

**02043270 NORTH LANDING RIVER NEAR CREEDS, VA**

Albemarle-Chowan Basin  
Albemarle Subbasin

LOCATION.--Lat 36°36'58", long 76°02'57" referenced to North American Datum of 1983, Virginia Beach City, VA, Hydrologic Unit 03010205, at Old Pungo Ferry Road, approximately 1.5 mi northwest of Creeds.

DRAINAGE AREA.--Indeterminate.

**WATER-QUALITY RECORDS**

PERIOD OF RECORD.--Water years 2006-07, July 2012.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: March 2006 to June 2007.

SALINITY: March 2006 to June 2007.

pH: March 2006 to June 2007.

WATER TEMPERATURE: March 2006 to June 2007.

DISSOLVED OXYGEN: March 2006 to June 2007.

DISSOLVED OXYGEN, PERCENT SATURATION: March 2006 to June 2007.

TURBIDITY, in FNU: March 2006 to June 2007.

CHLOROPHYLL: March 2006 to June 2007.

INSTRUMENTATION.--Self-logging water-quality monitor March 2006 to September 2007. Constituents monitored were: specific conductance, water temperature, dissolved oxygen, and pH. Turbidity data collected using a YSI 6136 sensor in formazin nephelometric units (FNU).

REMARKS.--Station operated in 2012 to define water quality in the Albemarle Sound as part of the National Monitoring Network for U.S. Coastal Waters and their Tributaries. Water-quality samples were collected using the depth-integration sampling technique. In water years 2006-07, station was operated in cooperation with the North Carolina Department of Environment and Natural Resources, Division of Water Resources. Water-quality monitors operated by Elizabeth City State University under the general supervision of the U.S. Geological Survey. Salinity and dissolved oxygen, percent saturation are computed. The salinity is computed from specific conductance using the conversion from U. S. Geological Survey Water-Supply Paper 2311. The dissolved oxygen, percent saturation is computed using a barometric pressure of 760 mm of Hg.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 4,940 microsiemens, May 9, 2006; minimum recorded, 778 microseimens, September 11, 2006.

SALINITY: Maximum recorded, 2.6 ppt, April 30, 2006, May 1, 9, 2006; minimum recorded, 0.4 ppt, on several days during the period.

pH: Maximum recorded, 8.8 standard units, August 15, 2006; minimum recorded, 6.0 standard units, September 3, 4, 5, 2006.

WATER TEMPERATURE: Maximum recorded, 34.3°C, August 4, 2006; minimum recorded, 2.0°C, February 6, 2007.

DISSOLVED OXYGEN: Maximum recorded, 13.2 mg/L, March 7, 2006; minimum recorded, 0.4 mg/L, September 9, 2006.

DISSOLVED OXYGEN, PERCENT SATURATION: Maximum recorded, 123%, March 24, 2007; minimum recorded, 5%, September 9, 2006.

TURBIDITY: Maximum recorded, 96 FNU, November 22, 2006; minimum recorded, <5 FNU, on many days during the period.

CHLOROPHYLL: Maximum recorded, 57.4 micrograms per liter, June 23, 2006; minimum recorded, 5.0 micrograms per liter, June 3, 9, 2006.

## 02043270 NORTH LANDING RIVER NEAR CREEDS, VA—Continued

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012**

Part 1 of 5

[CaCO<sub>3</sub>, calcium carbonate; N, nitrogen; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; m, meters; 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]

Date	Sample start time	Medium name	Sample type	Barometric pressure, mm Hg (00025)	Temperature, air, °C (00020)	Depth to bottom from water surface, at sampling location, meters (82903)	Dissolved oxygen, water, unfiltered, mg/L (00300)	pH, water, unfiltered, field, standard units (00400)	Specific conductance, water, unfiltered, μS/cm at 25°C (00095)
07-26-2012	1500	Surface water	Regular	757	34.1	0.70	6.1	6.5	1,540

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012**

Part 2 of 5

[CaCO<sub>3</sub>, calcium carbonate; N, nitrogen; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; m, meters; 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]

Date	Sample start time	Temperature, water, °C (00010)	Transparency, water, in situ, Secchi disc, m (00078)	Photosynthetically active radiation (average flux density on a horizontal surface during measurement interval), micromoles of photons per square meter per second (99988)	Sampling depth, m (00098)	Dissolved solids dried at 180°C, water, filtered, mg/L (70300)	Suspended solids, water, unfiltered, mg/L (00530)	Calcium, water, filtered, mg/L (00915)	Magnesium, water, filtered, mg/L (00925)	Potassium, water, filtered, mg/L (00935)
07-26-2012	1500	30.6	0.35	1,940	0.40	843	< 15	13.9	28.4	11.5

## 02043270 NORTH LANDING RIVER NEAR CREEDS, VA—Continued

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012**

Part 3 of 5

[CaCO<sub>3</sub>, calcium carbonate; N, nitrogen; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; m, meters; 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]

Date	Sample start time	Sodium, water, filtered, mg/L (00930)	Alkalinity, water, filtered, fixed endpoint (pH 4.5) titration, laboratory, mg/L as CaCO <sub>3</sub> (29801)	Alkalinity, water, filtered, inflection-point, incremental titration method, field, mg/L as CaCO <sub>3</sub> (39086)	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)
07-26-2012	1500	222	30.5	28.3	425	0.12	3.57	51.2	1.0	0.016

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012**

Part 4 of 5

[CaCO<sub>3</sub>, calcium carbonate; N, nitrogen; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; m, meters; 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]

Date	Sample start time	Nitrate plus nitrite, water, filtered, mg/L as N (00631)	Nitrite, water, filtered, mg/L as N (00613)	Orthophosphate, water, filtered, mg/L as P (00671)	Phosphorus, water, unfiltered, mg/L as P (00665)	Chlorophyll a, phytoplankton, chromatographic-fluorometric method, µg/L (70953)	Aluminum, water, filtered, µg/L (01106)	Cobalt, water, filtered, µg/L (01035)	Copper, water, filtered, µg/L (01040)
07-26-2012	1500	0.104	0.006	0.171	0.288	33.8	44.6	0.274	1.1

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012**

Part 5 of 5

[CaCO<sub>3</sub>, calcium carbonate; N, nitrogen; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; m, meters; 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]

Date	Sample start time	Iron, water, filtered, µg/L (01046)	Manganese, water, filtered, µg/L (01056)	Molybdenum, water, filtered, µg/L (01060)	Nickel, water, filtered, µg/L (01065)	Zinc, water, filtered, µg/L (01090)
07-26-2012	1500	416	85.4	0.525	0.60	< 1.4