Post Construction Storm Water Management

Appendix

City of Poquoson Annual Report

VAR# 040024

Fiscal Year 2019

Submitted to DEQ September 30, 2019

5. Post Construction Storm Water Management in New Development and Redevelopment							
BMP	**BMP Description**	**Measurable Goals**	**Metric**	**Responsible Party**	**Timeline**	**Associated Documents**	**PY 1 Status**
5.1	Post Construction SW Management Program						
5.1a	Local VSMP	Implement the approved VSMP	Approved VSMP	VSMP Authority Administrator	Ongoing	Approval letter issued by DEQ	Compliant.Letter is found in the appendix with MCM 4 items.
5.1b	Stormwater Management Ordinance	Implement the stormwater criteria of the Stormwater Management Ordinance for new development and redevelopment	Stormwater Management Ordinance	SW Program Administrator	Ongoing	SWM Ordinance	Compliant. See https://library.municode.com/va/poquoson/codes/code_of_ordinances?nodeId=PTIICOOR_CH34EN_ARTVSTMA
5.2	Inspection & Maintenance Schedules for BMPs						
5.2a	Written inspection and maintenance procedures for managing locally owned BMPs	Implement procedures, inspect locally owned BMPs at least annually (or have an approved alternative schedule)	# of inspections; description of significant maintenance activities	SW Program Administrator	Ongoing	Procedures and BMP Spreadsheet /Database	Compliant. Three BMPs are owned by City for WQ treatment. All were inspected. See Appendix for inspection reports and procedures.
5.2b	Inspection and enforcement program for privately-owned BMPs	Implement program, inspect privately owned BMPs at least once every 5 years	# of inspections; # of enforcement activities	SW Program Administrator	Ongoing	BMP Spreadsheet /Database	Compliant. Six private BMP inspections were performed this year. Two private owners were given "Final Request" letters. This led to one inpsection. The other BMP owner (Channelwalk Subdivision) is working with the City to obtain inspection. Poquoson will inspect at the HOA's cost if the inspection is not performed.
5.2.c	BMP Maintenance Agreements	Require BMP maintenance agreements as directed by the Stormwater Management Ordinance.	# of Agreements & Inspection Schedules	SW Program Administrator	Ongoing	List of Maintenance Agreements	Compliant. BMPs with Maintenance agreements as well as those constructed prior to the requirement for agreements are attached in the spreadsheet. No new BMPs or agreements were added this year.
5.2d	**Optional** - Develop and implement a progessive compliance and enforcement strategy	Develop and implement strategy	Strategy	SW Program Administrator	Ongoing	Written Strategy	The current program appears to be working well. See description of program in Appendix. Staff will review the program periodically to determine if this optional action is needed.

5.3	Tracking and Reporting						
5.3a	BMP Tracking	Track all known permanent stormwater management facilities that discharge to the regulated small MS4 and submit the information listed in permit	Data as required by Permit (print & spreadsheet/ database)	SW Program Administrator	Annually	BMP Spreadsheet /Database	Compliant. See spreadsheet in Appendix. This shows all BMPs in the City. Practices draining into the MS4 are highlighted in yellow.
5.3b	Update database or spreadsheet with new BMPs	Track new permanent stormwater management facilities	Database or spreadsheet with new BMP information	SW Program Administrator	Within 30 days of date brought online	BMP Spreadsheet /Database	Compliant. No new BMPs this year. Spreadsheet attached.
5.3c	Report Construction BMPs	Report BMPs installed to control post-construction runoff through the DEQ Construction SW database	Confirmation statement	SW Program Administrator	Ongoing	Confirmation statement	Compliant. No new BMPs this year.
5.3d	Report other BMPs	Report any BMPs not included in the Construction SW database implemented between July 1 - June 30 in the DEQ BMP Warehouse	Confirmation statement	SW Program Administrator	No later than Oct. 1 each year	Confirmation statement and date information was submitted	BMP clearinghouse would not allow any log in. City will review list and report any BMPs excluded when site is corrected. See Appendix for BMP spreadsheet in the interim
5.4	Evaluation and Assessment	Evaluate and assess progress towards meeting measurable goals.		SW Program/E&SC Program Administrators	Annually	Annual Report	Compliant. City's inspection processes for publically and privately owned BMPs are working well. Only one privately owned BMP has not been inspected on schedule. That facility will be inspected by the City at the HOA's cost if the inspection is not performed.

Poquoson-owned Water Quality BMPs: SOPs and Inspections

Constructed Wetlands Operations and Maintenance Plan

Vegetation Establishment Period: Provided if new vegetation is installed.

During this establishment period, wetlands plantings shall be procured so that there is a warranty period. Plants that are under warranty and will be monitored and replaced as needed by the Contractor. City staff duties:

Monitor the Contractor's activities to ensure that the warranty is being honored.

- Time period: 12 months after substantial completion
- Frequency: Monthly visual inspection during growing season; bimonthly during winter
- Staff members: Engineering
- Follow up: provide information to contractor on distressed/dead vegetation and/or deficiencies in bird netting (if required).

Evaluate the effectiveness of the types of wetlands plants used.

- Time Period: In spring, after the start of growing season (end of March/April)
- Frequency: Annually
- Staff members: Public Works, Engineering
- Follow up: Create projects for fall planting of new varieties of plants
- Evaluation topics:
    - Do plants in general appear healthy?
    - During the growing season, do they appear to be growing and spreading?
    - Are they blooming at the appropriate time?
    - If not, are there better plant choices? Refer to the latest edition of the Virginia BMP Clearinghouse Specification for Constructed Wetlands.

Monitor the perimeter landscaping: Contractor is also responsible for maintaining the bushes located about the perimeter. Staff's role is to monitor these perimeter plantings to ensure the warranty is being honored.

- Time period: 12 months after construction completion.
- Frequency: Bimonthly
- Staff members: Public works or Engineering staff
- Follow up: Notify contractor regarding distressed/dead vegetation.

City personnel (Public Works) shall reseed grass/maintain good ground cover during establishment period.

Other site features will be maintained per the permanent O&M plan (attached).

Inspections and Ongoing Maintenance

Annual Inspections: City Inspection or Engineering Staff member will inspect the facility at least once a year. Inspection items include:

- Monitor sediment accumulation levels in sediment forebay. Visually monitor every year.
- Monitor plant growth within the BMP. Note the presence of any invasive species/woody growth on steep side slopes. Annually.
- Inspect articulated concrete block overflow to ensure that voids in concrete block are filled with soil and plants are establishing. Annually.
- Inspect side slopes for erosion, animal burrows, and woody growth or other conditions that would impact slope stability or cause erosion. Annually.

Ongoing Maintenance: Public Works staff tasks:

- Perform work annually to trim grass/weeds so that flow in channel is not inhibited.
- While performing this work, remove woody growth on side slopes/bottom of facility.
- Prior to removing any potential weed or planting in created wetland area, meet with Engineering staff to determine if planting is invasive or provided for water quality. Only remove invasive species.
- Remove trash, debris, and floatables.

Volunteer Projects: The following tasks may be accomplished during volunteer events. City staff must be present for work. Safety measures shall be implemented as applicable to work location and tasks.

- Plant flowers or other foliage about the perimeter of the site. Volunteer coordinator to work with Public Works and Engineering to ensure plantings do not interfere with site maintenance or function.
- Remove debris, trash and floatables from the site. Provide information to volunteers on proper disposal of items and appropriate facilities/equipment.
- Rake leaves and other yard waste from site.
- As needed, with appropriate supervision, plant new wetlands plantings; thin or transplant wetlands plantings located in thickets. Ensure all safety measures are in place and volunteers clearly understand where they may and may not enter; ensure the locations of micropools and other safety hazards are clearly delineated.

Non-Routine Maintenance

Sediment Removal from the Sediment Forebay shall be provided as needed.

- Timing: Work shall occur during periods of low groundwater.
- Dewatering shall be in accordance with Public Works SOPs.
- Adequate dewatering and disposal sites for excavated spoils shall be determined and be available prior to sediment removal.

Invasive Species Control: Invasive species such as phragmites shall not be allowed to cover more than 15% of the wetland cell area. The site is highly visible from Victory Boulevard. Any observation of an invasive species will be reported to Public Works immediately so that its removal can be added to an ongoing maintenance duty list. Extended periods of dewatering shall only be used as a last resort to remove invasive species.

Wet Pond Operations and Maintenance Plan

Plan applies to City-owned Wet Ponds located on the City Hall property and at South Lawson Park.

Vegetation Establishment: Vegetation is currently established in pond. The following is provided if additional vegetation is warranted:

During this establishment period, wetlands bench plantings will be monitored and replaced as needed by the Contractor. City staff duties:

Monitor the Contractor's activities to ensure that the warranty is being honored.

- Time period: 12 months after substantial completion
- Frequency: Monthly visual inspection during growing season; bimonthly during winter
- Staff members: Engineering
- Follow up: provide information to contractor on distressed/dead vegetation and/or deficiencies in bird netting (if required).

Evaluate the effectiveness of the types of wetlands plants used.

- Time Period: In spring, after the start of growing season (end of March/April)
- Frequency: Annually
- Staff members: Public Works, Engineering
- Follow up: Create projects for fall planting of new varieties of plants, thinning of existing vegetation if needed
- Evaluation topics:
    - Do plants in general appear healthy?
    - During the growing season, do they appear to be growing and spreading?
    - Are they blooming at the appropriate time?
    - If not, are there better plant choices? Refer to Virginia BMP Clearinghouse Specification for Constructed Wetlands, Table 13.4.
- City personnel (Public Works) shall reseed grass/maintain good ground cover during establishment period.

Surrounding Site Activities:

Other site features will be maintained per the permanent O&M plan (attached).

Inspections and Ongoing Maintenance

Routine Visual Inspections: City Public Work and Engineering staff members will visually inspect the facility during routine (monthly or more frequent) maintenance of the adjacent park area; as they drive by the site to go to work, and every time they enter the site:

- Visually monitor sediment accumulation levels in sediment forebay. Sediment levels to be measured during 5-year inspection.
- Following recent rain events, visually inspect turbidity levels in forebay and downstream pool to ascertain if sediment forebay is functional (no seeps; sufficiently low sediment accumulation level to allow for continued settlement in the forebay).
- Monitor plant growth on the BMP aquatic bench. Note the presence of any invasive species/woody growth on steep side slopes.
- Inspect inflow and outfall pipes to ensure adequate flow of water and to ensure there is no erosion around or under the piping.
- Inspect side slopes for erosion, animal burrows, and woody growth or other conditions that would impact slope stability or cause erosion.

Ongoing Maintenance: Public Works staff tasks:

- Perform work annually to trim grass/weeds.
- While performing this work, remove woody growth on side slopes/bottom of facility.
- Prior to removing any potential weed or planting in the aquatic bench, meet with Engineering staff to determine if planting is invasive or provided for water quality. Only remove invasive species.
- Remove trash, debris, and floatables.

Volunteer Projects: The following tasks may be accomplished during volunteer events. City staff must be present for work. Safety measures shall be implemented as applicable to work location and tasks.

- Plant flowers or other foliage about the perimeter of the site. Volunteer coordinator to work with Public Works and Engineering to ensure plantings do not interfere with site maintenance or function.
- Remove debris, trash and floatables from the site. Provide information to volunteers on proper disposal of items and appropriate facilities/equipment.
- Rake leaves and other yard waste from site.
- As needed, with appropriate supervision, plant new wetlands plantings; thin or transplant wetlands plantings located in thickets. Ensure all safety measures are in place and volunteers clearly understand where they may and may not enter; ensure that volunteers do not venture near the permanent wet pool.

Non-Routine Maintenance

Sediment Removal from the Sediment Forebay shall be provided as needed.

- Timing: Work shall occur during periods of low groundwater.
- Dewatering shall be in accordance with Public Works SOPs.
- Adequate dewatering and disposal sites for excavated spoils shall be determined and be available prior to sediment removal.

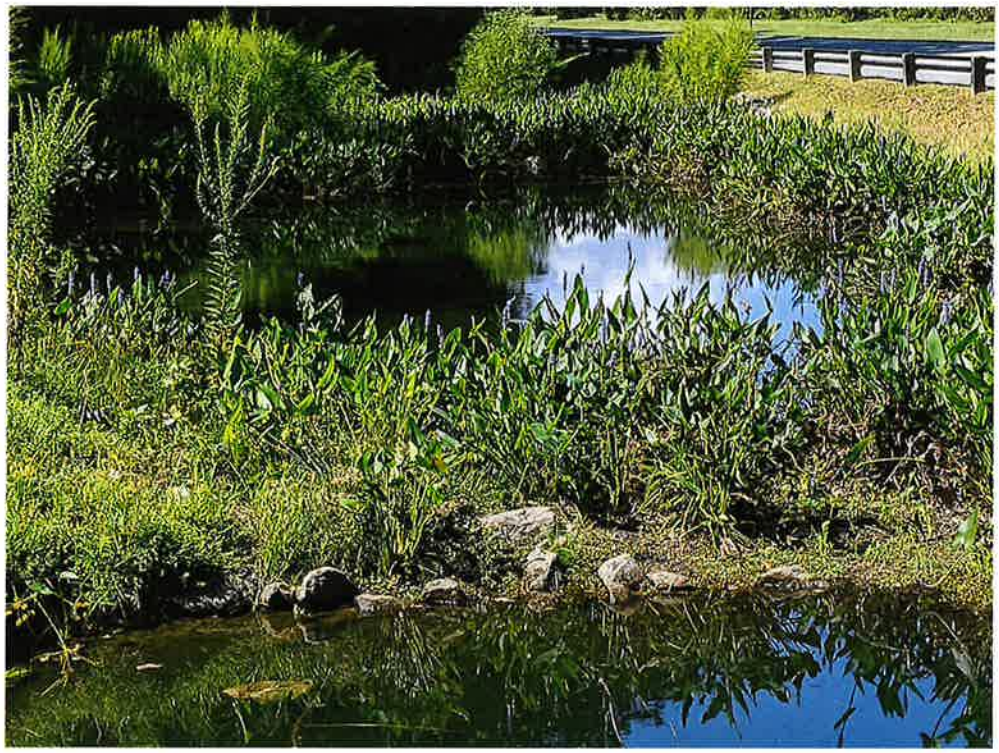
Invasive Species Control: Invasive species such as phragmites shall not be allowed to cover more than 15% of the wetland cell area. Any observation of an invasive species will be reported to Public Works immediately so that its removal can be added to an ongoing maintenance duty list. Extended periods of dewatering shall only be used as a last resort to remove invasive species.

Constructed Wetland Inspection Findings

Inspection Item	Findings	Notes
Monitor sediment accumulation levels in sediment forebay	Low.	One piece of trash needs to be removed. The sediment forebay and BMP design are proving effective at keeping litter from flowing downstream.
Monitor plant growth within the BMP.	plants are well established on side slopes and in shallow areas of wetland. Pickerel weed in particular is thriving.	No immediate action. Continue to promote plant growth in wetlands areas.
Invasive Species?	No issues. Public work staffed has delineated native plants establishment areas and trims remainder of site. Native plants appear to be well established with no signs of invasive plants/woody growth.	Monitor "no mow" areas closely to ensure no woody growth occurs. This area has dense vegetation.
Inspect articulated concrete block spillway: are voids filled in with soil/plants?	Plants established. No voids observed.	Re-check in winter months.
Inspect side slopes for erosion, animal burrows, and woody growth	No burrows or woody growth.	Re-check in winter months.
Aerators and solar panels	Aerators operational. No issues	Clean solar panels in winter months.

Performed by E.W. ROBERTS on 18 Sept. 2019

Constructed Wetland Inspection Photos



Wet Pond Annual Inspection Findings

Inspection Item	Findings	Notes
Monitor sediment accumulation levels in sediment forebay	Acceptable. Sediment level appears low.	Inspect again during a dry winter period when plant growth is dormant.
Monitor plant growth on the BMP aquatic bench	Plants are flourising.	Public paricipation project suggested: thin out pickerel weed under supervision of City landscaping staff member.
Invasive Species?	None, but native species planted on side slopes should be monitored closely for overgrowth/crowding	Inspect again during winter when plant growth is dormant.
Inspect inflow and outfall pipes to ensure adequate flow and that there is no erosion around or under the piping	Piping and surrounding embankments appear to be in good condition	n/a
Inspect side slopes for erosion, animal burrows, and woody growth	none found.	n/a
Following recent rain events, visually inspect turbidity levels in forebay and downstream pool to ensure forebay is functioning	No signs of forebay failure	n/a

LIBRARY POND

Performed by Ellen Roberts on 9/17/19

Library Pond Inspection Photos

Wet Pond Annual Inspection Findings

Inspection Item	Findings	Notes
Monitor sediment accumulation levels in sediment forebay	Unable to inspect, as the forebay was completely covered in vegetation	Will reinspect during dry season
Monitor plant growth on the BMP aquatic bench	Large amounts of plant growth on aquatic bench	
Invasive Species?	Pond has a small amount geese. Geese have been an issue in the past.	Continue working with USDA/FWS to reduce goose population
Inspect inflow and outfall pipes to ensure adequate flow and that there is no erosion around or under the piping	Moderate Erosion and sedimentation around one of the inflow pipes. Outfall does not appear to have adequate capacity as it is already using all capacity with no rain in the past week.	Monitor outfall at low tide. This outfall is tidally connected.
Inspect side slopes for erosion, animal burrows, and woody growth	No issues	
Following recent rain events, visually inspect turbidity levels in forebay and downstream pool to ensure forebay is functioning	Algae sheen was present on the top of the water	

SOUTH LAWSON PARK

Performed by Garrett Feagans on Sept. 23, 2019

South Lawson Park Inspection Photos

Privately-Owned BMP Inspections

Owners of privately owned BMPs subject to maintenance agreements are required to have a professional inspection once every 5 years. The City Environmental Compliance Officer tracks the inspections and sends out notices to owners reminding them when inspections are due. Should the owners fail to have these inspections performed, agreements typically give the City rights of access for inspection at the owner's cost.

Private property, single family lot BMPs are not reported to the Bay program. However, the City does remind these owners to periodically inspect their BMPs through an educational postcard mailing.

The attached spreadsheet shows BMPs draining into the City's MS4 in yellow highlights. All other BMPs drain downstream of the MS4.

PandE/BMPs/City of Poquoson Historic BMP Data with Current Inspection Dates
Ponds draining to the City's MS4 are highlighted in Yellow.

*Location	*Name	Installed	BMP Name	otal Acres Treat	vious Acres T	Inspect Date 1	Inspect Date 2	Inspect Date 3	Inspect Date 4	Inspect Date 5	Inspect Date 6	Inspections
~~Vantage Drive~~	~~Bayside~~	7/1/1998	~~Wet Pond~~	13.415	1.790	2/20/1988	12/21/1990					No maintenenace agreement requiring inspections; owner responsible for self inspections & maintenance.
Wythe Creek Rd	EXPRESS LUBE/ADVANCE AUTO	11/5/1999	Wet Pond	1.570	0.834	9/30/2002	3/22/2010	5/5/2010	12/7/2012	1/17/2019	Due 1/17/24	
Victory Blvd	KFC/TACO BELL/PIZZA HUT	7/1/2003	Wet Pond	1.295	0.620	9/28/2001	4/2/2002	4/22/2013	1/4/2019	Due 1/4/24		
416 Wythe Creek Rd.	LANGLEY FCU	7/1/1998	Wet Pond	1.620	0.940	5/15/1998	7/16/2015	Due 7/16/20				No maintenenace agreement requiring inspections; owner responsible for self inspections & maintenance.
S. Lawson Rd	LAWSON PARK	7/1/2009	Wet Pond	16.379	2.297	7/1/2013	6/1/2015	Due 6/1/20				City inspects.
Wythe Creek Rd	McDONALDS	7/1/1995	Wet Pond	1.032	0.690	9/25/1995	7/15/2004	7/16/2015	Due 6/16/20			Pond is in plain view of citizens and staff and is "inspected" regularly.
Wythe Creek Rd	POQUOSON COMMONS #1	7/1/2000	Wet Pond	6.030	2.270	7/16/2015	Due 7/16/20					No maintenenace agreement requiring inspections; owner responsible for self inspections & maintenance.
Wythe Creek Rd	POQUOSON COMMONS #2	7/1/2000	Dry Detention Ponds	4.000	2.910	7/16/2015	Due 7/16/20					No maintenenace agreement requiring inspections; owner responsible for self inspections & maintenance.
Wythe Creek Rd	RITE AID	7/1/2000	Dry Detention Ponds	1.400	0.670	7/16/2015	Due 7/16/20					No maintenenace agreement requiring inspections; owner responsible for self inspections & maintenance.
563 Wythe Creek Rd	POQUOSON FIRE STATION 2	7/1/2001	Dry Detention Ponds	0.750	0.446	7/1/2004	7/1/2008	7/9/2015	Due 7/9/20			City inspects.
563 Wythe Creek Rd	POQUOSON FIRE STATION 2 (2)	7/1/2001	Dry Detention Ponds	0.390	0.226	7/1/2004	7/1/2008	7/9/2015	Due 7/9/20			City inspects.
~~Wythe Creek Rd~~	~~Poquoson Place Apts~~	7/1/1986	~~Wet Pond~~	18.076	7.467							No maintenenace agreement requiring inspections; owner responsible for self inspections & maintenance.

PandE/BMPs/City of Poquoson Historic BMP Data with Current Inspection Dates
Ponds draining to the City's MS4 are highlighted in Yellow.

~~Valasia Rd~~	~~Townvillas South Homes Assoc.~~	7/1/1987	~~Wet Pond~~	9.938	4.736							No maintenenace agreement requiring inspections; owner responsible for self inspections & maintenance.
WCR/Yktn/PoqAve	VDOT Pond	7/1/1998	Dry Pond (no wq)	4.807	1.958	10/18/2011	2/1/2019	Due 2/1/24				City inspects.
105 Rens Rd	~~White House Cove Marina~~	11/10/2011	Filtering Practices	0.052	0.052	7/29/2011	10/17/2011	3/19/2012				
105 Rens Rd	TE HOUSE COVE RESORT HOMES FILTERF	10/22/2014	Filtering Practices	0.340	0.160	11/12/2014	Due 11/12/19					
105 Rens Rd	TE HOUSE COVE RESORT HOMES FILTERF	10/22/2014	Filtering Practices	0.120	0.080	11/12/2014	Due 11/12/19					
Wythe Creek Rd	WYTHE CREEK MINI STORAGE	7/1/2004	Wet Pond	4.756	3.257	11/9/2004	9/5/2006	10/12/2006	7/16/2015	Due 7/16/20		
Weston Dr.	BENNETT CREEK POINT	11/22/1996	Wet Pond	5.482	1.826	7/1/2005	8/1/2007	3/1/2008	5/5/2011	5/22/2014	7/20/2019	Due 7/20/24
Darden Dr.	BULL RUN	10/28/1998	Dry Pond	10.663	2.828	7/1/1998	7/1/2004	7/23/2004	7/1/2007	7/1/2012	Due 11/20/23	Completed 11/20/18
Channelwalk Dr	CHANNELWALK	1/22/1999	Wet Pond	7.922	2.093	5/1/2008	5/1/2010	12/5/2013	Due 12/5/18			~~11/9/18 talked to Rick~~ Jones, HOA president, who was looking for possible inspectors. He
Yorktown Rd	GARDEN ATRIUMS	2/6/2003	Wet Pond	3.115	1.065	4/1/2005	7/1/2005	5/16/2018	Due 5/16/23			
Dryden Dr.	HERITAGE COVE POND 1	2/5/1996	Wet Pond	56.664	15.210	7/1/1998	7/1/2003	7/1/2009	10/17/2011	6/29/2018	Due 7/1/2023	Obtained wetlands permit to retrofit pond in 2016. Still in progress in 2018. Vince Pascual, HOA President, 23 Emmaus Road, vpascual@cox.net
Callis Ln.	HERITAGE COVE POND 2	2/5/1996	Wet Pond	13.449	2.722	7/1/1998	7/1/2003	7/1/2009	10/17/2011	6/29/2018	Due 7/1/2023	Notice sent 3/28/18 for all 3 Heritage Cove BMPs
Dryden Dr	HERITAGE COVE SHALLOW MARSH	2/5/1996	Constructed Wetland	2.257	0.747	7/1/1998	7/1/2003	7/1/2009	10/17/2011	6/29/2018	DUE 7/1/2023	
Black Oak Ct.	HOLLYS	5/16/2000	Wet Pond	7.540	2.280	6/1/2006	11/19/2012	6/4/2018	Due 6/4/2023			

PandE/BMPs/City of Poquoson Historic BMP Data with Current Inspection Dates
Ponds draining to the City's MS4 are highlighted in Yellow.

Pheasant Dr.	HUNTS COVE	8/13/2002	Wet Pond	9.388	2.999	7/26/2004	3/6/2006	8/12/2009	12/1/2012	2/19/2019	Due 12/19/24	HOA notified on 6/7/18 & all homeowners notified on 8/21/18. Todd Ritter, HOA Pres, asked for and received emailed list of qualified individuals/companies 8/27/18.
Pickins Drive	VICTORY COVE	7/8/1905	Wet Pond			8/1/2016	Due 8/2021					
Hunts Neck Rd	HUNTS NECK ESTATES	2/2/2006	Wet Pond	16.460	6.130	5/1/2006	6/10/2010	10/31/2012	4/24/2018	Due 4/24/23		
Elm St.	ISLAND COVE	6/21/2007	Wet Pond	5.695	1.283	7/1/2007	6/10/2010	4/30/2012	8/15/2018	Due 8/15/23		
Wornom Farm Dr.	LAKES AT POQUOSON	9/7/2005	Wet Pond	27.244	5.720	7/1/2005	6/20/2011	1/7/2014	3/4/2014	3/27/2019	Due 3/27/24	Reminder mailed 1/7/19
W. Laydon Way	LAWSON FARMS	3/20/2001	Wet Pond	21.500	6.200	7/1/2004	7/1/2006	7/1/2010	7/1/2013	Due 7/1/18		City inspects.
Henley Way	LYONS LANDING	9/23/2005	Wet Pond	5.964	1.566	6/1/2005	4/1/2006	10/1/2008	3/29/2011	9/13/2013	11/30/2018	Due 11/30/23
Crescent Pt.	PHILLIPS POINT COVE	12/19/2001	Wet Pond	14.200	2.581	7/1/2001	9/1/2006	7/16/2015	7/30/2018	Due 7/30/23		
Hollingsworth	RIVER"S EDGE	12/3/2007	Wet Pond	11.701	1.171	10/25/2012	8/1/2013	10/28/2013	3/1/2014	7/14/2014	5/10/2019	Due 5/10/24
Villa Dr.	VILLAS PHASE 1	11/8/2005	Wet Pond	6.147	3.622	9/11/2012	6/24/2009	10/3/2006	7/22/2005	4/16/2018	Due 4/16/23	
Villa Dr.	VILLAS PHASE 1(2)	11/8/2005	Wet Pond	7.618	3.840	9/11/2012	6/24/2009	4/16/2018	Due 4/16/23			
Huntlandia Way	VILLAS PHASE 2	7/1/2008	Urban Infiltration Practice	4.130	2.200	7/16/2015	9/11/2012	4/16/2018	Due 4/16/23			
City Hall Ave.	CREATED WETLAND	7/1/2015	Constructed Wetland	20.440	8.880	4/4/2018	Due 4/4/23					
City Hall Ave.	WET POND	7/1/2015	Wet Pond	7.110	3.410	4/4/2018	Due 4/4/23					
Wythe Creek Rd	POQUOSON BAPTIST CHURCH	9/8/2005	Wet Pond	2.485	1.013		5/17/2019	Due 5/17/2024				No agreement
Hunts Neck Rd	MASONIC LODGE	7/1/2009	y Extended Detention Por	0.848	0.498	7/13/2015	4/10/2009	7/3/2019	Due 7/3/24			No agreement

Poquoson BMP DATA														
Data Reporting Enity: *(Grantee)*	City of Poquoson, Virginia													
Localit(ies) Represented:	City of Poquoson, Virginia	Locality Contact: *(Name, Phone #, E-mail)*	*(757)-868-3040*	Ellen.Roberts@poquoson-va.gov										
	Practice Description		Practice Treatment: Area OR Amount Applied		Practice Location					Practice Inspection	Practice Maintenan	City Comments	City Comments	
*Name	Date Installed	BMP Name	Total Acres Treated	Impervious Acres Treated	County Name	State FIPS	HUC12	Latitude	Longitude	Inspect Date 1	Maint Date 1	Inspections	Maint 2	Maint 3
Victory Cove BMP #2	2/26/2018	Wet Pond	5.10	1.82	Poquoson	51735	020801080101	37.139900	76.410200	2/26/2018				
Victory Cove BMP #1	2/26/2018	Wet Pond	5.90	2.81	Poquoson	51735	020801080101	37.140100	76.406200	2/26/2018				

CITY OF POQUOSON

PLANNING DEPARTMENT

500 CITY HALL AVENUE, POQUOSON, VIRGINIA 23662-1996
(757) 868-3025 TELEPHONE (757) 868-3105 FAX

FINAL REQUEST

October 16, 2018

Earley and Associated Building, Inc.
11 Henley's Way
Poquoson, VA 23662

Re: BMP Inspection Report, Lyons Landing Subdivision

Dear Sir or Madam,

As advised in a letter dated April 18, 2018 and a reminder letter dated September 13, 2018, in accordance with the Stormwater Maintenance Agreement for the Lyons Landing subdivision, the BMP/Stormwater Pond must be inspected by a registered professional engineer and a written report of this inspection must be provided to the City of Poquoson every five years to ensure that it continues to perform as intended. It was requested that you provide a copy of any inspection that has occurred within the last five years or schedule an inspection with a qualified professional as soon as possible. The latest letter provided a timeframe of thirty (30) days to provide a report to this office. As thirty days have passed and we have still not received the requested report, you are hereby advised that Article IX of the Lyons Landing Covenants grants the right for City employees to enter the property to enforce maintenance of common open space areas and improvements should the Homeowners Association (HOA) fail to maintain the common open space areas and improvements in reasonable order and condition in accordance with the approved plans. Once an inspection is performed you will be advised of any deficiencies, which must be corrected within thirty (30) days thereafter. Failure to correct the deficiencies within the time given will result in corrections made by the City or City-retained contractor(s) at the expense of the homeowners. Please note that this notice is being sent to all residents of the subdivision in hopes that someone will respond before these measures must be taken. The City inspection will be performed sometime during the week of November 26, 2018, unless the Lyons Landing Homeowners Association provides a satisfactory response before that time.

If you have any questions, please do not hesitate to contact me at 868-3040.

Sincerely,

Karen W. Holloway

Karen W. Holloway
Environmental Compliance Officer

cc: Community Development Coordinator
City Engineer
file

Reporting BMPs

No new BMPs were constructed by the City of Poquoson. No private BMPs were finalized and/or accepted. Staff members unsuccessfully attempted to log on to the DEQ warehouse to verify entries listed for Poquoson. Please see attached correspondence with DEQ. Staff members will continue to check the warehouse and will verify data when log in a reasonable time frame after log in issue is corrected.

Minimum Control Measure 5.3b: Reporting new BMPs

Three different City staff members attempted to log in to the BMP Warehouse. All three received the following message. As instructed by DEQ, we will be verifying the Poquoson BMP data in the coming days when the system is once more online:

Oh No, Access Denied.

You do not have the correct claims to view the page you requested. Please contact the system administrator for access. Thank You

We then contacted the DEQ TRO:

From: Matthew Fanghella [matthew.fanghella@deq.virginia.gov]
Sent: Tuesday, September 24, 2019 2:36 PM
To: Garrett Feagans
Subject: RE: DEQ BMP Warehouse

CAUTION: This email is from a sender outside of City of Poquoson. Use discretion when opening attachments, selecting links, and responding to information requests..

Hi Garrett,

??

The person you need to conduct at DEQ is Bill Keeling. I have provided Bill???s contact info below.

William.Keeling@deq.virginia.gov

??

Bill is the system administrator for the BMP warehouse.

Others have reported this issue over the past weeks and I have reached out to DEQ Central Office about it. The guidance was as follows:

??

If the BMP Warehouse is not currently allowing data uploads that should just be temporary.?? Questions on BMP Warehouse uploading should go to Bill Keeling. Obviously, no compliance actions would be taken on permittees who missed deadline due to system malfunction.

??

However, to ensure compliance with MS4 requirements, a statement in the Annual Report explaining the situation and ensuring you will upload the BMPs in the coming days when the system is up should suffice.

Thanks,

Matt

??

Matt Fanghella

Regional MS4 Coordinator

Regional Safety Officer

Virginia Department of Environmental Quality

Tidewater Regional Office

757-518-2013

matthew.fanghella@deq.virginia.gov

End of Appendix Section

Good Housekeeping

Appendix

City of Poquoson Annual Report

VAR# 040024

Fiscal Year 2019

Submitted to DEQ September 30, 2019

6. Pollution Prevention/Good Housekeeping for Facilities Owned or Operated by the Permittee							
BMP	**BMP Description**	**Measurable Goals**	**Metric**	**Responsible Party**	**Timeline**	**Associated Documents**	**PY 1 Status**
6.1	Operations and Maintenance Activities						
6.1a	Pollution prevention procedures at permittee-owned facilities	Continue to implement and update plans describing spill prevention and control and pollution prevention procedures for municipal facilities specifically to prevent illict discharges	SOP(s)/ O&M Plan	SW Program Administrator/ EMS Team	Continuously	SOPs/ O&M Plan	Compliant. The SOPs are provided in the SWPPP plan. This is available on the City website at https://www.ci.poquoson.va.us/278/Stormwater-Quality
6.1b	Waste Disposal	Continue to implement and update procedures for proper waste disposal, including yard waste	SOP(s)/ O&M Plan	SW Program Administrator/ EMS Team	Continuously	SOPs/ O&M Plan	Compliant. See SWPPP on website.
6.1c	Manage Municpal Vehicle Wash Water and Wastewater	Develop and implement procedures to prevent the discharge of municipal vehicle wash water into the MS4 without a separate VPDES permit	Procedures	Operations Personnel and Department of Utilities	Continuously	SOPs/ O&M Plan	Compliant. See SWPPP on website.
6.1e	Stormwater System Maintenance BMPs	Require BMPs when discharging water pumped from utility construction and maintenance activities	BMPs Used	Operations Personnel	Continuously	SOPs/ O&M Plan	Compliant. See SWPPP on website.
6.1f	Bulk Storage BMPs	Require BMPs for bulk storage areas (salt storage, top soil stockpiles)	BMPs Used	Operations Personnel	Continuously	SOPs/ O&M Plan	Compliant. See SWPPP. Bulk storage is under roof or placed in designated areas. See photos in SWPPP
6.1g	Manage Leaking Municipally-owned Leaking Vehicles	Prevent the discharge of pollutants to the MS4	BMPs Used	Operations Personnel	Continuously	SOPs/ O&M Plan	Compliant. See SWPPP

6. Pollution Prevention/Good Housekeeping for Facilities Owned or Operated by the Permittee							
BMP	**BMP Description**	**Measurable Goals**	**Metric**	**Responsible Party**	**Timeline**	**Associated Documents**	**PY 1 Status**
6.1h	Manage Fertilizers and Pesticides	Implement procedures to ensure materials are are applied in accordance with manufacturer's recommendations	Procedures	Operations Personnel	Continuously	SOPs/ O&M Plan	Compliant. Personnel applying these products are trained through their certificaiton program. Materials stored inside.
6.2	Storm Water Pollution Prevention Plans (SWPPP)						
6.2a	High-priority facilities	Identify municipal high-priority facilities that have a high potential to discharge storwmater pollutants	# & type of high-priority facilities	SW Program Administrator	Within 12 months	List of high-priority facilities	Compliant. The City's Public Works yard houses the City garage, Public Works and Utilities Departments and their equipment and vehicles. This is the only site identified.
6.2b	SWPPP Implementation	Maintain and implement SWPPPs for identified high-priority facilities	SWPPP	SW Program Administrator	Continuously	SWPPP	Compliant. See SWPPP on website https://www.ci.poquoson.va.us/278/Stormwater-Quality . Public Works Yard is inspected monthly. A typical report is found in Appendix.
6.3	Nutrient Management Plans (NMPs)						
6.3a	NMP Implementation	Maintain and implement NMPs on permittee-owned lands where nutrients are applied to a contiguous area greater than one acre	NMP	SW Program Administrator & Landscape Division	Continuously	List of NMP Covered Sites	Compliant. Two facilities identified. See list in Appendix.

6. Pollution Prevention/Good Housekeeping for Facilities Owned or Operated by the Permittee							
BMP	**BMP Description**	**Measurable Goals**	**Metric**	**Responsible Party**	**Timeline**	**Associated Documents**	**PY 1 Status**
6.3b	Avoid deicing agents	Operator shall not apply deicing agents containing urea or other forms of nitrogen or phosphorus to parking lots, roadways, and sidewalks, or other paved surfaces	Statement of non-use of nutrient containing deicing agents	SW Program Administrator	Annually	Statement	Operator shall not apply deicing agents containing urea or other forms of nitrogen or phosphorus to parking lots, roadways, and sidewalks, or other paved surfaces
6.4	Contractors						
	Contractors minimize the discharge of pollutants	Provide contract language, training, SOPs, etc. to contractors to use appropriate control measures to minimize the discharge of pollutants to the MS4	Contract language, SOPs, etc.	SW Program Administrator	Continuously	Contract language, SOPs, etc.	Contractors are required to follow SOPs in the SWPPP available at https://www.ci.poquoson.va.us/278/Stormwater-Quality . Contractors are used to supplement existing Public Works staff and are supervised by Public Works staff leaders.
6.5	Employee Education & Training						
6.5a	Written training plan	Maintain and implement a training plan for applicable staff	Training Plan	SW Program Administrator	PY1	Training Plan	Compliant. Training plan is attached.
6.5b	IDDE Training for field personnel	Provide training to field personnel in the recognition and reporting of illicit discharges	# of training sessions / # employees trained	SW Program Administrator	No less than once every 24 months	Date, Attendance list, Summary of training objectives	Training will be held in PY 2020. The last training was conducted in FY 2018 and reported in last year's annual report.
6.5c	Streets & parking lot maintenance staff training	Provide training to Streets & Landscape Divisions for road, street & parking lot maintenance	# of training sessions / # employees trained	SW Program Administrator	No less than once every 24 months	Date, Attendance list, Summary of training objectives	Training will be held in PY 2020. The last training was conducted in FY 2018 and reported in last year's annual report.

6. Pollution Prevention/Good Housekeeping for Facilities Owned or Operated by the Permittee							
BMP	**BMP Description**	**Measurable Goals**	**Metric**	**Responsible Party**	**Timeline**	**Associated Documents**	**PY 1 Status**
6.5d	Good housekeeping at municipal yards	Provide training on good housekeeping and pollution prevention practices to employees working in and around maintenance, public works, or rec facilities	# of training sessions / # employees trained	SW Program Administrator	No less than once every 24 months	Date, Attendance list, Summary of training objectives	Training will be held in PY 2020. The last training was conducted in FY 2018 and reported in last year's annual report.
6.5e	Pesticides & herbicide certifications	Maintain certifications and training for pesticide and herbicide applicators in accordance with Virginia Pesticide Control Act and verify contractors have obtained	Certifications obtained	SW Program Administrator	Continuously	Certifications	Compliant. Four certifications are attached.
6.5f	E&SC & SWM Training	Ensure that plan reviewers, inspectors, and program administrators obtain the appropriate certifications as required under the Erosion and Sediment Control Law and the Stormwater Management Act and verify that contractors have obtained	Certifications obtained	E&SC Program and SW Program Administrators	Continuously	Certifications	Compliant. Five certifications are attached.
6.5g	Emergency Response employee training	Document spill management training for emergency responders	Certifications obtained	Haz-Mat officer	Annually	Certifications	Compliant. Appendix includes list of attendees who were trained in current year.
6.6	Evaluation and Assessment	Evaluate and assess progress towards meeting measurable goals.		SW Program Administrator	Annually	Annual report	Compliant. If possible, include contracted temporary workers in the staff training for spill prevention/good housekeeping.

SWPPP INSPECTION REPORT AT THE POQUOSON PUBLIC WORKS YARD

(City's high-priority facility, typical monthly inspection report)

FY 19 Public Works Yard Improvements:

- The double walled, dual compartment above ground fuel tank was replaced with a new unit.
- A shed was constructed to house spare metals (e.g., manhole covers).

CITY OF POQUOSON - Department of Public Works
STORMWATER POLLUTION PREVENTION PLAN
MONTHLY INSPECTION REPORT
October- 2018

FACILITY NAME: City of Poquoson, Public Works/Utilities/Fleet Maintenance Facility
FACILITY ADDRESS: 12 Municipal Drive, Poquoson, VA 23662

NOTE: The facility is located on approx. 4.52 acre portion of a 15.25 acre parcel. The facility contains an equipment storage building, utilities building, fleet maintenance garages, wash bay, salt/sand storage shed, fuel/oil storage tanks and storage for construction related materials. ***(SEE ATTACHED MAP)***

CONTACTS:

NAME:	TITLE:	TELEPHONE:
Tom Jones	Director of Public Works	(757) 868-3592
Bob Speechley	Utilities Superintendent	(757) 868-3594
Jon Ellis	Fleet Maintenance Supervisor	(757) 868-3595
Jerry Cagle	Facility Supervisor	(757) 868-3590

Training:

MATERIAL	DESCRIPTION	LOCATION	QUANTITY	EXPOSED YES	EXPOSED NO	SPILLS / LEAKS YES	SPILLS / LEAKS NO
Gasoline	Dual Walled Storage Tank (Outside)	Above Ground	4000 gals	X		X	
Diesel Fuel	Dual Walled Storage Tank (Outside)	Above Ground	6000 gals	X		X	
Heating Oil	Storage Tanks (Outside)	Above Ground	275 gals ea.	X			X
Other Waste Fluids	Used Motor Oil Storage Tank (Inside)	Above Ground	385 gals		X		X
Used Batteries	Various Types	Covered Outside Container	Approx. 12		X		X
Used Tires	Various Types	Covered Outside Container	Approx. 120		X		X
Metal	Various Types	Yes – Covered Outside on pallet	Various Amounts		X		X

Were Leak Detection Device(s) on Storage Tank(s) Visually Inspected? _X_ Yes __ No
Were Exterior Seam(s) on Storage Tank(s) Visually Inspected? _X_ Yes __ No

Jones & Frank had fuel tank delivered Tuesday, July 24th Not sure how long it will be to set up, test and release it to the City.(see pics) Monday ,August ,6th,2018 Fuel tank up and running with log books for all departments until updated monitoring system can be purchased and installed. Old one became obsolete during down time. October 10-12, 2018 Monitor Michael –homeowners brought in over 55 gallon of used oil; to site with one (1) extra pump out by Heritage-Crystal Clean, LLC.

NOTE: If any of the above was exposed to storm water please describe below:

MATERIAL EXPOSED TO STORMWATER, LEAKS/SPILLS? _X_ Yes __ No Please describe below:

- **Used motor oil storage tank (inside) is pumped 1-2 times a month with additional service when needed by Heritage-Crystal Clean, LLC. Clean weekly & checked daily or as needed. Remove all containers, oil tank etc. from building and clean ALL. This is done yearly with regular maintenance & cleaning performed twice a week.**
- **All tanks with exception of used motor oil are located outside. Used batteries and tires are stored in separate containers and covered to limit exposure to elements.**
- **Concrete blocks are needed to continue replacement of existing walls for storage of sand, cold patch however current holding system is adequate at this time.**

MATERIAL	DESCRIPTION	LOCATION	QUANTITY	EXPOSED		SPILLS / LEAKS	
				YES	NO	YES	NO
Asphalt	Cold Patch Mix	Covered / Under Shelter	Approx. 3 tons		X		X
Salt / Sand Material Storage	Salt / Sand Mix For Use on Roadway	Covered / Under Shelter	Approx. 150 tons		X		X
Stone Material Storage	Processed Stone	Outside Stockpiles	Approx. 525 tons	X			X

NOTE: If any of the above was exposed to storm water please describe below:

MATERIAL EXPOSED TO STORMWATER, LEAKS/SPILLS? _X_ Yes __ No Please describe below:

- **Processed stone – outside stockpiles**
- **10-15-18 -Inspect rock check dam at (south) Public Works Compound**

Description of Equipment & Vehicle with problems "Found"

EQUIPMENT STORAGE AREA	DESCRIPTION & NUMBER OF EQUIPMENT	Description of spill / leak	EXPOSED YES	EXPOSED NO	SPILLS / LEAKS YES	SPILLS / LEAKS NO
PUBLIC WORKS YARD						
	M&D23 2018 John Deere mowing tractor	oil	X		X	
PARKS MAINTENANCE YARD						

NOTE: If any of the above was exposed to storm water please describe below

EQUIPMENT EXPOSED TO STORMWATER, LEAKS/SPILLS? _X_ Yes __ No Please describe below:

- 80% of equipment is stored outside due to limited amount of covered space, monitored for leaks/spills daily and cleaned and repaired as needed.

VEHICLE STORAGE AREA	DESCRIPTION & NUMBER OF VEHICLE	Description of spill / leak	EXPOSED YES	EXPOSED NO	SPILLS /LEAKS YES	SPILLS /LEAKS NO
PUBLIC WORKS YARD						
*Replacement vehicle for PW1 put in service 10-9-18 by garage	Put on City list to sell PW1 1994 F250 utility truck					
	SW6 2006 IHC debris truck	Hydraulic oil	X			X
PARKS MAINTENANCE YARD						

NOTE: If any of the above was exposed to storm water please describe below:

VEHICLE EXPOSED TO STORMWATER, LEAKS/SPILLS? _X_ Yes __ No Please describe below:

- **80% of vehicles are stored outside due to limited amount of covered space, monitored for leaks/spills daily and cleaned and repaired as needed.**
- **Vehicles are visually checked daily & weekly as part of preventative maintenance training check list by Public Work employees and prior to use, any leaks are contained, or repaired on site by operator if possible, if not they are turned in to City Garage for repairs.**
- **Scheduled 4000 - 5000 mile inspections along with Bi-Monthly and Yearly for vehicles. With repairs completed on and off site.**

WASH RACK AREA: _X_ Yes __ No	**CLEAN: _X_ Yes __ No**	**SPILLS / STAINS: _X_ Yes _ No**
CHECK VALVE: _X_ Yes __ No	**GRATE / WASH RACK: _X_ Yes __ No**	

OIL /WATER SEDIMENT SEPERATOR 1: _X_ Yes __No *(Inspect on a monthly basis)* **(located east p.w.yard at wash rack.) (installed July 2014) (information updated 2-11-16) Pumped 3-15-2017 by Clean Harbors as part of ongoing inspection. Drain stopped on oil/water sediment separator, remove screen/basket, flush drain pipe. 12-13-17 CLEAN HARBOR- CLEAN OIL & WATER SEPERATOR THURSDAY, MARCH 15TH, 2018.**

OIL /WATER SEDIMENT SEPERATOR 2: _X_ Yes __No *(Inspect on a monthly basis)* **(located between city garage & new storage building installed (installed November 2013) (information updated 2-11-16) grates in building not in service as no washing, no water is released at this time.**

COMMENTS: *(If spills or strains are present, please describe & attach Spill / Leak Clean-up Report)*

***clean up dirt, grass & litter.**
***stains are old and pose no threat.**
***maintain cleaning after each use.**
*** Screens stopped up, remove, clean. 9-11-18**

NOTE: Wash Rack Area is uncovered. When in operation, staff members open a valve which allows the rack to drain through an oil/sediment separator and enter the municipal sewer system. Following wash operations, the wash rack pad is rinsed off and the valve is closed .When the wash rack is not in operation, storm water runoff from the concrete pad drains through grass in to a sediment trap. The sediment trap and oil/sediment separator is inspected monthly for accumulated sediment, trash and debris and cleaned when needed. ***updated 3-23-2018**

DUMPSTERS: _X_ Yes __ No	**CLOSED: _X _ Yes _ No**	**DRAIN PLUGS: _X_ Yes __ No**

COMMENTS: *(If spills or leaks are present, please describe)*

Dumpster top cover/door found open on 10-11,15,22,2018 ….. Closed to prevent rain entering, and notified all employees to close doors after use. (ongoing)

NOTE: Dumpsters are stored on hard surface, are contained and dumped by provider on a weekly basis.

FUELING AREA: _X_ Yes __ No	**CLEAN:** _X_ Yes __ No	**SPILLS / STAINS:** _X_ Yes __ No

COMMENTS: *(If spills or strains are present, please describe & attach Spill / Leak Clean-up Report)*

stains are old and pose no threat.

NOTE: Fueling Area is uncovered and exposed. All spills/leaks must be properly cleaned up and reported.

GENERAL FACILITY SITE AREA:

- **Pick up litter around wash-oil/water separator area and Parks Maintenance Compound. (ongoing)**
- **All non-hazardous absorbents and used oil filters are placed in separate containers, stored inside city garage and serviced when needed by Heritage-Crystal Clean, LLC.**

Description of Equipment & Vehicle with problems "Repaired"

EQUIPMENT STORAGE AREA	DESCRIPTION & NUMBER OF EQUIPMENT	* METHOD OF REPAIR	Work order # for repair		Repaired Yes	No
PUBLIC WORKS YARD						
	M&D23 2018 John Deere mowing tractor	Rebuild mowing deck-replacing items including seals & gaskets	0000059062		X	
*Replacement vehicle for PW1 with 2018 F250 put in service 10-9-18 by garage	Put old PW1 1994 F250 utility truck on City list to sell	This helps with ongoing leaks & repairs weekly & monthly	REPLACED		X	
PARKS MAINTENANCE YARD						

VEHICLE STORAGE AREA	DESCRIPTION & NUMBER OF VEHICLE	* METHOD OF REPAIR	Work order # for repair		Repaired Yes	No
PUBLIC WORKS YARD						
	SW6 2006 IHC debris truck	Replace hydraulic cylinder	0000059059		X	
PARKS MAINTENANCE YARD						

Completed By: NAME: Terry Cagle SIGNED: Terry Cagle DATE: Octoberber-31-2018

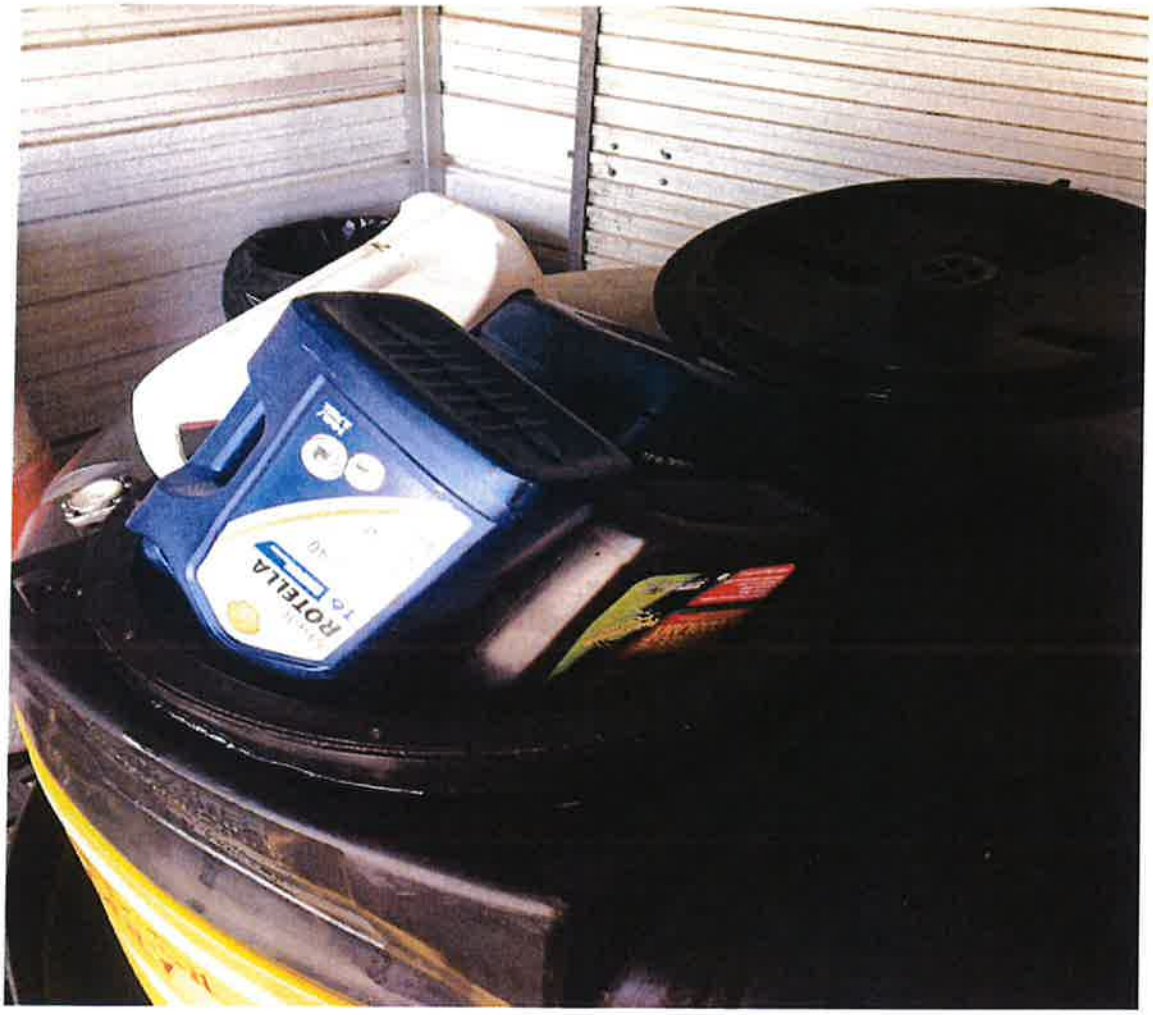
(Print Name) (Signature)

New updated , labeled site map April-5-2018

Jones & Frank had fuel tank delivered Tuesday, July 24th Not sure how long it will be to set up, test and release it to the City.(see pics) Installation, cleaning , testing & calibration will be next to make sure everything is safe and working properly. **Using old school notebooks; to record fuel amount, departments & names. Looking into new system to record fuel per departments.**

10-11,15,22-2018 Close cover to dumpster (on going)

Continue to monitor used oil site draining into proper containers for recycle & heating oil in garage (on going)



(Garage- oil draining fixture)

(on going)

Continue to monitor Oil-Water Seperator & Screen
Helps to cut down on debris going in system (on going)

42 Longwater Drive
P.O. Box 9149
Norwell, MA 02061-9149

INVOICE

Invoice No 1002255139

TASK 1801321666-001 - Pump Out

Item ID	Description	Qty	Units	Unit Price	Amount
		15 Mar 2018			
FIXD	Shift	1.000	Shift	1,200.0000	$1,200.00
FEE	Recovery Fee	1,200.000	EA	0.1250	$150.00
				SUBTOTAL	**$1,350.00**
				TAX	**$0.00**
				TASK TOTAL	**$1,350.00**

TASK 1801321666-003 - Disposal

Manifest Info	Item ID	Description	Manifest Qty	Manifest UOM	Billing Qty	Billing UOM	Unit Price	Amount
			15 Mar 2018					
	TANKWASH	Tank Wash			1.000	EA	247.0000	$247.00
BOL1189931 1	DISPSL / A32	Oil and Water 01157	1	TON	1.000	MIN	500.0000	$500.00
	FEE	Recovery Fee			747.000	EA	0.1250	$93.38
							SUBTOTAL	**$840.38**
							TAX	**$0.00**
							TASK TOTAL	**$840.38**

Invoice Date: 21 Mar 2018

City Properties Required to Use Nutrient Management Plans:

The City of Poquoson does not fertilize its school sites.

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

NUTRIENT MANAGEMENT PROGRAM JY 2019

RE: Nutrient program

Nagle, Jeffrey <jnagle@Trugreenmail.Com>

You replied to this message on 8/15/2019 10:07 AM.

Sent Thu 8/15/2019 10:06 AM

To Ellen Roberts

Ellen,

The first application is typically a pound of nitrogen per 1000 sq ft. the second application is half a pound of nitrogen per 1000 sq ft, third would be a pound, and the fourth will be zero lbs of nitrogren or another pound of nitrogen. It all depends on if the fields are seeded with rye in the fall or not. Also all our fertilizers contain zero phosphorus as the soil in this area does not need it. As a company trugreen found this out by doing thousands of soil samples in the early years of the company. This prevents run off of phosphorus that the soil cannot take in. Also, our fertilizers contain 5-7% potassium to promote root growth. All materials used by our company and the rates are set by our regional and corporate technical people. We are tightly partnered with many universities and organizations who have done extensive studies on fertilizers and what kind to use in what location. We also follow the Chesapeake bay act as well as all Va dept of agriculture laws and guide lines. The VDOA limits the amount of nitrogen that can be put down on turf and we follow that within our program. Typically with only 4 applications we don't even get close to maximum amount of nitrogen that can be put down on turf within a year. The 4 application program is based around a minimum program that provides the desired result by the City of Poquoson. Please don't hesitate to contact me if you need anything else.

Jeff Nagle
Commercial Account Manager
Newport News Branch
Phone: (757) 256-9483
jnagle@trugreenmail.com

TRUGREEN COMMERCIAL

By clicking reply and typing the word "Accept" to this email:

1. *You are telling us that you are authorized to act on behalf of your company in entering into this agreement with TruGreen.*
2. *You agree to the Terms and Conditions up to and including the payment terms of the attached.*
3. *You intend to agree with the services, number of services, the price for each service as well as the annual price for all services listed above.*
4. *You are accepting this Service Agreement without further comment or revision.*

RE: Nutrient program

Nagle, Jeffrey <jnagle@Trugreenmail.Com>

You replied to this message on 8/15/2019 10:07 AM.

Sent Thu 8/15/2019 10:06 AM

To Ellen Roberts

From: Nagle, Jeffrey [mailto:jnagle@Trugreenmail.Com]
Sent: Wednesday, August 14, 2019 8:59 AM
To: Milton Wiggs
Subject: Nutrient program

Milton please see below the nutrient program we do on your properties

Application 1, late winter/early spring- liquid nitrogen fertilizer, broadleaf weed control, and preemergent for crabgrass
Application 2, mid spring- liquid or granular nitrogen fertilizer, broad leaf weed control, and preemergent for crabgrass

Application 3- granular fertilizer, broadleaf weed control, nutsedge control, and post emergent crabgrass control

Application 4- granular fertilizer, broadleaf weed control

Jeff Nagle
Commercial Account Manager
Newport News Branch
Phone: (757) 256-9483
jnagle@trugreenmail.com

TRUGREEN COMMERCIAL

GOOD HOUSEKEEPING EMPLOYEE TRAINING PLAN

Staff Roles	Training Priority	Training Frequency	Schedule	Certification Required
Field Personnel	Receive training in the recognition and reporting of illicit discharges	No less than once per 24 months	First training this permit cycle to be held in February 2020. Training last occurred in PY18	Not Required.
Employees Performing Road, Street and Parking Lot Maintenance	Receive training in pollution prevention and good housekeeping measures	No less than once per 24 months	First training this permit cycle to be held in February 2020. Training last occurred in PY18	Not Required.
Pesticide and Herbicide Applicators	Become certified by the Virginia Department of Agriculture and Consumer Services Pesticide and Herbicide program	In accordance with the Virginia Pesticide Control Act	In accordance with the Virginia Pesticide Control Act; certifications must be kept current	Virginia Department of Agriculture and Consumer Services Pesticide and Herbicide Applicator's Certification
Virginia Erosion and Sediment Control Program inspectors, plan reviewers, program administrators and site operators	Staff in these roles shall maintain certifications; site operators shall demonstrate they hold a Responsible Land Disturber certification.	Certifications shall be continuously held in accordance with Virginia Erosion and Sediment Control Law and attendant regulations.	Certifications shall be continuously held in accordance with Virginia Erosion and Sediment Control Law and attendant regulations.	Certifications in accordance with Virginia Erosion and Sediment Control Law and attendant regulations.
Virginia Erosion and Sediment Control Program inspectors, plan reviewers, and program administrators and contractors acting in those capacities	Staff and contractors in these roles shall maintain certifications	Certifications shall be continuously held in accordance with Virginia Stormwater Management Act and attendant regulations.	Certifications shall be continuously held in accordance with Virginia Stormwater Management Act and attendant regulations.	Certifications in accordance with Virginia Stormwater Management Act and attendant regulations.
Emergency Response Employees	The Fire Department takes the lead in this area and conducts annual training. The Police Department also is trained in Hazardous Waste Response.	Annually for the Fire Department.	Annually	Certification is not required. However, staff members must pass a test at the end of training or re take the training.

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

PESTICIDE APPLICATOR CERTIFICATE

Issued		Fee Paid	Certificate
06/12/2019	REGISTERED TECH FOR BL# 12950	EXEMPT	124744-T
Expires 06/30/2021			

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

DANIEL J REEDER
CITY OF POQUOSON
500 CITY HALL AVE
POQUOSON,VA 23662-1996

Jewel H. Bronaugh, Ph.D.
Commissioner

Liza Fleeson Trossbach
Authorized Representative

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

PESTICIDE APPLICATOR CERTIFICATE

Issued		Fee Paid	Certificate Number
12/19/2018	REGISTERED TECH FOR BL# 12950	EXEMPT	78557-T
Expires 06/30/2020			

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

CURTIS L ROWE
CITY OF POQUOSON
500 CITY HALL AVE
POQUOSON,VA 23662

Jewel H. Bronaugh, Ph.D.
Commissioner

Liza Fleeson Trossbach
Authorized Representative

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

PESTICIDE APPLICATOR CERTIFICATE

Issued		Fee Paid	Certificate
06/01/2018	REGISTERED TECH FOR BL# 12950	EXEMPT	130603-T
Expires 06/30/2020			

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

Jewel H. Bronaugh, Ph.D.
Commissioner

Liza Fleeson Trossbach
Authorized Representative

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

PESTICIDE APPLICATOR CERTIFICATE

Issued		Fee Paid	Certificate
06/12/2019	REGISTERED TECH FOR BL# 6745	EXEMPT	91937-T
Expires 06/30/2021			

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

NOEL HERNANDEZ
CITY OF POQUOSON PUBLIC WORKS
500 CITY HALL AVE
POQUOSON, VA 23662

Jewel H. Bronaugh, Ph.D.
Commissioner

Liza Fleeson Trossbach
Authorized Representative

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

PESTICIDE APPLICATOR CERTIFICATE

Issued		Fee Paid	Certificate
06/01/2018	GOVT EMPLOYEE FOR BL# 6745	EXEMPT	61021-G
Expires 06/30/2020			

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

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

Jewel H. Bronaugh, Ph.D.
Commissioner

Liza Fleeson Trossbach
Authorized Representative

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

PESTICIDE APPLICATOR CERTIFICATE

Issued		Fee Paid	Certificate
06/12/2019	REGISTERED TECH FOR BL# 6745	EXEMPT	93001-T
Expires 06/30/2021			

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

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

Jewel H. Bronaugh, Ph.D.
Commissioner

Liza Fleeson Trossbach
Authorized Representative

VIRGINIA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES

P O BOX 1163, RICHMOND VA 23218-1163

PESTICIDE APPLICATOR CERTIFICATE

Issued		Fee Paid	Certificate
06/11/2018	GOVT EMPLOYEE FOR BL# 12950	EXEMPT	38303-G
Expires 06/30/2020			

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BONNIE F HAMPTON
CITY OF POQUOSON
500 CITY HALL AVE
POQUOSON, VA 23662

Jewel H. Bronaugh, Ph.D.
Commissioner

Liza Fleeson Trossbach
Authorized Representative

SIGMA CONSULTING AND TRAINING, INC.

P.O. Box 190
Eagle Lake, FL 33839-0190
Tel: 863-232-2910
Fax: 863-326-6780

CLASS CONFIRMATION

Course Title: Chemical Spill Response Training/OSHA Level II

Location: Comfort Inn & Suites
10601 Telegraph Road
Glen Allen, VA
Tel: 804-262-2000

Date of Course: August 9, 2018 **Time:** 8:00 a.m. to 5:00 p.m.

Fee: $150 per person, 4 or more $125 per person

Name of Agency: City of Poquoson Department of Public Works

Attendees: **Michael Geer, Daniel Reeder, Christopher Jensen, Herman Winder**

Government purchase orders accepted for payment or please make checks payable and mail to (do not give check to student to hand deliver):

Sigma Consulting and Training, Inc.
P.O. Box 190
Eagle Lake, FL 33839
email: info@sigmatrainingservices.com
Federal Employer Identification Number: 30-0009429

Please forward a copy of your purchase order with your registration form. Cancellations received at least three days prior to the class will receive 100% refund. No refunds less than three days prior to class. Substitutions can be made or classes can be switched. Please call to confirm.

SIGMA CONSULTING AND TRAINING, INC.
P.O. BOX 190
EAGLE LAKE, FL 33839
TEL: 863-232-2910
FAX: 863-326-6780
E-MAIL: INFO@SIGMATRAININGSERVICES.COM

Bill To:

City of Poquoson Public Works/Utilities
Attn: Accounts Payable
500 City Hall Avenue
Poquoson, VA 23662

Invoice

P.O. No.	Terms	Date	Invoice #
	Due on receipt	7/9/2018	10573

Quantity	Description	Rate	Amount
4	Chemical Spill Response Training/OSHA Level II August 9, 2018, Richmond -Michael Geer, Daniel Reeder, Christopher Jensen, Herman Winder	125.00	500.00

NOTE: Do not give check to student to bring to class. Please mail checks to address above. Invoice is due and payable upon receipt.

Federal Employer Identification #30-0009429

Cancelations must be received in writing to info@sigmatrainingservices.com or fax to 863-326-6780 at least 3 days prior to class to receive 100% refund. Substitutions can be made or classes switched.

Total	$500.00
Payments/Credits	$0.00
Balance Due	$500.00

COMMONWEALTH OF VIRGINIA

State Water Control Board

629 East Main Street, Richmond, Virginia 23219

DUAL

Combined Administrator

Karen White Holloway

CERTIFICATE NUMBER

DCA0198

EXPIRATION DATE

11/23/2021

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

This certificate is for your records and should be kept in a safe location. Please detach the above certificate and the two wallet size cards below. It is your responsibility to ensure that your certification is kept current and that you meet the requirements for re-certification before the expiration date.

COMMONWEALTH OF VIRGINIA
State Water Control Board
629 East Main Street, Richmond, Virginia 23219

DUAL
Combined Administrator
Karen White Holloway

Certificate Number
DCA0198

Expiration Date
11/23/2021

COMMONWEALTH OF VIRGINIA
State Water Control Board
629 East Main Street, Richmond, Virginia 23219

DUAL
Combined Administrator
Karen White Holloway

Certificate Number
DCA0198

Expiration Date
11/23/2021

COMMONWEALTH OF VIRGINIA

State Water Control Board

629 East Main Street, Richmond, Virginia 23219

STORMWATER MANAGEMENT

Inspector

Garrett Jeffrey Feagans

CERTIFICATE NUMBER

SWIN1250

EXPIRATION DATE

3/1/2021

DEQ
VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

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COMMONWEALTH OF VIRGINIA
State Water Control Board
629 East Main Street, Richmond, Virginia 23219

STORMWATER MANAGEMENT
Inspector
Garrett Jeffrey Feagans

Certificate Number
SWIN1250

Expiration Date
3/1/2021

COMMONWEALTH OF VIRGINIA
State Water Control Board
629 East Main Street, Richmond, Virginia 23219

STORMWATER MANAGEMENT
Inspector
Garrett Jeffrey Feagans

Certificate Number
SWIN1250

Expiration Date
3/1/2021

COMMONWEALTH OF VIRGINIA

State Water Control Board

629 East Main Street, Richmond, Virginia 23219

EROSION AND SEDIMENT CONTROL

Inspector

Garrett Jeffrey Feagans

CERTIFICATE NUMBER

ESIN0846

EXPIRATION DATE

2/22/2021

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

This certificate is for your records and should be kept in a safe location. Please detach the above certificate and the two wallet size cards below. It is your responsibility to ensure that your certification is kept current and that you meet the requirements for re-certification before the expiration date.

COMMONWEALTH OF VIRGINIA
State Water Control Board
629 East Main Street, Richmond, Virginia 23219

EROSION AND SEDIMENT CONTROL
Inspector
Garrett Jeffrey Feagans

Certificate Number
ESIN0846

Expiration Date
2/22/2021

COMMONWEALTH OF VIRGINIA
State Water Control Board
629 East Main Street, Richmond, Virginia 23219

EROSION AND SEDIMENT CONTROL
Inspector
Garrett Jeffrey Feagans

Certificate Number
ESIN0846

Expiration Date
2/22/2021

COMMONWEALTH OF VIRGINIA

State Water Control Board

629 East Main Street, Richmond, Virginia 23219

STORMWATER MANAGEMENT

Plan Reviewer

Garrett Jeffrey Feagans

CERTIFICATE NUMBER

SWPR0367

EXPIRATION DATE

12/3/2021

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

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COMMONWEALTH OF VIRGINIA
State Water Control Board
629 East Main Street, Richmond, Virginia 23219

STORMWATER MANAGEMENT
Plan Reviewer
Garrett Jeffrey Feagans

Certificate Number
SWPR0367

Expiration Date
12/3/2021

COMMONWEALTH OF VIRGINIA
State Water Control Board
629 East Main Street, Richmond, Virginia 23219

STORMWATER MANAGEMENT
Plan Reviewer
Garrett Jeffrey Feagans

Certificate Number
SWPR0367

Expiration Date
12/3/2021

COMMONWEALTH OF VIRGINIA

State Water Control Board

629 East Main Street, Richmond, Virginia 23219

EROSION AND SEDIMENT CONTROL

Inspector

Mark Boesen

CERTIFICATE NUMBER

2242

EXPIRATION DATE

5/31/2020

DEQ

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

FIRE DEPARTMENT HAZARDOUS MATERIALS TRAINING FISCAL YEAR 2019

First Name	Last Name	Employee I	Assignment Name	Assignment	Completion	Duration (hours)
Nicholas	Allen	44	NFPA 1500 Advanced HAZWOPER Awareness	TS Course	1/30/2019	8
Corey	Archer	43	NFPA 1500 Advanced HAZWOPER Awareness	TS Course	2/4/2019	8
Joshua	Blanton	3000	NFPA 1500 Advanced HAZWOPER Awareness	TS Course	2/4/2019	8
Joseph	Breeden	421	NFPA 1500 Advanced HAZWOPER Awareness	TS Course	2/15/2019	8
Thomas	Cannella	950	NFPA 1500 Advanced HAZWOPER Awareness	TS Course	1/10/2019	8
Randy	Cooke	1131	NFPA 1500 Advanced HAZWOPER Awareness	TS Course	2/7/2019	8
Clay	Cooper	40	NFPA 1500 Advanced HAZWOPER Awareness	TS Course	2/8/2019	8
Jonathon	Deel	2000	NFPA 1500 Advanced HAZWOPER Awareness	TS Course	1/30/2019	8
Thomas	Diggs	10000	NFPA 1500 Advanced HAZWOPER Awareness	TS Course	1/22/2019	8
David	Dixon	999	NFPA 1500 Advanced HAZWOPER Awareness	TS Course	1/12/2019	8
Charles	Downey	313	NFPA 1500 Advanced HAZWOPER Awareness	TS Course	2/5/2019	8
John	Ferrara	439	NFPA 1500 Advanced HAZWOPER Awareness	TS Course	1/31/2019	8
Jessica	Firth	3000	NFPA 1500 Advanced HAZWOPER Awareness	TS Course	1/16/2019	8
Darryll	Griffiths	392	NFPA 1500 Advanced HAZWOPER Awareness	TS Course	1/8/2019	8
Joseph	Insley	451	NFPA 1500 Advanced HAZWOPER Awareness	TS Course	1/10/2019	8
Steven	Katona	499	NFPA 1500 Advanced HAZWOPER Awareness	TS Course	1/30/2019	8
John Paul	Linton	454	NFPA 1500 Advanced HAZWOPER Awareness	TS Course	2/3/2019	8
Natalie	Marshall	39	NFPA 1500 Advanced HAZWOPER Awareness	TS Course	1/21/2019	8
Duane	McFarland	18	NFPA 1500 Advanced HAZWOPER Awareness	TS Course	2/9/2019	8
Tavish	O'Connor	13	NFPA 1500 Advanced HAZWOPER Awareness	TS Course	2/13/2019	8
Eric	Peterson	41	NFPA 1500 Advanced HAZWOPER Awareness	TS Course	1/25/2019	8
Elijah	Rossi	10009	NFPA 1500 Advanced HAZWOPER Awareness	TS Course	1/23/2019	8
Owen	Smith	14	NFPA 1500 Advanced HAZWOPER Awareness	TS Course	1/20/2019	8
Christopher	Tantillo	427	NFPA 1500 Advanced HAZWOPER Awareness	TS Course	1/14/2019	8
Allen	Torrence	22	NFPA 1500 Advanced HAZWOPER Awareness	TS Course	1/17/2019	8
William	Willis	10002	NFPA 1500 Advanced HAZWOPER Awareness	TS Course	2/7/2019	8
John	Young	7	NFPA 1500 Advanced HAZWOPER Awareness	TS Course	1/28/2019	8

End of Appendix Section

BMP SC: TMDL Special Conditions

Appendix

City of Poquoson Annual Report

VAR# 040024

Fiscal Year 2019

Submitted to DEQ September 30, 2019

TMDL Special Conditions							
BMP	**BMP Description**	**Measurable Goals**	**Metric**	**Responsible Party**	**Timeline**	**Associated Documents**	**PY 1 Status**
SC-1	Chesapeake Bay TMDL						
SC-1a	Update the Chesapeake Bay TMDL Action Plan	Update the Bay TMDL Action Plan to meet 40% reduction of pollutants of concern (POC)	Updated Bay TMDL Action Plan	SW Program Administrator	12 months after permit effective date	Updated Bay TMDL Action Plan	Compliant. Draft plan submitted to DEQ in June 2018 is attached. Action plan will be finalized prior to end of first permit year. The draft plan will be updated after new DEQ guidance becomes available.
SC-1b	Provide opportunity for public comment on the updated Bay TDML Action Plan	Opportunity provided for public comment	Public comment period for no less than 15 days	SW Program Administrator	Prior to submittal of updated Bay TMDL Action Plan	Record of Comments	Public comment period will be held after plan has been revised per new DEQ guidance.
SC-1c	Implement Bay TMDL Action Plan	Implement the Bay TMDL Action Plan to meet 40% of the Level 2 (L2) reductions of pollutants of concern (POC) by the end of the permit cycle	BMPs implemented	SW Program Administrator	End of PY5	Bay TMDL Action Plan	ongoing. Credit Trading agreement with HRSD is provided in Appendix.
SC-2	Local TMDL						
SC-2a	Local TMDL Action Plan for TMDLs approved by EPA prior to July 1, 2013	Develop a local TMDL Action Plan	Local TMDL Action Plan	SW Program Administrator	No later than 18 months after permit effective date	Local TMDL Action Plan	Not applicable. Bacterial TMDLs approved by EPA after July 1, 2013, in February 2018

SC-2b	Local TMDL Action Plan for TMDLs approved by EPA on or after July 1, 2013 and prior to June 30, 2018	Develop a local TMDL Action Plan	Local TMDL Action Plan	SW Program Administrator	No later than 30 months after the permit effective date	Local TMDL Action Plan	Applicable. Plan to be developed by May 2021.
SC-2c	Identify the significant sources of the POC	Identify the significant sources	Sources identified	SW Program Administrator	No later than 18 or 30 months after permit effective date, as applicable	Local TMDL Action Plan	Applicable. Plan to be developed by May 2021.
SC-2d	Outreach strategy to enhance public (including staff) education on reducing bacteria discharges	Develop and implement an outreach strategy	Outreach Strategy	askHRgreen and SW Program Administrator	No later than 18 or 30 months after permit effective date, as applicable	Local TMDL Action Plan	Applicable. Strategy to be developed by May 2021.
SC-2e	Schedule of anticipated actions for this permit term	Schedule of anticipated actions provided	Schedule of actions	SW Program Administrator	No later than 18 or 30 months after permit effective date, as applicable	Local TMDL Action Plan	Applicable. Strategy to be developed by May 2021.
SC-2f	Public comment period for the updated Local TDML Action Plan	Opportunity provided for public comment	Public comment period for no less than 15 days	SW Program Administrator	Prior to submittal of updated Local TMDL Action Plan	Record of Comments	Applicable. Strategy to be developed by May 2021.
SC-3	Bacteria TMDL						
SC-3a	Implement at least 3 strategies from Table 5	Identify strategies	At least 3 strategies implemented	SW Program Administrator	As listed in schedule of anticipated actions	Bacteria TMDL Action Plan	Applicable. Strategy to be developed by May 2021.
SC-4	Sediment, Phosphorous, and Nitrogen TMDLs						

SC-4a	Implement BMPs to reduce pollutant loads	BMPs listed in the VA BMP Clearinghouse, BMPs approved by the CBP, or using land disturbance thresholds lower than required	BMPs installed	SW Program Administrator	As listed in schedule of anticipated actions	Sediment, P, or N TMDL Action Plan	N/A. No individual TMDLs.
SC-4b	Submit anticipated end date by which the WLA will be met	Identify anticipated end date	Submit anticipated end date	SW Program Administrator	36 months after effective date of permit	Annual report	N/A. No individual TMDLs.
SC-5	PCB TMDLs						
	Develop an inventory of potentially significant sources of PCBs owned or operated by the permittee	Develop potentially significant sources inventory	Potentially significant sources identified	SW Program Administrator	As scheduled in permit	PCB TMDL Action Plan	N/A. No individual TMDLs.
	Evaluation and Assessment	Evaluate compliance with permit and assess progress	Assessprogress.	SW Program Administrator	Annually	Annual Report	Compliant. Bacterial education and some measures are already underway. Bay TMDL work is on track. Waiting for DEQ action plan guidance.

TMDL Status Reports

Chesapeake Bay TMDL Implementation: As reported in its 2018 annual report, the City of Poquoson met and exceeded the 2018 implementation goal for the Bay TMDL. Information on this is provided in the draft Chesapeake Bay TMDL Action Plan, attached in the appendix for the TMDLs. In accordance with permit requirements, the City also provided a copy of the attached draft to DEQ in 2018. No comments on this draft have been provided to date. The City is therefore planning to use this draft, finalizing it after DEQ updates its plan guidance and prior to the permit deadline in November.

While the City plans to continue implementing water quality measures, the draft plan calls for the use of credits obtained via the HRSD trading agreement. This document is provided in the annual report. In addition, additional properties are converting from septic tank to sewer connections. Poquoson has over a 99% connection rate to its sewer system. Four homes were connected this year after their septic tanks were pumped, filled in and their tops crushed. This leaves only 34 residences in the City being served by a septic tank.

In addition to the City's water quality BMPs, staff members participated in the regional effort to assist in the state's latest Watershed Implementation Plan. Poquoson is a member of the Hampton Roads Planning District Commission. This group led the WIP work.

Bacterial TMDL Implementation: The City's bacterial TMDLs were approved by the EPA in 2017. The action plan for these TMDLs is due 30 months after the permit issuance. However, the City has been implementing steps to reduce bacteria in its waters and from its MS4 for several years now. This work includes providing free boat pump outs on City docks in both the Back and Poquoson River watersheds. Our education program emphasizes picking up after pets. Pet waste stations are provided at City parks and are available to civic groups interested in

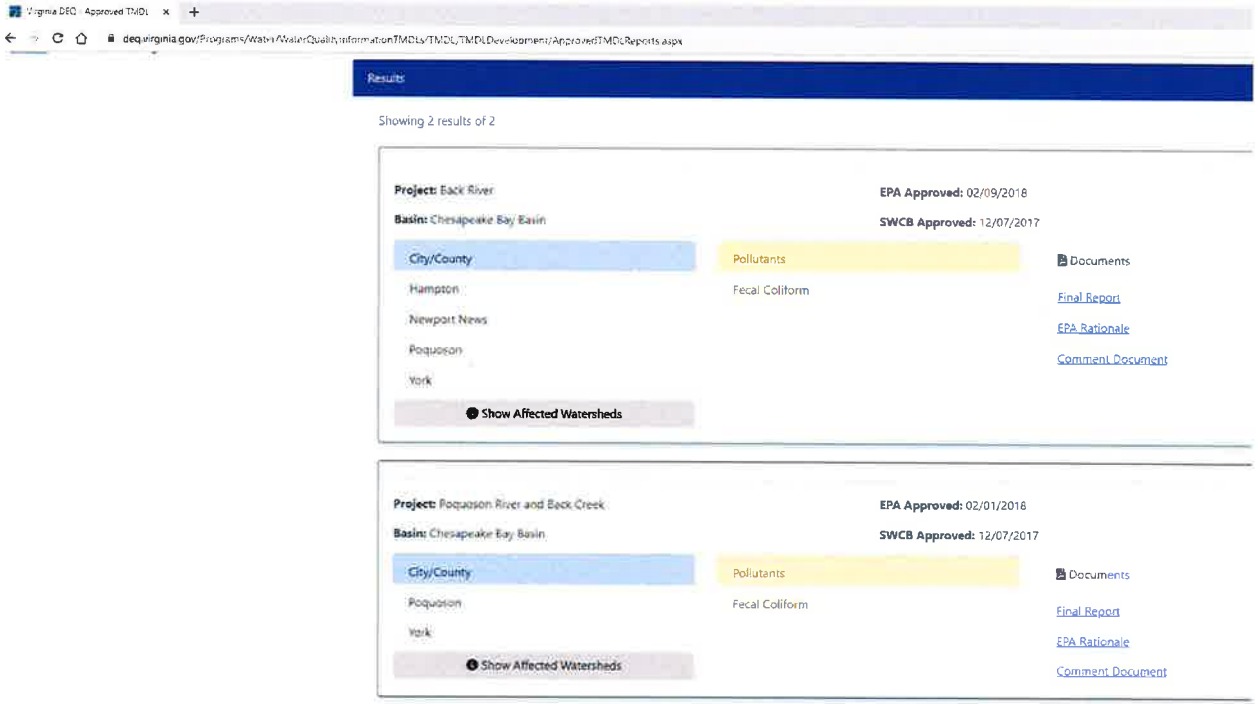
adopting and maintaining a station. Finally, Poquoson is working with the Fish and Wildlife Service and USDA to reduce itinerant wildlife bacterial loads. Poquoson is located adjacent to a federal wildlife refuge. City ponds and parks draw waterfowl, primarily geese, that make the waters permanent homes instead of migrating. This program is reducing the goose population and associated waste.

DEQ Website: Approval Dates for City's Bacterial TMDLs

Special Condition: Local TMDLs

Source: Virginia DEQ website
https://www.deq.virginia.gov/Programs/Water/WaterQualityInformationTMDLs/TMDL/TMDLDevelopment/ApprovedTMDLReports.aspx

Poquoson is subject to two local TMDLs. Both are for Fecal Coliform and both were approved by the State Water Control Board after July 1, 2013. In accordance with its MS4 permit, Poquoson is required to develop and begin implementing an action plan no later than 30 months after the permit effective date.



DRAFT Chesapeake Bay TMDL Action Plan

CHESAPEAKE BAY TMDL ACTION PLAN

CITY OF POQUOSON, VA

2018-2023

DRAFT

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."

_____

SIGNATURE

_____

DATE

_____

PRINTED NAME

_____

TITLE

DEFINITIONS & ACRONYMS

The following definitions and acronyms are used in this Chesapeake Bay TMDL Action Plan:

Action Plan – unless specifically stated otherwise, the 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
HRSD – The Hampton Roads Sanitation District Commission
L2 – Level 2 (scoping run of Chesapeake Bay Watershed Model)
MS4 – Municipal Separate Storm Sewer System
MTD – Manufactured Treatment Devices
NASA – National Aeronautics and Space Administration
NAVD88 – North American Vertical Datum of 1988
Permit – unless specifically stated otherwise, the City's current MS4 permit valid from 2013 to 2018
POCs – Pollutants of Concern (Specifically Nitrogen, Phosphorus, and Total Suspended Solids)
RMA – Resource Management Area
SLAF – Stormwater Local Assistance Fund (administered by DEQ)
SWIFT – Sustainable Water Initiative for Tomorrow
TMDL – Total Maximum Daily Load
TN – Total Nitrogen
TP – Total Phosphorous
TSS – Total Suspended Solids
RPA – Resource Protection Area
VAMSA – Virginia Municipal Stormwater Association
VSMP – Virginia Stormwater Management Program
WIP – Watershed Implementation Plan

A. Executive Summary

In accordance with requirements of the Virginia General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4 permit), the City of Poquoson, Virginia (the City) has prepared this Chesapeake Bay TMDL Action Plan for the next MS4 permit cycle.

This action plan covers the time period of July 1, 2018 – June 30, 2023.

Review of the Current MS4 Program

Poquoson has coverage under 9VAC25-890-40 and is currently applying for continued coverage during the next permit cycle. This state general permit provides authorization to discharge stormwater from the City's municipal separate storm sewer system (MS4) into state waters. This general permit is consistent with the Chesapeake Bay TMDL and the Virginia Phase I and II Watershed Implementation Plans.

The City maintains an MS4 program plan that is updated in accordance with the permit schedule and submits an annual report to DEQ prior to October 1st of each year. This draft action plan was prepared in accordance with the permit requirements and available DEQ guidance. More information on Poquoson's permit activities can be found on pages of 6 & 7 of the City's approved action plan for the first 5-year permit cycle. This document is found in the appendix.

Identification of New or Modified Legal Authorities

All legal authorities needed to implement this action plan are in place. These include the Virginia law on nutrient trading and the attached Memorandum of Agreement between the City of Poquoson and the Hampton Roads Sanitation District. Should the City opt to construct or modify additional BMPs in furtherance of future Bay TMDL requirements, the only additional legal authorities that would be needed are project-specific permits for construction. These might

include land disturbance permits, VPDES stormwater permits for construction activities, or various wetlands or other state and federal permits. These permits would depend on specific project requirements and conditions.

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

Stormwater discharges from new development with in Poquoson must comply with the VSMP regulations and laws for both quantity and quality. Post-development BMPs must meet Virginia BMP Clearinghouse standards and specifications. Plans and calculations for these structures are reviewed by staff members as part of the Poquoson development review process. All construction activities must follow the minimum standards and requirements of Virginia's Erosion and Sediment Control Law. Development work must adhere to the Poquoson City Code, including Stormwater, Erosion and Sediment Control, and Chesapeake Bay Preservation ordinances. Poquoson restricts development in the Bay Resource Preservation Area. In an effort to protect water quality, all areas within Poquoson located upland of the Resource Protection Areas were designated Resource Management Areas. This exceeded Chesapeake Bay Preservation Act minimum requirements.

Applicable City ordinances, staffing, and other aspects of the Poquoson VSMP program were reviewed by DEQ and approved by the State Water Control Board at VSMP implementation. There are lands zoned for industrial use or anticipated industrial development in the City or its MS4.

Offsets for Existing Development

There have been no changes to the City's MS4 service area since its delineation in the first permit cycle. Existing development loads were calculated at that time. This calculation was completed in the 2015 action plan in order to meet MS4 permit requirements. The total offset required for the Bay TMDL has not changed, as the City's MS4 service and urbanized areas have remained the same. Page 12 of the approved 2015 action plan provides the estimated total POC loads.

Determination of Total Pollutant Load Reductions

The total pollutant load reduction required by the Bay TMDL were calculated during the previous permit cycle and included in the approved Action Plan for 2013-2018. They were calculated again for this effort and are shown in the Table 1. The required total load reductions did not change.

Table 1: Total Pollutant Load Reductions

Pollutant	Subsource	Loading Rate (lbs/ac/yr)	Existing developed lands as of 6/30/09 served by the MS4 within the 2010 CUA (acres)	Loading (lbs/yr)	MS4 required Chesapeake Bay total L2 loading rate reduction (decimal numbers)	Total reduction required at the end of the third permit cycle (6/30/28)	Total reduction required at the end of the third cycle (6/30/28)
	Regulated urban impervious	7.31	636.28	4651.2068	0.09	418.608612	
Nitrogen							**1167.25597**
	Regulated urban pervious	7.65	1631.04	12477.456	0.06	748.64736	
	Regulated urban impervious	1.51	636.28	960.7828	0.16	153.725248	
Phosphorus							**214.032952**
	Regulated urban pervious	0.51	1631.04	831.8304	0.0725	60.307704	
	Regulated urban impervious	456.68	636.28	290576.3504	0.2	58115.27008	
Total Suspended Solids							**68502.1406**
	Regulated urban pervious	72.78	1631.04	118707.0912	0.0875	10386.87048	

Means and Methods Used to Meet the Required Reductions for First Permit Cycle

As documented in its MS4 annual reports, the City of Poquoson has completed all work required to meet the first permit cycle's 5% reduction goal. Information on BMPs used to meet this first milestone is found on page 9 of the attached first cycle action plan. Following completion of the BMPs, Poquoson exceeded its required reduction of 5%. Means and methods used to meet the required reductions for the first permit cycle are described in the attached 2015 action plan.

Two more homes were converted from septic tanks to sewer connections. This is in addition to the septic tank disconnections/connections to public sewer listed in the 2015 action plan. The septic tanks were taken off line (pumped out; filled; tops cracked) and cannot be used again. The homes are now connected to public sewer. One conversion was reported in the PY4 annual report; the other will be reported in the PY5 annual report.

Table 2 summarizes the current load reductions. It includes the means and methods described in the first action plan and accomplished in the first permit cycle. It also includes nitrogen load reductions resulting from the additional septic tank conversions.

Table 2: Load Reductions Achieved through June 30, 2018

Pollutant	Load Reductions Achieved by Stormwater BMPs and other methods outlined in approved first cycle Action Plan (achieved prior to June 30, 2018)	Load Reductions Achieved by Additional Septic Tank Disconnection/Connection to Sewer occurring between first action plan approval and June 30, 2018, lb/yr*	Total Load Reductions Achieved through 6/30/2018 (end of first permit cycle), lb/yr
Nitrogen	162.76	18.86	181.62
Phosphorus	18.57	0	18.57
Total Suspended Solids	5597.7	0	5597.7

*2 tanks disconnected: 205 Hunts Neck connected to sewer in PY4; 209 Odd Road connected to sewer in PY5. Per DEQ guidance, each is credited with 9.432 lbs./yr TN reduction. These septic tanks are in addition to those credited in the first Action Plan.

Notes

Determination of Total Pollutant Load Reductions Required by June 30, 2023

In accordance with the MS4 permit, the City of Poquoson is required to have reached 40% of the total pollutant load reductions by the end of the second permit cycle in June 2023. These load reductions include both reductions made to date and those that will be accomplished in the upcoming permit cycle. Table 3 provides the required reductions for each pollutant of concern.

Table 3: Total Load Reductions Required by June 30, 2023

Pollutant	Total reduction required (at end of third permit cycle, 6/30/23), lb/yr	Reduction required at the end of the second permit cycle (6/30/23): 40% of total, lb/yr	Total Load Reductions Achieved through 6/30/2018 (end of first permit cycle), lb/yr	Additional Load Reductions Required by June 30, 2023 (these reductions are what is remaining to achieve 40% goal, and what must be achieved between July 1, 2018 and June 30, 2023), lb/yr
Nitrogen	1167.26	466.9	181.62	258.28
Phosphorus	214.03	85.61	18.57	67.04
Total Suspended Solids	68502.14	27400.86	5597.7	21803.16

Means and Methods to Meet the Required Reductions for Upcoming Permit Cycle from July 1, 2018-June 30, 2023

The City of Poquoson has entered into a nutrient and sediment trading agreement with the Hampton Roads Sanitation District to meet the upcoming load reduction requirements. This agreement, the Hampton Roads Water Quality Credit Agreement for Chesapeake Bay Restoration, is provided in the appendix. Table 4 shows the credits reserved through the agreement and those needed to accomplish the load reductions.

Table 4: HRSD Credits vs. Required Reductions

Pollutant	Additional Load Reductions Required by June 30, 2023 , lb/yr*	HRSD Credits Reserved by the City of Poquoson by the MOA (lb/yr)**	Total HRSD credits to achieve required 40% load reduction, lb/yr
Nitrogen	258.28	408.52	258.28
Phosphorus	67.04	74.9	67.04
Total Suspended Solids	21803.16	23975.8	21803.16
Note	*Represents the difference between reductions achieved to date and total reductions required by June 30, 2023		

In addition, the City will continue to maintain its BMPs, and will continue to promote septic tank to sewer connection conversion during the permit cycle. It is

likely the City will be able to facilitate 2-5 more conversions during the next permit cycle. These conversions are not credited on attached Table because the pollutant reductions achieved by these conversions exceed the required load reductions, and because the City cannot accurately predict when these conversions will actually occur. Poquoson will report new conversions via MS4 permit annual reports.

The City may also take other actions in furtherance of the Bay TMDL goals. Actions might include upgrades to existing City-owned ponds or new BMPs. These measures are not reported in this action plan because any pollutant load reductions achieved will exceed what is required for the permit period. Any additional work completed will be reported in the City's annual reports and summarized in the 2023 action plan for the 2023-2028 implementation period.

Means and Methods to Offset increased Loads from Construction Between July 1, 2009 to June 30, 2014

Local governments must offset increased loads from projects initiating construction between July 1, 2009 and June 30, 2014 that disturbed one acre or greater and used an average land cover condition greater than 16% impervious cover. There are no such projects in the City of Poquoson and therefore no additional loads were created. Poquoson consistently used an average land cover of 16% impervious throughout this period. No projects were constructed that used an average impervious land cover condition greater than 16%.

Means and Methods to Offset Increased Loads from Grandfathered Projects

Local governments must offset increased loads from projects that are grandfathered in accordance with 4VAC50-68-48 that disturbed one acre or greater, began construction after July 1, 2014, and used an average land cover condition greater than 16% in the design of post-development stormwater management facilities. Poquoson does not have any grandfathered projects that meet this condition. Therefore there are no required means and methods to offset increased loads from grandfathered projects.

Modifications to the TMDL or Watershed Implementation Plan

The City of Poquoson reserves the right to substitute other means and methods, BMPs, and types of treatment practices. Modifications to the TMDL plan shall be addressed during the permit re-application. Actions taken during the permit cycle will be reported in the MS4 permit annual reports.

Future Projects and Associated Acreage That Qualify as Grandfathered

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

Estimate of Expected Costs

The credits generated by HRSD and being used for nutrient and sediment trading are being funded by HRSD ratepayers. More than 95% of the households in Poquoson are connected to sewer and are therefore HRSD ratepayers. Per the attached MOA, there is no direct cost to the City of Poquoson because its citizens are already funding these credits. Funding for the City's Bay TMDL work will come directly from citizens to HRSD without passing through City coffers.

Any additional work completed by the City in furtherance of the Bay TMDL goals will be funded through General Fund monies. The Bay TMDL is part of the City's Capital Improvement Plan.

Public Comment

The City's Chesapeake Bay TMDL plan will be discussed at the June 25, 2018 meeting of the Poquoson City Council and published on the City website for a minimum time period of 30 days. A public comment period will be held from June 26, 2018 through July 25, 2018.

Appendix 1: The City of Poquoson 2015 Chesapeake Bay TMDL Action Plan

CITY OF POQUOSON, VIRGINIA

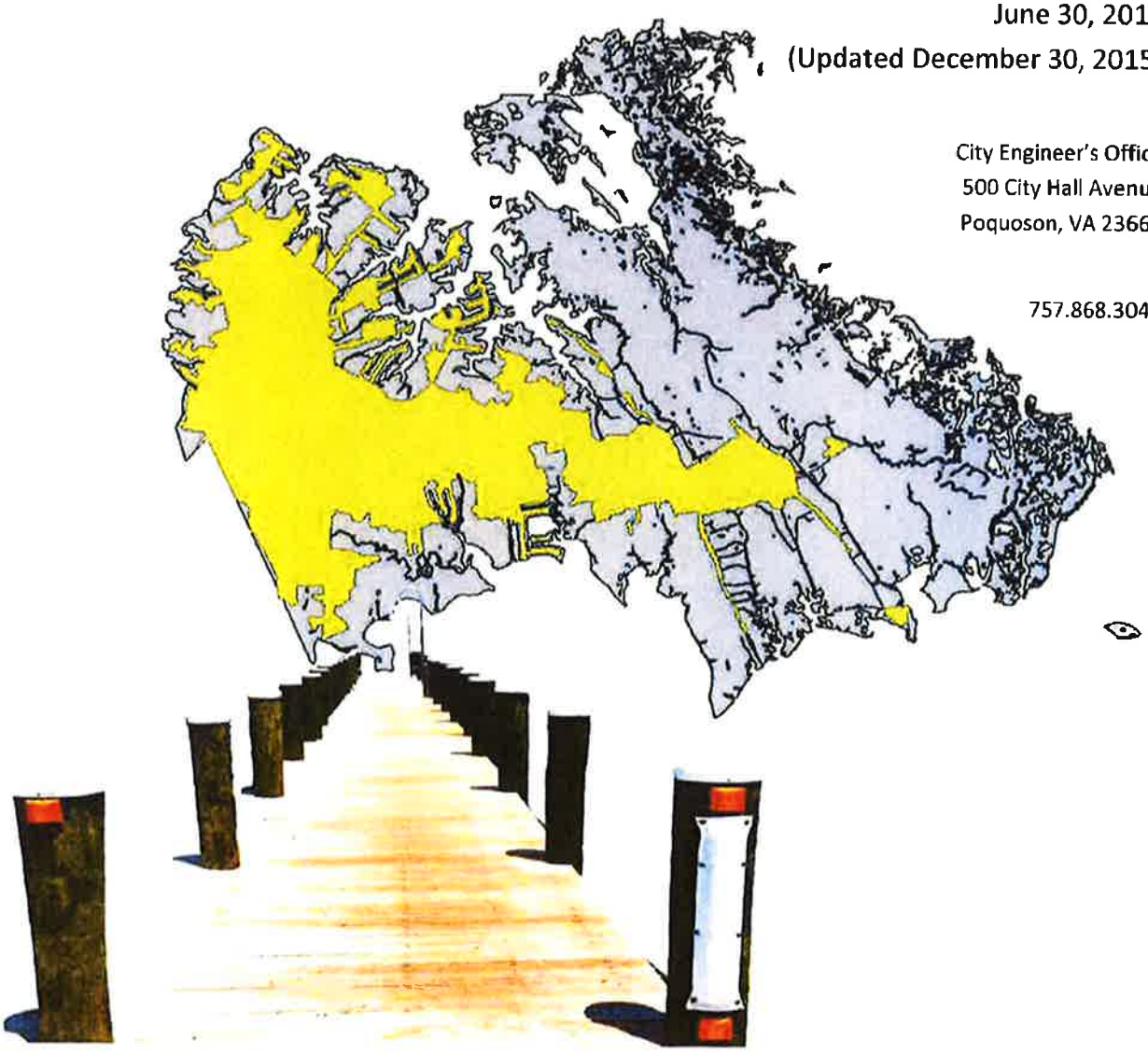
CHESAPEAKE BAY TMDL
ACTION PLAN

VPDES PERMIT NO. VAR040024

June 30, 2015
(Updated December 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

City Manager
Title

1/8/2016
Date

CHESAPEAKE BAY TMDL ACTION PLAN

(5 PERCENT COMPLIANCE)

VPDES PERMIT NUMBER VAR040024

June 30, 2015

(Updated December 30, 2015)

Prepared by City staff and

AECOM

AECOM No. 60393499

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

UPDATE HISTORY

June 30, 2015 — Original Document.

December 30, 2015 — First revision. Addressed review comments provided by DEQ in a Kelsey Brooks email to Ellen Roberts dated December 9, 2015. Modified this Action Plan to account for BMPs, installed between January 1, 2006 and July 1, 2009 that can be credited towards pollutant load reductions required by the Chesapeake Bay TMDL and the City's MS4 Permit. Adjusted land cover to include 11.3 acres of forested land that was excluded (due to small acreage) in DEQ's March 19, 2015 guidance document, then allowed in DEQ guidance issued May 18, 2015. Recomputed pollutant removals using DEQ's corrected loading rate for Total Suspended Solids. Revised the text to address clarifications requested by DEQ.

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DEFINITIONS & ACRONYMS

The following definitions and acronyms are used in this Chesapeake Bay TMDL Action Plan:

Action Plan – unless specifically stated otherwise, the 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
L2 – Level 2 (scoping run of Chesapeake Bay Watershed Model)
MS4 – Municipal Separate Storm Sewer System
MTD – Manufactured Treatment Devices
NASA – National Aeronautics and Space Administration
NAVD88 – North American Vertical Datum of 1988
Permit – unless specifically stated otherwise, the City's current MS4 permit valid from 2013 to 2018
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
TN – Total Nitrogen
TP – Total Phosphorous
TSS – Total Suspended Solids
RPA – Resource Protection Area
VAMSA – Virginia Municipal Stormwater Association
VSMP – Virginia Stormwater Management Program
WIP – Watershed Implementation Plan

CHESAPEAKE BAY TMDL ACTION PLAN
(5 PERCENT COMPLIANCE)

VPDES PERMIT NUMBER VAR040024
JUNE 30, 2015
(UPDATED DECEMBER 30, 2015)

A. EXECUTIVE SUMMARY

Virginia localities, such as the City of Poquoson, are required to comply with the terms of the Chesapeake Bay TMDL regulations as set forth in their MS4 permits. These permits require each regulated locality to prepare and implement an Action Plan to reduce pollutants in stormwater discharges.

Poquoson prepared an Action Plan (dated June 30, 2015) and submitted it to DEQ for review. The original plan identified seven specific projects, one of which was already completed, two of which were under design and had been funded through a SLAF grant, and four additional projects that were to be completed by June 30, 2018. The total cost of the four unfunded projects was estimated to be $238,831.

After the June 30, 2015 Action Plan was submitted, City staff continued working on a separate grant that Poquoson had received from DEQ to compile an accurate, up-to-date inventory of the City's BMPs. This work led to the discovery of four BMPs—implemented between January 1, 2006 and June 30, 2009—that can qualify for pollutant reduction credits under the Chesapeake Bay TMDL regulations.

DEQ reviewed both the Action Plan and BMP Inventory submittals, and commented in a December 9, 2015 email from Kelsey Brooks to City Engineer Ellen Roberts that qualifying BMPs could be incorporated into the Action Plan and credited towards the City's pollutant reduction goals.

The City asked AECOM to revise this Action Plan and incorporate the qualifying BMPs. When these BMPs are added to the five-percent compliance plan and combined with the two projects funded

by DEQ SLAF grants (a created wetland and a wet pond in Oxford Run), no additional projects are required to satisfy the five-percent pollutant reduction goal for the current permit cycle.

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. The means and methods by which the required reductions are met have also been 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 30 meters square. 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 1,631.04 acres of regulated pervious land within the City's MS4 service area, the estimated annual pollutant loads from existing sources are 17,128.66 pounds of nitrogen, 1,792.61 pounds of phosphorus, and 409,283.44 pounds of total suspended solids.

The five-percent 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 58.36 pounds of nitrogen, 10.70 pounds of phosphorus and 3,425.11 pounds of suspended solids.

To satisfy the first permit cycle requirements, Poquoson has eight BMPs, six of which are already completed, and two of which have been designed and will be awarded for construction in 2016. These two projects have been funded through a SLAF grant. The project locations are shown in Figure 3. Table 4 documents the pollutant reductions for these projects, as summarized in Table 5. Table 6 presents the implementation schedule.

The two SLAF grant projects are a proposed wet pond and created wetland. Land use conversion for the property at 127 Ridge Road has been completed (see Figure 4). The remaining projects that qualify for pollutant removal credit include three wet ponds and an infiltration basin. The City is

also taking credit for an annual reduction of nitrogen of approximately 66.02 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 162.76 pounds of nitrogen, 18.57 pounds of phosphorus, and 5,597.70 pounds of total suspended solids. Because all of these projects have been implemented or have already been funded, the implementation cost will be zero additional dollars. The City recognizes that meeting the next phase of the Chesapeake Bay TMDL requirements—developing and implementing a 35-percent Action Plan—will require significant additional planning and funding, and is already working to monitor developments and changes in the regulations with that plan in mind.

DEQ provisionally approved Poquoson's June 30, 2015 Action Plan on December 22, 2015—incorporating additional information provided by Poquoson that addressed DEQ comments and stated the City's intent to take credit for qualifying historical BMPs. This Action Plan is considered an enforceable part of the MS4 Program Plan. DEQ requested that Poquoson submit its updated Action Plan by January 11, 2016. This December 30, 2015 update addresses all outstanding issues listed in DEQ's email from Kelsey Brooks to City Engineer Ellen Roberts dated December 9, 2015.

The City reserves the right to make adjustments to this plan, and to substitute any projects that can achieve the required pollutant reductions, for economic or other reasons. 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 30 meters by 30 meters—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 land cover and the means and methods to achieve the first permit cycle reductions to account for the forested land that had been excluded by the March 19th revision of the guidance document, as well as the additional nutrient reductions required due to the corrected reductions in loading rates listed in the final guidance memo. However, this updated Action Plan has revised the land cover in Table 1 to include approximately 11.31 acres of forested land that had been excluded and counted as regulated pervious land due to changes in the March 19th guidance memorandum. In addition, the loading rates in Table 2 have been updated to reflect the change in acreage of forested and regulated

pervious land. The corrected loading rates from the May 18, 2015 guidance memorandum were also used to update Table 3, which presents the revised reductions required during the first permit cycle.

During the development of its Action Plan, the City identified BMPs to help it meet the required POC reductions for both the first and second permit cycles. Originally the City identified four projects—three vegetated filter strips and a wet swale—that when combined with two BMPs that were already in the design phase, seven lots connected to sanitary sewer, and a City-owned residential parcel converted to grass, met the required five-percent reductions for the first permit cycle. The four BMPs eligible for POC credit that were identified as a result of the City's 2015 Historical Data Cleanup help the City achieve the required five-percent reductions for the first permit cycle without the need for the three proposed vegetated filter strips and the wet swale. However, the City recognizes that meeting its required second permit cycle reductions will be difficult, and may use those projects to help achieve its 35-percent POC reductions during the second permit cycle.

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 five percent 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 developed and submitted

to DEQ, for its review and acceptance, an approvable Chesapeake Bay TMDL Action Plan dated June 30, 2015. DEQ provisionally approved Poquoson's June 30, 2015 Action Plan on December 22, 2015—incorporating additional information provided by Poquoson that addressed DEQ comments and stated the City's intent to take credit for qualifying historical BMPs. This Action Plan is considered an enforceable part of the MS4 Program Plan. DEQ requested that Poquoson submit its updated Action Plan by January 11, 2016. This December 30, 2015 update addresses all outstanding issues listed in DEQ's email from Kelsey Brooks to City Engineer Ellen Roberts dated December 9, 2015.

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 into receiving waters.

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 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 feet 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 met the Bay Program size requirement of a contiguous area at least 30 meters by 30

meters. Forested areas on the edge of the MS4 boundary were included if they were less than 30 meters square, but were part of a contiguous area greater than 30 meters by 30 meters. 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.

The land cover found in Table 1 was revised for this December 30, 2015 Action Plan update to account for approximately 11.3 acres of forested land that had been excluded by DEQ's March 19th guidance memorandum, and was counted as regulated urban pervious land in the June 30, 2015 Action Plan. 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 0.26 pounds of nitrogen, 0.02 pounds of phosphorus, and 3.60 pounds of suspended solids. The second permit cycle reductions are reduced by 1.82, 0.14, and 25.19 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.

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 five-percent required nutrient reductions for the first permit cycle are 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. 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. This updated Action Plan uses the corrected load reductions from the May 18, 2015 guidance memorandum.

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.

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 three specific projects, one of which is already complete, two of which are under design and are funded through a SLAF grant, and four additional qualifying BMPs that all together meet the City's required reductions. The project and BMP locations are shown in Figure 3. Table 4 documents the pollutant reductions for these projects and BMPs.

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 land use conversion at 127 Ridge Road involved the conversion of 0.08 acres of impervious land and 0.21 acres of managed turf to grass. The grass on this parcel will be unmanaged. Figure 4 shows photos of the converted property taken on December 10, 2015.

During its 2015 Historical Data Cleanup, the City identified four BMPs within its MS4 service area that were implemented between January 1, 2006 and June 30, 2009, and thus are eligible for credit towards the City's required five-percent POC reductions during the first permit cycle. Three of the BMPs are wet ponds (Hunts Neck Estates, Island Cove, and River's Edge) and one is an infiltration basin (Villas Phase 2) that was verified during the Historic Data Cleanup to be in good order and functioning as designed. The calculated reductions for these BMPs are included in Table 4.

It should be noted that the service areas and impervious acres served that were reported for the Hunts Neck Estates wet pond, and the Villas Phase 2 infiltration basin were taken from engineering calculations submitted to the City for the BMPs prior to construction. When calculating the reduction loads for those BMPs, GIS data was checked to confirm the land cover in the service areas. Discrepancies were found in the impervious areas served for both BMPs, and the total service area for the Villas Phase 2 infiltration basin. The Hunts Neck Estates wet pond has a service area of 16.46 acres. Impervious acres served were reported as 6.13 acres, but GIS data and aerial photos show that area to be approximately 2.51 acres. Similarly, The Villas Phase 2 infiltration basin has a service area of 3.59 acres—not the 4.13 acres as initially reported—with an impervious area served of 0.99 acres, not 2.2 acres. In both cases the changes are conservative, resulting in less impervious acres served, and a slight reduction in phosphorus removal.

In addition 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.

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 pounds of TN per person per year. In a June 29, 2015 email to the City, DEQ stated that when determining the number of individuals in a household for calculating sewer connection credits, the average number of people per household based on the latest Census data for that locality should be used. For Poquoson that number is 2.62 people per household.

Since July 1, 2009, the City has disconnected seven septic tanks and connected those parcels to the sanitary sewer system. Using 2.62 people per household, and nitrogen reductions of 3.6 lbs TN/person/year results in a reduction of 9.43 lbs TN/year for each household disconnected. With seven household disconnects, the total nitrogen reduction is 66.02 lbs/yr.

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 four proposed projects identified in the June 30, 2015 version of this Action Plan was estimated to be $238,831. As described elsewhere in this December 30, 2015 update, Poquoson will meet its requirements for the first permit term and exceed the five-percent compliance level documented in Table 3 without constructing additional projects. The projects that meet the five-percent goal are documented in Tables 4 through 6.

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	1,631.04
Forest*	828.33
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	17,128.66
	Regulated Pervious	7.65	1,631.04	12,477.46	
Phosphorus	Regulated Impervious	1.51	636.28	960.78	1,792.61
	Regulated Pervious	0.51	1,631.04	831.83	
TSS	Regulated Impervious	456.68	636.28	290,576.35	409,283.44
	Regulated Pervious	72.78	1,631.04	118,707.09	

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	0.032895	636.28	20.93	58.36
	Regulated Pervious	0.02295	1,631.04	37.43	
Phosphorus	Regulated Impervious	0.01208	636.28	7.69	10.70
	Regulated Pervious	0.00184875	1,631.04	3.02	
TSS	Regulated Impervious	4.56680	636.28	2,905.76	3,425.11
	Regulated Pervious	0.3184125	1,631.04	519.34	

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

SUMMARY — Reductions Required for First Permit Cycle, 5% of the Level 2 Scoping Run	TN	TP	TSS
5% Required Annual Reductions - (1st Permit Cycle)	58.36	10.70	3,425.11
Total Annual Reductions (lbs/yr) from BMPs	162.76	18.57	5,597.70
Pounds in Excess of Requirements: (carried forward to 2nd permit cycle)	✓ 104.40	✓ 7.87	✓ 2,172.59

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	72.78	31.67	2.11	301.31
Reg. Impervious	8.88	7.31	1.51	456.68	64.91	13.41	4,055.32
			Total (lbs/yr)		**112.39**	**16.04**	**4,561.49**
			Removal Efficiency*		15%	24%	30%
			Annual Reduction (lbs/yr)		**16.86**	**3.85**	**1,368.45**

*Efficiencies taken from the Bay Program Retrofit Curves for a treatment depth of 0.23 inches.

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	72.78	14.08	0.94	133.92
Reg. Impervious	3.41	7.31	1.51	456.68	24.93	5.15	1,557.28
			Total (lbs/yr)		**42.96**	**6.22**	**1742.55**
			Removal Efficiency*		20%	45%	60%
			Annual Reduction (lbs/yr)		**8.59**	**2.80**	**1045.53**

*Chesapeake Bay Program established efficiencies for wet ponds.

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**

*Pervious land converted was managed turf. See Figure 4 for photos.

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

1-4.Hunts Neck Estates Wet Pond (Online 2/2/2006)

Land Use	Acres	Loading Rates (lbs/ac/yr)			Pollutant Loads (lbs/yr)		
		TN	TP	TSS	TN	TP	TSS
Forest	1.09	2.13	0.07	27.61	2.32	0.08	30.09
Reg. Pervious	12.86	7.65	0.51	72.78	98.38	6.56	935.95
Reg. Impervious	2.51	7.31	1.51	456.68	18.35	3.79	1,146.27
				Total (lbs/yr)	119.05	10.43	2,112.31
				Removal Efficiency*	20%	45%	60%
				Annual Reduction (lbs/yr)	23.81	4.69	1,267.39

*Chesapeake Bay Program established efficiencies for wet ponds.

1-5. Island Cove Wet Pond (Online 6/21/2007)

Land Use	Acres	Loading Rates (lbs/ac/yr)			Pollutant Loads (lbs/yr)		
		TN	TP	TSS	TN	TP	TSS
Forest	0.14	2.13	0.07	27.61	0.30	0.01	3.87
Reg. Pervious	4.28	7.65	0.51	72.78	32.74	2.18	311.50
Reg. Impervious	1.28	7.31	1.51	456.68	9.36	1.93	584.55
				Total (lbs/yr)	42.40	4.13	899.91
				Removal Efficiency*	20%	45%	60%
				Annual Reduction (lbs/yr)	8.48	1.86	539.95

*Chesapeake Bay Program established efficiencies for wet ponds.

1-6. River's Edge Wet Pond (Online 12/3/2007)

Land Use	Acres	Loading Rates (lbs/ac/yr)			Pollutant Loads (lbs/yr)		
		TN	TP	TSS	TN	TP	TSS
Forest	1.76	2.13	0.07	27.61	3.75	0.12	48.59
Reg. Pervious	8.77	7.65	0.51	72.78	67.09	4.47	638.28
Reg. Impervious	1.17	7.31	1.51	456.68	8.55	1.77	534.32
				Total (lbs/yr)	79.39	6.36	1,221.19
				Removal Efficiency*	20%	45%	60%
				Annual Reduction (lbs/yr)	15.88	2.86	732.71

*Chesapeake Bay Program established efficiencies for wet ponds.

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

1-7. Villas Phase 2 Infiltration Basin (Online 7/1/2008)

Land Use	Acres	Loading Rates (lbs/ac/yr)			Pollutant Loads (lbs/yr)		
		TN	TP	TSS	TN	TP	TSS
Forest	-	2.13	0.07	27.61	-	-	-
Reg. Pervious	2.60	7.65	0.51	72.78	19.89	1.33	189.23
Reg. Impervious	0.99	7.31	1.51	456.68	7.24	1.49	452.11
				Total (lbs/yr)	**27.13**	**2.82**	**641.34**
				Removal Efficiency*	80%	85%	95%
				Annual Reduction (lbs/yr)	**21.70**	**2.40**	**609.27**

*Chesapeake Bay Program established efficiencies for infiltration practices w/o sand, veg.

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

Conversion	Number of Households Connected to Sewer	Load Reductions (lbs/Household/yr)*			Total Reductions (lbs/yr)		
		TN	TP	TSS	TN	TP	TSS
Septic to Sanitary Sewer	7.0	9.432	-	-	66.02	-	-
				Total Reduction for Land Conversion (lbs/yr)	**66.02**	-	-

*Per email from DEQ to City on June 29, 2015 based on a stream loading value of 3.6 lb TN/year/person and an average number of people per household of 2.62 based on Poquoson's 2009-2013 Census data.

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 [1]	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. Hunts Neck Estates Wet Pond	South of Volunteer Trail, in the Hunts Neck Estates Subdivision	-	Pond online 2/2/2006
1-5. Island Cove Wet Pond	North of Elm Street in the Island Cove subdivision	-	Pond online 6/21/2007
1-6. Rivers Edge Wet Pond	Adjacent to Hollingsworth Way	-	Pond online 12/3/2007
1-7. Villas Phase 2 Infiltration Basin	Between Ambrosia Place and Government Ditch	-	Basin online 7/1/2008
1-8. Septic Tank Disconnects/Connections to Sanitary Sewer	(See notes)	$ -	Completed after July 1, 2009
	Total Cost:	**$ -**	

Notes:

1. These projects have been fully funded or completed prior to December 30, 2015. There will be no additional cost to construct them.
2. See Figure 3 for specified locations.
3. See Table 4 for computation and tabulation of Chesapeake Bay TMDL pollutant removal credits.
4. The following parcels were connected to sanitary sewer: 220 Browns Neck Rd., 2 Lyons Creek Dr., 3 Lyons Creek Dr., 4 Lyons Creek Dr., 5 Lyons Creek Dr., 6 Lyons Creek Dr., 201-A Odd Rd. Nitrogen reductions were based on a stream loading value of 3.6 lb TN/year/person, and an average of 2.62 people per household in Poquoson according to the City's 2009-2013 Census data. The stream loading value of 3.6 lb TN/year/person and Poquoson's average number of people per household of 2.62 were confirmed in a DEQ email to the City dated June 29, 2015.

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

Project	DATES[2] BMP Initiated[1]	BMP Construction to Begin	BMP Installation Completed	Notes
1-1. Proposed Created Wetland (In Progress)	n/a	1/22/2016	6/20/2016	SLAF grant. Design completed in 2015.
1-2. Proposed Wet Pond (In Progress)	n/a	1/22/2016	6/20/2016	SLAF grant. Design completed in 2015.
1-3. Land Use Change - 127 Ridge Rd. (Completed)	n/a	-	Before 6/30/2014	Completed.
1-4. Hunts Neck Estates Wet Pond	n/a	-	2/2/2006	Completed.
1-5. Island Cove Wet Pond	n/a	-	6/21/2007	Completed.
1-6. Rivers Edge Wet Pond	n/a	-	12/3/2007	Completed.
1-7. Villas Phase 2 Infiltration Basin	n/a	-	7/1/2008	Completed.
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.

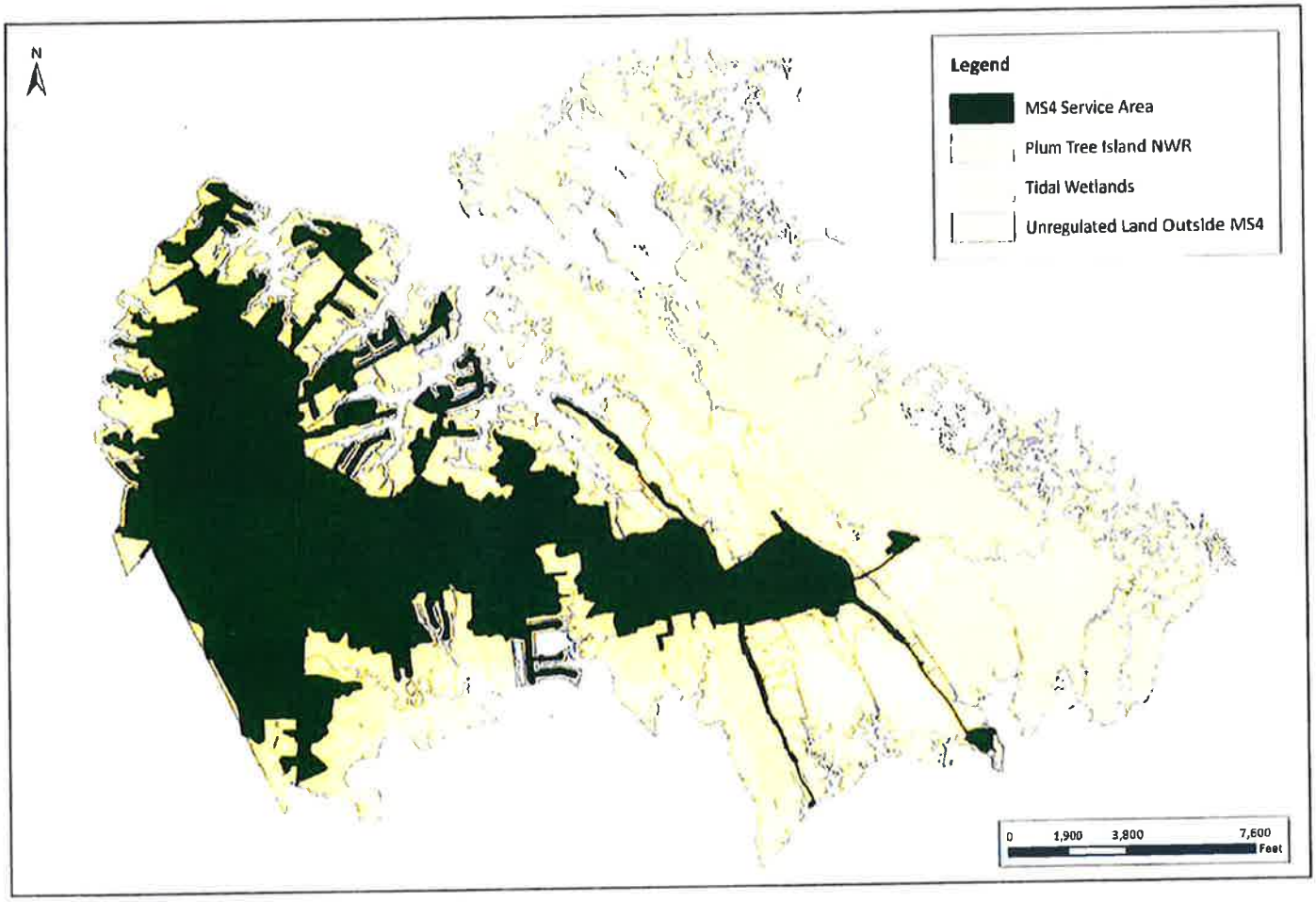

Figure 1. City of Poquoson's MS4 Service Area

Appendix 2: The Hampton Roads Water Quality Credit Agreement for Chesapeake Bay Restoration

HAMPTON ROADS WATER QUALITY CREDIT AGREEMENT FOR CHESAPEAKE BAY RESTORATION

THIS HAMPTON ROADS WATER QUALITY CREDIT AGREEMENT FOR CHESAPEAKE BAY RESTORATION (this "Agreement") is made this 5TH day of JULY, 2017, by and between the Hampton Roads Sanitation District ("HRSD") and the City of Poquoson (the "City") (each a "Party" and jointly the "Parties).

BACKGROUND

A. The HRSD Plants. HRSD owns and operates various wastewater treatment plants that are authorized to discharge the nutrients total nitrogen ("TN") and total phosphorus ("TP") as well as sediment as total suspended solids ("TSS") to the Chesapeake Bay watershed (the "HRSD Plants"). The HRSD Plants have TN, TP and TSS waste load allocations assigned by the State Water Control Board and the Virginia Department of Environmental Quality (jointly, "DEQ") pursuant to the Water Quality Management Planning Regulation, 9 VAC 25-720, and by the U.S. Environmental Protection Agency ("EPA") pursuant to the Chesapeake Bay Total Maximum Daily Load ("TMDL") and related Virginia Watershed Implementation Plan ("WIP"). The HRSD Plants are subject to the General Virginia Pollutant Discharge Elimination System ("VPDES") Watershed Permit Regulation for TN and TP Discharges and Nutrient Trading in the Chesapeake Bay Watershed in Virginia, 9 VAC 25-820, most recently reissued by DEQ effective February 8, 2017, as hereafter modified or reissued from time to time (the "Watershed General Permit"). Due to exceptional performance and current operating conditions, the HRSD Plants currently discharge less TN, TP and TSS than they are authorized to discharge under the Watershed General Permit while protecting Chesapeake Bay water quality and, therefore, HRSD has the ability to provide TN, TP and TSS credits on at least a temporary basis.

B. The Locality MS4. The City owns and operates a municipal separate stormwater sewer system ("MS4") authorized to discharge TN, TP and TSS to the Chesapeake Bay watershed. Like the HRSD Plants, the MS4 is subject to the Chesapeake Bay TMDL as derived from the Virginia WIP and to a VPDES Permit issued to the City by DEQ. Pursuant to the TMDL, WIP and VPDES Permit for the MS4, it is anticipated that the City will reduce MS4-related TN, TP and TSS discharges pursuant to City-developed and DEQ-approved TMDL Action Plans for each of three, five-year permit cycles, which are referred to as the First Bay TMDL Permit Cycle (5% Progress), Second Bay TMDL Permit Cycle (40% Progress), and Third Bay TMDL Permit Cycle (100% Progress). During 2017, the City is in its First Bay TMDL Permit Cycle.

C. The SWIFT Project. HRSD's Sustainable Water Initiative For Tomorrow ("SWIFT") Project was conceived with multiple benefits in mind for the Hampton Roads region. Aside from TMDL benefits, this innovative water purification project is designed to enhance the sustainability of the long-term groundwater supply and help address other environmental pressures such as sea level rise and saltwater intrusion. The SWIFT Project is intended to achieve these benefits by taking already-treated wastewater that would otherwise be discharged into the Chesapeake Bay watershed, purifying it through additional rounds of advanced water treatment to meet drinking water standards, and injecting the resulting drinking quality water into the Potomac aquifer deep underground. With respect to TMDL benefits, SWIFT will result in a

significant reduction in the total volume of HRSD discharge to the Chesapeake Bay watershed, to achieve greater environmental benefits with corresponding significant reductions of TN, TP and TSS discharges to the Chesapeake Bay watershed.

D. Legal Authority. Pursuant to Virginia Code § 62.1-44.19:21, the City may acquire and use TN and TP credits for purposes of compliance with the Chesapeake Bay TMDL loading reductions of its MS4 VPDES Permit, including credits generated by the HRSD Plants by discharging less TN or TP than permitted under the Watershed General Permit. Pursuant to Virginia Code § 62.1-44.19:21.1, the City may also acquire and use TSS credits for purposes of compliance with the Chesapeake Bay TMDL loading reductions of its MS4 VPDES Permit, including credits generated by the HRSD Plants by discharging less TSS than allocated under the Chesapeake Bay TMDL. With respect to all three parameters, it is recognized that this authority does not limit or otherwise affect the authority of DEQ to establish and enforce more stringent water quality-based effluent limitations in permits where such limitations are necessary to protect local water quality and, further, that the use of water quality credits does not relieve an MS4 permit holder of any requirement to comply with applicable local water quality-based limitations.

E. Redevelopment-Based MS4 TMDL Action Plan. The City expects to achieve its Chesapeake Bay TMDL reduction goals more cost-effectively by utilizing HRSD-generated TN, TP and TSS credits before and during operation of the SWIFT Project in lieu of stormwater retrofit projects on a condensed 10-year schedule (*i.e.*, Second and Third Bay TMDL Permit Cycles) coupled with ongoing stormwater quality improvements from redevelopment projects, which are subject to TP reduction criteria (and associated TN and TSS reductions) under the applicable water quality design requirements of DEQ's Virginia Stormwater Management Program Regulation, 9VAC25-870-63.A.2. By aligning with the normal redevelopment cycle rather than scheduling retrofits prior to redevelopment activity, the City's Chesapeake Bay TMDL Action Plan will also conserve scarce state and local resources for other important water quality projects.

F. Credit Trading Premise of SWIFT. For all of the above reasons and others, the ability to generate TN, TP, and TSS credits through the SWIFT Project and apply those credits as progress under the Hampton Roads localities' MS4 Permits and associated TMDL Action Plans is a fundamental premise for the SWIFT Project. HRSD is proceeding with the SWIFT Project, and the City is supporting it, in large part in reliance on these critical water quality trading-based benefits.

AGREEMENT

NOW, THEREFORE, in consideration of the foregoing premises (hereby incorporated as if fully set forth herein), the mutual covenants and conditions herein, and other good and valuable consideration, the receipt and sufficiency of which HRSD and the City acknowledge, the Parties hereby agree as follows.

1. Annual Credit Transfers Prior to SWIFT Feasibility Determination. Prior to HRSD's determination of SWIFT Project feasibility as provided below, HRSD shall annually generate and transfer to the City the quantity of water quality credits needed to meet the City's

compliance requirements under its DEQ-Approved Chesapeake Bay TMDL Action Plan for its MS4, as provided below. This annual transfer shall be made by HRSD's execution and delivery to the City of the Annual Water Quality Credit Transfer Form (Attachment B hereto) on or before May 20 immediately following each calendar year of HRSD's credit generation.

a. Determination of Total Reductions Needed. The City shall determine the total TN, TP and TSS reductions required for its full MS4 implementation of the Chesapeake Bay TMDL and WIP as issued in December 2010, in accordance with the procedures established in its VPDES Permit and DEQ Guidance Memorandum 15-2005, Chesapeake Bay TMDL Special Condition Guidance (May 18, 2015).

b. Credit Demand Minimization Elements. The City shall minimize its calculated reductions by (i) accurately mapping and delineating its existing MS4 service area, (ii) taking full credit for reductions achieved by stormwater projects and regulated redevelopment projects occurring prior to the effective date of the City's VPDES Permit in effect as of the effective date of this Agreement, and (iii) other procedures or accounting measures reasonably available to the City.

c. Credit Transfer Ceilings. HRSD's annual credit transfer obligations to the City shall not exceed the lesser of (i) the City's initial estimate of credit needs, or (ii) 95 percent of the City's total calculated reductions determined in accordance with Subparagraphs 1.a. and 1.b. and set forth in a DEQ-approved Chesapeake Bay TMDL Action Plan, or (iii) the quantity of credits actually needed to meet such total calculated reductions. The City's initial estimate of credit needs as of the effective date of this Agreement is set forth in Section 1 of Attachment A hereto. Following DEQ's approval of the City's Chesapeake Bay TMDL Action Plan and subsequent acceptance of the credit needs by HRSD as consistent with the requirements of this Subparagraph 1.c., HRSD shall issue an update to Attachment A setting forth in Section 2 thereof HRSD's actual annual credit transfer obligation determined in accordance with this Subparagraph 1.c.

d. Term & Termination of Initial Credit Transfers. HRSD's annual credit transfer obligations to the City under this Paragraph 1 shall expire upon (i) conversion to a permanent transfer of wasteload allocations as provided in Paragraph 2, (ii) termination as specifically authorized by any other provision of this Agreement, or (iii) December 31, 2036, whichever occurs first.

2. Permanent Transfer After SWIFT Feasibility Determination. Upon HRSD's determination that full-scale implementation of the SWIFT Project is feasible, HRSD shall permanently transfer to the City the quantity of TN, TP and TSS waste load allocations set forth for its MS4 on Attachment A hereto, as updated and issued by HRSD in accordance with Paragraph 1 c.

a. Factors for Feasibility Determination. Feasibility shall be determined in HRSD's sole discretion taking into account (i) whether all required permits and approvals have been acquired in final, non-appealable form acceptable to HRSD including the federal Safe Drinking Water Act Underground Injection Control Permit, (ii) whether the first full-scale

HRSD plant upgrade is online and performing as desired, (iii) whether full-scale implementation of the SWIFT Project is technically and financially feasible, and (iv) other material factors.

b. Timing for Feasibility Determination. Without limiting HRSD's discretion to determine whether full-scale SWIFT Project implementation is feasible or when to make such determination, it is the mutual goal of the Parties for HRSD to make such determination as soon as reasonably possible and not later than December 31, 2025, so as to preserve the maximum amount of time prior to the termination date for the City to implement stormwater retrofit projects or other permit compliance measures that might be necessary should it be determined that the SWIFT Project is not feasible.

3. Regulatory Plans & Approvals. In furtherance of the annual credit transfer and, when applicable, the permanent transfer contemplated by this Agreement, the Parties shall collaborate on appropriate submittals to and requests of DEQ, as follows; however, HRSD shall have no responsibility for the failure or refusal of DEQ or other governmental authority to approve such transfers.

a. City's TMDL Action Plan. For purposes of annual and, when applicable, permanent transfers, the City shall each include in its Chesapeake Bay TMDL Action Plan a provision for the receipt and use of TN, TP and TSS credits from the HRSD Plants in the form set forth in Attachment C hereto (or such other form as may be mutually agreeable to the City and HRSD).

b. HRSD Watershed General Permit Registration. For purposes of permanent wasteload allocation transfers, when applicable, HRSD shall modify its Watershed General Permit Registration and, if necessary, individual VPDES permits to reflect such transfers.

c. Virginia Chesapeake Bay TMDL Phase III WIP. HRSD and the City shall collaborate to seek inclusion in the Phase III WIP of recognition of the SWIFT Project and the annual and, when applicable, permanent transfers contemplated by this Agreement.

4. Authorized Use of Credits. The City agrees that its sole and limited use of the TN, TP, and TSS credits transferred under this Agreement shall be for the purpose of MS4 Permit compliance and Chesapeake Bay TMDL implementation and that it shall not transfer any portion of HRSD-generated credits (or waste load allocations, if applicable) to any other person or entity. In the event that the City no longer requires some or all of the credits (or waste load allocations) for such use, they shall revert to HRSD and HRSD shall update and reissue Attachment A accordingly.

5. Mutual Cooperation. The Parties shall continue to cooperate with each other as reasonably necessary to confirm or bring about the transfers contemplated by this Agreement.

6. Permits & Approvals. If for any reason any federal, state, regional or local government or agency fails to issue any necessary permit, approval or other authorization for the SWIFT Project or the transfers contemplated by this Agreement, HRSD shall be excused from its performance hereunder.

7. Force Majeure. The obligations of HRSD, including its annual or permanent transfer obligations, shall be suspended while and as long as performance is prevented or impeded by strikes, disturbances, riots, fire, severe weather, acts of war, acts of terrorism, acts of God, government action (other than by HRSD), major technical, engineering or construction related delays, or any other cause similar or dissimilar to the forgoing that is beyond the reasonable control of and not due to the gross negligence of HRSD.

8. Change in Law. In the event of any material change in applicable laws or regulations, the Parties shall work together to attempt to amend this Agreement to conform to such change, while maintaining as closely as practical the provisions and intent of this Agreement. If in any such event HRSD is unable to perform its transfer obligations as provided herein, the City shall be solely responsible for otherwise meeting its TMDL and MS4 Permit obligations.

9. Significant Financial & Budgetary Constraints. Notwithstanding any other provision of this Agreement or any prior determination of feasibility of the SWIFT Project, HRSD reserves the right to terminate or renegotiate this Agreement in the event HRSD experiences significant financial or budgetary challenges which, in HRSD's opinion, would significantly impair its ability to perform its obligations hereunder. In such event, the Parties shall work together to attempt to amend this Agreement to accommodate such challenges, with the goal of providing annual credits to the City (and to other Hampton Roads localities with similar water quality credit agreements) as practical.

10. Credit Supply Constraints. Notwithstanding any other provision of this Agreement, to the extent that HRSD determines in its sole discretion that its available quantity of water quality credits (or allocations) is insufficient to meet the total MS4 Chesapeake Bay TMDL Action Plan compliance requirements of the City and of all other Hampton Roads localities that are party or become party to a similar water quality credit agreement, HRSD's obligations hereunder shall be limited to transferring to the City its pro rata share of HRSD's available credits based on pollutant-specific total credit needs of all Hampton Roads localities. HRSD agrees to provide the City with notice of its ability only to transfer a pro rata share of HRSD's available credits as promptly as possible but no later than 90 days after becoming aware of the event limiting HRSD's ability to meet the total credit needs of all Hampton Roads Localities. For clarity, HRSD shall assume no obligation under this Agreement to install, upgrade, improve, or significantly alter the operation of any portion of its sewerage system or treatment works for purposes of providing water quality credits (or allocations).

11. No Third-Party Beneficiaries. This Agreement is solely for the benefit of the Parties hereto and their permitted successors and assigns and shall not confer any rights or benefits on any other person or entity.

12. No Assignment. This Agreement, and the rights and obligations established hereunder, shall be binding upon and inure to the benefit of any successors of the Parties. However, no Party may transfer or assign this Agreement, or its rights or obligations hereunder, without the prior written consent of the other Party, which consent shall not be unreasonably withheld.

13. Expenses; Commissions. Except as provided herein, each Party shall pay its own fees and expenses, including its own counsel fees, incurred in connection with this Agreement or any transaction contemplated hereby. The Parties represent and warrant to each other that they have not dealt with any business broker or agent who would be entitled to a brokerage commission or finders fee as a result of this Agreement or any related transactions. .

14. Governing Law; Venue; Severability. This Agreement shall be construed in accordance with and governed for all purposes by the laws of the Commonwealth of Virginia. This Agreement is a Virginia contract deemed executed and accepted in the City of Virginia Beach; and all questions with respect to any of its provisions shall be instituted, maintained, and contested in a court of competent jurisdiction in the City of Virginia Beach, Virginia or the U.S. District Court for the Eastern District of Virginia. If any word or provision of this Agreement as applied to any Party or to any circumstance is adjudged by a court to be invalid or unenforceable, the same shall in no way affect any other circumstance or the validity or enforceability of any other word or provision.

15. No Waiver. Neither any failure to exercise or any delay in exercising any right, power or privilege under this Agreement by either Party shall operate as a waiver, nor shall any single or partial exercise of any right, power or privilege hereunder preclude the exercise of any other right, power or privilege. No waiver of any breach of any provision shall be deemed to be a waiver of any preceding or succeeding breach of the same or any other provision, nor shall any waiver be implied from any course of dealing.

16. Entire Agreement; Amendments. This Agreement contains the entire agreement between the Parties as to the subject matter hereof and supersedes all previous written and oral negotiations, commitments, proposals and writings. No amendments may be made to this Agreement except by a writing signed by both Parties.

17. Counterparts; Signatures; Copies. This Agreement may be executed in counterparts, both of which shall be deemed an original, but all of which together shall constitute one and the same instrument. A facsimile or scanned signature may substitute for and have the same legal effect as an original signature. Any copy of this executed Agreement made by photocopy, facsimile or scanner shall be considered the original for all purposes.

18. Authorization. Each Party represents that its execution, delivery and performance under this Agreement have been duly authorized by all necessary action on its behalf, and do not and will not violate any provision of its charter or enabling legislation or result in a material breach of or constitute a material default under any agreement, indenture, or instrument of which it is a party or by which it or its properties may be bound or affected.

IN WITNESS WHEREOF, the Parties hereto have caused the execution of this Agreement as of the date first written above.

[SIGNATURES BEGIN ON NEXT PAGE]

SIGNATURE PAGE OF HAMPTON ROADS WATER QUALITY CREDIT AGREEMENT FOR CHESAPEAKE BAY RESTORATION BY AND BETWEEN HRSD AND CITY OF POQUOSON

HAMPTON ROADS SANITATION DISTRICT

By: _____

Edward G. Henifin
General Manager

SIGNATURE PAGE OF HAMPTON ROADS WATER QUALITY CREDIT AGREEMENT FOR CHESAPEAKE BAY RESTORATION BY AND BETWEEN HRSD AND CITY OF POQUOSON

CITY OF POQUOSON

By: _____
J. Randall Wheeler
City Manager

ATTEST:

_____
City Clerk

APPROVED AS TO FORM:

_____
City Attorney

HAMPTON ROADS WATER QUALITY CREDIT AGREEMENT
FOR CHESAPEAKE BAY RESTORATION
ATTACHMENT A

Water Quality Credit Needs for Second & Third Bay TMDL Permit Cycles

Section 1: Initial Estimate of Credit Needs (lbs/yr)
[As Estimated by City as of Effective Date of this Agreement]

	James River Basin			York River Basin		
Parameter	2nd Permit Cycle	3rd Permit Cycle	Total Both Cycles	2nd Permit Cycle	3rd Permit Cycle	Total Both Cycles
TN	0.0	0.0	0.0	408.52	700.32	1108.84
TP	0.0	0.0	0.0	74.90	128.40	203.30
TSS	0.0	0.0	0.0	23,975.8	41,101.4	65,077.2

Section 2: City-Calculated and HRSD-Accepted Credit Needs (lbs/yr)
Under DEQ-Approved TMDL Action Plan and Subparagraph 1.c. of this Agreement
[As Accepted by HRSD After DEQ Approval of City's TMDL Action Plan]

	James River Basin			York River Basin		
Parameter	2nd Permit Cycle	3rd Permit Cycle	Total Both Cycles	2nd Permit Cycle	3rd Permit Cycle	Total Both Cycles
TN	0.0	0.0	0.0	408.52	700.32	1108.84
TP	0.0	0.0	0.0	74.90	128.40	203.30
TSS	0.0	0.0	0.0	23,975.8	41,101.4	65,077.2

* DEQ approved the City's TMDL Action Plan prior to the effective date of this Agreement. Section 2 is complete.

HAMPTON ROADS WATER QUALITY CREDIT AGREEMENT
FOR CHESAPEAKE BAY RESTORATION
ATTACHMENT B

Annual Water Quality Credit Transfer Form

Instructions: To be completed and executed by HRSD and delivered to the City on or before each May 20 immediately following the calendar year of credit generation by HRSD.

By execution and delivery of this Annual Credit Transfer Form, HRSD transfers the following water quality credits in the amounts specified to the City in accordance with, and for the specific and limited purposes of, the Hampton Roads Water Quality Credit Agreement for Chesapeake Bay Restoration.

Transferor: Hampton Roads Sanitation District

Transferee (MS4): City of Poquoson, Virginia

Year Credits Generated: _____

Date Credits Transfer: _____

River Basin	TN (lbs/yr)	TP (lbs/yr)	TSS (lbs/yr)
James			
York			

Signed (for HRSD): _____

Name (Print): _____

Title: _____

HAMPTON ROADS WATER QUALITY CREDIT AGREEMENT
FOR CHESAPEAKE BAY RESTORATION
ATTACHMENT C

MS4 TMDL Action Plan Provision for Use of HRSD-Generated Water Quality Credits

The intent of this plan is the generation and use of TN, TP and TSS credits before and during operation of the SWIFT Project in collaboration with HRSD pursuant to the Hampton Roads Water Quality Credit Agreement for Chesapeake Bay Restoration to which the City and HRSD are signatories. This compliance method is in lieu of more traditional stormwater retrofit projects, which may not be feasible to execute on a condensed 10-year schedule (i.e., Second and Third Bay TMDL Permit Cycles). Not only does this method have the advantage of more reliably meeting the MS4 Permit's short deadlines, but it is also beneficial to the public in that it will meet the City's Chesapeake Bay TMDL reduction goals more cost-effectively than otherwise possible. This component of the plan is fully in accordance with Virginia Code §62.1-44.19:21 (TN and TP) and §62.1-44.19:21.1 (TSS). The quantity of reduction credits from the SWIFT Project that are allocated to this TMDL Action Plan for the James River Basin are 0.0 lbs/yr TN, 0.0 lbs/yr TP, and 0.0 lbs/yr TSS and for the York River Basin are 1108.84 lbs/yr TN, 203.30 lbs/yr TP, and 65,077.2 lbs/yr TSS.

END OF DOCUMENT

FINAL PAGE of Appendix & Report

VAR# 040024