

02081054 ROANOKE RIVER AT WILLIAMSTON, NC

Roanoke Basin Lower Roanoke Subbasin

LOCATION.--Lat 35°51′35″, long 77°02′25″ referenced to North American Datum of 1983, Martin County, NC, Hydrologic Unit 03010107, on right bank 175 ft upstream of U.S. Highway 17 bridge, .75 mi above Sweetwater Creek, and 1 mi northeast of Williamston.

DRAINAGE AREA.--9,070 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD .--

DISCHARGE: July 2006 to November 2007 (discontinued).

GAGE HEIGHT: December 1985 to current year.

GAGE.--Water stage recorder and acoustic velocity meter. Datum of gage is 2.86 ft below NGVD of 1929. Satellite telemetry at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,400 ft³/s, December 11, 2006, maximum gage height, 11.91 ft, April 27, 2003; minimum discharge, 553 ft³/s, October 14, 2007, minimum gage height, -0.35 ft, January 4, 1989.

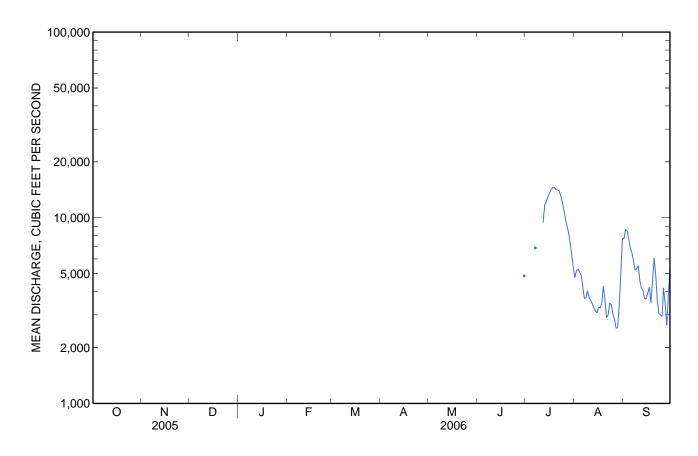
EXTREMES FOR CURRENT YEAR.--Maximum discharge, 18,400 ft³/s, December 11, 2006, maximum gage height, 11.45 ft, January 24; minimum discharge, 718 ft³/s, September 20, minimum gage height, 3.71 ft, September 19.

02081054 ROANOKE RIVER AT WILLIAMSTON, NC—Continued

DISCHARGE, CUBIC FEET PER SECOND WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006 DAILY MEAN VALUES

[e, estimated]

Day	0ct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1											4,770	7,720
2											5,190	8,630
3											5,300	8,470
4											5,110	7,690
5											4,900	6,840
6											4,300	e6,490
7										6,880	3,670	5,870
8											3,710	5,260
9											4,050	5,300
10											3,730	5,530
11											3,600	4,610
12										9,460	3,440	4,190
13										11,700	3,280	4,070
14										12,300	3,140	3,670
15										12,900	3,080	3,660
16										13,600	3,300	3,930
17										14,200	3,270	4,220
18										14,600	3,470	3,500
19										14,600	4,280	4,520
20										14,200	3,650	6,060
21										14,100	2,900	4,990
22										14,000	3,010	3,630
23										13,200	3,470	3,050
24										12,300	3,410	3,000
25										11,100	3,050	2,940
26										9,890	2,850	4,180
27										9,120	2,550	3,440
28										8,310	2,550	2,640
29										7,370	3,400	3,780
30									4,860	6,430	5,030	5,400
31										5,380	7,690	



02081054 ROANOKE RIVER AT WILLIAMSTON, NC—Continued

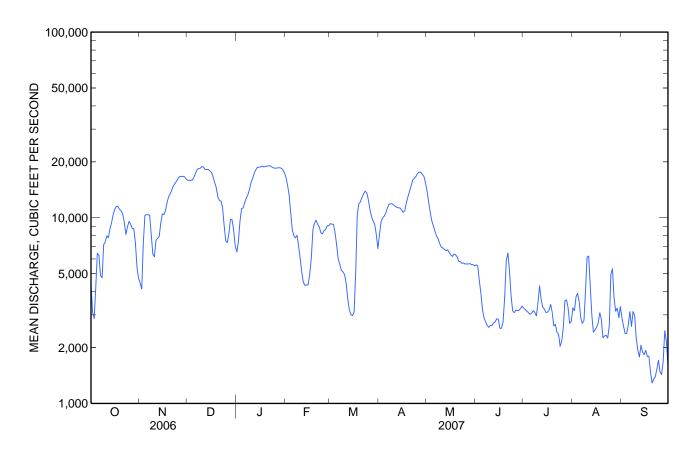
DISCHARGE, CUBIC FEET PER SECOND WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007 DAILY MEAN VALUES

[e, estimated]

						le, estimate	uj					
Day	0ct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	4,360	4,460	15,900	6,560	16,500	9,300	8,110	13,900	5,580	e3,260	3,270	2,890
2	3,100	4,140	15,900	7,410	15,000	9,230	9,510	12,300	5,510	e3,200	3,160	2,600
3	2,870	7,310	15,900	9,570	13,200	9,220	9,980	10,700	4,590	3,140	3,750	2,380
4	4,170	10,300	16,000	11,200	10,700	8,290	10,200	9,640	3,910	3,080	3,920	2,380
5	6,440	10,400	16,600	11,300	8,630	7,100	10,600	9,060	3,190	3,020	3,540	2,650
6	6,270	10,400	17,400	12,100	7,990	5,960	11,300	8,460	2,890	3,070	2,890	3,120
7	4,890	10,300	18,200	12,800	7,800	5,620	11,800	7,970	2,750	3,160	2,700	2,600
8	4,750	8,110	18,400	13,300	8,040	5,200	11,900	7,710	2,630	3,100	2,800	3,130
9	7,150	6,360	18,500	14,200	7,050	5,110	11,900	7,260	2,570	2,960	4,000	2,970
10	7,410	6,170	18,900	15,500	6,030	4,950	11,700	6,960	2,640	3,480	6,140	2,250
11	7,990	7,560	18,700	16,300	5,090	4,410	11,500	6,880	2,630	4,300	6,220	1,940
12	7,810	7,740	18,200	17,400	4,480	3,650	11,400	6,760	2,720	3,630	4,250	1,780
13	8,760	7,910	18,200	18,100	4,320	3,190	11,300	6,640	2,750	3,300	2,970	2,060
14	9,410	9,350	18,200	18,700	4,350	3,010	11,300	6,720	2,860	3,230	2,420	1,890
15	10,400	10,500	17,900	18,700	4,350	2,970	11,000	6,490	2,840	3,090	2,490	1,830
16	11,100	10,400	17,500	18,800	4,970	3,110	10,700	6,320	2,540	3,100	2,580	1,930
17	11,500	10,900	16,700	19,000	6,060	5,110	10,900	6,190	2,540	3,180	2,710	1,790
18	11,500	12,100	15,500	18,800	8,640	10,300	12,100	6,380	2,750	3,410	3,080	1,800
19	11,100	13,000	14,600	18,900	9,330	11,900	13,000	6,320	3,730	3,100	2,850	1,470
20	10,900	13,500	13,000	19,000	9,700	12,200	13,900	6,160	5,880	2,610	2,260	1,290
21	10,500	14,100	12,400	19,000	9,230	12,900	14,900	5,830	6,460	2,670	2,310	1,350
22	9,480	14,900	12,300	19,100	8,940	13,500	16,000	5,810	5,260	2,410	2,330	1,390
23	8,120	15,300	11,400	18,800	8,300	13,900	16,300	5,680	3,850	2,360	2,250	1,530
24	8,950	15,800	9,130	18,600	8,190	13,600	16,700	5,710	3,160	2,030	2,640	1,710
25	9,560	16,300	7,530	18,500	8,520	12,400	17,300	5,630	3,080	2,170	4,950	1,480
26	9,260	16,700	7,350	18,500	8,640	11,200	17,600	5,650	3,180	2,570	5,310	1,430
27	8,750	16,700	8,240	18,600	9,060	10,100	17,600	5,630	3,160	3,580	3,720	1,680
28	8,730	16,700	9,800	18,600	9,040	9,590	17,200	5,670	3,170	3,610	3,140	2,460
29	7,340	16,600	9,770	18,500		9,230	16,700	5,590	3,250	3,290	3,260	2,160
30	5,420	16,200	8,570	18,200		8,130	15,500	5,590	3,350	2,700	2,900	1,620
31	4,730		7,040	17,500		6,830		5,510		2,760	3,320	

SUMMARY STATISTICS

	Water Years	2006 - 2007
Highest daily mean	19,100	Jan 22, 2007
Lowest daily mean	1,290	Sep 20, 2007
Annual seven-day minimum	1,450	Sep 20, 2007
Maximum peak flow	20,200	Dec 11, 2006
Maximum peak stage	11.45	Jan 24, 2007
Instantaneous low flow	597	Sep 20, 2007
10 percent exceeds	16,700	
50 percent exceeds	7,100	
90 percent exceeds	2,570	



DISCHARGE, CUBIC FEET PER SECOND WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008 DAILY MEAN VALUES

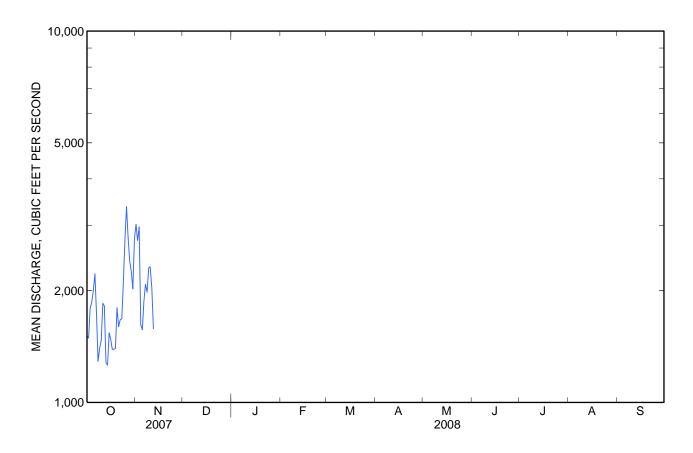
******* THESE DATA ARE NOT FLAGGED "APPROVED" IN THE DATABASE *********

[e, estimated]

Day	•											
	0ct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	1,510	3,020										
2	1,490	2,730										
3	1,790	2,970										
4	1,860	1,620										
5	2,000	1,570										
6	2,220	1,870										
7	1,730	2,080										
8	1,290	1,980										
9	1,400	2,300										
10	1,470	2,320										
11	1,850	2,040										
12	1,820	1,580										
13	1,280											
14	1,260											
15	1,540											
16	1,480											
17	1,390											
18	1,390											
19	1,400											
20	1,800											
21	1,600											
22	1,670											
23	1,680											
24	2,100											
25	e2,740											
26	3,370											
27	2,780											
28	2,400											
29	2,260											
30	2,020											
31	2,760											

SUMMARY STATISTICS

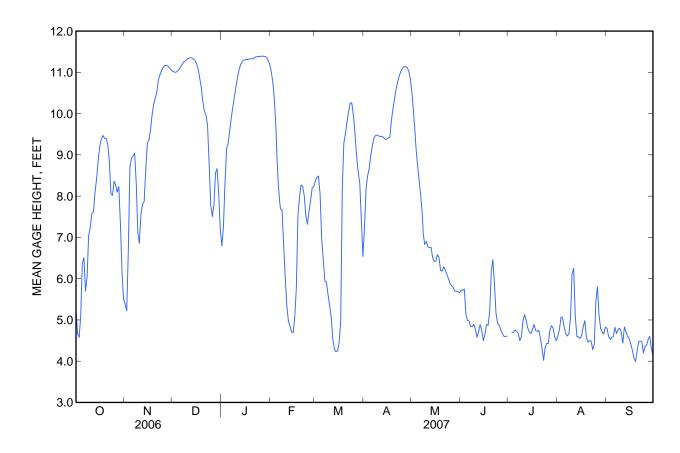
	Water Years	s 2006 - 2008
Highest daily mean	19,100	Jan 22, 2007
Lowest daily mean	1,260	Oct 14, 2007
Annual seven-day minimum	1,390	Oct 13, 2007
Maximum peak flow	18,400	Dec 11, 2006
Maximum peak stage	11.45	Jan 24, 2007
Instantaneous low flow	417	Oct 14, 2007
10 percent exceeds	16,700	
50 percent exceeds	7,100	
90 percent exceeds	2,570	



02081054 ROANOKE RIVER AT WILLIAMSTON, NC—Continued

GAGE HEIGHT, FEET WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007 DAILY MEAN VALUES

					DAIL	Y MEAN V	ALUES					
Day	0ct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	5.23	5.39	11.03	6.80	11.06	8.37	7.24	10.49	5.72		4.60	4.80
2	4.66	5.22	11.01	7.25	10.81	8.45	8.20	10.02	5.72		4.77	4.61
3	4.58	6.68	11.00	8.31	10.43	8.49	8.50	9.48	5.75	4.70	5.07	4.53
4	5.11	8.70	11.03	9.14	9.73	8.05	8.67	8.97	5.14	4.70	5.05	4.58
5	6.36	8.92	11.07	9.28	8.79	6.97	8.99	8.52	4.99	4.76	4.83	4.59
6	6.51	8.97	11.13	9.60	8.10	6.47	9.23	8.21	4.97	4.72	4.67	4.82
7	5.70	9.04	11.19	9.91	7.69	5.94	9.41	7.80	4.84	4.68	4.61	4.67
8	6.05	8.31	11.25	10.17	7.67	5.92	9.47	7.11	4.84	4.50	4.67	4.77
9	7.05	7.12	11.28	10.42	6.85	5.62	9.48	6.83	4.90	4.59	5.04	4.80
10	7.24	6.86	11.32	10.67	6.05	5.35	9.46	6.90	4.76	4.97	6.12	4.71
11	7.58	7.58	11.34	10.90	5.35	5.08	9.44	6.78	4.58	5.13	6.25	4.44
12	7.61	7.81	11.35	11.08	4.97	4.53	9.45	6.75	4.71	4.99	5.09	4.83
13	8.10	7.87	11.35	11.20	4.85	4.30	9.42	6.76	4.89	4.81	4.60	4.71
14	8.41	8.64	11.33	11.27	4.71	4.23	9.38	6.51	4.74	4.71	4.59	4.60
15	8.86	9.29	11.29	11.30	4.69	4.25	9.38	6.42	4.50	4.67	4.55	4.55
16	9.21	9.36	11.21	11.31	5.05	4.45	9.41	6.42	4.65	4.77	4.62	4.42
17	9.38	9.60	11.09	11.31	5.77	4.98	9.43	6.58	4.89	4.89	4.83	4.27
18	9.47	9.97	10.88	11.32	7.51	8.20	9.84	6.52	4.87	4.74	4.98	4.08
19	9.40	10.23	10.65	11.33	7.98	9.28	10.13	6.20	5.20	4.72	4.59	3.99
20	9.40	10.38	10.30	11.33	8.27	9.52	10.37	6.18	6.18	4.75	4.46	4.24
21	9.26	10.52	10.06	11.33	8.24	9.80	10.60	6.29	6.46	4.55	4.50	4.48
22	8.87	10.82	9.97	11.37	8.01	10.06	10.78	6.21	5.86	4.31	4.49	4.49
23	8.06	10.94	9.72	11.38	7.53	10.26	10.92	6.10	5.16	4.02	4.28	4.47
24	8.02	11.05	8.81	11.38	7.32	10.26	11.03	6.00	4.92	4.33	4.42	4.20
25	8.36	11.12	7.80	11.39	7.64	9.98	11.10	5.88	4.87	4.43	5.46	4.35
26	8.28	11.16	7.51	11.39	7.88	9.51	11.14	5.83	4.76	4.43	5.80	4.38
27	8.10	11.17	7.79	11.39	8.20	8.98	11.14	5.79	4.67	4.75	5.12	4.53
28	8.23	11.15	8.56	11.39	8.23	8.62	11.11	5.70	4.60	4.86	4.79	4.60
29	7.35	11.11	8.67	11.37		8.32	11.02	5.70	4.60	4.81	4.71	4.31
30	6.17	11.06	8.10	11.31		7.47	10.82	5.68	4.61	4.59	4.66	4.14
31	5.51		7.21	11.22		6.54		5.66		4.50	4.82	
Mean	7.49	9.20	10.20	10.61	7.48	7.36	9.82	6.91	5.04		4.87	4.50
Max	9.47	11.17	11.35	11.39	11.06	10.26	11.14	10.49	6.46		6.25	4.83
Min	4.58	5.22	7.21	6.80	4.69	4.23	7.24	5.66	4.50		4.28	3.99



WATER-QUALITY RECORDS

PERIOD OF RECORD .-- Water years 2006 to 2008

PERIOD OF DAILY RECORD .--

SPECIFIC CONDUCTANCE: June to September 2006, March to November 2007.

pH: June to September 2006, March to November 2007.

WATER TEMPERATURE: June to September 2006, March to November 2007.

DISSOLVED OXYGEN: June to September 2006, March to November 2007.

DISSOLVED OXYGEN, PERCENT SATURATION: June to September 2006, March to November 2007,

INSTRUMENTATION.--Water-quality monitor with satellite telemetry from June to September 2006, March to November 2007.

REMARKS.--Station operated in cooperation with the U.S. Army Corps of Engineers. Dissolved oxygen, percent saturation is computed using a barometric pressure of 760 mm of Hg. Water-quality measurements and samples for water years 2006-2008, were collected by the U.S. Geological Survey and the North Carolina Department of Environment and Natural Resources, Division of Water Quality.

EXTREMES FOR PERIOD OF DAILY RECORD .--

SPECIFIC CONDUCTANCE: Maximum recorded, 157 microsiemens, October 23, 2007; minimum recorded, 80 microsiemens, Sepember 5, 2007.

pH: Maximum recorded, 8.0 standard units, October 2, 2007; minimum recorded, 6.1 standard units, September 4, 5, 6, 2007.

WATER TEMPERATURE: Maximum recorded, 30.8°C, August 6, 2006, August 9, 2007; minimum recorded, 9.4°C, March 20, 21, 2007.

DISSOLVED OXYGEN: Maximum recorded, 11.0 mg/L, March 20, 2007; minimum recorded, 3.9 mg/L, September 5, 2006.

DISSOLVED OXYGEN, PERCENT SATURATION: Maximum recorded, 105%, October 2, 2007; minimum recorded, 47%, September 5, 2006.

EXTREMES FOR CURRENT PERIOD .--

SPECIFIC CONDUCTANCE: Maximum recorded, 157 microsiemens, October 23, 2007; minimum recorded, 91 microsiemens, March 20, 21, 2007.

pH: Maximum recorded, 8.0 standard units, October 2, 2007; minimum recorded, 6.5 standard units, March 31, 2007, April 2, 2007, May 2, 2007.

WATER TEMPERATURE: Maximum recorded, 30.8°C, August 9, 2007; minimum recorded, 9.4°C, March 20, 21, 2007.

DISSOLVED OXYGEN: Maximum recorded, 11.0 mg/L, March 20, 2007; minimum recorded, 4.7 mg/L, August 27, 2007.

DISSOLVED OXYGEN, PERCENT SATURATION: Maximum recorded, 105%, October 2, 2007; minimum recorded, 61%, August 27, 31, 2007.

WATER-QUALITY DATA WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

[Remark codes: <, less than.]

Date	Time	Sample type	Instan- taneous dis- charge, cfs (00061)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unf µS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	Sus- pended sedi- ment concen- tration mg/L (80154)	
Oct										
16	0955	Environmental	11,500	8.0	7.8	116	19.7	< 2.0		
Nov										
08	0900	Environmental	7,970	9.1	7.0	90	14.7	<1.0	27	
08	0915	Replicate	7,970	9.1	7.0	90	14.7	<1.0		
Apr										
05	0810	Environmental	11,300	9.4	7.1	99	15.6	<1.0	39	
16	1030	Environmental	10,800	9.2	6.8	98	14.6	<1.0		
May										
03	1230	Environmental	10,500	7.1	6.7	104	19.8	< 2.0	23	
14	1120	Environmental	7,020	7.3	6.8	94	20.0	<1.0		
31	1245	Environmental	5,330	7.9	7.3	109	24.2	1.2	45	
Jun										
13	0840	Environmental	2,890	6.5	6.9	118	27.4	<1.0		
28	0830	Environmental	3,220	6.8	7.2	118	27.6	< 2.0	18	
Jul										
17	0900	Environmental	3,010	6.8	6.9	121	28.7	<1.0		
Aug										
01	1515	Environmental	3,330	6.7	7.2	116	28.3	<1.0	14	
13	0910	Environmental	3,060	6.2	6.4	103	28.3	<1.0		
Sep										
06	0930	Environmental	3,320	7.5	7.4	139	27.2	<1.0	17	
17	1115	Environmental	1,840	7.3	7.4	137	26.4	<1.0		

WATER-QUALITY DATA WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

[Remark codes: <, less than.]

Date	Time	Instan- taneous dis- charge, cfs (00061)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific onductance, wat unf µS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	Sus- pended sedi- ment concen- tration mg/L (80154)
Oct								
03	1345	1,630	9.9	7.1	129	24.0	<1.0	10
17	0915	1,140	7.6	6.7	137	21.1	<1.0	
Nov								
07	1410	1,710	8.9	7.3	123	15.6	<1.0	10

02081054 ROANOKE RIVER AT WILLIAMSTON, NC—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Day	Max	Min	Mean									
		October			Novembe	r		Decembe	r		January	
1	136	122	129	112	108	109						
2	122	116	118	116	112	114						
3	125	117	118	117	111	115						
4	132	120	124	118	106	112						
5	134	126	131	106	105	106						
6	127	114	120	108	105	106						
7	122	114	117	108	105	105						
8	115	113	114	107	104	104						
9	125	113	118									
10	119	111	114									
11	119	110	112									
12	120	110	113									
13	116	110	112									
14	116	111	112									
15	114	110	111									
16	112	110	111									
17	111	111	111									
18	112	110	111									
19	115	112	113									
20	117	112	113									
21	117	112	113									
22	114	111	112									
23	115	111	113									
24	117	111	113									
25	117	111	114									
26	111	108	109									
27	112	108	109									
28	112	107	109									
29	112	107	109									
30	111	108	109									
31	108	107	108									
Month	136	107	114									

02081054 ROANOKE RIVER AT WILLIAMSTON, NC—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Dov	Max	Min	Moon	Max	Min	Mean		Min	Moon	Max	Min	Mean
Day	IVIAX	IVIII	Mean	IVIAX	IVIII	Mean	Max	IVIII	Mean	IVIAX	IVIII	iviean
		February			March			April			May	
1							108	104	105	102	96	99
2							109	98	105	105	101	103
3							99	97	98	105	104	105
4							97	96	97	106	105	105
5							97	96	96	107	105	106
6							97	96	96	107	105	106
7							96	96	96	106	106	106
8							97	95	96	107	106	106
9							99	96	97	108	106	107
10							100	98	99	108	106	107
11							100	99	99	108	106	107
12							100	99	100	108	107	108
13							100	98	99	109	108	108
14							100	98	99	108	107	107
15							99	96	98	108	107	108
16							98	95	97	109	108	108
17							99	97	98	108	106	108
18							99	96	98	107	106	107
19							96	93	94	107	106	106
20							97	93	96	108	106	107
21				92	91	92	99	97	98	108	106	107
22				94	92	93	99	97	98	108	107	107
23				95	93	94	97	96	97	108	106	107
24				95	94	94	97	96	96	108	106	107
25				96	94	95	97	96	96	108	107	108
26				100	96	98	97	95	96	108	106	107
27				103	100	101	96	95	96	107	105	106
28				104	102	103	96	95	96	108	105	107
29				106	103	104	96	95	95	109	105	107
30				107	102	105	97	95	96	108	105	107
31				107	103	104				108	106	107
onth							109	93	98	109	96	106

02081054 ROANOKE RIVER AT WILLIAMSTON, NC—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
Бау	IVIAX	IVIIII	Wiedii	IVIAX	IVIIII	IVIEGII	IVIAX	IVIIII	IVICALI	IVIAX	IVIIII	Wiedii
		June			July			August			Septembe	er
1	108	106	107				119	108	114	121	112	116
2	108	106	107				122	112	119	126	119	123
3	108	105	107	110	107	109	121	112	119	125	113	119
4	107	106	107	111	108	110	115	109	113	126	113	121
5	107	106	107	112	110	111	116	107	113	128	118	122
6	108	107	107	112	111	112	114	107	112	130	127	128
7	113	108	111	113	111	112	114	107	110	128	126	127
8	113	112	113	114	112	113	115	109	113			
9	115	111	113	114	112	113	119	111	117			
10	113	112	112	114	111	112	120	116	118			
11	114	108	112	115	112	113	116	106	112			
12	113	107	109	115	111	113	115	106	111	125	114	117
13	119	113	116	113	104	110	109	106	107	128	116	122
14	120	116	118	110	102	106	108	106	107	133	116	125
15	118	115	117	115	109	113	119	107	112	136	130	135
16	117	115	116	116	115	115	121	119	120	137	134	136
17	117	116	117	117	106	116	123	120	122	137	134	136
18	118	115	117	117	114	116	124	116	120	135	127	131
19	121	117	118	116	114	115	117	116	116	138	135	137
20	121	117	118	116	112	114	118	116	117	139	136	137
21	117	107	113	114	112	113	119	111	116	139	138	139
22	114	104	109	116	113	114	122	110	115	140	138	139
23	107	104	105	119	115	118	124	121	122	141	138	140
24	116	106	113	121	119	120	126	123	125	144	140	142
25	114	107	109	122	120	121	126	122	124	150	143	147
26	120	114	118	122	120	121	127	111	121	150	149	149
27	120	118	119	123	120	121	116	107	112	150	148	149
28	122	116	120	124	121	122	111	105	107	149	145	148
29	117	115	116	124	109	119	112	105	107	145	142	143
30	117	103	110	120	107	112	122	112	120	147	143	145
31				120	109	113	122	117	120			
lonth	122	103	113				127	105	116			

02081054 ROANOKE RIVER AT WILLIAMSTON, NC—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
-		October			Novembe	r		Decembe	r		January	
	1.47										_	
1	147	144	145	140	132	137						
2	145	129	139	136	134	135						
3	129	120	122	134	125	129						
4	145	125	139	125	117	119						
5	154	138	149	133	118	127						
6	150	148	149	132	120	125						
7	151	143	149	135	122	128						
8	145	141	143	136	124	133						
9				138	136	137						
10				137	135	136						
11				137	127	132						
12				137	134	136						
13												
14												
15												
16												
17	150	139	144									
18	150	139	144									
19	153	146	151									
20	154	150	152									
21	150	148	149									
22	154	149	151									
23	157	154	156									
24	156	154	155									
25												
26	146	139	143									
27	141	119	130									
28	135	119	129									
29	134	122	129									
30	122	118	119									
31	135	121	130									
lonth												

02081054 ROANOKE RIVER AT WILLIAMSTON, NC—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

1 2 3 4 5 6 7 8 9	 February	 	March	 	April	 	May 	
2 3 4 5 6 7 8	 	 	 	 	 	 	 	
3 4 5 6 7 8 9	 	 	 	 		 		
4 5 6 7 8 9	 	 		 		 		
5 6 7 8 9	 	 		 				
6 7 8 9	 	 				 		
7 8 9	 	 						
7 8 9	 					 		
8 9	 			 		 		
10		 		 		 		
11	 	 		 		 		
12	 	 		 		 		
13	 	 		 		 		
14	 	 		 		 		
15	 	 		 		 		
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17	 	 		 		 		
18	 	 		 		 		
19	 	 		 		 		
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21								
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24 25	 	 		 		 		
25	 	 		 		 		
26	 	 		 		 		
27	 	 		 		 		
28	 	 		 		 		
29	 	 		 		 		
30	 	 		 		 		
31	 	 		 		 		
Month	 	 		 		 		

02081054 ROANOKE RIVER AT WILLIAMSTON, NC—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
рау	IVIAX	IVIIII	Iviean	IVIAX	IVIIII	iviean	IVIAX	IVIIII	iviean	IVIAX	IVIIII	iviean
		June			July			August			Septembe	er
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
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29												
30												
31												
onth												

02081054 ROANOKE RIVER AT WILLIAMSTON, NC—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

	Day	Max	Min	Median	Max	Min	Median	Max	Min	Median	Max	Min	Median
2 7.2 7.1 7.1 7.1 7.1 7.1 7.0 6.8 6.9			Octobe	r		Novembe	er		Decembe	er		January	,
2 7.2 7.1 7.1 7.1 7.1 7.1 7.0 6.8 6.9	1	7.2	7.1	7.2	6.8	6.7	6.8						
4 7.2 7.1 7.2 7.2 7.0 7.2	2												
4 7.2 7.1 7.2 7.2 7.0 7.2	3	7.1	7.1	7.1	7.0	6.8	6.9						
5 7.2 7.2 7.3 7.2 7.3													
7 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2	5	7.2	7.2		7.3	7.2	7.3						
8 7.2 7.2 7.2 6.9 7.0	6	7.2	7.2	7.2	7.3	7.2	7.2						
9 7.2 7.1 7.2	7	7.2	7.2	7.2	7.2	7.2	7.2						
10 7.1 7.0 7.1	8	7.2	7.2	7.2	7.2	6.9	7.0						
11 7.1 7.1 7.1 7.1 7.1	9	7.2	7.1	7.2									
12 7.2 7.1 7.2	10	7.1	7.0	7.1									
13	11	7.1	7.1	7.1									
14 7.2 7.2 7.2	12	7.2	7.1	7.2									
15 7.3 7.2 7.2	13	7.2	7.2	7.2									
16 7.3 7.2 7.2	14	7.2	7.2	7.2									
17 7.3 7.2 7.2	15	7.3	7.2	7.2									
18 7.2 7.1 7.1	16	7.3	7.2	7.2									
19 7.1 7.0 7.1	17		7.2										
20 7.1 7.0 7.0	18	7.2	7.1										
21 7.1 7.0 7.0	19		7.0										
22 7.0 6.8 6.9	20	7.1	7.0	7.0									
23 6.8 6.8 6.8		7.1	7.0										
24 7.0 6.8 6.9													
25 7.1 7.0 7.1													
26 7.1 7.1 7.1			6.8										
27 7.1 7.0 7.0	25	7.1	7.0	7.1									
28 7.1 7.0 7.1													
29 7.1 6.9 7.0		7.1	7.0										
30 6.9 6.8 6.8													
31 6.8 6.8 6.8				7.0									
Max 7.3 7.2 7.2		6.9											
	31	6.8	6.8	6.8									
Min 6.8 6.8 6.8													
	Min	6.8	6.8	6.8									

02081054 ROANOKE RIVER AT WILLIAMSTON, NC—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

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

02081054 ROANOKE RIVER AT WILLIAMSTON, NC—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Day	Max	Min	Median	Max	Min	Median	Max	Min	Median	Max	Min	Median
		June			July			August			Septemb	er
1	7.1	7.1	7.1				7.1	7.1	7.1	7.3	7.2	7.3
2	7.1	7.0	7.1				7.2	7.1	7.1	7.3	7.3	7.3
3	7.1	7.0	7.0	6.8	6.8	6.8	7.2	7.1	7.1	7.3	7.2	7.3
4	7.1	7.0	7.1	6.9	6.8	6.8	7.1	7.1	7.1	7.3	7.2	7.3
5	7.1	6.9	7.0	6.8	6.8	6.8	7.1	7.1	7.1	7.3	7.3	7.3
6	7.1	6.9	7.1	6.8	6.8	6.8	7.1	7.0	7.1	7.3	7.2	7.3
7	7.1	7.0	7.1	6.8	6.8	6.8	7.1	7.0	7.1	7.3	7.3	7.3
8	7.1	7.0	7.1	6.8	6.7	6.8	7.1	7.0	7.1			
9	7.2	7.1	7.1	6.9	6.8	6.8	7.1	7.0	7.1			
10	7.2	7.1	7.2	6.9	6.8	6.9	7.1	7.0	7.1			
11	7.2	7.1	7.1	7.0	6.9	7.0	7.0	6.9	7.0			
12	7.2	7.0	7.1	7.0	7.0	7.0	7.0	6.9	7.0	7.2	7.1	7.2
13	7.0	7.0	7.0	7.0	6.9	7.0	7.0	6.9	6.9	7.3	7.2	7.2
14	7.0	7.0	7.0	7.0	6.9	7.0	7.1	7.0	7.0	7.2	7.1	7.2
15	7.0	7.0	7.0	7.0	6.9	6.9	7.2	7.1	7.1	7.3	7.2	7.2
16	7.0	7.0	7.0	7.0	7.0	7.0	7.2	7.1	7.2	7.2	7.2	7.2
17	7.0	6.9	7.0	7.0	7.0	7.0	7.2	7.1	7.2	7.2	7.2	7.2
18	7.0	6.9	6.9	7.0	7.0	7.0	7.2	7.2	7.2	7.2	7.0	7.2
19	7.0	6.9	6.9	7.0	7.0	7.0	7.2	7.2	7.2	7.2	7.1	7.2
20	6.9	6.8	6.9	7.0	7.0	7.0	7.2	7.2	7.2	7.2	7.1	7.1
21	6.9	6.8	6.8	7.0	7.0	7.0	7.2	7.2	7.2	7.2	7.0	7.1
22	6.8	6.8	6.8	7.0	6.9	7.0	7.3	7.2	7.2	7.2	7.0	7.1
23	6.8	6.8	6.8	7.0	7.0	7.0	7.3	7.3	7.3	7.1	7.0	7.1
24	6.8	6.8	6.8	7.0	7.0	7.0	7.4	7.3	7.3	7.2	7.0	7.1
25	6.8	6.8	6.8	7.1	7.0	7.0	7.4	7.3	7.3	7.2	7.0	7.1
26	6.9	6.8	6.8	7.1	7.0	7.0	7.3	7.2	7.2	7.2	7.0	7.1
27	6.9	6.8	6.8	7.1	7.0	7.0	7.2	7.1	7.1	7.1	7.1	7.1
28	6.9	6.9	6.9	7.1	7.0	7.1	7.2	7.1	7.1	7.2	7.1	7.2
29	6.9	6.8	6.9	7.1	7.0	7.1	7.3	7.2	7.2	7.2	7.1	7.2
30	6.9	6.8	6.8	7.1	7.0	7.1	7.3	7.2	7.3	7.3	7.1	7.2
31				7.1	7.0	7.1	7.3	7.2	7.2			
Max	7.2	7.1	7.2				7.4	7.3	7.3			
Min	6.8	6.8	6.8				7.0	6.9	6.9			

02081054 ROANOKE RIVER AT WILLIAMSTON, NC—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Day	Max	Min	Median	Max	Min	Median	Max	Min	Median	Max	Min	Median
Duy	HIUA									HUA		
		Octobe	r		Novembe	er		Decembe	er		January	
1	7.2	7.1	7.1	7.1	7.1	7.1						
2	8.0	7.1	7.3	7.1	7.1	7.1						
3	7.7	7.2	7.2	7.1	7.1	7.1						
4	7.3	7.2	7.2	7.1	7.1	7.1						
5	7.3	7.2	7.2	7.1	7.1	7.1						
6	7.3	7.2	7.2	7.2	7.1	7.1						
7	7.4	7.1	7.2	7.2	7.1	7.2						
8	7.4	7.0	7.2	7.2	7.2	7.2						
9	7.3	7.1	7.2	7.2	7.2	7.2						
10	7.4	7.0	7.2	7.2	7.2	7.2						
11	7.2	7.2	7.2	7.2	7.2	7.2						
12	7.3	7.2	7.2	7.2	7.2	7.2						
13	7.3	7.2	7.2									
14	7.3	7.2	7.3									
15	7.3	7.1	7.2									
16	7.2	7.1	7.2									
17	7.2	7.2	7.2									
18	7.2	7.1	7.2									
19	7.2	7.1	7.1									
20	7.2	7.1	7.1									
21	7.2	7.1	7.1									
22	7.2	7.1	7.1									
23	7.2	7.1	7.1									
24	7.1	7.1	7.1									
25												
26	7.1	7.1	7.1									
27	7.1	7.0	7.0									
28	7.0	7.0	7.0									
29	7.1	7.0	7.0									
30	7.0	7.0	7.0									
31	7.1	7.0	7.0									
Иах												
∕in												

02081054 ROANOKE RIVER AT WILLIAMSTON, NC—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Day	Max	Min	Median	Max	Min	Median	Max	Min	Median	Max	Min	Median
		Februar	у		March			April			May	
1												
2												
3												
4												
5												
6												
7												
8												
9												
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30												
31												
Max												
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02081054 ROANOKE RIVER AT WILLIAMSTON, NC—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Day	Max	Min	Median	Max	Min	Median	Max	Min	Median	Max	Min	Median
		June			July			August		:	Septemb	er
1												
2												
3												
4												
5												
6												
7												
8												
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10												
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27												
28												
29												
30												
31												
Max												
Min												
AIIII												

02081054 ROANOKE RIVER AT WILLIAMSTON, NC—Continued

TEMPERATURE, WATER, DEGREES CELSIUS WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Day	Max	Min	Moon	Max	Min		Max	Min	Mean	Max	Min	Mean
рау	IVIAX	IVIIII	Mean	IVIAX	IVIIII	Mean	IVIAX	IVIIII	Iviean	IVIAX	IVIIII	iviean
		October			Novembe	r		Decembe	r		January	
1	23.0	22.5	22.7	16.1	15.7	16.0						
2	23.0	22.6	22.8	16.2	15.8	16.1						
3	22.7	22.3	22.5	16.0	15.6	15.8						
4	23.0	22.3	22.6	15.6	15.1	15.4						
5	23.3	22.4	22.8	15.1	14.8	14.9						
6	23.4	22.8	23.2	14.9	14.3	14.5						
7	22.8	22.2	22.4	14.6	14.3	14.4						
8	22.4	21.6	22.0	14.8	14.6	14.7						
9	21.6	19.9	20.8									
10	21.3	19.6	20.5									
11	21.2	20.8	21.0									
12	21.2	20.8	21.0									
13	21.0	20.3	20.7									
14	20.5	20.3	20.4									
15	20.3	19.6	19.9									
16	19.9	19.4	19.7									
17	19.8	19.4	19.5									
18	19.8	19.4	19.6									
19	19.9	19.8	19.8									
20	20.5	19.9	20.3									
21	20.4	19.7	20.1									
22	19.7	18.9	19.3									
23	18.9	18.1	18.6									
24	18.1	17.2	17.5									
25	17.3	16.6	17.0									
26	17.1	16.0	16.6									
27	16.0	15.4	15.8									
28	16.2	15.4	15.8									
29	15.9	15.4	15.7									
30	15.8	15.5	15.7									
31	15.9	15.7	15.8									
onth	23.4	15.4	19.7									

02081054 ROANOKE RIVER AT WILLIAMSTON, NC—Continued

TEMPERATURE, WATER, DEGREES CELSIUS WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
Duy	IIIUX			IVIUA		Micun	IVIUX		Wican	IVIUA		Wicum
		February			March			April			May	
1							14.7	14.3	14.5	18.9	18.2	18.5
2							15.1	14.1	14.5	19.7	18.6	19.1
3							14.8	14.2	14.5	19.8	19.4	19.6
4							15.3	14.5	14.9	19.8	19.3	19.4
5							15.5	15.2	15.3	19.3	18.4	18.9
6							15.2	14.0	14.4	19.2	17.8	18.5
7							14.9	13.8	14.3	17.8	17.2	17.6
8							13.8	12.9	13.2	17.7	17.3	17.5
9							13.4	13.0	13.2	17.9	17.4	17.6
10							13.1	12.9	13.0	18.8	17.6	18.0
11							13.0	12.6	12.8	19.8	18.6	19.0
12							13.4	12.6	13.1	20.0	19.4	19.7
13							13.6	13.4	13.5	20.0	19.6	19.8
14							14.2	13.6	13.9	19.9	19.2	19.5
15							14.5	14.2	14.3	19.7	18.9	19.2
16							14.3	13.9	14.1	20.1	19.3	19.7
17							14.2	13.8	14.0	20.9	20.0	20.3
18							14.2	13.8	14.0	20.9	20.1	20.4
19							13.8	13.3	13.5	20.7	20.3	20.5
20							13.8	13.1	13.5	20.7	20.1	20.3
21				9.8	9.4	9.6	14.2	13.5	13.8	20.5	20.0	20.3
22				10.5	9.6	9.9	14.5	13.8	14.1	21.2	20.5	20.7
23				11.1	10.3	10.6	15.2	14.3	14.7	21.8	21.2	21.4
24				12.8	11.1	11.8	15.7	14.9	15.3	22.1	21.8	21.9
25				13.7	12.8	13.3	16.5	15.5	16.0	22.2	21.9	22.0
26				14.0	13.3	13.6	17.1	16.3	16.6	22.7	22.0	22.2
27				14.7	13.7	14.1	17.6	17.1	17.4	23.2	22.6	22.8
28				15.2	14.5	14.8	17.8	17.6	17.7	23.8	23.1	23.3
29				14.8	13.7	14.2	17.9	17.4	17.7	24.0	23.8	23.9
30				14.8	13.8	14.3	18.3	17.8	18.0	24.4	24.0	24.1
31				14.7	13.8	14.3				24.5	24.2	24.3
onth							18.3	12.6	14.7	24.5	17.2	20.3

02081054 ROANOKE RIVER AT WILLIAMSTON, NC—Continued

TEMPERATURE, WATER, DEGREES CELSIUS WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

						BER 2006 TO						
Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
		June			July			August			Septembe	r
1	25.3	24.5	25.1				28.5	28.0	28.2	28.3	27.9	28.1
2	25.3	24.4	24.8				28.9	28.0	28.4	28.1	27.6	27.9
3	24.8	24.1	24.4	28.1	27.6	27.8	28.6	27.8	28.2	27.8	27.2	27.5
4	25.0	24.1	24.6	28.1	27.6	27.8	29.4	27.8	28.5	27.7	26.9	27.3
5	25.3	24.2	24.8	27.8	27.3	27.5	29.4	28.6	29.0	27.8	27.3	27.6
6	25.6	25.2	25.4	27.9	27.1	27.5	29.8	28.8	29.3	27.8	27.2	27.6
7	25.8	24.8	25.3	28.4	27.6	28.0	29.9	29.1	29.5	28.2	27.2	27.7
8	26.4	25.2	25.8	28.6	28.0	28.3	30.5	29.9	30.2			
9	27.4	26.2	26.7	29.3	28.4	28.9	30.8	30.0	30.4			
10	27.7	27.0	27.4	29.6	29.1	29.3	30.6	30.0	30.4			
11	27.9	27.1	27.5	29.8	29.3	29.5	30.0	29.3	29.6			
12	27.9	27.4	27.6	29.5	28.7	29.1	29.6	28.5	29.0	27.6	27.1	27.3
13	27.7	27.2	27.5	29.1	28.4	28.7	28.9	28.1	28.5	27.7	27.1	27.4
14	27.6	26.3	26.8	28.7	28.1	28.4	29.1	28.4	28.7	27.3	26.9	27.1
15	26.3	25.5	25.8	28.5	28.0	28.2	29.4	28.7	29.0	27.2	26.9	27.1
16	25.7	24.8	25.3	28.8	28.0	28.3	29.5	29.1	29.3	26.9	26.3	26.6
17	25.7	25.0	25.4	28.8	27.4	28.4	29.6	29.1	29.4	26.3	25.5	25.9
18	26.0	25.0	25.5	28.6	27.7	28.2	29.7	29.1	29.5	25.5	24.8	25.1
19	26.7	25.3	26.0	29.4	28.6	29.0	29.5	28.9	29.3	24.8	24.1	24.4
20	27.3	26.4	27.0	29.8	29.2	29.5	29.6	28.7	29.1	24.1	23.9	24.0
21	27.1	26.1	26.5	29.6	29.2	29.5	29.6	28.8	29.3	24.6	23.7	23.9
22	26.5	26.2	26.4	29.2	28.6	28.9	29.3	29.1	29.2	25.3	23.6	24.0
23	26.8	26.1	26.4	28.6	28.1	28.3	29.6	29.2	29.3	24.9	23.7	24.1
24	27.1	26.5	26.8	28.4	28.0	28.2	29.7	29.4	29.5	25.3	23.9	24.3
25	27.4	26.6	27.0	28.3	28.0	28.1	30.2	29.4	29.8	25.8	24.2	24.7
26	27.7	26.8	27.3	28.3	27.8	28.1	29.7	29.1	29.4	25.8	24.7	25.1
27	28.2	27.1	27.7	28.9	28.0	28.4	29.1	28.7	28.9	25.7	25.2	25.4
28	28.2	27.4	27.8	28.6	28.2	28.4	29.1	28.6	28.8	26.1	25.6	25.8
29	28.4	27.7	28.0	28.9	27.9	28.4	29.4	28.5	28.9	25.7	25.0	25.3
30	28.4	27.7	28.0	28.5	28.0	28.2	29.0	28.3	28.8	25.1	24.3	24.6
31				28.6	28.1	28.3	28.4	27.9	28.2			
lonth	28.4	24.1	26.4				30.8	27.8	29.1			

02081054 ROANOKE RIVER AT WILLIAMSTON, NC—Continued

TEMPERATURE, WATER, DEGREES CELSIUS WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

						BEK 2007 1						
Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
		October			Novembe	r		Decembe	r		January	
1	24.3	23.9	24.1	18.6	17.8	18.2						
2	24.6	23.8	24.0	17.8	17.2	17.4						
3	24.0	23.8	23.9	17.6	17.2	17.4						
4	24.2	23.8	23.9	17.6	17.2	17.4						
5	24.2	23.7	23.9	17.2	16.6	16.9						
6	24.7	24.0	24.4	16.6	16.0	16.4						
7	25.7	24.6	25.0	16.0	15.0	15.4						
8	26.7	25.0	25.4	15.0	14.1	14.5						
9	26.4	25.2	25.5	14.1	13.6	13.8						
10	26.1	25.3	25.5	13.6	13.0	13.4						
11	25.4	24.9	25.1	13.0	12.5	12.8						
12	24.9	24.2	24.4	12.6	12.4	12.5						
13	24.2	23.6	23.9									
14	23.6	23.0	23.2									
15	23.0	22.1	22.5									
16	22.1	21.4	21.7									
17	21.7	21.1	21.2									
18	21.4	20.9	21.0									
19	21.6	20.9	21.1									
20	21.8	21.2	21.5									
21	21.9	21.4	21.6									
22	22.2	21.7	21.9									
23	22.8	22.0	22.3									
24	22.6	22.3	22.4									
25												
26	22.4	22.1	22.2									
27	22.4	22.0	22.3									
28	22.0	21.3	21.7									
29	21.3	20.4	20.9									
30	20.4	19.5	19.9									
31	19.5	18.6	19.0									
onth												

02081054 ROANOKE RIVER AT WILLIAMSTON, NC—Continued

TEMPERATURE, WATER, DEGREES CELSIUS WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

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Month	 	 		 		 		

02081054 ROANOKE RIVER AT WILLIAMSTON, NC—Continued

TEMPERATURE, WATER, DEGREES CELSIUS WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
рау	IVIAX	IVIIII	Iviean	IVIAX	IVIIII	iviean	IVIAX	IVIIII	iviean	IVIAX	IVIIII	wiean
		June			July			August		:	Septembe	r
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02081054 ROANOKE RIVER AT WILLIAMSTON, NC—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Day	Max	Min	Mean									
		October			Novembe	r		Decembe	r		January	
1	6.9	6.7	6.8	6.9	6.3	6.6						
2	6.8	6.7	6.8	7.2	6.3	6.7						
3	6.8	6.7	6.8	8.1	7.2	7.5						
4	7.1	6.8	6.9	8.9	8.1	8.6						
5	7.2	6.9	7.1	8.9	8.8	8.9						
6	7.1	6.8	7.0	9.0	8.8	8.9						
7	7.0	6.8	6.9	9.1	8.9	9.0						
8	7.1	6.9	7.0	9.0	7.5	8.3						
9	7.2	7.1	7.2									
10	7.3	7.0	7.1									
11	7.3	7.0	7.1									
12	7.3	7.2	7.2									
13	7.5	7.2	7.3									
14	7.6	7.3	7.4									
15	7.6	7.5	7.5									
16	7.6	7.5	7.5									
17	7.7	7.6	7.6									
18	7.6	7.0	7.2									
19	7.0	6.7	6.9									
20	6.9	6.7	6.8									
21	7.0	6.6	6.8									
22	6.6	6.2	6.5									
23	6.3	6.1	6.2									
24	7.4	6.2	6.7									
25	7.8	7.4	7.6									
26	7.9	7.7	7.8									
27	8.0	7.9	8.0									
28	8.4	8.0	8.3									
29	8.3	7.8	8.0									
30	7.8	7.2	7.5									
31	7.2	6.9	7.1									
onth	8.4	6.1	7.2									

02081054 ROANOKE RIVER AT WILLIAMSTON, NC—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
		February	1		March			April			Мау	
1							8.5	7.4	8.0	6.3	6.0	6.2
2							9.2	8.4	8.8	6.3	5.8	6.1
3							9.4	8.7	9.1	6.2	5.7	5.9
4							9.4	8.9	9.1	6.3	5.8	5.9
5							9.0	8.8	8.9	6.2	5.8	6.0
6							9.1	8.9	9.0	6.7	5.9	6.3
7							9.0	8.7	8.9	7.1	6.6	6.7
8							9.1	8.9	9.0	7.2	6.9	7.0
9							9.0	8.8	8.9	7.6	7.0	7.2
10							9.0	8.8	8.9	7.6	7.2	7.4
11							9.2	9.0	9.1	7.6	7.1	7.3
12							9.2	8.9	9.0	7.4	7.0	7.1
13							9.0	8.8	8.9	7.3	6.9	7.1
14							8.9	8.7	8.8	7.4	7.0	7.2
15							8.8	8.2	8.6	7.4	7.0	7.2
16							8.3	8.2	8.3	7.4	6.9	7.1
17							8.3	8.0	8.2	7.4	7.1	7.2
18							8.7	8.2	8.4	7.4	7.0	7.2
19										7.4	7.0	7.1
20										7.4	6.6	7.0
21				10.9	10.5	10.7				7.6	7.3	7.4
22				10.8	10.3	10.5				7.7	7.3	7.5
23				10.6	10.2	10.3				8.3	7.5	7.9
24				10.4	9.6	10	7.7	7.3	7.5	8.3	8.0	8.1
25				9.7	9.0	9.3	7.4	7.1	7.3	8.3	7.8	8.1
26				9.3	8.8	9.0	7.2	6.9	7.1	8.2	7.8	8.0
27				8.9	8.4	8.7	7.1	6.7	6.9	8.3	7.7	8.0
28				8.8	8.3	8.5	7.0	6.7	6.8	8.4	7.9	8.1
29				8.6	7.9	8.4	6.8	6.4	6.6	8.5	8.1	8.2
30				8.2	7.6	7.9	6.6	6.1	6.4	8.2	7.9	8.1
31				7.9	7.3	7.6				8.3	7.8	8.1
/lonth										8.5	5.7	7.2

02081054 ROANOKE RIVER AT WILLIAMSTON, NC—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
		June			July			August			Septembe	er e
1	8.1	7.6	7.9				6.0	5.4	5.8	5.4	5.0	5.2
2	7.9	7.7	7.8				6.2	5.6	5.9	5.4	5.0	5.3
3	7.7	7.2	7.5	5.9	5.6	5.8	6.1	5.7	5.9	5.4	4.9	5.2
4	7.4	7.0	7.3	6.0	5.8	5.9	6.1	5.7	5.9	5.5	5.0	5.2
5	7.2	6.7	7.0	6.0	5.6	5.9	6.0	5.6	5.8	5.5	5.1	5.3
6	7.0	6.5	6.7	6.0	5.8	5.9	5.9	5.6	5.8	5.6	5.1	5.3
7	6.9	6.5	6.7	6.0	5.7	5.8	6.2	5.5	5.9	5.4	5.0	5.2
8	7.0	6.1	6.6	5.8	5.6	5.7	6.1	5.6	5.9			
9	6.9	6.1	6.5	5.8	5.5	5.6	6.3	5.5	5.9			
10	7.0	6.5	6.8	5.6	5.3	5.5	5.9	5.5	5.8			
11				5.7	5.3	5.5	5.7	5.1	5.3			
12				5.7	5.4	5.5	5.4	5.0	5.2	6.2	5.6	5.9
13				5.5	5.2	5.4	5.4	5.1	5.2	6.5	5.8	6.1
14	6.6	5.8	6.1	5.7	5.3	5.5	5.7	5.2	5.4	6.6	6.0	6.2
15	6.3	5.9	6.1	5.6	4.9	5.3	5.8	5.3	5.6	6.5	6.0	6.2
16	6.3	5.9	6.1	5.9	5.4	5.6	6.0	5.4	5.8	6.4	5.9	6.2
17	6.3	5.9	6.1	6.2	5.5	5.8	6.0	5.5	5.8	6.2	5.7	6.0
18	6.4	5.8	6.1	6.0	5.8	5.9	6.1	5.6	5.9	6.3	5.8	6.0
19	6.5	5.8	6.2	5.9	5.6	5.8	6.0	5.8	5.9	6.2	5.7	6.0
20	6.3	5.7	6.1	6.0	5.5	5.8	6.2	5.7	5.9	6.2	5.5	5.8
21	6.0	5.3	5.7	5.9	5.7	5.8	6.2	5.6	5.8	6.4	5.7	5.9
22	5.7	5.2	5.5	5.9	5.5	5.7	6.3	5.9	6.0	6.7	6.1	6.3
23	5.9	5.3	5.6	6.1	5.7	5.8	6.0	5.8	5.9	6.4	6.0	6.2
24	5.6	5.4	5.5	6.1	5.6	5.8	5.9	5.5	5.7	6.9	6.2	6.4
25	5.7	5.3	5.5	6.3	5.8	6.0	5.6	5.2	5.4	6.9	6.2	6.4
26	5.7	5.5	5.6	6.4	6.1	6.3	5.3	4.9	5.1	6.5	5.8	6.1
27	5.8	5.5	5.6	6.5	6.1	6.3	5.0	4.7	4.8	6.1	5.7	5.9
28	5.7	5.4	5.6	6.2	5.8	5.9	5.2	4.8	5.0	6.0	5.6	5.8
29	5.8	5.2	5.5	5.8	5.5	5.7	5.3	4.8	5.1	6.0	5.6	5.8
30	5.6	5.0	5.3	5.7	5.5	5.6	5.4	4.8	5.1	6.3	5.9	6.1
31				5.9	5.4	5.6	5.3	4.8	5.0			
lonth							6.3	4.7	5.6			

02081054 ROANOKE RIVER AT WILLIAMSTON, NC—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Day	Max	Min	Mean									
		October	•		Novembe	r		Decembe	r		January	
1	6.4	6.0	6.2	8.1	7.4	7.7						
2	8.7	6.3	7.4	8.4	7.8	8.2						
3	8.1	6.8	7.1	8.2	7.8	8.0						
4	7.1	6.8	6.9	8.2	7.8	8.0						
5	7.2	6.8	7.0	8.2	7.8	8.0						
6	7.0	6.7	6.9	8.4	7.9	8.2						
7	6.9	6.6	6.7	8.7	8.1	8.4						
8	7.2	6.4	6.6	9.0	8.4	8.7						
9				9.2	8.7	9.0						
10				9.4	8.9	9.1						
11				9.6	9.1	9.4						
12				9.7	9.3	9.5						
13												
14												
15												
16												
17	7.4	7.1	7.3									
18	7.7	7.2	7.4									
19	7.5	7.1	7.3									
20	7.5	7.1	7.3									
21	7.4	7.1	7.2									
22	7.4	7.0	7.2									
23	7.2	6.8	7.0									
24	7.1	6.7	6.9									
25												
26	7.1	6.8	7.0									
27	7.0	6.7	6.8									
28	6.9	6.7	6.8									
29	7.1	6.7	6.9									
30	7.3	6.9	7.2									
31	7.7	7.0	7.2									
Month												

02081054 ROANOKE RIVER AT WILLIAMSTON, NC—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
		February	,		March			April			May	
1												
2												
3												
4												
5												
6												
7												
8												
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10												
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19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												
Month												

02081054 ROANOKE RIVER AT WILLIAMSTON, NC—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
		June			July			August			Septembe	r
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
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25												
26												
27												
28												
29												
30												
31												
onth												

02081054 ROANOKE RIVER AT WILLIAMSTON, NC—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Day	Max	Min	Mean									
		October			Novembe	r		Decembe	r		January	
1	81	78	80	70	64	67						
2	80	78	79	73	64	68						
3	79	78	79	82	73	76						
4	83	78	81	89	82	86						
5	85	80	82	89	87	88						
6	84	79	82	89	87	88						
7	81	78	80	90	87	88						
8	81	79	80	89	74	82						
9	81	79	80									
10	81	79	79									
11	82	79	80									
12	82	81	81									
13	84	81	82									
14	85	81	83									
15	84	82	83									
16	84	82	83									
17	84	83	83									
18	83	77	80									
19	77	74	76									
20	77	75	75									
21	78	72	76									
22	72	67	70									
23	68	65	66									
24	77	66	70									
25	81	77	79									
26	81	79	80									
27	81	80	81									
28	86	80	84									
29	84	79	81									
30	79	73	75									
31	73	70	72									
/lonth	86	65	79									

02081054 ROANOKE RIVER AT WILLIAMSTON, NC—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
		February	1		March			April			May	
1							84	73	79	68	64	66
2							90	82	86	69	63	66
3							93	86	90	68	62	64
4							93	88	91	69	63	64
5							90	88	89	67	62	65
6							91	87	88	71	63	67
7							89	85	87	75	69	71
8							87	85	86	75	72	73
9							86	84	85	80	73	76
10							86	84	85	81	76	78
11							88	85	86	82	76	79
12							87	85	86	81	76	78
13							87	84	86	81	76	78
14							86	84	85	81	76	78
15							87	80	84	81	76	78
16							81	80	81	81	75	78
17							81	77	79	83	78	80
18							85	80	82	83	77	80
19										82	78	80
20										82	73	78
21				96	93	94				85	81	82
22				95	91	93				87	81	84
23				95	91	93				95	85	89
24				95	90	92	78	72	75	95	91	93
25				92	87	89	76	73	74	96	90	94
26				89	84	87	75	71	73	95	90	92
27				88	81	85	75	70	72	97	90	93
28				87	82	84	74	70	72	99	93	95
29				85	78	82	72	67	69	101	96	97
30				80	75	77	70	65	68	98	94	97
31				78	72	75				100	94	97
lonth										101	62	80

02081054 ROANOKE RIVER AT WILLIAMSTON, NC—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
		June			July			August		;	Septembe	e r
1	99	93	96				78	69	74	70	64	67
2	96	92	94				80	72	77	69	64	67
3	93	86	90	76	71	74	79	73	76	69	62	65
4	89	84	87	77	74	75	80	73	77	70	63	66
5	88	82	84	77	71	75	79	73	76	70	65	67
6	86	80	82	77	73	75	78	73	76	72	64	68
7	85	79	81	76	73	75	82	72	77	70	63	66
8	87	74	81	75	72	74	82	74	78			
9	87	76	82	75	71	73	85	73	79			
10	89	82	86	74	69	72	79	73	77			
11				75	70	73	76	67	70			
12				75	70	72	70	66	68	79	71	74
13				72	68	70	70	66	68	83	73	78
14	84	73	77	74	68	70	74	67	70	83	76	78
15	78	72	75	72	63	68	76	69	73	82	76	79
16	77	71	74	77	70	73	79	71	76	80	73	78
17	78	72	74	79	71	75	79	72	76	77	70	74
18	79	71	75	78	74	76	81	73	77	77	71	73
19	81	71	77	78	73	75	79	76	78	75	68	72
20	79	72	77	79	72	76	82	74	78	74	66	70
21	76	66	71	78	75	76	81	74	76	77	68	70
22	71	65	69	77	72	74	80	77	78	82	72	75
23	74	66	70	79	73	75	79	76	77	77	71	74
24	71	67	69	79	72	75	78	73	75	84	74	76
25	72	66	69	81	75	77	74	69	71	85	74	77
26	73	69	70	82	78	80	70	64	67	80	71	74
27	75	69	71	85	78	81	65	61	63	75	70	72
28	73	70	72	80	75	77	68	62	65	74	69	72
29	74	67	70	75	71	73	70	62	66	73	68	71
30	72	64	68	74	71	72	70	62	67	77	71	73
31				76	69	72	68	61	65			
Month							85	61	73			

02081054 ROANOKE RIVER AT WILLIAMSTON, NC—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mear
Duy	IVIUA									IVIUA		moai
		October			Novembe	r		Decembe	r		January	
1	77	72	74	85	79	82						
2	105	75	89	88	82	85						
3	97	81	85	86	82	84						
4	85	81	82	86	81	83						
5	86	81	83	85	81	83						
6	84	81	82	86	81	83						
7	85	80	81	87	82	84						
8	90	78	81	88	83	86						
9				89	85	87						
10				89	86	88						
11				91	86	89						
12				91	87	89						
13												
14												
15												
16												
17	84	81	82									
18	87	81	83									
19	85	80	83									
20	86	80	83									
21	85	81	82									
22	85	80	82									
23	84	78	81									
24	82	77	80									
25												
26	82	78	81									
27	81	77	79									
28	79	76	78									
29	79	76	78									
30	81	77	79									
31	83	76	78									
onth												

02081054 ROANOKE RIVER AT WILLIAMSTON, NC—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	February			March			April				May	
1												
2												
3												
4												
5												
6												
7												
8												
9												
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30												
31												
Month												

02081054 ROANOKE RIVER AT WILLIAMSTON, NC—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
-		June			July		August			September		
4												
1 2												
3												
3 4												
5												
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31												
lonth												