

# Powhatan, Mill and Skiffes Creek TMDL Action Plan - Addendum/Update

James City County, Virginia



April 13, 2020

## Acronyms

BMP	Best Management Practice
DEQ	Department of Environmental Quality
EPA	Environmental Protection Agency
JCC	James City County
JCSA	James City Service Authority
MS4	Municipal Separate Stormwater Sewer System
TMDL	Total Maximum Daily Load
VSMP	Virginia Stormwater Management Program
VPDES	Virginia Pollutant Discharge Elimination System
WLA	Wasteload Allocation

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## I. Introduction

James City County is required to have a Virginia Pollution Discharge Elimination System (VPDES) permit to discharge stormwater into local waterways. The specific permit is referred to as the Municipal Separate Storm Sewer System (MS4) permit and is issued by the state Department of Environmental Quality (DEQ). The state program was established in response to federal requirements under the Clean Water Act (CWA) and administered by the Environmental Protection Agency (EPA).

The current MS4 permit (Permit #VAR040037) requires the County to update the previously approved local TMDL action plan to meet the conditions in the permit no later than 18 months after the permit effective date and continue implementation of the action plan. A total maximum daily load (TMDL) is developed by the DEQ when state waters are impaired for water quality and determines the amount of a pollutant that a water body can handle. A wasteload allocation (WLA) is the portion of the receiving waters' loading capacity that is allocated to one of the existing or future sources of pollution.

The Powhatan, Mill and Skiffes Creek TMDL Action Plan was approved by the DEQ on May 9, 2017 and a copy is provided on the County's website (<https://jamescitycountyva.gov/3048/Bacteria-Total-Maximum-Daily-Loads>). This update to the existing approved plan will address changes to the plan since approval in 2017 as well as updates to reflect requirements in the current MS4 permit.

## II. MS4 Permit Language

The following language is taken from the County's current MS4 permit related to the required update to the previously approved local TMDL action plan. The permit requires updates to meet the conditions of Part II B 3, B 4, B 5, B 6, and B 7, as applicable. The approved TMDLs where JCC has been allocated a wasteload allocation are for bacteria impairment, and therefore Part II B 5 and B 6 do not apply, and are not included below.

### *Part II*

#### *TMDL Special Conditions*

##### *B. Local TMDL special condition.*

- 1. The permittee shall develop a local TMDL action plan designed to reduce loadings for pollutants of concern if the permittee discharges the pollutants of concern to an impaired water for which a TMDL has been approved by the U.S. Environmental Protection Agency (EPA) as described in Part II B 1 a and 1 b:*
  - a. For TMDLs approved by the EPA prior to July 1, 2013, and in which an individual or aggregate wasteload has been allocated to the permittee, the permittee shall update the previously approved local TMDL action plans to meet the conditions of Part II B 3, B 4, B 5, B 6, and B 7 as applicable, no later than 18 months after the permit effective date and continue implementation of the action plan; and*
  - b. For TMDLs approved by EPA on or after July 1, 2013, and prior to June 30, 2018, and in which an individual or aggregate wasteload has been allocated to the permittee, the permittee shall develop and initiate implementation of action plans to meet the conditions of Part II B 3, B 4, B 5, B 6, and B 7 as applicable for each pollutant for which wasteloads have been allocated to the permittee's MS4 no later than 30 months after the permit effective date.*
- 2. The permittee shall complete implementation of the TMDL action plans as soon as practicable. TMDL action plans may be implemented in multiple phases over more than one permit cycle using the adaptive iterative approach provided adequate progress is achieved in the implementation of BMPs designed to reduce pollutant discharges in a manner that is consistent with the assumptions and requirements of the applicable TMDL.*
- 3. Each local TMDL action plan developed by the permittee shall include the following:*
  - a. The TMDL project name;*
  - b. The EPA approval date of the TMDL;*
  - c. The wasteload allocated to the permittee (individually or in aggregate), and the corresponding percent reduction, if applicable;*
  - d. Identification of the significant sources of the pollutants of concern discharging to the permittee's MS4 and that are not covered under a separate VPDES permit. For the purposes of this requirement, a significant source of pollutants means a discharge where the expected*

*pollutant loading is greater than the average pollutant loading for the land use identified in the TMDL;*

- e. The BMPs designed to reduce the pollutants of concern in accordance with Parts II B 4, B 5, and B 6;*
- f. Any calculations required in accordance with Part II B 4, B 5, or B 6;*
- g. For action plans developed in accordance with Part II B 4 and B 5, an outreach strategy to enhance the public's education (including employees) on methods to eliminate and reduce discharges of the pollutants; and*
- h. A schedule of anticipated actions planned for implementation during this permit term.*

**4. Bacterial TMDLs.**

- a. If the permittee is an approved VSMP authority, the permittee shall select and implement at least three of the strategies listed in Table 5 below designed to reduce the load of bacteria to the MS4. Selection of the strategies shall correspond to sources identified in Part II B 3 d.*
- b. If the permittee is not an approved VSMP authority, the permittee shall select at least one strategy listed in Table 5 below designed to reduce the load of bacteria to the MS4 relevant to sources of bacteria applicable within the MS4 regulated service area. Selection of the strategies shall correspond to sources identified in Part II B 3 d.*

<b>Table 5</b>	
<b>Strategies for Bacteria Reduction Stormwater Control/Management Strategy</b>	
<b>Source</b>	<b>Strategies (provided as an example and not meant to be all inclusive or limiting)</b>
<i>Domestic pets (dogs and cats)</i>	<p><i>Provide signage to pick up dog waste, providing pet waste bags and disposal containers.</i></p> <p><i>Adopt and enforce pet waste ordinances or policies, or leash laws or policies.</i></p> <p><i>Place dog parks away from environmentally sensitive areas.</i></p> <p><i>Maintain dog parks by removing disposed of pet waste bags and cleaning up other sources of bacteria.</i></p> <p><i>Protect riparian buffers and provide unmanicured vegetative buffers along streams to dissuade stream access.</i></p>
<i>Urban wildlife</i>	<p><i>Educate the public on how to reduce food sources accessible to urban wildlife (e.g., manage restaurant dumpsters and grease traps, residential garbage, feed pets indoors).</i></p> <p><i>Install storm drain inlet or outlet controls.</i></p> <p><i>Clean out storm drains to remove waste from wildlife.</i></p> <p><i>Implement and enforce urban trash management practices.</i></p> <p><i>Implement rooftop disconnection programs or site designs that minimize connections to reduce bacteria from rooftops.</i></p> <p><i>Implement a program for removing animal carcasses from roadways and properly disposing of the same (either through proper storage or through transport to a licensed facility).</i></p>

<p><i>Illicit connections or illicit discharges to the MS4</i></p>	<p><i>Implement an enhanced dry weather screening and illicit discharge, detection, and elimination program beyond the requirements of Part I E 3 to identify and remove illicit connections and identify leaking sanitary sewer lines infiltrating to the MS4 and implement repairs.</i></p> <p><i>Implement a program to identify potentially failing septic systems.</i></p> <p><i>Educate the public on how to determine whether their septic system is failing.</i></p> <p><i>Implement septic tank inspection and maintenance program.</i></p> <p><i>Implement an educational program beyond any requirements in Part I E 1 through E 6 to explain to citizens why they should not dump materials into the MS4.</i></p>
<p><i>Dry weather urban flows (irrigations, carwashing,</i></p>	<p><i>Implement public education programs to reduce dry weather flows from storm sewers related to lawn and park irrigation practices, carwashing, powerwashing and other nonstormwater flows.</i></p> <p><i>Provide irrigation controller rebates.</i></p>
<p><i>powerwashing,</i></p>	<p><i>Implement and enforce ordinances or policies related to outdoor (etc.) water waste.</i></p> <p><i>Inspect commercial trash areas, grease traps, washdown practices, and enforce corresponding ordinances or policies.</i></p>
<p><i>Birds (Canadian geese, gulls, pigeons, etc.)</i></p>	<p><i>Identify areas with high bird populations and evaluate deterrents, population controls, habitat modifications and other measures that may reduce bird-associated bacteria loading.</i></p> <p><i>Prohibit feeding of birds.</i></p>
<p><i>Other sources</i></p>	<p><i>Enhance maintenance of stormwater management facilities owned or operated by the permittee.</i></p> <p><i>Enhance requirements for third parties to maintain Stormwater management facilities.</i></p> <p><i>Develop BMPs for locating, transporting, and maintaining portable toilets used on permittee-owned sites. Educate third parties that use portable toilets on BMPs for use.</i></p> <p><i>Provide public education on appropriate recreational vehicle dumping practices.</i></p>

7. *Prior to submittal of the action plan required in Part II B 1, the permittee shall provide an opportunity for public comment proposed to meet the local TMDL action plan requirements for no less than 15 days.*
8. *The MS4 program plan as required by Part I B of this permit shall incorporate each local TMDL action plan. Local TMDL action plans may be incorporated by reference into the MS4 program plan provided that the program plan includes the date of the most recent local TMDL action plan and identification of the location where a copy of the local TMDL action plan may be obtained.*
9. *For each reporting period, each annual report shall include a summary of actions conducted to implement each local TMDL action plan.*

### III. Updates to Approved Plan

This section summarizes the updates to the previously approved Powhatan, Mill and Skiffes Creek TMDL Action Plan to meet the conditions outlined in the current MS4 permit (General Permit VAR040037) of Part II B 3, B 4, B 5, B 6, and B 7. This addendum/update to the existing approved plan will address changes to the plan since its approval in 2017 as well as updates to reflect requirements in the current MS4 permit. Those portions of the previously approved plan not specifically referenced or discussed within this document are considered unchanged. This addendum/update combined with the existing approved plan, which is hereby incorporated by reference, is considered the Powhatan, Mill and Skiffes Creek TMDL Action Plan.

#### A. TMDL Information

The local action plan was developed for separate TMDLs listed below:

<b>TMDL Name</b>	<b>Approval Date</b>	<b>Pollutant of Concern</b>	<b>Individual Watershed WLAs</b>
Fecal Bacteria Total Maximum Daily Load Development for Warwick River: Primary Contact Recreational Use and Shellfish Harvesting Use	February 29, 2008	Fecal Coliform: Skiffes Creek	3.33E+10
Bacteria Total Maximum Daily Load Development for Mill Creek and Powhatan Creek	April 28, 2009	E.Coli: Powhatan Creek Enterococci: Powhatan Creek Enterococci: Mill Creek	1.50E+13 6.90E+12 3.00E+10

#### B. Significant Sources

Information on bacterial sources was provided in the approved action plan incorporated by reference. An assessment of County facilities within the regulated areas was performed to identify facilities that may be a significant source for discharging bacteria to the MS4 or directly into surface waters. Potential sources include those associated with the municipal facilities that potentially produce bacteria pollution as a part of their operations, or those subject to loading from outside sources, such as pets at recreational parks, schools and municipal open space. This information is provided below in Table 1. There are no on-site septic systems at County facilities within the regulated areas within the Powhatan, Mill and Skiffes Creek watersheds.

There are a total of 413 septic systems within the impaired watersheds listed in this report. Individually, the Powhatan Creek watershed (JL31) contains 311 septic systems, the Mill Creek watershed (JL33) contains 53 septic systems, and the Skiffes Creek watershed (JL35) contains 49 septic systems

Table 1  
Regulated Area Information and Assessment

Regulated Area No.	Regulated Area Name	Description	Sub-Watershed	Potential Sources
8	Warhill - Wanner Stadium	School Complex	Powhatan Creek	Wildlife
9	Warhill High School	School Complex	Powhatan Creek	Wildlife
10	Adams Hunt	Residential	Powhatan Creek	Wildlife, pet waste
11	Warhill Soccer – East	School Complex	Powhatan Creek	Wildlife, pet waste
12	Warhill Soccer – North	School Complex	Powhatan Creek	Wildlife, pet waste
13	Warhill Soccer – South	School Complex	Powhatan Creek	Wildlife, pet waste
14	Lafayette High School	School Complex	Powhatan Creek	Wildlife
15	Clarks Lane – West	Residential	Powhatan Creek	Wildlife, pet waste
16	Clarks Lane – East	Residential	Powhatan Creek	Wildlife, pet waste,
17	Forest Heights	Residential	Powhatan Creek	Wildlife, pet waste
18	Fire Station 4	Fire Station	Powhatan Creek	Wildlife
19	Human Services Building	County Facility	Powhatan Creek	Wildlife
20	D. J. Montague Elem. School	School Complex	Powhatan Creek	Wildlife
21	Recreation Center - West	Recreation Center	Powhatan Creek	Wildlife, pet waste
22	Recreation Center - North	Recreation Center	Powhatan Creek	Wildlife, pet waste
23	Recreation Center - South	Recreation Center	Powhatan Creek	Wildlife, pet waste
24	Tewning Road - West	County Facility	Powhatan Creek	Wildlife
25	Tewning Road - East	County Facility	Powhatan Creek	Wildlife
29	Mid County Park - South	Park	Powhatan Creek	Wildlife, pet waste
30	Mid County Park - North	Park	Powhatan Creek	Wildlife, pet waste
34	Jamestown High School - West	School Complex	Powhatan Creek	Wildlife
35	Jamestown High School - East	School Complex	Powhatan Creek	Wildlife
36	JCSA Water Treatment Facility	County Facility	Powhatan Creek	Wildlife
37	Clara Byrd Baker Elem. School - North	School Complex	Powhatan Creek	Wildlife, pet waste
38	Clara Byrd Baker Elem. School – West	School Complex	Powhatan Creek	Wildlife, pet waste
39	Clara Byrd Baker Elem. School – East	School Complex	Powhatan Creek	Wildlife, pet waste
40	Clara Byrd Baker Elem. School - South	School Complex	Powhatan Creek	Wildlife, pet waste
42	Powhatan Creek Access	Boat Launch	Powhatan Creek	Wildlife, pet waste
28	Mill Creek to Rt 199	Residential	Mill Creek	Wildlife, pet waste
31	Venture Lane Regional BMP	Residential/Commercial	Mill Creek	Wildlife
32	Fire Administration & Sta. 3	Fire Station	Mill Creek	Wildlife
41	Laurel Lane Elem. School (formerly Rawls Byrd)	School Complex	Mill Creek	Wildlife
43	Lakewood Drive BMP	Church/Residential	Mill Creek	Wildlife, pet waste
44	Rolling Woods - North	Residential	Mill Creek	Wildlife, pet waste
45	Rolling Woods - South	Residential	Mill Creek	Wildlife, pet waste
46	Rolling Woods - East	Residential	Mill Creek	Wildlife, pet waste
48	Grove Easement	Residential	Skiffes Creek	Wildlife

## C. BMPs

### 1. Septic System Program

As part of the County’s Chesapeake Bay Preservation Ordinance, property owners with septic systems are required to have them pumped out at least once every 5 years and notify the County providing evidence that the system was pumped out. James City County tracks all operating septic system within the County and sends notifications in the form of mailings to property owners every 5 years to remind them about this requirement. A rack card containing septic educational information is also provided with each mailing. Information on the pumpout program known as Septic Smart is provided on the County’s website (<https://jamescitycountyva.gov/958/Be-Septic-Smart>). Based on County records, a total of 413 properties within the Powhatan, Mill and Skiffes Creek watersheds continue to use a septic system.

## 2. Pet Waste Programs

Through the Clean Water Heritage Program, James City County is actively educating residents to continue to pick up pet waste and reduce bacteria levels in County watersheds. This program covers MS4 regulated areas as well as non-MS4 areas. The Stormwater and Resource Protection Division website (<https://jamescitycountyva.gov/963/Scoop-the-Poop>) contains educational information about the “Scoop the Poop” program as well as a link to the application form for neighborhoods to receive free pet waste stations. As of FY20, the County has distributed a total of 71 pet waste stations to 49 neighborhoods. In addition, there are 18 pet waste stations in the County park trail system. In an effort to reach pet owners, the Division also has participated in the Fido Fest, an annual event geared towards dog owners, and provided giveaways and educational information focused on Scoop the Poop. The pet waste station giveaway program has been so successful over the past several years that additional pet waste stations were purchased by the Division in excess of the amount provided by the HRPDC in order to meet the demand by County neighborhoods.

Through the Clean Water Heritage Program, James City County is actively educating residents to continue to pick up pet waste and reduce bacteria levels in County watersheds. This program covers MS4 regulated areas as well as non-MS4 areas. The Stormwater and Resource Protection Division website (<https://jamescitycountyva.gov/963/Scoop-the-Poop>) contains educational information about the “Scoop the Poop” program as well as a link to the application form for neighborhoods to receive free pet waste stations. The Division has also partnered with the HRPDC to develop educational materials to be distributed such as rack card pamphlets, dog waste bag holders, and dog Frisbees. These outreach materials are distributed at bacteria and water quality specific events such as Fido Fest, James River Fest, Bark in the Park, and the Williamsburg Farmers Market. As of 2020, the County has distributed a total of 71 pet waste stations to 49 neighborhoods. Of the 71, a total of 40 pet waste stations have been distributed in the Mill, Powhatan, and Skiffes Creek Watersheds. In addition, there are over 20 pet waste stations maintained by the County on recreational parcels, including 17 within the Powhatan Creek watershed. The pet waste station giveaway program has been so successful over the past several years that additional pet waste stations were obtained by the Division in excess of the amount provided by the HRPDC in order to meet the demand by County neighborhoods.

## 3. Chesapeake Bay TMDL Action Plan Projects

The County will continue implementing and maintaining projects identified as part of its Chesapeake Bay TMDL Action Plan. Its primary purpose is the reduction of nutrients and sediments to the Chesapeake Bay however these programs and actions contained in that plan will also serve to reduce the anthropogenic sources of bacteria within the Mill Creek, Powhatan and Skiffes Creek Watersheds. Because the Mill, Powhatan and Skiffes Creek watersheds are direct tributaries to the Chesapeake Bay, implementing BMPs to help achieve the TMDL Bay goals by reducing sediment and nutrients loads will also help to reduce bacteria levels in these creeks.

Projects included in the plan within the Mill Creek, Powhatan, and Skiffes Creek basins to date since the local plan was approved in 2017 include:

Table 2  
Chesapeake Bay TMDL Action Plan Projects

<b>Project</b>	<b>Date Constructed</b>	<b>Subwatershed</b>	<b>Type</b>
Clara Byrd Baker Elem School	FY17	Powhatan Creek	BMP Retrofit
Cooley Road	FY20	Mill Creek	Stream Restoration
Brookhaven	FY18	Mill Creek	Stream Restoration
Jamestown Road	FY19	Powhatan Creek	Stream Restoration
Oxford Road	FY18	Mill Creek	Stream Restoration
Winston Terrace	FY18	Mill Creek	Stream Restoration
Essex Court	FY17	Powhatan Creek	Stream Restoration

#### 4. BMP Bacteria Retrofit Program

James City County contracted with a consultant to conduct a feasibility study to determine how many facilities the County operates in its MS4 in the impaired watersheds that might be feasible to retrofit with bacteria removal improvements. BMPs evaluated by the study included wet ponds and extended detention ponds of which 34 facilities were identified. There were none existing in the Skiffes Creek watershed. The study, completed in 2018, identified which facilities could be cost effectively retrofitted.

The County's Capital Maintenance projects since 2017, listed below in Table 3, include BMP retrofits which improve water quality within the Powhatan, Mill and Skiffes Creek watersheds.

Table 3  
Capital Maintenance Projects – BMP Bacteria Retrofits

<b>BMP ID</b>	<b>Date Completed</b>	<b>Location</b>	<b>Subwatershed</b>	<b>BMP Type</b>
PC108	In design	Warhill Softball - North	Powhatan Creek	Wet pond retrofit
MC009	FY18	Rolling Woods – North	Mill Creek	Wet Pond Retrofit
MC014	FY17	Laurel Lane Elem.	Mill Creek	Dry Pond Retrofit
PC204	FY17	Warhill High School	Powhatan Creek	Constructed Wetlands Retrofit
MC045	FY17	Venture Lane	Mill Creek	Constructed Wetlands Retrofit

#### IV. Schedule of Anticipated Actions Planned for Implementation during the Permit Term

During the current MS4 permit term, James City County will continue efforts towards the following programs.

- *Implement a program to identify potentially failing septic systems*
- *Implement septic tank inspection and maintenance program*
  - o James City County will continue to mail septic pumpout letters to property owners every five years.
  - o The County will continue to track septic systems within the County and the date when each was last pumped.
- *Educate the public on how to determine whether their septic system is failing*
  - o James City County will continue to provide educational information to property owners with septic systems by including information in the pumpout letters, and on the website.
- *Provide signage to pick up dog waste, providing pet waste bags and disposal containers*
  - o James City County will continue its Clean Water Heritage program including a focus on Scoop the Poop.
  - o The County will continue to provide educational information to pet owners, focusing on dog owners, regarding picking up pet waste in order to reduce bacteria levels in local waterways.
  - o James City County, through the Stormwater and Resource Protection Division, will continue to partner with the HRPDC on regional efforts related to pet waste including the distribution of pet waste stations to neighborhoods.
- *Enhance maintenance of stormwater management facilities owned or operated by the permittee*
  - o James City County will continue efforts to maintain and retrofit where feasible existing stormwater management facilities owned and operated by the County in order to protect water quality including reductions in bacteria levels.

## V. Public Comment Process

Public comments were solicited on the draft update to the approved plan through posting a copy of the document on the James City County website with request for public input. Both the draft update and the previously approved plan were provided on the website (<https://jamescitycountyva.gov/3048/Bacteria-Total-Maximum-Daily-Loads>). The draft update was posted on April 15, 2020. The webpage also provided background information on both the approved plan and update and included information on how to submit comments.

[Home](#) > [Government](#) > [Departments](#) > [General Services](#) > [Stormwater & Resource Protection](#) > [Resource Protection](#) > [Local Water Quality](#) > [Bacteria Total Maximum Daily Loads](#)

### Bacteria Total Maximum Daily Loads

#### Restoring Our Local Waterways

In order to restore Virginia waterways to health, the [Virginia Department of Environmental Quality](#) (VADEQ) issues pollution diets setting limits on the amount of bacteria that can enter County waterways with documented high bacteria pollution. These limits are known as Total Maximum Daily Loads (TMDLs).

#### Stormwater Runoff

As a community with a municipal stormwater permit, James City County must take action to reduce the bacteria in stormwater runoff to the levels dictated by the TMDL. Reducing storm runoff pollution is a long-term effort and the County has a long history of working to accomplish the needed reductions.

#### Action Plan

In order to utilize County resources effectively and provide information to the VADEQ, the County has developed a Bacteria TMDL Action Plan for Powhatan, Mill and Skiffes Creeks which describes how the County will meet the pollution diets for these streams.

As part of the County's ongoing efforts to increase the health of local waterways, a Bacteria Total Maximum Daily Load was finalized in 2017 for the Mill, Powhatan, and Skiffes Creek watersheds. This document serves as an update to the original plan and will remain open for comments from the public until May 1st. Citizens are encouraged to reach out to Toni Small, Stormwater and Resource Protection Division Director, with any questions or concerns regarding the update.

- [Draft Bacteria TMDL Action Plan Update for Powhatan, Mill, and Skiffes Creeks for Public Comment \(PDF\)](#)

#### Related Documents

- [Final Bacteria TMDL Action Plan for Powhatan, Mill and Skiffes Creeks \(PDF\)](#)
- [Fecal Bacteria Total Maximum Daily Load Development for Warwick River \(Skiffes Creek\) \(PDF\)](#)
- [Bacteria Total Maximum Daily Load Development for Mill Creek and Powhatan Creek \(PDF\)](#)

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#### Hours

Monday - Friday  
8 a.m. - 5 p.m.

The James City County Stormwater and Resource Protection Division received one comment via email on April 17, 2020. The comment is attached below for reference.

**Public Comment Powhatan, Mill and Skiffes Creek TMDL Action Plan - Addendum/Update dated April 13, 2020 - Frank Polster 420 Hempstead Rd**

A little over three years ago I provided a public comment to the Powhatan, Mill and Skiffes Creek TMDL Action Plan. The county's Stormwater Division, JCSA and county residents can point to successes in the reduction of the bacteria impaired waters.

But the county still finds itself in a "Catch 22" in solving the bacteria impaired waters despite the implementation of water quality projects, sewer line upgrades, and pet owners scooping the poop.

The county's regulatory area is narrowly defined in terms of the county's Municipal Separate Storm Sewer Systems (MS4) Permit to discharge stormwater. The county overall is only responsible for the discharge of stormwater in 5% of the county's total acreage. For Skiffes Creek Watershed the MS4 area is .3% of the Skiffes Creek's 4,412 acres. For the Powhatan Watershed none of the MS4 area drains into it. For Mill Creek Watershed of 3,663 acres the 426 MS4 acres is 11.6% of it

The "Catch 22" is that the original and the updated Powhatan, Mill, and Skiffes Creek TMDL Action Plan MS4 regulated areas will not significantly reduce the bacteria in these watersheds -

"Improvements in the regulated areas in these watersheds will result in very minor if any improvements to water quality in the targeted segments" The future reduction strategies will continue to address sources with potentially the largest impact on water quality such as sanitary sewer overflows, septic system failures, pet waste, stormwater runoff and recreational boating. The initial implementation actions in this permit cycle were developed to reduce human and pet sources of bacteria loadings whereas future strategies may need to also focus on *wildlife as the single largest remaining contributing source.* "

In the eventuality that all actions prove to be insufficient and the county initiates a special study called a Use Attainability Analysis (UAA) (\* Note) to determine if the designated use should be changed maybe it would be prudent at this time to initiate an assessment of a non-point source for wildlife similar to the study of the "Fecal Bacteria Total Maximum Daily Load Development for Warwick River "

As I said in my original public comment and it applies to this update also -

"Mitigating wildlife bacteria in the subsequent two phases is a longer term problem. It requires a long-term county and community commitment to improving county water quality, reducing health risks and maintaining HOAs BMPs." And "*Scooping the Poop*"

\*Note Page 27, section 4.6 Actions in Future Permit Cycles, Powhatan, Mill and Skiffes Creek TMDL Action Plan - Addendum/Update dated April 13, 2020

No further actions were taken as a result of the comments received.