



COMMONWEALTH of VIRGINIA

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GREAT WICOMICO RIVER Growing Area # 013 Northumberland County Shoreline Sanitary Survey

Date: June 1, 2025

Survey Period: 10/25/24-5/1/25

Total Number of Properties Surveyed and Near-Shore Samples Collected: 314

Surveyed By: Neill Shultz, Ian Geeson, Jaclyn Friedman, Matt Farnham, Julia Carrier, Jill Fleiger

SECTION A: GENERAL

This survey includes the areas of the Great Wicomico River from Sandy Point (end of Sandy Point Rd) on the most southeastern point to the headwaters of the Great Wicomico River including Bush Mill Stream and bounded by Indian Vally Rd. The north side of the survey is bounded to the east by Haynie Point (end of Whays Creek Rd). Major tributaries included in the survey are as follows: Gougher Creek, Penny Creek, Barrett Creek, Tipers Creek, Balls Creek, Warehouse Creek, Horn Harbor, Betts Mill Creek and Blackwell Creek

As part of a Growing Area boundary revision, Whays Creek and Reason Creek were removed from GA # 13 and added to GA # 12 on 5/15/23. Cranes Creek was removed from GA # 13 and added to GA # 14 on 5/15/23. These areas were included in their respective shoreline surveys.

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](#)

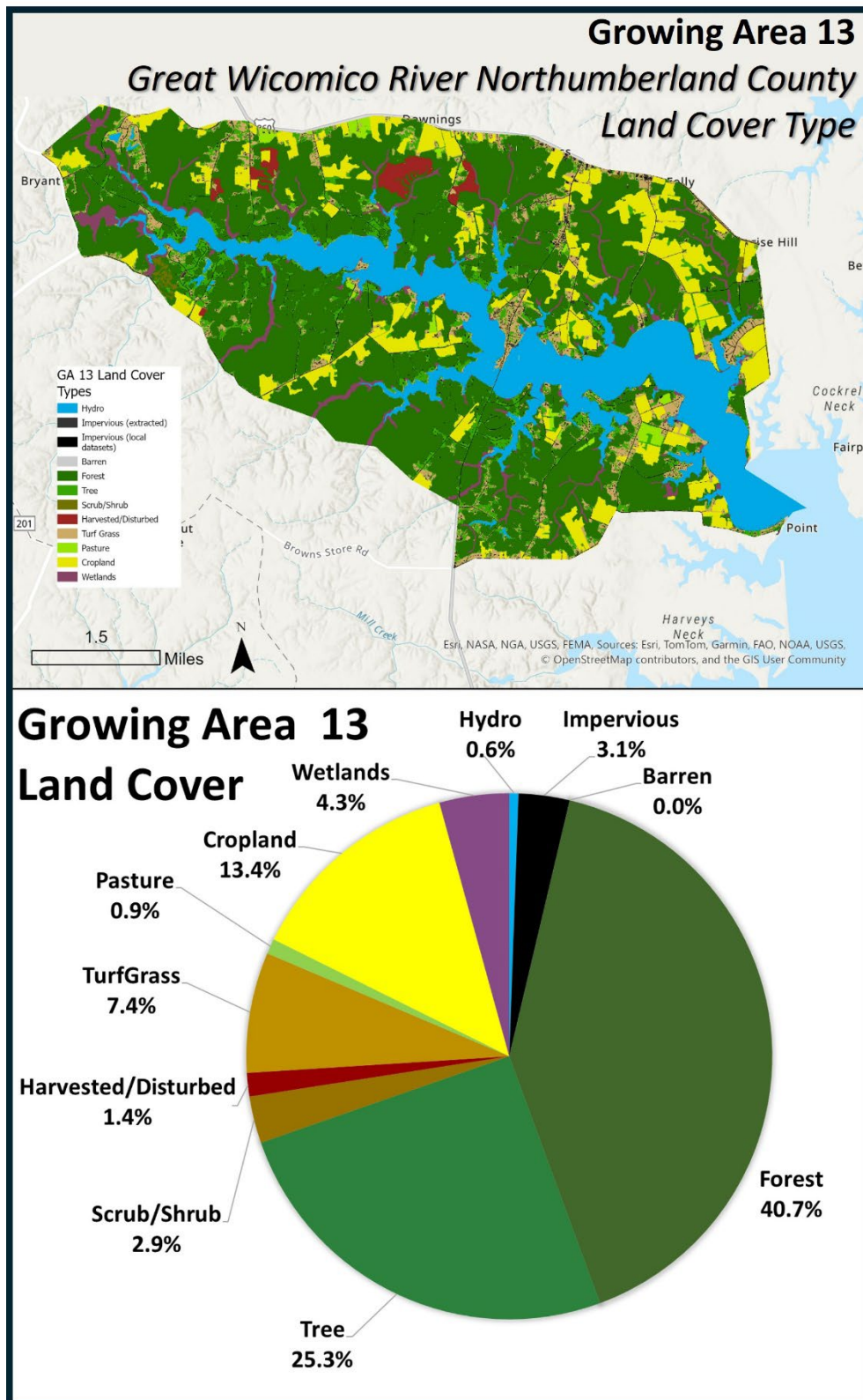
Population and Landcover:

The topography of the area surveyed begins at the shoreline of the Great Wicomico River and reaches a maximum of 113 feet at the highest elevation at the outer western edge of the survey boundary line. The growing area is largely rural with several subdivisions, one with townhouses, and three campgrounds located on the Great Wicomico River. There are no known sewer systems within this survey boundary. Properties within this survey boundary are served by onsite sewage systems.

The 2020 census reported that there are an estimated 3,086 residents and 1,986 housing units in Growing Area 13 with a population density of 129 residents per square mile and is generally rural.

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 in the following pie chart.



Source: [Virginia Geographic Information Network Land Cover Dataset](#)

Rainfall Data:

Meteorological data indicated that 24.65" of rain fell during the survey period. A monthly breakdown is as follows:

Date range	Cumulative Rainfall (inches)	Avg. Monthly rainfall (2015-2024)
December 2024	1.92	3.57
January 2025	1.68	3.62
February 2025	6.10	3.08
March 2025	4.57	3.63
April 2025	4.96	3.22
May 2025	5.42	4.61

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.

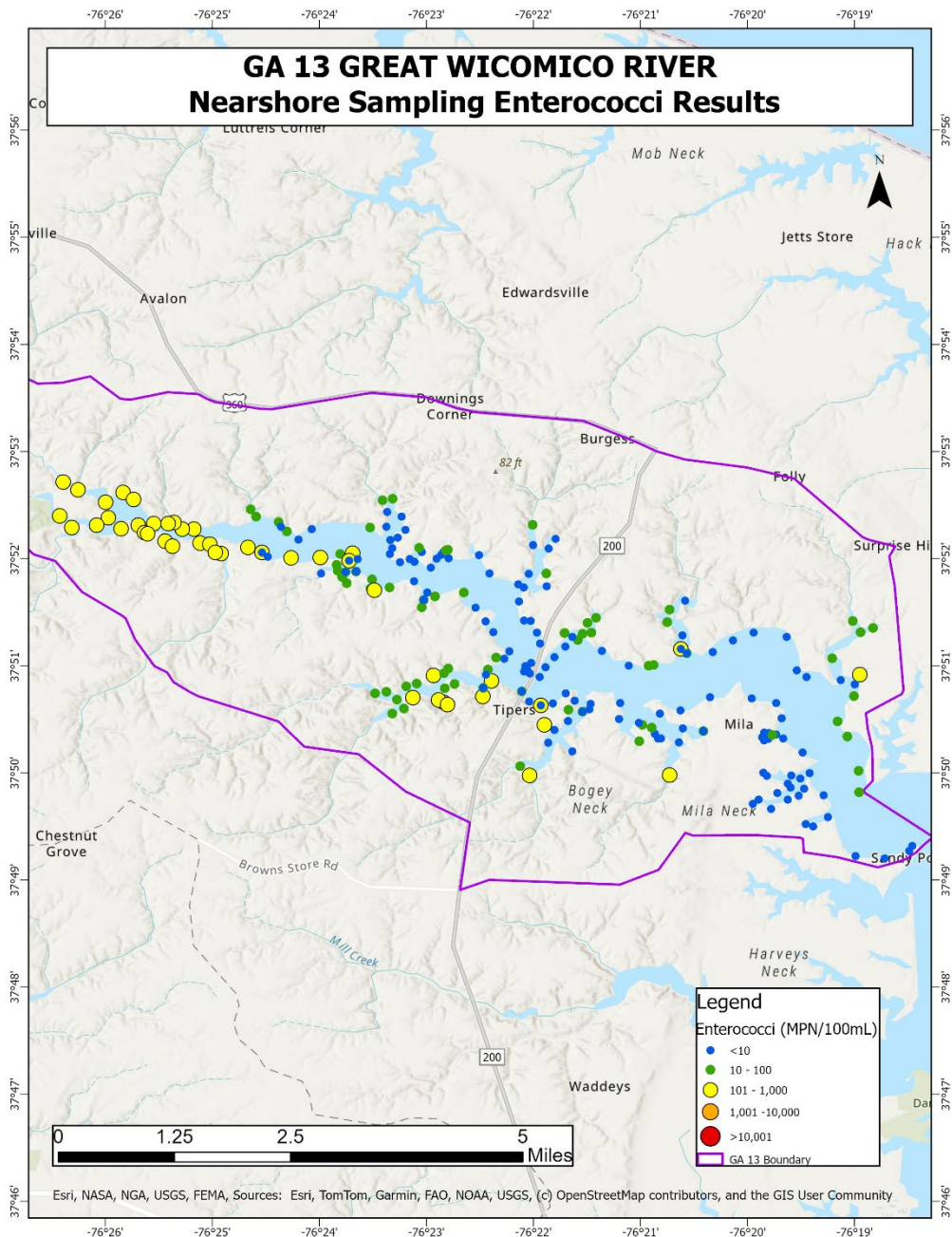
The table below shows hydrographic data, sampling times, and the range of enterococcus concentrations measured.

Growing Area # 13 Nearshore Sampling					Rainfall (inches)		
Sample dates	Sampling time	High Tide*	# of boats	Enterococci range (MPN/100ml)	Day of	Previous 24 hours	Previous 7 days
12/17/24	10:37am - 1:14pm	1:15pm	1	<10 - 10	0	0.28	1.72
3/26/25	10:28am - 12:55pm	10:43am	1	<10 - 388	0.03	0.01	0.86
4/9/25	9:03am - 12:40pm	11:18am	3	<10 - 988	0	0.45	1.87
4/10//25	9:20am - 1:09pm	11:57am	1	<10 - 63	0	0	1.87
5/1/25	8:55am - 12:32pm	3:43pm	1	<10 - 279	0.01	0	0.14
*Prior High Tide estimated from: NOAA ID 8636046-Glebe Point, Great Wicomico River					Total Rainfall: 12/17/24- 5/1/25: 17.5"		

Nearshore Sampling Summary:

The first round of nearshore sampling took place over several months due to holidays, freezing weather and scheduling constraints. Sampling results followed the typical pattern of higher enterococci levels at the head waters of creeks and coves and low levels in the main body of the Great Wicomico and areas closer to the Bay. There was 0.45" of rain the within the previous 24 hours of the collection run on 4/9/25 which may have contributed to elevated enterococci levels in the head waters of the Great Wicomico.

A second round of sampling was conducted on 5/1/25. There was little to no rain in the previous 7 days. Sampling was concentrated in transition areas between restricted and approved shellfish waters in the growing area. Additional samples were also taken at locations that had elevated enterococci if the sample location was close to open waters. The second round of sampling repeated the same results from the first round, with the highest enterococci levels found at the headwaters of coves. At sites with multiple rounds of testing, the 2nd test typically came back lower.



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 13 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 **6** Marinas in GA 13.

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 GA13 survey, there are a total of **12** 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

-None

ON-SITE AND SEWER INFRASTRUCTURE DEFICIENCIES

ON-SITE DEFICIENCIES

Field ID	Survey Date	Type	Lat/Long	Direct Impact to Shellfish waters (Y/N)	Actual/Potential	Septic System Type	Structure Type	Contact (Y/N)	Site Remarks
O1	5/13/25	Onsite Sewage	37.85802, -76.36393	N	Potential	unknown	Dwelling	Y	Previous survey in 2013 noted ponding effluent of ground surface. During follow up investigation owner noted they still have issues with the septic system
O2	5/19/25	No Facilities	37.884864, -76.443093	N	Potential	None	Temporary Dwelling Site	N	Previous survey in 2013 noted property did not have a septic system and may be used as temporary living quarters. Most recent inspection noted the same site condition
O3	5/19/25	No Facilities	37.849287, -76.442042	N	Potential	None	Temporary Dwelling Site	N	Previous survey in 2013 noted property did not have a septic system and may be used as temporary living quarters. Most recent inspection noted the same site condition
P1	3/14/25	Potential Pollution	37.820753, -76.307940	N	Potential	Alternative	Dwelling	N	New septic system installed in 2019 at house on property. Unable to determine if existing building on the property, which was listed on the prior 2013 survey, as having an onsite deficiency was connected to the new system. No visual signs of sewage discharge at time of property visit.

SECTION C: NON-SEWAGE WASTE SITES

INDUSTRIAL SITES

Field ID	Survey Date	Facility Name	Type	Lat/Long	Direct Impact to Shellfish waters	Actual/Potential	DEQ VPDES Permit #	Site Remarks
I1	4/25/25	N/A	Fuel Storage	37.84928, -76.38521	Indirect	Potential	N/A	550 gallon gasoline tank, a 2,000 gallon gasoline tank and a 175 gallon waste oil tank, all without berms found on site

SOLID WASTE SITES

-None

SECTION D: MARINAS

Field ID	Survey Date	Type	Lat/Long	Facility Name	Number of Wet Slips	Over 7 Boats Present? (Y/N)	Evidence of Overnight Boaters (Y/N)	Site Remarks
M1	5/16/25	Marina	37.85072, -76.34841	Great Wicomico Marina	32	Y	Y	Available on-site are 32 seasonal slips/moorings, fuel (3000 gallon gasoline, above ground without berm), ramp, electricity, water, solid waste containers, restroom facilities, dump station and a sewage holding tank pump-out facility.
M2	3/27/25	Campground Marina	37.85678, -76.35888	Glebe Point Campground	18	Y	N	Available on-site are 18 seasonal slips/moorings, ramp, electricity, water, solid waste containers, restroom facilities, dump station.
M3	12/30/24	Marina	37.85277, -76.36395	Tiffany Yacht Co., Inc.	14	Y	Y	Available on-site are 14 seasonal slips/moorings, 1,000 gallon gas and 2,000 gallon diesel tanks above ground electricity, water, boat repair, solid waste containers, restroom facilities, dump station and a sewage holding tank pump-out facility.
M4	3/27/25	Community Dock	37.87381, -76.38969	River Bend Estates	11	N	N	Available on-site are 11 slips/moorings, ramp, electricity, water, restroom, and a dump station (at privy).
M5	4/22/25	Community Dock	37.87029, -76.42651	Mallard Bay	18	Y	N	Available on-site are 18 slips/moorings, ramp, electricity, water, solid waste containers and restroom facilities (at clubhouse)
M6	12/30/24	Seafood Landing Site	37.84910, -76.36678	Glebe Point Aquaculture	19	N	N	Oyster landing site and aquaculture site with 19 wet slips

SECTION E: ANIMALS

Field ID	Survey Date	Type	Lat/Long	Direct Impact to Shellfish waters (Y/N)	Actual/Potential	Contact (Y/N)	Site Remarks
A1	5/19/25	Livestock	37.841811, -76.332398	N	Actual	Y	12 horses, 3 foals, around 15 chickens 6 ducks, and 2 pigs. Manure is composted and used in the garden
A2	3/27/25	Livestock	37.860079, -76.351137	N	Actual	N	3 donkeys in fenced pasture
A3	3/27/25	Livestock	37.859318, -76.351361	N	Actual	Y	Approximately 7 goats and 40 chickens on property. Manure is spread in the garden or given away.

SUMMARY

Growing Area # 013
Great Wicomico River
June 1, 2025

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
- 1 – CONTRIBUTES POLLUTION, INDIRECT – # **O1**
- 0 – CP – (Kitchen or Laundry Wastes), DIRECT – None
- 0 – CP – (Kitchen or Laundry Wastes), INDIRECT – None
- 0 – NO FACILITIES, DIRECT – None
- 2 – NO FACILITIES, INDIRECT – # **O2, O3**
- 3 – B.2. TOTAL

3. POTENTIAL POLLUTION – Periodic surveillance of these properties will be maintained to determine any status change.

- 1 – POTENTIAL POLLUTION – # **P1**

SECTION C: NON-SEWAGE WASTE SITES

1. INDUSTRIAL WASTE 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

- 6 – MARINA – # **M1, M2, M3, M4, M5, M6**
- 6 – D. TOTAL

SECTION E: ANIMALS

- 0 – DIRECT – None
- 3 – INDIRECT – # **A1, A2, A3**
- 3 – E. TOTAL

Virginia Department of Health
Division of Shellfish Safety
& Waterborne Hazards

Great Wicomico River
013
Shoreline Sanitary Survey

Northumberland County

GA 13 Significant Properties

	POTENTIAL POLLUTION		ANIMALS, indirect
	MARINA		NO FACILITIES, indirect
	INDUSTRIAL WASTES, indirect		ONSITE SEWAGE, indirect

VDH VIRGINIA
DEPARTMENT
OF HEALTH

www.VDH.Virginia.gov/Shellfish

Date: July 2025
Number of Samples collected and properties surveyed: 314

0 0.25 0.5 1 1.5 2 Miles

Sources: Esri, TomTom,
Mapbox, FAO, NOAA, IGN,
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