



COMMONWEALTH of VIRGINIA

Department of Health
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COCKRELL CREEK Growing Area # 012 Northumberland County Shoreline Sanitary Survey

Date: 27 March 2024

Survey Period: 9/5/23 to 12/13/23

Total Number of Properties Surveyed and Near-shore Samples Collected: 238

Surveyed By: J. Freidman

SECTION A: GENERAL

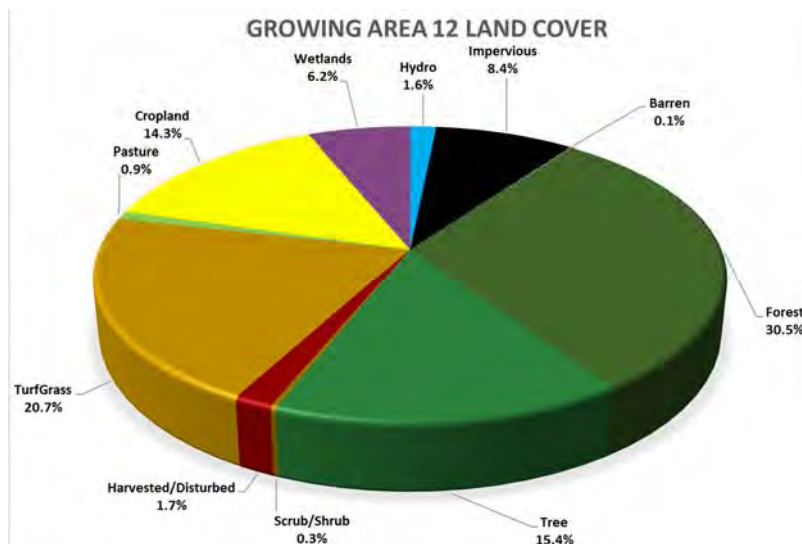
This survey includes the area from Haynie Point to Fleet Point including Whays Creek Reason Creek, Cockrell Creek and their tributaries. Precise survey boundaries are included on a map at the end of this report.

The topography of the area varies in elevation from 5' around the shoreline of Cockrell Creek to a maximum of 20' along the northwest boundary of the headwaters.

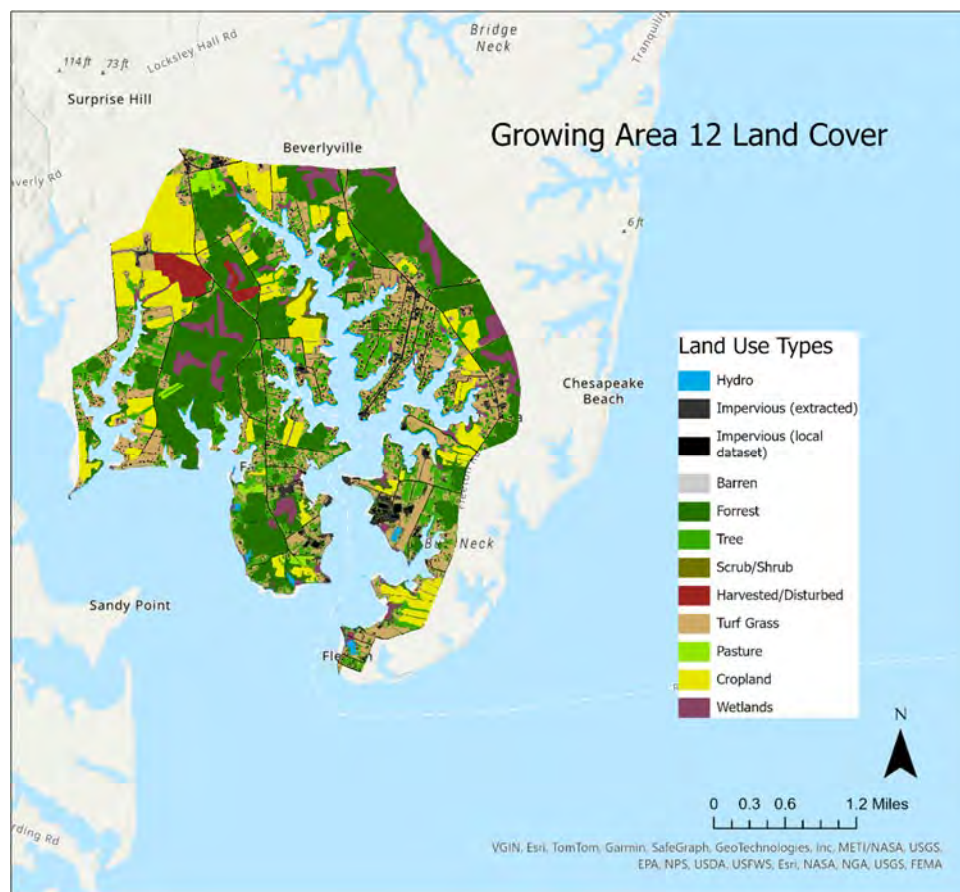
The survey area falls within Northumberland County. Since the 2010 census the Northumberland County population remains stable with about 12,300 residents in 9041 housing units. 63 building permits were issued in 2022.

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

Within Growing Area 12, there are 1597 land parcels. Land Cover data are shown below.



Within Growing Area 12, there are 1597 land parcels. Land Cover data are shown below.



Source: https://gismaps.vdem.virginia.gov/Download/Land_Cover/County_Report.pdf

Meteorological data indicated that 6.08" of rain fell during the survey period. Monthly breakdown is as follows:

Date Range	Cumulative Rainfall	Average Monthly rainfall 2012-2022
9/25-30/2023	0.0"	--
10/2023	1.5"	4.82
11/2023	1.84"	2.71
12/1-13/2023	2.74"	--

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 # 12 Nearshore Sampling						Rainfall in inches	
Sample dates	High Tide *	Ebb Current **	Sampling times	Enterococcus range (MPN/100ml)	Day of	Previous 24 hours	Previous 7 days
9/25/23	8:53	11:23	9:13 – 12:16	<10 - 2613	0	0.24	2.48
9/26/23	10:01	12:34	9:13 – 10:49	<10 - 98	0	0	2.02
9/29/23	12:43	15:26	8:54 – 11:50	<10 - 292	0	0	2.02
10/25/23	9:50	12:42	9:03 – 12:13	<10 - 19863	0	0	0.28
10/26/23	11:05	13:43	9:41 – 10:49	<10 - 52	0	0	0.28
Total rainfall for nearshore sampling period (9/25/23 – 10/26/2023)						1.34"	

* High Tide estimated from Great Wicomico River Light NOAA ID# 2155.

** Slack Ebb Current estimated from 3.8 nautical miles ESE of Great Wicomico River Light NOAA ID# 4671.

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/water/surface-waters-vpdes> and <https://geohub-vadeq.hub.arcgis.com/pages/Water%20Datasets>.

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.

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/>.

Shoreline Survey # 012

SECTION B: SEWAGE POLLUTION SOURCES

[illegible]

Shoreline Survey # 012

SECTION C: NONSEWAGE WASTE SITES

[illegible]

Shoreline Survey # 012

SECTION D: BOATING ACTIVITY

[illegible]

Shoreline Survey # 012

SECTION E: ANIMALS PRESENT

[illegible]

SUMMARY

Growing Area # 012
Cockrell Creek
27 March 2024

SECTION B: SEWAGE POLLUTION SOURCES

1. SEWAGE TREATMENT FACILITIES

1 – DIRECT – # 2.7
1 – INDIRECT – # 30
2 – 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.

0 – POTENTIAL POLLUTION – None.

SECTION C: NON-SEWAGE WASTE SITES

1. INDUSTRIAL WASTE SITES

2 – DIRECT – # 16A, 51
1 – INDIRECT – # 25
3 – C.1. TOTAL

2. SOLID WASTE SITES

0 – DIRECT – None
0 – INDIRECT – None
0 – C.2. TOTAL

3. STORMWATER OUTFALLS

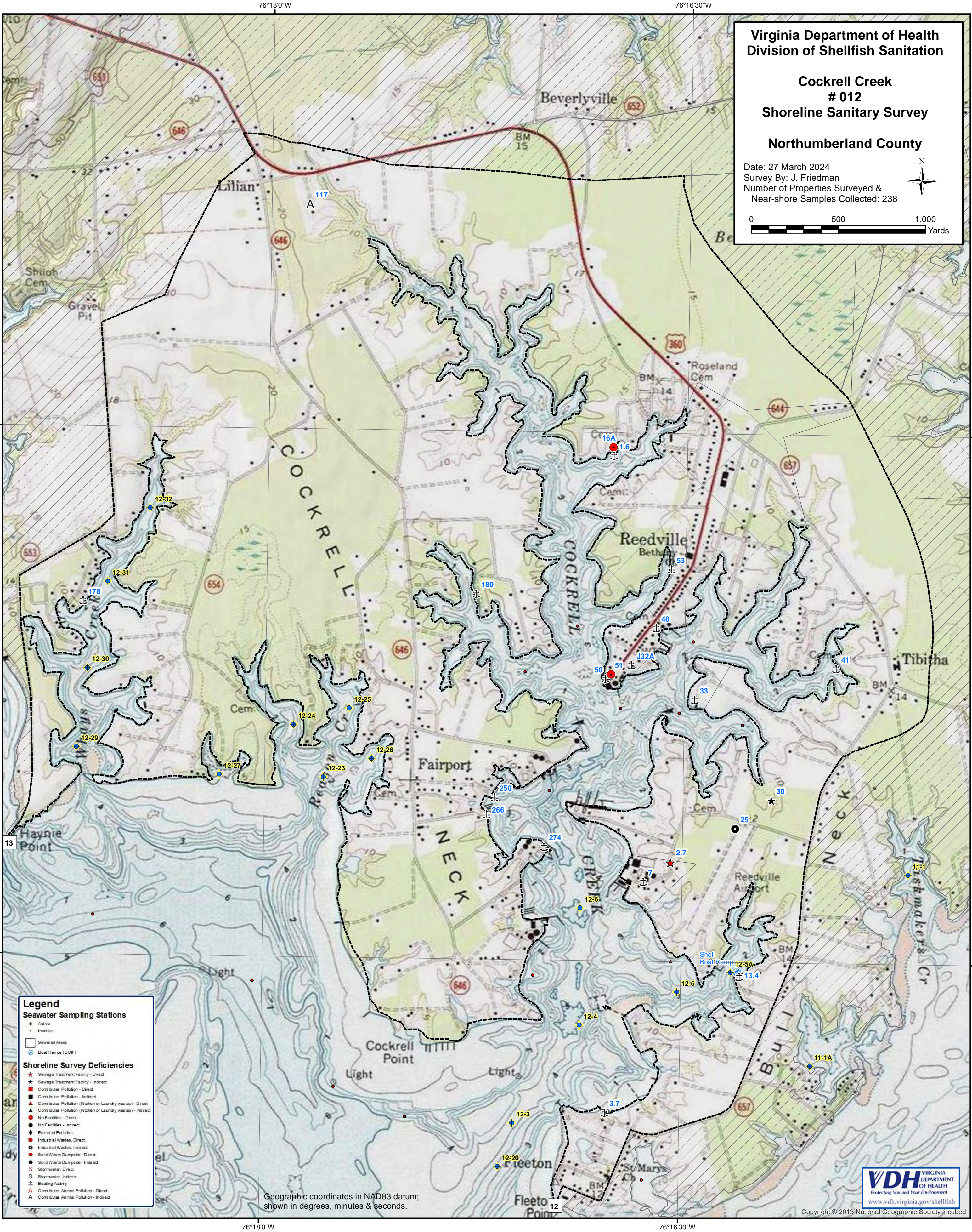
0 – DIRECT – None.
0 – INDIRECT – None.
0 – C.3. TOTAL

SECTION D: BOATING ACTIVITY

5 – MARINA – # 41, 50, 180, 250, 266
10 – UNDER SURVEILLANCE - # 1.6, 3.7, 7, 13.4, 33, 48, 53, 178, 274, J32A
15 – D. TOTAL

SECTION E: ANIMALS PRESENT

0 – DIRECT – None
1 – INDIRECT – # 117
1 – E. TOTAL



Virginia Department of Health
Division of Shellfish Sanitation

Cockrell Creek
012
Shoreline Sanitary Survey

Northumberland County

Date: 27 March 2024
Survey By: J. Friedman
Number of Properties Surveyed &
Near-shore Samples Collected: 238



0 500 1,000
Yards

Legend

Seawater Sampling Stations

- Active
- Inactive
- Sewered Area
- Boat Ramps (DGF)

Shoreline Survey Deficiencies

- Sewage Treatment Facility - Direct
- Sewage Treatment Facility - Indirect
- Contributes Pollution - Direct
- Contributes Pollution - Indirect
- Contributes Pollution (Kitchen or Laundry wastes) - Direct
- Contributes Pollution (Kitchen or Laundry wastes) - Indirect
- No Facilities - Direct
- No Facilities - Indirect
- Potential Pollution
- Industrial Wastes, Direct
- Industrial Wastes, Indirect
- Solid Waste Dumpsite - Direct
- Solid Waste Dumpsite - Indirect
- Stormwater, Direct
- Stormwater, Indirect
- Boating Activity
- Contributes Animal Pollution - Direct
- Contributes Animal Pollution - Indirect

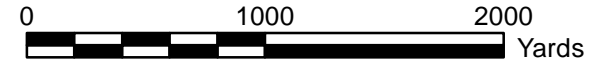
Geographic coordinates in NAD83 datum;
shown in degrees, minutes & seconds.



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Near Shore Enterococcus Sampling Growing Area # 012 - Cockrell Creek Lancaster County

* Highest value was 19863 collected at station
J19 on 10/25/23.



Legend

Enterococcus spp. (MPN/100ml)

Sampling Dates: 9/25/23 - 11/2/23

- < 10
- 10 - 100
- 101 - 1000
- 1001 - 10000
- > 10000