Section A: GENERAL

This survey area extends from Reference Point 8 at the end of State Route 680 to Reference Point 9 at Great Point. Included in this area is the Potomac River shoreline between these two points and include Garners Creek, Judith Sound, Kingscote Creek, The Glebe (Wrights Cove, Glebe Creek), Coan River (Killneck Creek, Mill Creek, Coan Mill Stream, Headley Creek, Boathouse Pond), Balls Creek and all of their tributaries. The survey boundary, drawn by the Division of Shellfish Sanitation, has been revised. See map for current boundary.

During the survey period, meteorological data indicated that 19.81” of precipitation were recorded. Monthly totals below were recorded by the Division of Shellfish Sanitation in White Stone, Virginia. A monthly breakdown follows:

<table>
<thead>
<tr>
<th>Month</th>
<th>Precipitation (in)</th>
</tr>
</thead>
<tbody>
<tr>
<td>October 25-31</td>
<td>0.12</td>
</tr>
<tr>
<td>November</td>
<td>0.41</td>
</tr>
<tr>
<td>December</td>
<td>1.02</td>
</tr>
<tr>
<td>January</td>
<td>0.65</td>
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<tr>
<td>February</td>
<td>0.22</td>
</tr>
<tr>
<td>March</td>
<td>2.52</td>
</tr>
<tr>
<td>April 1-19</td>
<td>0.84</td>
</tr>
<tr>
<td>May 1-19</td>
<td></td>
</tr>
</tbody>
</table>

The topography of the area varies from 5’ or less along the shoreline to a maximum of 110’± near the southwestern edge of the survey boundary. The economy in Northumberland County is primarily comprised of manufacturing, government, agriculture, fisheries and construction as the major employers. According to a 2016 Census Bureau study, the population of the county was estimated at 12,330 with a population density of 65 people per square mile.

The area has experienced several major storms since the 2009 shoreline survey including Hurricane Irene in 2011 and Hurricane Sandy in 2012. The village of Lewisetta experienced tidal flooding and severe storm damage left fuel spills, damaged docks and shoreline erosion. According to the NOAA MPE Rainfall database, Hurricane Irene rainfall totals over the three day span measured 8.85”. Hurricane Sandy had similar effects on the survey area just over a year later, pounding the shoreline with heavy winds and rainfall totaling 9.85” in a 7 day span.

Special near-shore Enterococci seawater sampling was conducted in addition to the regularly scheduled ‘routine’ Fecal coliform seawater sampling via systematic random sampling methods.
per NSSP criteria. Near shore sampling was conducted to identify and take samples at storm water outfall locations; to determine the location of straight pipes not observable by land; and to collect water samples at a closer proximity to the shoreline, closer together and farther upstream than regular seawater sampling. The additional water sampling was to identify areas that had unusually high fecal coliform counts to be further investigated from on shore property inspections.

Information about Northumberland County can be found on the county’s website at: www.co.northumberland.va.us. The Northumberland County Board of Supervisors, in accordance with section 54-16(B)5 (Chesapeake Bay Preservation Area Ordinance), has initiated a program requiring that all on-site sewage disposal systems (septic systems) be pumped out at least once every five (5) years. As alternatives to this pump-out requirement, septic system owners may elect to have an effluent filter installed in the outflow pipe from the septic tank and submit documentation every five (5) years from a licensed sewage handler explaining that the system has been inspected, is functioning properly, and does not need to be pumped out.

In implementing this program, efforts have been made to only notify the owners of property believed to contain an on-site sewage disposal system (septic system). Once initially contacted, septic system owners will be re-notified on a recurring basis (once every five (5) years) regarding their need to comply with this program.

Copies for Bacteriological, Hydrographic and Shellfish Closure data are available at the area office or the Richmond central office for review. Copies of the current condemnation notices and maps are available via the internet at www.vdh.virginia.gov/shellfish.

This report lists only those properties that have a sanitary deficiency or may have other environmental significance and can be located online at the above link. “DIRECT” indicates that the significant activity or deficiency may have a direct impact on shellfish waters. Data in the report is also made available to local health departments and other agencies to address items that may be of concern with their regulatory programs.
<table>
<thead>
<tr>
<th>No.</th>
<th>GA #</th>
<th>Field #</th>
<th>Inspection Date</th>
<th>Deficiency or Pollution Type</th>
<th>Latitude</th>
<th>Longitude</th>
<th>Address</th>
<th>Pollutant Remarks</th>
<th>Septic System Type</th>
<th>Structure Type</th>
<th>Contact</th>
<th>Overall Site Remarks</th>
<th>Locality</th>
<th>DSS Staff</th>
<th>Date of Correction</th>
<th>Correction Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>8</td>
<td>W25</td>
<td>6/20/2016</td>
<td>POTENTIAL POLLUTION</td>
<td>38.007539</td>
<td>-76.472250</td>
<td>233 Judith Sound Circle, Lottsburg, VA 22511</td>
<td>House not currently occupied and is listed for sale. Entire front lawn is extremely saturated and sea grass is about 2 ft tall surrounding house. No signs of effluent or malfunction at inspection.</td>
<td>Conv</td>
<td>Dwelling</td>
<td>N</td>
<td>For Sale. Property elevation low and prone to flooding on high tide.</td>
<td>Northumberland</td>
<td>WB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>#</td>
<td>GA #</td>
<td>Field #</td>
<td>Inspection Date</td>
<td>Deficiency or Pollution Type</td>
<td>Latitude</td>
<td>Longitude</td>
<td>Address</td>
<td>Pollutant Remarks</td>
<td>Septic System Type</td>
<td>Structure Type</td>
<td>Contact</td>
<td>Overall Site Remarks</td>
<td>Locality</td>
<td>DSS Staff</td>
<td></td>
<td></td>
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<tr>
<td>16</td>
<td>8</td>
<td>W622</td>
<td>6/20/2016</td>
<td>INDUSTRIAL WASTES, direct</td>
<td>37.988514</td>
<td>-76.475288</td>
<td>1146 Honest Point Rd, Lottsburg, VA 22511</td>
<td>General permit #VAG524037 for seafood processing facility and storm water discharges.</td>
<td>Conv</td>
<td>Marine</td>
<td>N</td>
<td>Keyser Brothers, Inc.</td>
<td>Northumberland</td>
<td>WB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>8</td>
<td>W715</td>
<td>6/20/2016</td>
<td>INDUSTRIAL WASTES, direct</td>
<td>37.972088</td>
<td>-76.469689</td>
<td>755 Lake Landing Dr., Lottsburg, VA 22511</td>
<td>Seafood Processing Plant VA90SP. Aquaculture float and wet storage permits.</td>
<td>Conv</td>
<td>Marine</td>
<td>Y</td>
<td>Cowart Seafood, Inc.</td>
<td>Northumberland</td>
<td>WB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>959</td>
<td>8</td>
<td>W910</td>
<td>5/19/2017</td>
<td>SOLID WASTE SITES, direct</td>
<td>37.946096</td>
<td>-76.505462</td>
<td>4049 Northumberland Hwy., Lottsburg, VA 22511</td>
<td>Metal scrap yard that houses junk cars, appliances, copper, aluminum, steel, batteries, etc.</td>
<td>Conv</td>
<td>Business</td>
<td>Y</td>
<td>Lottsburg Metals</td>
<td>Northumberland</td>
<td>WB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>116</td>
<td>8</td>
<td>W98</td>
<td>11/3/2016</td>
<td>STORMWATER, direct</td>
<td>37.998942</td>
<td>-76.462624</td>
<td>River Road, Lottsburg, VA 22511</td>
<td>Storm water outfall pipe that empties runoff from ditches along River Rd into Coan River.</td>
<td>NA</td>
<td></td>
<td>N</td>
<td></td>
<td>Northumberland</td>
<td>WB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>478</td>
<td>8</td>
<td>W1104</td>
<td>2/23/2017</td>
<td>STORMWATER, direct</td>
<td>37.966033</td>
<td>-76.480009</td>
<td>Coan Haven Road, Lottsburg, VA 22511</td>
<td>Storm water outfall pipe that empties runoff from ditches along Coan Haven Road into Coan River.</td>
<td>NA</td>
<td></td>
<td>N</td>
<td></td>
<td>Northumberland</td>
<td>WB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>#</td>
<td>GA #</td>
<td>Field #</td>
<td>Inspection Date</td>
<td>Deficiency or Pollution Type</td>
<td>Latitude</td>
<td>Longitude</td>
<td>Address</td>
<td>Pollutant Remarks</td>
<td>Septic System Type</td>
<td>Contact</td>
<td>Overall Site Remarks</td>
<td>Locality</td>
<td>Boating Activity Type</td>
<td>Number of Wet Slips</td>
<td>NUM BOATS &lt;26'</td>
<td>NUM BOATS &gt;26'</td>
</tr>
<tr>
<td>0</td>
<td>8</td>
<td>W125</td>
<td>6/20/2016</td>
<td>BOATING ACTIVITY</td>
<td>37.996901</td>
<td>-76.464338</td>
<td>369 Church Ln, Lottsburg, VA 22511</td>
<td>Several RV's on site. Seasonal use and waste is carried to dump station. General store has own drainfield and fuel station office has separate bathroom and drainfield.</td>
<td>Conv</td>
<td>Y</td>
<td>Lewisetta Marina</td>
<td>Northumberland</td>
<td>Marina</td>
<td>20</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>4</td>
<td>8</td>
<td>W156</td>
<td>6/20/2016</td>
<td>BOATING ACTIVITY</td>
<td>38.001512</td>
<td>-76.470629</td>
<td>103 Lake Francis Ln, Lottsburg, VA 22511</td>
<td>Wooden in-out ramp rotten and not usable. Restroom facility provided in form of privy. No pump out or fuel services provided.</td>
<td>Privy</td>
<td>Y</td>
<td>Lake Francis Marina</td>
<td>Northumberland</td>
<td>Marina</td>
<td>25</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>16</td>
<td>8</td>
<td>W622</td>
<td>6/20/2016</td>
<td>BOATING ACTIVITY</td>
<td>37.985814</td>
<td>-76.475288</td>
<td>1146 Honest Point Rd, Lottsburg, VA 22511</td>
<td>Shellfish Shipper-Seafood Processor</td>
<td>Conv</td>
<td>N</td>
<td>Keyser Brothers, Inc.</td>
<td>Northumberland</td>
<td>Marina</td>
<td>10</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>17</td>
<td>8</td>
<td>W669</td>
<td>6/20/2016</td>
<td>BOATING ACTIVITY</td>
<td>37.982430</td>
<td>-76.472022</td>
<td>3170 Lake Rd., Lottsburg, VA 22511</td>
<td>In out ramp. Pump station operable. Restroom facilities, water and electric provided. 2 large fuel tanks 50 ft from water surrounded by berm.</td>
<td>Conv</td>
<td>Y</td>
<td>Coan River Marina</td>
<td>Northumberland</td>
<td>Marina</td>
<td>60</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>8</td>
<td>W146</td>
<td>6/20/2016</td>
<td>BOATING ACTIVITY</td>
<td>37.998819</td>
<td>-76.467486</td>
<td>108 Island Ln, Lottsburg, VA 22511</td>
<td>Private dock that houses personal and charter boats of owner.</td>
<td>NA</td>
<td>N</td>
<td>Go Fish Charters</td>
<td>Northumberland</td>
<td>OPWBAM</td>
<td>4</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>6</td>
<td>8</td>
<td>W201</td>
<td>6/20/2016</td>
<td>BOATING ACTIVITY</td>
<td>38.000307</td>
<td>-76.483435</td>
<td>Adjacent to 292/318 Kingscote Dr., Lottsburg, VA 22511</td>
<td>Loading dock. In-out concrete ramp</td>
<td>NA</td>
<td>N</td>
<td>Kingscote Homeowners Association</td>
<td>Northumberland</td>
<td>Under Surveillance</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>13</td>
<td>8</td>
<td>W525</td>
<td>6/20/2016</td>
<td>BOATING ACTIVITY</td>
<td>37.977247</td>
<td>-76.496824</td>
<td>131 Sunrise Ct, Lottsburg, VA 22511</td>
<td>In-out ramp, no other facilities provided.</td>
<td>NA</td>
<td>N</td>
<td>Coan Harbour Estates</td>
<td>Northumberland</td>
<td>Under Surveillance</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>18</td>
<td>8</td>
<td>W715</td>
<td>6/20/2016</td>
<td>BOATING ACTIVITY</td>
<td>37.972088</td>
<td>-76.469683</td>
<td>755 Lake Landing Dr., Lottsburg, VA 22511</td>
<td>Concrete ramp &amp; loading/unloading dock for residents on Coan Drive. Plat shows a right of way to the water.</td>
<td>Conv</td>
<td>Y</td>
<td>Cowart Seafood, Inc.</td>
<td>Northumberland</td>
<td>Under Surveillance</td>
<td>4</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>19</td>
<td>8</td>
<td>W944</td>
<td>6/20/2016</td>
<td>BOATING ACTIVITY</td>
<td>37.941376</td>
<td>-76.483860</td>
<td>End of Rt. 612, Lottsburg, VA 22511</td>
<td>In-out ramp and small dock on site. No additional services provided.</td>
<td>NA</td>
<td>N</td>
<td>Forest Landing Public boat ramp</td>
<td>Northumberland</td>
<td>Under Surveillance</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>20</td>
<td>8</td>
<td>W983</td>
<td>6/20/2016</td>
<td>BOATING ACTIVITY</td>
<td>37.936716</td>
<td>-76.482223</td>
<td>End of Rowes Landing, Heathsville, VA 22473</td>
<td>In out ramp with small dock. No additional services provided.</td>
<td>NA</td>
<td>N</td>
<td>Rowes Landing</td>
<td>Northumberland</td>
<td>Under Surveillance</td>
<td>2</td>
<td>0</td>
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</tr>
<tr>
<td>22</td>
<td>8</td>
<td>W102E</td>
<td>6/20/2016</td>
<td>BOATING ACTIVITY</td>
<td>37.941990</td>
<td>-76.480654</td>
<td>Adjacent to 690 Coan Dr., Heathsville, VA 22473</td>
<td>Concrete ramp &amp; loading/unloading dock for residents on Coan Drive. Plat shows a right of way to the water.</td>
<td>NA</td>
<td>N</td>
<td></td>
<td>Northumberland</td>
<td>Under Surveillance</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>GA #</td>
<td>Field #</td>
<td>Inspection Date</td>
<td>Deficiency or Pollution Type</td>
<td>Latitude</td>
<td>Longitude</td>
<td>Address</td>
<td>Pollutant Remarks</td>
<td>Septic System Type</td>
<td>Structure Type</td>
<td>Contact</td>
<td>Overall Site Remarks</td>
<td>Locality</td>
<td>DSS Staff</td>
<td></td>
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<tr>
<td>531</td>
<td>8</td>
<td>W477</td>
<td>3/6/2017</td>
<td>37.966148</td>
<td>-76.518951</td>
<td>Building adjacent to VDOT, Lottsburg, VA 22511</td>
<td>15+ Cows</td>
<td>Conv</td>
<td>Agri</td>
<td>N</td>
<td>Melville Farms</td>
<td>Northumberland</td>
<td>WB</td>
<td></td>
<td></td>
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<tr>
<td>983</td>
<td>8</td>
<td>W934</td>
<td>5/19/2017</td>
<td>37.941939</td>
<td>-76.498068</td>
<td>Millwood Lane, Lottsburg, VA 22511</td>
<td>Dog kennels and 10+ hunting dogs on site.</td>
<td>Conv</td>
<td>Dwelling</td>
<td>N</td>
<td>Northumberland</td>
<td>WB</td>
<td></td>
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<tr>
<td>21</td>
<td>8</td>
<td>W1015</td>
<td>6/20/2016</td>
<td>37.941633</td>
<td>-76.465373</td>
<td>1069 Coan Wharf Road, Heathsville, VA 22473</td>
<td>15+ cows and 10+ horses. Manure is left on ground surface.</td>
<td>Conv</td>
<td>Dwelling</td>
<td>Y</td>
<td>Northumberland</td>
<td>WB</td>
<td></td>
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</tr>
</tbody>
</table>
SUMMARY

Growing Area # 008
Coan River, The Glebe and Kingscote Creek
19 June 2017

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
   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
   1 – NO FACILITIES, INDIRECT – # W246
   1 – B.2 TOTAL

3. POTENTIAL POLLUTION – Periodic surveillance of these properties will be maintained to determine any status change.
   1 – POTENTIAL POLLUTION – # W25

SECTION C: NON-SEWAGE WASTE SITES
1. INDUSTRIAL WASTE SITES
   2 – DIRECT – # W622, W715
   0 – INDIRECT – None
   2 – C.1. TOTAL

2. SOLID WASTE SITES
   0 – DIRECT – None
   1 – INDIRECT – # W910
   1 – C.2. TOTAL

3. STORMWATER OUTFALLS
   2 – DIRECT – # W98, W1104
   0 – INDIRECT – None
   2 – E. TOTAL

SECTION D: BOATING ACTIVITY
4 – MARINAS – # W125, W156, W622, W669
1 – OTHER PLACES WHERE BOATS ARE MOORED – # W146
6 – UNDER SURVEILLANCE – # W201, W525, W715, W944, W983, W1028
11 – D. TOTAL

SECTION E: CONTRIBUTES ANIMAL POLLUTION
0 – DIRECT – None
3 – INDIRECT – # W477, W934, W1015
3 – E. TOTAL
Virginia Department of Health
Division of Shellfish Sanitation
Coan River:
Kingscote and Glebe Creeks
# 008
Shoreline Sanitary Survey
Northumberland County
Near-Shore Enterococci Sampling Results
MPN Colonies / 100ml
Date: 22-23 February 2017
Survey By: W.I. Barrack, et al.
Virginia Department of Health
Division of Shellfish Sanitation
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