



COMMONWEALTH of VIRGINIA

Department of Health
P O BOX 2448
RICHMOND, VA 23218

TTY 7-1-1 OR
1-800-828-1120

BROAD AND LINKHORN BAYS City of Virginia Beach Growing Area # 071 Shoreline Sanitary Survey

Date: 13 February 2025

Survey Period: July 1, 2024 – January 10, 2025

Number of significant properties evaluated and samples analyzed: 128

Survey By: I. Geeson, C. Turner, F. Monis, L. Sakach, & S. Durham

SECTION A: GENERAL

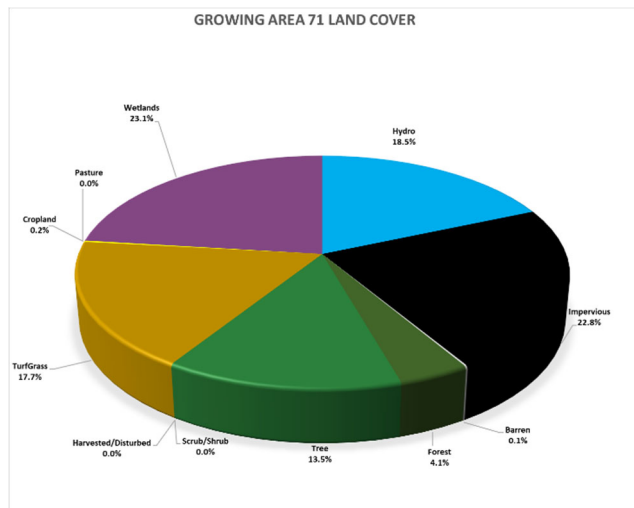
The survey extends east from the Lesner Bridge around Shore Drive and Atlantic Avenue south to 22nd street / I-264, west to Great Neck Road and north again to Inlet Road. For the most up-to-date map, see:

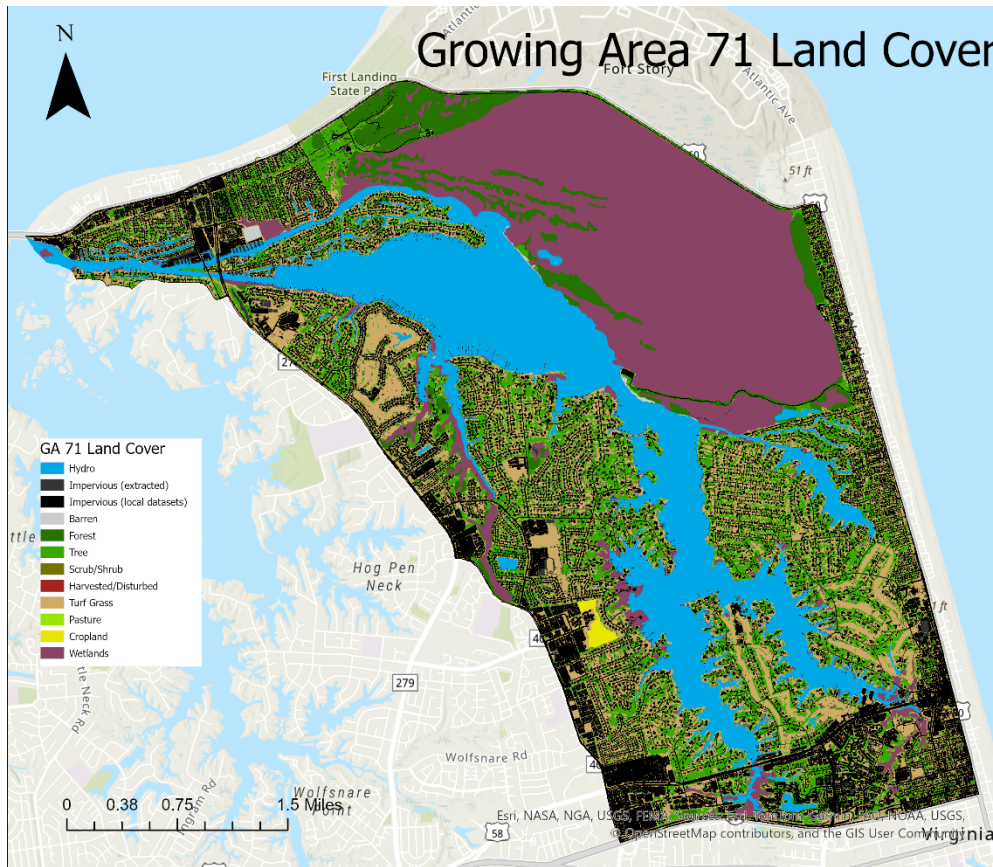
<https://www.vdh.virginia.gov/environmental-health/environmental-health-services/shellfish-safety/shellfish-harvesting-area-map/> and [2024 Growing Area Boundaries](#)

The 2020 census reported that there are an estimated 41498 residents across 21673 housing units in Growing Area 71. The population density is 4082 residents per square mile.

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

Within GA 71 there are 8891 land parcels. Land Cover data are shown below:





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

Meteorological data indicated that 26.7" of rain fell during the survey period. A monthly breakdown is as follows:

Date range	Cumulative Rainfall (inches)	Avg. Monthly Rainfall (2013-2023)
July 2024	12.92"	6.51"
August 2024	3.08"	5.51"
September 2024	4.38"	4.86"
October 2024	0.68"	3.45"
November 2024	2.09"	3.04"
December 2024	2.39"	3.44"
January 1 – 10, 2025	1.16"	3.66"

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 # 71 Nearshore Sampling						Rainfall in inches	
Sample dates	High Tide*	Ebb Current **	Sampling time	Enterococcus range	Day of	Previous 24 hours	Previous 7 days
7-1-24	05:27	05:40	06:40 – 07:01	230 – >24196	1.04"	3.03"	4.23"
7-18-24	06:55	06:46	09:21 – 11:33	9 - 173	0.76"	0.01"	3.92"
7-31-24	06:21	06:14	10:58 – 12:31	9 - 41	0.1"	0.05"	1.3"
8-15-24	05:22	04:55	09:17 – 11:05	9 - 644	0	0	1.39"
8-21-24	10:47	11:13	09:23 – 10:30	9 - 2755	0	0.01"	0.98"
8-29-24	06:12	06:11	09:29 – 10:30	9 - 185	0	0	0.01"
10-2-24	09:26	10:29	09:50- 10:47	41 - 1421	0	0.63"	1.66"
10-22-24	Pipe	Pipe	10:32- 11:32	10 - >24196	0	0	0.05"
Total rainfall for nearshore sampling period 21.06".							

* High Tide estimated from.

** Slack ebb current estimated from Lynnhaven Inlet bridge NOAA ID (ACT4556).

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]

SECTION C: NONSEWAGE WASTE SITES

[illegible]

SECTION D: BOATING ACTIVITY

[illegible]

SECTION E: ANIMALS PRESENT SITES

[illegible]

SUMMARY

Growing Area # 071
Broad and Linkhorn Bays
13 February 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

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

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

0 – INDIRECT – None

0 – 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, INDIRECT

17 – MARINAS – # 4, 6, 7, 8, 9, 10, 11, 16, 22, 23, 24, 25, 69, 70, 90, 92, 100

10 – UNDER SURVEILLANCE – # 1, 2, 3, 19, 20, 26, 27, 54, 91, 99

27 – D. TOTAL

SECTION E: ANIMALS PRESENT

0 – DIRECT – None

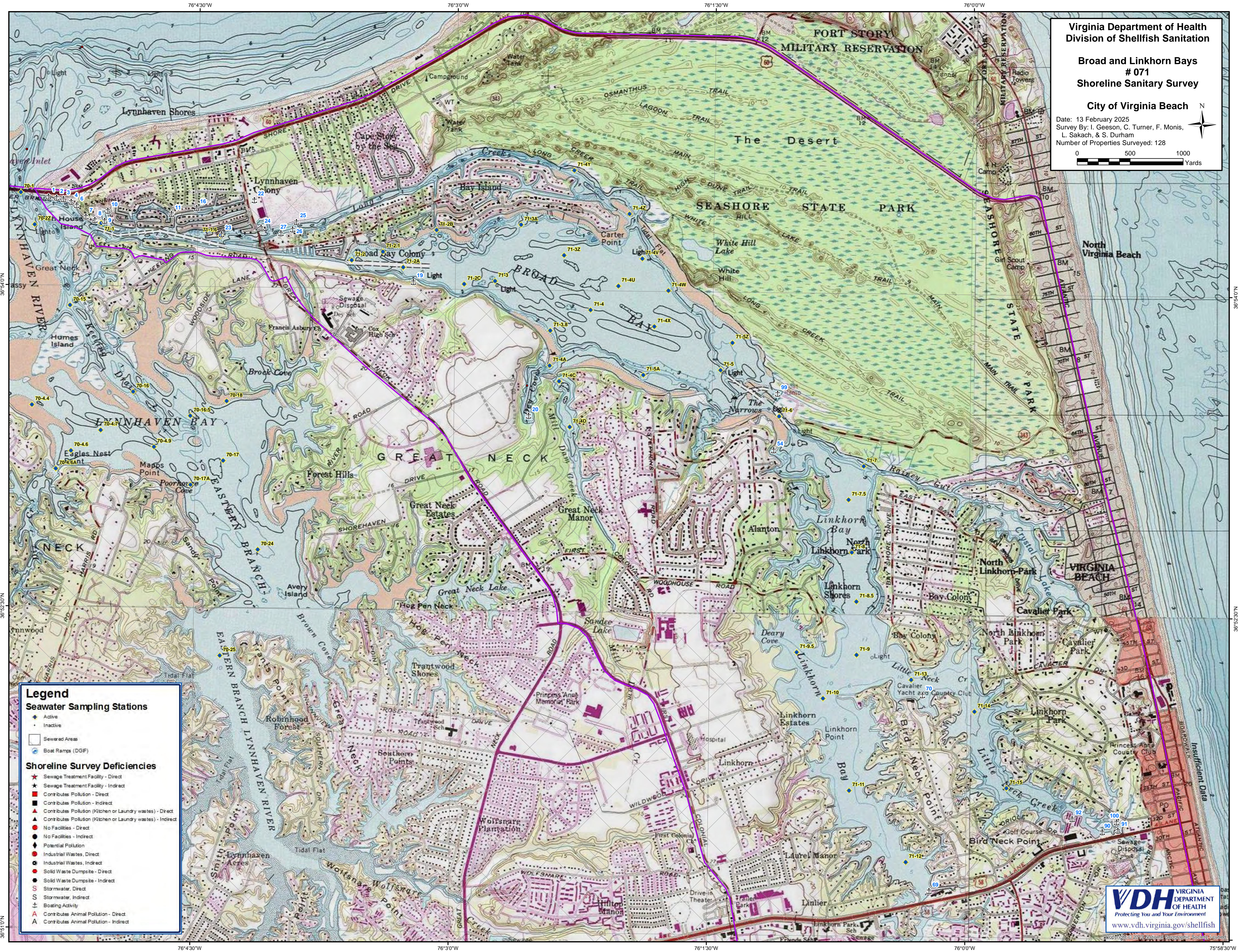
0 – INDIRECT – None

0 – E. TOTAL

Broad and Linkhorn Bays
071
Shoreline Sanitary Survey

City of Virginia Beach

Date: 13 February 2025
Survey By: I. Geeson, C. Turner, F. Monis,
L. Sakach, & S. Durham
Number of Properties Surveyed: 128



Legend

Seawater Sampling Stations

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

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

Near Shore Enterococcus Sampling Growing Area # 071 - Broad & Linkhorn Bays City of Virginia Beach

* Highest value was 24,197 collected at station # G2R on 7/1/24.

0 1500 3000
Yards

