319H TMDL Implementation Project Report

UPPER YORK RIVER

Orange County

Virginia Nonpoint Source
MANAGEMENT PROGRAM

Project Location and Background

The Upper York watershed is located in Orange, Louisa, and Spotsylvania Counties. Subwatersheds Beaver Creek, Mountain Run, Pamunkey Creek, Plentiful Creek, and Terry's Run were initially placed on the Commonwealth of Virginia's Section 303(d) List of Impaired Waters in 1998 for exceedances of the bacteria standard. Goldmine Creek was added to the list in 2002. Mountain Run and Beaver Creek flow south and drain into the North Anna River. Pamunkey Creek and Terry's Run drain directly into Lake Anna. The Upper York watershed is primarily forested (61%), with pasture/hayland as the second most predominant land use (30%). Cropland constitutes approximately 7% of the watershed, while residential and water/wetland land uses each constitute approximately 1% of the total watershed area. TMDLs were completed for the impaired stream segments in August 2005. A TMDL implementation plan was completed for the Upper York Watershed in August 2011, and was approved by EPA in January, 2012. An implementation project began in July 2012 and continued through 2015.

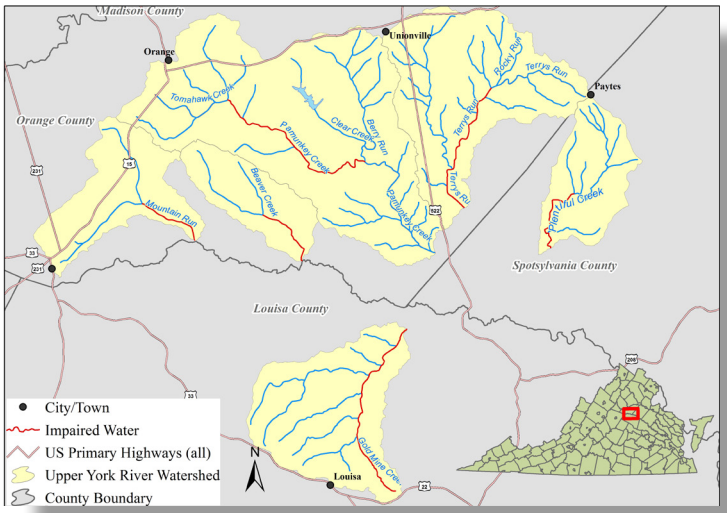


Table 1. Upper York River BMP Summary: July 2012 – June 2015

Control measure	Units	Needed	Installed	%
Agricultural				
Livestock exclusion fencing	F	744,480	90,327	12
Livestock exclusion fencing	S	320	18	6
Residential septic				
Septic tank pumpout	S	514	80	16
Septic system repair	S	302	10	3
Septic system installation	S	152	15	10
Alternative waste sewage system	S	50	0	-

NOTE: BMP counts only include 319 funded projects and BMPs funded by the VA Agricultural Cost Share and Conservation Reserve Enahncement Programs; A = Acres, S = System, F = Feet

Implementation Highlights

This implementation project is administered by the Culpeper Soil and Water Conservation District. The Implementation Project only addresses activity within the four sub-watersheds located in Orange County. The District was contracted to provide technical assistance and educational outreach to farmers and homeowners for agricultural and residential BMP implementation. Table 1 shows BMPs implemented in the watersheds since the project began in July 2012 and implementation goals established for each of the control measures. Outreach efforts for the project have included various meetings, newspaper articles, of mailing to landowners in the watersheds, and presentations to community organizations. Between July 2014 and June 2015, nine livestock stream exclusion systems were established, totaling 43,838 linear feet of fencing and 40 acres of riparian buffers. In addition, a waste storage facility was installed along with 765 acres of cover crops. Under the residential BMP program, 40 septic tank pumpouts, six septic system repairs, and 3 septic system replacements were completed between July 2014 and June 2015.

UPPER YORK RIVER
Orange County

Virginia Nonpoint Source
MANAGEMENT PROGRAM

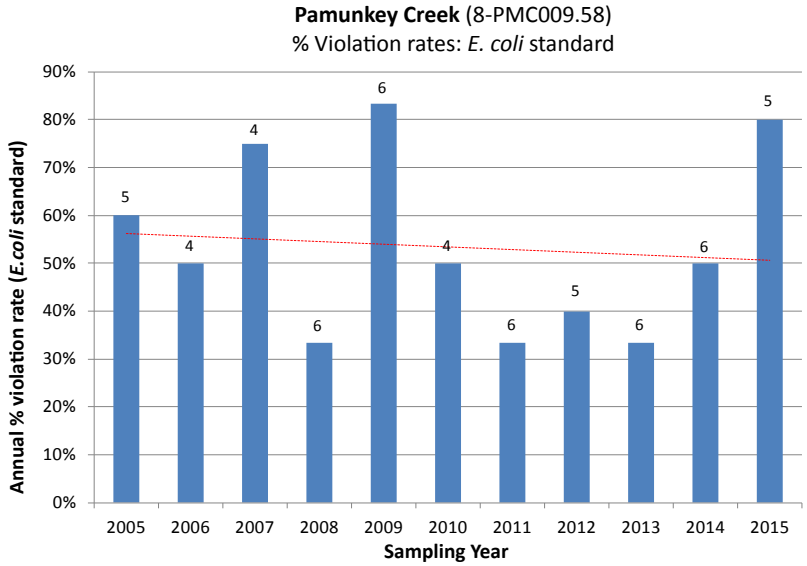
Pollution Reductions

Pollution reductions for bacteria, nitrogen, phosphorus and sediment for BMPs installed during the project period are summarized in Table 2.

Table 2. Pollution Reductions for the Upper York River: July 2012-June 2015

Period	Pathogens: coliform (cfu/100mL)	Nitrogen (lbs/yr)	Phosphorous (lbs/yr)	Sedimentation-Siltation (T/yr)
July 2014-June 2015	1.30E+15	6,891	840	1,823
July 2012 -June 2015	1.52E+15	10,557	1,234	1,208

Water Quality Monitoring Results



Water quality data collected by VADEQ from 2005 through 2015 was analyzed to determine the impact of BMPs implemented in the project area on *E. coli* violation rates and associated long term trends.

The bar graph above shows the percent violation rate for samples collected annually at monitoring station 8-PMC009.58, located near the mouth of Pamunkey Creek, that did not meet the water quality standard of 235 cfu/100 mL. The number of samples collected each year is shown above each bar. The linear regression fitted to the data shows a slight decreasing trend in violation rates over the sampling period, indicating improvements in water quality in Pamunkey Creek.

This Virginia Nonpoint Source Management Program is managed by Virginia Department of Environmental Quality and is funded, in part, through grants from the U.S. Environmental Protection Agency, under the Clean Water Act Section 319.

For more information regarding Virginia's Nonpoint Source Management Program, please visit us on the web at: http://www.deq.virginia.gov/Programs/Water/WaterQualityInformationTMDLs/NonpointSourcePollutionManagement.aspx

For more information, contact:

May Sligh, VADEQ Northern Regional Office
Non Point Source Coordinator
may.sligh@deq.virginia.gov
(804) 450-3802

Greg Wichelns, Culpeper SWCD
District Manager
gregw@culpeperswcd.org