

Department of Health
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LOWER MACHODOC CREEK Growing Area # 005 Westmoreland County Shoreline Sanitary Survey

Date: 9 August 2023

Survey Period: February 1, 2023 – August 9, 2023

Number of Samples Collected and Properties Surveyed: 216 Surveyed By: J. Hudnall, J. Freidman, M. Farham, & I. Geeson

SECTION A: GENERAL

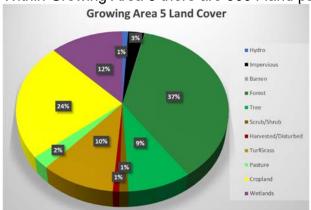
This survey area extends from Reference Point 5 at Kingcopsico Point to Reference Point 6 at Ragged Point, including the Potomac River shoreline between these two points, Lower Machodoc Creek, Herring Pond, Bettys Pond, Cabin Point Creek, Glebe Creek (Weatherall Creek and Ames Creek), Doyle Cove, Thompson Branch, Jones Branch, Drum Bay, Lee Creek, Mount Pleasant Branch, Hester Cove, Branson Cove, Blackbeard Pond and all their tributaries.

The terrain is relatively level throughout the survey area with elevations up to 30'. The western portions of the survey area have onsite sewage treatment systems. A portion of the survey area east of Lower Machodoc Creek and along the Potomac River from Grapevine Point to Ragged Point, are served by the Coles Point Sewage Treatment Plant.

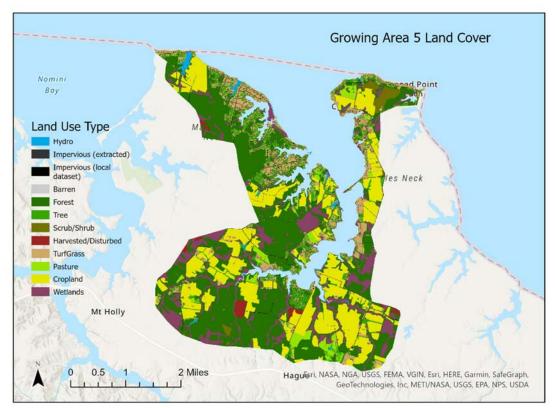
The survey area falls within Westmoreland County. The population in Westmoreland County has grown an estimated 7.2 % since the 2010 census. The estimated population is around 18,700 people. Data from 2021 indicate there are 11,426 housing units. In 2022, 215 building permits were issued.

https://www.census.gov/quickfacts/fact/table/US/PST045221

Within Growing Area 5 there are 3604 land parcels. Land Cover data are shown below.







Source: https://gismaps.vdem.virginia.gov/Download/Land Cover/County Report.pdf

Meteorological data indicated that 18.61" of rain fell during the survey period. A monthly breakdown is as follows:

Date range	Cumulative Rainfall (inches)	Avg. Monthly rainfall (2012-2022)
2/2023	1.07"	3.33"
3/2023	1.07"	3.10"
4/2023	6.01"	3.47"
5/2023	1.72"	4.61"
6/2023	3.15"	4.55"
7/2023	4.59"	5.43"
8/1/2023 - 8/9/2023	0.99"	n/a (partial month)

For this survey, nearshore seawater stations were established to survey the full extent of navigable waters beyond routine classification stations. Stations were created in closer proximity to the shoreline and farther upstream than routine stations and are intended to evaluate drainage entry points of potential point and nonpoint source pollution. Station data were analyzed to compare relative concentrations of fecal indicator bacteria within the waterway to identify potential onshore sources of contamination.

Hydrographic data, sampling times and range of enterococcus concentrations measured are shown in the table below. Maps of the enterococcus sampling are shown at the conclusion of this report.

Growing Area	a#5 Nea	rshore Sampli	Rainfall in inches				
Sample dates	High Tide*	Ebb Current**	Sampling time	Enterococcus range (MPN/100ml)	Day of	Previous 24 hours	Previous 7 days
4/12/23	07:42	8:13	9:46-12:57	9-63	0	0	2.16"
4/13/23	4/13/23 08:48 9:25		9:51-12:25	9-445	0	0	2.16"
5/24/23	06:26	6:55	9:52-12:36	9-650	0	0	0.43"
5/25/23	07:13	7:38	10:12-11:00	9-259	0	0	0.29"
Total rainfall	for nearsh	ore sampling	period (4/12/23	to 5/25/23): 4.96"			

^{*} High tide estimated from Ragged Point, Coles Neck NOAA Station ID # 2107.

Information in this report is gathered by and primarily for use by the Division of Shellfish Safety, Virginia Department of Health, in order to fulfill its responsibilities of shellfish growing area supervision and classification. However, the data are made available to various agencies participating in shellfish program coordinated activities or other interested parties.

Copies of VPDES permits and inspections are available at the Department of Environmental Quality. A directory and interactive map are available via the internet at https://www.deq.virginia.gov/permits-regulations/permits/water/surface-water-virginia-pollutant-discharge-elimination-system and https://geohub-vadeq.hub.arcgis.com/pages/Water%20Datasets

Copies of Bacteriological, Hydrographic and Shellfish Closure data are available at the area office for review. Copies of the current condemnation notices and maps are available via the Internet at

https://www.vdh.virginia.gov/environmental-health/environmental-health-services/shellfish-safety/

This report lists only those properties which have a sanitary deficiency or have other environmental significance. "*DIRECT*" indicates that the significant activity or deficiency has a direct impact on shellfish waters.

^{**}Slack ebb current estimated from 2.2 Miles South of Piney Point NOAA Station ID #5726.

Shoreline Survey # 005

SECTION B: SEWAGE POLLUTION SOURCES

	GA #	Field #	Inspection Date	Deficiency or Pollution Type	Latitude	Longitude	Pollutant Remarks	Septic System Type	Structure Type	Contact	Overall Site Remarks	Locality	DSS Staff	Date of Correction	Correction Notes
2045	5	728	8/29/2023	1 022011011		-76.664785	Unoccupied mobile home, previous survey referenced a 2' pvc pipe exiting foundation.			Ν		Westmoreland	JH		
2053	5	874	8/25/2023	POTENTIAL POLLUTION	38.107036	-76.634788	Empty lot with 9 remote drain fields					Westmoreland	JH		

Shoreline Survey # 005

SECTION C: NONSEWAGE WASTE SITES

GA #	Field #	Inspection Date	Deficiency or Pollution Type	Latitude	Longitude	Pollutant Remarks	Septic System Type	Structure Type	Contact	Overall Site Remarks	Locality	DSS Staff

SECTION D: BOATING ACTIVITY

	GA #	Field #	Inspection Date	Deficiency or Pollution Type	Latitude	Longitude	Pollutant Remarks	Septic System Type	Structure Type	Contact	Overall Site Remarks	Boating Activity Type	Number of Wet Slips	NUM BOATS <26'	NUM BOATS >26'	Evidence of Live- Aboards	Locality	DSS Staff
2050	5	829	9/8/2023	BOATING ACTIVITY	38.096825	-76.655184	Community docks with boat ramp					Marina	30	0	0	N	Westmoreland	JH
3085	5	988	9/8/2023	BOATING ACTIVITY	38.141514	-76.635577	Condos with community docks					Marina	14	0	0	N	Westmoreland	JH
2056	5	996	8/21/2023	BOATING ACTIVITY	38.142082	-76.633385	Seasonal dockage for workboats					Marina	12	0	0	N	Westmoreland	JH
2057	5	999	8/21/2023	BOATING ACTIVITY	38.142709	-76.633996	Not in business as a marina, but still around 14 slips on site					Marina	14	0	0	N	Westmoreland	JH
2058	5	1001	8/25/2023	BOATING ACTIVITY	38.142491	-76.634817	Seasonal slips					Marina	14	0	0	N	Westmoreland	JH
2029	5	255	8/29/2023	BOATING ACTIVITY	38.138694	-76.667773	Community ramp / bath house on site					Under Surveillance	0	0	0	N	Westmoreland	JH
2030	5	409	8/29/2023	BOATING ACTIVITY	38.130991	-76.653272	Community ramp, no slips					Under Surveillance	0	0	0	N	Westmoreland	JH
2037	5	600	8/25/2023	BOATING ACTIVITY	38.116309	-76.640609	4 seasonal work boat slips					Under Surveillance	4	0	0	N	Westmoreland	JH
2038	5	622	8/29/2023	BOATING ACTIVITY	38.109352	-76.642730	3 seasonal work boat slips					Under Surveillance	3	0	0	N	Westmoreland	JH
2042	5	649	8/25/2023	BOATING ACTIVITY	38.107263	-76.649148	4 seasonal work boat slips					Under Surveillance	4	0	0	N	Westmoreland	JH
2043	5	665	8/29/2023	BOATING ACTIVITY	38.104685	-76.651250	2 seasonal work boat slips					Under Surveillance	2	0	0	N	Westmoreland	JH
2044	5	671	8/18/2023	BOATING ACTIVITY	38.103308	-76.652252	Seasonal slips for workboats					Under Surveillance	6	0	0	N	Westmoreland	JH
2046	5	738	9/8/2023	BOATING ACTIVITY	38.100053	-76.658974	Community boat ramp					Under Surveillance	0	0	0	N	Westmoreland	JH
2055	5	989	9/8/2023	BOATING ACTIVITY	38.141230		Railway / boat yard seasonal work boat slips					Under Surveillance	6	0	0	N	Westmoreland	JH
2061	5	1068	8/29/2023	BOATING ACTIVITY	38.153252	-76.631055	Restaurant with day slips for restaurant guests only					Under Surveillance	10	0	0	N	Westmoreland	JH

Shoreline Survey # 005

SECTION E: ANIMALS PRESENT

	GA #	Field #	Inspection Date	Deficiency or Pollution Type	Latitude	Longitude	Pollutant Remarks	Septic System Type	Structure Type	Contact	Overall Site Remarks	Locality	DSS Staff
204	5	631	8/21/2023	ANIMAL PRESENT,	38.108449		15 cattle fenced in away from the water. Manure left in					Westmoreland	JH
				indirect			field						

SUMMARY

Growing Area # 005 Lower Machodoc Creek 9 August 2023

SECTION B: SEWAGE POLLUTION SOURCES

- 1. SEWAGE TREATMENT FACILITIES
 - 0 DIRECT None.
 - 0 INDIRECT None.
 - 0 B.1. TOTAL
- 2. ON-SITE SEWAGE DEFICIENCIES Correction of deficiencies in this section is the responsibility of the local health department.
 - 0 CONTRIBUTES POLLUTION, DIRECT None.
 - 0 CONTRIBUTES POLLUTION, INDIRECT None.
 - 0 CP (Kitchen or Laundry Wastes), DIRECT None.
 - 0 CP (Kitchen or Laundry Wastes), INDIRECT None.
 - 0 NO FACILITIES, DIRECT None.
 - 0 NO FACILITIES, INDIRECT None.
 - 0 B.2. TOTAL
- **3. POTENTIAL POLLUTION** Periodic surveillance of these properties will be maintained to determine any status change.
 - 2 POTENTIAL POLLUTION # 728, 874

SECTION C: NON-SEWAGE WASTE SITES

- 1. INDUSTRIAL WASTE SITES
 - 0 DIRECT None.
 - 0 INDIRECT None.
 - 0 C.1. TOTAL
- 2. SOLID WASTE SITES
 - 0 DIRECT None.
 - 0 INDIRECT None.
 - 0 C.2. TOTAL
- 3. STORMWATER OUTFALLS
 - 0 DIRECT None.
 - 0 INDIRECT None.
 - 0 E. TOTAL

SECTION D: BOATING ACTIVITY

- 5 MARINA # 829, 988, 996, 999, 1001
- <u>10</u> UNDER SURVEILLANCE # 255, 409, 600, 622, 649, 665, 671, 738, 989, 1068
- 15 D. TOTAL

SECTION E: ANIMALS PRESENT

- 0 DIRECT None.
- 1 INDIRECT # 1001
- 1 E. TOTAL

76°40'30"W

