



COMMONWEALTH of VIRGINIA

Department of Health Division of Shellfish Safety

109 Governor Street, 6th Floor
P O BOX 2448
RICHMOND, VA 23218

M. Norman Oliver, MD, MA
State Health Commissioner

Ph: 804-864-7487
Fax: 804-864-7481

NANSEMOND RIVER Growing Area # 063 City of Suffolk Shoreline Sanitary Survey

Date: 13 February 2019

Survey Period: May 5, 2016 - November 6, 2018

Total number of properties surveyed and samples analyzed: 1150

Total number of sampling events: 76

Surveyed By: E.M. Yeargan, T.A. Egerton, I.M. Geeson, L.Z. Sakach, F.P. Monis, J.D. Dickerson

SECTION A: GENERAL

This survey area extends from Reference Point 64 at Barrel Point upstream to Trotman Wharf on the opposite shoreline and then downstream to Reference Point 65 at Pig Point, including the Nansemond River shoreline between these 3 points, Bleakhorn Creek, Nix Cove, Campbell Creek, Cedar Creek, Wills Cove, Olds Cove, Bennett Creek (Deanes Branch), Knotts Creek, West Creek and all of their tributaries. The survey boundary has been revised. See map for current boundary.

The topography of this area is characterized by land elevations ranging from 5' or less along the shoreline to a maximum of 50' near the southwestern edge of the survey boundary. The population of Suffolk continues to grow, and ranges from moderately sparse in the diminishing farmlands on the western shores to increasingly common moderately dense in developed residential areas on the southern shore. The south shore remains more densely populated with larger subdivisions in addition to new development occurring due in part to the more widespread availability of the HRSD public sanitary sewer system. Since the last survey, public sanitary sewer has been installed on the north shore near the mouth of the Nansemond River and Bleakhorn Creek. Stormwater is managed through a network of surface ditches and stormwater structures and outfalls, which are mapped and maintained by the City of Suffolk and the locations shared with VDH:DSS.

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 establish nearshore seawater stations. Properties identified in the previous survey as having sanitary deficiencies or other environmental significance were revisited to evaluate current status. All roadways and navigable shoreline within the survey boundary were visually inspected to identify potential pollution sources requiring further investigation.

Near-shore 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.

Meteorological data indicated that the area received variable rainfall during the survey period, including extraordinary precipitation in September and October 2016 due to tropical storms Julia and Mathew. A monthly breakdown is as follows:

Area 63 Rainfall Summary (monthly total in inches)			
	2016	2017	2018
January	4.75	3.84	3.68
February	6.66	0.71	1.41
March	3.35	4.71	3.24
April	3.21	3.62	3
May	8.13	5.19	5.56
June	7.62	4.79	5.96
July	7.31	5.32	8.4
August	1.53	8.81	5.35
September	14.94	3.78	3.54
October	12.57	4.28	3.27
November	1.4	1.26	4.41
December	2.44	2.07	5.28
Total	73.91	48.38	53.1

In addition to the Shoreline Sanitary Survey, the Nansemond River Watershed has been a part of a major enhanced pollution source assessment study with a partnership between the Virginia Department of Health: Division of Shellfish Safety, Hampton Roads Sanitation District, City of Suffolk: Department of Public Works, and the Nansemond River Preservation Alliance. A large focus area of this study has been the upper Nansemond river watershed, in the proximity of downtown Suffolk (>10 miles upstream of conditionally approved waters and >13 miles upstream of approved growing area) as well as the downstream tributaries of the river. This enhanced source tracking effort has led to the identification and correction of multiple sewage leaks from compromised sewage structures and failing septic systems. More information on completed and ongoing infrastructure repairs can be found in the *Microbial Source Tracking* report by the City of Suffolk's Department of Public Utilities Report (2018) a copy of which is located in the Central Office classification files.

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 in this report are also 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/oehs/shellfish/.

SECTION B: SEWAGE POLLUTION SOURCES

[illegible]

SECTION C: NONSEWAGE WASTE SITES

[illegible]

SECTION D: BOATING ACTIVITY

[illegible]

SECTION E: CONTRIBUTES ANIMAL POLLUTION

[illegible]

SUMMARY

Growing Area # 063, Nansemond River
13 February 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.

0 – CONTRIBUTES POLLUTION, DIRECT – None.
5 – CONTRIBUTES POLLUTION, INDIRECT – # E25, E27, F18, G2, G3
0 – CP (Kitchen or Laundry Wastes), DIRECT – None.
0 – CP (Kitchen or Laundry Wastes), INDIRECT – None.
2 – NO FACILITIES, DIRECT – # E30, E31
0 – NO FACILITIES, INDIRECT – None.
7 – B.2 TOTAL

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

8 – POTENTIAL POLLUTION – # E26, E30, E31, F15, G4, T15, L3, L11

SECTION C: NON-SEWAGE WASTE SITES

1. INDUSTRIAL WASTE SITES

0 – DIRECT – None.
2 – INDIRECT – # F22, F23
2 – C.1. TOTAL

2. SOLID WASTE SITES

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 – # F20, F21
0 – OTHER PLACES WHERE BOATS ARE MOORED – None
3 – UNDER SURVEILLANCE – # F19, T17, T18
5 – D. TOTAL

SECTION E: CONTRIBUTES ANIMAL POLLUTION

0 – DIRECT – None.
11 – INDIRECT – # T1, T2, T6, T7, T8, T9, T10, T11, T12, T13, T14
11 – E. TOTAL

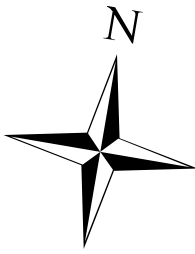
Virginia Department of Health Division of Shellfish Sanitation

Nansemond River # 063 Shoreline Sanitary Survey

City of Suffolk

Date: 13 February 2019
Surveyed By: E.M. Yeargan, T.A. Egerton,
I.M. Geeson, L.Z. Sakach, F.P. Monis,
& J.D. Dickerson
Total Number of Properties Surveyed: 1150

0 1000 2000
Yards



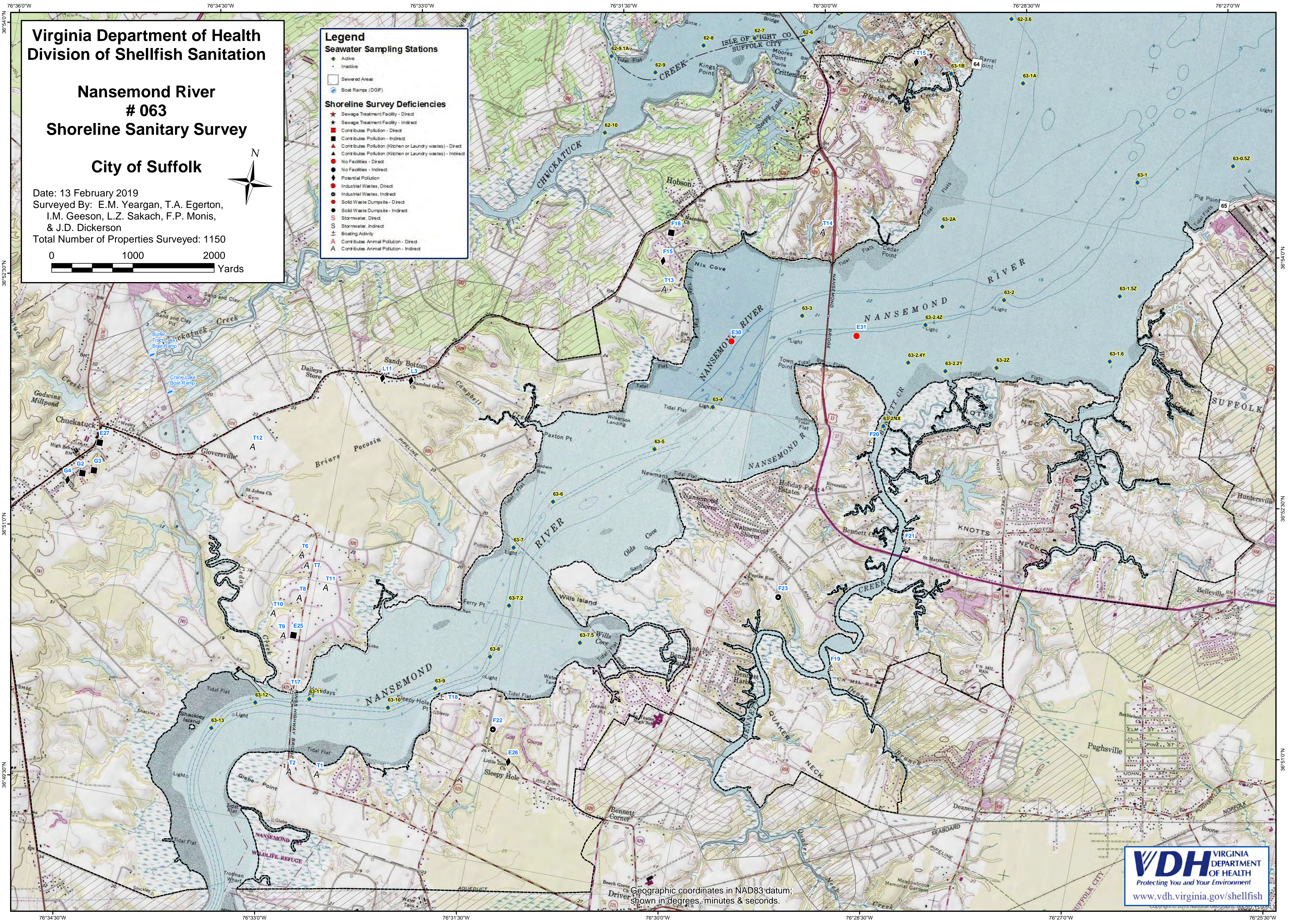
Legend

Seawater Sampling Stations

- Active (blue diamond)
- Inactive (black diamond)
- Sewered Areas (pink hatched)
- Boat Ramps (DGIF) (blue circle)

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)
- Industrial Wastes, Indirect (black circle)
- Solid Waste Dumpsite - Direct (red circle)
- Solid Waste Dumpsite - Indirect (black circle)
- Stormwater, Direct (red 'S')
- Stormwater, Indirect (black 'S')
- Boating Activity (black 'B')
- Contributes Animal Pollution - Direct (red 'A')
- Contributes Animal Pollution - Indirect (black 'A')



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

Virginia Department of Health
Division of Shellfish Safety

Nansemond River Growing Area # 063

Near-Shore Sampling, Shoreline Sanitary Survey

City of Suffolk

Survey Publication Date: 13 February 2019

Survey By: J. Dickerson, T. Egerton, I. Geeson, F. Monis, L. Sakach, E. Yeargan

Total Number of Samples Analyzed: 1129

