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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

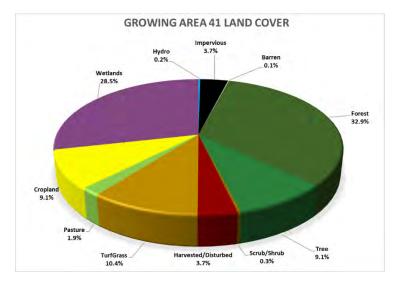
SECTION A: GENERAL

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.

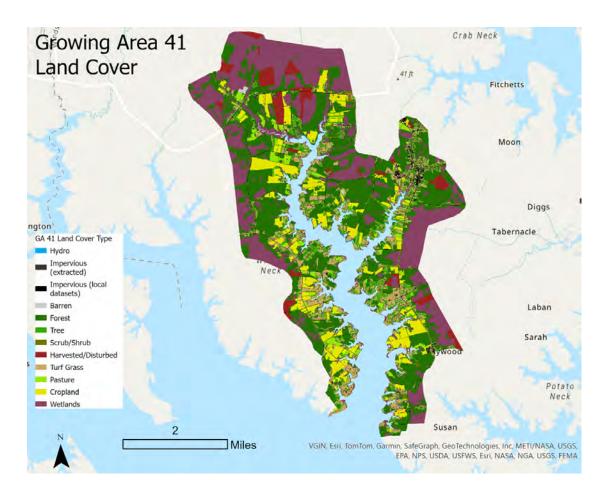
Downtown Mathews has a sanitary sewer system that connects to the HRSD York Treatment Facility that discharges into Growing Area 52. The rest of the survey area utilize onsite (septic) treatment systems.

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 A	rea # 41 Ne	earshore Sa	mpling	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.

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-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.

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

SECTION B: SEWAGE POLLUTION SOURCES

	GA #	Field #	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
2249	41	675	POTENTIAL POLLUTION	37.419452	-76.372397	Indirect - Recreational Vehicle on lot overgrown with vegetation, uninhabited at time of survey.			NA		Mathews	JF		

Shoreline Survey # 041

SECTION C: NONSEWAGE WASTE SITES

				Туре	Туре	Contact	Overall Site Remarks	Locality	Staff
SOLID WASTE DUMPSITE, indirect	37.372547	-76.329417	Property is gated, old vehicles and equipment on property. Site visit 5/22/24.			NA		Mathews	JF
SOLID WASTE DUMPSITE, indirect	37.385734	-76.318571	previous survey references scrap vehicles, tires,			NA		Mathews	JF
SOLID WASTE DUMPSITE, indirect	37.458535	-76.370224	well maintained and operational, closed			NA		Mathews	JF
5	SOLID WASTE DUMPSITE, indirect SOLID WASTE	SOLID WASTE DUMPSITE, indirect 37.385734 SOLID WASTE 37.458535	SOLID WASTE DUMPSITE, indirect SOLID WASTE 37.385734 -76.318571 SOLID WASTE 37.458535 -76.370224	SOLID WASTE DUMPSITE, indirect 37.385734 -76.318571 5/22/24 site visit attempt, unable to access, previous survey references scrap vehicles, tires, overgrowth. Local solid waste convenience center that is well maintained and operational, closed	SOLID WASTE DUMPSITE, indirect 37.385734 -76.318571 SOLID WASTE DUMPSITE indirect 37.458535 37.458535 -76.370224 SOLID WASTE DUMPSITE indirect 37.458535	SOLID WASTE DUMPSITE, indirect 37.385734 -76.318571 SOLID WASTE DUMPSITE indirect 37.458535 37.458535 -76.370224 SOLID WASTE DUMPSITE indirect 37.458535 -76.370224 SOLID WASTE DUMPSITE indirect 37.458535	SOLID WASTE DUMPSITE, indirect 37.385734 -76.318571 SOLID WASTE DUMPSITE indirect 37.458535 -76.370224 SOLID WASTE DUMPSITE indirect 37.458535 -76.370224 SOLID WASTE DUMPSITE indirect 37.458535 -76.370224 SOLID WASTE Well maintained and operational, closed NA	SOLID WASTE DUMPSITE, indirect 37.385734 -76.318571 5/22/24 site visit attempt, unable to access, previous survey references scrap vehicles, tires, overgrowth. Local solid waste convenience center that is well maintained and operational, closed NA NA	SOLID WASTE DUMPSITE, indirect SOLID WASTE DUMPSITE indirect SOLID WASTE DUMPSITE indirect 37.385734 37.458535 -76.370224 SOLID WASTE DUMPSITE indirect SOLID WASTE DUMPSITE indirect 37.458535 -76.370224 SOLID WASTE DUMPSITE indirect SOLID WASTE DUMPSITE INDIRECT

SECTION D: BOATING ACTIVITY

	GA #	Field #	Deficiency or Pollution Type	Latitude	Longitude	Pollutant Remarks	Septic System Type	Structure Type	Contact	Overall Site Remarks	Boating Activity Type	Number of Wet Slips	Evidence of Live- Aboards	Locality	DSS Staff
2258	41	919	BOATING ACTIVITY, indirect	37.377811	-76.346163				NA	34 - Compass Marina, 18 seasonal slips.	Marina	18	N	Mathews	JF
2229	41	177	BOATING ACTIVITY, indirect	37.398256	-76.332036	Poplar Grove Community Dock			NA		Under Surveillance	6	N	Mathews	JF
2232	41	240	BOATING ACTIVITY, indirect	37.403634	-76.345120	Williams Wharf Landing - community waterfront access with restrooms.			NA I	WIliams Wharf Landing, Mathews Land Conservancy.	Under Surveillance	6	N	Mathews	JF
2233	41	242	BOATING ACTIVITY, indirect	37.403854	-76.345819	Williams Wharf Rowing Center - primary use for non-motorized boats. Port-a-jon available on site.			NA		Under Surveillance	2	N	Mathews	JF
2234	41	270	BOATING ACTIVITY, indirect	37.415395	-76.337541	DWR maintained public ramp. Double ramp with dock for loading/unloading. No permanent slips.			NA	10. DWR maintained boat ramp. Double ramp for launching/retreiving, no permanent slips.	Under Surveillance	1	N	Mathews	JF
2250	41	794	BOATING ACTIVITY, indirect	37.407829	1 - /6 352585	Zimmerman Marine - location for boat sales and repair. No permanent moorings/slips.			NA		Under Surveillance	6	N	Mathews	JF
2252	41	835	BOATING ACTIVITY, indirect	37.401232	-76.352222	Used as a seafood landing site.			NA	Property owned by Mathews County - to be developed into boat ramp area. East River Boat Yard.	Under Surveillance	8	N	Mathews	JF
2254	41	ี 267	BOATING ACTIVITY, indirect	37.393209	1-76 350659	EHD inspection indicates 6 slips for loading/unloading shellfish product.			NA		Under Surveillance	6	N	Mathews	JF
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SECTION E: ANIMALS PRESENT

	GA #	Field #	Deficiency or Pollution Type	Latitude	Longitude	Pollutant Remarks	Septic System Type	Structure Type	Contact	Overall Site Remarks	Locality	DSS Staff
2236	41	385	ANIMALS PRESENT, indirect	37.425635	-76.342932	goat and dogs observed from road, previous survey references other livestock			NA		Mathews	JF
2242	41	568	ANIMALS PRESENT, indirect	37.448698	-76.367286	2 horses observed from roadway			NA		Mathews	JF
2245	41	593	ANIMALS PRESENT, indirect	37.447286	-76.376623	3 horses visible from roadway			NA		Mathews	JF
2246	41	602	ANIMALS PRESENT, indirect	37.445320	1 - /6 36 /052	2 horses visible from roadway. New fences installed to prevent livestock entering waterway.			NA		Mathews	JF
2247	41	637	ANIMALS PRESENT, indirect	37.441043	-76.366213	driveway gated, 4 cows visible from roadway			NA		Mathews	JF
2256	41	885	ANIMALS PRESENT, indirect	37.389082	-76.352373	8 chickens present. Liter is composted.			NA		Mathews	JF
5279	41	11()()	ANIMALS PRESENT, indirect	37.400212	-76.361154	2 horses in pasture visible from road.			N		Mathews	JF
5277	41	J101	ANIMALS PRESENT, indirect	37.403334	-76.358286	2 horses observed from roadway.			N		Mathews	JF
5276	41	J103	ANIMALS PRESENT, indirect	37.414724	-76.335165	2 horses present		Dwelling	N		Mathews	JF

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
- 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.
 - <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.
 - 1 POTENTIAL POLLUTION # 675

SECTION C: NON-SEWAGE WASTE SITES

- 1. INDUSTRIAL WASTE SITES
 - 0 DIRECT None.
 - <u>0</u> 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.
 - <u>0</u> 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.
- <u>9</u> INDIRECT # 385, 568, 593, 602, 637, 885, J100, J101, J103
- 9 E. TOTAL

