



COMMONWEALTH of VIRGINIA

Department of Health
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INDIAN, DYMER AND TABBS CREEKS Growing Area # 016 Lancaster and Northumberland Counties Shoreline Sanitary Survey

Date: 16 May 2023

Survey Period: June 9, 2022 – May 2, 2023

Total Number of Properties Surveyed and Samples Collected: 480

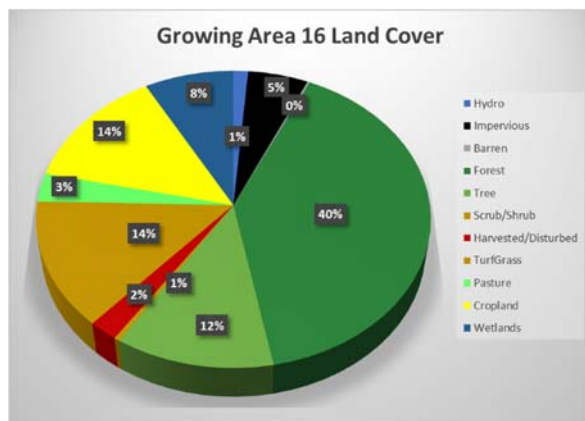
Surveyed By: J. Friedman, J. Hudnall, M. Farnham, I. Geeson

SECTION A: GENERAL

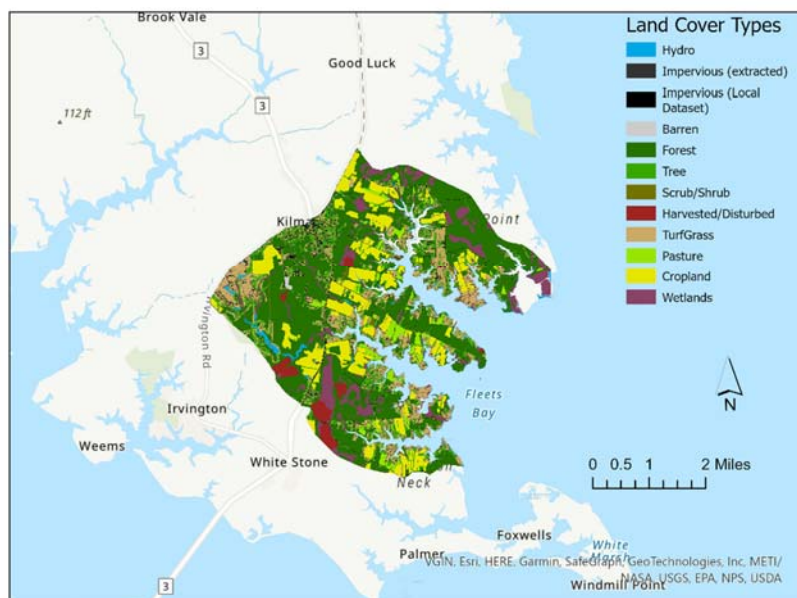
This survey area extends from Reference Point 16 at Bluff Point to Reference Point 17 at the first point south of the mouth of Tabbs Creek, including Barnes Creek, Henry's Creek, Indian Creek (Bells Creek, Arthur Cove, Waverly Cove, Pitmans Cove, and Long Creek), Dyer Creek (Rones Bay, Lees Cove, Hunts Cove, Johnson Cove, Dunton's Millpond, Chases Cove, Apple Grove Cove, Georges Cove, and Ashley Cove), Tabbs and all of their tributaries. The Growing Area sits within portions of Lancaster and Northumberland County.

The topography in this area varies from 5' or less along the shoreline to about 90' at the western edge of the survey boundary. The US Census Bureau reported that the population for Lancaster County has remained stable at just under 11000 residents in about 7400 housing units. 48 Building permits were issued in 2021. Northumberland County population remains stable with about 12,300 residents in 9000 housing units. 61 building permits were issued in 2021. <https://www.census.gov/quickfacts/fact/table/US/PST045221>

Within Growing Area 16, there are 4,276 land parcels. The town of Kilmarnock has a wastewater treatment plant. The rest of the developed areas have onsite sewage systems. Land Cover data are shown below.



Growing Area 16 Land Cover



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

Meteorological data indicated that 34.93" of rain fell during the survey period. Monthly breakdown is as follows:

Date Range	Cumulative Rainfall (inches)	Average Monthly rainfall 2012-2022
6/09-30/2022	3.89	--
7/2022	5.81	5.55
8/2022	1.77	4.61
9/2022	2.69	4.76
10/2022	4.18	4.65
11/2022	3.61	2.74
12/2022	3.38	3.48
1/2023	1.98	3.71
2/2023	1.38	3.3
3/2023	1.36	3.61

At the beginning of the survey, inspectors reviewed the available literature from prior reports, public works and online resources to characterize land use, drainage patterns, and establish nearshore seawater stations. Properties identified in the previous survey as having sanitary deficiencies or other environmental significance were revisited to evaluate their current status. All roadways and navigable shoreline within the survey boundary were visually inspected to identify potential pollution sources requiring further investigation.

Nearshore seawater stations were established to survey the full extent of 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 16 Nearshore Sampling Rainfall in Inches

Sampling Dates	# of boats	High Tide*	Ebb Current*	Sampling Time	Enterococcus range (MPN/100mL)	Day of	Previous 24 hours	Previous 7 days
6/23/22	2	7:38	09:55	8:59 - 11:42	<10 - >24,196	0.36	0.46	0.92
6/28/22	1	12:09	13:20	12:05 - 14:06	<10 - 52	0.18	1.04	1.86
7/11/22	2	9:14	11:11	10:22 - 14:19	<10 - 428	0	0.52	3.34
7/25/22	1	9:42	11:24	10:33 - 12:39	<10 - 63	0.06	0	0.5
8/9/22	1	9:01	10:59	9:43 - 11:44	<10 - 228	0	0	0.35
8/23/22	1	9:11	10:58	9:45 - 12:25	<10 - 96	0	0	0.03
8/25/22	1	10:39	12:40	10:44 - 12:52	<10 - 52	0	0	0.01
9/8/22	1	9:58	12:10	9:23 - 10:39	<10 - 677	0.01	0.02	0.13
9/29/22	1	13:58	16:47	11:12 - 11:28	<10 - 10	0	0	0.18
3/21/23	1	11:29	14:09	13:07 - 15:52	<10 - 20	0	0	0.22
4/14/23	2	06:17	09:30	7:50 - 10:05	<10 - 2,187	0.05	0	0.55
5/2/23	1	09:27	11:50	10:07 - 12:55	<10 - 3,255	0.03	0.03	2.63

Total Rainfall for sampling Period 32.62".

* High Tide estimated from Windmill Point Light NOAA Station ID 2162.

** Slack Ebb Current Estimated from Bluff Point NOAA Station ID 4661.

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-virginiapollutant-discharge-elimination-system>.

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/>.

SECTION B: SEWAGE POLLUTION SOURCES

[illegible]

SECTION C: NONSEWAGE WASTE SITES

[illegible]

SECTION D: BOATING ACTIVITY

[illegible]

SECTION D: BOATING ACTIVITY

[illegible]

SUMMARY

Growing Area # 016
Indian, Dymer and Tabbs Creeks
16 May 2023

SECTION B: SEWAGE POLLUTION SOURCES

1. SEWAGE TREATMENT FACILITIES

- 1 – DIRECT – # STP2
- 2 – INDIRECT – # 394, 1049
- 3 – 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

- 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 A

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

SECTION D: BOATING ACTIVITY

- 4 – MARINA – # 122, 187, 424, 479
- 8 – UNDER SURVEILLANCE – # 313, 423, 453, 537, 556, 727, 767, J158A
- 12 – D. TOTAL

SECTION E: CONTRIBUTES ANIMAL POLLUTION

- 0 – DIRECT – None.
- 2 – INDIRECT – # J4B2, J50A
- 2 – E. TOTAL

Virginia Department of Health
Division of Shellfish Sanitation

Indian, Dyer and Tabbs Creeks
016
Shoreline Sanitary Survey

Lancaster and
Northumberland Counties

Date: 16 May 2023
Survey By: J. Friedman, J. Hudnall, M. Farnham,
& I. Geeson
Number of Properties Surveyed: 480

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Yards

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Legend

Seawater Sampling Stations

- Active
- Inactive
- Sewered Areas
- Boat Ramps (DGIF)

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

Near Shore Enterococcus Sampling Growing Area # 016 - Indian, Dymer & Tabbs Creeks Northumberland & Lancaster Counties

* Highest value was 24,196 collected on 6/23/22 at station # J84.

