

**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 mi<sup>2</sup>.

**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 Records from August 1996 to September 1997 are unpublished and available from the USGS Water Science Center, Raleigh, NC.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 NGVD of 1929. Satellite telemetry at stations.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 4.68 ft, September 16, 1999; minimum elevation, -1.20 ft, September 1, 1993.

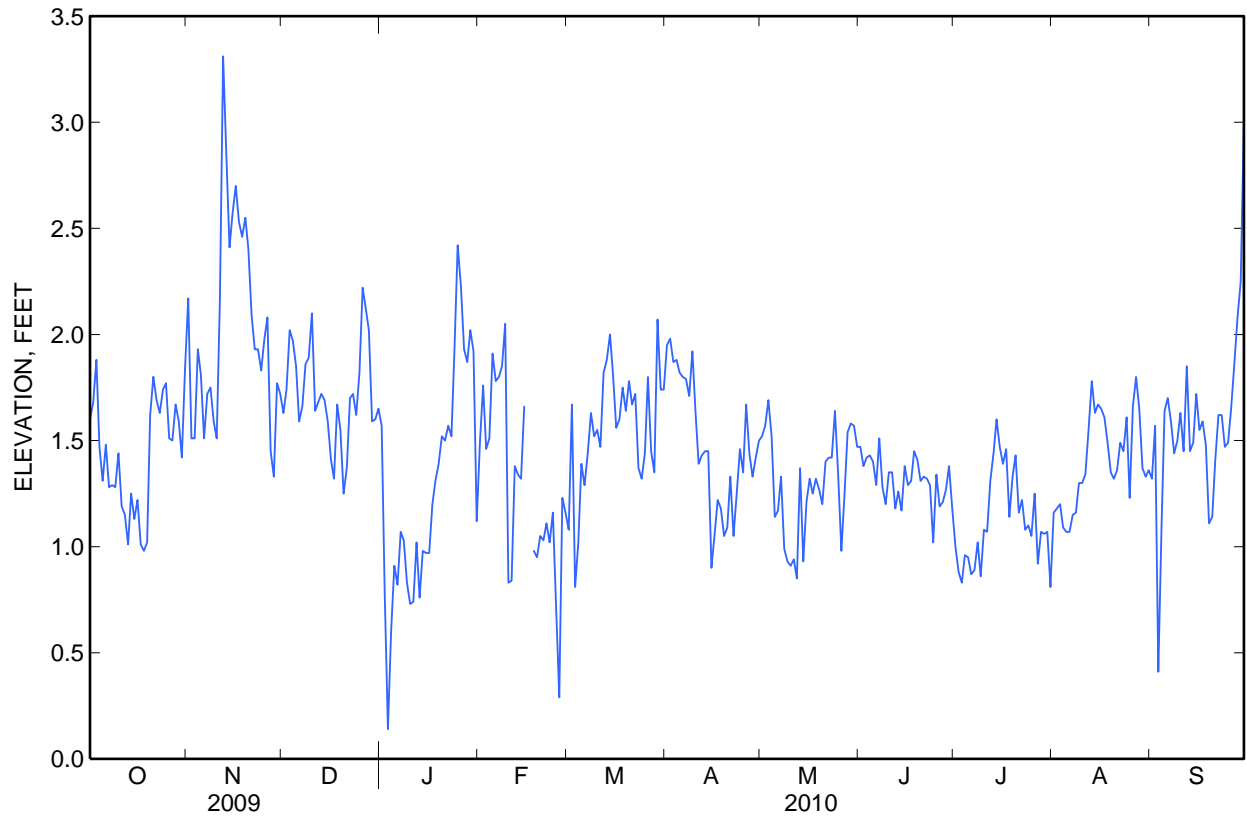
EXTREMES FOR CURRENT YEAR.--Maximum elevation, 3.73 ft, September 30; minimum elevation, -0.68 ft, September 3.

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

**ELEVATION, FEET**  
**WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**  
**DAILY MEAN VALUES**

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	1.60	2.17	1.63	1.57	1.49	1.08	1.95	1.52	1.47	1.00	1.16	1.32
2	1.68	1.51	1.74	0.78	1.76	1.67	1.98	1.57	1.38	0.88	1.18	1.57
3	1.88	1.51	2.02	0.14	1.46	0.81	1.87	1.69	1.42	0.83	1.20	0.41
4	1.47	1.93	1.97	0.60	1.51	1.02	1.88	1.52	1.43	0.96	1.09	1.09
5	1.31	1.81	1.85	0.91	1.91	1.39	1.82	1.14	1.40	0.95	1.07	1.64
6	1.48	1.51	1.59	0.82	1.78	1.29	1.80	1.17	1.29	0.87	1.07	1.70
7	1.28	1.72	1.66	1.07	1.80	1.44	1.79	1.33	1.51	0.89	1.15	1.59
8	1.29	1.75	1.86	1.03	1.85	1.63	1.71	0.99	1.28	1.02	1.16	1.44
9	1.28	1.59	1.89	0.83	2.05	1.52	1.92	0.93	1.20	0.86	1.30	1.50
10	1.44	1.51	2.10	0.73	0.83	1.55	1.64	0.91	1.35	1.08	1.30	1.63
11	1.19	2.17	1.64	0.74	0.84	1.47	1.39	0.94	1.35	1.07	1.34	1.45
12	1.15	3.31	1.68	1.02	1.38	1.82	1.43	0.85	1.18	1.31	1.55	1.85
13	1.01	2.85	1.72	0.76	1.34	1.88	1.45	1.37	1.26	1.44	1.78	1.45
14	1.25	2.41	1.69	0.98	1.32	2.00	1.45	0.93	1.17	1.60	1.63	1.49
15	1.13	2.57	1.59	0.97	1.66	1.81	0.90	1.21	1.38	1.47	1.67	1.72
16	1.22	2.70	1.41	0.97	---	1.56	1.05	1.32	1.29	1.39	1.65	1.55
17	1.01	2.53	1.32	1.20	---	1.60	1.22	1.25	1.31	1.46	1.61	1.59
18	0.98	2.46	1.67	1.31	0.98	1.75	1.18	1.32	1.45	1.14	1.49	1.48
19	1.02	2.55	1.55	1.39	0.95	1.64	1.05	1.27	1.41	1.33	1.35	1.11
20	1.62	2.40	1.25	1.52	1.05	1.78	1.09	1.20	1.31	1.43	1.32	1.14
21	1.80	2.09	1.37	1.50	1.03	1.67	1.33	1.40	1.33	1.16	1.36	1.41
22	1.69	1.93	1.70	1.57	1.11	1.72	1.05	1.42	1.32	1.22	1.49	1.62
23	1.63	1.93	1.72	1.52	1.02	1.37	1.25	1.42	1.29	1.08	1.45	1.62
24	1.74	1.83	1.62	1.93	1.16	1.32	1.46	1.64	1.02	1.10	1.61	1.47
25	1.77	1.98	1.82	2.42	0.72	1.44	1.35	1.34	1.34	1.05	1.23	1.49
26	1.51	2.08	2.22	2.23	0.29	1.80	1.67	0.98	1.19	1.25	1.66	1.65
27	1.50	1.45	2.12	1.93	1.23	1.45	1.44	1.25	1.21	0.92	1.80	1.86
28	1.67	1.33	2.02	1.87	1.16	1.35	1.33	1.54	1.27	1.07	1.65	2.08
29	1.59	1.77	1.59	2.02	---	2.07	1.42	1.58	1.38	1.06	1.37	2.25
30	1.42	1.72	1.60	1.92	---	1.74	1.50	1.57	1.18	1.07	1.33	3.01
31	1.84	---	1.65	1.12	---	1.74	---	1.47	---	0.81	1.36	---
<b>Total</b>	44.45	61.07	53.26	39.37	---	48.38	44.37	40.04	39.37	34.77	43.38	47.18
<b>Mean</b>	1.43	2.04	1.72	1.27	---	1.56	1.48	1.29	1.31	1.12	1.40	1.57
<b>Max</b>	1.88	3.31	2.22	2.42	---	2.07	1.98	1.69	1.51	1.60	1.80	3.01
<b>Min</b>	0.98	1.33	1.25	0.14	---	0.81	0.90	0.85	1.02	0.81	1.07	0.41

**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, 6.0 standard units, June 19, 21, 22, 2001.

pH (BOTTOM): Maximum recorded, 7.9 standard units, November 11, 12, 2010; minimum recorded, 5.8 standard units, March 4, 1998, September 18-22, 1999.

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, 145%, July 22, 2010; 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, 2,350 microsiemens, November 11; minimum recorded, 84 microsiemens, February 6, 7, 26, 28.

SPECIFIC CONDUCTANCE (BOTTOM): Maximum recorded, 2,400 microsiemens, October 24; minimum recorded, 86 microsiemens, January 31, February 1, 26, 28.

pH (TOP): Maximum recorded, 8.5 standard units, July 8; minimum recorded, 6.3 standard units, on several days during the year.

pH (BOTTOM): Maximum recorded, 7.9 standard units, November 11, 12; minimum recorded, 6.3 standard units, on several days during the year.

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

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

DISSOLVED OXYGEN (TOP): Maximum recorded, 12.8 mg/L, February 15, 18, 19, 20, 21; minimum recorded, 0.1 mg/L, August 19.

DISSOLVED OXYGEN (BOTTOM): Maximum recorded, 12.6 mg/L, January 14, 15, 16; minimum recorded, 0.4 mg/L, July 29.

DISSOLVED OXYGEN, PERCENT SATURATION (TOP): Maximum recorded, 145%, July 22; minimum recorded, 1%, August 19.

DISSOLVED OXYGEN, PERCENT SATURATION (BOTTOM): Maximum recorded, 106%, August 12; minimum recorded, 5%, July 29.

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

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS, TOP  
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	October			November			December			January		
1	155	138	146	---	---	---	118	113	115	101	97	99
2	160	140	151	546	175	242	116	113	115	98	97	97
3	160	148	152	---	---	---	115	108	110	99	98	98
4	171	145	155	---	---	---	109	104	107	104	98	101
5	154	145	150	---	---	---	104	100	103	104	98	102
6	197	136	156	---	---	---	104	100	102	102	97	100
7	257	166	192	184	168	173	104	103	103	105	100	102
8	216	140	162	195	171	182	106	100	103	106	100	103
9	225	186	208	197	165	180	102	96	100	105	100	103
10	226	173	183	196	168	184	97	92	96	104	99	102
11	219	130	181	1,620	164	368	97	95	96	106	100	104
12	211	129	164	1,560	1,100	1,320	100	97	99	105	99	102
13	212	157	179	1,100	129	481	101	97	99	105	99	101
14	206	156	181	129	116	120	102	97	99	102	101	101
15	241	151	207	130	119	122	103	98	100	106	100	102
16	239	182	223	138	110	119	103	98	100	107	104	105
17	187	176	182	115	112	113	104	99	101	108	103	105
18	253	186	225	118	111	113	106	101	103	104	97	100
19	238	199	212	117	111	114	104	96	99	106	98	102
20	224	197	207	115	109	112	98	96	98	108	100	103
21	220	201	209	111	109	110	103	98	100	107	100	103
22	285	204	248	115	111	112	104	98	100	108	96	101
23	273	180	211	118	112	115	105	98	100	103	95	98
24	1,220	201	493	119	112	116	105	98	100	107	100	103
25	1,220	176	475	119	112	114	107	98	100	108	94	102
26	222	141	192	118	108	113	103	96	99	96	92	94
27	196	165	176	117	108	112	101	97	99	94	89	91
28	195	162	172	115	113	114	102	95	99	97	89	91
29	212	163	189	115	113	114	101	95	97	106	89	96
30	211	146	192	117	112	115	102	97	99	98	91	96
31	---	---	---	---	---	---	102	97	99	93	86	89
Month	---	---	---	---	---	---	118	92	101	108	86	100

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

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS, TOP  
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	February			March			April			May		
1	96	86	92	94	89	92	101	96	99	127	117	120
2	96	92	93	96	93	94	101	94	97	124	115	119
3	94	90	92	102	88	90	102	95	97	136	118	124
4	94	91	92	95	89	92	100	97	99	131	114	122
5	102	89	94	99	94	96	105	99	101	134	128	131
6	104	84	88	99	97	98	104	100	103	142	127	133
7	88	84	86	99	95	97	105	96	101	133	119	125
8	90	87	89	99	96	98	106	99	103	135	124	131
9	92	89	91	98	96	97	109	99	103	154	128	138
10	90	86	88	98	96	97	103	99	100	184	114	134
11	90	87	89	99	96	98	104	99	100	127	115	121
12	93	89	91	104	98	100	105	100	102	126	119	122
13	93	90	91	110	96	99	106	100	103	162	115	128
14	92	89	91	101	98	99	109	100	102	134	119	123
15	92	88	90	102	93	97	108	102	104	144	120	132
16	93	88	90	99	94	95	111	103	106	171	113	134
17	93	89	91	100	94	96	112	108	110	152	117	132
18	94	90	92	100	97	98	122	107	111	142	129	135
19	98	90	95	102	97	99	115	111	112	144	113	128
20	99	97	98	104	99	101	116	108	113	134	107	128
21	99	92	94	105	99	101	120	109	113	147	105	130
22	93	87	90	105	102	103	117	109	113	143	117	123
23	92	86	89	106	100	103	121	113	117	128	115	122
24	92	85	88	105	98	102	121	111	114	163	103	125
25	91	85	89	107	103	105	121	112	115	163	121	134
26	98	84	94	108	103	105	128	114	118	141	117	128
27	98	95	96	127	100	102	136	115	123	138	117	123
28	97	84	89	103	95	100	146	114	122	151	113	128
29	---	---	---	114	95	104	126	113	120	141	114	124
30	---	---	---	106	96	99	129	115	120	134	118	124
31	---	---	---	101	97	98	---	---	---	138	113	125
Month	104	84	91	127	88	99	146	94	108	184	103	127

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

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS, TOP  
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	June			July			August			September		
1	142	126	135	203	146	159	149	128	139	212	173	194
2	135	117	126	186	148	167	176	123	163	195	141	165
3	136	121	127	183	160	175	200	132	167	229	121	146
4	138	117	126	180	160	167	191	169	181	164	124	139
5	123	114	118	172	164	167	191	165	178	164	143	157
6	129	113	116	216	170	179	169	156	164	207	148	179
7	144	114	121	200	164	181	163	133	152	224	196	209
8	142	115	121	227	136	172	154	119	139	196	169	181
9	139	111	122	182	135	145	173	138	149	191	170	177
10	145	115	120	188	139	160	173	161	166	197	158	177
11	148	111	124	178	142	159	233	163	173	200	148	162
12	125	113	116	173	145	155	490	166	211	158	138	148
13	124	113	119	201	170	182	332	172	197	193	138	161
14	142	113	125	197	182	188	223	165	189	165	147	155
15	164	111	131	209	180	200	181	145	160	232	152	175
16	146	114	128	198	157	179	163	141	151	238	142	176
17	141	117	129	167	153	158	181	156	170	163	142	157
18	155	123	137	164	147	155	225	168	189	246	148	174
19	131	118	123	175	145	155	201	168	182	169	145	153
20	126	117	120	194	152	179	176	153	164	164	149	154
21	146	121	128	196	180	188	184	129	164	171	143	163
22	146	118	129	186	158	177	162	139	154	197	170	181
23	171	132	151	177	158	170	163	139	150	181	163	174
24	160	136	152	191	172	181	192	123	149	186	159	167
25	206	140	150	175	147	158	243	141	194	162	142	151
26	194	143	168	183	141	151	186	141	156	159	140	146
27	157	139	148	196	170	183	199	155	186	163	147	157
28	169	147	156	203	169	183	220	144	184	198	150	169
29	181	167	173	197	178	186	164	137	151	262	149	198
30	190	166	183	200	154	179	169	141	154	204	118	134
31	---	---	---	180	131	142	194	157	170	---	---	---
Month	206	111	134	227	131	170	490	119	168	262	118	166

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

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS, BOTTOM  
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	October			November			December			January		
1	152	135	144	---	---	---	118	114	115	104	100	102
2	156	139	149	580	177	254	116	114	115	101	99	100
3	156	145	150	---	---	---	114	109	111	101	100	101
4	166	142	154	1,080	161	388	110	105	108	107	101	104
5	150	144	147	---	---	---	105	102	104	106	100	105
6	191	132	154	---	---	---	106	102	103	105	99	102
7	461	164	239	182	166	172	106	104	105	105	100	104
8	375	141	159	191	170	179	108	103	106	106	99	103
9	224	158	204	195	165	180	105	99	102	105	100	103
10	457	179	302	196	166	189	100	96	99	105	99	102
11	216	129	180	1,640	174	395	101	99	100	106	100	104
12	211	124	160	1,590	1,100	1,360	104	100	102	106	99	102
13	213	156	180	1,100	128	488	105	100	102	105	99	101
14	211	158	182	128	115	119	106	100	102	102	101	102
15	241	140	204	129	118	121	106	101	103	106	100	102
16	239	190	222	137	109	118	106	102	104	107	105	106
17	192	180	184	114	110	111	107	102	105	108	103	106
18	253	184	223	117	110	112	109	105	107	104	98	100
19	238	199	211	116	110	112	107	99	102	106	99	102
20	225	187	203	114	108	111	102	100	101	108	101	104
21	482	192	246	110	105	108	107	101	103	107	100	103
22	682	215	373	114	110	111	108	101	104	108	96	101
23	1,760	199	842	117	111	114	108	101	103	103	95	98
24	2,400	388	1,690	118	111	115	109	101	103	108	101	104
25	2,270	177	1,080	118	111	114	111	101	103	108	95	103
26	222	160	196	117	108	112	106	99	102	96	92	94
27	195	165	177	116	108	111	104	101	102	94	88	91
28	635	167	231	114	112	113	104	98	102	97	89	91
29	969	186	276	115	113	114	104	97	100	107	89	96
30	210	146	193	117	112	114	105	100	102	98	92	96
31	---	---	---	---	---	---	104	100	102	93	86	89
Month	---	---	---	---	---	---	118	96	104	108	86	101



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

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS, BOTTOM  
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	February			March			April			May		
1	96	86	93	97	91	95	101	96	99	127	116	119
2	97	92	94	99	96	97	101	94	97	127	116	120
3	95	91	93	105	91	93	102	96	97	137	116	124
4	---	---	---	94	92	93	100	97	99	130	113	121
5	---	---	---	99	93	96	105	99	101	135	127	130
6	---	---	---	100	97	98	104	99	102	143	127	135
7	---	---	---	99	95	97	105	95	101	135	121	128
8	---	---	---	99	96	98	106	99	103	139	127	134
9	---	---	---	97	95	96	109	99	103	159	131	140
10	93	88	90	98	96	97	103	98	100	198	114	138
11	93	90	91	99	96	98	104	98	100	131	117	124
12	96	91	93	104	98	100	104	99	102	129	122	125
13	96	92	94	110	96	99	106	99	103	167	118	130
14	94	91	93	101	98	99	108	100	102	137	121	125
15	94	90	92	101	93	97	108	101	104	150	126	135
16	95	90	92	99	94	95	110	103	106	174	116	137
17	96	91	93	100	94	96	111	108	109	152	122	134
18	97	92	94	100	97	98	120	107	111	144	131	138
19	100	93	98	101	97	99	114	111	112	147	115	131
20	102	99	100	103	99	100	115	108	112	137	109	130
21	102	95	96	104	99	101	119	108	112	152	107	132
22	96	89	93	105	101	103	116	108	112	149	119	125
23	94	88	91	106	100	103	121	112	117	133	117	125
24	94	88	91	105	98	102	120	110	113	166	104	128
25	93	87	91	108	103	105	120	111	113	166	123	138
26	101	86	96	108	103	105	127	113	118	145	119	131
27	101	98	99	128	99	102	135	114	122	145	119	127
28	100	86	91	103	94	100	146	113	121	154	116	132
29	---	---	---	114	95	104	125	113	119	146	115	127
30	---	---	---	106	95	98	130	113	120	135	120	127
31	---	---	---	101	96	98	---	---	---	148	115	127
Month	---	---	---	128	91	99	146	94	108	198	104	130

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

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS, BOTTOM  
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	June			July			August			September		
1	154	128	139	199	136	159	153	128	141	226	179	204
2	151	120	130	185	131	165	180	126	166	196	157	172
3	142	123	131	186	159	177	202	147	171	219	122	148
4	165	119	132	182	161	168	201	169	183	148	125	138
5	125	116	120	167	163	165	193	173	184	167	142	158
6	130	114	119	183	162	170	179	161	167	207	148	176
7	170	115	126	229	162	187	165	134	152	228	180	211
8	145	117	124	262	182	240	153	109	139	203	174	184
9	145	113	125	183	134	145	176	142	152	180	171	174
10	147	116	122	188	139	158	172	161	164	187	153	174
11	149	111	126	181	142	161	577	163	229	199	151	163
12	137	114	118	193	150	172	478	167	243	159	139	148
13	137	112	120	213	166	181	399	172	200	195	140	161
14	146	113	127	196	179	186	223	137	181	166	143	159
15	172	119	137	222	187	202	181	147	162	222	155	171
16	151	114	130	221	172	194	154	145	149	236	140	177
17	145	117	131	190	155	160	419	146	206	163	140	156
18	157	124	139	182	146	156	806	195	474	247	151	174
19	132	119	124	168	145	150	811	172	298	167	145	153
20	130	118	122	184	157	171	180	156	167	163	148	154
21	142	122	129	214	168	190	187	147	169	172	139	159
22	164	136	148	225	173	185	163	143	157	194	169	179
23	171	140	156	246	170	186	165	140	153	181	163	175
24	171	157	160	295	181	239	190	127	149	184	156	169
25	212	149	161	233	150	169	242	154	217	161	140	149
26	213	172	190	192	141	156	206	150	170	159	138	146
27	179	141	150	198	173	182	200	171	187	162	146	155
28	160	147	151	188	170	178	224	137	186	198	145	169
29	179	150	169	195	178	188	168	139	156	257	149	196
30	188	163	181	199	152	181	168	142	156	200	117	135
31	---	---	---	182	131	143	202	162	174	---	---	---
Month	213	111	138	295	131	176	811	109	187	257	117	166

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

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS, TOP  
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Day	Max	Min	Median	Max	Min	Median	Max	Min	Median	Max	Min	Median
	October			November			December			January		
1	6.5	6.4	6.4	---	---	---	6.8	6.7	6.7	6.4	6.3	6.3
2	6.6	6.4	6.5	7.3	7.1	7.2	6.8	6.7	6.7	6.4	6.3	6.3
3	6.6	6.4	6.5	---	---	---	6.8	6.6	6.7	6.4	6.4	6.4
4	6.6	6.5	6.5	---	---	---	6.6	6.6	6.6	6.5	6.3	6.4
5	6.6	6.4	6.5	---	---	---	6.8	6.6	6.6	6.4	6.4	6.4
6	6.5	6.3	6.4	---	---	---	6.6	6.6	6.6	6.4	6.4	6.4
7	6.5	6.4	6.4	7.5	7.4	7.5	6.8	6.6	6.6	6.7	6.4	6.5
8	6.6	6.3	6.5	7.5	7.4	7.4	6.6	6.6	6.6	6.7	6.7	6.7
9	6.7	6.5	6.5	7.5	7.4	7.4	7.1	6.6	6.7	6.8	6.7	6.7
10	6.7	6.6	6.6	7.5	7.3	7.5	6.7	6.6	6.6	6.8	6.7	6.7
11	6.7	6.5	6.6	7.6	7.3	7.4	6.7	6.6	6.7	6.8	6.7	6.8
12	6.7	6.4	6.6	7.8	7.4	7.5	6.7	6.6	6.6	6.8	6.7	6.8
13	6.8	6.6	6.6	8.1	7.0	7.5	6.7	6.6	6.6	6.8	6.7	6.8
14	6.8	6.6	6.7	7.8	6.8	6.9	6.6	6.6	6.6	6.8	6.8	6.8
15	6.9	6.7	6.9	7.3	6.8	6.8	6.6	6.6	6.6	6.8	6.8	6.8
16	6.9	6.8	6.9	7.8	6.7	6.8	6.6	6.5	6.5	6.8	6.8	6.8
17	7.0	6.8	6.8	7.5	6.7	6.8	6.6	6.5	6.6	6.9	6.8	6.8
18	7.1	6.9	7.0	7.1	6.8	6.8	6.6	6.6	6.6	6.8	6.7	6.8
19	7.1	7.0	7.1	7.5	6.7	6.8	6.7	6.5	6.6	6.7	6.7	6.7
20	7.1	7.0	7.0	7.3	6.7	6.7	6.6	6.5	6.5	6.7	6.7	6.7
21	7.1	7.0	7.0	6.7	6.6	6.7	6.6	6.5	6.5	6.8	6.7	6.7
22	7.3	7.0	7.2	6.7	6.6	6.7	6.6	6.5	6.6	6.8	6.6	6.7
23	7.2	7.0	7.1	7.5	6.6	6.7	6.6	6.5	6.6	6.7	6.6	6.6
24	7.3	7.1	7.2	7.2	6.6	6.7	6.6	6.4	6.5	6.7	6.7	6.7
25	7.3	7.1	7.2	6.9	6.6	6.6	6.5	6.4	6.5	6.8	6.6	6.7
26	7.2	6.9	7.1	7.4	6.6	6.6	6.5	6.4	6.5	6.6	6.5	6.6
27	7.1	7.0	7.1	6.7	6.6	6.6	6.4	6.3	6.4	6.6	6.6	6.6
28	7.2	7.0	7.2	6.7	6.7	6.7	6.3	6.3	6.3	6.7	6.6	6.6
29	7.3	7.1	7.2	6.7	6.7	6.7	6.4	6.3	6.3	6.7	6.6	6.6
30	7.3	7.1	7.2	6.7	6.7	6.7	6.4	6.4	6.4	6.7	6.6	6.7
31	---	---	---	---	---	---	6.5	6.3	6.4	6.7	6.6	6.6
Max	---	---	---	---	---	---	7.1	6.7	6.7	6.9	6.8	6.8
Min	---	---	---	---	---	---	6.3	6.3	6.3	6.4	6.3	6.3

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

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS, TOP  
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Day	Max	Min	Median	Max	Min	Median	Max	Min	Median	Max	Min	Median
	February			March			April			May		
1	6.7	6.7	6.7	7.0	6.9	7.0	6.9	6.8	6.9	7.0	7.0	7.0
2	6.8	6.7	6.7	7.0	6.9	7.0	6.9	6.8	6.8	7.1	7.0	7.0
3	6.7	6.6	6.7	7.0	6.8	6.8	6.8	6.7	6.8	7.1	7.0	7.1
4	6.9	6.7	6.8	7.2	6.8	7.0	6.8	6.7	6.8	7.0	6.9	6.9
5	7.0	6.9	6.9	7.3	7.2	7.3	6.8	6.6	6.6	6.9	6.9	6.9
6	6.9	6.7	6.8	7.4	7.3	7.3	6.6	6.5	6.6	7.0	6.9	7.0
7	6.8	6.7	6.7	7.4	7.3	7.3	6.6	6.5	6.5	7.0	6.9	7.0
8	6.8	6.8	6.8	7.4	7.3	7.3	6.6	6.5	6.5	7.2	7.0	7.1
9	6.8	6.8	6.8	7.3	7.2	7.2	6.6	6.4	6.5	7.2	7.1	7.2
10	6.8	6.7	6.8	7.3	7.1	7.2	6.4	6.3	6.4	7.3	7.1	7.2
11	6.9	6.8	6.8	7.3	7.1	7.2	6.4	6.3	6.4	7.1	7.0	7.1
12	6.9	6.8	6.9	7.2	7.1	7.1	6.5	6.4	6.5	7.2	7.1	7.1
13	7.0	6.8	6.9	7.1	7.0	7.0	6.6	6.5	6.6	7.2	7.1	7.2
14	7.0	6.9	6.9	7.1	7.0	7.0	6.7	6.5	6.6	7.2	7.1	7.2
15	7.0	6.9	7.0	7.1	7.0	7.0	6.8	6.5	6.8	7.2	7.2	7.2
16	7.0	6.9	7.0	7.1	7.0	7.0	6.9	6.8	6.9	7.3	7.1	7.2
17	7.0	7.0	7.0	7.0	7.0	7.0	7.0	6.9	6.9	7.3	7.1	7.2
18	7.0	7.0	7.0	7.1	6.9	7.0	6.9	6.8	6.8	7.2	7.2	7.2
19	7.1	7.0	7.0	7.0	6.9	7.0	6.9	6.8	6.9	7.2	7.0	7.0
20	7.1	7.0	7.0	7.1	7.0	7.0	6.9	6.9	6.9	7.0	7.0	7.0
21	7.1	7.0	7.0	7.1	7.0	7.0	7.0	6.9	6.9	7.0	6.9	7.0
22	7.1	6.9	7.0	7.1	7.0	7.0	6.9	6.9	6.9	7.0	6.9	7.0
23	7.0	6.8	6.9	7.1	7.0	7.0	6.9	6.8	6.9	7.0	6.9	6.9
24	7.0	6.8	6.9	7.2	7.0	7.1	6.9	6.8	6.9	7.0	6.8	6.9
25	6.9	6.8	6.9	7.2	7.1	7.1	7.0	6.9	6.9	7.0	6.9	7.0
26	7.0	6.9	6.9	7.3	7.1	7.2	7.0	6.9	7.0	7.1	7.0	7.0
27	7.0	6.9	7.0	7.2	6.9	7.0	7.0	6.9	7.0	7.1	6.9	7.0
28	7.0	6.9	7.0	7.0	6.9	7.0	7.0	6.9	7.0	7.0	6.9	7.0
29	---	---	---	7.1	7.0	7.0	7.0	6.9	6.9	7.0	6.9	7.0
30	---	---	---	7.0	6.8	6.9	7.0	6.9	7.0	7.0	6.9	7.0
31	---	---	---	6.9	6.8	6.9	---	---	---	7.1	6.9	7.0
<b>Max</b>	7.1	7.0	7.0	7.4	7.3	7.3	7.0	6.9	7.0	7.3	7.2	7.2
<b>Min</b>	6.7	6.6	6.7	6.9	6.8	6.8	6.4	6.3	6.4	6.9	6.8	6.9

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

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS, TOP  
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Day	Max	Min	Median	Max	Min	Median	Max	Min	Median	Max	Min	Median
	June			July			August			September		
1	7.1	7.0	7.0	7.2	7.0	7.1	7.0	6.9	7.0	7.1	6.8	6.9
2	7.0	7.0	7.0	7.3	7.0	7.1	7.1	6.9	7.0	7.3	6.8	6.9
3	7.1	7.0	7.0	7.5	7.0	7.2	7.4	6.9	7.0	7.3	7.0	7.1
4	7.1	7.0	7.0	7.6	7.0	7.1	7.3	6.9	7.0	7.2	7.0	7.0
5	7.0	6.9	7.0	7.5	7.0	7.2	7.7	6.9	7.3	7.3	7.0	7.0
6	7.0	6.9	7.0	7.7	6.9	7.1	7.7	7.1	7.3	7.5	7.0	7.1
7	7.1	7.0	7.0	7.8	6.9	7.2	7.7	7.0	7.1	8.1	7.1	7.2
8	7.1	6.9	7.0	8.5	7.0	7.4	7.6	7.0	7.1	7.3	7.0	7.1
9	7.0	6.9	7.0	7.5	7.0	7.1	7.9	7.1	7.2	7.5	7.0	7.1
10	7.1	6.7	7.0	7.4	7.0	7.1	8.0	7.1	7.3	7.4	7.0	7.2
11	7.0	6.9	7.0	7.8	7.0	7.1	8.0	7.1	7.3	7.3	7.0	7.1
12	7.0	6.9	7.0	7.4	7.0	7.2	7.8	7.1	7.2	7.1	6.9	7.0
13	7.1	7.0	7.0	7.2	7.0	7.0	7.2	6.9	7.1	7.3	7.0	7.1
14	7.1	7.0	7.0	7.2	7.0	7.1	7.1	6.8	7.0	7.2	6.9	7.0
15	7.2	6.9	7.0	7.5	7.0	7.1	7.3	6.8	6.9	7.5	6.9	7.1
16	7.1	6.9	7.0	7.3	6.9	7.1	7.4	6.8	7.0	7.2	6.9	7.1
17	7.0	6.9	7.0	7.2	6.9	7.1	7.4	6.8	7.1	7.1	7.0	7.1
18	7.1	7.0	7.0	7.2	6.9	7.0	7.3	6.8	7.0	7.2	7.0	7.1
19	7.1	7.0	7.0	7.3	7.0	7.0	7.1	6.7	6.9	7.3	7.0	7.1
20	7.0	7.0	7.0	7.4	7.0	7.1	7.2	6.8	6.9	7.2	7.0	7.0
21	7.0	6.9	6.9	7.5	7.0	7.1	7.2	6.8	7.0	7.2	6.8	7.0
22	7.6	6.9	7.0	7.9	6.8	7.1	7.2	6.9	7.0	7.2	7.0	7.0
23	8.1	7.0	7.0	7.6	7.0	7.2	7.1	6.9	7.0	7.3	6.9	7.0
24	7.6	7.0	7.1	7.3	6.8	7.0	7.1	6.8	6.9	7.2	7.0	7.1
25	7.9	7.0	7.2	7.2	6.9	7.0	7.1	6.9	7.0	7.2	7.0	7.1
26	7.5	7.1	7.2	7.6	6.8	6.9	7.1	6.8	6.9	7.3	7.0	7.1
27	8.2	7.0	7.1	7.2	7.0	7.0	7.2	6.9	7.0	7.1	7.0	7.0
28	7.4	7.0	7.2	7.1	6.9	7.0	7.0	6.8	7.0	7.1	7.0	7.0
29	7.4	7.0	7.2	7.1	6.8	6.9	7.2	6.8	6.9	7.1	6.9	7.0
30	7.2	7.0	7.1	7.4	6.9	7.1	7.2	6.8	6.8	7.0	6.7	6.9
31	---	---	---	7.1	6.9	7.0	7.1	6.8	6.9	---	---	---
<b>Max</b>	8.2	7.1	7.2	8.5	7.0	7.4	8.0	7.1	7.3	8.1	7.1	7.2
<b>Min</b>	7.0	6.7	6.9	7.1	6.8	6.9	7.0	6.7	6.8	7.0	6.7	6.9

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

**PH, WATER, UNFILTERED, FIELD, STANDARD UNITS, BOTTOM  
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

<b>Day</b>	<b>Max</b>	<b>Min</b>	<b>Median</b>	<b>Max</b>	<b>Min</b>	<b>Median</b>	<b>Max</b>	<b>Min</b>	<b>Median</b>	<b>Max</b>	<b>Min</b>	<b>Median</b>
	<b>October</b>			<b>November</b>			<b>December</b>			<b>January</b>		
<b>1</b>	6.6	6.5	6.5	---	---	---	7.0	7.0	7.0	6.5	6.3	6.5
<b>2</b>	6.7	6.5	6.6	7.1	6.7	6.9	7.0	7.0	7.0	6.4	6.3	6.3
<b>3</b>	6.7	6.6	6.6	---	---	---	7.1	7.0	7.0	6.4	6.4	6.4
<b>4</b>	6.7	6.6	6.6	7.0	6.7	6.8	7.0	6.9	6.9	6.4	6.3	6.4
<b>5</b>	6.7	6.6	6.6	---	---	---	7.0	6.9	6.9	6.4	6.3	6.4
<b>6</b>	6.7	6.6	6.7	---	---	---	7.0	6.9	6.9	6.4	6.3	6.4
<b>7</b>	6.8	6.7	6.7	7.5	7.3	7.4	7.0	7.0	7.0	6.6	6.3	6.4
<b>8</b>	6.8	6.6	6.6	7.6	7.4	7.5	7.0	7.0	7.0	6.7	6.6	6.7
<b>9</b>	6.9	6.6	6.8	7.6	7.4	7.6	7.0	7.0	7.0	6.7	6.7	6.7
<b>10</b>	6.9	6.8	6.8	7.6	7.6	7.6	7.0	6.8	6.9	6.8	6.7	6.7
<b>11</b>	6.9	6.7	6.8	7.9	7.6	7.6	7.0	6.8	6.9	6.8	6.7	6.8
<b>12</b>	6.9	6.7	6.8	7.9	7.7	7.8	6.9	6.8	6.9	6.8	6.8	6.8
<b>13</b>	6.9	6.7	6.8	7.8	7.2	7.5	6.9	6.9	6.9	6.8	6.8	6.8
<b>14</b>	7.0	6.8	6.9	7.2	7.0	7.0	6.9	6.8	6.9	6.8	6.8	6.8
<b>15</b>	7.0	6.8	6.9	7.1	7.0	7.1	6.8	6.8	6.8	6.9	6.8	6.8
<b>16</b>	7.0	6.9	7.0	7.1	7.0	7.0	6.8	6.8	6.8	6.9	6.8	6.8
<b>17</b>	7.0	6.9	7.0	7.0	7.0	7.0	6.9	6.7	6.8	6.9	6.8	6.8
<b>18</b>	7.2	7.0	7.1	7.0	7.0	7.0	6.8	6.7	6.8	6.9	6.7	6.8
<b>19</b>	7.1	7.0	7.1	7.0	6.9	7.0	6.8	6.7	6.8	6.8	6.7	6.8
<b>20</b>	7.1	6.9	7.0	7.0	6.9	7.0	6.8	6.6	6.8	6.8	6.7	6.8
<b>21</b>	7.1	7.0	7.0	7.0	6.9	7.0	6.7	6.6	6.7	6.8	6.7	6.8
<b>22</b>	7.1	7.0	7.1	7.0	7.0	7.0	6.8	6.7	6.7	6.8	6.7	6.7
<b>23</b>	7.1	6.9	7.0	7.0	7.0	7.0	6.7	6.6	6.7	6.7	6.6	6.7
<b>24</b>	7.1	6.9	7.0	7.0	7.0	7.0	6.6	6.6	6.6	6.8	6.7	6.8
<b>25</b>	7.1	7.0	7.0	7.0	7.0	7.0	6.7	6.6	6.6	6.8	6.6	6.8
<b>26</b>	7.1	7.0	7.0	7.0	6.9	7.0	6.7	6.4	6.6	6.7	6.6	6.6
<b>27</b>	7.0	6.9	7.0	7.0	6.9	7.0	6.5	6.4	6.4	6.6	6.6	6.6
<b>28</b>	7.0	6.9	6.9	7.0	7.0	7.0	6.5	6.4	6.5	6.7	6.6	6.6
<b>29</b>	7.1	6.9	7.0	7.0	7.0	7.0	6.5	6.4	6.5	6.8	6.6	6.7
<b>30</b>	7.0	6.9	7.0	7.0	7.0	7.0	6.5	6.4	6.4	6.7	6.6	6.7
<b>31</b>	---	---	---	---	---	---	6.5	6.4	6.5	6.7	6.6	6.6
<b>Max</b>	---	---	---	---	---	---	7.1	7.0	7.0	6.9	6.8	6.8
<b>Min</b>	---	---	---	---	---	---	6.5	6.4	6.4	6.4	6.3	6.3

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

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS, BOTTOM  
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Day	Max	Min	Median	Max	Min	Median	Max	Min	Median	Max	Min	Median
	February			March			April			May		
1	6.8	6.7	6.7	6.8	6.7	6.7	6.8	6.7	6.8	6.8	6.8	6.8
2	6.8	6.7	6.8	6.8	6.7	6.7	6.8	6.7	6.7	6.9	6.8	6.9
3	6.8	6.7	6.7	6.8	6.6	6.6	6.8	6.7	6.7	6.9	6.8	6.9
4	---	---	---	6.9	6.6	6.8	6.8	6.7	6.7	6.9	6.8	6.8
5	---	---	---	7.0	6.9	7.0	6.8	6.7	6.7	6.8	6.8	6.8
6	---	---	---	7.0	6.9	7.0	6.8	6.7	6.7	6.9	6.8	6.8
7	---	---	---	7.0	6.9	7.0	6.8	6.7	6.7	6.9	6.8	6.8
8	---	---	---	7.1	6.9	7.0	6.8	6.7	6.7	7.0	6.8	6.9
9	---	---	---	7.0	6.9	7.0	6.8	6.6	6.7	7.0	6.9	7.0
10	7.0	6.8	6.9	7.0	6.9	7.0	6.6	6.6	6.6	7.1	6.9	7.0
11	7.0	6.9	7.0	7.0	6.9	6.9	6.7	6.6	6.7	7.0	6.9	6.9
12	7.0	6.9	6.9	6.9	6.9	6.9	6.8	6.7	6.7	7.0	6.9	7.0
13	7.0	6.9	6.9	6.9	6.7	6.8	6.8	6.7	6.7	7.0	6.9	7.0
14	7.0	6.9	6.9	6.9	6.8	6.8	6.8	6.7	6.7	7.0	6.9	6.9
15	7.0	6.9	7.0	6.9	6.8	6.8	6.7	6.6	6.6	7.0	6.9	7.0
16	7.0	6.9	7.0	6.9	6.8	6.8	6.7	6.6	6.7	7.0	6.9	7.0
17	7.0	6.9	6.9	6.8	6.8	6.8	6.8	6.7	6.7	7.0	6.9	7.0
18	7.0	6.9	6.9	6.9	6.8	6.8	6.7	6.7	6.7	7.0	6.8	7.0
19	7.0	6.9	7.0	6.9	6.8	6.8	6.8	6.7	6.7	6.9	6.8	6.8
20	7.0	6.9	7.0	6.9	6.8	6.9	6.8	6.7	6.7	6.8	6.7	6.8
21	7.0	6.9	7.0	6.9	6.8	6.8	6.8	6.7	6.7	6.8	6.7	6.7
22	7.0	6.8	6.9	6.9	6.8	6.9	6.7	6.6	6.6	6.8	6.6	6.7
23	6.8	6.7	6.8	6.9	6.8	6.9	6.7	6.6	6.7	6.7	6.6	6.7
24	6.8	6.7	6.8	7.0	6.8	6.9	6.7	6.6	6.7	6.8	6.6	6.6
25	6.8	6.7	6.7	7.0	6.9	6.9	6.8	6.7	6.7	6.8	6.6	6.7
26	6.8	6.8	6.8	7.1	6.9	7.0	6.8	6.7	6.7	6.8	6.7	6.8
27	6.9	6.7	6.8	7.1	6.9	6.9	6.8	6.7	6.8	6.8	6.7	6.8
28	6.8	6.6	6.7	7.0	6.9	6.9	6.8	6.8	6.8	6.8	6.7	6.8
29	---	---	---	7.0	6.9	7.0	6.8	6.8	6.8	6.8	6.7	6.8
30	---	---	---	6.9	6.8	6.8	6.8	6.8	6.8	6.8	6.7	6.8
31	---	---	---	6.8	6.8	6.8	---	---	---	6.8	6.7	6.8
<b>Max</b>	---	---	---	7.1	6.9	7.0	6.8	6.8	6.8	7.1	6.9	7.0
<b>Min</b>	---	---	---	6.8	6.6	6.6	6.6	6.6	6.6	6.7	6.6	6.6

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

**PH, WATER, UNFILTERED, FIELD, STANDARD UNITS, BOTTOM**  
**WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

Day	Max	Min	Median	Max	Min	Median	Max	Min	Median	Max	Min	Median
	June			July			August			September		
1	6.9	6.8	6.8	7.2	7.0	7.1	7.2	7.0	7.2	7.2	7.0	7.1
2	6.8	6.8	6.8	7.2	7.0	7.1	7.3	7.1	7.2	7.2	6.8	7.0
3	6.8	6.8	6.8	7.2	7.1	7.1	7.2	7.1	7.2	7.2	6.8	6.9
4	6.8	6.8	6.8	7.2	7.0	7.1	7.2	7.0	7.1	6.9	6.8	6.8
5	6.9	6.8	6.8	7.2	7.0	7.1	7.4	7.1	7.3	6.9	6.8	6.9
6	6.9	6.8	6.8	7.2	6.9	7.1	7.6	7.4	7.5	7.1	6.8	6.9
7	6.9	6.8	6.9	7.1	6.8	7.0	7.8	7.4	7.5	7.1	6.9	7.0
8	6.9	6.8	6.8	7.3	7.0	7.1	7.7	7.4	7.5	7.0	6.8	6.9
9	6.9	6.8	6.8	7.3	6.9	7.0	7.5	7.3	7.5	7.0	6.8	6.9
10	6.9	6.7	6.8	7.1	6.9	7.1	7.5	7.3	7.4	7.0	6.9	7.0
11	6.9	6.7	6.8	7.2	7.0	7.1	7.5	7.2	7.3	7.1	6.7	6.9
12	6.8	6.7	6.8	7.1	6.9	7.0	7.7	7.2	7.4	6.9	6.8	6.8
13	6.9	6.7	6.8	7.2	7.0	7.1	7.5	7.2	7.4	6.9	6.8	6.9
14	6.9	6.7	6.8	7.2	7.0	7.1	7.4	7.1	7.3	6.8	6.8	6.8
15	7.0	6.7	6.8	7.2	7.0	7.1	7.4	7.1	7.2	7.0	6.7	6.8
16	7.0	6.7	6.9	7.1	7.0	7.1	7.3	7.1	7.2	7.1	6.9	7.0
17	7.0	6.8	6.9	7.2	7.0	7.1	7.4	6.9	7.3	7.0	6.9	7.0
18	7.0	6.8	6.9	7.1	7.0	7.0	7.2	6.9	6.9	7.1	6.9	7.0
19	7.0	6.9	7.0	7.1	7.0	7.1	7.3	6.9	7.2	7.0	6.8	6.9
20	7.0	6.9	6.9	7.2	6.9	7.1	7.2	7.2	7.2	7.0	6.8	6.9
21	7.0	6.8	6.9	7.2	7.0	7.1	7.3	7.1	7.2	7.0	6.8	6.9
22	7.0	6.8	7.0	7.1	6.9	7.0	7.3	7.1	7.2	7.1	6.8	7.0
23	7.2	6.9	7.1	7.2	6.8	7.0	7.2	7.0	7.1	7.1	6.9	7.0
24	7.2	7.0	7.1	7.2	6.7	6.8	7.4	7.0	7.1	7.1	6.9	7.0
25	7.1	6.9	7.0	7.2	6.9	7.1	7.4	7.0	7.2	7.1	6.9	7.0
26	7.1	7.0	7.0	7.2	6.9	7.1	7.1	6.8	7.0	7.1	7.0	7.0
27	7.2	7.0	7.1	7.2	7.0	7.1	7.2	7.0	7.1	7.1	6.9	7.0
28	7.3	7.1	7.2	7.2	7.0	7.1	7.2	6.9	7.1	7.1	6.9	7.0
29	7.3	7.0	7.2	7.3	7.0	7.1	7.2	7.0	7.0	7.1	6.8	7.0
30	7.3	7.1	7.1	7.5	7.0	7.2	7.0	6.9	7.0	7.0	6.7	6.9
31	---	---	---	7.3	7.1	7.1	7.1	6.8	7.0	---	---	---
<b>Max</b>	7.3	7.1	7.2	7.5	7.1	7.2	7.8	7.4	7.5	7.2	7.0	7.1
<b>Min</b>	6.8	6.7	6.8	7.1	6.7	6.8	7.0	6.8	6.9	6.8	6.7	6.8



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

**TEMPERATURE, WATER, DEGREES CELSIUS, TOP  
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

<b>Day</b>	<b>Max</b>	<b>Min</b>	<b>Mean</b>	<b>Max</b>	<b>Min</b>	<b>Mean</b>	<b>Max</b>	<b>Min</b>	<b>Mean</b>	<b>Max</b>	<b>Min</b>	<b>Mean</b>
	<b>October</b>			<b>November</b>			<b>December</b>			<b>January</b>		
<b>1</b>	23.7	23.1	23.4	---	---	---	11.8	11.3	11.6	6.3	5.8	6.1
<b>2</b>	23.5	22.9	23.3	17.9	17.6	17.8	11.3	11.1	11.2	6.3	4.9	5.7
<b>3</b>	23.8	23.0	23.3	---	---	---	12.7	11.3	12.2	4.9	3.4	4.0
<b>4</b>	23.5	22.9	23.2	---	---	---	12.7	12.0	12.5	3.4	2.9	3.1
<b>5</b>	23.2	22.7	22.9	---	---	---	12.1	11.7	12.0	3.0	2.7	2.9
<b>6</b>	22.8	22.3	22.6	---	---	---	11.7	10.1	10.9	2.8	2.6	2.7
<b>7</b>	22.7	22.3	22.5	16.4	15.7	16.0	10.1	9.4	9.8	2.8	2.5	2.7
<b>8</b>	22.9	21.8	22.1	16.5	15.8	16.0	9.6	9.5	9.6	3.3	2.7	3.1
<b>9</b>	22.9	21.9	22.3	16.5	15.9	16.0	11.5	9.5	10.4	3.2	2.6	2.9
<b>10</b>	23.2	22.6	22.8	16.4	15.9	16.1	12.1	11.5	11.9	2.6	2.1	2.4
<b>11</b>	22.9	22.1	22.5	16.2	15.5	16.0	11.6	9.0	10.2	2.1	2.0	2.1
<b>12</b>	22.4	21.7	21.9	15.5	15.0	15.2	9.0	7.8	8.3	2.5	2.0	2.3
<b>13</b>	22.5	21.4	21.6	15.1	14.3	14.8	8.9	7.8	8.3	2.7	2.5	2.6
<b>14</b>	21.8	20.6	21.1	14.3	14.1	14.2	9.7	8.9	9.4	2.7	2.5	2.6
<b>15</b>	20.6	20.1	20.2	14.5	14.1	14.2	10.0	9.7	9.9	3.2	2.6	2.9
<b>16</b>	20.1	19.4	19.8	14.5	14.0	14.3	10.0	9.4	9.9	3.8	3.2	3.5
<b>17</b>	19.4	18.2	18.9	14.6	14.2	14.4	9.4	8.0	8.7	5.4	3.8	4.6
<b>18</b>	18.2	17.1	17.6	14.7	14.3	14.5	8.0	7.4	7.7	6.4	5.4	6.1
<b>19</b>	17.2	16.6	16.9	15.3	14.7	14.9	7.7	7.4	7.6	6.4	6.2	6.3
<b>20</b>	16.9	15.7	16.5	15.6	15.3	15.4	7.5	6.6	7.0	6.7	6.3	6.5
<b>21</b>	18.0	16.3	16.8	15.4	14.4	15.0	6.6	6.1	6.3	6.8	6.4	6.6
<b>22</b>	17.8	16.8	17.2	14.4	13.5	13.9	6.2	5.9	6.1	6.7	6.4	6.6
<b>23</b>	18.2	17.4	17.7	13.8	13.4	13.6	6.1	5.9	6.0	6.6	6.0	6.3
<b>24</b>	18.4	17.1	18.0	14.0	13.8	13.9	6.2	5.9	6.1	6.5	6.0	6.2
<b>25</b>	18.7	17.6	18.1	13.9	13.7	13.9	6.4	5.9	6.0	8.9	6.5	7.7
<b>26</b>	17.6	17.0	17.2	13.8	13.5	13.7	7.8	6.4	7.2	9.0	8.2	8.8
<b>27</b>	17.1	16.8	16.9	13.5	12.4	13.1	7.9	7.7	7.8	8.2	7.2	7.7
<b>28</b>	17.5	16.9	17.1	12.4	11.2	11.8	7.7	7.2	7.5	7.2	7.0	7.1
<b>29</b>	17.6	17.1	17.4	11.3	11.1	11.2	7.2	6.2	6.7	7.1	6.5	7.0
<b>30</b>	17.9	17.1	17.4	11.6	11.1	11.4	6.2	5.4	5.7	6.5	3.7	5.4
<b>31</b>	---	---	---	---	---	---	5.8	5.4	5.6	3.7	3.1	3.2
<b>Month</b>	---	---	---	---	---	---	12.7	5.4	8.7	9.0	2.0	4.8

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

**TEMPERATURE, WATER, DEGREES CELSIUS, TOP  
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

<b>Day</b>	<b>Max</b>	<b>Min</b>	<b>Mean</b>	<b>Max</b>	<b>Min</b>	<b>Mean</b>	<b>Max</b>	<b>Min</b>	<b>Mean</b>	<b>Max</b>	<b>Min</b>	<b>Mean</b>
	<b>February</b>			<b>March</b>			<b>April</b>			<b>May</b>		
<b>1</b>	3.3	3.1	3.2	6.4	6.0	6.2	14.8	13.2	14.0	19.9	18.7	19.3
<b>2</b>	3.4	3.2	3.3	6.7	6.1	6.5	16.0	14.1	15.1	21.0	19.6	20.2
<b>3</b>	4.2	3.3	3.7	6.1	5.0	5.5	16.4	15.0	15.8	21.5	20.4	20.9
<b>4</b>	4.5	4.2	4.4	5.5	4.9	5.2	17.3	15.9	16.6	21.2	20.7	21.0
<b>5</b>	4.8	4.5	4.7	5.9	5.5	5.8	18.1	16.8	17.5	22.2	20.8	21.4
<b>6</b>	5.4	4.7	5.2	6.4	5.9	6.2	18.8	17.7	18.3	23.1	21.6	22.3
<b>7</b>	5.1	4.3	4.6	6.7	6.3	6.6	19.3	18.3	18.8	23.4	22.4	22.9
<b>8</b>	4.3	4.0	4.1	7.5	6.6	7.2	19.4	18.6	19.0	24.3	22.7	23.3
<b>9</b>	4.2	4.0	4.1	8.1	7.4	7.8	19.0	18.3	18.8	23.5	22.4	22.9
<b>10</b>	4.5	4.1	4.3	9.1	8.1	8.7	18.3	16.9	17.5	22.9	21.7	22.3
<b>11</b>	4.1	3.5	3.8	9.6	9.1	9.4	17.2	16.7	16.9	22.4	21.5	21.8
<b>12</b>	4.0	3.8	3.9	10.0	9.6	9.7	17.6	16.7	17.1	23.1	21.6	22.1
<b>13</b>	3.9	3.2	3.6	11.0	9.8	10.4	17.9	17.1	17.5	22.4	21.2	21.8
<b>14</b>	3.2	2.9	3.1	11.1	10.7	11.0	17.5	16.4	17.2	22.6	21.0	21.6
<b>15</b>	3.8	3.1	3.5	10.8	10.5	10.7	16.4	15.8	16.1	23.5	21.9	22.4
<b>16</b>	4.3	3.8	4.1	10.7	10.1	10.4	17.0	16.1	16.5	23.2	22.5	22.8
<b>17</b>	4.2	3.9	4.0	10.2	9.9	10.0	17.7	16.8	17.4	22.8	22.2	22.4
<b>18</b>	4.1	3.8	3.9	10.6	9.9	10.3	17.6	17.0	17.3	22.4	22.0	22.2
<b>19</b>	4.7	4.1	4.4	11.0	10.2	10.6	17.1	16.6	16.8	22.0	21.6	21.8
<b>20</b>	5.1	4.7	4.9	12.0	10.6	11.3	17.0	16.3	16.6	22.3	21.6	21.9
<b>21</b>	5.6	5.1	5.4	12.6	11.4	12.1	16.7	16.3	16.5	23.1	21.9	22.2
<b>22</b>	6.2	5.6	6.0	12.7	12.1	12.4	17.0	16.1	16.5	23.2	21.4	21.8
<b>23</b>	6.8	6.2	6.6	12.3	11.9	12.2	17.1	16.5	16.8	22.4	21.5	21.8
<b>24</b>	6.8	6.4	6.6	12.2	11.4	11.8	17.2	16.7	16.9	22.7	21.8	22.0
<b>25</b>	6.4	5.9	6.2	12.9	11.8	12.3	17.9	17.0	17.4	23.3	22.4	22.7
<b>26</b>	5.9	5.2	5.4	13.6	12.5	13.0	18.9	17.9	18.4	23.2	22.6	22.8
<b>27</b>	5.7	5.2	5.5	13.2	12.2	12.7	19.1	18.7	18.8	23.7	22.8	23.0
<b>28</b>	6.1	5.6	5.9	13.1	11.9	12.4	18.8	18.3	18.6	24.3	23.1	23.5
<b>29</b>	---	---	---	13.2	12.5	12.7	18.7	18.1	18.4	24.4	23.7	24.0
<b>30</b>	---	---	---	13.6	12.9	13.3	19.3	18.2	18.6	25.4	23.6	24.3
<b>31</b>	---	---	---	13.9	13.3	13.5	---	---	---	25.9	24.6	25.1
<b>Month</b>	6.8	2.9	4.6	13.9	4.9	9.9	19.4	13.2	17.3	25.9	18.7	22.3

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

**TEMPERATURE, WATER, DEGREES CELSIUS, TOP  
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

<b>Day</b>	<b>Max</b>	<b>Min</b>	<b>Mean</b>	<b>Max</b>	<b>Min</b>	<b>Mean</b>	<b>Max</b>	<b>Min</b>	<b>Mean</b>	<b>Max</b>	<b>Min</b>	<b>Mean</b>
	<b>June</b>			<b>July</b>			<b>August</b>			<b>September</b>		
<b>1</b>	25.7	25.0	25.3	30.7	29.7	30.2	30.5	29.7	30.0	30.0	29.2	29.4
<b>2</b>	25.7	25.2	25.4	30.5	29.5	29.9	29.9	29.2	29.5	29.8	28.6	29.0
<b>3</b>	26.3	24.9	25.4	30.2	29.1	29.6	30.6	29.3	29.7	28.6	28.0	28.3
<b>4</b>	26.8	25.7	26.2	30.0	29.0	29.3	30.6	29.3	29.8	28.7	27.7	28.0
<b>5</b>	27.7	26.6	27.1	30.4	28.7	29.3	30.6	29.2	29.9	28.3	27.4	27.8
<b>6</b>	28.2	27.1	27.7	30.9	29.0	29.4	31.4	29.6	30.3	28.7	27.7	28.0
<b>7</b>	28.0	27.3	27.7	31.5	29.2	30.1	31.0	29.9	30.3	29.9	27.9	28.3
<b>8</b>	27.9	26.7	27.2	31.6	30.1	30.8	31.1	30.0	30.3	28.3	27.6	28.0
<b>9</b>	27.4	26.5	26.9	31.0	29.8	30.2	31.3	30.0	30.5	29.0	27.5	28.0
<b>10</b>	27.4	26.1	26.6	31.0	30.0	30.4	31.8	30.2	30.7	28.2	27.4	27.7
<b>11</b>	27.9	26.8	27.3	31.7	29.8	30.2	31.9	30.6	31.0	27.6	26.8	27.1
<b>12</b>	28.0	27.0	27.5	31.0	30.3	30.7	31.5	31.0	31.1	27.1	26.2	26.6
<b>13</b>	28.8	27.1	27.6	31.2	30.2	30.5	31.5	30.6	31.1	26.8	25.9	26.1
<b>14</b>	28.5	27.7	28.0	30.7	29.8	30.3	31.8	30.4	30.8	26.7	25.6	25.8
<b>15</b>	29.6	28.3	28.6	31.9	30.1	30.5	31.8	30.4	30.8	27.5	25.6	26.3
<b>16</b>	29.3	28.4	28.8	31.5	30.1	30.7	32.0	30.6	31.2	26.7	26.1	26.4
<b>17</b>	28.8	28.0	28.3	31.3	30.4	30.8	32.0	30.7	31.2	26.9	25.8	26.2
<b>18</b>	29.6	28.6	29.0	31.6	30.1	30.6	32.0	30.8	31.1	26.8	25.8	26.2
<b>19</b>	29.7	29.1	29.4	31.0	29.8	30.4	31.1	30.6	30.9	27.0	25.7	26.1
<b>20</b>	29.4	28.6	28.9	31.8	30.1	30.8	31.7	30.3	30.8	26.8	25.7	26.1
<b>21</b>	29.0	28.2	28.3	32.2	30.8	31.4	31.5	30.4	30.9	26.8	25.9	26.2
<b>22</b>	31.5	28.6	29.2	32.4	30.8	31.4	31.7	30.4	30.8	27.2	26.0	26.4
<b>23</b>	32.0	29.0	29.8	32.8	31.5	32.0	30.9	30.1	30.4	27.5	26.1	26.5
<b>24</b>	31.7	29.8	30.5	32.9	31.1	31.6	30.6	29.3	30.0	27.8	26.4	26.9
<b>25</b>	32.0	30.2	30.8	33.1	31.4	32.1	30.0	29.3	29.6	27.5	26.3	26.8
<b>26</b>	32.3	30.8	31.3	33.4	31.6	32.1	29.8	29.2	29.4	27.2	26.6	26.8
<b>27</b>	33.2	30.4	31.1	32.0	31.5	31.7	30.2	29.3	29.6	26.8	26.2	26.5
<b>28</b>	32.2	30.5	31.2	32.3	31.0	31.5	29.9	29.1	29.3	26.2	25.8	26.0
<b>29</b>	32.5	31.0	31.4	32.5	30.9	31.5	29.9	28.9	29.2	25.9	25.3	25.6
<b>30</b>	31.6	30.4	30.9	32.2	31.1	31.5	29.6	28.8	29.0	25.5	24.1	24.9
<b>31</b>	---	---	---	31.3	30.5	30.8	29.9	29.1	29.4	---	---	---
<b>Month</b>	33.2	24.9	28.4	33.4	28.7	30.7	32.0	28.8	30.3	30.0	24.1	26.9

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

**TEMPERATURE, WATER, DEGREES CELSIUS, BOTTOM  
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

<b>Day</b>	<b>Max</b>	<b>Min</b>	<b>Mean</b>	<b>Max</b>	<b>Min</b>	<b>Mean</b>	<b>Max</b>	<b>Min</b>	<b>Mean</b>	<b>Max</b>	<b>Min</b>	<b>Mean</b>
	<b>October</b>			<b>November</b>			<b>December</b>			<b>January</b>		
<b>1</b>	23.4	22.6	23.1	---	---	---	11.8	11.3	11.7	6.4	5.8	6.2
<b>2</b>	23.3	22.7	23.0	17.8	17.2	17.6	11.4	11.1	11.2	6.3	4.9	5.8
<b>3</b>	23.3	22.8	23.0	---	---	---	12.8	11.4	12.2	4.9	3.5	4.0
<b>4</b>	23.3	22.6	23.0	17.5	16.6	17.1	12.8	12.1	12.5	3.5	3.0	3.2
<b>5</b>	23.1	22.4	22.6	---	---	---	12.1	11.7	12.0	3.1	2.8	3.0
<b>6</b>	22.6	22.1	22.4	---	---	---	11.7	10.2	11.0	2.8	2.6	2.7
<b>7</b>	22.6	22.0	22.3	16.3	15.5	15.9	10.2	9.5	9.8	2.8	2.6	2.7
<b>8</b>	22.4	21.6	21.9	16.0	15.5	15.9	9.7	9.5	9.6	3.3	2.8	3.1
<b>9</b>	22.7	21.6	22.1	16.1	15.7	15.9	11.6	9.6	10.4	3.3	2.6	2.9
<b>10</b>	22.8	22.0	22.2	16.1	15.8	15.9	12.2	11.6	11.9	2.6	2.1	2.4
<b>11</b>	22.9	22.0	22.4	16.1	15.5	15.9	11.6	9.0	10.3	2.2	2.0	2.1
<b>12</b>	22.4	21.5	21.8	15.5	15.0	15.3	9.0	7.9	8.3	2.5	2.0	2.4
<b>13</b>	21.6	21.0	21.4	15.2	14.4	14.9	9.0	7.9	8.3	2.7	2.5	2.6
<b>14</b>	21.6	20.5	21.0	14.4	14.1	14.2	9.8	9.0	9.5	2.7	2.5	2.6
<b>15</b>	20.5	19.8	20.1	14.4	14.2	14.2	10.1	9.8	9.9	3.2	2.6	3.0
<b>16</b>	20.1	19.0	19.7	14.5	14.0	14.3	10.1	9.5	9.9	3.8	3.2	3.5
<b>17</b>	19.1	18.0	18.6	14.6	14.2	14.4	9.5	8.1	8.8	5.4	3.8	4.6
<b>18</b>	18.2	16.7	17.5	14.7	14.3	14.5	8.1	7.4	7.8	6.4	5.4	6.1
<b>19</b>	17.2	16.4	16.8	15.3	14.7	15.0	7.7	7.4	7.6	6.4	6.2	6.3
<b>20</b>	16.8	15.2	16.2	15.6	15.3	15.5	7.6	6.6	7.1	6.7	6.3	6.5
<b>21</b>	16.8	15.2	16.1	15.4	14.4	15.0	6.6	6.1	6.4	6.8	6.4	6.6
<b>22</b>	17.4	15.4	16.5	14.4	13.6	14.0	6.2	6.0	6.1	6.7	6.4	6.6
<b>23</b>	17.8	15.7	16.4	13.8	13.5	13.7	6.2	6.0	6.1	6.6	6.0	6.3
<b>24</b>	18.0	15.7	16.4	14.1	13.8	14.0	6.2	6.0	6.1	6.5	6.0	6.2
<b>25</b>	18.1	17.3	17.7	13.9	13.8	13.9	6.4	6.0	6.1	8.9	6.5	7.7
<b>26</b>	17.6	16.9	17.2	13.8	13.5	13.7	7.9	6.4	7.3	9.0	8.2	8.8
<b>27</b>	16.9	16.8	16.8	13.5	12.5	13.1	8.0	7.8	7.9	8.2	7.2	7.7
<b>28</b>	17.1	16.8	17.0	12.5	11.3	11.8	7.8	7.3	7.6	7.2	7.0	7.1
<b>29</b>	17.4	17.0	17.3	11.4	11.1	11.2	7.3	6.2	6.7	7.1	6.5	7.0
<b>30</b>	17.6	17.1	17.3	11.7	11.1	11.4	6.2	5.4	5.8	6.5	3.7	5.4
<b>31</b>	---	---	---	---	---	---	5.8	5.4	5.6	3.7	3.1	3.2
<b>Month</b>	---	---	---	---	---	---	12.8	5.4	8.8	9.0	2.0	4.8

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

**TEMPERATURE, WATER, DEGREES CELSIUS, BOTTOM  
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	February			March			April			May		
<b>1</b>	3.3	3.1	3.2	6.3	5.9	6.1	14.8	13.4	14.1	19.9	18.7	19.2
<b>2</b>	3.5	3.2	3.4	6.6	6.0	6.4	15.9	14.2	15.1	20.8	19.6	20.1
<b>3</b>	4.2	3.4	3.7	6.0	4.9	5.4	16.4	15.2	15.8	21.3	20.4	20.8
<b>4</b>	---	---	---	5.6	4.9	5.2	17.2	16.0	16.7	21.1	20.8	21.0
<b>5</b>	---	---	---	6.0	5.6	5.9	18.0	16.8	17.5	22.1	20.8	21.4
<b>6</b>	---	---	---	6.5	6.0	6.3	18.8	17.8	18.3	22.9	21.6	22.2
<b>7</b>	---	---	---	6.8	6.5	6.7	19.2	18.4	18.8	23.4	22.4	22.9
<b>8</b>	---	---	---	7.6	6.8	7.3	19.3	18.7	19.1	23.5	22.7	23.1
<b>9</b>	---	---	---	8.2	7.6	8.0	19.1	18.4	18.9	23.2	22.3	22.8
<b>10</b>	4.3	4.0	4.2	9.2	8.2	8.8	18.4	17.0	17.6	22.7	21.6	22.3
<b>11</b>	4.0	3.4	3.6	9.7	9.2	9.5	17.0	16.8	16.9	22.4	21.4	21.8
<b>12</b>	3.9	3.7	3.8	10.0	9.7	9.8	17.5	16.8	17.2	22.5	21.6	21.9
<b>13</b>	3.8	3.1	3.5	11.1	9.9	10.5	17.8	17.2	17.5	22.3	21.2	21.8
<b>14</b>	3.1	2.8	2.9	11.2	10.8	11.1	17.6	16.5	17.3	21.9	21.0	21.4
<b>15</b>	3.7	3.0	3.3	10.9	10.6	10.8	16.5	15.9	16.2	22.7	21.8	22.1
<b>16</b>	4.1	3.7	4.0	10.8	10.2	10.5	16.9	16.1	16.5	23.0	22.5	22.7
<b>17</b>	4.1	3.8	3.9	10.2	10.0	10.1	17.7	16.9	17.4	22.8	22.2	22.4
<b>18</b>	4.0	3.7	3.8	10.7	10.0	10.5	17.6	17.0	17.3	22.4	22.0	22.2
<b>19</b>	4.6	4.0	4.3	11.0	10.3	10.7	17.0	16.6	16.8	22.0	21.5	21.8
<b>20</b>	5.0	4.6	4.8	12.0	10.7	11.4	16.9	16.3	16.6	22.2	21.6	21.8
<b>21</b>	5.5	5.0	5.2	12.6	11.6	12.2	16.7	16.3	16.6	22.3	21.8	22.1
<b>22</b>	6.1	5.5	5.8	12.8	12.2	12.5	16.9	16.1	16.5	22.1	21.4	21.7
<b>23</b>	6.7	6.1	6.5	12.4	12.0	12.3	17.1	16.5	16.8	22.0	21.5	21.7
<b>24</b>	6.7	6.3	6.5	12.2	11.6	11.9	17.3	16.7	16.9	22.4	21.7	21.9
<b>25</b>	6.3	5.8	6.1	12.9	11.9	12.4	17.9	17.0	17.4	23.0	22.4	22.6
<b>26</b>	5.8	5.1	5.3	13.6	12.6	13.1	18.8	17.9	18.3	23.1	22.5	22.7
<b>27</b>	5.6	5.1	5.4	13.3	12.3	12.8	19.0	18.7	18.8	23.2	22.8	22.9
<b>28</b>	6.0	5.5	5.8	13.0	12.0	12.5	18.8	18.3	18.6	23.9	22.9	23.3
<b>29</b>	---	---	---	13.3	12.6	12.8	18.5	18.1	18.3	24.1	23.6	23.9
<b>30</b>	---	---	---	13.7	13.0	13.4	19.0	18.1	18.5	24.8	23.6	24.1
<b>31</b>	---	---	---	13.9	13.4	13.6	---	---	---	25.6	24.5	24.9
<b>Month</b>	---	---	---	13.9	4.9	10.0	19.3	13.4	17.3	25.6	18.7	22.2

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

**TEMPERATURE, WATER, DEGREES CELSIUS, BOTTOM**  
**WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	June			July			August			September		
<b>1</b>	25.6	25.0	25.3	30.5	29.5	30.1	30.4	29.4	29.8	29.4	29.0	29.2
<b>2</b>	25.6	25.2	25.4	30.1	29.2	29.7	29.6	28.9	29.3	29.3	28.7	29.0
<b>3</b>	25.8	24.9	25.2	30.1	28.8	29.2	29.6	29.0	29.3	28.7	28.0	28.3
<b>4</b>	26.8	25.6	26.2	29.5	28.8	29.0	29.7	29.2	29.3	28.2	27.6	27.9
<b>5</b>	27.6	26.6	27.0	29.1	28.5	28.7	29.6	29.1	29.3	28.0	27.3	27.6
<b>6</b>	28.0	27.1	27.6	29.2	28.0	28.7	30.2	29.4	29.8	28.5	27.6	27.9
<b>7</b>	28.0	27.4	27.7	29.7	28.0	28.9	30.5	29.8	30.1	28.4	27.8	28.1
<b>8</b>	27.6	26.7	27.1	30.1	29.6	29.8	30.3	29.9	30.1	28.3	27.7	27.9
<b>9</b>	27.5	26.4	27.0	30.1	29.5	29.8	30.6	30.0	30.2	28.1	27.4	27.8
<b>10</b>	27.4	26.1	26.5	30.3	29.8	30.0	30.6	30.2	30.4	27.9	27.3	27.6
<b>11</b>	27.9	26.8	27.3	30.1	29.6	29.8	30.8	30.1	30.5	27.7	26.8	27.1
<b>12</b>	27.8	27.0	27.4	30.4	29.8	30.0	31.3	30.6	31.0	27.1	26.2	26.7
<b>13</b>	28.0	27.1	27.5	30.5	30.0	30.2	31.4	30.4	31.1	26.3	25.9	26.0
<b>14</b>	28.5	27.7	28.0	30.3	29.6	29.9	30.8	30.3	30.6	26.1	25.4	25.7
<b>15</b>	29.1	28.3	28.5	30.2	29.7	30.0	30.9	30.2	30.5	26.4	25.5	25.9
<b>16</b>	29.3	28.4	28.8	30.5	29.9	30.1	30.8	30.5	30.6	26.6	26.1	26.4
<b>17</b>	28.8	28.0	28.3	30.9	30.2	30.5	30.8	30.0	30.6	26.3	25.8	26.0
<b>18</b>	29.6	28.5	29.0	30.7	29.8	30.1	30.8	29.3	29.9	26.6	25.7	26.1
<b>19</b>	29.6	29.0	29.4	30.4	29.6	29.9	31.0	29.3	30.6	26.2	25.6	25.9
<b>20</b>	29.3	28.6	28.9	30.7	29.8	30.0	31.0	30.3	30.6	26.5	25.6	25.9
<b>21</b>	28.7	28.1	28.3	30.8	30.2	30.6	31.0	30.3	30.6	26.2	25.7	25.9
<b>22</b>	28.7	28.3	28.5	31.1	30.1	30.7	30.9	30.3	30.6	26.8	26.0	26.1
<b>23</b>	29.4	28.6	29.1	31.6	30.2	31.0	30.7	30.0	30.3	26.7	26.1	26.3
<b>24</b>	29.9	29.2	29.7	31.6	30.0	30.6	30.6	29.4	30.0	27.0	26.4	26.6
<b>25</b>	30.6	29.6	30.0	32.0	30.9	31.4	29.9	29.1	29.4	27.1	26.2	26.6
<b>26</b>	30.9	30.6	30.7	32.0	31.1	31.6	29.5	29.1	29.3	26.9	26.5	26.7
<b>27</b>	31.1	30.4	30.6	31.9	31.2	31.5	29.5	29.2	29.4	26.8	26.0	26.5
<b>28</b>	31.4	30.4	30.7	31.5	30.7	31.1	29.5	28.9	29.2	26.2	25.8	26.0
<b>29</b>	31.5	30.6	31.0	31.6	30.7	31.1	29.4	28.8	29.1	25.9	25.2	25.5
<b>30</b>	31.6	30.3	30.9	31.7	30.9	31.3	29.0	28.6	28.9	25.5	24.1	24.8
<b>31</b>	---	---	---	31.2	30.4	30.6	29.2	29.0	29.1	---	---	---
<b>Month</b>	31.6	24.9	28.3	32.0	28.0	30.2	31.4	28.6	30.0	29.4	24.1	26.8

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

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER, TOP  
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	October			November			December			January		
1	---	---	---	---	---	---	6.2	5.8	6.0	10.0	9.4	9.7
2	---	---	---	8.1	6.3	7.0	6.7	5.9	6.2	10.2	9.4	9.6
3	---	---	---	---	---	---	6.9	6.3	6.7	10.7	10.2	10.3
4	---	---	---	---	---	---	6.3	5.5	5.8	10.8	10.6	10.7
5	---	---	---	---	---	---	6.3	5.6	5.9	11.1	10.8	10.9
6	---	---	---	---	---	---	6.4	6.0	6.2	11.4	11.1	11.2
7	---	---	---	7.2	6.8	7.0	6.6	6.4	6.5	11.6	11.1	11.3
8	---	---	---	7.4	7.0	7.2	7.1	6.6	6.9	11.6	11.1	11.3
9	7.6	6.3	6.8	7.9	7.2	7.5	7.6	7.0	7.3	11.6	11.2	11.4
10	7.4	6.9	7.2	8.0	7.3	7.6	7.6	6.1	6.8	11.9	11.5	11.7
11	7.3	6.8	6.9	9.4	7.6	8.1	6.7	6.1	6.3	12.1	11.7	11.9
12	7.0	6.5	6.7	9.3	8.8	9.1	7.4	6.7	7.1	12.3	11.7	12.0
13	7.4	6.4	6.8	9.0	6.7	7.8	7.7	7.3	7.5	12.3	11.8	12.0
14	7.5	6.5	7.2	6.7	5.6	5.8	7.4	7.1	7.2	12.4	11.8	12.1
15	7.3	7.0	7.2	6.1	5.7	5.9	7.3	7.0	7.2	12.6	11.8	12.1
16	7.6	7.0	7.1	5.9	5.1	5.6	7.3	7.0	7.2	12.5	11.7	12.1
17	7.6	7.3	7.4	5.4	4.8	5.1	7.8	7.3	7.6	12.4	11.4	11.9
18	7.9	7.5	7.7	5.5	4.9	5.1	8.3	7.8	8.0	11.7	10.6	11.2
19	8.2	7.8	7.9	5.4	4.5	5.0	8.6	7.8	8.3	11.2	10.4	10.8
20	8.6	7.8	8.0	4.7	4.3	4.5	8.6	8.1	8.2	11.2	10.3	10.7
21	8.3	7.6	7.9	4.8	4.4	4.6	8.8	8.6	8.7	11.1	10.3	10.7
22	8.0	7.4	7.8	5.5	4.6	5.1	9.1	8.8	8.9	10.7	10.0	10.3
23	8.2	7.4	7.8	5.7	5.3	5.5	9.2	8.9	9.0	10.2	9.8	9.9
24	8.5	7.7	8.1	5.4	4.8	5.1	9.3	9.0	9.2	10.7	10.2	10.5
25	8.4	8.0	8.2	4.9	4.9	4.9	9.5	9.3	9.4	10.9	9.5	10.4
26	8.6	7.9	8.2	5.0	4.6	4.8	9.5	8.8	9.2	9.8	9.0	9.4
27	8.6	7.8	8.3	5.3	4.5	5.0	8.9	8.3	8.6	9.8	9.2	9.5
28	8.4	7.8	8.2	5.9	5.3	5.6	8.7	8.5	8.6	10.3	9.7	9.9
29	8.4	7.9	8.1	6.1	5.9	6.0	9.2	8.6	8.9	10.6	9.6	10.1
30	8.3	7.9	8.1	6.2	6.0	6.1	9.7	9.2	9.4	10.7	9.9	10.5
31	---	---	---	---	---	---	10.0	9.7	9.8	11.4	10.5	10.8
Month	---	---	---	---	---	---	10.0	5.5	7.7	12.6	9.0	10.9

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

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER, TOP  
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	February			March			April			May		
1	11.8	11.4	11.5	11.9	11.1	11.5	8.4	7.4	8.0	7.4	7.2	7.3
2	12.2	11.6	11.9	12.0	11.2	11.5	7.9	7.2	7.6	7.5	7.3	7.4
3	11.8	11.4	11.6	11.4	10.5	10.8	7.7	6.8	7.3	7.6	7.1	7.4
4	12.1	11.4	11.8	11.1	10.6	10.8	7.5	6.7	7.1	7.1	6.6	7.0
5	12.1	11.6	11.9	11.6	10.9	11.2	7.5	6.3	6.9	6.7	6.3	6.5
6	11.6	10.7	11.0	11.7	10.9	11.3	7.2	6.1	6.7	6.5	6.2	6.3
7	11.2	10.6	10.8	11.7	10.9	11.3	7.0	6.0	6.5	6.6	6.1	6.3
8	11.6	11.1	11.3	11.8	10.8	11.3	6.9	6.0	6.5	7.2	6.3	6.7
9	11.9	11.3	11.6	11.5	10.6	11.0	6.9	5.0	6.3	7.3	6.5	6.8
10	11.9	11.0	11.4	11.4	10.3	10.8	5.2	4.8	5.0	7.6	6.6	6.9
11	12.0	11.6	11.7	11.1	9.8	10.4	6.2	5.1	5.8	7.3	6.7	6.9
12	12.2	11.6	11.9	10.2	9.4	9.8	6.9	5.9	6.4	7.7	6.9	7.2
13	12.4	11.6	12.0	9.6	8.4	9.0	6.9	5.8	6.3	7.4	7.0	7.2
14	12.3	11.9	12.1	9.6	8.6	9.1	7.2	5.6	6.2	7.6	7.0	7.2
15	12.8	12.1	12.4	9.4	8.7	9.0	6.3	5.6	6.1	7.6	7.0	7.3
16	12.6	11.8	12.2	9.4	8.5	9.0	7.5	6.3	6.9	7.7	7.0	7.3
17	12.7	12.1	12.4	9.1	8.7	8.9	7.6	6.6	7.1	7.4	6.9	7.1
18	12.8	12.1	12.4	9.8	8.8	9.4	7.2	6.3	6.8	7.2	6.9	7.0
19	12.8	12.1	12.4	9.6	9.0	9.3	7.4	6.4	6.9	6.9	6.7	6.8
20	12.8	11.9	12.4	10.0	9.0	9.5	7.3	6.6	7.0	6.8	6.3	6.5
21	12.8	11.9	12.3	9.8	8.7	9.3	7.3	6.5	6.9	6.7	6.3	6.5
22	12.7	11.6	12.1	9.5	8.7	9.1	6.5	6.0	6.2	7.3	6.5	6.6
23	12.0	10.9	11.4	9.1	8.7	8.8	6.6	6.0	6.3	7.0	6.4	6.6
24	11.6	10.8	11.2	9.6	8.7	9.2	6.7	6.2	6.5	6.9	6.1	6.4
25	11.3	10.8	11.0	9.8	9.0	9.4	7.1	6.4	6.8	7.0	6.2	6.5
26	11.6	11.1	11.3	9.7	9.0	9.4	7.0	6.6	6.7	7.0	6.6	6.8
27	11.9	11.1	11.5	9.4	8.5	8.9	6.7	6.3	6.5	6.9	6.5	6.7
28	12.0	11.1	11.5	9.2	8.5	8.9	6.8	6.2	6.5	7.0	6.5	6.7
29	---	---	---	9.3	8.8	9.1	7.0	6.6	6.8	6.7	6.3	6.5
30	---	---	---	8.8	7.5	8.0	7.3	6.8	7.1	6.9	6.3	6.5
31	---	---	---	8.4	7.5	8.0	---	---	---	7.0	6.4	6.7
Month	12.8	10.6	11.8	12.0	7.5	9.8	8.4	4.8	6.7	7.7	6.1	6.8



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

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER, TOP  
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	June			July			August			September		
1	6.8	6.4	6.6	6.4	4.9	5.4	6.9	4.6	6.3	10.6	2.2	7.3
2	6.7	6.2	6.4	7.1	5.0	5.7	7.2	4.9	6.3	8.5	3.7	6.5
3	6.8	6.2	6.4	8.2	5.2	6.3	9.3	5.5	6.8	6.6	5.8	6.2
4	6.6	6.0	6.3	8.5	4.8	6.2	9.1	5.8	7.0	7.2	5.6	6.1
5	6.7	6.1	6.4	8.3	4.4	6.3	8.0	5.3	6.9	7.6	5.3	6.1
6	7.0	6.3	6.6	8.6	1.6	5.4	8.6	6.0	6.8	8.3	5.6	6.4
7	6.9	6.1	6.5	8.9	2.5	5.7	8.7	5.8	6.7	10.1	5.5	6.6
8	6.9	5.8	6.2	10.3	3.1	7.4	8.8	6.1	6.9	7.4	6.0	6.4
9	6.7	5.9	6.3	8.2	5.6	6.3	9.6	6.4	7.5	8.3	5.8	6.6
10	7.1	6.3	6.5	7.9	5.9	6.5	9.7	6.7	7.5	7.9	5.8	6.5
11	6.6	6.2	6.3	9.5	5.2	6.3	9.3	5.8	7.3	7.4	6.0	6.3
12	6.8	6.1	6.4	8.6	5.4	6.9	9.1	6.4	7.3	6.5	5.4	5.9
13	7.1	6.3	6.6	6.8	5.1	5.8	7.5	5.8	6.7	7.2	5.1	5.7
14	6.5	6.2	6.3	6.6	5.1	5.8	7.5	5.4	6.4	7.2	5.4	6.0
15	7.2	5.8	6.1	8.4	5.1	5.9	9.2	5.4	6.8	9.0	5.1	6.5
16	6.8	5.9	6.2	7.9	4.6	6.1	9.2	5.4	7.4	7.3	5.9	6.6
17	6.3	5.8	6.0	7.2	5.3	6.4	9.3	4.4	7.3	7.1	6.2	6.6
18	6.5	5.9	6.2	7.8	5.6	6.4	7.8	2.8	6.5	7.2	5.9	6.4
19	6.5	5.8	6.2	7.8	6.0	6.7	6.5	0.1	5.4	8.1	6.2	6.8
20	6.6	5.8	6.2	8.5	5.7	6.9	8.9	5.7	6.7	7.4	6.2	6.6
21	6.5	5.5	5.8	8.6	5.1	6.9	9.2	6.0	7.1	7.3	5.5	6.2
22	9.2	5.4	6.6	10.5	4.0	6.8	8.8	6.0	7.3	7.1	5.4	6.3
23	10.2	5.6	6.7	9.7	5.5	7.4	8.2	5.8	6.9	7.6	5.3	6.2
24	9.0	5.2	6.8	8.1	1.5	5.4	8.2	6.3	7.1	7.1	6.0	6.4
25	9.2	5.5	6.7	8.1	5.3	6.2	9.5	5.8	6.7	7.1	6.1	6.6
26	8.6	5.6	6.7	9.2	2.4	5.9	9.0	5.3	6.6	7.7	6.2	6.7
27	10.0	5.4	6.5	6.8	4.3	5.4	9.7	4.9	7.3	6.7	5.6	6.1
28	7.8	5.8	6.4	6.3	3.7	4.8	9.1	6.3	7.2	6.2	5.6	5.9
29	7.4	5.0	6.1	5.8	1.3	4.3	10.0	6.8	7.5	6.0	4.8	5.5
30	6.3	4.8	5.3	8.4	4.7	6.4	10.0	3.9	7.0	6.4	5.7	6.0
31	---	---	---	7.1	5.9	6.5	10.0	4.6	7.6	---	---	---
Month	10.2	4.8	6.3	10.5	1.3	6.1	10.0	0.1	6.9	10.6	2.2	6.3

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

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER, BOTTOM  
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	October			November			December			January		
1	---	---	---	---	---	---	6.4	5.9	6.1	10.0	9.4	9.7
2	---	---	---	8.4	6.3	7.2	6.7	6.0	6.3	10.2	9.5	9.6
3	---	---	---	---	---	---	7.0	6.3	6.7	10.7	10.2	10.3
4	---	---	---	8.1	6.2	7.1	6.3	5.4	5.8	10.9	10.6	10.7
5	---	---	---	---	---	---	6.3	5.2	5.7	11.1	10.8	11.0
6	---	---	---	---	---	---	6.3	5.9	6.2	11.4	11.1	11.2
7	---	---	---	7.2	6.6	7.0	6.5	6.2	6.4	11.6	11.2	11.4
8	---	---	---	7.3	6.9	7.1	6.9	6.5	6.6	11.8	11.2	11.5
9	7.6	6.1	6.6	7.6	6.9	7.4	7.5	6.9	7.3	11.8	11.3	11.6
10	7.4	6.0	6.6	7.6	7.2	7.4	7.5	6.1	6.8	12.0	11.6	11.8
11	7.3	6.5	7.0	9.5	7.4	8.1	6.7	6.2	6.3	12.2	11.8	12.0
12	7.2	6.3	6.8	9.4	8.9	9.2	7.4	6.7	7.1	12.4	11.9	12.1
13	7.1	6.4	6.8	9.1	6.7	7.9	7.7	7.4	7.5	12.5	11.9	12.1
14	7.6	6.4	7.3	6.7	5.6	5.9	7.4	7.1	7.2	12.6	12.0	12.2
15	7.5	7.0	7.2	6.2	5.8	6.0	7.4	7.1	7.2	12.6	11.9	12.2
16	7.7	7.0	7.3	6.0	5.2	5.6	7.3	7.0	7.2	12.6	11.8	12.1
17	7.9	7.4	7.6	5.3	4.8	5.1	7.8	7.3	7.6	12.5	11.5	12.0
18	8.3	7.6	7.9	5.4	4.9	5.2	8.4	7.8	8.0	11.8	10.7	11.2
19	8.1	7.6	7.9	5.4	4.5	5.0	8.7	7.8	8.3	11.3	10.5	10.8
20	9.2	7.7	8.3	4.8	4.4	4.6	8.6	8.1	8.3	11.2	10.3	10.8
21	9.2	7.9	8.4	5.0	4.5	4.7	8.9	8.6	8.7	11.3	10.3	10.7
22	9.0	7.8	8.2	5.7	4.8	5.2	9.1	8.9	9.0	10.8	10.1	10.4
23	8.5	7.5	8.0	5.8	5.4	5.6	9.2	8.9	9.1	10.2	9.9	10.0
24	8.6	8.0	8.4	5.4	4.9	5.1	9.3	9.1	9.2	10.8	10.2	10.6
25	9.0	8.0	8.5	5.0	4.9	4.9	9.5	9.3	9.4	11.0	9.6	10.4
26	8.8	8.2	8.5	5.0	4.7	4.9	9.6	8.8	9.2	9.8	9.0	9.4
27	8.8	8.1	8.5	5.4	4.6	5.0	8.9	8.4	8.6	9.8	9.3	9.6
28	8.6	8.1	8.3	6.0	5.4	5.7	8.8	8.5	8.6	10.3	9.7	9.9
29	8.6	7.8	8.3	6.3	6.0	6.1	9.3	8.7	8.9	10.6	9.6	10.1
30	8.6	7.9	8.2	6.3	6.1	6.2	9.7	9.2	9.4	10.6	9.9	10.4
31	---	---	---	---	---	---	10.1	9.7	9.8	11.5	10.4	10.7
Month	---	---	---	---	---	---	10.1	5.2	7.7	12.6	9.0	10.9

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

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER, BOTTOM  
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	February			March			April			May		
1	11.8	11.4	11.6	11.7	10.9	11.3	8.2	7.3	7.8	7.4	7.2	7.3
2	12.1	11.6	11.9	11.8	11.0	11.3	7.7	7.0	7.4	7.4	7.2	7.3
3	11.8	11.3	11.5	11.2	10.3	10.7	7.6	6.6	7.1	7.4	7.0	7.3
4	---	---	---	10.9	10.4	10.6	7.4	6.5	6.9	7.1	6.5	6.9
5	---	---	---	11.4	10.8	11.1	7.4	6.1	6.7	6.6	6.2	6.4
6	---	---	---	11.5	10.8	11.1	7.1	5.9	6.5	6.3	6.0	6.2
7	---	---	---	11.6	10.7	11.1	6.9	5.9	6.3	6.5	6.0	6.2
8	---	---	---	11.6	10.6	11.1	6.8	5.9	6.3	6.8	6.2	6.5
9	---	---	---	11.3	10.4	10.8	6.8	4.9	6.1	7.1	6.4	6.7
10	11.5	10.6	11.0	11.2	10.1	10.7	5.0	4.7	4.8	7.3	6.4	6.8
11	11.7	11.2	11.3	10.9	9.6	10.2	6.0	5.0	5.7	7.1	6.6	6.8
12	11.9	11.3	11.6	10.1	9.2	9.6	6.8	5.8	6.2	7.1	6.5	6.8
13	12.1	11.3	11.7	9.4	8.3	8.8	6.7	5.7	6.1	7.2	6.9	7.1
14	12.0	11.6	11.7	9.5	8.4	8.9	7.0	5.4	6.1	7.2	6.6	6.9
15	12.4	11.8	12.1	9.3	8.6	8.9	6.3	5.5	6.0	7.2	6.8	7.0
16	12.3	11.5	11.9	9.2	8.4	8.8	7.4	6.2	6.9	7.3	6.8	7.1
17	12.3	11.7	12.0	9.0	8.5	8.7	7.5	6.6	7.0	7.2	6.8	7.0
18	12.4	11.8	12.1	9.7	8.6	9.2	7.2	6.3	6.7	7.0	6.7	6.8
19	12.5	11.7	12.1	9.4	8.8	9.1	7.3	6.3	6.9	6.8	6.5	6.6
20	12.5	11.6	12.0	9.8	8.8	9.3	7.3	6.6	6.9	6.6	6.0	6.3
21	12.4	11.5	12.0	9.6	8.6	9.1	7.3	6.4	6.9	6.4	6.0	6.2
22	12.3	11.3	11.8	9.4	8.6	9.0	6.4	5.9	6.1	6.5	6.2	6.4
23	11.7	10.6	11.1	8.9	8.5	8.7	6.5	5.9	6.2	6.7	6.2	6.4
24	11.3	10.5	10.9	9.4	8.5	9.0	6.7	6.1	6.4	6.4	5.9	6.2
25	11.1	10.5	10.7	9.6	8.9	9.2	7.1	6.4	6.7	6.6	6.0	6.2
26	11.3	10.8	11.0	9.5	8.9	9.2	6.9	6.5	6.6	6.7	6.4	6.5
27	11.7	10.9	11.3	9.3	8.3	8.7	6.7	6.1	6.4	6.6	6.0	6.4
28	11.8	10.9	11.3	9.1	8.4	8.8	6.7	6.2	6.5	6.5	6.0	6.3
29	---	---	---	9.2	8.7	8.9	6.9	6.6	6.7	6.4	6.0	6.2
30	---	---	---	8.7	7.3	7.8	7.2	6.8	7.1	6.3	5.9	6.1
31	---	---	---	8.2	7.3	7.8	---	---	---	6.7	6.0	6.3
Month	---	---	---	11.8	7.3	9.6	8.2	4.7	6.5	7.4	5.9	6.6

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

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER, BOTTOM  
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	June			July			August			September		
1	6.6	6.1	6.4	5.9	4.4	5.1	6.7	4.5	6.1	6.5	2.0	5.4
2	6.5	6.0	6.2	6.4	4.1	5.0	6.7	4.8	5.8	7.2	5.0	6.0
3	6.4	6.0	6.2	6.2	4.3	5.0	6.5	4.4	5.4	6.2	5.4	5.9
4	6.4	5.9	6.2	6.0	4.3	5.1	6.5	3.9	5.0	5.8	4.8	5.3
5	6.5	5.8	6.2	6.1	4.1	5.2	6.8	4.5	5.7	6.0	4.5	5.2
6	6.6	5.8	6.3	6.1	2.9	4.6	6.4	4.5	5.6	6.1	4.7	5.5
7	6.6	5.8	6.2	4.8	0.6	3.3	7.5	4.8	6.0	6.3	4.8	5.5
8	6.4	5.6	5.9	6.4	2.0	4.0	7.2	5.7	6.3	6.2	5.1	5.7
9	6.4	5.8	6.1	6.4	4.8	5.5	6.7	5.2	6.2	6.4	4.8	5.7
10	6.4	5.9	6.2	6.5	3.8	5.6	7.0	5.8	6.3	6.6	5.2	5.9
11	6.2	6.0	6.1	6.6	4.5	5.4	7.1	4.4	5.6	6.4	4.0	5.6
12	6.5	6.0	6.2	5.7	2.9	4.2	7.8	4.6	6.0	6.2	4.8	5.7
13	6.6	6.2	6.4	5.8	4.4	5.2	6.7	4.6	5.9	6.3	5.3	5.7
14	6.5	6.0	6.2	5.6	3.4	5.0	6.3	4.9	5.5	6.2	3.5	5.3
15	6.2	5.5	5.9	5.4	3.5	4.8	6.2	3.9	5.2	5.6	2.6	4.8
16	6.5	5.7	6.0	6.0	3.7	4.9	6.1	3.5	5.0	7.2	5.5	6.3
17	6.1	5.8	5.9	6.6	4.4	5.9	6.2	1.8	4.8	7.1	5.5	6.2
18	6.5	5.9	6.1	6.4	4.6	5.6	5.4	1.6	2.7	7.0	5.6	6.1
19	6.5	5.9	6.2	6.3	5.1	5.8	5.4	1.7	4.2	6.8	5.9	6.2
20	6.4	5.8	6.2	6.5	4.5	5.5	5.6	4.6	5.1	6.8	5.8	6.3
21	6.1	5.4	5.7	6.1	3.5	5.2	5.5	4.0	4.9	6.5	5.2	5.9
22	5.5	4.4	5.2	6.2	2.5	4.6	6.6	3.5	5.3	6.7	5.1	5.8
23	5.7	4.5	5.2	6.2	1.1	4.0	6.1	3.5	5.0	6.6	5.3	6.0
24	5.8	3.3	4.9	6.1	0.6	2.8	6.6	4.0	5.4	7.0	5.5	6.1
25	5.1	2.7	4.0	6.4	2.5	5.1	6.4	2.4	4.5	7.1	5.9	6.4
26	5.6	3.8	4.6	6.1	2.5	4.8	5.6	0.9	4.1	7.0	6.2	6.5
27	6.4	4.0	5.1	6.7	2.6	5.0	6.3	2.8	4.9	6.7	5.6	6.2
28	6.4	4.9	5.6	6.7	1.6	4.8	6.3	5.1	5.5	6.1	5.0	5.8
29	6.4	3.8	5.1	6.3	0.4	4.4	7.1	4.8	5.7	6.0	4.8	5.5
30	6.2	4.4	5.1	7.4	1.2	5.3	5.9	2.8	5.3	6.3	5.6	6.0
31	---	---	---	6.7	4.4	5.6	6.1	1.8	5.0	---	---	---
Month	6.6	2.7	5.8	7.4	0.4	4.9	7.8	0.9	5.3	7.2	2.0	5.8

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

DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION, TOP  
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	October			November			December			January		
1	---	---	---	---	---	---	57	53	55	81	76	78
2	---	---	---	85	66	74	61	54	57	80	76	77
3	---	---	---	---	---	---	64	60	62	81	77	79
4	---	---	---	---	---	---	60	51	54	81	79	80
5	---	---	---	---	---	---	58	52	54	83	80	81
6	---	---	---	---	---	---	57	55	56	84	82	83
7	---	---	---	74	69	72	58	56	57	86	82	83
8	---	---	---	76	71	73	62	58	60	86	83	84
9	89	72	79	81	73	76	70	62	65	87	83	85
10	87	80	84	82	74	77	70	56	63	88	84	86
11	85	78	80	95	77	82	58	54	56	88	85	86
12	80	74	77	93	88	91	62	58	60	90	86	88
13	85	73	78	90	66	78	65	62	64	91	87	88
14	84	74	81	66	55	57	65	62	63	91	87	89
15	82	78	80	60	56	58	65	62	64	94	88	90
16	83	77	78	58	50	54	65	62	64	94	89	91
17	82	79	80	53	47	50	66	64	65	95	90	93
18	83	79	81	54	48	50	69	66	67	94	86	90
19	85	80	82	53	45	49	72	65	69	91	84	88
20	87	80	82	47	43	45	70	68	68	91	84	87
21	88	78	81	47	44	46	71	70	70	91	84	87
22	84	77	81	53	45	49	73	71	72	87	82	84
23	86	77	82	55	51	53	74	72	73	82	79	80
24	91	81	86	52	47	50	75	72	74	86	82	85
25	90	85	88	48	47	48	76	75	75	91	82	87
26	89	82	85	48	44	46	78	74	76	85	77	81
27	89	81	86	50	43	47	75	70	72	83	78	80
28	87	81	85	54	50	52	73	71	72	85	80	82
29	88	82	85	56	54	55	74	71	73	88	79	83
30	88	82	85	57	55	56	78	73	75	86	79	83
31	---	---	---	---	---	---	80	77	78	85	79	81
Month	---	---	---	---	---	---	80	51	66	95	76	84

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

DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION, TOP  
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	February			March			April			May		
1	89	85	86	96	90	93	82	73	78	81	78	80
2	92	87	89	98	90	94	80	71	76	84	80	82
3	91	87	88	92	82	86	78	69	74	86	80	83
4	93	88	91	88	84	85	78	69	73	80	74	78
5	94	90	92	93	87	90	78	66	72	75	70	74
6	91	84	87	94	88	92	77	65	71	76	71	73
7	86	82	83	96	89	93	75	64	70	78	71	74
8	89	85	87	98	90	94	75	64	70	86	74	79
9	91	86	89	97	89	93	75	53	67	86	76	80
10	91	85	88	98	89	93	54	51	52	89	75	80
11	92	88	89	97	86	91	64	53	60	83	76	79
12	93	88	91	90	83	87	72	61	66	90	79	83
13	95	87	91	85	76	80	72	61	65	85	80	82
14	92	89	90	87	78	83	75	57	65	88	79	83
15	96	92	94	85	78	82	64	57	62	89	80	84
16	97	91	94	85	76	81	77	64	71	90	81	85
17	98	92	95	81	77	79	79	68	74	86	80	83
18	98	93	95	88	78	84	75	66	71	83	79	81
19	99	94	96	86	80	83	76	66	71	79	76	78
20	100	93	97	92	81	87	75	68	72	78	72	74
21	101	95	97	92	81	86	75	66	71	77	72	74
22	102	93	98	90	81	86	66	62	64	85	75	76
23	98	89	93	85	81	82	69	62	65	81	73	75
24	95	88	92	90	80	86	70	64	67	80	70	73
25	92	87	89	93	83	88	75	67	71	82	72	76
26	93	88	89	94	85	89	74	70	72	82	77	79
27	95	88	91	90	79	84	72	68	70	82	76	79
28	96	89	92	88	79	84	73	66	70	84	76	79
29	---	---	---	89	84	86	75	70	73	80	75	77
30	---	---	---	84	72	77	79	73	77	84	75	78
31	---	---	---	81	72	77	---	---	---	86	77	81
Month	102	82	91	98	72	86	82	51	69	90	70	79

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

DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION, TOP  
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	June			July			August			September		
1	84	78	81	86	65	72	91	61	83	141	29	96
2	82	76	79	95	66	75	95	64	83	113	48	85
3	85	75	79	109	68	83	125	72	90	86	74	81
4	83	74	79	113	63	81	122	76	93	94	71	78
5	85	76	80	111	57	83	107	70	92	98	67	78
6	90	80	84	116	21	71	117	79	91	108	72	82
7	88	77	83	121	33	76	118	77	89	134	71	85
8	88	73	78	141	41	99	119	81	92	95	76	83
9	85	74	79	111	74	84	130	85	101	108	74	84
10	89	79	81	106	78	87	133	89	101	101	74	83
11	84	78	80	130	69	84	127	78	99	94	75	80
12	87	77	81	116	72	93	124	87	98	82	68	74
13	92	80	83	92	68	78	102	79	90	90	63	71
14	84	79	81	89	68	78	103	73	86	90	67	73
15	95	75	80	115	68	79	126	73	92	114	63	81
16	89	76	81	108	61	83	125	73	101	91	73	82
17	82	75	78	98	71	86	128	59	100	88	77	82
18	86	76	81	106	75	85	107	38	88	90	73	79
19	86	76	82	105	80	89	88	1	73	102	76	85
20	87	75	81	116	76	94	121	76	90	93	76	82
21	85	71	74	119	69	94	125	80	95	91	68	78
22	124	70	86	145	54	92	120	81	99	89	67	79
23	140	73	89	135	75	102	111	78	92	97	66	77
24	123	69	92	113	20	74	110	83	95	91	75	81
25	126	73	90	113	72	86	126	76	89	90	76	83
26	119	75	92	129	33	81	119	70	86	97	78	84
27	140	72	88	93	59	74	129	64	97	84	70	76
28	108	78	86	87	50	65	120	83	94	77	69	73
29	103	68	83	80	18	58	132	89	98	74	59	67
30	86	65	71	116	64	87	132	51	92	78	70	73
31	---	---	---	95	79	87	133	60	100	---	---	---
Month	140	65	82	145	18	83	133	1	93	141	29	80

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

DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION, BOTTOM  
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	October			November			December			January		
1	---	---	---	---	---	---	59	54	57	81	76	79
2	---	---	---	88	66	76	61	55	57	80	76	77
3	---	---	---	---	---	---	65	60	63	81	77	79
4	---	---	---	84	65	74	60	50	55	82	79	80
5	---	---	---	---	---	---	58	48	53	83	80	81
6	---	---	---	---	---	---	57	54	56	84	82	83
7	---	---	---	73	66	71	57	55	56	86	83	84
8	---	---	---	74	69	72	61	57	58	88	84	86
9	88	70	76	77	70	75	69	61	65	88	84	86
10	86	69	77	77	73	75	69	56	63	88	85	86
11	85	75	81	96	75	82	58	55	57	89	86	87
12	82	72	78	95	89	92	62	58	61	91	87	89
13	81	73	77	91	66	78	65	62	64	92	87	89
14	86	73	82	66	55	58	65	62	63	93	88	90
15	84	77	80	61	57	59	66	63	64	94	89	91
16	84	77	80	59	51	55	65	62	64	95	90	92
17	84	79	82	52	47	50	66	64	65	96	91	93
18	86	79	83	53	48	51	70	66	68	95	87	91
19	84	78	82	53	45	50	73	66	70	92	85	88
20	92	79	84	48	44	46	70	68	68	91	84	88
21	92	80	85	49	45	47	72	70	71	93	84	88
22	91	81	84	55	47	50	74	72	73	88	83	85
23	86	78	82	56	52	54	74	72	73	83	80	81
24	89	81	86	52	48	50	75	73	74	87	82	86
25	95	84	89	49	47	48	76	75	76	92	82	87
26	92	85	88	48	45	47	79	74	76	85	77	81
27	91	84	88	51	44	48	75	71	72	83	79	80
28	89	84	86	55	51	53	74	71	72	85	80	82
29	90	81	87	57	55	56	75	72	73	88	79	83
30	90	83	86	58	56	57	78	73	75	86	79	83
31	---	---	---	---	---	---	81	77	79	86	78	80
Month	---	---	---	---	---	---	81	48	66	96	76	85



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

DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION, BOTTOM  
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	February			March			April			May		
1	89	86	87	94	88	91	81	72	76	81	77	79
2	91	87	89	96	89	92	78	70	74	83	80	81
3	91	86	87	90	81	85	77	67	72	84	79	81
4	---	---	---	87	82	84	76	67	72	80	73	78
5	---	---	---	92	87	89	77	64	70	74	69	73
6	---	---	---	93	88	90	76	63	70	74	68	71
7	---	---	---	95	88	91	74	63	68	76	69	72
8	---	---	---	96	88	92	74	63	68	80	73	76
9	---	---	---	95	88	91	74	52	66	83	75	78
10	88	82	85	97	88	92	53	49	51	85	74	78
11	89	84	86	96	84	90	62	52	59	81	75	78
12	91	86	88	89	82	85	71	60	65	82	75	78
13	92	85	88	84	75	79	70	60	64	83	79	81
14	89	86	87	87	76	81	74	56	63	82	75	79
15	93	89	91	84	78	80	64	56	61	83	78	81
16	94	88	91	83	75	79	76	63	71	85	79	82
17	94	89	92	80	76	78	78	68	73	84	79	81
18	94	90	92	87	76	82	75	65	70	81	77	79
19	96	90	93	85	79	82	75	65	71	78	74	76
20	98	91	94	91	79	85	75	68	71	75	69	72
21	98	91	95	91	81	85	75	65	71	74	69	72
22	99	91	95	89	80	84	65	61	63	74	71	73
23	95	87	90	83	79	81	68	61	65	77	70	73
24	93	85	89	88	79	84	70	63	66	73	68	71
25	89	85	87	91	83	86	75	67	70	77	69	72
26	90	85	87	92	84	88	73	69	71	79	74	76
27	93	86	89	89	78	82	72	66	69	78	70	75
28	95	87	91	87	78	82	72	66	70	77	70	74
29	---	---	---	88	82	84	74	70	72	76	71	74
30	---	---	---	83	70	75	78	72	76	76	71	73
31	---	---	---	79	70	75	---	---	---	82	72	77
Month	---	---	---	97	70	85	81	49	68	85	68	76

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

DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION, BOTTOM  
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	June			July			August			September		
1	81	74	78	79	58	67	90	59	80	85	26	70
2	79	73	76	85	54	66	88	63	76	94	65	78
3	79	73	75	82	56	66	86	58	71	81	69	76
4	80	72	77	79	56	66	86	51	65	74	61	68
5	83	73	78	80	53	68	90	59	75	77	57	66
6	84	74	80	80	38	60	85	59	74	79	60	70
7	84	74	80	63	8	43	100	64	80	81	61	70
8	82	70	75	85	26	54	96	76	84	80	65	73
9	81	72	77	85	63	73	89	69	83	82	61	72
10	81	73	77	86	50	74	94	77	85	84	66	75
11	79	75	77	88	60	72	96	59	75	82	50	70
12	83	76	79	76	38	55	106	62	81	78	60	71
13	85	78	81	78	59	69	90	62	80	78	66	70
14	83	77	79	75	45	66	85	66	74	77	43	66
15	81	71	76	72	47	63	84	52	69	70	32	60
16	85	74	79	80	49	65	82	47	67	90	69	78
17	79	74	76	89	59	79	84	24	65	88	68	76
18	86	77	80	86	61	74	73	21	36	87	69	76
19	86	77	81	84	68	76	73	23	56	84	72	77
20	84	75	80	87	60	73	76	62	68	85	72	78
21	79	70	73	82	47	70	74	53	66	81	64	72
22	71	57	67	84	34	62	89	47	71	84	63	72
23	75	58	68	85	15	55	82	46	67	82	66	75
24	77	44	65	83	8	38	89	53	72	88	69	76
25	68	36	53	88	34	70	85	31	60	89	74	80
26	76	51	61	84	34	65	73	12	54	88	77	81
27	86	54	69	91	35	68	83	37	64	84	69	77
28	87	66	76	91	22	65	83	67	72	75	62	72
29	87	51	69	86	5	60	93	63	74	73	59	67
30	84	59	69	101	16	72	77	36	69	77	69	73
31	---	---	---	90	59	76	80	24	65	---	---	---
Month	87	36	74	101	5	65	106	12	70	94	26	73