

### Project Location and Background

The scope of the project includes Gulf, Barlow, Mattawoman, Jacobus, and Hungars Creeks watersheds located in Northampton County, Virginia. This area consists of five main watersheds and 3 sub-watersheds, which directly drain to the Chesapeake Bay. These watersheds drain approximately 17,250 acres, and the predominant land uses are agriculture (53%), forest (21%) and wetlands (17%). None of these watersheds (excluding Barlow Creek) meet water quality standards for the production of edible and marketable seafood. To address bacterial pollution in the watershed, four TMDL reports were approved by EPA between 2007 and 2010, and the *Water Quality Implementation Plan for the Gulf, Barlow, Mattawoman, Jacobus, and Hungars Creeks* was approved in 2015. The 319(h)-funded TMDL implementation project kicked off in 2018 and continues through December 2021.

### Implementation Highlights

DEQ awarded the Accomack Northampton Planning District Commission (ANPDC) \$108,900 for a septic improvement TMDL implementation project, which started in December 2018. Southeast Environmental Rural Community Assistance Project (SERCAP) provided \$13,466 in match. Although these watersheds are impaired for fecal bacteria and shell fishing designated use, the public has been involved with water quality improvement education and awareness through the Phase III Watershed Implementation Process (WIP III). The Eastern Shore Soil and Water Conservation District has had an increase in interest and sign-up for cover crop from producers which are being funded through the Virginia Agricultural Cost-Share (VACS) program funded by the Virginia Department of Conservation and Recreation (DCR). *(continued on Page 2)*



**Table 1: The Gulf, Barlow, Mattawoman, Jacobus, and Hungars Creeks BMP Summary : 2015-2021**

Control Measure	Units	Goal	Installed	%
<b>Agricultural</b>				
Stream Exclusion Fencing	S	10	2	20
Sm. Acreage Grazing System	S	6	0	0
Woodland Buffer Filter	A	102	0	0
Cover Crop	A	594	6,388	1,075
Pasture Management	A	538	0	0
Sed. Ret./Water Control	A	56	0	0
Continuous High Residue Minimal Soil Disturbance Tillage System	A	N/A	887	N/A
<b>Residential Septic</b>				
Septic Tank Pump-out	S	957	10	1
Septic System Repair	S	20	0	0
Septic System Installation	S	40	2	5
Alternative Waste Treatment System	S	14	0	0
<b>Residential/Urban</b>				
Rain Garden	A	45	0	0
Vegetated Buffer	A	27	0	0
Pet Waste Composter	S	328	0	0
Pet Waste Station	S	29	0	0

A = Acres, F = Linear Feet, S = System, P=Program; **Note:** BMP counts only include 319-funded and state VACS. NRCS EQIP funded practices are not included.

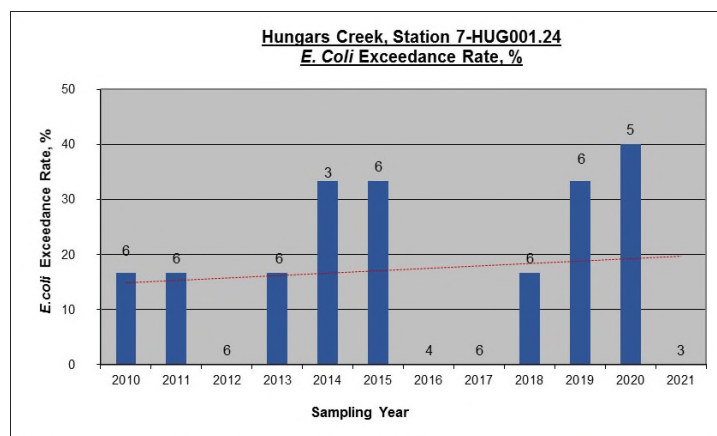
**The Virginia Nonpoint Source Management Program:** The Virginia NPS Management Program is managed by the Virginia Department of Environmental Quality (DEQ) and is funded, in part, through grants from the U.S. Environmental Protection Agency, under the Clean Water Act Section 319(h). For more information regarding Virginia's Nonpoint Source Management Program and an electronic copy of this report, please visit us on VA DEQ's website. General NPS Program questions? email: [npsgrants@deq.virginia.gov](mailto:npsgrants@deq.virginia.gov).

**Implementation Highlights— Continued**

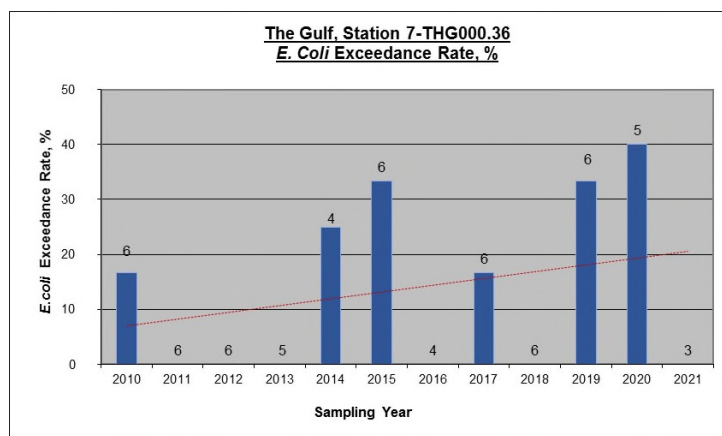
Most of the watersheds on the Bay Side of the Eastern Shore have harvesting areas with restrictions for shell fishing due to fecal bacteria pollution. ANPDC conducted windshield surveys and interviews in 2014 to identify homes on the Bay Side of the Eastern Shore without indoor plumbing. Of the 1,266 homes surveyed, 9% lacked indoor plumbing facilities. Humans are a known significant source of bacteria loadings. As of September 2021, twelve of the septic BMPs have been implemented through the grant with a larger number of pump-outs planned for the last quarter of 2021. Much of the project has focused on outreach and awareness through targeted mailings to landowners; posting of flyers in community centers, retail and grocery stores, post offices, and town and county offices; canvassing neighborhoods; social media postings; and local newspaper and radio advertisements. The ANPDC staff continuously share information at ANPDC Board meetings, Eastern Shore of Virginia Ground Water Committee meetings, Northampton County Board of Supervisors meetings, and planned events such as the Well and Septic Annual Forum.

**Water Quality Monitoring Results**

Water quality data collected by DEQ for the period of 2010 through 2021 were analyzed at two stations in the watershed to determine long-term trends (if any) in water quality based on exceedance of the *E.coli* standard. The bar graphs below show the percent violation rate for samples collected annually at monitoring station 7-HUG001.24 in Hungars Creek and station 7-THG000.36 in The Gulf, neither of which met the water quality standard of 235 cfu/100 mL for bacteria. The number of samples collected each year is shown above each bar. The linear regression fitted to the data shows a slight increase in bacteria exceedance rates in Hungars Creek and a more pronounced increase in exceedance rates in The Gulf. Monitoring over a longer period of time following greater BMP implementation is needed to corroborate water quality changes.



**Graph 1: *E.coli* data for Hungars Creek watershed (Station 7-HUG001.24 ), 2010-2021**



**Graph 2: *E.coli* data for The Gulf watershed (Station 7-THG000.36 ), 2010-2021**

**For More Information Please Contact:**

Kristie Britt, DEQ Water Quality Monitoring & Planning Manager  
Kristie.Britt@deq.virginia.gov, (757) 518-2153

Jessica Steelman, ANPDC Coastal Planner  
jsteelman@a-npdc.org, (757) 787-2936, ext. 114

