COMMONWEALTH of VIRGINIA
Department of Health
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COBHAM BAY AND LAWNES CREEK
Growing Area # 060
Isle of Wright and Surry Counties
Shoreline Sanitary Survey

Date: 20 April 2023
Survey Period: February 1, 2023 – April 17, 2023
Total Number of Samples Taken and Properties Surveyed: 78
Surveyed By: I. Geeson, C. Turner, F. Monis, E. Yeargan, L. Sakach

SECTION A: GENERAL

This survey area extends from Reference Point 61 at Drewry Point to Reference Point 62 at the end of Fergusons Wharf Way, including the James River shoreline between these two points, Homewood Creek, Hog Island Creek, Hunnicut Creek, Lawnes Creek, and all their tributaries.

Topography of this area is characterized by land elevations ranging from approximately sea level at the James River shoreline to 80' on adjacent bluffs; 100' elevations are found further inland which descend into large areas of wetlands.

Hog Island National Wildlife Refuge occupies close to 4000 acres over three tracts of land. The area north of the Surry Power Station contains a system of water impoundments and wetlands that are seasonally drained to produce native plant foods for wintering waterfowl. The two tracts of land at the mouth of Lawnes Creek contain a boat ramp and areas of forest and wetlands that are not actively managed thorough the use of water dams or prescribed burns. Hunting and trapping are permitted subject to a quota system and Surry County regulations.

The economy is based on agriculture, fishing, tourism, power generation, and small business. The Surry Nuclear Power Station is located at the base of Hog Island Point. There are between 800 and 1000 workers at the power plant and there is a small wastewater treatment system with a discharge into the western side of the peninsula.

Further south, Lawnes Creek Wastewater Treatment plant serves approximately 25 homes. Originally designed for a larger service area and capacity, the plant was decommissioned in 2018. At the time of survey, all influent is pumped and hauled to a HRSD pump station approximately 8 miles away. The two lined lagoons hold only stormwater. The subtidal outfall in Lawnes creek remains but the effluent valves are closed. The plant grounds are in good condition and are maintained by HRSD.

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 waterfront roadways and navigable shorelines within the survey boundary were visually inspected to identify potential pollution sources requiring further investigation.

During this survey period, meteorological data indicated that 6.79” of precipitation was recorded. A monthly breakdown follows:

Date range	Cumulative Rainfall (inches)
2/2023	2.87
3/2023	2.44
4/1/23 to 4/19/23	1.48

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 (FIB) within the waterway to identify potential onshore sources of contamination. At the time of this report, Lawnes Creek is classified as Restricted, with FIB concentrations exceeding the microbiological standards for Approved classification. During the survey, nearshore samples were analyzed for the FIB enterococcus as well as the human-associated molecular marker gene HF183 which may indicate the presence of recent human-source fecal pollution. While there were some elevated values of enterococcus found within the creek, all HF 183 samples were below the level of detection. These data make it unlikely that the FIB originate from failing onsite or municipal sewage system infrastructure and are more likely non-human sources, associated with wildlife in the marsh and surrounding woodlands.

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.

Nearshore Samples						Rainfall in Inches		
Sample dates	High Tide*	Ebb Current**	Sampling time	Enterococcus range (MPN/100ml)	HF 183 results	Day of	Previous 24 hours	Previous 7 days
2/1/23	07:25	11:16	09:14-10:24	<10- 4352	All below detection	0.27	0.06	1.57
2/2/23	08:16	12:02	09:25-11:26	<10-86	All below detection	0.1	0.27	1.23
Total rainfall for nearshore sampling period 0.37”.								

* High tide estimated from Burwell Bay.
**Slack ebb current estimated from Point of Shoals.

Information in this report is gathered by and primarily for use by the Division of Shellfish Safety and Waterborne Hazards, 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.

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
1908	60	A4	3/31/2022	SEWAGE TREATMENT FACILITY, direct	37.171356	-76.704695	Discharge to Prohibited Shellfish waters. Satisfactory DEQ inspection conducted December 2022.			Y	Dominion Power Surry Nuclear Power Plant. WWTP for the 800-1000 workers at power plant. VPDES Permit # VA004090.	Surry	IG		
2124	60	D1	3/31/2022	SEWAGE TREATMENT FACILITY, indirect	37.105912	-76.667106	Originally .05 MGD design Flow, but plant on pump and haul by HRSD.			Y	Lawnes Point WWTP. VPDES Permit # VA0091952.	Isle of Wight	IG		
5058	60	D1A	2/7/2023	SEWAGE TREATMENT FACILITY, direct	37.108512	-76.675372	Outfall (inactive) for VA0091952.			N/A		Isle of Wight	IG		
5056	60	E24	2/1/2023	POTENTIAL POLLUTION	37.127168	-76.680633	Derelict building and camper right on the side of the creek (no signs of habitation)			N		Surry	EY		
5066	60	E26	3/3/2023	POTENTIAL POLLUTION	37.090193	-76.683643	Camping site at the side of the creek with a shed and small boats.			N		Isle of Wight	EY		

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
5054	60	E23	2/1/2023	SOLID WASTE DUMPSITE, indirect	37.087927	-76.688665	Old vehicles, some litter scattered in the woods behind the property.			N		Surry	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	Boating Activity Type	Number of Wet Slips	NUM BOATS <26'	NUM BOATS >26'	Evidence of Live-Aboards	DSS Staff
1914	60	96	3/31/2022	BOATING ACTIVITY	37.083288	-76.665612	Used primarily by workboats. No water power or pumpout.	Privy		Y	Tylers Beach Boat Launch.	Isle of Wight	Marina	11	0	0	N	IG
1909	60	E25	3/31/2022	BOATING ACTIVITY	37.139300	-76.675957	Public DWR boat ramp and fishing pier no boat slips or bathroom facilites	NA		Y		Surry	Under Surveillance	0	0	0	N	EY

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
1911	60	A36	3/31/2022	CONTRIBUTES ANIMAL POLLUTION, indirect	37.087684	-76.696657	1 bovine and aproximately 8 dogs in pens.			N		Surry	IG

SUMMARY

Growing Area # 060
Cobham Bay and Lawnes Creek
20 April 2023

SECTION B: SEWAGE POLLUTION SOURCES

1. SEWAGE TREATMENT FACILITIES

2 – DIRECT – # A4, D1A
1 – INDIRECT – # D1
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.

2 – POTENTIAL POLLUTION – # E24, E26

SECTION C: NON-SEWAGE WASTE SITES

1. INDUSTRIAL WASTE SITES

0 – DIRECT – None.
0 – INDIRECT – None.
0 – C.1. TOTAL

2. SOLID WASTE DUMPSITES

0 – DIRECT – None.
1 – INDIRECT – # E23
1 – C.2. TOTAL

3. STORMWATER

0 – DIRECT – None
0 – INDIRECT – None
0 – TOTAL

SECTION D: BOATING ACTIVITY

1 – MARINAS – # 96
1 – UNDER SURVEILLANCE – # E25
2 – D. TOTAL

SECTION E: CONTRIBUTES ANIMAL POLLUTION

0 – DIRECT – None.
1 – INDIRECT – # A36
1 – E. TOTAL

76°42'30"W
76°40'0"W
Virginia Department of Health
Division of Shellfish Sanitation
Cobham Bay and Lawnes Creek
Growing Area # 060
Shoreline Sanitary Survey
Isle of Wight and Surry Counties
Date: 20 April 2023
Survey By: I. Geeson, C. Turner, F. Monis, E. Yeargan & L. Sakach
Number of Properties Surveyed and Near-shore Samples Collected: 78
0
0.5
1
Miles
N
Legend
SeawaterSamplingStations (History)
Active
Inactive
Sewered Areas
BoatRamps (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
A4 STF-D
60--EE86
60--AA88
60--V87
60--U89
60--U88
E25 BA
60-1
E24 PP
60--N86
D1A STF-D
D1 STF
60--J86
E26 PP
A36 CAP
E23 SWD
60--G87
96 BA
60-TB2
60-TB1
60--F88
61--B87
Hog Point
Homewood
HOG ISLAND
HOG ISLAND STATE WILDLIFE REFUGE
Walnut Point
Surry Nuclear Powerplant
Sewage Disposal
Drewry Point
GRAVEL NECK
Bayse Point
Cobham
Chippokes
PLANTATION
Hunnicut Creek
SURRY CO
ISLE OF WIGHT CO
Lawnes Point
LAWNES NECK
Rushmere Shores
Poolesville
Pierce Creek
Grove Memorial Cem
Burnt Mill Bridge
Gravel Pit
Baileys Beach
Holly Point
First Gravel Hill Ch
Rushmere
Bayview Ch
BURWE
37°10'0"N
37°7'30"N
37°5'0"N
VDH VIRGINIA DEPARTMENT OF HEALTH
Protecting You and Your Environment
www.vdh.virginia.gov/shellfish
Geographic coordinates in NAD83 datum; shown in degrees, minutes & seconds.
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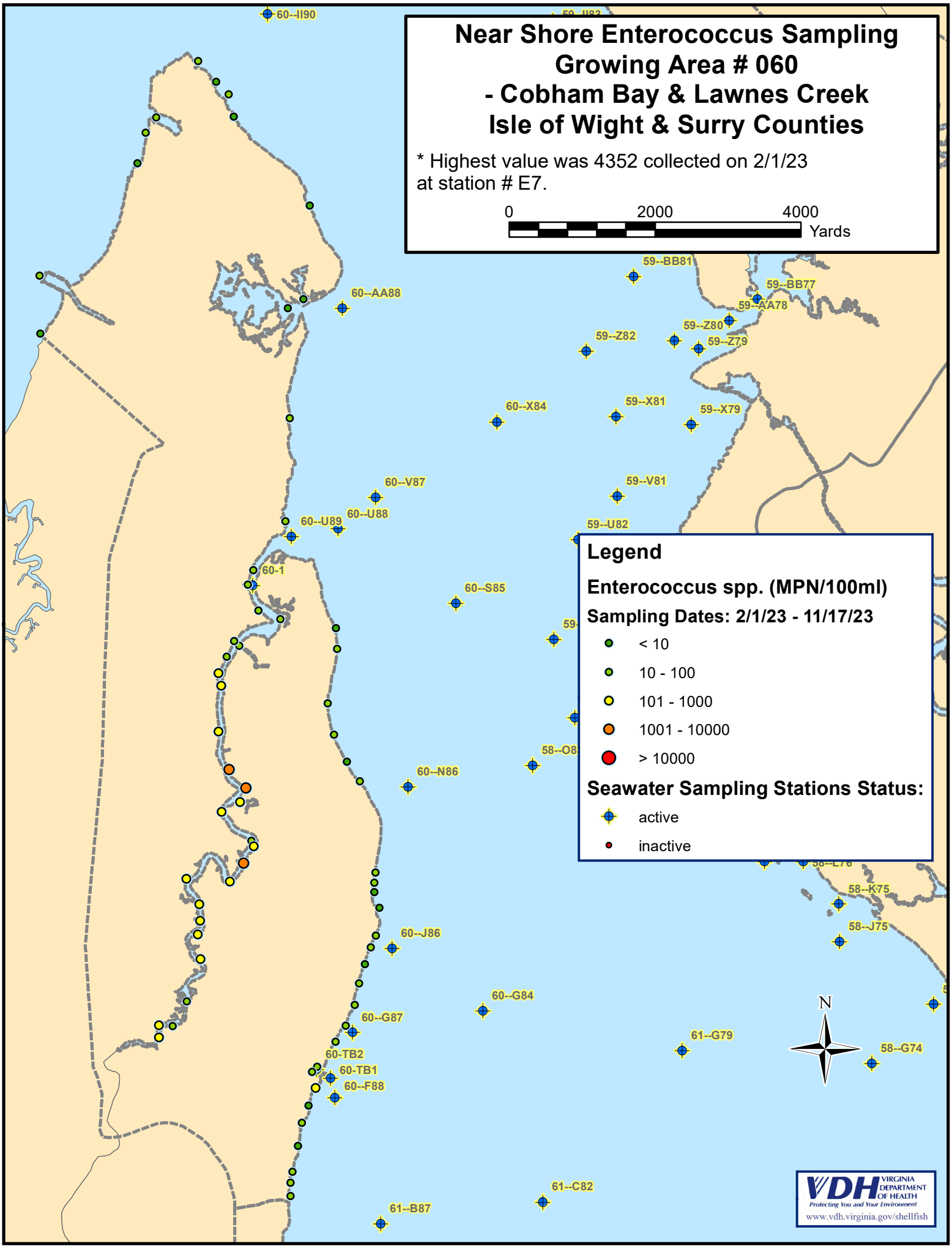
Near Shore Enterococcus Sampling
Growing Area # 060
- Cobham Bay & Lawnes Creek
Isle of Wight & Surry Counties
* Highest value was 4352 collected on 2/1/23
at station # E7.
0
2000
4000
Yards
Legend
Enterococcus spp. (MPN/100ml)
Sampling Dates: 2/1/23 - 11/17/23
< 10
10 - 100
101 - 1000
1001 - 10000
> 10000
Seawater Sampling Stations Status:
active
inactive
N
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60--II90
60--AA88
59--BB81
59--BB77
59--AA78
59--Z80
59--Z82
59--Z79
60--X84
59--X81
59--X79
60--V87
59--V81
60--U88
60--U89
59--U82
60-1
60--S85
58--O8
60--N86
58--L76
58--K75
58--J75
60--J86
60--G84
60--G87
61--G79
58--G74
60-TB2
60-TB1
60--F88
61--C82
61--B87