



COMMONWEALTH of VIRGINIA

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PAGAN RIVER Growing Area # 061 Isle of Wight County Shoreline Sanitary Survey

Date: 23 December 2024

Survey Period: September 11 – October 24, 2024

Total Number of Properties Surveyed and Near-Shore Samples Collected: 86

Surveyed by: F. Monis I. Geeson, L. Sakach, C. Turner, E. Yeargin, & T. Egerton

SECTION A: GENERAL

This survey area extends from Reference Point 62 at Route 703 extended to the Burwell Bay shore at Rushmere to Reference Point 63 at Ballard Marsh, including the James River shoreline between these two points, Pagan River, Williams Creek, Tormentor Creek (excluding Tormentor Lake), Lawson Creek south of Old Stage Highway, Canal Run, Blairs Creek, Mount Holly Creek, Cypress Creek, Little Creek, portions of Champion Swamp (excluding Scotts Factory Pond), Moon Creek, Jones Creek (Town Farm Creek, Carrollton Branch, and Titus Creek), and all of their tributaries.

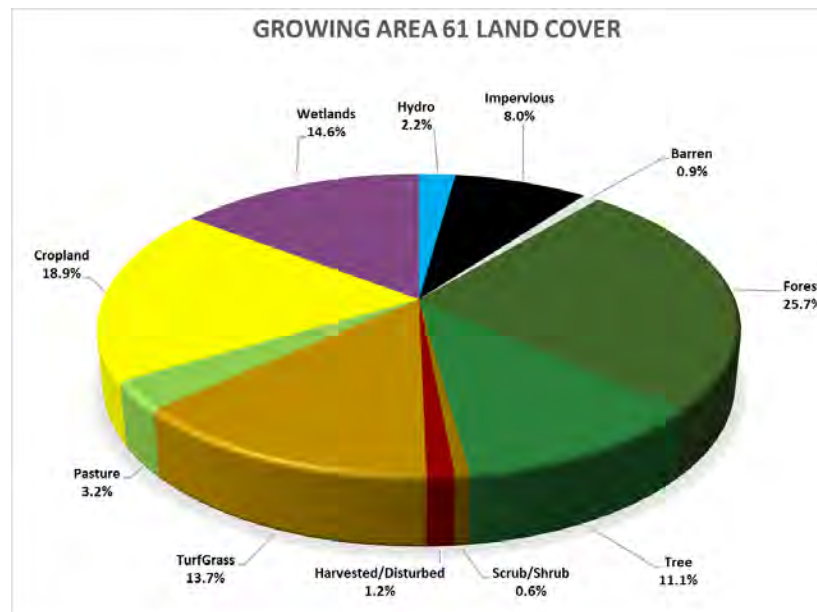
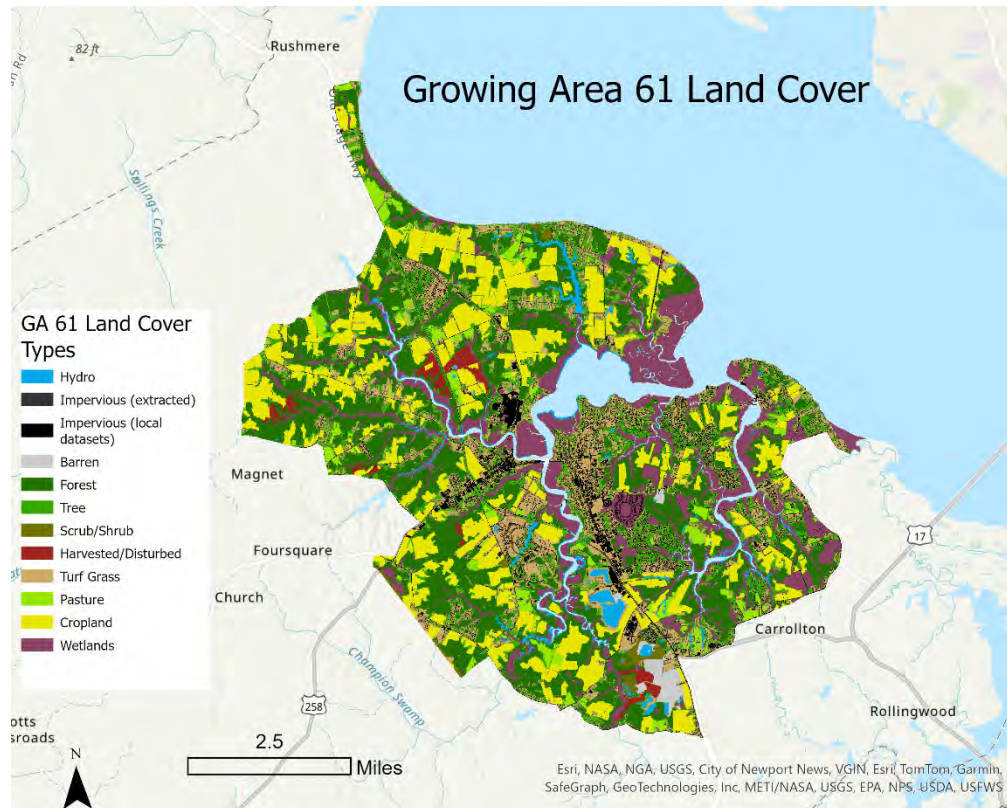
Early in 2024, the boundaries of the Growing Areas along the James River were revised to better align with the natural shape of its bays and tributaries. The fieldwork for this survey follows the 2023 boundaries to complete the mapping of all significant properties within the James River watershed since 2019. Future surveys will adhere to the [2024 Growing Area boundaries](#).

Meteorological data indicated that 4.19" of rain fell during the survey period. A monthly breakdown follows:

Date range	Cumulative Rainfall (inches)
September 11 – 30, 2024	3.95"
October 1 – 24, 2024	0.24"

The 2020 census reported that there are an estimated 18578 residents across 7820 housing units in Growing Area 61. The population density is 432 residents per square mile. <https://www.census.gov/geographies/reference-maps/2020/geo/2020-census-block-maps.html>

Within GA 61 there are 8,975 land parcels. Land Cover data are shown below:



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

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 samples were also

tested for the human-associated molecular marker gene HF183, which could indicate recent human-source fecal pollution. However, all HF183 results were below detectable levels.

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 # 61 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
10/15/24	09:17	11:01	10:06 – 13:10	<10-987	0"	0"	0"
10/16/24	10:09	11:59	09:58 –11:38	<10 - 173	0"	0"	0"
10/17/24	10:59	12:55	11:01	30	0"	0"	0"
10/22/24	02:50	03:32	10:27 - 13:01	10 - 84	0"	0"	0"
Total Rainfall for Sampling period: (10/15/24 to 10/22/24) = 0"							

*High Tide predicted from Smithfield, Pagan River NOAA ID 2247.

**Slack Ebb current predicted from James River, South end NOAA ID ACT5311.

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 <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]

SECTION C: NONSEWAGE WASTE SITES

[illegible]

SECTION D: BOATING ACTIVITY

[illegible]

SECTION E: ANIMALS PRESENT SITES

[illegible]

SUMMARY

Growing Area # 061
Pagan River
23 December 2024

SECTION B: SEWAGE POLLUTION SOURCES

1. SEWAGE TREATMENT FACILITIES

2 – DIRECT – # G31, X48

0 – INDIRECT – None.

2 – B.1. TOTAL

2. ONSITE 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 – # CM1

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.

1 – B.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

1 – DIRECT – # FM6

0 – INDIRECT – None.

1 – C.1. TOTAL

2. SOLID WASTE DUMPSITES

0 – DIRECT – None.

1 – INDIRECT – # G77

1 – C.2. TOTAL

3. STORMWATER OUTFALLS

0 – DIRECT – None.

0 – INDIRECT – None.

0 – E. TOTAL

SECTION D: BOATING ACTIVITY, INDIRECT

4 – MARINAS – # CM5, CM6, L5, L7

5 – UNDER SURVEILLANCE – # FM1, FM2, L8, L9, L10

9 – D. TOTAL

SECTION E: ANIMALS PRESENT

0 – DIRECT – None.

10 – INDIRECT – # CM7, FM3, FM4, FM5, FM7, FM9, FM10, G1, L1, L3

10 – E. TOTAL

Legend
Seawater Sampling Stations

- Active
- Inactive
- Sewered Areas
- Boat Ramps (DGIF)

Shoreline Survey Deficiencies

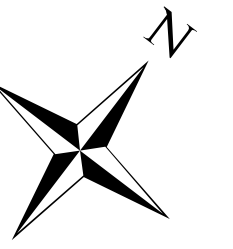
- Sewage Treatment Facility - Direct
- Sewage Treatment Facility - Indirect
- Contributes Pollution - Direct
- Contributes Pollution - Indirect
- Contributes Pollution (Kitchen or Laundry wastes) - Direct
- Contributes Pollution (Kitchen or Laundry wastes) - Indirect
- No Facilities - Direct
- No Facilities - 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

Virginia Department of Health
Division of Shellfish Sanitation

Pagan River
Growing Area # 061
Shoreline Sanitary Survey

Isle of Wight County

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Near Shore Enterococcus Sampling Growing Area # 061 - Pagan River Isle of Wight County

* Highest value was 987 collected at
station # M4 on 10/15/24.

0 2000 4000
Yards



Legend

Enterococcus spp. (MPN/100ml)

Sampling Dates: 10/15/24 - 10/22/24

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

Growing Areas New