

Water-Data Report 2010

**0209782609 WHITE OAK CREEK AT MOUTH NEAR GREEN LEVEL, NC**

Cape Fear Basin  
Haw Subbasin

LOCATION.--Lat 35°45'37", long 78°55'13" referenced to North American Datum of 1983, Wake County, NC, Hydrologic Unit 03030002, on left bank on Secondary Road 1603, 1.8 mi south-southwest of Green Level.

DRAINAGE AREA.--11.9 mi<sup>2</sup>.

**SURFACE-WATER RECORDS**

PERIOD OF RECORD.--October 1999 to current year. Prior to September 2003 published as "White Oak Creek at Green Level, NC" (0209782520).

GAGE.--Water-stage recorder. Datum of gage is 236.14 ft above North American Vertical Datum of 1988. Satellite telemetry at streamgage.

REMARKS.--Records poor. No flow occurs at times most years.

## 0209782609 WHITE OAK CREEK AT MOUTH NEAR GREEN LEVEL, NC—Continued

**DISCHARGE, CUBIC FEET PER SECOND**  
**WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**  
**DAILY MEAN VALUES**

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	e1.3	e12	16	13	14	8.8	10	e1.2	9.0	2.3	3.7	0.52
2	e0.72	e5.4	58	9.1	27	10	7.4	e1.2	7.2	1.2	3.8	0.97
3	e0.61	e1.2	286	6.9	94	28	5.2	e1.3	3.8	0.90	1.6	1.1
4	e0.57	e0.43	49	6.1	58	18	4.1	e1.4	2.8	0.67	1.2	1.0
5	e0.84	e0.32	69	6.2	155	9.2	3.6	e1.2	2.3	0.51	131	1.0
6	e1.1	e0.28	41	4.9	243	7.4	3.3	e1.1	1.8	0.37	71	1.0
7	e1.4	e0.27	22	4.7	55	5.6	5.2	e1.0	2.2	0.23	7.5	0.94
8	e1.0	e0.28	17	5.9	29	4.9	2.5	e0.92	1.9	0.11	1.7	0.83
9	e0.80	e0.25	159	4.6	38	4.3	35	e0.76	1.7	0.01	0.88	0.71
10	e0.63	e1.6	56	3.8	57	3.9	7.7	e0.76	1.5	0.00	0.63	0.56
11	e0.70	214	24	3.5	24	7.0	3.8	e0.86	1.3	0.00	0.49	0.44
12	e0.89	202	15	3.9	17	28	2.3	e1.1	1.0	0.00	0.43	0.36
13	e1.4	101	30	3.5	20	99	2.1	e1.1	4.4	0.00	0.38	0.27
14	e1.7	35	30	3.9	18	37	1.9	e0.98	4.5	0.00	0.40	0.16
15	e4.1	21	17	3.4	14	19	1.7	14	2.3	0.00	0.35	0.05
16	e2.1	16	12	3.4	12	13	1.7	13	32	0.00	0.39	0.00
17	e1.4	13	9.3	114	9.7	9.5	1.6	19	4.2	0.00	0.26	0.00
18	e0.75	12	9.0	95	8.9	7.4	1.4	61	2.5	0.00	0.17	0.00
19	e0.64	18	125	30	7.5	6.1	1.3	54	1.8	1.7	2.1	0.00
20	e0.78	13	43	18	6.3	4.6	e1.2	16	1.5	1.5	95	0.00
21	e0.53	11	22	25	5.4	4.0	e2.4	7.4	1.3	1.1	9.8	0.00
22	e0.53	11	15	129	14	4.2	e3.9	6.5	1.0	0.70	2.1	0.00
23	e0.63	45	12	35	19	4.2	e2.0	69	0.82	0.48	39	0.00
24	e0.58	34	9.8	21	12	2.7	e1.7	31	0.70	0.29	75	0.00
25	e0.58	20	52	183	17	2.6	e7.7	11	0.58	0.10	15	0.00
26	e0.53	16	76	50	9.5	3.0	e4.3	8.4	0.47	0.00	4.0	0.00
27	e0.43	15	27	22	7.2	3.1	e2.4	4.5	1.2	41	1.5	17
28	e0.53	13	17	15	6.0	2.4	e1.9	4.6	1.7	32	0.86	11
29	e0.52	11	12	12	---	144	e1.4	10	0.99	3.8	0.61	10
30	e0.52	11	9.0	17	---	44	e1.2	4.0	1.9	8.3	0.48	200
31	e0.59	---	16	13	---	17	---	2.4	---	2.4	0.39	---
<b>Total</b>	29.40	854.03	1,355.1	865.8	997.5	561.9	131.9	350.68	100.36	99.67	471.72	247.91
<b>Mean</b>	0.95	28.5	43.7	27.9	35.6	18.1	4.40	11.3	3.35	3.22	15.2	8.26
<b>Max</b>	4.1	214	286	183	243	144	35	69	32	41	131	200
<b>Min</b>	0.43	0.25	9.0	3.4	5.4	2.4	1.2	0.76	0.47	0.00	0.17	0.00
<b>Cfsm</b>	0.08	2.39	3.67	2.35	2.99	1.52	0.37	0.95	0.28	0.27	1.28	0.69
<b>In.</b>	0.09	2.67	4.24	2.71	3.12	1.76	0.41	1.10	0.31	0.31	1.47	0.77

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2010, BY WATER YEAR (WY)**

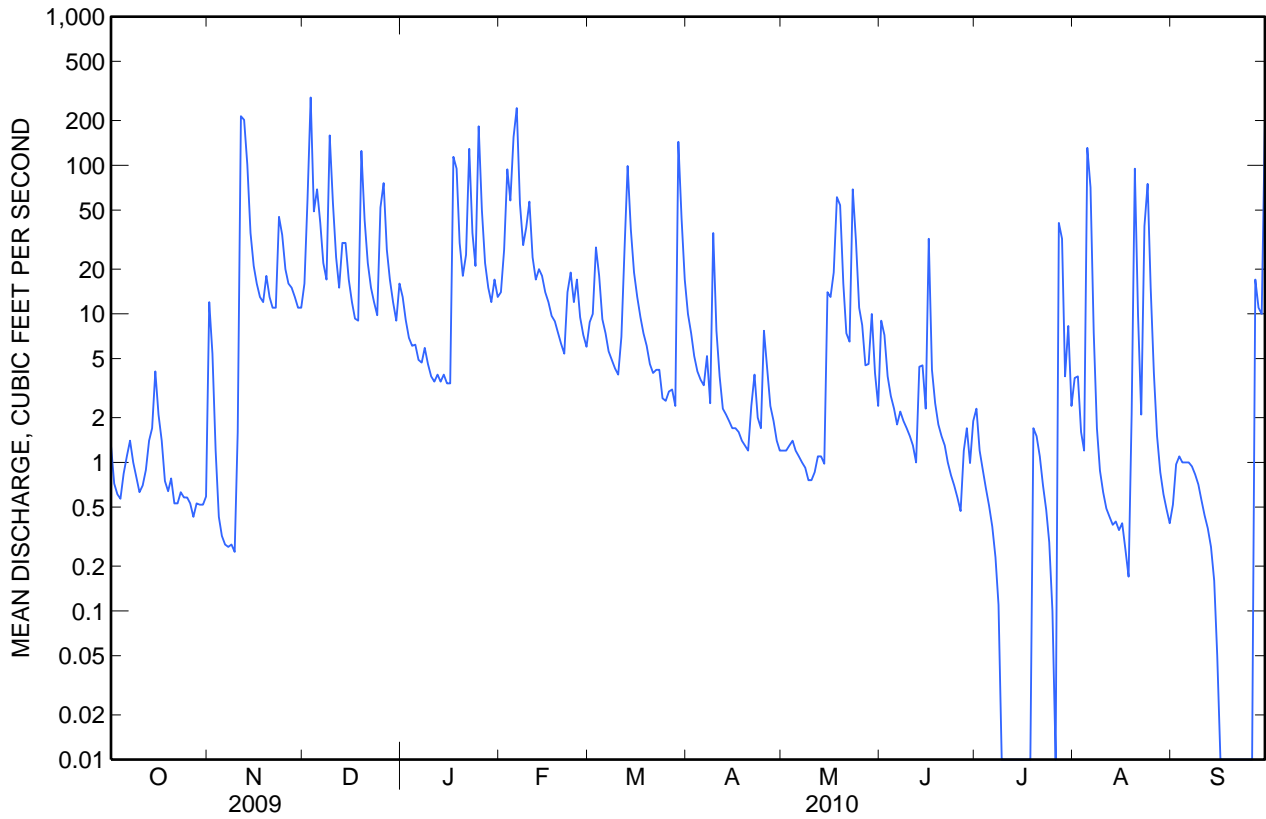
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Mean</b>	5.13	13.0	16.8	15.0	19.0	24.6	14.9	5.24	10.6	3.25	8.18	9.38
<b>Max</b>	23.8	51.8	43.7	28.6	51.4	56.4	44.8	12.9	53.0	7.89	30.2	28.6
<b>(WY)</b>	(2003)	(2007)	(2010)	(2000)	(2003)	(2003)	(2003)	(2009)	(2006)	(2008)	(2004)	(2008)
<b>Min</b>	0.77	0.21	2.35	3.26	3.91	4.06	4.40	0.20	0.00	0.01	0.00	0.01
<b>(WY)</b>	(2002)	(2002)	(2001)	(2001)	(2009)	(2006)	(2010)	(2002)	(2002)	(2002)	(2007)	(2007)

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SUMMARY STATISTICS

	Calendar Year 2009		Water Year 2010		Water Years 2000 - 2010	
<b>Annual total</b>	5,213.83		6,065.97			
<b>Annual mean</b>	14.3		16.6		12.0	
<b>Highest annual mean</b>					25.3	2003
<b>Lowest annual mean</b>					5.51	2002
<b>Highest daily mean</b>	389	Jun 16	286	Dec 3	1,240	Jun 14, 2006
<b>Lowest daily mean</b>	0.00	Jun 8	0.00	Jul 10	0.00	May 28, 2002
<b>Annual seven-day minimum</b>	0.00	Jun 30	0.00	Jul 10	0.00	May 28, 2002
<b>Maximum peak flow</b>			733	Dec 3	5,920	Jun 14, 2006
<b>Maximum peak stage</b>			9.43	Dec 3	13.50	Jun 14, 2006
<b>Instantaneous low flow</b>			<sup>a</sup> 0.00	Jul 9	<sup>a</sup> 0.00	May 28, 2002
<b>Annual runoff (cfsm)</b>	1.20		1.40		1.01	
<b>Annual runoff (inches)</b>	16.30		18.96		13.74	
<b>10 percent exceeds</b>	29		42		24	
<b>50 percent exceeds</b>	3.3		3.8		2.9	
<b>90 percent exceeds</b>	0.00		0.34		0.00	

<sup>a</sup> See Remarks



## 0209782609 WHITE OAK CREEK AT MOUTH NEAR GREEN LEVEL, NC—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1999 to current year. Prior to September 2003 published as "White Oak Creek at Green Level, NC" (0209782520).

REMARKS.--Station operated to define water quality as part of a regional surface-water quality assessment.

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

Part 1 of 5

[%, percent; ANC, acid neutralizing capacity; CaCO<sub>3</sub>, calcium carbonate; N, nitrogen; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; ft<sup>3</sup>/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; °C, degrees Celsius; μS/cm, microsiemens per centimeter; μg/L, micrograms per liter; <, less than; E, estimated]

Date	Sample start time	Medium name	Sample type	Barometric pressure, mm Hg (00025)	Color, water, filtered, platinum cobalt units (00080)	Discharge, instantaneous, ft <sup>3</sup> /s (00061)	Dissolved oxygen, water, unfiltered, mg/L (00300)	Dissolved oxygen, water, unfiltered, % saturation (00301)	pH, water, unfiltered, field, standard units (00400)	Specific conductance, water, unfiltered, μS/cm at 25 °C (00095)
10-05-2009	1245	Surface water	Regular	756	88	2.1	5.2	54	6.4	93
12-08-2009	1345	Surface water	Regular	763	80	15	10.9	90	6.9	78
02-03-2010	0815	Surface water	Regular	759	88	90	12.4	90	6.6	204
04-01-2010	1415	Surface water	Regular	759	100	9.4	9.3	96	6.6	73
06-15-2010	0830	Surface water	Regular	760	100	2.5	5.6	67	7.0	104
08-04-2010	0830	Surface water	Regular	760	100	1.3	5.8	70	6.7	95
08-05-2010	0915	Surface water	Regular	755	400	284	6.0	74	5.8	47

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

Part 2 of 5

[%, percent; ANC, acid neutralizing capacity; CaCO<sub>3</sub>, calcium carbonate; N, nitrogen; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; ft<sup>3</sup>/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; °C, degrees Celsius; μS/cm, microsiemens per centimeter; μg/L, micrograms per liter; <, less than; E, estimated]

Date	Temperature, water, °C (00010)	Dissolved solids dried at 180 °C, water, filtered, mg/L (70300)	Hardness, water, mg/L as CaCO <sub>3</sub> (00900)	Calcium, water, filtered, mg/L (00915)	Magnesium, water, filtered, mg/L (00925)	Potassium, water, filtered, mg/L (00935)	Sodium, water, filtered, mg/L (00930)	ANC, water, unfiltered, inflection-point, incremental titration method, field, mg/L as CaCO <sub>3</sub> (00419)	Bi carbonate, water, unfiltered, inflection-point, incremental titration method, field, mg/L (00450)
10-05-2009	17.0	60	22.9	5.76	2.06	3.62	6.64	17.8	21.7
12-08-2009	7.3	65	20.1	5.09	1.79	2.73	5.48	12.1	14.8
02-03-2010	2.2	126	24.5	6.28	2.14	2.37	25.6	10.0	12.2
04-01-2010	16.7	64	17.4	4.33	1.61	2.13	6.24	13.7	16.8
06-15-2010	24.7	84	30.5	7.81	2.66	2.94	8.04	24.7	30.1
08-04-2010	24.5	71	23.0	5.87	2.02	3.15	7.32	16.9	20.6
08-05-2010	24.9	56	9.52	2.39	.863	3.18	2.99	3.5	4.3

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**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

Part 3 of 5

[%, percent; ANC, acid neutralizing capacity; CaCO<sub>3</sub>, calcium carbonate; N, nitrogen; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; ft<sup>3</sup>/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; °C, degrees Celsius; μS/cm, microsiemens per centimeter; μg/L, micrograms per liter; <, less than; E, estimated]

Date	Chloride, water, filtered, mg/L (00940)	Fluoride, water, filtered, mg/L (00950)	Silica, water, filtered, mg/L as SiO <sub>2</sub> (00955)	Sulfate, water, filtered, mg/L (00945)	Ammonia plus organic nitrogen, water, unfiltered, mg/L as N (00625)	Ammonia, water, filtered, mg/L as N (00608)	Nitrate plus nitrite, water, filtered, mg/L as N (00631)	Nitrite, water, filtered, mg/L as N (00613)	Orthophos phate, water, filtered, mg/L as P (00671)
10-05-2009	7.98	E .08	6.34	8.95	.49	< .020	E .013	E .001	E .007
12-08-2009	7.14	E .05	8.40	9.15	.55	.024	.105	< .010	.010
02-03-2010	48.7	< .08	6.37	8.36	.51	.033	.175	.003	.010
04-01-2010	8.31	E .06	7.02	6.91	.54	< .020	.034	E .001	.009
06-15-2010	8.16	.11	5.50	6.98	.73	.039	.092	.005	.017
08-04-2010	7.84	.11	6.48	11.3	.64	.047	.082	.004	.014
08-05-2010	3.58	E .07	3.84	5.75	1.2	< .020	.258	.008	.015

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

Part 4 of 5

[%, percent; ANC, acid neutralizing capacity; CaCO<sub>3</sub>, calcium carbonate; N, nitrogen; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; ft<sup>3</sup>/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; °C, degrees Celsius; μS/cm, microsiemens per centimeter; μg/L, micrograms per liter; <, less than; E, estimated]

Date	Phosphorus, water, unfiltered, mg/L as P (00665)	Aluminum, water, unfiltered, recover able, μg/L (01105)	Cadmium, water, unfiltered, μg/L (01027)	Chromium, water, unfiltered, recover able, μg/L (01034)	Cobalt, water, unfiltered, recoverabl e, microgram s per liter (01037)	Copper, water, unfiltered, recover able, μg/L (01042)	Iron, water, unfiltered, recover able, μg/L (01045)	Lead, water, unfiltered, recover able, μg/L (01051)	Manganes e, water, unfiltered, recover able, μg/L (01055)	Mercury, water, unfiltered, recover able, μg/L (71900)
10-05-2009	.044	164	< .04	E .36	.46	1.7	1,120	.61	101	< .010
12-08-2009	.054	--	--	--	--	--	--	--	--	--
02-03-2010	.056	--	--	--	--	--	--	--	--	--
04-01-2010	.053	383	< .04	.73	.82	2.5	1,580	1.14	105	< .010
06-15-2010	.072	--	--	--	--	--	--	--	--	--
08-04-2010	.062	--	--	--	--	--	--	--	--	--
08-05-2010	.294	3,730	E .03	2.6	2.4	5.8	3,830	6.19	169	.017

## 0209782609 WHITE OAK CREEK AT MOUTH NEAR GREEN LEVEL, NC—Continued

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

Part 5 of 5

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Date	Molybdenum, water, unfiltered, recoverable, micrograms per liter (01062)	Nickel, water, unfiltered, recoverable, μg/L (01067)	Silver, water, unfiltered, recoverable, μg/L (01077)	Zinc, water, unfiltered, recoverable, μg/L (01092)	Arsenic, water, unfiltered, μg/L (01002)	Selenium, water, unfiltered, μg/L (01147)	Organic carbon, water, unfiltered, mg/L (00680)	Suspended sediment concentration, mg/L (80154)
10-05-2009	E .1	.87	< .02	3.5	.68	.12	11.1	9
12-08-2009	--	--	--	--	--	--	12.0	9
02-03-2010	--	--	--	--	--	--	8.0	71
04-01-2010	.1	1.4	< .02	3.8	.76	.13	10.3	17
06-15-2010	--	--	--	--	--	--	13.2	28
08-04-2010	--	--	--	--	--	--	10.5	12
08-05-2010	E .1	2.3	E .01	18.3	1.3	.19	17.2	351