



COMMONWEALTH of VIRGINIA

Department of Health Division of Shellfish Safety

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WINTER HARBOR AND GARDEN CREEK Growing Area # 038 Mathews County Shoreline Sanitary Survey

Date: 22 April 2019

Survey Period: December 17, 2018 – April 8, 2019

Surveyed By: R.M. Thomas, W.A. McCarty III, & W.I. Barrack III

Number of Properties and Near Shore Samples Collected: 115

SECTION A: GENERAL

This survey area extends from Reference Point 38 at the end of Route 645 to Reference Point 39 at Beach Point, including the Chesapeake Bay shoreline between these two points, Winter Harbor, Garden Creek, and all of their tributaries. Refer to map for boundary revisions.

The topography of the area is low, flat, and marshy with poor drainage despite an extensive surface drainage ditch system. The population is moderate with a small concentration around the Onemo community. The stretch of beach front off of Route 609, the shoreline on the southern end of Winter Harbor and the tip of Potato Neck off Route 608 has been developed into seasonal use residential properties. The economy of the surveyed area is mostly dependent on agriculture and recreation.

Meteorological data indicated that the area received a total rainfall of 15.23" for the survey period. A monthly breakdown is as follows:

Dec. 17-31, 2018 1.97" January 2019 3.99" February 4.48" March 4.00" April 1-8 0.79"

Information about Mathews County can be found on the county website at:

www.mathews.va.us. The following statement is on that website.

The Mathews County Board of Supervisors has required implementation of a Septic System Pump-out/Inspection Program, requiring all private septic systems to be pumped out at least once every 5 years. This program is in accordance with the County's Chesapeake Bay Preservation Ordinance and mandated by the Chesapeake Bay Local Assistance Board of the Department of Conservation and Recreation (DCR).

At the beginning of the survey, inspectors reviewed the available literature from prior reports, public works and online resources to characterize land use, drainage patterns, and established nearshore seawater stations. Properties identified in the previous survey as having sanitary deficiencies or other environmental significance were revisited to evaluate their current status. All roadways and navigable shoreline within the survey boundary were visually inspected to identify potential pollution sources requiring further investigation.

Nearshore seawater stations were established to survey the full extent of 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 pollution sources. Station data were analyzed to compare relative concentrations of fecal indicator bacteria within the waterway to identify potential onshore sources of contamination. Areas with elevated concentrations of fecal indicator bacteria were surveyed onshore using a property by property approach. Surveyors interviewed occupants and examined properties for evidence of pollution sources within the immediate watershed.

Hydrographic data and Ebb current windows are shown in the table below. Maps of the Enterococcus sampling are shown at the conclusion of this report.

Area 38 Nearshore Sampling					Rainfall in Inches		
Sample dates	High Tide	Ebb Current	Sampling time	Enterococcus range (MPN/100ml)	Day of	Previous 48 hours	Previous 72 hours
12/18/18	6:24	9:13-4:10	9:06-11:34	<10-31	0.00	0.00	0.14
2/05/19	10:35	1:24-8:16	10:41-1:07	<10-20	0.00	0.00	0.00
4/03/19	10:01	12:36-7:30	10:48-1:26	<10-10	0.00	0.07	0.07
4/05/19	11:16	1:39-8:28	10:52-12:37	<10-10	0.42	0.42	0.42

Copies of Bacteriological and Shellfish Closure data are available at the area office for review. This report lists only those properties that have a sanitary deficiency or other environmental significance. "***DIRECT***" indicates that the significant activity or deficiency has a direct impact on shellfish waters. Data reports are made available to local health departments and other agencies to address items that may be out of compliance with their regulatory programs. Copies of VPDES Permits and inspections are available at the Department of Environmental Quality, Tidewater Regional Office (DEQ/TRO).

Copies of the current condemnation notices and maps are available via the Internet at www.vdh.virginia.gov/shellfish/.

SECTION B: SEWAGE POLLUTION SOURCES

[illegible]

SECTION C: NONSEWAGE WASTE SITES

[illegible]

SECTION D: BOATING ACTIVITY

[illegible]

[illegible]

SUMMARY

Growing Area # 038
Winter Harbor and Garden Creek
22 April 2019

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 the deficiencies in this section is the responsibility of the local health department.

1 – CONTRIBUTES POLLUTION, DIRECT – # W12
0 – CONTRIBUTES POLLUTION, INDIRECT – None.
0 – CP (Kitchen or Laundry Wastes), DIRECT – None.
1 – CP (Kitchen or Laundry Wastes), INDIRECT – # W11
0 – NO FACILITIES, DIRECT – None.
0 – NO FACILITIES, INDIRECT – None.
2 – 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 SITES

0 – DIRECT – None.
2 – INDIRECT – # W8, W10
2 – C.2. TOTAL

3: STORMWATER OUTFALLS

0 – DIRECT – None.
0 – INDIRECT – None.
0 – E. TOTAL

SECTION D: BOATING ACTIVITY

1 – MARINAS – # W1
1 – OTHER PLACES WHERE BOATS ARE MOORED – # W3
1 – UNDER SURVEILLANCE – # W2
3 – D. TOTAL

SECTION E: CONTRIBUTES ANIMAL POLLUTION

4 – DIRECT – # W5, W6, W13, W18
7 – INDIRECT – # W4, W7, W9, W14, W15, W16, W17
11 – E. TOTAL

Virginia Department of Health

Division of Shellfish Sanitation

Winter Harbor and Garden Creek

038

Shoreline Sanitary Survey

Mathews County

Date: 22 April 2019

Survey By: R.M. Thomas, W.A. McCarty III,
& W.I. Barrack III

Number of Properties and Near
Shore Samples Collected: 115

N

0

500

1000

Yards

Legend

Seawater Sampling Stations (History)

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

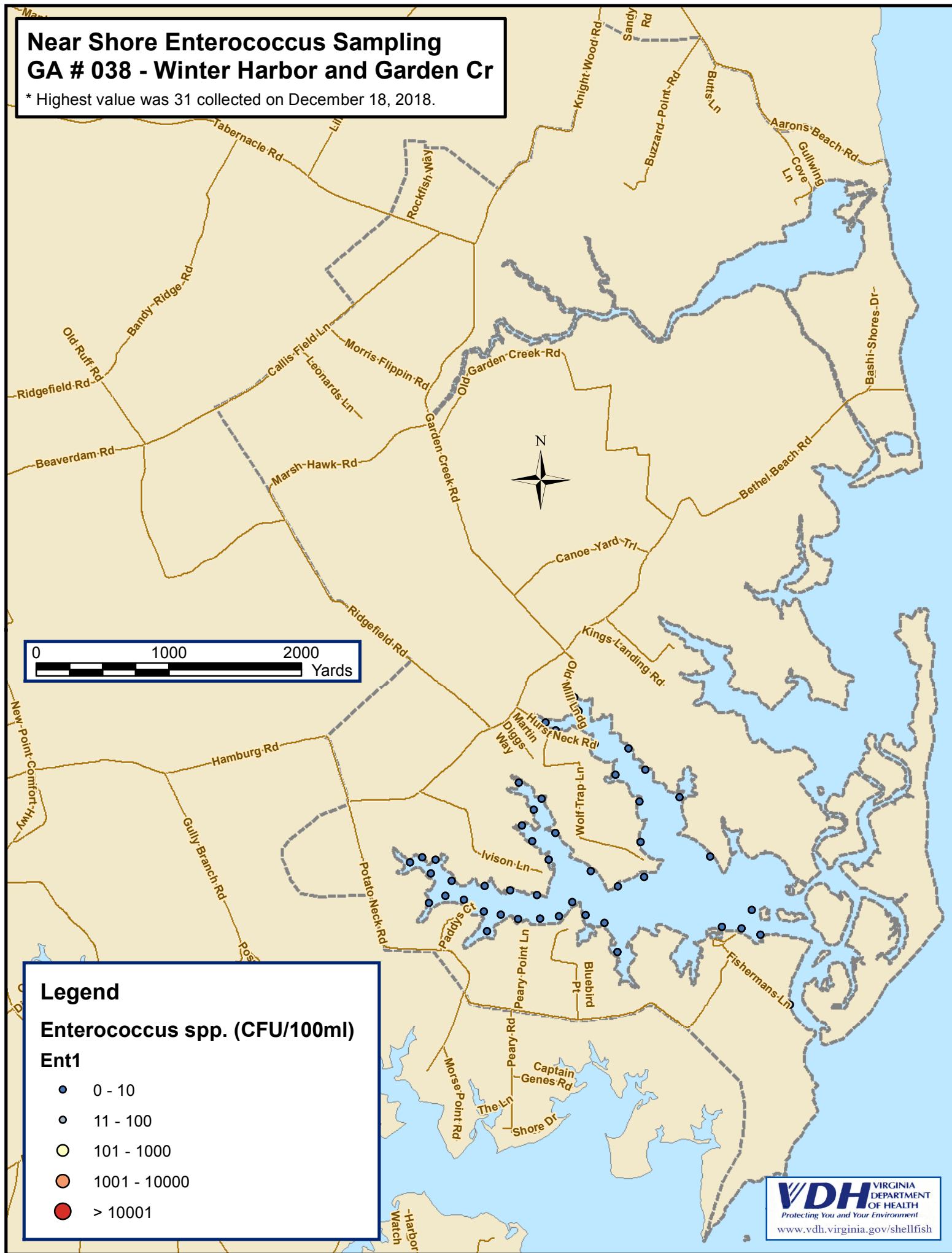
The map displays the shoreline of Winter Harbor and Garden Creek in Mathews County, Virginia. It includes various geographical features such as creeks, bays, and land parcels. Key locations labeled on the map include Laban, Sarah, Onemo, and Potato Neck. The map is overlaid with a grid showing geographic coordinates in NAD83 datum. A scale bar in the top left indicates distances in yards (0, 500, 1000). The map also shows several sampling stations, some active (blue dots) and some inactive (red dots), and various symbols indicating shoreline survey deficiencies such as sewage treatment facilities, pollution sources, and potential pollution areas. The map is titled "Virginia Department of Health Division of Shellfish Sanitation Winter Harbor and Garden Creek # 038 Shoreline Sanitary Survey Mathews County". The date of the survey is 22 April 2019, and the survey was conducted by R.M. Thomas, W.A. McCarty III, and W.I. Barrack III. The number of properties and near shore samples collected is 115.

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

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Near Shore Enterococcus Sampling GA # 038 - Winter Harbor and Garden Cr

* Highest value was 31 collected on December 18, 2018.



Legend

Enterococcus spp. (CFU/100ml)

Ent1

- 0 - 10
- 11 - 100
- 101 - 1000
- 1001 - 10000
- > 10001