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

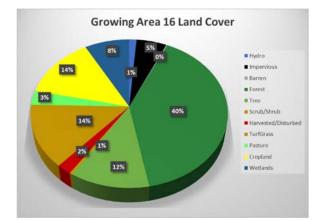
Date: 16 May 2023 Survey Period: June 9, 2022 – May 2, 2023 Total Number of Properties Surveyed and Samples Collected: 480 Surveyed By: J. Friedman, J. Hudnall, M. Farnham, I. Geeson

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), Dymer 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. <u>https://www.census.gov/quickfacts/fact/table/US/PST045221</u>

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.







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.

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 Dainf	all for a	ompling l	Dariad 22 6	so"				

Growing Area 16 Nearshore Sampling Rainfall in Inches

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-virginia.gov/permits-regulations/permits/water/surface-water-virginia.gov/permits-regulation-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

	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
5091	16	STP2	3/23/2023	SEWAGE TREATMENT FACIILITY, direct	37.708421	-/6 365853	76.365853 Discharge for VPDES permit # VA0020788.				Kilmarnock WWTP outfall.	Lancaster	IG		
1940	16	394	3/23/2023	SEWAGE TREATMENT FACIILITY, indirect	37.70879	-/6.36693	Design Flow 0.5 MGD, Avg 0.225 MGD, Max 0.86 MGD, UV disinfectant.				Kilmarnock WWTP, DEQ permit# VA0020788.	Lancaster	IG		
1957	7 16	1049	5/11/2023	SEWAGE TREATMENT FACIILITY, indirect	37.69212	-76.38950	VDH inspected WWTP with drip irrigation and drainfield. No dischage to shellfish waters.				Church View Septic Service, HDID # 151-09-0138.	Lancaster	IG		

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	Locality	Boating Activity Type	Number of Wet Slips	NUM BOATS <26'	NUM BOATS >26'	Evidence of Live- Aboards	DSS Staff
1934	4 16	122	5/12/2023	BOATING ACTIVITY	37.68942	-76.33435	VDH inspection 7/2022.				Westbay Community Association.	Northumberland	Marina	18	0	0	Ν	
1936	5 16	187	3/23/2023	BOATING ACTIVITY	37.69202	-76.33923	VDH inspection 6/2020. Pumpout and dump station satisfactory.					Northumberland	Marina	40	0	0	Ν	
1942	2 16	424	5/9/2023	BOATING ACTIVITY	37.69992	-76.35160	Marina Program inspection 6/2/22. Pump out and restrooms satisfactory.		Marine	N	Chesapeake Boat Basin.	Lancaster	Marina	68	0	0	Ν	IG
1946	5 16	479	5/9/2023	BOATING ACTIVITY	37.69109	-76.35623	VDH inspection 6/2022. HOA docks. Pumpout exemption.				Harbour on Indian Creek.	Lancaster	Marina	23	0	0	Ν	
1939	9 16	313	5/9/2023	BOATING ACTIVITY	37.70826	-76.34324	Community Boat ramp with locked chain.	NA		NA		Northumberland	Under Surveillance	0	0	0	Ν	IG
1943	1 16	423	5/11/2023	BOATING ACTIVITY	37.70080	-76.35095	Temporary dockage for grain barges.				Southern State (Grain Elevator).	Lancaster	Under Surveillance	4	0	0	Ν	JF
1944	4 16	453	5/12/2023	BOATING ACTIVITY	37.69704	-76.35384	VDH inspection 5/2023. Docks and private boat ramp for YMCA summer camp.			N	YMCA Camp Kekoka.	Lancaster	Under Surveillance	7	0	0		IG
1947	7 16	537	3/23/2023	BOATING ACTIVITY	37.68707	-76.34168	VDH inspection 6/2022. HOA dock. Pumpout exemption.				R&R Unlimited (Community).	Lancaster	Under Surveillance	9	0	0	Ν	
1948	₃ 16	556	5/11/2023	BOATING ACTIVITY	37.68246	-76.33588	VDH inspection 5/2023. Docks for HOA - about 9 slips				Blue Water Point HOA pier, docks for homes in the HAO - about 9 slips.	Lancaster	Under Surveillance	9	0	0		JF
1952	2 16	727	5/11/2023	BOATING ACTIVITY	37.67113	-76.35725	Community Ramp locked with chain.			Y	Dymer Shores Property Owner's Association.	Lancaster	Under Surveillance	2	0	0		IG
3083	3 16	767	5/11/2023	BOATING ACTIVITY	37.66716	-76.35187	VDH inspection 5/2023. Fish house, harvesters unload here often, about 8 slips				Dymer Creek Seafood - no longer a marine railway. (shell)fish house, harvesters unload here often.	Lancaster	Under Surveillance	8	0	0		JF
5008	₃ 16	J158A	5/12/2023	BOATING ACTIVITY	37.69543	-76.31985	Small shellfish plant, a few slips available for harvesters to unload.			N	Small shellfish/fish house, maybe some retail, few slips available for harvesters to unload.	Northumberland	Under Surveillance	3	0	0		IG

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	Locality	DSS Staff
1950	16	J4B2	3/23/2023	CONTRIBUTES ANIMAL POLLUTION, indirect	37.68455	-76.36696	2 horses in fenced pasture.					Lancaster	
1951	16	J50A	3/23/2023	CONTRIBUTES ANIMAL POLLUTION, indirect	37.67460	-76.35982	.35982 3 horses in fenced pasture.					Lancaster	

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SUMMARY

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

SECTION B: SEWAGE POLLUTION SOURCES 1. SEWAGE TREATMENT FACILITIES

- 1 DIRECT # STP2
- <u>2</u> 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 FÀCILITIES, DIRECT None.
 - <u>0</u> 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.
- <u>0</u> INDIRECT None.
- 0 C.2. TOTAL

3. STORMWATER OUTFALLS A

- 0 DIRECT None.
- <u>0</u> INDIRECT None.
- 0 C.3. TOTAL

SECTION D: BOATING ACTIVITY

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

SECTION E: CONTRIBUTES ANIMAL POLLUTION

- 0 DIRECT None.
- <u>2</u> INDIRECT # J4B2, J50A
- 2 E. TOTAL

