



COMMONWEALTH of VIRGINIA

Department of Health

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Mobjack Bay: East River Growing Area # 041 Mathews County Shoreline Sanitary Survey

Date: 8 August 2024

Survey Period: February 1, 2024 – July 18, 2024

Total Number of samples analyzed and sites evaluated: 111

Surveyed By: J. Freidman, M. Farnham, & N. Shultz

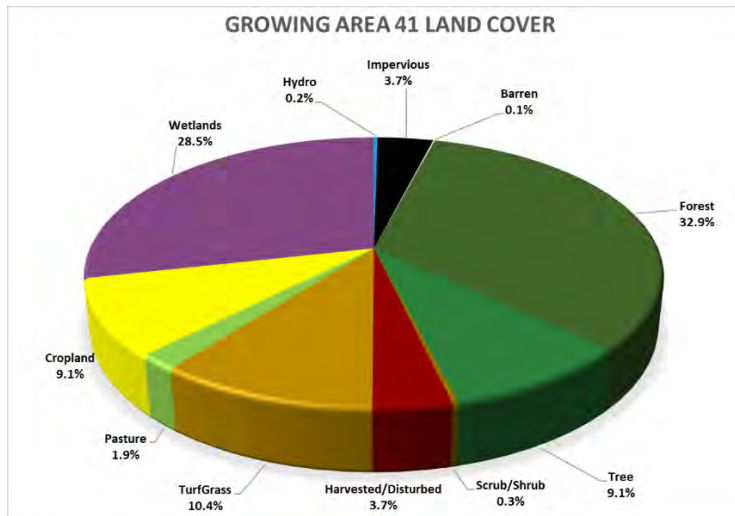
SECTION A: GENERAL

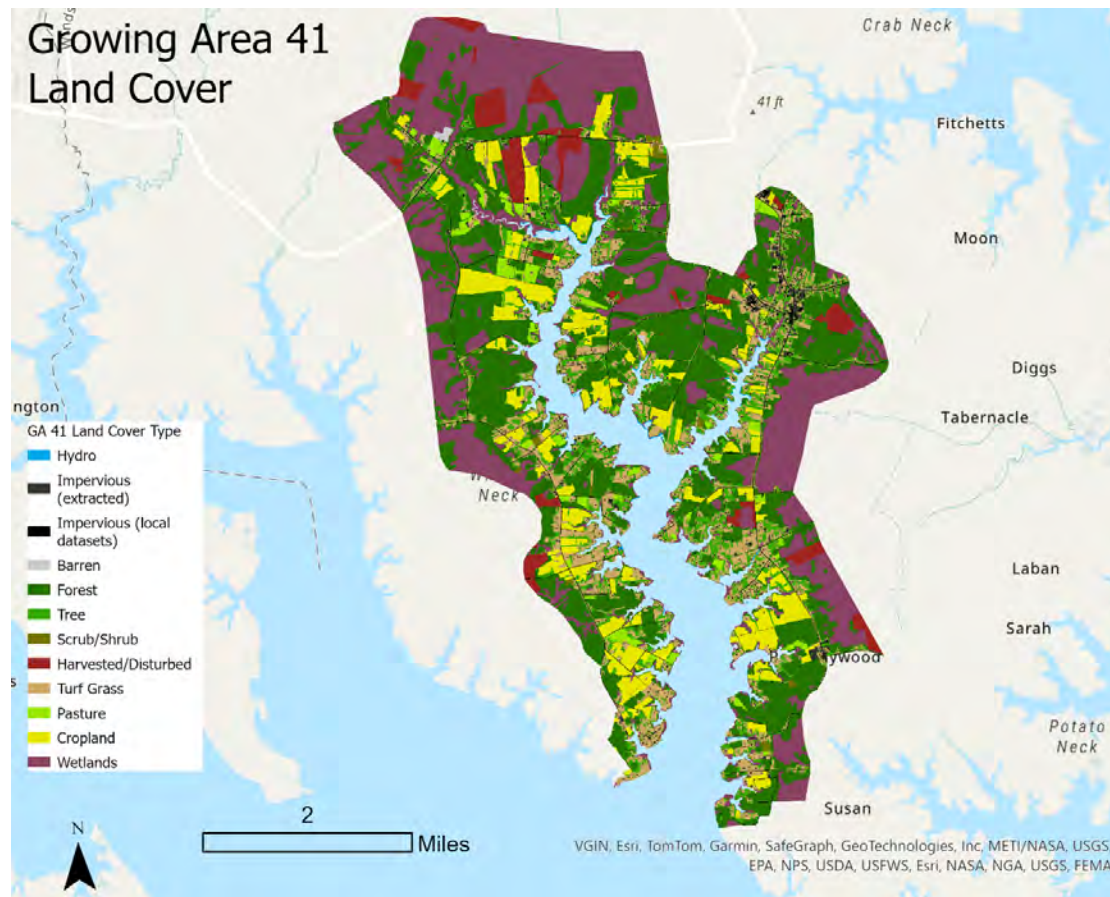
This survey area extends from Reference Point 41 at Bay Shore Point to Reference Point 42 at Minter Point and includes the shoreline and all of the tributaries on the East River within a boundary line set by the Division of Shellfish Safety. The topography of the area begins with an elevation of 5' around the shoreline reaching 10' at the headwaters and 15' further inland and having a maximum elevation of 25' on Route 626.

Downtown Mathews has a sanitary sewer system that connects to the HRSD York Treatment Facility that discharges into Growing Area 52. The rest of the survey area utilize onsite (septic) treatment systems.

The 2020 census reported that there are an estimated 1865 residents across 1039 housing units in Growing Area 41. <https://www.census.gov/geographies/reference-maps/2020/geo/2020-census-block-maps.html>

Within Growing Area 41 there are 2502 land parcels. Land Cover data are shown below





Meteorological data indicated that 22.61" of rain fell during the survey period. A monthly breakdown follows:

Date range	Cumulative Rainfall	Avg. Monthly rainfall (2013-2023)
February 2024	2.55"	3.29"
March 2024	8.49"	3.68"
April 2024	1.20"	4.10"
May 2024	5.50"	4.12"
June 2024	1.65"	5.39"
July 1 – 18, 2024	3.22"	NA 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. Data from these stations were analyzed to compare fecal indicator bacteria (FIB) concentrations within the waterway and identify potential onshore contamination sources.

As of this report, the headwaters of Put-in-Creek are classified as Restricted because FIB concentrations exceed the standards for an Approved classification. During the survey, nearshore samples were tested for enterococcus, a type of FIB, as well as for the HF183 gene, a marker that may indicate recent human fecal pollution. Although some elevated levels of enterococcus were found in the creek, all HF183 samples were below detection

limits. This suggests that the elevated FIB levels are unlikely to come from failing sewage systems and are more likely originate from non-human sources, such as pets and wildlife in the marsh and surrounding woodlands.

The table below shows hydrographic data, sampling times, and the range of enterococcus concentrations measured. Maps of the enterococcus sampling locations are provided at the end of this report.

Growing Area # 41 Nearshore Sampling					Rainfall in inches		
Sample dates	High Tide*	Ebb Current**	Sampling time	Enterococcus range (MPN/100ml)	Day of	Previous 24 hours	Previous 7 days
2/22/24	07:54	12:30	9:11 - 1:00	<10 - 70	0	0	0.02
4/11/24	11:50	04:06	9:34 - 12:18	<10 - 5335	0	0.02	0.27
5/23/24	09:42	12:54	11:41 - 13:18	<10 - 450	0	0	0.9
6/27/24	14:09	06:00	11:24	10,462 (1 sample)	0.78	0	0.01
Total rainfall for nearshore sampling period (2/22/24 - 6/27/24) 17.37"							

* High tide estimated from NOAA ID (8637072) Belleville.

** Slack ebb estimated from NOAA ID (ACT5516) New Point Comfort, 2.0 n.mi. WSW.

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>

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.

Shoreline Survey # 041

SECTION C: NONSEWAGE WASTE SITES

[illegible]

SECTION D: BOATING ACTIVITY

[illegible]

SECTION E: ANIMALS PRESENT

[illegible]

SUMMARY

Growing Area # 041
Mobjack Bay: East River
8 August 2024

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.

1 – POTENTIAL POLLUTION – # 675

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.
3 – INDIRECT – # 44, 105, 569
0 – C.2. TOTAL

3. STORMWATER OUTFALLS

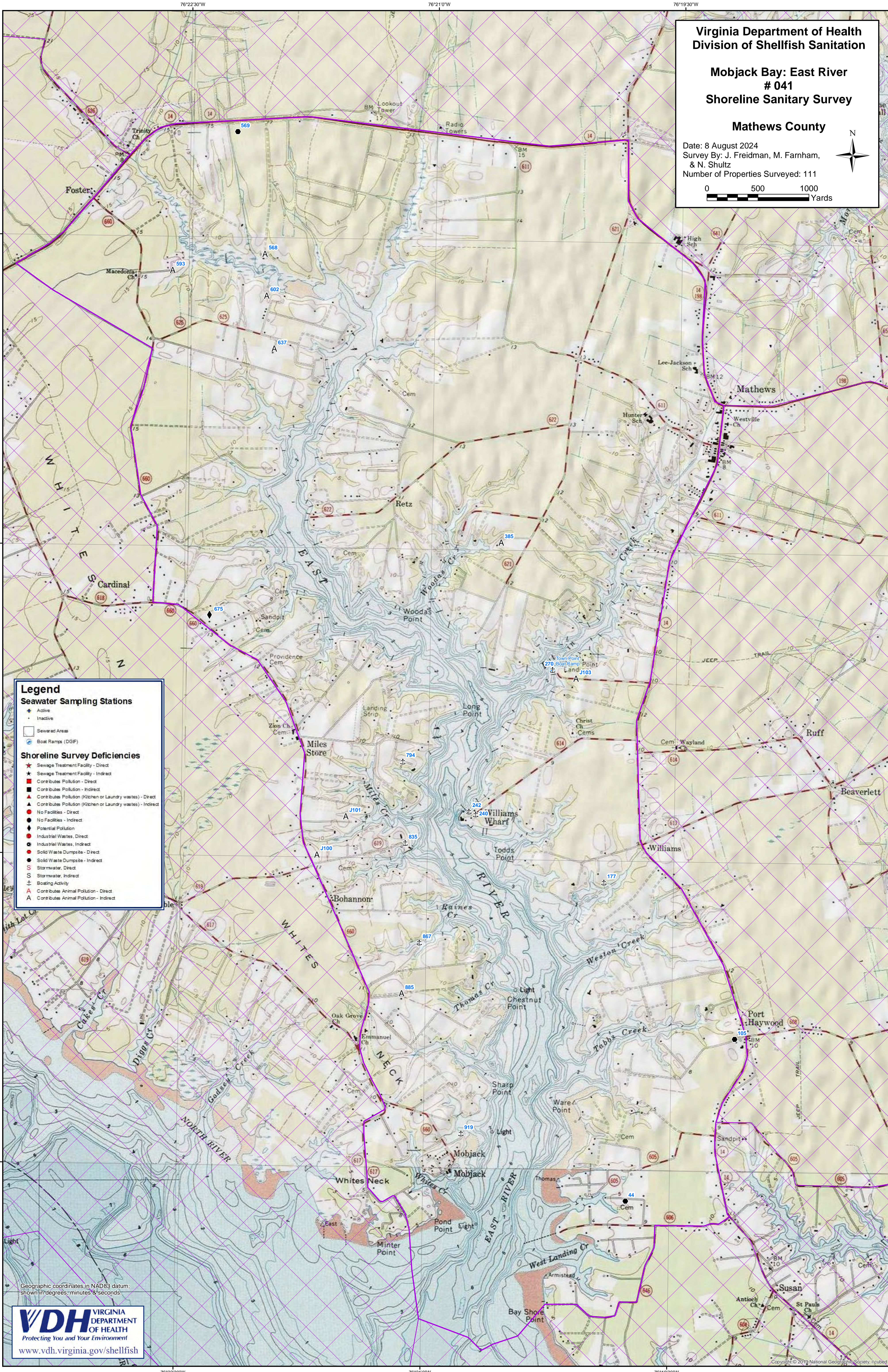
0 – DIRECT – None.
0 – INDIRECT – None.
0 – C.3. TOTAL

SECTION D: BOATING ACTIVITY, INACTIVE

1 – MARINA – # 919
7 – UNDER SURVEILLANCE – # 177, 240, 242, 270, 794, 835, 867
0 – D. TOTAL

SECTION E: ANIMALS PRESENT

0 – DIRECT – None.
9 – INDIRECT – # 385, 568, 593, 602, 637, 885, J100, J101, J103
9 – E. TOTAL



Virginia Department of Health
Division of Shellfish Sanitation

Mobjack Bay: East River
041
Shoreline Sanitary Survey

Mathews County

Date: 8 August 2024
Survey By: J. Freidman, M. Farnham,
& N. Shultz
Number of Properties Surveyed: 111

05001000

Yards

N

North Arrow

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 # 041 - Mobjack Bay: East River Mathews County

* Highest value was 10,462
collected at station # N1
on 6/27/24.

0 1000 2000
Yards



Legend

Entero041

Sampling Date: 2/21/24 - 6/27/24

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