COMMONWEALTH of VIRGINIA
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RAPPAHANNOCK RIVER: URBANNA AND WHITING CREEKS
Growing Area # 029
Middlesex County
Shoreline Sanitary Survey

Date: June 1, 2025
Survey Period: April 1, 2025 – May 22, 2025
Total Number of Properties Surveyed and Near-Shore Samples Collected: 115
Surveyed By: J. Friedman, M. Farnham, T. Egerton

SECTION A: GENERAL

This survey includes approximately 3 miles of the Rappahannock River shoreline as well as Urbanna and Whiting Creeks and their tributaries. The survey area extends from the upstream extent at the northern mouth of Urbanna Creek, in Urbanna, downstream to Locust Grove Road in Middlesex County. Inland, the survey area extends south to Routes 33 and 3, including portions of the towns of Saluda, Christchurch, Locust Hill and Topping.

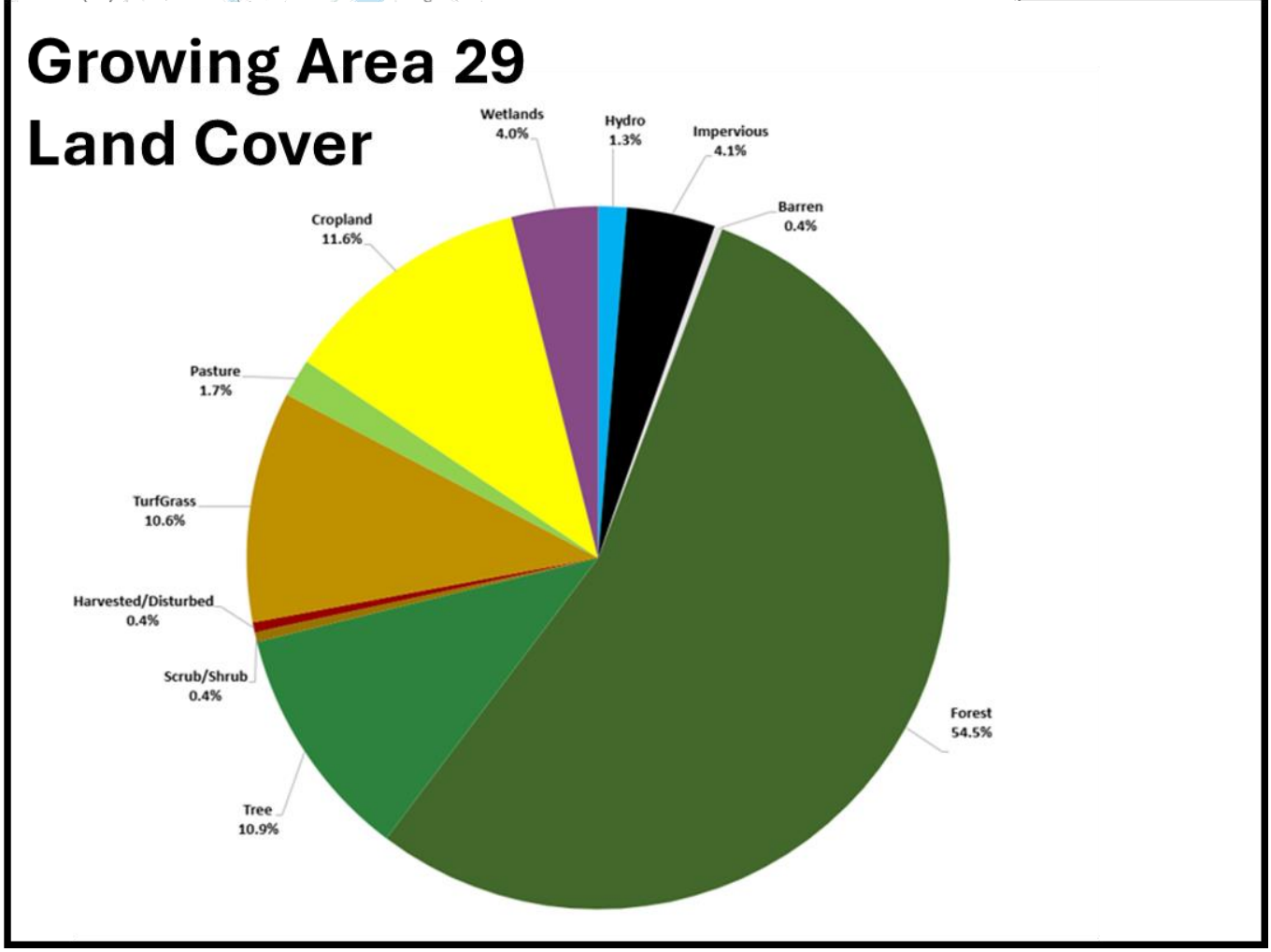
The topography of the area surveyed ranges from the shoreline to 118' at the highest elevation within the interior boundary.

For the most up-to-date Classification map, see Virginia Shellfish Classification Map
For the Growing Area Boundary Map, see: Virginia Shellfish Growing Area Boundary Map

The 2020 census reported that there are an estimated 2,685 residents and 1,524 housing units in Growing Area 29 with a population density of 245 residents per square mile. Much of the growing area can be characterized as semirural with the majority of the population being found in Urbana along with communities along the Rappahannock riverfront.

Source: https://www.census.gov/geographies/reference-maps/2020/geo/2020-census-block-maps.html

Land Cover data are shown in the map below and summarized and in the following pie chart.



Rainfall Data:
Meteorological data indicated that 9.36" of rain fell during the survey period. A monthly breakdown follows:

Date range	Cumulative Rainfall (inches)	Avg. Monthly rainfall (2015-2024)
April 2025	5.72	3.31
May 1-22, 2025	3.67	NA - partial month

Nearshore Water Sampling:
For this survey, nearshore seawater stations were established to assess navigable waters beyond the routine classification stations. These stations were positioned closer to the shoreline and farther upstream than the regular stations, with the goal of evaluating drainage entry points for potential point and nonpoint source pollution. Data from these stations were analyzed to compare fecal indicator bacteria (FIB) concentrations in the waterway and identify possible onshore contamination sources.

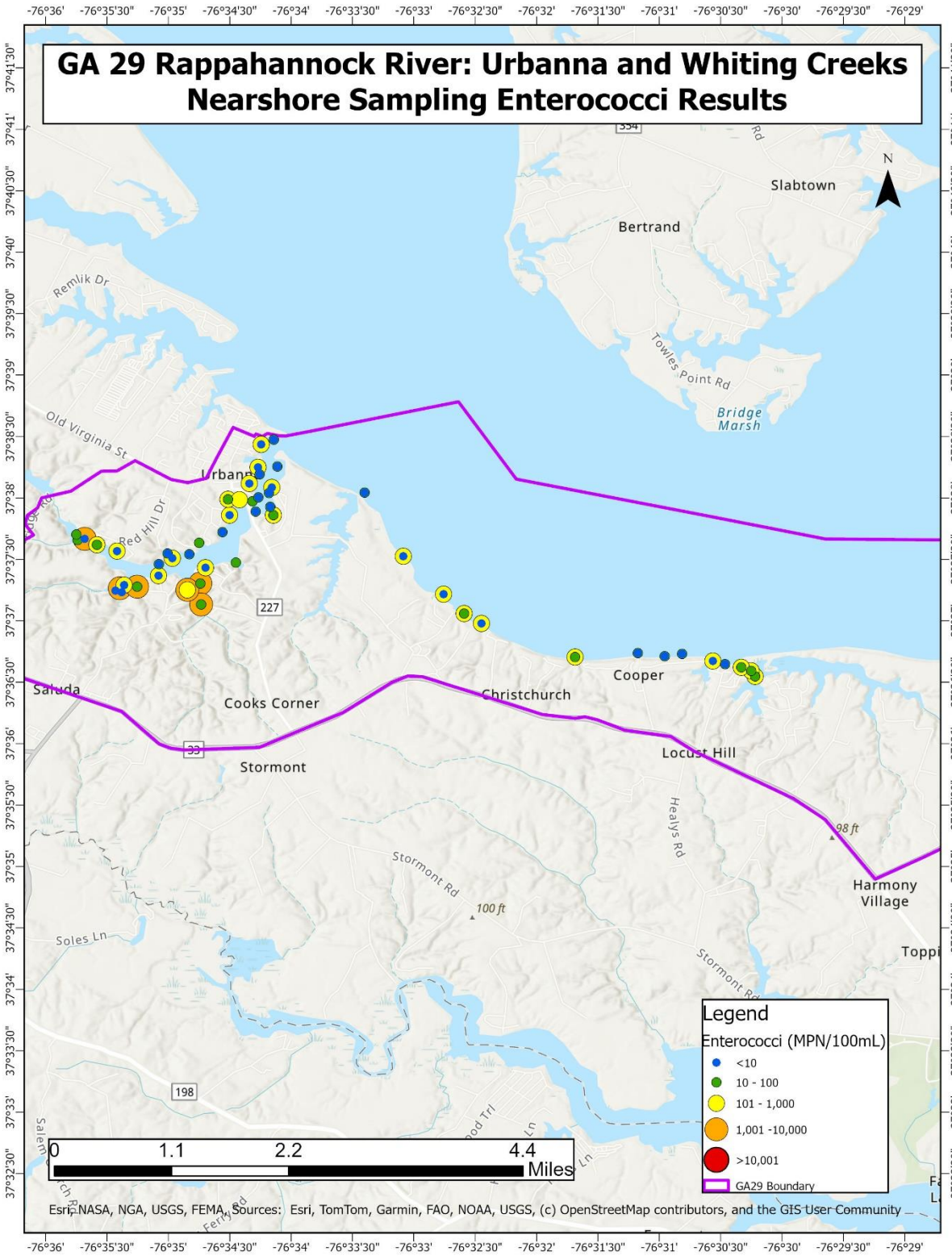
The table below shows hydrographic data, sampling times, and the range of enterococci concentrations measured.

Growing Area 29 Nearshore Sampling Data				Rainfall in inches		
Sample dates	High Tide	Sampling Time	Enterococci range (MPN/100ml)	Day of	Previous 24 hours	Previous 7 days
4/28/25	12:32 am	9:31 – 11:34am	<10 - 108	0	0	0.55
4/29/25	1:23 am	9:39 – 11:18am	<10 - 199	0	0	0.54
5/22/25	7:55 am	9:02 – 11:44am	<10 - 2851	0.19	1	1.16
*Prior High Tide estimated from: NOAA ID 8636522-Urbanna, VA				Total Rainfall: 4/28- 5/22/25: 3.64"		

Nearshore Sampling Summary:
Two full rounds of nearshore sample collections took place for GA 29 between 4/28/25 and 5/22/2025. Enterococci concentrations were generally low on the first round of sampling (<100 MPN/100ml) throughout the growing area. The shoreline to the east of Whiting creek was visually surveyed but did not have samples collected as there is only one property in the area.

The second round of samples from 5/22/25 were collected following an inch rain in the prior 24 hours. The second round of wet weather samples had higher corresponding enterococci concentrations than the first round of sample results ranging from <10 up to 500 (MPN/100mL) across much of the growing area. In the upper extent of Urbana Creek, which are classified as prohibited due to the wastewater treatment plant outfall, there were a handful of samples in very shallow muddy waters with Enterococci concentrations in the low thousands with the highest value of 2,851 (MPN/100mL). These sampling results indicate there could be some wet weather driven contamination that occurs within Urbana Creek and its downstream waters into the Rappahannock River following significant rain events.

A map of the sampling results is below.


GA 29 Rappahannock River: Urbanna and Whiting Creeks
Nearshore Sampling Enterococci Results
N
Slabtown
Bertrand
Remlik Dr
Towles Point Rd
Bridge Marsh
Old Virginia St
Urbanna
Red Hill Dr
227
Saluda
Cooks Corner
Christchurch
Cooper
33
Stormont
Locust Hill
Healys Rd
98 ft
Stormont Rd
100 ft
Harmony Village
Soles Ln
198
0 1.1 2.2 4.4
Miles
Legend
Enterococci (MPN/100mL)
<10
10 - 100
101 - 1,000
1,001 -10,000
>10,001
GA29 Boundary
Esri, NASA, NGA, USGS, FEMA, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, (c) OpenStreetMap contributors, and the GIS User Community

Marinas and Additional Marine Structures:
All marine structures (docks, piers, bulkheads) with a total length of 200' (double sided) or 330' (single side) within Growing Area 29 were measured and evaluated to determine whether they meet the NSSP definition for a "Marina". This evaluation was conducted using field observations from the boat and/or with current and historic satellite imagery to determine whether these structures are used for docking and constructed to provide temporary or permanent docking space for more than ten (10) boats. If these structures meet the NSSP Marina definition they are documented and evaluated as a Marina (Section D). There are **11** Marinas in GA 29.

If they meet the size criteria but are determined in the field to either not be used for docking or are not constructed to accommodate more than 10 boats then they are documented as "Additional Marine Structures" on the Shoreline Survey Field Map Application. For the 29 survey, there are a total of 16 of these Additional Marine Structures.

Condemnations and Deficiencies:
Information in this report is gathered by and primarily for use by the Division of Shellfish Safety, Virginia Department of Health, 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 VPDES Permit Map

Copies of bacteriological, hydrographical, and shellfish closure data are available at the area field office for review. Copies of the current condemnation notices and maps are available via the internet at www.vdh.virginia.gov/shellfish/.

This report lists only those properties that have sanitary deficiencies or have other environmental significance. "DIRECT" indicates that the significant activity or deficiency has a direct impact on the shellfish growing area waters. Individual field forms with full information on properties listed in this report are on file in the Richmond Office of the Division of Shellfish Safety and are available for reference until superseded by a subsequent survey of the area. Data in the report are also made available to local health departments and other agencies to address items that may be out of compliance with their regulatory programs.

SECTION B: SEWAGE POLLUTION SOURCES

SEWAGE TREATMENT FACILITIES

Field ID	Survey Date	Facility Name	Type	DEQ VPDES Permit #	Outfall Lat/ Long	Site Remarks
STP-1	4/2/25	Town of Urbanna Wastewater Treatment Plant	Municipal wastewater treatment plant	VA0026263	37.6244/ -76.5827	HRSD. Middle Peninsula Hampton Roads District, 110 Laurel Hill Road, Urbanna 23175 (PO Box 387, Hartfield 23071). Population served: 1000. Treatment processing includes screening, (the comminutor has been removed and replaced with small squares of wire mesh, which are changed daily), grit removal, flow measurement, ultraviolet disinfection, sewage pumping and effluent/plant outfall (submerged) to Urbanna Creek. The sludge is disposed of at the Gloucester County Landfill, via the Stormont Transfer Station. Designed flow: 0.8MGD. Average annual flow 0.061 MGD. Maximum reported daily flow: 1.22MGD.
STP-2	5/12/25	Central Middlesex Sewage Treatment Plant (STP)	Municipal wastewater treatment plant	VA0073318	37.6091/ -76.5924	HRSD. 234 Oak Landing Road, Saluda, VA 23149. Population served: 200-230 inmates and staff, the Middlesex County Courthouse, the Woodward Building, the historic courthouse, and the Middlesex County Sheriff's office. Total population: 250. Treatment processing includes a bar screen, comminutor, equalization basin, aeration basin, clarifier, sludge holding tank, UV disinfection, and weir box. Treated effluent is released to a stream that leads to Urbanna Creek. Design flow: 0.025MGD. Average annual flow: 0.015 MGD. Maximum reported flow: 0.046 MGD.
STP-3	4/2/25	Dockside Health and Rehab Center WWTP	Privately operated wastewater treatment system	VA0063029	37.6111/ -76.5086	74 Mizpah Road, Locust Hill, VA 23092. The Dockside Health and Rehab Center WWTP is a privately-owned package sewage treatment plant that serves a nursing care facility in Middlesex County, Virginia. Wastewater treatment at the facility consists of screening, grit removal, activated sludge aeration, secondary sedimentation, chlorination, dechlorination and sludge holding. Flow from the headworks is divided between two treatment trains (A, B). Each treatment train consists of an activated sludge aeration basin and a secondary sedimentation basin. Flow from these two treatment trains combine in the facility's chlorine contact tank for disinfection before flowing through a dechlorinator and discharging to the Rappahannock River at river mile 3 through roughly 500m of pipe RPP013.71 via permitted Outfall 001. Designed flow 0.02MGD. Average annual flow:0.008 MGD and maximum flow reported at 0.060 MGD.

ON-SITE AND SEWER INFRASTRUCTURE DEFICIENCIES

-None-

SECTION C: NON-SEWAGE WASTE SITES

INDUSTRIAL SITES

Field ID	Surveyed Date	Type	Lat/Long	Direct Impact to Shellfish waters (Y/N)	Actual/ Potential	Site Remarks
I-1	4/15/25	Chemical/ Petroleum storage	37.6073/ -76.5906	N	Potential	455 General Puller Highway, Saluda 23149. Virginia Department of Transportation, Saluda Resident Engineer and Maintenance Headquarters, PO Box 184, Saluda 23149. State Highway Shop. Approximately 47 employees. On-site is one ten-thousand gallon tank of potassium acetate and two five-hundred gallon waste oil tanks without berms.

SOLID WASTE SITES

-None-

SECTION D:

MARINAS

Field ID	Surveyed Date	Type	Lat/Long	Facility Name	Number of Wet Slips	Over 7 boats present	Evidence of overnight boaters	Site Remarks
M-1	4/28/25	Marina	37.6413/ -76.5708	Queen Anne's Cove Yacht Club	24	Y	N	24 seasonal slips available. Electricity and water are available. An in-out ramp is shared with The Cove Association, Inc. Owner has alternative pump-out agreement with Urbanna Yachting center. On-shore restroom facilities, dump station facilities, and boat holding tank pump-out facilities are exempt.
M-2	4/28/25	Marina w/ boat ramp	37.6376/ -76.5703	Town of Urbanna Marina	32	Y	Y	Available on-site are 32 seasonal slips, ramp, water, electricity, solid waste containers, restrooms, dump station, and sewage holding tank pump-out facilities.
M-3	4/28/25	Marina	37.6369/ -76.5711	Montague Boat Dock	15	Y	N	Available on-site are 15 seasonal slips, water and electricity. Owner has alternative agreement with Urbanna Yacht Center to provide boat holding tank pump-out facilities.
M-4	4/28/25	Marina	37.6361/ -76.5712	Oyster Harbor at Urbanna Creek	13	Y	N	Available on site are 13 seasonal slips/moorings, electricity, water, and restrooms. Owner is exempt from having dump station and sewage holding tank pump-out facilities. Owner has alternate pump-out agreement with Urbanna Town Marina at Upton's Point.
M-5	4/28/25	Marina	37.6306/ -76.5685	Urbanna Harbor Yacht Club	129	Y	N	Private marina for Urbanna Harbor Property Owners. Available on-site are 129 seasonal slips, electricity, water dump station facilities, sewage holding tank pump-out facilities, and solid waste containers. Restrooms are provided with sewage disposal via drainfield which appeared to functioning satisfactorily at time of inspection.
M-6	4/28/25	Marina	37.6327/ -76.5716	Urbanna Boat Yard and Marina-1	70	Y	N	Available on-site are 70 seasonal slips, fuel, electricity, water, boat repair, solid waste containers, sewage pump-out facilities, and restrooms.
M-7	4/28/25	Marina	37.6331/ -76.5723	Urbanna Boat Yard and Marina-2	43	Y	N	Available on-site are 43 seasonal slips, electricity, water, dump station facilities, solid waste containers, and restrooms.
M-8	4/28/25	Marina	37.6353/ -76.5723	Urbanna Boat Yard and Marina-3	53	Y	N	Available on-site are 53 slips, 20 dry storage spaces, water, electricity, boat repair, dump station facilities, boat holding tank pump-out facilities, restrooms, and solid waste containers.
M-9	4/28/25	Marina	37.6416/ -76.5703	Cove Association, Inc.	11	N	N	Available on-site are 11 seasonal slips, water, electricity, solid waste containers, and a ramp. Owner has an alternate pump-out agreement with Urbanna Yachting Center. On-shore restroom facilities, dump station facilities, and boat holding tank pump-out facilities are exempt.
M-10	4/28/25	Marina w/ boat ramp	37.6248/ -76.5524	The Boatyard at Christchurch	16	N	N	Primarily used as a dry storage facility, there is a ramp available and a long pier with capacity for 16 boats.
M-11	4/28/25	School Marina w/ boat ramp	37.6196/ -76.5466	Christchurch School	11	N	N	Pier used by sailing school with 2 boat lifts and space for 11 small boats to tie up. Portable toilets are available for sailing school guests.

SECTION E:

ANIMALS

Field ID	Surveyed Date	Type	Lat/Long	Direct Impact to Shellfish waters (Y/N)	Actual/ Potential	Contact (Y/N)	Site Remarks
A1	4/15/25	Livestock	37.6110/ -76.5137	N	Actual	Y	Goats in fenced area adjacent to the Rappahannock River

SUMMARY

Growing Area # 029
Rappahannock River: Urbanna and Whiting Creeks
June 1, 2025

SECTION B: SEWAGE POLLUTION SOURCES

1. SEWAGE TREATMENT FACILITIES

3 – DIRECT – **STP-1, STP-2, STP-3**
0 – INDIRECT – None.
3 – B.1. TOTAL

2. ON-SITE SEWAGE DEFICIENCIES – Correction of deficiencies is 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

SECTION C: NON-SEWAGE WASTE SITES

1. INDUSTRIAL SITES

0 – DIRECT – None
1 – INDIRECT – **I1**
1 – C.1. TOTAL

2. SOLID WASTE SITES

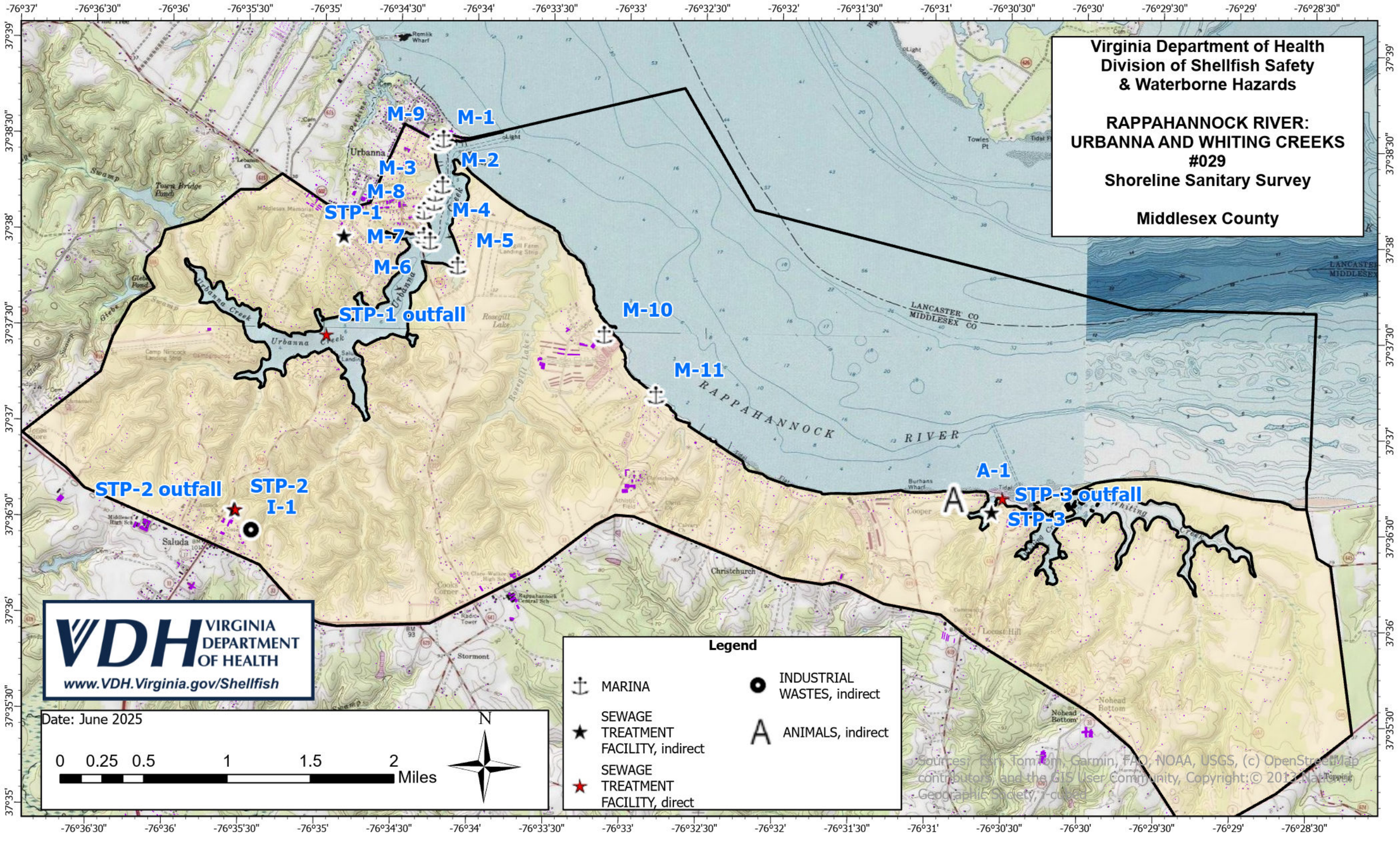
0 – DIRECT – None
0 – INDIRECT – None
0– C.2. TOTAL

SECTION D: MARINAS

11 – MARINA – **M1, M2, M3, M4, M5, M6, M7, M8, M9, M10, M11**
11– D. TOTAL

SECTION E: ANIMALS

0 – DIRECT – None
1 – INDIRECT – **A1**
1 – E. TOTAL


Virginia Department of Health
Division of Shellfish Safety
& Waterborne Hazards
RAPPAHANNOCK RIVER:
URBANNA AND WHITING CREEKS
#029
Shoreline Sanitary Survey
Middlesex County
M-9
M-1
M-2
M-3
M-8
M-4
STP-1
M-7
M-5
M-6
STP-1 outfall
M-10
M-11
RAPPAHANNOCK RIVER
LANCASTER CO
MIDDLESEX CO
A-1
STP-3 outfall
STP-3
STP-2 outfall
STP-2
I-1
VDH VIRGINIA DEPARTMENT OF HEALTH
www.VDH.Virginia.gov/Shellfish
Date: June 2025
0 0.25 0.5 1 1.5 2 Miles
N
Legend
MARINA
SEWAGE TREATMENT FACILITY, indirect
SEWAGE TREATMENT FACILITY, direct
INDUSTRIAL WASTES, indirect
ANIMALS, indirect
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