Department of Health P O BOX 2448 RICHMOND, VA 23218

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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

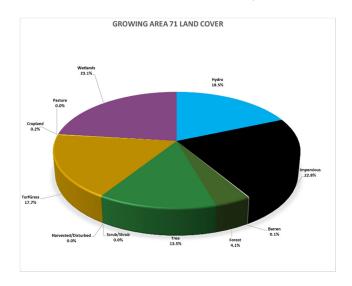
SECTION A: GENERAL

The survey extends east from the Lesner Bridge around Shore Drive and Atantic 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:

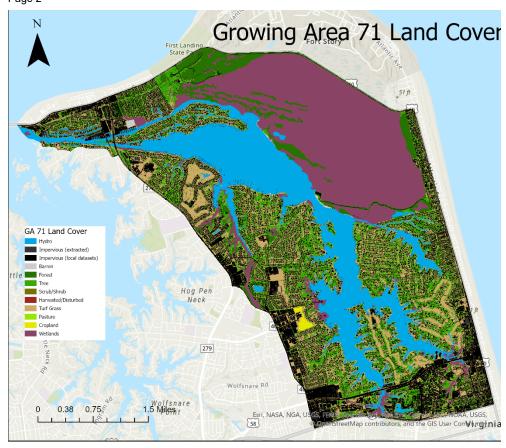
https://www.vdh.virginia.gov/environmental-health/environmental-health-services/shellfish-safety/shellfish-harvesting-area-map/ and 2024 Growing Area Boundaries

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 rainfal	l for nearshor	e sampling p	eriod 21.06".							

^{*} High Tide estimated from.

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-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.

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

SECTION B: SEWAGE POLLUTION SOURCES

GA #	Field #	Deficiency or Pollution Type	Latitude	Longitude	Pollutant Remarks	OVERALL_SI	Locality	DSS Staff	Date of Correction	Correction Notes

SECTION C: NONSEWAGE WASTE SITES

# # Pollution Type	tude Longitude	Pollutant Remarks	Overall Site Remarks	Locality	Staff

	GA #	Field #	Deficiency or Pollution Type	Latitude	Longitude	Pollutant Remarks	OVERALL_SI	Boating Activity Type	Number of Wet Slips	Evidence of Live- Aboards	Locality	DSS Staff
5	71	4	BOATING ACTIVITY, indirect	36.906491	-76.087246	Satisfactory Marina Program Inspection 2024	Shellfish Company at Bubba's Marina	Marina	12	N	Virginia Beach	IG
6	71	6	BOATING ACTIVITY, indirect	36.906234	-76.086698	Satisfactory Marina Program Inspection 2024	Lynnhaven Seafood Marina at Dockside	Marina	16	N	Virginia Beach	IG
7	71	7	BOATING ACTIVITY, indirect	36.905356	-76.085795	Satisfactory Marina Program Inspection 2024	Warner Athey	Marina	12	N	Virginia Beach	IG
8	71	8	BOATING ACTIVITY, indirect	36.905111	-76.084926	Satisfactory Marina Program Inspection 2024	Chick's Oyster Bar	Marina	14	N	Virginia Beach	IG
9	71	9	BOATING ACTIVITY, indirect	36.905034	-76.083980	Satisfactory Marina Program Inspection 2024	Lynnhaven Municipal Marina	Marina	50	N	Virginia Beach	IG
10	71	10	BOATING ACTIVITY, indirect	36.905823	-76.083677	Satisfactory Marina Program Inspection 2024	Five 2 Peers	Marina	32	N	Virginia Beach	IG
11	71	11	BOATING ACTIVITY, indirect	36.905634	-76.077506	Satisfactory Marina Program Inspection 2024	Basin Road Real Estate Trust	Marina	62	N	Virginia Beach	IG
12	71	16	BOATING ACTIVITY, indirect	36.906121	-76.075088	Satisfactory Marina Program Inspection 2024	Penninsula Real Estate Trust	Marina	42	N	Virginia Beach	IG
15	71	22	BOATING ACTIVITY, indirect	36.906795	-76.069501	Satisfactory Marina Program Inspection 2024	Lynnhaven Dry Storage	Marina	24	N	Virginia Beach	IG
17	71	23	BOATING ACTIVITY, indirect	36.904109	-76.072634	Satisfactory Marina Program Inspection 2024	Long Bay Pointe	Marina	215	N	Virginia Beach	IG
19	71	24	BOATING ACTIVITY, indirect	36.904662	-76.068828	Marina Program Inspection 2024. Repair facility marina CTO expired.	Capps Boatworks, Inc.	Marina	27	N	Virginia Beach	IG
	71	25	BOATING ACTIVITY, indirect	36.905120	-76.065396	Satisfactory Marina Program Inspection 2024	Marina Shores	Marina	208	N	Virginia Beach	IG
16	71	69	BOATING ACTIVITY, indirect	36.853583	-76.003468	Satisfactory Marina Program Inspection 2024	Linkhorn Bay Condominiums	Marina	44	N	Virginia Beach	IG
18	71	70	BOATING ACTIVITY, indirect	36.868831	-76.004296	Satisfactory Marina Program	Cavalier Golf & Yacht Club	Marina	90	N	Virginia Beach	IG
25	71	90	BOATING ACTIVITY, indirect	36.858302	-75.986746	Marina no longer active, building is a real estate office. Site visit 2024.	Brownings Marina (closed since 2013)	Marina	12	N	Virginia Beach	IG
19	71	92	BOATING ACTIVITY, indirect	36.859311	-75.989683	Satisfactory Marina Program Inspection 2024	Cove Point Marina	Marina	66	N	Virginia Beach	IG
	71	100	BOATING ACTIVITY, indirect	36.859090	-75.985370	Satisfactory Marina Program Inspection 2024	Link Harbour Condominiums	Marina	18	N	Virginia Beach	IG
0	71	1	BOATING ACTIVITY, indirect	36.906900	-76.089442	Pilot Boats only, no docking.	Virginia Pilots Association	Under Surveillance	5	N	Virginia Beach	IG
2	71	2	BOATING ACTIVITY, indirect	36.906811	-76.088662	Pilot Bots only, no docking.	Maryland Pilots Association	Under Surveillance	2	N	Virginia Beach	IG
4	71	3	BOATING ACTIVITY, indirect	36.906704	-76.088000	Side tie for restaurant.	Lesner Inn Catering Club	Under Surveillance	7	N	Virginia Beach	IG
13	71	19	BOATING ACTIVITY, indirect	36.900554	-76.054016	Most slips have lifts for small runabouts.	Green Hill By the Bay	Under Surveillance	4	N	Virginia Beach	IG
14	71	20	BOATING ACTIVITY, indirect	36.890243	-76.042710	Satisfactory Marina Program Inspection 2024	Ferebee Cove Condominium	Under Surveillance	5	N	Virginia Beach	IG
22	71	26	BOATING ACTIVITY, indirect	36.904542	-76.065756	Satisfactory Marina Program Inspection 2024	Bay Island Quay Wharf	Under Surveillance	10	N	Virginia Beach	IG
23	71	27	BOATING ACTIVITY, indirect	36.904225	-76.066895	Satisfactory Marina Program Inspection 2024	W.A. Rowe	Under Surveillance	10	N	Virginia Beach	IG
24	71	54	BOATING ACTIVITY, indirect	36.887762	-76.018959	Satisfactory Marina Program Inspection 2024	Alanton Civic League	Under Surveillance	8	N	Virginia Beach	IG
27	71	91	BOATING ACTIVITY, indirect	36.858454		Boat rental and tour guide, no docking, Shellfish program Site visit	Chesapean Outdoors	Under Surveillance	8	N	Virginia Beach	IG
26	71	99	BOATING ACTIVITY, indirect	36.892156	-76.018624	2024 Satisfactory Marina Program Inspection 2024	First Landing State Park	Under Surveillance	2	N	Virginia Beach	IG

SECTION E: ANIMALS PRESENT SITES

GA #	Field #	Deficiency or Pollution Type	Latitude	Longitude	Pollutant Remarks	Overall Site Remarks	Locality	DSS Staff

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

