



COMMONWEALTH of VIRGINIA

Department of Health
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ROSIER CREEK Growing Area # 001 King George and Westmoreland County Shoreline Sanitary Survey

Date: 1 February 2024

Survey Period: September 20 – October 31, 2023

Total Number of Properties Visited and Samples Collected: 48

Surveyed By: M. Farnham, J. Freidman, & J. Hudnall

SECTION A: GENERAL

This survey area extends from Reference Point 1 at Stoney Point Road, along the south side of Stoney Point Road, including properties on Spy Hill Road, out to the intersection of Tetotum and Good Hope Roads Road, including the south side of Good Hope Road down to Ridge Road and continuing into Colonial Beach to Reference 2 including Rosier Creek and all of its tributaries.

The topography of the area varies in elevation from 160' by ridges on Tetotum Road to 100' on Ridge Road and decreasing to 50' at the headwaters of Rosier Creek and falling to 30' on the North side and to 25' on the South side at the mouth of the Creek. An elevation of 25' is found on Goldman Creek and decreases to 10' at the mouth of the Creek.

Meteorological data indicated that 3.77" of rain fell during the survey period. Monthly breakdown is as follows:

Date Range	Cumulative Rainfall	Average Monthly rainfall 2012-2022
9/21-30/2023	2.36"	n/a (partial month)
10/2023	1.41"	4.39"

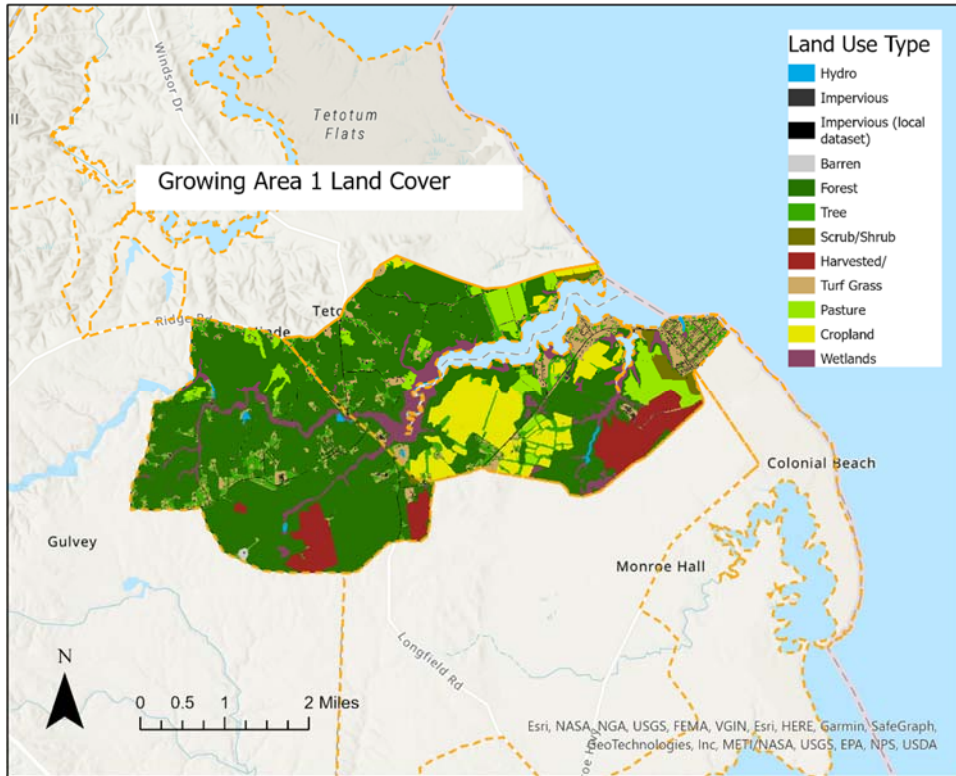
The northern portion of the survey area falls within King George County. The population in King George County has grown an estimated 18 percent since the 2010 census. The estimated population is around 27,850 people. Data from 2022 indicate there are 10,783 housing units. In 2022, 161 building permits were issued.

The southern portion of the survey area falls within Westmoreland County. The population in Westmoreland County has grown an estimated 7 percent since the 2010 census. The estimated population is around 18,700 people. Data from 2022 indicate there are 11,426 housing units. In 2022, 215 building permits were issued.

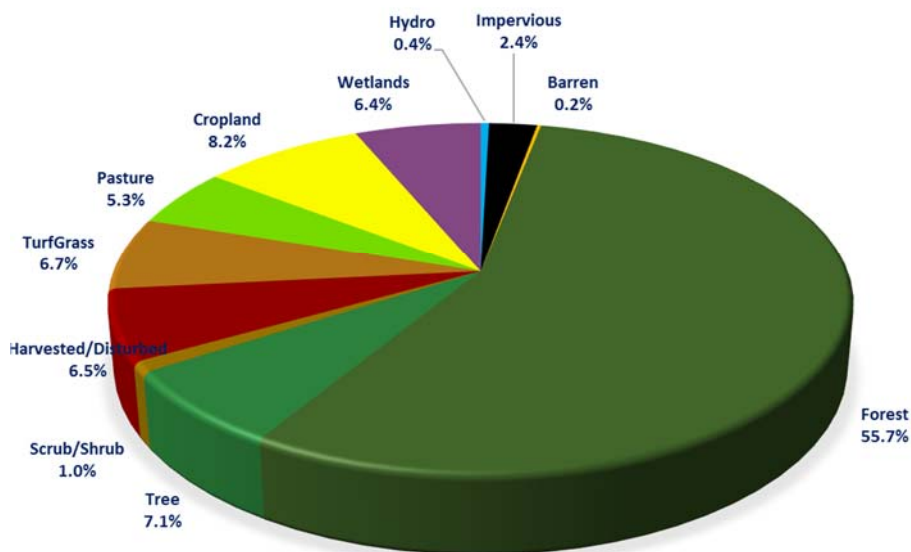
<https://www.census.gov/quickfacts/fact/table/US/PST045221>

Most properties in the survey area have onsite sewage treatment systems (septic). The eastern portion of the area is served by the Colonial Beach Wastewater Treatment Plant. The plant itself sits within the Growing Area 1 boundary along Goldman creek, while the discharge point is to Monroe Bay in Growing Area 2. A July 2023 spill of approximately 1.1 million gallons at the plant initiated a 21-day administrative closure of shellfish grounds in Rosier Creek and adjacent waters.

Within Growing Area 1, there are 1109 land parcels. Land Cover data are shown below.



GROWING AREA 1 LAND COVER



Source: https://gismaps.vdem.virginia.gov/Download/Land_Cover/County_Report.pdf

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. Station data were analyzed to compare relative concentrations of fecal indicator bacteria within the waterway to identify potential onshore sources of contamination.

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.

Growing Area # 1 Nearshore Sampling						Rainfall in inches	
Sample dates	High Tide*	Ebb Current**	Sampling time	Enterococcus range (MPN/100 ml)	Day of	Previous 24 hours	Previous 7 days
9/20/2023	06:27	9:39	10:09-11:53	<10 - 148	0	0	0.96
10/4/23	06:46	9:53	10:01-11:53	<10 - 231	0	0	0
Total rainfall for nearshore sampling period 2.36".							

* High Tide estimated from Colonial Beach NOAA ID # 1960.

* Slack Ebb Current estimated from Swan Point NOAA ID # 5766.

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-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

[illegible]

Shoreline Survey # 001

SECTION C: NONSEWAGE WASTE SITES

[illegible]

Shoreline Survey # 001

SECTION D: BOATING ACTIVITY

[illegible]

Shoreline Survey # 001

SECTION C: NONSEWAGE WASTE SITES

[illegible]

SUMMARY

Growing Area # 001
Rosier Creek
1 February 2024

SECTION B: SEWAGE POLLUTION SOURCES

1. SEWAGE TREATMENT FACILITIES

0 – DIRECT – None.

1 – INDIRECT – # 219

1 – 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 – D.2. TOTAL

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

0 – POTENTIAL POLLUTION – None.

SECTION C: NON-SEWAGE WASTE SITES

1. INDUSTRIAL WASTE SITES

0 – DIRECT – None.

1 – INDIRECT – # 97

1 – C.1. TOTAL

2. SOLID WASTE DUMPSITES

0 – DIRECT – None.

0 – INDIRECT – None.

0 – C.2. TOTAL

3. STORMWATER OUTFALLS

0 – DIRECT – None.

0 – INDIRECT – None.

0 – E. TOTAL

SECTION D: BOATING ACTIVITY

2 – MARINAS – # 3, 156

2 – UNDER SURVEILLANCE – # 190, 260

4 – D. TOTAL

SECTION E: ANIMALS PRESENT

0 – DIRECT – None.

1 – INDIRECT – # 10

1 – E. TOTAL

Virginia Department of Health
Division of Shellfish Sanitation

Rosier Creek
001
Shoreline Sanitary Survey

King George and
Westmoreland Counties

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Legend

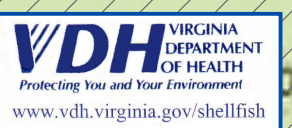
Seawater Sampling Stations

- Active (Blue diamond with crosshair)
- Inactive (Black dot)
- Sewered Areas (Hatched area)
- Boat Ramps (DGIF) (Blue anchor icon)

Shoreline Survey Deficiencies

- Sewage Treatment Facility - Direct (Red star)
- Sewage Treatment Facility - Indirect (Black star)
- Contributes Pollution - Direct (Red square)
- Contributes Pollution - Indirect (Black square)
- Contributes Pollution (Kitchen or Laundry wastes) - Direct (Red triangle)
- Contributes Pollution (Kitchen or Laundry wastes) - Indirect (Black triangle)
- No Facilities - Direct (Red circle)
- No Facilities - Indirect (Black circle)
- Potential Pollution (Black diamond)
- Industrial Wastes, Direct (Red circle with dot)
- Industrial Wastes, Indirect (Black circle with dot)
- Solid Waste Dumpsite - Direct (Red circle with crosshair)
- Solid Waste Dumpsite - Indirect (Black circle with crosshair)
- Stormwater, Direct (Red S)
- Stormwater, Indirect (Black S)
- Boating Activity (Blue anchor icon)
- Contributes Animal Pollution - Direct (Red A)
- Contributes Animal Pollution - Indirect (Black A)

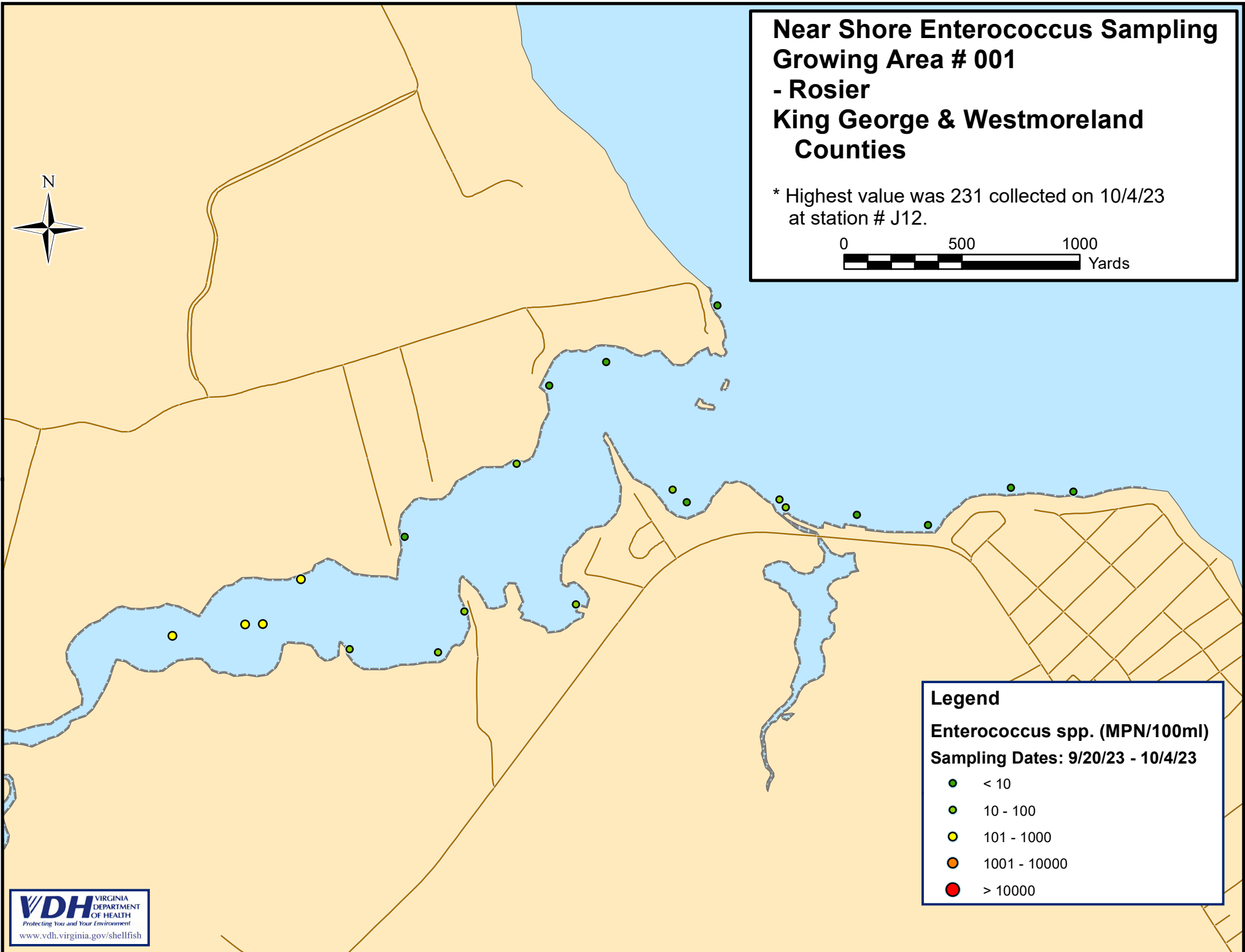
Geographic coordinates in NAD83 datum;
shown in degrees, minutes & seconds.



Near Shore Enterococcus Sampling Growing Area # 001 - Rosier King George & Westmoreland Counties

* Highest value was 231 collected on 10/4/23
at station # J12.

0 500 1000
Yards



Legend

Enterococcus spp. (MPN/100ml)

Sampling Dates: 9/20/23 - 10/4/23

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