APPENDIX

City of Poquoson Annual Report

VAR# 040024

July 1, 2014-June 30, 2015

Submitted to DEQ September 30, 2015

BMP 1: Public Education

BMP 1.1a: Supporting Document: *Regional Education and Outreach Plan* (Developed in PY 1)

Regional Stormwater Education and Outreach Plan

High Priority Water Quality Issues to Address

1. Contribution of pet waste to bacteria impairments.
2. Nutrient runoff due to poor lawncare practices.
3. Reduction of FOG/Garbage Disposal Use to reduce dry weather sanitary sewer overflows.

Target Audience for High Priority Issues

1. Pet Waste Reduction
    a. single women, 18-49, under $75K household income
2. Lawncare Best Practices: fertilizer, soil testing, mowing practices, leaf/yard debris disposal
    a. Married men, 35+, any college, $75,000+ household income
3. FOG/Garbage Disposal Use
    a. Married men, 35+, any college, $75,000+ household income

BMPs 1.2, 1.3 & 1.4: Supporting Document: *askHRgreen Annual Report*

This can also be viewed at: http://askhrgreen.org/wp-content/uploads/2011/06/askHRgreen-FY15-Annual-Report.pdf

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Report Documentation

TITLE
askHRgreen.org Annual Report for Fiscal Year 2014-2015

REPORT DATE
August 2015

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Local Funds

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ABSTRACT
This report provides a summary of the fourth year of the askHRgreen.org public outreach and education initiative. The report contains seven major sections. The first section provides background about askHRgreen.org. The second section provides an overview of overall campaign results for fiscal year 2014-2015. The third provides a summary of research conducted during the fiscal year. The fourth through seventh sections provide an overview of the individual initiatives and results from each of the four askHRgreen.org subcommittees: Recycling & Beautification, Stormwater Education, Water Awareness, and Fats, Oils and Grease Education.

ACKNOWLEDGEMENTS
This report was prepared by the Hampton Roads Planning District Commission (HRPDC) staff in cooperation with the member localities. Preparation of this report was included in the HRPDC Unified Planning Work Program for Fiscal Year 2014-2015, approved by the Commission on June 19, 2014.

table of contents

In This Report...

introduction

About askHRgreen.org...

askHRgreen.org was developed to help Hampton Roads residents find their inner green with just the click of a mouse. For years, the HRPDC facilitated a variety of environmental education efforts to assist localities in notifying residents and meeting regulatory requirements. Developing consistent regional messaging has always afforded localities an economy of scale that they could not otherwise achieve. Couple that with various emerging issues beginning to overlap, like sanitary sewer overflows and stormwater pollution, and we knew the time was right for the development of an umbrella brand to tie all of the messages together. askHRgreen.org began with offering just the green basics. What we found was that people then craved more information. Once you show someone an easy, green alternative, they get hooked and want to add something else. Now we make the connections for people by illustrating not just what they can do, but why they should care and how their actions impact the larger environment. askHRgreen.org is powered by the 17 localities of Hampton Roads, HRSD, and the Hampton Roads Planning District Commission.

You can "like" askHRgreen.org on Facebook at Facebook.com/askHRgreen, tweet and retweet at Twitter.com/HRgreen, "tune in" at YouTube.com/HRGreenVA, and read and comment on the blog, askhrgreen.org/blog.

Fiscal Year 2014-2015 Highlights

- 58,279 website visitors

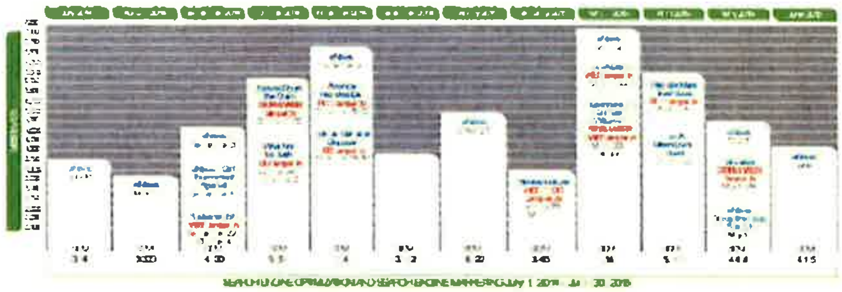
Fiscal Year 2014-2015 Campaign Schedule and Results

Eleven environmentally-themed media campaigns, a Search Engine Marketing campaign, and a Search Engine Optimization campaign ran for a combined total of 52 weeks of exposure in FY15.

Campaign	Media
Water Infrastructure Sustainability	R-O-F
Leaves & Pet Waste	R-O-F
What Not To Flush	R-O-F-M
America Recycles Day	R-O-F
Holiday Garbage Disposal	R-O-F
Water/FOG Infrastructure Sustainability	R-O-F
Fix a Leak Week	R-O-F
Lawn Care & Outdoor Watering	R-O-F
Recycle More, Trash Less	R-O-F
Green Magazine	R-O
Pet Waste	R-O-F
askHRgreen.org E-Newsletter	
Public Relations	
SEO/SEM	
askHRgreen.org Blog Articles	
[illegible]	

Total Advertising Weeks	52
[illegible]	
Coastal Virginia Magazine	221,300
Radio*	7.68 million
Online Newspaper	1.59 million
Movie Theater Advertising	219,033
Search Engine Marketing (SEM)	308,128
Search Engine Optimization (SEO)	256,208
Facebook	1.48 million
Public Relations	4.08 million
[illegible]	213,304
[illegible]	
Media	$135,295
Public Relations	$25,012
Creative & Web Development	$65,670
Consulting	$5,000
Research	$17,335

Website Analytics



askHRgreen.org Website Statistics

Visits	27,424	32,697	55,505	59,279
Unique Visitors	19,920	25,092	43,547	46,994
Pageviews	67,047	72,270	116,614	103,228
Pages per Visit	2.42	2.21	2.10	1.77
Average Visit Duration	2:19	2:10	1:48	1:26
Bounce Rate	61.24%	61.27%	34.37%	74.60%
% New Visits	70.78%	75.50%	77.74%	79.87%

askHRgreen.org Referrals by Locality Websites

vbgov.com	2,423	19.70%
cityofchesapeake.net	430	3.50%
hrsd.com	378	3.07%
portsmouthva.gov	225	1.40%
norfolk.gov	192	1.56%
jamescitycountyva.gov	187	1.52%
hrsd.com	140	1.14%

FY 2014-2015 askHRgreen.org Website Visitors by Locality

Virginia Beach	19.68%
Chesapeake	9.46%
Norfolk	7.42%
Newport News	5.33%
Hampton	4.33%
James City County/ Williamsburg	2.84%
Portsmouth	2.16%
Suffolk	1.87%
Poquoson	0.52%
Smithfield	0.52%
Gloucester County	0.19%
Yorktown	0.06%
Other	45.90%

Top 10 Website Traffic Sources

askHRgreen.org campaign initiatives & results

SEO

Utilizing Search Engine Optimization (SEO) improves the askHRgreen.org website's organic (unpaid) search rankings. Optimization tactics included editing/adding keyword-rich content to the site, identifying and eliminating any barriers to search engine indexers, and promoting the site to increase the number of inbound links from other sources. The SEO campaign ran for 10 months and resulted in 255,206 impressions in FY15 and a 39% increase in clicks from organic search results over FY14.

Organic Search Results

Clicks	8,813	14,842	20,637

Webpage Traffic

Of the 103,228 pages visited over the last year, the chart below shows the top ten which accounted for just 33% of all pages visited.

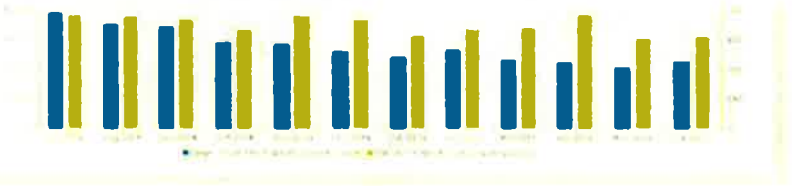
SEM

The askHRgreen.org Search Engine Marketing (SEM) program utilizes Google AdWords and Bing Ads pay-per-click advertising to increase traffic to the askHRgreen.org website. By bidding on select keywords and phrases, search ads direct search traffic to relevant content on the askHRgreen.org site. In total, the SEM campaigns garnered 330,571 impressions and 5,880 clicks to the askHRgreen.org website in FY15.

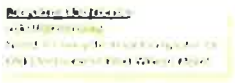
SEM Campaigns

Recycling & Beautification	134,675	2,705	2.01%	2.21
Stormwater	67,397	824	1.22%	2.08
askHRgreen.org	32,292	672	2.08%	1.47
askHRgreen R&B	25,223	505	2.40%	1.65
FOG	13,626	265	1.95%	2.47
askHRgreen Stormwater	15,799	228	1.44%	2.50
Water Awareness	15,237	[illegible]	1.52%	[illegible]
askHRgreen askHRgreen.org	5,404	153	[illegible]	1.48
askHRgreen Water	8,493	100	1.18%	2.48
askHRgreen FOG	3,793	88	2.21%	2.34
Total	330,571	5,880	1.78%	2.22

SEM Results



Of all the ad groups in both the Google and Bing SEM campaigns, below is a look at the Top 30 ad groups ranked by the number of clicks received. An ad group is one or more ads which target a shared set of keywords. For instance, the "electronics recycling" ad group contains keywords such as "electronics disposal," "recycling computers," "where to recycle electronics," etc. and displays an ad with content specific to that topic like the one pictured at right. Please note some ad groups appear in the listing twice because the same ad group exists in both Google and Bing campaigns. Bing campaign names have "ASK-HRGreen-" listed first.



Top 30 Ad Groups by Clicks

Ad Group Name	Campaign Name	Clicks	Impr.	CTR	Avg. Pos.	Avg. CPC
Recycling at Home/ Residential Recycling	R&B	948	75,696	1.25%	2.45	$1.82
Electronics Recycling	R&B	801	16,815	4.76%	2.44	$1.68
What to Recycle	R&B	678	26,483	2.56%	1.56	$1.54
askHRgreen.org	askHRgreen.org	352	1,188	29.63%	1.07	$0.54
Medication Disposal	Stormwater	272	4,331	6.28%	2.01	$1.63
Electronics Recycling	ASK-HRGreen- R&B	271	6,777	4.00%	1.60	$1.48
TMDL	Stormwater	220	8,045	2.73%	1.16	$2.68
What to Recycle	ASK-HRGreen- R&B	175	6,309	2.77%	1.59	$1.07
The Business of Recycling	R&B	171	5,963	2.87%	1.47	$1.72
Environmental Education	askHRgreen.org	136	20,893	0.65%	1.40	$4.15
Fat/ Oil/ Grease Disposal	FOG	105	4,973	2.11%	2.51	$2.25
Green Home Practices	askHRgreen.org	90	7,918	1.14%	1.77	$2.42
Conservation/ Wise Water Use	Water	88	2,800	3.14%	1.42	$2.28
Recycling at Home/ Residential Recycling	ASK-HRGreen- R&B	79	8,306	0.95%	1.69	$1.03
askHRgreen.org	ASK-HRGreen- askHRgreen.org	80	309	25.89%	1.00	$0.34
Medication Disposal	ASK-HRGreen- Stormwater	75	3,622	2.07%	2.68	$1.98
Soil Testing	Stormwater	70	6,898	1.01%	1.97	$2.64
Hampton Roads Environment	askHRgreen.org	67	621	10.79%	1.24	$0.89

askHRgreen.org Campaign Research

The askHRgreen.org effort to engage the community to improve environmental behavior has been measured over time by EAB Research, which conducted focus groups and a benchmark online survey in November 2010, a second wave survey in November 2012, and a third and final survey in April 2015. A total of 411 respondents participated in this most recent study with a potential sampling error of +/- 5 percent. Participants in the survey had to be over 18 years of age, live in Hampton Roads and plan to remain a resident for five years or more. The participants were recruited to reflect the relative percentages of the population located on the peninsula and the southside of Hampton Roads.

The third installment of the online survey shows that awareness of the region-wide public awareness and education campaign has increased to 18.2 percent from 2012—a 6.2 percent gain. The survey also confirmed that overall participants who have been to the website, attended an educational event or read or heard askHRgreen.org messaging in the media are more likely to report positive behavior and attitudes. Other general survey findings showed that:

- 20 percent of those surveyed had visited the askHRgreen.org website, and 80 percent of those went for general information or curiosity; 6.7 percent had a specific question.
- askHRgreen.org-aware participants considered themselves significantly more knowledgeable. From 2010 to 2015, aware participants who ranked themselves knowledgeable increased 17.2 points.
- The disconnect between a personal action and the collective impact on an individual (uncovered in the 2012 benchmark survey) is unchanged and is still significant in 2015.
- Except for younger respondents who seek environmental information at a high frequency,
- Respondents who use the garbage disposal showed no change between 2010 and 2012, but went up 3.5 points in 2015, showing a need to further educate residents about eliminating its use to prevent backups.
- Participants who flush materials other than toilet paper declined from 13 percent in 2012 to 10.5 percent in 2015.
- Of participants who said they recycle, 93.9 percent recycle at curbside, 28.3 percent recycle plastic or paper at convenience centers/grocery stores, and 26.6 percent recycle at special events. The top two reasons for not recycling are uncertainty about what can be recycled and that the bin fills up too quickly.
- The 2015 survey revealed that of the participants with a lawn or garden, 20.7 percent reported fertilizing three or more times per year and 41.6 percent fertilize 1-2 times per year.
- Since 2010, drinking primarily bottled water at home has declined from 69.1 percent to 54.3 percent. The changes among askHRgreen.org-aware are more significant with a 21 point decrease over five years.

A full summary of the 2015 online survey results can be downloaded from the askHRgreen.org website at the following URL: http://askhrgreen.org/press-room.

Green Magazine Partnership with Coastal Virginia Magazine

In April of 2015, the inaugural issue of Green Magazine hit the shelves in Hampton Roads. Green Magazine was the result of an exciting new partnership between Coastal Virginia Magazine and askHRgreen.org. The special edition 24-page lifestyle supplement was produced at no cost to askHRgreen.org. It was a true partnership and collaboration to empower residents and businesses alike with interesting facts and features about what we can all do to make our coastal lifestyle a little easier on the environment.

The first edition of Green Magazine featured a behind-the-scenes look at a recycling audit that demonstrates the importance of trash vs. treasure, an exploration of the quality of our local waterways and what's being done to clean them up, a feature on homeowners across the region greening their homes in big and small ways, and the importance and appeal of tap water. There was also an enticing food feature on our area's beloved oyster, shedding light on why consuming local food straight from our waterways benefits more than just our taste buds.

In addition to the 32,000 copies mailed to households in Hampton Roads and the over 221,000 impressions delivered by Green Magazine, askHRgreen.org also received 7,500 copies of the publication free of charge to distribute at local locations and events throughout the year. The advertising value of this partnership was over $65,000. Due to the success of the inaugural issue and popularity of the piece, askHRgreen.org is already collaborating with Coastal Virginia Magazine on a second edition of Green Magazine planned for the spring of 2016.

Social Media

Social media continues to be a key source for public outreach. Facebook, Twitter, and YouTube were all used to share askHRgreen.org and various locality events, respond to requests from citizens seeking information, share blog articles, and promote important programs and initiatives like the Cigarette Litter Prevention Program, America Recycles Day events, grant programs, etc. Through the "Let's Talk Green" blog, which is written by askHRgreen.org team members and guest bloggers, 101 interesting posts were published throughout the year covering everything from eating wetlands and sewer lateral woes to milk paint projects and local compost sales.

E-newsletter

The askHRgreen.org e-newsletter is shared via email to media contacts and an ever-growing list of citizens whose email addresses have been collected at local events and through online promotions. In FY15, a total of nine e-newsletters covering seasonal "green" tips, events and askHRgreen.org campaign updates were sent out. By the end of FY15, the askHRgreen.org subscriber list was already up to 5,184 subscribers and it continues to grow.

Subscribers (as of July 1, 2015)	5,184
Total Emails Sent	28,478
Total Opens	6,071
Open Rate	15.6%
Total Clicks	602
CTR (Click Through Rate)	1.6%

Online Toolkit

The askHRgreen.org Online Media Toolkit continues to be especially useful to committee members, civic leagues, community groups, home owners associations, schools, clubs, businesses—and any organization or individual with an interest in improving neighborhoods and communities. Ideal for both online and print reproduction, the toolkit items are professionally designed and carry the signature askHRgreen.org graphic look. The materials are organized so that it is easy for users to browse and select the topic they seek in the medium of their choice. In addition to logos, print and digital ads, rack cards, brochures, tip cards, posters and billboards, there are feature articles, publications, info-graphics, radio ads, videos, and stickers available, too.

Media Ambassadors

In January 2015, askHRgreen.org media ambassadors took part in the 3rd annual media training with The Virginian-Pilot editor Ron Crow. Mr. Crow participated in a helpful Q&A session with team members that highlighted tips and tricks for successfully pitching stories to the media. After the training, media ambassadors paired up to pitch spring story ideas in six appointments with local editors, reporters and planners in various media outlets. Below is the list of askHRgreen.org media ambassadors who attended the training and are now better prepared to handle any future media opportunities.

Cris Ausink, Hampton
Donna Corbus, Portsmouth
Sean Crawford, HRT

Events

The askHRgreen.org campaign's education and outreach efforts include representation at various regional public events throughout the year (Earth Day celebrations, fairs, home & garden shows, community days, etc.). Committee members volunteer to staff either the askHRgreen.org mobile education trailer or a table display at these events and hand out educational materials and promotional items to those in attendance. In FY15, team members represented askHRgreen.org at 31 community events.

Mini Grants

The askHRgreen.org Environmental Education Mini Grant Program provides grants of up to $500 for environmentally-themed projects. All Hampton Roads school teachers (K-12), youth leaders, or organizations working with youth are eligible to apply and projects must be tied to at least one of the askHRgreen.org program focal areas. In FY15, a total of $13,211 was awarded through 31 mini grants reaching more than 6,985 students in 9 localities across Hampton Roads.

Project	Locality	Students	Grant
Butterfly Sensory Garden	Norfolk	50	$500.00
Community Garden	Newport News	30	$375.00
Green Team Strikes Again	Hampton	550	$400.00
Here Comes the Rain	Virginia Beach	120	$500.00
How Does Your Garden Grow	Chesapeake	60	$305.00
How Does Your Garden Grow	Virginia Beach	530	$474.35
Keep Deep Creek Green	Chesapeake	75	$500.00
Matoaka Recycling Rangers	James City County	753	$500.00
Newport News Family YMCA Habitat Project	Newport News	275	$500.00
NOAA STEM Project	Newport News	41	$500.00
Norge Elementary Goes Green	James City County	590	$500.00
Oyster Gardeners	Virginia Beach	21	$220.00
Oyster Reef Keepers	Virginia Beach	15	$200.00
Oyster Reef Keepers of VA School Oyster Restoration	Virginia Beach	24	$250.00
Oyster Restoration Project	Norfolk	29	$250.00
Oyster Restoration Project	Virginia Beach	15	$110.00
Park Ambassadors After School Program	Portsmouth	15	$500.00
Plastic Bag Recycling	Norfolk	150	$500.00
Plastic Bag Recycling Willoughby Civic League	Norfolk	150	$500.00
Reaching for the Sky	Virginia Beach	530	$428.00
School Recycling Program	Williamsburg	530	$500.00
School Wide Cafeteria Recycling Program	Williamsburg	1000	$500.00
School Wide Growing Project	Hampton	40	$500.00
Sun & Turf Habitat Improvements for the	[illegible]	[illegible]	[illegible]

Public Relations

FY15 was another busy year for askHRgreen.org in the media. Seven news releases were issued through the program covering seasonal topics, news, events, and promotions which were picked up by a variety of media outlets. We also had several guest columns in various publications covering topics ranging from the economics of recycling to eco-friendly landscaping tips and team members participated in a plethora of interviews. The total value of this publicity for FY15 was $307,995.

Date	Format	Media Outlet	Title	Length	Circ/Imp	PR Value
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

recycling & beautiÄcation subcommittee

Recycling and Beautification Subcommittee

The Recycling and Beauti cation Subcommittee is a coalition of local government sta members from across Hampton Roads who are working together to share ideas and pool resources for various education programs tailored towards community beauti cation, litter prevention, and recycling education.

FOCAL AREA: America Recycles Day
TARGET AUDIENCE: Adults, Age 25-54

The Recycling and Beauti cation Subcommittee celebrated Keep America Beautiful's America Recycles Day 2014 by promoting ten recycling collection and education events across nine cities and counties in Hampton Roads. Of these events, two were hosted by the Recycling and Beauti cation committee to ensure residents on both the southside and peninsula had access to a convenient way to recycle electronics and shred unwanted documents in celebration of America Recycles Day.

The southside event took place on November 15 at Greenbrier Mall in Chesapeake while the peninsula event took place the same day at the York County Sports Complex. VersAbility Resources donated their time and resources by providing electronics recycling for the peninsula event at no charge. Goodwill, a new partner this year, collected 28,614 pounds of household goods and electronics from the Chesapeake event as well as municipal events in Norfolk and Portsmouth. Shred-It also partnered with askHRgreen.org to provide free document shredding services to the public at both events.

ARD Events Media & Public Relations	
Paid Media (1 week)	
Radio	
Impressions	157,150
Reach	7.4%
Frequency	2.3
Online Newspaper (The Virginian-Pilot & Daily Press)	
Impressions	103,029
Clicks	135
CTR (Clickthrough Rate)	0.13%
Facebook	
Impressions	77,472
Clicks	1,365
CTR (Clickthrough Rate)	1.75%
Donated Media	
Added Value	$891
Added value impressions	0
Overall Campaign	
Total Impressions	289,851
Total Budget	$3,000
Total Exposure Value	$1,894
Return on investment	1.63:1
Cost per Thousand Impressions	$10.37

FOCAL AREA: Great American Cleanup™
TARGET AUDIENCE: Entire Hampton Roads Community

The Subcommittee also promoted Keep America Beautiful's 2015 Great American Cleanup initiative. Most localities held multiple events from April to June to help beautify and clean up their communities. The Subcommittee supported these e orts by issuing a news release about the Great American Cleanup, featuring event details for each locality prominently on the website and social media sites as well as featuring information about the events on the blog and in the e-newsletter.

The two-week campaign ran from April 6 to April 18 and included 60-second radio ads, banner display ads on dailypress.com and pilotonline.com, and Facebook ads. As added value for the paid media campaign, Max Media included the "In the Bin" on-air contest on Eagle 97.3 and 92.9 The Wave, plus 35 additional mentions per week per station, inclusion on both websites, and three Facebook posts per station per week. Entercom provided weekly Facebook recycling tips on all station pages and web streaming banners. 92.3 The Tide provided bonus spots, question of the week contest, weekly feature on the Hometown Guy Eric Worden Show, and 15 30-second promos.

FOCAL AREA: Christmas Tree Recycling
TARGET AUDIENCE: Entire Hampton Roads Community

In FY15, the Recycling and Beauti cation Subcommittee encouraged residents to take advantage of Christmas tree recycling programs across the region. The majority of localities in Hampton Roads provide free Christmas tree pickup and recycling for residents. To promote these free municipal programs, a news release was issued in addition to featuring the information prominently on the website and social media. The information was also included on the blog and featured in the e-newsletter.

Recycle More, Trash Less	
Paid Media (3 weeks)	
Radio	
Impressions	1,077,000
Reach	56.5%
Frequency	2.9
Online Newspaper (The Virginian-Pilot & Daily Press)	
Impressions	189,773
Clicks	177
CTR (Clickthrough Rate)	0.09%
Facebook	
Impressions	202,349
Clicks	2,2[illegible]
CTR (Clickthrough Rate)	1.10%
Donated Media	
Added value	$5,299
Added value impressions	36,710
Overall Campaign	
Total Impressions	1,505,832
Total Budget	$11,33[illegible]
Total Exposure Value	$24,342
Return on investment	[illegible]
Cost per Thousand Impressions	$7.39

FOCAL AREA: Residential Recycling
TARGET AUDIENCE: Adults, Age 25-54

In April 2015, the Subcommittee launched the rst Recycle More, Trash Less media campaign using the logo and slogan developed in FY14. The Dr. Seuss-inspired campaign detailed what should and should not go into curbside recycling bins, explained the economic bene ts of recycling and promoted recycling drop-o centers which o er expanded recycling options. While the

FOCAL AREA: The State of Recycling in Hampton Roads
TARGET AUDIENCE: Entire Hampton Roads Community

report contains a comprehensive look at recycling in the region, from the municipalities that provide curbside recycling services to the businesses that collect, sort and re-sell recyclables. A special feature of the report is a point-in-time look at the constantly changing picture of recycling in Hampton Roads. The askHRgreen.org 2013 Recycling Survey identified how many residents receive recycling services and what is accepted, how recycling services and public education are administered and funded by local government, the perspectives of local recycling programs and opportunities for strengthening municipal recycling programs including reducing contamination through increased public education and awareness.

A press release was issued in November 2014 to notify the media about the availability of the report. The report was also distributed to participants of the Department of Environmental Quality Solid Waste Stakeholders Conference which focused on Managing the Future of Solid Waste in Virginia.

Focusing on the theme "Cigarette butts=litter," the Cigarette Litter Prevention Program launched in June 2015 and will continue into early fall. Activities completed in FY15 included a pre-scan of the areas to determine the extent of the cigarette litter and education/outreach. As part of the education and outreach, a social media outreach campaign was created using the hash tag #NoCigaretteLitterNow. The use of the hash tag and coordinated collateral items helped tie each local project and outreach campaign into part of the larger, regional effort. The program caught the attention of the media and $40,230 in publicity value was generated through print and online articles as well as television interviews with local coordinators. The result was that Hampton Roads residents beyond the seven project areas benefited from messages about cigarette litter prevention which affects the entire region. A complete report on the effectiveness of the program on reducing cigarette litter as well as long term sustainability will be available in FY16.

FOCAL AREA: Clean Communities and Litter Prevention
TARGET AUDIENCE: Entire Hampton Roads Community

The Recycling & Beautification Subcommittee developed a new rack card in FY15 to support their litter prevention and clean community messages. The rack card features simple tips that anyone can implement into their daily routine to keep trash and litter in appropriate places. The rack card also helps educate the public about how litter impacts them including facts and figures about the cost of litter cleanup and negative impact on communities. The rack card also emphasizes that littering is illegal and includes the litter law from Virginia Code.

FOCAL AREA: Inaugural Keep Hampton Roads Beautiful Golf Tournament
TARGET AUDIENCE: Business and Community Leaders

The Subcommittee partnered with Keep Virginia Beautiful to host the Inaugural Keep Hampton Roads Beautiful Golf Tournament on October 13, 2014 at Greenbrier Country Club in Chesapeake. In keeping with the message of askHRgreen.org, the tournament was designed to be easy on the environment with tap water served instead of bottled water and convenient recycling receptacles available throughout the course. As a result of this partnership, the Subcommittee raised $5,000 for litter prevention and recycling education in Hampton Roads.

FOCAL AREA: Cigarette Litter Prevention
TARGET AUDIENCE: Adult Smokers

The Subcommittee was awarded a $12,500 grant from Keep America Beautiful (KAB) to implement the proven-effective cigarette litter prevention program developed by KAB. The Subcommittee added to these grant funds with the $5,000 raised from the Keep Hampton Roads Beautiful Golf Tournament to launch cigarette litter prevention projects in seven localities across the region. The project sites include:

- Hampton – Buckroe Beach
- James City County – Commuter parking on Interstate 64 at Croaker Road
- Newport News – Hilton Village at Warwick Blvd. and Main St.
- Norfolk – City Hall Plaza
- Portsmouth – Nauticus Pavilion

stormwater education subcommittee

Stormwater Education Subcommittee

The Stormwater Education Subcommittee is a cooperative partnership of the region's seventeen member cities and counties. This cooperative effort has been underway since 1997 as a formal adjunct to the required public information component of the Virginia Pollution Discharge Elimination System Permits (VPDES) for Phase I and Phase II Municipal Separate Storm Sewer Systems (MS4). Local government staff members work together to share ideas and pool resources for various education programs tailored to stormwater pollution prevention.

FOCAL AREA: Leaves and Pet Waste
TARGET AUDIENCE: Adults, Age 35-64

The Stormwater Education Subcommittee ran a three-week campaign from October 8 through October 25 to help Hampton Roads residents remember that fallen leaves should be cleaned up but never by ending up down a storm drain. Messaging highlighted the fact that fallen leaves can clog storm drains and lead to flooding. The campaign also addressed the role fallen leaves can play as a source of nutrient pollution in waterways. As some localities differ in their leaf collection method, the call to action for citizens included several options for properly disposing of leaves including raking, bagging, mulching, and composting them. The campaign included banner displays on pilotonline.com and dailypress.com, 60-second radio ads, and Facebook ads.

As added value for the paid media campaign, Max Media provided bonus spots on STAR 1310 AM and ran digital and on-air promotions for each week on Eagle 97.3 and 92.9 The

Leaves & Pet Waste	
Paid Media (Fy Results)	
Radio	
Impressions	1,327,750
Reach	61.3%
Frequency	4.3
Online Newspaper (The Virginian-Pilot & Daily Press)	
Impressions	285,397
Clicks	169
CTR (Click Through Rate)	0.07%
Facebook	
Impressions	255,106
Clicks	3,166
CTR (Click Through Rate)	1.193%
Unpaid Media	
Added Value	[illegible]
Added Value Impressions	[illegible]
Overall Campaign	
Total Impressions	2,170,329
Total Budget	$17,998
Total Exposure Value	$36,410

when it comes to having a great outdoor landscape. The messages highlighted by this campaign included soil testing, seeding bare spots, leaving grass clippings on the lawn, and replacing grassy areas with flower beds. The campaign included banner displays on pilotonline.com and dailypress.com, 60-second radio ads, and Facebook ads.

As added value for the paid media campaign, the Subcommittee also received digital billboard and banner ads on FM 99, 1230 WJOI, 93.7 Bob FM and US 106.1, weekly Facebook tips and streaming banner ads on 95.9 R&B, and bonus spots and askHRgreen.org question of the week (including a minimum of 15 30-second promos per week) on The Tide radio stations 92.3 and 102.1.

Lawn Care & Outdoor Watering (Co-promotion with Water Awareness)	
Paid Media (Fy Results)	
Radio	
Impressions	[illegible]
Reach	[illegible]
Frequency	[illegible]
Online Newspaper (The Virginian-Pilot & Daily Press)	
Impressions	[illegible]
Clicks	[illegible]
CTR (Click Through Rate)	[illegible]
Facebook	
Impressions	[illegible]
Clicks	[illegible]
CTR (Click Through Rate)	[illegible]

FOCAL AREA: Pet Waste
TARGET AUDIENCE: Women, Age 25-49

The Subcommittee continued outreach to the public regarding the importance of scooping the poop with a two-week pet waste media campaign. The campaign, which ran May 18 through May 31, included banner displays on pilotonline.com and dailypress.com, 60-second radio ads, and Facebook ads. As added value for the paid media campaign, the Subcommittee received production of "Real Neighborhood Hero" ads at no charge, bonus spots for "Real Neighborhood Hero" ads, online digital display ads, and an on-air interview with Hometown Guy Eric Worden. The campaign also coincided with the YouTube release of a parody video produced by a Red Chalk Studios design intern at no charge that featured the "Scoop the Poop" version of the popular Doo Wop song "Why Do Fools Fall in Love."

In support of the paid media campaign, the Stormwater Education Subcommittee once again partnered with 9 local organizations including animal shelters, animal welfare groups, and watershed restoration groups to promote the Scoop the Poop Pledge. The pledge, developed in FY14 through a partnership with the Norfolk SPCA and Elizabeth River Project, is available online at askHRgreen.org/scoop-the-poop-pledge. Dog owners are asked to support clean and healthy waterways by being good environmental stewards. To sign up, pet owners pledge to:

- Be a good environmental steward and neighbor by not looking the other way when it comes to pet waste.
- Scoop it, bag it and trash it each and every time whether in their own yards or out for a walk.
- Always take poop bags on walks with their pets – even if it means tying plastic grocery bags to the leash so they don't forget.

Pet Waste

Radio	
Impressions	449,640
Reach	22.0%
Frequency	6.2
Online Newspaper (The Virginian Pilot & Daily Press)	
Impressions	123,421
Clicks	102
CTR (Click Through Rate)	0.08%
Facebook	
Impressions	77,348
Clicks	888
CTR (Click Through Rate)	1.14%
Added Value	$1,368
Added Value Impressions	33,679
Total Impressions	686,441
Total Budget	$6,505
Total Exposure Value	$13,430
Return on Investment	2.06 : 1
Cost per Thousand Impressions	$9.48

FOCAL AREA: Bay Star Homes
TARGET AUDIENCE: Entire Hampton Roads Community

In FY15, the Stormwater Education Subcommittee united

Water Connections, Conserve Resources, and Get Involved. The resident also has the opportunity to request more information about residential best management practices such as installing a rain barrel, rain garden, pet waste station, etc. Once registered, program participants will receive a Bay Star Homes garden flag and flag pole to proudly display in their yards. They will also receive a welcome packet filled with information encouraging environmentally-friendly behaviors and connecting them to environmental resources in their community.

Regionalizing the program required the development of a database that could manage tracking for all Bay Star Homes in Hampton Roads. The City of Norfolk's database was used as the basis for the regional program, however, an automated import process was also created so there would not be a need for duplicate data entry. The program launched with 649 participants as of June 2015, mainly from the City of Norfolk's existing program. Widespread promotion of the program throughout the region will begin in FY16.

Bay Star Homes Registrants (as of June 2015)

Chesapeake	8
Hampton	1
Newport News	2
Norfolk	623
Portsmouth	1
Suffolk	1
Virginia Beach	12
York	1
Total	649

org provides the pet waste station, which comes ready to install and includes a post, sign, bag dispenser, waste can, hardware, 400 dog waste bags, and 50 can liners. The citizen or community group is then responsible for installing the station, emptying the trash regularly, and replacing the bags as needed. The responsible party is also asked to promote the purpose and use of the station. In FY15, the Subcommittee received 84 applications to the program and approved 64 of those applications. As a result, 96 pet waste stations were installed in 13 localities across the region (see map on page 23). This total does not include pet waste stations issued by locality-funded programs in Newport News or James City County.

New Stations in FY15

Chesapeake	4
Franklin/Southampton	1
Gloucester	4
Hampton	6
James City County	6
Newport News	27
Norfolk	1
Portsmouth	11
Smithfield	3
Suffolk	4
Virginia Beach	15
Williamsburg	1
York County	11
Total	96
Back River-Lower Chesapeake	14
Elizabeth River	14
Hampton Roads	6
Lower Chickahominy	1
Lower York River	4
Lynnhaven River - Lower Chesapeake Bay	14
Mobjack Bay-Lower Chesapeake Bay	1
Nansemond River	4
Newmarket Creek	1

belongs down the drain" by allowing volunteers to adhere medallions stating "No Dumping. Leads to Waterway" on storm drains in their neighborhoods. The Subcommittee promotes the program to schools, community associations, youth clubs, and volunteer groups of all ages across the region. The program is particularly popular with Boy Scout and Girl Scout troops.

Approved applicants through the Storm Drain Medallion Program each receive medallions, adhesive, a lesson plan, and PowerPoint presentation about stormwater and how individual actions affect our local waterways. Each group works with representatives from their locality to map out which storm drains will be marked. This allows for ease of tracking. This fiscal year, the Subcommittee helped place 560 medallions across the region, 180 through applications to the program by 15 different volunteer groups and 380 through locality-initiated programs.

FOCAL AREA: Local Water Quality and TMDLs
TARGET AUDIENCE: Entire Hampton Roads Community

The Stormwater Education Subcommittee developed a new brochure in FY15 in an effort to educate citizens and other stakeholders about local water quality concerns and the new Total Maximum Daily Loads (TMDL) established for the Chesapeake Bay and its tributaries. This brochure shows local waterway impairments for the region and defines the common sources for nutrients and bacteria.

Pet Waste Stations

water awareness subcommittee

Water Awareness Subcommittee

The Water Awareness Subcommittee is an education committee comprised of local government staff members who are committed to promoting and educating citizens about aging infrastructure, the value of tap water, and the importance of being good water stewards. This cooperative effort to promote conservation and awareness of the importance of water assists localities in meeting requirements of various water supply and ground water permits.

FOCAL AREA: Sustainability
TARGET AUDIENCE: Adults Age 25-54

The Water Awareness Subcommittee ran a two-week media campaign focused on aging infrastructure and sustainability from September 22 through October 4. The campaign encouraged people to learn more about the three public water systems that help keep Hampton Roads running smoothly and the expensive processes and maintenance that go into delivering clean and safe tap water. The campaign included banner displays on pilotonline.com and dailypress.com, 60-second radio ads, and Facebook ads.

As added value for the paid media campaign, the Subcommittee also received an on-air interview and digital banner ad on RM99, bonus spots and question of the week (including a minimum of 15 30-second promos per week) from The Tide (92.3/102.1), sponsorship of the Entercom o ce lunch delivery contest, weekly Facebook posts with "did you know" tips for followers on all four Entercom station pages (260,000 followers), and bonus

Sustainability	
Radio	
Impressions	851,850
Reach	45.6%
Frequency	2.6
Online Newspaper (The Virginian-Pilot & Daily Press)	
Impressions	165,186
Clicks	94
CTR (Click Through Rate)	0.05%
Facebook	
Impressions	276,985
Clicks	2,973
CTR (Click Through Rate)	1.073%
Added Value	
Added Value	$10,308
Added Value Impressions	40,400
Overall Campaign	
Total Impressions	1,334,201
Total Budget	$12,499
Total Exposure Value	$22,807
Return on Investment	1.82 : 1
Cost per Thousand Impressions	$9.35

FOCAL AREA: Fix a Leak Week
TARGET AUDIENCE: Adults Age 18-49

In celebration of National Fix a Leak Week, the Subcommittee ran a two-week paid media campaign including banner display ads on pilotonline.com and dailypress.com, 60-second radio ads, and Facebook ads.

95.9 R&B, 94.9 The Point, ESPN 94.1 FM 99, 1230 WJOI, Eagle 97.3 and STAR 1310.

Fix a Leak Week	
Paid Media (2 weeks)	
Radio	
Impressions	1,457,400
Reach	54.8%
Frequency	3.6
Online Newspaper (The Virginian-Pilot & Daily Press)	
Impressions	110,947
Clicks	52
CTR (Click Through Rate)	0.04%
Facebook	
Impressions	139,433
Clicks	1,622
CTR (Click Through Rate)	1.163%
Unpaid Media	
Added Value	$10,100
Added Value Impressions	15,250
Overall Campaign	
Total Impressions	1,735,127
Total Budget	$11,000
Total Exposure Value	$22,167
Return on Investment	1.85:1
Cost per Thousand Impressions	$6.3

FOCUS AREA: Lawn Care & Outdoor Watering (Co-promotion

adjusting sprinklers away from paved areas, and watering in the morning. The campaign included banner displays on pilotonline.com and dailypress.com, 60-second radio ads and Facebook ads.

As added value for the paid media campaign, the Subcommittees also received digital billboard and banner ads on FM 99, 1230 WJOI, 93.7 Bob FM and US 106.1, weekly Facebook tips and streaming banner ads on 95.9 R&B, and bonus spots and askHRgreen.org question of the week (including a minimum of 15 30-second promos per week) on The Tide radio stations 92.3 and 102.1.

Lawn Care & Outdoor Watering (Co-promotion with Stormwater Education)	
Paid Media (2 weeks)	
Radio	
Impressions	741,000
Reach	43.3%
Frequency	2.9
Online Newspaper (The Virginian-Pilot & Daily Press)	
Impressions	702,224
Clicks	170
CTR (Click Through Rate)	0.02%
Facebook	
Impressions	103,176
Clicks	2,752
CTR (Click Through Rate)	2.667%
Unpaid Media	
Added Value	$8,375

FOCUS AREA: Infrastructure (Co-promotion with Fats, Oils & Grease Education)
TARGET AUDIENCE: Adults Age 25-54

The Water Awareness Subcommittee also partnered with the Fats, Oils and Grease Education Subcommittee on a joint media campaign in early 2015. Messaging highlighted the "honest truth" about how our public water systems work and the cost of maintenance that is required to keep it all running smoothly. The two-week campaign, which ran from February 23 through March 8, included banner display ads on pilotonline.com and dailypress.com, 60-second radio ads and Facebook ads.

As added value for the paid media campaign, the Subcommittees also received bonus spots and question of the week from The Tide (92.3/102.1), weekly Facebook posts with "did you know" tips for listeners of the Entercom 1Thing website, and digital billboards or banner ads on the following station websites: 95.9 R&B, 94.9 The Point, 93.7 BOB FM, FM 99, and 1230 WJOI.

Infrastructure (Co-promotion with FOG Education)	
Paid Media (2 weeks)	
Radio	
Impressions	763,600
Reach	60.5%
Frequency	2.1
Online Newspaper (The Virginian-Pilot & Daily Press)	
Impressions	200,550
Clicks	[illegible]
CTR (Click Through Rate)	[illegible]
Facebook	
Impressions	[illegible]

FOCUS AREA: Value of Tap Water Rack Card and Green Magazine Advertisement
TARGET AUDIENCE: Adults Age 25-54

The Subcommittee produced a new rack card in FY15 to convey the value of tap water. Among the features of this rack card is a comparison between the cost of an average water bill and other monthly household costs such as cable and internet service, a family cell phone package with data plan, and even a daily latte habit. The bottom line: tap water is a bargain and a great value! The rack card also explains some of the additional benefits that tap water provides beyond drinking. Tap water also contributes to public health, safety, economic development, and the overall quality of life we enjoy in Hampton Roads.

The same creative used for the rack card was adapted for use as an ad in Green Magazine, the supplemental insert developed in partnership with Coastal Virginia Magazine.

Value of Water Ad – Green Magazine	
Paid Ad	
Total Impressions	227,000
Total Budget	$2,455
Total Exposure Value	$2,445
Return on Investment	1:1
Cost per Thousand Impressions	$11.06

1. How many gallons of water does the average person use at home per day?
2. How many gallons of water are used in Hampton Roads each day?
3. On average, how much does a gallon of water cost (in Hampton Roads)?
4. How important is it to have water available from your faucet 24/7/365?

The three videos were each one to two minutes in length and were posted to YouTube. The videos were promoted only on social media during FY15 and received nearly 600 views. The "What Do You Know?" videos will be part of a larger media campaign planned for FY16.

fats, oils and grease education subcommittee

Fats, Oils and Grease Education Subcommittee

The Fats, Oils, and Grease (FOG) Education Subcommittee is a coalition of local government sta members and HRSD working together to share ideas and pool resources for various education programs tailored to preventing sanitary sewer over ows and backups caused by improper disposal of fats, oils, and grease. This cooperative e ort has been underway since 2007 when 13 of the region s localities and HRSD entered into the Regional Special Order by Consent with the Virginia Department of Environmental Quality.

Garbage Disposal Use
Adults, Age 35-64

In FY15, the FOG Education Subcommittee encouraged Hampton Roads residents to keep their kitchen plumbing free of clogs caused by fats, oils, and grease while dicing all of their holiday cooking. The holiday-themed promotion ran from November 24 to November 30 and advised the public about the damaging e ects of using the garbage disposal and pouring fats, oils, and grease down the drain. The one-week campaign included banner display ads on pilotonline.com and dailypress.com, 60-second radio ads, and Facebook ads.

As added value for the paid campaign, the Subcommittee also received bonus spots and video blogs on Eagle 97.3 and 92.9 The Wave, bonus spots and question of the week (including a minimum of 15 30-second promos per week) from The Tide (92.3/102.1), bonus spots and feature sponsorship from 106.9 The Fox, and bonus schedule on 1230 WJOI and ESPN 94.1.

Garbage Disposal Use – Holiday Theme

Radio	
Impressions	417,100
Reach	28.9%
Frequency	2.3
Online Newspaper (The Virginian-Pilot & Daily Press)	
Impressions	78,212
Clicks	74
CTR (Click Through Rate)	0.09%
Facebook	
Impressions	77,932
Clicks	2,203
CTR (Click Through Rate)	2.827%
Added Value	
Added Value	$4,136
Added Value Impressions	11,505
Overall Campaign	
Total Impressions	582,056
Total Budget	$5,774
Total Exposure Value	$9,910
Return on Investment	1.72 : 1
Cost per Thousand Impressions	$9.92

What Not to Flush
Women, Age 25-54

"It came from beneath the streets" was the theme of the FOG Subcommittee's FY15 "what not to ush" media campaign. Themed after a classic horror movie, the campaign alludes to the potential for sanitary sewer over ows to occur

spots and question of the week (including a minimum of 15 30-second promos per week) from The Tide (92 3/102 1), sponsorship of the Entercom o ce lunch delivery contest and weekly Facebook posts with "did you know" tips for followers on all four Entercom station pages (over 260,000 followers), and sponsorship of classic country at 5 on US 106 1

What Not To Flush	
Paid Media (1 week)	
Radio	
Impressions	265,050
Reach	46.0%
Frequency	1.7
Online Newspaper (The Virginian-Pilot & Daily Press)	
Impressions	105,405
Clicks	104
CTR (Click Through Rate)	0.10%
Facebook	
Impressions	58,405
Clicks	1,462
CTR (Click Through Rate)	1.64%
AOM Movie Theatre	
Impressions	219,353
Unpaid Media	
Added Value	$8,107
Added Value Impressions	20,071
Overall Campaign	
Total Impressions	700,975
Total Budget	$10,785

FOCUS AREA: What Not to Flush - Stickers
TARGET AUDIENCE: Local Businesses and Municipal Facilities

As a way to spread the "what not to ush" message, the Subcommittee developed water-proof, yet easy to remove stickers that could be posted in public restrooms across Hampton Roads. Local businesses are a natural audience for these stickers as they often su er the consequences of the harmful ushing behaviors of their patrons. Likewise, committee members felt that municipal facilities should install these stickers in public and sta restrooms to further support the campaign

FOCUS AREA: Fats, Oils and Grease Regional Training Program
TARGET AUDIENCE: Food Service Establishment Employees and Grease Haulers

In FY15, the FOG Education Subcommittee continued to utilize the regional website, www HRFOG com for training and certi cation Through the website, grease haulers and food service industry employees receive free training and certi cation on proper maintenance of grease control devices and the harmful e ects of FOG on the region's sanitary sewer systems. The website helps locality sta manage, train and enforce the FOG ordinances present in some Hampton Roads municipalities.

campaign in early 2015. Messaging highlighted the "honest truth" about how our public water systems work and the cost of maintenance that is required to keep it all running smoothly. The two-week campaign, which ran from February 23 through March 8, included banner display ads on pilotonline.com and dailypress.com, 60-second radio ads, and Facebook ads.

As added value for the paid media campaign, the Subcommittees also received bonus spots and question of the week from The Tide (92 3/102 1), weekly Facebook posts with "did you know" tips for followers of the Entercom 1Thing website, and digital billboards or banner ads on the following station websites: 95 9 R&B, 94 9 The Point, 93 7 BOB FM, FM 99, and 1230 WJOI

Infrastructure (Co-promotion with Water Awareness)	
Paid Media (2 weeks)	
Radio	
Impressions	765,600
Reach	30.4%
Frequency	2.3
Online Newspaper (The Virginian-Pilot & Daily Press)	
Impressions	200,592
Clicks	133
CTR (Click Through Rate)	0.07%
Facebook	
Impressions	136,607
Clicks	1,365
CTR (Click Through Rate)	1.021%
Unpaid Media	

glossary of terms

added value
Earned but unpaid advertising value.

ad group
In Search Engine Marketing (SEM), an ad group contains one or more ads which target a shared set of keywords.

average position
A ranking system that determines where your search engine marketing ad will display on a web search results page (i.e. top of page v. bottom of page)

bounce rate
The percentage of visitors who enter the site and "bounce" (leave the site) rather than continue viewing other pages within the same site.

click through rate (CTR)
A way of measuring online advertising. The CTR of an advertisement is determined as the number of clicks on an ad divided by its impressions, expressed as a percentage.

cost-per-click (CPC)
The cost associated with a person clicking on a display ad in search engine marketing.

exposure value
The combination of advertising cost, added value, and public relations value.

frequency
The number of times an individual (among the target audience) is exposed to the message.

reach
The number or percentage of people within the target audience who are exposed to an advertising message at least once over a specific period of time.

search engine marketing (SEM)
The process of attracting traffic to a website from search engine results pages on a pay-per-click basis.

search engine marketing (SEO)
The process of improving the quality of a website so that it appears higher in natural ("organic") search results.

unique visitors (users)
The number of people who visit a website within a specific period of time. If they visit more than one time within the period, their initial visit as well as their subsequent visits are counted as sessions. A user may have one session or multiple sessions.

BMP 1.2f: Supporting Documentation on Poquoson-specific outreach Implement Education: Island Tide articles:

The Island Tide reaches is mailed to every household in the City three times a year and available at City Hall, the Poquoson Library, and other public buildings. An article on water quality was published in each edition.

Fall 2014 Edition:

Storm water has been in the news the last few years, for good reason. Storm water runoff into streams and rivers is the perfect transport for pollution....whether it is soap from washing a car, soil from a bare spot in a yard, spilled chemicals, or sewage from a clogged sewer. Not pretty, and not something you want to swim or boat in.

Obviously, there are many times when we need the rain, and we cannot control the weather. One key to clean waterways is keeping the pollutants away from the storm water. Here are some ways you can help:

- *Wash your car over grass, not driveway or street pavement. More of the soapy water will be absorbed into the yard, and less will runoff into storm drains.*
- *Pick up after your pets. Disposing of pet waste will reduce the amount of bacteria in our rivers.*
- *Think twice about feeding waterfowl. Geese produce a lot of waste and a lot of bacteria.*
- *Don't dump chemicals or oil down storm drains. Not only is it dirty, it is against City Code and state law. If it isn't rain water, it doesn't belong in our pipes and ditches.*
- *The same thing goes for yard waste. Grass clippings and yard debris do not belong in ditches, or alongside them. Environmental advocates recommend leaving grass clippings on your lawn. If you want to collect them, place them in a trash bin, not in a drainage easement.*
- *State law does allow dechlorinated pool water in storm drains. Wait at least a week between the last pool chlorination and when you drain the water. Pool filters should be rinsed out over grass, or the filtered particles should be collected and disposed of in a trash can.*
- *Take care of those bare spots! New plantings look much better than a mud patch, and keep soil from eroding.*

Let's talk sewage. The goal is simple: Keep the sewage in the pipes and out of the storm water. It sounds like a job for the Utilities Department and HRSD. However, homeowners do play a very important role. Here are some steps you can take to avoid an unpleasant mess in your streets, yards and ditches:

- *If you have a septic system, maintain it! If there is a way to connect to a public sewer system, please consider doing so. You'll feel a lot better about walking through your yard on a rainy day if you're connected to sewer or know your septic tank is in good shape.*
- *Make sure sewer clean outs are sealed. Those vertical pipes sticking out of the ground (usually plastic, 4" in diameter) are sewer clean outs that plumbers use to remove clogs. Clean outs should be fitted with a watertight cap that keeps rain water out. If the cap is damaged or missing, rain water can pour in, flooding the sewage system and causing overflows. This is a quick check, a quick fix, and an inexpensive way to keep your neighborhood clean.*
- *If you pour fats, oils, or grease in your drain, you are clogging a sewer somewhere. It might be your pipes or the City's. A clogged sewer eventually overflows. Wipe dishes and cooking pots before you wash them. Don't pour grease down your drain. There is a common myth that garbage disposals can handle grease. Don't believe it....you'll just end up replacing your garbage disposal sooner, and experiencing some bad odors in the meantime.*

Basically, your goal is the same for each of these actions: Keep the pollution away from the storm water. If you take steps to keep the bad stuff out of the storm water, you can make a big difference.

Winter 2014-2015 Edition:

Think Clean Water....Think Trees and Shrubs!

Conversations about cleaning the Chesapeake Bay often focus on the bad stuff---the pollutants. We often hear:

- *Don't over fertilize....the nutrients will run off into the Bay!*
- *Pick up after your pet....that waste is a major source of bacteria!*
- *Don't wash your car on concrete....do it on the grass!*
- *Keep chlorinated pool water out of the drainage system!*
- *Reduce pavement and rooftop area!*

Let's change the focus to a positive action that everyone can do to help the Bay. Let's talk about trees and shrubs.

Now is the time to start planning for spring planting. You might want to consider adding trees and shrubs to your yard. Grass makes a wonderful play surface, but trees and shrubs can put the sod to shame when it comes to water quality....especially if you focus on native species.

Trees and shrubs create less stormwater runoff. They absorb more water than grass. Their leaves catch rain water, increasing evaporation. That means less pollution runs off the land and enters streams. There is an added benefit: the more water the plants and shrubs take up, the less standing water and saturated soil area you'll have in your yard. Every little bit helps.

Trees and shrubs uptake carbon dioxide, and filter air. They help you breathe cleaner, and reduce the air pollution deposited on local rivers. The cleaner the air, the sooner we reach Bay water quality goals.

Trees have other benefits. They provide shade. Sometimes they seem to provide a little more space and privacy between neighbors. They are habitats for animals and nesting areas for birds.

There are a lot of advantages to planting groups of trees and shrubs. If the trees and undergrowth are thick enough, almost no water runs off. The forestry industry uses buffers to protect waters located downstream of forest harvesting operations. The same concept applies to yards...a tree- and shrub-filled Resource Protection Area provides much more Bay water quality than a grassed buffer.

If you're thinking of planting trees and shrubs, go native! Native plants are more resistant to local insects and viruses. You won't be introducing an invasive species (think Kudzu or phragmites) into the local environment. The odds of survival are increased when you plant a species that is suited to local conditions...and if it occurs naturally in an area, a plant or tree is suited to the area.

It's important to think about how and where you plant. Per a Poquoson master gardener, remember "Right plant, right place." We've all looked at a huge tree located very close to a house and thought, "If that thing goes....." A tree planted too close to drainage features will experience eroded root systems as the earth around the roots is washed away by ditch flow. Those trees fall, and City Code bans landscaping in a drainage easement that would interfere with maintenance or block stormwater. Think about how big a tree or bush will grow, and give it room. That way you won't create a "Frankenstein" bush that is overwhelming everything else in the area, or slowly dying off for lack of root space.

There are plenty of resources to help you plant shrubs and trees. A gardening center or master gardeners can provide a lot of information. Check out the plantings and information provided at the Poquoson museum...you may be inspired by what you see. Here are some web resources that focus on trees and plants in Virginia:

Plant more plants: http://www.plantmoreplants.com/

AskHRGreen: http://askhrgreen.org/your-yard/

Virginia Trees: http://www.treesvirginia.org/

Virginia Forestry: http://www.dof.virginia.gov/print/edu/Common-Native-Trees.pdf

Virginia Dept. of Conservation and Recreation:
http://www.dcr.virginia.gov/natural_heritage/nativeplants.shtml

Virginia Native Plant Society: http://vnps.org/

It's winter, and it's cold and drab outside. It's also the perfect time to start thinking about spring and summer yard work. Here's one last thought: the more trees and bushes you plant this year, the less grass mowing in future years. Just sayin'.....

Spring 2015 Edition:

It's time for a Chesapeake Bay TMDL update! You have more than likely seen the topic in the news and discussed at City Council meetings. There have been questions from citizens wanting to know what they can do to help, or whether actions they have already taken can count toward the City's goals. Here's the latest:

What is the program? The Chesapeake Bay TMDL program could be described as the old "Clean the Bay" program on steroids. The requirements are mandatory and much more intensive, the schedule is fixed and extremely fast paced, and local governments like Poquoson are required to do something they have never had to do before: provide stormwater treatment for already-developed land. Until now, stormwater treatment was only provided at the time a development was constructed. Now we have to find treat stormwater runoff from parking lots and buildings that were built decades ago.

This goal is to have all the treatment we need for a Clean Bay in the ground by 2025. A clean bay means more economic opportunity through recreation, fishing and crabbing. It means a beautiful place to live. The region has been working on Cleaning the Bay since the early 1980's. This program is intended to get the job done by removing excess phosphorous, nitrogen, and sediment from our waters.

What is happening in Poquoson? Like other localities in Virginia, we are taking several actions at once to meet program goals and schedules:

- *As this is being written, the City's Action Plan is being formulated. This is a 15-year plan to meet mandatory pollution removal deadlines. The final plan will include treatment options, possible sites, and costs. Barring some unforeseen circumstance, the plan will be finalized and will be available on the City website under the environmental page by the end of June.*
- *City staff is looking for sites to build retrofits. An "ideal" cost effective site would*
    - *Be owned by the City or donated to the City;*
    - *Not be designated for some other purpose, such as a ball field or economic development;*
    - *Be located downstream of developed areas that had been built before the Bay program went into effect; and*
    - *Have the potential to provide some secondary benefit, such as flood storage or recreation.*
- *We are in the process of creating our first two retrofits. These are located near City Hall, and treat runoff from Victory Boulevard, City Hall, and the Oxford Run watershed. The City was awarded a grant for half of the design and construction cost of these projects. As a secondary benefit, both will provide more flood storage in the Oxford Run watershed.*

- *We are working with the state to have more options. Many of the treatment options promoted by the Bay program are not effective in coastal areas where the elevation is low and the groundwater is high. Measures like street sweeping, oyster aquaculture, tree planting and phragmites harvesting have yet to be approved as clean up options. We hope to see more options with better price tags as soon as possible. The more options, the lower the cost, and the faster we can reach our goals.*

What can citizens do to help? A frequent question has been "Will the City get credit for this?" The answer may not be yes, and is often "We're not sure yet." That is okay....the ultimate goal is to Clean the Bay. It is easy to get lost in the credit game, and to forget that every tree planted, every person cleaning up after a pet and every treatment method helps. The EPA is re-evaluating its requirements every few years, and water quality monitoring will show the benefit of work even if a particular action is not credited.

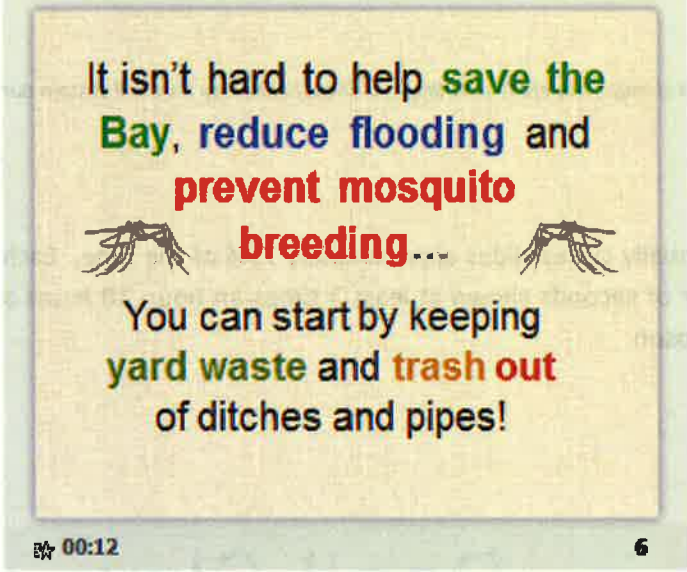
Another way to help is to suggest treatment sites and give us your ideas on the program. These goals are very challenging. Cities like Poquoson that are almost built out are overburdened with extra land on which to put retrofits. Give us your ideas! You can email the City Engineer at ellen.roberts@poquoson-va.gov.

Finally, think clean water. You would be surprised at how many small steps you can take during your day that will help improve our waters. If you want some ideas, check out the askHRgreen.org website at http://askhrgreen.org/ .

That's the latest. This program will continue to evolve and change, hopefully resulting in a Chesapeake Bay that will sustain our community for generations.

BMP 1.2f: The Poquoson Cable Channel continually cycles slides approximately 75% of the time. Each of the following slides appears for the number of seconds shown at least 3 times an hour, 18 hours a day, 7 days a week, to every cable user in Poquoson.


PET OWNERS CAN SAVE THE BAY!
Keep pet waste out of ditches and drains, and you will reduce bacteria in our waters.
Information on proper disposal of pet waste available at City Hall.
00:12
3


It isn't hard to help save the Bay, reduce flooding and prevent mosquito breeding...
You can start by keeping yard waste and trash out of ditches and pipes!
00:12
6


Questions about recycling, smart water use, sustainable landscaping practices or anything related to our Hampton Roads environment? Find the answers at askHRgreen.org
YOUR GO-TO RESOURCE FOR EVERYTHING GREEN IN HAMPTON ROADS
askHRgreen.org
00:15
9

Reducing the Mosquito Population

We all know that mosquitoes can spread diseases such as West Nile virus and Eastern Equine Encephalitis and they can transmit heartworms to your pets. By reducing potential breeding sites you can do your part to reduce the mosquito population. As little as one half inch of water can produce hundreds of mosquitoes. Be aware of areas of standing water such as.....

City of Poquoson

00:12 4

Reducing the Mosquito Population

...children's swimming pools, pet bowls, trash can lids, bird baths, potted plants and other outside containers that can fill with water during a rain shower. Clear any drainage ways on your property to prevent stormwater backup in ditches and NEVER put grass clippings, leaves and other yard debris in drainage ditches or down storm drains.

City of Poquoson

00:12 5

DON'T DUMP IT--PUMP IT! IT'S FREE!

Help clean the bay – free boat pumpout tokens are available at these City offices:

Public Works Parks & Recreation
Planning & Engineering

00:12 7

YARD WASTE HAS IT PLACE.

That place is NOT the drainage system. Keep Ditches Clean, and Keep them Flowing!

00:12 8

BMP 1.2g: Supporting Documentation: *Numbers of Promotional Giveaways*

STORMWATER MANAGEMENT PROGRAM
FISCAL YEAR 2015

Dog Waste Bag Holders

Total Cost	$ 7,612.00	Price	$ 0.70
Storm Cost	$ 7,192.00	Shipping	$ 192.00
Total Ordered	10,600		
Regional Use	n/a		
Storm Order	10,000		

Garden Kneelers

Total Cost	$ 4,950.75	Unit Price	$ 1.81
Storm Cost	$ 4,950.75	Setup+S&H	$ 425.75
Total Ordered	2,500		
Regional Use	n/a		
Storm Order	2,500		

			Dog Waste Bag Holders						Garden Kneelers					
Jurisdiction	FY14-15 Population	Percent	Base Allocation	Pop. Based	Additional Items Purchased	Total Items Per Locality	Picked up	Balance	Base Allocation	Pop. Based	Additional Items Purchased	Total Items Per Locality	Picked up	Balance
Chesapeake	225,898	14%	100	1,134		1,234	1234	0	50	230		280	280	(0)
Franklin	8,680	1%	100	44		144		144	50	9		59		59
Gloucester	36,987	2%	100	186		286		286	50	38		88		88
Hampton	137,372	8%	100	690		790	790	(0)	50	140		190	190	(0)
Isle of Wight	27368	2%	100	137		237	37	200	50	28		78	78	(0)
James City	68,874	4%	100	346		446	446	(0)	50	70		120	120	(0)
Newport News	181,027	11%	100	909		1,009	1009	0	50	184		234	234	(0)
Norfolk	243,985	15%	100	1,225		1,325	1200	125	50	248		298	298	(0)
Poquoson	12,240	1%	100	61		161	161	0	50	12		62	62	0
Portsmouth	96,368	6%	100	484		584	84	500	50	98		148	148	(0)
Smithfield	8,089	0%	100	41		141		141	50	8		58	58	0
Southampton	18,714	1%	100	94		194		194	50	19		69		69
Suffolk	85,692	5%	100	430	300	830	830	0	50	87		137	137	0
Virginia Beach	441,240	26%	100	2,216		2,316	2316	(0)	50	448		498	498	0
Williamsburg	14,256	1%	100	72	300	472	472	(0)	50	14		64	64	0
York	65,973	4%	100	331		431	431	0	50	67		117	117	0
Region	1,672,769		1,600	8,400	600	10,600	9010		800	1,700		2,500	2284	

STORMWATER M
FISCAL YEAR 201

	Clean Healthy Bay Brochures						Scoop the Poop Rack Cards					
	Total Cost						Total Cost					
	Storm Cost						Storm Cost					
	Total Ordered	11,500					Total Ordered	9,300				
	Regional Use	1,000					Regional Use	1,000				
	Storm Order	9,000					Storm Order	9,000				
Jurisdiction	Base Allocation	Pop. Based	Additional Items Purchased	Total Items Per Locality	Picked up	Balance	Base Allocation	Pop. Based	Additional Items Purchased	Total Items Per Locality	Picked up	Balance
Chesapeake	100	999		1,099	1099	0	100	999		1,099	1099	0
Franklin	100	38		138		138	100	38		138		138
Gloucester	100	164		264		264	100	164		264		264
Hampton	100	608		708		708	100	608		708		708
Isle of Wight	100	121		221	221	0	100	121		221	221	0
James City	100	305		405		405	100	305		405		405
Newport News	100	801		901	901	(0)	100	801		901	901	(0)
Norfolk	100	1,079	500	1,679	1679	0	100	1,079		1,179	1179	0
Poquoson	100	54		154	154	0	100	54		154	154	0
Portsmouth	100	426	1000	1,526	1526	0	100	426		526	526	0
Smithfield	100	36		136		136	100	36		136		136
Southampton	100	83		183		183	100	83		183		183
Suffolk	100	379	1000	1,479	1479	0	100	379	300	779	779	0
Virginia Beach	100	1,952		2,052	2052	(0)	100	1,952		2,052	1952	100
Williamsburg	100	63		163	163	0	100	63		163	163	0
York	100	292		392	392	(0)	100	292		392	392	(0)
Region	1,600	7,400	2,500	11,500	9666		1,600	7,400	300	9,300	7366	

STORMWATER M
FISCAL YEAR 201

	Soil Testing Brochures						Water Quality Brochures					
	Total Cost						Total Cost					
	Storm Cost						Storm Cost					
	Total Ordered	10,000					Total Ordered	10,000				
	Regional Use	1,000					Regional Use	1,000				
	Storm Order	9,000					Storm Order	9,000				
Jurisdiction	Base Allocation	Pop. Based	Additional Items Purchased	Total Items Per Locality	Picked up	Balance	Base Allocation	Pop. Based	Additional Items Purchased	Total Items Per Locality	Picked up	Balance
Chesapeake	100	999		1,099	1099	0	100	999.33		1,099	1099	0
Franklin	100	38		138		138	100	38		138		138
Gloucester	100	164		264		264	100	164		264		264
Hampton	100	608		708		708	100	608		708		708
Isle of Wight	100	121		221	221	0	100	121		221	221	0
James City	100	305		405		405	100	305		405		405
Newport News	100	801		901	901	(0)	100	801		901	901	(0)
Norfolk	100	1,079	1000	2,179	2179	0	100	1,079	1000	2,179	2179	0
Poquoson	100	54		154	154	0	100	54		154	154	0
Portsmouth	100	426		526	526	0	100	426		526	526	0
Smithfield	100	36		136		136	100	36		136		136
Southampton	100	83		183		183	100	83		183		183
Suffolk	100	379		479	479	0	100	379		479	479	0
Virginia Beach	100	1,952		2,052	2052	(0)	100	1,952		2,052	2052	(0)
Williamsburg	100	63		163	163	0	100	63		163	163	0
York	100	292		392	392	(0)	100	292		392	392	(0)
Region	1,600	7,400	1,000	10,000	8166		1,600	7,400	1,000	10,000	8166	

BMP 1.3: Provide for Public Participation: Overview & Supporting Data

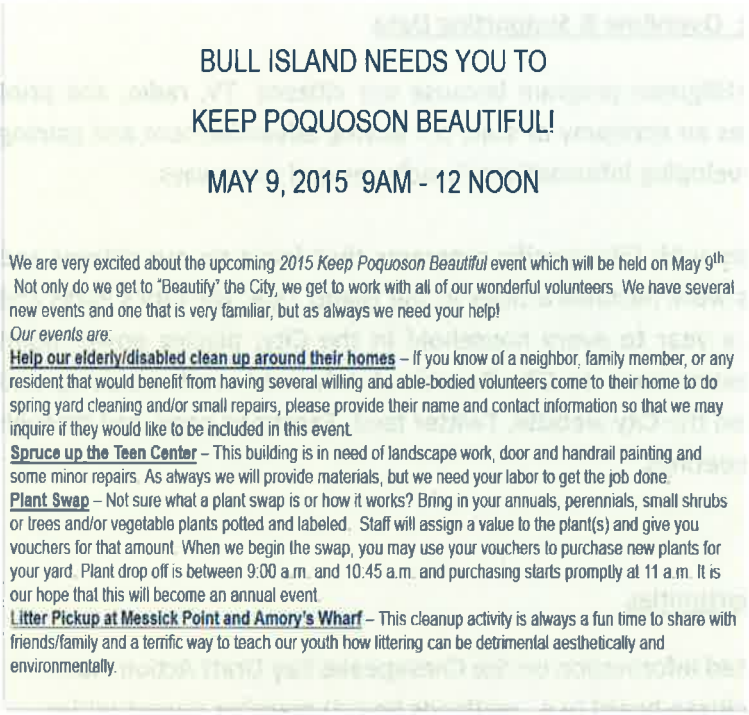
Poquoson participates in the regional askHRgreen program because our citizens' TV, radio, and print markets are regional. AskHRgreen provides an economy of scale for buying advertisement and gaining exposure in the regional media, and for developing informational brochures and giveaways.

The City supplements the regional program with City-specific programs that focus on our citizens and local water quality issues of concern. This work includes articles in the Island Tide, the City's Parks and Recreation magazine distributed 3 times a year to every household in the City; placing power point slides on the City's TV station; staff presentations to City Council at televised work sessions; and advertisement of volunteer opportunities on the City website, Twitter feed, Facebook page, and through announcements at televised City Council meetings.

BMP 1.3a: Local Outreach: Volunteer Opportunities

The Poquoson City website main page posted information on the Chesapeake Bay Draft Action Plan, citizen news, and public participation and citizen board (e.g., wetlands board) member opportunities. The link for this page is: http://www.ci.poquoson.va.us/

The main page has links to the City Beautification page, where information on environmental volunteer activities are also advertised: http://www.ci.poquoson.va.us/city_beautification . The following is an example used for the Keep Poquoson Beautiful event:



BULL ISLAND NEEDS YOU TO

KEEP POQUOSON BEAUTIFUL!

MAY 9, 2015 9AM - 12 NOON

We are very excited about the upcoming *2015 Keep Poquoson Beautiful* event which will be held on May 9th. Not only do we get to "Beautify" the City, we get to work with all of our wonderful volunteers. We have several new events and one that is very familiar, but as always we need your help!

Our events are:

Help our elderly/disabled clean up around their homes – If you know of a neighbor, family member, or any resident that would benefit from having several willing and able-bodied volunteers come to their home to do spring yard cleaning and/or small repairs, please provide their name and contact information so that we may inquire if they would like to be included in this event.

Spruce up the Teen Center – This building is in need of landscape work, door and handrail painting and some minor repairs. As always we will provide materials, but we need your labor to get the job done.

Plant Swap – Not sure what a plant swap is or how it works? Bring in your annuals, perennials, small shrubs or trees and/or vegetable plants potted and labeled. Staff will assign a value to the plant(s) and give you vouchers for that amount. When we begin the swap, you may use your vouchers to purchase new plants for your yard. Plant drop off is between 9:00 a.m. and 10:45 a.m. and purchasing starts promptly at 11 a.m. It is our hope that this will become an annual event.

Litter Pickup at Messick Point and Amory's Wharf – This cleanup activity is always a fun time to share with friends/family and a terrific way to teach our youth how littering can be detrimental aesthetically and environmentally.

Information was also placed on the City Twitter Feed for both the Keep Poquoson Beautiful and the Clean the Bay events. The following is an example of the Clean the Bay event. Similar information was placed for the Keep Poquoson Beautiful event:

- *Clean the Bay Day*, June 6th starting at 9 a.m. at Messick Point. The Community Recreation Department is currently recruiting volunteers for this special cleanup event. Those interested in participating in this worthy effort may do so by emailing Mel Insley at Melvin.insley@poquoson-va.gov.

Information was placed in City employee newsletters and City Council weekly reports for both events:

EMPLOYEE *Minute*

Assistant to the City Manager Message

This weekend you and your family may want to consider participating in one or more of the following fun activities/events:

- *Clean the Bay Day*, June 6th starting at 9 a.m. at Messick Point. The Community Recreation Department is currently recruiting volunteers for this special cleanup event. Those interested in participating in this worthy effort may do so by emailing Mel Insley at Melvin.insley@poquoson-va.gov.

EMPLOYEE *Minute* **April 8, 2015**

Assistant City Manager's Message

The City is still seeking volunteers to assist with this year's Keep Poquoson Beautiful event. The event will occur on May 9th and will include numerous activities such as picking up litter at Amory's Wharf and Messick Point, and performing landscape/minor painting improvements at the Teen Center and at the homes of several elderly/disabled residents. Should you or anyone you know wish to volunteer, please contact our office. The Plant Swap, presented by Keep Poquoson Beautiful and the York/Poquoson Master Gardeners, will occur on the same day. See the attached flyer for all of the details on the Plant Swap.

These events were also announced at City Council meetings and advertised in the Island Tide newsletter. Brochures and posters were distributed throughout the City:

2015 KEEP POQUOSON Beauti-

May 9, 2015

This year we would like to do a couple of different projects and we need your help.

Our Projects:
- *Plant Swap
- *Litter Clean-up
- *Help our elderly/disabled residents clean-up around their home.
- *Teen Center Spruce Up

Our Needs:
- *Plants
- *For you to suggest your family or neighbors who would like help with their spring clean-up
- *VOLUNTEERS

Evie and Bodina (868-3000) look forward to hearing from you

Heron argued that it was unnecessary to clean up one's mess,

to which Bull replied, "Malarkey!"

Plant Swap

1st Annual (hopefully)

Presented by:

Keep Poquoson *Beautiful* and York/Poquoson Master Gardeners

Virginia Cooperative Extension

May 9, 2015 at Municipal Park

9 am–10:45 am Plant Drop off

11 am–12 pm Plant Swapping

12 pm–1 pm Propagation Class
(3 plants to swap or $5.00 entrance fee)

Donations will be accepted for any Plants not swapped.

For more information call 868-3590.

All plants need to be potted and identified. Please no invasive species.

Information about the events was placed in Council weekly reports and mentioned at televised City Council meetings:

A two-page color spread on *Poquoson is the Place* was included in the *Coastal Virginia 2015-2016* publication. A copy of the article is attached for your review.

The Community Recreation Office hosted *Clean the Bay Day* at Messick Point on Saturday, June 6th. Approximately 50 volunteers participated in this annual event including Cub Scout volunteers from Pack 38, the men's group from Kirkwood Presbyterian Church, John Foden of the PPR Advisory Board and his family, and many others. The volunteers gathered approximately 1,015 lbs. of trash and a number of items which would not fit into a bag. The volunteers worked the Messick Point shoreline and cleaned the road ditches all the way to Bill Forrest Seafood. Additionally, some volunteers participated in the event using kayaks this year. This proved to be very helpful as the kayak participants could spot trash not seen from the shoreline and coordinate with on-shore volunteers to retrieve it. Special thanks go to Community Recreation staff member, Mel Insley for his excellent coordination of the event. See the photos below taken at the event.

83 Poquoson Girls ages 8-17 are playing in the City of Poquoson Community Recreation Summer Field Hockey League on the turf at the Middle School. This is the first year Poquoson has hosted a Summer Field Hockey League. To complete the league in the range of age groups and provide enough competition, teams from Tabb and York areas are also participating in the league. All total the league is hosting 180 players from around the area. 17 teams will be fielded with play beginning this week running through July 13th.

One Wetlands Board position and one alternate position were advertised on the City website.

BMP 1.3b: List of articles and advertisements submitted:

Articles for Keep Poquoson Beautiful were submitted to askHRgreen.org.

Keep Poquoson Beautiful and Clean the Bay Day were advertised in the Spring 2015 Island Tide. Articles on Poquoson water quality issues were placed in the Island Tide because the newsletter is distributed to every home in the City. It is an effective way to provide all citizens information on City-specific water quality issues.

AskHRgreen and the City website provided information on a drug take-back event intended to keep pharmaceuticals out of sewers and storm drains. It was also posted in the employee newsletter and in a City Council memo:

MEMORANDUM

TO: Mayor and Council Members

FROM: Assistant City Manager

SUBJECT: **Weekly Report**

Highlights from September 19 – September 25, 2014:

Police Report:

Attached is the Police Department report for the period of 9/17/14 to 9/24/14.

Please remember that the Police Department is partnering with the Poquoson Pharmacy, the DEA and the Virginia State Police for the National Drug Take-Back event that will occur this Saturday, September 27th from 10 a.m. to 2 p.m. at the Poquoson Pharmacy.

BMP 1.3c: List of volunteer postings:

Articles for Keep Poquoson Beautiful and were submitted to askHRgreen.org.

Keep Poquoson Beautiful and Clean the Bay Days and the Plant Swap were advertised in the Spring 2015 Island Tide.

One Wetlands Board position and one alternate position were advertised on the City website.

BMP 1.3d: List & Numbers of Promotional Giveaways

In addition to regional giveaways listed in BMP 1.2g, the City of Poquoson distributed additional materials at several City events.

Give-a-ways for Seafood Festival October 17-19, 2014:

Trash rack card	98 (seafood fest)
Fertilize rack card	74 (seafood fest)
Water wise booklet	25 (seafood fest)
Seed packs	50 (seafood fest)
Chip/note holders	50 (seafood fest)
Pens	50 (seafood fest)

Give-a-ways for Shady Oaks Trailer Park Community Day August 16, 2014:

Fertilize rack card	40
Seed packs	20
Chip/note holders	45
Pens	45
Totes	50

Keep Poquoson Beautiful Day August 16, 2014

T-shirts	73

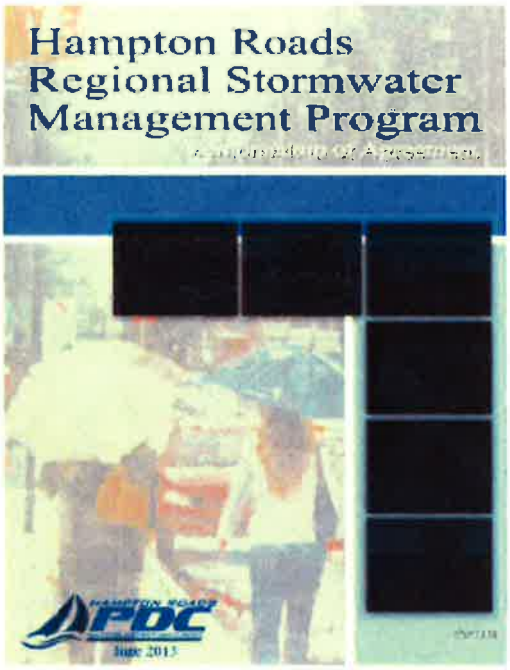
Proof of T-shirt provided to volunteers at Keep Poquoson Beautiful Day:

Farm Fresh
Iris Art Studio
Poquoson Business Association
Poquoson Shopping Center
Port Messick Marina
Fountins of Poquoson, LLC

TOTAL GIVEAWAYS: Combining FY 15 askHRgreen materials and Poquoson special event materials, Poquoson distributed the following:

62	Garden kneelers
161	Dog Waste Holders
154	Scoop the Poop Brochures
154	Clean Healthy Bay Brochures
154	Water Quality Brochures
154	Soil Testing Brochures
73	Keep Poquoson Beautiful T-shirts
114	Fertilizer rack cards
70	Seed packs
95	chip/note holders
95	pens
50	totes
25	Water wise brochures
98	trash rack cards

BMP 1.4 Regional Cooperation: Memorandum of Agreement for Regional Stormwater Program This can also be viewed at http://www.hrpdcva.gov/uploads/docs/09192013-PDC-E14.pdf



[illegible] and other regulated sectors of the state are [illegible] these stated quality of the goals and objectives. The Clean Water Act and the VSMP require that stormwater quantity and quality be managed at the maximum extent practicable.

In meeting our Post stormwater management requirements, the above-named local governments have developed a consensus on regional goals to guide the operation of Post stormwater management programs. [illegible] approach to the HRPDC at its Executive Committee Meeting of September 15, 1994. They are:

1. Manage stormwater quantity and quality in the manner most practicable [illegible]:
   - Implement best management practices (BMP) and water flood control projects to provide water quality benefits
   - Support site planning and plan review activities
   - Manage pesticide, herbicide and fertilizer applications
2. Implement public participation activities to maximize citizen involvement and support for the program.
3. Meet the following needs of citizens:
   - Address flooding and drainage problems
   - Maintain the stormwater infrastructure
   - Protect waterways
   - Provide the most stable funding for the program
4. Implement cost-effective and flexible program components.
5. Satisfy VSMP stormwater permit requirements:
   - Enhance erosion and sediment control
   - Manage illicit discharges, spill response, and prevention.

This Agreement establishes the administrative framework which will be used by the local governments in Hampton Roads to address certain stormwater management issues under the above-cited state and federal laws and regulations.

Eighteen local governments in the Hampton Roads Region will be participants in and signatories to the Agreement.

HRPDC staff/Consultant efforts

Under the terms of this Agreement the HRPDC staff is responsible for the following:

- Provide technical support and policy analysis related to stormwater and water quality issues to local government staff.

- Provide the necessary administrative, technical and clerical resources to support program activities in order to ensure that the VSMP permit holding cities and counties meet applicable stormwater management requirements.
- Prepare an annual work program and budget for the Hampton Roads Regional Stormwater Management Program. The annual work program will be incorporated into the HRPDC Unified Planning Work Program and the annual budget will be incorporated into the HRPDC budget.
- Assist the signatories in record-keeping and reporting on stormwater related activities to other state and federal agencies to ensure that program requirements are met in a cost effective manner, which minimizes duplicative reporting and the administrative burden on the signatories.
- Conduct a regional stormwater education program. This will include public education activities and may include outreach to specific economic sectors and groups. The stormwater education subcommittee of the HRPDC will be responsible for guiding the development of program materials, including publications, media advertising and promotional items. This may also include development of locally-specific materials or coordination of bulk purchases. The stormwater education subcommittee of the HRPDC will work closely with HRPDC staff on the education and outreach components of the Hampton Roads Regional Stormwater Management Program.
- Develop and conduct a regional training program for municipal employees, contractors, civic leaders and other interested parties. The training program will emphasize stormwater management, pollution prevention and good practices.
- Respond accurately and in a timely fashion to requests from all signatory local governments for technical assistance. The time frame for responses will be based on supervisor's the complexity of individual requests and the overall workload of program staff.
- Provide other technical support as requested to the signatory local governments.
- Upon request from one or more participating localities, conduct technical studies to support compliance by the localities with MS4 permit requirements and VSMP program requirements.
- Facilitate development of multi-jurisdictional management plans for shared watersheds as requested.
- Take steps in cooperation with the signatory local governments to obtain financial support for program activities from outside sources, including state, federal and private grants, to the extent that they may be accomplished without creating a conflict of interest as determined by the signatory local governments.
- Contract with and manage consultants including both private firms and academic

institutions to support the regional program, including provision of requested services to local governments in excess of the current program elements.

- Represent the Hampton Roads Regional Stormwater Management Program at federal, state, regional and local governmental, civic, professional and private organizations, agencies and committees.
- Provide technical and administrative support, as appropriate, to those localities that are required to develop stormwater management programs to meet VSMP requirements, but that are not required to obtain MS4 permits for their stormwater discharges.
- Prepare annual program reports or components thereof, which comply with the provisions of the MS4 permit and stormwater management programs of the signatory localities.
- Facilitate local government involvement in TMDL studies being prepared through the Virginia Department of Environmental Quality and EPA, and facilitate preparation of TMDL Implementation Plans for impaired waters in the Hampton Roads Region as requested.
- Prepare an annual report of activities undertaken through the Hampton Roads Stormwater Management Program. This report will include assessment of needed activities undertaken on a watershed basis by the signatories.
- Identify state and federal regulatory actions that may affect local government stormwater programs, serve on regulatory advisory panels (RAPs) as necessary, conduct policy analyses, and develop policy recommendations on behalf of the HRPDC.
- Coordinate the completion of required data for MS4 permit annual reports to the appropriate regulatory authority.

LOCAL GOVERNMENT RESPONSIBILITIES

Under the terms of the Agreement, the signatory local governments are responsible for the following:

- Appoint one voting member and alternate, as appropriate, to the Regional Environmental Advisory Committee to represent the local government stormwater and water quality related concerns. Generally, the policy representative should be the MS4 permit program permittee(s).
- Appoint a representative and alternate, as appropriate, to the stormwater education subcommittee of the HRPDC and [illegible]

- Provide, in a timely fashion, all locally generated data required by their MS4 permits and such other data as may be necessary to accomplish locally requested services.
- Provide timely technical review of HRPDC analyses and conclusions.
- Participate in regional efforts to conduct public outreach and education activities in regard to the state's TMDL study process and efforts to develop TMDL Implementation Plans for impaired waters lying within the locality or within watersheds that include the locality.
- Provide input on regulatory issues to HRPDC staff and serve on RAPs as provided input to the regional MAP representative as appropriate.
- Support HRPDC efforts to obtain additional funding to support the regional programs to the extent that this may be accomplished without creating a conflict of interest, as determined by the signatory local governments.
- Provide annual funding to support the agreed-upon regional program.

METHOD OF FINANCING

Program costs will be allocated on a per capita basis among the local governments. Annual costs will be allocated according to a formula reflecting the local share of regional population. Costs for additional projects or services will be allocated based on a formula developed by the HRPDC staff and approved by the HRPDC with the concurrence of the signatory local governments. The most current estimate of population developed by the Weldon Cooper Center for Public Service/Virginia Employment Commission will be used as the population base for allocating program costs. Local contributions may be adjusted on an annual basis to reflect program experience and projected program expenditures necessary to satisfy permit requirements and local needs. Costs will not be assessed for any services which a participating

Individual local governments may request specific services from the HRPDC which are outside of the program elements common to all participants. The cost of such services will be based on the [illegible] hourly [illegible] localities.

Financial support from other private, local, state and federal agencies, and the private sector, may be sought and received to support the activities of the Hampton Roads Regional Stormwater Management Program. To the extent that this may be accomplished without creating a conflict of interest, as determined by the signatory local governments.

AVAILABILITY OF FUNDS

Performance by the HRPDC of its responsibilities under this Agreement is subject to the availability of funding from the signatory local governments. Failure of the local governments to provide the necessary funding to support these activities will constitute a Notice to Modify or Terminate the Agreement.

MODIFICATIONS

Modifications to this Memorandum of Agreement must be submitted in writing, approved by the HRPDC, and accepted by all signatories.

DURATION AND TERMINATION

This Agreement will have a term of five years, extending from the date of full execution of the revised Agreement by the signatories or June 30, 2013, whichever occurs last through June 30, 2018. To conform to local government charter and Virginia Code requirements, the funding provisions of the Agreement will be subject to annual appropriations.

No later than January 1, 2018, the signatories will initiate a formal reevaluation of the Hampton Roads Regional Stormwater Management Program. This reevaluation will serve as the basis for appropriate modification of the Agreement and the Hampton Roads Regional Stormwater Management Program.

Any signatory may terminate its participation in the Hampton Roads Regional Stormwater Management Program by written Notice To Terminate to all other parties. Such termination will be effective with the start of the following Fiscal Year. Depending upon the terms of individual VSMP permits, termination of participation in the Hampton Roads Regional Stormwater Management Program in the middle of a permit term may result in changes to permit conditions and require renegotiation of the individual locality's VSMP permit from the state (Virginia Department of Conservation and Recreation).

OWNERSHIP OF PROPERTY

It is not the intent of the signatories that the Memorandum of Agreement will result in the purchase, ownership, leasing, holding or conveying of any real property.

INDEMNITY

It is the intent of the signatories that no signatory will be held liable for any damage or associated penalties caused by or associated with the failure of any other signatory to discharge its duties or to exercise due diligence in discharging its duties under this Agreement, and that no signatory, by entering this Agreement, waives any defenses or immunities available to it at law, including, but not limited to, those set forth in Section 15.2-[illegible] of the Code of Virginia.

It is the intent of the signatories that no signatory will be held liable for any damage or associated penalties caused by or associated with the failure of any other signatory to comply with the terms and conditions of the signatory's VSMP permit.

Revised April 3, 2013 7

IN WITNESS THEREOF, the Chief Administrative Officer of the local governments and the Executive Director of the Hampton Roads Planning District Commission hereby execute this Agreement.

City of Chesapeake

Date 6/19/13

James City County

Date 6/28/2013

City of Franklin

By

Date 6/17/13

City of Newport News

By

Date 7/22/13

Gloucester County

By

Date July 3, 2013

City of Norfolk

By

Date 6/17/13

City of Hampton

By Mary B. Bunting, City Manager

Date 6/13/13

City of Poquoson

By
Mayor

Date 6/26/13

Isle of Wight County

W. Douglas Caskey, County Administrator

City of Portsmouth

By

Date July 16, 2013

Revised April 3, 2013 8

Southampton County

By

Date 6/20/13

City of Williamsburg

By

Date 7/11/13

City of Suffolk

By

Date 6/10/13

York County

By

Date 6/14/13

Surry County

By

Date

Town of Smithfield

By Peter M. Stephenson, Town Manager

Date June 4, 2013

City of Virginia Beach

By James K. Spore, City Manager

Date May 30, 2013

Hampton Roads Planning District Commission

By Dwight L. Farmer

Date 7/1/13

Revised April 3, 2013

BMP 1.4b: Regional Stormwater Education Meeting Attendance. Poquoson attended 40% of meetings.

ASKHRGREEN ATTENDANCE PY 2: JULY 2014-JUNE 2015

	July	August	September	October	November	December	January	February	March	April	May	June
Chesapeake		Elizabeth Vaughn				Elizabeth Vaughn		Elizabeth Vaughan		Elizabeth Vaughan		
Gloucester												
Hampton	Cris Ausink			Cris Ausink	Cris Ausink		Cris Ausink	Cris Ausink	Cris Ausink			Cris Ausink
Isle of Wight	Kim Hummel, Brian Bass	Brian Bass, Kim Hummel		Brian Bass/Kim Hummel	Brian Bass/Kim Hummel	Brian Bass	Brian Bass	Brian Bass	Brian Bass	Brian Bass, Kim Hummel		Brian Bass
James City County	Paul Cuomo				Paul Cuomo	Paul Cuomo	Paul Cuomo					Paul Cuomo
Newport News	Allison Watts	Allison Watts		Allison Watt/Dave Kuzma	Allison Watts	Allison Watts	Allison Watts	Allison Watts	Allison Watts	Allison Watts		
Norfolk	Fleta Jackson	Fleta Jackson, Gina Shaw, Alacia Nixson		Fleta Jackson/June Whitehurst	Fleta Jackson	Fleta Jackson, Gina Shaw	Fleta Jackson	Fleta Jackson		Fleta Jackson		Fleta Jackson
Poquoson		Sherry Coffey	Cancelled - CBF Boat Trip	Sherry Coffey			Sherry Coffey			Sherry Coffey	Cancelled Conflict with State Training	
Portsmouth					Christina Murphy	Christina Murphy	Christina Murphy	Christina Murphy	Christina Murphy	Christina Murphy		Christina Murphy
Smithfield				Wayne Griffin		Wayne Griffin						
Suffolk	David Keeling	David Keeling		David Keeling	David Keeling	David Keeling	David Keeling	David Keeling	David Keeling, Alacia Nixson	David Keeling, Alacia Nixson		David Keeling, Alacia Nixson
Virginia Beach		Bill Johnston		Bill Johnston	Sue Kriebel	Sue Kriebel	Sue Kriebel	Sue Kriebel		Sue Kriebel		Sue Kriebel
Williamsburg	Tammy Rojeck				Tammy Rojeck	Tammy Rojeck			Tammy Rojeck	Tammy Rojeck		
York	Ivan Shelton	Ivan Shelton		Ivan Shelton	Ivan Shelton	Ivan Shelton	Ivan Shelton	Ivan Shelton	Ivan Shelton	Ivan Shelton		Ivan Shelton

BMP 1.4c: Regional Stormwater Subcommittee Attendance. Poquoson attended 82% of meetings.

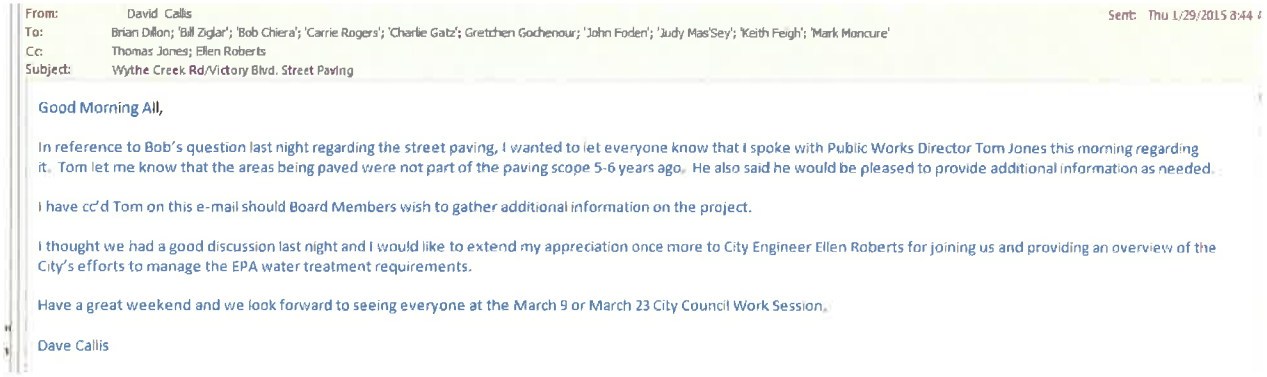
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	**Phase II Meeting Attendance FY 14-15**															
2		Regional SW Workgroup	Regional SW Workgroup	Regional SW Workgroup	Regional SW Workgroup	Regional SW Workgroup	Regional SW Workgroup	Regional SW Workgroup	Regional SW Workgroup & Phase II	Phase II	Regional SW Workgroup	Regional SW Workgroup & Phase II	Regional SW Workgroup	Regional SW Workgroup & Phase II		
3	Meeting Dates	7/16/2014	8/20/2014	9/17/2014	##########	11/19/2014	12/17/2014	1/21/2015	2/18/2015	3/3/2015	3/18/2015	4/15/2015	5/20/2015	6/17/2015	# Meetings	% Attended
4	**Phase II Localities:**	1	1		1	1	1	1		1	1	1	1	1	11	100%
5	Isle of Wight County	1	1		1	1	1	1		1	1	1	1	1	11	100%
6	James City County	1	1		-	1	-	1		1	1	1	1	1	9	82%
7	Poquoson	1	1		1	-	1	1		-	1	1	1	1	9	82%
8	Suffolk	1	1		1	1	1	1		1	1	1	1	1	11	100%
9	Williamsburg	1	1		1	1	-	1		1	1	1	1	1	10	91%
10	York Co.	1	1		1	1	1	1		1	1	1	1	1	11	100%
11																
12	*3/3/2015 meeting was held in addition to the regular monthly meeting.															

BMP 2: Public Participation

BMP 2.2: Public Participation in a minimum of four local activities

List of events where the public could volunteer participate and/or discuss water quality with City of Poquoson staff members:

- October 17-19, 2014: 34th Annual Poquoson Seafood Festival: City staff and community volunteers distributed water quality promotional materials and provided information on stormwater programs. Festival exhibits include Chesapeake Bay-focused displays by VIMS and other organizations. A total of 347 items were distributed by the City; over 60 staff/volunteer hours are estimated to have been spent providing information.
- Saturday, November 15, 2014: Multi-jurisdictional electronics recycling day: Poquoson public works staff member worked 2.5 hours at this event.
- January 28, 2015: The City Engineer met with the Poquoson Parks and Recreation Citizen Advisory Board to present information on the Chesapeake Bay TMDL program and to seek citizen input on Bay TMDL retrofits that might align with the Board's goals.
- May 9, 2015: Keep Poquoson Beautiful Day: 73 volunteers cleaned sites, collecting a total of 2.27 tons of debris. Each volunteer received a T-shirt. This event has grown in popularity over the years, with "branding" resulting in increased citizen awareness of the event.
- June 6, 2015: Clean the Bay Day: 50 volunteers removed over 1015 pounds of debris from the City shoreline. This year's event featured both volunteers walking along the shore and kayakers removing debris from shallow water.
- April 29, 2015: The City Engineer met with made a presentation to three Poquoson High School Ecology classes on stormwater quality, the Chesapeake Bay TMDL, local bacterial TMDL impairment, and the Clean Water Act/state water quality regulatory process. A total of 53 students and one para-educator attended.



From: David Callis Sent: Thu 1/29/2015 8:44 A
To: Brian Dillon; 'Bill Ziglar'; 'Bob Chiera'; 'Carrie Rogers'; 'Charlie Gatz'; Gretchen Gochenour; 'John Foden'; 'Judy MasSey'; 'Keith Feigh'; 'Mark Moncure'
Cc: Thomas Jones; Ellen Roberts
Subject: Wythe Creek Rd/Victory Blvd. Street Paving

Good Morning All,

In reference to Bob's question last night regarding the street paving, I wanted to let everyone know that I spoke with Public Works Director Tom Jones this morning regarding it. Tom let me know that the areas being paved were not part of the paving scope 5-6 years ago. He also said he would be pleased to provide additional information as needed.

I have cc'd Tom on this e-mail should Board Members wish to gather additional information on the project.

I thought we had a good discussion last night and I would like to extend my appreciation once more to City Engineer Ellen Roberts for joining us and providing an overview of the City's efforts to manage the EPA water treatment requirements.

Have a great weekend and we look forward to seeing everyone at the March 9 or March 23 City Council Work Session.

Dave Callis

Ellen Roberts

From: Livia Gong <Livia.Gong@poquoson.k12.va.us>
Sent: Wednesday, April 29, 2015 2:00 PM
To: Ellen Roberts
Subject: RE: helpful websites

Dear Ms. Roberts,

Thank you so much again for coming to our class. Your presentation gave students a lot of things to think about as they enter their adult lives. The level of detail that you provided was perfect, and I really think your presentation helped them to better understand the issues facing Poquoson.

Besides me, there were 53 students and 1 paraeducator present for your talk today.

Please let me know if there is any way that I can further assist you or the Planning Office. We will continue to monitor the water quality of the stream monthly through the end of the school year, and I will make sure that you get copies of our data. I look forward to coming up with some new ideas for future collaboration.

Sincerely,
Livia

BMP 3: Illicit Discharge Detection and Elimination

BMP 3.1: Storm Sewer Map

3.1.a Map of storm sewer system is available at http://poquoson.mapsdirect.net/Search.aspx

3.1.b: Outfall table: In accordance with permit requirements, the outfall table is being developed and updated to provide information on acreages served, MS4 watersheds, and other information. At this time the only applicable TMDL is the Chesapeake Bay TMDL. All outfalls drain into waters impacted by the Chesapeake Bay TMDL.

Outfall #	Ditch Dimensions or Pipe Size	Invert	Downstream Water Body	Hydrologic Unit Code
A1H	12"		Poquoson River	CB21
A1D	12"		Poquoson River	CB21
A1G	18"	3.9	Poquoson River	CB21
A6C	15"		Canal to Lyon's Creek	CB21
A6D	12"	4.47	Lyon's Creek	CB21
A11A	B=2, D=2, Z=1		Canal to Roberts Creek	CB21
A4A	15"	0.99	Roberts Creek	CB21
A4B	24"	0.32	Roberts Creek	CB21
A2B	48"		Roberts Creek	CB21
A1A	B=4, D=.5, Z=1.3		Roberts Creek	CB21
B14	18"	-0.01	Canal to Poquoson River	CB21
A1E	12"	0.91	Roberts Creek	CB21
A1F	15"	1.62	Roberts Creek	CB21
A1C	15"		Canal to Roberts Creek	CB21
A1	B=8, D=5, Z=1.3		Poquoson River	CB21
A7B	12"		Poquoson River	CB21
57	B=3.5, D=2, Z=1		Lyon's Creek	
B16B	B=40, D=4, Z=5	2.78	Poquoson River	CB21
B12A	24"	2.31	Poquoson River	CB21
B13A	B=2, D=2, Z=1.5	3.53	Lambs Creek	CB21
B11B	24"	0	Lambs Creek	CB21
B11A	B=1, D=1, Z=1		Poquoson River	CB21
B11D	18"	1.71	Poquoson River	CB21
B3B	B=4, D=3.5,		Lambs Creek	CB21

	Z=1.7			
B3A	B=4, D=4, Z=2		Lambs Creek	CB21
B11C	B=1, D=0.5, Z=2		Lambs Creek	CB21
B14A	15"	2.6	Poquoson River	CB21
B16A	19"X30"	2.78	Poquoson River	CB21
B13B	24"		Lambs Creek	CB21
B12B	15"		Lambs Creek	CB21
B17	15"		Lambs Creek	CB21
B8D	24"	-1.12	Lyon's Creek	CB21
B8E	24"	-1.06	Lyon's Creek	CB21
B8F	84"X76"	-0.57	Lyon's Creek	CB21
B8G	12"	0.13	Lyon's Creek	CB21
A4C	B=3, D=2, Z=2.25	1	Roberts Creek	CB21
B9A	B=15, D=3, Z=1	0.47	Roberts Creek	CB21
A6E	B=10, D=3.4, Z=1.5	-0.19	Lyon's Creek	CB21
A11B	D=1.2, Z=4	1.53	Roberts Creek	CB21
A1I	18"	4.28	Roberts Creek	CB21
B8H	15"	3.07	Lyon's Creek	CB21
B4A	B=10, Z=2 ,Z=2	0.85	White House Cove	CB21
B5A	18"	1.47	White House Cove	CB21
B5B	18"	1.59	White House Cove	CB21
B5C	12"	1.89	White House Cove	CB21
B5D	12"	1.58	White House Cove	CB21
B8I	15"		Lyon's Creek	CB21
B8J	18"		Lyon's Creek	CB21
B9B	12"		Canal to Lyon's Creek	CB21
B9C	15"		Canal to Lyon's Creek	CB21
B9D	12"		Canal to Lyon's Creek	CB21
B9E	12"		Canal to Lyon's Creek	CB21
B9F	15"		Lyon's Creek	CB21
B9G	12"		Lyon's Creek	CB21
B9H	12"		Canal to Lyon's Creek	CB21
B9I	12"		Canal to Lyon's Creek	CB21
B9J	15"		Canal to Lyon's Creek	CB21
B5E	15"		White House Cove	CB21
A4D	15"		Roberts Creek	CB21
A1J	18"		Roberts Creek	CB21
B4B	18"		White House Cove	CB21
231	24"	-0.86	White House Cove	
D7A	24"		Floyds Bay	CB21
D5C	18"	1.33	Floyds Bay	CB21
D5B	15"	2.56	Bennett Creek	CB21

D5D	18"	1.53	White House Cove	CB21
D5A	18"	1.91	Bennett Creek	CB21
B9K	15"		White House Cove	CB21
23	36"	2.2	Floyds Bay Creek	
B1C	36"	0.34	Lambs Creek	CB21
B1D	24"	1.4	Lambs Creek	CB21
B1E	18"	1.93	Lambs Creek	CB21
B1F	15"	3.13	Lambs Creek	CB21
B1G	15"	2.91	Lambs Creek	CB21
B1H	15"	2.73	Lambs Creek	CB21
B3C	15"	3.53	Lambs Creek	CB21
B1I	15"	3.53	Lambs Creek	CB21
B1J	36"	-0.08	Lambs Creek	CB21
D3F	36"		White House Cove	CB21
B4C	24"		Canal to White House Cove	CB21
C1C	42"X30"	-0.1	White House Cove	CB21
C2E	24"	1.07	White House Cove	CB21
C1A	18"	2.04	Roadside Ditch to White House Cove	CB21
C1F	12"		Canal to White House Cove	CB21
C1G	15"		Canal to White House Cove	CB21
292	12"	4.29	White House Cove	
293	15"	2.45	Canal to White House Cove	
D3B	B=13, D=2, Z=3		Floyds Bay	CB21
D1A	B=7, D=2, Z=3.25		Floyds Bay	CB21
D1B	18"	3.51	Ditch to Floyds Bay	CB21
D3E	12"		Ditch to Floyds Bay	CB21
D1C	30"		Floyds Bay	CB21
F3E	B=5, D=2.5, Z=1.2		Topping Creek	CB22
F3C	18"	1.07	Bennett Creek	CB21
F4B			Bennett Creek	CB21
F5A	30"	0.5	Bennett Creek	CB21
F5B	30"	0.5	Bennett Creek	CB21
D4A	12"		Bennett Creek	CB21
174	18"		Bennett Creek	
D7A	B=12, D=0.5, Z=4		Floyds Bay	CB21
D3D	18"	1.35	Bennett Creek	CB21
D3B	15"	2.02	Bennett Creek	CB21
187	15"	3.73	Floyds Bay	
G1E	B=4, Z=2		Easton Cove	CB21
G6C	24"	-0.17	Canal to Bennetts Creek	CB21
G6B	15"	1.71	Canal to Bennetts Creek	CB21

G6A	15"	1.65	Canal to Bennetts Creek	CB21
G5E	18"	0.84	Canal to Easton Cove	CB21
G1D	B=6, D=2, Z=1.25		Ditch to Easton Cove	CB21
G4C	B=2.5, D=2, Z=1.38		Big Salt Marsh	CB21
G4E	B=2.5, D=1.5, Z=1.5		Big Salt Marsh	CB21
G5C	15"		Bennett Creek	CB21
8	15"		Lambs Creek	
1	3-6'X8'	-1.77	Oxford Run	CB22
168	B=3, D=2	1.58	Oxford Run	CB22
171		-1.47	Oxford Run	CB22
182	D=1, Z=1	7.58	Into Pond	CB22
183	B=3, D=2.5, Z=0.3	-1.87	Oxford Run	CB22
200		0.5	Oxford Run	CB22
254	B=4, D=4, Z=1	-1.29	Cedar Creek	CB22
E2E	24"	-0.08	Canal to Back River	CB22
E2F	24"	-0.08	Canal to Back River	CB22
E2G	36"	-1.15	Canal to Topping Creek	CB22
E2H	24"	-0.11	Canal to Topping Creek	CB22
F7C	B=2, D=3, Z=0.33	1.5	Topping Creek	CB22
F2	B=7, D=1.5, Z=1.67	0.83	Topping Creek	CB22
F2A	B=2, D=2, Z=0.75	1.11	Topping Creek	CB22
F8A	B=2, D=2, Z=1	2.21	Topping Creek	CB22
F7	B=8, D=1.5, Z=3	1.91	Topping Creek	CB22
F6	B=11, D=3, Z=1.5	0	Back River	CB22
F9A	15"	0	Canal at Cedar Landing	CB22
E9B	18"	-0.05	Canal to Back River	CB22
E9C	15"	-0.27	Canal to Back River	CB22
E9D	15"	2	Canal to Back River	CB22
E10	B=2.5, D=3, Z=1	1.63	Cedar Creek	CB22
E2C	B=3.5, D=1.5, Z=2.2	1.82	Cedar Creek	CB22
E2B	18"	1.55	Canal to Cedar Creek	CB22
E9E	18"	1.52	Canal to Cedar Creek	CB22
E9F	18"	1.38	Canal to Cedar Creek	CB22
E9H	18"	1.74	Cedar Creek	CB22
E9G	30"	1.4	Canal to Cedar Creek	CB22
E1B	B=2, D=1.5, Z=2	0.1	Cedar Creek	CB22
E1C	B=2, D=1.5, Z=2	0.3	Cedar Creek	CB22
E3	48"X76"	-0.52	Cedar Creek	CB22
E3A	24"	-0.2	Cedar Creek	CB22

E3C	18"	1.6	Cedar Creek	CB22
E1H	B=10, D=3, Z=1	0.8	Cedar Creek	CB22
E3B	12"	2.97	Cedar Creek	CB22
E10A	18"		Canal to Topping Creek	CB22
F5E	B=4, D=3.5, Z=0.86	0.13	Watts Creek	CB22
G1I	B=18, D=5.5, Z=0.5		Canal to Big Salt Marsh	CB21
G2B	18"		Marsh	CB24
G2A	B=1, D=1, Z=1.75		Long Creek	CB24
G3	B=4, D=1.5, Z=1.67		Long Creek	CB24
G4G	B=6, D=1.5, Z=2		Marsh	CB24
G4B	B=4, D=1.5, Z=1		Big Salt Marsh	CB21
F5C	B=4, D=3.5, Z=1.5		Marsh at Watts Creek	CB22
F5	12"		Watts Creek	CB22
F5D	B=8		Back River	CB22
F5E	B=4, D=3, Z=0.3		Watts Creek	CB22
G1H	18"		Easton Cove	CB21
96	18"		Big Salt Marsh	
99	15"		Big Salt Marsh	
104	24"		Big Salt Marsh	
106	24"		Big Salt Marsh	
108	18"		Big Salt Marsh	
109	18"		Big Salt Marsh	
G3C	12"		Canal to Front Cove	CB24
G3B	12"		Canal to Long Creek	CB24
C9A	48"	-0.82	Brick Kiln Creek	CB22
C12	30"	-0.27	Brick Kiln Creek	CB22
C6B			Brick Kiln Creek	CB22
C6D	15"		Pond	CB22
C6C	B=4, D=1, Z=0	2.89	Brick Kiln Creek	CB22
C12A	18"	1.58	Brick Kiln Creek	CB22
C12B	12"	3	Brick Kiln Creek	CB22
C12C	12"	2.81	Brick Kiln Creek	CB22
C8	D=1. Z=2.5	2	Oxford Run	CB22
G2K	15"		Fore Landing Creek	CB24
G2I	18"		Fore Landing Creek	CB24
G2G	15"		Fore Landing Creek	CB24
8	18"	0.17	Fore Landing Creek	
G3I	15"		Front Cove	CB24
G3H	18"		Front Cove	CB24

BMP 3.1.d Storm drainage outfalls shown on City GIS website:
http://poquoson.mapsdirect.net/Search.aspx

BMP 3.1.g Notify downstream MS4's of interconnectedness: Poquoson is downstream of all other MS4's. The following emails were received from VDOT and York County, the two upstream MS4's interconnected with the City's MS4:

Email from VDOT regarding interconnection, along with Poquoson City Engineer's response:

From: Scott, Andrew B. 'Drew', PE (VDOT) [mailto:Andrew.Scott@VDOT.Virginia.gov]
Sent: Tuesday, March 24, 2015 8:42 AM

To: Ben McFarlane; Bernick, Clay; Brogan, Joseph ; Brumbaugh, Barbara; Brusso, Fred; Carney Dennis ; Drake, Anna; Geissler, Fran; Goodwin, Donald [DHCD-NSP] (DHCD); Griffin, Wayne; Hummel, Kim; Imburgia, David; Jai McBride; Jennifer Tribo; Jill Sunderland; Joe Turner; Johnston, W. J. "Bill"; Julia Hillegass; Katie Cullipher; Khalil, Youssef; Kuzma, David; Lewis, Beth ; Lindgren, Melissa; Murphy, Carolyn; Parks, David ; Quick, Diane; Rae, Scott; Randy Keaton; Rebekah Eastep; Rivas, Angela; Ellen Roberts; Morris, Christine (Christine.Morris@norfolk.gov); Rountree, Erin; Russell, Rhonda ; Kidd, Sara; Saunders, William; Shafer, Justin; Small Aaron; Thomas, Scott ; Tiffany Smith; White, Jennifer ; Whitehurst, June; Whitney Katchmark; Kevin Wyne; Bennett, Mark; Bradshaw, Stacey; Bullard, William S.; Cotnoir, Dave; Diebel, Sarah E.; Everton, Roger (DEQ); Griffin, Chuck; Herbert, Todd ; Hill, Noah (DEQ); Howell, Jennifer (DEQ); Hunley, Will; Kennedy, John (DEQ); Kirkby, Arthur (DCR); Landry, Kevin (DEQ); Miller, Nancy (DEQ); Mitchell, Jamie; Moon, Shep (DEQ); Noyes, Brian; Outland-Williams, Tara; Parker, Kevin; Reitz, Jennifer; Salvati, Joan (DEQ); Smith, Shawn (DEQ); Winslow, Phillip Jr; Allsbrook, Lynn; Anaya, Michael; Arnold, Beth ; Boy, Wayne; Cannady, Keith; Cook, Darryl; Dierks, Ken; Ducey-Ortiz, Anne; Dunlap, Melinda; Durant, Joe; Dyba, Suzanne ; Faulk, Mike; Fowler, H. Reed; Francis, J. Arnie; Gonzalez, Dana (DEQ); Haltom, Frank ; Hare, Tim; Heide, Ed ; Henkel, Kent; Hicks, Gayle; Hoagland, Roy; Karen Holloway; Hughes, Shereen; Hulst, Shannon ; Iyer, Seshadri S. ; Jennings, Donald ; Jill Sunderland; Johnson, Julien W. Jr.; Kriebel, Sue; Magruder, Casey; Martin, Eric; McCarthy, Seamus; McElroy, Mark ; McLaughlin, Steve; McNamara, Whitney ; McNeilan, Tom; McPherson, Jenny; Mills, Scott; Moore, Chris; Nagel, Ryan; Nesbitt., Steve; Pace, Russell; Paine, John; Phillips, Jeryl; Phillips, Richard; Pittenger, Meg; Porter, Stacy; Privette, Jennifer; Rich, Emily; Rosenberg, Lee; Sawan, Sam; Scheessele, Liz; Shaffer, Karen; Shaw, Gina; Slater, Noelle; Robert Speechley; Stephenson, Peter M.; Stiff, Mary-Carson Saunders; Stiles, Skip; Stromberg, David; Swets, Brian; Deborah Vest; Walkup, Beverly; Whitney, Jack; Woodward, Brian; Wright, James
Cc: Darko, Emmanuel O., PE (VDOT); Arnold, Elizabeth, P.E. (VDOT); Reilly, Peter, P.E. (VDOT); Utterback, James S., PMP (VDOT)
Subject: Locality MS-4 Coordination with VDOT

Good morning,

For localities with new MS-4 permits that require coordination with VDOT, please send me a copy of your permit so that VDOT may begin the necessary coordination.

Thanks,

Drew

Andrew B. Scott, P.E.
District Hydraulic Engineer
Virginia Department of Transportation
Hampton Roads District
(757) 925-3685

In response: email from City Engineer to Drew Scott on March 24, 2015. Further review of permit requirements indicated downstream MS4 owners are not required to notify upstream owners. However, this email did provide necessary info to VDOT to ensure they were aware of interconnectivity:

RE: Locality MS-4 Coordination with VDOT

Ellen Roberts

Sent: Tue 3/24/2015 10:11 AM
To: 'Scott, Andrew B. 'Drew', PE (VDOT)'

Drew, not sure what you're looking for here. My permit is the general permit for phase II communities. VDOT drains into our system along Rte 171, Victory Boulevard. At one point about 5 years ago we received a letter from VDOT advising us of that fact. Haven't heard from you guys since. Since the permit requirements have changed so that we are all supposed to be sending letters to any MS4 we are connected to (not just downstream), I'll be sending you a letter before June 30th.

As for coordination: VDOT water is in a roadside ditch. You guys treat your upstream water, we'll treat our downstream stuff! However, I will be glad to meet on this.

Ellen W. Roberts, P.E.
City Engineer
500 City Hall Avenue
Poquoson, VA 23662
(757)868-3025
(757)868-3105 fax

Email Correspondence from York County (upstream MS4):

From:	Brogan, Joe <broganj@yorkcounty.gov>
To:	Ellen Roberts
Cc:	
Subject:	MS4 Interconnectivity Notice

Ellen,

This email shall serve as notification of possible interconnectivity with York County as we discussed in our meeting on April 15, 2015. The only place York County drains into the City of Poquoson is at the outfall ditch to the Woods of Tabb subdivision. Based on guidance from DEQ, since the ditch is Waters of the US, this interconnectivity probably can be eliminated.

Joe Brogan

REPLY FROM CITY ENGINEER TO YORK COUNTY:

RE: MS4 Interconnectivity Notice

Ellen Roberts

Sent: Tue 9/15/2015 11:19 AM

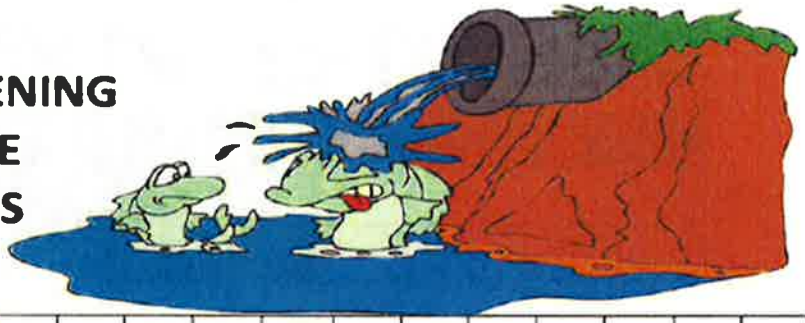
To: 'Brogan, Joe'

Joe, The City is waiting to hear if the Army Corps of Engineers has verified that the ditch in question is a Water of the U.S. A member of the Corps recently conducted a site visit to the ditch and should provide a confirmation of what is and is not WOTUS in the near future. In the meantime, from our Chesapeake Bay TMDL Action Plans, it appears that each locality is taking responsibility for the drainage areas in our respective locality. Nice working with you!

I'll update you when I hear back on the Corps confirmation.

BMP 3.2b; 3.3a; and 3.3c Illicit Discharge and Dry Weather Screening Form (typical). This example shows a report of a suspected illicit discharge. Note: Forms for the entire year are kept in City records. Per conversation last year with DEQ, one sample form is being provided, along with total number of outfalls and length of system inspected.

DRY WEATHER SCREENING
ILLICIT DISCHARGE
DETECTION FORMS



Year 2015																	
Month May																	
Date	4,5	5	7,8,13-15	*8,11	18	18	19	19	20	21	27	28					
TIME	7am-3pm	7am-3pm	7am-3pm	7am-3pm	7am-3pm	7am-3pm	7am-3pm	7am-3pm	7am-3pm	7am-3pm	7am-3pm	7am-3pm	7am-3pm	7am-3pm	7am-3pm	7am-1pm	7am-1pm
	*Check all city clean leaves as part of annual preventative maintenance																
PUBLIC WORKS I.D.NUMBER																	
SECTION	C	B	B		C	C	C	C	C	C	C	C					
DITCH	9c	4	8c		14	16	13	18	20	19	8	8b					
WEATHER :																	
RAINY DRY	W/D	W/D	W/D	D/C	D/C	D/C	W/D	W/D	W/D	R/W	W/D	W/D					
WINDY CALM																	
NOTE REGUARDING WEATHER;FIELD CONDITIONS																	
TYPE OF DRAINAGE STRUCTURE																	
PIPE :																	
DIAMETER :																	
APPROXIMATE LENGTH																	
TOTAL																	
DITCH :																	
PAVED 1075	350			175								500					
UNPAVED 6150		200	775	225	300	300	850	700	900	1000	900						
TOTAL FEET 7175																	
CONDITION IS IT FILLED IN?																	
IS THE PIPE CRACKED?																	
ILLICIT DISCHARGE	N	N	N	N	N	N	N	N	N	N	N	Y					
ARE ANY PIPES OR DITCHES																	
YES - NO												Y					
IF YES, DESCRIBE WHAT YOU SAW AND ANY ACTION TAKEN:												See Form #2					
PHYSICAL INDICATORS																	
DID YOU NOTICE ANY UNUSUAL SMELLS?												N					
SEWAGE																	
PETROLEUM																	
RANCID / SOUR																	
SULFUR (ROTTEN EGGS)																	
DID THE WATER HAVE UNUSUAL COLOR OR OILY SHEEN?IF SO,DESCRIBE:												N					
WAS ANYTHING UNUSUAL FLOATING IN WATER?EX:TOILET PAPER,SUDS ETC.												N					

Date	Ditch Number	Details & Description of discharge,spill,leak etc. found. With information of how it was corrected,addresed ,handled,etc.
5/28/2015	C-8c	Drainage crew found water running in cement swale at 44 Valmoore Drive.Upon investigations
		was found to be flowing from Air Conditioner unit located on the back of detached garage.
		Water was clear, and posed no threat as it was being filtered through existing vegetated area.

BMP 3.3c, 4.2d, 4.3c PY2 Citizen complaints, construction site inspection issues, and illicit discharge/dry weather inspection data

Complaints, Inspection Enforcement and Illicit Discharge/Dry Weather Detection Issues

DATE	PERMIT #	NAME OR ADDRESS OF DEVELOPMENT	ISSUE	ENFORCEMENT ACTION	FOLLOW UP
7/16/2014	N/A: no permit obtained or required	7 HENLEYS WAY	Resulting from City inspection: Possible RPA violation at Single Family home: 2 trees removed in the RPA. Minimal land disturbance (work done by hand; no stump removal)	Stop Work notice issued	Homeowner required to mitigate for loss of 2 trees. Inspections confirmed work was completed.
July 1-July 30, 2015	N/A; in lieu of agreement	Price property	Citizen complaints: 12 calls expressing worry over future drainage problems resulting from nearby property being filled.	City Inspector and Engineer repeatedly visited site and found no E&SC violations or deviations from plans. Drainage plan had been reviewed and found adequate. City has not received any complaints since project completion.	N/A; no enforcement action taken as no violation was found on site. Citizens making complaints were called and information provided by City staff appeared to mitigate some of their concerns.
August 1-30, 2014	N/A; in lieu of agreement	Shepard Lot, Beach Road	Citizen complaints: 2 citizens expressing worry over future drainage problems resulting from nearby property being filled.	City Inspector and Environmental Compliance officer visited site and found no E&SC violations or deviations from plans. Drainage plan had been reviewed and found adequate. City has not received any complaints since project completion.	N/A; no enforcement action taken as no violation was found on site. Citizens making complaints had questions answered and received information from City staf.
9/8/2014	N/A; existing pond (post development)	McDonald's parking lot	Citizen complaint: report of drainage problem at MacDonald's pond.	City inspector visted site; removed trash near outfall; no further issue	N/A; City did a follow up inspection in July 2015 to ensure pond was still being maintained. Pond is in good condition and is in highly visible location that allows for frequent "drive by" inspections by city staff members.
9/12/2014	L13-583	Firth Lane Development	Citizen complaint: report of standing water on site	City inspector visted site; standing water located in sediment traps.	City Engineer met with concerned citizen to explain erosion and sediment control plan.
11/25/2014	N/A post development	103 Freemor Drive	Citizen complaint: Citizen wanted City to install pipe in ditch	City inspector visited site and found that ditch was in good condition. City Engineer recommended not piping ditch because of flow capacity and environmental benefits of ditch	Follow up with Citizen; no action taken

Complaints, Inspection Enforcement and Illicit Discharge/Dry Weather Detection Issues

23-Mar-15	L15-0065	Drakes Landing	City inspection: City inspector and site contractor discussed changes to sequence of construction to provide more protection to adjacent property owners. No issues were evident. This change to e&sc plan was made to ensure adjacent property were not impacted at some future date.	Perimeter ditching/piping installed earlier than called for in sequence of construction. Perimeter ditching relocated in small area to save mature trees at request of adjacent property owners. This resulted in a minimal reduction in disturbed area.	City has not received any complaints from adjacent property owners; no impacts observed during site inspections.
4/3/2015	L15-0057	Fountains of Poquoson	City inspection: Silt fencing was improperly installed	Developer given a week to re-install silt fence. Notice of failed inspection included photographs with notes that explained why the silt fence failed inspection and what was improvements were needed.	City inspector performed follow up inspection on April 13, 2015
4/13/2015	L15-0057	Fountains of Poquoson	City Follow-up inspection: deficiencies were not corrected.	Notice to comply issued on April 2013, 2015. NOC states legal actions would be taken if corrective actions were not made by April 21, 2015	City inspector and Environmental Compliance Officer inspected site and attended a meeting with developer to discuss ongoing e&sc requirements for the project. E&SC found to be acceptable at that time.
5/6/2015	N/a; no permit obtained.	Martin property on Floyd Avenue	City workers observed private property owner blocking City ditch.	City inspector issued Stop Work notice to ensure no further work occurred and then directed property owner to remove ditch obstructions and restore ditch.	Ditch repaired and stabilized.
5/28/2015	n/a	City MS4 Concrete Channel (ditch 8b)	City workers observed a discharge in a concrete channel upstream of tidal area during a dry weather day.	Discharge was followed upstream and found to be air conditioning condensate from a unit located near the ditch. Flow was filtered through a grassed area.	no follow up. Allowable non-stormwater discharge.
6/1/2015	L15-0057	Fountains of Poquoson	City inspector noted areas where silt fence needed to be reinstalled. Concrete wash water facility needed to be installed. Construction entrance also required improvement to prevent sediment from being tracked on City street.	City inspector met with developer and warned him that a Notice to Comply would be issued if improvements were not made.	Improvements made 6/13/15

Complaints, Inspection Enforcement and Illicit Discharge/Dry Weather Detection Issues

6/17/2015	L15-0065	Drakes Landing	Citizen complaint of overfilling property and filling off site	City inspector and City Engineer visited site. No offsite disturbance observed. Sitework appeared to comply with site development plan. Regular inspections continuing. City staff responded to citizens regarding their complaints.
6/19/2015	L15-0057	Fountains of Poquoson	City Engineer went to site and could not find SWPPP	SWPPP was being stored in a locked construction trailer. City staff made it clear that SWPPP must be available to public at all times. City Environmental Compliance Officer met with developer and reviewed SWPPP with him to ensure he understood requirements. SWPPP is displayed on sign located at north east corner of site.

BMP 3.3d: Sanitary Sewer Maintenance/retrofit/repair work in PY2: 25 repair & replacement projects; 5 TV inspections; 1 pressure test

FY 15 Lateral Inspections/Repairs/Cleanings:

1) TV inspected lateral @ **2 Sir Ralph Drive**: lateral has a reverse grade; higher in the manhole than in the yard (Completed: 4 Feb 2014)
2) TV inspected lateral @ **51 Bunting Lane**: TV inspected lateral from house to City main: Could not locate a clean out: Homeowner's Cast Iron pipe is heavily corroded & in need of replacement: City's terra cotta pipe is in good shape (Completed: 11 Feb 2014)
3) Located and repaired City clean out at **13 Bannister Court** & installed casting box: Best Way Plumbing removed roots (Completed: 26 Feb 2014)
4) Repaired City clean out @ **1083 Poquoson Avenue** (Completed 27 February 2014)
5) Excavated lateral at **47 Valmoore Drive**: Discovered that the homeowner's pipe has settled and is mis-aligned with the City's piping: homeowner advised that repairs will be their responsibility (Completed: 6 March 2014)
6) TV inspected lateral @ **14 Ebb Tide Lane**: Located & raised City clean out: (Completed: 20 March 2014)
7) Repaired lateral at **9 Berwick Street**: Replaced 7 Feet of 4" clay pipe with 4" plastic pipe and repaired the street (Completed: 1 April 2014)
8) Repaired 4" sewer lateral @ **208 Little Florida Road**: Replaced 12' of Terra Cotta pipe & cleanout (Completed: 29 May 2014)
9) TV inspected **1305 Poquoson Avenue:** Removed root ball from city clean out: repaired clean out and installed casting box (Completed: 26 June 2014)
10) Contractor tied in new sewer connection for **160 Messick Road** (Completed: 28 July 2014)
11) Tied in new sewer connection for **53 Ren's Road** (Completed: 4 September 2014)
12) Jet rodded the lateral at **69 Lodge Road**: Grease buildup in the lateral: TV inspected: Repaired cleanout riser top (Completed: 15 September 2014)
13) Located clean out & replaced casting box at **22 Belle Lane** (Completed: 23 September 2014)
14) Located clean out at **8 River Road:** Removed roots, repaired riser and installed casting box (Completed: 15 October 2014)
15) Replaced lateral @ **8 River Road:** Removed 18' of clay pipe and installed 4" PVC pipe (Completed: 23 October 2014)
16) Repaired clean out riser & cap @ **49 Ren's Road** (Completed: 30 October 2014)
17) Installed new sewer tap @ **10 Riverview Drive** & abandoned existing lateral (Completed: 12 November 2014)
18) Contractor (Prism Inc.) slip lined laterals @ **887 Poquoson Avenue & 1 Deveron Drive** (Completed: 15 November 2014)
19) Installed Clean Out Casting @ **1067 Poquoson Avenue** (Completed: 2 December 2014)
20) Replaced broken manhole cover on Wythe Creek Road adjacent to McDonald's restaurant (Completed: 3 December 2014)

21) TV inspected laterals @ **887 Poquoson Avenue & 1 Deveron Drive** to verify completion of the slip lining of the laterals (Completed: 3 December 2014)
22) Repaired lateral @ **108 Laydon Way**: Replaced 5 feet of pipe underneath water main (Completed: 11 December 2014)
23) Repaired lateral @ **34 Little Florida Road:** Replaced 15 feet of 4" pipe, repaired clean out and added casting box (Completed: 18 December 2014)
24) Repaired lateral @ **13 Jean Mar Drive:** Replaced 4 feet of clay pipe with PVC pipe: repaired cleanout & installed casting box around cleanout (Completed: 6 January 2015)
25) Installed casting box on new 2" force main originating at Amory's Wharf (Completed: 29 January 2015)
26) Tied in new 2" force main @ manhole located at **1500 Poquoson Ave** (Completed: 4 February 2015)
27) Pressure tested new 2" force main at **1500 Poquoson Ave** (Completed: 5 February 2015)
28) Excavated and repaired grinder pump discharge lines for **15 Frank Hunt Drive** (Completed: 23 April 2015)
29) Repaired 4" lateral @ **18 Hudgins Road** (Completed: 6 May 2015)
30) Repaired 4" lateral @ **104 Kelsor Drive** (Completed: 6 May 2015)
31) Installed new 6" lateral @ **1336 Poquoson Avenue** (Completed: 11 June 2015)

BMP 3.4b: Sanitary Sewer Overflow Reporting System Report: 1 spill; sewage removed with VacTruck before entering MS4.

SSORS ID:	104176
ASSET ID:	
Reported Date:	12/29/2014 2:43:02 PM
Site Name:	Wilson Drive
Site Address:	18 Wilson Drive Poquoson, Va. 23662
Responsible Party:	City of Poquoson
Spilled In Jurisdiction:	Pogouson
SSO Classification:	Other
Incident Description:	Sanitary sewer manhole overflowed due to pump station # 2D control panel failure
Date Phoned In:	
Date Of Incident:	12/28/2014 3:15:00 PM
Date Under Control:	12/28/2014 4:00:00 PM
Spill Duration:	0 hour(s) 45 minute(s).
Possible Receptor:	Lyons Creek
Amount Of Material:	25
Material Units:	Gallons
Material Description:	Residental sewage
Zip Code:	23662
Amount Materials Recovered:	25
Amount Materials Water:	25
Corrective Action:	Replaced pump station control panel air compressor -----December 29, 2014 02:43 PM-----
DEQ Comments:	
SP Northing:	
SP Easting:	
Latitude:	
Longitude:	
Last Edited By:	Robert Speechley

BMP 4: Construction Site Stormwater Runoff Control

BMP 4.1d: Letter from DEQ finding VSMP program implementation compliant:

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
Street address: 629 East Main Street, Richmond, Virginia 23219
Mailing address: P.O. Box 1105, Richmond, Virginia 23218
Fax: 804-698-4019 - TDD (804) 698-4021
www.deq.virginia.gov

Molly Joseph Ward
Secretary of Natural Resources

David K. Paylor
Director

(804) 698-4020
1-800-592-5482

June 13, 2014

J. Randall Wheeler, City Manager
City of Poquoson
500 City Hall Avenue
Poquoson, VA 23662

Dear Mr. Wheeler:

In accordance with §62.1-44.15:27 G of the Virginia Stormwater Management Act (Act), Department of Environmental Quality (DEQ) has completed the review of the City of Poquoson's final Virginia Stormwater Management Program (VSMP) application package submitted on June 02, 2014. Based on this review, DEQ has determined that the City of Poquoson VSMP is consistent with the Act, the VSMP regulation and the General VPDES Permit for Discharges of Stormwater from Construction Activities.

In light of this determination, DEQ approves the City of Poquoson's VSMP; and the City is authorized to operate a VSMP beginning on July 1, 2014. Please note that this approval is based on the content of the application package. Any changes made to the documents in the package after the approval date, including changes to the adopted ordinance, may necessitate DEQ evaluation as part of its compliance review of your approved VSMP.

Thank you for your cooperation in developing a VSMP. We look forward to continuing to assist the City with the implementation of its VSMP.

Sincerely,

David K. Paylor

cc: Melanie Davenport, Director, DEQ Water Division
Frederick Cunningham, Director, DEQ Office of Water Permits
Joan Salvati, Manager, DEQ Local Government Stormwater Programs

BMP 4.2b: E&SC Program Compliance Finding

L. Preston Bryant, Jr.
Secretary of Natural Resources

Joseph H. Maroon
Director

COMMONWEALTH of VIRGINIA

DEPARTMENT OF CONSERVATION AND RECREATION

203 Governor Street, Suite 206
Richmond, Virginia 23219
Phone: (804) 786-2064 Fax: (804) 786-1798

July 24, 2008

Mr. Charles W. Burgess, Jr.
City Manager
City of Poquoson
500 City Hall Ave.
Poquoson, Virginia 23662

Re: City of Poquoson's Erosion and Sediment Control Program

Dear Mr. Burgess:

In response to information presented to the Virginia Soil and Water Conservation Board by the Department of Conservation and Recreation Staff, the Board approved the following motion:

> "The Virginia Soil and Water Conservation Board commends the City of Poquoson County for successfully improving the City's Erosion and Sediment Control Program to become fully consistent with the requirements of the Virginia Erosion and Sediment Control Law and Regulations, thereby providing better protection for Virginia's soil and water resources."

We congratulate the City of Poquoson on this substantial accomplishment and recognize the City's efforts to proactively protect Virginia's soil and water resources through implementation of effective erosion and sediment control.

Sincerely,

Joseph H. Maroon
Director

cc: Karen Holloway, City of Poquoson ESC Program Administrator
Robert Bennett, DCR Tappahannock Regional Manager
Eric R. Capps, DCR Erosion and Sediment Control Program Manager

State Parks • Soil and Water Conservation • Natural Heritage • Outdoor Recreation Planning
Chesapeake Bay Local Assistance • Dam Safety and Floodplain Management • Land Conservation

BMP 4.2c: CBPA Program finding of Fully Compliant:

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Molly Joseph Ward
Secretary of Natural Resources

Street address: 629 East Main Street, Richmond, Virginia 23219
Mailing address: P.O. Box 1105, Richmond, Virginia 23218
Fax: 804-698-4019 - TDD (804) 698-4021
www.deq.virginia.gov

David K. Paylor
Director

(804) 698-4000
1-800-592-5482

VIA E-MAIL

From: Nancy L. Miller, Principal Environmental Planner, DEQ

To: Karen Holloway, Environmental Compliance Officer, City of Poquoson

Date: January 14, 2014

Subject: City of Poquoson, May 9, 2013 Compliance Evaluation Condition Review

On May 9, 2013 the Virginia Department of Conservation and Recreation Virginia Soil and Water Conservation Board conducted a compliance evaluation condition review of the City of Poquoson's Chesapeake Bay Preservation Act program for consistency with the Chesapeake Bay Preservation Act and Regulations, and the Board found the City's Chesapeake Bay Preservation Act program to be fully compliant.

Attached to this e-mail is an excerpt from the Board minutes, as posted at the Virginia Town Hall website. A full copy of the minutes can be accessed via the link below. As always, if you have any questions or need further assistance, please contact me at 804-445-4435 (cell) or via return e-mail at Nancy.Miller@deq.virginia.gov.

http://townhall.virginia.gov/L/GetFile.cfm?File=C:\TownHall\docroot\Meeting\116\19506\Minutes_DCR_19506_v3.pdf

BMP 4.3b Erosion and sediment control enforcement communications

Details of site issues, reports of illicit discharges and construction site inspection issues are listed in BMP 3.3c, 4.2d, 4.3c PY2 Citizen complaints, construction site inspection issues, and illicit discharge/dry weather inspection data, page 57-59 of this appendix. The following enforcement communications are provided for more detail:

Attached E&SC Inspection Report for Fountains of Poquoson (Alphus Street)

Mark Boesen

Sent: Fri 4/3/2015 12:04 PM
To: rwmoses@cox.net
Cc: Karen Holloway; Ellen Roberts; Sherry Coffey; Deborah Vest; Thomas Jones; Bodina Wright

Message E&SC Insp. - Fountains of Poquoson - Pictures.pdf (796 KB)
E&SC Inspection Report - Fountains of Poquoson 15-0403.pdf (133 KB)

Bob,

Attached is a copy of the inspection report for the erosion and sediment control inspection that I completed this morning (4/3/15) at the Fountains of Poquoson (Alphus Street). Please review the inspection report and correct all deficiencies, as noted on the inspection report. A re-inspection of the above project will be completed by my office within 5 to 7 business days to ensure compliance with the above inspection and regulations. You will receive a copy of the inspection report via regular mail, as well...If you should have any questions or concerns, please feel free to contact me...Thanks!

Mark G. Boesen, CCI, CSI, CEI, CTC


SILT FENCE NOT PROPERLY SECURED IN PLACE
SUPPORT POLES/STAKES DO NOT MEET SPECIFICATIONS.
SUPPORT POLES/STAKES ARE IMPROPERLY SPACED
SILT FENCE NOT PROPERLY OVERLAPPED AND/OR SECURED AT CONNECTION
SILT FENCE NOT PROPERLY OVERLAPPED AND/OR SECURED AT CONNECTION
SILT FENCE NOT PROPERLY ENTRENCHED AND/OR BACKFILLED
SUPPORT POLES/STAKES DO NOT MEET SPECIFICATIONS, ARE IMPROPERLY SPACED AND ARE NOT SECURED PROPERLY
SUPPORT POLES/STAKES DOES NOT MEET SPECIFICATIONS AND ARE NOT PROPERLY SECURED
SILT FENCE IS NOT PROPERLY PLACED AND/OR INSTALLED

CITY OF POQUOSON
ENVIRONMENTAL COMPLIANCE
EROSION & SEDIMENT CONTROL

INSPECTION REPORT CHECKLIST
Department of Planning & Engineering

Address / Location: Fountains of Poquoson (Alphus Street)		**Permit Number:** #L15-0057 **Date Issued:** Feb. 25, 2015
Inspector: Mark G. Boesen	**Site Visit Date:** Apr. 3, 2015	**Insp. Time:** 10:30AM
STAGE OF CONSTRUCTION		
__ Pre-Construction	__ Rough Grading	__ Finish Grading
X Clearing & Grubbing	__ Building Construction	__ Final Stabilization
Are site photos attached? Yes	**Photo numbers:** Nine (9) photos	

YES	NO	N/A	*Local Action	MINIMUM REQUIREMENTS DESCRIPTION
X				Is required construction entrance (Minimum of 12' wide and 70' long) installed, unless otherwise specified?
	X			Is required silt fence installed where specified on approved site plan and adequately trenched?
		X		Is inlet and/or tree protection provided, if required?
		X		Is all other requirements shown on the permit / approved site plan been properly addressed?

YES	NO	N/A	*Local Action	
				The property located at the above Address /Location was inspected for erosion and sediment control compliance and has been approved.
X				The property located at the above Address / Location was inspected for erosion and sediment control compliance and has NOT been approved for the following reason(s) indicated below:

CORRECTIVE ACTION(S): Support poles/stakes do not meet specifications and installation requirements. *(Must be 2" x 2" oak or 4" x 4" pine, measuring 5' in length and spaced a max. of 6' apart.)* Silt fence is not properly entrenched in some areas. *(Trench must be approx. 4" wide and 4" deep with silt fence installed and backfilled.)* Silt fence not properly connected at joints. *(Silt fence must be spliced at support poles/stakes a min. of 6" and properly secured.)* Silt fence not properly placed and/or installed along existing detention pond area. *(Silt fence is to be placed and/or installed at the upslope area where land-disturbance is completed to prevent run-off from infiltrating into the pond.)*

NOTE: See attached pictures for reference.

COMMENTS: The above inspection was to insure that required erosion and sediment control was installed, as required and being maintained. Upon visual inspection of the location I found it to be not satisfactory and the site was not within the minimum requirements, rejected at that time.

NOTE: Re-inspection to ensure compliance with the above will be completed within 5 to 7 business days.

Re-inspection of E&SC Completed at Fountains of Poquoson

Mark Boesen

Sent: Tue 4/14/2015 7:27 AM
To: Karen Holloway
Cc: Deborah Vest; Sherry Coffey; Ellen Roberts; Randy Wheeler; Victoria Diggs; Thomas Jones; Cheryl Miller
Message E&SC Notice To Comply - Fountains of Poquoson - 15-0413.pdf (343 KB)
E&SC Inspection Report - Fountains of Poquoson 15-0413.pdf (133 KB)

Please find attached copies of the inspection report and Notice to Comply for the Fountains of Poquoson..As you are aware yesterday afternoon (4/13/15) I completed the re-inspection of the erosion and sediment control requirements at the above project site that is located off of Alphus Street. This inspection was to insure that the project site was within the minimum requirements and that they had completed the corrective actions that were noted on the previous inspection report dated 4/3/15. Upon inspecting the above location I found there appeared to be little to no effort made to complete the corrective actions and/or come into compliance with the minimum requirements for erosion and sediment control. At this time a Notice To Comply has been issued for this project and if no effort to come into compliance is made by the responsible party by April 21, 2015. A Stop Work Notice will be issued and posted on the project site until all requirements and corrective actions are completed to the satisfaction of the City.

As always, if you should have any questions or concerns, please feel free to contact me...Thanks!

Mark G. Boesen, CCI, CSI, CEI, CTC

Construction Inspector

CITY OF POQUOSON
PLANNING & ENGINEERING 500 CITY HALL AVENUE, POQUOSON, VIRGINIA 23662
(757) 868-3040 TELEPHONE (757) 868-3105 FAX

NOTICE TO COMPLY

Permit No. L15-0057
Date: April 13, 2015

To: Fountains of Poquoson, LLC
ATTN: Robert W. Moses
89 Sandy Bay Drive
Poquoson, Virginia 23662

Re: Fountains of Poquoson, Tax Map No. #27-10-00-0004, Alphus Street

An inspection for the erosion and sediment control requirements was completed on April 3, 2015 and was found to be non-compliance and corrective action(s) were required to be completed. A re-inspection of the above-referenced location on April 13, 2015 revealed that the following violation(s) currently exist:

- Non-compliance to erosion and sediment control requirements and corrective action(s) noted on previous inspection report dated 4/3/15.

The following recommendations are made regarding the necessary corrections:

- Complete all corrective actions as noted on inspection report dated April 13, 2015 (See attached).

Notice is hereby given that the violation(s) shall be corrected in accordance with the approved Erosion and Sediment Control plan on or before April 21, 2013. The location will be re-inspected at that time.

Failure to comply with this notice will result in necessary legal enforcement action by the locality to effect the implementation of the approved plan. Please contact this department at (757) 868-3040 if there are any questions and/or to request copies of detail specifications for requirements.

Inspector: Mark D. Bassen
(Signature)

Program Administrator: Karen Holloway
(Signature)

Cc: **City Manager**
Engineering Dept.
Planning Dept.
Building Dept.
File

Following receipt of the notice, the developer met with staff and corrected issues.

PUBLIC WORKS DEPARTMENT
CONSTRUCTION INSPECTIONS

WEEKLY PROGRESS REPORT
April 20, 2015 to April 24, 2015

Report No. 710

- BRICK KILN LLC / CRANDOL PROPERTY (257 Wythe Creek Road) – The developer/owner had fill material hauled into the property and graded the material onto the property.
- DOVE POINT TRAIL (Maguire Property, N. Lawson Road) – No site work and/or construction activities to report.
- DRAKES LANDING (Hunts Neck Road) – H. B. Hankins Inc. resumed clearing operations within the project site area.
- FIRTH LANE TOWNHOMES – No site work and/or construction activities to report.
- FOUNTAINS AT POQUOSON – The developer had their contractor continue land clearing operations within the project site. Perdue II Construction Co. continued the installation of the proposed storm drain system and installed 38' of 18" RCP and set in place proposed drainage structure. They also completed grade work within the project site. Visually inspected the installation of 38' of 18" RCP and drainage structure. Attended on-site meeting with City Staff member and developer/owner to discuss and review issues regarding erosion and sediment control requirements and site compliance.
- ISLAND COVE – The building construction continued to be completed within the project site.
- LAKES AT POQUOSON – The building construction continued to be completed within the project site.
- LYONS LANDING – The building construction continued to be completed within the project site.
- PHILLIPS POINT COVE – The building construction continued to be completed within the project site.
- POQUOSON MARINA PROJECT – No site work and/or construction activities to report.

Regarding STOP WORK Notices at property parcel on Floyd Avenue

Mark Boesen

You replied to this message on 5/6/2015 2:18 PM.

Sent: Wed 5/6/2015 12:06 PM

To: Karen Holloway

Cc: Thomas Jones; Bodina Wright; Sherry Coffey; Ellen Roberts; Deborah Vest; Randy Wheeler; Victoria Diggs; Evie Insley; Cheryl Miller

Message Property Parcel, Floyd Avenue 15-0506 (1).JPG (166 KB) Property Parcel, Floyd Avenue 15-0506 (2).JPG (187 KB)
Property Parcel, Floyd Avenue 15-0506 (3).JPG (185 KB) Property Parcel, Floyd Avenue 15-0506 (4).JPG (218 KB)
Property Parcel, Floyd Avenue 15-0506 (5).JPG (202 KB) Property Parcel, Floyd Avenue 15-0506 (6).JPG (150 KB)

As you are aware I have posted STOP WORK Notices on the property parcels known as Tax Map No. #29-03-00-0032 and #29-03-00-0032A that are located off of Floyd Avenue. The STOP WORK Notices are for unauthorized land-disturbance activities and blocking/interfering with City drainage. I have spoken with the property owner, Mr. John I. Martin, who resides at 74 Carriage Hill Drive, Poquoson, VA 23662. I advised Mr. Martin that he will need to contact your office in regard to obtaining the required permits/approval for completing land-disturbance activities. I also informed Mr. Martin that he will be required to remove the small pipes and re-establish the drainage ditch that is located on the side of the property, in-between his property and 13 Floyd Avenue. I checked the City's GIS and there appears to be a City drainage and utility easement over this ditch, as well as it drains a City street (End of Holly Street). I advised Mr. Martin that if he wishes to pipe in this ditch he will be required to submit an engineered plan for review and approval by Ellen Roberts. But as of now he will need to re-establish the drainage ditch so to not block or restrict the drainage...

Attached are the pictures that I took while I was out there...

I will send Mr. Martin a letter of notice to back up what I informed him of on-site...if you should have any questions or concerns, please feel free to contact me...Thanks!

The property owner removed the conduit and pip from the ditch, removed the fill soil, and restored the ditch cross section, and stabilized the side slopes.

CITY OF POQUOSON ENVIRONMENTAL COMPLIANCE EROSION & SEDIMENT CONTROL	INSPECTION REPORT CHECKLIST Department of Planning & Engineering

Address / Location: Fountains of Poquoson (Alphus Street)				**Permit Number:** #L15-0057 **Date Issued:** Feb. 25, 2015	
Inspector: Mark G. Boesen			**Site Visit Date:** June 1, 2015	**Insp. Time:** 10:00AM	
STAGE OF CONSTRUCTION					
__ Pre-Construction			X Rough Grading	__ Finish Grading	
__ Clearing & Grubbing			__ Building Construction	__ Final Stabilization	
Are site photos attached? No			**Photo numbers:** N/A		
YES	NO	N/A	*Local Action	MINIMUM REQUIREMENTS DESCRIPTION	
	X			Is required construction entrance (Minimum of 12' wide and 70' long) installed, unless otherwise specified?	
	X			Is required silt fence installed where specified on approved site plan and adequately trenched?	
X				Is inlet and/or tree protection provided, if required?	
		X		Is all other requirements shown on the permit / approved site plan been properly addressed?	

YES	NO	N/A	*Local Action	
				The property located at the above Address /Location was inspected for erosion and sediment control compliance and has been approved.
X				The property located at the above Address / Location was inspected for erosion and sediment control compliance and has NOT been approved for the following reason(s) indicated below:

CORRECTIVE ACTION(S): Need to install required silt fence along the easterly side of the project, near the rear of the Langley Federal Credit Union property. Need to re-attach existing silt fence to support poles in some areas. Recommend checking all silt fence and addressing any issues found. Need to re-establish required construction entrance.

COMMENTS: The above inspection was to insure that required erosion and sediment control was installed, as required and being maintained. Upon visual inspection of the location I found it to be not satisfactory and the site was not within the minimum requirements, rejected at that time.

NOTE: Re-inspection to ensure compliance with the above will be completed within 5 to 7 business days.

* Denotes a violation observed on site, but it is being addressed through enforcement action

Attached E&SC Inspection Report for Fountains of Poquoson (Alphus Street)

Mark Boesen

Sent: Mon 6/1/2015 10:54 AM
To: rwmoses@cox.net
Cc: Karen Holloway; Ellen Roberts; Sherry Coffey; Deborah Vest; Thomas Jones; Bodina Wright

Message E&SC Inspection Report - Fountains of Poquoson 15-0601.pdf (88 KB)

Bob,

Attached is a copy of the inspection report for the erosion and sediment control inspection that I completed this morning (6/1/15) at the Fountains of Poquoson (Alphus Street). Please review the inspection report and correct all deficiencies, as noted on the inspection report. A re-inspection of the above project will be completed by my office within 5 to 7 business days to ensure compliance with the above inspection and regulations. You will receive a copy of the inspection report via regular mail, as well...Also as a reminder please keep up with inspections and have copies of the inspection reports located on-site for the SWPPP. If you should have any questions or concerns, please feel free to contact me...Thanks!

Mark G. Boesen, CCI, CSI, CEI, CTC
Construction Inspector
City of Poquoson
500 City Hall Avenue
Poquoson, Virginia 23662
OFFICE (757) 868-5312
FAX (757) 868-3545

RE: Attached E&SC Inspection Report for Fountains of Poquoson (Alphus Street)

Mark Boesen

Sent: Thu 6/11/2015 11:46 AM
To: rwmoses
Cc: Karen Holloway; Ellen Roberts; Sherry Coffey; Deborah Vest; Thomas Jones; Bodina Wright

While I was out at Fountains of Poquoson I noticed that you still haven't completed the requirements that are listed on the Inspection Report dated June 1st. Please be advised that you are responsible for insuring that the required erosion and sediment control measures are in place and operating within the minimum requirements. Also I noticed that dirt and sediment was being tracked from the project site out onto the roadway (Alphus Street)...This needs to be cleaned up at the end of each work day...I will checking the site again for compliance...Please have all the items noted on the above mentioned inspection report completed to prevent issuance of a Notice To Comply.

As always, please feel free to contact me if you should have any questions or concerns. Thank you.

Mark G. Boesen, CCI, CSI, CEI, CTC
Construction Inspector
City of Poquoson
500 City Hall Avenue
Poquoson, Virginia 23662
OFFICE (757) 868-5312
FAX (757) 868-3515

RE: Attached E&SC Inspection Report for Fountains of Poquoson (Alphus Street)

Mark Boesen

Sent: Fri 6/12/2015 9:27 AM
To: rwmoses
Cc: Karen Holloway; Ellen Roberts; Sherry Coffey; Deborah Vest; Thomas Jones; Bodina Wright

Bob,

Thank you for meeting with me on-site this morning to discuss the erosion and sediment control requirements. As per our meeting the following items/issues need to be addressed:

- Make necessary repair work to the construction entrance to insure that dirt, mud and sediment is not tracked/transported onto roadway (Alphus Street). Clean all dirt, mud and sediment from roadway at the end of each work day.
- Check and insure that all installed silt fence is in place, attached and functioning as required.
- Repair inlet protection around proposed CDI #1-1.
- Install and maintain concrete wash-out area.

As discussed during our meeting I see no need at this time to install the required silt fence along the easterly side of the project, near the rear of the Langley Federal Credit Union. Also as discussed please have the pavement path installed as soon as possible on the area where the sanitary sewer connection was completed within Alphus Street. Until the patch is installed please have all the stone cleaned up from the roadway...If you should have any questions and/or concerns, please feel free to contact me...Thanks!

Re: Attached E&SC Inspection Report for Fountains of Poquoson (Alphus Street

Mark Boesen

Sent: Sat 6/13/2015 7:48 AM

To: rwmoses

Cc: Karen Holloway; Ellen Roberts; Sherry Coffey; Deborah Vest; Thomas Jones; Bodina Wright

Thanks Bob...

- Mark

Sent from iPhone

On Jun 13, 2015, at 7:19 AM, rwmoses <rwmoses@cox.net> wrote:

> Mark,
> The road is swept of rocks and dirt clogs, and the silt fence around the drop inlet is repaired. Someone had cut it intentionally.
> Thank you!
> Bob
>
> Sent from my Verizon Wireless 4G LTE smartphone

BMP 4.3c: Modifications to E&SC plan to save mature trees and protect adjacent properties from runoff during construction

In Regard to Drakes Landing...

Mark Boesen

You replied to this message on 3/23/2015 9:37 AM

Sent: Mon 3/23/2015 7:45 AM

To: Deborah Vest; Ellen Roberts; Thomas Jones; Randy Wheeler

Cc: Karen Holloway; Kevin Wyne; Sherry Coffey; Bodina Wright; Victoria Diggs

Landing that will be located off of Hunts Neck Road. The meeting was in regard to the sequence of construction and he was looking to change a few things to help with drainage on the site. The changes are due to the site being extremely wet. He proposed installing the sections of the storm drain pipelines along the northern side of the development. This is to include the 116' of 14" x 23" HECP that ties into the proposed BMP #1. The 200' of 15" RCP and the 104' of 14" x 23" HECP, as well as the 325' of earthen ditch that these pipe systems tie into. I informed Mr. Mullins that he would still be responsible for protecting these pipelines during construction, as well as stabilize the ditch and BMP area. Mr. Mullins indicated he would seed and install erosion matting in these areas and protect them during construction.

Mr. Mullins also expressed a concern with the proposed regrading of the existing ditch that is along the property line on the Moore property, adjacent to the southern side of the project. Mr. Mullins indicated there were trees along the edge of this ditch and the proposed 3:1 slopes would be difficult to install without removing or damaging the root systems on these trees. He proposed keeping the 3:1 slopes on the Drakes Landing side of the ditch, but leave the Moore property side in tract with only moderate grading to achieve drainage. Mr. Mullins also indicated that he would contact Mr. Moore, if there was a need to disturb the trees in any way.

Lastly Mr. Mullins indicated he would begin clearing operation today (3/23/15) to clear the areas where silt fence needs to be installed and hopefully would have this completed and the silt fence installed by the end of the week. If anyone should have any questions or concerns, please feel free to contact me. Thanks!

BMP 4.5b: Current VPDES permits for construction projects in Poquoson. Four are active; the remainder have not applied for a land disturbance permit. These were approved by DEQ because applications were sent to DEQ prior to July 1, 2013. Poquoson has not received a VSMP permit application since July 1, 2013.

2014 Construction General Permits

DEQ Permit Number	DEQ Region	Operator Name	Operator Address	Operator City	Operator State	Operator Zip	Site Name
VAR10C494	TRO	Pomoco Developments Inc	4116 W Mercury Blvd	Hampton	VA	23666	Drakes Landing
VAR10C516	TRO	American Eastern Inc	632 Hampton Hwy	Yorktown	VA	23693	Poquoson Town House
VAR10D929	TRO	Poquoson Commons Retail Inv	3735 B Beam Rd	Charlotte	NC	28217	Poquoson Commons Outparcel
VAR10E065	TRO	Fountains of Poquoson LLC	89 Sandy Bay Dr	Poquoson	VA	23662	The Fountains of Poquoson
VAR10E188	TRO	Wayne Harbin Builder Inc	3630 George Washington Mem	Yorktown	VA	23693	Village Park
VAR10E576	TRO	C.A. Barrs Contractor Inc.	7601 George Washington Mem	Yorktown	VA	23692	Pickins Lane Subdivision
VAR10E961	TRO	JD and M LLC	16 Walters Rd	Newport News	VA	23602	Printers Alley
VAR10F100	TRO	Rick West	24 Victory Blvd	Poquoson	VA	23662	Hunts Neck Rd Family Subdivis
VAR10F766	TRO	John I Martin et al	74 Carriage Hill Dr	Poquoson	VA	23662	Martins Seafood Wholesale
VAR10F950	TRO	Ashland Woods LLC	606 Thimble Shoals Blvd Bldg A	NEWPORT NEWS	VA	23606	Jessicas Place
VAR10G404	TRO	Precisions Services Inc	PO Box 155	Barhamsville	VA	23011	Whitehouse Cove Marina

E&SC Requirements for the Victory Cove Subdivision (Emmaus Road)

Mark Boesen

Sent: Tue 6/16/2015 12:32 PM
To: Karen Holloway
Cc: Ellen Roberts; Sherry Coffey; Deborah Vest; Thomas Jones

Karen,

While on-site this morning (6/16/15) at the Victory Cove Subdivision that is located off of Emmaus Road, I discussed the erosion and sediment control requirements with the contractor (C. A. Barrs Contractors Inc.). As you are aware they have begun the clearing operations within the project site and are actually in the final stage of completing the clearing. They have also begun stripping the topsoil and stockpiling the material on-site...As of now all of the perimeter silt fence has been installed with the exception of a small area at the front of the project near the access entrance. This small section was left out so that the contractor could gain access to remove two large pine trees in this location...Once the trees are removed they will install the silt fence, as required...

One question that contractor had during our discussion was if they could use the use the existing gravel roadway (Pickins Lane) as their construction entrance. Being the lane is well-established and has a good stone base I felt it would be acceptable for use as a construction entrance at this time. However I did advise the contractor that they will be responsible for maintaining it and insuring if any dirt, mud, sediment or debris that was tracked out onto the main roadway (Emmaus Road) was cleaned up by the end of each work day.

I will complete the initial E&S inspection tomorrow and submit my report to you...Also the contractor has installed a suitable mailbox that contains their SWPPP documentations...

Thanks!

RE: Attached E&SC Inspection Report for Fountains of Poquoson (Alphus Street)

Karen Holloway

Sent: Mon 6/22/2015 9:10 AM
To: rwmoses; Ellen Roberts; Mark Boesen
Cc: Sherry Coffey; Deborah Vest; Thomas Jones; Bodina Wright

Good morning, Bob,

I am available to meet with you today if possible. You can either come by the office or I can meet you at your office trailer. Thanks!

Karen

From: rwmoses [mailto:rwmoses@cox.net]
Sent: Monday, June 22, 2015 9:06 AM
To: Ellen Roberts; Mark Boesen
Cc: Karen Holloway; Sherry Coffey; Deborah Vest; Thomas Jones; Bodina Wright
Subject: RE: Attached E&SC Inspection Report for Fountains of Poquoson (Alphus Street)

Ellen,
The 3-ring binders are locked in the trailer. The key to the lock is hanging on a nail about 5' off the ground on the back side of the tree closest to the rear most door of the trailer.
I printed and placed in the binder a copy of all emails. I need to spend a few minutes with Karen to determine whether i am to use the table in section 8 or 9 to log these.
Thanks.
Bob

RE: Attached E&SC Inspection Report for Fountains of Poquoson (Alphus Street)

Karen Holloway

Sent: Wed 6/24/2015 1:27 PM
To: rwmoses; Ellen Roberts; Mark Boesen
Cc: Sherry Coffey; Deborah Vest; Thomas Jones; Bodina Wright

I'll see you then. Please make sure to bring your SWPPP so we can go over it all. Thanks!

From: rwmoses [mailto:rwmoses@cox.net]
Sent: Wednesday, June 24, 2015 9:06 AM
To: Karen Holloway; Ellen Roberts; Mark Boesen
Cc: Sherry Coffey; Deborah Vest; Thomas Jones; Bodina Wright
Subject: RE: Attached E&SC Inspection Report for Fountains of Poquoson (Alphus Street)

Thursday, 1pm.
Thanks Karen.
Bob

The developer posted the SWPPP where it could be available to the public 24 hours/day. The Environmental Compliance Officer met with the developer and reviewed SWPPP requirements. The developer appears to have a better understanding of site requirements.

BMP 5: Post Construction Stormwater Management

BMP 5.2a, 5.3a, and 5.2b: List of Commercial, HOA, and Municipal BMPs within Poquoson, with inspection dates. BMP's with maintenance agreements are shown in bold-faced type.

Commercial, HOA Municipal BMP's
(excerpts from DEQ Historic Data Submittal. BMP's shown in bold faced type are subject to maintenance agreements)

Practice	Practice	Area			Practice Location			Practice Inspection				
*Location	*Name	Date Installed	BMP Name	Total Acres Treated	Impervious Acres Treated	HUC12	Latitude	Longitude	Inspect Date 1	Inspect Date 2	Inspect Date 3	Inspect Date 4	Inspect Date 5
Vantage Drive	Bayside	7/1/1998	Wet Pond	13.415	1.790	020801080101	37.1303	-76.4032	2/21/1990	12/20/1988			
Wythe Creek Road	Express Lube/Advance Auto	11/5/1999	Wet Pond	1.570	0.834	020801080102	37.1204	-76.3914	**12/7/2012**	**5/5/2010**	3/22/2010	9/30/2002	
Victory Blvd	KFC/Taco Bell/Pizza Hut	7/1/2003	Wet Pond	1.295	0.620	020801080102	37.1252	-76.3943	**4/22/2013**	4/2/2002	9/28/2001		
416 Wythe Creek Rd.	Langley FCU	7/1/1998	Wet Pond	1.620	0.940	020801080102	37.1221	-76.3924	**7/16/2015**	5/15/1998			
S. Lawson Rd	Lawson Park	7/1/2009	Wet Pond	16.379	2.297	020801080101	37.1249	-76.3532	**6/1/2015**	7/1/2013			
Wythe Creek Road	McDonalds	7/1/1995	Wet Pond	1.032	0.690	020801080102	37.1236	-76.393	**7/16/2015**	7/15/2004	9/25/1995		
Wythe Creek Road	Poquoson Commons #1	7/1/2000	Wet Pond	6.030	2.270	020801080102	37.1227	-76.3947	**7/16/2015**				
Wythe Creek Road	Poquoson Commons #2	7/1/2000	Dry Detention Ponds	4.000	2.910	020801080102	37.1225	-76.3936	**7/16/2015**				
Wythe Creek Road	Rite Aid	7/1/2000	Dry Extended Detention Ponds	1.400	0.670	020801080102	37.1225	-76.3923	**7/16/2015**				
563 Wythe Creek Rd	Poquoson Fire Station 2	7/1/2001	Dry Detention Ponds	0.750	0.446	020801080101	37.1321	-76.3908	**7/9/2015**	7/1/2008	7/1/2004		
563 Wythe Creek Rd	Poquoson Fire Station 2 (2)	7/1/2001	Dry Detention Ponds	0.390	0.226	020801080101	37.1328	-76.3913	**7/9/2015**	7/1/2008	7/1/2004		
Wythe Creek Road	Poquoson Place Apts	7/1/1986	Wet Pond	18.076	7.467	020801080101	37.1314	-76.3948					

Commercial, HOA Municipal BMP's

(excerpts from DEQ Historic Data Submittal. BMP's shown in bold faced type are subject to maintenance agreements)

Valasia Road	Townvillas South Homes Assoc	7/1/1987	Wet Pond	9.938	4.736	020801080101	37.1304	-76.3935							
WCR/Yktn/PoqAve	VDOT Pond	7/1/1998	Wet Pond	4.807	1.958	020801080101	37.1359	-76.3909	10/18/2011						
105 Rens Road	White House Cove Marina	11/10/2011	Filtering Practices	0.052	0.052	020801080101	37.1419	-76.3768	3/19/2012	10/17/2011	7/29/2011				
105 Rens Road	White House Cove Resort Homes Filterra #1	10/22/2014	Filtering Practices	0.340	0.160	020801080101	37.141	-76.3786	11/12/2014						
105 Rens Road	White House Cove Resort Homes Filterra #2	10/22/2014	Filtering Practices	0.120	0.080	020801080101	37.1411	-76.3786	11/12/2014						
Wythe Creek Road	Wythe Creek Mini Storage	7/1/2004	Wet Pond	4.756	3.257	020801080102	37.1189	-76.391	7/16/2015	10/12/2006	9/5/2006	11/9/2004			
Weston Dr.	Bennett Creek Point	11/22/1996	Wet Pond	5.482	1.826	020801080101	37.1339	-76.3627	5/22/2014	5/5/2011	3/1/2008	8/1/2007	7/1/2005		
Darden Dr	Bull Run	10/28/1998	Dry Pond	10.663	2.828	020801080101	37.1448	-76.4059	7/1/2007	7/23/2004	7/1/2004	7/1/1998			
Channelwalk Dr	Channelwalk	1/22/1999	Wet Pond	7.922	2.093	020801080102	37.1219	-76.3616	12/5/2013	5/1/2010	5/1/2008				
Yorktown Rd	Garden Atriums	2/6/2003	Wet Pond	3.115	1.065	020801080101	37.1371	-76.3908	7/1/2005	4/1/2005					
Dryden Dr.	Heritage Cove Pond 1	2/5/1996	Wet Pond	56.664	15.210	020801080101	37.1372	-76.4083	10/17/2011	7/1/2009	7/1/2003	7/1/1998			
Callis Ln.	Heritage Cove Pond 2	2/5/1996	Wet Pond	13.449	2.722	020801080101	37.1394	-76.4069	10/17/2011	7/1/2009	7/1/2003	7/1/1998			
Dryden Dr	Heritage Cove Shallow Marsh	2/5/1996	Constructed Wetland	2.257	0.747	020801080101	37.139	-76.4098	10/17/2011	7/1/2009	7/1/2003	7/1/1998			

Commercial, HOA Municipal BMP's
(excerpts from DEQ Historic Data Submittal. BMP's shown in bold faced type are subject to maintenance agreements)

Black Oak Ct.	**Hollys**	5/16/2000	Wet Pond	7.540	2.280	020801080102	37.1258	-76.3697	6/1/2006				
Pheasant Dr.	**Hunts Cove**	8/13/2002	Wet Pond	9.388	2.999	020801080101	37.1345	-76.3713	**12/1/2012**	8/12/2009	2/13/2006	7/26/2004	
Hunts Neck Rd	**Hunts Neck Estates**	2/2/2006	Wet Pond	16.460	6.130	020801080101	37.1502	-76.402	**10/31/2012**	6/10/2010	5/1/2006		
Elm St.	**Island Cove**	6/21/2007	Wet Pond	5.695	1.283	020801080101	37.1345	-76.3648	**4/30/2012**	6/10/2010	7/1/2007		
Wornom Farm Dr.	**Lakes at Poquoson**	9/7/2005	Wet Pond	27.244	5.720	020801080101	37.1439	-76.3963	**3/4/2014**	1/7/2014	6/20/2011	7/1/2005	
W. Laydon Way	**Lawson Farms**	3/20/2001	Wet Pond	21.500	6.200	020801080102	37.1226	-76.3697	**7/1/2013**	7/1/2010	7/1/2006	7/1/2004	
Henley Way	**Lyons Landing**	9/23/2005	Wet Pond	5.964	1.566	020801080101	37.1503	-76.3844	**9/13/2013**	3/29/2011	10/1/2008	4/1/2006	6/1/2005
Crescent Pt.	**Phillips Point Cove**	12/19/2001	Wet Pond	14.200	2.581	020801080101	37.1365	-76.3791	**7/16/2015**	9/1/2006	7/1/2001		
Hollingsworth	**River's Edge**	12/3/2007	Wet Pond	11.701	1.171	020801080101	37.1531	-76.386	**7/14/2014**	3/1/2014	8/1/2013	10/28/2013	10/25/2012
Villa Dr.	**Villas Phase 1**	11/8/2005	Wet Pond	8.147	3.622	020801080102	37.1155	-76.3943	**9/11/2012**	6/24/2009	10/3/2006	7/22/2005	
Villa Dr.	**Villas Phase 1 (2)**	11/8/2005	Wet Pond	7.618	3.840	020801080102	37.1177	-76.3938	**9/11/2012**	6/24/2009			
Huntlandia Way	**Villas Phase 2**	7/1/2008	Urban Infiltration Practices	4.130	2.200	020801080102	37.1188	-76.3936	**7/16/2015**	9/11/2012			
Wythe Creek Road	Poquoson Baptist Church	9/8/2005	Wet Pond	2.485	1.013	020801080102	37.1133	-76.3946	9/8/2005				
Hunts Neck Rd	**Masonic Lodge**	7/1/2009	Dry Extended Detention Ponds	0.848	0.498	020801080101	37.1394	-76.3917	**7/13/2015**	4/10/2009			

BMP 5.2d: Poquoson tracks single family home BMPs that are not subject to maintenance agreements. Postcards sent to single family home BMP owners reminding them to maintain their facilities:

City of Poquoson

Reminder

As a property owner who has received permission to develop within the 100-foot Resource Protection Area (RPA) buffer you are reminded of the water quality features you installed to offset impacts to the buffer. Now that spring has arrived please take this time to inspect your water quality features and repair or replace items as needed to ensure that they continue to provide the water quality intended. It is our goal to protect our waterways for future generations and your cooperation will help us to achieve that goal.

Please contact the Community Development Department if you have any questions.

500 City Hall Avenue
Poquoson, VA 23662
Phone: 757-868-3040

CITY OF POQUOSON
500 CITY HALL AVENUE
POQUOSON, VA 23662

PLEASE
PLACE
STAMP
HERE

Property Owner

39 Woodland Road

Poquoson, VA 23662

BMP 5.2d: Inventory of Single Family Home BMP's:

Revision Date 9/25/15

BMP Spreadsheet (highlighted = complete)

Address	Approval Type	Approval Date	Tax Map Number	N	W	BMP Type	Drainage Area	Area of Buffer	HUC	Last Inspection
Rivercrest Drive 4	#05-04, #10-11, B	4/13/2005	5(7)23	Lat: 37° 08' 12.48"N	Lon: 76° 22' 31.87"W	Bioretention	5,325	5,325	CB21	7/24/2014
Rivercrest Drive 6	#04-16	12/22/2004	5(7)22	Lat: 37° 08' 12.48"N	Lon: 76° 22' 31.87"W	Bioretention	16000	16,000	CB21	7/3/2013
Rivercrest Drive 9	#05-09	5/25/2005	5(7)15	Lat: 37° 08' 12.49"N	Lon: 76° 22' 31.87"W	Vegetated Filter	575	575	CB21	6/25/2014
Rivergate Drive 12	#10-04	6/23/2010	12(2)5)6	Lat: 37° 08' 12.49"N	Lon: 76° 22' 31.87"W	Vegetated Filter	750	750	CB21	6/4/2014
Rivergate Drive 14	#12-05	4/10/2012	12(2)5)7	Lat: 37° 08' 12.49"N	Lon: 76° 22' 31.87"W	Vegetated Filter	325	325	CB21	1/23/2015
Riverview Drive 8	BZA Exception	3/27/2013	26(6)26	Lat: 37° 07' 00.75"N	Lon: 76° 21' 58.14"W	Vegetated Filter	150	150	CB22	5/30/2014
Riverview Drive 13	#07-14	9/19/2007	29(6)42	Lat: 37° 08' 12.49"N	Lon: 76° 22' 31.87"W	Vegetated Filter	120	120	CB22	6/2/2014
Riverview Drive 14	#07-02	1/24/2007	29(6)29	Lat: 37° 08' 12.49"N	Lon: 76° 22' 31.87"W	Vegetated Filter	142	142	CB22	6/10/2014
Riverview Drive 22	#09-07	5/6/2009	29(6)33	Lat: 37° 08' 12.49"N	Lon: 76° 22' 31.87"W	Vegetated Filter	100	100	CB22	6/23/2014
Riverview Drive 25	#09-08	6/3/2009	29(6)36	Lat 37° 08' 12.49"N	Lon: 76° 22' 31.87"W	Infiltration Trench	2,469	247	CB22	6/16/2014
Robert Bruce Road 21	BZA Exception	10/22/2008	28-6-38	Lat 37° 08' 12.49"N	Lon 76° 22' 31.87"W	Vegetated Filter	834	834	CB22	6/1/2014
Roberts Landing Drive 6	#12-15	11/21/2012	11(5)3	Lat: 37° 08' 57.28"N	Lon: 76° 23' 48.98"W	Vegetated Filter	500	500	CB21	5/31/2014
Roberts Landing Drive 20	BZA Exception	8/27/2014	11(5)9	Lat 37° 09' 03.90"N	Lon: 76° 23' 43.03"W	Rain Barrel & Veget	128	128	CB21	12/30/2014
Roberts Landing Drive 24	#13-05	4/16/2013	11(5)1	Lat: 37° 09' 06.03"N	Lon: 76° 23' 41.05"W	Vegetated Filter	144	144	CB21	6/5/2014
Rollins Street 6	#07-15 & BZA Exc	10/3/2007 & 10/26/1	30(5)4A	Lat: 37° 08' 12.49"N	Lon: 76° 22' 31.87"W	Vegetated Filter	72	72	CB22	6/7/2014
Rosewood Lane 26	#04-13	11/24/2004	12(1)16	Lat 37° 08' 12.49"N	Lon: 76° 22' 31.87"W	Vegetated Filter	307	307	CB21	6/5/2014
Sandy Bay Drive 89	#08-06 & 07-01	5/7/08 & 1/24/07	5(6)4	Lat 37° 08' 12.49"N	Lon: 76° 22' 31.87"W	Bioretention & Land	4,000	3,160	CB21	6/4/2013
Sandy Bay Drive 93	#06-20	7/27/2007	5(6)6	Lat 37° 09' 26.79"N	Lon: 76° 23' 49.80"W	Vegetated Filter	4,000	4,000	CB21	6/6/2014
~~Sandy Point Rd. E. 12~~	#12-16	11/30/2012	12(10)27	Lat 37° 08' 42.33"N	Lon 76° 22' 59.61"W	Complete Removal	N/A	N/A	CB21	7/14/2014
Sandy Point Rd. E. 18	#11-06 & BZA Exc	1/24/2007 & 5/11/11	12(10)30	Lat: 37° 08' 12.49"N	Lon: 76° 22' 31.87"W	Vegetated Filter	900	900	CB21	5/31/2014
Sandy Point Rd. W. 61	#06-07	5/10/2006	12(9)4	Lat. 37° 08' 12.49"N	Lon: 76° 22' 31.87"W	Vegetated Filter	740	740	CB21	9/15/2014
Sandy Point Road E. 1	#09-09	7/15/2009	12(10)21	Lat 37° 08' 12.49"N	Lon 76° 22' 31.87"W	Vegetated Filter	168	168	CB21	6/2/2014
Sandy Point Road E. 4	#11-01	1/19/2011	12(10)23	Lat: 37° 08' 45.46"N	Lon: 76° 23' 00.68"W	Vegetated Filter	160	160	CB21	6/1/2014
Sandy Point Road E. 6	#08-02	3/5/2008	12(10)24	Lat 37° 08' 44.84"N	Lon 76° 23' 00.97"W	Vegetated Filter	200	200	CB21	5/31/2014
Sandy Point Road E. 8	#05-01, #12-01	2/2/2005, 2/29/12	12(10)25	Lat: 37° 08' 43.82"N	Lon: 76° 22' 58.25"W	Vegetated Filter	710	710	CB21	6/14/2014
Sandy Point Road W 4	#05-07, 11-05	5/25/2005, 3/30/11	12(9)10	Lat 37° 08' 38.45"N	Lon: 76° 23' 09.45"W	Vegetated Filter	691	691	CB21	8/23/2013
~~Sandy Point Road W. 12~~	#12-02	3/16/2012	12(9)6	Lat: 37° 08' 40.92"N	Lon 76° 23' 03.42"W	Vegetated Filter	185	185 proposed	CB21	Expired - not com
Trottwood Drive 19	BZA Exception	2/22/2006	28(9)21	Lat: 37° 07' 49.30"N	Lon: 76° 23' 01.15"W	Bioretention	896	896	CB22	6/1/2014
Trottwood Drive 21	BZA Exception	6/22/2011	28(9)20	Lat 37° 07' 20.00"N	Lon 76° 22' 38.60"W	Vegetated Filter	22	22	CB22	6/5/2014
Trottwood Drive 5	#07-07	4/18/2007	28(7)25	Lat: 37° 07' 24.77"N	Lon: 76° 22' 37.61"W	Vegetated Filter	783	783	CB22	6/2/2014
Twin Creek Road 17	#15-04	4/29/2015	11(29)3A	Lat: 37° 09' 12.60"N	Lon: 76° 23' 21.96"W	Vegetated Filter			CB21	
Wagner Road 14	#14-13	9/24/2014	5(10)14	Lat: 37° 09' 17.53"N	Lon 76° 23' 21.83"W	Rain Barrel	76	84	CB21	5/18/2015
Wagner Road 30	#05-22	12/7/2005	5(9)1	Lat 37° 09' 17.15"N	Lon 76° 23' 26.01"W	Vegetated Filter	2,400	2,400	CB21	6/2/2014
Walter's Edge 4	BZA Exception &	12/8/2004&9/14/11	10(1)15A	Lat 37° 08' 51.60"N	Lon: 76° 24' 27.36"W	Vegetated Filter	493	493	CB21	6/4/2014
~~Weston Drive 9~~	#09-12	10/26/2009	29(25)12	Lat: 37° 08' 00.22"N	Lon: 76° 21' 44.24"W	None Required	N/A Temp Dist	Restored	CB21	10/29/2010

BMP Spreadsheet (highlighted = complete)

Revision Date 9/25/15

Address	Approval Type	Approval Date	Tax Map Number	N	W	BMP Type	Drainage Area	Area of Buffer	HUC	Last Inspection
Mingee Street 216	#06-13, 11-03	10/25/2006, 3/20/11	12(1)45	Lat: 37° 08' 50.41"N	Lon: 76° 22' 31.22"W	Vegetated Filter	665	665	CB21	6/5/2014
Pasture Road 42	#13-11	7/10/2011	11(1)116	Lat: 37° 08' 45.22"N	Lon: 76° 23' 16.11"W	Vegetated Filter	600	600	CB21	9/2/2014
Pasture Road 66	#05-08	5/25/2005	12(1)12A	Lat: 37° 08' 52.00"N	Lon: 76° 23' 16.32"W	Vegetated Filter	565	565	CB21	6/10/2014
Phillips Road 3	#12-08	4/26/2012	12(10)35	Lat: 37° 08' 44.58"N	Lon: 76° 22' 51.30"W	Vegetated Filter	1,916	1,916	CB21	1/29/2013
~~Phillips Road 7~~	#13-09	6/26/2013	12(10)33	Lat: 37° 08' 46.06"N	Lon: 76° 22' 52.47"W	Undetermined	2,872	2,872	CB21	Expired - not com
Phillips Road 12	#14-01	1/24/2014	12(11)5	Lat: 37° 08' 48.57"N	Lon: 76° 22' 49.25"W	Infiltration Trench	1,200	1,200	CB21	6/25/2015
Phillips Road 15	#12-07	4/25/2012	12(10)10	Lat: 37° 08' 50.29"N	Lon: 76° 22' 54.84"W	Rain Barrels	100	100	CB21	6/2/2014
Poquoson Avenue 1083C	#14-08	7/23/2014	21(8)1A	Lat: 37° 07' 42.93"N	Lon: 76° 21' 27.43"W	Vegetated Filter & R	500	500	CB21	7/8/2015
Poquoson Avenue 1087	BZA Exception	10/26/2005	21(11)B	Lat: 37° 07' 46.47"N	Lon: 76° 21' 21.84"W	Vegetated Filter	2,414	2,414	CB21	6/2/2014
Poquoson Avenue 1089	#06-02	2/1/2006	21(8)7	Lat: 37° 07' 46.54"N	Lon: 76° 21' 25.34"W	Vegetated Filter	1,044	1,044	CB21	11/15/2013
Poquoson Avenue 1178	#07-10	7/11/2007	21(1)45A	Lat: 37° 07' 46.02"N	Lon: 76° 21' 07.95"W	Vegetated Filter	800	800	CB21	6/2/2014
Poquoson Avenue 1209	#04-07	10/13/2004	21(1)120	Lat: 37° 07' 40.12"N	Lon: 76° 20' 55.96"W	Vegetated Filter	563	563	CB21	6/23/2014
Poquoson Avenue 1395	#14-07	7/2/2014	31(1)207	Lat: 37° 06' 57.68"N	Lon: 76° 20' 36.57"W	Vegetated Filter	225	225	CB24	
Poquoson Avenue 1397	#04-06	6/23/2004	31(1)210	Lat: 37° 06' 56.86"N	Lon: 76° 20' 36.68"W	Vegetated Filter	1,721	1,721	CB24	6/2/2014
Poquoson Avenue 683	#06-18	12/20/2006	19(7)B 1	Lat: 37° 08' 01.36"N	Lon: 76° 23' 08.75"W	Vegetated Filter	3,696	3,696	CB21	6/9/2014
Poquoson Avenue 833	#10-10, #14-14	7/28/2010, 9/24/14	19(1) 220	Lat: 37° 08' 00.78"N	Lon: 76° 22' 27.32"W	Vegetated Filter	2,297	2,297	CB21	4/24/2015
~~Poquoson Avenue 835~~	#10-08	7/28/2010	19(1)221	Lat: 37° 08' 04.73"N	Lon: 76° 22' 31.12"W	Vegetated Filter	Undetermined	Undetermined	CB21	
Poquoson Avenue 837	#10-09	7/28/2010	19(1)222	Lat: 37° 08' 05.69"N	Lon: 76° 22' 33.14"W	Vegetated Filter	4,570	4,570	CB21	6/18/2014
Poquoson Avenue 841	#09-03	3/18/2009	19(1)219	Lat: 37° 08' 02.40"N	Lon: 76° 22' 24.81"W	Vegetated Filter	160	160	CB21	6/17/2014
Poquoson River Drive 14	#04-05	9/22/2004	5(3)3	Lat: 37° 09' 27.75"N	Lon: 76° 24' 01.01"W	Vegetated Filter	600	600	CB21	6/12/2014
Rens Road 116	#05-06, 06-06 and	4/12/2006	12(1)83	Lat: 37° 08' 23.33"N	Lon: 76° 22' 31.14"W	Infiltration Trench	191	191	CB21	6/19/2014
Rens Road 53	#14-02	2/27/2014	19(1)49	Lat: 37° 08' 07.31"N	Lon: 76° 22' 55.06"W	Vegetated Filter	1,032	1,032	CB21	
Rens Road 84	#07-08	6/27/2007	19(1)232	Lat: 37° 08' 12.49"N	Lon: 76° 22' 31.87"W	Vegetated Filter	672	672	CB21	7/14/2014
Ridge Road 75	BZA Exception	4/25/2007	22(1)18	Lat: 37° 08' 12.49"N	Lon: 76° 22' 31.87"W	Vegetated Filter	3,086	3,086	CB21	7/14/2014
River Road 114	#05-11	7/6/2005	19(3)3	Lat: 37° 08' 12.49"N	Lon: 76° 22' 31.87"W	Vegetated Filter	786	786	CB21	5/8/2010
River Road 117	#09-05 & 05-21	4/22/09 & 11/23/05	12(1)64	Lat: 37° 08' 12.49"N	Lon: 76° 22' 31.87"W	Vegetated Filter	1,195	1,195	CB21	7/14/2014
~~River Road 120~~	BZA Exception	4/25/2007	12(1)65	Lat: 37° 08' 12.49"N	Lon: 76° 22' 31.87"W	None Required	/A (Old Approva	N/A	CB21	N/A
River Road 125	#12-12	6/20 & 8/15/12	12(1)69	Lat: 37° 08' 23.66"N	Lon: 76° 22' 54.73"W	Vegetated Filter & S	591	591	CB21	5/31/2014
River Road 127	#05-14	8/17/2005	12(1)70	Lat: 37° 08' 12.49"N	Lon: 76° 22' 31.87"W	Vegetated Filter	1,350	1,350	CB21	5/31/2014
River Road 60	#09-01	1/21/2009	19(4)4	Lat: 37° 08' 12.49"N	Lon: 76° 22' 31.87"W	Vegetated Filter	131	131	CB21	7/25/2014
Rivercrest Drive 11	BZA Exception	10/30/2003	5(7)16	Lat: 37° 08' 12.49"N	Lon: 76° 22' 31.87"W	Bioretention	2,400	2,400	CB21	6/2/2014
Rivercrest Drive 12	BZA Exception	9/27/2006	5(7)19	Lat: 37° 08' 12.49"N	Lon: 76° 22' 31.87"W	Undetermined	750	750 proposed	CB21	
Rivercrest Drive 15	BZA Exception	7/26/2006	5(7)18	Lat: 37° 08' 12.49"N	Lon: 76° 22' 31.87"W	InfiltrationTrench & I	1,600	1,600	CB21	6/2/2014
Rivercrest Drive 2	BZA Exception	2/8/2005, 6/12/13	5(7)24	Lat: 37° 08' 12.49"N	Lon: 76° 22' 31.87"W	Vegetated Filter	4,343	4,343	CB21	6/18/2014

BMP Spreadsheet (highlighted = complete)

Revision Date 9/25/15

Address	Type	Date	Number	N	W	BMP Type	Area	Buffer	HUC	Inspection
Darden Drive, 104	#10-03	4/14/2010	10-(3)-10	Lat: 37° 08' 45.51"N	Lon: 76° 24' 36.92"W	Vegetated Filter	187	187	CB21	6/22/2014
Doc Landing 1	#07-18	11/14/2007	12(22)2	Lat: 37° 08' 29.57"N	Lon: 76° 22' 55.05"W	Vegetated Filter	23,357	23,356	CB21	6/2/2014
Doc Landing 2	#06-14	10/25/2006	12(22)1&2, 1	Lat: 37° 08' 32.15"N	Lon: 76° 22' 59.30"W	Vegetated Filter	7,168	7,168	CB21	6/30/2014
Dryden Drive 41	BZA Exception	10/26/2005	17(14)62	Lat: 37° 08' 14.09"N	Lon: 76° 24' 41.89"W	Vegetated Filter	2,160	2,160	CB21	6/1/2014
Ebb Tide Landing 14	BZA Exception	1/24/2007	12(8)22	Lat: 37° 08' 40.70"N	Lon: 76° 23' 13.25"W	Vegetated Filter	120	120	CB21	6/16/2014
Edwards Road 36	#14-10	8/7/2014	10(1)10	Lat: 37° 09' 04.34"N	Lon: 76° 24' 26.29"W	Vegetated Filter	96	96	CB21	7/31/2015
Edwards Road 45	#07-16	10/17/2007	10(1)12	Lat: 37° 09' 01.71"N	Lon: 76° 24' 30.57"W	Vegetated Filter	441	441	CB21	6/3/2014
Emmaus Road, 141	#10-12	11/12/2010	10(1)30	Lat: 37° 08' 38.18"N	Lon: 76° 24' 24.02"W	Vegetated Filter	288	288	CB21	6/9/2014
~~Emory Place, 3~~	#11-02	3/2/2011	17(2)26	Lat: 37° 08' 10.80"N	Lon: 76° 24' 30.57"W	Concrete Removal	N/A	N/A	CB21	2/3/2012
Evans Circle 12	BZA Exception	9/26/2009	12(18)1	Lat: 37° 08' 32.49"N	Lon: 76° 22' 30.67"W	Vegetated Filter	300	300	CB21	6/2/2014
Evans Circle 4	#05-13, #13-01	8/3/2005, 1/9/13	13(4)1	Lat: 37° 08' 33.15"N	Lon: 76° 22' 21.20"W	Vegetated Filter	132	132	CB21	6/3/2014
~~Evans Circle 8~~	#12-13	7/11/2012	13(4)3	Lat: 37° 08' 32.48"N	Lon: 76° 22' 26.48"W	Vegetated Filter	500	500	CB21	Expired - not com
Far Street 2	BZA Exception	1/27/2010	28(8)E	Lat: 37° 07' 27.67"N	Lon: 76° 22' 31.56"W	Vegetated Filter	200	200	CB22	5/31/2014
Forrest Road 140	#04-08	10/13/2004 & 8/21/1	20(1)12	Lat: 37° 08' 18.63"N	Lon: 76° 22' 00.44"W	Vegetated Filter	2,069	2,069	CB21	7/1/2014
Forrest Road 31	#15-01	1/21/2015	20(1)16	Lat: 37° 08' 10.61"N	Lon: 76° 21' 52.52"W	Undetermined	700		CB21	
Freeman Drive 12	#07-09	6/27/2007	21(7)32	Lat: 37° 07' 45.69"N	Lon: 76° 21' 30.07"W	Vegetated Filter	680	680	CB21	6/9/2014
Freemoor Drive 124	#06-04	3/1/2006	10(6)7	Lat: 37° 08' 37.68"N	Lon: 76° 24' 35.01"W	Vegetated Filter	100	100	CB21	5/31/2014
Freemoor Drive 6	#04-01	8/10/2004	10(5)10	Lat: 37° 08' 36.03"N	Lon: 76° 24' 23.37"W	Vegetated Filter	1,347	1,347	CB21	6/2/2014
Hamilton Circle 10	#08-09	9/5/2008	10(6)20	Lat: 37° 08' 32.83"N	Lon: 76° 24' 35.56"W	Vegetated Filter	300	300	CB21	7/14/2014
Hamilton Circle 2	#09-02	3/18/2009	10(6)16	Lat: 37° 08' 34.89"N	Lon: 76° 24' 37.39"W	Vegetated Filter	50	50	CB21	6/23/2014
Harbourview Drive 3	#14-12	8/20/2014	5(7)9	Lat: 37° 09' 22.05"N	Lon: 76° 23' 54.90"W	Vegetated Filter	3,170	3,170	CB21	
Hunts Neck Road 247	BZA Exception	6/22/2005	5(8)4	Lat: 37° 09' 10.95"N	Lon: 76° 24' 00.35"W	Vegetated Filter	2,700	2,700	CB21	8/2/2014
Hunts Neck Road 256S	#04-09	10/13/2004	11(24)C	Lat: 37° 09' 11.04"N	Lon: 76° 23' 41.85"W	Bioretention	740	740	CB21	8/18/2014
Hunts Neck Road 258	#12-06	4/18/2012	12(24)D	Lat: 37° 09' 11.24"N	Lon: 76° 23' 40.25"W	Vegetated Filter	4,032	4,032	CB21	6/6/2014
Langley Street 50	#05-06	5/16/2005	30(1)49	Lat: 37° 07' 07.98"N	Lon: 76° 21' 15.80"W	Vegetated Filter	1,127	1,127	CB22	7/10/2014
Lawson Road N. 2	#08-01	2/20/2008	21(1)14	Lat: 37° 07' 46.05"N	Lon: 76° 21' 02.79"W	Vegetated Filter	800	800	CB21	7/15/2014
Lawson Road N. 236	#09-04	3/18/2009	13(1)13	Lat: 37° 08' 24.97"N	Lon: 76° 21' 36.41"W	Vegetated Filter	1,173	1,173	CB21	6/15/2014
Lawson Road N. 26	#05-16	9/28/2005	21(1)40	Lat: 37° 07' 50.44"N	Lon: 76° 21' 00.54"W	Vegetated Filter	338	338	CB21	6/3/2014
Lawson Road N. 36	#05-23 & 12-11	12/7/2005 & 6/20/12	21(1)24	Lat: 37° 07' 51.99"N	Lon: 76° 21' 10.47"W	Vegetated Filter	537 + 120	537 + 120	CB21	7/14/2014
Lessie's Drive 16	#06-08	7/3/2006	20(22)13	Lat: 37° 08' 16.27"N	Lon: 76° 22' 23.57"W	Vegetated Filter	750	750	CB21	6/5/2014
Lessie's Drive 19	#09-11	7/29/2009	29(22)8	Lat: 37° 08' 14.17"N	Lon: 76° 22' 20.36"W	Vegetated Filter	200	200	CB21	5/30/2014
Messick Road 110A	#05-03	3/30/2005	31(1)148A	Lat: 37° 07' 16.32"N	Lon: 76° 20' 11.75"W	Vegetated Filter	500	500	CB24	6/23/2014
Messick Road 124-2	#10-14	12/15/2010	31-1-134	Lat: 37° 07' 16.06"N	Lon: 76° 20' 04.70"W	Vegetated Filter	268	268	CB24	6/20/2014
Messick Road 129	BZA Exception	12/10/2008	31-1-83	Lat: 37° 07' 20.26"N	Lon: 76° 20' 04.59"W	Vegetated Filter	372	372	CB24	6/26/2014
Messick Road 413	#13-02	2/8/2013	40-1-3A	Lat: 37° 06' 35.45"N	Lon: 76° 19' 05.68"W	Vegetated Filter	200	200	CB24	
Messick Road 84	BZA Exception	4/25/2007	31(1)161A	Lat: 37° 07' 16.55"N	Lon: 76° 20' 18.00"W	Vegetated Filter	114	114	CB24	7/14/2014

BMP Spreadsheet (highlighted = complete)

Revision Date 9/25/15

Address	Approval Type	Approval Date	Tax Map Number	N	W	BMP Type	Drainage Area	Area of Buffer	HUC	Last Inspection
Barbara Lane	BZA Exception	5/27/2009	11-25-B	Lat: 37° 09' 10.88"N	Lon: 76° 23' 45.50"W	Stormceptors	1706 proposed	1706 proposed	CB21	
Bayview Drive 12	#05-12, 13-08	7/27/2005, 6/26/13	5(1)2	Lat: 37° 09' 19.83"N	Lon: 76° 24' 03.96"W	Vegetated Filter	1046+	1046+	CB21	6/2/2014
Beach Road 180	#07-06	4/18/2007	6(1)14	Lat: 37° 09' 18.41"N	Lon: 76° 23' 01.38"W	Vegetated Filter	1,670	1,670	CB21	7/1/2014
Beach Road 200	#14-14	11/18/2014	6(3)1A	Lat: 37° 09' 19.85"N	Lon: 76° 23' 09.67"W	Vegetated Filter	76	76	CB21	
Beach Road 210	#15-07	9/2/2015	6(3)3	Lat: 37°09'25" N	Lon: 76°23'11"W	Undetermined	Undetermined	Undetermined	CB21	
Beach Road 222	#08-10	9/5/2008	5(11)1A	Lat: 37° 09' 20.64"N	Lon: 76° 23' 11.00"W	Vegetated Filter	265	265	CB21	6/12/2014
Beach Road 224	#06-15/ #15-06 &	10/31/2006, 8/6/158	5(11)1	Lat: 37° 09' 20.84"N	Lon: 76° 23' 14.09"W	Vegetated Filter	293 + 461	754	CB21	7/1/2014
Beach Road 230	#04-04	8/25/2004	5(11)4	Lat: 37° 09' 21.86"N	Lon: 76° 23' 17.43"W	Bioretention	1,890	1,890	CB21	6/3/2014
Beach Road 234	BZA Exception	9/27/2006	5(11)7	Lat: 37° 09' 22.34"N	Lon: 76° 23' 19.31"W	Undetermined	Undetermined	Undetermined	CB21	
Bennett Road 149	BZA Exception	6/22/2011	20(1)149	Lat: 37° 08' 23.39"N	Lon: 76° 21' 58.87"W	Vegetated Filter	1,000	1,000	CB21	
Blue Crab Road 9	#05-19	10/12/2005	19(1)38	Lat: 37° 08' 11.22"N	Lon: 76° 22' 58.37"W	Vegetated Filter	309	309	CB21	6/3/2014
Brickhouse Road 52	#09-10	7/15/2009	28(1)47	Lat: 37° 06' 56.54"N	Lon: 76° 23' 07.72"W	Vegetated Filter	900	900	CB22	6/14/2014
Browns Neck Road 103	#08-03	4/16/2008	12(9)22	Lat: 37° 08' 42.48"N	Lon: 76° 22' 51.76"W	Vegetated Filter	100	100	CB21	6/9/2014
Browns Neck Road 104	#12-03	4/4/2012	12(20)B	Lat: 37° 08' 32.83"N	Lon: 76° 22' 43.91"W	Vegetated Filter	340	340	CB21	6/2/2014
Browns Neck Road 106	#14-06	4/16/2014	12(19)3A	Lat: 37° 08' 40.85"N	Lon: 76° 22' 51.45"W	Vegetated Filter	248	248	CB21	
Browns Neck Road 209	#04-10	10/21/2004	12(1)25	Lat: 37° 08' 53.47"N	Lon: 76° 22' 37.25"W	Vegetated Filter	228	228	CB21	6/15/2014
Browns Neck Road 222	#15-03	4/1/2015	12(1)43A	Lat: 37° 08' 54.69"N	Lon: 76° 22' 28.70"W	Vegetated Filter	1500	1500	CB21	
Browns Neck Road 60	#12-04	8/4/2012	12(1)57	Lat: 37° 08' 33.07"N	Lon: 76° 23' 14.34"W	Vegetated Filter	200	200	CB21	6/2/2014
~~Browns Neck Road 66~~	#06-12	8/30/2006	12(1)56	Lat: 37° 08' 29.85"N	Lon: 76° 23' 12.78"W	Structure Removal	N/A	N/A	CB21	N/A
~~Browns Neck Road 81~~	#07-19	11/28/2007	12(9)11	Lat: 37° 08' 36.57"N	Lon: 76° 23' 08.14"W	None Required	N/A	N/A	CB21	N/A
~~Browns Neck Road 83~~	#07-13	9/5/2007	12(9)12	Lat: 37° 08' 37.34"N	Lon: 76° 23' 06.68"W	Pool Removal	N/A	N/A	CB21	N/A
Browns Neck Road 87	#06-17	12/6/2006	12(9)14	Lat: 37° 08' 38.24"N	Lon: 76° 23' 03.97"W	Vegetated Filter	640	640	CB21	6/3/2014
Browns Neck Road 95	#05-02	3/16/2005	12(9)18	Lat: 37° 08' 40.39"N	Lon: 76° 22' 58.35"W	Vegetated Filter	2,000	2,000	CB21	8/23/2013
Browns Neck Rd 96	#14-09	8/11/2014	12(21)8	Lat: 37° 08' 32.17"N	Lon: 76° 22' 46.01"W	Bioretention	14,240	14,240	CB21	
Canal Drive 4	#06-09	7/13/2006	29(4)87A	Lat: 37° 07' 13.90"N	Lon: 76° 22' 03.92"W	Vegetated Filter	345	345	CB22	6/13/2014
Canal Drive 5	#11-07	5/11/2011	29(4)67	Lat: 37° 07' 15.79"N	Lon: 76° 22' 05.16"W	Vegetated Filter	235	235	CB22	6/2/2014
Canal Drive 9	#06-19	12/20/2006	29(4)69	Lat: 37° 07' 16.14"N	Lon: 76° 22' 02.58"W	Vegetated Filter	269	269	CB22	6/14/2014
~~Carnage Hill Drive 41~~	#11-08	6/8/2011	17(10)57	Lat: 37° 07' 58.28"N	Lon: 76° 24' 35.04"W	Shed Removal/Land	66	N/A	CB21	EXPIRED
Carriage Hill Drive 47	#07-17	11/14/2007	17(9)54	Lat: 37° 07' 58.28"N	Lon: 76° 24' 35.04"W	Vegetated Filter	224	N/A	CB21	6/17/2014
Cedar Road 216A										
Cedar Road 231										
Cedar Road 234	#07-03	1/24/2007	29(7)5	Lat: 37° 07' 10.08"N	Lon: 76° 22' 08.85"W	Infiltration Trench	1,175	1,175	CB22	6/26/2014
Cedar Road 240	#10-06	6/23/2010	29(7)8	Lat: 37° 07' 07.15"N	Lon: 76° 22' 07.59"W	Vegetated Filter	335	335	CB22	6/2/2014
Cedar Road 241	#05-15	9/2/2005	29(7)16C	Lat: 37° 07' 07.49"N	Lon: 76° 22' 03.04"W	Vegetated Filter	572	572	CB22	6/3/2014
Cedar Road 242	#07-11	8/22/2007	29(7)9	Lat: 37° 07' 06.07"N	Lon: 76° 22' 06.59"W	Vegetated Filter	450	450	CB22	6/4/2014

BMP 5.3a: Inspections and Maintenance Procedures for City-owned Stormwater Facilities: SOP's for the Fire Station Dry Ponds and the Wythe Creek Road [VDOT] pond were added this year. These facilities were added to the City's list of BMPs during the DEQ Historic Data Call.

South Lawson Park Retention Pond Operations and Maintenance Plan

The South Lawson Park stormwater pond was designed and constructed for existing and future development at South Lawson Park, providing both flood control in a low-lying, flood-prone part of the City, and water quality treatment.

Daily Operations

City staff working near the pond should routinely watch for

- unusually high water levels that might indicate outlet clogging;
- vandalism or damage to the structure;
- erosion;
- debris;
- muskrat, groundhog or other animal-caused damage; or
- other conditions that might impact the pond's flood control and water quality treatment performance.

Any observed deficiencies should be reported to Public Works.

Swimming, boating and other access to the pond is strictly prohibited. Any Poquoson staff member observing unauthorized people trespassing into the pond should promptly call the Poquoson Police Department.

Mosquito breeding and resultant mosquito-borne illnesses are a major concern within the City of Poquoson. Any complaints should be forwarded to the Mosquito Control and Drainage Supervisor as soon as possible.

Inlet and Outfall Channels

Public Works drainage staff members routinely maintain channels and pipes within the City. Any observed erosion, blockages, or other issues should be reported to the Mosquito Control and Drainage Supervisor as soon as possible.

Maintenance

Routine maintenance schedule for South Lawson Park Pond (Source:EPA website, which referenced WMI, 1997, augmented by City staff to add specific facility, City requirements)

Activity	Schedule
Inspect for invasive vegetation. This would likely include fragmites and/or woody growth "volunteers" along the side slopes. Remove woody growth promptly; cut fragmites once per year at minimum.	Semi-annual inspection by Parks & Rec Maintenance Staff during routine park maintenance
Inspect for damage. Report vandalism to the	Annual inspection by Parks &

police and to the Parks and Recreation Department. As needed, make suggestions to Parks and Rec about public information/monitoring of site during park events to minimize vandalism. Note signs of hydrocarbon build-up, and deal with appropriately. Monitor for sediment accumulation in the facility and forebay. Examine to ensure that inlet and outlet devices are free of debris and operational.	Rec Maintenance Staff during routine park maintenance. Inspection by VA-certified stormwater inspector once every 5 years.
Repair undercut or eroded areas.	As needed maintenance
Clean and remove debris from inlet and outlet structures. Mow side slopes.	Monthly maintenance
Check pipe assembly installed for Fire Department use. (this task is the responsibility of the Fire Department; all other tasks are the responsibility of Public Works)	Annually
Remove sediment from the forebay.	5- to 7-year maintenance
Monitor sediment accumulations, and remove sediment when the pool volume has become reduced significantly or the pond becomes eutrophic.	20-to 50-year maintenance

WYTHE CREEK ROAD WET POND (A.K.A. THE "VDOT POND") OPERATIONS AND MAINTENANCE PLAN

The VDOT pond was designed to receive runoff from Wythe Creek Road.

Daily Operations

City staff working near the pond should routinely watch for

- unusually high water levels that might indicate outlet clogging;
- vandalism or damage to the structure;
- erosion;
- debris;
- muskrat, groundhog or other animal-caused damage; or
- other conditions that might impact the pond's flood control and water quality treatment performance.

Any observed deficiencies should be reported to Public Works.

Swimming, boating and other access to the pond is strictly prohibited. Any Poquoson staff member observing unauthorized people trespassing into the pond should promptly call the Poquoson Police Department.

Mosquito breeding and resultant mosquito-borne illnesses are a major concern within the City of Poquoson. Any complaints should be forwarded to the Mosquito Control and Drainage Supervisor as soon as possible.

Inlet and Outfall Channels

Public Works drainage staff members routinely maintain channels and pipes within the City. Any observed erosion, blockages, or other issues should be reported to the Mosquito Control and Drainage Supervisor as soon as possible.

Routine Maintenance Schedule for VDOT pond (Source: EPA website, which referenced WMI, 1997). Information has been amended to reflect City- and facility-specific conditions):

Activity	Schedule
Inspect for invasive vegetation. This would likely include fragmites and/or woody growth "volunteers" along the side slopes. Remove woody growth promptly; cut fragmites once per year at minimum.	Semi-annual inspection by Parks & Rec Maintenance Staff during routine park maintenance
Inspect for damage. Report vandalism to the police and to the Parks and Recreation Department. As needed, make suggestions to Parks and Rec about public information/monitoring of site during park events to minimize vandalism. Note signs of hydrocarbon build-up, and deal with appropriately. Monitor for sediment accumulation in the facility and forebay. Examine to ensure that inlet and outlet devices are free of debris and operational.	Annual inspection by Parks & Rec Maintenance Staff during routine park maintenance. Inspection by VA-certified stormwater inspector once every 5 years.
Repair undercut or eroded areas.	As needed maintenance
Clean and remove debris from inlet and outlet structures. Mow side slopes.	Monthly maintenance
Check pipe assembly installed for Fire Department use. (this task is the responsibility of the Fire Department; all other tasks are the responsibility of Public Works)	Annually
Remove sediment from the forebay.	5- to 7-year maintenance
Monitor sediment accumulations, and remove sediment when the pool volume has become reduced significantly or the pond becomes eutrophic.	20-to 50-year maintenance

Note: Pond location makes it vulnerable to littering. Maintenance crews should be vigilant as they pass pond between inspections to ensure debris is not accumulating at facility.

Fire Station Dry Ponds Operations and Maintenance Plan

The fire station dry ponds, located on the north and south side of the parking lot and building, were designed to receive runoff from the fire station site.

Daily Operations

City staff working near the pond should routinely watch for

- unusually high water levels that might indicate outlet clogging;
- vandalism or damage to the structure;
- erosion;
- debris;
- muskrat, groundhog or other animal-caused damage; or
- other conditions that might impact the pond's flood control and water quality treatment performance.

Any observed deficiencies should be reported to Public Works.

Mosquito breeding and resultant mosquito-borne illnesses are a major concern within the City of Poquoson. Any complaints should be forwarded to the Mosquito Control and Drainage Supervisor as soon as possible.

Inlet and Outfall Channels

Public Works drainage staff members routinely maintain channels and pipes within the City. Any observed erosion, blockages, or other issues should be reported to the Mosquito Control and Drainage Supervisor as soon as possible.

Routine Maintenance

ACTIVITY	SCHEDULE
Note erosion of pond banks or bottom	Semiannual inspection
Inspect for damage to the embankment	Annual Inspection
Monitor for sediment accumulation in the facility	Annual Inspection
Examine to ensure that inlet and outlet devices are free of debris and operational	Annual Inspection
Repair undercut or eroded areas	Standard maintenance
Mow side slopes	Standard maintenance
Manage pesticide and nutrients	Standard maintenance
Remove litter and debris	Standard maintenance
Seed or sod to restore dead or damaged ground cover	Annual maintenance (as needed)
Monitor sediment accumulations, and remove sediment when the pond volume has been reduced by 25 percent	25- to 50-year maintenance

Poquoson Rain Garden Operations and Maintenance Plan

The Poquoson Rain Garden is located directly in front of the Poquoson Public Works office building, and receives runoff from the building and adjacent sidewalk and street. City staff members are encouraged to visually inspect the area as they enter the building, and to report any trash, distressed vegetation, or water standing more than 72 hours to the Public Works Office Manager or Parks Maintenance Supervisor.

Maintain grassed buffer between Public Works building downspouts and rain garden. Buffers filter runoff and help remove soil fines that can "clog" rain garden mulch and reduce the facility's ability to absorb water.

Festivals and Special Events

Temporary fencing should be installed around the rain garden prior to the Annual Poquoson Seafood Festival and other special events so that pedestrians are prevented from entering the facility.

Future Plantings

Choose future plantings to reduce maintenance and enhance rain garden function. Whenever possible, plant the area with native vegetation, or plants that provide habitat value. Select species that can withstand the hydrologic regime they will experience. At the bottom of the bioretention facility, plants that tolerate both wet and dry conditions are preferable. At the edges, which will remain primarily dry, choose more resilient upland species.

Routine Maintenance

Bioretention requires landscaping maintenance, including measures to ensure that the area is functioning properly, as well as maintenance of the landscaping on the practice. In many cases, bioretention areas initially require intense maintenance, but less maintenance is needed over time. In many cases, maintenance tasks can be completed by a landscaping contractor, who may already be hired at the site. Landscaping maintenance requirements can be less resource intensive than with traditional landscaping practices such as elevated landscaped islands in parking areas.

Typical maintenance activities for the Poquoson rain garden are found below. (Source: From EPA website, which references ETA and Biohabitats, 1993. The table was adapted by Poquoson staff to apply to conditions in the Poquoson rain garden.)

Activity	Schedule
Remulch void areas Treat diseased trees and shrubs Mow turf areas	As needed
Water plants daily for 2 weeks	At project completion & after new planting
Inspect soil and repair eroded areas	Monthly
Remove litter and debris	
Remove and replace dead and diseased vegetation	Twice per year
Add mulch Replace tree stakes and wires	Once per year

BMP 6: Good Housekeeping for Municipal Operations

BMP 6.1: Standard Operating Procedures (SOP's)

Standard Operating Procedures for Good housekeeping & Storm Water Pollution Prevention City of Poquoson

Public Works, Utilities, Landscaping, and Parks & Rec Maintenance

Established June -13-2011
Revised May -27-2015

Table of Contents

Spill Prevention:

Purpose: to prevent contamination of stormwater by using proper washing techniques, proper washing locations, and proper disposal of wash water.

1. Monitor equipment storage areas, materials storage areas, and waste storage areas, checking for: fluid leaks, uncovered containers, and deteriorating labels and/or containers, and correct any problems that are noted. Frequency- daily

2. Inspect secondary containment systems (i.e. oil, fuel storage tanks) as necessary, and empty them as necessary. Frequency- monthly

3. Monitor oil/water separators and their downstream discharges. An oily discharge indicates that the unit is either not functioning properly or needs to be "pumped out". Frequency- monthly

4. Install oil absorbent materials in floor drains and/or catch basins, and inspect, remove/replace as appropriate. Frequency- monthly

5. Monitor floor drains and storm receiver inlets and outlets for excessive amounts of contaminants, and clean out as necessary. Frequency- monthly

6. Document any/all inspection activities on the proper forms. Frequency- monthly Ex: Storm water Pollution Prevention Plan, Dry Weather Screening/Illicit Discharge Detection Forms.

Landscaping and Lawn Care:

Purpose: to prevent contamination of stormwater by minimizing contact with fertilizer and by using innovative landscaping techniques

1. Plant vegetation that needs minimal amounts of care (i.e. water, fertilizer**).** Consult resources like Virginia Tech Extension literature, NC State literature, or information from DEQ & DCR Frequency – at time of initial landscaping

2. Implement landscaping techniques that minimize water usage. Frequency – at time of initial landscaping

3. Water according to nursery/extension recommendations, as needed to supplement rainfall – use drip irrigation techniques and/or moisture sensors. Frequency - always

4. Minimize fertilizer application, use slow release fertilizers. Consult certified profession to develop nutrient management plan. Frequency - always

5. Mow with blades set high, leave grass clippings on turf areas**.** Frequency - always

6. Use compost or natural (organic) fertilizers. When Available, in accordance with Nutrient Management Plan.

Pest Control:

Purpose: to prevent contamination of stormwater by pesticides while protecting citizens from mosquitoes, mosquito-borne illness, and from other pests. Be mindful that pesticides can be toxic to aquatic life and may contaminate receiving waters.

1. Purchase pesticides for immediate use when possible and storing per manufacture label. Materials must be stored in the designated chemical storage room located inside the Public Works equipment building. Frequency - always

2. Adopt Integrated Pesticide Management techniques. Frequency - always

3. Adopt alternatives to pesticides options. Consult with Mosquito Control teams in other localities to compare experiences with pesticide alternatives. Frequency - always

4. Eliminate food, water, harborage for pests by implementing routine inspections. frequency – once/week

5. Inspect pest traps regularly, remove and properly dispose of dead pests. frequency – once/week

6. Minimize pesticide application; use nontoxic/lowest toxicity pesticides such as glue boards. frequency – as warranted

7. Do not apply pesticides immediately before/during rain events. frequency - always

Pet Waste Collection:

Purpose: to prevent contamination of stormwater via contact with pet related wastes. Poquoson does not have a dog park.

1. Check for pet waste (i.e. feces, food wastes) per inspection of parks, playgrounds etc. frequency: As needed, minimum of once a week during fair weather

2. Remove all pet waste, and dispose of properly. Preferred method of disposal is bagged and placed in a trash receptacle. 3x per week during fair weather

3. Wash the affected areas with a disinfectant soap and hot water, and rinse to a vegetated area. Suggested frequency – bi-monthly or as needed

Vehicle and Equipment Maintenance:

Purpose: to prevent contamination of stormwater by using proper maintenance techniques, proper maintenance locations, and retrofitting infrastructure.

1. Check vehicles and equipment for leaks prior to use, cleaning spills immediately, turning in to garage for repairs. frequency – continuous

2. Conduct maintenance work indoors – dedicate specific vehicle bays, seal floor drain systems in buildings other than the equipment storage building. Equipment storage building drains discharge to sewer system. Minimize oil and fluid discharges into system by monitoring equipment; using dry absorbents; and sealing floor drains during substantial leaks Check oil/water separators/filters in building drain system to ensure proper function. Use equipment storage building when possible. frequency – always at time of work; check drain filter every 6 months minimum.

3. If work is performed outside, protect stormwater drainage conveyances from spills using filter bags and drain seals. Work away from drain inlet located near the Public Works office building and away from perimeter ditches. Work inside rock check berm used to filter runoff from site. frequency – continuous

4. Clean up spilled materials immediately, using dry methods (absorbents) contaminated materials to be placed in labeled containers located in Vehicle Maintenance Garage and serviced by reputable contractor for disposal as needed. frequency– continuous

5. Inspect monthly and maintain oil/water separators located in equipment building and wash rack where necessary. Frequency ongoing.

6. Rinse grass from lawn care equipment over permeable, vegetated areas, away from storm drains and ditches. frequency– continuous

7. Never leave vehicles/equipment unattended while refueling. frequency - continuous

8. Document any/all inspection activities on the proper forms. frequency – continuous

9. Call emergency responders immediately if a spill exceeds volume of one 5-gallon bucket, or if there is any concern regarding type of spill hazard.

Vehicle and Equipment Washing:

Purpose: to prevent contamination of stormwater by using proper washing techniques, proper washing locations, and proper disposal of wash water

1. Inspect oil/water separators and floor drain systems periodically to determine maintenance needs. **Suggested frequency– before and after use**

2. City vehicles and equipment MUST be washed in a facility that does not drain into a stormwater drainage facility. Staff must use either the Public Works wash rack, with the valve open, or at Cool Wave Car Wash. Equipment must be washed at the Wash Rack. Consult supervisor regarding the use of Cool Wave; otherwise, use the Wash Rack. frequency – continuous

3. When using the Wash Rack, always:

    a. Rinse leaves and soil off of wash rack before opening valve.
    b. Open valve to ensure wash water drains to sewer, not overflow sediment trap and storm drainage system. lose unneeded floor drains.
    c. Wash vehicle or equipment, using detergent and water sparingly.
    d. Rinse rack to ensure all washwater enters sewer system.
    e. CLOSE valve immediately after rack has been rinsed.

4. Wash vehicles in a designated wash area only, frequency – continuous
5. Follow posted directions if using Cool Wave Car Wash facility.

6. Document any/all inspection activities on the proper forms. frequency-monthly on SWPPP report

Roadway Maintenance:

Purpose: to prevent contamination of stormwater as it flows over debris that is deposited on road infrastructure and bridges

1. Pave only in dry weather. frequency – always

2. Cover manholes and catch basins prior to milling pavement, paving, patching, etc. Using filtering logs to prevent millings, sediment, and other waste from entering curb inlets. frequency – always.

3. Clean all fluid leaks immediately. frequency – always

4. Maintain roadside vegetation – restrict pesticide and herbicide use. Follow manufacturer's directions when chemicals must be used. frequency – whenever possible.

5. Road sweepings must be disposed of in approved facility

.

Road Salt Storage and Application:

Purpose: to prevent contamination of storm water by using proper storage techniques, and improving application techniques of deicing materials. In accordance with state law, Do not apply deicing agents containing urea or other forms of nitrogen or phosphorus to parking lots, roadways, sidewalks, and other paved surfaces.

1. Store road salt, road salt/sand mixtures in properly sized, covered structure frequency – as needed

2. Order/request salt delivery prior to the onset of winter weather to enable immediate storage (i.e. in salt barn, under tarp) to prevent runoff.

frequency – at time of purchase

3. Unload salt deliveries directly into barn, or move inside immediately. frequency -each delivery

5. Cover salt loading area or "build into" storage shed. frequency – continuous

6. Control spreading speeds; use a wetting agent to minimize "bounce". frequency- as needed

7. Control spread patterns to concentrate material where it is most effective. frequency – continuous

8. Inspect salt storage area, salt loading area to ensure that salt is not exposed to weather. frequency– weekly

9. Minimize salt usage by calibrating salt application equipment periodically. frequency – weekly during winter months

10. Minimize salt spillage by not exceeding capacities of equipment (i.e. front-end loader, truck bed) during loading operations. frequency – always

11. Always plow when de-icing roads. frequency – weekly during winter months

13. Document any/all inspection activities on the proper forms. frequency – continuous

Hazardous and Waste Materials Management:

Purpose: to prevent contamination of stormwater by properly storing, handling, and disposing of hazardous and waste materials.

1. Store all materials/wastes in closed, labeled containers – Chemicals shall be stored in the chemical storage room located inside the equipment building. If materials must be temporarily stored outside, the storage area must be sheltered from the weather. frequency – continuous

2. Always store away from from floor drains (if inside); away from drain inlets near Public Works office building, and away from perimeter ditches. Loading, unloading, and outside storage must occur within the Public Works yard and inside the perimeter gravel berm. frequency – continuous

3. Block floor drains to prevent petroleum products from entering system. Check floor drain oil/water separator/filter if a large spill occurs. frequency – continuous

4. Reduce stocks of materials where viable - use "first in/first out" management techniques. frequency – continuous

5. Use least toxic materials frequency – continuous

6. Verify secondary containment devices are in place prior to commencing work. frequency – continuous

7. Recycle/dispose of materials properly. Use designated petroleum product containers frequency – continuous

8. Do not mix dissimilar wastes in the same containers. frequency – continuous

9. Document any/all inspection activities on the proper forms. frequency – monthly

10. Disposal of "road kill" -place in double plastic bag, and place in dumpster frequency – as needed

11. Call emergency responders immediately if a spill exceeds volume of one 5-gallon bucket, or if there is any concern regarding type of spill hazard.

Operational By Products/Wastes

Purpose: to prevent contamination of stormwater by preventing "illegal" disposal, and by properly storing, handling, and disposing of facility generated and wastes.

FACILITY GENERATED WASTES:

1. Develop a list of wastes, with associated procedures for handling/storage/recycling/disposal, and provide to staff during monthly safety training. Instruct all staff to adhere to this information, and to inform the facility manager if new wastes are generated. frequency – as needed, at least annually

2. Secure the facility to prevent access (fence/lock gates). frequency – at close of business

MUNICIPAL AREAS THAT ARE SUSCEPTIBLE TO ILLEGAL DUMPING (tire disposal site; outside Public Works Yard fencing):

1. Maintain "NO DUMPING" signs, verify locks on used oil facility are in place after hours, maintain barriers used to prevent access. frequency – continuous
2. Patrol areas. frequency – as needed
3. Maintain areas/remove illegally dumped trash/debris. frequency – as needed, as soon as possible
4. Document any/all inspection activities on the proper forms frequency - continuous

DROP OFF SERVICE: SATELLITE LOCATION FOR CONTROLLED DEBRIS REMOVAL:

1. Post/maintain barriers to provide proper location of site. frequency - during hours of operation

2. Maintain and clean area used pre & post use. frequency - during hours of operation

3. Remove debris and take to controlled off-site. frequency - during hours of operation

4. Spill kits on site with vehicles in case of spill. frequency - during hours of operation

5. Call emergency responders immediately if a spill exceeds volume of one 5-gallon bucket, or if there is any concern regarding type of spill hazard.

UTILITY WORK

Any project that requires trenching, land disturbance, or that will create sediment-laden runoff shall follow the following requirements:

- Block drain inlets or place "logs" or other filtering devices at curb inlet openings and drain inlets whenever possible, prior to beginning work. Frequency: continuous.
- If trench dewatering is necessary, provide a filtration area to allow for sediment settlement before water reaches drain system. Frequency: continuous.
- Perform work in dry weather except in the event of emergency sewer breaks, overflows, or service outages. In the event of wet weather, ensure sediment-laden runoff through grass or other vegetated areas.
- Follow all applicable Erosion and Sediment Control standards for linear projects. Frequency: continuous.
- In the event of a sewage spill or other non-stormwater discharge, immediately place barriers to block spill from storm drainage system. Vacuum up spill immediately. Vacuum up rinse water used to clean the site, ensuring that it does not enter drainage system.
- Follow Hampton Roads Regional standards and regional consent order standards, and industry standard practices while performing work.

Private Events Held on City Property: Required Standard Operating Procedures Necessary to Meet State and Federal Storm Drainage Mandates

Cooking Oil and Gray Water Disposal Standard Operating Procedures

1. Gray (wash water), cooking oil and food waste must be properly disposed of and removed from the site. Cooking oil, food waste and gray water may not be dumped on the ground or in the drainage system. Cooking oil may not be disposed of in the City's used oil disposal facility.
2. Prior to set up, provide disposal containers barrels for cooking oil, tubs for gray water, and waste disposal bins as necessary. All containers should be clearly marked and accessible. Containers must be located away from drainage ditches and drain inlets to prevent contact with stormwater.
3. During the event, no waste is to be disposed or dumped. It must be placed in designated containers.
4. Areas inside and around portable restrooms must be monitored routinely to ensure cleanliness. Portable restrooms must be maintained.
5. No city staff will be on site, so there will be no additional assistance in maintaining a clean area.
6. Following the event, waste must promptly be removed from the site. In the event barrels/waste bins and grey water containers are filled early, containers must be emptied promptly into appropriate vessels.

In the event that a spill does occur, the following Standard Operating Procedures will be followed:

1. Cleanup will begin immediately.
2. On the site no use of detergents or degreasers will be allowed.
3. At the site of the spill, nearby storm drains must be blocked or sealed off promptly.
4. A clean-up contractor and the appropriate agency must be contacted if the spill is unmanageable.
5. Never wash leaks, spills, or used clean-up materials onto nearby streets or into drains.
6. Dispose of all used clean-up materials in a garbage can.

Seafood Festival Cooking Oil and Gray Water Disposal Standard Operating Procedures

1. In the Food Vendor Application and Arrival Information, all vendors are notified that onsite gray water disposal areas and cooking oil disposal barrels are provided. They are also notified that they are expected to use these facilities for disposal of all cooking oil and gray water.
2. Prior to Festival set up, PSF staff will contact a contractor to provide and put onsite the disposal barrels for cooking oil and tubs for gray water. All containers will be clearly marked and accessible to all vendors. Containers will be located to prevent contact with stormwater.
3. During the event, each vendor is monitored by the Vendor for Proper disposal to ensure they are following of proper sanitary and oil/grey water/refuse disposal procedures. They are also subject to inspections by the Peninsula Health District.
4. Following the event, the contracted disposal company will promptly remove all barrels of water and grease from the site. In the event barrels and grey water containers are filled early, PSF staff will contact the disposal company to have the containers replaced.
5. Any vendor failing to follow the approved disposal procedures will lose the right to vendor or future or subsequent years.

In the event that a spill does occur, the following Standard Operating Procedures will be followed:

1. Clean up will begin immediately.
2. On the site no use of detergents or degreasers will be allowed.
3. At the site of the spill, staff will Block or seal off nearby storm drains.
4. Staff will Contact a clean-up contractor and the appropriate agency if the spill is unmanageable.
5. Never wash leaks, spills, or used clean-up materials onto nearby streets or into drains.
6. Dispose of all used clean-up materials in a garbage can.

BMP 6.1c Typical invoice for City Vehicles using a commercial car wash facility. This year the City entered into an agreement with the commercial facility. Municipal vehicles are washed at either Cool Wave or at the Public Works Yard wash rack that was updated in PY1.

Cool Wave, LLC
P. O. Box 12161
Newport News, VA 23612

757-593-5892 bwillis@coolwavecarwash.com

INVOICE

Date	Invoice #
12/5/2014	COP - 5

Bill To
City of Poquoson Attn: Theresa Owens 500 City Hall Ave. Poquoson, VA 23662

PO No.	Terms	Project
	Due on receipt	

Description	Rate	Amount
Fleet Account Services for December 2014.		
Inspections	$ 15.00	$ 15.00
Engineering	$ 5.00	$ 5.00
Police		
Public Works - Value added to pre-paid wash card	$ -	$ -
Pooled	$ 15.00	$ 15.00
Utilities	$ 50.00	$ 50.00
Parks & Rec - Value added to pre-paid wash card	$ -	$ -
Please make checks payable to **Cool Wave, LLC.**		
SUB TOTAL:	$ 85.00	$ 85.00
Thank you for your business!	**Total**	**$85.00**

BMP 6.2.1: Municipal high-priority facilities that have the potential to discharge stormwater pollutants

The City of Poquoson has ONE centralized facility that maintains all City vehicles and consolidates Public Works/Department of Utilities/Parks Maintenance offices, equipment, and facilities. The City does not operate its own solid waste disposal, water treatment, or wastewater treatment facilities.

Tax Map # 19-01-00-0210

Lat: 37º 07' 42.03"N Lon: 76º 22' 12.54"W

HUC CB-21

BMP 6.3a: List of Managed Turf Sites with more than 1 acre of managed turf: Please note that the City included the City Hall parcel as a site with more than 1 acre of contiguous managed turf. This parcel has less than 0.56 acres of turf and is therefore not required to have a nutrient management plan. It will be removed from the list next year:

BMP 6.3a: City Properties Required to Use Nutrient Management Plans by PY5:

The City of Poquoson does not fertilize its school sites. The City Hall site, listed in last year's annual report, has been removed from this list because it only has 0.56 acres of turf. Only two other City properties have contiguous managed turf areas of one acre or more:

South Lawson Park:

- Tax Map # 27-10-00-0006; 21-01-00-0141; 21-01-00-0136
- Lat: 37° 07' 23.79"N; Long: 76° 20' 44.60"W
- HUC CB21
- 1.42 contiguous acres turf
- 16.21 acres total acreage

Baseball complex at 17 Park Street:

- Tax Map # 210-01-00-0025
- Lat: 37° 07' 48.08" N; Long: 76° 21' 35.95"W
- HUC CB22
- 5.05 acres turf
- 9.60 acres total site acreage

BMP 6.3b & 6.3c: Nutrient Management Plan information for the ball field complex (5.05 acres managed turf). The City contracts with TruGreen to development and implement the nutrient management plan for this facility.

TruGreen Newport News: Poquoson Plan

Nutrient Application Worksheet

Please **Submit Electronically** by February 15, 2013 to:

J. Derik Cataldi
Urban Nutrient Management Specialist
Phone: 804-786-1798
Email: Derik.Cataldi@dcr.virginia.gov

WQA ID Number: 147

Program Type: Cool Season Turf

Month	Analysis	Rate per 1,000 sq. ft.	Percent Slow Release N	lbs Slow Release N per 1,000 sq. ft.	lbs Fast Release N per 1,000 sq. ft.	Total N
2/1-3/17	17-0-5	.7	0	0	.7	.7
3/18-5/7	17-0-5	.5	0	0	.5	.5
5/8-9/24	19-0-5	2	50	1	1	2
9/25-12/31	25-0-8	2	50	1	1	2
Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.
			Total	2	3.2	5.2

Notes: The 17-0-5 is a liquid fertilizer.

BMP 6.4a: IDDE training

All available Public Works, Garage, Utility and Parks Maintenance workers received illicit discharge training on March 27, 2015. Training consisted of:

-A brief overview of state laws on what is and is not allowed in a drainage system

-Video Presentation of "IDDE- a grate concern" from Excal Visual. Prior to the video, the City Engineer highlighted a few topics workers should look for like over fertilizing indicators, staining. This was intended to ensure that staff paid close attention to less obvious signs of illicit discharge.

-A question and answer session focused on video content was held

-Finally, a discussion was held where staff members discussed past experiences and actual field experiences. "Next steps" when an illicit discharge was suspected were also discussed.

-A handout was provided explaining what was and was not allowed in drainage systems. This handout has been displayed in the Public Works buildings.

22 employees attended the training, as well as the City Engineer:

POQUOSON PUBLIC WORKS
SAFETY TRAINING PROGRAM

SAFETY TOPIC: Illicit Discharge

DATE: march-27-15

INSTRUCTOR: Ellen Roberts / City Engineer / video

EMPLOYEES ATTENDING	
[illegible]	
Mark Sacks	
[illegible]	
[illegible]	
[illegible]	
[illegible]	
[illegible]	
[illegible]	
Matthew Jesse	
Mason Finch	
[illegible]	
Jamie Weaver	
Milton Wiggs	
[illegible]	
[illegible]	
[illegible]	
[illegible]	
[illegible]	
[illegible]	
[illegible]	
Tom [illegible]	
Brad Wilkins	

What: **Training – Illicit Discharge**

When: **Friday, March, 27th, 2015**

Time: **7:15 a.m.**

Where: **Public Works Meeting Room**

Who: **All Public Works, Utilities, Parks Maintenance and Garage**

BMPs 6.4a & 6.5c: Handout and poster used during Illicit Discharge training and then posted on all bulletin boards in the Public Works/Utilities yard:

ALL Discharges are
ILLICIT DISCHARGES
except:

- RAINWATER, groundwater and tidal water
- RESIDENTIAL Car Wash Water (ENCOURAGE THEM TO WASH OVER GRASS!)
- Fire Fighting Water
- Water line flushing;
- Landscape irrigation and lawn watering runoff (so long as chemicals are applied according to maker's labels)
- Foundation drains
- Air conditioning condensation
- Swimming pool discharges that have been dechlorinated or are free of other disinfecting agents;
- Street washing water

BMP 6.4b, c, and f: All available Public Works, Garage, Utility and Parks Maintenance workers received illicit discharge training on June 26, 2015. Training consisted of:

-Good housekeeping, spill prevention, countermeasure and containment procedures at maintenance yards;

-Practices to be used during street and parking lot maintenance, paving and repair work to ensure storm water quality;

-Practices to be used during lawn maintenance and landscaping to ensure stormwater quality;

-A review of signs of illicit discharge and next steps;

-Fertilizer, pesticide, and herbicide application was discussed;

-Trench and utility construction practices to ensure storm water quality (filtering runoff; dewatering trench filtration)

- A video on these topics prepared by the northwest Texas Council of Governments was viewed.

-A question and answer session focused on video content was held

-Finally, a discussion was held where staff members discussed past experiences and actual field experiences.

-Poquoson-specific challenges and issues were discussed.

-Aerial photos of sites in and out of the City were provided for staff members to practice identifying hot spots and areas of concern.

What: Training – Good Housekeeping and Practices

When: Friday, June, 26th, 2015

Time: 7:15 a.m.

Where: Public Works Meeting Room

Who: All Public Works, Utilities, Parks Maintenance and Garage

Poquoson Public Works - Safety Training Program

Safety Topic	Instructor	Date
Illicit Discharge	Ellen Roberts - DVD - Mac Hill	June 26 2015

Employees Attending

1. Jay Cook
2. [illegible]
3. Tom Edmonson
4. [illegible]
5. [illegible]
6. [illegible]
7. [illegible]
8. Matthew Hill
9. [illegible]
10. [illegible]
11. Mark Locke
12. [illegible]
13. [illegible]
14. [illegible]
15. [illegible]
16. [illegible]
17. [illegible]
18. [illegible]
19.
20.
21.
22.
23.
24.
25.
26.
27.

BMP 6.4d: Pesticide Certifications:

VIRGINIA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES
P O BOX 1163, RICHMOND VA 23218-1163

PESTICIDE APPLICATOR CERTIFICATE

Issued		Fee Paid	Certificate
09/30/2014	REGISTERED TECH FOR BL# 12950	EXEMPT	130603-T
Expires 06/30/2016			

Issued in accordance with application duly executed by the person shown below who has agreed to comply with all applicable laws, rules and regulations

JERRY R BEAN
CITY OF POQUOSON
45 BLAKE LOOP
APT E
NEWPORT NEWS, VA 23606

Sandra J. Adams
Commissioner

Liza J. Fleeson
Authorized Representative

VIRGINIA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES
OFFICE OF PESTICIDE SERVICES
P O BOX 1163, RICHMOND VA 23218-1163
PHONE (804) 786-3798
FAX (804) 786-9149

September 8, 2014

AARON M MC DANIEL
CITY OF POQUOSON PUBLIC WORKS
500 CITY HALL AVE
POQUOSON VA 23662

Certification No.: 93001
Class: REGISTERED TECH

GOVERNMENT APPLICATOR CERTIFICATION(RETRAINING) STATUS REPORT

Printed below is the current record of the pesticide applicator categories in which you are certified. An asterisk at the end of any line indicates that your certification (retraining) for this category will expire June 30, 2015, unless you attend a Virginia-approved recertification course for your category, or choose to be reexamined. If you need to attend a training class, you may check our list of approved training courses at www.vdacs.virginia.gov/pesticides/categories.shtml or call our office at (804)786-3798 for course information.

CATEGORY	CATEGORY TITLE	RECERTIFY BEFORE
60	REGISTERED TECHNICIAN	30-JUN-2019

If any of the above employer or address information is incorrect, contact OPS immediately. If your certificate expires June 30 of this year and you have not received a new certificate by July 1, it is your responsibility to contact OPS at 804-786-3798 to verify your status and request a duplicate.

If you do not meet your recertification requirement by August 29 of the year your certificate expires, your certificate will lapse and you will receive no further contact or mailing from this office.

VIRGINIA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES
OFFICE OF PESTICIDE SERVICES
P O BOX 1163, RICHMOND VA 23218-1163
PHONE (804) 786-3798
FAX (804) 786-9149

September 8, 2014

MARK S LACKS
CITY OF POQUOSON PUBLIC WORKS
500 CITY HALL AVE
POQUOSON VA 23662

Certification No.: 61021
Class: GOVT EMPLOYEE

GOVERNMENT APPLICATOR CERTIFICATION(RETRAINING) STATUS REPORT

Printed below is the current record of the pesticide applicator categories in which you are certified. An asterisk at the end of any line indicates that your certification (retraining) for this category will expire June 30, 2015, unless you attend a Virginia-approved recertification course for your category, or choose to be reexamined. If you need to attend a training class, you may check our list of approved training courses at www.vdacs.virginia.gov/pesticides/categories.shtml or call our office at (804)786-3798 for course information.

CATEGORY	CATEGORY TITLE	RECERTIFY BEFORE
8	PUBLIC HEALTH PEST CONTROL	30-JUN-2018

If any of the above employer or address information is incorrect, contact OPS immediately. If your certificate expires June 30 of this year and you have not received a new certificate by July 1, it is your responsibility to contact OPS at 804-786-3798 to verify your status and request a duplicate.

If you do not meet your recertification requirement by August 29 of the year your certificate expires, your certificate will lapse and you will receive no further contact or mailing from this office.

VIRGINIA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES
OFFICE OF PESTICIDE SERVICES
P O BOX 1163, RICHMOND VA 23218-1163
PHONE (804) 786-3798
FAX (804) 786-9149

September 23, 2013

JERRY CAGLE
CITY OF POQUOSON PUBLIC WORKS
10 HOLLY STREET
POQUOSON VA 23662

Certification No.: 26802
Class: GOVT EMPLOYEE

GOVERNMENT APPLICATOR CERTIFICATION(RETRAINING) STATUS REPORT

Printed below is the current record of the pesticide applicator categories in which you are certified. An asterisk at the end of any line indicates that your certification (retraining) for this category will expire June 30, 2014, unless you attend a Virginia-approved recertification course for your category, or choose to be reexamined. If you need to attend a training class, you may check our list of approved training courses at www.vdacs.virginia.gov/pesticides/categories.shtml or call our office at (804)786-3798 for course information.

CATEGORY	CATEGORY TITLE	RECERTIFY BEFORE
8	PUBLIC HEALTH PEST CONTROL	30-JUN-2018

If any of the above employer or address information is incorrect, contact OPS immediately. If your certificate expires June 30 of this year and you have not received a new certificate by July 1, it is your responsibility to contact OPS at 804-786-3798 to verify your status and request a duplicate.

If you do not meet your recertification requirement by August 29 of the year your certificate expires, your certificate will lapse and you will receive no further contact or mailing from this office.

VIRGINIA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES
OFFICE OF PESTICIDE SERVICES
P O BOX 1163, RICHMOND VA 23218-1163
PHONE (804) 786-3798
FAX (804) 786-9149

September 20, 2012

NOEL HERNANDEZ
CITY OF POQUOSON PUBLIC WORKS
500 CITY HALL AVENUE
POQUOSON VA 23662

Certification No: 91937
Class: REGISTERED TECH

GOVERNMENT APPLICATOR CERTIFICATION(RETRAINING) STATUS REPORT

Printed below is the current record of the pesticide applicator categories in which you are certified. An asterisk at the end of any line indicates that your certification (retraining) for this category will expire June 30, 2013, unless you attend a Virginia-approved recertification course for your category, or choose to be reexamined. If you need to attend a training class, you may check our list of approved training courses at www.vdacs.virginia.gov/pesticides/categories.shtml or call our office at (804)786-3798 for course information.

CATEGORY	CATEGORY TITLE	RECERTIFY BEFORE
60	REGISTERED TECHNICIAN	30-JUN-2017

If any of the above employer or address information is incorrect, contact OPS immediately. If your certificate expires June 30 of this year and you have not received a new certificate by July 1, it is your responsibility to contact OPS at 804-786-3798 to verify your status and request a duplicate.

If you do not meet your recertification requirement by August 29 of the year your certificate expires, your certificate will lapse and you will receive no further contact or mailing from this office.

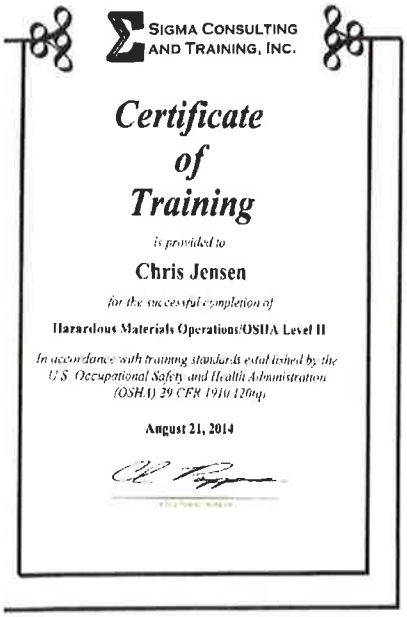
BMP 6.4g Emergency Response Training in Hazardous Waste Spills: 24 Fire Department Personnel completed NFPA HAZMAT Spill Prevention and Control training:

Completions Report
Report executed 03/25/2015
User Status: Active/Offline
Assignment Type: All Assignments
Courses Selected: 1
Custom Activities Selected: 0

First Name	Last Name	Assignment Name	Completion Date	Completion Time	Test Score	Duration (hours)
Nicholas	Allen	NFPA 1500 HAZMAT Spill Prevention & Control	09/05/2014	01:27 PM	90%	1
Corey	Archer	NFPA 1500 HAZMAT Spill Prevention & Control	09/03/2014	10:02 AM	90%	1
Joseph	Breeden	NFPA 1500 HAZMAT Spill Prevention & Control	09/30/2014	09:17 PM	100%	1
Vernon	Bryan	NFPA 1500 HAZMAT Spill Prevention & Control	09/09/2014	10:19 AM	90%	1
Thomas	Cannella	NFPA 1500 HAZMAT Spill Prevention & Control	09/03/2014	09:31 AM	90%	1
Clay	Cooper	NFPA 1500 HAZMAT Spill Prevention & Control	09/30/2014	10:11 PM	100%	1
Charles	Downey	NFPA 1500 HAZMAT Spill Prevention & Control	09/25/2014	03:34 PM	100%	1
Charles	Dryden	NFPA 1500 HAZMAT Spill Prevention & Control	09/25/2014	03:36 PM	100%	1
John	Ferrara	NFPA 1500 HAZMAT Spill Prevention & Control	09/22/2014	09:22 AM	100%	1
Robert	Forrest	NFPA 1500 HAZMAT Spill Prevention & Control	09/22/2014	05:35 PM	90%	1
Darryll	Griffiths	NFPA 1500 HAZMAT Spill Prevention & Control	09/16/2014	10:29 PM	90%	1
Darlene	Harris	NFPA 1500 HAZMAT Spill Prevention & Control	09/29/2014	05:59 PM	90%	1
Joseph	Insley	NFPA 1500 HAZMAT Spill Prevention & Control	09/16/2014	02:43 PM	90%	1

Steven	Katona	NFPA 1500 HAZMAT Spill Prevention & Control	09/17/2014	08:15 PM	100%	1
Ricky	Kinser	NFPA 1500 HAZMAT Spill Prevention & Control	09/09/2014	10:44 AM	90%	1
Donald	Lawson	NFPA 1500 HAZMAT Spill Prevention & Control	09/05/2014	02:37 PM	100%	1
John Paul	Linton	NFPA 1500 HAZMAT Spill Prevention & Control	09/19/2014	08:04 PM	90%	1
Natalie	Marshall	NFPA 1500 HAZMAT Spill Prevention & Control	09/06/2014	11:23 AM	90%	1
Duane	McFarland	NFPA 1500 HAZMAT Spill Prevention & Control	09/08/2014	10:41 AM	90%	1
Eric	Peterson	NFPA 1500 HAZMAT Spill Prevention & Control	09/09/2014	11:38 AM	100%	1
Devin	Rilee	NFPA 1500 HAZMAT Spill Prevention & Control	09/03/2014	09:16 AM	100%	1
Owen	Smith	NFPA 1500 HAZMAT Spill Prevention & Control	09/22/2014	11:27 AM	100%	1
Christopher	Tantillo	NFPA 1500 HAZMAT Spill Prevention & Control	09/25/2014	08:52 PM	90%	1
John	Young	NFPA 1500 HAZMAT Spill Prevention & Control	09/30/2014	09:11 PM	100%	1

6 Public Works, Garage and Utilities employees completed OSHA Level II Hazardous Materials Operations training on August 21, 2014. Employees are trained and recertified on a rotating basis, with a portion of the 27 total Public Works, Garage and Utilities employees attending each year:



SIGMA CONSULTING AND TRAINING, INC.

Certificate of Training

is provided to

Chris Jensen

for the successful completion of

Hazardous Materials Operations/OSHA Level II

In accordance with training standards established by the U.S. Occupational Safety and Health Administration (OSHA) 29 CFR 1910.120(q)

August 21, 2014

SIGMA CONSULTING AND TRAINING, INC.

Certificate of Training

is provided to

Jonathan Ellis

for the successful completion of

Hazardous Materials Operations/OSHA Level II

In accordance with training standards established by the U.S. Occupational Safety and Health Administration (OSHA) 29 CFR 1910.120(q)

August 21, 2014

SIGMA CONSULTING AND TRAINING, INC.

Certificate of Training

is provided to

Ronald Belknap

for the successful completion of

Hazardous Materials Operations/OSHA Level II

In accordance with training standards established by the U.S. Occupational Safety and Health Administration (OSHA) 29 CFR 1910.120(q)

August 21, 2014

SIGMA CONSULTING AND TRAINING, INC.

Certificate of Training

is provided to

Michael Easterling

for the successful completion of

Hazardous Materials Operations/OSHA Level II

In accordance with training standards established by the U.S. Occupational Safety and Health Administration (OSHA) 29 CFR 1910.120(q)

August 21, 2014

SIGMA CONSULTING AND TRAINING, INC.

Certificate of Training

is provided to

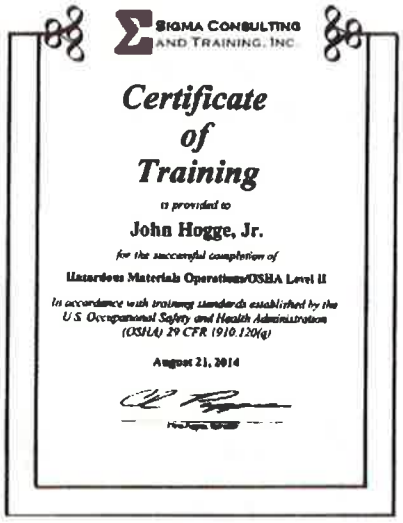
Douglas Montgomery

for the successful completion of

Hazardous Materials Operations/OSHA Level II

In accordance with training standards established by the U.S. Occupational Safety and Health Administration (OSHA) 29 CFR 1910.120(q)

August 21, 2014



SIGMA CONSULTING AND TRAINING, INC.

Certificate of Training

is provided to

John Hogge, Jr.

for the successful completion of

Hazardous Materials Operations/OSHA Level II

In accordance with training standards established by the U.S. Occupational Safety and Health Administration (OSHA) 29 CFR 1910.120(q)

August 21, 2014

BMP 6.5a & b: Training Needs and Regional Plan

Regional Stormwater Training Plan

Training Priorities:

1) IDDE – Public Works, fire department, parks and rec
2) Street and Parking Lot maintenance
3) Pollution Prevention Maintenance and Public Works Yards

Training Strategy/Schedule

HRPDC will create and maintain a Regional Training Library of physical and online videos and other training materials by December 31, 2014.

Localities will create opportunities for necessary staff to attend 30 min-1 hr. education sessions on priority topics.

A Regional Training on Pollution Prevention will be held once per permit cycle.

A Regional Training on Construction/E and S will be held once per permit cycle.

Special Conditions: Chesapeake Bay Action Plan is being provided as a separate document. Bacterial TMDL's are still under development by DEQ.

End of Appendix.

Chesapeake Bay Action Plan

City of Poquoson Annual Report

VAR# 040024

July 1, 2014-June 30, 2015

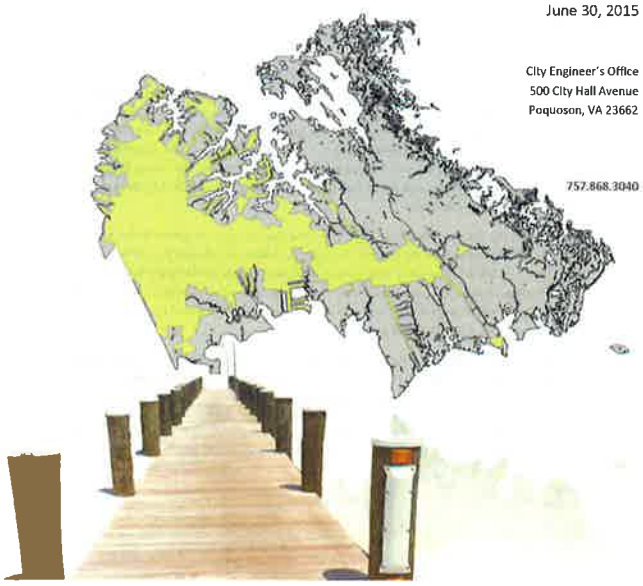
Submitted to DEQ September 30, 2015, via separate email

CITY OF POQUOSON, VIRGINIA

CHESAPEAKE BAY TMDL ACTION PLAN

VPDES PERMIT No. VAR040024

June 30, 2015



City Engineer's Office
500 City Hall Avenue
Poquoson, VA 23662

757.868.3040

CERTIFICATION

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Name	Title	Date

CHESAPEAKE BAY TMDL ACTION PLAN

(5 PERCENT COMPLIANCE)

VPDES PERMIT NUMBER VAR040024

June 30, 2015

Prepared by City staff and

AECOM No. 60393499

City Engineer's Office
500 City Hall Avenue, Poquoson, VA 22662
757-868-3040

TABLE OF CONTENTS

List of Tables

List of Figures

Definitions & Acronyms

The following definitions shall apply to this Chesapeake Bay TMDL Action Plan:

Action Plan – unless specifically stated otherwise, the Chesapeake Bay TMDL Action Plan
Permit – unless specifically stated otherwise, the City's current MS4 permit valid from 2013 to 2018

The following acronyms are used in this Chesapeake Bay TMDL Action Plan:
City – unless specifically stated otherwise, the City of Poquoson
DEQ – Virginia Department of Environmental Quality
EOS – Edge of Stream
EPA – The U.S. Environmental Protection Agency
MS4 – Municipal Separate Storm Sewer System
MTD – Manufactured Treatment Devices
NAVD88 – North American Vertical Datum of 1988
POCs – Pollutants of Concern (Specifically Nitrogen, Phosphorus, and Total Suspended Solids)
RMA – Resource Management Area
SLAF – Stormwater Local Assistance Fund (administered by DEQ)
TMDL – Total Maximum Daily Load
RPA – Resource Protection Area
VAMSA – Virginia Municipal Stormwater Association
VSMP – Virginia Stormwater Management Program

CHESAPEAKE BAY TMDL ACTION PLAN
(5 PERCENT COMPLIANCE)

VPDES Permit Number VAR040024
June 30, 2015

A. Executive Summary

The City of Poquoson is submitting this Chesapeake Bay Action Plan in compliance with Section I.C., "Special Condition for the Chesapeake Bay TMDL" found in its General Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems, No. VAR040024 issued in 2013. This Action Plan details the City's estimation of its existing source loads of POCs as of June 30, 2009 based on the Chesapeake Bay Program's Phase 5.3.2 watershed model and the required reductions in POCs by the end of this permit cycle using Table 3d in the permit. Also, the means and methods by which the required reductions will be met, and an estimate of the costs to the City to meet the required reductions is addressed.

To determine the POC loads from existing sources, the City delineated Poquoson's MS4 boundary carefully using guidance from the Virginia Municipal Stormwater Association and definitions from DEQ. The City's GIS data and aerial imagery from 2009 were used to delineate the MS4 area. Contour information, storm system pipe and structure data, as well as infrared LIDAR data obtained from NASA, were used to determine drainage patterns during the delineation process. The City's MS4 service area is shown in Figure 1.

Land cover within the MS4 as of June 30, 2009 was also determined using the City's aerial imagery and parcel development data. The types of land cover identified within the City's MS4 area were regulated urban pervious, regulated urban impervious and forested land. Forested land was only included if it was a contiguous area over one-half acre. Tidal marsh areas within the MS4 were included as forested land. Table 1 lists the land cover within the City's MS4, as indicated in Figure 2. Table 2 lists the annual pollutant loads generated by existing sources as of June 30, 2009.

Based on a total of 636.28 acres of regulated urban impervious land, and 1,642.35 acres of regulated pervious land within the City's MS4 service area, the estimated annual pollutant loads from existing sources are 17,215.18 pounds of nitrogen, 1,798.38 pounds of phosphorus, and 409,285.41 pounds of total suspended solids.

The 5% required nutrient reduction for the first permit cycle, was calculated based on the land cover acreage within the MS4 and the required reduction in loading rates from Table 3d in the City's MS4 permit. Table 3 lists the total reductions required for the first permit cycle. The City's MS4 area in this Action Plan includes the City's 2010 Census urbanized area, and that land is included in the calculations of the reduction requirements for the first permit cycle. The total annual reductions required during the first permit cycle are 51.94 pounds of nitrogen, 9.65 pounds of phosphorus and 3,452.44 pounds of suspended solids.

To satisfy the first permit cycle requirements, Poquoson has identified seven specific projects, one of which is already completed, two of which are under design and are funded through a SLAF grant, and four additional projects that must be completed by June 30, 2018. The project locations are shown in Figure 3, with individual project sites shown in Figures 4 through 7. Table 4 documents the pollutant reductions for these projects, as summarized in Table 5. Table 6 presents the implementation schedule.

The two projects currently under design are a proposed wet pond and created wetland. Land use conversion for the property at 127 Ridge Road has been completed. The four remaining projects include three vegetated filter strips at different locations within the MS4 area and a wet swale. The City is also taking credit for an annual reduction of nitrogen of approximately 124.2 lbs./yr., for taking seven septic tanks offline and connecting those parcels to the City's sanitary sewer system.

The total annual reductions of POCs, through the implementation of this Action Plan, are approximately 201.86 pounds of nitrogen, 10.39 pounds of phosphorus, and 3,607.88 pounds of total suspended solids. The total implementation cost of the four additional projects is estimated at $238,831. Table 7 lists the individual cost opinions for the four projects.

Due to the high cost to the City of meeting the required reductions, the City reserves the right to make adjustments to this plan, and to substitute any projects that can achieve the required pollutant reductions at less total cost. If DEQ approves more cost-effective BMP types for credit under the Chesapeake Bay TMDL, the City will modify its Action Plan to meet the nutrient reduction requirements during this permit cycle as well as future permit cycles.

B. Background Information

The City of Poquoson encompasses an area of less than 16 square miles, near the mouth of the Chesapeake Bay. The City drains to three water bodies; the Poquoson River, Back River, and the Chesapeake Bay itself, but is considered to be part of the York River watershed in the current Bay model, and for purposes of developing this Action Plan to comply with the Chesapeake Bay TMDL requirements in its permit. The City has noted on many occasions that it does not drain to the York River, and feels that its POC reduction requirements are unrealistically high to make up for contributions of POCs by entities far upstream in the York River watershed.

With a 2010 population of approximately 12,500 residents, Poquoson is one of the smallest regulated MS4s in the state of Virginia. However, the City strives to protect the Chesapeake Bay through its local program, which it continues to update since the implementation of its 1999 comprehensive Chesapeake Bay Preservation Ordinance. The City of Poquoson's history is directly linked to the Chesapeake Bay. Historically, Poquoson was a fishing village, with generations of families making their living fishing in the Bay and many of Poquoson's residents still depend on the waters around Poquoson for their livelihood.

The land cover in the current Phase 5.3 Chesapeake Bay Watershed Model is highly inaccurate and in Poquoson's case is a poor representation of the actual land cover in the City's MS4 service area. The City has approximately 5,089 acres of tidal wetlands within its boundary, which are not regulated under the City's permit. The majority of those tidal wetlands are contained within the 3,276-acre Plum Tree Island National Wildlife Refuge. The remaining 1,800 acres of tidal wetlands surround the shoreline of the City's tidal creeks. In addition, there are approximately 1,575 acres of land that are not part of the MS4 service area because stormwater runs off directly to tidal waters, or stormwater is conveyed from City owned ditches or pipes through private property which is not maintained by the City. During the development of this Action Plan, the City spent considerable time and effort to delineate its MS4 service area and determine the total acres of regulated urban pervious and urban impervious land within that service area.

Poquoson, like other Hampton Roads localities, has flat, low-lying topography, high water tables, and soils that are not conducive to infiltration. As of spring 2015, there are not many Clearinghouse-approved BMPs that can be used in a cost-effective manner in the City. Many low impact development (LID) practices such as rooftop disconnection and vegetated roofs are acceptable as BMPs for individual parcel development but are not practical as retrofits for localities to implement on a large scale. The flat topography and high water tables in Poquoson preclude many of the BMPs with the highest nutrient removal efficiencies. Infiltration basins make ideal BMPs to treat impervious areas such as parking lots, but cannot be used in areas with high water tables. The primary BMPs considered by the City for the Action Plan were wet ponds, created wetlands, wet swales, vegetated filter strips, permeable asphalt, manufactured treatment devices and land conversions.

During the preparation of this Action Plan, DEQ made two revisions to its draft guidance memorandum (No. 14-2012) issued on August 18, 2014. The first revision was issued for public comment on March 19, 2015. The final guidance memorandum (No. 15-2005) was issued on May 18th, 2015—less than six weeks before this Action Plan was due to be implemented. Two revisions made in the final guidance memo impact the City's Action Plan. The first revision—reverting back to the Chesapeake Bay Program's size requirement for forested lands of 30m x 30m—reversed a

change in the March 19th guidance memo, stating that forested lands must be at least one-half acre in size. While this change resulted in a very slight decrease in the City's pollutant load, it did not affect the City's Action Plan. The second revision, which corrected an issue with rounding the required reduction in loading rates, found in Table 3d of the permit, does affect the City's POC reduction requirements, which are increased for nitrogen and phosphorus. Due to the delay in issuing the final guidance document, the City was not able to update the means and methods to achieve the first permit cycle reductions to account for the additional nutrient reductions required by the Corrected Reductions in Loading Rates listed in the final guidance memo. While the final guidance memo states that either set of load reduction numbers given in the memo may be used for the Action Plan, additional nutrient reductions will be required during the second permit cycle to make up for the difference.

During the development of its Action Plan, the City identified projects to help it meet the required POC reductions for both the first and second permit cycles. The projects the City proposes for meeting its 5% reductions during this permit cycle are described in detail in the Action Plan. However, due to the high cost to the City of meeting those reductions, the City plans to replace any of the proposed projects with more cost-effective BMPs, when and if they become approved by DEQ, to meet the nutrient reduction requirements.

C. Required Components of the Chesapeake Bay TMDL Action Plan

The following sections of the Action Plan are required components, described in Section I.C.2.a of the City's MS4 Permit. The "Permit Requirements" described below are taken verbatim from Section I.C.2.a of the City's MS4 Permit.

1. Review of Current MS4 Program

Permit Requirement: A review of the current MS4 program implemented as a requirement of this state permit including a review of the existing legal authorities and the operator's ability to ensure compliance with this special condition.

The City of Poquoson has obtained coverage under 9VAC25-890-40, the General VPDES Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4's), with authorization to discharge under the Virginia Stormwater Management Program and the Virginia Stormwater Management Act. This state permit authorizes operators of small municipal separate storm sewer systems to discharge to surface waters within the boundaries of the Commonwealth of Virginia, except those waters specifically named in State Water Control Board regulations, which prohibit such discharges. This permit is consistent with the Chesapeake Bay TMDL and the Virginia Phase I and II WIPs to meet the Level 2 (L2) scoping run for existing developed lands as it represents an implementation of 5.0% of L2 as specified in the 2010 Phase I WIP.

The City maintains an MS4 program plan, which was updated according to the schedule found in Table 1 of the permit, and submitted to DEQ on September 30, 2014 along with its Permit Year 1 Annual Report. In accordance with the permit requirements, Poquoson has developed and shall submit to the department for its review and acceptance, an approvable Chesapeake Bay TMDL Action Plan on or before October 1, 2015. Unless specifically denied in writing by the department, this plan becomes effective and enforceable 90 days after the date received by the department.

The City implements its MS4 program through legal authorities found in Section 34 of the City Code. The City's Erosion and Sediment Control, Wetlands, and Stormwater Management Ordinances; Articles III, IV, and V of Chapter 34 respectively, are the primary legal authorities governing land development, water quality, and environmental protection. In addition to its environmental ordinances, the City has taken other steps to preserve the environment and protect water quality. In 1991, areas equal to approximately 16% of the City of the City's total land mass were designated as RPAs. All upland areas outside the RPAs were designated as RMAs. As a result, every construction project within the City is reviewed for compliance with the Chesapeake Bay Act.

Actions undertaken to implement the Chesapeake Bay TMDL Special Condition shall be undertaken on City-owned lands, using General Funds, in accordance with all applicable state laws and regulations.

2. Identification of New or Modified Legal Authorities

Permit Requirement: The identification of any new or modified legal authorities such as ordinances, state and other permits, orders, specific contract language, and interjurisdictional agreements implemented or needing to be implemented to meet the requirements of this special condition.

The only new legal authorities required for plan implementation will be site-specific permits related to construction activity. These include coverage under the General VPDES Permit for Discharges of Stormwater from Construction Activities; Poquoson Land Disturbance Permits; Poquoson Right-of-Way Permits; and Wetlands permits obtained on an as-needed basis. All other local and state construction and procurement laws are sufficient to implement the plan.

3. Means and Methods to Address Discharges into the MS4 from New Sources

Permit Requirement: The means and methods that will be utilized to address discharges into the MS4 from new sources.

The City of Poquoson requires that stormwater discharges from any new development adhere to the criteria outlined in the VSMP regulations for both water quality and quantity. Post-development stormwater management facilities and structures must meet the design standards and specifications of the Virginia Stormwater BMP Clearinghouse, and plans for proposed post-

development stormwater management facilities must be reviewed and approved by the City. In addition, all construction activities must follow the minimum standards and requirements outlined in Virginia's Erosion and Sediment Control Law as well as the City's Erosion and Sediment Control ordinance, to prevent sediment laden stormwater from being discharged in to the MS4.

Also, the City restricts all development in its RPAs in accordance with the Chesapeake Bay Preservation Act. In an effort to protect water quality, all City upland areas outside the RPAs were designated as RMAs in 1991. This designation exceeds the Chesapeake Bay Act's minimum technical requirements for RMA designation. The City's Environmental Management Area Overlay District ordinance allows the City to request that a Water Quality Impact Assessment be performed for any proposed land disturbance, development, or redevelopment activity within an RMA, when the City deems it necessary due to unique site conditions, or the intensity of the proposed use, development or redevelopment.

4. Estimate of Annual POC Loads Discharged from Existing Sources as of June 30, 2009

Permit Requirement: An estimate of the annual POC loads discharged from the existing sources as of June 30, 2009, based on the 2009 progress run. The operator shall utilize the applicable versions of Tables 2 a-d in this section based on the river basin to which the MS4 discharges by multiplying the total existing acres served by the MS4 on June 30, 2009, and the 2009 Edge of Stream (EOS) loading rate.

To determine the POC loads from existing sources, the City delineated Poquoson's MS4 boundary carefully using guidance from the VAMSA and definitions from DEQ. The City's GIS data and aerial imagery from 2009 were used to delineate the MS4 area. Contour information, storm system pipe and structure data, as well as infrared LIDAR data obtained from NASA, were used to determine drainage patterns during the delineation process. Drainage ditches through private property were not included as part of the City's MS4 area, except for those ditches that the City identified as being maintained by City personnel. The majority of the City's outfall ditches are tidal at some point, and interstate waters and wetlands are outside of the City's MS4 jurisdiction. The MS4 area was terminated where outfall ditches reached "vegetated wetlands." Virginia's definition of vegetated wetlands is those lands between mean low water and an elevation above mean low water equal to 1.5 times the mean tide range. Using the Sewell's Point tidal recording station, this elevation is approximately equal to 2.16 on the NAVD88 datum. Figure 1 maps the resulting MS4 service area.

Land cover within the MS4 as of June 30, 2009 was also determined using the City's aerial imagery and parcel development data. The types of land cover identified within the City's MS4 area were regulated urban pervious, regulated urban impervious and forested land. Forested land was only included if it was a contiguous area over one-half acre. Forested areas on the edge of the MS4 boundary were included if they were under one-half acre but were part of a contiguous area greater than one-half acre. Originally, forested areas were included if they met the minimum area requirement of 30 meters square used in the Chesapeake Bay Watershed Model. After DEQ's

revised guidance memo was issued in March of 2015, the forested areas were revised, and only those forested areas that were a minimum of one-half acre were classified as forested land. The May 18, 2015 final guidance memo eliminates the half-acre requirement and goes back to the 30-meters-square requirement. Approximately 11.3 acres of regulated urban pervious land can revert to "forested land," and not be included in the pollutant load calculations. The net result is a very small decrease in required pollutant reductions for the first two permit cycles. For the first permit cycle, the required nutrient reductions are reduced by 0.23 pounds of nitrogen, .02 pounds of phosphorus, and 3.62 pounds of suspended solids. The second permit cycle reductions are reduced by 1.58, 0.23, and 25.33 pounds of nitrogen, phosphorus and suspended solids respectively. These reductions do not have any impact on the means and methods for meeting the nutrient reduction requirements for the first two permit cycles. Due to the late date, and the amount of work required to update and recalculate land use, pollutant load, and BMP tables, with no impact to the Action Plan recommendations, the forest area changes in the May 18, 2015 guidance memo are not incorporated into the Action Plan. Tidal marsh areas within the MS4 are included as forested land. Land cover within the City's MS4 is listed in Table 1 and shown in Figure 2. Table 2 lists the annual pollutant loads generated by existing sources as of June 30, 2009.

5. Determination of Total Pollutant Load Reductions

Permit Requirement: determination of the total pollutant load reductions necessary to reduce the annual POC loads from existing sources utilizing the applicable versions of Tables 3 a-d in this section based on the river basin to which the MS4 discharges. This shall be calculated by multiplying the total existing acres served by the MS4 by the first permit cycle required reduction in loading rate. For the purposes of this determination, the operator shall utilize those existing acres identified by the 2000 U.S. Census Bureau urbanized area and served by the MS4.

The 5% required nutrient reductions for the first permit cycle are calculated based on the land cover acreages within the MS4 and the required reduction in loading rates from Table 3d in the City's MS4 permit. Table 3 lists the total reductions required for the first permit cycle. It should be noted that the City's MS4 area in this Action Plan includes the City's 2010 Census urbanized area, and that land was included in the calculations of the reduction requirements for the first permit cycle.

As previously mentioned, DEQ's May 18, 2015 final guidance memo recognized that the required reductions in loading rates found in Table 3d of the City's MS4 permit contain problematic rounding of significant digits. Full reduction requirements are listed in the final guidance memo. According to the memo, either set of numbers may be used for this permit term. Elements in this Action Plan are based on the load reductions as they are listed in the City's MS4 permit. The City's nutrient reduction requirements increase for nitrogen and phosphorus when using the full load reductions as listed in the May 18, 2015 guidance memo. For the first permit cycle, the required reductions increase by 6.68 pounds for nitrogen and 1.07 pounds for phosphorus.

6. MEANS AND METHODS TO MEET THE REQUIRED REDUCTIONS WITH SCHEDULE

Permit Requirement: The means and methods, such as management practices and retrofit programs that will be utilized to meet the required reductions included in subdivision 2 a (5) of this subsection, and a schedule to achieve those reductions. The schedule should include annual benchmarks to demonstrate the ongoing progress in meeting those reductions.

To satisfy the first permit cycle requirements, Poquoson has identified seven specific projects, one of which is already completed, two of which are under design and are funded through a SLAF grant, and four additional projects that must be completed by June 30, 2018. The project locations are shown in Figure 3, with individual project sites shown in Figures 4 -7. Table 4 documents the pollutant reductions for these projects, and Table 5 summarizes the projects. Table 6 presents the implementation schedule is presented in.

Pollutant removals for the proposed wet pond and created wetland currently under design were calculated along with the land use conversion for the property at 127 Ridge Road to determine the remainder of the first permit cycle reductions. Because the created wetland does not meet the water quality volume under the Virginia BMP Clearinghouse specifications for a level 1 design, the Bay Program retrofit curves were used to determine the pollutant removal efficiencies. With a treatment depth of only 0.23 inches over the impervious area treated, the removal rates are approximately half of those for a level 1 design.

The vegetated filter strips along Victory Boulevard, at the Elementary School, and the end of Messick Road will meet the Clearinghouse specifications for sheet flow to a vegetated filter strip and soil compost amendments and will involve tilling the soil in the area of the filter strips, incorporating compost to amend the soil, and planting turf grass. These BMPs have minimal design requirements, do not require major construction efforts, and alter the land very little as turf grass can be planted back over the area where the compost was incorporated. The filter strips along Victory Boulevard and at Messick Point are an important part of the first permit cycle Action Plan, because they provide approximately 73% of the required nitrogen reduction and 25% of the required phosphorus reduction. Also, they are very cost effective, with the greatest costs being the compost itself and labor to till it into the soil. The filter strip along Victory Boulevard will require compost to be incorporated into the soil to a depth of approximately ten inches. Only the shallowest utilities will be in conflict, and because the area between the roadway and the ditch to the north is approximately 50 feet in most places, and the filter strip is 35 feet wide, the area tilled can vary to avoid utilities if necessary. The filter strips will not prevent redevelopment in the future. The strip along Victory Boulevard will treat the existing westbound lane and shoulder. If the road is widened in the future, the new asphalt and existing pavement will still require treatment by an alternative BMP for water quality.

The wet swale behind the Public Works yard primarily requires ditch grading and construction of one or two small weirs to detain stormwater runoff. Some clearing of trees will also be required.

This project could be replaced if other, more cost-effective BMPs, such as nutrient credits, oyster aquaculture or Phragmites harvesting, become available before the end of the permit cycle.

Also to the BMP construction projects listed above, the City will take nitrogen reduction credit for recent disconnections of household septic tanks and the conversions of the lots to sanitary sewer hookups. During the mid-2000s, the City spent millions of dollars to install new sanitary sewer lines and make pump station upgrades. Currently, it is estimated that more than 95% of the City's parcels are connected to the sanitary sewer system. With less than thirty parcels remaining with septic tanks, the City is working towards a 100% connection rate to its sanitary sewer system.

The City is applying the nitrogen reduction credits for those disconnections towards their TMDL requirements for several reasons. First, the City has been paying for the infrastructure improvements that allow the septic tank disconnections. Secondly, the septic systems the City has taken off-line were contributing to the nitrogen load in the Bay that ultimately has led to the development of the TMDL, and since the sewer line construction and upgrades, with most residential lots now connected to sanitary sewer, water quality has improved in the City's tidal creeks. Thirdly, the Chesapeake Bay TMDL reductions being enforced through its MS4 permit unfairly penalize the City by averaging nitrogen loads over the York River watershed, and Poquoson is being forced to make up for nutrient loads by upstream contributors. While the septic disconnects do not provide any reductions for phosphorus or suspended solid loads, the City has a substantial nitrogen reduction requirement, and will take credit for any actions that reduce nutrient inputs into the Bay.

In a June 17, 2015 conference call with the Hampton Roads Regional Stormwater Work Group, DEQ decided that localities could take nitrogen reduction credits for sanitary sewer connections equal to 3.6 lbs. N/capita/year. The number of people can be based on an average household per capita for the locality, an average for the neighborhood, or 1.5 people per bedroom. Credit can be taken for any septic tank/sewer connection from 2006 onward.

Since July 1, 2009, the City has disconnected seven septic tanks and connected those parcels to the sanitary sewer system. The houses on those seven parcels have a total of 23 bedrooms. The City estimated the per capita number using 1.5 people per bedroom for a total of 34.5 people and a total nitrogen reduction for the seven septic disconnects of 124.2 lbs/yr. As previously stated, there are no reductions for phosphorus and suspended solids, and the nitrogen reductions for septic disconnects do not eliminate any of the projects required for the first permit cycle reductions. However, they will count towards the total nitrogen reduction requirement (100%) at the end of the third permit cycle, and may be used to offset more expensive BMPs in the future.

The City will reserve the right to make adjustments to this plan, and to substitute any projects that can achieve the required pollutant reductions at less total cost. Alternative BMPs and nutrient credit trading opportunities that are not available in 2015 could become available in time to be implemented by June 30, 2018.

7. MEANS AND METHODS TO OFFSET INCREASED LOADS FROM CONSTRUCTION BETWEEN JULY 1, 2009 AND JUNE 30, 2014

Permit Requirement: The means and methods to offset the increased loads from new sources initiating construction between July 1, 2009, and June 30, 2014, that disturb one acre or greater as a result of the utilization of an average land cover condition greater than 16% impervious cover for the design of post-development stormwater management facilities. The operator shall utilize Table 4 in this section to develop the equivalent pollutant load for nitrogen and total suspended solids. The operator shall offset 5.0% of the calculated increased load from these new sources during the permit cycle.

Poquoson has consistently used an average land cover condition of 16% impervious cover for the design of post-development stormwater management facilities. The City therefore does not have to identify any means and methods to offset increased loads from new sources initiating construction between July 1, 2009 and June 30, 2014—as addressed in Phase II General Permit Section I.C.2.a.(7).

8. MEANS AND METHODS TO OFFSET INCREASED LOADS FROM GRANDFATHERED PROJECTS

Permit Requirement: The means and methods to offset the increased loads from projects as grandfathered in accordance with 4VAC50-60-48, that disturb one acre or greater that begin construction after July 1, 2014, where the project utilizes an average land cover condition greater than 16% impervious cover in the design of post-development stormwater management facilities. The operator shall utilize Table 4 in this section to develop the equivalent pollutant load for nitrogen and total suspended solids.

Poquoson does not have any grandfathered projects that began construction after July 1, 2014—as addressed in Phase II General Permit Section I.C.2.a.(8). Therefore, there are no required means and methods to offset increased loads from grandfathered projects.

9. ANY MODIFICATION TO THE TMDL OR WATERSHED IMPLEMENTATION PLAN

Permit Requirement: The operator shall address any modification to the TMDL or watershed implementation plan that occurs during the term of this state permit as part of its permit reapplication and not during the term of this state permit.

The City of Poquoson reserves the right to substitute locations, sizes and types of treatment practices if more cost effective measures are approved by the Bay Program or if site conditions warrant. Modifications to the TMDL plan shall be addressed during the permit reapplication.

10. FUTURE PROJECTS AND ASSOCIATED ACREAGE THAT QUALIFY AS GRANDFATHERED

Permit Requirement: A list of future projects and associated acreage that qualify as grandfathered in accordance with 4VAC50-60-48.

There are no future projects and associated acreage within the City that qualify as grandfathered in accordance with 4VAC50-60-48.

11. ESTIMATE OF EXPECTED COSTS

Permit Requirement: An estimate of the expected costs to implement the requirements of this special condition during the state permit cycle.

The total implementation cost of the four additional projects is estimated at $238,831. Individual cost opinions for the four projects are found in Table 7.

12. PUBLIC COMMENT

Permit Requirement: An opportunity for receipt and consideration of public comment regarding the draft Chesapeake Bay TMDL Action Plan.

The City of Poquoson Chesapeake Bay TMDL Action Plan was discussed at a televised City Council Work Session on June 22, 2015, and made available on line on the City website, and at City Hall on Friday, June 26, 2015. Public Comments were received from June 26, 2015 to July 27, 2015.

Table 1. City of Poquoson Regulated MS4 Area

MS4 Land Use	Area (ac)
Regulated Impervious	636.28
Regulated Pervious	1,642.35
Forest*	817.02
Open Water*	15.94
Total Area	3,111.59

* Excluded land

Table 2. Existing Pollutant Loads (As of June 30, 2009)

Pollutant	Subsource	2009 EOS Loading Rate for the York River Basin (lbs/ac)[1]	Total Existing Acres Served by MS4 (6/30/09)	Estimated Load (lbs)	Estimated Total POC Load Based on 2009 Progress Run (lbs)
Nitrogen	Regulated Impervious	7.31	636.28	4,651.21	17,215.18
	Regulated Pervious	7.65	1,642.35	12,563.98	
Phosphorus	Regulated Impervious	1.51	636.28	960.78	1,798.38
	Regulated Pervious	0.51	1,642.35	837.60	
TSS	Regulated Impervious	456.68	636.28	290,576.35	409,285.41
	Regulated Pervious	72.28	1,642.35	118,709.06	

1. Existing Source Loads for the York River Basin taken from Table 2d of the City's MS4 General Permit.

Table 3. Reductions Required During First Permit Cycle (5% of the Level 2 Scoping Run)

No offsets are required for "New Sources" as of 06/30/2009. An average land cover of 16% imperviousness was used by the City for the design of post-development stormwater management facilities for development that occurred between June 30, 2009 and June 30, 2014.

Pollutant	Subsource	First Permit Cycle Required Reduction in Loading Rate (lbs/ac)	Total Existing Acres Served by MS4 (6/30/09)	Reduction Required (lbs)	Total Reduction Required During First Permit Cycle (lbs)
Nitrogen	Regulated Impervious	0.03	636.28	19.09	51.94
	Regulated Pervious	0.02	1,642.35	32.85	
Phosphorus	Regulated Impervious	0.01	636.28	6.36	9.65
	Regulated Pervious	0.002	1,642.35	3.28	
TSS	Regulated Impervious	4.60	636.28	2,926.89	3,452.44
	Regulated Pervious	0.32	1,642.35	525.55	

Table 4. Computation of Proposed Credits for First Permit Cycle (5% of the Level 2 Scoping Run)

SUMMARY — BMPs Required for First Permit Cycle Reductions, 5% of the Level 2 Scoping Run			
	TN	TP	TSS
5% Required Annual Reductions - (1st Permit Cycle)	51.94	9.65	3,452.44
Total Annual Reductions (lbs/yr) from BMPs	201.86	10.39	3,607.88
Pounds in Excess of Requirements: (carried forward to 2nd permit cycle)	149.92	0.74	155.44

1-1. Proposed Created Wetland (In Progress)

Land Use	Acres	Loading Rates (lbs/ac/yr) TN	TP	TSS	Pollutant Loads (lbs/yr) TN	TP	TSS
Forest	7.42	2.13	0.07	27.61	15.80	0.52	204.87
Reg. Pervious	4.14	7.65	0.51	72.28	31.67	2.11	299.24
Reg. Impervious	8.88	7.31	1.51	456.68	64.91	13.41	4,055.32
				Total (lbs/yr)	112.39	16.04	4,559.42
				Removal Efficiency	15%	24%	30%
				Annual Reduction (lbs/yr)	16.86	3.85	1,367.83

1-2. Proposed Wet Pond (In Progress)

Land Use	Acres	Loading Rates (lbs/ac/yr) TN	TP	TSS	Pollutant Loads (lbs/yr) TN	TP	TSS
Forest	1.86	2.13	0.07	27.61	3.96	0.13	51.35
Reg. Pervious	1.84	7.65	0.51	72.28	14.08	0.94	133.00
Reg. Impervious	3.41	7.31	1.51	456.68	24.93	5.15	1,557.28
				Total (lbs/yr)	42.96	6.22	1741.63
				Removal Efficiency	20%	45%	60%
				Annual Reduction (lbs/yr)	8.59	2.80	1044.98

1-3. Land Use Change - 127 Ridge Rd. (Completed)

Area Converted	Acres	Load Reductions (lbs/ac/yr) TN	TP	TSS	Total Reductions (lbs/yr) TN	TP	TSS
Impervious to Grass	0.08	6.06	1.17	430.00	0.48	0.09	34.40
Pervious to Grass	0.21	4.41	0.08	-	0.93	0.02	-
				Total Reduction for Land Conversion (lbs/yr)	1.41	0.11	34.40

Table 4. Computation of Proposed Credits for First Permit Cycle (5% of the Level 2 Scoping Run)

1-4. Victory Boulevard Vegetated Filter Strip

Land Use	Acres	Loading Rates (lbs/ac/yr) TN	TP	TSS	Pollutant Loads (lbs/yr) TN	TP	TSS
Forest	-	2.13	0.07	27.61	-	-	-
Reg. Pervious	0.86	7.65	0.51	72.28	6.58	0.44	62.16
Reg. Impervious	0.72	7.31	1.51	456.68	5.26	1.09	328.81
				Total (lbs/yr)	11.84	1.53	390.97
				Removal Efficiency	50%	50%	50%
				Annual Reduction (lbs/yr)	5.92	0.76	195.49

Additional Reduction for Land Use Change (Pervious to Grass)

Area Converted	Acres	Load Reductions (lbs/ac/yr) TN	TP	TSS	Total Reductions (lbs/yr) TN	TP	TSS
Pervious to Grass	1.95	4.41	0.08	-	8.60	0.16	-
				Total Reduction for Land Conversion (lbs/yr)	8.60	0.16	-
Total Annual Reduction (lbs/yr) (Efficiency + Land Conversion)					14.52	0.92	195.49

1-5. Elementary School Vegetated Filter Strip

Land Use	Acres	Loading Rates (lbs/ac/yr) TN	TP	TSS	Pollutant Loads (lbs/yr) TN	TP	TSS
Forest	-	2.13	0.07	27.61	-	-	-
Reg. Pervious	0.91	7.65	0.51	72.28	6.96	0.46	65.77
Reg. Impervious	-	7.31	1.51	456.68	-	-	-
				Total (lbs/yr)	6.96	0.46	65.77
				Removal Efficiency	50%	50%	50%
				Annual Reduction (lbs/yr)	3.48	0.23	32.89

Additional Reduction for Land Use Change (Pervious to Grass)

Area Converted	Acres	Load Reductions (lbs/ac/yr) TN	TP	TSS	Total Reductions (lbs/yr) TN	TP	TSS
Pervious to Grass	0.40	4.41	0.08	-	1.76	0.03	-
				Total Reduction for Land Conversion (lbs/yr)	1.76	0.03	-
Total Annual Reduction (lbs/yr) (Efficiency + Land Conversion)					5.24	0.26	32.89

Table 4. Computation of Proposed Credits for First Permit Cycle (5% of the Level 2 Scoping Run)

1-6. Wet Swale Near Municipal Works Lot and Pool

Land Use	Acres	Loading Rates (lbs/ac/yr) TN	TP	TSS	Pollutant Loads (lbs/yr) TN	TP	TSS
Forest	-	2.13	0.07	27.61	-	-	-
Reg. Pervious	1.37	7.65	0.51	72.28	10.48	0.70	99.02
Reg. Impervious	2.73	7.31	1.51	456.68	19.96	4.12	1,246.74
				Total (lbs/yr)	30.44	4.82	1,345.76
				Removal Efficiency	25%	20%	50%
				Annual Reduction (lbs/yr)	7.61	0.96	672.88

1- 50% value from Bay Program for Vegetated Open Channels (C/D soils)

1-7. End of Messick Road Vegetated Filter Strip

Land Use	Acres	Loading Rates (lbs/ac/yr) TN	TP	TSS	Pollutant Loads (lbs/yr) TN	TP	TSS
Forest	-	2.13	0.07	27.61	-	-	-
Reg. Pervious	3.64	7.65	0.51	72.28	27.85	1.86	263.10
Reg. Impervious	0.56	7.31	1.51	456.68	4.09	0.85	255.74
				Total (lbs/yr)	31.94	2.70	518.84
				Removal Efficiency	50%	50%	50%
				Annual Reduction (lbs/yr)	15.97	1.35	259.42

Additional Reduction for Land Use Change (Pervious to Grass)

Area Converted	Acres	Load Reductions (lbs/ac/yr) TN	TP	TSS	Total Reductions (lbs/yr) TN	TP	TSS
Pervious to Grass	1.69	4.41	0.08	-	7.45	0.14	-
				Total Reduction for Land Conversion (lbs/yr)	7.45	0.14	-
Total Annual Reduction (lbs/yr) (Efficiency + Land Conversion)					23.42	1.49	259.42

1-8. Septic Tank Disconnects/Connections to Sanitary Sewer

Conversion	Number of People Served	Load Reductions (lbs/capita/yr) TN	TP	TSS	Total Reductions (lbs/yr) TN	TP	TSS
Septic to Sanitary Sewer	34.5	3.60	-	-	124.20	-	-
				Total Reduction for Land Conversion (lbs/yr)	124.20	-	-

See the summary at the beginning of this table for cumulative totals

Table 5. Projects for First Permit Cycle (5% of the Level 2 Scoping Run)

Project	Location(s)	2015 Estimated Cost	Notes
1-1. Proposed Created Wetland (In Progress)	Adjacent to Oxford Run Ditch just south of Victory Boulevard	-	Project funded previously (SLAF grant).
1-2. Proposed Wet Pond (In Progress)	Adjacent to Oxford Run Ditch, west of the City Hall parking lot	-	Project funded previously (SLAF grant).
1-3. Land Use Change - 127 Ridge Road (Completed)	127 Ridge Road	-	Project completed previously.
1-4. Victory Boulevard Vegetated Filter Strip	North side of Victory Boulevard from the City line to Oxford Run Ditch	$ 110,743	
1-5. Elementary School Vegetated Filter Strip	Along concrete swale to the west of the Elementary School Parking lot	$ 13,479	
1-6. Wet Swale Near Municipal Works Lot and Pool	Just south of the Municipal Works lot on Municipal Drive	$ 89,739	
1-7. End of Messick Road Vegetated Filter Strips	Around City lot at end of Messick Road (Messick Point)	$ 24,870	
1-8. Septic Tank Disconnects/Connections to Sanitary Sewer	(See notes)	$ -	Completed after July 1, 2009
	Total Cost:	**$ 238,831**	

Notes:

1. See Figure 3 for specified locations.
2. See Table 7 for computation and tabulation of Chesapeake Bay TMDL pollutant removal credits.
3. See Table 11 for cost opinions.
4. Projects may be abandoned in favor of more economical alternatives, depending upon future regulatory approval of innovative BMPs, or other alternatives that may become available.
5. The following parcels were connected to sanitary sewer: 220 Browns Neck Rd. (2BR), 2 Lyons Creek Dr. (3 BR), 3 Lyons Creek Dr. (5 BR), 4 Lyons Creek Dr. (4 BR), 5 Lyons Creek Dr. (3 BR), 6 Lyons Creek Dr. (3 BR), 201 A Odd Rd. (3 BR). The number of individuals served was calculated using DEQ's estimate of 1.5 individuals per bedroom, and a total number of bedrooms of 23. 23 x 1.5 = 34.5 individuals.

Table 6. Schedule for First Permit Cycle (5% of the Level 2 Scoping Run)

Project	DATES[2] BMP Initiated[3]	BMP Construction to Begin	BMP Installation Completed	Notes
1-1. Proposed Created Wetland (In Progress)	n/a	6/10/2015	3/11/2016	SLAF grant. In design as of April 2015
1-2. Proposed Wet Pond (In Progress)	n/a	6/30/2015	3/31/2016	SLAF grant. In design as of April 2015
1-3. Land Use Change - 127 Ridge Rd. (Completed)	n/a		Before 6/30/2014	Completed
1-4. Victory Boulevard Vegetated Filter Strip	n/a	10/31/2016	6/30/2017	
1-5. Elementary School Vegetated Filter Strip	n/a	10/31/2016	6/30/2017	
1-6. Wet Swale Near Municipal Works Lot and Pool	n/a	10/31/2017	6/30/2018	
1-7. End of Messick Road Vegetated Filter Strip	n/a	10/31/2017	6/30/2018	
1-8. Septic Tank Disconnects/Connections to Sanitary Sewer	After 6/30/2009	-	-	Completed

Notes:

1. This column is for non-structural BMPs.
2. This information is formatted as requested in DEQ Guidance Memo No. 15-2005 (Finalized 5/18/2015)
3. This schedule can be used as the annual benchmarks required by the Phase II General Permit.
4. Projects may be abandoned in favor of more economical alternatives, depending upon future regulatory approval of innovative BMPs, or other alternatives that may become available.

Table 7. Cost Opinions

1-4. Victory Boulevard Vegetated Filter Strip. (Approximately 35' x 2,427')

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
1	Mobilization/Demobilization	1	LS	$3,564	$3,564
2	Soil Testing	17	EA	$100	$1,700
3	Compost (4.5" depth incorporated to a depth of 10")	1168	CY	$20	$23,360
4	Soil tilling and compost incorporation	1.95	AC	$3,100	$6,045
5	Seeding	1.95	AC	$1,000	$1,950
6	Erosion and Sediment Control	1	LS	$11,500	$11,500
				Construction Sub-Total:	$48,119
	Design and Permitting	1	LS	$20,000	$20,000
	Survey	1	LS	$18,000	$18,000
	Utility Location	1	LS	$10,000	$10,000
	Utility Relocation	1	LS	$15,000	$15,000
	Contingency	20	%	$9,624	$9,624
				Design & Construction Subtotal:	$110,743
				Total Project Cost:	**$110,743**

Cost Assumptions

1. Mobilization/Demobilization set at 8% of construction subtotal.
2. One soil test required per 5,000 s.f. of vegetated filter strip. Assumes 2 samples for each test location; one before and one after compost incorporation.
3. Compost depth and incorporation depth from BMP clearinghouse Design Guideline No. 4 for Soil Compost Amendments. Compost depth based on IC/SA ratio of 0.37 and hydrologic group C soils.
4. Turf seeding assumed to be applied at 100 lbs. per acre. Includes mechanical spreading.
5. E&S cost assumes approximately 2,800 l.f. of silt fence and 1.95 acres of erosion control mulch.

Table 7. Cost Opinions

1-5. Elementary School Vegetated Filter Strip. (Approximately 35' x 500')

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
1	Mobilization/Demobilization	1	LS	$659	$659
2	Soil Testing	4	EA	$100	$400
3	Compost (3.5" depth incorporated to a depth of 9")	190	CY	$20	$3,800
4	Soil tilling and compost incorporation	0.4	AC	$3,100	$1,240
5	Seeding	0.4	AC	$1,000	$400
6	Erosion and Sediment Control	1	LS	$2,400	$2,400
				Construction Sub-Total:	$8,899
	Design and Permitting	1	LS	$800	$800
	Survey	1	LS	$1,000	$1,000
	Utility Location	1	LS	$1,000	$1,000
	Contingency	20	%	$1,780	$1,780
				Design & Construction Subtotal:	$13,479
				Total Project Cost:	**$13,479**

Cost Assumptions

1. Mobilization/Demobilization set at 8% of construction subtotal.
2. One soil test required per 5,000 s.f. of vegetated filter strip. Assumes 2 samples for each test location; one before and one after compost incorporation.
3. Compost depth and incorporation depth from BMP clearinghouse Design Guideline No. 4 for Soil Compost Amendments. Compost depth based on IC/SA ratio of 0.0 and hydrologic group C soils.
4. Turf seeding assumed to be applied at 100 lbs. per acre. Includes mechanical spreading.
5. E&S cost assumes approximately 600 l.f. of silt fence and 0.4 acres of erosion control mulch.

Table 7. Cost Opinions

1-6. Wet Swale Near Municipal Works Lot and Pool.

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
1	Mobilization/Demobilization	1	LS	$1,589	$1,589
2	Clearing & Grubbing	0.4	AC	$8,000	$3,200
3	Regular Excavation	230	CY	$22	$5,060
4	V-Notched Weir Across Swale	2	EA	$1,800	$3,600
5	Erosion and Sediment Control	1	LS	$8,000	$8,000
				Construction Sub-Total:	$21,449
	Design and Permitting	1	LS	$8,000	$8,000
	Survey	1	LS	$3,000	$3,000
	Utility Location	1	LS	$3,000	$3,000
	Contingency	20	%	$4,290	$4,290
				Design & Construction Subtotal:	$39,739
				Total Project Cost:	$39,739

Cost Assumptions

1. Mobilization/Demobilization set at 8% of construction subtotal.
2. Excavation quantity based on a proposed swale with the following dimensions; bottom width = 8', depth = 3' side slopes = 3V:4H and an existing ditch with the following dimensions; bottom width = 3', depth = 3' side slopes = 1V:4H.
3. Cost for each v-notched weir assumes 2.41 CY of concrete for a weir 26' long x 3' high x 6" thick, with a 26' x 2' x 6" footing, and 3.8 tons of No. 57 stone for bedding.
4. Cost opinion assumes 2 weirs. Only 1 weir may be necessary depending on actual ditch slope.
5. E&S cost assumes approximately 1,150 SY of VDOT SL'd EC-2 protective soil covering and 800 l.f. of silt fence. EC-2 covering includes 2" of topsoil and seed.

Table 7. Cost Opinions

1-7. End of Messick Road Vegetated Filter Strip. (Approximately 35' x 1,694' & 50' x 335')

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
1	Mobilization/Demobilization	1	LS	$4,128	$4,128
2	Soil Testing	16	EA	$100	$1,600
3	Compost (9" depth incorporated to a depth of 18")	596	CY	$20	$11,920
4	Compost (3.5" depth incorporated to a depth of 9")	558	CY	$20	$11,160
5	Soil tilling and compost incorporation (18")	0.56	AC	$5,000	$2,800
6	Soil tilling and compost incorporation (9")	1.13	AC	$3,100	$3,503
7	Seeding	1.69	AC	$1,000	$1,690
8	Stone Level Spreaders	553	LF	$16.50	$9,125
9	Erosion and Sediment Control	1	LS	$9,800	$9,800
				Construction Sub-Total:	$55,725
	Design and Permitting	1	LS	$5,000	$5,000
	Survey	1	LS	$1,500	$1,500
	Utility Location	1	LS	$1,500	$1,500
	Contingency	20	%	$11,145	$11,145
				Design & Construction Subtotal:	$74,870
				Total Project Cost:	$74,870

Cost Assumptions

1. Mobilization/Demobilization set at 8% of construction subtotal.
2. One soil test required per 5,000 s.f. of vegetated filter strip. Assumes 2 samples for each test location; one before and one after compost incorporation.
3. Compost depth and incorporation depth from BMP clearinghouse Design Guideline No. 4 for Soil Compost Amendments. Compost depth of 9" based on IC/SA ratio of 1.0 and hydrologic group C soils. Compost depth of 3.5" based on IC/SA ratio of 0.0 and hydrologic group C soils.
4. Compost depth of 9" for filter strip beside parking lot. Nutrient reduction credit only taken for impervious area equal to size of filter strips adjacent to parking lot (0.56 acres).
5. Turf seeding assumed to be applied at 100 lbs. per acre. Includes mechanical spreading.
6. LF cost of level spreaders includes 41 CY of No. 57 stone and 250 SY of geotextile fabric.
7. E&S cost assumes approximately 2,400 l.f. of silt fence and 1.69 acres of erosion control mulch.

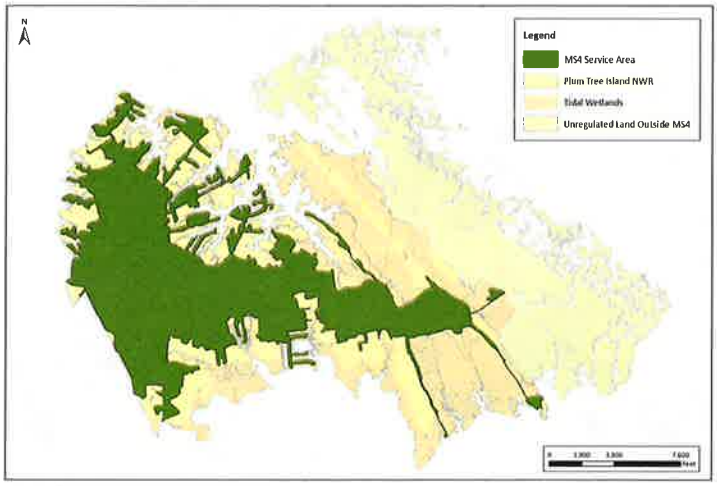


Figure 1. City of Poquoson's MS4 Service Area

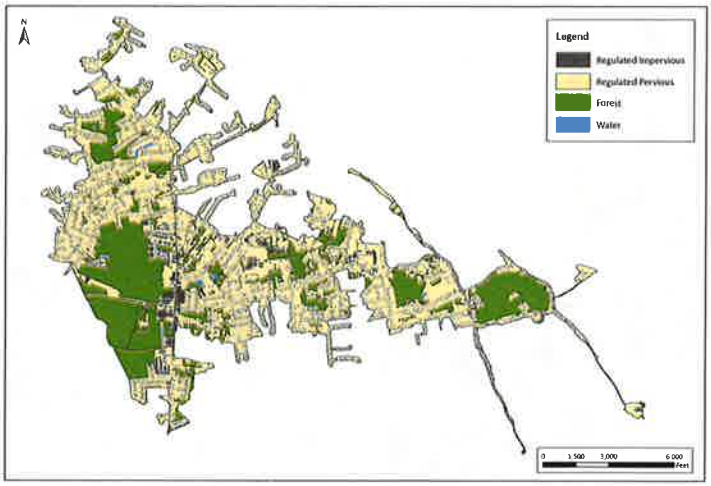


Figure 2. Land Use in the MS4 Service Area

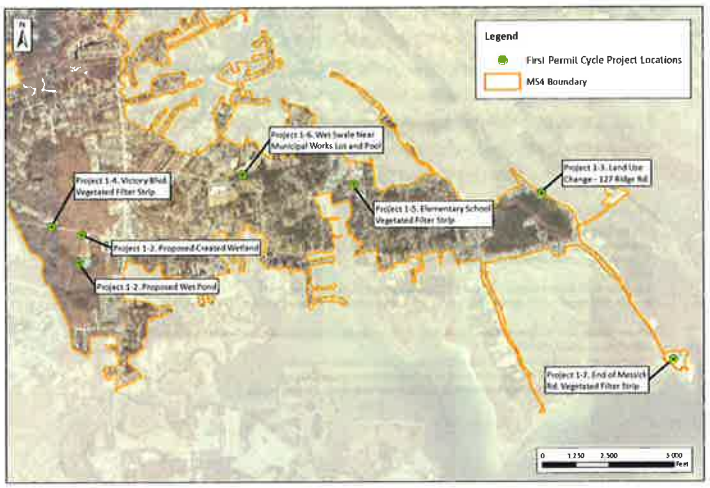


Figure 3. Project Locations for First Permit Cycle (5% of the Level 2 Scoping Run)

Figure 4. Project 1-4, Victory Boulevard Vegetated Filter Strip

Figure 5. Project 1-5, Elementary School Vegetated Filter Strip

Figure 6. Project 1-6, Wet Swale Near Municipal Works Lot and Pool

Figure 7. Project 1-7, End of Messick Road Vegetated Filter Strips