



Water-Data Report 2010

02081022 ROANOKE RIVER NEAR OAK CITY, NC

Roanoke Basin
Lower Roanoke Subbasin

LOCATION.--Lat 36°00'49", long 77°12'55" referenced to North American Datum of 1983, Martin County, NC, Hydrologic Unit 03010107, on right bank at bridge on North Carolina Highway 11-42, and 5.2 mi northeast of Oak City.

DRAINAGE AREA.--8,810 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--

DISCHARGE: Occasional discharge measurements, water years 1968-1985. Daily discharges August 2006 to September 2007 (discontinued).

ELEVATION: July 1987 to current year.

GAGE.--Water stage recorder. Datum of gage is at NGVD of 1929. Satellite telemetry at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,000 ft³/s, January 27, 2007; maximum elevation, 22.07 ft, September 19, 1999; minimum discharge 1,430 ft³/s, September 16, 2007; minimum elevation, 2.27 ft, September 19, 2007.

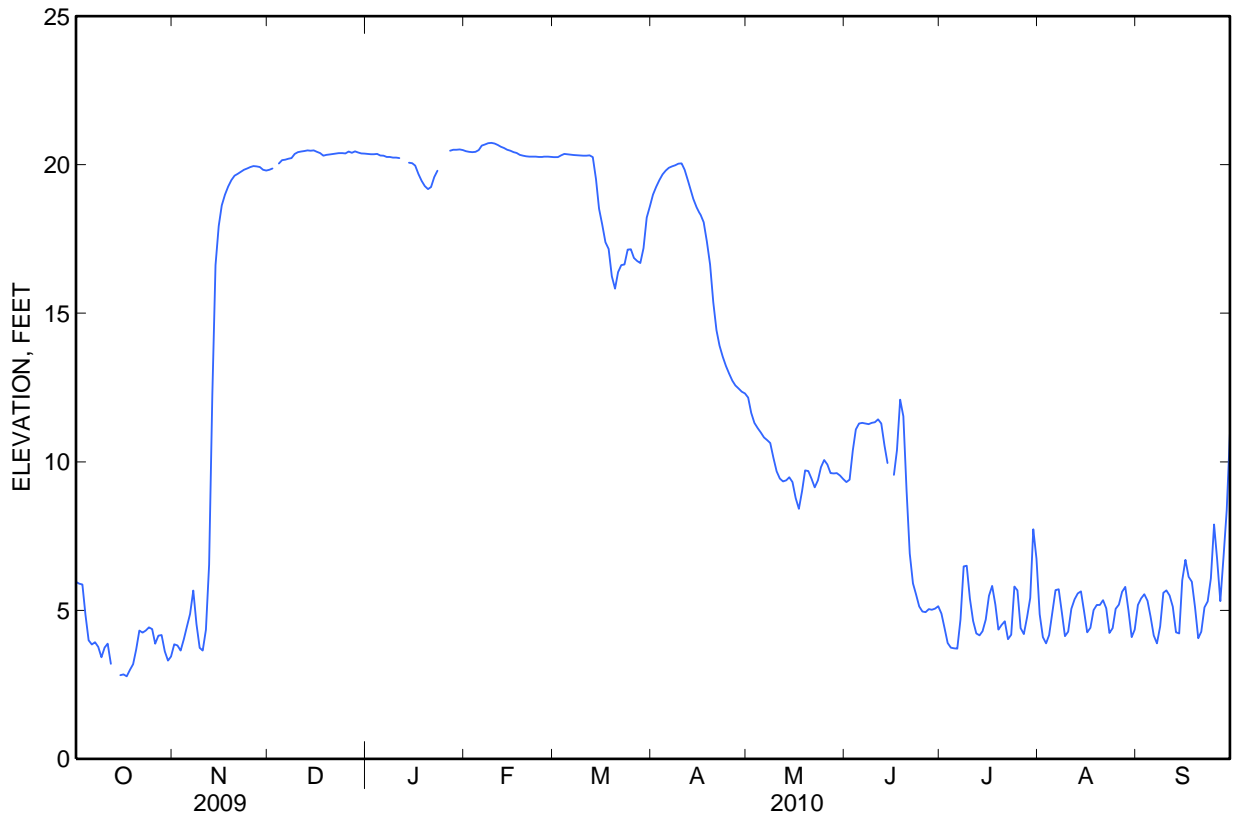
EXTREMES FOR CURRENT YEAR.--Maximum elevation 20.83 ft, February 8, 9; minimum elevation, 2.68 ft, October 16.

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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	5.96	3.86	19.83	20.36	20.45	20.25	18.99	12.16	9.32	4.89	4.87	5.18
2	5.90	3.82	19.87	20.35	20.43	20.25	19.25	11.65	9.40	4.39	4.10	5.40
3	5.87	3.65	---	20.35	20.42	20.31	19.48	11.31	10.38	3.90	3.89	5.54
4	4.86	4.03	20.04	20.36	20.43	20.36	19.67	11.14	11.09	3.74	4.17	5.32
5	3.99	4.45	20.15	20.31	20.49	20.35	19.80	10.99	11.29	3.72	4.92	4.79
6	3.85	4.88	20.17	20.30	20.64	20.34	19.89	10.82	11.31	3.71	5.68	4.15
7	3.93	5.67	20.20	20.26	20.68	20.32	19.94	10.73	11.29	4.69	5.71	3.89
8	3.77	4.54	20.22	20.26	20.72	20.32	19.98	10.63	11.27	6.48	4.91	4.46
9	3.42	3.74	20.36	20.24	20.73	20.31	20.03	10.13	11.31	6.50	4.13	5.59
10	3.75	3.65	20.42	20.24	20.71	20.30	20.04	9.68	11.33	5.39	4.28	5.67
11	3.88	4.35	20.44	20.22	20.66	20.30	19.83	9.44	11.43	4.64	5.05	5.50
12	3.20	6.54	20.46	---	20.60	20.31	19.47	9.34	11.29	4.22	5.37	5.12
13	---	12.24	20.48	---	20.56	20.25	19.09	9.38	10.55	4.16	5.57	4.26
14	---	16.62	20.47	20.07	20.50	19.51	18.77	9.48	9.96	4.30	5.64	4.22
15	2.82	17.93	20.48	20.05	20.47	18.52	18.50	9.32	---	4.69	4.98	6.01
16	2.85	18.63	20.43	19.97	20.42	17.98	18.31	8.78	9.56	5.49	4.26	6.70
17	2.78	18.99	20.39	19.69	20.39	17.39	18.06	8.42	10.39	5.82	4.41	6.13
18	3.00	19.26	20.30	19.46	20.33	17.16	17.41	9.02	12.09	5.19	5.01	5.96
19	3.19	19.48	20.33	19.28	20.30	16.24	16.64	9.71	11.53	4.35	5.18	5.10
20	3.68	19.63	20.35	19.18	20.28	15.83	15.37	9.69	9.04	4.51	5.18	4.06
21	4.32	19.69	20.35	19.25	20.27	16.38	14.43	9.43	6.91	4.63	5.34	4.28
22	4.25	19.76	20.38	19.58	20.27	16.62	13.91	9.14	5.91	4.03	5.07	5.10
23	4.32	19.83	20.39	19.80	20.27	16.64	13.54	9.38	5.54	4.18	4.24	5.30
24	4.43	19.87	20.39	---	20.26	17.14	13.23	9.82	5.13	5.80	4.40	6.08
25	4.37	19.92	20.38	---	20.26	17.15	12.97	10.06	4.96	5.67	5.05	7.89
26	3.88	19.95	20.44	---	20.27	16.86	12.73	9.91	4.94	4.40	5.19	6.72
27	4.15	19.94	20.40	20.47	20.27	16.76	12.57	9.62	5.04	4.20	5.62	5.31
28	4.17	19.92	20.45	20.50	20.26	16.69	12.47	9.61	5.02	4.76	5.79	6.79
29	3.62	19.83	20.41	20.50	---	17.19	12.36	9.62	5.06	5.42	4.99	8.37
30	3.31	19.80	20.38	20.51	---	18.22	12.30	9.54	5.14	7.73	4.10	10.94
31	3.45	---	20.37	20.49	---	18.60	---	9.42	---	6.74	4.35	---
Mean	---	13.15	---	---	20.44	18.54	16.97	9.92	---	4.91	4.89	5.66
Max	---	19.95	---	---	20.73	20.36	20.04	12.16	---	7.73	5.79	10.94
Min	---	3.65	---	---	20.26	15.83	12.30	8.42	---	3.71	3.89	3.89

02081022 ROANOKE RIVER NEAR OAK CITY, NC—Continued



02081022 ROANOKE RIVER NEAR OAK CITY, NC—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1968 to 1973, 1998 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: March 1998 to current year.

pH: March 1998 to current year.

WATER TEMPERATURE: March 1998 to current year.

DISSOLVED OXYGEN: March 1998 to current year.

DISSOLVED OXYGEN, PERCENT SATURATION: March 1998 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. Partial record site from October 1967 to September 1973. 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: Maximum recorded, 5160 microsiemens, March 29, 2003; minimum recorded, 52 microsiemens, September 17, 1999.

pH: Maximum recorded, 8.3 standard units, December 28, 2008; minimum recorded, 6.1 standard units, September 17, 1999, September 20, 21, 2003, June 16, 17, 2006.

WATER TEMPERATURE: Maximum recorded, 32.0°C, July 23, 24, 2010; minimum recorded, 2.0°C, January 28, 2004.

DISSOLVED OXYGEN: Maximum recorded, 15.5 mg/L, January 6, 7, 1999; minimum recorded, 2.4 mg/L, September 24, 2003.

DISSOLVED OXYGEN, PERCENT SATURATION: Maximum recorded, 123%, January 6, 7, 1999; minimum recorded, 28%, September 24, 2003.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 144 microsiemens, November 15; minimum recorded, 77 microsiemens, March 30, 31.

pH: Maximum recorded, 7.6 standard units, on several days during the year; minimum recorded, 6.4 standard units, September 30.

WATER TEMPERATURE: Maximum recorded, 32.0°C, July 23, 24; minimum recorded, 3.0°C, January 11.

DISSOLVED OXYGEN: Maximum recorded, 12.4 mg/L, January 11; minimum recorded, 5.9 mg/L August 1.

DISSOLVED OXYGEN, PERCENT SATURATION: Maximum recorded, 109%, August 9; minimum recorded, 76%, November 29.

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**SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
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	129	118	121	139	135	138	113	110	112	101	99	100
2	129	119	125	136	134	135	110	100	105	101	99	101
3	127	118	122	135	131	133	100	96	98	100	99	100
4	127	119	124	---	---	---	96	88	92	100	97	99
5	125	119	121	137	124	132	88	87	88	98	96	97
6	126	125	125	137	122	133	88	86	87	97	95	96
7	126	124	125	133	121	127	89	86	88	96	95	95
8	125	123	124	127	117	122	90	87	88	---	---	---
9	---	---	---	131	118	121	90	88	89	---	---	---
10	129	126	128	138	130	136	91	88	90	---	---	---
11	129	122	126	137	132	134	94	90	92	---	---	---
12	---	---	---	133	108	121	96	93	95	---	---	---
13	---	---	---	139	110	125	96	95	96	---	---	---
14	126	124	125	142	133	139	97	95	97	95	94	95
15	127	125	125	144	131	138	98	97	97	95	94	95
16	---	---	---	133	128	129	98	97	98	95	94	95
17	---	---	---	128	126	127	99	98	98	97	94	95
18	---	---	---	132	125	129	100	98	99	96	94	95
19	---	---	---	136	131	134	100	100	100	96	92	94
20	---	---	---	140	136	138	101	100	100	95	91	93
21	---	---	---	140	137	139	101	99	100	97	92	94
22	---	---	---	137	131	134	100	99	99	94	93	94
23	---	---	---	133	129	131	101	99	100	94	93	94
24	---	---	---	136	133	135	101	100	101	93	92	93
25	---	---	---	134	127	130	101	100	100	93	92	92
26	---	---	---	127	125	126	101	100	100	92	88	90
27	---	---	---	125	121	122	101	100	100	89	88	89
28	134	131	132	122	110	115	101	99	100	90	89	89
29	132	123	127	114	110	112	100	99	100	91	90	90
30	137	124	129	114	113	114	100	99	100	94	90	91
31	138	136	137	---	---	---	100	98	99	91	90	90
Month	---	---	---	---	---	---	113	86	97	---	---	---

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**SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
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	90	90	90	87	86	87	83	79	82	---	---	---
2	90	90	90	87	87	87	---	---	---	---	---	---
3	90	89	90	88	86	87	---	---	---	---	---	---
4	90	89	89	88	87	88	---	---	---	---	---	---
5	90	88	89	88	87	88	---	---	---	---	---	---
6	88	86	87	89	87	88	---	---	---	101	100	101
7	87	84	85	90	88	89	---	---	---	101	99	100
8	86	84	84	90	88	89	92	88	90	102	100	101
9	88	85	86	90	88	89	91	86	89	102	100	101
10	90	88	89	89	88	89	91	87	89	102	101	101
11	91	90	91	89	87	88	90	85	87	102	100	101
12	92	90	91	89	87	88	90	88	89	102	100	101
13	93	91	92	88	87	88	91	90	91	102	101	101
14	93	92	93	87	85	87	91	89	90	103	99	101
15	93	92	92	91	86	89	---	---	---	104	102	103
16	92	91	92	91	89	91	---	---	---	104	101	102
17	91	91	91	93	89	90	---	---	---	103	99	101
18	91	90	91	93	89	91	---	---	---	101	98	100
19	90	89	90	92	89	91	---	---	---	100	98	99
20	90	88	89	93	90	91	---	---	---	98	95	96
21	88	87	88	91	89	90	---	---	---	99	96	97
22	88	86	87	90	89	89	---	---	---	101	98	100
23	87	86	86	90	89	89	---	---	---	101	96	99
24	86	85	86	92	88	90	---	---	---	99	97	98
25	86	85	86	93	88	89	---	---	---	100	97	98
26	86	85	86	91	88	89	---	---	---	101	97	98
27	86	86	86	92	89	90	---	---	---	103	99	101
28	87	86	86	92	88	90	---	---	---	100	96	98
29	---	---	---	91	87	89	---	---	---	98	94	95
30	---	---	---	87	77	82	---	---	---	97	95	96
31	---	---	---	80	77	79	---	---	---	99	95	96
Month	93	84	89	93	77	88	---	---	---	---	---	---

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SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
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	99	96	97	113	108	111	---	---	---	128	121	126
2	---	---	---	115	108	112	---	---	---	127	114	120
3	---	---	---	118	113	116	---	---	---	125	112	119
4	103	99	101	122	117	120	---	---	---	127	114	120
5	---	---	---	122	120	121	123	116	119	121	113	116
6	---	---	---	122	120	121	119	106	113	124	117	120
7	---	---	---	---	---	---	116	105	111	130	119	128
8	102	97	99	---	---	---	117	104	110	132	129	130
9	---	---	---	---	---	---	117	110	114	130	116	126
10	---	---	---	---	---	---	124	116	120	127	113	119
11	---	---	---	---	---	---	123	115	120	126	112	118
12	---	---	---	---	---	---	120	109	115	124	112	118
13	---	---	---	---	---	---	122	108	114	124	111	116
14	---	---	---	---	---	---	122	110	117	128	115	125
15	---	---	---	---	---	---	122	111	116	128	114	123
16	---	---	---	---	---	---	123	113	117	121	110	115
17	---	---	---	---	---	---	130	118	126	118	108	113
18	---	---	---	---	---	---	130	127	129	125	111	117
19	---	---	---	---	---	---	127	118	123	125	111	117
20	---	---	---	---	---	---	127	118	123	124	113	116
21	---	---	---	---	---	---	128	117	122	127	118	125
22	---	---	---	---	---	---	127	120	123	126	121	125
23	---	---	---	---	---	---	126	116	119	126	112	118
24	116	111	114	---	---	---	130	119	127	128	113	120
25	115	110	113	---	---	---	130	126	128	129	119	122
26	115	111	113	---	---	---	129	119	124	127	118	123
27	115	112	113	---	---	---	128	117	122	118	114	116
28	114	111	113	---	---	---	122	112	117	133	116	125
29	114	110	112	---	---	---	124	112	116	133	118	126
30	113	109	112	---	---	---	125	116	121	119	105	113
31	---	---	---	---	---	---	128	117	125	---	---	---
Month	---	---	---	---	---	---	---	---	---	133	105	120

02081022 ROANOKE RIVER NEAR OAK CITY, NC—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS
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	7.1	7.0	7.0	---	---	---	6.9	6.8	6.8	6.7	6.7	6.7
2	7.1	7.0	7.1	---	---	---	6.8	6.7	6.7	6.7	6.7	6.7
3	7.1	7.0	7.0	---	---	---	6.7	6.7	6.7	6.7	6.7	6.7
4	7.1	7.0	7.1	---	---	---	6.7	6.7	6.7	6.8	6.7	6.8
5	7.2	7.1	7.1	7.3	7.2	7.3	6.8	6.7	6.7	6.8	6.8	6.8
6	7.1	7.0	7.1	7.3	7.3	7.3	6.8	6.7	6.7	6.8	6.8	6.8
7	7.1	7.1	7.1	7.4	7.1	7.3	6.8	6.8	6.8	6.9	6.8	6.8
8	7.2	7.1	7.1	7.3	7.1	7.3	6.8	6.8	6.8	6.9	6.8	6.8
9	---	---	---	7.3	7.2	7.3	6.8	6.7	6.8	7.0	6.9	7.0
10	7.1	7.0	7.1	7.3	7.2	7.3	6.7	6.7	6.7	7.0	7.0	7.0
11	7.1	7.1	7.1	7.3	7.2	7.3	6.8	6.7	6.7	7.1	7.0	7.1
12	---	---	---	7.3	7.1	7.2	6.8	6.8	6.8	---	---	---
13	---	---	---	7.1	6.6	6.9	6.8	6.8	6.8	---	---	---
14	7.6	7.3	7.3	6.8	6.7	6.7	6.8	6.8	6.8	7.3	7.3	7.3
15	7.5	7.3	7.3	7.0	6.8	6.9	6.8	6.8	6.8	7.3	7.3	7.3
16	7.6	7.3	7.5	7.0	7.0	7.0	6.8	6.8	6.8	7.3	7.0	7.3
17	7.6	7.3	7.5	7.1	6.9	7.0	6.8	6.8	6.8	7.0	6.9	6.9
18	7.6	7.5	7.5	7.0	7.0	7.0	6.8	6.7	6.7	7.2	6.9	7.0
19	7.6	7.4	7.6	7.0	7.0	7.0	6.8	6.8	6.8	7.1	7.0	7.0
20	7.6	7.4	7.6	7.0	7.0	7.0	6.8	6.8	6.8	7.2	7.0	7.1
21	7.6	7.3	7.5	7.0	7.0	7.0	6.8	6.8	6.8	7.3	7.1	7.2
22	7.6	7.3	7.4	7.0	6.9	6.9	6.8	6.8	6.8	7.3	7.3	7.3
23	7.6	7.3	7.4	6.9	6.8	6.9	6.8	6.8	6.8	7.3	7.3	7.3
24	7.3	7.3	7.3	6.9	6.8	6.8	6.8	6.7	6.7	7.3	7.2	7.2
25	7.6	7.3	7.3	6.9	6.8	6.8	6.8	6.7	6.7	7.2	7.2	7.2
26	7.6	7.3	7.3	6.9	6.8	6.8	6.7	6.7	6.7	7.2	7.1	7.1
27	---	---	---	6.9	6.8	6.8	6.7	6.7	6.7	7.2	7.1	7.1
28	---	---	---	6.8	6.8	6.8	6.7	6.7	6.7	7.2	7.1	7.1
29	---	---	---	6.8	6.7	6.7	6.7	6.6	6.7	7.2	7.1	7.2
30	---	---	---	6.9	6.8	6.8	6.7	6.7	6.7	7.2	7.2	7.2
31	---	---	---	---	---	---	6.7	6.7	6.7	7.2	7.2	7.2
Max	---	---	---	---	---	---	6.9	6.8	6.8	---	---	---
Min	---	---	---	---	---	---	6.7	6.6	6.7	---	---	---

02081022 ROANOKE RIVER NEAR OAK CITY, NC—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS
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	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.0	7.2	7.2	7.1	7.2
2	7.2	7.2	7.2	7.2	7.2	7.2	7.3	7.2	7.2	7.2	7.1	7.2
3	7.2	7.2	7.2	7.3	7.1	7.2	7.3	7.3	7.3	7.2	7.1	7.1
4	7.2	7.2	7.2	7.3	7.2	7.2	7.4	7.3	7.3	7.2	7.1	7.1
5	7.2	7.2	7.2	7.3	7.2	7.3	7.4	7.3	7.3	7.1	7.1	7.1
6	7.2	7.1	7.1	7.3	7.2	7.3	7.4	7.3	7.3	7.1	7.0	7.1
7	7.1	7.1	7.1	7.3	7.2	7.3	7.4	7.3	7.3	7.2	7.0	7.1
8	7.1	7.1	7.1	7.3	7.2	7.3	7.4	7.3	7.4	7.2	7.0	7.1
9	7.2	7.1	7.1	7.3	7.2	7.2	7.4	7.3	7.3	7.2	7.1	7.1
10	7.2	7.2	7.2	7.3	7.2	7.2	7.3	7.2	7.3	7.3	7.1	7.2
11	7.3	7.2	7.2	7.3	7.2	7.2	7.3	7.0	7.1	7.3	7.2	7.2
12	7.3	7.3	7.3	7.2	7.2	7.2	7.1	7.0	7.1	7.3	7.1	7.2
13	7.4	7.3	7.3	7.2	7.1	7.2	7.1	7.1	7.1	7.2	7.1	7.1
14	7.3	7.2	7.2	7.1	6.8	6.9	7.2	7.1	7.2	7.3	7.1	7.2
15	7.2	7.2	7.2	7.0	6.8	6.9	7.2	7.2	7.2	7.2	7.2	7.2
16	7.3	7.2	7.2	7.1	7.0	7.0	7.2	7.2	7.2	7.3	7.2	7.2
17	7.3	7.2	7.2	7.1	7.0	7.0	7.2	7.1	7.2	7.2	7.1	7.2
18	7.3	7.2	7.3	7.2	7.1	7.2	7.1	7.1	7.1	7.2	7.1	7.1
19	7.3	7.3	7.3	7.1	7.0	7.1	7.2	7.1	7.1	7.1	7.0	7.1
20	7.3	7.3	7.3	7.2	7.1	7.1	7.1	7.1	7.1	7.1	7.0	7.0
21	7.3	7.2	7.3	7.3	7.2	7.3	7.2	7.1	7.1	7.2	7.1	7.1
22	7.3	7.2	7.2	7.3	7.2	7.3	7.2	7.1	7.2	7.2	7.1	7.1
23	7.2	7.1	7.1	7.3	7.2	7.3	7.1	7.1	7.1	7.3	7.1	7.2
24	7.1	7.1	7.1	7.3	7.2	7.3	7.2	7.0	7.1	7.3	7.2	7.2
25	7.1	7.1	7.1	7.3	7.3	7.3	7.1	7.0	7.1	7.2	7.1	7.2
26	7.1	7.1	7.1	7.3	7.2	7.3	7.1	7.0	7.1	7.3	7.1	7.2
27	7.2	7.1	7.1	7.3	7.2	7.3	7.2	7.1	7.1	7.3	7.2	7.3
28	7.2	7.2	7.2	7.3	7.3	7.3	7.2	7.1	7.1	7.4	7.3	7.3
29	---	---	---	7.3	7.2	7.3	7.2	7.1	7.1	7.4	7.2	7.3
30	---	---	---	7.2	6.9	7.0	7.2	7.1	7.2	7.3	7.2	7.3
31	---	---	---	7.0	6.9	7.0	---	---	---	7.3	7.2	7.2
Max	7.4	7.3	7.3	7.3	7.3	7.3	7.4	7.3	7.4	7.4	7.3	7.3
Min	7.1	7.1	7.1	7.0	6.8	6.9	7.1	7.0	7.1	7.1	7.0	7.0

02081022 ROANOKE RIVER NEAR OAK CITY, NC—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS
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	7.4	7.1	7.3	7.0	6.9	6.9	7.1	7.0	7.1	7.3	7.1	7.2
2	7.3	6.9	7.2	7.0	6.9	7.0	7.2	7.1	7.1	7.2	7.1	7.2
3	7.1	6.9	7.0	7.1	6.9	7.0	7.3	7.1	7.2	7.2	7.1	7.2
4	7.1	7.0	7.0	7.1	6.9	7.0	7.2	7.1	7.2	7.2	7.1	7.2
5	7.2	7.0	7.0	7.1	6.9	7.0	7.2	7.1	7.1	7.2	7.1	7.2
6	7.1	7.0	7.1	7.0	6.9	7.0	7.2	7.1	7.1	7.4	7.2	7.2
7	7.2	7.0	7.1	7.1	7.0	7.0	7.2	7.0	7.1	7.3	7.2	7.2
8	7.1	7.0	7.0	7.1	7.0	7.0	7.2	7.1	7.2	7.2	7.2	7.2
9	7.1	7.0	7.0	7.1	7.0	7.0	7.4	7.2	7.3	7.2	7.1	7.2
10	7.1	7.0	7.0	7.1	7.0	7.0	7.3	7.2	7.2	7.2	7.1	7.2
11	7.1	7.0	7.0	7.1	7.0	7.1	7.2	7.2	7.2	7.2	7.2	7.2
12	7.1	7.0	7.0	7.1	7.0	7.1	7.2	7.1	7.2	7.2	7.1	7.2
13	7.0	6.9	7.0	7.2	7.1	7.1	7.2	7.1	7.2	7.3	7.2	7.2
14	7.0	6.9	6.9	7.2	7.1	7.1	7.2	7.1	7.2	7.2	7.1	7.2
15	---	---	---	7.1	7.0	7.1	7.2	7.1	7.2	7.2	7.1	7.2
16	7.2	6.9	6.9	7.1	7.0	7.1	7.4	7.1	7.2	7.2	7.1	7.2
17	7.0	6.8	6.9	7.1	7.0	7.1	7.3	7.2	7.2	7.3	7.1	7.2
18	6.8	6.7	6.8	7.1	7.0	7.0	7.2	7.2	7.2	7.2	7.1	7.2
19	6.8	6.7	6.8	7.3	7.1	7.2	7.2	7.1	7.2	7.2	7.1	7.2
20	6.8	6.8	6.8	7.2	7.1	7.2	7.2	7.1	7.2	7.4	7.2	7.2
21	6.8	6.7	6.8	7.2	7.1	7.2	7.2	7.1	7.2	7.2	7.2	7.2
22	6.9	6.7	6.8	7.4	7.2	7.3	7.2	7.1	7.2	7.2	7.2	7.2
23	7.0	6.7	6.9	7.3	7.2	7.2	7.4	7.2	7.2	7.2	7.2	7.2
24	7.0	6.9	7.0	7.2	7.1	7.1	7.3	7.2	7.2	7.2	7.1	7.2
25	7.0	6.9	7.0	7.1	7.0	7.0	7.3	7.2	7.2	7.2	7.0	7.1
26	7.0	6.9	7.0	7.6	7.1	7.2	7.3	7.2	7.2	7.1	7.0	7.1
27	7.0	6.9	7.0	7.4	7.2	7.3	7.3	7.2	7.2	7.1	7.0	7.0
28	7.0	6.9	6.9	7.2	7.2	7.2	7.3	7.2	7.2	7.0	7.0	7.0
29	7.0	6.9	6.9	7.2	7.1	7.2	7.3	7.2	7.2	7.0	6.9	7.0
30	6.9	6.9	6.9	7.2	7.0	7.1	7.4	7.2	7.3	6.9	6.4	6.6
31	---	---	---	7.1	7.0	7.0	7.4	7.3	7.3	---	---	---
Max	---	---	---	7.6	7.2	7.3	7.4	7.3	7.3	7.4	7.2	7.2
Min	---	---	---	7.0	6.9	6.9	7.1	7.0	7.1	6.9	6.4	6.6

02081022 ROANOKE RIVER NEAR OAK CITY, NC—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
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	23.0	22.3	22.5	18.4	17.7	18.1	12.1	11.8	12.0	6.8	6.6	6.7
2	22.4	21.8	22.1	17.7	16.7	17.2	12.2	11.9	12.0	6.8	6.4	6.6
3	22.8	22.0	22.3	16.7	16.1	16.3	12.4	12.2	12.3	6.4	5.7	6.0
4	22.8	22.1	22.3	---	---	---	12.3	12.1	12.2	5.7	4.8	5.1
5	22.5	22.0	22.2	16.0	15.4	15.6	12.1	11.9	12.0	4.8	4.2	4.4
6	22.3	21.6	22.0	15.4	15.0	15.2	11.9	11.2	11.5	4.5	4.1	4.2
7	22.2	21.6	21.9	15.2	14.6	14.8	11.2	10.8	11.0	4.5	4.2	4.3
8	21.9	21.2	21.5	14.8	14.5	14.7	10.8	10.5	10.6	4.4	4.2	4.3
9	---	---	---	15.4	14.5	14.9	11.2	10.7	10.9	4.2	3.9	4.0
10	22.5	21.7	22.0	15.6	14.8	15.2	11.2	10.9	11.1	4.0	3.5	3.7
11	22.0	21.2	21.8	15.8	15.4	15.6	10.9	10.4	10.6	3.5	3.0	3.2
12	---	---	---	15.5	14.4	15.0	10.4	9.6	9.9	---	---	---
13	---	---	---	14.4	13.4	13.8	9.6	9.3	9.4	---	---	---
14	20.2	19.1	19.6	14.3	13.8	14.0	9.6	9.3	9.4	3.4	3.1	3.2
15	19.1	18.1	18.5	14.5	14.0	14.2	9.9	9.6	9.8	3.6	3.1	3.3
16	18.1	17.2	17.6	15.0	14.3	14.6	9.9	9.7	9.8	4.0	3.4	3.6
17	17.2	16.0	16.6	15.2	14.8	15.0	9.7	9.3	9.5	4.4	3.9	4.1
18	16.0	15.0	15.4	15.1	14.9	15.0	9.3	8.7	8.9	4.9	4.4	4.7
19	15.2	14.5	14.9	15.0	14.9	14.9	8.8	8.4	8.6	5.3	4.8	5.0
20	15.5	14.5	15.0	14.9	14.7	14.9	8.4	7.8	8.1	5.3	5.0	5.1
21	16.1	15.1	15.6	14.7	14.4	14.5	7.8	7.5	7.6	5.3	4.8	5.1
22	16.7	16.0	16.4	14.4	14.1	14.2	7.6	7.3	7.5	4.9	4.8	4.8
23	17.7	16.6	17.1	14.1	13.9	14.0	7.7	7.3	7.5	4.9	4.6	4.8
24	18.8	17.5	18.3	14.0	13.8	13.9	7.7	7.4	7.5	5.4	4.8	5.0
25	19.1	18.5	18.9	13.9	13.8	13.8	7.8	7.5	7.6	6.3	5.4	5.9
26	18.5	17.5	18.1	13.8	13.6	13.7	7.8	7.7	7.8	6.9	6.3	6.5
27	17.5	17.0	17.2	13.7	13.2	13.4	7.8	7.6	7.7	6.9	6.6	6.8
28	17.8	17.0	17.4	13.2	12.5	12.7	7.8	7.5	7.7	6.6	6.0	6.2
29	18.1	17.6	17.9	12.5	11.9	12.0	7.5	7.1	7.2	6.1	5.7	5.9
30	17.9	17.5	17.7	12.0	11.7	11.8	7.1	6.5	6.7	5.8	4.7	5.1
31	18.6	17.7	18.1	---	---	---	6.6	6.3	6.4	4.7	4.2	4.3
Month	---	---	---	---	---	---	12.4	6.3	9.4	---	---	---

02081022 ROANOKE RIVER NEAR OAK CITY, NC—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
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	4.2	3.8	3.9	5.6	5.0	5.2	12.6	11.9	12.3	19.0	17.8	18.5
2	4.3	3.8	4.0	5.6	5.2	5.4	13.1	12.4	12.7	20.2	18.7	19.5
3	4.8	4.3	4.5	5.4	4.9	5.0	13.4	12.5	12.9	20.9	20.0	20.5
4	4.8	4.6	4.7	5.2	5.0	5.2	13.9	12.8	13.3	21.4	20.7	21.0
5	4.7	4.5	4.6	5.5	4.9	5.2	14.2	13.5	13.8	21.5	20.6	21.0
6	4.7	4.2	4.4	5.8	5.1	5.4	14.7	13.6	14.0	22.2	21.2	21.6
7	4.2	3.7	3.9	5.9	5.4	5.6	15.2	14.6	14.8	22.5	21.6	22.0
8	3.8	3.5	3.6	6.3	5.6	5.9	16.0	15.0	15.3	23.3	21.4	22.4
9	3.8	3.5	3.6	6.6	5.8	6.1	16.1	15.6	15.8	22.7	20.9	21.8
10	3.9	3.8	3.8	7.0	6.3	6.6	16.1	15.6	15.8	21.8	20.3	21.0
11	4.0	3.7	3.8	7.2	6.5	6.8	16.0	15.6	15.8	21.4	20.2	20.6
12	3.9	3.5	3.6	7.5	7.1	7.3	16.5	16.0	16.2	21.0	19.6	20.3
13	3.7	3.4	3.5	8.4	7.3	7.7	16.6	16.1	16.4	20.4	20.1	20.3
14	3.8	3.4	3.6	9.4	8.4	9.0	16.6	15.8	16.0	21.6	20.0	20.7
15	3.9	3.6	3.7	9.5	8.8	9.3	15.9	15.5	15.7	22.1	20.8	21.4
16	3.9	3.5	3.7	8.8	8.3	8.5	16.1	15.6	15.9	23.0	21.7	22.2
17	4.0	3.6	3.8	8.7	8.2	8.4	16.4	15.8	16.1	22.9	22.4	22.6
18	4.0	3.5	3.7	8.8	8.6	8.6	16.7	16.3	16.5	22.5	20.3	21.2
19	4.2	3.6	3.9	9.2	8.8	9.0	16.7	16.4	16.5	20.3	19.4	19.6
20	4.5	3.9	4.2	9.8	9.0	9.5	17.0	16.4	16.7	20.5	19.2	19.8
21	4.9	4.2	4.5	10.4	9.7	10.1	17.1	16.6	16.8	22.0	20.4	21.1
22	5.1	4.6	4.8	10.5	9.9	10.2	17.0	16.4	16.6	22.6	21.3	21.9
23	5.2	4.9	5.0	10.5	10.0	10.2	16.9	16.4	16.6	22.7	21.4	22.0
24	5.2	5.0	5.1	10.8	10.2	10.5	17.6	16.8	17.3	22.1	21.1	21.6
25	5.1	5.0	5.1	10.8	10.4	10.6	17.9	17.3	17.6	22.4	21.4	22.0
26	5.1	4.8	5.0	11.3	10.8	11.1	18.2	17.6	17.9	22.4	21.6	22.0
27	5.2	4.7	4.9	11.3	10.9	11.1	18.4	17.9	18.1	23.6	22.2	22.8
28	5.1	4.7	4.9	11.4	11.0	11.1	18.3	17.6	17.9	24.2	22.6	23.3
29	---	---	---	11.7	11.1	11.3	17.9	17.3	17.6	24.6	23.0	23.7
30	---	---	---	12.1	11.4	11.8	18.2	17.4	17.8	23.9	22.8	23.3
31	---	---	---	12.6	12.0	12.3	---	---	---	25.3	23.2	24.2
Month	5.2	3.4	4.2	12.6	4.9	8.4	18.4	11.9	15.9	25.3	17.8	21.5

02081022 ROANOKE RIVER NEAR OAK CITY, NC—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
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	25.9	24.6	25.1	29.7	29.2	29.5	29.0	28.1	28.6	29.5	28.8	29.1
2	25.8	25.1	25.5	29.2	28.5	28.9	28.9	27.5	28.2	29.3	28.4	28.8
3	25.9	25.2	25.5	28.6	27.7	28.2	29.2	27.8	28.4	28.8	27.6	28.0
4	25.9	25.4	25.7	28.8	27.1	28.0	29.7	28.6	29.1	28.0	27.1	27.5
5	26.6	25.4	26.0	29.5	27.5	28.5	29.9	29.1	29.5	27.5	26.6	27.0
6	26.5	25.8	26.2	30.2	28.1	29.2	29.8	28.8	29.4	27.4	26.5	26.9
7	27.1	25.9	26.5	30.4	28.9	29.7	30.5	29.1	29.7	27.4	26.3	26.9
8	27.4	25.9	26.6	30.2	29.0	29.7	30.3	29.3	29.8	27.7	26.7	27.0
9	26.6	25.6	26.0	29.7	28.5	29.2	30.7	29.9	30.3	27.4	26.7	27.0
10	26.1	25.4	25.8	29.5	28.7	29.1	31.1	29.8	30.4	26.8	26.0	26.4
11	26.7	25.9	26.3	29.7	28.8	29.3	31.0	30.3	30.7	26.4	25.6	25.8
12	27.6	26.5	27.1	29.8	28.9	29.3	31.1	30.0	30.6	25.8	25.0	25.2
13	27.3	26.5	26.9	30.1	28.9	29.4	31.2	30.2	30.8	25.4	24.8	25.1
14	28.0	26.5	27.2	30.0	29.4	29.6	31.1	29.9	30.4	25.9	24.5	25.1
15	---	---	---	30.2	28.9	29.6	30.5	29.6	30.1	26.4	25.5	25.9
16	28.9	27.9	28.5	30.8	30.0	30.4	30.5	29.7	30.1	26.6	25.5	26.1
17	28.1	27.1	27.7	30.8	29.6	30.4	31.2	29.8	30.4	26.7	25.8	26.2
18	27.5	26.4	27.0	29.7	28.6	29.2	30.7	30.2	30.5	26.5	25.7	26.1
19	28.2	27.4	27.7	30.1	29.2	29.7	30.7	29.6	30.0	26.2	25.3	25.8
20	28.1	27.6	27.9	30.6	29.2	29.9	29.8	28.8	29.2	26.3	25.5	25.9
21	28.9	27.4	28.2	30.9	30.1	30.5	29.5	28.4	29.0	26.1	25.3	25.6
22	29.5	28.9	29.3	31.6	30.5	31.0	29.7	29.0	29.4	26.1	25.3	25.6
23	30.3	29.3	29.8	32.0	30.9	31.4	29.9	29.2	29.5	26.6	25.4	25.9
24	30.1	29.5	29.8	32.0	31.0	31.4	29.5	28.8	29.2	27.2	26.2	26.6
25	30.7	29.8	30.3	31.5	30.4	31.0	28.8	28.2	28.6	27.0	26.6	26.8
26	30.8	30.2	30.4	31.8	30.8	31.3	28.7	27.6	28.0	26.9	26.4	26.6
27	30.9	30.1	30.5	31.4	30.1	30.9	28.4	27.5	27.9	26.4	25.2	25.8
28	30.7	30.1	30.4	30.5	29.8	30.2	29.0	27.7	28.3	25.2	25.0	25.1
29	30.8	30.1	30.4	30.5	29.4	29.8	28.7	27.7	28.3	25.0	24.2	24.7
30	30.6	29.5	30.2	30.4	29.2	29.8	29.0	28.0	28.5	24.2	22.6	23.3
31	---	---	---	29.9	29.0	29.5	29.6	28.2	28.8	---	---	---
Month	---	---	---	32.0	27.1	29.8	31.2	27.5	29.4	29.5	22.6	26.3

02081022 ROANOKE RIVER NEAR OAK CITY, NC—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER
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	7.9	7.2	7.6	8.5	7.9	8.4	9.0	8.7	8.8	10.8	10.6	10.6
2	8.0	7.6	7.8	8.6	8.3	8.5	8.8	8.7	8.7	10.6	10.5	10.6
3	8.1	7.5	7.8	8.8	8.5	8.7	8.8	8.7	8.7	10.9	10.6	10.7
4	8.1	7.6	7.8	---	---	---	8.8	8.6	8.7	11.5	10.9	11.2
5	8.0	7.7	7.9	9.0	8.8	8.9	8.9	8.8	8.9	11.7	11.5	11.6
6	8.0	7.6	7.8	9.2	8.9	9.0	8.9	8.8	8.9	11.7	11.6	11.7
7	8.0	7.8	7.9	9.3	9.0	9.1	9.0	8.9	9.0	11.8	11.6	11.7
8	8.2	7.8	8.0	9.2	9.0	9.1	9.1	9.0	9.0	12.0	11.8	11.9
9	---	---	---	9.5	9.1	9.3	9.1	8.8	9.0	12.0	11.9	11.9
10	8.0	7.6	7.9	9.4	9.1	9.3	9.0	8.8	8.9	12.3	12.0	12.1
11	8.0	7.8	7.9	9.2	9.1	9.1	9.2	8.9	9.0	12.4	12.2	12.3
12	---	---	---	9.3	9.1	9.2	9.5	9.2	9.3	---	---	---
13	---	---	---	9.1	8.0	8.5	9.6	9.5	9.5	---	---	---
14	8.5	8.1	8.3	8.8	8.2	8.5	9.5	9.3	9.4	12.2	12.1	12.1
15	8.6	8.3	8.5	9.1	8.6	8.9	9.4	9.3	9.4	12.2	12.1	12.2
16	8.8	8.4	8.6	9.2	9.0	9.1	9.4	9.3	9.4	12.2	11.2	11.9
17	8.9	8.6	8.8	9.2	9.0	9.1	9.5	9.4	9.4	11.2	10.8	11.0
18	9.2	8.8	9.0	9.2	9.1	9.1	9.6	9.2	9.4	11.6	10.9	11.2
19	9.4	9.0	9.2	9.2	9.1	9.1	9.7	9.6	9.7	11.4	11.0	11.2
20	9.5	9.2	9.3	9.1	8.9	9.0	10.0	9.7	9.8	11.6	11.2	11.4
21	9.4	9.1	9.3	9.0	8.8	8.9	10.2	10.0	10.1	11.8	11.2	11.5
22	9.3	9.0	9.2	9.0	8.9	8.9	10.2	10.1	10.1	11.8	11.7	11.8
23	9.3	8.9	9.2	9.0	8.8	8.9	10.2	10.1	10.1	11.8	11.7	11.8
24	9.1	8.8	8.9	8.8	8.6	8.7	10.1	10.0	10.1	11.8	11.6	11.7
25	8.9	8.6	8.8	8.8	8.6	8.7	10.2	10.1	10.1	11.6	11.3	11.5
26	8.6	8.5	8.6	8.6	8.5	8.6	10.2	10.1	10.2	11.3	11.0	11.1
27	8.8	8.5	8.6	8.5	8.2	8.3	10.3	10.2	10.2	11.1	10.9	11.0
28	8.8	8.5	8.7	8.6	8.3	8.4	10.3	10.2	10.3	11.3	11.0	11.1
29	8.7	8.4	8.6	8.8	8.2	8.4	10.4	10.2	10.3	11.3	11.2	11.2
30	8.6	8.3	8.4	9.0	8.8	8.9	10.8	10.4	10.5	11.5	11.3	11.4
31	8.6	8.4	8.5	---	---	---	10.8	10.7	10.8	11.7	11.4	11.6
Month	---	---	---	---	---	---	10.8	8.6	9.5	---	---	---

02081022 ROANOKE RIVER NEAR OAK CITY, NC—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER
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	11.9	11.7	11.8	12.0	11.8	11.9	10.3	9.8	10.1	9.2	8.7	8.9
2	11.9	11.8	11.9	11.9	11.8	11.8	10.4	10.1	10.3	9.1	8.6	8.8
3	11.8	11.7	11.7	11.9	11.7	11.8	10.7	10.4	10.5	8.8	8.1	8.5
4	11.8	11.6	11.7	11.9	11.7	11.8	10.6	10.4	10.5	8.4	7.8	8.1
5	11.8	11.7	11.8	12.0	11.8	11.9	10.5	10.2	10.3	8.2	7.8	8.0
6	11.8	11.4	11.6	12.0	11.9	11.9	10.4	10.1	10.2	8.4	7.9	8.1
7	11.9	11.6	11.7	12.1	11.9	12.0	10.2	9.7	10	8.6	7.9	8.2
8	12.0	11.8	11.9	12.0	11.9	12.0	10.0	9.7	9.8	8.5	7.8	8.1
9	12.0	11.9	12.0	12.0	11.9	12.0	9.8	9.4	9.5	8.6	7.8	8.1
10	12.0	11.9	11.9	12.0	11.8	11.9	9.4	9.1	9.2	8.8	7.8	8.3
11	12.1	11.9	12.0	11.9	11.8	11.8	9.1	8.2	8.4	8.9	8.2	8.5
12	12.3	12.1	12.2	11.9	11.7	11.7	8.4	8.2	8.3	9.0	8.2	8.5
13	12.3	12.2	12.3	11.7	11.2	11.5	8.7	8.3	8.5	8.5	8.1	8.3
14	12.2	12.2	12.2	11.2	10.0	10.5	8.9	8.6	8.8	8.7	8.0	8.3
15	12.3	12.2	12.2	10.3	9.8	10	9.0	8.9	8.9	8.5	8.0	8.2
16	12.3	12.2	12.3	10.8	10.3	10.6	9.2	9.0	9.1	8.6	7.9	8.2
17	12.3	12.2	12.2	11.0	10.6	10.8	9.3	8.8	9.1	8.3	7.6	7.9
18	12.3	12.3	12.3	11.3	11.0	11.1	8.9	8.6	8.7	8.2	7.7	7.9
19	12.3	12.3	12.3	11.0	10.9	10.9	8.9	8.6	8.8	8.0	7.6	7.8
20	12.3	12.2	12.2	11.1	10.9	11.0	---	---	---	8.0	7.5	7.7
21	12.3	12.1	12.2	11.2	11.1	11.1	---	---	---	8.2	7.6	7.9
22	12.1	11.9	12.0	11.2	11.1	11.1	---	---	---	8.4	7.6	7.9
23	11.9	11.8	11.8	11.1	10.9	11.0	---	---	---	8.5	7.7	8.0
24	11.8	11.7	11.8	11.1	10.9	10.9	---	---	---	8.4	7.6	8.0
25	11.8	11.7	11.8	11.0	10.9	11.0	8.9	8.6	8.7	7.9	7.5	7.7
26	11.8	11.7	11.7	11.0	10.6	10.8	8.9	8.5	8.6	7.9	7.4	7.6
27	12.0	11.8	11.8	10.8	10.6	10.7	8.8	8.5	8.6	8.2	7.4	7.7
28	12.0	11.9	12.0	10.8	10.6	10.7	8.9	8.4	8.6	8.3	7.5	7.8
29	---	---	---	10.8	10.4	10.7	8.9	8.6	8.7	8.2	7.2	7.7
30	---	---	---	10.4	9.5	9.9	9.2	8.6	8.9	8.0	7.0	7.5
31	---	---	---	9.9	9.5	9.6	---	---	---	8.1	7.2	7.5
Month	12.3	11.4	12.0	12.1	9.5	11.2	---	---	---	9.2	7.0	8.1

02081022 ROANOKE RIVER NEAR OAK CITY, NC—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER
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	---	---	---	7.0	6.4	6.7	7.0	5.9	6.6	7.4	7.0	7.2
2	---	---	---	7.5	6.7	7.1	7.0	6.6	6.8	7.3	7.0	7.2
3	8.0	7.2	7.4	7.8	7.2	7.5	7.6	6.8	7.1	7.3	6.9	7.1
4	7.7	7.0	7.3	7.9	7.3	7.6	7.6	7.1	7.3	7.3	6.8	7.0
5	7.7	7.0	7.3	7.8	7.2	7.5	7.3	7.1	7.2	7.4	6.9	7.2
6	7.6	7.0	7.3	7.8	7.2	7.4	7.2	6.9	7.1	8.1	7.3	7.6
7	7.5	6.8	7.2	7.4	7.0	7.2	7.2	6.6	6.9	7.8	7.4	7.6
8	7.5	6.8	7.2	7.4	6.7	7.1	7.3	7.0	7.2	7.6	7.2	7.4
9	7.6	7.0	7.2	7.0	6.6	6.8	8.1	7.0	7.5	7.4	7.0	7.2
10	7.5	7.0	7.2	7.0	6.7	6.9	7.7	7.3	7.4	7.4	7.0	7.2
11	7.3	6.9	7.0	7.5	6.7	7.1	7.4	7.0	7.3	7.5	7.3	7.4
12	7.6	6.8	7.1	7.3	6.9	7.1	7.3	6.9	7.2	7.5	7.1	7.3
13	7.4	6.7	7.0	7.5	7.0	7.2	7.3	6.9	7.1	7.8	7.2	7.5
14	7.6	6.8	7.1	7.2	6.8	7.0	7.3	6.7	7.0	7.6	7.2	7.4
15	---	---	---	7.2	6.8	7.0	7.4	6.9	7.1	7.6	7.2	7.3
16	7.6	6.8	7.1	7.0	6.6	6.8	8.0	7.0	7.5	7.6	7.0	7.3
17	7.4	6.5	6.9	6.8	6.2	6.6	7.5	7.1	7.3	---	---	---
18	6.7	6.2	6.4	7.1	6.2	6.7	7.2	6.9	7.0	---	---	---
19	6.8	6.4	6.6	7.6	6.7	7.1	7.1	6.7	6.9	---	---	---
20	---	---	---	7.4	7.0	7.2	7.1	6.6	6.9	---	---	---
21	---	---	---	7.1	6.5	6.8	7.2	6.7	7.0	---	---	---
22	---	---	---	---	---	---	7.2	6.8	7.0	---	---	---
23	---	---	---	---	---	---	7.9	6.9	7.3	---	---	---
24	7.1	6.6	6.9	---	---	---	7.3	7.1	7.2	---	---	---
25	7.4	6.5	7.0	---	---	---	7.4	7.0	7.2	---	---	---
26	7.3	6.8	7.0	---	---	---	7.4	6.8	7.2	---	---	---
27	7.3	6.7	7.0	7.6	6.7	7.0	7.5	6.8	7.2	---	---	---
28	7.2	6.7	7.0	7.0	6.6	6.8	7.5	6.9	7.2	---	---	---
29	7.3	6.7	7.0	7.0	6.7	6.9	7.6	7.1	7.3	---	---	---
30	7.0	6.2	6.6	6.9	6.2	6.6	8.1	7.2	7.6	---	---	---
31	---	---	---	6.5	6.1	6.3	7.7	6.8	7.5	---	---	---
Month	---	---	---	---	---	---	8.1	5.9	7.2	---	---	---

02081022 ROANOKE RIVER NEAR OAK CITY, NC—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION
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	91	84	88	90	83	89	84	81	82	88	87	87
2	93	87	90	90	86	89	82	81	81	87	86	87
3	94	86	90	90	87	89	83	81	81	88	85	86
4	94	87	90	---	---	---	82	80	81	90	87	88
5	93	88	91	91	88	89	83	82	83	90	89	90
6	92	87	90	92	89	90	82	81	81	91	90	90
7	92	89	90	92	89	91	82	81	82	91	89	90
8	94	88	91	91	89	90	82	81	81	92	91	91
9	---	---	---	95	90	92	83	80	82	92	91	91
10	93	87	91	94	90	92	82	80	81	93	91	92
11	92	88	90	93	91	92	83	80	81	93	92	92
12	---	---	---	93	89	92	84	82	83	---	---	---
13	---	---	---	89	77	82	84	83	83	---	---	---
14	92	90	91	86	80	83	83	82	82	92	90	91
15	92	89	91	90	84	87	83	82	83	92	90	91
16	92	88	90	91	88	89	83	82	83	92	86	90
17	91	88	90	92	89	90	83	82	83	86	82	84
18	92	88	90	92	90	91	83	79	81	91	84	88
19	94	89	91	91	90	90	84	83	84	90	86	88
20	94	91	92	90	88	89	84	82	83	92	88	90
21	94	92	93	89	87	88	86	84	85	92	88	91
22	95	92	94	88	87	87	85	84	84	92	91	92
23	97	93	95	88	85	86	85	84	84	92	91	92
24	97	93	95	86	83	84	85	84	84	92	91	92
25	96	92	95	85	83	84	86	84	85	93	92	92
26	92	90	91	83	82	83	86	85	86	92	90	91
27	91	89	90	82	78	80	87	85	86	91	89	90
28	92	89	91	81	78	80	87	85	86	91	89	90
29	92	89	91	82	76	78	86	84	85	91	90	90
30	91	87	89	84	82	82	88	85	86	91	89	89
31	92	88	90	---	---	---	88	87	88	90	88	89
Month	---	---	---	---	---	---	88	79	83	---	---	---

02081022 ROANOKE RIVER NEAR OAK CITY, NC—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION
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	91	89	90	95	93	94	97	92	95	99	93	95
2	92	90	91	95	93	94	99	95	97	101	92	96
3	91	90	91	94	92	93	103	98	100	99	91	95
4	92	90	91	94	92	93	102	98	100	95	88	91
5	92	91	91	95	92	94	102	98	100	93	87	90
6	92	88	90	96	94	95	101	97	99	97	89	92
7	91	88	89	97	94	95	101	96	99	100	90	94
8	91	89	90	97	95	96	100	96	98	100	90	94
9	91	90	91	98	95	97	100	95	96	99	88	93
10	92	91	91	98	96	97	96	92	93	101	87	93
11	93	90	91	99	96	97	92	83	85	100	91	94
12	93	91	92	99	97	98	86	83	84	101	90	94
13	93	92	93	98	96	97	89	85	87	95	90	92
14	93	92	92	96	88	91	90	88	89	99	88	93
15	94	92	93	89	85	87	91	89	90	98	90	93
16	94	92	93	93	89	91	94	91	92	101	90	95
17	94	92	93	94	90	92	95	90	93	97	88	92
18	94	93	93	97	94	95	91	88	89	93	87	89
19	95	93	94	96	94	95	92	88	90	88	83	86
20	95	93	94	98	95	97	---	---	---	89	81	85
21	96	94	95	100	98	99	---	---	---	94	85	89
22	95	93	94	101	98	99	---	---	---	98	86	91
23	94	92	93	100	97	98	---	---	---	99	87	92
24	93	92	93	100	97	98	---	---	---	97	86	91
25	93	92	93	100	98	99	94	90	92	91	86	88
26	93	91	92	100	97	98	95	89	91	91	84	88
27	94	92	93	98	96	97	94	90	92	97	85	90
28	94	93	94	99	96	98	95	88	92	99	87	92
29	---	---	---	100	96	98	94	90	92	99	85	91
30	---	---	---	96	89	91	98	90	94	95	82	88
31	---	---	---	93	88	90	---	---	---	99	85	90
Month	96	88	92	101	85	95	---	---	---	101	81	91

02081022 ROANOKE RIVER NEAR OAK CITY, NC—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION
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	---	---	---	92	84	88	91	77	86	97	91	94
2	---	---	---	98	87	92	91	84	88	96	90	93
3	99	88	91	101	92	96	100	87	92	94	88	91
4	95	86	90	103	93	97	100	92	95	93	86	89
5	96	86	91	103	92	98	97	93	95	94	86	90
6	95	84	91	104	93	97	95	90	93	103	91	96
7	95	85	89	99	91	96	96	86	91	99	92	95
8	94	84	89	98	87	93	97	92	95	97	90	93
9	94	86	90	92	85	88	109	93	101	94	88	90
10	93	86	89	92	87	90	103	97	100	93	87	90
11	90	86	87	99	87	93	100	94	97	93	90	91
12	96	86	90	97	91	93	99	92	96	91	86	89
13	94	84	88	100	91	95	99	92	96	95	87	91
14	97	85	90	96	89	93	98	89	93	94	88	90
15	---	---	---	96	89	92	99	91	95	95	88	90
16	99	88	92	93	88	91	107	93	99	95	86	90
17	95	82	88	92	82	89	100	95	97	---	---	---
18	85	77	80	94	81	88	97	92	94	---	---	---
19	87	81	84	101	88	94	95	89	92	---	---	---
20	---	---	---	99	92	95	93	86	90	---	---	---
21	---	---	---	96	87	92	95	87	91	---	---	---
22	---	---	---	---	---	---	95	89	93	---	---	---
23	---	---	---	---	---	---	105	90	96	---	---	---
24	94	87	91	---	---	---	96	92	95	---	---	---
25	99	86	93	---	---	---	96	90	93	---	---	---
26	98	91	94	---	---	---	95	87	93	---	---	---
27	98	89	94	103	89	94	97	86	93	---	---	---
28	97	89	94	94	87	90	98	88	93	---	---	---
29	98	89	94	92	89	91	99	91	95	---	---	---
30	93	83	88	91	82	88	106	92	99	---	---	---
31	---	---	---	85	80	83	100	89	98	---	---	---
Month	---	---	---	---	---	---	109	77	94	---	---	---