

# Colonial Heights MS4 Annual Report 2016

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Stormwater Management Program

October 1, 2016

Colonial Heights Department of Public Works  
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**a. Background Information**

1. Colonial Heights Municipal Separate Storm Sewer System - VA040009
2. This annual report covers the period of July 1, 2015 through June 30, 2016.
3. Per a Consent Special Order issued to the City by the Soil & Water Conservation Board on October 8, 2009, the City hired a MS4 Coordinator on August 6 of 2008 and appointed a Stormwater Foreman from existing Department of Public Works (DPW) personnel. These roles and their concurrent responsibilities have not been modified since that time.
4. Zero (0) new municipal outfalls were added during this reporting cycle.
5. Signed certification (see last page of this report)

**b. Status of Compliance**

As part of the Consent Special Order issued the City, the Soil & Water Conservation Board accepted an MS4 Implementation Plan submitted by Colonial Heights that proposed, detailed and scheduled the BMPs Colonial Heights would implement during the permit period.

Attached as **Appendix A** is an Excel® spreadsheet tracking version of that Plan showing the Fiscal Year 1 BMP goals. Please see that appendix for a complete understanding of the status of compliance of the Colonial Heights permit.

**c. Monitoring Data**

Attached as **Appendix B** of this report is BMP data for all known BMPs in the City. Type, drainage area, owner information and operation and maintenance (O&M) status is determined for all known BMPs. O&M Inspections are then administered accordingly per this BMP Data Monitoring log.

Attached as **Appendix C** of this report are copies of the illicit discharge and dry-weather screening mechanisms utilized by the City's stormwater program. Paper recordation is used for these as they are conducted in the field.

**d. Reporting Cycle 5 - July 1, 2016 through June 30, 2017**

Please see **Appendix D** of this report for the next reporting cycle's goals.

**e. Minimum Control Measure (MCM) Changes**

All MCM change explanations are located in the "REVISED OR ALTERED" column of **Appendix A**.

**f.** Not applicable to VA040009

**g.** Not applicable to VA040009

**h.** Estimated discharge information pursuant to Section I B 9 may be found in **Appendix G+H**

**i. Illicit Discharge(s) Control**

Colonial Heights City Code, per §245 (ORDINANCE NO. 09-1, adopted March 11, 2009), authorizes the Department of Public Works to enforce the prohibition of illicit discharges and illegal connections. Via that ordinance, DPW may determine a deadline by which an illicit discharge must be corrected, and otherwise may correct the situation itself at the sole cost of the responsible party and/or land owner. Civil and criminal penalties are prescribed for willful, knowing violations.

In conjunction with the passage of this ordinance, an illicit discharge hotline was established during the first reporting year. See **Appendix E** for an explanation of the recorded incidents for this reporting period. In conjunction with these, **Appendix E**

**j. Regulated Land Disturbing Activities**

Attached as **Appendix F** is the regulated land disturbing activity data for this reporting cycle. The data reflects the information as compiled in the land disturbance activity reports as sent monthly to DCR.

**k. Stormwater Management Facility Data**

Attached as **Appendix B** is an Excel® spreadsheet containing data for all the stormwater management facilities in the City. All of the facilities for which Maintenance Agreements exist are inspected, per the terms of the agreements, by a Professional Engineer on a two-year cycle. Note that this is a change from the three-year frequency as before required, increased in an effort to ensure BMP design performance. Copies of archived Maintenance Inspection Records are archived with the City's DPW-Engineering Division personnel.

**l. Maintenance Agreements**

Maintenance Agreements for all of the structural stormwater facilities as noted in Section K exist between the City and the respective private entity. The agreements require the owner to have operations and maintenance inspections conducted by a professional engineer on a two-year schedule. The owner is then responsible for documenting the results of that report with the City, via a completed Operation and Maintenance Inspection Record, and is responsible for any necessary repairs. An example Operation and Maintenance Record is provided in **Appendix B**.

**m. Not applicable during this reporting cycle**

## Municipal Separate Storm Sewer System (MS4) Phase II Report Certification Statement

As required by 9VAC25-870-370 B, all reports required by state permits, and other information requested by the board, shall be signed by a responsible official or by a duly authorized representative of that person. A responsible official is:

- 1. For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy-making or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided the manager is authorized to make management decisions that govern the operation of the regulated facility, including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for state permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;*
- 2. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or*
- 3. For a municipality, state, federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.*

A person is a duly authorized representative only if:

- 1. The authorization is made in writing by a person described above;*
- 2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. A duly authorized representative may thus be either a named individual or any individual occupying a named position; and*
- 3. The written authorization is submitted to the department.*

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### 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.



11-9-2016

Responsible Official Signature

Date

VA040009                      City of Colonial Heights, Virginia  
Permit Number                      MS4 Name

SWM ID	Facility Name	Facility Address	Owner\Designee	Owner\Designee Mailing	Owner\Designee City	Owner\Designee State
BMP-0001	City of Colonial Heights	201 James Avenue	City	201 James Avenue	Colonial Heights	VA
BMP-0002	City of Colonial Heights	1209 Covington Road (behind)	City	201 James Avenue	Colonial Heights	VA
BMP-0003	City of Colonial Heights	Lee Place & Danville Ave	City	201 James Avenue	Colonial Heights	VA
BMP-0004	City of Colonial Heights	Archer Avenue at MLK Bridge	City	201 James Avenue	Colonial Heights	VA
BMP-0005	City of Colonial Heights	Chesterfield Avenue at Marvin Avenue	City	201 James Avenue	Colonial Heights	VA
BMP-0006	City of Colonial Heights	100 Highland Avenue	City	201 James Avenue	Colonial Heights	VA
BMP-0007	Boulevard Flowers	111 Pickett Avenue	Charles H. Aters, IV	206 Woodbridge Road	Colonial Heights	VA
BMP-0008	Carlton's Auto Service	116 Taswell Avenue	McGlone, Clifford	6217 Matoaca Rd	Petersburg	VA
BMP-0009	CHMS (additions; staff parking lot)	500 Conduit Road	School Board	512 Boulevard	Colonial Heights	VA
BMP-0010	Clements Retail Center (formerly)	3522 Boulevard	Jones Jr., Norris	16925 Jefferson Davis Hwy	Colonial Heights	VA
BMP-0011	Colonial Car Wash	3224 Boulevard	FD & B Enterprises, LLC	1377 Anderson Hwy	Powhatan	VA
BMP-0012	Lakeview Maintenance Bldg.	401 Taswell Avenue	School Board	512 Boulevard	Colonial Heights	VA
BMP-0013	Colonial Shell (Country Store)	3220 Boulevard	BDSB, LLC	P.O. Box 29317	Richmond	VA
BMP-0014	Creek View Center	3660 Boulevard	Creek View Centre, LLC	PO Box 23061	Richmond	VA
BMP-0015	Dominion Chevrolet	325 Charles H. Dimmock Parkway	J. Theodore Linhart, Dominion Auto Group	12050 West Broad St.	Richmond	VA
BMP-0016	Dominion Nissan	445 Charles H. Dimmock Parkway	J. Theodore Linhart, Dominion Auto Group	12050 West Broad St.	Richmond	VA
BMP-0017	Dr. Richard Bates, DDS	3610 Boulevard	Dr. Richard Bates	3610 Boulevard	Colonial Heights	VA
BMP-0018	Dunlop Farms Senior Apartments	1000 Dunlop Place	Mr. Lanny Redden, APTCO East, LLC	21400 Ridgetop Circle, Ste 250	Sterling	VA
BMP-0019	Gilcreff Place Subdivision	Dunlop Farms Boulevard	Gilbert Martin	117 Roanoke Avenue	Colonial Heights	VA
BMP-0020	Gills Point Section 9	Conduit Road	Bernard A. Hrouda c/o Gills Point Development Corp.	1001 Taylor Lane	Colonial Heights	VA
BMP-0021	Hardee's	1850 Boulevard	BNE Restaurant Group IV LLC c/o RASH #56-46-28160	PO Box 260888	Plano	TX
BMP-0022	Home Depot #4633	2600 Conduit Road	Sammy Boehms, Home Depot USA, Inc	2455 Paces Ferry Rd.	Atlanta	GA
BMP-0023	J.W. Humphries, Lot 2	107 Jackson Avenue	J.W. Humphries	127 Boulevard	Colonial Heights	VA
BMP-0024	Jones Office Building	2306 Boulevard	Mr. Norris E. Jones	16925 Jefferson Davis Hwy	Colonial Heights	VA
BMP-0025	Laurel Park Office Building	2421 Boulevard	Jones Realty & Construction Corporation	9800 JEB Stuart Parkway, Ste 200	Glen Allen	VA
BMP-0026	Laurel Park Parking Facility	2421 Boulevard	Jones Realty & Construction Corporation	9800 JEB Stuart Parkway, Ste 200	Glen Allen	VA
BMP-0027	McDonald's	411 Southpark Circle	Faison Associates	121 W Trade St., Ste 2700	Charlotte	NC
BMP-0028	Mekhoubat Office Building	107 W Eilerslie	Mekhoubat Properties, Inc	P.O. Box 276	Colonial Heights	VA
BMP-0029	Merchants Tire & Auto	773 Southpark Boulevard	Kosmakos Properties, LLC	11101 Hampton Rd	Fairfax Station	VA
BMP-0030	MIDAS	1400 Boulevard	TMT, LLC	11463 West Broad St.	Richmond	VA
BMP-0031	Movie Time	2900 Cedar Lane	88, LLC	P.O. Box 71150	Richmond	VA
BMP-0032	Mt. Pleasant Baptist Church	3110 Greenwood Avenue	Rob McIntosh c/o MPBC	3110 Greenwood Avenue	Colonial Heights	VA
BMP-0033	Mt. Pleasant Baptist playground	3110 Greenwood Avenue	Rob McIntosh c/o MPBC	3110 Greenwood Avenue	Colonial Heights	VA
BMP-0034	Mt. Pleasant Baptist parking lot extension	3110 Greenwood Avenue	Rob McIntosh c/o MPBC	3110 Greenwood Avenue	Colonial Heights	VA
BMP-0035	Old Towne Center	2801 Boulevard	Multiple tenants	N/A		
BMP-0036	Olive Garden	801 South Avenue	Mr. Nick Patel, Kaylan Plaza II	931 South Avenue		
BMP-0037	Outback Steakhouse	165 Southpark Circle	(Robert Basham, COO) / Mr. Jamie Butler c/o Outback Steakhouse	Outback Steakhouse, 2202 North Westshore Boulevard, 5th Floor	Tampa	FL
BMP-0038	Over The Edge	3635 Boulevard	William K. Thibault	3635 Boulevard	Colonial Heights	VA
BMP-0039	Park South Business Park	798 Southpark Boulevard	Faison Associates	121 West Trade Street, Ste 2550	Charlotte	NC
BMP-0040	Peoples Advantage Credit Union	2801 Conduit Road	Audrey L. Bollinger, President	2801 Conduit Road	Colonial Heights	VA
BMP-0041	Pizza Hut Delivery	714 Eilerslie Avenue	GE Capital Franchise Finance	8377 E Hartford Dr., Ste 200	Scottsdale	AZ
BMP-0042	Prospect Heights Subdivision	214 Clover Hill Avenue				
BMP-0043	Rite Aid #4820	3210 Boulevard	Mr. Jeff Hansen	291 N Main St.	Amherst	VA
BMP-0044	Riverview Apartments	205 Archer Avenue	RV Limited Partnership c/o VA Housing Development Authority	13195 Warwick Boulevard, Ste 1F	Newport News	VA
BMP-0045	Sam's Club	735 Southpark Boulevard	Store Manager	735 Southpark Boulevard	Colonial Heights	VA
BMP-0046	Sheetz	2711 Conduit Road	Randall A. Sheetz, Sheetz, Inc.	5700 6th Avenue	Altoona	PA
BMP-0047	Southside Regional Medical Center	436 Claremont Court	The Cameron Foundation	P.O. Box 3090	Petersburg	VA
BMP-0048	Starbucks	790 Southpark Boulevard	MKIS Enterprise, LLC c/o Sang Park Moon Park & Associates	7617 Little River Turnpike #930	Annandale	VA
BMP-0049	Target Store (#T-1016)	721 Southpark Boulevard	Cindy Swanson - Dayton Hudson Corporation	P.O. Box 9456	Minneapolis	MN
BMP-0050	Temple Lake Offices, Lots 11 & 12	131 Temple Lake Drive	Roslyn Farm Corp.	P.O. Box 727	Colonial Heights	VA
BMP-0051	Terrace View Apartments	200 Lakeview Park Road	H.W. Owens, S.A. Housing, LLP	2717 Willard Rd.	Richmond	VA
BMP-0052	Tussing Elementary	5501 Conduit Road	School Board	512 Boulevard	Colonial Heights	VA
BMP-0053	Virginia Pediatrics (Atreos)	301 Jennick Drive	Dr. Oscar & Amabel Sibal	11904 Hogans Alley	Chester	VA

## APPENDIX B

## Stormwater Management Facility Data

## ANNUAL REPORT 2015

BMP-0054	Waffle House	2002 Boulevard	Raypark, LLC, Jayfair Corp, North Lake Foods Inc-WH #136	PO Box 6450	Norcross	GA
BMP-0055	Walgreens	626 Boulevard	Walgreen Company	104 Wilmot Rd.	Deerfield	IL
BMP-0056	WaWa	604 Boulevard	Property Management	260 Baltimore Pike	Media	PA
BMP-0057	Wesley Methodist Church	3701 Conduit Road	Wesley Methodist Church	3701 Conduit Rd	Colonial Heights	VA
BMP-0058	White Bank Landing, Section II	155 Watercress Court (adjacent)				
BMP-0059	Wilton Property Grading	Ridge at Temple				
BMP-0060	A. Wright Pond Office Building	250 Ellerslie Avenue	A.Wright Pond, DDS	1025 Avon Court	Colonial Heights	VA
BMP-0061	American Family Fitness	930 South Avenue	Roslyn Farm Corporation	320C Charles Dimmock Parkway	Colonial Heights	VA
BMP-0062	Anderson Office Building	200 Lakeview	Don Anderson	PO Box 517	Colonial Heights	VA
BMP-0063	Ariya	3507 Boulevard	Ariya Real Estate	3660 Boulevard, Ste G	Colonial Heights	VA
BMP-0064	Bank of Southside VA	764 Ellerslie Avenue	Property Manager	PO Box 40	Carson	VA
BMP-0065	Behavior & Stress Management Center	3236 Boulevard	Broad Investments, LLC	3236-B Boulevard	Colonial Heights	VA
BMP-0066	Jones Office Building	201 Temple Avenue	Mr. Norris E. Jones	16925 Jefferson Davis Hwy	Colonial Heights	VA
BMP-0067	Colonial Heights Healthcare Center	831 E Ellerslie Avenue	Mario Thompson	831 E Ellerslie Avenue	Colonial Heights	VA
BMP-0068	Colonial Heights Courthouse	550 Boulevard	City	201 James Avenue	Colonial Heights	VA
BMP-0069	EVB Bank	3012 Boulevard	EVB Bank	3012 Boulevard	Colonial Heights	VA

## Stormwater Management Facility Data

Owner\Design ee Zip	END 1-YMP	TYPE	CONSTRUCT CERTIFIED	EASEMENT	ACRES BMP'd	Sub-Watershed	H.U.C.	FILE #
23834	Jan-02	BR		N\A	0.6	Oldtown	JA40	100162
23834		CB		N\A	8	Appomattox	JA44	
23834	Jan-99	UD		N\A		Appomattox	JA44	100520
23834	Jan-03	DB		N\A	0.4	Appomattox	JA40	101101
23834	Aug-93	DB \ FL		N\A	0.11	Fleets Branch	JA40	100530
23834	Jan-03	BR		N\A	0.6	Oldtown	JA40	100162
23834	Jan-90	US		YES	0.82	Oldtown	JA44	100001
23803-1589	Jan-96	SW		NO	0.75	Oldtown	JA40	100026
23834	Jan-03	SW		NO	1.2	Appomattox	JA40	100973
23834-5330	Jan-91	US		NO	0.44	Swift Creek	JA44	100040
23139	Jan-00	US \ ST		YES	0.7	Swift Creek	JA44	100006
23834	Sep-11	DB	YES	YES	1.5	Oldtown	JA40	100208
23242	Jan-98	CB \ US		YES	0.79	Swift Creek	JA44	100119
23223-0361	Jan-94	CB		NO	5.86	Swift Creek	JA44	100039
23233	Jan-95	DB		YES	0.56	Appomattox	JA40	100035
23233	Jul-09	DB \ ST		YES	11.03	Appomattox	JA40	100017
23834	Oct-02	DB		YES	0.39	Swift Creek	JA44	100005
20166	Jan-01	CB		YES	5.79	Swift Creek	JA44	100024
23834	Dec-09	DB		YES	6.35	Swift Creek	JA44	100159
23834	Aug-12	DB	YES	YES	1.73	Swift Creek	JA44	100209
75026-0888	Jan-86	SW \ DB		NO	1.62	Oldtown	JA40	100053
30339	Jan-01	DB		YES	13.11	Oldtown	JA40	100054
23834	Jan-96	CB		NO	0.032	Appomattox	JA40	100070
23834-5330	Dec-05	DB		YES	0.12	Oldtown	JA40	100047
23059	Jan-05	DB		YES	0.2	Oldtown	JA40	100138
23059	Jan-08	DB		YES	0.34	Oldtown	JA40	100218
28202-1195	Jan-91	DB		NO	1.15	Oldtown	JA40	100080
23834	Jan-07	DB		YES	0.2	Swift Creek	JA44	100129
22039-2301	Jan-95	DB		NO	1.14	Oldtown	JA40	100068
23233	Jan-02	DB		YES	0.42	Oldtown	JA40	100007
23255	Jan-88	DB		YES	0.08	Oldtown	JA40	file drawer
23834	Jan-98	RCC		NO	2.45	Oldtown	JA40	100067
23834	Jan-09	US \ UI		YES	0.2	Oldtown	JA40	100137
23834	Jun-11	UI		YES	0.83	Oldtown	JA40	100188
	Jan-89	FL		NO	1.26	Oldtown	JA40	101011
	Jun-09	US		YES	0.32	Appomattox	JA40	100183
33607	Jan-00	DB		YES	1.92	Oldtown	JA40	100055
23834	Apr-02	US		YES	1.41	Swift Creek	JA44	100050
28202	Jan-90	DB \ US		YES	14.61	Oldtown	JA40	100073
23834	Jun-05	US		YES	1.3	Oldtown	JA40	100152
85255-5687	Jan-91	DB		NO	0.84	Swift Creek	JA40	100046
	Jan-11	RB	YES	YES	0.5	Oldtown	JA40	100189
24521	Jan-98	DB		YES	1.7	Swift Creek	JA44	100101
23606	Jan-02	DB		YES	6.27	Appomattox	JA40	100083
23834	Jan-94	DB		YES	6.61	Oldtown	JA40	100121
16602	Jan-03	RP		YES	2.09	Oldtown	JA40	100084
23805	Sep-09	DB		YES	5.64	Swift Creek	JA44	100058
22003	Jan-09	US		YES	0.8	Oldtown	JA40	100142
55440	Jan-98	DB		YES	2.7	Appomattox	JA40	100112
23834	Jan-06	CB		NO	1.7	Oldtown	JA40	100127
23294	Jan-98	DB		YES	2.26	Oldtown	JA44	100111
23834	Aug-10	DB	YES	YES	3.66	Appomattox	JA44	100202
23836	Feb-09	DB		YES	1.37	Appomattox	JA40	100128

Stormwater Management Facility Data

30091	Jan-01	US		NO	0.48	Oldtown	JA40	100109
60015-5121	Dec-11	DB	YES	YES	0.32	Appomattox	JA40	100198
19063	Jan-01	DB \ FL		YES	0.32	Fleets Branch	JA40	100107
23834-2631	Jan-93	UD		NO	0.46	Appomattox	JA40	100115
	Jan-96	DB		NO	3.79	Swift Creek	JA44	100430
				NO				100201
23834	Jan-03	RO		YES	0.41	Swift Creek	JA40	100051
23834	Jan-04	DB		YES	32.44	Appomattox	JA40	100002
23834	Jan-96	DB		NO	0.32	Oldtown	JA44	file drawer
23834	Mar-11	US		YES	0.3	Swift Creek	JA44	100191
23830-0040	Jan-93	DB		NO	0.88	Swift Creek	JA40	100012
23834	Jan-88	RO		NO	0.9	Swift Creek	JA44	file drawer
23834-5330	Jan-03	DB		YES	0.44	Oldtown	JA40	100052
23834	Jul-11	DB	YES	YES	6.2	Oldtown	JA40	100886
23834	Oct-14	DB	YES	Yes	4.6	Fleets Branch	JA40	file drawer
23834	May-14	UI	YES	YES	1.6	Swift Creek	JA40	101117
<b>APPROX TOTAL ACRES BMP'd =</b>					<b>179.932</b>			

**NOTES**

- \* In 1-year maintenance period
- \* Approved & discontinued or unconstructed
- \* JA40 - Old Town Creek, Appomattox River
- \* JA44 - Swift Creek

**LEGEND**

- RB = Retention Basin
- DB = Detention Basin
- CB = Catch Basin (includes Drop Inlet)
- UD = Underground Detention
- RCC = Restrictive Curb Cuts
- ST = Sediment Trap
- FL = Flume
- SW = Swale
- RO = Restrictive Outlet
- UI = Underground Infiltration
- BR = Bioretention

DATE: 5/16/16

TIME: 10:20  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
OUTFALL ID: <u>OF-001</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> JA40 ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> JA44 ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> JA-J ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> Corridor ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> Upland ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> Tributary ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input checked="" type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> None ( <i>no detectable scent</i> ) <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid\Sour\Pungent <input type="checkbox"/> Sulfide ( <i>rotten eggs</i> ) <input type="checkbox"/> Natural gas <input type="checkbox"/> Petroleum ( <i>gas</i> ) <input type="checkbox"/> Other: _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Oily sheen\film <input type="checkbox"/> Cloudy <input type="checkbox"/> Suds <input type="checkbox"/> Colored ( <i>describe</i> ): _____ <input type="checkbox"/> Other: _____ <b>Deposits\Stains:</b> <input type="checkbox"/> Oily <input type="checkbox"/> Paint <input type="checkbox"/> Flow line <input type="checkbox"/> Other ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> None <input type="checkbox"/> Algae <input type="checkbox"/> Dead fish <input type="checkbox"/> Suspended solids <input type="checkbox"/> Sewage <input type="checkbox"/> Other: _____	



DATE: 5/16/16

TIME: 1:26  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
<b>OUTFALL ID:</b> <u>OF-002</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> <b>JA40</b> ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> <b>JA44</b> ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> <b>JA-J</b> ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input type="checkbox"/> <b>Corridor</b> ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> <b>Upland</b> ( <i>Not adjacent to watercourse</i> ) <input checked="" type="checkbox"/> <b>Tributary</b> ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input checked="" type="checkbox"/> Collapsed pipe <input checked="" type="checkbox"/> Roots\brush <input checked="" type="checkbox"/> Earth\sediment <input checked="" type="checkbox"/> Rock\rubble <input type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input type="checkbox"/> Stabilized embankment <input checked="" type="checkbox"/> Eroded embankment <input type="checkbox"/> On\In concrete structure <input type="checkbox"/> In\Near watercourse <input checked="" type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> <b>None</b> ( <i>no detectable scent</i> ) <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Rancid\Sour\Pungent</b> <input type="checkbox"/> <b>Sulfide</b> ( <i>rotten eggs</i> ) <input type="checkbox"/> <b>Natural gas</b> <input type="checkbox"/> <b>Petroleum</b> ( <i>gas</i> ) <input type="checkbox"/> <b>Other:</b> _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> <b>Normal</b> <input type="checkbox"/> <b>Oily sheen\film</b> <input type="checkbox"/> <b>Cloudy</b> <input type="checkbox"/> <b>Suds</b> <input type="checkbox"/> <b>Colored</b> ( <i>describe</i> ): _____ <input type="checkbox"/> <b>Other:</b> _____ <b>Deposits\Stains:</b> <input type="checkbox"/> <b>Oily</b> <input type="checkbox"/> <b>Paint</b> <input type="checkbox"/> <b>Flow line</b> <input type="checkbox"/> <b>Other</b> ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> <b>None</b> <input type="checkbox"/> <b>Algae</b> <input type="checkbox"/> <b>Dead fish</b> <input type="checkbox"/> <b>Suspended solids</b> <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Other:</b> _____	

FLOW CONDITIONS	<input checked="" type="checkbox"/> 1 - No flow\interior conditions are dry
	<input type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	<b>Flow Estimates:</b>
	Width of flow surface: __ inches __ feet
	Approximate depth of flow: __ inches ____ feet
	Approximate flow rate: __ feet per second

- REPORT SUMMARY CHARACTERIZATION -

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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**Photographic Documentation  
of Outfall Must be Attached to  
Complete Report**

ADDITIONAL NOTES:

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REPORTER SIGNATURE: Jeremy D Moore



DATE: 4/27/16

TIME: 8:29  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
OUTFALL ID: <u>OF-003</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input checked="" type="checkbox"/> <b>JA40</b> ( <i>Appomattox River I and II</i> ) <input type="checkbox"/> <b>JA44</b> ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> <b>JA-J</b> ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> <b>Corridor</b> ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> <b>Upland</b> ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> <b>Tributary</b> ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input checked="" type="checkbox"/> Institutional <input checked="" type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input checked="" type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input checked="" type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> <b>None</b> ( <i>no detectable scent</i> ) <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Rancid\Sour\Pungent</b> <input type="checkbox"/> <b>Sulfide</b> ( <i>rotten eggs</i> ) <input type="checkbox"/> <b>Natural gas</b> <input type="checkbox"/> <b>Petroleum</b> ( <i>gas</i> ) <input type="checkbox"/> <b>Other:</b> _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> <b>Normal</b> <input type="checkbox"/> <b>Oily sheen\film</b> <input type="checkbox"/> <b>Cloudy</b> <input type="checkbox"/> <b>Suds</b> <input type="checkbox"/> <b>Colored</b> ( <i>describe</i> ): _____ <input type="checkbox"/> <b>Other:</b> _____ <b>Deposits\Stains:</b> <input type="checkbox"/> <b>Oily</b> <input type="checkbox"/> <b>Paint</b> <input type="checkbox"/> <b>Flow line</b> <input type="checkbox"/> <b>Other</b> ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> <b>None</b> <input type="checkbox"/> <b>Algae</b> <input type="checkbox"/> <b>Dead fish</b> <input type="checkbox"/> <b>Suspended solids</b> <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Other:</b> _____	

<b>FLOW CONDITIONS</b>	<input type="checkbox"/> 1 - No flow\interior conditions are dry
	<input type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input checked="" type="checkbox"/> 3 - Visible flow
	<b>Flow Estimates:</b>
	Width of flow surface: <u>&lt;1</u> inches <u>  </u> feet
	Approximate depth of flow: <u>&lt;1</u> inches <u>  </u> feet
	Approximate flow rate: <u>&lt;1</u> feet per second

**- REPORT SUMMARY CHARACTERIZATION -**

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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**Photographic Documentation  
of Outfall Must be Attached to  
Complete Report**

**ADDITIONAL NOTES:**

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**Water Test**

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REPORTER SIGNATURE: Jeremy D Moore



DATE: 4/26/16

TIME: 1:52  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
OUTFALL ID: <u>OF-004</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> JA40 ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> JA44 ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> JA-J ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> Corridor ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> Upland ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> Tributary ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> Time Lapse: <input type="checkbox"/> < 2 days <input checked="" type="checkbox"/> > 2 days Estimated Amount: <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input checked="" type="checkbox"/> Commercial <input type="checkbox"/> Residential <input type="checkbox"/> Institutional <input checked="" type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> None ( <i>no detectable scent</i> ) <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid\Sour\Pungent <input type="checkbox"/> Sulfide ( <i>rotten eggs</i> ) <input type="checkbox"/> Natural gas <input type="checkbox"/> Petroleum ( <i>gas</i> ) <input type="checkbox"/> Other: _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Oily sheen\film <input type="checkbox"/> Cloudy <input type="checkbox"/> Suds <input type="checkbox"/> Colored ( <i>describe</i> ): _____ <input type="checkbox"/> Other: _____ Deposits\Stains: <input type="checkbox"/> Oily <input type="checkbox"/> Paint <input type="checkbox"/> Flow line <input type="checkbox"/> Other ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> None <input type="checkbox"/> Algae <input type="checkbox"/> Dead fish <input type="checkbox"/> Suspended solids <input type="checkbox"/> Sewage <input type="checkbox"/> Other: _____	

FLOW CONDITIONS	<input type="checkbox"/> 1 - No flow\interior conditions are dry
	<input checked="" type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	Flow Estimates:
	Width of flow surface: __ inches __ feet
	Approximate depth of flow: __ inches ____ feet
	Approximate flow rate: __ feet per second

- REPORT SUMMARY CHARACTERIZATION -

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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Photographic Documentation  
of Outfall Must be Attached to  
Complete Report

ADDITIONAL NOTES:

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REPORTER SIGNATURE: Jeremy D Moore



DATE: 4/26/16

TIME: 9:15  AM  PM

FILED BY: A. J. Covington

- ENVIRONMENTAL INFORMATION -		
OUTFALL ID: <u>OF-005</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> JA40 ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> JA44 ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> JA-J ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> Corridor ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> Upland ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> Tributary ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> Time Lapse: <input type="checkbox"/> < 2 days <input checked="" type="checkbox"/> > 2 days Estimated Amount: <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> None ( <i>no detectable scent</i> ) <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid\Sour\Pungent <input type="checkbox"/> Sulfide ( <i>rotten eggs</i> ) <input type="checkbox"/> Natural gas <input type="checkbox"/> Petroleum ( <i>gas</i> ) <input type="checkbox"/> Other: _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Oily sheen\film <input type="checkbox"/> Cloudy <input type="checkbox"/> Suds <input type="checkbox"/> Colored ( <i>describe</i> ): _____ <input type="checkbox"/> Other: _____ Deposits\Stains: <input type="checkbox"/> Oily <input type="checkbox"/> Paint <input type="checkbox"/> Flow line <input type="checkbox"/> Other ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> None <input type="checkbox"/> Algae <input type="checkbox"/> Dead fish <input type="checkbox"/> Suspended solids <input type="checkbox"/> Sewage <input type="checkbox"/> Other: _____	



DATE: 5/27/16

TIME: 9:45  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
<b>OUTFALL ID:</b> <u>OF-006</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input checked="" type="checkbox"/> <b>JA40</b> ( <i>Appomattox River I and II</i> ) <input type="checkbox"/> <b>JA44</b> ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> <b>JA-J</b> ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> <b>Corridor</b> ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> <b>Upland</b> ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> <b>Tributary</b> ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input type="checkbox"/> < 2 days <input checked="" type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> <b>None</b> ( <i>no detectable scent</i> ) <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Rancid\Sour\Pungent</b> <input type="checkbox"/> <b>Sulfide</b> ( <i>rotten eggs</i> ) <input type="checkbox"/> <b>Natural gas</b> <input type="checkbox"/> <b>Petroleum</b> ( <i>gas</i> ) <input type="checkbox"/> <b>Other:</b> _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> <b>Normal</b> <input type="checkbox"/> <b>Oily sheen\film</b> <input type="checkbox"/> <b>Cloudy</b> <input type="checkbox"/> <b>Suds</b> <input type="checkbox"/> <b>Colored</b> ( <i>describe</i> ): _____ <input type="checkbox"/> <b>Other:</b> _____ <b>Deposits\Stains:</b> <input type="checkbox"/> <b>Oily</b> <input type="checkbox"/> <b>Paint</b> <input type="checkbox"/> <b>Flow line</b> <input type="checkbox"/> <b>Other</b> ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> <b>None</b> <input type="checkbox"/> <b>Algae</b> <input type="checkbox"/> <b>Dead fish</b> <input type="checkbox"/> <b>Suspended solids</b> <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Other:</b> _____	

FLOW CONDITIONS	<input type="checkbox"/> 1 - No flow\interior conditions are dry
	<input checked="" type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	<b>Flow Estimates:</b>
	Width of flow surface: ___ inches ___ feet
	Approximate depth of flow: ___ inches ___ feet
	Approximate flow rate: ___ feet per second

**- REPORT SUMMARY CHARACTERIZATION -**

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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**Photographic Documentation  
of Outfall Must be Attached to  
Complete Report**

**ADDITIONAL NOTES:**

Pipe submerged-High Tide: Water Test

*Jeremy D Moore*

REPORTER SIGNATURE: \_\_\_\_\_



DATE: 4/26/16

TIME: 1:56  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
OUTFALL ID: <u>OF-007</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> JA40 ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> JA44 ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> JA-J ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> Corridor ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> Upland ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> Tributary ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> Time Lapse: <input type="checkbox"/> < 2 days <input checked="" type="checkbox"/> > 2 days Estimated Amount: <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input checked="" type="checkbox"/> Commercial <input type="checkbox"/> Residential <input type="checkbox"/> Institutional <input checked="" type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> None ( <i>no detectable scent</i> ) <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid\Sour\Pungent <input type="checkbox"/> Sulfide ( <i>rotten eggs</i> ) <input type="checkbox"/> Natural gas <input type="checkbox"/> Petroleum ( <i>gas</i> ) <input type="checkbox"/> Other: _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Oily sheen\film <input type="checkbox"/> Cloudy <input type="checkbox"/> Suds <input type="checkbox"/> Colored ( <i>describe</i> ): _____ <input type="checkbox"/> Other: _____ Deposits\Stains: <input type="checkbox"/> Oily <input type="checkbox"/> Paint <input type="checkbox"/> Flow line <input type="checkbox"/> Other ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> None <input type="checkbox"/> Algae <input type="checkbox"/> Dead fish <input type="checkbox"/> Suspended solids <input type="checkbox"/> Sewage <input type="checkbox"/> Other: _____	

FLOW CONDITIONS	<input checked="" type="checkbox"/> 1 - No flow\interior conditions are dry
	<input type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	Flow Estimates:
	Width of flow surface: __ inches __ feet
	Approximate depth of flow: __ inches ____ feet
	Approximate flow rate: __ feet per second

- REPORT SUMMARY CHARACTERIZATION -

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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**Photographic Documentation  
of Outfall Must be Attached to  
Complete Report**

ADDITIONAL NOTES:

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**Ponding Water**

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REPORTER SIGNATURE: Jeremy D Moore



DATE: 4/26/16

TIME: 9:22  AM  PM

FILED BY: A. J. Covington

- ENVIRONMENTAL INFORMATION -		
<b>OUTFALL ID:</b> <u>OF-008</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> <b>JA40</b> ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> <b>JA44</b> ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> <b>JA-J</b> ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> <b>Corridor</b> ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> <b>Upland</b> ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> <b>Tributary</b> ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input type="checkbox"/> < 2 days <input checked="" type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> <b>None</b> ( <i>no detectable scent</i> ) <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Rancid\Sour\Pungent</b> <input type="checkbox"/> <b>Sulfide</b> ( <i>rotten eggs</i> ) <input type="checkbox"/> <b>Natural gas</b> <input type="checkbox"/> <b>Petroleum</b> ( <i>gas</i> ) <input type="checkbox"/> <b>Other:</b> _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> <b>Normal</b> <input type="checkbox"/> <b>Oily sheen\film</b> <input type="checkbox"/> <b>Cloudy</b> <input type="checkbox"/> <b>Suds</b> <input type="checkbox"/> <b>Colored</b> ( <i>describe</i> ): _____ <input type="checkbox"/> <b>Other:</b> _____ <b>Deposits\Stains:</b> <input type="checkbox"/> <b>Oily</b> <input type="checkbox"/> <b>Paint</b> <input type="checkbox"/> <b>Flow line</b> <input type="checkbox"/> <b>Other</b> ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> <b>None</b> <input type="checkbox"/> <b>Algae</b> <input type="checkbox"/> <b>Dead fish</b> <input type="checkbox"/> <b>Suspended solids</b> <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Other:</b> _____	

FLOW CONDITIONS	<input type="checkbox"/> 1 - No flow\interior conditions are dry
	<input type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input checked="" type="checkbox"/> 3 - Visible flow
	Flow Estimates:
	Width of flow surface: <u>&lt;1</u> inches <u>  </u> feet
	Approximate depth of flow: <u>&lt;2</u> inches <u>  </u> feet
	Approximate flow rate: <u>&lt;1</u> feet per second

- REPORT SUMMARY CHARACTERIZATION -

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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Photographic Documentation  
of Outfall Must be Attached to  
Complete Report

ADDITIONAL NOTES:

Outfall partially submerged and covered with brush. Water test performed.

REPORTER SIGNATURE: \_\_\_\_\_

*a.j. Covington*



DATE: 5/16/16

TIME: 1:08  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
<b>OUTFALL ID:</b> <u>OF-009</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input checked="" type="checkbox"/> <b>JA40</b> ( <i>Appomattox River I and II</i> ) <input type="checkbox"/> <b>JA44</b> ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> <b>JA-J</b> ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input type="checkbox"/> <b>Corridor</b> ( <i>In or adjacent to watercourse</i> ) <input checked="" type="checkbox"/> <b>Upland</b> ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> <b>Tributary</b> ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input checked="" type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input type="checkbox"/> Stabilized embankment <input checked="" type="checkbox"/> Eroded embankment <input type="checkbox"/> On\In concrete structure <input type="checkbox"/> In\Near watercourse <input checked="" type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> <b>None</b> ( <i>no detectable scent</i> ) <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Rancid\Sour\Pungent</b> <input type="checkbox"/> <b>Sulfide</b> ( <i>rotten eggs</i> ) <input type="checkbox"/> <b>Natural gas</b> <input type="checkbox"/> <b>Petroleum</b> ( <i>gas</i> ) <input type="checkbox"/> <b>Other:</b> _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> <b>Normal</b> <input type="checkbox"/> <b>Oily sheen\film</b> <input type="checkbox"/> <b>Cloudy</b> <input type="checkbox"/> <b>Suds</b> <input type="checkbox"/> <b>Colored</b> ( <i>describe</i> ): _____ <input type="checkbox"/> <b>Other:</b> _____ <b>Deposits\Stains:</b> <input type="checkbox"/> <b>Oily</b> <input type="checkbox"/> <b>Paint</b> <input type="checkbox"/> <b>Flow line</b> <input type="checkbox"/> <b>Other</b> ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> <b>None</b> <input type="checkbox"/> <b>Algae</b> <input type="checkbox"/> <b>Dead fish</b> <input type="checkbox"/> <b>Suspended solids</b> <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Other:</b> _____	

FLOW CONDITIONS	<input checked="" type="checkbox"/> 1 - No flow\interior conditions are dry
	<input type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	<b>Flow Estimates:</b>
	Width of flow surface: __ inches __ feet
	Approximate depth of flow: __ inches ____ feet
	Approximate flow rate: __ feet per second

- REPORT SUMMARY CHARACTERIZATION -

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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**Photographic Documentation  
of Outfall Must be Attached to  
Complete Report**

ADDITIONAL NOTES:

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Erosion

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REPORTER SIGNATURE: Jeremy D Moore



DATE: 5/16/16

TIME: 10:28  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
OUTFALL ID: <u>OF-010</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> JA40 ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> JA44 ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> JA-J ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> Corridor ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> Upland ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> Tributary ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input checked="" type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> None ( <i>no detectable scent</i> ) <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid\Sour\Pungent <input type="checkbox"/> Sulfide ( <i>rotten eggs</i> ) <input type="checkbox"/> Natural gas <input type="checkbox"/> Petroleum ( <i>gas</i> ) <input type="checkbox"/> Other: _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Oily sheen\film <input type="checkbox"/> Cloudy <input type="checkbox"/> Suds <input type="checkbox"/> Colored ( <i>describe</i> ): _____ <input type="checkbox"/> Other: _____ <b>Deposits\Stains:</b> <input type="checkbox"/> Oily <input type="checkbox"/> Paint <input type="checkbox"/> Flow line <input type="checkbox"/> Other ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> None <input type="checkbox"/> Algae <input type="checkbox"/> Dead fish <input type="checkbox"/> Suspended solids <input type="checkbox"/> Sewage <input type="checkbox"/> Other: _____	



DATE: 4/25/16

TIME: 9:40  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
OUTFALL ID: <u>OF-011</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> JA40 ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> JA44 ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> JA-J ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> Corridor ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> Upland ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> Tributary ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input checked="" type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
- OUTFALL OBSERVATIONS -		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input checked="" type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> None ( <i>no detectable scent</i> ) <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid\Sour\Pungent <input type="checkbox"/> Sulfide ( <i>rotten eggs</i> ) <input type="checkbox"/> Natural gas <input type="checkbox"/> Petroleum ( <i>gas</i> ) <input type="checkbox"/> Other: _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Oily sheen\film <input type="checkbox"/> Cloudy <input type="checkbox"/> Suds <input type="checkbox"/> Colored ( <i>describe</i> ): _____ <input type="checkbox"/> Other: _____	
	<b>Deposits\Stains:</b> <input type="checkbox"/> Oily <input type="checkbox"/> Paint <input checked="" type="checkbox"/> Flow line <input type="checkbox"/> Other ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> None <input type="checkbox"/> Algae <input type="checkbox"/> Dead fish <input type="checkbox"/> Suspended solids <input type="checkbox"/> Sewage <input type="checkbox"/> Other: _____	



DATE: 5/25/16

TIME: 9:57  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
<b>OUTFALL ID:</b> <u>OF-012</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input checked="" type="checkbox"/> <b>JA40</b> ( <i>Appomattox River I and II</i> ) <input type="checkbox"/> <b>JA44</b> ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> <b>JA-J</b> ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> <b>Corridor</b> ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> <b>Upland</b> ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> <b>Tributary</b> ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input checked="" type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input checked="" type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> <b>None</b> ( <i>no detectable scent</i> ) <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Rancid\Sour\Pungent</b> <input type="checkbox"/> <b>Sulfide</b> ( <i>rotten eggs</i> ) <input type="checkbox"/> <b>Natural gas</b> <input type="checkbox"/> <b>Petroleum</b> ( <i>gas</i> ) <input type="checkbox"/> <b>Other:</b> _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> <b>Normal</b> <input type="checkbox"/> <b>Oily sheen\film</b> <input type="checkbox"/> <b>Cloudy</b> <input type="checkbox"/> <b>Suds</b> <input type="checkbox"/> <b>Colored</b> ( <i>describe</i> ): _____ <input type="checkbox"/> <b>Other:</b> _____ <b>Deposits\Stains:</b> <input type="checkbox"/> <b>Oily</b> <input type="checkbox"/> <b>Paint</b> <input type="checkbox"/> <b>Flow line</b> <input type="checkbox"/> <b>Other</b> ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> <b>None</b> <input type="checkbox"/> <b>Algae</b> <input type="checkbox"/> <b>Dead fish</b> <input type="checkbox"/> <b>Suspended solids</b> <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Other:</b> _____	



DATE: 4/25/16

TIME: 10:03  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
<b>OUTFALL ID:</b> <u>OF-013</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> <b>JA40</b> ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> <b>JA44</b> ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> <b>JA-J</b> ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> <b>Corridor</b> ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> <b>Upland</b> ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> <b>Tributary</b> ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input checked="" type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> <b>None</b> ( <i>no detectable scent</i> ) <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Rancid\Sour\Pungent</b> <input type="checkbox"/> <b>Sulfide</b> ( <i>rotten eggs</i> ) <input type="checkbox"/> <b>Natural gas</b> <input type="checkbox"/> <b>Petroleum</b> ( <i>gas</i> ) <input type="checkbox"/> <b>Other:</b> _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> <b>Normal</b> <input type="checkbox"/> <b>Oily sheen\film</b> <input type="checkbox"/> <b>Cloudy</b> <input type="checkbox"/> <b>Suds</b> <input type="checkbox"/> <b>Colored</b> ( <i>describe</i> ): _____ <input type="checkbox"/> <b>Other:</b> _____ <b>Deposits\Stains:</b> <input type="checkbox"/> <b>Oily</b> <input type="checkbox"/> <b>Paint</b> <input type="checkbox"/> <b>Flow line</b> <input type="checkbox"/> <b>Other</b> ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> <b>None</b> <input type="checkbox"/> <b>Algae</b> <input type="checkbox"/> <b>Dead fish</b> <input type="checkbox"/> <b>Suspended solids</b> <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Other:</b> _____	

<b>FLOW CONDITIONS</b>	<input checked="" type="checkbox"/> 1 - No flow\interior conditions are dry
	<input type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	<b>Flow Estimates:</b>
	Width of flow surface: __ inches __ feet
	Approximate depth of flow: __ inches ____ feet
	Approximate flow rate: __ feet per second

**- REPORT SUMMARY CHARACTERIZATION -**

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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**Photographic Documentation  
of Outfall Must be Attached to  
Complete Report**

**ADDITIONAL NOTES:**

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REPORTER SIGNATURE: \_\_\_\_\_ *Jeremy D Moore*



DATE: 4/25/16

TIME: 1:49  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
<b>OUTFALL ID:</b> <u>OF-014</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> <b>JA40</b> ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> <b>JA44</b> ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> <b>JA-J</b> ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> <b>Corridor</b> ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> <b>Upland</b> ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> <b>Tributary</b> ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input checked="" type="checkbox"/> Commercial <input type="checkbox"/> Residential <input type="checkbox"/> Institutional <input checked="" type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> <b>None</b> ( <i>no detectable scent</i> ) <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Rancid\Sour\Pungent</b> <input type="checkbox"/> <b>Sulfide</b> ( <i>rotten eggs</i> ) <input type="checkbox"/> <b>Natural gas</b> <input type="checkbox"/> <b>Petroleum</b> ( <i>gas</i> ) <input type="checkbox"/> <b>Other:</b> _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> <b>Normal</b> <input type="checkbox"/> <b>Oily sheen\film</b> <input type="checkbox"/> <b>Cloudy</b> <input type="checkbox"/> <b>Suds</b> <input type="checkbox"/> <b>Colored</b> ( <i>describe</i> ): _____ <input type="checkbox"/> <b>Other:</b> _____ <b>Deposits\Stains:</b> <input type="checkbox"/> <b>Oily</b> <input type="checkbox"/> <b>Paint</b> <input type="checkbox"/> <b>Flow line</b> <input type="checkbox"/> <b>Other</b> ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> <b>None</b> <input type="checkbox"/> <b>Algae</b> <input type="checkbox"/> <b>Dead fish</b> <input type="checkbox"/> <b>Suspended solids</b> <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Other:</b> _____	

FLOW CONDITIONS	<input type="checkbox"/> 1 - No flow\interior conditions are dry
	<input checked="" type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	<b>Flow Estimates:</b>
	Width of flow surface: ___ inches ___ feet
	Approximate depth of flow: ___ inches ___ feet
	Approximate flow rate: ___ feet per second

**- REPORT SUMMARY CHARACTERIZATION -**

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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**Photographic Documentation  
of Outfall Must be Attached to  
Complete Report**

**ADDITIONAL NOTES:**

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REPORTER SIGNATURE: Jeremy D Moore



DATE: 4/25/16

TIME: 10:04  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
OUTFALL ID: <u>OF-015</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> JA40 ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> JA44 ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> JA-J ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> Corridor ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> Upland ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> Tributary ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input checked="" type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> None ( <i>no detectable scent</i> ) <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid\Sour\Pungent <input type="checkbox"/> Sulfide ( <i>rotten eggs</i> ) <input type="checkbox"/> Natural gas <input type="checkbox"/> Petroleum ( <i>gas</i> ) <input type="checkbox"/> Other: _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Oily sheen\film <input type="checkbox"/> Cloudy <input type="checkbox"/> Suds <input type="checkbox"/> Colored ( <i>describe</i> ): _____ <input type="checkbox"/> Other: _____ <b>Deposits\Stains:</b> <input type="checkbox"/> Oily <input type="checkbox"/> Paint <input type="checkbox"/> Flow line <input type="checkbox"/> Other ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> None <input type="checkbox"/> Algae <input type="checkbox"/> Dead fish <input type="checkbox"/> Suspended solids <input type="checkbox"/> Sewage <input type="checkbox"/> Other: _____	

<b>FLOW CONDITIONS</b>	<input checked="" type="checkbox"/> 1 - No flow\interior conditions are dry
	<input type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	<b>Flow Estimates:</b>
	Width of flow surface: ___ inches ___ feet
	Approximate depth of flow: ___ inches ___ feet
	Approximate flow rate: ___ feet per second

**- REPORT SUMMARY CHARACTERIZATION -**

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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**Photographic Documentation  
of Outfall Must be Attached to  
Complete Report**

**ADDITIONAL NOTES:**

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*Jeremy D Moore*

REPORTER SIGNATURE: \_\_\_\_\_



DATE: 5/27/16

TIME: 1:51  AM  PM

FILED BY: A. J. Covington

- ENVIRONMENTAL INFORMATION -		
<b>OUTFALL ID:</b> <u>OF-016</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> <b>JA40</b> ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> <b>JA44</b> ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> <b>JA-J</b> ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> <b>Corridor</b> ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> <b>Upland</b> ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> <b>Tributary</b> ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input type="checkbox"/> < 2 days <input checked="" type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input checked="" type="checkbox"/> Commercial <input type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input checked="" type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> <b>None</b> ( <i>no detectable scent</i> ) <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Rancid\Sour\Pungent</b> <input type="checkbox"/> <b>Sulfide</b> ( <i>rotten eggs</i> ) <input type="checkbox"/> <b>Natural gas</b> <input type="checkbox"/> <b>Petroleum (gas)</b> <input type="checkbox"/> <b>Other:</b> _____	
<b>APPEARANCE</b>	<input type="checkbox"/> <b>Normal</b> <input type="checkbox"/> <b>Oily sheen\film</b> <input type="checkbox"/> <b>Cloudy</b> <input type="checkbox"/> <b>Suds</b> <input checked="" type="checkbox"/> <b>Colored</b> ( <i>describe</i> ): <u>Muddy</u> <input type="checkbox"/> <b>Other:</b> _____ <b>Deposits\Stains:</b> <input type="checkbox"/> <b>Oily</b> <input type="checkbox"/> <b>Paint</b> <input type="checkbox"/> <b>Flow line</b> <input type="checkbox"/> <b>Other</b> ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> <b>None</b> <input type="checkbox"/> <b>Algae</b> <input type="checkbox"/> <b>Dead fish</b> <input type="checkbox"/> <b>Suspended solids</b> <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Other:</b> _____	



DATE: 4/25/16

TIME: 10:05  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
<b>OUTFALL ID:</b> <u>OF-017</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> <b>JA40</b> ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> <b>JA44</b> ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> <b>JA-J</b> ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> <b>Corridor</b> ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> <b>Upland</b> ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> <b>Tributary</b> ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input checked="" type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> <b>None</b> ( <i>no detectable scent</i> ) <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid\Sour\Pungent <input type="checkbox"/> Sulfide ( <i>rotten eggs</i> ) <input type="checkbox"/> Natural gas <input type="checkbox"/> Petroleum ( <i>gas</i> ) <input type="checkbox"/> Other: _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Oily sheen\film <input type="checkbox"/> Cloudy <input type="checkbox"/> Suds <input type="checkbox"/> Colored ( <i>describe</i> ): _____ <input type="checkbox"/> Other: _____ <b>Deposits\Stains:</b> <input type="checkbox"/> Oily <input type="checkbox"/> Paint <input type="checkbox"/> Flow line <input type="checkbox"/> Other ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> None <input type="checkbox"/> Algae <input type="checkbox"/> Dead fish <input type="checkbox"/> Suspended solids <input type="checkbox"/> Sewage <input type="checkbox"/> Other: _____	

<b>FLOW CONDITIONS</b>	<input type="checkbox"/> 1 - No flow\interior conditions are dry
	<input checked="" type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	<b>Flow Estimates:</b>
	Width of flow surface: ___ inches ___ feet
	Approximate depth of flow: ___ inches ___ feet
	Approximate flow rate: ___ feet per second

**- REPORT SUMMARY CHARACTERIZATION -**

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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**Photographic Documentation  
of Outfall Must be Attached to  
Complete Report**

**ADDITIONAL NOTES:**

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*Jeremy D Moore*

REPORTER SIGNATURE: \_\_\_\_\_



DATE: 5/16/16

TIME: 10:32  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
OUTFALL ID: <u>OF-018</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> JA40 ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> JA44 ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> JA-J ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> Corridor ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> Upland ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> Tributary ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input checked="" type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input checked="" type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> None ( <i>no detectable scent</i> ) <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid\Sour\Pungent <input type="checkbox"/> Sulfide ( <i>rotten eggs</i> ) <input type="checkbox"/> Natural gas <input type="checkbox"/> Petroleum ( <i>gas</i> ) <input type="checkbox"/> Other: _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Oily sheen\film <input type="checkbox"/> Cloudy <input type="checkbox"/> Suds <input type="checkbox"/> Colored ( <i>describe</i> ): _____ <input type="checkbox"/> Other: _____ <b>Deposits\Stains:</b> <input type="checkbox"/> Oily <input type="checkbox"/> Paint <input type="checkbox"/> Flow line <input type="checkbox"/> Other ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> None <input type="checkbox"/> Algae <input type="checkbox"/> Dead fish <input type="checkbox"/> Suspended solids <input type="checkbox"/> Sewage <input type="checkbox"/> Other: _____	

FLOW CONDITIONS	<input checked="" type="checkbox"/> 1 - No flow\interior conditions are dry
	<input type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	Flow Estimates:
	Width of flow surface: ___ inches ___ feet
	Approximate depth of flow: ___ inches ___ feet
	Approximate flow rate: ___ feet per second

- REPORT SUMMARY CHARACTERIZATION -

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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Photographic Documentation  
of Outfall **Must** be Attached to  
Complete Report

ADDITIONAL NOTES:

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REPORTER SIGNATURE: Jeremy D Moore



DATE: 5/16/16

TIME: 10:41  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
<b>OUTFALL ID:</b> <u>OF-019</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> <b>JA40</b> ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> <b>JA44</b> ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> <b>JA-J</b> ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> <b>Corridor</b> ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> <b>Upland</b> ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> <b>Tributary</b> ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input checked="" type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input checked="" type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> <b>None</b> ( <i>no detectable scent</i> ) <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid\Sour\Pungent <input type="checkbox"/> Sulfide ( <i>rotten eggs</i> ) <input type="checkbox"/> Natural gas <input type="checkbox"/> Petroleum ( <i>gas</i> ) <input type="checkbox"/> Other: _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Oily sheen\film <input type="checkbox"/> Cloudy <input type="checkbox"/> Suds <input type="checkbox"/> Colored ( <i>describe</i> ): _____ <input type="checkbox"/> Other: _____ <b>Deposits\Stains:</b> <input type="checkbox"/> Oily <input type="checkbox"/> Paint <input type="checkbox"/> Flow line <input type="checkbox"/> Other ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> None <input type="checkbox"/> Algae <input type="checkbox"/> Dead fish <input type="checkbox"/> Suspended solids <input type="checkbox"/> Sewage <input type="checkbox"/> Other: _____	

FLOW CONDITIONS	<input checked="" type="checkbox"/> 1 - No flow\interior conditions are dry
	<input type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	Flow Estimates:
	Width of flow surface: ___ inches ___ feet
	Approximate depth of flow: ___ inches ___ feet
	Approximate flow rate: ___ feet per second

- REPORT SUMMARY CHARACTERIZATION -

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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Photographic Documentation  
of Outfall Must be Attached to  
Complete Report

ADDITIONAL NOTES:

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REPORTER SIGNATURE: Jeremy D Moore



DATE: 4/26/16

TIME: 9:37  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
OUTFALL ID: <u>OF-020</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> JA40 ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> JA44 ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> JA-J ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> Corridor ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> Upland ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> Tributary ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input type="checkbox"/> < 2 days <input checked="" type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input checked="" type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input checked="" type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> None ( <i>no detectable scent</i> ) <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid\Sour\Pungent <input type="checkbox"/> Sulfide ( <i>rotten eggs</i> ) <input type="checkbox"/> Natural gas <input type="checkbox"/> Petroleum ( <i>gas</i> ) <input type="checkbox"/> Other: _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Oily sheen\film <input type="checkbox"/> Cloudy <input type="checkbox"/> Suds <input type="checkbox"/> Colored ( <i>describe</i> ): _____ <input type="checkbox"/> Other: _____ <b>Deposits\Stains:</b> <input type="checkbox"/> Oily <input type="checkbox"/> Paint <input type="checkbox"/> Flow line <input type="checkbox"/> Other ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> None <input type="checkbox"/> Algae <input type="checkbox"/> Dead fish <input type="checkbox"/> Suspended solids <input type="checkbox"/> Sewage <input type="checkbox"/> Other: _____	

FLOW CONDITIONS	<input type="checkbox"/> 1 - No flow\interior conditions are dry
	<input checked="" type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	<b>Flow Estimates:</b>
	Width of flow surface: __ inches __ feet
	Approximate depth of flow: __ inches ____ feet
	Approximate flow rate: __ feet per second

**- REPORT SUMMARY CHARACTERIZATION -**

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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**Photographic Documentation  
of Outfall Must be Attached to  
Complete Report**

**ADDITIONAL NOTES:**

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REPORTER SIGNATURE: Jeremy D Moore



DATE: 5/16/16

TIME: 10:44  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
OUTFALL ID: <u>OF-021</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> JA40 ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> JA44 ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> JA-J ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> Corridor ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> Upland ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> Tributary ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input checked="" type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input checked="" type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> None ( <i>no detectable scent</i> ) <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid\Sour\Pungent <input type="checkbox"/> Sulfide ( <i>rotten eggs</i> ) <input type="checkbox"/> Natural gas <input type="checkbox"/> Petroleum ( <i>gas</i> ) <input type="checkbox"/> Other: _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Oily sheen\film <input type="checkbox"/> Cloudy <input type="checkbox"/> Suds <input type="checkbox"/> Colored ( <i>describe</i> ): _____ <input type="checkbox"/> Other: _____ <b>Deposits\Stains:</b> <input type="checkbox"/> Oily <input type="checkbox"/> Paint <input type="checkbox"/> Flow line <input type="checkbox"/> Other ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> None <input type="checkbox"/> Algae <input type="checkbox"/> Dead fish <input type="checkbox"/> Suspended solids <input type="checkbox"/> Sewage <input type="checkbox"/> Other: _____	

FLOW CONDITIONS	<input checked="" type="checkbox"/> 1 - No flow\interior conditions are dry
	<input type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	<b>Flow Estimates:</b>
	Width of flow surface: ___ inches ___ feet
	Approximate depth of flow: ___ inches ___ feet
	Approximate flow rate: ___ feet per second

- REPORT SUMMARY CHARACTERIZATION -

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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Photographic Documentation  
of Outfall Must be Attached to  
Complete Report

ADDITIONAL NOTES:

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REPORTER SIGNATURE: Jeremy D Moore



DATE: 4/26/16

TIME: 2:06  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
OUTFALL ID: <u>OF-022</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> JA40 ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> JA44 ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> JA-J ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> Corridor ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> Upland ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> Tributary ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> Time Lapse: <input type="checkbox"/> < 2 days <input checked="" type="checkbox"/> > 2 days Estimated Amount: <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input checked="" type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> None ( <i>no detectable scent</i> ) <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid\Sour\Pungent <input type="checkbox"/> Sulfide ( <i>rotten eggs</i> ) <input type="checkbox"/> Natural gas <input type="checkbox"/> Petroleum ( <i>gas</i> ) <input type="checkbox"/> Other: _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Oily sheen\film <input type="checkbox"/> Cloudy <input type="checkbox"/> Suds <input type="checkbox"/> Colored ( <i>describe</i> ): _____ <input type="checkbox"/> Other: _____ Deposits\Stains: <input type="checkbox"/> Oily <input type="checkbox"/> Paint <input type="checkbox"/> Flow line <input type="checkbox"/> Other ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> None <input type="checkbox"/> Algae <input type="checkbox"/> Dead fish <input type="checkbox"/> Suspended solids <input type="checkbox"/> Sewage <input type="checkbox"/> Other: _____	

FLOW CONDITIONS	<input checked="" type="checkbox"/> 1 - No flow\interior conditions are dry
	<input type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	<b>Flow Estimates:</b>
	Width of flow surface: ___ inches ___ feet
	Approximate depth of flow: ___ inches ___ feet
	Approximate flow rate: ___ feet per second

**- REPORT SUMMARY CHARACTERIZATION -**

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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**Photographic Documentation  
of Outfall Must be Attached to  
Complete Report**

**ADDITIONAL NOTES:**

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REPORTER SIGNATURE: Jeremy D Moore



DATE: 4/26/16

TIME: 9:30  AM  PM

FILED BY: A. J. Covington

- ENVIRONMENTAL INFORMATION -		
<b>OUTFALL ID:</b> <u>OF-023</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> <b>JA40</b> ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> <b>JA44</b> ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> <b>JA-J</b> ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> <b>Corridor</b> ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> <b>Upland</b> ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> <b>Tributary</b> ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input type="checkbox"/> < 2 days <input checked="" type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input checked="" type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> <b>None</b> ( <i>no detectable scent</i> ) <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid\Sour\Pungent <input type="checkbox"/> Sulfide ( <i>rotten eggs</i> ) <input type="checkbox"/> Natural gas <input type="checkbox"/> Petroleum ( <i>gas</i> ) <input type="checkbox"/> Other: _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Oily sheen\film <input type="checkbox"/> Cloudy <input type="checkbox"/> Suds <input type="checkbox"/> Colored ( <i>describe</i> ): _____ <input type="checkbox"/> Other: _____ <b>Deposits\Stains:</b> <input type="checkbox"/> Oily <input type="checkbox"/> Paint <input type="checkbox"/> Flow line <input type="checkbox"/> Other ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> None <input type="checkbox"/> Algae <input type="checkbox"/> Dead fish <input type="checkbox"/> Suspended solids <input type="checkbox"/> Sewage <input type="checkbox"/> Other: _____	

FLOW CONDITIONS	<input checked="" type="checkbox"/> 1 - No flow\interior conditions are dry
	<input type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	<b>Flow Estimates:</b>
	Width of flow surface: ___ inches ___ feet
	Approximate depth of flow: ___ inches ___ feet
	Approximate flow rate: ___ feet per second

- REPORT SUMMARY CHARACTERIZATION -

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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**Photographic Documentation  
of Outfall Must be Attached to  
Complete Report**

ADDITIONAL NOTES:

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REPORTER SIGNATURE: \_\_\_\_\_

*a.j. Covington*



DATE: 5/26/16

TIME: 8:52  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
<b>OUTFALL ID:</b> <u>OF-024</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> <b>JA40</b> ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> <b>JA44</b> ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> <b>JA-J</b> ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> <b>Corridor</b> ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> <b>Upland</b> ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> <b>Tributary</b> ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input type="checkbox"/> < 2 days <input checked="" type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input checked="" type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> <b>None</b> ( <i>no detectable scent</i> ) <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Rancid\Sour\Pungent</b> <input type="checkbox"/> <b>Sulfide</b> ( <i>rotten eggs</i> ) <input type="checkbox"/> <b>Natural gas</b> <input type="checkbox"/> <b>Petroleum (gas)</b> <input type="checkbox"/> <b>Other:</b> _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> <b>Normal</b> <input type="checkbox"/> <b>Oily sheen\film</b> <input type="checkbox"/> <b>Cloudy</b> <input type="checkbox"/> <b>Suds</b> <input type="checkbox"/> <b>Colored</b> ( <i>describe</i> ): _____ <input type="checkbox"/> <b>Other:</b> _____ <b>Deposits\Stains:</b> <input type="checkbox"/> <b>Oily</b> <input type="checkbox"/> <b>Paint</b> <input type="checkbox"/> <b>Flow line</b> <input type="checkbox"/> <b>Other</b> ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> <b>None</b> <input type="checkbox"/> <b>Algae</b> <input type="checkbox"/> <b>Dead fish</b> <input type="checkbox"/> <b>Suspended solids</b> <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Other:</b> _____	

FLOW CONDITIONS	<input type="checkbox"/> 1 - No flow\interior conditions are dry
	<input type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input checked="" type="checkbox"/> 3 - Visible flow
	Flow Estimates:
	Width of flow surface: <u>4</u> inches <u>  </u> feet
	Approximate depth of flow: <u>&lt;1</u> inches <u>  </u> feet
	Approximate flow rate: <u>&lt;2</u> feet per second

- REPORT SUMMARY CHARACTERIZATION -

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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Photographic Documentation  
of Outfall **Must** be Attached to  
Complete Report

ADDITIONAL NOTES:

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Water Test Performed

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REPORTER SIGNATURE: Jeremy D Moore



DATE: 4/26/16

TIME: 10:42  AM  PM

FILED BY: A. J. Covington

- ENVIRONMENTAL INFORMATION -		
<b>OUTFALL ID:</b> <u>OF-025</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> <b>JA40</b> ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> <b>JA44</b> ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> <b>JA-J</b> ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> <b>Corridor</b> ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> <b>Upland</b> ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> <b>Tributary</b> ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input type="checkbox"/> < 2 days <input checked="" type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input checked="" type="checkbox"/> Commercial <input type="checkbox"/> Residential <input type="checkbox"/> Institutional <input checked="" type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> <b>None</b> ( <i>no detectable scent</i> ) <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Rancid\Sour\Pungent</b> <input type="checkbox"/> <b>Sulfide</b> ( <i>rotten eggs</i> ) <input type="checkbox"/> <b>Natural gas</b> <input type="checkbox"/> <b>Petroleum</b> ( <i>gas</i> ) <input type="checkbox"/> <b>Other:</b> _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> <b>Normal</b> <input type="checkbox"/> <b>Oily sheen\film</b> <input type="checkbox"/> <b>Cloudy</b> <input type="checkbox"/> <b>Suds</b> <input type="checkbox"/> <b>Colored</b> ( <i>describe</i> ): _____ <input type="checkbox"/> <b>Other:</b> _____ <b>Deposits\Stains:</b> <input type="checkbox"/> <b>Oily</b> <input type="checkbox"/> <b>Paint</b> <input type="checkbox"/> <b>Flow line</b> <input type="checkbox"/> <b>Other</b> ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> <b>None</b> <input type="checkbox"/> <b>Algae</b> <input type="checkbox"/> <b>Dead fish</b> <input type="checkbox"/> <b>Suspended solids</b> <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Other:</b> _____	



DATE: 4/25/16

TIME: 10:28  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
<b>OUTFALL ID:</b> <u>OF-026</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> <b>JA40</b> ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> <b>JA44</b> ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> <b>JA-J</b> ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input type="checkbox"/> <b>Corridor</b> ( <i>In or adjacent to watercourse</i> ) <input checked="" type="checkbox"/> <b>Upland</b> ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> <b>Tributary</b> ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input checked="" type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input checked="" type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input type="checkbox"/> On\In concrete structure <input type="checkbox"/> In\Near watercourse <input checked="" type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> <b>None</b> ( <i>no detectable scent</i> ) <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Rancid\Sour\Pungent</b> <input type="checkbox"/> <b>Sulfide</b> ( <i>rotten eggs</i> ) <input type="checkbox"/> <b>Natural gas</b> <input type="checkbox"/> <b>Petroleum</b> ( <i>gas</i> ) <input type="checkbox"/> <b>Other:</b> _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> <b>Normal</b> <input type="checkbox"/> <b>Oily sheen\film</b> <input type="checkbox"/> <b>Cloudy</b> <input type="checkbox"/> <b>Suds</b> <input type="checkbox"/> <b>Colored</b> ( <i>describe</i> ): _____ <input type="checkbox"/> <b>Other:</b> _____ <b>Deposits\Stains:</b> <input type="checkbox"/> <b>Oily</b> <input type="checkbox"/> <b>Paint</b> <input type="checkbox"/> <b>Flow line</b> <input type="checkbox"/> <b>Other</b> ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> <b>None</b> <input type="checkbox"/> <b>Algae</b> <input type="checkbox"/> <b>Dead fish</b> <input type="checkbox"/> <b>Suspended solids</b> <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Other:</b> _____	

<b>FLOW CONDITIONS</b>	<input checked="" type="checkbox"/> 1 - No flow\interior conditions are dry
	<input type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	<b>Flow Estimates:</b>
	Width of flow surface: ___ inches ___ feet
	Approximate depth of flow: ___ inches ___ feet
	Approximate flow rate: ___ feet per second

**- REPORT SUMMARY CHARACTERIZATION -**

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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**Photographic Documentation  
of Outfall Must be Attached to  
Complete Report**

**ADDITIONAL NOTES:**

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**REPORTER SIGNATURE:** Jeremy D Moore



DATE: 4/26/16

TIME: 10:49  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
<b>OUTFALL ID:</b> <u>OF-027</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> <b>JA40</b> ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> <b>JA44</b> ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> <b>JA-J</b> ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> <b>Corridor</b> ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> <b>Upland</b> ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> <b>Tributary</b> ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input type="checkbox"/> < 2 days <input checked="" type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input checked="" type="checkbox"/> Commercial <input type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> <b>None</b> ( <i>no detectable scent</i> ) <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Rancid\Sour\Pungent</b> <input type="checkbox"/> <b>Sulfide</b> ( <i>rotten eggs</i> ) <input type="checkbox"/> <b>Natural gas</b> <input type="checkbox"/> <b>Petroleum (gas)</b> <input type="checkbox"/> <b>Other:</b> _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> <b>Normal</b> <input type="checkbox"/> <b>Oily sheen\film</b> <input type="checkbox"/> <b>Cloudy</b> <input type="checkbox"/> <b>Suds</b> <input type="checkbox"/> <b>Colored</b> ( <i>describe</i> ): _____ <input type="checkbox"/> <b>Other:</b> _____ <b>Deposits\Stains:</b> <input type="checkbox"/> <b>Oily</b> <input type="checkbox"/> <b>Paint</b> <input type="checkbox"/> <b>Flow line</b> <input type="checkbox"/> <b>Other</b> ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> <b>None</b> <input type="checkbox"/> <b>Algae</b> <input type="checkbox"/> <b>Dead fish</b> <input type="checkbox"/> <b>Suspended solids</b> <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Other:</b> _____	

FLOW CONDITIONS	<input type="checkbox"/> 1 - No flow\interior conditions are dry
	<input checked="" type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	<b>Flow Estimates:</b>
	Width of flow surface: ___ inches ___ feet
	Approximate depth of flow: ___ inches ___ feet
	Approximate flow rate: ___ feet per second

**- REPORT SUMMARY CHARACTERIZATION -**

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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**Photographic Documentation  
of Outfall Must be Attached to  
Complete Report**

**ADDITIONAL NOTES:**

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REPORTER SIGNATURE: Jeremy D Moore



DATE: 5/26/16

TIME: 10:21  AM  PM

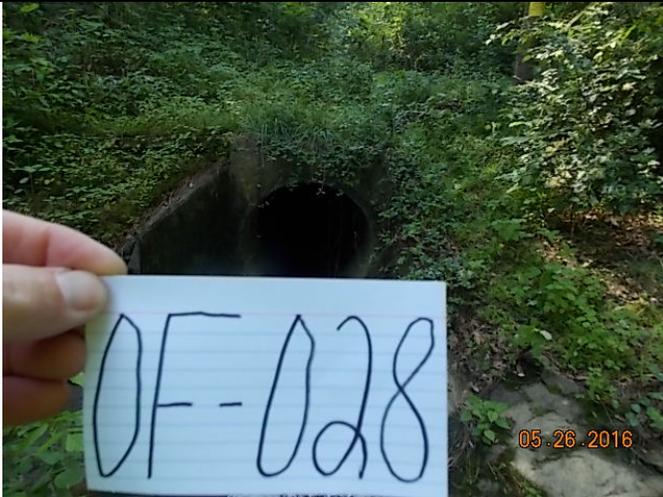
FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
OUTFALL ID: <u>OF-028</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> JA40 ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> JA44 ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> JA-J ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> Corridor ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> Upland ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> Tributary ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input type="checkbox"/> < 2 days <input checked="" type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input checked="" type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> None ( <i>no detectable scent</i> ) <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid\Sour\Pungent <input type="checkbox"/> Sulfide ( <i>rotten eggs</i> ) <input type="checkbox"/> Natural gas <input type="checkbox"/> Petroleum ( <i>gas</i> ) <input type="checkbox"/> Other: _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Oily sheen\film <input type="checkbox"/> Cloudy <input type="checkbox"/> Suds <input type="checkbox"/> Colored ( <i>describe</i> ): _____ <input type="checkbox"/> Other: _____ <b>Deposits\Stains:</b> <input type="checkbox"/> Oily <input type="checkbox"/> Paint <input type="checkbox"/> Flow line <input type="checkbox"/> Other ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> None <input type="checkbox"/> Algae <input type="checkbox"/> Dead fish <input type="checkbox"/> Suspended solids <input type="checkbox"/> Sewage <input type="checkbox"/> Other: _____	

FLOW CONDITIONS	<input type="checkbox"/> 1 - No flow\interior conditions are dry
	<input checked="" type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	<b>Flow Estimates:</b>
	Width of flow surface: ___ inches ___ feet
	Approximate depth of flow: ___ inches ____ feet
	Approximate flow rate: ___ feet per second

**- REPORT SUMMARY CHARACTERIZATION -**

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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**Photographic Documentation  
of Outfall Must be Attached to  
Complete Report**

**ADDITIONAL NOTES:**

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REPORTER SIGNATURE: Jeremy D Moore



DATE: 5/26/16

TIME: 10:11  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
<b>OUTFALL ID:</b> <u>OF-029</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> <b>JA40</b> ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> <b>JA44</b> ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> <b>JA-J</b> ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> <b>Corridor</b> ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> <b>Upland</b> ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> <b>Tributary</b> ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input type="checkbox"/> < 2 days <input checked="" type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input checked="" type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> <b>None</b> ( <i>no detectable scent</i> ) <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Rancid\Sour\Pungent</b> <input type="checkbox"/> <b>Sulfide</b> ( <i>rotten eggs</i> ) <input type="checkbox"/> <b>Natural gas</b> <input type="checkbox"/> <b>Petroleum</b> ( <i>gas</i> ) <input type="checkbox"/> <b>Other:</b> _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> <b>Normal</b> <input type="checkbox"/> <b>Oily sheen\film</b> <input type="checkbox"/> <b>Cloudy</b> <input type="checkbox"/> <b>Suds</b> <input type="checkbox"/> <b>Colored</b> ( <i>describe</i> ): _____ <input type="checkbox"/> <b>Other:</b> _____ <b>Deposits\Stains:</b> <input type="checkbox"/> <b>Oily</b> <input type="checkbox"/> <b>Paint</b> <input type="checkbox"/> <b>Flow line</b> <input type="checkbox"/> <b>Other</b> ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> <b>None</b> <input type="checkbox"/> <b>Algae</b> <input type="checkbox"/> <b>Dead fish</b> <input type="checkbox"/> <b>Suspended solids</b> <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Other:</b> _____	

FLOW CONDITIONS	<input type="checkbox"/> 1 - No flow\interior conditions are dry
	<input checked="" type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	<b>Flow Estimates:</b>
	Width of flow surface: ___ inches ___ feet
	Approximate depth of flow: ___ inches ___ feet
	Approximate flow rate: ___ feet per second

**- REPORT SUMMARY CHARACTERIZATION -**

<input type="checkbox"/> Unlikely Illicit Discharge	<input checked="" type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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**Photographic Documentation  
of Outfall Must be Attached to  
Complete Report**

**ADDITIONAL NOTES:**

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**Ponding**

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REPORTER SIGNATURE: Jeremy D Moore



DATE: 5/27/16

TIME: 10:04  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
<b>OUTFALL ID:</b> <u>OF-030</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input checked="" type="checkbox"/> <b>JA40</b> ( <i>Appomattox River I and II</i> ) <input type="checkbox"/> <b>JA44</b> ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> <b>JA-J</b> ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> <b>Corridor</b> ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> <b>Upland</b> ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> <b>Tributary</b> ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input type="checkbox"/> < 2 days <input checked="" type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input checked="" type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> <b>None</b> ( <i>no detectable scent</i> ) <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Rancid\Sour\Pungent</b> <input type="checkbox"/> <b>Sulfide</b> ( <i>rotten eggs</i> ) <input type="checkbox"/> <b>Natural gas</b> <input type="checkbox"/> <b>Petroleum</b> ( <i>gas</i> ) <input type="checkbox"/> <b>Other:</b> _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> <b>Normal</b> <input type="checkbox"/> <b>Oily sheen\film</b> <input type="checkbox"/> <b>Cloudy</b> <input type="checkbox"/> <b>Suds</b> <input type="checkbox"/> <b>Colored</b> ( <i>describe</i> ): _____ <input type="checkbox"/> <b>Other:</b> _____ <b>Deposits\Stains:</b> <input type="checkbox"/> <b>Oily</b> <input type="checkbox"/> <b>Paint</b> <input checked="" type="checkbox"/> <b>Flow line</b> <input type="checkbox"/> <b>Other</b> ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> <b>None</b> <input type="checkbox"/> <b>Algae</b> <input type="checkbox"/> <b>Dead fish</b> <input type="checkbox"/> <b>Suspended solids</b> <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Other:</b> _____	



DATE: 4/25/16

TIME: 12:39  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
OUTFALL ID: <u>OF-031</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> JA40 ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> JA44 ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> JA-J ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input type="checkbox"/> Corridor ( <i>In or adjacent to watercourse</i> ) <input checked="" type="checkbox"/> Upland ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> Tributary ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input checked="" type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input checked="" type="checkbox"/> On\In concrete structure <input type="checkbox"/> In\Near watercourse <input checked="" type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> None ( <i>no detectable scent</i> ) <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid\Sour\Pungent <input type="checkbox"/> Sulfide ( <i>rotten eggs</i> ) <input type="checkbox"/> Natural gas <input type="checkbox"/> Petroleum ( <i>gas</i> ) <input type="checkbox"/> Other: _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Oily sheen\film <input type="checkbox"/> Cloudy <input type="checkbox"/> Suds <input type="checkbox"/> Colored ( <i>describe</i> ): _____ <input type="checkbox"/> Other: _____	
	<b>Deposits\Stains:</b> <input type="checkbox"/> Oily <input type="checkbox"/> Paint <input type="checkbox"/> Flow line <input type="checkbox"/> Other ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> None <input type="checkbox"/> Algae <input type="checkbox"/> Dead fish <input type="checkbox"/> Suspended solids <input type="checkbox"/> Sewage <input type="checkbox"/> Other: _____	

<b>FLOW CONDITIONS</b>	<input type="checkbox"/> 1 - No flow\interior conditions are dry
	<input checked="" type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	<b>Flow Estimates:</b>
	Width of flow surface: ___ inches ___ feet
	Approximate depth of flow: ___ inches ___ feet
	Approximate flow rate: ___ feet per second

**- REPORT SUMMARY CHARACTERIZATION -**

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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**Photographic Documentation  
of Outfall Must be Attached to  
Complete Report**

**ADDITIONAL NOTES:**

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REPORTER SIGNATURE: Jeremy D Moore



DATE: 5/25/16

TIME: 1:53  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
OUTFALL ID: <u>OF-032</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> JA40 ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> JA44 ( <i>Swift Creek, Old Town Creek</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> Corridor ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> Upland ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> Tributary ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input checked="" type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> None ( <i>no detectable scent</i> ) <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid\Sour\Pungent <input type="checkbox"/> Sulfide ( <i>rotten eggs</i> ) <input type="checkbox"/> Natural gas <input type="checkbox"/> Petroleum ( <i>gas</i> ) <input type="checkbox"/> Other: _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Oily sheen\film <input type="checkbox"/> Cloudy <input type="checkbox"/> Suds <input type="checkbox"/> Colored ( <i>describe</i> ): _____ <input type="checkbox"/> Other: _____ <b>Deposits\Stains:</b> <input type="checkbox"/> Oily <input type="checkbox"/> Paint <input type="checkbox"/> Flow line <input type="checkbox"/> Other ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> None <input type="checkbox"/> Algae <input type="checkbox"/> Dead fish <input type="checkbox"/> Suspended solids <input type="checkbox"/> Sewage <input type="checkbox"/> Other: _____	

FLOW CONDITIONS	<input checked="" type="checkbox"/> 1 - No flow\interior conditions are dry
	<input type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	<b>Flow Estimates:</b>
	Width of flow surface: _____ inches _____ feet
	Approximate depth of flow: _____ inches _____ feet
	Approximate flow rate: _____ feet per second

**- REPORT SUMMARY CHARACTERIZATION -**

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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**Photographic Documentation  
of Outfall Must be Attached to  
Complete Report**

**ADDITIONAL NOTES:**

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REPORTER SIGNATURE: Jeremy D Moore



DATE: 5/25/16

TIME: 1:58  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
OUTFALL ID: <u>OF-033</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> JA40 ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> JA44 ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> JA-J ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input type="checkbox"/> Corridor ( <i>In or adjacent to watercourse</i> ) <input checked="" type="checkbox"/> Upland ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> Tributary ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> None ( <i>no detectable scent</i> ) <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid\Sour\Pungent <input type="checkbox"/> Sulfide ( <i>rotten eggs</i> ) <input type="checkbox"/> Natural gas <input type="checkbox"/> Petroleum ( <i>gas</i> ) <input type="checkbox"/> Other: _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Oily sheen\film <input type="checkbox"/> Cloudy <input type="checkbox"/> Suds <input type="checkbox"/> Colored ( <i>describe</i> ): _____ <input type="checkbox"/> Other: _____ <b>Deposits\Stains:</b> <input type="checkbox"/> Oily <input type="checkbox"/> Paint <input type="checkbox"/> Flow line <input type="checkbox"/> Other ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> None <input type="checkbox"/> Algae <input type="checkbox"/> Dead fish <input type="checkbox"/> Suspended solids <input type="checkbox"/> Sewage <input type="checkbox"/> Other: _____	

FLOW CONDITIONS	<input type="checkbox"/> 1 - No flow\interior conditions are dry
	<input checked="" type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	<b>Flow Estimates:</b>
	Width of flow surface: _____ inches _____ feet
	Approximate depth of flow: _____ inches _____ feet
	Approximate flow rate: _____ feet per second

**- REPORT SUMMARY CHARACTERIZATION -**

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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**Photographic Documentation  
of Outfall Must be Attached to  
Complete Report**

**ADDITIONAL NOTES:**

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Ponding

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REPORTER SIGNATURE: Jeremy D Moore



DATE: 4/27/16

TIME: 10:45  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
<b>OUTFALL ID:</b> <u>OF-034</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> <b>JA40</b> ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> <b>JA44</b> ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> <b>JA-J</b> ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input type="checkbox"/> <b>Corridor</b> ( <i>In or adjacent to watercourse</i> ) <input checked="" type="checkbox"/> <b>Upland</b> ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> <b>Tributary</b> ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input type="checkbox"/> On\In concrete structure <input type="checkbox"/> In\Near watercourse <input checked="" type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> <b>None</b> ( <i>no detectable scent</i> ) <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Rancid\Sour\Pungent</b> <input type="checkbox"/> <b>Sulfide</b> ( <i>rotten eggs</i> ) <input type="checkbox"/> <b>Natural gas</b> <input type="checkbox"/> <b>Petroleum (gas)</b> <input type="checkbox"/> <b>Other:</b> _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> <b>Normal</b> <input type="checkbox"/> <b>Oily sheen\film</b> <input type="checkbox"/> <b>Cloudy</b> <input type="checkbox"/> <b>Suds</b> <input type="checkbox"/> <b>Colored</b> ( <i>describe</i> ): _____ <input type="checkbox"/> <b>Other:</b> _____ <b>Deposits\Stains:</b> <input type="checkbox"/> <b>Oily</b> <input type="checkbox"/> <b>Paint</b> <input type="checkbox"/> <b>Flow line</b> <input type="checkbox"/> <b>Other</b> ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> <b>None</b> <input type="checkbox"/> <b>Algae</b> <input type="checkbox"/> <b>Dead fish</b> <input type="checkbox"/> <b>Suspended solids</b> <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Other:</b> _____	



DATE: 4/27/16

TIME: 10:39  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
OUTFALL ID: <u>OF-035</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> JA40 ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> JA44 ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> JA-J ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input type="checkbox"/> Corridor ( <i>In or adjacent to watercourse</i> ) <input checked="" type="checkbox"/> Upland ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> Tributary ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> Time Lapse: <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days Estimated Amount: <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input type="checkbox"/> On\In concrete structure <input type="checkbox"/> In\Near watercourse <input checked="" type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> None ( <i>no detectable scent</i> ) <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid\Sour\Pungent <input type="checkbox"/> Sulfide ( <i>rotten eggs</i> ) <input type="checkbox"/> Natural gas <input type="checkbox"/> Petroleum ( <i>gas</i> ) <input type="checkbox"/> Other: _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Oily sheen\film <input type="checkbox"/> Cloudy <input type="checkbox"/> Suds <input type="checkbox"/> Colored ( <i>describe</i> ): _____ <input type="checkbox"/> Other: _____ Deposits\Stains: <input type="checkbox"/> Oily <input type="checkbox"/> Paint <input type="checkbox"/> Flow line <input type="checkbox"/> Other ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> None <input type="checkbox"/> Algae <input type="checkbox"/> Dead fish <input type="checkbox"/> Suspended solids <input type="checkbox"/> Sewage <input type="checkbox"/> Other: _____	



DATE: 4/27/16

TIME: 8:08  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
OUTFALL ID: <u>OF-036</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> JA40 ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> JA44 ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> JA-J ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> Corridor ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> Upland ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> Tributary ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input checked="" type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> None ( <i>no detectable scent</i> ) <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid\Sour\Pungent <input type="checkbox"/> Sulfide ( <i>rotten eggs</i> ) <input type="checkbox"/> Natural gas <input type="checkbox"/> Petroleum ( <i>gas</i> ) <input type="checkbox"/> Other: _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Oily sheen\film <input type="checkbox"/> Cloudy <input type="checkbox"/> Suds <input type="checkbox"/> Colored ( <i>describe</i> ): _____ <input type="checkbox"/> Other: _____ <b>Deposits\Stains:</b> <input type="checkbox"/> Oily <input type="checkbox"/> Paint <input type="checkbox"/> Flow line <input type="checkbox"/> Other ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> None <input type="checkbox"/> Algae <input type="checkbox"/> Dead fish <input type="checkbox"/> Suspended solids <input type="checkbox"/> Sewage <input type="checkbox"/> Other: _____	

FLOW CONDITIONS	<input type="checkbox"/> 1 - No flow\interior conditions are dry
	<input checked="" type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	<b>Flow Estimates:</b>
	Width of flow surface: __ inches __ feet
	Approximate depth of flow: __ inches ____ feet
	Approximate flow rate: __ feet per second

**- REPORT SUMMARY CHARACTERIZATION -**

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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**Photographic Documentation  
of Outfall Must be Attached to  
Complete Report**

**ADDITIONAL NOTES:**

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REPORTER SIGNATURE: Jeremy D Moore



DATE: 5/27/16

TIME: 9:26  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
<b>OUTFALL ID:</b> <u>OF-037</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input checked="" type="checkbox"/> <b>JA40</b> ( <i>Appomattox River I and II</i> ) <input type="checkbox"/> <b>JA44</b> ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> <b>JA-J</b> ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> <b>Corridor</b> ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> <b>Upland</b> ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> <b>Tributary</b> ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input type="checkbox"/> < 2 days <input checked="" type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> <b>None</b> ( <i>no detectable scent</i> ) <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Rancid\Sour\Pungent</b> <input type="checkbox"/> <b>Sulfide</b> ( <i>rotten eggs</i> ) <input type="checkbox"/> <b>Natural gas</b> <input type="checkbox"/> <b>Petroleum (gas)</b> <input type="checkbox"/> <b>Other:</b> _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> <b>Normal</b> <input type="checkbox"/> <b>Oily sheen\film</b> <input type="checkbox"/> <b>Cloudy</b> <input type="checkbox"/> <b>Suds</b> <input type="checkbox"/> <b>Colored</b> ( <i>describe</i> ): _____ <input type="checkbox"/> <b>Other:</b> _____ <b>Deposits\Stains:</b> <input type="checkbox"/> <b>Oily</b> <input type="checkbox"/> <b>Paint</b> <input type="checkbox"/> <b>Flow line</b> <input type="checkbox"/> <b>Other</b> ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> <b>None</b> <input type="checkbox"/> <b>Algae</b> <input type="checkbox"/> <b>Dead fish</b> <input type="checkbox"/> <b>Suspended solids</b> <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Other:</b> _____	

FLOW CONDITIONS	<input checked="" type="checkbox"/> 1 - No flow\interior conditions are dry
	<input type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	Flow Estimates:
	Width of flow surface: ___ inches ___ feet
	Approximate depth of flow: ___ inches _____ feet
	Approximate flow rate: ___ feet per second

- REPORT SUMMARY CHARACTERIZATION -

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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Photographic Documentation  
of Outfall Must be Attached to  
Complete Report

ADDITIONAL NOTES:

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REPORTER SIGNATURE: Jeremy D Moore



DATE: 4/25/16

TIME: 10:06  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
OUTFALL ID: <u>OF-038</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> JA40 ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> JA44 ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> JA-J ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> Corridor ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> Upland ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> Tributary ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> Time Lapse: <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days Estimated Amount: <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input checked="" type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> None ( <i>no detectable scent</i> ) <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid\Sour\Pungent <input type="checkbox"/> Sulfide ( <i>rotten eggs</i> ) <input type="checkbox"/> Natural gas <input type="checkbox"/> Petroleum ( <i>gas</i> ) <input type="checkbox"/> Other: _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Oily sheen\film <input type="checkbox"/> Cloudy <input type="checkbox"/> Suds <input type="checkbox"/> Colored ( <i>describe</i> ): _____ <input type="checkbox"/> Other: _____ Deposits\Stains: <input type="checkbox"/> Oily <input type="checkbox"/> Paint <input type="checkbox"/> Flow line <input type="checkbox"/> Other ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> None <input type="checkbox"/> Algae <input type="checkbox"/> Dead fish <input type="checkbox"/> Suspended solids <input type="checkbox"/> Sewage <input type="checkbox"/> Other: _____	



DATE: 4/25/16

TIME: 9:38  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
OUTFALL ID: <u>OF-039</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> JA40 ( <i>Appomattox River I and II</i> ) <input type="checkbox"/> JA44 ( <i>Swift Creek, Old Town Creek</i> ) <input checked="" type="checkbox"/> JA-J ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input type="checkbox"/> Corridor ( <i>In or adjacent to watercourse</i> ) <input checked="" type="checkbox"/> Upland ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> Tributary ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input checked="" type="checkbox"/> Institutional <input checked="" type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input checked="" type="checkbox"/> On\In concrete structure <input type="checkbox"/> In\Near watercourse <input checked="" type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> None ( <i>no detectable scent</i> ) <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid\Sour\Pungent <input type="checkbox"/> Sulfide ( <i>rotten eggs</i> ) <input type="checkbox"/> Natural gas <input type="checkbox"/> Petroleum ( <i>gas</i> ) <input type="checkbox"/> Other: _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Oily sheen\film <input type="checkbox"/> Cloudy <input type="checkbox"/> Suds <input type="checkbox"/> Colored ( <i>describe</i> ): _____ <input type="checkbox"/> Other: _____ <b>Deposits\Stains:</b> <input type="checkbox"/> Oily <input type="checkbox"/> Paint <input type="checkbox"/> Flow line <input type="checkbox"/> Other ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> None <input type="checkbox"/> Algae <input type="checkbox"/> Dead fish <input type="checkbox"/> Suspended solids <input type="checkbox"/> Sewage <input type="checkbox"/> Other: _____	

FLOW CONDITIONS	<input type="checkbox"/> 1 - No flow\interior conditions are dry
	<input checked="" type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	<b>Flow Estimates:</b>
	Width of flow surface: ___ inches ___ feet
	Approximate depth of flow: ___ inches ___ feet
	Approximate flow rate: ___ feet per second

**- REPORT SUMMARY CHARACTERIZATION -**

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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**Photographic Documentation  
of Outfall Must be Attached to  
Complete Report**

**ADDITIONAL NOTES:**

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REPORTER SIGNATURE: Jeremy D Moore



DATE: 4/27/16

TIME: 9:25  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
OUTFALL ID: <u>OF-040</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> JA40 ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> JA44 ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> JA-J ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input type="checkbox"/> Corridor ( <i>In or adjacent to watercourse</i> ) <input checked="" type="checkbox"/> Upland ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> Tributary ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input checked="" type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input checked="" type="checkbox"/> On\In concrete structure <input type="checkbox"/> In\Near watercourse <input checked="" type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> None ( <i>no detectable scent</i> ) <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid\Sour\Pungent <input type="checkbox"/> Sulfide ( <i>rotten eggs</i> ) <input type="checkbox"/> Natural gas <input type="checkbox"/> Petroleum ( <i>gas</i> ) <input type="checkbox"/> Other: _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Oily sheen\film <input type="checkbox"/> Cloudy <input type="checkbox"/> Suds <input type="checkbox"/> Colored ( <i>describe</i> ): _____ <input type="checkbox"/> Other: _____ <b>Deposits\Stains:</b> <input type="checkbox"/> Oily <input type="checkbox"/> Paint <input type="checkbox"/> Flow line <input type="checkbox"/> Other ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> None <input type="checkbox"/> Algae <input type="checkbox"/> Dead fish <input type="checkbox"/> Suspended solids <input type="checkbox"/> Sewage <input type="checkbox"/> Other: _____	

FLOW CONDITIONS	<input type="checkbox"/> 1 - No flow\interior conditions are dry
	<input checked="" type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	<b>Flow Estimates:</b>
	Width of flow surface: __ inches __ feet
	Approximate depth of flow: __ inches ____ feet
	Approximate flow rate: __ feet per second

**- REPORT SUMMARY CHARACTERIZATION -**

Unlikely Illicit Discharge       Suspected Illicit Discharge       Obvious Illicit Discharge



**Photographic Documentation  
of Outfall Must be Attached to  
Complete Report**

**ADDITIONAL NOTES:**

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*Jeremy D Moore*

REPORTER SIGNATURE: \_\_\_\_\_



DATE: 4/27/16

TIME: 9:41  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
<b>OUTFALL ID:</b> <u>OF-041</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> <b>JA40</b> ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> <b>JA44</b> ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> <b>JA-J</b> ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> <b>Corridor</b> ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> <b>Upland</b> ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> <b>Tributary</b> ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input checked="" type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> <b>None</b> ( <i>no detectable scent</i> ) <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Rancid\Sour\Pungent</b> <input type="checkbox"/> <b>Sulfide</b> ( <i>rotten eggs</i> ) <input type="checkbox"/> <b>Natural gas</b> <input type="checkbox"/> <b>Petroleum</b> ( <i>gas</i> ) <input type="checkbox"/> <b>Other:</b> _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> <b>Normal</b> <input type="checkbox"/> <b>Oily sheen\film</b> <input type="checkbox"/> <b>Cloudy</b> <input type="checkbox"/> <b>Suds</b> <input type="checkbox"/> <b>Colored</b> ( <i>describe</i> ): _____ <input type="checkbox"/> <b>Other:</b> _____ <b>Deposits\Stains:</b> <input type="checkbox"/> <b>Oily</b> <input type="checkbox"/> <b>Paint</b> <input type="checkbox"/> <b>Flow line</b> <input type="checkbox"/> <b>Other</b> ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> <b>None</b> <input type="checkbox"/> <b>Algae</b> <input type="checkbox"/> <b>Dead fish</b> <input type="checkbox"/> <b>Suspended solids</b> <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Other:</b> _____	



DATE: 4/25/16

TIME: 10:32  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
OUTFALL ID: <u>OF-042</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> JA40 ( <i>Appomattox River I and II</i> ) <input type="checkbox"/> JA44 ( <i>Swift Creek, Old Town Creek</i> ) <input checked="" type="checkbox"/> JA-J ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input type="checkbox"/> Corridor ( <i>In or adjacent to watercourse</i> ) <input checked="" type="checkbox"/> Upland ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> Tributary ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input checked="" type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input checked="" type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input checked="" type="checkbox"/> On\In concrete structure <input type="checkbox"/> In\Near watercourse <input checked="" type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> None ( <i>no detectable scent</i> ) <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid\Sour\Pungent <input type="checkbox"/> Sulfide ( <i>rotten eggs</i> ) <input type="checkbox"/> Natural gas <input type="checkbox"/> Petroleum ( <i>gas</i> ) <input type="checkbox"/> Other: _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Oily sheen\film <input type="checkbox"/> Cloudy <input type="checkbox"/> Suds <input type="checkbox"/> Colored ( <i>describe</i> ): _____ <input type="checkbox"/> Other: _____ <b>Deposits\Stains:</b> <input type="checkbox"/> Oily <input type="checkbox"/> Paint <input type="checkbox"/> Flow line <input type="checkbox"/> Other ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> None <input type="checkbox"/> Algae <input type="checkbox"/> Dead fish <input type="checkbox"/> Suspended solids <input type="checkbox"/> Sewage <input type="checkbox"/> Other: _____	



DATE: 5/25/16

TIME: 9:35  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
<b>OUTFALL ID:</b> <u>OF-043</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> <b>JA40</b> ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> <b>JA44</b> ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> <b>JA-J</b> ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> <b>Corridor</b> ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> <b>Upland</b> ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> <b>Tributary</b> ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input type="checkbox"/> Stabilized embankment <input checked="" type="checkbox"/> Eroded embankment <input type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> <b>None</b> ( <i>no detectable scent</i> ) <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Rancid\Sour\Pungent</b> <input type="checkbox"/> <b>Sulfide</b> ( <i>rotten eggs</i> ) <input type="checkbox"/> <b>Natural gas</b> <input type="checkbox"/> <b>Petroleum</b> ( <i>gas</i> ) <input type="checkbox"/> <b>Other:</b> _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> <b>Normal</b> <input type="checkbox"/> <b>Oily sheen\film</b> <input type="checkbox"/> <b>Cloudy</b> <input type="checkbox"/> <b>Suds</b> <input type="checkbox"/> <b>Colored</b> ( <i>describe</i> ): _____ <input type="checkbox"/> <b>Other:</b> _____ <b>Deposits\Stains:</b> <input type="checkbox"/> <b>Oily</b> <input type="checkbox"/> <b>Paint</b> <input type="checkbox"/> <b>Flow line</b> <input type="checkbox"/> <b>Other</b> ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input type="checkbox"/> <b>None</b> <input checked="" type="checkbox"/> <b>Algae</b> <input type="checkbox"/> <b>Dead fish</b> <input type="checkbox"/> <b>Suspended solids</b> <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Other:</b> _____	



DATE: 4/25/16

TIME: 2:29  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
OUTFALL ID: <u>OF-044</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> JA40 ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> JA44 ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> JA-J ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input type="checkbox"/> Corridor ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> Upland ( <i>Not adjacent to watercourse</i> ) <input checked="" type="checkbox"/> Tributary ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input checked="" type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input checked="" type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> None ( <i>no detectable scent</i> ) <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid\Sour\Pungent <input type="checkbox"/> Sulfide ( <i>rotten eggs</i> ) <input type="checkbox"/> Natural gas <input type="checkbox"/> Petroleum ( <i>gas</i> ) <input type="checkbox"/> Other: _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Oily sheen\film <input type="checkbox"/> Cloudy <input type="checkbox"/> Suds <input type="checkbox"/> Colored ( <i>describe</i> ): _____ <input type="checkbox"/> Other: _____ <b>Deposits\Stains:</b> <input type="checkbox"/> Oily <input type="checkbox"/> Paint <input type="checkbox"/> Flow line <input type="checkbox"/> Other ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> None <input type="checkbox"/> Algae <input type="checkbox"/> Dead fish <input type="checkbox"/> Suspended solids <input type="checkbox"/> Sewage <input type="checkbox"/> Other: _____	

FLOW CONDITIONS	<input type="checkbox"/> 1 - No flow\interior conditions are dry
	<input checked="" type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	<b>Flow Estimates:</b>
	Width of flow surface: __ inches __ feet
	Approximate depth of flow: __ inches ____ feet
	Approximate flow rate: __ feet per second

**- REPORT SUMMARY CHARACTERIZATION -**

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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of Outfall Must be Attached to  
Complete Report

**ADDITIONAL NOTES:**

Ponding water

REPORTER SIGNATURE: \_\_\_\_\_

*Jeremy D Moore*



DATE: 4/25/16

TIME: 2:27  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
<b>OUTFALL ID:</b> <u>OF-045</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> <b>JA40</b> ( <i>Appomattox River I and II</i> ) <input type="checkbox"/> <b>JA44</b> ( <i>Swift Creek, Old Town Creek</i> ) <input checked="" type="checkbox"/> <b>JA-J</b> ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input type="checkbox"/> <b>Corridor</b> ( <i>In or adjacent to watercourse</i> ) <input checked="" type="checkbox"/> <b>Upland</b> ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> <b>Tributary</b> ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input type="checkbox"/> Stabilized embankment <input checked="" type="checkbox"/> Eroded embankment <input type="checkbox"/> On\In concrete structure <input type="checkbox"/> In\Near watercourse <input checked="" type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> <b>None</b> ( <i>no detectable scent</i> ) <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Rancid\Sour\Pungent</b> <input type="checkbox"/> <b>Sulfide</b> ( <i>rotten eggs</i> ) <input type="checkbox"/> <b>Natural gas</b> <input type="checkbox"/> <b>Petroleum</b> ( <i>gas</i> ) <input type="checkbox"/> <b>Other:</b> _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> <b>Normal</b> <input type="checkbox"/> <b>Oily sheen\film</b> <input type="checkbox"/> <b>Cloudy</b> <input type="checkbox"/> <b>Suds</b> <input type="checkbox"/> <b>Colored</b> ( <i>describe</i> ): _____ <input type="checkbox"/> <b>Other:</b> _____ <b>Deposits\Stains:</b> <input type="checkbox"/> <b>Oily</b> <input type="checkbox"/> <b>Paint</b> <input type="checkbox"/> <b>Flow line</b> <input type="checkbox"/> <b>Other</b> ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> <b>None</b> <input type="checkbox"/> <b>Algae</b> <input type="checkbox"/> <b>Dead fish</b> <input type="checkbox"/> <b>Suspended solids</b> <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Other:</b> _____	

FLOW CONDITIONS	<input checked="" type="checkbox"/> 1 - No flow\interior conditions are dry
	<input type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	Flow Estimates:
	Width of flow surface: __ inches __ feet
	Approximate depth of flow: __ inches ____ feet
	Approximate flow rate: __ feet per second

- REPORT SUMMARY CHARACTERIZATION -

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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**Photographic Documentation  
of Outfall Must be Attached to  
Complete Report**

ADDITIONAL NOTES:

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REPORTER SIGNATURE: Jeremy D Moore



DATE: 5/16/16

TIME: 11:03  AM  PM

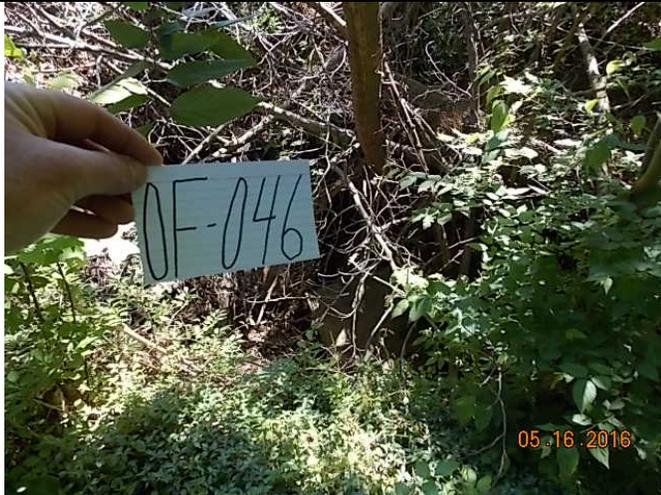
FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
<b>OUTFALL ID:</b> <u>OF-046</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> JA40 ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> JA44 ( <i>Swift Creek, Old Town Creek</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input type="checkbox"/> Corridor ( <i>In or adjacent to watercourse</i> ) <input checked="" type="checkbox"/> Upland ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> Tributary ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input checked="" type="checkbox"/> Collapsed pipe <input checked="" type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input type="checkbox"/> Stabilized embankment <input checked="" type="checkbox"/> Eroded embankment <input type="checkbox"/> On\In concrete structure <input type="checkbox"/> In\Near watercourse <input checked="" type="checkbox"/> Upland area\away from watercourse <input type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> None ( <i>no detectable scent</i> ) <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid\Sour\Pungent <input type="checkbox"/> Sulfide ( <i>rotten eggs</i> ) <input type="checkbox"/> Natural gas <input type="checkbox"/> Petroleum ( <i>gas</i> ) <input type="checkbox"/> Other: _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Oily sheen\film <input type="checkbox"/> Cloudy <input type="checkbox"/> Suds <input type="checkbox"/> Colored ( <i>describe</i> ): _____ <input type="checkbox"/> Other: _____ <b>Deposits\Stains:</b> <input type="checkbox"/> Oily <input type="checkbox"/> Paint <input type="checkbox"/> Flow line <input type="checkbox"/> Other ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> None <input type="checkbox"/> Algae <input type="checkbox"/> Dead fish <input type="checkbox"/> Suspended solids <input type="checkbox"/> Sewage <input type="checkbox"/> Other: _____	

FLOW CONDITIONS	<input checked="" type="checkbox"/> 1 - No flow\interior conditions are dry
	<input type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	Flow Estimates:
	Width of flow surface: _____ inches _____ feet
	Approximate depth of flow: _____ inches _____ feet
	Approximate flow rate: _____ feet per second

- REPORT SUMMARY CHARACTERIZATION -

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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Photographic Documentation  
of Outfall **Must** be Attached to  
Complete Report

ADDITIONAL NOTES:

Residents blocked outfall with limbs and other debris;

REPORTER SIGNATURE: Jeremy D Moore

DATE: 5/16/16

TIME: 11:12  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
<b>OUTFALL ID:</b> <u>OF-047</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> <b>JA40</b> ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> <b>JA44</b> ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> <b>JA-J</b> ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input type="checkbox"/> <b>Corridor</b> ( <i>In or adjacent to watercourse</i> ) <input checked="" type="checkbox"/> <b>Upland</b> ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> <b>Tributary</b> ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input checked="" type="checkbox"/> On\In concrete structure <input type="checkbox"/> In\Near watercourse <input checked="" type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> <b>None</b> ( <i>no detectable scent</i> ) <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid\Sour\Pungent <input type="checkbox"/> Sulfide ( <i>rotten eggs</i> ) <input type="checkbox"/> Natural gas <input type="checkbox"/> Petroleum ( <i>gas</i> ) <input type="checkbox"/> Other: _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Oily sheen\film <input type="checkbox"/> Cloudy <input type="checkbox"/> Suds <input type="checkbox"/> Colored ( <i>describe</i> ): _____ <input type="checkbox"/> Other: _____ <b>Deposits\Stains:</b> <input type="checkbox"/> Oily <input type="checkbox"/> Paint <input type="checkbox"/> Flow line <input type="checkbox"/> Other ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> None <input type="checkbox"/> Algae <input type="checkbox"/> Dead fish <input type="checkbox"/> Suspended solids <input type="checkbox"/> Sewage <input type="checkbox"/> Other: _____	

FLOW CONDITIONS	<input type="checkbox"/> 1 - No flow\interior conditions are dry
	<input checked="" type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	<b>Flow Estimates:</b>
	Width of flow surface: __ inches __ feet
	Approximate depth of flow: __ inches ____ feet
	Approximate flow rate: __ feet per second

**- REPORT SUMMARY CHARACTERIZATION -**

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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**Photographic Documentation  
of Outfall Must be Attached to  
Complete Report**

**ADDITIONAL NOTES:**

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REPORTER SIGNATURE: Jeremy D Moore



DATE: 4/27/16

TIME: 9:29  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
OUTFALL ID: <u>OF-048</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> JA40 ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> JA44 ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> JA-J ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input type="checkbox"/> Corridor ( <i>In or adjacent to watercourse</i> ) <input checked="" type="checkbox"/> Upland ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> Tributary ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input type="checkbox"/> On\In concrete structure <input type="checkbox"/> In\Near watercourse <input checked="" type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> None ( <i>no detectable scent</i> ) <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid\Sour\Pungent <input type="checkbox"/> Sulfide ( <i>rotten eggs</i> ) <input type="checkbox"/> Natural gas <input type="checkbox"/> Petroleum ( <i>gas</i> ) <input type="checkbox"/> Other: _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Oily sheen\film <input type="checkbox"/> Cloudy <input type="checkbox"/> Suds <input type="checkbox"/> Colored ( <i>describe</i> ): _____ <input type="checkbox"/> Other: _____ <b>Deposits\Stains:</b> <input type="checkbox"/> Oily <input type="checkbox"/> Paint <input type="checkbox"/> Flow line <input type="checkbox"/> Other ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> None <input type="checkbox"/> Algae <input type="checkbox"/> Dead fish <input type="checkbox"/> Suspended solids <input type="checkbox"/> Sewage <input type="checkbox"/> Other: _____	

FLOW CONDITIONS	<input type="checkbox"/> 1 - No flow\interior conditions are dry
	<input checked="" type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	<b>Flow Estimates:</b>
	Width of flow surface: __ inches __ feet
	Approximate depth of flow: __ inches ____ feet
	Approximate flow rate: __ feet per second

**- REPORT SUMMARY CHARACTERIZATION -**

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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**Photographic Documentation  
of Outfall Must be Attached to  
Complete Report**

**ADDITIONAL NOTES:**

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REPORTER SIGNATURE: Jeremy D Moore



DATE: 4/25/16

TIME: 1:59  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
<b>OUTFALL ID:</b> <u>OF-049</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input checked="" type="checkbox"/> <b>JA40</b> ( <i>Appomattox River I and II</i> ) <input type="checkbox"/> <b>JA44</b> ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> <b>JA-J</b> ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input type="checkbox"/> <b>Corridor</b> ( <i>In or adjacent to watercourse</i> ) <input checked="" type="checkbox"/> <b>Upland</b> ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> <b>Tributary</b> ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input checked="" type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input checked="" type="checkbox"/> On\In concrete structure <input type="checkbox"/> In\Near watercourse <input checked="" type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> <b>None</b> ( <i>no detectable scent</i> ) <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid\Sour\Pungent <input type="checkbox"/> Sulfide ( <i>rotten eggs</i> ) <input type="checkbox"/> Natural gas <input type="checkbox"/> Petroleum ( <i>gas</i> ) <input type="checkbox"/> Other: _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Oily sheen\film <input type="checkbox"/> Cloudy <input type="checkbox"/> Suds <input type="checkbox"/> Colored ( <i>describe</i> ): _____ <input type="checkbox"/> Other: _____ <b>Deposits\Stains:</b> <input type="checkbox"/> Oily <input type="checkbox"/> Paint <input type="checkbox"/> Flow line <input type="checkbox"/> Other ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> None <input type="checkbox"/> Algae <input type="checkbox"/> Dead fish <input type="checkbox"/> Suspended solids <input type="checkbox"/> Sewage <input type="checkbox"/> Other: _____	

FLOW CONDITIONS	<input checked="" type="checkbox"/> 1 - No flow\interior conditions are dry
	<input type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	Flow Estimates:
	Width of flow surface: __ inches __ feet
	Approximate depth of flow: __ inches ____ feet
	Approximate flow rate: __ feet per second

- REPORT SUMMARY CHARACTERIZATION -

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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Photographic Documentation  
of Outfall Must be Attached to  
Complete Report

ADDITIONAL NOTES:

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REPORTER SIGNATURE: Jeremy D Moore



DATE: 4/25/16

TIME: 10:12  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
<b>OUTFALL ID:</b> <u>OF-050</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> <b>JA40</b> ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> <b>JA44</b> ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> <b>JA-J</b> ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> <b>Corridor</b> ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> <b>Upland</b> ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> <b>Tributary</b> ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input checked="" type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input checked="" type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> <b>None</b> ( <i>no detectable scent</i> ) <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Rancid\Sour\Pungent</b> <input type="checkbox"/> <b>Sulfide</b> ( <i>rotten eggs</i> ) <input type="checkbox"/> <b>Natural gas</b> <input type="checkbox"/> <b>Petroleum</b> ( <i>gas</i> ) <input type="checkbox"/> <b>Other:</b> _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> <b>Normal</b> <input type="checkbox"/> <b>Oily sheen\film</b> <input type="checkbox"/> <b>Cloudy</b> <input type="checkbox"/> <b>Suds</b> <input type="checkbox"/> <b>Colored</b> ( <i>describe</i> ): _____ <input type="checkbox"/> <b>Other:</b> _____ <b>Deposits\Stains:</b> <input type="checkbox"/> <b>Oily</b> <input type="checkbox"/> <b>Paint</b> <input type="checkbox"/> <b>Flow line</b> <input type="checkbox"/> <b>Other</b> ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> <b>None</b> <input type="checkbox"/> <b>Algae</b> <input type="checkbox"/> <b>Dead fish</b> <input type="checkbox"/> <b>Suspended solids</b> <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Other:</b> _____	

<b>FLOW CONDITIONS</b>	<input type="checkbox"/> 1 - No flow\interior conditions are dry
	<input checked="" type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	<b>Flow Estimates:</b>
	Width of flow surface: ___ inches ___ feet
	Approximate depth of flow: ___ inches ___ feet
	Approximate flow rate: ___ feet per second

**- REPORT SUMMARY CHARACTERIZATION -**

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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**Photographic Documentation  
of Outfall Must be Attached to  
Complete Report**

**ADDITIONAL NOTES:**

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**REPORTER SIGNATURE:** \_\_\_\_\_  
*Jeremy D Moore*



DATE: 4/25/16

TIME: 2:41  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
OUTFALL ID: <u>OF-051</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> JA40 ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> JA44 ( <i>Swift Creek, Old Town Creek</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input type="checkbox"/> Corridor ( <i>In or adjacent to watercourse</i> ) <input checked="" type="checkbox"/> Upland ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> Tributary ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input checked="" type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input checked="" type="checkbox"/> On\In concrete structure <input type="checkbox"/> In\Near watercourse <input checked="" type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> None ( <i>no detectable scent</i> ) <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid\Sour\Pungent <input type="checkbox"/> Sulfide ( <i>rotten eggs</i> ) <input type="checkbox"/> Natural gas <input type="checkbox"/> Petroleum ( <i>gas</i> ) <input type="checkbox"/> Other: _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Oily sheen\film <input type="checkbox"/> Cloudy <input type="checkbox"/> Suds <input type="checkbox"/> Colored ( <i>describe</i> ): _____ <input type="checkbox"/> Other: _____ <b>Deposits\Stains:</b> <input type="checkbox"/> Oily <input type="checkbox"/> Paint <input type="checkbox"/> Flow line <input type="checkbox"/> Other ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> None <input type="checkbox"/> Algae <input type="checkbox"/> Dead fish <input type="checkbox"/> Suspended solids <input type="checkbox"/> Sewage <input type="checkbox"/> Other: _____	

FLOW CONDITIONS	<input type="checkbox"/> 1 - No flow\interior conditions are dry
	<input checked="" type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	<b>Flow Estimates:</b> Width of flow surface: _____ inches _____ feet Approximate depth of flow: _____ inches _____ feet Approximate flow rate: _____ feet per second

**- REPORT SUMMARY CHARACTERIZATION -**

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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**Photographic Documentation  
of Outfall Must be Attached to  
Complete Report**

**ADDITIONAL NOTES:**

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REPORTER SIGNATURE: Jeremy D Moore



DATE: 4/26/16

TIME: 1:36  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
OUTFALL ID: <u>OF-052</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> JA40 ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> JA44 ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> JA-J ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> Corridor ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> Upland ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> Tributary ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> Time Lapse: <input type="checkbox"/> < 2 days <input checked="" type="checkbox"/> > 2 days Estimated Amount: <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> None ( <i>no detectable scent</i> ) <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid\Sour\Pungent <input type="checkbox"/> Sulfide ( <i>rotten eggs</i> ) <input type="checkbox"/> Natural gas <input type="checkbox"/> Petroleum ( <i>gas</i> ) <input type="checkbox"/> Other: _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Oily sheen\film <input type="checkbox"/> Cloudy <input type="checkbox"/> Suds <input type="checkbox"/> Colored ( <i>describe</i> ): _____ <input type="checkbox"/> Other: _____ Deposits\Stains: <input type="checkbox"/> Oily <input type="checkbox"/> Paint <input type="checkbox"/> Flow line <input type="checkbox"/> Other ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> None <input type="checkbox"/> Algae <input type="checkbox"/> Dead fish <input type="checkbox"/> Suspended solids <input type="checkbox"/> Sewage <input type="checkbox"/> Other: _____	

FLOW CONDITIONS	<input type="checkbox"/> 1 - No flow\interior conditions are dry
	<input checked="" type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	<b>Flow Estimates:</b>
	Width of flow surface: ___ inches ___ feet
	Approximate depth of flow: ___ inches ___ feet
	Approximate flow rate: ___ feet per second

**- REPORT SUMMARY CHARACTERIZATION -**

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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**Photographic Documentation  
of Outfall Must be Attached to  
Complete Report**

**ADDITIONAL NOTES:**

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REPORTER SIGNATURE: Jeremy D Moore



DATE: 4/26/16

TIME: 1:42  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
<b>OUTFALL ID:</b> <u>OF-053</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> <b>JA40</b> ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> <b>JA44</b> ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> <b>JA-J</b> ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> <b>Corridor</b> ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> <b>Upland</b> ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> <b>Tributary</b> ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input type="checkbox"/> < 2 days <input checked="" type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input checked="" type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> <b>None</b> ( <i>no detectable scent</i> ) <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Rancid\Sour\Pungent</b> <input type="checkbox"/> <b>Sulfide</b> ( <i>rotten eggs</i> ) <input type="checkbox"/> <b>Natural gas</b> <input type="checkbox"/> <b>Petroleum</b> ( <i>gas</i> ) <input type="checkbox"/> <b>Other:</b> _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> <b>Normal</b> <input type="checkbox"/> <b>Oily sheen\film</b> <input type="checkbox"/> <b>Cloudy</b> <input type="checkbox"/> <b>Suds</b> <input type="checkbox"/> <b>Colored</b> ( <i>describe</i> ): _____ <input type="checkbox"/> <b>Other:</b> _____ <b>Deposits\Stains:</b> <input type="checkbox"/> <b>Oily</b> <input type="checkbox"/> <b>Paint</b> <input type="checkbox"/> <b>Flow line</b> <input type="checkbox"/> <b>Other</b> ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> <b>None</b> <input type="checkbox"/> <b>Algae</b> <input type="checkbox"/> <b>Dead fish</b> <input type="checkbox"/> <b>Suspended solids</b> <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Other:</b> _____	

FLOW CONDITIONS	<input checked="" type="checkbox"/> 1 - No flow\interior conditions are dry
	<input type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	<b>Flow Estimates:</b>
	Width of flow surface: ___ inches ___ feet
	Approximate depth of flow: ___ inches ___ feet
	Approximate flow rate: ___ feet per second

- REPORT SUMMARY CHARACTERIZATION -

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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Photographic Documentation  
of Outfall Must be Attached to  
Complete Report

ADDITIONAL NOTES:

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*Jeremy D Moore*

REPORTER SIGNATURE: \_\_\_\_\_



DATE: 4/26/16

TIME: 1:44  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
OUTFALL ID: <u>OF-054</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> JA40 ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> JA44 ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> JA-J ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> Corridor ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> Upland ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> Tributary ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input type="checkbox"/> < 2 days <input checked="" type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input checked="" type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input checked="" type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> None ( <i>no detectable scent</i> ) <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid\Sour\Pungent <input type="checkbox"/> Sulfide ( <i>rotten eggs</i> ) <input type="checkbox"/> Natural gas <input type="checkbox"/> Petroleum ( <i>gas</i> ) <input type="checkbox"/> Other: _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Oily sheen\film <input type="checkbox"/> Cloudy <input type="checkbox"/> Suds <input type="checkbox"/> Colored ( <i>describe</i> ): _____ <input type="checkbox"/> Other: _____ <b>Deposits\Stains:</b> <input type="checkbox"/> Oily <input type="checkbox"/> Paint <input type="checkbox"/> Flow line <input type="checkbox"/> Other ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> None <input type="checkbox"/> Algae <input type="checkbox"/> Dead fish <input type="checkbox"/> Suspended solids <input type="checkbox"/> Sewage <input type="checkbox"/> Other: _____	

FLOW CONDITIONS	<input type="checkbox"/> 1 - No flow\interior conditions are dry
	<input checked="" type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	<b>Flow Estimates:</b>
	Width of flow surface: ___ inches ___ feet
	Approximate depth of flow: ___ inches ____ feet
	Approximate flow rate: ___ feet per second

**- REPORT SUMMARY CHARACTERIZATION -**

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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**Photographic Documentation  
of Outfall Must be Attached to  
Complete Report**

**ADDITIONAL NOTES:**

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REPORTER SIGNATURE: Jeremy D Moore



DATE: 4/26/16

TIME: 10:44  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
OUTFALL ID: <u>OF-055</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> JA40 ( <i>Appomattox River I and II</i> ) <input type="checkbox"/> JA44 ( <i>Swift Creek, Old Town Creek</i> ) <input checked="" type="checkbox"/> JA-J ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input type="checkbox"/> Corridor ( <i>In or adjacent to watercourse</i> ) <input checked="" type="checkbox"/> Upland ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> Tributary ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input checked="" type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input type="checkbox"/> On\In concrete structure <input type="checkbox"/> In\Near watercourse <input checked="" type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> None ( <i>no detectable scent</i> ) <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid\Sour\Pungent <input type="checkbox"/> Sulfide ( <i>rotten eggs</i> ) <input type="checkbox"/> Natural gas <input type="checkbox"/> Petroleum ( <i>gas</i> ) <input type="checkbox"/> Other: _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Oily sheen\film <input type="checkbox"/> Cloudy <input type="checkbox"/> Suds <input type="checkbox"/> Colored ( <i>describe</i> ): _____ <input type="checkbox"/> Other: _____ <b>Deposits\Stains:</b> <input type="checkbox"/> Oily <input type="checkbox"/> Paint <input type="checkbox"/> Flow line <input type="checkbox"/> Other ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> None <input type="checkbox"/> Algae <input type="checkbox"/> Dead fish <input type="checkbox"/> Suspended solids <input type="checkbox"/> Sewage <input type="checkbox"/> Other: _____	

<b>FLOW CONDITIONS</b>	<input checked="" type="checkbox"/> 1 - No flow\interior conditions are dry
	<input type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	<b>Flow Estimates:</b>
	Width of flow surface: ___ inches ___ feet
	Approximate depth of flow: ___ inches ___ feet
	Approximate flow rate: ___ feet per second

**- REPORT SUMMARY CHARACTERIZATION -**

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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**Photographic Documentation  
of Outfall Must be Attached to  
Complete Report**

**ADDITIONAL NOTES:**

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Pipe partially blocked with leaves & grass clippings.

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REPORTER SIGNATURE: Jeremy D Moore



DATE: 4/25/16

TIME: 2:12  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
<b>OUTFALL ID:</b> <u>OF-056</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input checked="" type="checkbox"/> <b>JA40</b> ( <i>Appomattox River I and II</i> ) <input type="checkbox"/> <b>JA44</b> ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> <b>JA-J</b> ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input type="checkbox"/> <b>Corridor</b> ( <i>In or adjacent to watercourse</i> ) <input checked="" type="checkbox"/> <b>Upland</b> ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> <b>Tributary</b> ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input checked="" type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input checked="" type="checkbox"/> On\In concrete structure <input type="checkbox"/> In\Near watercourse <input checked="" type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> <b>None</b> ( <i>no detectable scent</i> ) <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Rancid\Sour\Pungent</b> <input type="checkbox"/> <b>Sulfide</b> ( <i>rotten eggs</i> ) <input type="checkbox"/> <b>Natural gas</b> <input type="checkbox"/> <b>Petroleum</b> ( <i>gas</i> ) <input type="checkbox"/> <b>Other:</b> _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> <b>Normal</b> <input type="checkbox"/> <b>Oily sheen\film</b> <input type="checkbox"/> <b>Cloudy</b> <input type="checkbox"/> <b>Suds</b> <input type="checkbox"/> <b>Colored</b> ( <i>describe</i> ): _____ <input type="checkbox"/> <b>Other:</b> _____ <b>Deposits\Stains:</b> <input type="checkbox"/> <b>Oily</b> <input type="checkbox"/> <b>Paint</b> <input type="checkbox"/> <b>Flow line</b> <input type="checkbox"/> <b>Other</b> ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> <b>None</b> <input type="checkbox"/> <b>Algae</b> <input type="checkbox"/> <b>Dead fish</b> <input type="checkbox"/> <b>Suspended solids</b> <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Other:</b> _____	

FLOW CONDITIONS	<input type="checkbox"/> 1 - No flow\interior conditions are dry
	<input checked="" type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	<b>Flow Estimates:</b>
	Width of flow surface: __ inches __ feet
	Approximate depth of flow: __ inches ____ feet
	Approximate flow rate: __ feet per second

**- REPORT SUMMARY CHARACTERIZATION -**

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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**Photographic Documentation  
of Outfall Must be Attached to  
Complete Report**

**ADDITIONAL NOTES:**

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REPORTER SIGNATURE: Jeremy D Moore



DATE: 4/25/16

TIME: 1:13  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
OUTFALL ID: <u>OF-057</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> JA40 ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> JA44 ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> JA-J ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input type="checkbox"/> Corridor ( <i>In or adjacent to watercourse</i> ) <input checked="" type="checkbox"/> Upland ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> Tributary ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> None ( <i>no detectable scent</i> ) <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid\Sour\Pungent <input type="checkbox"/> Sulfide ( <i>rotten eggs</i> ) <input type="checkbox"/> Natural gas <input type="checkbox"/> Petroleum ( <i>gas</i> ) <input type="checkbox"/> Other: _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Oily sheen\film <input type="checkbox"/> Cloudy <input type="checkbox"/> Suds <input type="checkbox"/> Colored ( <i>describe</i> ): _____ <input type="checkbox"/> Other: _____ <b>Deposits\Stains:</b> <input type="checkbox"/> Oily <input type="checkbox"/> Paint <input type="checkbox"/> Flow line <input type="checkbox"/> Other ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> None <input type="checkbox"/> Algae <input type="checkbox"/> Dead fish <input type="checkbox"/> Suspended solids <input type="checkbox"/> Sewage <input type="checkbox"/> Other: _____	

FLOW CONDITIONS	<input type="checkbox"/> 1 - No flow\interior conditions are dry
	<input checked="" type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	<b>Flow Estimates:</b>
	Width of flow surface: ___ inches ___ feet
	Approximate depth of flow: ___ inches ___ feet
	Approximate flow rate: ___ feet per second

**- REPORT SUMMARY CHARACTERIZATION -**

Unlikely Illicit Discharge       Suspected Illicit Discharge       Obvious Illicit Discharge



**Photographic Documentation  
of Outfall Must be Attached to  
Complete Report**

**ADDITIONAL NOTES:**

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REPORTER SIGNATURE: Jeremy D Moore



DATE: 4/25/16

TIME: 1:21  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
OUTFALL ID: <u>OF-058</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> JA40 ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> JA44 ( <i>Swift Creek, Old Town Creek</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input type="checkbox"/> Corridor ( <i>In or adjacent to watercourse</i> ) <input checked="" type="checkbox"/> Upland ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> Tributary ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> Time Lapse: <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days Estimated Amount: <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input checked="" type="checkbox"/> Earth\sediment <input checked="" type="checkbox"/> Rock\rubble <input type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input type="checkbox"/> On\In concrete structure <input type="checkbox"/> In\Near watercourse <input checked="" type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> None ( <i>no detectable scent</i> ) <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid\Sour\Pungent <input type="checkbox"/> Sulfide ( <i>rotten eggs</i> ) <input type="checkbox"/> Natural gas <input type="checkbox"/> Petroleum ( <i>gas</i> ) <input type="checkbox"/> Other: _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Oily sheen\film <input type="checkbox"/> Cloudy <input type="checkbox"/> Suds <input type="checkbox"/> Colored ( <i>describe</i> ): _____ <input type="checkbox"/> Other: _____ Deposits\Stains: <input type="checkbox"/> Oily <input type="checkbox"/> Paint <input type="checkbox"/> Flow line <input type="checkbox"/> Other ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> None <input type="checkbox"/> Algae <input type="checkbox"/> Dead fish <input type="checkbox"/> Suspended solids <input type="checkbox"/> Sewage <input type="checkbox"/> Other: _____	

FLOW CONDITIONS	<input checked="" type="checkbox"/> 1 - No flow\interior conditions are dry
	<input type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	<b>Flow Estimates:</b>
	Width of flow surface: _____ inches _____ feet
	Approximate depth of flow: _____ inches _____ feet
	Approximate flow rate: _____ feet per second

**- REPORT SUMMARY CHARACTERIZATION -**

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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Photographic Documentation  
of Outfall **Must** be Attached to  
Complete Report

**ADDITIONAL NOTES:**

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REPORTER SIGNATURE: \_\_\_\_\_ *Jeremy D Moore*



DATE: 5/26/16

TIME: 10:03  AM  PM

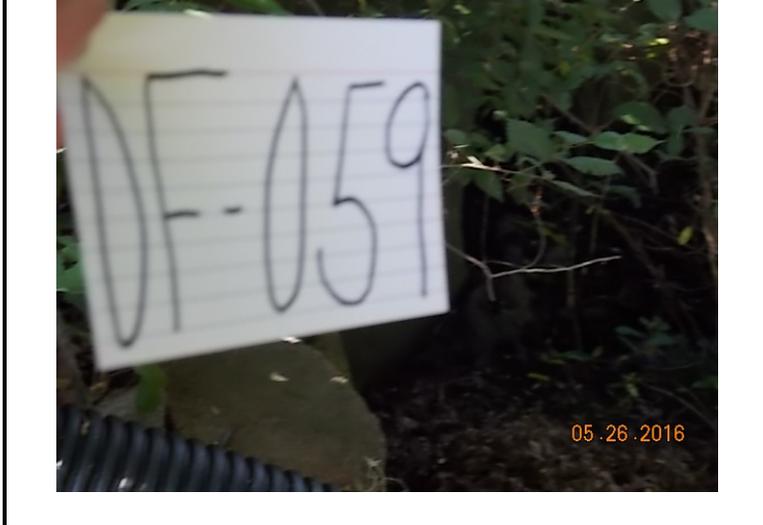
FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
<b>OUTFALL ID:</b> <u>OF-059</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> <b>JA40</b> ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> <b>JA44</b> ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> <b>JA-J</b> ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> <b>Corridor</b> ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> <b>Upland</b> ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> <b>Tributary</b> ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input type="checkbox"/> < 2 days <input checked="" type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input checked="" type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> <b>None</b> ( <i>no detectable scent</i> ) <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Rancid\Sour\Pungent</b> <input type="checkbox"/> <b>Sulfide</b> ( <i>rotten eggs</i> ) <input type="checkbox"/> <b>Natural gas</b> <input type="checkbox"/> <b>Petroleum</b> ( <i>gas</i> ) <input type="checkbox"/> <b>Other:</b> _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> <b>Normal</b> <input type="checkbox"/> <b>Oily sheen\film</b> <input type="checkbox"/> <b>Cloudy</b> <input type="checkbox"/> <b>Suds</b> <input type="checkbox"/> <b>Colored</b> ( <i>describe</i> ): _____ <input type="checkbox"/> <b>Other:</b> _____ <b>Deposits\Stains:</b> <input type="checkbox"/> <b>Oily</b> <input type="checkbox"/> <b>Paint</b> <input type="checkbox"/> <b>Flow line</b> <input type="checkbox"/> <b>Other</b> ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> <b>None</b> <input type="checkbox"/> <b>Algae</b> <input type="checkbox"/> <b>Dead fish</b> <input type="checkbox"/> <b>Suspended solids</b> <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Other:</b> _____	

FLOW CONDITIONS	<input type="checkbox"/> 1 - No flow\interior conditions are dry
	<input checked="" type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	<b>Flow Estimates:</b>
	Width of flow surface: ___ inches ___ feet
	Approximate depth of flow: ___ inches ___ feet
	Approximate flow rate: ___ feet per second

- REPORT SUMMARY CHARACTERIZATION -

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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**Photographic Documentation  
of Outfall Must be Attached to  
Complete Report**

ADDITIONAL NOTES:

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REPORTER SIGNATURE: Jeremy D Moore



DATE: 4/26/16

TIME: 12:56  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
<b>OUTFALL ID:</b> <u>OF-060</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> <b>JA40</b> ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> <b>JA44</b> ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> <b>JA-J</b> ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> <b>Corridor</b> ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> <b>Upland</b> ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> <b>Tributary</b> ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input type="checkbox"/> < 2 days <input checked="" type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input checked="" type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> <b>None</b> ( <i>no detectable scent</i> ) <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Rancid\Sour\Pungent</b> <input type="checkbox"/> <b>Sulfide</b> ( <i>rotten eggs</i> ) <input type="checkbox"/> <b>Natural gas</b> <input type="checkbox"/> <b>Petroleum</b> ( <i>gas</i> ) <input type="checkbox"/> <b>Other:</b> _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> <b>Normal</b> <input type="checkbox"/> <b>Oily sheen\film</b> <input type="checkbox"/> <b>Cloudy</b> <input type="checkbox"/> <b>Suds</b> <input type="checkbox"/> <b>Colored</b> ( <i>describe</i> ): _____ <input type="checkbox"/> <b>Other:</b> _____ <b>Deposits\Stains:</b> <input type="checkbox"/> <b>Oily</b> <input type="checkbox"/> <b>Paint</b> <input type="checkbox"/> <b>Flow line</b> <input type="checkbox"/> <b>Other</b> ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> <b>None</b> <input type="checkbox"/> <b>Algae</b> <input type="checkbox"/> <b>Dead fish</b> <input type="checkbox"/> <b>Suspended solids</b> <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Other:</b> _____	



DATE: 5/16/16

TIME: 2:41  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
<b>OUTFALL ID:</b> <u>OF-061</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input checked="" type="checkbox"/> <b>JA40</b> ( <i>Appomattox River I and II</i> ) <input type="checkbox"/> <b>JA44</b> ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> <b>JA-J</b> ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> <b>Corridor</b> ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> <b>Upland</b> ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> <b>Tributary</b> ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input checked="" type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> <b>None</b> ( <i>no detectable scent</i> ) <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid\Sour\Pungent <input type="checkbox"/> Sulfide ( <i>rotten eggs</i> ) <input type="checkbox"/> Natural gas <input type="checkbox"/> Petroleum ( <i>gas</i> ) <input type="checkbox"/> Other: _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Oily sheen\film <input type="checkbox"/> Cloudy <input type="checkbox"/> Suds <input type="checkbox"/> Colored ( <i>describe</i> ): _____ <input type="checkbox"/> Other: _____ <b>Deposits\Stains:</b> <input type="checkbox"/> Oily <input type="checkbox"/> Paint <input type="checkbox"/> Flow line <input type="checkbox"/> Other ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> None <input type="checkbox"/> Algae <input type="checkbox"/> Dead fish <input type="checkbox"/> Suspended solids <input type="checkbox"/> Sewage <input type="checkbox"/> Other: _____	

<b>FLOW CONDITIONS</b>	<input checked="" type="checkbox"/> 1 - No flow\interior conditions are dry <input type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp <input type="checkbox"/> 3 - Visible flow <b>Flow Estimates:</b> Width of flow surface: __ inches __ feet Approximate depth of flow: __ inches ____ feet Approximate flow rate: __ feet per second
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- REPORT SUMMARY CHARACTERIZATION -

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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**Photographic Documentation  
of Outfall Must be Attached to  
Complete Report**

**ADDITIONAL NOTES:**

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REPORTER SIGNATURE: Jeremy D Moore



DATE: 5/25/16

TIME: 10:23  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
OUTFALL ID: <u>OF-062</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input checked="" type="checkbox"/> <b>JA40</b> ( <i>Appomattox River I and II</i> ) <input type="checkbox"/> <b>JA44</b> ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> <b>JA-J</b> ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> <b>Corridor</b> ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> <b>Upland</b> ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> <b>Tributary</b> ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input checked="" type="checkbox"/> Commercial <input type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input checked="" type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input checked="" type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> <b>None</b> ( <i>no detectable scent</i> ) <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Rancid\Sour\Pungent</b> <input type="checkbox"/> <b>Sulfide</b> ( <i>rotten eggs</i> ) <input type="checkbox"/> <b>Natural gas</b> <input type="checkbox"/> <b>Petroleum</b> ( <i>gas</i> ) <input type="checkbox"/> <b>Other:</b> _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> <b>Normal</b> <input type="checkbox"/> <b>Oily sheen\film</b> <input type="checkbox"/> <b>Cloudy</b> <input type="checkbox"/> <b>Suds</b> <input type="checkbox"/> <b>Colored</b> ( <i>describe</i> ): _____ <input type="checkbox"/> <b>Other:</b> _____ <b>Deposits\Stains:</b> <input type="checkbox"/> <b>Oily</b> <input type="checkbox"/> <b>Paint</b> <input type="checkbox"/> <b>Flow line</b> <input type="checkbox"/> <b>Other</b> ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> <b>None</b> <input type="checkbox"/> <b>Algae</b> <input type="checkbox"/> <b>Dead fish</b> <input type="checkbox"/> <b>Suspended solids</b> <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Other:</b> _____	

<b>FLOW CONDITIONS</b>	<input type="checkbox"/> 1 - No flow\interior conditions are dry
	<input checked="" type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	<b>Flow Estimates:</b>
	Width of flow surface: ___ inches ___ feet
	Approximate depth of flow: ___ inches ___ feet
	Approximate flow rate: ___ feet per second

**- REPORT SUMMARY CHARACTERIZATION -**

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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Photographic Documentation  
of Outfall **Must** be Attached to  
Complete Report

**ADDITIONAL NOTES:**

Ponding

REPORTER SIGNATURE: \_\_\_\_\_

*Jeremy D Moore*



DATE: 5/25/16

TIME: 9:41  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
OUTFALL ID: <u>OF-063</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> JA40 ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> JA44 ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> JA-J ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> Corridor ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> Upland ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> Tributary ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input checked="" type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input checked="" type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> None ( <i>no detectable scent</i> ) <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid\Sour\Pungent <input type="checkbox"/> Sulfide ( <i>rotten eggs</i> ) <input type="checkbox"/> Natural gas <input type="checkbox"/> Petroleum ( <i>gas</i> ) <input type="checkbox"/> Other: _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Oily sheen\film <input type="checkbox"/> Cloudy <input type="checkbox"/> Suds <input type="checkbox"/> Colored ( <i>describe</i> ): _____ <input type="checkbox"/> Other: _____ <b>Deposits\Stains:</b> <input type="checkbox"/> Oily <input type="checkbox"/> Paint <input type="checkbox"/> Flow line <input type="checkbox"/> Other ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> None <input type="checkbox"/> Algae <input type="checkbox"/> Dead fish <input type="checkbox"/> Suspended solids <input type="checkbox"/> Sewage <input type="checkbox"/> Other: _____	

FLOW CONDITIONS	<input type="checkbox"/> 1 - No flow\interior conditions are dry
	<input checked="" type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	<b>Flow Estimates:</b>
	Width of flow surface: ___ inches ___ feet
	Approximate depth of flow: ___ inches ___ feet
	Approximate flow rate: ___ feet per second

- REPORT SUMMARY CHARACTERIZATION -

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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Photographic Documentation  
of Outfall Must be Attached to  
Complete Report

ADDITIONAL NOTES:

Ponding

REPORTER SIGNATURE: \_\_\_\_\_

*Jeremy D Moore*



DATE: 5/25/16

TIME: 9:43  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
<b>OUTFALL ID:</b> <u>OF-064</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> <b>JA40</b> ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> <b>JA44</b> ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> <b>JA-J</b> ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> <b>Corridor</b> ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> <b>Upland</b> ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> <b>Tributary</b> ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input checked="" type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> <b>None</b> ( <i>no detectable scent</i> ) <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Rancid\Sour\Pungent</b> <input type="checkbox"/> <b>Sulfide</b> ( <i>rotten eggs</i> ) <input type="checkbox"/> <b>Natural gas</b> <input type="checkbox"/> <b>Petroleum</b> ( <i>gas</i> ) <input type="checkbox"/> <b>Other:</b> _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> <b>Normal</b> <input type="checkbox"/> <b>Oily sheen\film</b> <input type="checkbox"/> <b>Cloudy</b> <input type="checkbox"/> <b>Suds</b> <input type="checkbox"/> <b>Colored</b> ( <i>describe</i> ): _____ <input type="checkbox"/> <b>Other:</b> _____ <b>Deposits\Stains:</b> <input type="checkbox"/> <b>Oily</b> <input type="checkbox"/> <b>Paint</b> <input type="checkbox"/> <b>Flow line</b> <input type="checkbox"/> <b>Other</b> ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> <b>None</b> <input type="checkbox"/> <b>Algae</b> <input type="checkbox"/> <b>Dead fish</b> <input type="checkbox"/> <b>Suspended solids</b> <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Other:</b> _____	

FLOW CONDITIONS	<input type="checkbox"/> 1 - No flow\interior conditions are dry
	<input checked="" type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	Flow Estimates:
	Width of flow surface: ___ inches ___ feet
	Approximate depth of flow: ___ inches ___ feet
	Approximate flow rate: ___ feet per second

- REPORT SUMMARY CHARACTERIZATION -

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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Photographic Documentation  
of Outfall Must be Attached to  
Complete Report

ADDITIONAL NOTES:

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REPORTER SIGNATURE: \_\_\_\_\_

*Jeremy D Moore*



DATE: 5/26/16

TIME: 9:51  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
<b>OUTFALL ID:</b> <u>OF-066</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> <b>JA40</b> ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> <b>JA44</b> ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> <b>JA-J</b> ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> <b>Corridor</b> ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> <b>Upland</b> ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> <b>Tributary</b> ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input type="checkbox"/> < 2 days <input checked="" type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input checked="" type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> <b>None</b> ( <i>no detectable scent</i> ) <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Rancid\Sour\Pungent</b> <input type="checkbox"/> <b>Sulfide</b> ( <i>rotten eggs</i> ) <input type="checkbox"/> <b>Natural gas</b> <input type="checkbox"/> <b>Petroleum (gas)</b> <input type="checkbox"/> <b>Other:</b> _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> <b>Normal</b> <input type="checkbox"/> <b>Oily sheen\film</b> <input type="checkbox"/> <b>Cloudy</b> <input type="checkbox"/> <b>Suds</b> <input type="checkbox"/> <b>Colored</b> ( <i>describe</i> ): _____ <input type="checkbox"/> <b>Other:</b> _____ <b>Deposits\Stains:</b> <input type="checkbox"/> <b>Oily</b> <input type="checkbox"/> <b>Paint</b> <input type="checkbox"/> <b>Flow line</b> <input type="checkbox"/> <b>Other</b> ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> <b>None</b> <input type="checkbox"/> <b>Algae</b> <input type="checkbox"/> <b>Dead fish</b> <input type="checkbox"/> <b>Suspended solids</b> <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Other:</b> _____	

FLOW CONDITIONS	<input checked="" type="checkbox"/> 1 - No flow\interior conditions are dry
	<input type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	<b>Flow Estimates:</b>
	Width of flow surface: ___ inches ___ feet
	Approximate depth of flow: ___ inches ___ feet
	Approximate flow rate: ___ feet per second

**- REPORT SUMMARY CHARACTERIZATION -**

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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**Photographic Documentation  
of Outfall Must be Attached to  
Complete Report**

**ADDITIONAL NOTES:**

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REPORTER SIGNATURE: Jeremy D Moore



DATE: 5/26/16

TIME: 9:39  AM  PM

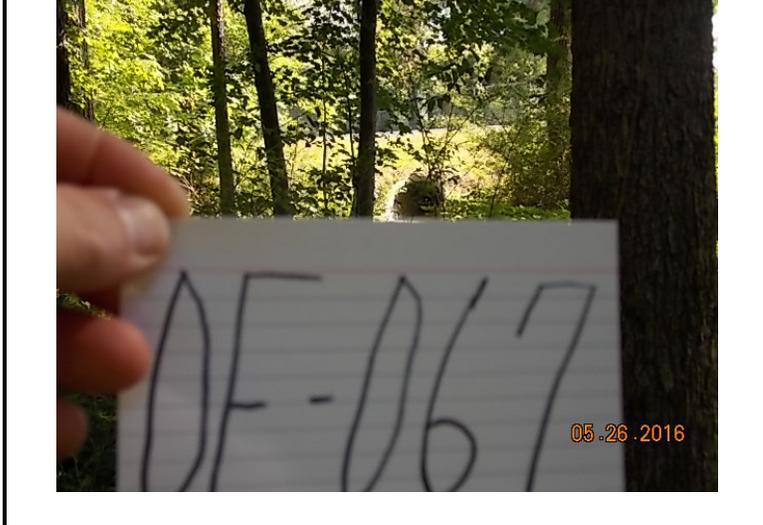
FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
<b>OUTFALL ID:</b> <u>OF-067</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> <b>JA40</b> ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> <b>JA44</b> ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> <b>JA-J</b> ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input type="checkbox"/> <b>Corridor</b> ( <i>In or adjacent to watercourse</i> ) <input checked="" type="checkbox"/> <b>Upland</b> ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> <b>Tributary</b> ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input type="checkbox"/> < 2 days <input checked="" type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input checked="" type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input checked="" type="checkbox"/> On\In concrete structure <input type="checkbox"/> In\Near watercourse <input checked="" type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> <b>None</b> ( <i>no detectable scent</i> ) <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Rancid\Sour\Pungent</b> <input type="checkbox"/> <b>Sulfide</b> ( <i>rotten eggs</i> ) <input type="checkbox"/> <b>Natural gas</b> <input type="checkbox"/> <b>Petroleum</b> ( <i>gas</i> ) <input type="checkbox"/> <b>Other:</b> _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> <b>Normal</b> <input type="checkbox"/> <b>Oily sheen\film</b> <input type="checkbox"/> <b>Cloudy</b> <input type="checkbox"/> <b>Suds</b> <input type="checkbox"/> <b>Colored</b> ( <i>describe</i> ): _____ <input type="checkbox"/> <b>Other:</b> _____ <b>Deposits\Stains:</b> <input type="checkbox"/> <b>Oily</b> <input type="checkbox"/> <b>Paint</b> <input type="checkbox"/> <b>Flow line</b> <input type="checkbox"/> <b>Other</b> ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> <b>None</b> <input type="checkbox"/> <b>Algae</b> <input type="checkbox"/> <b>Dead fish</b> <input type="checkbox"/> <b>Suspended solids</b> <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Other:</b> _____	

FLOW CONDITIONS	<input checked="" type="checkbox"/> 1 - No flow\interior conditions are dry
	<input type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	Flow Estimates:
	Width of flow surface: __ inches __ feet
	Approximate depth of flow: __ inches ____ feet
	Approximate flow rate: __ feet per second

- REPORT SUMMARY CHARACTERIZATION -

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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Photographic Documentation  
of Outfall **Must** be Attached to  
Complete Report

ADDITIONAL NOTES:

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REPORTER SIGNATURE: Jeremy D Moore



DATE: 5/26/16

TIME: 9:34  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
<b>OUTFALL ID:</b> <u>OF-068</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> <b>JA40</b> ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> <b>JA44</b> ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> <b>JA-J</b> ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input type="checkbox"/> <b>Corridor</b> ( <i>In or adjacent to watercourse</i> ) <input checked="" type="checkbox"/> <b>Upland</b> ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> <b>Tributary</b> ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input type="checkbox"/> < 2 days <input checked="" type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input checked="" type="checkbox"/> Institutional <input checked="" type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input checked="" type="checkbox"/> Earth\sediment <input checked="" type="checkbox"/> Rock\rubble <input type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input checked="" type="checkbox"/> On\In concrete structure <input type="checkbox"/> In\Near watercourse <input checked="" type="checkbox"/> Upland area\away from watercourse <input type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> <b>None</b> ( <i>no detectable scent</i> ) <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Rancid\Sour\Pungent</b> <input type="checkbox"/> <b>Sulfide</b> ( <i>rotten eggs</i> ) <input type="checkbox"/> <b>Natural gas</b> <input type="checkbox"/> <b>Petroleum (gas)</b> <input type="checkbox"/> <b>Other:</b> _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> <b>Normal</b> <input type="checkbox"/> <b>Oily sheen\film</b> <input type="checkbox"/> <b>Cloudy</b> <input type="checkbox"/> <b>Suds</b> <input type="checkbox"/> <b>Colored</b> ( <i>describe</i> ): _____ <input type="checkbox"/> <b>Other:</b> _____ <b>Deposits\Stains:</b> <input type="checkbox"/> <b>Oily</b> <input type="checkbox"/> <b>Paint</b> <input type="checkbox"/> <b>Flow line</b> <input type="checkbox"/> <b>Other</b> ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> <b>None</b> <input type="checkbox"/> <b>Algae</b> <input type="checkbox"/> <b>Dead fish</b> <input type="checkbox"/> <b>Suspended solids</b> <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Other:</b> _____	

FLOW CONDITIONS	<input type="checkbox"/> 1 - No flow\interior conditions are dry
	<input checked="" type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	<b>Flow Estimates:</b>
	Width of flow surface: ___ inches ___ feet
	Approximate depth of flow: ___ inches ___ feet
	Approximate flow rate: ___ feet per second

- REPORT SUMMARY CHARACTERIZATION -

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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Photographic Documentation  
of Outfall Must be Attached to  
Complete Report

ADDITIONAL NOTES:

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REPORTER SIGNATURE: Jeremy D Moore



DATE: 5/25/16

TIME: 1:09  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
<b>OUTFALL ID:</b> <u>OF-070</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> <b>JA40</b> ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> <b>JA44</b> ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> <b>JA-J</b> ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> <b>Corridor</b> ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> <b>Upland</b> ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> <b>Tributary</b> ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> <b>None</b> ( <i>no detectable scent</i> ) <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Rancid\Sour\Pungent</b> <input type="checkbox"/> <b>Sulfide</b> ( <i>rotten eggs</i> ) <input type="checkbox"/> <b>Natural gas</b> <input type="checkbox"/> <b>Petroleum</b> ( <i>gas</i> ) <input type="checkbox"/> <b>Other:</b> _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> <b>Normal</b> <input type="checkbox"/> <b>Oily sheen\film</b> <input type="checkbox"/> <b>Cloudy</b> <input type="checkbox"/> <b>Suds</b> <input type="checkbox"/> <b>Colored</b> ( <i>describe</i> ): _____ <input type="checkbox"/> <b>Other:</b> _____ <b>Deposits\Stains:</b> <input type="checkbox"/> <b>Oily</b> <input type="checkbox"/> <b>Paint</b> <input type="checkbox"/> <b>Flow line</b> <input type="checkbox"/> <b>Other</b> ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> <b>None</b> <input type="checkbox"/> <b>Algae</b> <input type="checkbox"/> <b>Dead fish</b> <input type="checkbox"/> <b>Suspended solids</b> <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Other:</b> _____	



DATE: 5/25/16

TIME: 1:31  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
<b>OUTFALL ID:</b> <u>OF-071</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> <b>JA40</b> ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> <b>JA44</b> ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> <b>JA-J</b> ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> <b>Corridor</b> ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> <b>Upland</b> ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> <b>Tributary</b> ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> <b>None</b> ( <i>no detectable scent</i> ) <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Rancid\Sour\Pungent</b> <input type="checkbox"/> <b>Sulfide</b> ( <i>rotten eggs</i> ) <input type="checkbox"/> <b>Natural gas</b> <input type="checkbox"/> <b>Petroleum</b> ( <i>gas</i> ) <input type="checkbox"/> <b>Other:</b> _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> <b>Normal</b> <input type="checkbox"/> <b>Oily sheen\film</b> <input type="checkbox"/> <b>Cloudy</b> <input type="checkbox"/> <b>Suds</b> <input type="checkbox"/> <b>Colored</b> ( <i>describe</i> ): _____ <input type="checkbox"/> <b>Other:</b> _____ <b>Deposits\Stains:</b> <input type="checkbox"/> <b>Oily</b> <input type="checkbox"/> <b>Paint</b> <input type="checkbox"/> <b>Flow line</b> <input type="checkbox"/> <b>Other</b> ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> <b>None</b> <input type="checkbox"/> <b>Algae</b> <input type="checkbox"/> <b>Dead fish</b> <input type="checkbox"/> <b>Suspended solids</b> <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Other:</b> _____	

FLOW CONDITIONS	<input checked="" type="checkbox"/> 1 - No flow\interior conditions are dry
	<input type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	<b>Flow Estimates:</b>
	Width of flow surface: ___ inches ___ feet
	Approximate depth of flow: ___ inches ___ feet
	Approximate flow rate: ___ feet per second

- REPORT SUMMARY CHARACTERIZATION -

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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**Photographic Documentation  
of Outfall Must be Attached to  
Complete Report**

ADDITIONAL NOTES:

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REPORTER SIGNATURE: Jeremy D Moore



DATE: 5/25/16

TIME: 1:22  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
OUTFALL ID: <u>OF-072</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> JA40 ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> JA44 ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> JA-J ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> Corridor ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> Upland ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> Tributary ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> None ( <i>no detectable scent</i> ) <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid\Sour\Pungent <input type="checkbox"/> Sulfide ( <i>rotten eggs</i> ) <input type="checkbox"/> Natural gas <input type="checkbox"/> Petroleum ( <i>gas</i> ) <input type="checkbox"/> Other: _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Oily sheen\film <input type="checkbox"/> Cloudy <input type="checkbox"/> Suds <input type="checkbox"/> Colored ( <i>describe</i> ): _____ <input type="checkbox"/> Other: _____ <b>Deposits\Stains:</b> <input type="checkbox"/> Oily <input type="checkbox"/> Paint <input type="checkbox"/> Flow line <input type="checkbox"/> Other ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> None <input type="checkbox"/> Algae <input type="checkbox"/> Dead fish <input type="checkbox"/> Suspended solids <input type="checkbox"/> Sewage <input type="checkbox"/> Other: _____	

FLOW CONDITIONS	<input checked="" type="checkbox"/> 1 - No flow\interior conditions are dry
	<input type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	<b>Flow Estimates:</b>
	Width of flow surface: ___ inches ___ feet
	Approximate depth of flow: ___ inches ___ feet
	Approximate flow rate: ___ feet per second

**- REPORT SUMMARY CHARACTERIZATION -**

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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**Photographic Documentation  
of Outfall Must be Attached to  
Complete Report**

**ADDITIONAL NOTES:**

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REPORTER SIGNATURE: Jeremy D Moore



DATE: 4/25/16

TIME: 1:16  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
<b>OUTFALL ID:</b> <u>OF-073</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> <b>JA40</b> ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> <b>JA44</b> ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> <b>JA-J</b> ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input type="checkbox"/> <b>Corridor</b> ( <i>In or adjacent to watercourse</i> ) <input checked="" type="checkbox"/> <b>Upland</b> ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> <b>Tributary</b> ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input type="checkbox"/> On\In concrete structure <input type="checkbox"/> In\Near watercourse <input checked="" type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> <b>None</b> ( <i>no detectable scent</i> ) <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Rancid\Sour\Pungent</b> <input type="checkbox"/> <b>Sulfide</b> ( <i>rotten eggs</i> ) <input type="checkbox"/> <b>Natural gas</b> <input type="checkbox"/> <b>Petroleum</b> ( <i>gas</i> ) <input type="checkbox"/> <b>Other:</b> _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> <b>Normal</b> <input type="checkbox"/> <b>Oily sheen\film</b> <input type="checkbox"/> <b>Cloudy</b> <input type="checkbox"/> <b>Suds</b> <input type="checkbox"/> <b>Colored</b> ( <i>describe</i> ): _____ <input type="checkbox"/> <b>Other:</b> _____ <b>Deposits\Stains:</b> <input type="checkbox"/> <b>Oily</b> <input type="checkbox"/> <b>Paint</b> <input type="checkbox"/> <b>Flow line</b> <input type="checkbox"/> <b>Other</b> ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> <b>None</b> <input type="checkbox"/> <b>Algae</b> <input type="checkbox"/> <b>Dead fish</b> <input type="checkbox"/> <b>Suspended solids</b> <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Other:</b> _____	



DATE: 4/26/16

TIME: 1:08  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
<b>OUTFALL ID:</b> <u>OF-075</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> <b>JA40</b> ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> <b>JA44</b> ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> <b>JA-J</b> ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> <b>Corridor</b> ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> <b>Upland</b> ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> <b>Tributary</b> ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input type="checkbox"/> < 2 days <input checked="" type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input checked="" type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> <b>None</b> ( <i>no detectable scent</i> ) <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid\Sour\Pungent <input type="checkbox"/> Sulfide ( <i>rotten eggs</i> ) <input type="checkbox"/> Natural gas <input type="checkbox"/> Petroleum ( <i>gas</i> ) <input type="checkbox"/> Other: _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Oily sheen\film <input type="checkbox"/> Cloudy <input type="checkbox"/> Suds <input type="checkbox"/> Colored ( <i>describe</i> ): _____ <input type="checkbox"/> Other: _____ <b>Deposits\Stains:</b> <input type="checkbox"/> Oily <input type="checkbox"/> Paint <input type="checkbox"/> Flow line <input type="checkbox"/> Other ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> None <input type="checkbox"/> Algae <input type="checkbox"/> Dead fish <input type="checkbox"/> Suspended solids <input type="checkbox"/> Sewage <input type="checkbox"/> Other: _____	

FLOW CONDITIONS	<input type="checkbox"/> 1 - No flow\interior conditions are dry
	<input checked="" type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	<b>Flow Estimates:</b>
	Width of flow surface: ___ inches ___ feet
	Approximate depth of flow: ___ inches ____ feet
	Approximate flow rate: ___ feet per second

**- REPORT SUMMARY CHARACTERIZATION -**

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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**Photographic Documentation  
of Outfall Must be Attached to  
Complete Report**

**ADDITIONAL NOTES:**

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REPORTER SIGNATURE: Jeremy D Moore



DATE: 4/26/16

TIME: 1:03  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
OUTFALL ID: <u>OF-076</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> JA40 ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> JA44 ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> JA-J ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> Corridor ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> Upland ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> Tributary ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input type="checkbox"/> < 2 days <input checked="" type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> None ( <i>no detectable scent</i> ) <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid\Sour\Pungent <input type="checkbox"/> Sulfide ( <i>rotten eggs</i> ) <input type="checkbox"/> Natural gas <input type="checkbox"/> Petroleum ( <i>gas</i> ) <input type="checkbox"/> Other: _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Oily sheen\film <input type="checkbox"/> Cloudy <input type="checkbox"/> Suds <input type="checkbox"/> Colored ( <i>describe</i> ): _____ <input type="checkbox"/> Other: _____ <b>Deposits\Stains:</b> <input type="checkbox"/> Oily <input type="checkbox"/> Paint <input type="checkbox"/> Flow line <input type="checkbox"/> Other ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> None <input type="checkbox"/> Algae <input type="checkbox"/> Dead fish <input type="checkbox"/> Suspended solids <input type="checkbox"/> Sewage <input type="checkbox"/> Other: _____	

FLOW CONDITIONS	<input type="checkbox"/> 1 - No flow\interior conditions are dry
	<input checked="" type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	<b>Flow Estimates:</b>
	Width of flow surface: ___ inches ___ feet
	Approximate depth of flow: ___ inches ___ feet
	Approximate flow rate: ___ feet per second

**- REPORT SUMMARY CHARACTERIZATION -**

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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**Photographic Documentation  
of Outfall Must be Attached to  
Complete Report**

**ADDITIONAL NOTES:**

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REPORTER SIGNATURE: Jeremy D Moore



DATE: 4/26/16

TIME: 1:14  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
<b>OUTFALL ID:</b> <u>OF-077</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> <b>JA40</b> ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> <b>JA44</b> ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> <b>JA-J</b> ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> <b>Corridor</b> ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> <b>Upland</b> ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> <b>Tributary</b> ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input type="checkbox"/> < 2 days <input checked="" type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> <b>None</b> ( <i>no detectable scent</i> ) <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Rancid\Sour\Pungent</b> <input type="checkbox"/> <b>Sulfide</b> ( <i>rotten eggs</i> ) <input type="checkbox"/> <b>Natural gas</b> <input type="checkbox"/> <b>Petroleum (gas)</b> <input type="checkbox"/> <b>Other:</b> _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> <b>Normal</b> <input type="checkbox"/> <b>Oily sheen\film</b> <input type="checkbox"/> <b>Cloudy</b> <input type="checkbox"/> <b>Suds</b> <input type="checkbox"/> <b>Colored</b> ( <i>describe</i> ): _____ <input type="checkbox"/> <b>Other:</b> _____ <b>Deposits\Stains:</b> <input type="checkbox"/> <b>Oily</b> <input type="checkbox"/> <b>Paint</b> <input type="checkbox"/> <b>Flow line</b> <input type="checkbox"/> <b>Other</b> ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> <b>None</b> <input type="checkbox"/> <b>Algae</b> <input type="checkbox"/> <b>Dead fish</b> <input type="checkbox"/> <b>Suspended solids</b> <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Other:</b> _____	

FLOW CONDITIONS	<input checked="" type="checkbox"/> 1 - No flow\interior conditions are dry
	<input type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	Flow Estimates:
	Width of flow surface: ___ inches ___ feet
	Approximate depth of flow: ___ inches ___ feet
	Approximate flow rate: ___ feet per second

- REPORT SUMMARY CHARACTERIZATION -

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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**Photographic Documentation  
of Outfall Must be Attached to  
Complete Report**

ADDITIONAL NOTES:

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REPORTER SIGNATURE: Jeremy D Moore



DATE: 5/26/16

TIME: 9:09  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
OUTFALL ID: <u>OF-078</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> JA40 ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> JA44 ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> JA-J ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> Corridor ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> Upland ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> Tributary ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input type="checkbox"/> < 2 days <input checked="" type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input checked="" type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input checked="" type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input checked="" type="checkbox"/> Rock\rubble <input type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> None ( <i>no detectable scent</i> ) <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid\Sour\Pungent <input type="checkbox"/> Sulfide ( <i>rotten eggs</i> ) <input type="checkbox"/> Natural gas <input type="checkbox"/> Petroleum ( <i>gas</i> ) <input type="checkbox"/> Other: _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Oily sheen\film <input type="checkbox"/> Cloudy <input type="checkbox"/> Suds <input type="checkbox"/> Colored ( <i>describe</i> ): _____ <input type="checkbox"/> Other: _____ <b>Deposits\Stains:</b> <input type="checkbox"/> Oily <input type="checkbox"/> Paint <input type="checkbox"/> Flow line <input type="checkbox"/> Other ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> None <input type="checkbox"/> Algae <input type="checkbox"/> Dead fish <input type="checkbox"/> Suspended solids <input type="checkbox"/> Sewage <input type="checkbox"/> Other: _____	

<b>FLOW CONDITIONS</b>	<input type="checkbox"/> 1 - No flow\interior conditions are dry
	<input checked="" type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	<b>Flow Estimates:</b>
	Width of flow surface: ____ inches __ feet
	Approximate depth of flow: ____ inches ____ feet
	Approximate flow rate: ____ feet per second

**- REPORT SUMMARY CHARACTERIZATION -**

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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**Photographic Documentation  
of Outfall Must be Attached to  
Complete Report**

**ADDITIONAL NOTES:**

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Ponding

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REPORTER SIGNATURE: Jeremy D Moore



DATE: 5/26/16

TIME: 9:14  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
<b>OUTFALL ID:</b> <u>OF-079</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> <b>JA40</b> ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> <b>JA44</b> ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> <b>JA-J</b> ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> <b>Corridor</b> ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> <b>Upland</b> ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> <b>Tributary</b> ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input type="checkbox"/> < 2 days <input checked="" type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> <b>None</b> ( <i>no detectable scent</i> ) <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Rancid\Sour\Pungent</b> <input type="checkbox"/> <b>Sulfide</b> ( <i>rotten eggs</i> ) <input type="checkbox"/> <b>Natural gas</b> <input type="checkbox"/> <b>Petroleum</b> ( <i>gas</i> ) <input type="checkbox"/> <b>Other:</b> _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> <b>Normal</b> <input type="checkbox"/> <b>Oily sheen\film</b> <input type="checkbox"/> <b>Cloudy</b> <input type="checkbox"/> <b>Suds</b> <input type="checkbox"/> <b>Colored</b> ( <i>describe</i> ): _____ <input type="checkbox"/> <b>Other:</b> _____ <b>Deposits\Stains:</b> <input type="checkbox"/> <b>Oily</b> <input type="checkbox"/> <b>Paint</b> <input type="checkbox"/> <b>Flow line</b> <input type="checkbox"/> <b>Other</b> ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> <b>None</b> <input type="checkbox"/> <b>Algae</b> <input type="checkbox"/> <b>Dead fish</b> <input type="checkbox"/> <b>Suspended solids</b> <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Other:</b> _____	



DATE: 4/26/16

TIME: 10:36  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
OUTFALL ID: <u>OF-080</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input checked="" type="checkbox"/> <b>JA40</b> ( <i>Appomattox River I and II</i> ) <input type="checkbox"/> <b>JA44</b> ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> <b>JA-J</b> ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input type="checkbox"/> <b>Corridor</b> ( <i>In or adjacent to watercourse</i> ) <input checked="" type="checkbox"/> <b>Upland</b> ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> <b>Tributary</b> ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input checked="" type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input type="checkbox"/> On\In concrete structure <input type="checkbox"/> In\Near watercourse <input checked="" type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> <b>None</b> ( <i>no detectable scent</i> ) <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid\Sour\Pungent <input type="checkbox"/> Sulfide ( <i>rotten eggs</i> ) <input type="checkbox"/> Natural gas <input type="checkbox"/> Petroleum ( <i>gas</i> ) <input type="checkbox"/> Other: _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Oily sheen\film <input type="checkbox"/> Cloudy <input type="checkbox"/> Suds <input type="checkbox"/> Colored ( <i>describe</i> ): _____ <input type="checkbox"/> Other: _____ <b>Deposits\Stains:</b> <input type="checkbox"/> Oily <input type="checkbox"/> Paint <input type="checkbox"/> Flow line <input type="checkbox"/> Other ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> None <input type="checkbox"/> Algae <input type="checkbox"/> Dead fish <input type="checkbox"/> Suspended solids <input type="checkbox"/> Sewage <input type="checkbox"/> Other: _____	

<b>FLOW CONDITIONS</b>	<input checked="" type="checkbox"/> 1 - No flow\interior conditions are dry
	<input type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	<b>Flow Estimates:</b>
	Width of flow surface: _____ inches _____ feet
	Approximate depth of flow: _____ inches _____ feet
	Approximate flow rate: _____ feet per second

**- REPORT SUMMARY CHARACTERIZATION -**

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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**Photographic Documentation  
of Outfall Must be Attached to  
Complete Report**

**ADDITIONAL NOTES:**

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REPORTER SIGNATURE: Jeremy D Moore



DATE: 4/26/16

TIME: 10:37  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
<b>OUTFALL ID:</b> <u>OF-081</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input checked="" type="checkbox"/> <b>JA40</b> ( <i>Appomattox River I and II</i> ) <input type="checkbox"/> <b>JA44</b> ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> <b>JA-J</b> ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input type="checkbox"/> <b>Corridor</b> ( <i>In or adjacent to watercourse</i> ) <input checked="" type="checkbox"/> <b>Upland</b> ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> <b>Tributary</b> ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input checked="" type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input type="checkbox"/> On\In concrete structure <input type="checkbox"/> In\Near watercourse <input checked="" type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> <b>None</b> ( <i>no detectable scent</i> ) <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Rancid\Sour\Pungent</b> <input type="checkbox"/> <b>Sulfide</b> ( <i>rotten eggs</i> ) <input type="checkbox"/> <b>Natural gas</b> <input type="checkbox"/> <b>Petroleum</b> ( <i>gas</i> ) <input type="checkbox"/> <b>Other:</b> _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> <b>Normal</b> <input type="checkbox"/> <b>Oily sheen\film</b> <input type="checkbox"/> <b>Cloudy</b> <input type="checkbox"/> <b>Suds</b> <input type="checkbox"/> <b>Colored</b> ( <i>describe</i> ): _____ <input type="checkbox"/> <b>Other:</b> _____ <b>Deposits\Stains:</b> <input type="checkbox"/> <b>Oily</b> <input type="checkbox"/> <b>Paint</b> <input type="checkbox"/> <b>Flow line</b> <input type="checkbox"/> <b>Other</b> ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> <b>None</b> <input type="checkbox"/> <b>Algae</b> <input type="checkbox"/> <b>Dead fish</b> <input type="checkbox"/> <b>Suspended solids</b> <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Other:</b> _____	

FLOW CONDITIONS	<input checked="" type="checkbox"/> 1 - No flow\interior conditions are dry
	<input type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	<b>Flow Estimates:</b>
	Width of flow surface: _____ inches _____ feet
	Approximate depth of flow: _____ inches _____ feet
	Approximate flow rate: _____ feet per second

**- REPORT SUMMARY CHARACTERIZATION -**

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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**Photographic Documentation  
of Outfall Must be Attached to  
Complete Report**

**ADDITIONAL NOTES:**

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Ponding due to silt buildup.

\_\_\_\_\_

\_\_\_\_\_

REPORTER SIGNATURE: \_\_\_\_\_ *Jeremy D Moore*



DATE: 4/26/16

TIME: 2:17  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
OUTFALL ID: <u>OF-082</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> JA40 ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> JA44 ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> JA-J ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> Corridor ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> Upland ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> Tributary ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input type="checkbox"/> < 2 days <input checked="" type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input checked="" type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input checked="" type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> None ( <i>no detectable scent</i> ) <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid\Sour\Pungent <input type="checkbox"/> Sulfide ( <i>rotten eggs</i> ) <input type="checkbox"/> Natural gas <input type="checkbox"/> Petroleum ( <i>gas</i> ) <input type="checkbox"/> Other: _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Oily sheen\film <input type="checkbox"/> Cloudy <input type="checkbox"/> Suds <input type="checkbox"/> Colored ( <i>describe</i> ): _____ <input type="checkbox"/> Other: _____ <b>Deposits\Stains:</b> <input type="checkbox"/> Oily <input type="checkbox"/> Paint <input type="checkbox"/> Flow line <input type="checkbox"/> Other ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> None <input type="checkbox"/> Algae <input type="checkbox"/> Dead fish <input type="checkbox"/> Suspended solids <input type="checkbox"/> Sewage <input type="checkbox"/> Other: _____	

FLOW CONDITIONS	<input checked="" type="checkbox"/> 1 - No flow\interior conditions are dry
	<input type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	Flow Estimates:
	Width of flow surface: __ inches __ feet
	Approximate depth of flow: __ inches ____ feet
	Approximate flow rate: __ feet per second

- REPORT SUMMARY CHARACTERIZATION -

Unlikely Illicit Discharge       Suspected Illicit Discharge       Obvious Illicit Discharge



Photographic Documentation  
of Outfall Must be Attached to  
Complete Report

ADDITIONAL NOTES:

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REPORTER SIGNATURE: Jeremy D Moore



DATE: 4/27/16

TIME: 8:51  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
OUTFALL ID: <u>OF-083</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> JA40 ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> JA44 ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> JA-J ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input type="checkbox"/> Corridor ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> Upland ( <i>Not adjacent to watercourse</i> ) <input checked="" type="checkbox"/> Tributary ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input checked="" type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input checked="" type="checkbox"/> Rock\rubble <input type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> None ( <i>no detectable scent</i> ) <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid\Sour\Pungent <input type="checkbox"/> Sulfide ( <i>rotten eggs</i> ) <input type="checkbox"/> Natural gas <input type="checkbox"/> Petroleum ( <i>gas</i> ) <input type="checkbox"/> Other: _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Oily sheen\film <input type="checkbox"/> Cloudy <input type="checkbox"/> Suds <input type="checkbox"/> Colored ( <i>describe</i> ): _____ <input type="checkbox"/> Other: _____ <b>Deposits\Stains:</b> <input type="checkbox"/> Oily <input type="checkbox"/> Paint <input type="checkbox"/> Flow line <input type="checkbox"/> Other ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> None <input type="checkbox"/> Algae <input type="checkbox"/> Dead fish <input type="checkbox"/> Suspended solids <input type="checkbox"/> Sewage <input type="checkbox"/> Other: _____	

FLOW CONDITIONS	<input type="checkbox"/> 1 - No flow\interior conditions are dry
	<input checked="" type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	<b>Flow Estimates:</b>
	Width of flow surface: __ inches __ feet
	Approximate depth of flow: __ inches ____ feet
	Approximate flow rate: __ feet per second

**- REPORT SUMMARY CHARACTERIZATION -**

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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**Photographic Documentation  
of Outfall Must be Attached to  
Complete Report**

**ADDITIONAL NOTES:**

Resident put logs/brush over fence in front of outfall. Silt build up due to tree roots.

REPORTER SIGNATURE: Jeremy D Moore



DATE: 4/27/16

TIME: 10:25  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
OUTFALL ID: <u>OF-084</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> JA40 ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> JA44 ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> JA-J ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input type="checkbox"/> Corridor ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> Upland ( <i>Not adjacent to watercourse</i> ) <input checked="" type="checkbox"/> Tributary ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input checked="" type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> None ( <i>no detectable scent</i> ) <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid\Sour\Pungent <input type="checkbox"/> Sulfide ( <i>rotten eggs</i> ) <input type="checkbox"/> Natural gas <input type="checkbox"/> Petroleum ( <i>gas</i> ) <input type="checkbox"/> Other: _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Oily sheen\film <input type="checkbox"/> Cloudy <input type="checkbox"/> Suds <input type="checkbox"/> Colored ( <i>describe</i> ): _____ <input type="checkbox"/> Other: _____ <b>Deposits\Stains:</b> <input type="checkbox"/> Oily <input type="checkbox"/> Paint <input type="checkbox"/> Flow line <input type="checkbox"/> Other ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> None <input type="checkbox"/> Algae <input type="checkbox"/> Dead fish <input type="checkbox"/> Suspended solids <input type="checkbox"/> Sewage <input type="checkbox"/> Other: _____	



DATE: 4/27/16

TIME: 10:50  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
OUTFALL ID: <u>OF-085</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> JA40 ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> JA44 ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> JA-J ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input type="checkbox"/> Corridor ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> Upland ( <i>Not adjacent to watercourse</i> ) <input checked="" type="checkbox"/> Tributary ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> None ( <i>no detectable scent</i> ) <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid\Sour\Pungent <input type="checkbox"/> Sulfide ( <i>rotten eggs</i> ) <input type="checkbox"/> Natural gas <input type="checkbox"/> Petroleum ( <i>gas</i> ) <input type="checkbox"/> Other: _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Oily sheen\film <input type="checkbox"/> Cloudy <input type="checkbox"/> Suds <input type="checkbox"/> Colored ( <i>describe</i> ): _____ <input type="checkbox"/> Other: _____ <b>Deposits\Stains:</b> <input type="checkbox"/> Oily <input type="checkbox"/> Paint <input type="checkbox"/> Flow line <input type="checkbox"/> Other ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> None <input type="checkbox"/> Algae <input type="checkbox"/> Dead fish <input type="checkbox"/> Suspended solids <input type="checkbox"/> Sewage <input type="checkbox"/> Other: _____	

FLOW CONDITIONS	<input type="checkbox"/> 1 - No flow\interior conditions are dry
	<input checked="" type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	<b>Flow Estimates:</b>
	Width of flow surface: ___ inches ___ feet
	Approximate depth of flow: ___ inches ___ feet
	Approximate flow rate: ___ feet per second

- REPORT SUMMARY CHARACTERIZATION -

Unlikely Illicit Discharge       Suspected Illicit Discharge       Obvious Illicit Discharge



Photographic Documentation  
of Outfall Must be Attached to  
Complete Report

ADDITIONAL NOTES:

Ponding Water: outfall in marsh land.

REPORTER SIGNATURE: \_\_\_\_\_

*Jeremy D Moore*



DATE: 4/25/16

TIME: 2:19  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
<b>OUTFALL ID:</b> <u>OF-086</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input type="checkbox"/> <b>JA40</b> ( <i>Appomattox River I and II</i> ) <input checked="" type="checkbox"/> <b>JA44</b> ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> <b>JA-J</b> ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input type="checkbox"/> <b>Corridor</b> ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> <b>Upland</b> ( <i>Not adjacent to watercourse</i> ) <input checked="" type="checkbox"/> <b>Tributary</b> ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input checked="" type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input checked="" type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> <b>None</b> ( <i>no detectable scent</i> ) <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid\Sour\Pungent <input type="checkbox"/> Sulfide ( <i>rotten eggs</i> ) <input type="checkbox"/> Natural gas <input type="checkbox"/> Petroleum ( <i>gas</i> ) <input type="checkbox"/> Other: _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Oily sheen\film <input type="checkbox"/> Cloudy <input type="checkbox"/> Suds <input type="checkbox"/> Colored ( <i>describe</i> ): _____ <input type="checkbox"/> Other: _____ <b>Deposits\Stains:</b> <input type="checkbox"/> Oily <input type="checkbox"/> Paint <input type="checkbox"/> Flow line <input type="checkbox"/> Other ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> None <input type="checkbox"/> Algae <input type="checkbox"/> Dead fish <input type="checkbox"/> Suspended solids <input type="checkbox"/> Sewage <input type="checkbox"/> Other: _____	

FLOW CONDITIONS	<input type="checkbox"/> 1 - No flow\interior conditions are dry
	<input checked="" type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	<b>Flow Estimates:</b>
	Width of flow surface: __ inches __ feet
	Approximate depth of flow: __ inches ____ feet
	Approximate flow rate: __ feet per second

**- REPORT SUMMARY CHARACTERIZATION -**

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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**Photographic Documentation  
of Outfall Must be Attached to  
Complete Report**

**ADDITIONAL NOTES:**

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REPORTER SIGNATURE: Jeremy D Moore



DATE: 4/27/16

TIME: 9:55  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
<b>OUTFALL ID:</b> <u>OF-088</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input checked="" type="checkbox"/> <b>JA40</b> ( <i>Appomattox River I and II</i> ) <input type="checkbox"/> <b>JA44</b> ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> <b>JA-J</b> ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> <b>Corridor</b> ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> <b>Upland</b> ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> <b>Tributary</b> ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input checked="" type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> <b>None</b> ( <i>no detectable scent</i> ) <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Rancid\Sour\Pungent</b> <input type="checkbox"/> <b>Sulfide</b> ( <i>rotten eggs</i> ) <input type="checkbox"/> <b>Natural gas</b> <input type="checkbox"/> <b>Petroleum</b> ( <i>gas</i> ) <input type="checkbox"/> <b>Other:</b> _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> <b>Normal</b> <input type="checkbox"/> <b>Oily sheen\film</b> <input type="checkbox"/> <b>Cloudy</b> <input type="checkbox"/> <b>Suds</b> <input type="checkbox"/> <b>Colored</b> ( <i>describe</i> ): _____ <input type="checkbox"/> <b>Other:</b> _____ <b>Deposits\Stains:</b> <input type="checkbox"/> <b>Oily</b> <input type="checkbox"/> <b>Paint</b> <input type="checkbox"/> <b>Flow line</b> <input type="checkbox"/> <b>Other</b> ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> <b>None</b> <input type="checkbox"/> <b>Algae</b> <input type="checkbox"/> <b>Dead fish</b> <input type="checkbox"/> <b>Suspended solids</b> <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Other:</b> _____	

FLOW CONDITIONS	<input type="checkbox"/> 1 - No flow\interior conditions are dry
	<input checked="" type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	<b>Flow Estimates:</b>
	Width of flow surface: ___ inches ___ feet
	Approximate depth of flow: ___ inches ___ feet
	Approximate flow rate: ___ feet per second

- REPORT SUMMARY CHARACTERIZATION -

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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Photographic Documentation  
of Outfall Must be Attached to  
Complete Report

ADDITIONAL NOTES:

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REPORTER SIGNATURE: Jeremy D Moore



DATE: 4/27/16

TIME: 10:11  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
OUTFALL ID: <u>OF-090</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input checked="" type="checkbox"/> <b>JA40</b> ( <i>Appomattox River I and II</i> ) <input type="checkbox"/> <b>JA44</b> ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> <b>JA-J</b> ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> <b>Corridor</b> ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> <b>Upland</b> ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> <b>Tributary</b> ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input checked="" type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> <b>None</b> ( <i>no detectable scent</i> ) <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Rancid\Sour\Pungent</b> <input type="checkbox"/> <b>Sulfide</b> ( <i>rotten eggs</i> ) <input type="checkbox"/> <b>Natural gas</b> <input type="checkbox"/> <b>Petroleum</b> ( <i>gas</i> ) <input type="checkbox"/> <b>Other:</b> _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> <b>Normal</b> <input type="checkbox"/> <b>Oily sheen\film</b> <input type="checkbox"/> <b>Cloudy</b> <input type="checkbox"/> <b>Suds</b> <input type="checkbox"/> <b>Colored</b> ( <i>describe</i> ): _____ <input type="checkbox"/> <b>Other:</b> _____ <b>Deposits\Stains:</b> <input type="checkbox"/> <b>Oily</b> <input type="checkbox"/> <b>Paint</b> <input type="checkbox"/> <b>Flow line</b> <input type="checkbox"/> <b>Other</b> ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> <b>None</b> <input type="checkbox"/> <b>Algae</b> <input type="checkbox"/> <b>Dead fish</b> <input type="checkbox"/> <b>Suspended solids</b> <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Other:</b> _____	

FLOW CONDITIONS	<input checked="" type="checkbox"/> 1 - No flow\interior conditions are dry
	<input type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	<b>Flow Estimates:</b>
	Width of flow surface: __ inches __ feet
	Approximate depth of flow: __ inches ____ feet
	Approximate flow rate: __ feet per second

**- REPORT SUMMARY CHARACTERIZATION -**

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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**Photographic Documentation  
of Outfall Must be Attached to  
Complete Report**

**ADDITIONAL NOTES:**

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Uprooted tree at end of pipe ; hard to access.

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REPORTER SIGNATURE: Jeremy D Moore



DATE: 4/27/16

TIME: 10:22  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
<b>OUTFALL ID:</b> <u>OF-091</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input checked="" type="checkbox"/> <b>JA40</b> ( <i>Appomattox River I and II</i> ) <input type="checkbox"/> <b>JA44</b> ( <i>Swift Creek, Old Town Creek</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> <b>Corridor</b> ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> <b>Upland</b> ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> <b>Tributary</b> ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input checked="" type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input type="checkbox"/> Stabilized embankment <input checked="" type="checkbox"/> Eroded embankment <input type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> <b>None</b> ( <i>no detectable scent</i> ) <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Rancid\Sour\Pungent</b> <input type="checkbox"/> <b>Sulfide</b> ( <i>rotten eggs</i> ) <input type="checkbox"/> <b>Natural gas</b> <input type="checkbox"/> <b>Petroleum (gas)</b> <input type="checkbox"/> <b>Other:</b> _____	
<b>APPEARANCE</b>	<input type="checkbox"/> <b>Normal</b> <input type="checkbox"/> <b>Oily sheen\film</b> <input type="checkbox"/> <b>Cloudy</b> <input type="checkbox"/> <b>Suds</b> <input type="checkbox"/> <b>Colored</b> ( <i>describe</i> ): _____ <input checked="" type="checkbox"/> <b>Other:</b> <u>Stagnant Water</u> <b>Deposits\Stains:</b> <input type="checkbox"/> <b>Oily</b> <input type="checkbox"/> <b>Paint</b> <input type="checkbox"/> <b>Flow line</b> <input type="checkbox"/> <b>Other</b> ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> <b>None</b> <input type="checkbox"/> <b>Algae</b> <input type="checkbox"/> <b>Dead fish</b> <input type="checkbox"/> <b>Suspended solids</b> <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Other:</b> _____	

FLOW CONDITIONS	<input checked="" type="checkbox"/> 1 - No flow\interior conditions are dry
	<input type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	Flow Estimates:
	Width of flow surface: _____ inches _____ feet
	Approximate depth of flow: _____ inches _____ feet
	Approximate flow rate: _____ feet per second

**- REPORT SUMMARY CHARACTERIZATION -**

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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**Photographic Documentation  
of Outfall Must be Attached to  
Complete Report**

**ADDITIONAL NOTES:**

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**Bell end of pipe collapsed due to erosion**

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REPORTER SIGNATURE: Jeremy D Moore

DATE: 4/27/16

TIME: 10:30  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
OUTFALL ID: <u>OF-092</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input checked="" type="checkbox"/> <b>JA40</b> ( <i>Appomattox River I and II</i> ) <input type="checkbox"/> <b>JA44</b> ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> <b>JA-J</b> ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input type="checkbox"/> <b>Corridor</b> ( <i>In or adjacent to watercourse</i> ) <input checked="" type="checkbox"/> <b>Upland</b> ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> <b>Tributary</b> ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input type="checkbox"/> On\In concrete structure <input type="checkbox"/> In\Near watercourse <input checked="" type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> <b>None</b> ( <i>no detectable scent</i> ) <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Rancid\Sour\Pungent</b> <input type="checkbox"/> <b>Sulfide</b> ( <i>rotten eggs</i> ) <input type="checkbox"/> <b>Natural gas</b> <input type="checkbox"/> <b>Petroleum</b> ( <i>gas</i> ) <input type="checkbox"/> <b>Other:</b> _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> <b>Normal</b> <input type="checkbox"/> <b>Oily sheen\film</b> <input type="checkbox"/> <b>Cloudy</b> <input type="checkbox"/> <b>Suds</b> <input type="checkbox"/> <b>Colored</b> ( <i>describe</i> ): _____ <input type="checkbox"/> <b>Other:</b> _____ <b>Deposits\Stains:</b> <input type="checkbox"/> <b>Oily</b> <input type="checkbox"/> <b>Paint</b> <input type="checkbox"/> <b>Flow line</b> <input type="checkbox"/> <b>Other</b> ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> <b>None</b> <input type="checkbox"/> <b>Algae</b> <input type="checkbox"/> <b>Dead fish</b> <input type="checkbox"/> <b>Suspended solids</b> <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Other:</b> _____	

FLOW CONDITIONS	<input checked="" type="checkbox"/> 1 - No flow\interior conditions are dry
	<input type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	<b>Flow Estimates:</b>
	Width of flow surface: __ inches __ feet
	Approximate depth of flow: __ inches ____ feet
	Approximate flow rate: __ feet per second

- REPORT SUMMARY CHARACTERIZATION -

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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**Photographic Documentation  
of Outfall Must be Attached to  
Complete Report**

ADDITIONAL NOTES:

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REPORTER SIGNATURE: Jeremy D Moore



DATE: 5/16/16

TIME: 2:20  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
OUTFALL ID: <u>OF-093</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input checked="" type="checkbox"/> <b>JA40</b> ( <i>Appomattox River I and II</i> ) <input type="checkbox"/> <b>JA44</b> ( <i>Swift Creek, Old Town Creek</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> <b>Corridor</b> ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> <b>Upland</b> ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> <b>Tributary</b> ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input checked="" type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> <b>None</b> ( <i>no detectable scent</i> ) <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid\Sour\Pungent <input type="checkbox"/> Sulfide ( <i>rotten eggs</i> ) <input type="checkbox"/> Natural gas <input type="checkbox"/> Petroleum ( <i>gas</i> ) <input type="checkbox"/> Other: _____	
<b>APPEARANCE</b>	<input type="checkbox"/> Normal <input type="checkbox"/> Oily sheen\film <input type="checkbox"/> Cloudy <input type="checkbox"/> Suds <input type="checkbox"/> Colored ( <i>describe</i> ): _____ <input checked="" type="checkbox"/> Other: _____	
	<b>Deposits\Stains:</b> <input type="checkbox"/> Oily <input type="checkbox"/> Paint <input type="checkbox"/> Flow line <input type="checkbox"/> Other ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> None <input type="checkbox"/> Algae <input type="checkbox"/> Dead fish <input type="checkbox"/> Suspended solids <input type="checkbox"/> Sewage <input type="checkbox"/> Other: _____	

FLOW CONDITIONS	<input type="checkbox"/> 1 - No flow\interior conditions are dry
	<input checked="" type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	<b>Flow Estimates:</b>
	Width of flow surface: ____ inches ____ feet
	Approximate depth of flow: ____ inches ____ feet
	Approximate flow rate: ____ feet per second

**- REPORT SUMMARY CHARACTERIZATION -**

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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**Photographic Documentation  
of Outfall Must be Attached to  
Complete Report**

**ADDITIONAL NOTES:**

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REPORTER SIGNATURE: Jeremy D Moore



DATE: 4/25/16

TIME: 2:05  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
<b>OUTFALL ID:</b> <u>OF-094</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input checked="" type="checkbox"/> <b>JA40</b> ( <i>Appomattox River I and II</i> ) <input type="checkbox"/> <b>JA44</b> ( <i>Swift Creek, Old Town Creek</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input type="checkbox"/> <b>Corridor</b> ( <i>In or adjacent to watercourse</i> ) <input checked="" type="checkbox"/> <b>Upland</b> ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> <b>Tributary</b> ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input checked="" type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input checked="" type="checkbox"/> Stabilized embankment <input type="checkbox"/> Eroded embankment <input type="checkbox"/> On\In concrete structure <input type="checkbox"/> In\Near watercourse <input checked="" type="checkbox"/> Upland area\away from watercourse <input checked="" type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> <b>None</b> ( <i>no detectable scent</i> ) <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid\Sour\Pungent <input type="checkbox"/> Sulfide ( <i>rotten eggs</i> ) <input type="checkbox"/> Natural gas <input type="checkbox"/> Petroleum ( <i>gas</i> ) <input type="checkbox"/> Other: _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Oily sheen\film <input type="checkbox"/> Cloudy <input type="checkbox"/> Suds <input type="checkbox"/> Colored ( <i>describe</i> ): _____ <input type="checkbox"/> Other: _____ <b>Deposits\Stains:</b> <input type="checkbox"/> Oily <input type="checkbox"/> Paint <input type="checkbox"/> Flow line <input type="checkbox"/> Other ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> None <input type="checkbox"/> Algae <input type="checkbox"/> Dead fish <input type="checkbox"/> Suspended solids <input type="checkbox"/> Sewage <input type="checkbox"/> Other: _____	

FLOW CONDITIONS	<input checked="" type="checkbox"/> 1 - No flow\interior conditions are dry
	<input type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	<b>Flow Estimates:</b>
	Width of flow surface: _____ inches _____ feet
	Approximate depth of flow: _____ inches _____ feet
	Approximate flow rate: _____ feet per second

**- REPORT SUMMARY CHARACTERIZATION -**

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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**Photographic Documentation  
of Outfall Must be Attached to  
Complete Report**

**ADDITIONAL NOTES:**

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REPORTER SIGNATURE: Jeremy D Moore



DATE: 5/16/16

TIME: 1:45  AM  PM

FILED BY: Jeremy Moore

- ENVIRONMENTAL INFORMATION -		
<b>OUTFALL ID:</b> <u>OF-096</u>	<b>HYDROLOGIC UNIT CODE (HUC) ▼</b> <input checked="" type="checkbox"/> <b>JA40</b> ( <i>Appomattox River I and II</i> ) <input type="checkbox"/> <b>JA44</b> ( <i>Swift Creek, Old Town Creek</i> ) <input type="checkbox"/> <b>JA-J</b> ( <i>Fleets Branch</i> )	<b>PROXIMITY TO WATERCOURSE ▼</b> <input checked="" type="checkbox"/> <b>Corridor</b> ( <i>In or adjacent to watercourse</i> ) <input type="checkbox"/> <b>Upland</b> ( <i>Not adjacent to watercourse</i> ) <input type="checkbox"/> <b>Tributary</b> ( <i>In or near basin, wetland, etc.</i> )
<b>MOST RECENT RAIN EVENT ▼</b> <b>Time Lapse:</b> <input checked="" type="checkbox"/> < 2 days <input type="checkbox"/> > 2 days <b>Estimated Amount:</b> <input checked="" type="checkbox"/> < 0.5 inches <input type="checkbox"/> > 0.5 inches		
- OUTFALL OBSERVATIONS -		
<b>SURROUNDING LAND USE(S) ▼</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Institutional <input checked="" type="checkbox"/> Open space ( <i>check all that apply</i> )		
<b>PIPE OBSTRUCTIONS ▼</b> <input type="checkbox"/> Collapsed pipe <input type="checkbox"/> Roots\brush <input type="checkbox"/> Earth\sediment <input type="checkbox"/> Rock\rubble <input checked="" type="checkbox"/> No obstruction		
<b>PIPE SITUATION ▼</b> <input type="checkbox"/> Stabilized embankment <input checked="" type="checkbox"/> Eroded embankment <input checked="" type="checkbox"/> On\In concrete structure <input checked="" type="checkbox"/> In\Near watercourse <input type="checkbox"/> Upland area\away from watercourse <input type="checkbox"/> Maintained earth		
- ILLICIT DISCHARGE INDICATORS -		
<b>ODOR</b>	<input checked="" type="checkbox"/> <b>None</b> ( <i>no detectable scent</i> ) <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Rancid\Sour\Pungent</b> <input type="checkbox"/> <b>Sulfide</b> ( <i>rotten eggs</i> ) <input type="checkbox"/> <b>Natural gas</b> <input type="checkbox"/> <b>Petroleum</b> ( <i>gas</i> ) <input type="checkbox"/> <b>Other:</b> _____	
<b>APPEARANCE</b>	<input checked="" type="checkbox"/> <b>Normal</b> <input type="checkbox"/> <b>Oily sheen\film</b> <input type="checkbox"/> <b>Cloudy</b> <input type="checkbox"/> <b>Suds</b> <input type="checkbox"/> <b>Colored</b> ( <i>describe</i> ): _____ <input type="checkbox"/> <b>Other:</b> _____ <b>Deposits\Stains:</b> <input type="checkbox"/> <b>Oily</b> <input type="checkbox"/> <b>Paint</b> <input type="checkbox"/> <b>Flow line</b> <input type="checkbox"/> <b>Other</b> ( <i>describe</i> ): _____	
<b>FLOATABLES</b>	<input checked="" type="checkbox"/> <b>None</b> <input type="checkbox"/> <b>Algae</b> <input type="checkbox"/> <b>Dead fish</b> <input type="checkbox"/> <b>Suspended solids</b> <input type="checkbox"/> <b>Sewage</b> <input type="checkbox"/> <b>Other:</b> _____	

FLOW CONDITIONS	<input type="checkbox"/> 1 - No flow\interior conditions are dry
	<input checked="" type="checkbox"/> 2 - No visible flow\interior conditions are moist or damp
	<input type="checkbox"/> 3 - Visible flow
	<b>Flow Estimates:</b>
	Width of flow surface: __ inches __ feet
	Approximate depth of flow: __ inches ____ feet
	Approximate flow rate: __ feet per second

**- REPORT SUMMARY CHARACTERIZATION -**

<input checked="" type="checkbox"/> Unlikely Illicit Discharge	<input type="checkbox"/> Suspected Illicit Discharge	<input type="checkbox"/> Obvious Illicit Discharge
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**Photographic Documentation  
of Outfall Must be Attached to  
Complete Report**

**ADDITIONAL NOTES:**

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REPORTER SIGNATURE: Jeremy D Moore



**2014-2018**

**Virginia Stormwater Management Program**

**Appendix B  
MS4 Program  
Implementation Plan**

**Colonial Heights, Virginia**

March, 2013

# Colonial Heights, Virginia

## MS4 Program Implementation Plan, 2014-2018

MINIMUM CONTROL MEASURE	BEST MGMT PRACTIC CATEGORY	PROPOSED BEST MGMT PRACTICE	PROGRAM TASK	MEASURABLE GOAL/ ANTICIPATED ACHIEVEMENT	TASK SCHEDULE FISCAL YEARS ENDING JUNE 30					LEAD RESPONSIBILITY	SUPPORT RESPONSIBILITY	COMMENTS
					2014	2015	2016	2017	2018			
#1: Public Education and Outreach on Stormwater Impacts	1.1. Public Outreach/ Education for Homeowners	1.1.1. Lawn and Garden Activities	Information will be Included in <i>The City Focus</i> addressing appropriate landscape design, efficient irrigation, use of mulches, fertilizers, and pesticides. The City Focus is a City wide newsletter published in January, May, July and October.	Information on landscape design and fertilizer to be provided in May of each year. Information on mulch and efficient irrigation to be provided in May. Information on pesticides to be provided in July. <i>Use of harmful pesticides and fertilizers will be minimized by educating how water conservation techniques will be provided to homeowners.</i>	Q4	Q4	Q4	Q4	Q4	<ul style="list-style-type: none"> <li>MS4 Coordinator</li> </ul>	<ul style="list-style-type: none"> <li>Horticulturist</li> <li>Web Administrator</li> <li>Executive Assistant</li> </ul>	Publish in Spring 2014 issue of the City's periodic newsletter and annually thereafter and city website
#1: Public Education and Outreach on Stormwater Impacts	1.1. Public Outreach/ Education for Homeowners	1.1.2. Water Conservation Practices for Homeowners	Provide information on city website and in <i>The City Focus</i> to advise public about water conservation practices. Provide links on City website to organizations that promote conservation practices.	Information to be provided in the Spring of each year and as necessary in drought conditions. <i>Water conservation techniques will be identified to homeowners.</i>	Q4	Q4	Q4	Q4	Q4	<ul style="list-style-type: none"> <li>MS4 Coordinator</li> </ul>	<ul style="list-style-type: none"> <li>Web Administrator</li> <li>Executive Assistant</li> </ul>	Publish in Spring 2014 issue of the City's periodic newsletter and annually thereafter and city website
#1: Public Education and Outreach on Stormwater Impacts	1.1. Public Outreach/ Education for Homeowners	1.1.3. Proper Disposal of Hazardous Wastes	Provide information on city website and in <i>The City Focus</i> about the household hazardous waste pick up points and reasons to dispose of hazardous waste properly.	Information to be provided in the Fall of each year. <i>Homeowners will be educated on how to dispose of hazardous wastes properly.</i>	Q2	Q2	Q2	Q2	Q2	<ul style="list-style-type: none"> <li>MS4 Coordinator</li> </ul>	<ul style="list-style-type: none"> <li>Web Administrator</li> <li>Executive Assistant</li> </ul>	Publish in Fall 2014 issue of the City's periodic newsletter and annually thereafter and city website
#1: Public Education and Outreach on Stormwater Impacts	1.1. Public Outreach/ Education for Homeowners	1.1.4. Trash Management	Provide information on city website and in <i>The City Focus</i> to inform public about benefits of proper trash management and effects of littering.	Information to be provided in Fall of each year. <i>Homeowners will be aware of problems associated with improper trash disposal (flooding, health hazards, etc.)</i>	Q2	Q2	Q2	Q2	Q2	<ul style="list-style-type: none"> <li>MS4 Coordinator</li> <li>Web Administrator</li> <li>Executive Assistant</li> </ul>	<ul style="list-style-type: none"> <li>Public Works Superintendent</li> <li>CVWMA Operations Director</li> </ul>	Publish in Fall 2014 issue of the City's periodic newsletter and annually thereafter and city website

# Colonial Heights, Virginia

## MS4 Program Implementation Plan, 2014-2018

MINIMUM CONTROL MEASURE	BEST MGMT PRACTIC CATEGORY	PROPOSED BEST MGMT PRACTICE	PROGRAM TASK	MEASURABLE GOAL/ ANTICIPATED ACHIEVEMENT	TASK SCHEDULE FISCAL YEARS ENDING JUNE 30					LEAD RESPONSIBILITY	SUPPORT RESPONSIBILITY	COMMENTS
					2014	2015	2016	2017	2018			
#1: Public Education and Outreach on Stormwater Impacts	1.1. Public Outreach/ Education for Homeowners	1.1.5. Pet Waste Management	Provide information on city website and in <i>The City Focus</i> to inform public about impacts of pet wastes to the environment. Post signs at City parks to address pet waste disposal. Provide waste disposal bags at city parks.	Information to be provided in the Spring of each year. Signs currently posted. Currently provided and will continue. <i>Owner will be aware of legal responsibility to remove pet wastes from City property and will use waste disposal bags to contain pet wastes.</i>	Q4	Q4	Q4	Q4	Q4	<ul style="list-style-type: none"> <li>MS4 Coordinator</li> <li>Web Administrator</li> <li>Executive Assistant</li> </ul>	<ul style="list-style-type: none"> <li>Parks Superintendent</li> </ul>	Publish in Spring 2014 issue and annually thereafter and city website
#1: Public Education and Outreach on Stormwater Impacts	1.2. Targeting Public Outreach/ Education	1.2.2. Develop a Relationship with Local Media	Identify local media staff and send them information generated.	Identify and review annually. <i>Get media involved.</i>	Q4	Q4	Q4	Q4	Q4	<ul style="list-style-type: none"> <li>MS4 Coordinator</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	Provide in Spring 2014
#1: Public Education and Outreach on Stormwater Impacts	1.2. Targeting Public Outreach/ Education	1.2.3. Classroom Education on Stormwater	Review curriculum for sixth grade students addressing natural resource management and its relation to public policy and cost/benefit tradeoffs as defined by SOL guidelines consistent with grade level. Target a select school in first year and evaluate for expansion.	Curriculum to be developed and used annually. <i>Children will learn about water conservation and environmental impacts caused by Improper waste disposal and misuse of household products.</i>	Q2	Q2	Q2	Q2	Q2	<ul style="list-style-type: none"> <li>MS4 Coordinator</li> </ul>	<ul style="list-style-type: none"> <li>School Administration</li> <li>Youth Services</li> </ul>	Coordinate campaign with Schools in Fall 2014 and annually thereafter
#1: Public Education and Outreach on Stormwater Impacts	1.2. Targeting Public Outreach/ Education	1.2.4. Organized Education on Stormwater	Identify two (2) target audiences who would benefit from organized education programs. Potential groups include the Boy and Girl Scouts.	Make contact with two (2) youth group leaders and explore target education programs. <i>Children will learn about environmental impacts of improper waste disposal and will learn to take responsibility for their environment.</i>	Q1	Q1	Q1	Q1	Q1	<ul style="list-style-type: none"> <li>MS4 Coordinator</li> </ul>	<ul style="list-style-type: none"> <li>Youth Services</li> </ul>	Record number of contacts and provide report on projects completed each year in Q1 of ensuing year

# Colonial Heights, Virginia

## MS4 Program Implementation Plan, 2014-2018

MINIMUM CONTROL MEASURE	BEST MGMT PRACTIC CATEGORY	PROPOSED BEST MGMT PRACTICE	PROGRAM TASK	MEASURABLE GOAL/ ANTICIPATED ACHIEVEMENT	TASK SCHEDULE FISCAL YEARS ENDING JUNE 30					LEAD RESPONSIBILITY	SUPPORT RESPONSIBILITY	COMMENTS
					2014	2015	2016	2017	2018			
#1: Public Education and Outreach on Stormwater Impacts	1.3. Public Outreach Programs for New Development	1.3.1. Low Impact Development	Encourage developers and planners to apply low impact development practices (LID) Establish guidelines in plan review process for voluntary consideration applicable BMP measures for new development	Establish guidelines, record contact with developer and estimate number of acres developed with LID annually. <i>Low-impact development practices will be considered and used by builder to minimize development impacts</i>	O N G O I N G	O N G O I N G	O N G O I N G	O N G O I N G	O N G O I N G	<ul style="list-style-type: none"> <li>MS4 Coordinator</li> </ul>	<ul style="list-style-type: none"> <li>Assistant Director of Public Works</li> <li>Senior Engineering Technician</li> </ul>	Track development information on an ongoing basis. Complete annual report each year in Q1 of ensuing year
#1: Public Education and Outreach on Stormwater Impacts	1.4. Pollution Prevention Program for Household and Existing Development	1.4.1. Pollution Prevention Program for Homeowners	Formalize pollution prevention hotline to report problems and/or illicit discharge and notify the public of the hotline number and conditions they should be aware of.	Develop hotline to appear permanently on and in <i>The City Focus</i> . <i>Citizens will be able to notify appropriate City personnel of violations and unfavorable conditions</i>	O N G O I N G	O N G O I N G	O N G O I N G	O N G O I N G	O N G O I N G	<ul style="list-style-type: none"> <li>MS4 Coordinator</li> </ul>	<ul style="list-style-type: none"> <li>Web Administrator</li> <li>EMS Communications Supervisor</li> </ul>	Track notifications on an ongoing basis. Complete annual report each year in Q1 of ensuing year.
#1: Public Education and Outreach on Stormwater Impacts	1.4. Pollution Prevention Program for Household and Existing Development	1.4.2. Pollution Prevention for Businesses	Establish guidelines for a pollution prevention and recognition program tailored for the business community and annually provide information to business owners through a brochure or the City's newsletter.	Establish a formal pollution prevention program that provides guidelines for the business community to follow and obtain public recognition. <i>Recognition of pollution prevention efforts and environmental responsibility will provide an incentive for the business community to cooperate with proper storm water management.</i>	Q 1	Q1	Q1	Q1	Q1	<ul style="list-style-type: none"> <li>MS4 Coordinator</li> </ul>		Distribute brochure and give recognition to one business each year in Q1 of ensuing year.

# Colonial Heights, Virginia

## MS4 Program Implementation Plan, 2014-2018

MINIMUM CONTROL MEASURE	BEST MGMT PRACTIC CATEGORY	PROPOSED BEST MGMT PRACTICE	PROGRAM TASK	MEASURABLE GOAL/ ANTICIPATED ACHIEVEMENT	TASK SCHEDULE FISCAL YEARS ENDING JUNE 30					LEAD RESPONSIBILITY	SUPPORT RESPONSIBILITY	COMMENTS
					2014	2015	2016	2017	2018			
<b>#2: Public Involvement/ Participation</b>	2.1. Activities/ Public Participation	2.1.1. Stream Cleanup	Involve Boy and Girl Scout troops or other non-municipal organizations in cleanup efforts along streams and rivers. Encourage Scout masters to involve troop participation to meet goals consistent with the Boy Scout Forestry, and Soil and Water Conservation	Meet annually in Fall with Boy and Girl Scoutmasters / troop leaders or other non-municipal organizations to schedule annual clean up day along streams and rivers. <i>Children/Citizens will learn about environmental impacts of improper waste disposal.</i>	Q2	Q2	Q2	Q2	Q2	<ul style="list-style-type: none"> <li>MS4 Coordinator</li> </ul>	<ul style="list-style-type: none"> <li>PW Administrative Assistant</li> <li>Schools</li> </ul>	Schedule coordination meeting for Fall 2014 and annually thereafter
<b>#2: Public Involvement/ Participation</b>	2.1. Activities/ Public Participation	2.1.2. Adopt-A-Street/Adopt-A-Stream	Encourage residents and groups to adopt streets and areas along streams and rivers for clean up and volunteer monitoring and identify which stream is the recipient of runoff from the adopted street. Develop a program to distribute to interested groups.	Inform public biannually through website and <i>The City Focus</i> of streets available for adoption. <i>Public will help keep streets and streams free of debris and identify with the program.</i>	Q2 & Q4	Q2 & Q4	Q2 & Q4	Q2 & Q4	Q2 & Q4	<ul style="list-style-type: none"> <li>PW Administrative Assistant</li> </ul>	<ul style="list-style-type: none"> <li>MS4 Coordinator</li> <li>Web Administrator</li> <li>Executive Assistant</li> </ul>	Schedule public service announcements for Fall and Spring of each year
<b>#2: Public Involvement/ Participation</b>	2.1. Activities/ Public Participation	2.1.3. Public Programs in Schools	Encourage school children to create educational displays for public libraries and schools addressing stormwater pollution and control measures. Set up meetings and offer assistance to school science coordinator. Public Works to provide oversight and coordination.	Meet with Science coordinator annually. Consider creation of displays for August (National Water Quality Month). <i>Children will learn about stormwater impacts and ways that they can improve their environment.</i>	Q2	Q2	Q2	Q2	Q2	<ul style="list-style-type: none"> <li>MS4 Coordinator</li> </ul>	<ul style="list-style-type: none"> <li>Schools</li> </ul>	Schedule meeting for Fall 2014 and annually thereafter
<b>#3: Illicit Discharge Detection and Elimination</b>	3.1. Illicit Discharge and Elimination	3.1.1. Review of Legal Authority	Assess City ordinance to ensure illicit discharges are adequately defined and prohibited. Ensure enforcement actions are implemented.	Revise ordinance as needed and review annually. (High Priority)	O N G O I N G	O N G O I N G	O N G O I N G	O N G O I N G	O N G O I N G	<ul style="list-style-type: none"> <li>MS4 Coordinator</li> </ul>	<ul style="list-style-type: none"> <li>City Attorney</li> <li>Engineering Technician</li> <li>Assistant Director of Public Works</li> </ul>	Update and enforce on an ongoing basis.

# Colonial Heights, Virginia

## MS4 Program Implementation Plan, 2014-2018

MINIMUM CONTROL MEASURE	BEST MGMT PRACTIC CATEGORY	PROPOSED BEST MGMT PRACTICE	PROGRAM TASK	MEASURABLE GOAL/ ANTICIPATED ACHIEVEMENT	TASK SCHEDULE FISCAL YEARS ENDING JUNE 30					LEAD RESPONSIBILITY	SUPPORT RESPONSIBILITY	COMMENTS
					2014	2015	2016	2017	2018			
#3: Illicit Discharge Detection and Elimination	3.2. Illicit Discharge Detection	3.2.1. Inventory Regulated Stormwater Outfall Locations	Using existing map and fieldwork, establish program and schedule for inventory and data base development.	Existing regulated outfalls will be identified for annual inspection and illicit discharge tracking. <i>Creates map of regulated outfalls.</i> The City's 2003 inventory included approximately 40 outfalls to waterways and 600 inlets.	O N G O N G O N G	O N G O N G O N G Q1	O N G O N G O N G Q1	O N G O N G O N G Q1	O N G O N G O N G Q1	• MS4 Coordinator	• Senior Engineering Technician • Engineering Technician	Inspect regulated outfalls annually and update map of regulated outfalls as changes occur. Complete annual report in Q1 of ensuing year.
#3: Illicit Discharge Detection and Elimination	3.2. Illicit Discharge Detection	3.2.2. Map Regulated Outfalls and their Drainage Areas	Using existing mapping and continuing to do field work, refine and increase accuracy and detail of stormwater drainage system maps.	Create mapping delineating drainage areas associate with regulated outfalls. <i>Areas contributing to runoff will be identified.</i>	O N G O N G O N G	O N G O N G O N G Q1	O N G O N G O N G Q1	O N G O N G O N G Q1	O N G O N G O N G Q1	• Senior Engineering Technician	• MS4 Coordinator	Continue to update and refine map of drainage basins and regulated outfalls. Publish annual map update in Q1 of each year.
#3: Illicit Discharge Detection and Elimination	3.2. Illicit Discharge Detection	3.2.3. Locate Priority Area or Businesses Likely to have an Illicit Discharge	Using staff knowledge and available information develop a list of areas and businesses that would have a significant impact if a spill occurred or would have a high probability of having an accidental spill (ie auto repair shop restaurant and other industrial activities).	Create mapping of priority areas with unique pollution prevention schemes. <i>Areas that are possible sources of detrimental pollutants will be identified and monitored of possible problems</i>	Q1	Q1	Q1	Q1	Q1	• MS4 Coordinator	• Senior Engineering Technician	Update as necessary each year in Q1 of each year.
#3: Illicit Discharge Detection and Elimination	3.2. Illicit Discharge Detection	3.2.4. Inspect Regulated Outfalls for Dry Weather Discharge	Develop a program to use in the inspection to include visual observation, odors and conditions that would indicate illicit discharges. Schedule and forms to document the program will be included.	Inspect all regulated outfalls annually. <i>Dry weather discharges will be identified and appropriate action taken</i>	Q3	Q3	Q3	Q3	Q3	• MS4 Coordinator	• Engineering Technician	Inspect regulated outfalls in Q3 of each year. Complete annual report in Q1 of ensuing year.

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					2014	2015	2016	2017	2018				
#3: Illicit Discharge Detection and Elimination	3.3. Illicit Discharge Elimination	3.3.1. Trace and Remove Illicit Discharge	Establish method for tracing illicit discharges and procedures for enforcing ordinances. Techniques and safety need to be included	Revise Handbook and include enforcement measures.		Q4					<ul style="list-style-type: none"> <li>MS4 Coordinator</li> </ul>	<ul style="list-style-type: none"> <li>PW Administrative Assistant</li> </ul>	Complete in Q4 of 2015
#3: Illicit Discharge Detection and Elimination	3.3. Illicit Discharge Elimination	3.3.2. Program Evaluation and Assessment	Develop a formal record-keeping procedure to document identification of illicit discharge and the steps taken to address the situation	Annual review by City Staff. <i>Historic records addressing illicit discharge detection and elimination will be maintained and can be used for program evaluation.</i>	O N G O I N G	O N G O I N G Q1	O N G O I N G Q1	O N G O I N G Q1	O N G O I N G Q1		<ul style="list-style-type: none"> <li>MS4 Coordinator</li> </ul>	<ul style="list-style-type: none"> <li>PW Administrative Assistant</li> </ul>	Track illicit discharges as identified.  Complete annual report in Q1 of ensuing year
#3: Illicit Discharge Detection and Elimination	3.4. Illicit Discharge Detection to be Distributed	3.4.1. Illicit Discharge Education for Residences	Develop public education pollution prevention handouts to address illicit discharges from residences. Suggested topics include Household Hazardous Waste, Grass Clippings and Pesticides. Prepare 1 per year or as need is shown. Coordinate with 1.1 and 1.4	Provide on city forms to residents addressing household hazardous waste and impact to stormwater. <i>Homeowners will dispose of household hazardous wastes properly.</i>	Q3	Q3	Q3	Q3	Q3		<ul style="list-style-type: none"> <li>MS4 Coordinator</li> </ul>	<ul style="list-style-type: none"> <li>Web Administrator</li> <li>Executive Assistance</li> </ul>	Include insert in Winter issue of the City's periodic newsletter and website
#3: Illicit Discharge Detection and Elimination	3.4. Illicit Discharge Detection to be Distributed	3.4.2. Illicit Discharge Education for Businesses	Develop public education pollution prevention handouts to address illicit discharges from specific businesses. Suggested businesses include Auto Repair, Dry Cleaners and Restaurants. Prepare 1 per year or as need is shown. Coordinate with 1.4.2	Provide handouts to businesses addressing illicit discharges from their specific business and impact to stormwater. <i>Business will dispose of hazardous wastes and minimize use of hazardous or toxic materials.</i>	Q4	Q4	Q4	Q4	Q4		<ul style="list-style-type: none"> <li>MS4 Coordinator</li> </ul>	<ul style="list-style-type: none"> <li>Web Administrator</li> <li>Executive Assistance</li> </ul>	Include insert in Spring issue of City Focus and website

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					2014	2015	2016	2017	2018			
<b>#4: Construction Site Stormwater Runoff Control</b>	4.1. Erosion and Sediment Control Plan Review in association with Site Plan Review	4.1.1. Evaluate Current Ordinance and Method of Site Plan Review Using DCR Guidelines	Review current City of Colonial Heights ordinances, policies and procedures for reviewing E&S Control plans submitted in conjunction with the Site Plan review. Compare the City practices with those of other Virginia municipalities and the industry standards.	Compile, create, and publish a standard operating procedure for the review of E&S Control Plans. Refine E&S Control Plan review and publish definitive SOP	Q4	Q4	Q4	Q4	Q4	<ul style="list-style-type: none"> <li>Assistant Director of Public Works</li> </ul>	<ul style="list-style-type: none"> <li>MS4 Coordinator</li> <li>Senior Engineering Technician</li> <li>Administrative Assistant</li> </ul>	Complete review in Q4 of each year
<b>#4: Construction Site Stormwater Runoff Control</b>	4.1. Erosion and Sediment Control Plan Review in association with Site Plan Review	4.1.2. Revise Ordinance Pertaining to Site Plan Review Including Construction Waste	Revise and introduce legislation to City Council as needed and identified in 4.1.1	Development and adaptation of ordinance. <i>Uniform application of regulation.</i>	Q1	Q1	Q1	Q1	Q1	<ul style="list-style-type: none"> <li>Assistant Director of Public Works</li> </ul>	<ul style="list-style-type: none"> <li>MS4 Coordinator</li> <li>Administrative Assistant</li> <li>City Attorney</li> </ul>	Develop and introduce in Q1 of each year
<b>#4: Construction Site Stormwater Runoff Control</b>	4.1. Erosion and Sediment Control Plan Review in association with Site Plan Review	4.1.3. Develop Standards and Design Procedures for Site Plan Design	Review current City of Colonial Heights approved E&S Control methods guidance. Develop guidance specific to City topography and development practices, as to how and when each E&S Control method should be used. Include minimized Clearing, Stabilized Drainage Ways, Stabilized Exposed Soils, Protected Steep Slopes, Protected Waterways, Phased Construction, temporary diversion dikes, wind fences, brush barriers, silt fences, sediment basins and rock dams, sediment filters and sediment chambers, sediment traps and storm drain inlet protection. Coordinate with Virginia DCR, E&S Manual.	Create regulations that provide City Staff with clear guidance. <i>Simplify site plan design as it relates to erosion control.</i>	Q3	Q3	Q3	Q3	Q3	<ul style="list-style-type: none"> <li>Assistant Director of Public Works</li> </ul>	<ul style="list-style-type: none"> <li>MS4 Coordinator</li> </ul>	Review procedures annually in Fall

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					2014	2015	2016	2017	2018			
#4: Construction Site Stormwater Runoff Control	4.2. Construction Site Inspections for E&S Control Compliance	4.2.1. Develop Internal Checklist for Reviewers for Consistency	Collect and review other jurisdictions compared to Colonial Heights and develop internal checklist for reviewers. Consider adopting DCR checklist.	Development of internal checklist for reviewers. Internal checklist for reviewers creates consistency in the review process.	Q3	Q3	Q3	Q3	Q3	<ul style="list-style-type: none"> <li>Assistant Director of Public Works</li> </ul>	<ul style="list-style-type: none"> <li>MS4 Coordinator</li> <li>Senior Engineering Technician</li> </ul>	Update and Maintain checklist. Revisions complete Fall each year
#4: Construction Site Stormwater Runoff Control	4.2. Construction Site Inspections for E&S Control Compliance	4.2.2. Publish guidance documents on E&S Control Plan Inspections	Review, revise and publish current inspection procedures for E&S Control Plans.	Create and publish standard E&S Control Inspection Checklists. Provide best practices guidance to City staff performing E&S site inspections	Q2					<ul style="list-style-type: none"> <li>Assistant Director of Public Works</li> </ul>	<ul style="list-style-type: none"> <li>MS4 Coordinator</li> <li>Engineering Technician</li> </ul>	Complete review, revisions and publication in Q2 2014
#4: Construction Site Stormwater Runoff Control	4.3. Internal Management	4.3.1. Training of City Staff for E&S Management and Site Plan Review	Select city site review staff members for training and certification in Virginia Department of Conservation (DCR) and Recreation E&S Control in Virginia for Plan Reviewers.	Provide opportunity for training and certification to new employees within 1 year of employment. Improves understanding of inspections on BMPs and E&S Procedure.	O N G O I N G,	O N G O I N G, , Q1	O N G O I N G, , Q1	O N G O I N G, , Q1	O N G O I N G, , Q1	<ul style="list-style-type: none"> <li>Assistant Director of Public Works</li> </ul>	<ul style="list-style-type: none"> <li>MS4 Coordinator</li> </ul>	Provide training for employees as needed  Complete annual report of certifications in Q1 of ensuing year
#4: Construction Site Stormwater Runoff Control	4.3. Internal Management	4.3.2. Training and Certification of E&S Construction Site Inspectors	Select city site review staff members of training and certification in (DCR) E&S Control in Virginia for Plan Inspectors.	Provide opportunity for training and certification to new employees within 1 year of employment. Improves understanding of inspections on BMPs and E&S procedure.	O N G O I N G,	O N G O I N G, , Q1	O N G O I N G, , Q1	O N G O I N G, , Q1	O N G O I N G, , Q1	<ul style="list-style-type: none"> <li>Assistant Director of Public Works</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	Provide training for employees  Complete annual report of certifications in Q1 of ensuing year
#4: Construction Site Stormwater Runoff Control	4.3. Internal Management	4.3.3. Coordination with Other Staff	Develop scheduled periodic meetings with Site Reviewers, Inspectors, GIS staff, and Public Works staff to discuss modifications to benefit programs.	Schedule meeting annually. <i>Continuously improve program for effectiveness.</i>	Q3	Q3	Q3	Q3	Q3	<ul style="list-style-type: none"> <li>Assistant Director of Public Works</li> </ul>	<ul style="list-style-type: none"> <li>Senior Engineering Technician</li> <li>Engineering Technician</li> <li>Construction Inspector</li> </ul>	Conduct staff meeting in Q3 of each year

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					2014	2015	2016	2017	2018			
#5: Post-Construction Stormwater Management in New Development and Redevelopment	5.2. Non-structural BMP's	5.2.1. Review and Evaluate Current Technology	Evaluate current methods being used and select those applicable for Colonial Heights	Develop list of methods. <i>Allow developers to consider alternatives</i>	Q3	Q3	Q3	Q3	Q3	<ul style="list-style-type: none"> <li>Assistant Director of Public Works</li> </ul>	<ul style="list-style-type: none"> <li>MS4 Coordinator</li> </ul>	Review methods annually and add approved methods by Q3 each year
#5: Post-Construction Stormwater Management in New Development and Redevelopment	5.2. Non-structural BMP's	5.2.3. Evaluate and Update by Inspection of Construction Sites and Literature Review	Review literature for new techniques. Inspect sites with non-structural controls and evaluate effectiveness. Update guidelines as required	Inspect site and revise guidelines every 3 years. <i>Annual reporting of results allows successes and failures to be identified to improve cost effectiveness.</i>	Q4			Q4		<ul style="list-style-type: none"> <li>Engineering Technician</li> </ul>	<ul style="list-style-type: none"> <li>Assistant Director of Public Works</li> <li>City Attorney</li> </ul>	Complete review and evaluation and update guidelines in Q4 2014 and Q4 2017
#5: Post-Construction Stormwater Management in New Development and Redevelopment	5.2. Non-structural BMP's	5.2.4. Develop and Maintain an inventory of Non-structural BMPs	Establish an inventory of non-structural BMPs to include type, order required O&M, inspection frequency, and locations of facilities constructed after 2003. Identify previously constructed non-structural BMPs as data becomes available	Develop and maintain data base. <i>Ensure tracking of BMPs and their effectiveness.</i>	O N G O I N G	O N G O I N G	O N G O I N G	O N G O I N G	O N G O I N G	<ul style="list-style-type: none"> <li>Assistant Director of Public Works</li> </ul>	<ul style="list-style-type: none"> <li>Senior Engineering Technician</li> <li>MS4 Coordinator</li> </ul>	Inventory to be updated as new BMPs are added/constructed
#5: Post-Construction Stormwater Management in New Development and Redevelopment	5.3. Structural BMP's	5.3.1. Review & Evaluate Current Technology	Review and evaluate current technologies for structural BMP's for new and redeveloped situations being used in other localities and select those applicable to Colonial Heights.	Evaluate current methods being used and select those applicable for Colonial Heights. <i>Improve rate of success.</i>	Q4					<ul style="list-style-type: none"> <li>Assistant Director of Public Works</li> </ul>	<ul style="list-style-type: none"> <li>Senior Engineering Technician</li> </ul>	Complete in Q4 2014

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					2014	2015	2016	2017	2018				
#5: Post-Construction Stormwater Management in New Development and Redevelopment	5.3. Structural BMP's	5.3.2. Adopt Standards and Design Criteria	Adopt design criteria and examples of structures such as retention basins, filters or other structures and landscaping features such as grassed swales or filter strips. The difference between structured and non-structured landscape features is the need to incorporate physical maintenance. Adopt a manual for distribution to design firms and developers.	Provide guidance document. <i>Allows developer to prepare consistent design.</i>		Q1					<ul style="list-style-type: none"> <li>Assistant Director of Public Works</li> </ul>	<ul style="list-style-type: none"> <li>Senior Engineering Technician</li> <li>MS4 Coordinator</li> </ul>	Update Design guidance by 2015
#5: Post-Construction Stormwater Management in New Development and Redevelopment	5.3. Structural BMP's	5.3.3. Develop Inspection Procedures for Structural BMP's	Evaluate procedures used by others and prepare checklist, logs and methodology to inspect the selected types of BMP's. Develop inspection schedule for determining frequency. Include method for putting data into a data base. Include a measurement for determining effectiveness.	Conduct inspections as per schedule and maintain inspection on file. <i>Determine structural conditions and effectiveness.</i>	O N G O I N G	O N G O I N G	O N G O I N G	O N G O I N G	O N G O I N G	<ul style="list-style-type: none"> <li>Assistant Director of Public Works</li> </ul>	<ul style="list-style-type: none"> <li>Senior Engineering Technician</li> <li>MS4 Coordinator</li> </ul>		
#5: Post-Construction Stormwater Management in New Development and Redevelopment	5.3. Structural BMP's	5.3.4. Develop and Maintain Inventory of Structural BMP's	Coordinate with mapping to establish an inventory of structural BMP's to Include type, owner required O & M, inspection frequency, and location.	Develop and maintain data base. <i>BMPs and map updates annual after initial completion.</i>	Q1	Q1	Q1	Q1	Q1	<ul style="list-style-type: none"> <li>Assistant Director of Public Works</li> </ul>	<ul style="list-style-type: none"> <li>Senior Engineering Technician</li> <li>MS4 Coordinator</li> </ul>	Update database as needed in Q1 each year	

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					2014	2015	2016	2017	2018			
#5: Post-Construction Stormwater Management in New Development and Redevelopment	5.4. Internal Management	5.4.1. Training of City Staff for Site Plan Review and Field Inspections	Select staff members for training and certification of city staff using DCR course "Basic E & S Control in Virginia"	Provide opportunity for certification for new employees within 1 year of employment. <i>Improves understanding of inspections on BMPs and E&amp;S procedure.</i>	O N G O I N G G , Q1	O N G O I N G G , Q1	O N G O I N G G , Q1	O N G O I N G G , Q1	O N G O I N G G , Q1	• Assistant Director of Public Works	• MS4 Coordinator	Continue certification on an ongoing basis and complete annual report in Q1 of ensuing year
#5: Post-Construction Stormwater Management in New Development and Redevelopment	5.4. Internal Management	5.4.2. Coordination with Other Staff	Develop scheduled periodic meetings with Site Reviewer, Inspectors, and Public Works to discuss modification to benefit programs.	Schedule meeting annually. <i>Continuously improve program for effectiveness.</i>	Q3	Q3	Q3	Q3	Q3	• Assistant Director of Public Works	• MS4 Coordinator	Conduct annual staff meeting in Q3
#6: Pollution Prevention/ Good House-keeping for Municipal Operations	6.1. Source Controls at Municipal Facilities.	6.1.1. Maintenance Facilities	Inventory municipal facilities involved with possible stormwater pollution impact.	Develop mapping showing municipal facilities. <i>City will be able to identify possible source of contaminants to stormwater runoff.</i>		Q3				• Assistant Director of Public Works	• Facilities Maintenance Superintendent • Parks Superintendent • MS4 Coordinator	Update mapping in Q3 2015
#6: Pollution Prevention/ Good House-keeping for Municipal Operations	6.1. Source Controls at Municipal Facilities.	6.1.2. Review and Prepare Pollution Prevention Plans for a Maintenance Garage	Evaluate current pollution prevention plans for applicable City facilities: DPW, school bus facilities and transit facilities and update as required.	Update plans and meet with appropriate City personnel. <i>City personnel will evaluate current pollution prevention plans and prepare for possible emergency procedures.</i>		Q1				• MS4 Coordinator	• Automotive Maintenance Superintendent or Designee • Facilities Maintenance Superintendent • MS4 Coordinator	Update plan in Q1 2015
#6: Pollution Prevention/ Good House-keeping for Municipal Operations	6.1. Source Controls at Municipal Facilities.	6.1.3. Prepare Pollution Prevention Plan for Recreational Facilities	Prepare pollution prevention plans for applicable City recreational facilities.	Update plans and meet with appropriate City personnel. <i>City personnel will evaluate current pollution prevention plans and prepare for possible emergency procedures.</i>		Q1				• MS4 Coordinator	• Facilities Maintenance Superintendent • MS4 Coordinator	Update in Q1 2015

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					2014	2015	2016	2017	2018			
#6: Pollution Prevention/ Good House-keeping for Municipal Operations	6.1. Source Controls at Municipal Facilities.	6.1.4. Personnel Training	Train operations personnel in pollution prevention measures.	Record annual training schedules and number and department of personnel. <i>City will ensure that all personnel are adequately informed of pollution prevention measures.</i>	Q3	Q3	Q3	Q3	Q3	<ul style="list-style-type: none"> <li>MS4 Coordinator</li> </ul>	<ul style="list-style-type: none"> <li>Public Works Superintendent</li> <li>Assistant Director of Public Works</li> <li>Automotive Maintenance Superintendent</li> <li>Facilities Maintenance Superintendent</li> </ul>	Complete annual training in Q3 of each year
#6: Pollution Prevention/ Good House-keeping for Municipal Operations	6.2. Source Control – Streets and Parking Lots	6.2.1. Parking Lot and Street Cleaning	One full time sweeper to clean all curb and gutter streets once a year.	Develop mapping to indicate streets cleaned and tonnage picked up. <i>City will track and evaluate current street cleaning routine and identify problem areas.</i>	ONGOING,	ONGOING, Q1	ONGOING, Q1	ONGOING, Q1	ONGOING, Q1	<ul style="list-style-type: none"> <li>Public Works Superintendent</li> </ul>	<ul style="list-style-type: none"> <li>MS4 Coordinator</li> <li>Senior Engineering Technician</li> </ul>	Sweep streets throughout year. Complete annual performance report in Q1 of ensuing year
#6: Pollution Prevention/ Good House-keeping for Municipal Operations	6.2. Source Control – Streets and Parking Lots	6.2.2. Personnel Training	Evaluate inlet protection, erosion, and sediment control measures in road, utility, and bridge maintenance and train staff on methods.	Meet with 25% of required personnel on annual basis for training on current erosion and sediment control measures. <i>City personnel will employ current water quality measures for road, utility, and bridge maintenance.</i>	Q4	Q4	Q4	Q4	Q4	<ul style="list-style-type: none"> <li>Public Works Superintendent</li> </ul>	<ul style="list-style-type: none"> <li>Stormwater Foreman</li> <li>MS4 Coordinator</li> </ul>	Conduct training in Q4 of each year
#6: Pollution Prevention/ Good House-keeping for Municipal Operations	6.3. Source Control – Storm Drainage System	6.3.1. Storm Drain Intake System Cleaning	Using City field crews and equipment, clean curb inlets, catch basins and manholes in the stormwater drainage system.	Clean 25% of storm structures per year. Record for historic data on database. <i>Reduces volume of solids in stormwater.</i>	ONGOING,	ONGOING, Q1	ONGOING, Q1	ONGOING, Q1	ONGOING, Q1	<ul style="list-style-type: none"> <li>Public Works Superintendent</li> </ul>	<ul style="list-style-type: none"> <li>Stormwater Foreman</li> <li>MS4 Coordinator</li> </ul>	Clean structures throughout year. Complete annual report in Q1 of ensuing year

# Colonial Heights, Virginia

## MS4 Program Implementation Plan, 2014-2018

MINIMUM CONTROL MEASURE	BEST MGMT PRACTIC CATEGORY	PROPOSED BEST MGMT PRACTICE	PROGRAM TASK	MEASURABLE GOAL/ ANTICIPATED ACHIEVEMENT	TASK SCHEDULE FISCAL YEARS ENDING JUNE 30					LEAD RESPONSIBILITY	SUPPORT RESPONSIBILITY	COMMENTS	
					2014	2015	2016	2017	2018				
#6: Pollution Prevention/ Good House-keeping for Municipal Operations	6.3. Source Control – Storm Drainage System	6.3.2. Storm Drain System Inventory	Delineate sub basins of non-regulated outfall during Master Plan preparation. Inventory and evaluate all structures within one drainage basin per year. Coordinate with 5.1	Develop mapping and data base for non-regulated outfall basins. <i>Identify outfall areas to account for sources of possible contaminants.</i>		Q2					<ul style="list-style-type: none"> <li>Assistant Director of Public Works</li> </ul>	<ul style="list-style-type: none"> <li>Senior Engineering Technician</li> </ul>	Complete by Q2 of 2015
#6: Pollution Prevention/ Good House-keeping for Municipal Operations	6.3. Source Control – Storm Drainage System	6.3.3. Stormwater Complaint File and History	Develop system to track and maintain historical data.	Review data annually. <i>Detection of failing or undersized systems</i>	O N G O I N G	O N G O I N G , Q1	O N G O I N G , Q1	O N G O I N G , Q1	O N G O I N G , Q1		<ul style="list-style-type: none"> <li>Public Works Superintendent</li> </ul>	<ul style="list-style-type: none"> <li>Public Work Superintendent</li> <li>MS4 Coordinator</li> <li>Stormwater Foreman</li> </ul>	Review citizen's request/work order history throughout year. Complete annual report by Q1 of ensuing year.
#6: Pollution Prevention/ Good House-keeping for Municipal Operations	6.4. Materials Management	6.4.1. Hazardous Materials Storage and Management	Evaluate storage locations and method of storing hazardous materials by EPA guidelines.	Record locations and methods of hazardous materials storage on map layer and database and inspect storage facilities annually. <i>Ensure hazardous materials storage containment is adequate.</i>	Q4	Q4	Q4	Q4	Q4		<ul style="list-style-type: none"> <li>Senior Engineering Technician</li> </ul>	<ul style="list-style-type: none"> <li>MS4 Coordinator</li> <li>Automotive Maintenance Superintendent</li> <li>Facilities Superintendent</li> <li>Director</li> </ul>	Complete inventory in Q4 of first year and inspect annually in Q4 of each year
#6: Pollution Prevention/ Good House-keeping for Municipal Operations	6.4. Materials Management	6.4.2. Salt Storage	Evaluate application and method of storing road salt.	Record application locations and methods of storage in layer and database. Inspect storage facilities annually. <i>Ensure salt storage is adequate.</i>	Q3	Q3	Q3	Q3	Q3		<ul style="list-style-type: none"> <li>Public Works Superintendent</li> </ul>	<ul style="list-style-type: none"> <li>Streets Foreman</li> <li>MS4 Coordinator</li> </ul>	inspect in Q3 of each ensuing year.

# Colonial Heights, Virginia

## MS4 Program Implementation Plan, 2014-2018

MINIMUM CONTROL MEASURE	BEST MGMT PRACTIC CATEGORY	PROPOSED BEST MGMT PRACTICE	PROGRAM TASK	MEASURABLE GOAL/ ANTICIPATED ACHIEVEMENT	TASK SCHEDULE FISCAL YEARS ENDING JUNE 30					LEAD RESPONSIBILITY	SUPPORT RESPONSIBILITY	COMMENTS
					2014	2015	2016	2017	2018			
#6: Pollution Prevention/ Good House-keeping for Municipal Operations	6.4. Materials Management	6.4.3. Oil and Antifreeze Recycling	Evaluate used oil and antifreeze recycling methods.	Record used oil and used antifreeze recycling programs and amount collected to assess efficiency of current programs annually. <i>Ensure current programs are adequate</i>	O N G O I N G G, Q1	O N G O I N G , Q1	O N G O I N G , Q1	O N G O I N G , Q1	O N G O I N G , Q1	<ul style="list-style-type: none"> <li>Public Works Superintendent</li> </ul>	<ul style="list-style-type: none"> <li>MS4 Coordinator</li> </ul>	Record quantities of collected materials continuously. Complete annual report in Q1 of ensuing year

Illicit Discharge Incident Reference Guide			
Reference Number	Location / Descriptive Name	Incident Date	Date Closed
00001	Southpark Mall carnival discharge	12-Mar-09	13-Mar-09
00001A	<i>second incident reported on July 30</i>	30-Jul-09	30-Jul-09
00001B	<i>third incident discovered on June 22</i>	22-Jun-11	27-Jun-11
00002	Highland Avenue garden drainage ditch	6-Apr-09	6-Apr-09
00003	Lafayette Avenue automobile leakage	14-May-09	currently open
00004	Billy's Lawn Service, Pertshire and School Streets	6-Nov-09	currently open
00005	214 Biltmore Drive	16-Apr-10	16-Apr-10
00006	Ridge and Snead	28-Mar-11	currently open
00007	111 Lakeside		currently open
00008	Hemlock Avenue, north end	17-Jun-11	currently open
00009	94 Swift Creek Lane	13-Jun-11	currently open
00010	209 Windmere Avenue	15-Jul-11	18-Jul-11
00011	210 Windmere Avenue	15-Jul-11	currently open
00012	1801 Duke of Gloucester inlet discharge	30-Aug-11	7-Sep-11
00013	Helen Avenue catch basin connection	4-Oct-11	5-Oct-11
00014	Don Jose, Boulevard @ Yew Ave	11-Apr-14	4/15/2014
00015	Martin's Grocery	24-Jun-14	7/8/2014

2013 POTENTIAL ILLICIT DISCHARGERS by INDUSTRY

TRADE NAME	FULL NAME	ADDRESS #	STREET NAME	CITY	STATE	ZIP	LICENSE NO	ALTERNATIVE CONTACT	FACILITIES	TYPE OF DISCHARGE	PAST VIOLATIONS
Virginia Medical Group PC		2905	Boulevard	Colonial Heights	VA	23834	20091367				
Colonial Heights Medical Center		3512	Boulevard	Colonial Heights	VA	23834	20091762				
Southside Pediatric Center		400 Suite D	Southpark Boulevard	Colonial Heights	VA	23834	20091291				
Commonwealth Dentistry		456 Suite 5	Charles Dimmock Pkwy	Colonial Heights	VA	23834	20091296				
Colonial Orthopedics Inc		131	Jennick Dr	Colonial Heights	VA	23834	20090797				
Virginia Physicians for Women Ltd		280	Charles Dimmock Pkwy	Colonial Heights	VA	23834	20091070				
Caldwell, Melaney MD	Caldwell Pediatrics & Wellness Center	2425 Suite 6	Boulevard	Colonial Heights	VA	23834	20091299				
Virginia Urology Center PC		436	Clairmont Ct	Colonial Heights	VA	23834	20090264				
Swift Creek Family Care		3628	Boulevard	Colonial Heights	VA	23834	20090590				
Family Auto Sales LLC		3626 Suite A	Boulevard	Colonial Heights	VA	23834	20090448				
Infant Jesus Children's Clinic PLC		210	Temple Ave	Colonial Heights	VA	23834	20091000				
Riverview Physicians for Women		439	Jennick Drive	Colonial Heights	VA	23834	20090431				
Colonial Heights Veterinary Hospital PC		3666	Boulevard	Colonial Heights	VA	23834	20090236				
Commonwealth Pediatrics PC		430 Suite 211	Clairmont Court	Colonial Heights	VA	23834	20091577				

**2013 POTENTIAL ILLICIT DISCHARGERS by INDUSTRY**

<b>TRADE NAME</b>	<b>FULL NAME</b>	<b>ADDRESS #</b>	<b>STREET NAME</b>	<b>CITY</b>	<b>STATE</b>	<b>ZIP</b>
Ackerman Auto Repair	James Ackerman	111	Boulevard	Colonial Heights	VA	23834
Advance Auto Parts #2840		3104	Boulevard	Colonial Heights	VA	23834
Always Auto Parts	Tri-City Properties of VA	P O Box 39		Colonial Heights	VA	23834
Arby's		107	Temple Lake Drive	Colonial Heights	VA	23834
Battlefield Park Body Shop	Wilson W Abernathy	118	Bruce Ave	Colonial Heights	VA	23834
Blue's Place	Michael Royea	1702	Boulevard	Colonial Heights	VA	23834
Boulevard BBQ	Jose E Melendez	2231	Boulevard	Colonial Heights	VA	23834
Boulevard BP	MS & KS LLC	915	Boulevard	Colonial Heights	VA	23834
Briggs Auto Service	Mark Briggs	1700	Snead Ave	Colonial Heights	VA	23834
Burger King		3116	Boulevard	Colonial Heights	VA	23834
Burger King		401	Southpark Blvd	Colonial Heights	VA	23834
Captain Tom's Seafood	T & J Restaurants Inc	1717	Boulevard	Colonial Heights	VA	23834
Carini Restaurant Corp	Carini's Restaurant Corp	3620	Boulevard	Colonial Heights	VA	23834
Carlton's Auto Service	Clifford B McGlone	116	Taswell Ave	Colonial Heights	VA	23834
Castaways Coffee House Inc	Kelly Scarbro	591	Southpark Blvd	Colonial Heights	VA	23834
Chanello's Pizza	Roodes Pizza Inc	3409	Boulevard	Colonial Heights	VA	23834
Chick-Fil-A	Donovan Carless	384 B-10	Southpark Circle	Colonial Heights	VA	23834
Colonial Heights Muffler & Auto	Autoworks Service Center	1718	Snead Ave	Colonial Heights	VA	23834
Colonial Italian Pizza Restaurant	Rosa-Nero Inc	1	Dunlop Village	Colonial Heights	VA	23834
Colonial Motor Company	Lyman W Ange Jr	3517	Boulevard	Colonial Heights	VA	23834
Colonial Shell	Rass Inc	3220	Boulevard	Colonial Heights	VA	23834
Conner Small Engine	Robert H Conner	1000	Temple Ave	Colonial Heights	VA	23834
Dairy Queen	J & A Inc	294	Southpark Circle	Colonial Heights	VA	23834
Dante's Pizzeria	Dante's Pizzeria	3008	Boulevard	Colonial Heights	VA	23834
Dishman's	David W Johnson	P O Box 472		Colonial Heights	VA	23834
Dominos Pizza	G & M Pizza	2227	Boulevard	Colonial Heights	VA	23834
Don Jose #2 Inc	Don Jose #2 Inc	3609	Boulevard	Colonial Heights	VA	23834
El Caporal	Zito, LLC	241 Suite 8	Charles Dimmock Pkwy	Colonial Heights	VA	23834
Five Guys Famous Burgers		707	Southpark	Colonial Heights	VA	23834
The Flaming Pit	ABA LLC	2231	Boulevard	Colonial Heights	VA	23834
Golden Corral	ESC Restaurants Inc	2501	Conduit Rd	Colonial Heights	VA	23834
Great China Buffet Inc	Great China Buffet Inc	1829	Southpark Blvd	Colonial Heights	VA	23834

Great Steak & Potatoe Co	S & G Cross Inc	366	Southpark Circle	Colonial Heights	VA	23834
Harris Auto Repair	Delmar J Shumate Jr	115	Boulevard	Colonial Heights	VA	23834
Jersey Mike's Subs	Wal Corp Inc	2011	Boulevard	Colonial Heights	VA	23834
Kentucky Fried Chicken	Kentucky Fried Chicken	1906 Suite B	Boulevard	Colonial Heights	VA	23834
Laines	JPF Inc	1621	Boulevard	Colonial Heights	VA	23834
Tom Lewis Auto Sales	Tom Lewis	3620	Boulevard	Colonial Heights	VA	23834
Little Caesars		2104	Boulevard	Colonial Heights	VA	23834
Los Bandidos	Leopoldo Lugo	170	Southgate Square	Colonial Heights	VA	23834
Master Transmissions	RWRW Inc	636	Boulevard	Colonial Heights	VA	23834
McDonalds		411	Southpark Circle	Colonial Heights	VA	23834
McDonalds		1101	Boulevard	Colonial Heights	VA	23834
Mi Rodeo Mexican Grill	Los Primos De Jal LLC	2208	Boulevard	Colonial Heights	VA	23834
Motorcycle Authority Inc	Motorcycle Authority	3008	Boulevard	Colonial Heights	VA	23834
	New Chinamen's Buffet of Dong's					
New Chinamen's Buffet	Inc	200	Southgate Square	Colonial Heights	VA	23834
No 1 New China	No 1 New China	34	Dunlop Shopping Center	Colonial Heights	VA	23834
Oxford Motor Company, LLC	Oxford Motor Company, LLC	119-B	Boulevard	Colonial Heights	VA	23834
Padow's Hams & Deli	Mariett Inc	648-A	Southpark Blvd	Colonial Heights	VA	23834
The Paint Warehouse	J & P of Petersburg Inc	1410	Boulevard	Colonial Heights	VA	23834
J E Perdue, Landscaping	Joseph Edward Perdue Jr	500	Dupuy Ave	Colonial Heights	VA	23834
Pino's Italian Restaurant	Marcello Crapa	3420	Boulevard	Colonial Heights	VA	23834
Pleasure Island Seafood	Pleasure Island Seafood Inc	3650	Boulevard	Colonial Heights	VA	23834
Quiznos Sub	Fazdins Inc	458	Charles Dimmock Pkwy	Colonial Heights	VA	23834
Sino Wok Chinese Eatery	Ying Qing Yang & Yan Qing Jiang	388	Southpark Circle	Colonial Heights	VA	23834
Staples Automotive	Colonial Heights Auto Parts I	1907	Boulevard	Colonial Heights	VA	23834
Stir Fry 88 of Southpark Mall Inc	Stir Fry 88 of Southpark Mall Inc	378	Southpark Mall	Colonial Heights	VA	23834
Subway #23642	Shree Shiv Co	501	Southpark Blvd	Colonial Heights	VA	23834
Subway #38026	Desjardins Ent Ltd Inc	671	Southpark Blvd	Colonial Heights	VA	23834
Subway #42545	Epieikeia Ent Ltd Inc	381	Southpark Circle	Colonial Heights	VA	23834
Taco Bell #16941	Burger Busters IV LLC	628	Southpark Blvd	Colonial Heights	VA	23834
Top's China	Song Yang	3107- 11	Boulevard	Colonial Heights	VA	23834
Tuffy Muffler	Lizco Inc	1115	Boulevard	Colonial Heights	VA	23834
Uppy's IX	Uppy's Convenience Stores Inc	961	Temple Ave	Colonial Heights	VA	23834
Vincenzo's Restaurant	Vincenzo's Restaurant Inc	609	Boulevard	Colonial Heights	VA	23834
Virginia Liftmaster 4X Specialist	Rodney Parlow & Mark Hinds	405	Ellerslie Ave	Colonial Heights	VA	23834

Wagstaff Steak House The  
What-A-Burger

Danny Wagstaff  
Jack T Branch

3737  
1018

Boulevard  
Boulevard

Colonial Heights  
Colonial Heights

VA  
VA

23834  
23834

LICENSE NO	ALTERNATIVE CONTACT	FACILITIES	TYPE OF DISCHARGE	PAST VIOLATIONS
20090281				
20090899				
20091039				
20090404				
20090085				
20090366				
20090454				
20090860				
20090945				
20091049				
20091512				
20090742				
20090519				
20090656				
20090959				
20090037				
20091042				
20090134				
20090160				
20091895				
20090327				
20091743				
20091356				
20091851				
20091468				
20090033				
20090196				
20091613				
20091540				
20091843				
20090416				
20090255				

20090954  
20090803  
20091131

20090458  
20090460  
20090301  
20091149  
20091281  
20090259  
20090472  
20091153  
20090230  
20091488

20090935  
20090138  
20090767  
20090893  
20090335  
20091545  
20091150  
20090866  
20091536

20091627  
20090406  
20090177  
20090445  
20091389  
20091516  
20091268  
20090996  
20090553  
20091669  
20090500  
20091561

20090284

20090469

**2013 POTENTIAL ILLICIT DISCHARGERS by INDUSTRY**

TRADE NAME	FULL NAME	ADDRESS #	STREET NAME	CITY	STATE	ZIP	LICENSE NO	ALTERNATIVE CONTACT	FACILITIES	TYPE OF DISCHARGE	PAST VIOLATIONS
Adams, Walter A - Builder Inc	Walter A Adams	P O Box 1044		Colonial Heights	VA	23834	20090179				
All American Home Improvement	John Morelle II	211	Marvin Ave	Colonial Heights	VA	23834	20091678				
B & T Excavating LLC	B & T LLC	104	Winston Ave	Colonial Heights	VA	23834	20091271				
Richard Bogese Builders Inc	C Richard Bogese Jr	206-D	Temple Ave	Colonial Heights	VA	23834	20090330				
BRY Builders	Bryant W Akins	316	Pickett Ave	Colonial Heights	VA	23834	20090191				
Buchanan & Rice Contractors Inc	Buchanan & Rice Contractors Inc	1811	Ruffin Mill Circle	Colonial Heights	VA	23834	20090682				
Cana Contractors	Joon Jeong	317	Yorktown Dr	Colonial Heights	VA	23834	20091407				
F J Childers Construction	Frank J Childers	897	Conduit Rd	Colonial Heights	VA	23834	20091225				
City Wide Construction Co	Timothy E Francis Sr	220	Virginia Ave	Colonial Heights	VA	23834	20090224				
Colonial Construction	Stephanie Wilson	405	Cloverhill Ave	Colonial Heights	VA	23834	20091221				
Richard L Crowder Construction Inc	Richard Crowder	P O Box 2125		Petersburg	VA	23804	20090117				
Daniels Masonry Contractors Inc	Daniels Masonry Contractors Inc	P O Box 1274		Colonial Heights	VA	23834	20090692				
DanRich Construction Co Inc	DanRich Construction Co Inc	117-C	Orange Ave	Colonial Heights	VA	23834	20091249				
Dietze Construction Group Inc	Dietze Construction Group Inc	45155 Suite 300	Research Place	Ashburn	VA	20147	20091186				
Divine Custom Builders	Michael Sawyer	200 Apt 1	Beechwood Ave	Colonial Heights	VA	23834	20090163				
Dunn Right Construction Inc	R L Dunn III	P O Box 532		Colonial Heights	VA	23834	20090930				
Tommy Dykes Construction	Tommy Dykes	902	E Westover Ave	Colonial Heights	VA	23834	20090863				
John Edward Construction	John Edward Johnson	218	Lafayette Ave	Colonial Heights	VA	23834	20090938				
Gibbs Masonry & Construction Inc	Lewis E Gibbs Jr	P O Box 834		Colonial Heights	VA	23834	20091009				
RM Hahn, Jr General Contractor	Richard M Hahn Jr	412	Whipporwill Ct	Colonial Heights	VA	23834	20091003				
JD Hauser Construction	Tara B Hauser	801	Old Town Dr	Colonial Heights	VA	23834	20090083				
Gilbert Martin Co Inc	Gilbert Martin	117	Roanoke Ave	Colonial Heights	VA	23834	20090354				
Moore Paving Company	Walter D Moore	309	W Ellerslie Ave	Colonial Heights	VA	23834	20091362				
Oasis Contracting Inc	Oasis Contracting Inc	1148	Peace Cliff Ct	Colonial Heights	VA	23834	20091550				
Perkinson Custom Homes	Dwayne R Perkinson	112	Waterfront Dr	Colonial Heights	VA	23834	20090997				
R & D Sealcoating	David P Hoopsick	401	Dupuy Ave	Colonial Heights	VA	23834	20090628				
R & R Concrete	Robert C Rollinson III	P O Box 1073		Colonial Heights	VA	23834	20090627				
R H Construction	Richard B Heuermann	318	Comstock Dr	Colonial Heights	VA	23834	20091239				
Real Deal Contracting	Patrick Stevens	1314	Canterbury Lane	Colonial Heights	VA	23834	20091837				
Robinette Construction Co Inc	Dwight Kelly Robinette	2004	Snead Ave	Colonial Heights	VA	23834	20091438				
Saunders Construction	David A Saunders	212	Moore Ave	Colonial Heights	VA	23834	20090007				
B P Short & Son Paving Co Inc		P O Box 2007		Petersburg	VA	23804	20090162				
Slurry Pavers Inc		1277	Mountain Rd	Glen Allen	VA	23060	20091507				
Southern Construction Inc		P O Box 667		Petersburg	VA	23804	20090006				
Square D Construction	Danny L Mayes	1705	Franklin Ave	Colonial Heights	VA	23834	20091606				
Sun General Contracting	Petros N Megariotis	411	Cloverhill Ave	Colonial Heights	VA	23834	20091387				
Waskey Construction LLC	Waskey Construction LLC	P O Box 948		Colonial Heights	VA	23834	20091603				
J S Wood Builder LLC	J S Wood	4700	Ridgecrest Lane	Colonial Heights	VA	23834	20090332				
Xtreme Structures	Donald Wayne Hogue	1101	Conduit Rd	Colonial Heights	VA	23834	20090407				

### TR 55 Worksheet 2: Runoff Curve Number and Runoff

Project: Overall Discharge - Colonial Heights Designed By: \_\_\_\_\_ Date: \_\_\_\_\_

Location: City of Colonial Heights Checked: \_\_\_\_\_ Date: \_\_\_\_\_

Check one:  Present  Developed

1. Runoff curve number (CN)

Soil name and hydrologic group (Appendix A)	Cover description (Cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN <sup>1/</sup>			Area <input checked="" type="checkbox"/> acres <input type="checkbox"/> mi <sup>2</sup> <input type="checkbox"/> %	Product of CN x area
		Table 2-2	Fig. 2-3	Fig. 2-4		
	33% Impervious		73		4,800.0	350,400.0
<b>Totals =</b>					4,800.0	350,400.0

<sup>1/</sup> Use only one CN source per line.

$$\text{CN (weighted)} = \frac{\text{total product}}{\text{total area}} = \frac{350,400.0}{4,800.0} = \underline{73}$$
 Use CN = 73

2. Runoff

Frequency ..... years

Rainfall, P (24 hour) ..... in.

Runoff, Q ..... in.

(Use P and CN with Table 2-1, Figure 2-1, or equations 2-3 and 2-4.)

Storm #1	Storm #2	Storm #3
2	10	100
3.5	5.5	8.0
1.2	2.7	4.8

### TR 55 Worksheet 3: Time of Concentration (T<sub>c</sub>) or Travel Time (T<sub>t</sub>)

Project: Overall Discharge - Colonial Heights      Designed By: \_\_\_\_\_ Date: \_\_\_\_\_

Location: City of Colonial Heights      Checked By: \_\_\_\_\_ Date: \_\_\_\_\_

Check one:  Present       Developed

Check one:    T<sub>c</sub>    T<sub>t</sub>    through subarea \_\_\_\_\_

NOTES: Space for as many as two segments per flow type can be used for each worksheet. Include a map, schematic, or description of flow segments.

Sheet Flow (Applicable to T<sub>c</sub> only)

Segment ID

--	--

1. Surface description (Table 3-1) .....
2. Manning's roughness coeff., n (Table 3-1) .....
3. Flow length, L (total L ≤ 100 ft) ..... ft
4. Two-year 24-hour rainfall, P<sub>2</sub>..... in
5. Land slope, s ..... ft/ft
6. T<sub>t</sub> =  $\frac{0.007 (nL)^{0.8}}{P_2^{0.5} s^{0.4}}$       Compute T<sub>t</sub> ..... hr

33% Impervious	
0.01	
27,444	
3.5	
0.010	
2.27	+ <span style="border: 1px solid black; padding: 2px;"> </span>
= <span style="border: 1px solid black; padding: 2px;">2.27</span>	

Shallow Concentrated Flow

Segment ID

--	--

7. Surface description (paved or unpaved) .....
8. Flow length, L ..... ft
9. Watercourse slope, s ..... ft/ft
10. Average velocity, V (Figure 3-1) ..... ft/s
11. T<sub>t</sub> =  $\frac{L}{3600 V}$       Compute T<sub>t</sub> ..... hr

	+ <span style="border: 1px solid black; padding: 2px;"> </span>
= <span style="border: 1px solid black; padding: 2px;"> </span>	

Channel Flow

Segment ID

--	--

12. Cross sectional flow area, a ..... ft<sup>2</sup>
13. Wetted perimeter, P<sub>w</sub> ..... ft
14. Hydraulic radius, r =  $\frac{a}{P_w}$       Compute r ..... ft
15. Channel Slope, s ..... ft/ft
16. Manning's Roughness Coeff., n .....
17. V =  $\frac{1.49 r^{2/3} s^{1/2}}{n}$       Compute V ..... ft/s


18. Flow length, L ..... ft
19. T<sub>t</sub> =  $\frac{L}{3600 V}$       Compute T<sub>t</sub> ..... hr

	+ <span style="border: 1px solid black; padding: 2px;"> </span>
= <span style="border: 1px solid black; padding: 2px;"> </span>	

20. Watershed or subarea T<sub>c</sub> or T<sub>t</sub> (add T<sub>t</sub> in steps 6, 11, and 19) ..... hr 2.27

### Tr 55 Worksheet 4: Graphical Peak Discharge Method

Project: Overall Discharge - Colonial Heights Designed By: \_\_\_\_\_ Date: \_\_\_\_\_

Location: Colonial Heights Checked By: \_\_\_\_\_ Date: \_\_\_\_\_

Check one:  Present  Developed

1. Data:

Drainage area .....  $A_m = \underline{7.40}$  mi<sup>2</sup> (acres/640)

Runoff curve number .... CN = 73 (From Worksheet 2)

Time of concentration .....  $T_c = \underline{2.20}$  hr (From Worksheet 3)

Rainfall distribution type ..... = II (II, III, DMVIII)

Pond and swamp areas spread throughout watershed ..... = \_\_\_\_\_ percent of  $A_m$  ( \_\_\_\_\_ acres or mi<sup>2</sup> covered)

	Storm #1	Storm #2	Storm #3
2. Frequency..... yr	2	10	100
3. Rainfall, P (24-hour)..... in	3.5	5.5	8.0
4. Initial abstraction, $I_a$ ..... in (Use CN with Table 4-1.)	0.740	0.740	0.740
5. Compute $I_a/P$ .....	0.21	0.13	0.09
6. Unit peak discharge, $q_u$ ..... csm/in (Use $T_c$ and $I_a/P$ with exhibit 4- <u>II</u> )	200	220	240
7. Runoff, Q ..... in (From Worksheet 2)	1.10	2.60	4.60
8. Pond and swamp adjustment factor, $F_p$ ..... in (Use percent pond and swamp area with Table 4-2. Factor is 1.0 for zero percent pond and swamp area.)	1.0	1.0	1.0
9. Peak discharge, $q_p$ ..... cfs (Where $q_p = q_u A_m Q F_p$ )	1,628	4,233	8,170

# The Simple Method to Calculate Urban Stormwater Loads

## Introduction

The Simple Method estimates stormwater runoff pollutant loads for urban areas. The technique requires a modest amount of information, including the sub-watershed drainage area and impervious cover, stormwater runoff pollutant concentrations, and annual precipitation. With the Simple Method, the investigator can either break up land use into specific areas, such as residential, commercial, industrial, and roadway and calculate annual pollutant loads for each type of land, or utilize more generalized pollutant values for land uses such as new suburban areas, older urban areas, central business districts, and highways.

Stormwater pollutant concentrations can be estimated from local or regional data, or from national data sources. Tables 1 through 3 summarize pollutant concentration data for Total Suspended Solids (Table 1), Total Phosphorous (Table 2), and Total Nitrogen (Table 3) for residential, commercial, industrial, and roadway land uses, and identify default values. Table 4 identifies pollutant concentration values for Phosphorus, Nitrogen, COD, BOD, and some metals for more generalized land use categories. In general, the selected data sources are nationwide in scope, or are summaries of several regional studies. Some studies included in these data did not characterize stormwater concentrations for specific land uses, and instead reported a concentration for "urban runoff." In these instances, the data are reported as the same concentration for each land use in Tables 1 through 3.

Fecal coliform is more difficult to characterize than other pollutants. Data are extremely variable, even during repeated sampling at a single location. Because of this variability, it is difficult to establish different concentrations for each land use. Although some source monitoring data exists (Steuer *et al.*, 1997; Bannerman *et al.*, 1993), the simple method assumes a median urban runoff default value, derived from NURP data (Pitt, 1998), of 20,000 MPN/100ml. For more information on sources and pathways of bacteria in urban runoff, consult Schueler (1999).

The Simple Method estimates pollutant loads for chemical constituents as a product of annual runoff volume and pollutant concentration, as:

$$L = 0.226 * R * C * A$$

Where: L = Annual load (lbs)  
R = Annual runoff (inches)  
C = Pollutant concentration (mg/l)  
A = Area (acres)  
0.226 = Unit conversion factor

For bacteria, the equation is slightly different, to account for the differences in units. The modified equation for bacteria is:

$$L = 1.03 * 10^{-3} * R * C * A$$

Where: L = Annual load (Billion Colonies)  
R = Annual runoff (inches)  
C = Bacteria concentration (#/100 ml)  
A = Area (acres)  
 $1.03 * 10^{-3}$  = Unit conversion factor

## Annual Runoff

The Simple Method calculates annual runoff as a product of annual runoff volume, and a runoff coefficient (Rv). Runoff volume is calculated as:

$$R = P * P_j * R_v$$

Where: R = Annual runoff (inches)

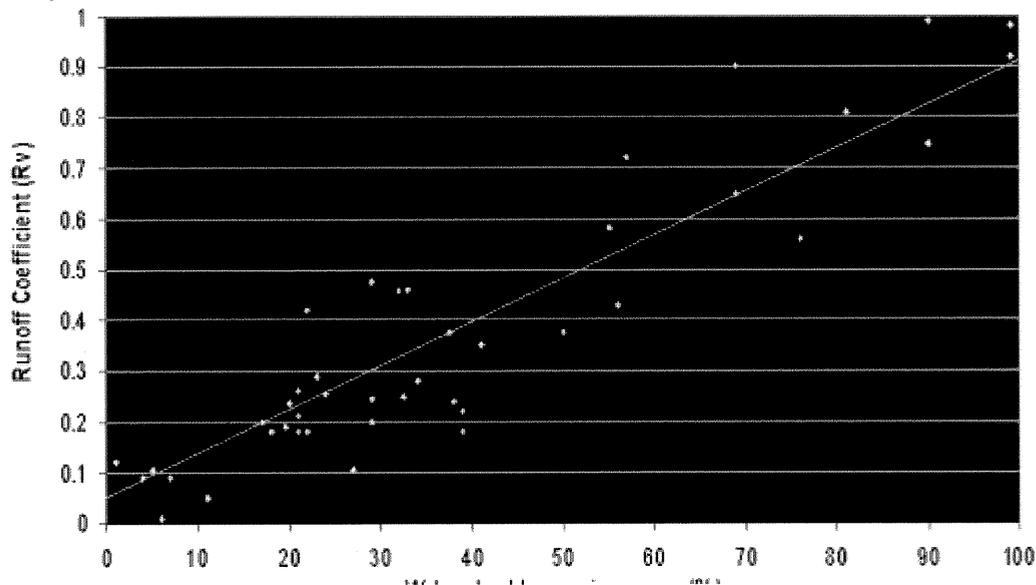
P = Annual rainfall (inches)

$P_j$  = Fraction of annual rainfall events that produce runoff (usually 0.9)

$R_v$  = Runoff coefficient

In the Simple Method, the runoff coefficient is calculated based on impervious cover in the sub-watershed. This relationship is shown in Figure 1. Although there is some scatter in the data, watershed imperviousness does appear to be a reasonable predictor of  $R_v$ .

Relationship Between Watershed Imperviousness (I)  
and the Storm Runoff Coefficient ( $R_v$ )  
(Source: Schueler, 1987)



The following equation represents the best fit line for the dataset (N=47,  $R^2=0.71$ ).

$$R_v = 0.05 + 0.9I_a$$

Where:  $I_a$  = Impervious fraction

### Impervious Cover Data

The model uses different impervious cover values for separate land uses within a sub-watershed. Representative impervious cover data, along with Model default values, are presented in [Table 5](#). A study is currently being conducted by the Center for Watershed Protection under a grant from the U.S. Environmental Protection Agency to update impervious cover estimates for these and other land uses. The results of this study will be available by 2001. In addition, some jurisdictions may have detailed impervious cover information if they maintain a detailed land use/land cover GIS database.

### Limitations of the Simple Method

The Simple Method should provide reasonable estimates of changes in pollutant export resulting from urban development activities. However, several caveats should be kept in mind when applying this method.

The Simple Method is most appropriate for assessing and comparing the relative stormflow pollutant load changes of different land use and stormwater management scenarios. The Simple Method provides estimates of storm pollutant export that are probably close to the "true" but unknown value for a development site, catchment, or sub-watershed. However, it is very important not to over emphasize the precision of the results obtained. For example, it would be inappropriate to use the Simple Method to evaluate relatively similar development scenarios (e.g., 34.3% versus 36.9% Impervious cover). The simple method provides a general planning estimate of likely storm pollutant export from areas at the scale of a development site, catchment or sub-watershed. More sophisticated modeling may be needed to analyze larger and more complex watersheds.

In addition, the Simple Method only estimates pollutant loads generated during storm events. It does not consider pollutants associated with baseflow volume. Typically, baseflow is negligible or non-existent at the scale of a single development site, and can be safely neglected. However, catchments and sub-watersheds do generate baseflow volume. Pollutant loads in baseflow are generally low and can seldom be distinguished from natural background levels (NVPDC, 1979). Consequently, baseflow pollutant loads normally constitute only a small fraction of the total pollutant load delivered from an urban area. Nevertheless, it is important to remember that the load estimates refer only to storm event derived loads and should not be confused with the total pollutant load from an area. This is particularly important when the development density of an area is low. For example, in a large low density residential sub-watershed (Imp. Cover < 5%), as much as 75% of the annual runoff volume may occur as baseflow. In such a case, the annual baseflow nutrient load may be equivalent to the annual stormflow nutrient load.

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Schueler, T. 1999. "Microbes and Urban Watersheds." *Watershed Protection Techniques*. 3(1): 551-596.

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Smullen, J., and K. Cave. 1998. "Updating the U.S. Nationwide Urban Runoff Quality Database." *3<sup>rd</sup> International Conference on Diffuse Pollution: August 31 - September 4, 1998*. Scottish Environment Protection Agency. Edinburg, Scotland.

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**Annual Runoff:**

**R = Annual Runoff (inches)**

**P = Annual Rainfall (inches)**

**P<sub>j</sub> = Fraction of annual rainfall events that produce runoff (usually 0.9)**

**R<sub>v</sub> = Runoff Coefficient**

<i>P</i>	<i>P<sub>j</sub></i>	<i>R<sub>v</sub></i>
45.26	0.90	0.32

**R = 13.03**

**Bacteria Concentration: 20,000 MPN / 100 ml.**

**L = Annual Load (Billion Colonies)**

**R = Annual Runoff (inches)**

**C = Bacteria Concentration (#/100ml)**

**A = Area (acres)**

<i>R</i>	<i>C</i>	<i>A</i>
13.03	200.00	4,800.00

**L = 12,888.89**

**Colonial Heights Annual  
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**Appendix H**

City of Colonial Heights  
Stormwater Volume and Pollutant Load Estimation for Watershed with an Identified WLA

Discharge Volumes and Pollution Loads have all been estimated using Simple Method  
Calculations

Impervious Area (%)	33	From CDM Stormwater Report 2008
Annual Rainfall (in)	43	From NOAA National Climatic Data

Watershed with WLA	Drainage Area (ac)	Discharge Volume (ft3)	E.Coli (cfu/yr)
Appomattox River (NT)	618	3.18E+07	3.97E+07
Appomattox River (Tidal)	2318	1.19E+08	1.46E+08
Swift Creek	1946	9.99E+07	1.04E+08



# Developing a Stormwater-friendly Lawn

## How >

Many people think maintaining a perfectly manicured landscape or green and plush yard involves harsh chemicals, plenty of pesticides and an endless amount of work, when actually, something of the opposite is true. While maintaining a picture-perfect landscape does require hard work and time, home-owners can save significant amounts of money, time and toil by utilizing a few natural products and taking some natural factors into account in their landscape planning. With a combination of organic products and some advanced planning, lawns and landscapes can be lush and hearty, while at the same time contributing far fewer pollutants to our surrounding waters.

## Getting started >

Getting started is easy. There are many great books and guides available that detail all the methods to get you started and the materials you'll need. Your local book retailer can point you in the right direction, but the links below can help as well:

<http://chlibrary.colonial-heights.com/cataloging/servlet/handlebasicsearchform.do>  
[www.organiclandscape.org/en/Books\\_27.html](http://www.organiclandscape.org/en/Books_27.html)  
<http://library.co.chesterfield.va.us/search/w?SEARCH=organic+gardening>  
[www.epa.gov/npdes/pubs/waterefficiency.pdf](http://www.epa.gov/npdes/pubs/waterefficiency.pdf)

## A first step >

One of the first things to do is get your lawn's soil sampled. Start by collecting a sample of your soil - a garden shovel scoop at least 4" deep without rocks - and take it to a local lawn and garden store. Many home and garden stores have do-it-yourself tests for sale, and some extension offices offer services that test your sample at a lab. Testing your soil will help you know the exact types and quantities of fertilizers your lawn needs rather than buying the kinds and amounts of nutrients your lawn may already have an abundance of. The key to successful fertilization is getting the right mixture of quality and quantity. Learn more about getting a soil test:

<http://www.ext.vt.edu/pubs/compost/452-129/452-129.html>  
[www.soiltest.vt.edu/soiltest.html](http://www.soiltest.vt.edu/soiltest.html)

## Fertilizing >

Once you've gotten the results of your soil test you'll know what nutrients your lawn needs or has an excess of. Finding natural substitutes for the traditional synthetic fertilizers is much easier than you might think, and these natural fertilizers are often more effective and less damaging than synthetics. Manures, dried blood, feather and bone meal, for example, can be used to add nitrogen to your lawn, and are less likely to burn turfgrass or cause rapid growth spurts due to their slow release properties. Because of this, these natural fertilizers may provide longer lasting benefit to your lawn and are much less apt than are water-soluble fertilizers to leach from the soil, thus reducing the ground and surface-water contamination commonly seen with synthetic fertilizers.

Important to understanding what natural fertilizers your lawn will need is knowing what levels of which nutrients are contained in any given compound or fertilizer. One thing that will help you determine this is NPK numbers. The make-up of fertilizers is determined by the three numbers on their packaging - 10-10-10, for example - each of which represent the percentage of nitrogen (N), phosphorous (P) or potassium (K) the compound contains. Each of these nutrients is important for proper plant growth

and development. Nitrogen helps plant foliage grow strong. Phosphorous helps roots and flowers grow and develop. Potassium (Potash) is important for overall plant health.

While many types of natural compounds can be used as fertilizers, some common fertilizing compounds are:

#### Bat Guano

Bat guano is the ultimate 100 percent natural fertilizer. Farmers and gardeners have used bat guano as a fertilizer for hundreds of years. Bat guano has a high humus content and works great as a soil builder and fertilizer. It is rated as a 10-3-1 fertilizer.

#### Fish Meal

Fish meal is a natural organic fertilizer that was traditionally used by gardeners and farmers before the advent of inorganic fertilizers. It contains important trace elements that make it a complete plant food. Rated as a 10-5-0 organic fertilizer, fish meal works quickly and provides plenty of phosphorous and organic nitrogen.

#### Kelp

Kelp meal fertilizer is made from brown seaweed harvested from ocean waters. The dried kelp maintains a high content of plant growth hormones, essential minerals and organic material. An added benefit is that kelp meal provides a slow, sustained release of nutrients, and works great for flowers, trees, and your lawn.

#### Garret Juice

Garret Juice, a highly effective liquid organic fertilizer mix, can be purchased ready-made in exact proportions or can be made at home. It contains compost tea, molasses, vinegar and seaweed and works as a foliar spray for all plants, ornamentals and food crops, or can be added directly to the soil. It works great on potted plants as well.

#### Kelp Lawn Starter

Organic kelp fertilizer is made from giant sea kelp and is specifically designed to help stimulate turf root growth, important for newly seeded lawns. It will also give your established lawn a quick boost, and as kelp is a slow release organic fertilizer, will work over time to keep your grass growing strong .

#### Organic Liquid Lawn Fertilizer

For a green, lush and chemical free yard, give your grass a dose of organic liquid lawn fertilizer. It is a great source of macronutrients, micronutrients, minerals, amino acids and peptides and has a NPK of 2-3-1. With this organic product the nutrients actually remain as solid amino acids in the soil, allowing for a slow release of nutrients that are absorbed thoroughly through the roots, minimizing waste. Your plants will absorb about 97 percent of the nutrients from this fertilizer, compared to the 20 percent which is more typical of chemical fertilizers.

#### Horticultural Cornmeal

Horticultural cornmeal helps to strengthen beneficial soil fungi. These beneficial soil organisms will help fight off the harmful fungi that can attack your plants, which is especially important for vegetable crops that are often susceptible to fungal diseases. Horticultural cornmeal also helps build up the quality of the soil, which will benefit all the plants in your garden, from grass to tomatoes. It can also be used it to safely remove algae from ponds and water features.

#### Garden Molasses

Garden molasses stimulates soil microorganisms and is a perfect compliment to organic fertilizers. It works as a foliar treatment when applied directly to the leaves of your plants, providing your plants trace minerals such as sulfur, potash, and iron.

*For more information on types of organic fertilizers and the nutrients each provide, visit:*

[www.cmg.colostate.edu/gardennotes/234.pdf](http://www.cmg.colostate.edu/gardennotes/234.pdf)

[www.basic-info-4-organic-fertilizers.com/organicfertilizers.html](http://www.basic-info-4-organic-fertilizers.com/organicfertilizers.html)

## Healthy maintenance >

Using organic fertilizers and soil amendments isn't the only thing that home-owners and gardeners can do to minimize their lawns' impact on Colonial Heights waters. There are several practices that can be obeyed to help your lawn naturally fight off disease, combat the effects of summer heat and naturally support itself. One of the easiest things to do is leave your grass clippings on the lawn as opposed to bagging or collecting them. Doing this will keep the nutrients that have already been absorbed by the existing grass' blades on the lawn, thus continuing to fertilize the turf and helping to

lessen the frequency of re-fertilization. In fact, one 1996 study suggests that mulching grass clippings into the lawn can, in some cases, eliminate the need of re-fertilization altogether. One common source of fertilizer runoff is over-watering. To prevent this, water at a rate of no more than 1/2 an inch per hour. Set several cans within your sprinkler's range and check how much water they collect every 15 minutes and adjust your sprinkler accordingly. Watering in the early morning, as well, is best. Plants and lawns allowed to stay wet overnight are more susceptible to disease. Keeping your lawn mowed at a regular height also acts as a natural defense. When mowing, make it a point to cut no more than 1/3 of the blade length, and remember to cut at a higher level than you might be used to. Increasing your mowing height to between 3 and 3 and one-half inches helps your lawn hold moisture and keeps the soil temperature cooler than it would be with shorter cut grass.

## Building supporting landscape features >

All of us enjoy those perfectly manicured landscape features that accent the lawns we work so hard on. In planning these features and selecting the right foliage to plant them with, we can utilize designs that maximize our lawn's ability to sustain itself without unnecessary work and chemicals.

### rain gardens >

Rain gardens are a great way to both accent and utilize those difficult or otherwise unusable spaces in the yard. Built essentially in the form of a slight depression filled with native plants, rain gardens can optimize low spots in your yard where water ponds. As another option, they can be placed at the base of slopes where water runoff from regularly fertilized turfs will feed the more nutrient-needy plant species that, in other areas of the yard, require more work. Rain gardens are often planted with bird, bee, and butterfly attracting species, and can really be an eye-catching addition to any landscape.



*For plans on choosing and building the right rain garden for your landscape, visit:*

- [www.dof.virginia.gov/mgt/resources/pub-Rain-Garden-Tech-Guide\\_2008-05.pdf](http://www.dof.virginia.gov/mgt/resources/pub-Rain-Garden-Tech-Guide_2008-05.pdf)
- [www.raingardennetwork.com/build.htm](http://www.raingardennetwork.com/build.htm)
- [www.epa.gov/nps/toolbox/other/cwc\\_raingardenbrochure.pdf](http://www.epa.gov/nps/toolbox/other/cwc_raingardenbrochure.pdf)
- [www.enterprise.mtu.edu/att/powerpoints/raingardens.ppt](http://www.enterprise.mtu.edu/att/powerpoints/raingardens.ppt)

### utilizing the lay of your land >

Just as you would place a rain garden in a naturally low lying area, you can design your landscape areas to conserve water and maximize your fertilization applications. Many of the brightly colored and flowering species we all enjoy planting in the spring and summer require more fertilization than some of our native and less colorful species. Lilies and daylilies are popular selections, thriving in full sun to partial shade. Though they require adequate drainage and mulch to keep their roots cool, a down-slope area of your yard that borders frequently fertilized turf may be perfect for these, as they prefer soils high in organic matter. Iris, another favorite that prefer partial shade and well-drained soil, demand acidic soils amended with organic matter. Due to this they make attractive bed borders and color-fills for low spots. Dahlias, as well, thrive in full sun or partial shade and prefer moist, well-drained soil. Gladiolus summer bulbs thrive in full sun locations with moist soil that is well drained and has good air circulation. Cannas love the hot summer, growing well in full sun but needing rich soil and a good moisture supply. Because proper soil drainage is important for all these species to prevent bacterial rot, they all thrive in soils rich with organic matter and they all require concentrated nutrient levels, beds on down-slope areas or at well-drained bases of slopes may be perfect places to feature colorful plants like these. These 'border' or 'slope' beds will maximize your lawn's natural drainage while capturing the lawn's fertilizer runoff.



*Learn more about sustainable landscaping at:*

- [www.ext.vt.edu/pubs/envirohort/vagardlist.html](http://www.ext.vt.edu/pubs/envirohort/vagardlist.html)

## Did you know?

...there are an estimated 25 to 30 million acres of turf lawn in the U.S.

...the average acre of maintained lawn receives roughly seven pounds of pesticides per year

...if lawns were classified as a crop, they would rank as the fifth largest crop in the nation

...over-doing lawn fertilizer causes plant roots to dehydrate, much like over-salting our food does to us

## Using your plants for more than aesthetics >

Any landscape design requires planning. In much the same way that plants can be placed in areas where they utilize fertilizer and water runoff, landscape features can be built in a manner that makes plants as beneficial as they are attractive. With the aid of good resources and some preliminary landscape planning you can choose plants and arrangement patterns that help minimize your need for things like pesticides. Many plants repel certain types of insects due simply to their natural characteristics and the insects' aversion to them. Utilizing a method often referred to as companion planting, you can group certain kinds of plants, or surround insect-susceptible plants with insect repelling plants, to act as a natural insect repellent. Chrysanthemums and dahlias, for example, kill parasitic root nematodes (*tiny roundworms*). Daisies attract beneficial insects like the tiny and non-stinging parasitic wasp, which preys on pests like aphids, flies, beetles and caterpillars. Geraniums, in addition to herbs like angelica and tansy, attract ladybugs which feed aggressively on pests like aphids, mealybugs and spider mites. Marigolds, as well, ward off parasitic nematodes and certain types of beetles. Mint, which makes a good controlled accent plant, repels ants and some types of moths. It also helps to control rodents, flea beetles, and aphids. Citronella grass, as its name might indicate, deters mosquitoes, one of our peskiest backyard foes. These annual grasses can grow quite large, but can help alleviate some of your need for chemical mosquito repellents. Petunias repel pesky leaf-hoppers and several types of beetles. Nasturtium, a late-blooming flower, will repel the whitefly. When planning your next landscape or new lawn feature, take a look at the following resources for some great ideas on getting started companion planning.



Parasitic wasp

[www.markham.ca/NR/rdonlyres/8937D562-A0B4-405E-A21C-CD01FC13481D/0/ens\\_insects.pdf](http://www.markham.ca/NR/rdonlyres/8937D562-A0B4-405E-A21C-CD01FC13481D/0/ens_insects.pdf)  
[www.homeandgardensite.com/companion\\_planting.htm](http://www.homeandgardensite.com/companion_planting.htm)  
<http://attra.ncat.org/attra-pub/complant.html>

## Pesticides >

Fertilizers aren't the only substances that can be supplanted with organic substitutes. As we've seen, many plant species can help repel certain types of insects, but there are also natural substances and compounds that are effective in preventing pests. Milky Spore Grub Control - a compound made from *bacillus popilliae* spores - is a product that can be spread onto the lawn to provide a natural and effective grub control. Horticultural, cottonseed and soybean oils are effective pesticides for many types of ornamentals. Pyrethrins - naturally occurring insecticides made from the chrysanthemum - can be found in powder form and, though not long lasting, can produce fast and highly effective pest-killing results. Diatomaceous earth is a naturally occurring, chalk-like sedimentary rock that is crumbled into a fine white powder and used as a lawn insecticide. It absorbs lipids from the insects' exoskeletons and causes them to dehydrate, and is very effective for all types of bugs. For certain bugs, as well as crabgrass, try corn gluten. There are even natural plant pesticides you can make at home utilizing certain types of oils and citrus juices. The next time you need to apply a pesticide to your lawn or landscaping features, take a look at the following to gather some great ideas:

[www.beyondpesticides.org/pesticidefreelawns/resources/index.htm](http://www.beyondpesticides.org/pesticidefreelawns/resources/index.htm)  
[www.organiclawncare101.com/articles.html](http://www.organiclawncare101.com/articles.html)  
[http://vegetablegardens.suite101.com/article.cfm/organic\\_pest\\_control\\_and\\_pesticide](http://vegetablegardens.suite101.com/article.cfm/organic_pest_control_and_pesticide)  
[www.colostate.edu/Dept/CoopExt/4DMG/VegFruit/organic.htm](http://www.colostate.edu/Dept/CoopExt/4DMG/VegFruit/organic.htm)

## A Note on Bugs >

When landscaping and caring for our lawns, it is important to remember that not all bugs are bad. Of course, there are those types that are particularly burdensome and cause a lot of damage if left to their natural actions. Other types of bugs, however, are an essential part of any healthy backyard ecosystem and are in fact beneficial to our lawns and landscapes. The earthworm, though not actually an insect, converts organic material into nutrients that plants can absorb, loosens the soil making it easier for roots to grow and air and water to circulate in the soil, increases the soil's water retention capability, and brings minerals and other nutrients located deep in the soil to the top layer where they can be absorbed by the plants. Some species of ground beetles and certain species of ants, as well, are carnivorous and feed upon the pest insects found in many lawns. Spiders, though also not classified in the insect family, catch and eat many of the pests that commonly disturb our

...savings for a typical quarter-acre lot where clippings were left on the lawn amount to almost \$100 for fertilizer and plastic bags

...home-owners use 10 times the pesticides per acre that farmers use

...one acre of lawn costs \$400 to \$700 per year to maintain

lawns. The following chart shows some other insects that prey on the damaging insects in our yards.

<b>Assassin bug</b>	<i>Aphids, caterpillars, potato beetles, Japanese beetles, leafhoppers, Mexican bean beetles</i>
<b>Damsel bug</b>	<i>Aphids, leafhoppers, mites, caterpillars</i>
<b>Big-eyed bug</b>	<i>Aphids, caterpillar eggs and larvae, immature bugs, leafhoppers, spider mites</i>
<b>Predacious stink bug</b>	<i>Potato beetles, caterpillar larvae</i>
<b>Syrphid fly larvae</b>	<i>Aphids, mealybugs</i>
<b>Lady beetle</b>	<i>Aphids, mealybugs, spider mites</i>
<b>Green lacewing larvae</b>	<i>Insect eggs, aphids, spider mites, thrips, leafhopper nymphs, caterpillar larvae</i>
<b>Trichogramma wasp</b>	<i>200 pest insect eggs including cutworms, corn borers, corn earworms, armyworms, codling moths</i>
<b>Encarsia wasp</b>	<i>Greenhouse whiteflies</i>

Table 1 - Beneficial bugs (noted in green) and the pests they prey upon

Visit the links below for some great resources to help you start targeting the pests with the help of beneficial bugs.

- [www.helpfulgardener.com/organic/2006/beneficial.html](http://www.helpfulgardener.com/organic/2006/beneficial.html)
- [www.beneficialinsects101.com/garden-insects-article.html](http://www.beneficialinsects101.com/garden-insects-article.html)
- [www.ext.colostate.edu/Pubs/water/xcm221.pdf](http://www.ext.colostate.edu/Pubs/water/xcm221.pdf)
- [www.ext.vt.edu/pubs/plantdiseasefs/450-725/450-725.html](http://www.ext.vt.edu/pubs/plantdiseasefs/450-725/450-725.html)

### Saving a lot >

The health of Colonial Heights' waters starts in our yards. Utilizing natural and organic fertilizers, pest repellants and organically-based planting and maintenance practices will help you save time, headaches and money, but will also keep a significant amount of chemicals from finding their way into Swift and Oldtown Creeks and the Appomattox River. With the help of some good resources and a little advanced planning, our lawns can be as healthy and attractive as our waters.



# 10 Easy Ways to Conserve Water



Do the following headlines sound familiar:

'Rainfall Four Inches Below Normal'... 'Groundwater Deficit'...  
'Lake Chesdin at Low Levels'... 'Localities to Institute Water Restrictions'?

In a hot, dry Virginia summer, they should...

## Our most important resource

All of us realize that water is an important resource in our lives, but sometime we forget just how important it is to our health, our welfare and our economy. About 60% of the human body, for example, is water. Muscle tissue is 75% water by weight, blood is 95% water, and the human heart is roughly 75% water. It takes 37 gallons of water to produce, package and ship the beans in your morning cup of coffee, and 4,200 gallons of water to produce just two pounds of beef.

It's clear, then, that water is entirely more important than we often give it credit for. The facts above, taken together with the fact that only about 1 to 2% of the world's water is suitable for human consumption, clearly demonstrate that it's an area where conservation is important.

## Water mandates

We're all familiar with the dry months of July and August when our lawns dry up and we begin to hear headlines about low water levels and water restrictions. In Colonial Heights, Ordinance 07-26 authorizes water restrictions when "the Appomattox River Water Authority (ARWA) requests or directs such restriction or when the governor... or other state or federal authority, pursuant to applicable law, declares an emergency [or] imposes mandatory water conservation measures." Under this authority, the City Manager imposes either voluntary or mandatory usage restrictions, dependant upon the severity of the shortfall. The restrictions include limits on lawn and landscape watering, limits on the washing of paved areas, vehicle washing and pool filling, among other actions.

Penalties for violating mandatory restrictions include civil penalties ranging from \$50 dollars to \$400 dollars, and failure to pay any assessed penalty authorizes the City to collect the fine in any manner authorized for the collection of utility bills.

## The good news about water conservation

We can help reduce the necessity for water restrictions like those mentioned by conserving water on a daily basis. The good news is that there are many easy steps we can take to limit or water usage and, by so doing, help conserve our most precious resource. Around the home, around the yard, and at work there are ways to conserve water that we may never have thought about before and that, with little effort and, in some cases, no added expense, can be incorporated into our daily routines. Remember, 1 to 2% of the world's water has to be shared between more than 6,710,000,000 people.



## 1. Check for leaks

Inside the home, checking for leaks can cut water usage by nearly 14 percent. Leaky toilets, for example, can waste as many as 30 gallons of water each day and dripping faucets can waste about 2,000 gallons of water each year. Leaky faucets, pipes and toilets are among the leading sources of water waste every year. Fixing them will not only help you conserve water, but could save you money on utility bills you probably didn't even know you were wasting.

## 2. Wash full loads

By washing clothes only when each load is a full load, you can save nearly half of the washing machine's capacity in water. Depending upon the size and settings of your washing machine, one load uses anywhere from 40 to 60 gallons of water. Washing only when each load is full inevitably lowers washing frequency, saves water and electricity; a savings you could notice in your water and electricity bills.

## 3. Be water-savvy in the kitchen

The kitchen presents some excellent opportunities for saving water. Instead of defrosting meats and other items by running them under water or letting them sit in a large container of water, plan ahead and allow your items to thaw in the refrigerator. This will save excess water and maximize electricity for which you are already paying. If you wash dishes by hand, use two basins: one for washing and another for rinsing. Doing so will save all the water you would normally use by leaving the rinse water running the entire time. As with the washing machine, only run the dishwasher when you have a full load. Instead of letting your faucet run a minute or two each time you want a glass of cold water, keep a jug or bottled waters in the refrigerator.

## 4. Run less - collect more

This might be the easiest one yet. When doing the routine things around the home, think about ways you can run less water and collect what you have run. For example, don't let the water run while shaving or brushing your teeth. Better, still, is brushing your teeth while showering - a great way to save both water and time. When doing things like rinsing fruits or meats, collect the water in a container below and use it to water plants. The excess water from cleaning out fish tanks, as well, is a great source for feeding thirsty plants. When bathing, ask yourself if you really need to fill the tub three-quarters of the way; four to five inches of bath water will get us just as clean.

## 5. Upgrade to save

When your old water heater goes out, or you have to replace it's elements yet again, consider getting an instant water heater. Several brands are now on the market, in both whole-house and point-of-use models. These water heaters are tankless, allowing you to conserve 60 or more gallons of

## Cool facts about water...

### Health & Body>

**A person can go weeks, and sometime months, without food, but can only go about seven days without water.**

**A person needs at least 6 to 8 cups of water per day to replenish what we naturally lose .**

**Water makes up 95% of the contents of human blood.**

**Headaches are often caused by an insufficient amount of water in the body.**

**The human brain is roughly 80% water.**

**Drinking at least 8 glasses of water a day can help you lose weight by keeping your kidneys functioning at full strength, thereby metabolizing more fat.**

**If you feel thirsty, you are already partly dehydrated.**

**Caffeine often acts as a diuretic, depleting the body of water.**

**A 2% drop in our body's water supply can trigger signs of dehydration like fuzzy short-term memory, trouble with basic math, difficulty focusing on smaller print and daytime fatigue.**

reserve while saving you money on your electric bill. You'll already be facing an expense on your old heater, and instead of rejuvenating it, an upgrade to an instant heater will save you a lot in the long run.

## 6. Build a rain barrel

Saving water is as easy and appropriate for the lawn and garden as it is inside the home. Building a rain barrel is an excellent way to conserve water by storing and utilizing the rain we do get during the times we do not get any. Rain barrels connect to a gutter downspout and have a built-in pump or spigot to release the water when you need it, and all are entirely sealed to prevent mosquitoes and animals from getting into them. You can buy a ready-to-use rain barrel or, by checking out the links below, build your own with little expense.

## 7. Water smartly

If you've made sure your spigot is leak-free, you can buy a timer for very little cost and set your sprinklers to water at, and for, ideal times. Watering is best between 2 and 7am because it ensures that no excess water is dried by the hot sun. Instead of watering once for 30 minutes or an hour, water for 15 minutes at three different intervals. This allows the water at each interval to soak in, preventing excess runoff caused by the rate of watering exceeding the rate of infiltration.

## 8. Back to the broom

During the dry summer months, use a broom or leaf blower to keep sidewalks, driveways and garage floors clean instead of rinsing them down with a water hose. A broom will do the trick without using all the excess water.

## 9. Go native

The new landscaping we all plan during the spring presents yet another opportunity to conserve water. Native plants, once established, are often heartier than plants not native to this area and are generally more adapted to our hot, dry summers. Plant choice and placement can greatly reduce the amount of water your landscaping requires.

## 10. Use your pool wisely

If you have a pool, there are several ways you can conserve water, both by protecting it and utilizing its contents. When back-flushing your filter, use the water on your plants and landscaping. Consider, also, getting a pool cover. This will help prevent water evaporation and, in so doing, reduce the amount and volume of necessary refills. There are many types of pool covers on the market: everything from roll-up covers to the handy, though more expensive, automatic pool covers. Additional benefits of keeping your pool covered are the facts that you'll have fewer insects and trash in it and have fewer concerns about unattended swimmers.

## Cool facts about water...

### Sources & Production >

**11 gallons of water are used to irrigate and wash the fruit in one half-gallon jug of orange juice.**

**The average person uses anywhere from 75 to 110 gallons of water per day.**

**It takes 264 gallons of water to produce one quart of milk.**

**Oceans and seas contain 96% of the world's water, and 2% is contained in the world's icebergs.**

**Acting as an insulator, water helps regulate the earth's temperature.**

**80% of the earth's surface is water.**

**Nationally, people pay over 25 cents for their water utility on a daily basis.**

**An average of 20 gallons is used in a five-minute shower.**

**Water utilities process 38 billion gallons of water per day.**

**It takes 62,600 gallons of water to produce one ton of steel.**

**400 gallons of water are used to grow and produce 1 chicken.**

# Learn more...

## Facts

- [www.epa.gov/ogwdw/kids/water\\_trivia\\_facts.html](http://www.epa.gov/ogwdw/kids/water_trivia_facts.html)
- [www.epa.gov/safewater/sdwa/30th/factsheets/pdfs/fs\\_30ann\\_waterfacts\\_web.pdf](http://www.epa.gov/safewater/sdwa/30th/factsheets/pdfs/fs_30ann_waterfacts_web.pdf)
- [www.allaboutwater.org/water-facts.html](http://www.allaboutwater.org/water-facts.html)

## Around the home

- [www.deq.state.va.us/waterresources/waterconservation.html](http://www.deq.state.va.us/waterresources/waterconservation.html)
- [www.engr.uga.edu/service/extension/publications/c819-1.html](http://www.engr.uga.edu/service/extension/publications/c819-1.html)
- [www.americanwater.com/49ways.htm](http://www.americanwater.com/49ways.htm)
- [www.ext.colostate.edu/pubs/consumer/09952.html](http://www.ext.colostate.edu/pubs/consumer/09952.html)
- [www.wateruseitwisely.com/100-ways-to-conserve/index.php](http://www.wateruseitwisely.com/100-ways-to-conserve/index.php)

## Conservation

- [www.epa.gov/watersense/](http://www.epa.gov/watersense/)

## Landscaping

- [pubs.ext.vt.edu/426/426-713/426-713.html](http://pubs.ext.vt.edu/426/426-713/426-713.html)
- [www.aces.edu/pubs/docs/A/ANR-0790/WQ1.3.4.pdf](http://www.aces.edu/pubs/docs/A/ANR-0790/WQ1.3.4.pdf)
- [www.wateruseitwisely.com/100-ways-to-conserve/outdoor-tips/how-to/landscape-to-xeriscape/index.php](http://www.wateruseitwisely.com/100-ways-to-conserve/outdoor-tips/how-to/landscape-to-xeriscape/index.php)
- [http://www.dcr.virginia.gov/natural\\_heritage/nativeplants.shtml](http://www.dcr.virginia.gov/natural_heritage/nativeplants.shtml)

## Rain Barrels

- [www.watershedactivities.com/projects/spring/rainbarl.html](http://www.watershedactivities.com/projects/spring/rainbarl.html)
- [www.ehow.com/how\\_4615763\\_build-install-rain-barrel.html](http://www.ehow.com/how_4615763_build-install-rain-barrel.html)

## Where does my water go?

Shower	up to 32 gallons for an 8-minute shower
Bath	31 gallons
Toilet	4 gallons per flush
Dishwashing	by hand: 8 gallons per wash
	machine: up to 24 gallons per wash
Clothes Washing	up to 66 gallons per wash for a large automatic
Car Washing	30 to 80 gallons
Garden Sprinkler	varies; 250 gallons per hour is not unusual
Dripping Tap	anywhere from 8 to 132 gallons per day
Leaking Pipe	up to 80 gallons per day

Visit the following to learn more about what groups in Virginia are doing to conserve:

VA Naturally  
[www.vanaturally.org/vanaturally/comm\\_water.html](http://www.vanaturally.org/vanaturally/comm_water.html)

Soil & Water Conservation Association  
[www.vaswcd.org/propertyowners.htm](http://www.vaswcd.org/propertyowners.htm)

VA Conservation Network  
[www.vcnva.org/anx/index.cfm/1,258,928,0,html/Water-Conservation-Tips](http://www.vcnva.org/anx/index.cfm/1,258,928,0,html/Water-Conservation-Tips)

Soil & Water Conservation Society\VA Chapter  
[www.bse.vt.edu/swcs/](http://www.bse.vt.edu/swcs/)

Department of Public Works  
201 James Avenue  
Colonial Heights, VA 23834  
(804) 520-9334  
[www.colonial-heights.com/PublicWorks](http://www.colonial-heights.com/PublicWorks)



# OUR HAZARDOUS HOUSEHOLDS

There are three things that the winter season is certain to bring with it: chores, chores and chores! Inevitably, indoor projects, fall cleanings and holiday decorating require us to clean and reorganize areas in and around our homes. Fortunately for the space in our homes, these projects usually result in the accumulation and disposal of solid waste. Unfortunate for our local waterways, however, is the fact that solid debris is one of the most significant contributors to the amount of pollutants found in our waters. Man-made, solid material that enters our waterways, either directly or indirectly, accounts for roughly 86% of the trash found in Virginia's rivers and on Virginia's beaches.

The good news is that there are many simple steps each of us can take to reduce the amount of solid debris we produce. Practicing these will not only save our valuable water resources, they'll save us time, money and possibly backaches during our winter projects.

## Reduce...Reuse...Recycle

Sure, it sounds cliché but if we really stop to think about the things we buy, why we buy them, and the amount that we use them, we can save ourselves significant expenditures and rid ourselves of a lot of household clutter. Since the easiest way to eliminate solid waste is by preventing it from ever becoming unwanted debris, try implementing the following steps around your home.

### Reduce

- Look for items packaged with minimal packaging
- Buy in bulk when practical
- Avoid disposable, single-use items
- Buy concentrates
- Rent instead of buying; this works particularly well in cases where you'll only need the item a few times

### Reuse

- Use cloth bags when shopping; most places offer a discount for this
- Pack your lunch in reusable food containers
- Use rechargeable batteries
- Use refillable pump/spray bottles
- Buy milk and water in refillable bottles

### Recycle

- Participate in recycling programs; each item you recycle is likely one less that needs to be produced
- Buy recycled products; the recycling loop is not closed until we purchase products made from recycled materials



*Reducing means less clutter, fewer backaches and more free time.*

### Remember

**One half of all our household solid waste comes from the packaging of the things we buy.**

It's estimated that 100 billion pieces of junk mail are delivered to mailboxes every year, an amount that requires 100 million trees to create. An estimated 30% of all mail delivered in the U.S. is junk mail, thrown away to become solid waste before its even opened. Take steps to cut down on your junk mail:

1. **Ask to be removed** - contact the [Direct Marketing Association](#) and ask to be removed from their affiliates' lists
2. **Ask for privacy** - when giving your name and info for any business transaction, ask that your info not be added to marketing lists
3. **Phone books** - consider an unlisted number, or request that the company list only your name and not your address
4. **Return to Sender** - any mail with *Address Correction Requested* or *Return Postage Guaranteed* can be returned unopened by writing *Refused-Return to Sender* on the envelope



The top 10 products recycled in 2009 were:

Computers  
Batteries  
Televisions  
Paint  
Aluminum Cans  
Used Motor Oil  
CFLs (Compact Fluorescent Lamps)  
Glass  
Fluorescent Lamps  
Christmas Trees

Source: Earth911

**7 Things You Probably Didn't Even Know Were Recyclable:**

1. Batteries
2. Crayons
3. Wine Corks
4. Hair
5. Holiday Lights
6. Trophies
7. CDs/DVDs/Cassettes

**THE GLOBAL LEADER**

The United States have long led the world in many categories of global production. As with anything, this unfortunately means we lead the rest of the globe in some not-so-attractive categories. As of 2006, the United States produced around 236 million tons of waste annually, and by 2007 that number had increased to 254 million tons. The average American throws away nearly 5 pounds of trash on a daily basis. Despite making up only 5% of the world's population, the United States produce 30% of the world's waste. In only a year, Americans throw away around 26,800,000 tons of food, 8,550,000 tons of furniture and furnishings, and 6,330,000 tons of clothing and footwear.

Unfortunately, 80% of all products that are produced in the United States are used only once and then discarded, and 95% of plastic and 50% of all of the aluminum beverage cans that are thrown away never get recycled. By reducing, reusing and recycling we can help change these statistics, save ourselves time, money and backaches, and most importantly, help protect our invaluable water resources.

Table of Trash Types and Percentages		
Trash Type	Percentage	Tonnage
paper	40.4%	71.6 million tons
yard trimmings	17.6%	31.6 million tons
metals	8.5%	15.3 million tons
plastics	8.0%	14.4 million tons
food scraps	7.4%	13.2 million tons
glass	7.0%	12.5 million tons
other	11.6%	20.8 million tons ( <i>rubber, leather, textiles, wood, miscellaneous inorganic wastes</i> )

According to the 2001 International Coastal Cleanup, these ten items accounted for 85% of all the litter debris found in and along Virginia's waters:

1. Cigarette butts/cigarette filters
2. Bags/food wrappers
3. Beverage bottles (plastic) 2 liters or less
4. Beverage bottles (glass)
5. Beverage cans
6. Cups, plates, forks, knives, spoons
7. Caps, lids
8. Fast-food containers
9. Straws, stirrers
10. Tobacco packaging/wrappers

**Harmful Impacts of Debris**

- ◆ Each year, more than 100,000 marine mammals die when they ingest littered debris.
- ◆ 2 million seabirds die every year due to debris ingestion and entanglement.
- ◆ According to the National Oceanic and Atmospheric Administration (NOAA), marine debris threatens over 265 different species of marine and coastal wild-life.
- ◆ Virginia's Department of Transportation (VDOT) spends more than \$6 million to remove litter from our roadsides.
- ◆ Millions of dollars are spent every year in Virginia and across the U.S. just to minimize the damage of littered debris.

**Dollars and Sense**

Practicing the "3 Rs" doesn't just protect our waters; it saves us money and that just makes good sense.

- Recycling one aluminum can saves enough energy to run a TV for three hours - or the equivalent of a half a gallon of gasoline.
- \$1 out of every \$11 Americans spend for food goes for packaging.
- One pound of recyclable aluminum is worth 85¢, on average.
- The average bottled water costs \$1.60; a savings of well over \$500 per year for a person who switches to a reusable bottle.



## ...the Other Part of the Equation

**S**olid waste is unfortunately just part of the danger our homes pose for our waters. Hazardous wastes are a significant source of the pollution in our rivers, streams, and lakes. Many of the harmful chemicals used in the cleaners, solvents and pesticides we use on a regular basis in and around our homes end up severely degrading the health and habitat of our watercourses. Holiday clean-up, winter room renovations and closet reorganizations all utilize solvents and chemicals that, if handled, used and disposed of in a more environmentally-friendly way, could be far less damaging to our waters.



Again, there are some simple things each of us can practice around the home to reduce the amount of hazardous waste we produce. In disposing of any chemical agents or solvents containing chemical agents, **NEVER** pour them down a floor drain or a storm sewer. The City Recycling Center, located behind the Sheetz on Conduit Road, accepts many types of chemicals and solvents. To find out more, call them at 479-7056 or visit their [website](#). For disposal of

insecticides, poisons, acids or other caustic compounds, appliances containing Polychlorinated Biphenyls (PCBs) or other toxic materials, please contact the [Central Virginia Waste Management Authority](#) at 800-732-3493 or [Safety-Kleen](#) at 804-748-3767. When storing, write the date of purchase on each item's



Projects that clean the home don't have to jeopardize our waters.

container with a permanent marker to keep a check on the age of any item and follow any and all disposal labels carefully. Keep all substances in their original containers and make sure to properly dispose of items if their containers have become corroded or unstable. Do the same for items intended for exterior use, but also make sure that any items such as these are stored above ground level, in a covered area, where there is no potential for them to come in contact with any stormwater runoff. In the event that any chemicals or solvents leak or are spilled onto the ground or impervious surfaces like paved driveways or sidewalks, use absorbents and a broom and dustpan to clean them up rather than a water hose. Remember that ultimately, everything we dispose of - whether its yard waste or household chemical cleaners and solvents - can end up

impacting our local waters. Clean houses don't have to mean dirty waters.



### LESS MEAN...MORE CLEAN

Household cleaners don't have to be as mean as they are to be effective. Many of them can be much less damaging to the environment than they currently are and yet be equally as effective in performing the cleaning task for which you need them.

#### Think alternatively:

Alternative cleaners generally refer to cleaners that can be made at home, using non-toxic or less toxic chemicals than those found in commercial cleaners. Some alternative cleaners still utilize synthetic products by substituting the most toxic ingredients for alternatives, while other alternative cleaners utilize all natural ingredients, staying entirely away from synthetics. The best way to decide which type of alternative works for you is to evaluate what your cleaning needs are specific to the types of stains or substances you find yourself regularly cleaning; some heavier commercial stains or substances might require a less toxic alternative, while many of the common household surfaces and stains are easily cleanable and removable using a non-toxic alternative.

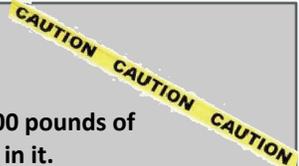
Ingredients common to many of the less toxic alternatives include the following:

**Baking Soda** - Cleans and deodorizes. Softens water to increase sudsing and cleaning power of soap. Good scouring powder.

**Borax** - Cleans and deodorizes. Excellent disinfectant. Softens water. Available in laundry section of grocery store.

**Soap** - Is non-toxic. Available in grocery stores and health food

### HOME SWEET HAZARD



- The average home has 50 to 100 pounds of hazardous chemicals & solvents in it.
- American households generate 1.6 million tons of hazardous wastes annually.
- *Chlorine* - found in common household cleaners like bathroom disinfectants, window & oven cleaners, and furniture polish - is the #1 cause of child poisonings.
- Bathroom cleaners often contain *sodium hypochlorite*, a corrosive that irritates or burns skin & eyes, causes fluid in the lungs, & can lead to coma or death.
- Less than 2% of synthetic chemicals have been tested for toxicity, mutagenic, carcinogenic, or birth defects.
- An EPA survey concluded that indoor air could be as much as 70 times more polluted than outdoor air.
- National Cancer Association released results of a 15 year study concluding that women who work in the home are at a 54% higher risk of developing cancer than women who work outside the home.
- There are more than 3 million poisonings every year. Household cleaners are the #1 cause of poisoning of children.

stores. Sold as liquid, flakes, powder or in bars. Bars can be grated to dissolve more easily in hot water. Insist on soap without synthetic scents, colors or other additives.

**Washing Soda** - Cuts grease and removes stains. Disinfects and softens water. Available in laundry section of grocery store or in pure form from chemical supply houses as "sodium carbonate."

**White Vinegar or Lemon Juice** - Cuts grease and freshens.

**Try the following recipes to begin making your home less toxic and less dangerous to our waters and our environment:**

**Household Cleaner -- Mix together:**

1 tsp. liquid soap (castile, peppermint)

1 tsp. borax

Squeeze of lemon

1 qt. warm water

**OR**

¼ c. baking soda

½ c. borax

½ c. vinegar

1 gal. water

**Window Cleaner -- Mix together:**

2 tsp. vinegar

1 qt. warm water

**OR**

2 tbsp. borax

3 c. water

**Mildew Remover -- Dissolve together:**

½ c. vinegar

½ c. borax in warm water

Apply with sponge or spray bottle

**Furniture Polish**

**(Wood Surfaces) --**

Rub toothpaste on wood furniture to remove water marks.

Polish wood with 2 tsp. lemon oil and 1 pint mineral oil in spray bottle. Spray, rub in and wipe clean.

Mix two parts olive oil to one part lemon juice. After rubbing the mixture in, let stand for several hours and then polish with a soft, dry cloth.

Melt 1 tbsp. carnauba wax into two pints mineral oil. Use sparingly and rub hard.



*Using alternative cleaners protects your family and our waters.*

These are just a few of the [many alternative cleaner recipes](#) that you can utilize to help make your home much less toxic than it is now. By doing so, you'll be healthier and will also be helping protect our waters.

**The Problem with Pills...**

What's above our sinks can often be as dangerous to our waters as what's below them: pharmaceuticals are increasingly being discovered in the nation's waters and in the animals that inhabit them. Studies discovering antibiotics such as penicillin, tetracycline, and vancomycin as well as hormone-disrupting compounds like endocrine continue to demonstrate the threat that medicine disposal from homes poses to our waters and our health. In waters with significant enough quantities, these chemicals have been found to severely alter the reproduction of species, turning male fish to female. Even more, researches are increasingly concerned that the presence of antibiotics will result in the presence of 'superbugs', new strains of bacteria that are resistant to antibodies. Pharmaceuticals enter our waters when they are flushed down the toilet or dumped down the sink, as wastewater treatment plants are not equipped to filter them.

If no local collection option exists for you, mix all old or unused pills together with such undesirable items as used coffee grounds and kitty litter in a securely sealable bag and discard in the garbage. Never put them down a sink or flush them down a toilet!

## o Collecting Your Pet's Waste

Animal waste is a significant contributor to the bacteria and pollutants found in our waters. It deposits harmful bacteria into our drinking, swimming, fishing and recreational waters. The Appomattox, much like our other waterways, contains high amounts of fecal coliform as a result of animal waste. Picking up after your pet is a simple and easy way to help decrease the amount of contaminants that end up in our waters. Virginia's Department of Conservation and Recreation (VDCR) lists the following 10 reasons why picking up pet waste benefits our environments:

1. *Stormwater carries pet waste and other pollutants directly into waterways.*
2. *Animal waste adds nitrogen to the water. Excess nitrogen depletes the water's oxygen, which is necessary for healthy underwater grasses, wildlife and fish.*
3. *Animal waste contains harmful organisms such as Giardia, Salmonella and E. coli that can be transmitted to humans and other animals by ingesting contaminated water.*
4. *Roundworms and hookworms deposited by infected animals can live in the soil for a long time and be transmitted to other animals and humans.*
5. *It's the law! Many urban and suburban areas require you to pick up after your pet. Even if there is no restriction, cleaning up after your pet is the right thing to do.*
6. *By joining the growing number of responsible pet owners, you might encourage hotel managers to accept pets when you're traveling and keep extra fees to a minimum.*
7. *Let's face it - no one likes to step in pet waste and spread it into homes, cars and businesses.*
8. *Scooping on a daily basis and applying lime will help prevent odors.*
9. *It's easy to clean up by carrying small plastic bags and paper towels in your pocket. The bags can be secured and thrown away in the garbage.*
10. *Your neighbors will appreciate the good manners.*

**From Colonial Heights Stormwater Management Program website, available at**

**[www.colonial-heights.com/StormwaterManagementSteps.htm](http://www.colonial-heights.com/StormwaterManagementSteps.htm)**

**PET WASTE**

TRANSMITS DISEASE

LEASH AND CLEAN

UP AFTER

YOUR PET



**PLEASE KEEP  
THIS AREA  
CLEAN**

**DOG & POT**



PLEASE CLEAN UP  
AFTER YOUR DOG!



**FLORA M. HILL  
PARK**  
CITY OF  
COLONIAL HEIGHTS  
DEPARTMENT OF  
RECREATION & PARKS

**TRESPASSING  
AFTER DARK**

LORA M. HILL  
PARK  
CITY OF  
COLONIAL HEIGHTS  
DEPARTMENT OF  
RECREATION & PARKS  
NO  
TRESPASSING  
AFTER DARK

## DOG WASTE

IS A THREAT TO THE HEALTH  
OF OUR CHILDREN - DEGRADES  
OUR TOWN - TRANSMITS DISEASE

LEASH - CURB AND  
CLEAN UP  
AFTER YOUR  
DOG



ITS REQUIRED BY LAW!  
MINIMUM FINE  
\$ 25.00

# What is Low Impact Development (LID)?

Have you ever wished you could simultaneously lower your site infrastructure costs, increase your project's marketability and protect the environment? You may have, but then you probably assumed that was impossible. With LID techniques, you can. LID is an ecologically friendly approach to site development and storm water management that aims to mitigate development impacts to land, water, and air. The approach emphasizes the integration of site design and planning techniques that conserve the natural systems and hydrologic functions of a site.



*Low Impact landscaping utilizes techniques that conserve the natural systems and hydrologic functions of a site.*

## For more information visit the following:

- [www.lowimpactdevelopment.org](http://www.lowimpactdevelopment.org)
- [www.lid-stormwater.net/background](http://www.lid-stormwater.net/background)
- [www.epa.gov/nps/lid](http://www.epa.gov/nps/lid)

## Colonial Heights Department of Public Works

201 James Avenue  
Colonial Heights, VA 23834

Phone: (804) 520-9334  
Fax: (804) 520-9203

[www.colonial-heights.com](http://www.colonial-heights.com)



# Builder's Guide to Low Impact Development

Would you be interested in saving upwards of \$70,000\* per mile in street infrastructure costs by eliminating one lane of on-street parking on residential streets? Did you know that communities designed to maximize open space and preserve mature vegetation are highly marketable and command higher lot prices? Are you aware that most homeowners perceive Low Impact Development practices, such as bioretention, as favorable since such practices are viewed as additional builder landscaping? Did you know that by reducing impervious surfaces, disconnecting runoff pathways, and using on-site infiltration techniques, you can reduce or eliminate the need for costly storm water ponds?



\*Assumes paving costs of \$15/sq yd

## **LID Benefits**

In addition to the practice just making good sense, LID techniques can offer many benefits to a variety of stakeholders.

### **Developers**

- Reduce land clearing and grading costs
- Potentially reduce infrastructure costs (streets, curbs, gutters, sidewalks)
- Reduce storm water management costs
- Potentially reduce impact fees and increase lot yield
- Increase lot and community marketability

### **Municipalities**

- Protect regional flora and fauna
- Balance growth needs with environmental protection
- Reduces municipal infrastructure and utility maintenance costs (streets, curbs, gutters, sidewalks, storm sewer)
- Increase collaborative public/private partnerships

### **Environment**

- Preserve integrity of ecological and biological systems
- Protect site and regional water quality by reducing sediment, nutrient, and toxic loads to water bodies
- Reduce impacts to local terrestrial and aquatic plants and animals
- Preserve trees and natural vegetation

## **Case Study**

Kensington Estates is a conventional development on 24 acres consisting of 103 single-family homes in Pierce County, WA. A study was conducted to redesign the site using a new state storm water model and to illustrate the full range of LID practices and technologies available to developers. Overall, the redesigned LID site could have:

- Resulted in construction cost savings of over 20%;
- Preserved 62% of the site in open space;
- Maintained the project density of 103 lots;
- Reduced the size of storm pond structures and eliminated catchments and piped storm conveyances; and
- Achieved “zero” effective impervious surfaces.

### **LID Site Planning and Design Concepts**

Successful LID projects simultaneously reduce land development and infrastructure costs while protecting a property’s natural resources and functions. During the development process, the designer, developer, and reviewing agency should work together to identify solutions that integrate the following concepts:

- Preserve Open Space and Minimize Land Disturbance;
- Protect and Incorporate Natural Systems (wetlands, stream/wildlife corridors, mature forests) as Design Elements;
- Utilize Neo-Traditional Street and Lot Layouts and Designs; and
- Decentralize and Micromanage Storm Water at its Source Using LID Storm Water Management Practices.

## **LID and Storm Water Management**

LID aims to mimic natural hydrology and processes by using small-scale, decentralized practices that infiltrate, evaporate, and transpire rainwater. Specifically, LID aims to:

- Minimize impervious surfaces;
- Disconnect hydrologic elements (roofs, downspouts, parking areas);
- Maintain/increase flow paths and times; and
- Utilize decentralized treatment practices.

### **Bioretention Areas**

Storm water directed to these shallow topographic depressions in the landscape is filtered, stored, and infiltrated into the ground using specialized



vegetation and engineered soils.

### **Grassed Swales**

Water moving through these systems is slowed, filtered, and percolated into the ground. These systems can act as low cost alternatives to curbs,



gutters, and pipes.

# Help Protect Your Water!

from illegal dumping & illicit discharges...

CALL  
**520-2003**

## Illegal discharges are:

- \* polluted dumping
- \* contaminated runoff
- \* discolored outfall discharge
- \* improperly connected floor drains



## Illegal discharges can:

- \* contaminate our water
- \* cause fish kills
- \* destroy our recreational areas and resources

Illegal discharges can be both intentional & unintentional. Dumping oils, solvents or yard waste into a storm drain, oily or soapy runoff from a business, leaky & unattended oil or chemical storage units, & discolored or chemical-smelling discharges from a sewer outfall all constitute an illegal discharge. These illegal discharges are punishable by civil & criminal penalties. They damage the health of Swift Creek, Old Town Creek &



the Appomattox River, and endanger our recreational and drinking waters. You can help: call the City's illegal discharge hotline & report any polluted discharges you see.

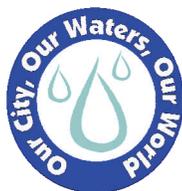
**STOP Discharges...**

**CALL 520-2003**

**OR**

**REPORT ONLINE**

Department of Public Works  
City of Colonial Heights  
201 James Avenue  
Colonial Heights, VA 23834  
(804) 520-9334



[www.colonial-heights.com/PublicWorksStormWaterManagement](http://www.colonial-heights.com/PublicWorksStormWaterManagement)

*Anonymous callers welcomed*

Citizens Action Center Home
Find Answers
Ask a Question
Make a Service Request
My Colonial Heights, VA

**Service Request Type:**

Stormwater Pollution

**Description:**

Report any miscellaneous stormwater pollution or illicit discharge.

\*Location of incident (please be as specific as possible):

\*Please check the type of stormwater pollution observed:

- Materials being dumped down storm drain or onto parking lots, roads, and walks
- Litter pile, dump, or stockpile
- Earthen materials accumulated in or near ditches or drains
- Soil erosion visible from construction and maintenance activities
- Vehicle leaking fuel or oil products
- Illegal storm drain connection - a non-stormwater connection to the storm drain system

**Submit** **Cancel**

From Colonial Heights Stormwater Management Program website, available at [www.colonial-heights.com/StormwaterManagementSteps.htm](http://www.colonial-heights.com/StormwaterManagementSteps.htm)



Colonial Heights DPW  
November, 2009

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# Proposal for

## Colonial Heights *Our Waters Award* Program

# Summary

The Colonial Heights *Our Waters Award* will recognize businesses for outstanding environmental stewardship. The award will be geared toward the recognition of stormwater-friendly practices or initiatives assumed or adopted by businesses. It could also be tailored to incorporate recognition of all environmentally-friendly practices.

*Our Waters Award* would be an annual award granted to a selected business whose actions had, throughout the previous calendar year, exhibited the highest commitment to reducing the impacts of stormwater on Colonial Heights' waters. The winning business would be selected from a pool of applicants by a selection panel. *Our Waters Award* winner would hold that title for the period of one calendar year - from current award notification to announcement of the award winner for the following year.

Benefits for being selected would include recognition in the *City Focus* and on the City's website, amounting to free advertisement, decorative Certificate of Recognition, recognition at a City Council meeting, and could include a small, decorative placard for placement on the exterior of the awarded business and a monetary award donated by interested community sponsors (\$500 Home Depot, Office Max, etc. gift card).

Community-wide benefits of the *Our Waters Award* Program include the following:

- Increased public commitment to stormwater pollution prevention
- BMP incentives at a low budgetary cost
- Strengthened relations between City government and local business
- Fulfillment of a Consent Order action item on the City's MS4 Implementation Plan
- Potential for subsequent programs and cooperative efforts
- Increased public knowledge of the City's stormwater program and related efforts

## I. Needs

Item	Pending	Anticipated	Expected
Guidance to businesses on decreasing stormwater impact	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Application	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Review panel	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Award certificate(s)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Award placard	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Corporate donor	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Director approval	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Manager\Council approval (?)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## II. Goals/Objectives

Primary goals for this program, as summarized above, include the following:

- Increased public commitment to stormwater pollution prevention
- Fulfillment of a Consent Order action item on the City's MS4 Implementation Plan
- BMP incentives at a low budgetary cost
- Increased public knowledge of the City's stormwater program and related efforts

## III. Procedures/Scope of Work

Pending program approval, a review panel - City personnel, corporate donor representative (potentially) - would be established. The application and review process would be outlined and documented. The program would then be advertised and applications would be accepted at a given date - likely then end of November in order to award a winner in early January. Once received, applications would be reviewed per program protocol and a winner would be announced. Following announcement, the winner would be recognized via the *City Focus* and on the City's website, a decorative Certificate of Recognition, recognition at a City Council meeting, a decorative placard for placement on the exterior of the awarded business and a monetary award donated by the corporate sponsor(s).

## IV. Timetable

Component	Start Date(s)	End Date(s)
Document construction	pending approval	(-)-30 days
Corporate donor solicitation	post-document construction	variable
Program advertisement	post-donor confirmation	ongoing November 30 (following advertisement)
Application receipt		

Application review

December 1

December 30  
January 1 or later,  
as applicable

Award announcement

## v. Budget

Item

Anticipated Costs

Guidance to businesses on decreasing stormwater impact

produced internally

Application

produced internally

Review panel

likely internal

Award certificate(s)

produced internally

Decorative placard

(+/-)\$50

Corporate donor(s) award

\$500 - \$1,000

## vi. Corporate Donor(s)

Appropriate corporate donor(s) would be Home Depot and/or Office Max or similar supply stores, as virtually every business uses products that these suppliers carry. Cooperation from such donors is anticipated as the amount(s) requested would be nominal.

## vii. Next Steps

Pending approval, the timetable as outlined above could be enacted immediately. It should be noted that the date of *establishment* as indicated in the City's Consent Order is Quarter 1 of Fiscal Year 2010. No date for program *implementation* was identified in the Consent Order.

- Submit for discussion
- Revise as necessary
- Submit for approval
- See section IV.



# Adopt-A-Waterway

## Colonial Heights

A large portion of the City of Colonial Heights - both on and within its borders - is home to some invaluable and historic waters. The Appomattox River, Swift Creek and Old Town Creek furnish us a source of drinking water, provide us recreational activities and sustain our environment, and have been a source of food and travel from the pre-colonial era to the present. These waterways, their tributaries and associated habitats contribute to our City's character, natural beauty and value. Unfortunately, the more our City develops the greater the chance of our waters becoming littered with trash and debris. This deteriorates the health of our waterways and makes them much less attractive.

## Want to help keep the City's waterways healthy?...

You can help protect the health, natural beauty and value of our waters by adopting a portion of a waterway for clean-up. By participating in the City's Adopt-A-Waterway program you'll be playing an active role in protecting the City's natural resources. You and your organization's clean-up team can be a valuable part of maintaining our waters and protecting our world.



### How it works...

Participants or participating groups sign up to clean a segment of a waterway in Colonial Heights, twice a year for a minimum of two years. The City will provide collection bags for the clean-up activities, and participants will be asked to fill out a short reporting form after each clean-up. Due to the nature of clean-up, adult participation is encouraged, but individuals between the ages of thirteen and eighteen may participate with authorization and supervision.

### How you'll help...

By adopting a waterway you'll be helping contribute to the future of Colonial Heights' natural resources. The more the City grows and develops, the more important it will become to ensure that our waters stay pristine and continue to fulfill their unique purpose in our environment. Your participation will help achieve this, and by participating you'll be setting an excellent example for citizenship and environmental stewardship. You and your group's efforts will be recognized in City publications and in various locations throughout the City.



### Getting started...

Getting started is easy: fill out an application, available on the City's website or in the Department of Public Works, Engineering Division office at 201 James Avenue in Colonial Heights. Clean-up activities will be encouraged on predetermined dates in the spring and fall of the year, and once you've informed the City (48) hours prior to clean-up activities, you'll be on your way to protecting our waters and playing a valuable role in the health of our City.



Department of Public Works, City of Colonial Heights  
201 James Avenue  
Colonial Heights, Virginia 23834  
(804) 520-9334

[www.colonial-heights.com/PublicWorksStormWaterManagement.htm](http://www.colonial-heights.com/PublicWorksStormWaterManagement.htm)





# CITY OF COLONIAL HEIGHTS

P.O. Box 3401  
COLONIAL HEIGHTS, VA 23834-9001  
WWW.COLONIAL-HEIGHTS.COM

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## Department of Public Works Staff Report to Council

Date of Council Meeting:

Date of Report:

Item Title: Recommendation for Resolution to authorize implementation of  
Colonial Heights Adopt-A-Waterway Program

---

### Summary and Recommendation:

Staff recommends that City Council adopt a Resolution to authorize the implementation of an Adopt-A-Waterway program. The program fulfills one of the 72 "best management practices" (BMPs) as agreed upon in the Consent Special Order (CSO) executed between the City of Colonial Heights and the Department of Conservation and Recreation (DCR) related to the City's municipal storm sewer system permit.

### Background:

In 2008 the City signed a Consent Special Order (CSO) with the Department of Conservation and Recreation (DCR). This CSO stipulates 72 best management practices (BMPs) to which the City has agreed to accomplish within the 5-year deadline of its municipal storm sewer permit with the purpose of reducing the pollutants in the City's stormwater runoff. One such BMP is the adoption and implementation of an Adopt-A-Waterway program.

Department of Public Works, Engineering Division staff subsequently investigated comparable programs implemented in jurisdictions throughout Virginia. The City's geographic features were then evaluated to determine what areas and/or water bodies were appropriate for inclusion in the program. Guidance and participatory documents were drafted and reviewed by the City Attorney and are attached as Exhibit A.

Adopt-a-waterway programs are designed much like adopt-a-street/roadway programs, in that citizens and civic groups have the opportunity to select areas of the jurisdiction for clean-up of litter and debris on some predetermined schedule. The jurisdiction, in turn, provides some level of support for the citizen(s)/group(s) conducting the clean-up. Some programs utilize a "stream and streambank approach" where participants remove litter and debris from both the water body's channel and the water body's banks; others utilize merely a "streambank approach." The selection seems generally based upon safety concerns related to the navigability of the water body, as well as the conditions for traversing the water body's banks. As well, jurisdictions seem split on whether or not to restrict these programs to City owned/authorized property or to pursue easements with private property owners.

A graphic showing the areas selected for inclusion is attached as Exhibit B. Based upon the evaluation mentioned above, it was determined that lands either owned by the City or under

Easement Agreement are most appropriate for a program such as this. This eliminates both the need for acquiring additional easements with additional property owners and the subsequent liability concerns of landowners. Based upon the physical characteristics of the City's surrounding waters, several of the areas selected for inclusion have been widened, relative to the traditional "streambank approach", in order to provide a larger area of impact.

Fiscal Impact:

As is the case with the Adopt-A-Street program, the City will provide participants with trash bags for debris collection, as well as safety vests to return when collection is complete. The City will recognize participants in the program via the *City Focus*, the stormwater website and other methods generated in-house, thus having little fiscal impact.

Policy Implications:

In addition to satisfying one of the provisions of the CSO, the Adopt-A-Waterway program will facilitate the clean-up of 78 acres of land area (with groups conducting clean-up on their adopted area twice per year). Participants will document the number of bags collected during each clean-up activity in order that the amount of debris collected can be reported annually to DCR. As well, it encourages a stronger commitment to environmental stewardship and civic responsibility. It creates an additional opportunity for cooperative interaction between residents and the City.



## CITY OF COLONIAL HEIGHTS Adopt-A-Waterway Program Overview



### **PROGRAM OBJECTIVE:**

The objective of the Adopt-A-Waterway Program is to maintain the health, cleanliness and beauty of city streams and waterways.

### **PROGRAM DESIGN:**

The Adopt-A-Waterway Program is an invitation to organizations and individuals to help take on the responsibility of maintaining the natural health and beauty of city waterways. Citizens, families, and organizations may volunteer to clean segments of selected streams and waterways on at least a semi-annual basis as an expression of environmental and municipal pride. Participants will be collecting bags of litter\debris.

### **PARTICIPANT CONDITIONS/EXPECTATIONS:**

Participants will be expected to:

1. Contact the City to register the desired waterway(s). (This will allow the City to maintain records on the adopted waterways, to notify any affected personnel or groups, and to properly recognize the participant's efforts.)
2. Adopt a selected section of a waterway for a minimum of a two-year period (4 cleanups). Stream and waterway designations shall be made exclusively by the City and cleanup activities on any unauthorized segments are in no way endorsed by the City.
3. Notify the City at least forty-eight (48) hours prior to beginning any cleanup activities.
4. Collect litter twice per year so that the appearance of the area(s) is consistently clean.
5. Let the City know if you need to end the agreement so that others are free to adopt the waterway(s).

### **NOTE FOR PARTICIPANTS:**

**In order to maintain safety during cleanup procedure, the following conditions apply:**

A. Persons under the age of eighteen (18) are not allowed to participate in the program without meeting the following criteria:

1. Have written authorization to participate from a parent\guardian; and
2. At least one (1) adult supervisor must accompany authorized participants under the age of eighteen when said participants number six (6) or fewer. If participants number more than six (6), an additional adult supervisor must be present. Thus for every six (6) participants under the age of eighteen, at least (1) adult supervisor must be present at all times during cleanup.

Other conditions include:

- B. Avoid any steep slopes and/or unsecured footings, avoid obstacles that might cause you to get too close to unsafe slopes, and avoid areas near swift water.
- C. Wear light-colored clothing for easy visibility.
- D. Wear gloves during any cleanup activities.
- E. Limit cleanup activities to the assigned area(s) only. **Unauthorized segments are not part of the Adopt-A-Waterway program.**
- F. Do not pickup materials that appear to be hazardous. Instead, contact the City of Colonial Heights Police Department regarding any materials that appear to be hazardous or an imminent danger to anyone.
- G. Work only in daylight and during fair weather conditions.
- H. Stay alert for snakes and noxious weeds and take measures to avoid them. Wear boots of at least ankle-height and long pants to avoid contact with either of the above.
- I. Do not overexert yourself; take breaks and drink plenty of water and hydrating fluids.

**CITY RESPONSIBILITIES:**

The City will:

- 1. Inform property owners, where applicable, of the date of sponsor(s) cleanup activity along designated waterway.
- 2. Provide sponsor(s) with safety vest(s) and collection bags.
- 3. Recognize sponsor(s) efforts in annual publications and related media.
- 4. Provide sponsor(s) with a certificate of recognition at the end of each two year sponsor period.

**I have read the Program Overview, I understand its provisions, and I agree to be bound by it:**

---

**Signature of Participant / Sponsor**

---

**Signature of Parent / Guardian**

.....

**APPLICATION TO ADOPT-A-WATERWAY**

**Participant / Sponsor Information:**

Name of Participant / Sponsor: \_\_\_\_\_

\_\_\_\_\_  
Affiliation (if volunteering with an organization or group):

\_\_\_\_\_  
Mailing Address:

\_\_\_\_\_  
Contact Person Phone Number:

\_\_\_\_\_  
Email:

**Agreements:**

The sponsor(s) agree that being granted approval to cleanup a city stream/waterway means that the following policies will apply:

1. This application shall have been approved by City staff prior to sponsor(s) beginning any cleanup activities.
2. Sponsor(s) agree to indemnify and hold harmless the City of Colonial Heights and any representatives thereof from ALL liability, judgment, costs, expenses and claims for damages or alleged damages of any nature whatsoever to any person, property or third party arising out of the performance of any cleanup activity or litter removal. Sponsor(s) will not go beyond assigned area or onto private property, and agree to heed the criteria listed under the **NOTE FOR PARTICIPANTS** as described on the program overview (preceding).
3. Signs and or any other equipment affixed to any land(s) shall not be removed, altered or damaged.
4. The sponsor(s) agrees to give the City forty-eight (48) hours notice of intention to begin cleanup. Notification shall be made to the City at the following:

City of Colonial Heights Department of Public Works, Engineering Division 201 James Avenue P.O. Box 3401 Colonial Heights, VA 23834 <b>(804) 520-9334</b>
--

5. The sponsor(s) acknowledges that all participants involved in this project are volunteers directed by and at the sponsor(s) discretion, and that the sponsor(s) accept full responsibility for any injuries or damages sustained by or caused by such participants. The sponsor(s) acknowledges that it or its

volunteers are solely responsible for their personal safety and are in no way considered to be employees of, or the responsibility of, the City of Colonial Heights.

6. The sponsor(s) agree that the City of Colonial Heights reserves the right to revise any of these criteria when deemed necessary and further reserves the right to revoke approval or deny participation when deemed appropriate.

**Please check:**

*By signing below, I hereby acknowledge that I have read and fully understand the foregoing Program Overview and Application, and hereby release the City of Colonial Heights, its officers and its employees from any liability or damages relating to or arising from my participation in the Adopt-A-Waterway Program. I further agree not to file any lawsuits, claims, or other causes of action, whether legal, equitable, administrative or other type, against the City of Colonial Heights, its officers and its employees, based on any incidents relating in any way to my participation in the Adopt-A-Waterway Program.*

*I am at least eighteen years of age.*

*I am under the age of eighteen and have provided the City of Colonial Heights with the appropriate parent/guardian authorization.*

**Participant Name:**

**Participant Signature:**

\_\_\_\_\_

**Participant D.O.B.:**

\_\_\_\_ - \_\_\_\_ - \_\_\_\_

**Date:** \_\_\_\_\_

**Parent/Guardian Name (if applicable):**

**Parent/Guardian Signature for Minor (if applicable):**

\_\_\_\_\_

**Date:** \_\_\_\_\_

**Authorized City Representative:** \_\_\_\_\_

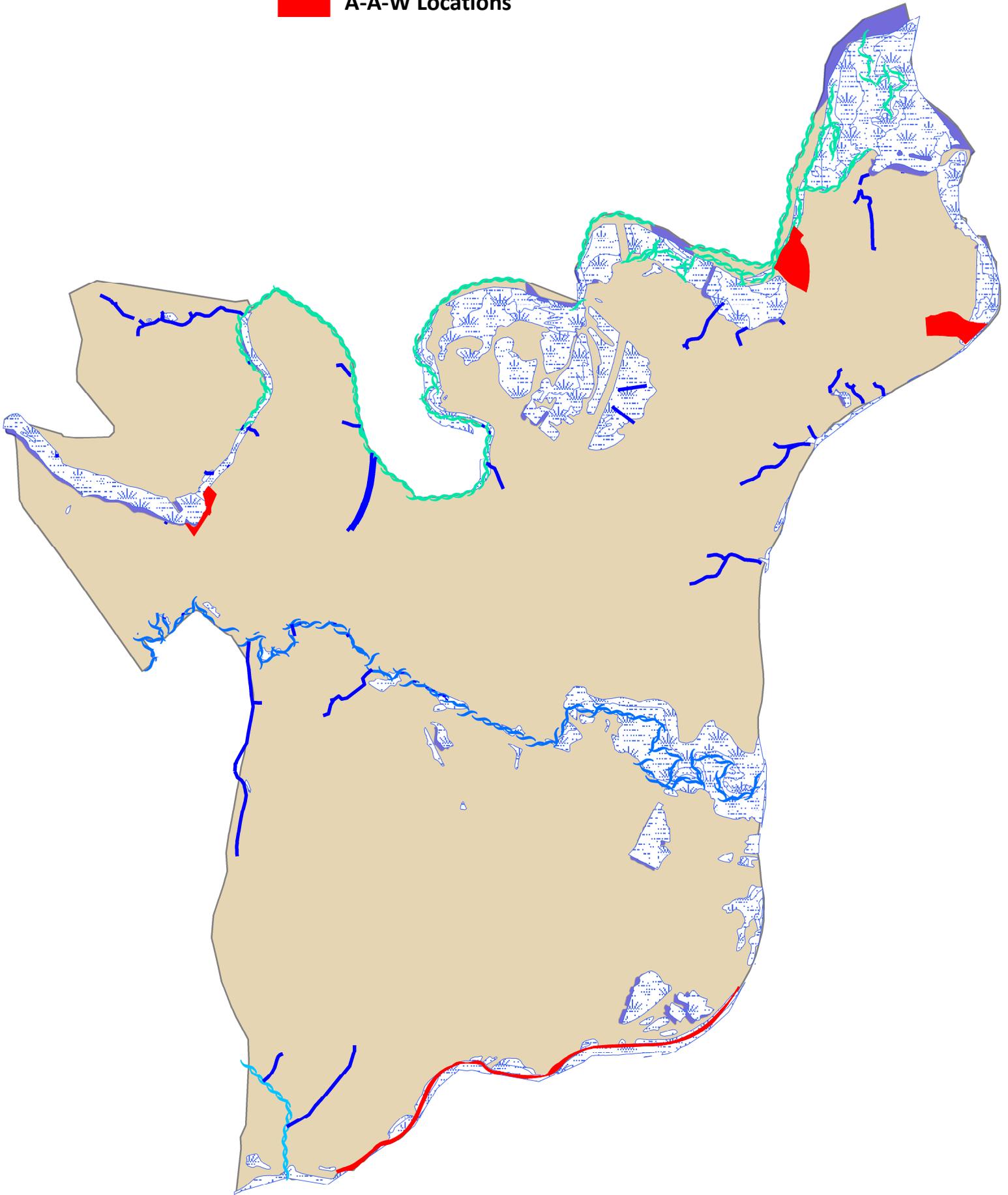
**Date:** \_\_\_\_\_

\_\_\_\_\_  
Notary Public

My commission expires:

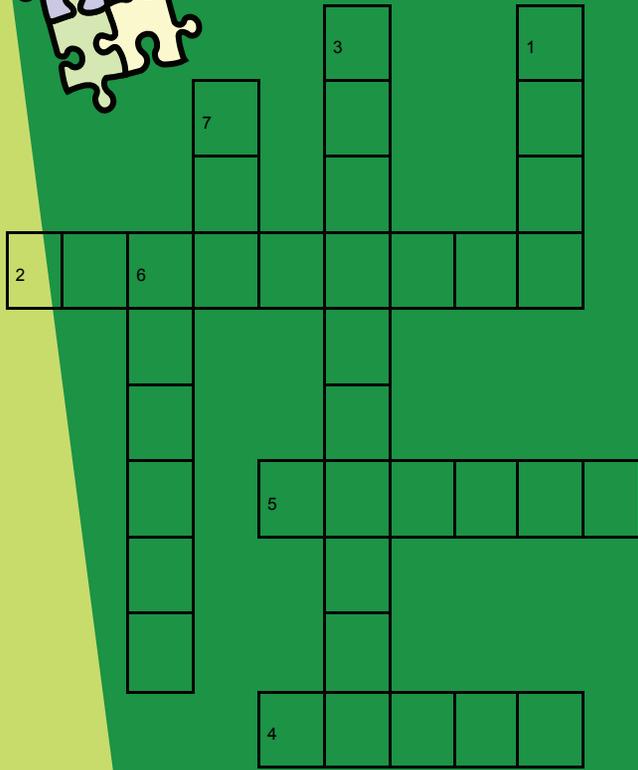
# Proposed Adopt-A-Waterway Locations (City parcels adjacent to waterbodies)

 A-A-W Locations



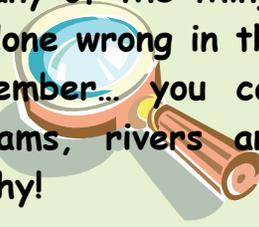


## Stormwater crossword!



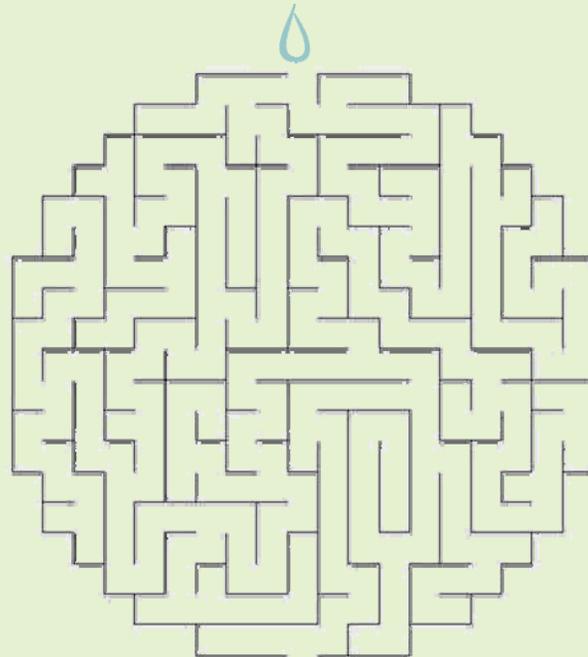
1. Stormwater is created by \_\_\_\_\_.
2. \_\_\_\_\_ makes streams, rivers and lakes unhealthy for fish and wildlife.
3. \_\_\_\_\_ is good for grass but can really hurt water quality.
4. \_\_\_\_\_ goes down the storm sewer and makes our waters ugly to look at and unhealthy.
5. \_\_\_\_\_ carry many pollutants to the Bay and the ocean.
6. \_\_\_\_\_ can clog a storm drain if raked into them.
7. Never pour \_\_\_\_\_ down the storm drain.

Be a stormwater detective! Look around your home and your yard to see if you can spot any of the things that you saw being done wrong in the picture inside. Remember... you can help keep our streams, rivers and lakes clean and healthy!



## Follow the rain drop...

Help guide the rain drop through the maze and into the storm drain. Remember to make sure that it gets there without picking up any trash, oil or other pollutants.



END

# What happens when it rains?

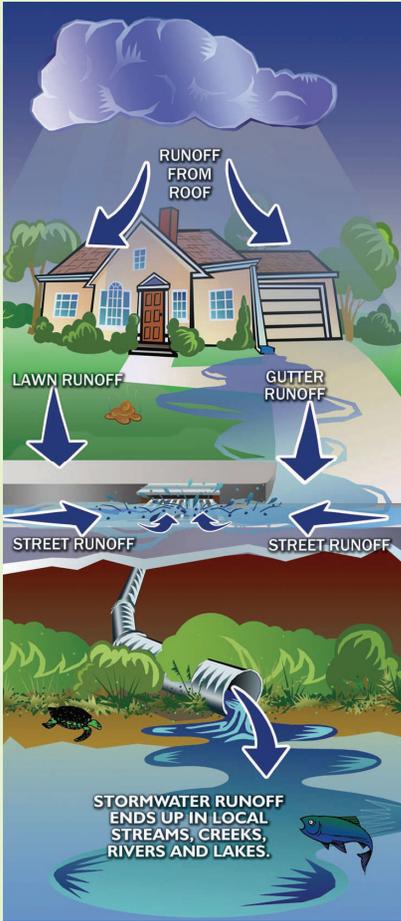


When it rains the rain drops fall on the trees, on our houses, and on our cars and trucks. Once it runs and drips off of these it lands on the streets and on our lawns. After that it either sinks into the ground or runs down the street into the storm drains. But what happens to it then...



# Where the rain goes

Once the rain has 'run off' of all the things above ground it is called runoff. Once this runoff has made it's way to the storm drain it doesn't just disappear. The storm drain is just the top, or inlet, to the storm sewer system. The storm sewer system is a long series of pipes under the ground that catches all the runoff. The storm sewer carries the runoff to lakes, streams and rivers.



Runoff is not clean water, though. As rains run off of the ground and street they pick up all the dirt, oils, grease, trash and pollutants that are on the ground and the streets. All of this is washed into the storm sewer in just the same way a ball or a small toy is moved around when you spray it with a garden hose.

So any pollutant that ends up on the ground ends up in the waters. Pollutants make it hard for fish and other species to live. These pollutants can make us sick, too, and make the waters too dirty for us to swim and fish in.

The best way to keep our waters clean is to keep anything that might hurt the water off of the ground and away from storm drains, so it can't be washed into them. Oil should never be poured into a storm drain or allowed to leak from a car. Trash should never be thrown into the street or the yard where runoff could wash it into the drain. Water from hoses or spigots should not be left where they can wash pollutants into the street or drain. Fertilizers and chemicals used for plants and keeping grass green should not be left where they can spill onto the lawn.

## Something isn't right here!...



Can you find all 5 things that are not storm water friendly in this picture? Remember that everything that might end up in the streams, lakes or rivers will end up polluting it. Circle all the things that are being done wrong.

## Storm water word challenge

P	M	A	E	R	T	S	B	W	R
X	O	I	B	L	A	K	E	A	U
W	V	L	I	D	J	O	Q	T	N
R	X	B	L	I	R	S	D	E	O
I	N	T	T	U	G	A	K	R	F
V	F	O	Q	Y	T	N	I	C	F
E	N	I	A	R	A	I	M	N	E
R	T	R	Z	B	E	P	O	Y	N
N	H	S	I	F	K	M	A	N	T

Find and circle the stormwater words:





# Be A Stream Protector

Do the things shown in the picture above with stars and never do those shown with a badge and you can help color your stream clean!



## You can help...

- never put anything down the storm drain
- help build a rain barrel
- make a compost bin for raked leaves
- make sure car oils don't run into the storm drain

- pick up after pets
- plant flowers that use less water
- use less fertilizer
- turn downspouts onto grassy areas



## Percolation Nation?

When water moves through the holes (called pores) in a material or substance it is called percolation. If you pour water onto a sponge, for example, the water will move through the sponge's pores to run out of the other side. Soil, like sponges, is made up of materials that have a lot of pores, so soil is called a porous material.



Since soil is a porous material, the ground often acts like a sponge for rain. As the rain runs across the ground and settles on flat and low spots, it runs through the ground's surface and through the soil below. The more pores the material has the more porous it is. Circle which of the surfaces below allow rain to percolate through them.



- |        |                |           |
|--------|----------------|-----------|
| Soil   | A Garden       | A Rooftop |
| Sand   | Sidewalk       | Mulch     |
| Grass  | Gravel         |           |
| A Lawn | A Paved Street |           |

## All About the Chesapeake Bay

The Chesapeake Bay is the largest estuary in the United States. An estuary is a body of water where fresh water from streams and rivers mixes with salt water from the ocean. Estuaries are among the most productive environments on earth, providing a variety of habitats that support many animal and plant communities. A habitat is an area where a particular animal or plant species lives. It is the natural environment in which an organism lives, or the environment that surrounds an animal or plant species. The Chesapeake Bay supports many habitats. Marshes, forests, aquatic reefs, wetlands and forests are all types of habitats that are supported by the Bay.

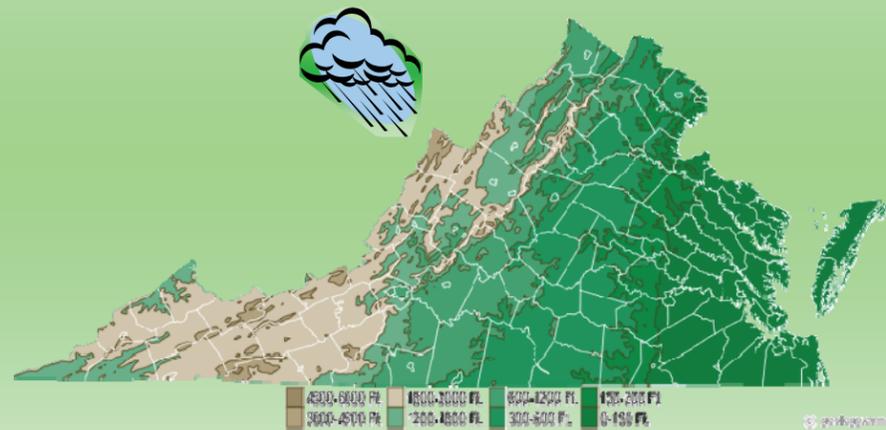
Fill in the blanks below beside each species with the correct letter for each habitat the Chesapeake Bay supports.

- |                         |                      |
|-------------------------|----------------------|
| ___ Catfish             | A = Forests          |
| ___ Oyster              | B = Wetlands         |
| ___ Sandbar Shark       | C = Streams & Rivers |
| ___ Bald Eagle          | D = Open Waters      |
| ___ American Black Duck |                      |
| ___ Eastern Screech Owl |                      |
| ___ Jellyfish           |                      |
| ___ Bobcat              |                      |
| ___ Red Fox             |                      |
| ___ Blue Crab           |                      |

## Are the Aliens Guiding Our Water?



It isn't being guided by any aliens, but it is being guided by outer space, in a way. Gravity is the force that causes all water to run downhill. Gravity is a natural occurrence that is responsible for keeping the planets in their orbit and keeping us on the ground. In space, the astronauts and all their things float around because there is no gravity.



This map of Virginia's elevations shows how, even when it rains in the mountains in the western part of the state, the rainwater still makes its way to the Chesapeake Bay in the eastern part of the state.

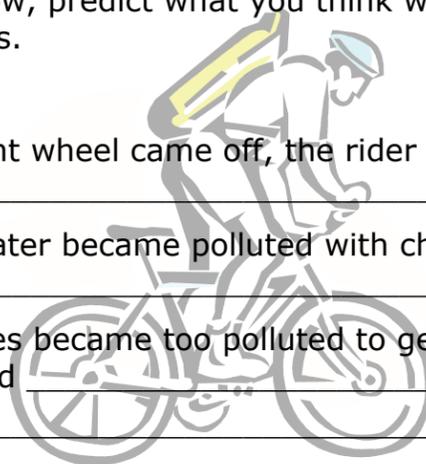
## Everybody Rides the Eco - Cycle!



All animals, plants and people are part of an ecosystem. In an ecosystem all living organisms interact with every other living organism in their local environment. In other words, an ecosystem functions like a bicycle, where all the parts work together and any particular part will not work properly without the other parts that it relies on. A wheel, for example, will not spin without the pedals to turn it, and the pedals can't turn the wheel if the chain is not attached properly. So just like a bicycle, an ecosystem needs all its parts in good condition to be healthy and function properly.

In the spaces below, predict what you think would happen in the following cases.

- If a bicycle's front wheel came off, the rider would \_\_\_\_\_.
- If an animal's water became polluted with chemicals, the animal would \_\_\_\_\_.
- If rivers and lakes became too polluted to get drinking water from, people would \_\_\_\_\_.



## What is a Watershed?

A watershed is any area of land that drains to a particular body of water. Colonial Heights is in the Chesapeake Bay watershed, which means that all of the rain that falls on Colonial Heights ends up in the Chesapeake Bay. The Chesapeake Bay watershed stretches across more than 64,000 square miles, covers parts of six states, and covers the entire area of Washington, D.C.

More than 100,000 streams and rivers run through the Chesapeake watershed. These streams and rivers that eventually flow into the Bay are called tributaries. Everyone in the Chesapeake Bay watershed lives within a few minutes of one of these streams and rivers, which act like pipelines that carry rainwater from our communities to the Bay.



Check the states that are not in the Chesapeake Bay watershed:

- |                |                   |
|----------------|-------------------|
| ___ New York   | ___ Florida       |
| ___ Kentucky   | ___ Delaware      |
| ___ Maryland   | ___ Pennsylvania  |
| ___ New Jersey | ___ West Virginia |

## What Happened In Our Water?

Something is happening in our waters. When it rains, the water that runs off of our houses, cars, streets and lawns is called stormwater runoff. Pollutants from this stormwater runoff are collecting in our streams and rivers and polluting them. As stormwater runs across surfaces, it picks up dirt, mud, oil, chemicals, litter and fertilizers and carries them into our rivers and streams. These pollutants affect the health of the water's habitats and make it difficult for animals and plants to live. In fact, pollutants in stormwater runoff are the leading cause of water pollution. How do these pollutants get into stormwater? Many of the actions people do on a regular basis allow many of the pollutants to collect in the runoff. Match the causes to the affects below to help find some clues about how runoff gets polluted.

- Litter \_\_\_\_\_.
- Using too much \_\_\_\_\_.
- Leaving or pouring \_\_\_\_\_.

1. fertilizer results in excess chemicals ending up in streams and rivers.
2. always ends up as pollutants in rivers and streams.
3. oil or chemicals onto the ground or into the storm drain allows it to be carried by stormwater runoff to local water bodies.



# Stormwater 4 Kids



**COLOR YOUR WATER CLEAN**



**Coloring Book**



**City of Colonial Heights**

A cartoon illustration of a young boy with spiky hair, wearing a t-shirt and pants, standing with his arms outstretched in a questioning gesture. A large speech bubble above him contains the text "What's Wrong with the water?".

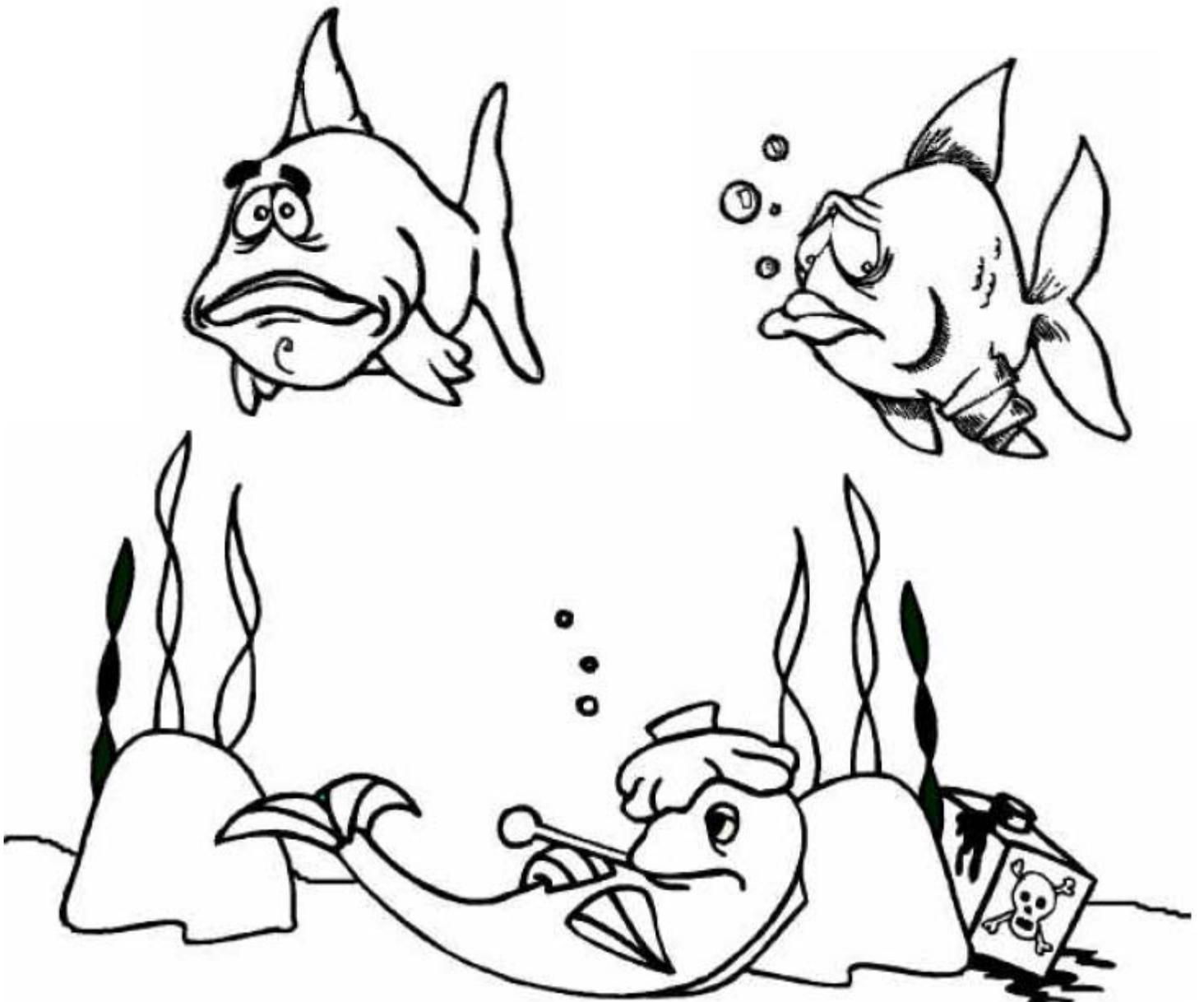
What's Wrong  
with the  
water?

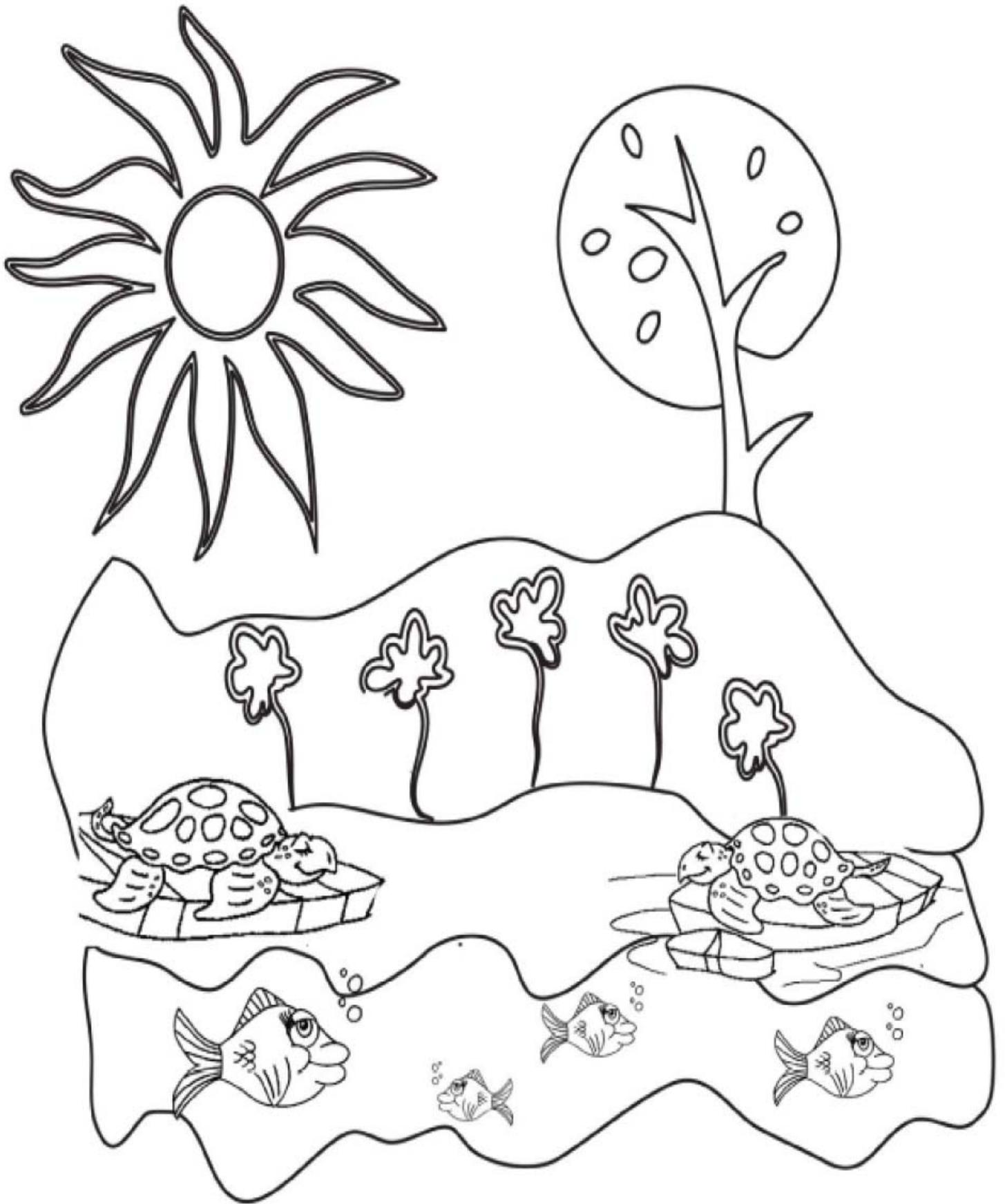
Why are the animals sick or moving out? The water may be polluted. One cause of water pollution is **STORM WATER POLLUTION**. This happens because water becomes contaminated with stuff like trash, dirt, oil, and sewage chemicals.



# How does the water become polluted?

We cause pollution. When it rains, the water that flows over the streets and in drainage ditches picks up pollutants such as trash, dirt, pet waster, chemicals and more and carries them, untreated, into our rivers, streams and lakes.





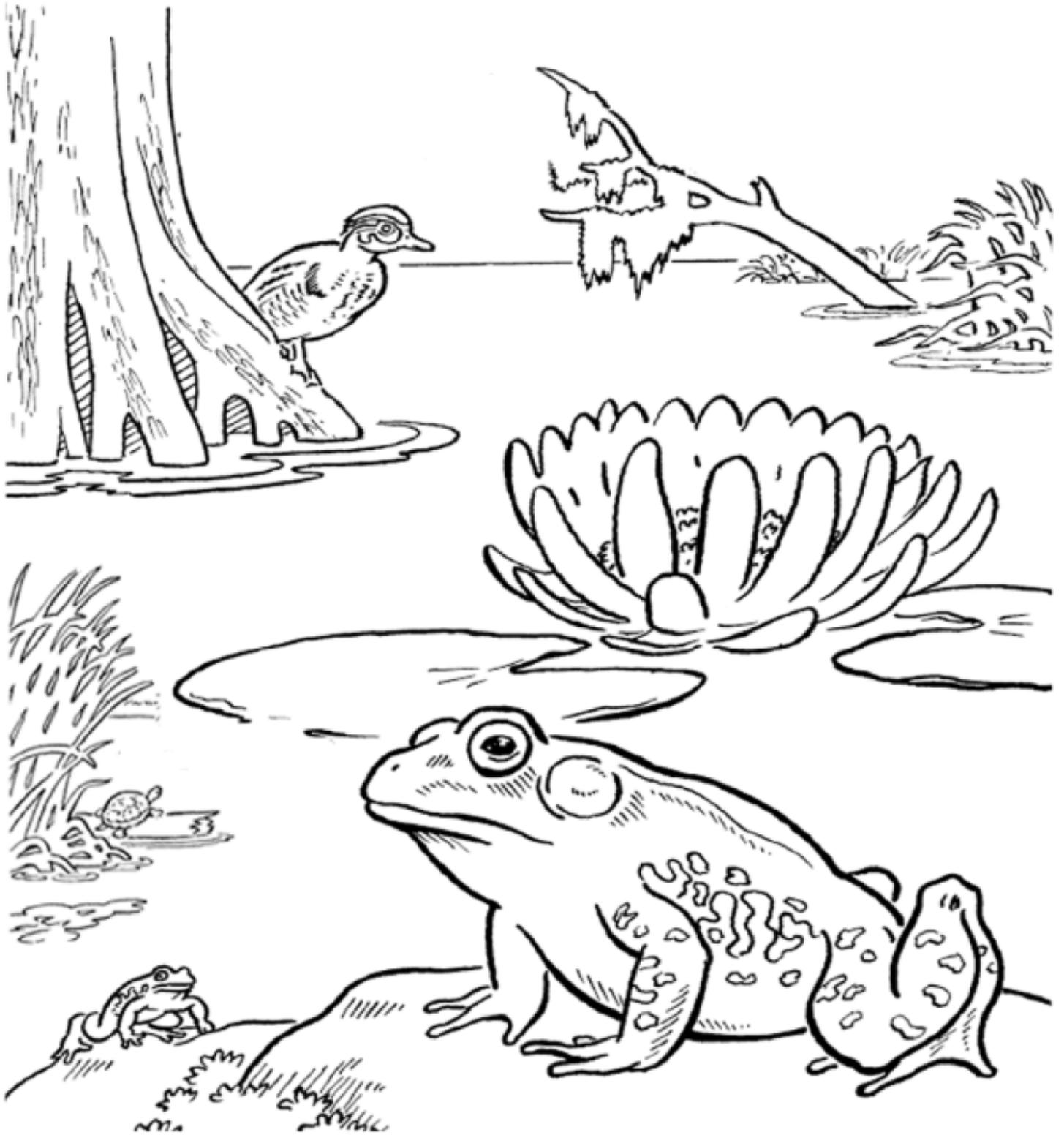
**Give our water a hand! Do not dump trash into our rivers or canals. Let our plants, fish and turtles have a clean, healthy place to live.**



What you drop means a lot! Help protect clean water by keeping litter and pollution out of storm drains.

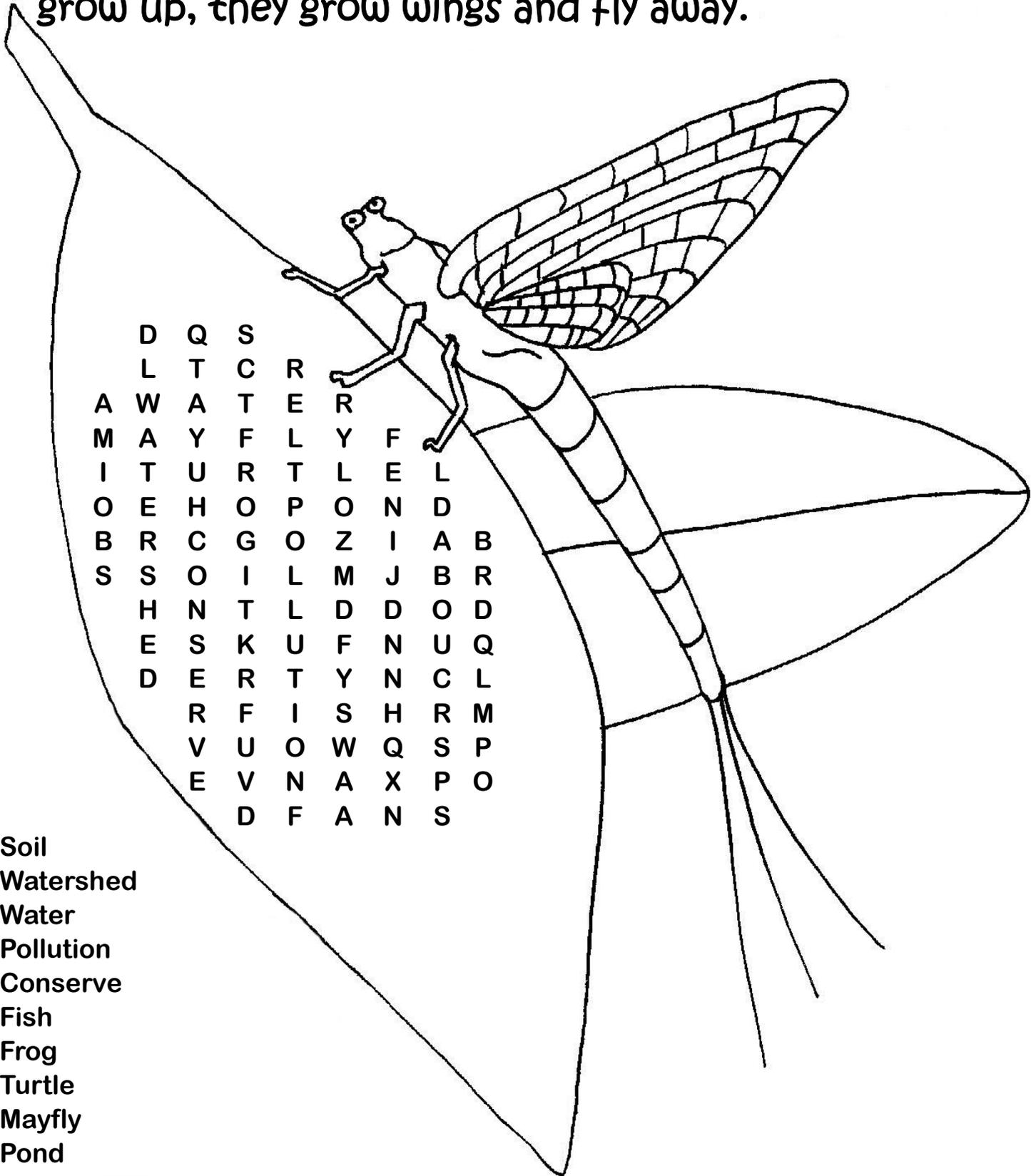


**Use care about what is poured on the ground. Things that should not be dumped onto the ground include: leftover paint, paint thinner, motor oil and all kinds of substances that are used to kill weeds and bugs. (small amounts of pesticides are not considered a major problem.)**



All life forms depend on clean water. Wetlands are essential, natural, living entities that must be protected for the common good—the good of the people and the good of the huge variety of animals, fish and plants that survive in these unique habitats.

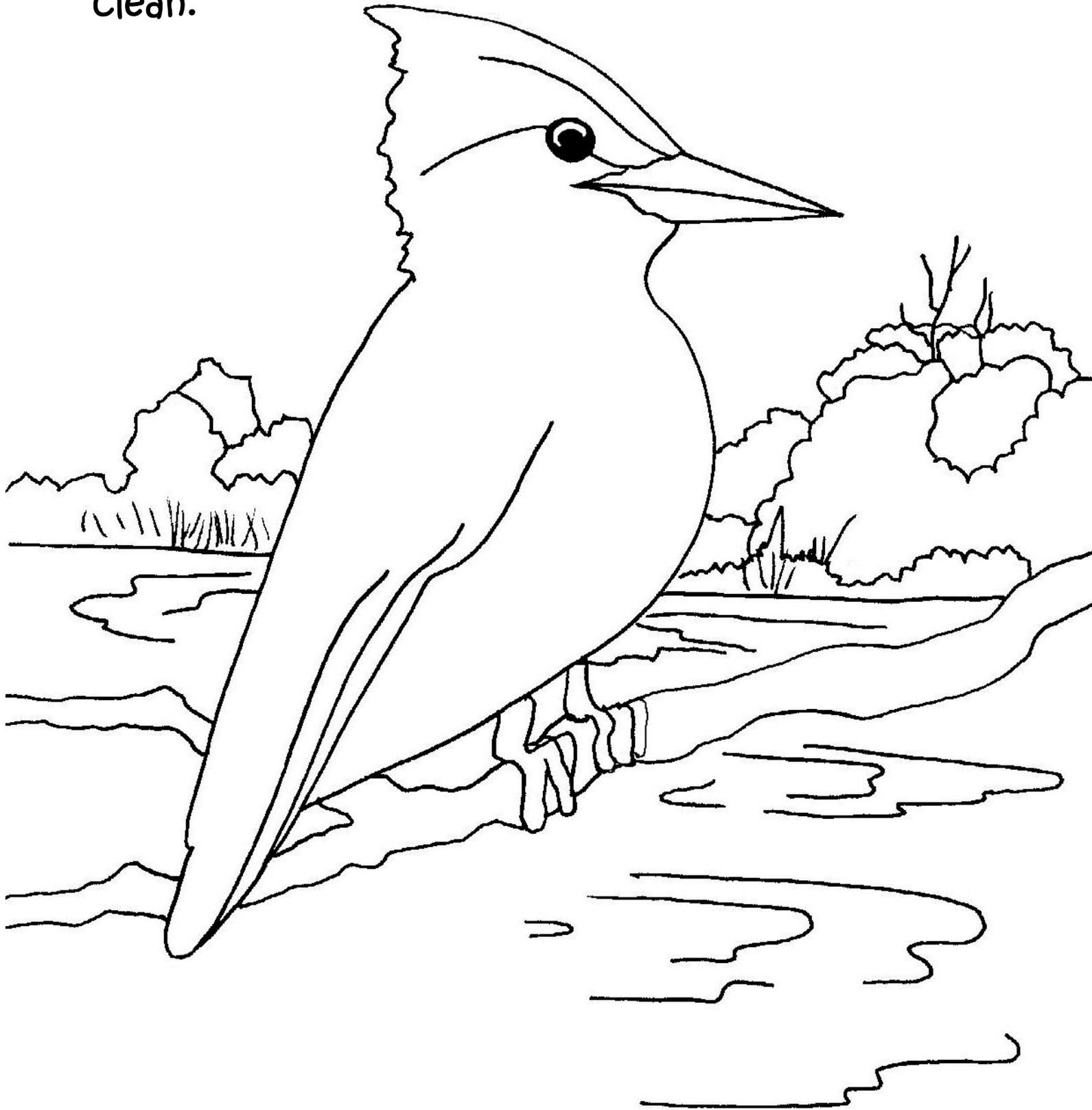
My name is Molly the Mayfly. Mayflies live in the water when they are babies. This is why it is so important to keep the water clean. When they grow up, they grow wings and fly away.



	D	Q	S	R	R	F	L	
A	L	T	C	E	Y	E	D	B
M	W	A	T	L	L	N	A	R
I	A	Y	F	T	O	I	B	D
O	T	U	R	P	Z	J	O	Q
B	E	H	O	O	M	D	U	L
S	R	C	G	L	D	N	C	M
	S	O	I	L	F	N	R	P
	H	N	T	U	Y	H	S	O
	E	S	K	T	S	Q	P	
	D	E	R	I	W	X		
		R	F	O	A	N		
		V	U	N				
		E	V	F				

- Soil
- Watershed
- Water
- Pollution
- Conserve
- Fish
- Frog
- Turtle
- Mayfly
- Pond

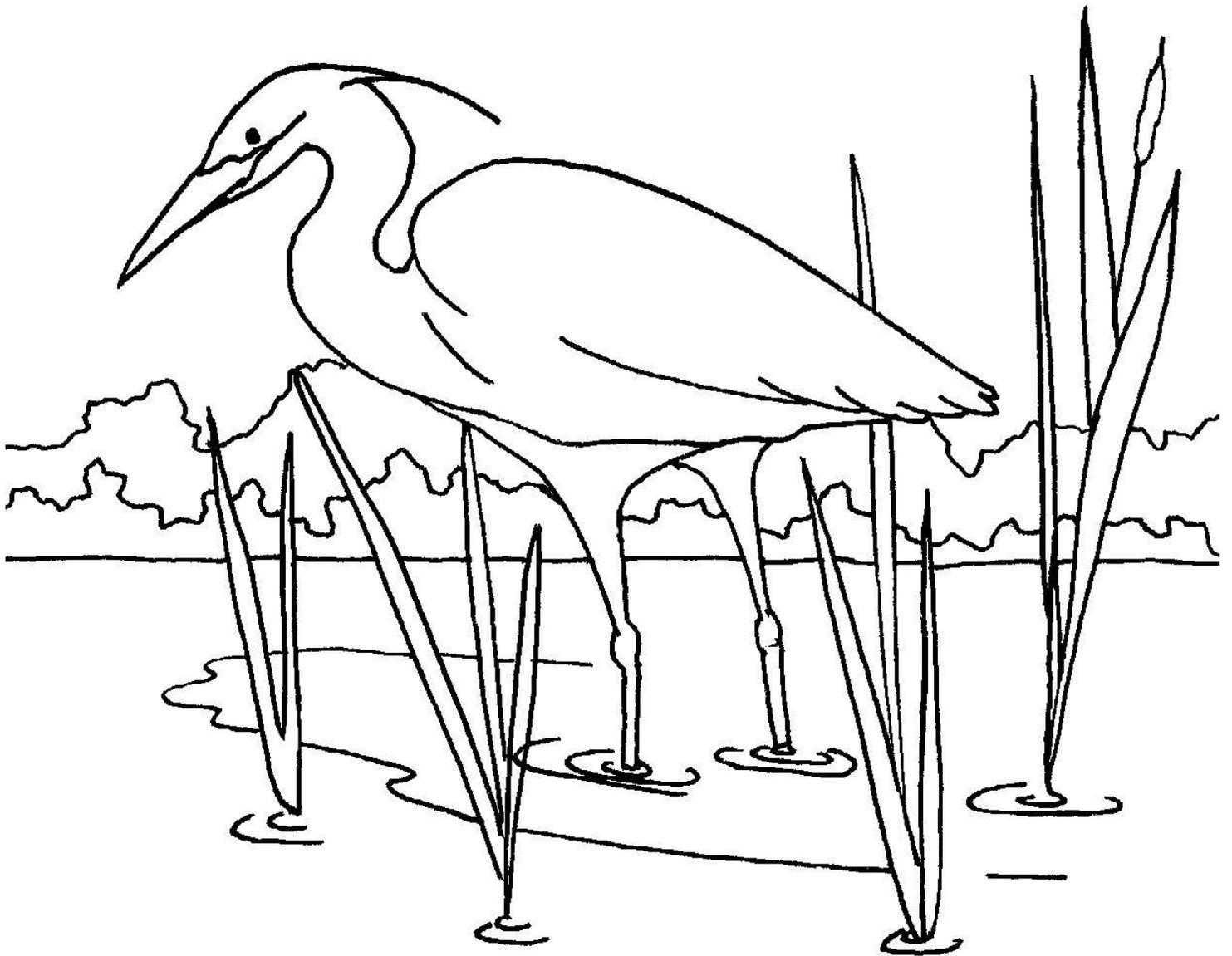
Hi! I am Karen the Kingfisher. I only eat fish. Fish need clean water to live so please keep their water clean.



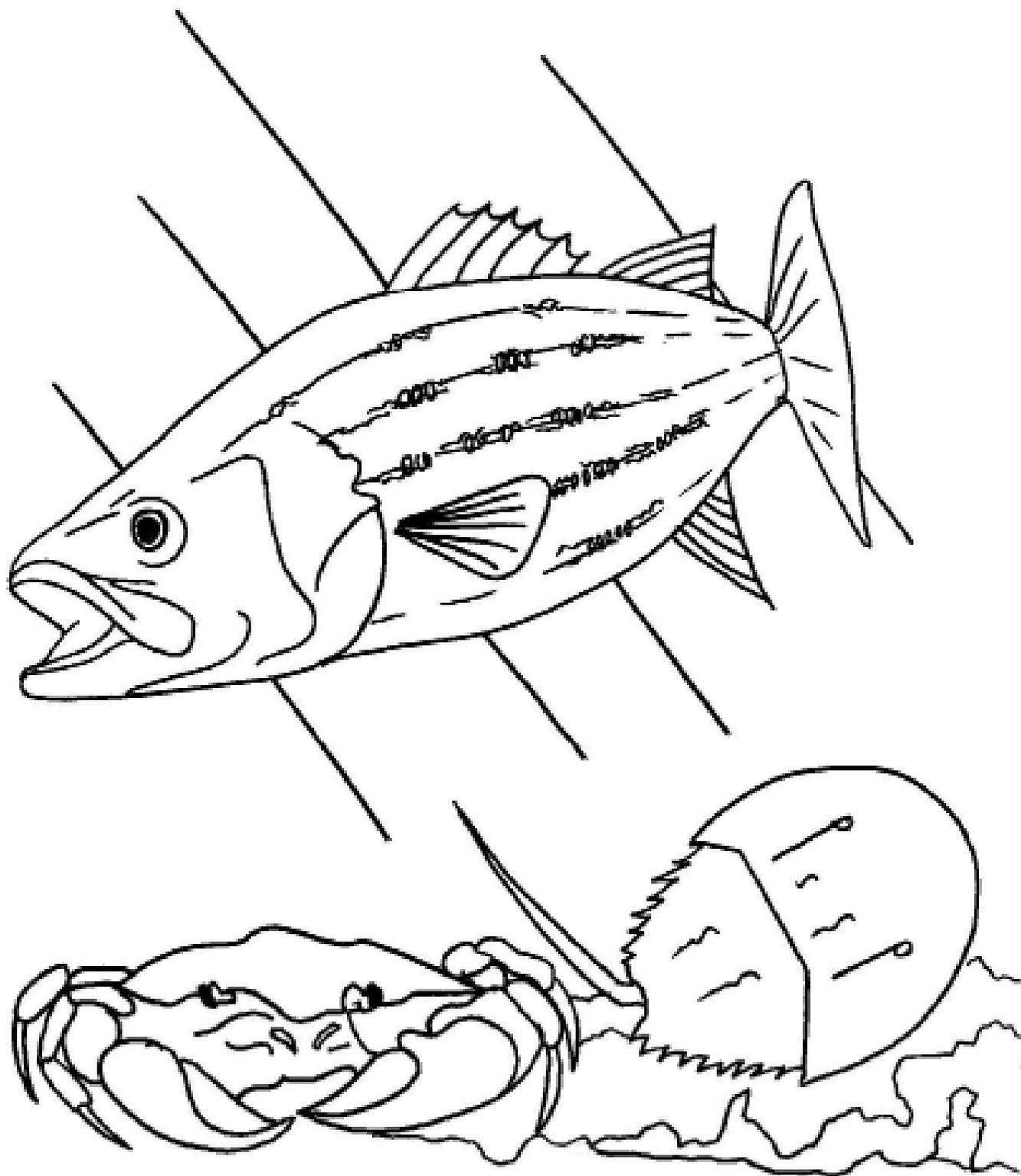
I am Frank the Frog. I need clean water to drink.  
I don't drink through my mouth. I drink water  
through my skin.



I am Henry the heron. I need clean water so that I can go fishing.



We all live in your waters and need clean water to stay healthy.



I am Ben. I need clean water to drink!



## Chapter 245. Stormwater Management

[HISTORY: Adopted by the City Council of the City of Colonial Heights 3-10-2009 by Ord. No. 09-1; amended in its entirety 12-14-2010 by Ord. No. 10-28. Subsequent amendments noted where applicable.]

### **GENERAL REFERENCES**

Drainage — See Ch. **121**.

Erosion and sediment control — See Ch. **241**.

Subdivision of land — See Ch. **250**.

Zoning — See Ch. **286**.

## Article I. General Provisions

### § 245-1. Purpose.

The purpose of this ordinance is to provide for the health, safety, and general welfare of the citizens of the City of Colonial Heights through the regulation of non-storm water discharges to the storm drainage system to the maximum extent practicable as required by federal and state law. This ordinance establishes methods for controlling the introduction of pollutants into the municipal separate storm sewer system (MS4) in order to comply with requirements of the National Pollutant Discharge Elimination System (NPDES) permit process. The objectives of this ordinance are:

- A. To regulate non-stormwater discharges to the municipal separate storm sewer system (MS4);
- B. To prohibit Illicit Connections and Illegal Discharges to the municipal separate storm sewer system; and
- C. To establish legal authority to carry out all inspection, surveillance, and monitoring procedures necessary to ensure compliance with this ordinance.

### § 245-2. Definitions.

For the purposes of this ordinance, the following shall mean:

#### **AUTHORIZED ENFORCEMENT AGENCY**

The City of Colonial Heights Department of Public Works.

#### **BEST MANAGEMENT PRACTICES (BMPs)**

Schedules of activities, prohibitions of practices, general good house keeping practices, pollution prevention and educational practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants directly or indirectly to stormwater, receiving waters, or stormwater conveyance systems. BMPs also include treatment practices, operating procedures, and practices to control site runoff, spillage or leaks, sludge or water disposal, or drainage from raw materials' storage.

#### **CLEAN WATER ACT**

The federal Water Pollution Control Act (33 U.S.C. § 1251 et seq.), and any subsequent amendments thereto.

#### **CONSTRUCTION ACTIVITY**

Construction projects resulting in land disturbance of one acre or more. Such activities include, but are not limited to, clearing and grubbing, grading, excavating and demolition.

**HAZARDOUS MATERIALS**

Any material, including any substance, waste, or combination thereof, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may cause, or significantly contribute to, a substantial present or potential hazard to human health, safety, property, or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

**ILLEGAL DISCHARGE**

Any direct or indirect non-storm water discharge to the storm drain system, except as exempted in § 245-6 of this ordinance.

**ILLICIT CONNECTIONS**

An illicit connection is defined as either of the following:

Any drain or conveyance, whether on the surface or subsurface, which allows an illegal discharge to enter the storm drain system, including but not limited to any conveyances which allow any non-storm water discharge including sewage, process wastewater, and wash water to enter the storm drain system and any connections to the storm drain system from indoor drains and sinks, regardless of whether such drain or connection had been previously allowed, permitted, or approved by the authorized enforcement agency; or,

Any drain or conveyance connected from a commercial or industrial land use to the storm drain system which has not been documented in plans, maps, or equivalent records and approved by the authorized enforcement agency.

**INDUSTRIAL ACTIVITY**

Activities subject to NPDES Industrial Permits as defined in 40 CFR, Section 122.26(b)(14).

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) STORM WATER DISCHARGE PERMIT**

Means a permit issued by EPA (or by a State under authority delegated pursuant to 33 USC § 1342(b)) that authorizes the discharge of pollutants to waters of the United States, whether the permit is applicable on an individual, group, or general area-wide basis.

**NON-STORM WATER DISCHARGE**

Any discharge to the storm drain system that is not composed entirely of storm water.

**PERSON**

Means any individual, association, organization, partnership, firm, corporation or other entity recognized by law and acting as either the owner or as the owner's agent.

**PREMISES**

Any building, lot, parcel of land, or portion of land whether improved or unimproved, including adjacent sidewalks and parking strips.

**STORM DRAIN SYSTEM**

Facilities by which storm water is collected and/or conveyed, including but not limited to any roads with drainage systems, municipal streets, gutters, curbs, inlets, piped storm drains, pumping facilities, retention and detention basins, natural and human-made or altered drainage channels, reservoirs, and other drainage structures.

**STORM WATER**

Any surface flow, runoff, and drainage consisting entirely of water from any form of natural precipitation, and resulting from such precipitation.

**STORMWATER POLLUTION PREVENTION PLAN**

A document which describes the Best Management Practices and activities to be implemented by a person or business to identify sources of pollution or contamination at a site and the actions to eliminate or reduce pollutant discharges to stormwater, stormwater conveyance systems, and receiving waters to the maximum extent practicable.

**WASTEWATER**

Means any water or other liquid, other than uncontaminated storm water, discharged from a facility.

### § 245-3. Applicability.

This ordinance shall apply to all water entering the storm drain system generated on any developed or undeveloped lands unless explicitly exempted by the Department of Public Works.

### § 245-4. Responsibility for administration.

The Department of Public Works shall administer, implement, and enforce the provisions of this ordinance. Any powers granted or duties imposed upon the Department may be delegated in writing by the Director of the Department of Public Works to persons or entities acting in the beneficial interest of or in the employ of the City.

### § 245-5. Severability.

The provisions of this Chapter are hereby declared to be severable. If any provision, clause, sentence, or paragraph of this Chapter or the application thereof to any person, establishment, or circumstances shall be held invalid, such invalidity shall not affect the other provisions or application of this Chapter.

### § 245-6. Discharge prohibitions.

#### A. Prohibition of illegal discharges.

No person shall discharge or cause to be discharged into the municipal storm drain system or watercourses any materials that cause or contribute to a violation of applicable water quality standards, other than storm water.

The commencement, conduct or continuance of any illegal discharge to the storm drain system is prohibited except as follows:

- (1) The following discharges are exempt from discharge prohibitions established by this Chapter: water line flushing or other potable water sources, landscape irrigation or lawn watering, diverted stream flows, rising ground water, ground water infiltration to storm drains, uncontaminated pumped ground water, foundation or footing drains (not including active groundwater dewatering systems), crawl space pumps, air conditioning condensation, springs, non-commercial washing of vehicles, natural riparian habitat or wetland flows, swimming pools (if dechlorinated - less than one PPM chlorine), fire fighting activities, and any other water source meeting applicable water quality standards.
- (2) Discharges specified in writing by the authorized enforcement agency as being necessary to protect public health and safety.
- (3) Dye testing is an allowable discharge, but requires a verbal notification to the Department of Public Works prior to the time of the test.
- (4) The prohibition shall not apply to any non-storm water discharge permitted under an NPDES permit, waiver, or waste discharge order issued to the discharger and administered under the authority of the Federal Environmental Protection Agency, provided that the discharger is in full compliance with all requirements of the permit, waiver, or order and other applicable laws and regulations, and provided that written approval has been granted for any discharge to the storm drain system.

#### B. Prohibition of Illicit Connections.

- (1) The construction, use, maintenance or continued existence of illicit connections to the storm drain system is prohibited.

- (2) This prohibition expressly includes, without limitation, illicit connections made in the past, regardless of whether the connection was permissible under law or practices applicable or prevailing at the time of connection.
- (3) A person is considered to be in violation of this ordinance if the person connects a drain or conveyance to the Storm Drain System, or allows such a connection to continue.

## § 245-7. Suspension of storm drain system access.

### A. Suspension of Illegal Discharges in Emergency Situations.

The Department of Public Works may, without prior notice, suspend discharge access to a person when such suspension is necessary to stop an actual or threatened discharge which presents or may present imminent and substantial danger to the environment, or to the health or welfare of persons, or to the Storm Drain System or waters of the United States. If the violator fails to comply with a suspension order issued in an emergency, the Department of Public Works may take such steps as deemed necessary to prevent or minimize damage to the Storm Drain System or waters of the United States, or to minimize danger to persons.

### B. Suspension due to the Detection of Illegal Discharge.

Any person discharging to the Storm Drain System in violation of this Chapter may have its access terminated if such termination would abate or reduce an illegal discharge. The authorized enforcement agency will notify a violator of the proposed termination of its access to the Storm Drain System. The violator may petition the Department of Public Works for a reconsideration and hearing.

A person commits an offense if the person reinstates access to premises terminated pursuant to this Section, without the prior approval of the Department of Public Works.

## § 245-8. Industrial or construction activity discharges.

Any person subject to an industrial or construction activity NPDES storm water discharge permit shall comply with all provisions of such permit. Proof of compliance with such permit may be required in a form acceptable to the Department of Public Works prior to allowing discharges to the Storm Drain System.

## § 245-9. Monitoring of discharges.

### A. Applicability.

This section applies to all facilities that have storm water discharges associated with industrial activity, including construction activity.

### B. Access to facilities.

- (1) The Department of Public Works shall be permitted to enter and inspect facilities subject to regulation under this Chapter as often as may be necessary to determine compliance with this Chapter. If a discharger has security measures in force which require proper identification and clearance before entry into its premises, the discharger shall make the necessary arrangements to allow access to representatives of the Department of Public Works.
- (2) Facility operators shall allow the Department of Public Works ready access to all parts of the premises for the purposes of inspection, sampling, examination and copying of records that must be kept under the conditions of an NPDES permit to discharge storm water, and the performance of any additional duties as defined by state and federal law.
- (3) The Department of Public Works shall have the right to set up on any permitted facility such devices as are necessary in the Department's opinion to conduct monitoring and/or sampling of the facility's stormwater discharge.

- (4) The Department of Public Works has the right to require the discharger to install monitoring equipment as necessary. The facility's sampling and monitoring equipment shall be maintained at all times in a safe and proper operating condition by the discharger at its own expense. All devices used to measure stormwater flow and quality shall be calibrated to ensure their accuracy.
- (5) Any temporary or permanent obstruction to safe and easy access to the facility to be inspected and/or sampled shall be promptly removed by the operator at the written or oral request of the Department of Public Works and shall not be replaced. The costs of clearing such access shall be borne by the operator.
- (6) Unreasonable delays in allowing the Department of Public Works access to a permitted facility is a violation of a stormwater discharge permit and of this Chapter. A person who is the operator of a facility with a NPDES permit to discharge storm water associated with industrial activity commits an offense if the person denies the Department reasonable access to the permitted facility for the purpose of conducting any activity authorized or required by this Chapter.
- (7) If a representative of the Department of Public Works has been refused access to any part of the premises from which storm water is discharged, and he is able to demonstrate probable cause to believe that there may be a violation of this Chapter, or that there is a need to inspect or sample as part of a routine inspection and sampling program designed to verify compliance with this Chapter or any order issued hereunder, or to protect the overall public health, safety, and welfare of the community, then the Department may seek issuance of a search warrant from any court of competent jurisdiction.

## **§ 245-10. Requirement to prevent, control, and reduce storm water pollutants by the use of best management practices.**

The Department of Public Works will adopt requirements identifying Best Management Practices for any activity, operation, or facility that may cause or contribute to pollution or contamination of storm water, the storm drain system, or waters of the U.S. The owner or operator of a commercial or industrial establishment shall provide, at its own expense, reasonable protection from accidental discharge of prohibited materials or other wastes into the storm drain system or watercourses through the use of these structural and non-structural BMPs. Further, any person responsible for a property or premise, which is, or may be, the source of an illegal discharge, may be required to implement, at the person's expense, additional structural and non-structural BMPs to prevent the further discharge of pollutants to the separate storm sewer system. Compliance with all terms and conditions of a valid NPDES permit authorizing the discharge of storm water associated with industrial activity, to the extent practicable, shall be deemed compliance with the provisions of this section. These BMPs shall be part of a stormwater pollution prevention plan (SWPP) as necessary for compliance with requirements of the NPDES permit.

## **§ 245-11. Watercourse protection.**

Every person owning property through which a watercourse passes, or such person's lessee, shall keep and maintain that part of the watercourse within the property free of trash, debris, excessive vegetation, and other materials that would pollute or contaminate the watercourse. In addition, the owner or lessee shall maintain existing privately owned structures within or adjacent to a watercourse, so that such structures will not become a hazard to the use, function, or physical integrity of the watercourse.

## **§ 245-12. Notification of spills.**

Notwithstanding other requirements of law, as soon as any person responsible for a facility or operation, or responsible for emergency response for a facility or operation, has information of any known or suspected release of materials which are resulting or may result in illegal discharges or pollutants discharging into storm water, the Storm Drain System, or water of the U.S., such person shall take all necessary steps to ensure the discovery, containment, and cleanup of the release. In the event of such a release of hazardous materials, the person shall immediately notify emergency response agencies of the occurrence via emergency dispatch services. In the event of a release of non-hazardous materials, the person shall notify the Department of Public Works in person or by phone

or facsimile no later than the next business day. Notifications in person or by phone shall be confirmed by written notice addressed and mailed to the Department of Public Works within three business days of the phone notice. If the discharge of prohibited materials emanates from a commercial or industrial establishment, the owner or operator of such establishment shall also retain an on-site written record of the discharge and the actions taken to prevent its recurrence. Such records shall be retained for at least three years.

## § 245-13. Enforcement.

Whenever the Department of Public Works finds that a person has violated a prohibition or failed to meet a requirement of this Chapter, the Department may order compliance by written notice of violation to the responsible person. Such notice may require without limitation:

- A. The performance of monitoring, analyses, and reporting;
- B. The elimination of illicit connections or illegal discharges;
- C. That violating discharges, practices, or operations shall cease and desist;
- D. The abatement or remediation of storm water pollution or contamination hazards and the restoration of any affected property;
- E. Payment of a fine to cover administrative and remediation costs; and
- F. The implementation of source control or treatment BMPs.

If abatement of a violation or restoration of affected property is required, the notice shall set forth a deadline within which such remediation or restoration must be completed. The notice shall further advise that, should the violator fail to remediate or restore within the established deadline, representatives of the Department of Public Works or a designated contractor shall enter upon the subject property; and they are authorized to take all measures necessary to abate the violation and/or restore the property. It shall be unlawful for any person, owner, agent or person in possession of any premises to refuse to allow a representative of the Department or its designated contractor to enter upon the premises for the purposes set forth above. The expense of such abatement and restoration shall be charged to the violator.

## § 245-14. Appeal of notice of violation.

Any person receiving a notice of violation may appeal the determination of the Department of Public Works. The notice of appeal must be received within three days from the date of the notice of violation. Hearing on the appeal before the City Manager or his designee shall take place within 12 days from the date of receipt of the notice of appeal. The City Manager or his designee shall affirm, modify, or reverse the decision of the Department of Public Works; and the decision of the City Manager or his designee shall be final.

## § 245-15. Enforcement measures after appeal.

If the City Manager's decision in an appeal is to affirm, wholly or in part, the decision of the Department of Public Works, then representatives of the Department or a designated contractor shall enter upon the subject private property and are authorized to take all measures necessary to abate the violation and/or restore the property. Provided however, the City Manager, at his sole discretion, may stay such entry and action by the Department or its contractor for a specified number of days if he determines that good cause exists for such a stay. It shall be unlawful for any person, owner, agent or person in possession of any premises to refuse to allow a representative of the Department or its designated contractor to enter upon the premises for the purposes set forth above.

## § 245-16. Cost of abatement of the violation.

Within 14 days after abatement of the violation, the owner of the property shall be notified of the cost of abatement, including administrative costs. The property owner may file a written protest objecting to the amount of the assessment within five days. If the amount due is not paid within a timely manner as determined by the decision of the City Manager or by the expiration of the time in which to file an appeal, the charges shall become a special assessment against the property and shall constitute a lien on the property for the amount of the assessment. Any person violating any of the provisions of this article shall become liable to the City by reason of such violation. The liability shall be paid in not more than 12 equal payments. Interest at the rate of 3.5 percent per annum shall be assessed on the balance beginning on the 1st day following discovery of the violation.

## § 245-17. Compensatory action.

In lieu of enforcement proceedings, penalties, and remedies authorized by this Chapter, the Department of Public Works may impose upon a violator alternative compensatory actions, such as storm drain stenciling, attendance at compliance workshops, and creek cleanup.

## § 245-18. Penalties.

- A. Any person violating any provision of this Chapter shall be subject to a civil penalty up to \$32,500 for each violation; which shall be determined at the trial court's discretion. Each day of violation of any requirement shall be a separate offense. The Department of Public Works may issue a summons for collection of the civil penalty, and the case may be prosecuted in the circuit court. Any civil penalties assessed by the court as a result of a summons issued by the Department shall be paid into the City's treasury. Such civil penalties paid into the City treasury shall be used to minimize, prevent, manage, or mitigate pollution of the City's waters and abate environmental pollution in the City in such way as the court orders.
- B. With the consent of any person who has violated, or failed, neglected or refused to obey this Chapter, any condition of a permit, or a regulation or order of a State agency, the Department of Public Works may provide, in an order issued against such person, for the payment of civil charges in specific sums for violations, not exceeding the limit specified in subsection **A** of this section. Such civil charges shall be instead of any appropriate civil penalty that can be imposed under subsection **A**. Any civil charges collected shall be paid to the City treasury pursuant to subsection **A**.
- C. The Department of Public Works may apply to the circuit court to enjoin a violation or a threatened violation of this Chapter or any State statute or regulation without the necessity of showing that an adequate remedy at law does not exist.
- D. Any person who willfully and knowingly violates any provision of this Chapter is guilty of a Class I misdemeanor.

## § 245-19. Remedies not exclusive.

The remedies listed in this Chapter are not exclusive of any other remedies available under any applicable federal, state or local law; and it is within the discretion of the Department of Public Works to seek cumulative remedies.

# Article II. Stormwater Management Utility

## § 245-20. Findings and determinations.

- A. The City of Colonial Heights has a system of manmade and natural components of a stormwater management infrastructure to both limit and manage the volume of stormwater to mitigate flood events and to minimize degradation of the City's waterways through stormwater quality management.
- B. Stormwater runoff is associated with all improved properties in the City, whether residential or nonresidential, and the individual property impacts of runoff are directly related to the amount of impervious surface on the

property and land-disturbing activities on property.

- C. The elements of the stormwater management infrastructure provide benefit and service to properties within the City through direct protection of property, through mitigation of flooding of critical components of the infrastructure, through protection of the City's natural environment and through protection of public health and safety.
- D. The costs of monitoring, operating, maintaining, and constructing the stormwater system required in the City, both to meet new regulations and to address identified flood event needs, should therefore be allocated, to the extent practicable, to all property owners based on their runoff contribution to the stormwater management system.

## § 245-21. Definitions.

The following words and terms used in this article shall have the following meanings:

### **AGRICULTURAL PROPERTY**

Land used for the tilling, planting or harvesting of agricultural, horticultural or forest crops or land used for raising livestock.

### **DEVELOPED MULTI-FAMILY RESIDENTIAL PROPERTY**

Developed property containing more than one residence or dwelling units, and accessory uses related to but subordinate to the purpose of providing permanent dwelling facilities. Such property shall include duplexes, triplexes, quadruplexes, townhouses apartments and condominiums.

### **DEVELOPED NONRESIDENTIAL PROPERTY -**

Developed property which does not serve a primary purpose of providing permanent dwelling units. Such property shall include, but not be limited to, commercial properties, industrial properties, parking lots, recreational and cultural facilities, hotels, offices and churches.

### **DEVELOPED PROPERTY**

Real property which has been altered from its "natural" state by the addition of any improvements such as buildings, structures, or other impervious surfaces. For new construction, property shall be considered developed pursuant to this subsection upon certification of the final building permit inspection.

### **DEVELOPED SINGLE-FAMILY RESIDENTIAL PROPERTY**

A developed lot or parcel containing one residence or dwelling unit, and accessory uses related to but subordinate to the purpose of providing permanent dwelling facilities. Such property shall include houses and mobile homes.

### **EQUIVALENT RESIDENTIAL UNIT or ERU**

The equivalent impervious area of a developed single-family residential property per dwelling unit located within the City based on the statistical average horizontal impervious area of a single-family residence in the City. An equivalent residential unit (ERU) equals 2,656 square feet of impervious surface area.

### **ERU RATE**

The utility fee charged on an equivalent residential unit.

### **IMPERVIOUS SURFACE AREA**

A surface which is compacted or covered with material that is highly resistant to infiltration by water, including, but not limited to, most conventionally surfaced streets, roofs, sidewalks, parking lots, and other similar structures.

### **REVENUES**

All rates, fees, assessments, rentals or other charges or other income received by the utility, in connection with the management and operation of the system, including amounts received from the investment or deposit of moneys in any fund or account and any amounts contributed by the City, fees-in-lieu-of provided by developers or individual residents, and the proceeds from sale of utility bonds.

**STORMWATER MANAGEMENT SYSTEM or SYSTEM**

The stormwater management infrastructure and equipment of the City and all improvements thereto for stormwater control in the City. Infrastructure and equipment shall include structural and natural stormwater control systems of all types, including, without limitation, retention basins, sewers, conduits, pipelines, pumping and ventilation stations, and other plants, structures, and real and personal property used for support of the system. The system does not include privately owned farm ditches and other private drainage systems.

**STORMWATER MANAGEMENT UTILITY or UTILITY**

The enterprise fund created by this section to operate, maintain and improve the City's stormwater management system.

**UNDEVELOPED PROPERTY**

Any parcel which has not been altered from its natural state to disturb or alter the topography or soils on the property in a manner which substantially reduces the rate of infiltration of stormwater into the earth.

**UTILITY FEES**

The monthly service charges based upon the ERU rate applied to property owners or occupants, including condominium unit owners or tenants (when the tenant or occupant is the party to whom water and sewer service is billed) of developed residential property, developed multi-family residential property and developed nonresidential property, all as more fully described in § 245-23.

**§ 245-22. Establishment of stormwater management utility.**

- A. The stormwater management utility is established to provide for the general welfare, health, and safety of the City and its residents.
- B. The utility shall deposit in a separate ledger account all revenues collected pursuant to this section. The funds deposited shall be used exclusively to provide services and facilities related to the stormwater management system. The deposited revenues may be used for the following:
  - (1) Acquisition of real or personal property, and interest therein necessary to construct, operate and maintain stormwater control facilities;
  - (2) The cost of administration of such programs, to include the establishment of reasonable operating and capital reserves to meet unanticipated or emergency requirements of the utility;
  - (3) Engineering and design, debt retirement, construction costs for new facilities, and enlargement or improvement of existing facilities;
  - (4) Facility maintenance;
  - (5) Monitoring of stormwater control devices; and
  - (6) Pollution control and abatement, consistent with City, state and federal regulations for water pollution control and abatement.

**§ 245-23. Imposition of utility fees.**

Revenues shall be generated to provide for a balanced operating or capital improvement budget, or both, for maintenance and/or improvement of the stormwater management system by setting sufficient levels of utility fees. Income from utility fees shall not exceed actual costs incurred in providing the services and facilities described in § 245-22. Utility fees shall be charged to owners of all developed property in the City; provided, however, where a tenant or occupant is the person to whom water or sewer service, or both, are billed, the utility fee may be charged to such tenant or occupant.

- A. For purposes of determining the utility fee, all properties in the City are classified into one of the following classes:

- (1) Developed single-family residential property;
  - (2) Developed multi-family residential property;
  - (3) Developed nonresidential property;
  - (4) Undeveloped property; or
  - (5) Agricultural property.
- B. The monthly utility fee for developed single-family residential property shall equal the ERU rate.
- C. The monthly utility fee for developed multi-family residential property shall be the ERU rate multiplied by the number of residences or dwelling units located on the lot or parcel.
- D. The monthly utility fee for developed nonresidential property shall be the ERU rate multiplied by the numerical factor obtained by dividing the total impervious surface area of a developed nonresidential property by one ERU (2,656 square feet). The numbered factor will be rounded to the nearest tenth of a unit. The minimum utility fee for any developed nonresidential property shall equal the ERU rate.
- E. The utility fee for vacant developed property, both residential and nonresidential, shall be the same as that for occupied property of the same class.
- F. Undeveloped property shall be exempt from the utility fee.
- G. Agricultural property shall be exempt from the utility fee. Provided however, each developed residential unit situated on a parcel devoted to agricultural use shall be charged a fee equal to the ERU rate.

## § 245-24. Billing and payment, interest, liens.

- A. The utility fee is to be paid by the owner of each lot or parcel subject to the utility fee; provided, however, where a tenant or occupant is the person to whom water or sewer service, or both, is billed, the utility fee may be charged to such tenant or occupant. In any case in which a tenant or occupant fails to pay utility fees, the delinquent utility fees shall be collected from the owner of the property. All properties, except undeveloped property, shall be rendered bills or statements for stormwater services. Such bills or statements may be combined with water and sewer bills levied pursuant to Chapter **238**, Sewers and Sewage Disposal, and Chapter **277**, Water, provided that all charges shall be separately stated. The combined bill shall be issued for one total amount. The Director of Finance is hereby authorized and directed to create policies and procedures for the efficient billing and collection of the combined bill, including a policy for allocating payments to the separate charges stated on the combined bill.
- B. The bills or statements shall include a date by which payment shall be due. All bills for charges prescribed by this article shall be due and payable 30 days from the date of the bill and shall be deemed delinquent if not paid in full within such time.
- C. Any bill which has not been paid by the due date shall be deemed delinquent and the account shall be collected by any means available to the City. Notice to the owner shall be provided in every case when stormwater charges incurred by a tenant or occupant become more than 90 days delinquent. All payments and interest due may be recovered by action at law or suit in equity. Unpaid fees and interest accrued shall constitute a lien against the property, ranking on a parity with liens for unpaid taxes. Records of all unpaid fees and interest, indexed by the name of the record owner of the real estate, shall be maintained in the City Treasurer's Office.
- D. In the event charges are not paid when due, interest thereon shall commence on the due date and accrue at the rate of 10% per annum until such time as the overdue payment and interest is paid.
- E. When developed properties are brought into the utility, fees will accrue commencing with the release of the final plumbing inspection for the property. In the absence of a plumbing inspection, utility fees will accrue commencing with release of the final building inspection for the property. A bill will be issued in the next billing cycle and will be prorated for the number of days in which service was provided.

- F. In the event of alterations or additions to developed multi-family property or developed nonresidential property which alter the amount of impervious surface area, the utility fees will be adjusted upon release of the final plumbing inspection. In the absence of a plumbing inspection, utility fees will be adjusted upon release of the final building inspection. A bill will be issued in the next billing cycle and will be prorated for the number of days in which service was provided.

## § 245-25. Adjustment of fees, exemptions, credits.

- A. Full waiver of the utility fee shall be provided to properties owned by federal, state, and local government agencies when those agencies own and provide for maintenance of storm drainage and stormwater control facilities.
- B. Any owner, tenant or occupant who has paid his utility fees and who believes his utility fees to be incorrect may submit an adjustment request to the City Manager or his designee. Adjustment requests shall be made in writing setting forth, in detail, the grounds upon which relief is sought. The responsibility for providing information that supports a change to the stormwater fee lies solely with the property owner. Any dispute of the impervious area determined for a property must be proven using drawings and measurements certified and sealed by a licensed engineer or Class B surveyor. Response to such adjustment requests, whether providing an adjustment or denying an adjustment, shall be made to the requesting person by the City Manager or his designee within 60 days of receipt of the request for adjustment.
- C. The City may provide a system of credits to reduce utility fees for properties on which stormwater control measures substantially mitigate the peak discharge or runoff pollution flowing from such properties or substantially decrease the City's cost of maintaining the stormwater management system. The Department of Public Works will develop written policies to implement the credit system.
- (1) No credit will be authorized until the City Council approves written policies to implement the system of credits; a copy of the approved policies shall be on file with the City Clerk. The City's policies may make credits retroactive to the date utility fees were initiated. Any bill charges requiring adjustments must be applied through the utility billing system. No credit will be granted for more than three past years. Nothing shall prevent the City Council from modifying the adopted system of credits, and such modifications may apply to holders of existing credits.
  - (2) Each credit allowed against the utility fee is conditioned on the continuing operation and functioning of the stormwater control measure as designed; credited stormwater control measures must comply with all applicable laws, ordinances and regulations, and credits may be rescinded for noncompliance with these standards.
  - (3) Each credit for which a customer applies shall be subject to review and approval by the City Manager or his designee. The City Manager may approve or reject any application for a credit in whole or in part.
  - (4) Credits shall only be applied to developed lands containing the credited stormwater control measure.

## § 245-26. Limitations of responsibility.

- A. The City shall be responsible only for the portions of the drainage system which are in City maintained street rights-of-way and permanent storm drainage easements conveyed to and accepted by the City. Repairs and improvements to the drainage system shall be in accordance with established standards, policies, and schedules.
- B. The City's acquisition of permanent storm drainage easements and/or the construction or repair by the City of stormwater control measures and drainage facilities does not constitute a warranty against stormwater hazards, including, but not limited to, flooding, erosion, or standing water.

## § 245-27. Severability.

The provisions of this article shall be deemed severable; and if any of the provisions hereof are adjudged to be invalid or unenforceable, the remaining portions of this article shall remain in full force and effect and their validity unimpaired.

## Article III. Virginia Stormwater Management Program (VSMP)

[Added 6-10-2014 by Ord. No. 14-1<sup>[1]</sup>]

[1] *Editor's Note: This ordinance stated that it would be in full force and effect as of 7-1-2014.*

### § 245-28. Purpose and authority.

- A. The purpose of this article is to ensure the general health, safety, and welfare of the citizens of Colonial Heights, Virginia, and protect the quality and quantity of state waters from the potential harm of unmanaged stormwater, including protection from a land-disturbing activity causing unreasonable degradation of properties, water quality, stream channels, and other natural resources, and to establish procedures whereby stormwater requirements related to water quality and quantity shall be administered and enforced.
- B. This article is adopted pursuant to Article 2.3 (§ 62.1-44.15.27 et seq.) of Chapter 3.1 of Title 62.1 of the Code of Virginia.

### § 245-29. Definitions.

In addition to the definitions set forth in the Virginia Stormwater Management regulations, as amended, which are expressly adopted and incorporated herein by reference, the following words and terms used in this article have the following meanings unless otherwise specified herein. Where definitions differ, those incorporated herein shall have precedence.

#### **AGREEMENT IN LIEU OF A STORMWATER MANAGEMENT PLAN**

A contract between the VSMP authority and the owner or permittee that specifies methods that shall be implemented to comply with the requirements of a VSMP for the construction of a single-family residence; such contract may be executed by the VSMP authority in lieu of a stormwater management plan.

#### **ADMINISTRATOR**

The Virginia Stormwater Management Program ("VSMP") authority, including the City staff person or department responsible for administering the VSMP on behalf of the City of Colonial Heights, VA.

#### **APPLICANT**

Any person submitting an application for a permit or requesting issuance of a permit under this article.

#### **BEST MANAGEMENT PRACTICE or BMP**

Schedules of activities, prohibitions of both structural and nonstructural practices, maintenance procedures, and other management practices to prevent or reduce the pollution of surface waters and groundwater systems from the impacts of land-disturbing activities.

#### **CHESAPEAKE BAY PRESERVATION ACT LAND-DISTURBING ACTIVITY**

A land-disturbing activity, including clearing, grading, or excavation, that results in a land disturbance equal to or greater than 2,500 square feet and less than one acre in all areas of jurisdictions so designated as subject to the regulations adopted pursuant to the Chesapeake Bay Preservation Act, which is located in Article 2.5 of Chapter 3.1 of Title 62.1 of the Code of Virginia.

#### **CLEAN WATER ACT or CWA**

The federal Clean Water Act (33 U.S.C. 1251 et seq.), formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972, Public Law 92-500, as amended by Public Law 95-217, Public Law 95-576, Public Law 96-483, and Public Law 97-117, or any subsequent revisions thereto.

#### **COMMON PLAN OF DEVELOPMENT OR SALE**

A contiguous area where separate and distinct construction activities may be taking place at different times on different schedules.

**CONTROL MEASURE**

Any best management practice, or stormwater facility, or other method used to minimize discharge of pollutants to state waters.

**DEPARTMENT**

The State Department of Environmental Quality.

**DEVELOPMENT**

Land disturbance and the resulting landform associated with the construction of residential, commercial, industrial, institutional, recreational, transportation or utility facilities or structures or the clearing of land for nonagricultural or nonsilvicultural purposes.

**GENERAL PERMIT**

The state permit titled General Permit for Discharges of Stormwater From Construction Activities found in Part XIV (9VAC25-880-1 et seq.) of the Regulations authorizing a category of discharges under the CWA and the Act within a geographical area of the Commonwealth of Virginia.

**LAND DISTURBANCE or LAND-DISTURBING ACTIVITY**

A man-made change to the land surface that potentially changes its runoff characteristics, including clearing, grading, or excavation, except that the term shall not include those exemptions specified in § 245-30C of this article.

**LAYOUT**

A conceptual drawing sufficient to provide for the specified stormwater management facilities required at the time of approval.

**MINOR MODIFICATION**

An amendment to an existing General Permit before its expiration not requiring extensive review and evaluation, including, but not limited to, changes in EPA promulgated test protocols, increased monitoring frequency requirements, changes in sampling locations, and changes to compliance dates within the overall compliance schedules. A minor General Permit modification or amendment does not substantially alter General Permit conditions, substantially increase or decrease the amount of surface water impacts, increase the size of the operation, or reduce the capacity of the facility to protect human health or the environment.

**OPERATOR**

The owner or operator of any facility or activity subject to regulation under this article.

**PERMIT or VSMP AUTHORITY PERMIT**

An approval to conduct a land-disturbing activity issued by the Administrator for the initiation of a land-disturbing activity, in accordance with this article, and which may only be issued after evidence of General Permit coverage has been provided by the Department.

**PERMITTEE**

The person to whom the VSMP Authority Permit is issued.

**PERSON**

Any individual, corporation, partnership, association, state, municipality, commission, or political subdivision of a state, governmental body, including federal, state, or local entity as applicable, any interstate body or any other legal entity.

**REGULATIONS**

The Virginia Stormwater Management Program (VSMP) Permit Regulations, 9VAC25-870, as amended.

**SITE**

The land or water area where any facility or land-disturbing activity is physically located or conducted, including adjacent land used or preserved in connection with the facility or land-disturbing activity. Areas channelward of

mean low water in tidal Virginia shall not be considered part of a site.

**STATE**

The Commonwealth of Virginia.

**STATE BOARD**

The State Water Control Board.

**STATE PERMIT**

An approval to conduct a land-disturbing activity issued by the State Board in the form of a state stormwater individual permit or coverage issued under a state General Permit or an approval issued by the State Board for stormwater discharges from an MS4. Under these state permits, the Commonwealth imposes and enforces requirements pursuant to the federal Clean Water Act and its regulations, and the Virginia Stormwater Management Act and its Regulations.

**STATE WATER CONTROL LAW**

Chapter 3.1 (§ 62.1-44.2 et seq.) of Title 62.1 of the Code of Virginia.

**STATE WATERS**

All water, on the surface and under the ground, wholly or partially within or bordering the Commonwealth or within its jurisdiction, including wetlands.

**STORMWATER**

Precipitation that is discharged across the land surface or through conveyances to one or more waterways and that may include stormwater runoff, snow melt runoff, and surface runoff and drainage.

**STORMWATER MANAGEMENT PLAN**

A document(s) containing material describing methods for complying with the requirements of § 245-33 of this article.

**STORMWATER POLLUTION PREVENTION PLAN or SWPPP**

A document that is prepared in accordance with good engineering practices and that identifies potential sources of pollutants that may reasonably be expected to affect the quality of stormwater discharges from the construction site, and otherwise meets the requirements of this article. In addition, the document shall identify and require the implementation of control measures, and shall include, but not be limited to, the inclusion of, or the incorporation by reference of, an approved erosion and sediment control plan, an approved stormwater management plan, and a pollution prevention plan.

**SUBDIVISION**

The same as defined in § 250-2 of the City of Colonial Heights Subdivision Ordinance.

**TOTAL MAXIMUM DAILY LOAD or TMDL**

The sum of the individual wasteload allocations for point sources, load allocations for nonpoint sources, natural background loading and a margin of safety. TMDLs can be expressed in terms of either mass per time, toxicity, or other appropriate measure. The TMDL process provides for point versus nonpoint source tradeoffs.

**VIRGINIA STORMWATER BMP CLEARINGHOUSE WEBSITE**

A website that contains detailed design standards and specifications for control measures that may be used in Virginia to comply with the requirements of the Virginia Stormwater Management Act and associated regulations.

**VIRGINIA STORMWATER MANAGEMENT ACT or ACT**

Article 2.3 (§ 62.1-44.15:24 et seq.) of Chapter 3.1 of Title 62.1 of the Code of Virginia.

**VIRGINIA STORMWATER MANAGEMENT PROGRAM AUTHORITY or VSMP AUTHORITY**

An authority approved by the State Board after September 13, 2011, to operate a Virginia Stormwater Management Program.

**VIRGINIA STORMWATER MANAGEMENT PROGRAM or VSMP**

A program approved by the State Board after September 13, 2011, that has been established by a locality to manage the quality and quantity of runoff resulting from land-disturbing activities and shall include such items as local ordinances, rules, permit requirements, annual standards and specifications, policies and guidelines, technical materials, and requirements for plan review, inspection, enforcement, where authorized in this article, and evaluation consistent with the requirements of this article and associated regulations.

## § 245-30. Stormwater permit requirement; exemptions.

- A. Except as provided herein, no person may engage in any land-disturbing activity until a permit application has been submitted to the City of Colonial Heights that includes the VSMP permit registration statement, if such statement is required; and after July 1, 2014, a stormwater management plan or an executed agreement in lieu of a stormwater management plan; and approval from the City to begin land disturbance.
- B. Chesapeake Bay Preservation Act land-disturbing activities shall not require the completion of a registration statement or require coverage under the General Permit for Discharges of Stormwater from Construction Activities. A Chesapeake Bay Preservation Act land-disturbing activity shall be subject to an erosion and sediment control plan consistent with the requirements of the Erosion and Sediment Control Ordinance, a stormwater management plan as outlined under Section 16, the technical criteria and administrative requirements for land-disturbing activities outlined in § 245-36, and the requirements for control measures' long-term maintenance outlined under § 245-37. Exceptions to these technical criteria and administrative requirements may be requested.
- C. Notwithstanding any other provisions of this article, the following activities are exempt, unless otherwise required by federal law:
  - (1) Permitted surface or deep mining operations and projects, or oil and gas operations and projects conducted under the provisions of Title 45.1 of the Code of Virginia;
  - (2) Clearing of lands specifically for agricultural purposes and the management, tilling, planting, or harvesting of agricultural, horticultural, or forest crops, livestock feedlot operations, or as additionally set forth by the State Board in regulations, including engineering operations as follows: construction of terraces, terrace outlets, check dams, desilting basins, dikes, ponds, ditches, strip cropping, lister furrowing, contour cultivating, contour furrowing, land drainage, and land irrigation; however, this exception shall not apply to harvesting of forest crops unless the area on which harvesting occurs is reforested artificially or naturally in accordance with the provisions of Chapter 11 (§ 10.1-1100 et seq.) of Title 10.1 of the Code of Virginia or is converted to a bona fide agricultural or improved pasture use as described in Subsection **B** of § 10.1-1163 of Article 9 of Chapter 11 of Title 10.1 of the Code of Virginia;
  - (3) Single-family residences separately built, including additions or modifications to existing single-family detached residential structures, within or outside of a common plan of development or sale are hereby exempt from having a registration statement; however, such projects must adhere to the requirements of the General Permit. The City may regulate single-family residences in Chesapeake Bay Protection areas where land disturbance exceeds 2,500 square feet in accordance with the Chesapeake Bay Preservation Act (§ 62.1-44.15:67 et seq.);
  - (4) Land-disturbing activities that disturb less than one acre of land area except for land-disturbing activity exceeding an area of 2,500 square feet in all areas of the City designated as subject to the Chesapeake Bay Preservation area Designation and Management Regulation (9VAC25-830) adopted pursuant to the Chesapeake Bay Preservation Act (§ 62.1-44.15:67 et seq.) or activities that are part of a larger common plan of development or sale that is one acre or greater of disturbance;
  - (5) Discharges to a sanitary sewer or a combined sewer system;
  - (6) Activities under a state or federal reclamation program to return an abandoned property to an agricultural or open land use;
  - (7) Routine maintenance that is performed to maintain the original line and grade, hydraulic capacity or original construction of the project. The paving of an existing road with a compacted or impervious

surface and reestablishment of existing associated ditches and shoulders shall be deemed routine maintenance if performed in accordance with this subsection; and

- (8) Conducting land-disturbing activities in response to a public emergency where the related work requires immediate authorization to avoid imminent endangerment to human health or the environment. In such situations, the Administrator shall be advised of the disturbance within seven days of commencing the land-disturbing activity; and compliance with the administrative requirements of Subsection **A** is required within 30 days of commencing the land-disturbing activity.

## § 245-31. Stormwater Management Program established; submission and approval of plans; prohibitions.

- A. The City of Colonial Heights hereby establishes a Virginia Stormwater Management Program for land-disturbing activities and adopts the applicable regulations that specify standards and specifications for VSMPs promulgated by the State Board for the purposes set out in § **245-28** of this article.
- B. The Colonial Heights City Council hereby designates the Director of Public Works as the Administrator of the Virginia Stormwater Management Program.
- C. No VSMP authority permit shall be issued by the Administrator until the following items have been submitted to and approved by the Administrator as prescribed herein:
- (1) A permit application that includes a General Permit registration statement;
  - (2) An erosion and sediment control plan approved in accordance with Chapter **241** of the Code of the City of Colonial Heights; and
  - (3) A Stormwater Management Plan that meets the requirements of § **245-33** of this article.
- D. No VSMP authority permit shall be issued until evidence of General Permit coverage is obtained.
- E. No VSMP authority permit shall be issued until the fees required to be paid pursuant to § **245-42**, are received.
- F. No VSMP authority permit shall be issued unless and until the permit application and attendant materials and supporting documentation demonstrate that all land clearing, construction, disturbance, land development and drainage will be done according to the approved permit.
- G. No grading, building or other local permit shall be issued for a property unless a VSMP authority permit has been issued by the Administrator.

## § 245-32. Stormwater Pollution Prevention Plan; contents of plans.

- A. The Stormwater Pollution Prevention Plan (SWPPP) shall include the content specified by Section 9VAC25-870-54 and must also comply with the requirements and general information set forth in Section 9VAC25-880-70, Section II [Stormwater Pollution Prevention Plan] of the General Permit.
- B. The SWPPP shall be amended by the operator whenever there is a change in design, construction, operation, or maintenance that has a significant effect on the discharge of pollutants to state waters which is not addressed by the existing SWPPP.
- C. The SWPPP must be maintained by the operator at a central location on site. If an on-site location is unavailable, notice of the SWPPP's location must be posted near the main entrance at the construction site. Operators shall make the SWPPP available for public review in accordance with Section II of the General Permit, either electronically or in hard copy.

## § 245-33. Stormwater Management Plan; contents of plan.

- A. The Stormwater Management Plan required in § **245-31** of this article must apply the stormwater management technical criteria set forth in § **245-36** of this article to the entire land-disturbing activity (individual lots in new residential, commercial, or industrial developments shall not be considered separate land-disturbing activities), consider all sources of surface runoff and all sources of subsurface and groundwater flows converted to surface runoff, and include the following information:
- (1) Information on the type and location of stormwater discharges; information on the features of the stormwater being discharged, including surface waters or karst features, if present; and the predevelopment and post-development drainage areas;
  - (2) Contact information including the name, address, and telephone number of the owner and the tax reference number and parcel number of the property or properties affected;
  - (3) A narrative that includes a description of current site conditions and final site conditions;
  - (4) A general description of the proposed stormwater management facilities and the mechanism through which the facilities will be operated and maintained after construction is complete;
  - (5) Information on the proposed stormwater management facilities, including the type of facilities, location (including geographical coordinates), acres treated, and the surface waters into which the facility will discharge;
  - (6) Hydrologic and hydraulic computations, including runoff characteristics;
  - (7) Documentation and calculations verifying compliance with the water quality and quantity requirements of § **245-36** of this article;
  - (8) A map or maps of the site that depicts the topography of the site and includes:
    - (a) All contributing drainage areas;
    - (b) Existing streams, ponds, culverts, ditches, wetlands, other water bodies, and floodplains;
    - (c) Soil types, forest cover, and other vegetative areas;
    - (d) Current land use, including existing structures, roads, and locations of known utilities and easements;
    - (e) Sufficient information on adjoining parcels to assess the impacts of stormwater from the site on these parcels;
    - (f) The limits of clearing and grading, and the proposed drainage patterns on the site;
    - (g) Proposed buildings, roads, parking areas, utilities, and stormwater management facilities; and
    - (h) Proposed land use with tabulation of the percentage of surface area to be adapted to various uses, including but not limited to planned location of utilities, roads, and easements.
- B. If an operator intends to meet the water quality and/or quantity requirements set forth in § **245-36** of this article through the use of off-site compliance options, where applicable, then a letter of availability from the off-site provider must be included. Approved off-site options must achieve the necessary nutrient reductions prior to the commencement of the applicant's land-disturbing activity except as otherwise allowed by § 62.1-44, 15:35 of the Code of Virginia.
- C. Elements of the stormwater management plans that include activities regulated under Chapter 4 (§ 54.1-400 et seq.) of Title 54.1 of the Code of Virginia shall be appropriately sealed and signed by a professional engineer registered in the Commonwealth of Virginia pursuant to Article 1 (§ 54.1-400 et seq.) of Chapter 4 of Title 54.1 of the Code of Virginia.
- D. A construction record drawing for permanent stormwater management facilities shall be submitted to the Administrator. The construction record drawing shall be appropriately sealed and signed by a professional registered in the Commonwealth of Virginia, certifying that the stormwater management facilities have been constructed in accordance with the approved plan.

## § 245-34. Pollution Prevention Plan; contents of plans.

- A. A Pollution Prevention Plan, required by 4VAC50-60-56, shall be developed, implemented, and updated as necessary and must detail the design, installation, implementation, and maintenance of effective pollution prevention measures to minimize the discharge of pollutants. At a minimum, such measures must be designed, installed, implemented, and maintained to:
- (1) Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge;
  - (2) Minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, and other materials present on the site to precipitation and to stormwater; and
  - (3) Minimize the discharge of pollutants from spills and leaks and implement chemical spill and leak prevention and response procedures.
- B. The Pollution Prevention Plan shall include effective best management practices to prohibit the following discharges:
- (1) Wastewater from washout of concrete, unless managed by an appropriate control;
  - (2) Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds, and other construction materials;
  - (3) Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance; and
  - (4) Soaps or solvents used in vehicle and equipment washing.
- C. Discharges from dewatering activities, including discharges from dewatering of trenches and excavations, are prohibited unless managed by appropriate controls.

## § 245-35. Review of Stormwater Management Plan.

- A. Stormwater Management Plans approved for residential, commercial, or industrial subdivisions shall govern the development of the individual parcels and shall be binding upon any subsequent owner. The Administrator shall review stormwater management plans and shall approve or disapprove a Stormwater Management Plan according to the following:
- (1) The Administrator shall determine the completeness of a plan in accordance with § **245-32** of this article, and shall notify the applicant, in writing, of such determination within 15 calendar days of receipt. If the plan is deemed to be incomplete, the written notification shall contain the reasons the plan is deemed incomplete.
  - (2) The Administrator shall have an additional 60 calendar days from the date of the communication of completeness to review the plan, except that if a determination of completeness is not made within the time prescribed in Subsection **A(1)**, then the plan shall be deemed complete and the Administrator shall have 60 calendar days from the date of submission to review the plan.
  - (3) The Administrator shall review any plan that has been previously disapproved within 45 calendar days of the date of resubmission.
  - (4) During the review period, the plan shall be approved or disapproved and the decision communicated in writing to the person responsible for the land-disturbing activity or his designated agent. If the plan is not approved, the reasons for not approving the plan shall be provided in writing. Approval or denial shall be based on the plan's compliance with the requirements of this article.

- (5) If a plan meeting all requirements of this article is submitted and no action is taken within the time provided above in Subsection **A(2)** for review, the plan shall be deemed approved.
- B. Approved stormwater plans may be modified as follows:
- (1) Modifications to an approved Stormwater Management Plan shall be allowed only after review and written approval by the Administrator. The Administrator shall have 60 calendar days to respond in writing either approving or disapproving such request.
  - (2) The Administrator may require that an approved Stormwater Management Plan be amended, within a time prescribed by the Administrator, to address and deficiencies noted during inspections.
- C. The Administrator shall require the submission of a construction record drawing for permanent stormwater management facilities. The Administrator may elect not to require construction record drawings for stormwater management facilities for which recorded maintenance agreements are not required pursuant to § 245-30.

## § 245-36. Technical criteria for regulated land-disturbing activities.

- A. To protect the quality and quantity of state water from the potential harm of unmanaged stormwater runoff from land-disturbing activities, the City of Colonial Heights, VA, hereby adopts the technical criteria for regulated land-disturbing activities set forth in Part IIB of the Regulations, as amended, expressly to include 9VAC25-870-62 [technical criteria for land-disturbing activities]; 9VAC25-870-63 [water quality design criteria requirements]; 9VAC25-870-65 [water quality compliance]; 9VAC25-870-66 [water quantity]; 9VAC25-870-69 [offsite compliance options]; 9VAC25-870-72 [design storms and hydrologic methods]; 9VAC25-870-74 [stormwater harvesting]; 9VAC25-870-76 [linear development projects]; 9VAC25-870-85 [stormwater management impoundment structures or facilities]; 9VAC25-870-92 [comprehensive stormwater management plans]; 9VAC25-870-93 [technical criteria for regulated land-disturbing activities; grandfathered projects and projects subject to the provisions of 9VAC25-870-47B]; 9VAC25-870-94 [applicability]; 9VAC25-870-95 [general]; 9VAC25-870-96 [water quality]; 9VAC25-870-97 [stream channel erosion]; 9VAC25-870-98 [flooding]; 9VAC25-870-99 [regional (watershed-wide) stormwater management plans], which shall apply to all land-disturbing activities regulated pursuant to this article, except as expressly set forth in Subsection **B** of this section.
- B. Any land-disturbing activity shall be considered grandfathered by the VSMP authority and shall be subject to the Part IIC technical criteria of the VSMP Regulation provided:
- (1) A proffered or conditional zoning plan, zoning with a plan of development, preliminary or final subdivision plat, preliminary or final site plan, or any document determined by the locality to be equivalent thereto, (i) was approved by the locality prior to July 1, 2012, (ii) provided a layout as defined in 9VAC25-870-10, (iii) will comply with the Part IIC technical criteria of the VSMP Regulation, and (iv) has not been subsequently modified or amended in a manner resulting in an increase in the amount of phosphorus leaving each point of discharge, and such that there is no increase in the volume or rate of runoff;
  - (2) A state permit has not been issued prior to July 1, 2014; and
  - (3) Land disturbance did not commence prior to July 1, 2014.
- Land-disturbing activities grandfathered under Subsections **A** and **B** of this section shall remain subject to the Part IIC technical criteria of the VSMP Regulation for one additional state permit cycle. After such time, portions of the project not under construction shall become subject to any new technical criteria adopted by the Board.
- In cases where governmental bonding or public debt financing has been issued for a project prior to July 1, 2012, such project shall be subject to the technical criteria of Part IIC of the Regulations.
- Nothing in this section shall preclude an operator from constructing to a more stringent standard at his discretion.
- C. In cases where governmental bonding or public debt financing has been issued for a project prior to July 1, 2012, such project shall be subject to the technical requirements of Part IIC of the Regulations, as adopted by

the City of Colonial Heights in Subsection **A** above.

- D. The Administrator may grant exceptions to the technical requirements of Part IIB or Part IIC of the Regulations, provided that (i) the exception is the minimum necessary to afford relief, (ii) reasonable and appropriate conditions are imposed so that the intent of the Act, the Regulations, and this article are preserved, (iii) granting the exception will not confer any special privileges that are denied in other similar circumstances, and (iv) exception requests are not based upon conditions or circumstances that are self-imposed or self-created. Economic hardship alone is not sufficient reason to grant an exception from the requirements of this article.
- (1) Exceptions to the requirement that the land-disturbing activity obtain required VSMP authority permit shall not be given by the Administrator, nor shall the Administrator approve the use of a BMP not found on the Virginia Stormwater BMP Clearinghouse Website, or any other control measure duly approved by the Director.
  - (2) Exceptions to requirements for phosphorus reductions shall not be allowed unless off-site options otherwise permitted pursuant to 4VAC50-60-69 have been considered and found not available.
- E. Nothing in this section shall preclude an operator from constructing to a more stringent standard at its discretion.

## **§ 245-37. Long-term maintenance of permanent stormwater facilities.**

- A. The Administrator shall require the provision of long-term responsibility for maintenance of stormwater management facilities and other techniques specified to manage the quality and quantity of runoff. Such requirements shall be set forth in an instrument recorded in the local land records prior to General Permit termination or earlier as required by the Administrator and shall at a minimum:
- (1) Be submitted to the Administrator for review and approval prior to the approval of the stormwater management plan;
  - (2) Be stated to run with the land;
  - (3) Provide for all necessary access to the property for purposes of maintenance and regulatory inspections;
  - (4) Provide for inspections and maintenance and the submission of inspection and maintenance reports to the Administrator; and
  - (5) Be enforceable by all appropriate governmental parties.

## **§ 245-38. Monitoring and inspections.**

- A. The Administrator shall inspect the land-disturbing activity during construction for:
- (1) Compliance with the approved erosion and sediment control plan;
  - (2) Compliance with the approved stormwater management plan;
  - (3) Development, updating, and implementation of a pollution prevention plan; and
  - (4) Development and implementation of any additional control measure necessary to address a TMDL.
- B. The Administrator or any duly authorized agent of the Administrator may, at reasonable times and under reasonable circumstances, enter any establishment or upon any property, public or private, for the purpose of obtaining information or conducting surveys or investigations necessary in the enforcement of the provisions of this article.
- C. In accordance with a performance bond, cash escrow, letter of credit, any combination thereof, or such other legal arrangement or instrument, the Administrator may also enter any establishment or upon any property,

public or private, for the purpose of initiating or maintaining appropriate actions which are required by the permit conditions associated with a land-disturbing activity when a permittee, after proper notice, has failed to take acceptable action within the time specified.

- D. The Administrator may require every VSMP authority permit applicant or permittee, or any such person subject to VSMP authority permit requirements under this article, to furnish when requested such application materials, plan, specifications, and other pertinent information as may be necessary to accomplish the purposes of this article.
- E. Post-construction inspections of stormwater management facilities required by the provisions of this article shall be conducted by the Administrator or any duly authorized agent of the Administrator pursuant to the City's adopted and State Board approved inspection program and shall occur, at minimum, at least once every five years except as may otherwise be provided for in § 245-37.

## § 245-39. Hearings.

- A. Any permit applicant or permittee, or person subject to this article's requirements, aggrieved by any action of the City of Colonial Heights taken without formal hearing, or by inaction of the City of Colonial Heights, may demand in writing a formal hearing by the Colonial Heights City Council provided a petition requesting such hearing is filed with the Administrator within 30 days after notice of the adverse action, or, in the case of inaction, within 30 days after the City should have acted.
- B. The hearings held under this section shall be conducted by the Colonial Heights City Council at a regular or special meeting of Council, or by at least one member of the City Council as designated to conduct such hearings on behalf of City Council, at a time and place authorized by the City Council.
- C. A verbatim record of such hearing's proceedings shall be taken and filed with the City Clerk.
- D. The Colonial Heights City Council or its designated member, as the case may be, shall have power to issue subpoenas and subpoenas duce tecum; and at the request of any party shall issue such subpoenas. The failure of a witness without legal excuse to appear or to testify or to produce documents shall be acted upon by the local governing body, or its designated member, whose action may include the procurement of an order of enforcement from the circuit court. Witnesses who are subpoenaed shall receive the same fees and reimbursement for car mileage as in civil actions.

## § 245-40. Appeals.

- A. Any applicant who seeks an appeal hearing before the City Council shall be heard at the next regularly scheduled City Council regular meeting, provided that the City Council and other involved parties have at least 30 days' prior notice. In reviewing the Administrator's actions, the City Council shall consider evidence and opinions presented by the aggrieved applicant and Administrator. After considering the evidence and opinions, the City Council may affirm, reverse, or modify the action. The City Council's decision shall be final, subject only to review by the Circuit Court of the City.
- B. Final decisions of the City Council under this article shall be subject to review by the City of Colonial Heights Circuit Court, provided an appeal is filed within 30 days from the date of any written decision adversely affecting the rights, duties, or privileges of the person engaging in or proposing to engage in land-disturbing activities.

## § 245-41. Enforcement.

- A. If the Administrator determines that there is a failure to comply with the VSMP authority permit conditions or determines there is an unauthorized discharge, notice shall be served upon the permittee or person responsible for carrying out the permit conditions by any of the following means: verbal warnings and inspection reports, notices of corrective action, consent special orders, and notices to comply. Written notices

shall be served by registered or certified mail to the address specified in the permit application or by delivery at the site of the development activities to the agent or employee supervising such activities.

- (1) The notice shall specify the measures needed to comply with the permit conditions and shall specify the time within which such measures shall be completed. Upon failure to comply within the time specified, a stop-work order may be issued in accordance with Subsection **B** or the permit may be revoked by the Administrator;
  - (2) If a permittee fails to comply with a notice issued in accordance with this section within the time specified, the Administrator may issue an order requiring the owner, permittee, person responsible for carrying out an approved plan, or the person conducting the land-disturbing activities without an approved plan or required permit to cease all land-disturbing activities until the permit violation has ceased, or an approved plan and required permits are obtained, and specified corrective measures have been completed;
  - (3) Such orders shall be issued in accordance with Chapter **241** of the Colonial Heights City Code. The orders shall become effective upon service on the person by certified mail, return receipt requested, sent to his address specified in the City's land records, or by personal delivery by an agent of the Administrator. However, if the Administrator finds that any such violation is grossly affecting or presents an imminent and substantial danger of causing harmful erosion of land or sediment deposition in waters within the Commonwealth's watersheds or otherwise substantially impacting water quality, it may issue, without advance notice or hearing, an emergency order directing such person to cease immediately all land-disturbing activities on the site and shall provide an opportunity for a hearing, after reasonable notice as to the time and place thereof, to such person, to affirm, modify, amend, or cancel such emergency order. If a person who has been issued an order is not complying with the terms thereof, the Administrator may institute a proceeding for an injunction, mandamus, or other appropriate remedy in accordance with **§ 245-41C**.
- B. In addition to any other remedy this article provides, if the Administrator or his designee determines that there is a failure to comply with the provisions of this article, he may initiate such informal and/or formal administrative enforcement procedures in a manner that is consistent with City Code **§ 241-3**.
- C. Any person violating or failing, neglecting, or refusing to obey any rule, regulation, ordinance, order, approved standard or specification, or any permit condition issued by the Administrator may be compelled in a proceeding instituted by the City in Colonial Heights Circuit Court to obey same and to comply therewith by injunction, mandamus, or other appropriate remedy.
- D. Any person who violates any provision of this article, or who fails, neglects, or refuses to comply with any order of the Administrator, shall be subject to a civil penalty not to exceed \$32,500 for each violation. Each day a requirement is violated shall constitute a separate offense.
- (1) Violations for which a penalty may be imposed under this subsection shall include but not be limited to the following:
    - (a) No state permit registration;
    - (b) No SWPPP;
    - (c) Incomplete SWPPP;
    - (d) SWPP not available for review;
    - (e) No approved erosion and sediment control plan;
    - (f) Failure to install stormwater BMPs or erosion and sediment controls;
    - (g) Stormwater BMPs or erosion and sediment controls improperly installed or maintained;
    - (h) Operational deficiencies;
    - (i) Failure to conduct required inspections;
    - (j) Incomplete, improper, or missed inspections; and

- (k) Discharges not in compliance with the permit requirements of Section 4VAC 50-60-1170 of the General Permit.
  - (2) The Administrator may issue a summons for collection of the civil penalty and the action may be prosecuted in the appropriate court.
  - (3) In imposing a civil penalty pursuant to this subsection, the court may consider the degree of harm caused by the violation and also the economic benefit to the violator from noncompliance.
  - (4) Any civil penalties assessed by a court as a result of a summons the City issues shall be paid into the treasury of the City of Colonial Heights to be used for the purpose of minimizing, preventing, managing, or mitigating pollution of the waters of the City and abating environmental pollution therein in such manner as the court may, by order, direct.
- E. Notwithstanding any other civil or equitable remedy provided by this section or by law, any person who willfully or negligently violates any provision of this article, any order of the Administrator, any condition of a permit, or any order of a court shall be guilty of a misdemeanor punishable by confinement in jail for not more than 12 months or a fine of not less than \$2,500 nor more than \$32,500, or both.

## § 245-42. Fees.

- A. Fees for coverage under the General Permit shall be imposed in accordance with Table 1. When a site or sites has been purchased for development within a previously permitted common plan of development or sale, the applicant shall be subject to fees in accordance with the disturbed acreage of its site or sites according to Table 1.

**Table 1: Fees for Permit Coverage**

Type of Permit	Fee Amount
VSMP General/Stormwater Management	
Small construction activity/land clearing: areas within common plans of development or sale with land disturbance acreage less than 1 acre	\$290
Small construction activity/land clearing: Sites within locally designated Chesapeake Bay Preservation Areas (CBPAs) with land-disturbance acreage greater than or equal to 2,500 SF and less than 0.5 acre	\$290
Small construction activity/land clearing: sites or areas within common plans of development or sale with land disturbance acreage equal to or greater than 1 acre and less than 5 acres	\$2,700
Large construction activity/land clearing: sites or areas within common plans of development or sale with land disturbance acreage equal to or greater than 5 acres and less than 10 acres	\$3,400
Large construction activity/land clearing: sites or areas within common plans of development or sale with land disturbance acreage equal to or greater than 10 acres and less than 50 acres	\$4,500
Large construction activity/land clearing: Sites or areas within common plans of development or sale with land disturbance acreage equal to or greater than 50 acres and less than 100 acres	\$6,100
Large construction activity/land clearing: sites or areas within common plans of development or sale with land disturbance acreage equal to or greater than 100 acres	\$9,600

- B. Fees for the modification or transfer of registration statements from the General Permit issued by Colonial Heights shall be imposed in accordance with Table 2. If the permit modifications result in changes to stormwater management plans that require the City's additional review, such review shall be subject to the fees set out in Table 2. The fee assessed shall be based on total disturbed acreage of the site.

**Table 2: Fees for the Modification or Transfer of Registration Statements for the General Permit for Discharges of Stormwater from Construction Activities**

Type of Permit	Fee Amount
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VSMP General/Stormwater Management

Small construction activity/land clearing: areas within common plans of \$20 development or sale with land disturbance acreage less than 1 acre

Small construction activity/land clearing: sites within locally designated CBPAs \$20 with land-disturbance acreage greater than or equal to 2,500 SF and less than 0.5 acre

Small construction activity/land clearing: sites or areas within common plans \$200 of development or sale with land disturbance acreage equal to or greater than 1 acre and less than 5 acres

Large construction activity/land clearing: sites or areas within common plans \$250 of development or sale with land disturbance acreage equal to or greater than 5 acres and less than 10 acres

Large construction activity/land clearing: sites or areas within common plans \$300 of development or sale with land disturbance acreage equal to or greater than 10 acres and less than 50 acres

Large construction activity/land clearing: sites or areas within common plans \$450 of development or sale with land disturbance acreage equal to or greater than 50 acres and less than 100 acres

Large construction activity/land clearing: sites or areas within common plans \$700 of development or sale with land disturbance acreage equal to or greater than 100 acres

- C. The following annual maintenance fees shall be imposed in accordance with Table 3, including fees imposed on expired permits that have been administratively continued. With respect to the General Permit, these fees shall apply until the permit coverage is terminated.

**Table 3: Permit Maintenance Fees**

<b>Type of Permit</b>	<b>Fee Amount</b>
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VSMP General/Stormwater Management

Small construction activity/land clearing: areas within common plans of \$50 development or sale with land disturbance acreage less than 1 acre

Small construction activity/land clearing: sites within locally designated CBPAs \$50 with land-disturbance acreage greater than or equal to 2,500 SF and less than 0.5 acre

Small construction activity/land clearing: sites or areas within common plans \$400 of development or sale with land disturbance acreage equal to or greater than 1 acre and less than 5 acres

Large construction activity/land clearing: sites or areas within common plans \$500 of development or sale with land disturbance acreage equal to or greater than 5 acres and less than 10 acres

Large construction activity/land clearing: sites or areas within common plans \$650 of development or sale with land disturbance acreage equal to or greater than 10 acres and less than 50 acres

Large construction activity/land clearing: sites or areas within common plans \$900 of development or sale with land disturbance acreage equal to or greater than 50 acres and less than 100 acres

Large construction activity/land clearing: sites or areas within common plans \$1,400 of development or sale with land disturbance acreage equal to or greater than 100 acres

General Permit coverage maintenance fees shall be paid annually to the City of Colonial Heights, by the anniversary date of the General Permit coverage. No permit will be reissued or automatically continued without payment of the required fee. General Permit coverage maintenance fees shall be applied until notice of termination is effective.

- D. The fees set forth in Subsections **A**, **B** and **C** above shall apply to:

- (1) All persons seeking coverage under the General Permit;

- (2) All permittees who request modifications to or transfers of their existing registration statement for coverage under a General Permit;
  - (3) Persons whose coverage under the General Permit has been revoked shall reapply for an individual Permit for Discharges of Stormwater from Construction Activities; and
  - (4) Permit and permit coverage maintenance fees outlined under § **245-42** shall apply to each General Permit holder.
- E. No permit application fees will be assessed to:
- (1) Permittees who request minor modifications to permits as defined in § **245-30** of this article. Permit modification at the request of the permittee resulting in changes to stormwater management plans that require the Administrator's additional review shall not be exempt.
  - (2) Permittees whose permits are modified or amended at the Department's initiative, excluding errors in the registration statement identified by the Administrator or errors related to the site's acreage.
- F. All insufficient payments will be deemed nonpayments, and the applicant shall be notified of any incomplete payments. Interest shall be charged for late payments at the underpayment rate set forth in § 58.1-15 of the Code of Virginia and is calculated on a monthly basis at the applicable periodic rate. A 10% late payment fee shall be charged to any delinquent (over 90 days past due) account. The City of Colonial Heights shall be entitled to all remedies available under the Code of Virginia in collecting any past due amount.

## § 245-43. Performance bond.

- A. Prior to the issuance of any permit, the applicant shall be required to submit a reasonable performance bond with surety, cash escrow, letter of credit, any combination thereof, or such other legal arrangement acceptable to the Colonial Heights City Attorney, for the full costs of the anticipated work, to ensure that measures could be taken by the City of Colonial Heights at the applicant's expense should he fail, after proper notice, within the time specified to initiate or maintain appropriate actions the permit requires of him. If the City of Colonial Heights takes such action upon the applicant's failure, the City may collect from the applicant for the difference should the cost of the action and any needed corrective action exceed the amount of the security held. Within 60 days of the completion of the permit conditions, such bond, cash escrow, letter of credit or other legal arrangement, or unexpended or any unobligated portion thereof, shall be refunded to the applicant or terminated.

STATUS	SCORE	MATCH_	SIDE	MATCH_ADDR	ARC_STREET	ARC_CIT	ARC_STA	TRADE_I	FULL_NA	ADDRESS	ADDRESS1	STREET_NAM	TYPE	CITY	STATE	ZIP	LICENSE_NO	BUS_CAT	FACILITIES
M	100	A	L	3666 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	3666 Boulevard	Colonial	VA	Colonial Heights Ve	3666 Bo	#####	Boulevard	Colonial	VA	23834	20090236	Professional			
M	100	A	R	2905 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	2905 Boulevard	Colonial	VA	Virginia Medical Gr	2905 Bo	#####	Boulevard	Colonial	VA	23834	20091367	Professional			
M	100	A	L	3512 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	3512 Boulevard	Colonial	VA	Colonial Heights Me	3512 Bo	#####	Boulevard	Colonial	VA	23834	20091762	Professional			
M	100	A	R	2425 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	2425 Boulevard	Colonial	VA	Caldwell, Caldwe	2425 Bo	#####	Boulevard	Colonial	VA	23834	20091299	Professional			
M	100	A	L	3628 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	3628 Boulevard	Colonial	VA	Swift Creek Family	3628 Bo	#####	Boulevard	Colonial	VA	23834	20090590	Professional			
M	100	A	L	3626 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	3626 Boulevard	Colonial	VA	Family Auto Sales L	3626 Bo	#####	Boulevard	Colonial	VA	23834	20090448	Professional			
U	0	A			456 Charles Dimmock Pkwy	Colonial	VA	Commonwealth De	456 Char	#####	Charles Dimmock	Pkwy	Colonial	VA	23834	20091296	Professional		
U	0	A			280 Charles Dimmock Pkwy	Colonial	VA	Virginia Physicians f	280 Char	#####	Charles Dimmock	Pkwy	Colonial	VA	23834	20091070	Professional		
U	0	A			436 Clairmont Court	Colonial	VA	Virginia Urology Ce	436 Clair	#####	Clairmont	Court	Colonial	VA	23834	20090264	Professional		
U	0	A			430 Clairmont Court	Colonial	VA	Commonwealth Per	430 Clair	#####	Clairmont	Court	Colonial	VA	23834	20091577	Professional		
U	0	A			131 Jennick Drive	Colonial	VA	Colonial Orthopedic	131 Jenn	#####	Jennick	Drive	Colonial	VA	23834	20090797	Professional		
U	0	A			439 Jennick Drive	Colonial	VA	Riverview Physician	439 Jenn	#####	Jennick	Drive	Colonial	VA	23834	20090431	Professional		
M	100	A	L	400 SOUTHPARK BLVD, COLONIAL HEIGHTS, VA, 23834	400 Southpark Boulevard	Colonial	VA	Southside Pediatric	400 Sout	#####	Southpark	Boulevard	Colonial	VA	23834	20091291	Professional		
M	100	A	L	210 TEMPLE AVE, COLONIAL HEIGHTS, VA, 23834	210 Temple Ave	Colonial	VA	Infant Jesus Childre	210 Tem	#####	Temple	Ave	Colonial	VA	23834	20091000	Professional		
M	100	A	L	1829 SOUTHPARK BLVD, COLONIAL HEIGHTS, VA, 23834	1829 Southpark Boulevard	Colonial	VA	Great Ch Great Ch	1829 So	#####	Southpark	Boulevard	Colonial	VA	23834	20090255	Retail		
M	100	A	R	111 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	111 Boulevard	Colonial	VA	Ackerma James Ac	111 Boul	#####	Boulevard	Colonial	VA	23834	20090281	Retail			
M	100	A	L	3104 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	3104 Boulevard	Colonial	VA	Advance Auto Parts	3104 Bo	#####	Boulevard	Colonial	VA	23834	20090899	Retail			
M	100	A	L	1702 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	1702 Boulevard	Colonial	VA	Blue's Pl Michael	1702 Bo	#####	Boulevard	Colonial	VA	23834	20090366	Retail			
M	100	A	R	2231 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	2231 Boulevard	Colonial	VA	Boulevard Jose E M	2231 Bo	#####	Boulevard	Colonial	VA	23834	20090454	Retail			
M	100	A	R	915 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	915 Boulevard	Colonial	VA	Boulevard MS & KS	915 Boul	#####	Boulevard	Colonial	VA	23834	20090860	Retail			
M	100	A	L	3116 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	3116 Boulevard	Colonial	VA	Burger King	3116 Bo	#####	Boulevard	Colonial	VA	23834	20091049	Retail			
M	100	A	R	1717 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	1717 Boulevard	Colonial	VA	Captain T & J Res	1717 Bo	#####	Boulevard	Colonial	VA	23834	20090742	Retail			
M	100	A	L	3620 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	3620 Boulevard	Colonial	VA	Carini Re Carini's F	3620 Bo	#####	Boulevard	Colonial	VA	23834	20090519	Retail			
M	100	A	R	3409 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	3409 Boulevard	Colonial	VA	Chanello Roodes F	3409 Bo	#####	Boulevard	Colonial	VA	23834	20090037	Retail			
M	100	A	R	3517 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	3517 Boulevard	Colonial	VA	Colonial Lyman W	3517 Bo	#####	Boulevard	Colonial	VA	23834	20091895	Retail			
M	100	A	L	3220 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	3220 Boulevard	Colonial	VA	Colonial Rass Inc	3220 Bo	#####	Boulevard	Colonial	VA	23834	20090327	Retail			
M	100	A	L	3008 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	3008 Boulevard	Colonial	VA	Dante's f Dante's f	3008 Bo	#####	Boulevard	Colonial	VA	23834	20091851	Retail			
M	100	A	R	2227 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	2227 Boulevard	Colonial	VA	Dominos G & M Pi	2227 Bo	#####	Boulevard	Colonial	VA	23834	20090033	Retail			
M	100	A	R	3609 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	3609 Boulevard	Colonial	VA	Don Jose Don Jose	3609 Bo	#####	Boulevard	Colonial	VA	23834	20090196	Retail			
M	100	A	R	2231 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	2231 Boulevard	Colonial	VA	The Flam ABA LLC	2231 Bo	#####	Boulevard	Colonial	VA	23834	20091843	Retail			
M	100	A	R	115 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	115 Boulevard	Colonial	VA	Harris Al Delmar J	115 Boul	#####	Boulevard	Colonial	VA	23834	20090803	Retail			
M	100	A	R	2011 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	2011 Boulevard	Colonial	VA	Jersey M Wal Corp	2011 Bo	#####	Boulevard	Colonial	VA	23834	20091131	Retail			
M	100	A	L	1906 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	1906 Boulevard	Colonial	VA	Kentucky Kentucky	1906 Bo	#####	Boulevard	Colonial	VA	23834	20090458	Retail			
M	100	A	R	1621 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	1621 Boulevard	Colonial	VA	Laines JPF Inc	1621 Bo	#####	Boulevard	Colonial	VA	23834	20090460	Retail			
M	100	A	L	3620 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	3620 Boulevard	Colonial	VA	Tom Lew Tom Lew	3620 Bo	#####	Boulevard	Colonial	VA	23834	20090301	Retail			
M	100	A	L	2104 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	2104 Boulevard	Colonial	VA	Little Caesars	2104 Bo	#####	Boulevard	Colonial	VA	23834	20091149	Retail			
M	100	A	L	636 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	636 Boulevard	Colonial	VA	Master T RWRW II	636 Boul	#####	Boulevard	Colonial	VA	23834	20090259	Retail			
M	100	A	R	1101 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	1101 Boulevard	Colonial	VA	McDonalds	1101 Bo	#####	Boulevard	Colonial	VA	23834	20091153	Retail			
M	100	A	L	2208 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	2208 Boulevard	Colonial	VA	Mi Rodeo Los Prim	2208 Bo	#####	Boulevard	Colonial	VA	23834	20090230	Retail			
M	100	A	R	119 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	119 Boulevard	Colonial	VA	Oxford Iv Oxford N	119 Boul	#####	Boulevard	Colonial	VA	23834	20090767	Retail			
M	100	A	L	1410 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	1410 Boulevard	Colonial	VA	The Pain J & P of f	1410 Bo	#####	Boulevard	Colonial	VA	23834	20090335	Retail			
M	100	A	L	3420 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	3420 Boulevard	Colonial	VA	Pino's Ita Marcello	3420 Bo	#####	Boulevard	Colonial	VA	23834	20091150	Retail			
M	100	A	L	3650 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	3650 Boulevard	Colonial	VA	Pleasure Pleasure	3650 Bo	#####	Boulevard	Colonial	VA	23834	20090866	Retail			
M	100	A	R	1907 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	1907 Boulevard	Colonial	VA	Staples A Colonial	1907 Bo	#####	Boulevard	Colonial	VA	23834	20090406	Retail			
M	100	A	R	3107 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	3107 Boulevard	Colonial	VA	Top's Chi Song Yan	3107 Bo	#####	Boulevard	Colonial	VA	23834	20090996	Retail			
M	100	A	R	1115 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	1115 Boulevard	Colonial	VA	Tuffy Mu Lizco Inc	1115 Bo	#####	Boulevard	Colonial	VA	23834	20090553	Retail			
M	100	A	R	609 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	609 Boulevard	Colonial	VA	Vincenzo Vincenzz	609 Boul	#####	Boulevard	Colonial	VA	23834	20090500	Retail			
M	100	A	R	3737 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	3737 Boulevard	Colonial	VA	Wagstaff Danny W	3737 Bo	#####	Boulevard	Colonial	VA	23834	20090284	Retail			
M	100	A	L	1018 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	1018 Boulevard	Colonial	VA	What-A- Jack T Br	1018 Bo	#####	Boulevard	Colonial	VA	23834	20090469	Retail			
M	100	A	R	118 BRUCE AVE, COLONIAL HEIGHTS, VA, 23834	118 Bruce Ave	Colonial	VA	Battlefie Wilson W	118 Bruc	#####	Bruce	Ave	Colonial	VA	23834	20090085	Retail		
U	0	A			458 Charles Dimmock Pkwy	Colonial	VA	Quiznos Fazdins I	458 Eller	#####	Charles Dimmock	Pkwy	Colonial	VA	23834	20091536	Retail		
M	95	A	R	241 CHARLES H DIMMOCK PKY, COLONIAL HEIGHTS, VA	241 Charles Dimmock Pkwy	Colonial	VA	El Capori Zito, LLC	241 Char	#####	Charles Dimmock	Pkwy	Colonial	VA	23834	20091613	Retail		
M	100	A	R	2501 CONDUIT RD, COLONIAL HEIGHTS, VA, 23834	2501 Conduit Road	Colonial	VA	Golden C ESC Rest	2501 Cor	#####	Conduit	Road	Colonial	VA	23834	20090416	Retail		
U	0	A			1 Dunlop Village Village	Colonial	VA	Colonial Rosa-Ner	1 Dunlop	#####	Dunlop Village	Village	Colonial	VA	23834	20090160	Retail		
U	0	A			34 Dunlop Village	Colonial	VA	No 1 Nev No 1 Nev	34 Dunlo	#####	Dunlop Village	Village	Colonial	VA	23834	20090138	Retail		
M	86	A	R	405 E ELLERSLIE AVE, COLONIAL HEIGHTS, VA, 23834	405 Ellerslie Ave	Colonial	VA	Virginia l Rodney f	405 Eller	#####	Ellerslie	Ave	Colonial	VA	23834	20091561	Retail		
M	100	A	L	1700 SNEAD AVE, COLONIAL HEIGHTS, VA, 23834	1700 Snead Ave	Colonial	VA	Briggs Al Mark Bri	1700 Sne	#####	Snead	Ave	Colonial	VA	23834	20090945	Retail		
M	100	A	L	1718 SNEAD AVE, COLONIAL HEIGHTS, VA, 23834	1718 Snead Ave	Colonial	VA	Colonial Autowor	1718 Sne	#####	Snead	Ave	Colonial	VA	23834	20090134	Retail		
U	0	A			170 Southgate Square	Colonial	VA	Los Band Leopoldc	170 Sout	#####	Southgate	Square	Colonial	VA	23834	20091281	Retail		
U	0	A			200 Southgate Square	Colonial	VA	New Chir New Chi	200 Sout	#####	Southgate	Square	Colonial	VA	23834	20090935	Retail		
M	100	A	R	401 SOUTHPARK BLVD, COLONIAL HEIGHTS, VA, 23834	401 Southpark Blvd	Colonial	VA	Burger King	401 Sout	#####	Southpark	Blvd	Colonial	VA	23834	20091512	Retail		
M	85	A	R	707 SOUTHPARK BLVD, COLONIAL HEIGHTS, VA, 23834	707 Southpark	Colonial	VA	Five Guys Famous B	707 Sout	#####	Southpark	Blvd	Colonial	VA	23834	20091540	Retail		
M	100	A	R	591 SOUTHPARK BLVD, COLONIAL HEIGHTS, VA, 23834	591 Southpark Blvd	Colonial	VA	Castawa Kelly Sca	591 Sout	#####	Southpark	Blvd	Colonial	VA	23834	20090959	Retail		
M	100	A	R	384 SOUTHPARK CIR, COLONIAL HEIGHTS, VA, 23834	384 Southpark Circle	Colonial	VA	Chick-Fil Donovan	384 Sout	#####	Southpark	Circle	Colonial	VA	23834	20091042	Retail		
M	100	A	R	294 SOUTHPARK CIR, COLONIAL HEIGHTS, VA, 23834	294 Southpark Circle	Colonial	VA	Dairy Qu J & A Inc	294 Sout	#####	Southpark	Circle	Colonial	VA	23834	20091356	Retail		
M	100	A	R	366 SOUTHPARK CIR, COLONIAL HEIGHTS, VA, 23834	366 Southpark Circle	Colonial	VA	Great Ste S & G Cr	366 Sout	#####	Southpark	Circle	Colonial	VA	23834	20090954	Retail		
M	100	A	L	411 SOUTHPARK CIR, COLONIAL HEIGHTS, VA, 23834	411 Southpark Circle	Colonial	VA	McDonalds	411 Sout	#####	Southpark	Circle	Colonial	VA	23834	20090472	Retail		
M	100	A	L	648 SOUTHPARK BLVD, COLONIAL HEIGHTS, VA, 23834	648 Southpark Boulevard	Colonial	VA	Padow's Mariett I	648 Sout	#####	Southpark	Boulevard	Colonial	VA	23834	20090893	Retail		

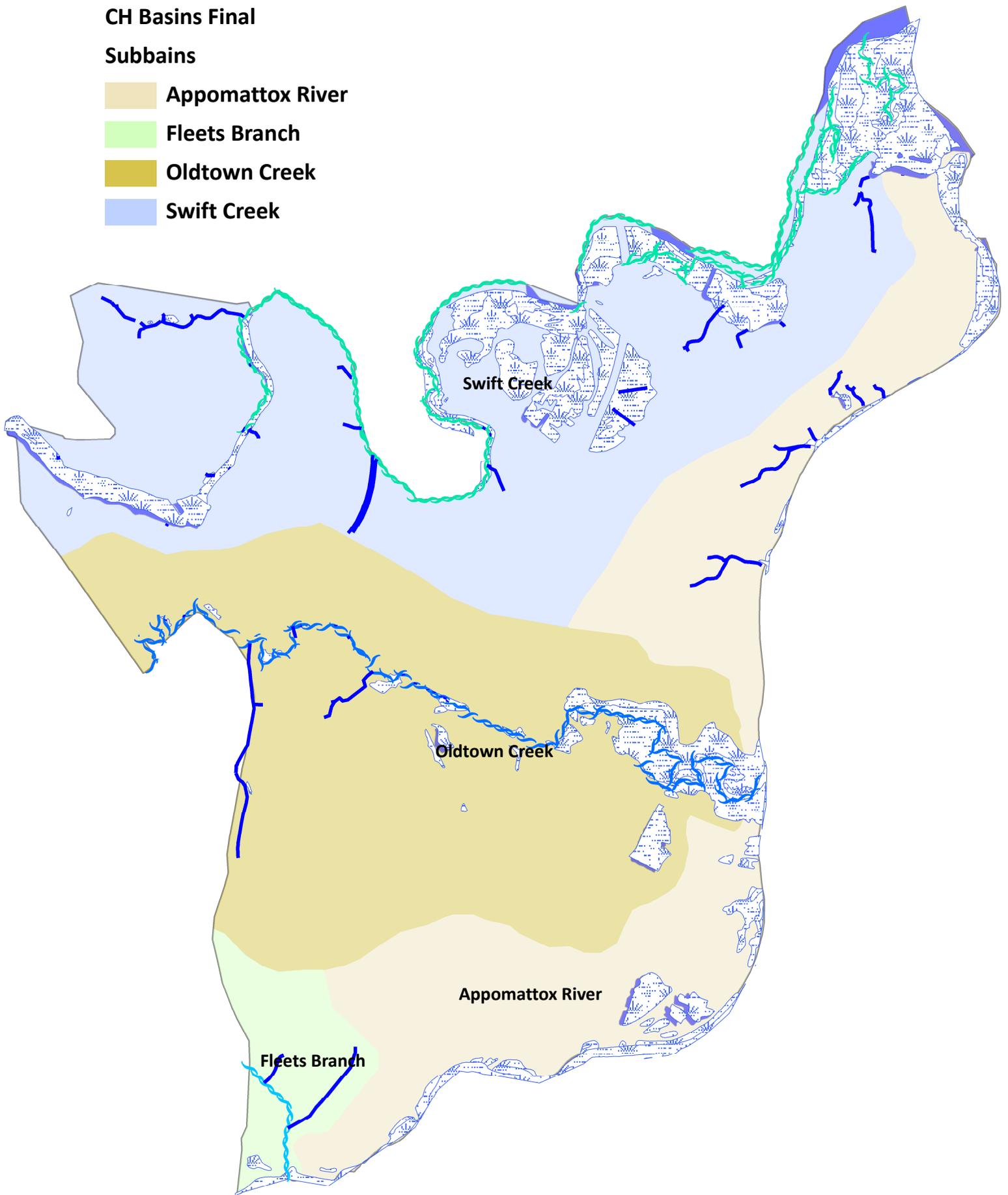
M	100	A	R	388 SOUTH PARK CIR, COLONIAL HEIGHTS, VA, 23834	388 Southpark Circle	Colonial	VA	Sino Wol	Ying Qin	388 Sout	#####	Southpark	Circle	Colonial	VA	23834	20091627	Retail
M	85	A	R	378 SOUTH PARK CIR, COLONIAL HEIGHTS, VA, 23834	378 Southpark Boulevard	Colonial	VA	Stir Fry	Stir Fry	378 Sout	#####	Southpark	Boulevard	Colonial	VA	23834	20090177	Retail
M	100	A	R	501 SOUTH PARK BLVD, COLONIAL HEIGHTS, VA, 23834	501 Southpark Boulevard	Colonial	VA	Subway	Shree Sh	501 Sout	#####	Southpark	Boulevard	Colonial	VA	23834	20090445	Retail
M	85	A	R	671 SOUTH PARK BLVD, COLONIAL HEIGHTS, VA, 23834	671 Southpark	Colonial	VA	Subway	Desjardis	671 Sout	#####	Southpark		Colonial	VA	23834	20091389	Retail
T	71	A	R	380 SOUTH PARK CIR, COLONIAL HEIGHTS, VA, 23834	381 Southpark Circle	Colonial	VA	Subway	Epieleia	381 Sout	#####	Southpark	Circle	Colonial	VA	23834	20091516	Retail
M	100	A	L	628 SOUTH PARK BLVD, COLONIAL HEIGHTS, VA, 23834	628 Southpark Boulevard	Colonial	VA	Taco Bell	Burger B	628 Sout	#####	Southpark	Boulevard	Colonial	VA	23834	20091268	Retail
M	100	A	R	116 TASWELL AVE, COLONIAL HEIGHTS, VA, 23834	116 Taswell Ave	Colonial	VA	Carlton's	Clifford E	116 Tasw	#####	Taswell	Ave	Colonial	VA	23834	20090656	Retail
M	100	A	L	1000 TEMPLE AVE, COLONIAL HEIGHTS, VA, 23834	1000 Temple Ave	Colonial	VA	Conner S	Robert H	1000 Ter	#####	Temple	Ave	Colonial	VA	23834	20091743	Retail
M	100	A	R	961 TEMPLE AVE, COLONIAL HEIGHTS, VA, 23834	961 Temple Ave	Colonial	VA	Uppy's D	Uppy's C	961 Tem	#####	Temple	Ave	Colonial	VA	23834	20091669	Retail
M	100	A	R	107 TEMPLE LAKE DR, COLONIAL HEIGHTS, VA, 23834	107 Temple Lake Drive	Colonial	VA	Arby's		107 Tem	#####	Temple Lake	Drive	Colonial	VA	23834	20090404	Retail
M	100	A	R	111 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	111 Boulevard	Colonial	VA	Ackerma	James Ac	111 Boul	#####	Boulevard		Colonial	VA	23834	20090461	Service
M	100	A	L	654 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	654 Boulevard	Colonial	VA	Ann's Cle	David J L	654 Boul	#####	Boulevard		Colonial	VA	23834	20091474	Service
M	100	A	R	225 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	225 Boulevard	Colonial	VA	Buddy's	Buddy W	225 Boul	#####	Boulevard		Colonial	VA	23834	20091415	Service
M	100	A	R	101 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	101 Boulevard	Colonial	VA	Cal's Inc	Calvin M	101 Boul	#####	Boulevard		Colonial	VA	23834	20090143	Service
M	100	A	L	3224 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	3224 Boulevard	Colonial	VA	Colonial	FD & B A	3224 Box	#####	Boulevard		Colonial	VA	23834	20090420	Service
M	100	A	L	2100 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	2100 Boulevard	Colonial	VA	Executiv	Tremayn	2100 Box	#####	Boulevard		Colonial	VA	23834	20091312	Service
M	100	A	L	610 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	610 Boulevard	Colonial	VA	Flagstop	Flagstop	610 Boul	#####	Boulevard		Colonial	VA	23834	20091212	Service
M	100	A	R	115 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	115 Boulevard	Colonial	VA	Harris A	Delmer J	115 Boul	#####	Boulevard		Colonial	VA	23834	20090735	Service
M	100	A	R	1919 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	1919 Boulevard	Colonial	VA	Johnson	Johnson	1919 Box	#####	Boulevard		Colonial	VA	23834	20090130	Service
M	100	A	L	636 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	636 Boulevard	Colonial	VA	Master T	RWRW II	636 Boul	#####	Boulevard		Colonial	VA	23834	20090382	Service
M	100	A	L	712 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	712 Boulevard	Colonial	VA	Meineke	Charles C	712 Boul	#####	Boulevard		Colonial	VA	23834	20091196	Service
M	100	A	L	1400 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	1400 Boulevard	Colonial	VA	Midas At	TMT LLC	1400 Box	#####	Boulevard		Colonial	VA	23834	20090849	Service
M	100	A	L	3008 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	3008 Boulevard	Colonial	VA	Motorcy	Motorcy	3008 Box	#####	Boulevard		Colonial	VA	23834	20091757	Service
M	100	A	R	305 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	305 Boulevard	Colonial	VA	Palmore	Palmore	305 Boul	#####	Boulevard		Colonial	VA	23834	20091537	Service
M	100	A	R	119 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	119 Boulevard	Colonial	VA	Sarek Au	Ralf Sare	119 Boul	#####	Boulevard		Colonial	VA	23834	20091697	Service
M	100	A	L	3300 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	3300 Boulevard	Colonial	VA	Sherwoo	Sherwoo	3300 Box	#####	Boulevard		Colonial	VA	23834	20090868	Service
M	100	A	R	225 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	225 Boulevard	Colonial	VA	Shumate	Delmer J	225 Boul	#####	Boulevard		Colonial	VA	23834	20090056	Service
M	79	A	R	1115 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	1115 Boulevard	Colonial	VA	Tuffy Mu	Lizco Inc	1115 Box	#####	Boulevard		Colonial	VA	2324	20090325	Service
M	100	A	R	3245 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	3245 Boulevard	Colonial	VA	Victory L	Shawn &	3245 Box	#####	Boulevard		Colonial	VA	23834	20090881	Service
M	100	A	L	3504 BOULEVARD, COLONIAL HEIGHTS, VA, 23834	3504 Boulevard	Colonial	VA	Wamsley	C Neil W	3504 Box	#####	Boulevard		Colonial	VA	23834	20090869	Service
M	100	A	R	118 BRUCE AVE, COLONIAL HEIGHTS, VA, 23834	118 Bruce Ave	Colonial	VA	Battlefie	Wilson W	118 Bruc	#####	Bruce	Ave	Colonial	VA	23834	20090159	Service
M	100	A	R	235 DUNLOP FARMS BLVD, COLONIAL HEIGHTS, VA, 23834	235 Dunlop Farms Boulevard	Colonial	VA	The Dunl	Coordin	235 Dunl	#####	Dunlop Farms	Boulevard	Colonial	VA	23834	20090540	Service
U	0	A			22 Dunlop Village	Colonial	VA	CJW Dry	Jeom S P	22 Dunlo	#####	Dunlop Village		Colonial	VA	23834	20090683	Service
M	86	A	R	831 E ELLERSLIE AVE, COLONIAL HEIGHTS, VA, 23834	831 Ellerslie Ave	Colonial	VA	Colonial	Colonial	831 Eller	#####	Ellerslie	Ave	Colonial	VA	23834	20090536	Service
M	86	A	R	405 E ELLERSLIE AVE, COLONIAL HEIGHTS, VA, 23834	405 Ellerslie Ave	Colonial	VA	Parlow A	Rodney f	405 Eller	#####	Ellerslie	Ave	Colonial	VA	23834	20091670	Service
M	86	A	R	435 E ELLERSLIE AVE, COLONIAL HEIGHTS, VA, 23834	435 Ellerslie Ave Avenue	Colonial	VA	All Seaso	All Seaso	435 Eller	#####	Ellerslie Ave	Avenue	Colonial	VA	23834	20091441	Service
M	100	A	R	517 JAMES AVE, COLONIAL HEIGHTS, VA, 23834	517 James Ave	Colonial	VA	Carville's	Joseph C	517 Jam	#####	James	Ave	Colonial	VA	23834	20091708	Service
M	100	A	L	1010 KENSINGTON AVE, COLONIAL HEIGHTS, VA, 23834	1010 Kensington Ave	Colonial	VA	Signatur	Signatur	1010 Ker	#####	Kensington	Ave	Colonial	VA	23834	20091350	Service
M	100	A	L	192 LYONS AVE, COLONIAL HEIGHTS, VA, 23834	192 Lyons Ave	Colonial	VA	Balch Alij	Christopl	192 Lyon	#####	Lyons	Ave	Colonial	VA	23834	20091245	Service
M	100	A	R	303 NORWOOD DR, COLONIAL HEIGHTS, VA, 23834	303 Norwood Drive	Colonial	VA	Colonial	M Sidney	303 Norw	#####	Norwood	Drive	Colonial	VA	23834	20090901	Service
M	100	A	R	303 NOTTINGHAM DR, COLONIAL HEIGHTS, VA, 23834	303 Nottingham Drive	Colonial	VA	Auto Tec	Mutaz Y	303 Nott	#####	Nottingham	Drive	Colonial	VA	23834	20091572	Service
M	85	A	R	105 PICKWICK AVE, COLONIAL HEIGHTS, VA, 23834	105 Pickwick Circle	Colonial	VA	A Rainbo	Harry E V	105 Pick	#####	Pickwick	Circle	Colonial	VA	23834	20091854	Service
M	100	A	L	40 PICKWICK AVE, COLONIAL HEIGHTS, VA, 23834	40 Pickwick Avenue	Colonial	VA	Aqua Cle	Glory Far	40 Pickw	#####	Pickwick	Avenue	Colonial	VA	23834	20090329	Service
M	96	A	R	1312 RIVEROAKS DR, COLONIAL HEIGHTS, VA, 23834	1312 River Oaks Drive	Colonial	VA	Stone Mi	Stone Mi	1312 Riv	#####	River Oaks	Drive	Colonial	VA	23834	20091359	Service
M	100	A	R	100 ROANOKE AVE, COLONIAL HEIGHTS, VA, 23834	100 Roanoke Ave	Colonial	VA	Colonial	Colonial	100 Roar	#####	Roanoke	Ave	Colonial	VA	23834	20090633	Service
M	100	A	L	1700 SNEAD AVE, COLONIAL HEIGHTS, VA, 23834	1700 Snead Ave	Colonial	VA	Briggs Al	Mark Bri	1700 Sne	#####	Snead	Ave	Colonial	VA	23834	20090344	Service
M	100	A	L	1718 SNEAD AVE, COLONIAL HEIGHTS, VA, 23834	1718 Snead Ave	Colonial	VA	Colonial	Autowor	1718 Sne	#####	Snead	Ave	Colonial	VA	23834	20091154	Service
U	0	A			184 Southgate Square	Colonial	VA	The Dry	Dolan/Ni	184 Sout	#####	Southgate	Square	Colonial	VA	23834	20090605	Service
M	100	A	R	100 TASWELL AVE, COLONIAL HEIGHTS, VA, 23834	100 Taswell Ave	Colonial	VA	Colonial	Paul Mai	100 Tasw	#####	Taswell	Ave	Colonial	VA	23834	20091619	Service
M	100	A	R	303 TEMPLE AVE, COLONIAL HEIGHTS, VA, 23834	303 Temple Avenue	Colonial	VA	A-1 Stea	David Kri	303 Tem	#####	Temple	Avenue	Colonial	VA	23834	20090231	Service
M	100	A	L	1000 TEMPLE AVE, COLONIAL HEIGHTS, VA, 23834	1000 Temple Ave	Colonial	VA	Conner S	Robert H	1000 Ter	#####	Temple	Ave	Colonial	VA	23834	20090497	Service

# Colonial Heights Drainage Sub-Basins

## CH Basins Final

### Subbasins

-  Appomattox River
-  Fleets Branch
-  Oldtown Creek
-  Swift Creek



# Potential Illicit Dischargers by Industry

## Type

- Professional
- Retail
- Service



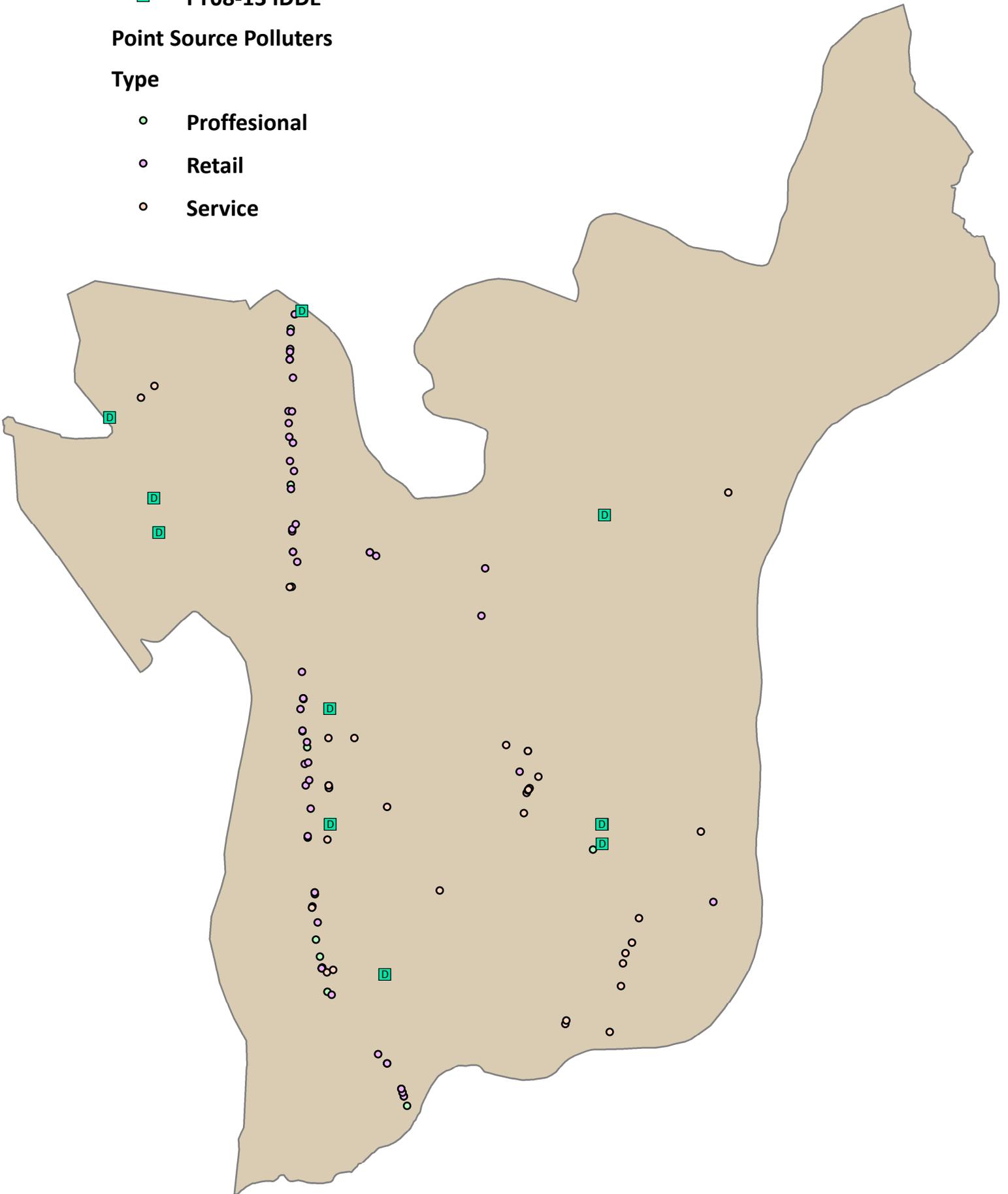
# Potential & Recorded Dischargers

FY08-13 IDDE

## Point Source Polluters

### Type

- Professional
- Retail
- Service





Department of Public Works  
201 James Avenue  
Colonial Heights, VA 23834

# Colonial Heights Stormwater Management Ordinance

What your business needs to know about



Department of Public Works  
City of Colonial Heights  
201 James Avenue  
Colonial Heights, Virginia 23834  
(804) 520-9334

## STORMWATER & YOUR BUSINESS

### Stormwater Ordinance

Colonial Heights Stormwater Ordinance, driven by clean water regulations like the Clean Water Act, seeks to protect the City's receiving waters as well as the integrity and efficiency of the City's storm sewage system. As everyone operating or living in the City contributes to the storm sewer system, your business may be affected by the ordinance in some important ways.

#### What does the ordinance prohibit?

The ordinance is intended to prohibit two categories of activity: illicit connections and illegal discharges. An illicit connection is any drain or conveyance, either surface or subsurface, which allows an illegal discharge to enter the storm drain system, including any conveyances which allow any non-storm water discharge including sewage, wastewater, and wash water to enter the storm drain system and any connections to the system from indoor drains and sinks, regardless of whether such drain or connection had been previously allowed, permitted, or approved by the authorized enforcement agency. Any drain or conveyance connected from a commercial or industrial land use to the storm drain system which has not been documented in plans, maps, or equivalent records and approved by the authorized enforcement agency. An illegal discharge is any direct or indirect non-storm

water discharge to the storm drain system. The only permitted illegal discharge exemptions are water line flushing, landscape irrigation or lawn watering, rising ground water, ground water infiltration to storm drains, uncontaminated pumped ground water, foundation or footing drains (not including active groundwater dewatering systems), crawl space pumps, air conditioning condensation, non-commercial washing of vehicles, swimming pools (if dechlorinated - less than one PPM chlorine), fire fighting activities, discharges authorized by the enforcement agency as being necessary to protect public health and safety, and any other water source meeting applicable water quality standards. Dye testing, as well, is an allowable discharge, but requires a verbal notification to the Department of Public Works prior to the time of the test.

#### How does the ordinance impact my business?

Many businesses, as a natural byproduct of their daily business operations, produce or handle materials that are or will become waste. This is true particularly in the service industry. As well, many service business facilities have drains and other outlets that could be discharging wastes or be illegally connected to the storm sewer system. Penalties for violations include fines as high as \$30,000 dollars and revocation of access to the storm sewer system, so having an illegal discharge could greatly impact your business.

# Ordinance Enforcement

Department of Public Works staff periodically inspect areas of the City for violations of the Stormwater Ordinance. Testing and reconnaissance of the storm sewer system allow Department personnel to understand if and where illicit connections have been made, and personnel routinely consider discharge practices and their adherence to the ordinance restrictions. Taking proactive steps to monitor and correct, if necessary, your business's discharges will save you time and monetary penalties in the future.

## Preventing discharges before they begin...

Whether or not you operate an automotive service, a laundromat, a restaurant or a landscape service, there are several strategies you can employ to help eliminate the possibility of illegal discharges at your business. If your business, whatever its type, has facilities with floor drains, ask the Department of Public Works' Engineering Division if floor plans for your facilities exist. With these you may be able to determine if the floor drains are connected to the sanitary or storm sewer. Two other steps you can take follow below.

### 1. Keep water from contacting work areas

Work areas can be contaminated by raw materials, processed liquids, grease, oily wastes, heavy metals, and automotive and chemical fluids. Surfaces used for storing outdoor equipment or materials and for

maintaining vehicles, for example, could all be sources of illegal discharges. As water runs across these work areas, it picks up contaminants as it flows. If that water reaches a storm drain or ditch, those contaminants will be discharged to the storm sewer system and are then considered illegal discharges. To prevent these, consider the following:

- *Keep stormwater from contacting any industrial areas, either indoors or out.*
- *Install roofs or move industrial operations indoors to keep rain from falling onto work areas.*
- *Avoid practices like hosing down outdoor areas or washing commercial vehicles where the waste water will enter the storm sewer system.*

### 2. Educate employees about preventing stormwater pollution

The first strategy won't work unless your employees and coworkers accurately understand that improper disposal of materials into the storm sewer system endangers it and pollutes the City's waters, and could result in penalties. Inform and remind your coworkers and employees that:

- *Proper equipment washing procedures at designated washing areas prevents illegal discharges*
- *Closing all covers at dumpsters and other storage areas helps ensure compliance*
- *'Topping-off' or overfilling fuel tanks increases the chances that you are illegally discharging*

## Illegal discharges at your business...

Different businesses, by discharging larger quantities or different types of wastewater and utilizing varied waste disposal practices, affect the storm sewer system in different ways. You can take business-specific prevention measures to decrease the chances that your business will be penalized for an illegal discharge.

### ⊕ Automotive Services

Vehicle maintenance, by its nature, involves circumstances that make illegal discharges possible. Take steps to eliminate discharges by disconnecting and covering any floor drains that are not necessary for your operation. Use absorbents for spills and sweep these up instead of hosing the areas down. Make sure that any chemicals and fluids are closed properly, stored above ground level either inside or out of any weather. Have any underground storage tanks evaluated for leaks or seepage, and maintain any grease or sand traps on a regular basis. If your facility produces untreated wash water, you will need to have some means to capture and treat it on-site.

### ⊕ Restaurants

Food preparation and dish washing also produce large amounts of waste water. As with automotive services, your business's wash water must discharge to the sanitary sewer, and not the storm sewer. Be certain that grease is disposed of in compliance with applicable law, and make certain that employees understand

that pouring any greases or wastes down storm drains constitutes an ordinance violation.

### ⊕ Landscapers and Lawn Services

Landscaping services often produce large amounts of brush and other debris. If you own or operate such a service, you'll need to ensure that no brush, leaves, debris or topsoil are being stored or disposed of in or near stream banks or other stormwater conveyance channels. Excess fertilizers or pesticides should never be disposed of in or around storm drains or stored where they will be exposed to rainfall and stormwater runoff.

### ⊕ Laundromats

Laundry and washing services, as well, need to take measures to ensure that wash water and cleaning agents and contaminants are not entering the storm sewer and are not being improperly stored, where they might come in contact with stormwater runoff.

## Saving time and money...

Understanding the intent and the restrictions of the Stormwater Ordinance will save you time and money. Knowing what is prohibited and what is allowable will help determine your site's layout, how you'll need to retrofit your existing site, or what practices will prevent ordinance violations and fines.

# Department of Public Works Construction Plan Review Checklist

Plan Name: \_\_\_\_\_

Date: \_\_\_\_\_ Reviewed By: \_\_\_\_\_

\*Engineer understands that any changes made to the road, drainage, water and/or waste water design will require a submittal to the Department of Public Works for review and approval of the revised plans reflecting those changes.\*

\*All revisions must include an explanation either on the plans or by separate transmittal.\*

**Plan Format:**

Plans for roads, utilities, drainage, and erosion control shall be submitted to the Department of Public Works (6 sets, including sewer and water line profiles). All plans must be folded and bundled accordingly. Include separate agency transmittals for PUBLIC WORKS (3), PLANNING (1), FIRE (1), and MAINTENANCE & OPERATIONS (1). Plans will not be processed nor forwarded unless 2 copies of the approved preliminary plan are included in the initial submittal package for the Department of Public Works. If sectioning is desired, each section must be submitted as a separate plan package and bundled accordingly.

**Program Administration:**

The fee must accompany the initial plans submission and is processed at the front counter.

The following information (where applicable) is to be provided or considered on all plans submitted for review.

**Cover Sheet, must be Standard City Cover Sheet with all applicable information completed:**

- \_\_\_\_ 1. Plan name and section designation, where applicable
- \_\_\_\_ 2. Zoning case number and Council approval date (provide a copy of the approved resolution)
- \_\_\_\_ 3. Preliminary case number and approval date (provide a copy of the approval letter)
- \_\_\_\_ 4. Name of Developer/Owner, Walk-in Address, Telephone Number, and Email address.
- \_\_\_\_ 5. Date
- \_\_\_\_ 6. Engineer and/or Surveyor, Address, signed certification stamp, Telephone number and Email address.
- \_\_\_\_ 7. Vicinity Sketch showing existing road names.

- \_\_\_ 8. Provide note stating how CBPA compliance has been achieved for the project
- \_\_\_ 9. Complete Sheet index
- \_\_\_ 10. Property Tax ID/GPIN/Parcel #'s
- \_\_\_ 11. Certification statement of the lot numbers, block letters/numbers and road names, etc.

ADDITIONAL COMMENTS:

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**Detail Sheet(s) must include the Standard City Detail Sheet and shall contain the following information at a minimum:**

- \_\_\_ 1. Show details of all proposed structures for which there is no standard drawing or modification of standards drawn to scale. Examples would be channel cross-sections, typical road cross-sections, sidewalk sections, etc.
- \_\_\_ 2. If a VDOT standard is modified, detail must be shown with all applicable dimensions drawn to scale.
- \_\_\_ 3. List all construction notes necessary to complete the work.
- \_\_\_ 4. Number assigned to structure shall be shown with detail.

ADDITIONAL COMMENTS:

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**Utility Detail Sheet(s) must include the Standard City Utility Note and Detail Sheet and shall contain the following information at a minimum:**

- \_\_\_ 1. Show details of all proposed utilities. Examples would be manholes, meter vaults, fire hydrants, etc.
- \_\_\_ 2. If a standard detail is modified, the detail must be shown with all applicable dimensions drawn to scale.
- \_\_\_ 3. List all construction notes necessary to complete the work.
- \_\_\_ 4. Number assigned to each utility shall be shown with detail.

ADDITIONAL COMMENTS:

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**Erosion Control Detail Sheet(s) must include the Standard City E&S Note and Detail Sheet and shall contain the following information at a minimum:**

\_\_\_\_ 1. Are details with applicable information provided on the detail sheet for every EC measure specified.

\_\_\_\_ 2. If a standard detail is modified, the detail must be shown with all applicable dimensions drawn to scale.

\_\_\_\_ 3. List all construction notes necessary to complete the work.

\_\_\_\_ 4. Has the temporary silt trap/sediment basin schedule been completed on the applicable EC Detail sheet with volumes and dimensions (length, width, depth, and side slopes).

\_\_\_\_ 5. A note must be added to the plans as follows: "All vegetative and structural erosion and sediment control practices will be constructed and maintained according to minimum standards and specifications of the Virginia Erosion and Sediment Control Handbook and Virginia Regulation VR 625-02-00."

ADDITIONAL COMMENTS:

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**Erosion Control:**

\_\_\_\_ 1. A note must be added to the construction sequence which requires the owner to give the City inspector 48 hours notification to schedule an on-site pre-construction meeting for the issuance of a Land Disturbance Permit. This note should be the first step in the erosion control narrative/sequence of construction.

\_\_\_\_ 2. The following note(s) must be added to or adjacent to the erosion control narrative / sequence of construction: (If applicable)

-All offsite easements must be recorded prior to issuance of a land disturbance permit for this project.

-All onsite easements, including SWM/BMP maintenance easements must be recorded prior to issuance of a certificate of occupancy for this project.

- The SWM/BMP facility must be certified by a professional engineer prior to issuance of any certificate of occupancy.
- A ROW permit is required for this project prior to issuance of a land disturbance permit.
- At the time of the pre-construction meeting, two standard signs must be installed on each side of the construction access. These signs may be installed on tripod devices and should state either “CONSTRUCTION ENTRANCE AHEAD” or “TRUCKS ENTERING HIGHWAY”.
- The riser and pipe barrel associated with the sediment basin must be on-site prior to issuance of a land disturbance permit.

\_\_\_ 3. An erosion and sediment control narrative is required which includes a detailed sequence of construction which coordinates the installation and removal of the erosion and sediment control measures with construction of the remainder of the project.

\_\_\_ a. Has the construction narrative been shown on the EC plan, not elsewhere.

\_\_\_ 4. Has a commentary been provided that addresses the sensitive areas (RPA’s, wetlands, steep slopes, etc.) and erodible soil types.

\_\_\_ 5. Steps must be included in the sequence of construction for the installation of utilities, storm sewer, drop inlets, inlet protection, curb & gutter, and building construction, etc.

\_\_\_ 6. Erosion control measures must be provided for the project for the initial clearing, grubbing, and grading operations. The drainage areas must be outlined and the sediment trapping facilities designed on the worst case scenario.

\_\_\_ 7. Have the clearing limits been restricted to only those necessary to install the perimeter EC measures-SF, DD, ST’s, SB’s, and stockpile area.

\_\_\_ 8. Provisions must be made in the narrative to allow all proposed sediment traps and basins to remain in place until all on-site contributing areas are stabilized.

\_\_\_ 9. Provisions must be made in the erosion control narrative for conversion of the sediment basin into a SWM/BMP facility after the upstream areas are fully stabilized.

\_\_\_ 10. Provisions must be made in the erosion control narrative for the infiltration facility to be observed by a professional engineer during construction. "As built" information will be required for future certification of the facility.

\_\_\_ 11. Standard symbols must be used to represent erosion control measures on the plan. Please refer to the first page of the practice found in Chapter iii of the Virginia Erosion and Sediment Control Handbook.

\_\_\_ 12. Does the EC plan ghost such features as ROW, property lines, centerline stationing, street names, lot numbers such that the EC measures and related activity “standout” in the plans.

\_\_\_ 13. The exact limits of land disturbance must be shown.

\_\_\_ 14. The construction entrance (CE) must be graphically shown on the plans and constructed as wide as the proposed permanent entrance.

\_\_\_ a. Is there enough concern to require a wash rack on the construction entrance.

\_\_\_ 1. If a wash rack is required, add the following note in **bold print**:  
“Installation of a wash rack is required for this site to wash mud and debris from all construction equipment and vehicles prior to leaving the construction area. Water trucks must be provided for the wash rack. Positive drainage must be maintained from the wash rack to a sediment trapping device.”

\_\_\_ 15. Any soil stockpile area must be located on the plans. Silt fence must be provided around the perimeter if it is located outside the perimeter erosion controls for the site.

\_\_\_ 16. A minimum 10' break must be provided in the low area of the silt fence. The break must be backfilled with stone to within 1' of the top of the silt fence to serve as an overflow. A detail must be shown.

\_\_\_ 17. Safety fence (STD. & SPEC 3.01) is required around all sediment traps and sediment basins.

\_\_\_ 18. The sediment basin(s) must be designed in accordance with STD. & SPEC. 3.14 of the VESCH. Sediment basin design calculation sheets must be submitted with all design data addressed and shown on construction details included on the plans.

\_\_\_ a. Does the EC plan provide a 1' contoured grading plan for the construction of the sediment basin(s).

\_\_\_ 1. Provide trash rack detail with dimensions.

\_\_\_ 2. Provide Sediment Basin dam section with elevations and dimensions.

\_\_\_ 3. Provide emergency spillway detail with dimensions.

\_\_\_ 4. Provide reclamation grading plan for removal of the sediment basin.

\_\_\_ 19. The culverts downstream of the detention basin(s) must be analyzed for adequacy based on the 10-year storm. Existing inadequate culverts in city easements and under city or state roads, into which a project drains, must be enlarged or on-site detention based on the ultimate development of the contributing watershed provided to achieve minimum 10 year performance of the pipe(s). A drainage area map must be provided for both on-site and off-site drainage areas.

\_\_\_ 20. Are temporary slope drains specified to convey sediment laden runoff from the road templates over the fill slopes exceeding 5' in height.

\_\_\_ 21. Has an itemized Cost Estimate been submitted for approval of bond amount.

\_\_\_ 22. Have MS-19 calculations with field-taken sections (H=V) been submitted for on-site/off-site receiving facilities.

\_\_\_ a. 2-yr analysis for natural

\_\_\_ b. 10-yr analysis for manmade

\_\_\_ c. Does section location satisfy 1% rule.

\_\_\_ d. Are section locations shown/labeled.

**Prior to issuance of Land Disturbance Permit:**

\_\_\_ 1. Received Planning, Fire, Building Inspection, and M&O approvals prior to Department of Public Works plan approval.

\_\_\_ 2. Received documentation from COE/DEQ.

\_\_\_ 3. Received processed VSMP registration and fee form.

\_\_\_ 4. ROW Permit is required for this project

\_\_\_ 5. Provided DB-PG of all off-site easements.

\_\_\_ 6. EC bond posted.

\_\_\_ 7. Engineer and/or Surveyor has notified all property owners prior to performing any design and/or surveying work (copy of such notification is attached). Permission must be obtained from the adjacent property owner(s) allowing for grading on the property as proposed.

\_\_\_ 8. Performance bond with estimated completion date.

\_\_\_ 9. Development Forms.

**Prior to issuance of certificate of occupancy:**

\_\_\_ 1. Two (2) complete sets of As-Built construction plans

\_\_\_ 2. A CD/DVD, the format of which shall be AutoCAD.dwg or dxf, must be submitted to Stephen Edwards of the Department of Public Works. The CD/DVD must contain the following (including all field changes), each in a separate layer:

- a. Final grading contour lines (min. 5' intervals);
- b. Proposed building footprint(s);
- c. All impervious area (parking lots, driveways, roads, etc);
- d. All existing and proposed easements;
- e. The storm sewer system; and
- f. Water and waste water systems.

A layer report printed from AutoCAD must be submitted with the CD/DVD. Both the CD/DVD and the report must be labeled with the plan name, plan number, and the engineering firm. All AutoCAD files must be referenced directly to the Virginia State Plane Coordinate system, South Zone, in the NAD83 Datum.

\_\_\_ 3. All onsite easements must be recorded, provide deed book/page number.

ADDITIONAL COMMENTS:

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**Chesapeake Bay Preservation Act:**

\_\_\_ 1. A perennial flow determination must be submitted for review and/or approval prior to construction plan approval.

\_\_\_ 2. Confirm Worksheet A (pollutant removal requirements) calculations approved.

- \_\_\_ 3. A data map must be submitted which outlines all drainage areas, impervious areas (existing and proposed), RPA and RMA limits, etc. Which were utilized in determining compliance with the Chesapeake Bay Preservation Ordinance:
- \_\_\_ 4. Have BMP design calculations been submitted.
- \_\_\_ a. Volumes where depths exceed 8' (entire water column) excluded from water quality volume.
- \_\_\_ 5. Provide separate BMP grading plan on 1" = 20' scale.
- \_\_\_ a. Specify the 2, 10, and 100 year water surface elevations (WSE) in plan and profile.
  - \_\_\_ b. Clearly show and label the total drainage area for the SWM/BMP.
  - \_\_\_ c. Provide minimum 3:1 length to width ratio across bottom of basin per E&SC Manual.
  - \_\_\_ d. Provide a scaled centerline profile of the pond and embankment with applicable elevations, slopes, widths, etc.
  - \_\_\_ e. Provide enlarged scaled principal/emergency spillway detail with applicable elevations, dimensions, material, etc.
  - \_\_\_ f. Does principal concrete spillway provide 10-yr capacity.
  - \_\_\_ g. Have sediment forebay(s) been provided at major inflow points.
  - \_\_\_ h. Forebay dimensions should not exceed 20' due to cleanout limitations.
  - \_\_\_ i. Emergency spillway may be grass or riprap lined in natural ground or paved in fill to 100-yr depth.
  - \_\_\_ j. Does wet pond range in depth from 3' to 8'.
  - \_\_\_ k. Top of dam shall provide minimum 1' freeboard above 100 year WSE.
  - \_\_\_ l. Top of dam width minimum 8' and slopes 3:1 or flatter for maintenance.
  - \_\_\_ m. Does dam embankment section specify an impermeable clay core keyed into impermeable subgrade.
  - \_\_\_ n. Provide 12" valve/12" pipe with elbow off the bottom to lower pond for maintenance.
  - \_\_\_ o. O-ring RCP pipe shall be used for barrels/risers.
  - \_\_\_ p. Inflow pipes shall be partially submerged to the spring line (half the pipe diameter).

- \_\_\_ q. A sluice gate must be provided to facilitate draining the BMP for maintenance.
  - \_\_\_ r. Riser and pipe barrels no smaller than 15”.
  - \_\_\_ s. Perforations in the riser must be precast, not field made. Add a note to the riser detail.
  - \_\_\_ t. Plastic Trash rack specified and a dimensioned detail provided that shows the method of securing the plastic trash rack/anti-vortex device to the concrete riser pipe.
  - \_\_\_ u. The required storage volumes for water quality and water quantity must be shown on the profile view of the basin.
- \_\_\_ 6. Has a SWM/BMP maintenance and access easement been shown enclosing entire facility and embankment/outfall.
- \_\_\_ a. Established 25’ off 100-yr WSE or toe of dam.
  - \_\_\_ b. Provided minimum 20’ wide access easement to ROW.
  - \_\_\_ c. Provided minimum 12’ wide, 6” base stone access road design & detail.
  - \_\_\_ d. A minimum 12’ wide ramp must be provided from the access gate to the bottom of the SWM/BMP facility. The slope cannot exceed 6:1.
- \_\_\_ 7. SWM/BMP safety measures required for slopes steeper than 6:1, 20’ from the shoreline.
- \_\_\_ a. When concrete weir depth exceeds 3’, a pedestrian crossing structure shall be constructed across the weir.
  - \_\_\_ b. For basins 4’ or less in depth and < 1 acre surface area a safety bench is required.
  - \_\_\_ c. For basins greater than 4’ in depth or more than 1 acre surface area, both safety and aquatic benches are required.
  - \_\_\_ d. Is safety bench 10’ wide at 10:1 slope
  - \_\_\_ e. Is aquatic bench 6’ wide at 6:1 slope
  - \_\_\_ f. Fencing around basin alternative to safety/aquatic benches - minimum height of fence 6’.
- \_\_\_ 8. Has 10’ vegetative perimeter yard setback measured from 100-yr WSE or the toe of dam been shown/dimensioned. (must be within limits of project)

\_\_\_ 9. Dimension/Label the "100' RPA Buffer Area" landward of wetlands contiguous to perennial streams to establish limits of the RPA.

\_\_\_ 10. Are minor/major Water Quality Impact Assessments required.

\_\_\_ a. Minor < 2500 Sq. ft.

\_\_\_ b. Major > 2500 Sq. ft.

\_\_\_ 11. If infiltration trenches are specified:

\_\_\_ a. Several soil borings must be made within the limits of the infiltration trench to a depth of at least five feet below the bottom of the trench. A percolation test must be performed to determine if the infiltration rate of this soil is acceptable.

\_\_\_ b. A minimum of two observation wells are required for the infiltration trench.

\_\_\_ 12. Due to the high possibility for spills of oil, gas, anti-freeze, etc.

\_\_\_ a. Does an oil-grit separator need to be installed. Design calculations must be submitted and details provided on the plans for its construction.

\_\_\_ b. Does an "off-line" sand filter need to be installed. Design calculations must be submitted and details provided on the plans for its construction

\_\_\_ 13. The facility certification process shall be performed by an engineering/surveying professional at the owner's expense.

ADDITIONAL COMMENTS:

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**Plan Sheet(s) shall contain the following information:**

\_\_\_ 1. Indicate all proposed and existing rights-of-way widths, all lot lines, all lots with numbers, easements (including DB/PG#), all street names and existing State route numbers if applicable. Stipple all areas proposed to be paved.

\_\_\_ 2. Adjacent property owners name(s), GPIN's/Tax ID's and lot lines must be shown.

- \_\_\_\_ 3. Show complete street curve data on the plan sheets to include the following stationing (PC, & PT), L, K, A, R, Delta, Chord Distance, and Chord Bearing.
- \_\_\_\_ 4. Indicate centerline stations at 100' intervals and at all other strategic points, i.e. drainage structuring, etc. and intersection of streets.
- \_\_\_\_ a. Does stationing ascend from left to right.
- \_\_\_\_ 5. When proposed and existing streets intersect, indicate existing conditions for 600 feet in each direction. This is to include width of pavement, right of way, location and direction of roadside drainage, any culverts to include inverts, etc.
- \_\_\_\_ 6. Indicate proposed driveway entrance culvert size (10-year), length, and location. (if applicable)
- \_\_\_\_ 7. Indicate all proposed and existing storm sewers, culverts and appurtenances, identify by type, size, slot length, material, inverts.
- \_\_\_\_ a. Every inlet and segment of storm sewer shall be assigned a structure number. A drainage structure description shall be provided as applicable on each respective plan sheet.
- \_\_\_\_ 8. Indicate, with arrows, the direction of flow in all gutters, storm sewers, ditches, subsurface drains, streams, minimum finished floors, etc.
- \_\_\_\_ 9. Indicate all existing and proposed ditches and streams and any relocations showing longitudinal slope, and furnish detailed typical section showing type of stabilization to be provided and maximum and minimum vertical depth.
- \_\_\_\_ 10. Indicate direction of North on each sheet.
- \_\_\_\_ 11. Indicate location and description of all benchmarks and their elevation referenced to mean sea level. Two (2) benchmarks must be shown on the proposed plan and at least one (1) of the benchmarks must be shown within the limits of the proposed plan.
- \_\_\_\_ 12. Indicate location of any City control monuments within vicinity.
- \_\_\_\_ 13. Plans shall be to a scale of 1"=50' (Maximum)
- \_\_\_\_ 14. Any notes that may be necessary to explain the intent and purpose of the plans.
- \_\_\_\_ 15. Indicate the location and width of all proposed and existing sidewalks and walkways.
- \_\_\_\_ 16. Show/label all USACOE wetlands, WOUS, 100-yr F/P, BW, RPA's.

- \_\_\_ 17. Dimension 10' building setback off the 100-yr F/P, 100-yr BW, wetlands/WOUS and RPA, whichever is most restrictive.
- \_\_\_ 18. Show Dimensioned Building Envelopes (DBE) where critical, as determined by the Department of Public Works.
- \_\_\_ 19. Indicate proposed and existing lakes and ponds on-site and in vicinity of projects. (NOTE: Separate detailed plans are to be submitted for all such structures).
- \_\_\_ 20. Easements (in Plan View) must be stationed in such a manner as to coordinate with profiles.
- \_\_\_ 21. Match lines must be shown with any overlap distinguished by dotting such overlap.
- \_\_\_ 22. Cut and fill construction limits must be shown.
- \_\_\_ 23. Table of Estimated Quantities (including breakdown for stone, asphalt, C&G, sidewalk, drainage pipe, etc.).

**ADDITIONAL COMMENTS:**

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**Design Requirements:**

- \_\_\_ 1. Have zoning conditions been satisfactorily addressed in construction plans.
- \_\_\_ 2. Have preliminary plan conditions been satisfactorily addressed in the construction plans.
  - \_\_\_ a. Does the construction plan road/lot/site layout and RPA limits match the approved preliminary plan.
- \_\_\_ 3. Has a site inspection been made to “field truth” existing conditions as shown in the construction plans.
  - \_\_\_ a. Do road beds or other features exist which should be graded/restored to surrounding ground elevation.
    - \_\_\_ 1. Earmark lots with NBP
- \_\_\_ 4. Are natural drainage ways (unencumbered by wetlands/WOUS) adequate conveyance systems which should have 10' Building Setback Limit (BSL) dimensioned.
  - \_\_\_ a. Specify that they are to remain in a natural state undisturbed.

- \_\_\_ 5. Does existing drainage flow pattern conflict with building envelope.
- \_\_\_ a. Has a contoured grading and drainage plan been provided.
  - \_\_\_ b. Earmark site or lots with NBP<sub>(grading)</sub>
  - \_\_\_ c. Dimension a Building Envelope 10' off the top of bank of drainage way.
- \_\_\_ 6. Has an approvable road design for sag conditions per VDOT Standards been provided a minimum 300' into adjacent property/future sections in plan and profile.
- \_\_\_ a. Utility Easements and Temporary Construction Easement's (TCE's) for fill slopes outside ROW.
- \_\_\_ 7. Are utility easements and/or improvements necessary to guarantee upstream off-site areas a permanent conveyance thru on-site development.
- \_\_\_ 8. Are proposed road fill slopes beyond the limits of ROW enclosed in utility easements.
- \_\_\_ a. Minimum 10' TCE's within lots adjacent to future road extensions.
- \_\_\_ 9. Top of curb elevations must be shown at the nose of all radial curb and at all appreciable breaks in horizontal or vertical alignment.
- \_\_\_ a. The radius of all radial curbing must be shown
- \_\_\_ 10. Dry gutter is required where runoff flows away from the face of curb. These areas must be cross-hatched and a detail provided on the plan for construction of dry gutter. Dry Gutter is **not allowed** within City ROW.
- \_\_\_ a. The symbol used for dry gutter in plan view must be shown on or adjacent to the detail for its construction.
- \_\_\_ 11. A detail must be shown on the plan which demonstrates the ability to obtain a minimum of 2' of horizontal backfill behind the curbing and drop inlets prior to beginning a back slope which cannot exceed 3:1 without encroaching onto any adjacent property. The detail must be to scale.
- \_\_\_ 12. The finished floor elevation of all structures must be shown.
- \_\_\_ 13. Bituminous curbing (Std. MC-3A) is required along the edge of pavement separating different phases of the project.
- \_\_\_ 14. A pavement design is required for all paved areas.

\_\_\_ 15. Does lot drainage cross more than 2 lots. If so, generally follow the guidelines below:

\_\_\_ a. Specify grass side yard swales (5:1 SS @ 12" depth) minimum 1% slope including a profile or spot flow line elevations.

\_\_\_ b. Dimension side yard swale 5' off the property line on the upstream side of downstream lot.

\_\_\_ c. Grass yard swales across multiple lots to be enclosed in minimum 16' utility easement to ensure permanent conveyance.

\_\_\_ d. Earmark lots requiring grass side yard swales with NBP (No Building Permit)

\_\_\_ e. Provide a 6" vertical opening with a 2' concrete gutter in the back of DI's within the ROW where available to intercept side yard swales.

\_\_\_ 16. To assure positive lot drainage, do Minimum Crawl Space Elevations (MCSE) need to be specified a minimum 1' above original ground.

\_\_\_ a. Provide typical MCSE detail.

\_\_\_ 17. Do the 100-yr calculations submitted show that the backwater elevation is at or below the 100-yr floodplain upstream/offsite.

\_\_\_ a. If the proposed 100-yr elevation is higher, a 100-yr backwater easement or revised floodplain limits must be recorded.

\_\_\_ 18. Does proposed grading activity establish limits of 100-yr floodplain or backwater.

\_\_\_ a. Has filling in the 100-yr FP to achieve a building envelope been proposed – **it is prohibited.**

\_\_\_ b. Have the 100-yr FP limits been shown to verify that proposed filling is only to enlarge building envelopes, by separate submittal.

\_\_\_ c. Limits must be certified by a licensed professional prior to the release of the Building Permit and so stated in the plans.

\_\_\_ 19. Could proposed building envelopes be impacted by a dam failure during the 100-yr storm event.

\_\_\_ a. Specify MFF(DF) elevation 1' above dam failure.

\_\_\_ b. Show Dimensioned Building Envelope (DBE) outside dam failure limits.

**Parking spaces, handicapped requirements and Entrances:**

- \_\_\_ 1. Have all CG-12 handicapped ramps been shown with truncated domes (yellow)
- \_\_\_ 2. Have handicapped ramps been shown at all intersections and entrances to proposed commercial buildings.
- \_\_\_ 3. Have sidewalks/ramps been shown adjacent to proposed handicapped parking spaces.
- \_\_\_ 4. The minimum dimensions for 60 degree angled parking spaces must be 19' x 9' (TYP).
- \_\_\_ 5. The minimum dimensions for 90 deg parking spaces must be 18' x 9' (TYP)
- \_\_\_ 6. The min. dimensions for handicapped parking spaces must be 18' x 8' (TYP)
- \_\_\_ 7. Have the adequate number of handicapped parking spaces been provided.
- \_\_\_ 8. Have at least one van accessible sign and space been provided.
- \_\_\_ 9. Have the dimensions for the dumpster pad been shown along with required screening (fencing)
- \_\_\_ 10. Have bumper blocks been provided on all parking spaces that are directly adjacent to sidewalks.
  - \_\_\_ a. If bumper blocks are not provided, then a minimum 2' grass strip must be added between the curb and sidewalk, or the width of the proposed sidewalk must be increased to 7'.
- \_\_\_ 11. Have sidewalks been shown connecting parking lots or adjoining sites.
- \_\_\_ 12. Are shared entrances shown with ingress/egress easements to adjoining sites.
- \_\_\_ 13. Fencing shown on the plans above proposed/existing retaining wall higher than 30" above ground elevation must provide fencing detail. Coordinate the type of fencing and all code requirements with Bernie Murrell, Building Official at 804-520-9298.
- \_\_\_ 14. The maximum allowable grade for a subdivision/commercial entrance in the first 25 feet, starting 14' back from EP on intersecting road, should be no more than 3%.
  - \_\_\_ a. The maximum allowable grade for the next 40 feet should be no more than 6%.

ADDITIONAL COMMENTS:

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**Profile Sheet(s) shall contain the following information:**

- \_\_\_ 1. Existing centerline profiles and stations must be shown on all proposed streets, storm sewers, stream relocations, outfall ditches (to existing streams, and on drainage ditches to include location and elevation of utility crossings).
- \_\_\_ 2. Offset profiles of existing ground should be shown to the right and left of centerline at the right of way line – include legend.
- \_\_\_ 3. The finished grade line of all streets must show and include:
  - \_\_\_ a. Show complete street curve data to include the following stationing (VPC, VPI, VPT), elevations (VPC, VPI, VPT), L, K, A, R, Delta, Chord Distance, and Chord Bearing.
  - \_\_\_ b. Percent of grade
- \_\_\_ 4. Stations shown on profile must agree with stations shown on plan. Stations must progress in the same direction on both plan and profile.
  - \_\_\_ a. Does stationing ascend from left to right.
- \_\_\_ 5. When proposed and existing streets intersect, indicate existing conditions for 600 feet in each direction. This is to include location and direction of roadside drainage, any culverts to include inverts, etc.
- \_\_\_ 6. Show existing/proposed profiles 300 feet beyond construction limits of roads that stub into adjacent properties or future sections.
- \_\_\_ 7. Show proposed culverts and/or storm sewer crossings at the proper location and grade.
- \_\_\_ 8. Each storm sewer system should be shown in its entirety to include, at a minimum, the following information: (including Structure number)
  - \_\_\_ a. Percent of grade and length
  - \_\_\_ b. Size and material
  - \_\_\_ c. Show catch basins, inlets, etc. with proposed elevation for tops and inverts.
  - \_\_\_ d. Show existing and proposed ground surface over centerline of system.

- \_\_\_\_\_ e. Existing/Proposed utilities passing perpendicular to the system or sharing a common easement ( to include outer elevation)
- \_\_\_\_\_ 9. Open channels must include, at a minimum, the following:
  - \_\_\_\_\_ a. Percent of grade
  - \_\_\_\_\_ b. Centerline profile
  - \_\_\_\_\_ c. Existing ground profiles at centerline and easement edge.
  - \_\_\_\_\_ d. Typical section showing 10-year design depth, side slopes, lining, and pertinent hydraulic data.
- \_\_\_\_\_ 10. Provide a legend for existing and proposed structures, existing and proposed ground and pavement profile, other utilities, etc.

ADDITIONAL COMMENTS:

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**Utility Plan Sheet(s) shall contain the following information:**

- \_\_\_\_\_ 1. The utility plan must include an overall plan of the water and waste water layout, including any phasing of the development.
- \_\_\_\_\_ 2. Indicate all proposed and existing rights-of-way widths, all property lines and property markers (stones, rods, pins, pipes, monuments, etc.), proper labeling of subdivisions (lot numbers, block, subdivision boundaries, etc.), easements (including DB/PG#), all street names, and existing State route numbers, if applicable.
- \_\_\_\_\_ 3. Adjacent property owners names, GPIN's/Tax ID's and lot lines must be shown.
- \_\_\_\_\_ 4. Have municipal, subdivision and/or drainage area boundaries been shown.
- \_\_\_\_\_ 5. Indicate the location and width of all proposed and existing sidewalks and entrances.
- \_\_\_\_\_ 6. Indicate centerline stations at 100' intervals and at all other strategic points, i.e. drainage structuring, utilities, etc. and intersection of streets.
  - \_\_\_\_\_ a. Does stationing ascend from left to right.
- \_\_\_\_\_ 7. Match lines must be shown with any overlap distinguished by dotting such overlap.
- \_\_\_\_\_ 8. Indicate direction of North on each sheet.

- \_\_\_ 9. Indicate with arrows, the direction of flow in utilities, subsurface drains, streams, minimum finished floors, etc.
- \_\_\_ 10. The horizontal and vertical scale must be shown on each sheet (the scale should be the same on plan and profile)
- \_\_\_ a. Vertical scale should be 1" = 5' or 1" = 10'
  - \_\_\_ b. Horizontal scale must be 1"=50'.
- \_\_\_ 11. Scaled drawings must be accurate to within +/- 2% for vertical and horizontal scales.
- \_\_\_ 12. Easements must be stationed in such a manner as to coordinate with profiles.
- \_\_\_ 13. Are existing water and/or wastewater lines properly labeled with size.
- \_\_\_ a. Are horizontal and vertical distances referenced on the plan.
  - \_\_\_ b. Are reference distances from right of way, boundaries, buildings, other utility lines, etc. shown.
- \_\_\_ 14. Is the alignment of utilities in the right of way consistent with City guidelines.
- \_\_\_ a. Have the lines been shown 4' from face of curb or 2' off pavement where there is a ditch.
- \_\_\_ 15. Do all water and waste water designs conform to the latest City, State and Federal regulations or standards. (at a minimum, reference has been made to City Standard specifications and details)
- \_\_\_ 16. When proposed and existing streets intersect, indicate existing conditions for 600 feet in each direction. This is to include width of pavement, right of way, any culverts to include inverts, utilities, etc.
- \_\_\_ 17. Are the locations of existing homes, buildings, fences, wells and other structures shown on the plans. In lawn or kept areas, trees and shrubs in the easements are shown (size and type).
- \_\_\_ 18. Have detailed drawings been provided for all stream crossings and storm sewer outlets, with elevations of the stream bed, the 100 year flood elevation, and normal water elevation shown/labeled.
- \_\_\_ 19. Have pavement boring details, etc. been shown on the plans.
- \_\_\_ 20. Have plans been submitted to State Health Department for review and approval where applicable. A copy of transmittal letter and approval must be provided.

\_\_\_\_ 21. Show all cut and fill areas within the limits of the existing and proposed waste water and/or water lines.

\_\_\_\_ 22. Has a Table of Estimated Quantities been provided (including breakdown of types of pipe).

\_\_\_\_ 23. Are any adjacent road, drainage, and/or utility projects shown - **REQUIRED**.

\_\_\_\_ 24. Has consideration been given to areas where roads and drainage structures may be lowered in the future.

\_\_\_\_ 25. If a horizontal bore is shown, provide the following information, bore location, length of bore, pit location (average 8' x 35'). Information must be shown in relation to all existing and/or proposed utilities on plan and profile.

\_\_\_\_ 26. Are the locations of special features (concrete encasement, riprap stabilization at creek crossings, clay dams, etc.) shown on the plans.

\_\_\_\_ 27. Have the necessary easement plats on-site and/or off-site been submitted for processing. Plats concur with Exhibit A at the end of checklist.

ADDITIONAL COMMENTS:

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**Utility Plan-Design Requirements:**

\_\_\_\_ 1. Have zoning conditions been satisfactorily addressed in the construction plans.

\_\_\_\_ 2. Have preliminary plan conditions been satisfactorily addressed in the construction plans.

\_\_\_\_ 3. Have existing and proposed storm sewer lines, gas, telephone, power, and other utility lines, which cross or run parallel to the waste water or water lines, been shown with exact horizontal and vertical separations given. Subsurface exploration must be performed where potential conflicts exist, where applicable.

\_\_\_\_ 4. Does the plan show all fire hydrants, meter settings, blow-offs, manholes, tees, bends, valves, reducers, etc. Has each appurtenance been properly labeled, including pipe sizes.

\_\_\_ a. The location of fire hydrants will be coordinated with the Fire Department by the Department of Public Works. Fire hydrant locations must comply with design guidelines.

\_\_\_ 5. Have waste water pipes, manholes, clean-outs, tees, bends, grinder pumps, flushing connections, etc. been labeled with size, grade, length, direction of flow, and type & class of pipes (with backup calculations on the type & class pipe needed, where applicable).

\_\_\_ 6. Have solid lines been used to show proposed water and waste water, short dashed lines to show existing water and waste water and labeled future water and waste water or portions covered under other phases of construction.

\_\_\_ 7. Indicate the location and dimensions of all water and waster water service connections.

\_\_\_ 8. Have conflicts with storm sewers and other utility lines been shown with appropriate design changes.

\_\_\_ a. Are ditch lines shown on the plan.

\_\_\_ b. Have temporary and/or permanent silt basins been shown.

\_\_\_ 1. Have the waste water lines and manholes been designed around these structures.

\_\_\_ 9. Have water line/waste water stubs for future extensions been designed to be installed beyond the edge of pavement.

\_\_\_ 10. Have calculations been checked for accuracy.

\_\_\_ 11. Do clay dams or other acceptable designs need to be shown at appropriate locations to avoid water from creeks and/or lakes being diverted along pipe bedding.

\_\_\_ 12. Received confirmation that the engineer has contacted Virginia Power/Columbia Gas/Verizon/etc. to obtain exact location of utility lines and received as-built information.

ADDITIONAL COMMENTS:

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**Water:**

- \_\_\_ 1. Has the water system been designed in accordance with available pressures/  
have fire flow and pressure calculations been provided, in accordance with  
Appendix 14.
- \_\_\_ 2. Have water services been shown in accordance with the design standards.
  - \_\_\_ a. Are water meter boxes shown at the edge of the right of way, outside of  
non-vehicular traveled areas. Where it is not possible to locate the boxes out of  
the driveways, and/or vehicular traveled area, a cast iron box is specified.
- \_\_\_ 3. Does the plan show all connections to existing subdivision mains, etc.
  - \_\_\_ a. For water line tie-ins, the plans must show the valve to be used for cut off  
during the tie-in.
- \_\_\_ 4. Have fire hydrants and air relief valves been shown on plan and profile.
  - \_\_\_ a. Have hydrants or blow-off valves been designed at major low places in  
the line where possible
  - \_\_\_ b. Have air release valves been designed at high points in the line where  
possible.
  - \_\_\_ c. Have blow off devices (flushing hydrants) or hydrants been designed at  
the end of all lines in cul-de-sacs.
    - \_\_\_ 1. Locations of hydrants must comply with guidelines outlined in  
design standards.
- \_\_\_ 5. Knockdown meter box shall not be located within any travel areas.

**ADDITIONAL COMMENTS:**

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**Waste Water:**

- \_\_\_ 1. Has a sewerage drainage area map with hydraulic analysis been included in  
plans.
- \_\_\_ 2. Have minimum finished floor elevations and basement elevations been shown on  
plans, where applicable.

\_\_\_\_ 3. Received confirmation that the engineer has field verified the inverts of the existing manhole(s). Where invert elevations are different from the as-built plans, the engineer has verified his survey work and notified the Department of Public Works of the discrepancy.

\_\_\_\_ 4. Have manholes been labeled with top and invert elevations; coordinates; and locations, size and inverts of drop stacks.

\_\_\_\_ a. Have manholes been designed to an elevation above the 100 year flood plain elevation as set forth in the design standards.

\_\_\_\_ b. Have deflection angles at all manholes or bearings of all lines been shown and labeled on the plans.

\_\_\_\_ 5. Have manholes in easements been referenced.

\_\_\_\_ 6. Does ground coverage over waste water pipes meet minimum criteria.

\_\_\_\_ 7. Are there buildings where the finished floor elevation of the building is below the top elevation of the nearest upgrade manhole from the building connection, as well as on any irrigation meter.

\_\_\_\_ a. Provide notation that a backwater/check valve is to be used at each location.

\_\_\_\_ 8. Has a minimum of ten (10) feet horizontal separation been maintained between waste water lines, waste water laterals and water meters or water blow off devices (flushing hydrants) and between waste water lines and storm drainage structures.

\_\_\_\_ 9. Are pipes between manholes of like material and class.

\_\_\_\_ 10. Have existing waste water laterals been shown on the plans, with station, length and depth.

\_\_\_\_ 11. Have waste water lines been designed with the entry into the manhole by the proposed waste water lines at an angle of 90° or greater to the downstream line, or if an exception has been granted, the engineer has increased the drop through the manhole to compensate for the reduced angle and has provided a blowup detail for the appropriate invert shaping that achieves the same results as a 90° or greater entry.

\_\_\_ 12. Whenever connecting waste water laterals to an existing waste water line, has proper notation been put on the plans that "the contractor must use a mechanical hole cutter when tapping the existing waste water line and that an approved saddle shall be used" and the appropriate lots affected by this have been identified in the note.

\_\_\_ 13. Where new manholes are proposed over existing lines, have distances from the new manhole to the two existing manholes been shown; inverts of the manhole and each existing manhole are shown; slope of existing line from new manhole to upstream and downstream existing manholes been shown.

\_\_\_ 14. Have manholes that are proposed within areas where vehicles travel been located either on center line of road or center of traveling lane.

\_\_\_ 15. Has the engineer provided the manhole number, as directed by DPW, and the City project number associated with the existing manhole.

\_\_\_ 16. Have minimum finish floor (sewer) elevations been specified.

\_\_\_ 17. Provide a note on the plans stating that the 6" waste water laterals are to be installed at 1% grade (min.).

\_\_\_ 18. Provide the invert elevation of the Clean Out at the ROW line for each lateral.

\_\_\_ 19. Sampling manholes are required for new facilities currently regulated by local or federal industrial waste pretreatment laws. Examples of these commercial facilities include, but are not limited to, restaurants, carwashes, auto repair shops, and Laundromats. Appropriate measures have been included in the design to allow for sampling of industrial waste. A sampling manhole shall be provided at the property line to facilitate random 24-hour composite sampling. In those cases where a private manhole on-site can be utilized for this function, adequate provisions will be agreed upon to facilitate sampling. Provisions include ingress/egress to the private manhole, ability to sample, and adequate space to set a 24-hour composite sampler.

ADDITIONAL COMMENTS:

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**Utility Profile Sheet(s) shall contain the following information:**

\_\_\_ 1. Proposed, existing, and original ground elevations are shown.

- \_\_\_ 2. Existing centerline profiles and stations must be shown on all utilities (water and waste water).
- \_\_\_ 3. Stations shown on profile must agree with stations shown on plan. Stations must progress in the same direction on both plan and profile.
- \_\_\_ a. Does stationing ascend from left to right.
- \_\_\_ 4. Show proposed water and waste water crossings at the proper location and grade, as well as culvert or storm sewer crossings.
- \_\_\_ 5. Each utility system (water and waste water) should be shown in its entirety to include, as a minimum, the following information: (including Structure number)
- \_\_\_ a. Percent of grade and length
- \_\_\_ b. Size and material
- \_\_\_ c. Show valve, T's, meters, blow offs, hydrants, manholes, clean-outs, tees, bends, grinder pumps, flushing connections, etc. with proposed elevation for tops/inverts.
- \_\_\_ d. Show existing and proposed ground surface over centerline of system.
- \_\_\_ e. Existing/Proposed drainage improvements passing perpendicular to the system or sharing a common easement ( to include outer elevation)
- \_\_\_ 6. Where waste water lines are in excess of 12' deep, the location of the waste water lateral has been identified and must be installed in accordance with the standard details and the appropriate notes are reflected on the plans.
- \_\_\_ 7. All "%" slopes are divisible by 4 to the nearest hundredth, where possible.
- \_\_\_ 8. Greater than 0.4% minimum slope has been used whenever possible.
- \_\_\_ 9. Has a legend been provided for waste water and water lines, other utilities and structures existing and proposed ground and pavement profile.
- \_\_\_ 10. Do the crowns of all waste water lines enter the manholes at crown's level or higher as specified in the design standards.
- \_\_\_ 11. Has a minimum of eighteen (18) inches of vertical clearance been designed and provided at all crossings of other utilities, or as specified by other utility agencies, or otherwise approved by the Department of Public Works.
- \_\_\_ 12. Do all water lines have a minimum cover of 3.5'.
- \_\_\_ 13. Has the depth of any ditch(es) been shown on the profile.

ADDITIONAL COMMENTS:

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**Hydrology:**

Include the following note in the review comments for all Construction Plans:

**It is acceptable but not advisable to show hydrological and hydraulic calculations on the plans. A revision to the calculations can be handled by separate submittal when they are not shown on the construction plans. When they are shown on the plans, a complete resubmittal of the plans to the Department of Public Works is required.**

- \_\_\_ 1. Rational Method limited to maximum 200 acres
  - \_\_\_ a. 1.25 Saturation factor used for 100-yr storm calculations.
  - \_\_\_ b. OLF length does not exceed 200 feet
  - \_\_\_ c. flow path shown/labeled
- \_\_\_ 2. TR-55 method used for areas exceeding 200 acres
- \_\_\_ 3. Are runoff coefficients, CN's, Tc's and drainage areas acceptable.

ADDITIONAL COMMENTS:

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**Hydraulics:**

- \_\_\_ 1. Culverts, storm sewer and open channels designed to minimum 10 year criteria:
  - \_\_\_ a. 10-yr flow less than pipe capacity.
  - \_\_\_ b. 10-yr HW/D < 1 for private entrance culverts within ROW
  - \_\_\_ c. All calculations submitted on standard VDOT forms
  - \_\_\_ d. All pipes are Class III RCP at a minimum.
  - \_\_\_ e. Dimensioned channel section with 10-yr lining depth, side slopes, bottom width specified/shown in plan/profile
  - \_\_\_ f. Open channel slopes < 0.75% shall be paved.
  - \_\_\_ g. Open channel/Storm sewer minimum slope 0.2%
  - \_\_\_ h. Manhole steps required in structures 4 feet and greater in depth
  - \_\_\_ i. EC-1 or OP specified at beginning and ends of storm sewer/culverts

- \_\_\_\_ j. IS-1 restricted to pipe diameters < 30"
- \_\_\_\_ k. Pipe diameter > 30" shall qualify for 50% reduction in junction losses only if precast manhole tee's and elbows specified
- \_\_\_\_ l. First roadside ditch culvert adjacent to drainage break may be 12" RCP.
- \_\_\_\_ 2. Specify private/secondary RCP entrance culvert diameters and lengths on each lot.
  - \_\_\_\_ a. Minimum 20' length for private/secondary entrance culverts
- \_\_\_\_ 3. Open Channel:
  - \_\_\_\_ a. Riprap channels not acceptable in front or beside single-family homes unless further than 100' from homes or otherwise approved.
  - \_\_\_\_ b. Riprap channels can be used to rear of lots if no closer than 75' to homes.
  - \_\_\_\_ c. Where paved channels are steeper than 15%, anchor lugs are required every 10', C' – C'
  - \_\_\_\_ d. 8" vertical wall (freeboard) required along outside radius of paved ditches.
  - \_\_\_\_ e. In the absence of a detailed soils report, the maximum permissible velocity allowable on bare earth is 3.5 fps. Velocities between 3.5 fps and 4.0 fps require a jute lining and any velocities greater than 4.0 fps require a structural lining of either riprap or concrete.
  - \_\_\_\_ f. Open channel depths shall be less than 3', otherwise channels shall be piped.
- \_\_\_\_ 4. Riprap lining a minimum 24" thickness with geotextile fabric underlayment at a grade of 0%.
- \_\_\_\_ 5. Has 3 inlet configuration or CG-6 with concrete driveway aprons specified on cul-de-sac's intercepting upstream road runoff.
- \_\_\_\_ 6. Hydraulic grade line calculations are required to support the design of all proposed storm sewers. (10 & 100 year calculations)
- \_\_\_\_ 7. Culverts, storm sewer, and open channels analyzed for 10-yr property protection
  - \_\_\_\_ a. Are 10-yr contained within easements/ROW or 10-yr overflow limits shown.
  - \_\_\_\_ b. Are 100-yr backwater limits/elevations shown.

- \_\_\_ c. Do single point access roads and secondary entrance culverts pass the 100-yr storm without overtopping the road sag. Maximum 6" overtopping with second point access.
  - \_\_\_ d. Are 100-yr Floodplain limits shown along natural drainage ways.
  - \_\_\_ e. Are 100-yr Floodplain cross sections with elevations shown along floodplain limits.
  - \_\_\_ f. Are MFF elevations specified at lots 1' foot above 100-yr floodplain (FP) or backwater (BW) or road sag (SAG) elevations, whichever is greater.
  - \_\_\_ g. Where flatter topography exists, 100-yr floodplain limits must be field verified by licensed professional and so stated on the plans.
  - \_\_\_ h. Where flood proofing is required, a registered professional engineer or architect shall certify that the flood proofing methods are adequate to withstand the flood depths, pressures, velocities, impact and uplift forces and other factors associated with the base flood prior to approval of the building permit by the Department of Public Works.
- \_\_\_ 8. Headwalls/Endwalls are required for pipes 24" or larger, or multiple lines or when slopes exceed 15%.
- \_\_\_ 9. All roof water and down drains must be collected and discharged in a non-erodible manner.
- \_\_\_ 10. House/Yard/Roof drains must either connect at inlets or Boot connectors must be specified in the tabular drainage description for all plastic pipes that tie into a concrete structure. Provide a detail.
- \_\_\_ 11. DI-1 yard inlets required in city easements - horizontal grate/inlets not acceptable.
- \_\_\_ a. Specified minimum 2' concrete gutters
  - \_\_\_ b. Specified slot opening locations (N,E,W,S)
  - \_\_\_ c. DI-1 detail included in construction plan details
- \_\_\_ 12. For car washes, unless they are using a recycle system for the water, it must be connected to the waste water system.

ADDITIONAL COMMENTS:

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**Easement Plan:**

\_\_\_ 1. A separate plan sheet must be included which only shows all proposed easements and right of way to be dedicated. Metes and bounds must be provided.

\_\_\_ 2. Do the Type/Location of easements match location of all ingress/egress, utilities and basins on plan.

\_\_\_ 3. Are all public sanitary, storm, water, loop detection, sidewalk easements labeled as "Utility Easement"

\_\_\_ 4. Are Ingress/Egress Access Easements shown between adjoining properties and along any joint entrance roads

\_\_\_ 5. Are Utility easements for waterlines extended to include meters and fire hydrants

ADDITIONAL COMMENTS:

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**Pre and Post Drainage Area (General Topographic) Sheet(s) shall contain the following information:**

Include the following note in the review comments for all Site Plans:

**The department has not performed a review of those on-site drainage conveyance systems whose contributing drainage areas lie within the limits of the property and are not required to be enclosed in a city easement.**

\_\_\_ 1. The drainage area plan shall not be incorporated into the EC plan.

\_\_\_ 2. Show existing contours (maximum of five foot interval) to mean sea level datum (or lesser interval where deemed necessary by Department of Public Works).

\_\_\_ a. Numeric contour elevations clearly shown

\_\_\_ b. Contours clearly establish ridge lines

\_\_\_ 3. Show proposed and existing road right of way with road lanes, layout, property and lot lines; Residential and commercial buildings, parking lots, other physical features etc. (1"=50' or 100')

\_\_\_ 4. Show on contour map, the stations and lot numbers.

\_\_\_\_ 5. Indicate schematically, all proposed and existing drainage structures, channels, etc. showing structure numbers.

\_\_\_\_ 6. Indicate limits of drainage areas and the acreage of each area. When the off-site drainage area becomes larger than one hundred (100) acres, the limits of the area may be shown on a larger scale map (maximum 1"=2000') with a larger contour interval (maximum 10'). All drainage area maps must be scaled maps and completely contoured with contour elevation and part of the actual plan assembly. (not submitted separately)

\_\_\_\_ 7. Indicate limits of computed 100-yr flood plains, 100-yr BW, wetlands, RPA's/RCMA's and identify.

\_\_\_\_ 8. Use arrows to indicate direction of flow on all roads, ditches, pipes, rivers, etc.

ADDITIONAL COMMENTS:

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**Traffic Control Plan:**

\_\_\_\_ 1. Is temporary vehicle detection needed at the proposed entrance prior to construction activity commencing.

\_\_\_\_ 2. Are permanent vehicle detection loops and/or any modifications to existing loops shown.

\_\_\_\_ a. Are easements necessary.

\_\_\_\_ 3. Are traffic control boxes or wiring shown.

\_\_\_\_ a. Are any easements necessary

\_\_\_\_ 4. Are modifications to existing traffic signals and installation of overhead signage necessary at intersection or entrance, etc....

\_\_\_\_ 5. Are Traffic notes and details that are applicable to the required improvements and modifications to existing traffic signals/signage for this site.

\_\_\_\_ 6. Does a Larger scaled detailed drawing or inset need to be provided to better show pavement markings, signage or other traffic devices.

\_\_\_\_ 7. Have transitions been shown from proposed pavement markings to existing, such as transitions from proposed entrance gutters or E/P to existing white edge lines.

- \_\_\_ 8. Have directional arrows been shown on pavement for all turning lanes.
- \_\_\_ 9. Do proposed site entrances properly and safely address vehicular movement to and from site and through site.
  - \_\_\_ a. This needs to be addressed with signage and pavement markings.
- \_\_\_ 10. Are mini skip lines shown on any Dual turn lane.
- \_\_\_ 11. Does the proposed entrance or roadway align with other roads at an existing intersection/roadway. This **must** be shown on the plan.
- \_\_\_ 12. Entrance width shown f/c – f/c (14’-20’ one way or 30’-50’ two way)
- \_\_\_ 13. Have all existing pavement markings and traffic signal devices been shown.
- \_\_\_ 14. Have R1-1 stop signs and 24” stop bars been shown at all exits/ intersections.
- \_\_\_ 15. Has above ground signage been shown for handicapped spaces.

ADDITIONAL COMMENTS:

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**Lighting Plan:**

- \_\_\_ 1. Include project section sheet showing proposed streetlight locations, as per the streetlight policy.
  - \_\_\_ a. The location, type, and height of the luminaries, including all exterior lights, light poles, lighting under canopies, and lights attached to or directed towards building.
  - \_\_\_ b. A description of the luminaries, including lamps, poles or other supports, and shielding devices which may be provided as catalogue cut sheets from the manufacturer.
  - \_\_\_ c. A photometric plan over the site plan.
  - \_\_\_ d. Any required easements shown.
- \_\_\_ 2. Is the Ornamental light cabinet shown with a direct on/off switch.
- \_\_\_ 3. Do the plans show how the light cabinet will obtain electricity.
- \_\_\_ 4. Are the Ornamental light cabinets on 2’ minimum concrete pad.
- \_\_\_ 5. Is 2” conduit shown beneath entrance aprons within grass strip for future lighting.
- \_\_\_ 6. Do the plans show schematics for any proposed underground wiring.

ADDITIONAL COMMENTS:

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**Landscaping Plan:**

\_\_\_ 1. A ten-foot-wide landscape strip shall be provided along all property lines that abut public rights-of-way. For large lots, a five-foot wide landscape area also shall be provided between parking areas and public alleys.

\_\_\_ 2. Landscaping strips separating parking areas and adjacent property lines shall be required as follows:

\_\_\_ a. For small lots (<22,000 sq. ft.), a minimum of 2.5 feet.

\_\_\_ b. For large lots (>22,000 sq. ft.), a minimum of five feet. In addition, between parking areas and buildings, there shall be a minimum of 10 feet to allow for a five-foot wide sidewalk and a five-foot wide landscape area immediately adjacent to the building.

\_\_\_ 3. All proposed dumpster locations and SWM/BMP facilities shall be screened by plantings in addition to any required board fence screening or fencing necessitated for safety issues. The type, size and spacing of plantings shall be the same as that screening required for parking areas.

\_\_\_ 4. Parking areas screened.

\_\_\_ a. Parking areas of a small lot shall be landscaped from adjoining public rights-of-way.

\_\_\_ b. Parking areas of a large lot shall be landscaped from adjacent properties and public rights-of-way.

\_\_\_ c. Parking areas shall be screened by the use of appropriate plantings for year-round coverage (e.g., evergreens) and shall be a minimum mature height of 3.5 feet, except where traffic safety concerns regarding sight distance are present.

\_\_\_ d. The preferred shrub species to be used to fulfill this requirement shall include, but not be limited to, Upright Yew, Winterberry (a.k.a. Northern Bayberry), Sentinel Japanese, Buford Chinese, or Nellie R. Stevens Holly, Hetz Juniper, Glossy Privet, Autumn Eleagnus, Red Photinia.

\_\_\_\_ 5. Trees required along property lines.

\_\_\_\_ a. For a small lot, a minimum of one tree shall be provided for every 50 feet of the property line, or part thereof, that abuts public rights-of-way; i.e., 60 feet of property line requires two trees.

\_\_\_\_ b. For a large lot, a minimum of one tree shall be provided for every 50 feet of all property lines, or part thereof; i.e., 60 feet of property line requires two trees.

\_\_\_\_ c. The placement of trees shall be evenly spaced and/or coordinated with existing conditions and proposed improvements as provided herein and shall be in addition to any other screening that may be required. Each tree shall be located in the landscape strip provided by the above-mentioned requirements.

\_\_\_\_ 1. The preferred tree species to be used to fulfill this requirement shall include, but not be limited to, Eastern Red Bud, Crepe Myrtle, Pear (any variety), Dogwood, Yoshino or Kwanzan Cherry, Golden Rain Tree.

\_\_\_\_ 6. Interior parking lot landscaping.

\_\_\_\_ a. Interior parking lot landscaping shall be provided by the use of raised, curbed, landscaped islands and areas, and, for a large lot, also at each end of an aisle of parking. A maximum of 15 parking spaces uninterrupted by a landscape island is permitted. Landscape islands separating parking spaces shall be:

\_\_\_\_ 1. For small lots, a minimum of five feet wide by 18 feet deep with rounded ends; and

\_\_\_\_ 2. For large lots, a minimum of eight feet wide by 18 feet deep with rounded ends.

\_\_\_\_ b. One shade tree shall be required for every 10 parking spaces. The tree shall be planted within the interior of the parking lot and in one of the islands provided, either the end and/or middle of a parking row. Trees planted along the property line boundaries do not count toward fulfilling this requirement.

\_\_\_\_ 1. The preferred tree species to be used shall include, but not be limited to, Maples (excluding Red, Silver, or Norway), Thornless Honeylocust, Autumn Purple Ash, Oak (Northern Red, Scarlet, or Swamp Chestnut), Littleleaf Linden, Green Ash, Golden Rain Tree, Pear (any variety).

\_\_\_\_ c. Redevelopment of existing parking lots. Interior parking lot islands, perimeter landscaping and other landscaping required in this section shall be installed at the time existing parking lots are redeveloped as part of a new plan of development.

\_\_\_\_ 1. If minimum off-street parking standards cannot be met, interior and perimeter landscaping areas that were formerly parking spaces can be counted as part of the minimum parking space requirements

\_\_\_\_ 7. Minimum size of plantings:

\_\_\_\_ a. The following sizes shall be used as the minimum installation size for the different plantings proposed on the landscape plan:

\_\_\_\_ 1. Evergreen trees: five feet tall at time of planting, measured from the finished grade.

\_\_\_\_ 2. Deciduous trees: two-and-five-tenths-inch caliper.

\_\_\_\_ 3. Screening shrubs: two feet tall, measured from the finished grade.

\_\_\_\_ 4. Screening shrubs shall be spaced to provide 70% capacity within three years.

\_\_\_\_ 8. Plantings selection:

\_\_\_\_ a. Species with potential nuisances, such as roots, seed pods, fruit, etc., should be avoided.

\_\_\_\_ b. When more than five trees are required to be planted on a site, no more than 50% of those trees shall be of one species.

\_\_\_\_ c. When more than 25 trees are required, no more than 25% of the required trees shall be of a single species.

\_\_\_\_ d. No trees will be allowed in any proposed public easements utilized for utilities.





**6.1.4 - Personnel Training on Pollution Prevention Measures**

Instructions: Record below the names of the employees trained during this evaluation year and the dates trained. 25% of required employees must be trained each evaluation year.			
Date	Employee Name	BMP Resource Number	Certification Affirmation <i>(by signing below I am affirming that I have undergone the training noted on the date assigned)</i>
5/5/2016	Michael West	APWA - Stormwater I, II, III, IV	
5/5/2016	Daniel Kanusek	APWA - Stormwater I, II, III	
5/5/2016	Theodore Berberich	APWA - Stormwater I, II, III, IV	
5/5/2016	Brandon Owen	APWA - Stormwater I, II, III	
5/5/2016	Todd Flippen	APWA - Stormwater II, III	



# Meeting Initiation Checklist



**Project Name** (where applicable):

**Facilitator:**

**Meeting Date:**

Background				
Reason for meeting:				
Objectives				
	Yes	No	N/A	Explain if applicable:
Did <i>a priori</i> meeting objectives exist?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Did these objectives change throughout the course of the meeting?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were the objectives of the meeting prioritized?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Have action items been associated to these objectives?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<i>If yes, explain under Action section, below.</i>
Constraint(s)				
	Yes	No	N/A	Comments
Do the objectives/action items have time limits or deadlines attached to them?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Have interdependencies between other projects or continuing objectives been identified?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Have community constraints been identified?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Have administrative constraints been identified?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Meeting Deliverables				
	Yes	No	N/A	Comments
Were deliverables defined during the meeting?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Has acceptance criteria been established for each deliverable?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Implementation Estimates				
	Yes	No	N/A	Comments
Proposed start date of action items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Proposed end date	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

**Actions:**

Use this section to identify the meeting's action items and to assign an action item ID, if applicable.

ID	Action Item	Assigned To	Due By

**Attendants:**

Name: \_\_\_\_\_ Department: \_\_\_\_\_ Date: \_\_/\_\_/\_\_

**CITY OF COLONIAL HEIGHTS  
DEPARTMENT OF PUBLIC WORKS  
OPERATION AND MAINTENANCE INSPECTION RECORD**

1. A licensed professional engineer must conduct all inspections utilizing the approved construction plans.
2. As a minimum, all items must be inspected and any discrepancies and necessary repairs noted. Include estimated cost of necessary repairs or actions.
3. Upon completion of the inspection, one (1) copy, indicating estimated completion date and cost of noted discrepancies and repairs, is to be forwarded by the inspection firm to the: City of Colonial Heights, Department of Public Works, Attn: SWM/BMP Inspection Report, P. O. Box 3401 Colonial Heights, VA 23834. The original form must be forwarded to the owner of the facility.
4. The facility owner's representative must indicate on the original form the actual completion date and actual cost of acquired repairs, after which the facility owner must sign and return one (1) copy of the form to the: City of Colonial Heights, Department of Public Works, Attn: SWM/BMP Inspection Report, P.O. Box 3401 Colonial Heights, VA 23834.

<b>Name of Project:</b>			<b>Location Project:</b>		
<b>Owner of Facility:</b>			<b>Date of Inspection:</b>		
Inspection Item	Acceptable?		N/A	If Not Acceptable Describe Repairs Needed	Estimated Cost of Repairs
	Yes	No			
<b>I. DAM / EMBANKMENT</b>					
<b>A. Vegetation</b>					
1.) Trees					
2.) Bare Spots					
<b>B. Settlement/Stabilization</b>					
1.) Cracks					
2.) Depressions					
3.) Erosion					
<b>C. Rodent/Wildlife Damage</b>					
<b>D. Evidence of seepage</b>					
<b>E. Bridges</b>					
<b>II. PRINCIPAL SPILLWAY</b>					
<b>A. Obstructions in Spillway</b>					
<b>B. Inlet and Outlet Structures</b>					
1.) Signs of seepage					
2.) Separation of joints					
3.) Cracks, Breaks, or Deterioration of Concrete					
4.) Differential Settlement					
5.) Undermining					

**Name of Project:**

Inspection Item	Acceptable?		N/A	If Not Acceptable Describe Repairs Needed	Estimated Cost of Repairs
	Yes	No			
<b>II. PRINCIPAL SPILLWAY (cont'd)</b>					
<b>C. Settlement Buildup</b>					
<b>D. Scour at Inlet</b>					
<b>E. Riser and Trash Rack</b>					
1.) Vertical Position					
2.) Securely Attached					
3.) Stone Cone Functional					
4.) Low Flow Perforations Functional					
5.) No Accumulated Debris					
<b>III. GATES OR VALVES</b>					
<b>A. Fully Functional</b>					
<b>B. No Rust Damage</b>					
<b>C. No Evidence of Leaking</b>					
<b>VI. RESERVOIR AREA</b>					
<b>A. Inlet Structures</b>					
1.) No Erosion					
2.) No Settlement					
3.) No Undermining					
4.) No Silt Buildup in Forebays					
<b>B. No Silt Buildup in Entire Basin</b>					
<b>C. Wet Volume per Design</b>					
<b>V. LOW FLOW CHANNELS</b>					
<b>A. No Sediment Buildup</b>					
<b>B. No Accumulated Debris</b>					
<b>C. No Undermining</b>					
<b>D. No Other Damage of Deterioration</b>					
<b>VI. WETLAND GRASSES</b>					
<b>A. If Required by Plan, Present Where So Required</b>					

**Name of Project:**

Inspection Item	Acceptable?		N/A	If Not Acceptable Describe Repairs Needed	Estimated Cost of Repairs
	Yes	No			
<b>II. FENCES</b>					
<b>A. Posts in Place and Secure</b>					
<b>B. Fencing in Place and Secure</b>					
<b>C. No Accumulated Debris</b>					
<b>D. Access Gate Functions</b>					
<b>E. Vegetative Barriers in Place</b>					

**Note Any Other Discrepancies Observed and Necessary Repairs (attach separate page if necessary). Attach Pictures of Condition at**

**Time of Inspection.**

\_\_\_\_\_

\_\_\_\_\_

<b>Estimate Repairs Completion Date:</b>	_____	<b>Total Estimated Cost of All Repairs:</b>	_____
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**The Professional Engineer's Information:**

Inspection Conducted by: \_\_\_\_\_ P.E.

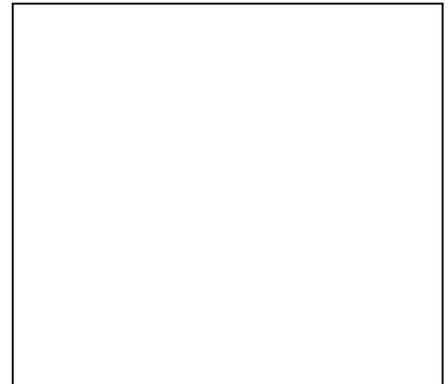
Firm: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Phone: \_\_\_\_\_



**Place signed, Professional Stamp Here**

Signature of P.E.

Performing the Inspection: \_\_\_\_\_

**Facility Owner Information:**

Owner's Representative: \_\_\_\_\_

Representative's Title: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Phone: \_\_\_\_\_

**ACTUAL DATE ALL REPAIRS COMPLETED:**

\_\_\_\_\_

**ACTUAL TOTAL COST OF ALL REPAIRS**

\_\_\_\_\_

**\*Attach pictures of completed repairs\***

**Representative's Signature:** \_\_\_\_\_

# Maintaining Your BMP



Stormwater Management ▪ Department of Public Works ▪ City of Colonial Heights

BMPs, or Best Management Practices, are facilities designed to reduce the impacts of pollutants and increased stormwater, caused by development, on local streams. They are an essential part of a region's efforts to restore aquatic habitats in, and protect the health of, its waters. However, BMPs will fail if not properly maintained. Once a BMP fails, it will no longer perform its intended functions and is often very expensive to replace. The following is information that will help you maintain your BMP and potentially avoid expensive long-term repairs.

## Which type of BMP do you have?

BMPs exist in several types and various sizes. **Dry ponds** retain water for a specified period of time (usually 48 hours) after a storm. **Infiltration trenches** are gravel-filled excavations that temporarily store stormwater and allow it to slowly sink into the underlying soil. **Wet ponds** contain a permanent pool of water much like a lake. **Grassed swales** are earthen, hill-like conveyance systems designed to simply transfer runoff to areas that will allow stormwater to soak into the soil where particles are trapped by the groundcover. **Sand filtration systems** (sand filters) are used to treat runoff from highly impervious areas like paved parking lots and high density residential areas, usually constructed inside a concrete shell and placed underground. **Bioretention facilities**, or rain gardens as they are often called, are basins designed to mimic the conditions found on a mature forest floor by being planted with specific types of vegetation, some of which are selected because of their ability to hold and convert pollutants to biomass.

## Routine Maintenance...

While actual maintenance needs will vary according to the specific facility and site conditions, the following are a few routine steps you can take to ensure the proper function of your BMP.

### 💧 Mowing

Most grass is hardiest if it is maintained as an upland meadow, cut no shorter than 6 to 8 inches. If a more manicured look is desired, special attention to the health of the turf is needed and professional landscapers should be consulted. Grass should never be cut below 4 inches. Grass on embankments should be cut at least twice during both growing seasons and once during the summer.

### 💧 Sediment Build-Up

Because vegetation surrounding a BMP is designed to trap sediment, it is likely to become laden with sediment causing bare spots to emerge. Bare areas should be vigorously raked, backfilled if needed, and covered with top soil. Disturbed areas should be seeded with a tall fescue grass seed. Excess material should be taken off-site and can be used as a mulch or soil supplement. If the soil becomes compacted, it will require aeration by a landscape company.

### 💧 Unwanted Vegetation

Certain types of vegetation are destructive to a BMP. Keeping the dam and bottom areas of your BMP free of deep-rooted vegetation (trees and bushes) is critical because roots can destabilize the structure. Consistent mowing and monitoring will control any unwanted vegetation.

### 💧 No-Mowing Zones

For wet ponds, a 10 foot un-mowed vegetated buffer around the perimeter of the facility (exclusive of the dam embankment) may be established to filter pollutants from adjacent properties and to help prevent shoreline erosion.

### 💧 Structural Stabilization

Animal burrows, in addition to the deep-rooted trees and bushes mentioned above, will also deteriorate the structural integrity of an embankment. Muskrats in particular, will burrow tunnels up to 6 inches in

diameter into pond and dam walls. Efforts should be made to control excessive animal burrowing, and existing burrows should be filled as soon as they are discovered.

### **Mechanical Components**

Some BMPs have mechanical components that need periodic attention (valves, sluice gates, pumps, fence gates, locks, etc) and should be functional at all times. This type of routine maintenance is best left to a BMP professional.

### **Insect Control**

Mosquitoes are not a common problem in regularly maintained BMPs since they are designed to let the water escape. Regular maintenance then, is the best

way to prevent mosquito issues. The best control technique for ensuring that stagnant pools of water do not develop is debris control. For BMPs that have a permanent pool of water, this means the prompt removal of floatable debris wherein stagnant pools could collect.

### **Debris & Litter Control**

Regular removal of debris and litter can help reduce the chance of clogging in outlet structures, prevent damage to vegetated areas, reduce mosquito breeding habitats, maintain facility appearance and reduce conditions for excessive algae growth. Special attention should be given to the removal of floating debris which can clog inlet and outlet devices.

### **When to call a professional...**

Self-inspection of your BMP should be able to identify unexpected or irregular ponding, improper health of vegetation or growth of unwanted vegetation, obstructions of the inlet or outlet, excessive erosion or sedimentation, signs of dumping or pollutants other than sediment, cracking or settling of the BMP's structural components, wetness on the downstream side of the dam (indicating seepage), low spots or sinkholes in bottom areas, deterioration of pipes, condition of the emergency spillway, condition of fences, shore erosion, stability of the side-slopes and downstream channel conditions, as well as signs of vandalism. Inspection of underground systems like sand filtration systems or infiltration trenches are obviously more difficult. A non-professional should never enter confined spaces meant for maintenance personnel. However, circumstances like water remaining in the system longer than designed draw down time, obvious signs of excessive sediment build up or debris around the facility and signs of disturbance of manholes or damage to the structure caused by vehicles or settling are indications that your BMP could benefit from a professional's services. Though Colonial Heights requires biannual inspections of your BMP, in many instances, an annual inspection will benefit your facility by decreasing the potential for development of serious maintenance concerns.

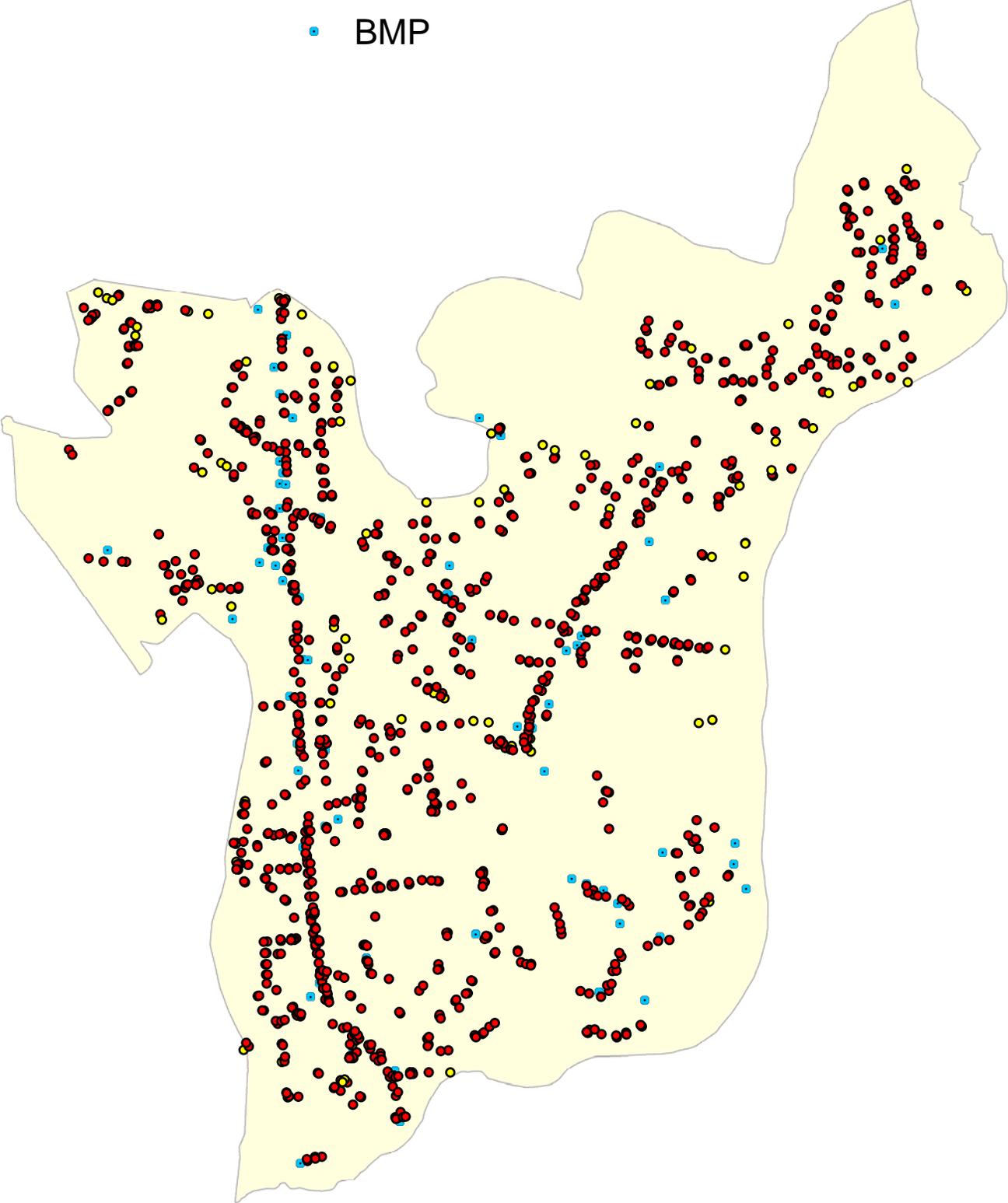
### **Remember...**

Routine and scheduled maintenance will help keep your BMP operating to its design, help ensure that our City and its waters are a healthier place to live, and could help save you some costly maintenance or repair bills.

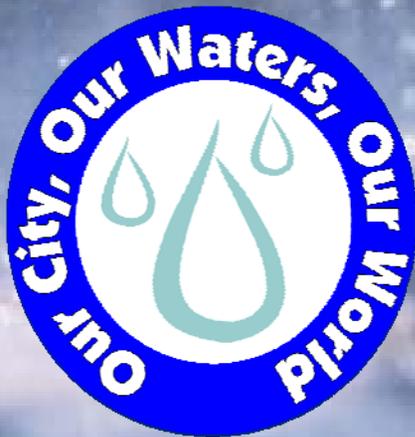


# Structural Stormwater Controls in Colonial Heights

- Outfalls
- Inlets
- BMP



# Storm Water Pollution Prevention Training



For Municipal Facilities  
In the City of Colonial Heights

BMP PT01

# What is Storm Water?

- Storm water is water flowing over the land during and immediately after a rain storm.
- Storm water does not flow into a wastewater treatment system, it flows into our surface waters. The Appomattox River, Swift Creek and Old Town Creek receive approximately 159,000 gallons of storm water runoff each year.
- What we do on the land affects the water quality and the habitat of our creeks and rivers. It also affects our quality of life, our fisheries, our recreation and our drinking water.

# Why we're required to improve our storm water discharges:

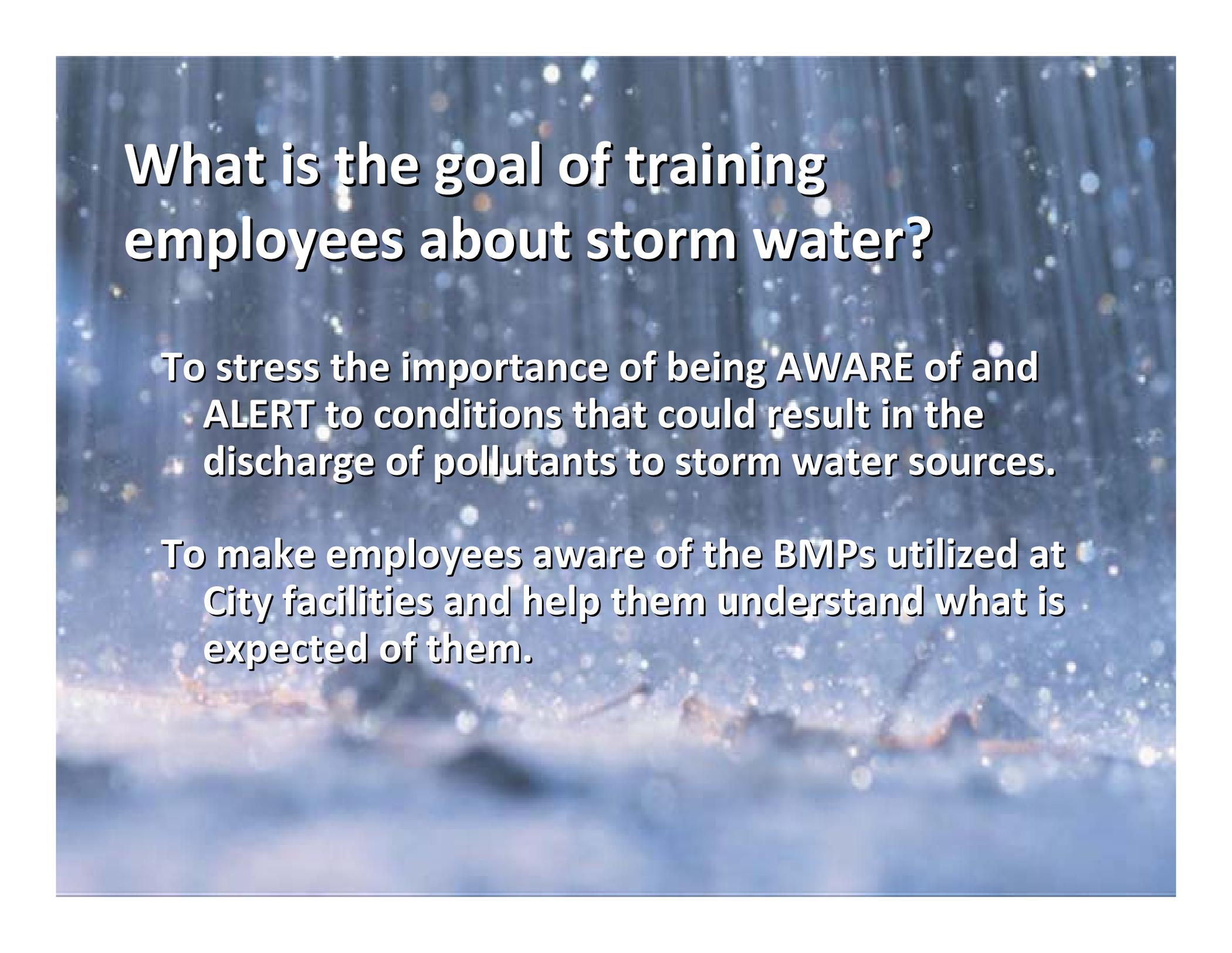
- In 1972, Congress passed the Clean Water Act (CWA), focusing on point source pollution discharges to surface waters.
- In 1990, the EPA began National Pollutant Discharge Elimination System (NPDES) permitting to address both point and non-point sources of pollution.
- Municipalities are required to have an NPDES Permit for their storm water discharges. The permit stipulates that any municipal facilities have a Storm Water Pollution Prevention Plan (SWPPP), observe their discharges (some also have to sample) and work to implement Best Management Practices (BMPs) to minimize the pollutants leaving their facilities.

# **City of Colonial Heights' Storm Water Program**

- **Per the City's NPDES Permit, and as a result of a Consent Special Order (CSO) issued to the City of Colonial Heights, the City is responsible for enforcing storm water pollution prevention requirements.**
- **The City is committed to an active role in the reduction of pollution and the protection of human health and the environment.**
- **City facilities with industrial or O&M activities are required to comply with the NPDES industrial permit regulations.**

# How do we achieve compliance with the NPDES permit?

- Facilities must have a SWPPP that 1) addresses all potential pollutant sources, and 2) has measures and controls needed to prevent pollution.
- Administrators must conduct an annual facility inspection and document the inspections in an annual comprehensive site evaluation report, updating the SWPPP with new BMPs.
- The facility must visually, and in some cases chemically, analyze its storm water runoff for signs of pollution.
- BMPs must be implemented in order to prevent pollution from your facility and employees must be trained.



# What is the goal of training employees about storm water?

To stress the importance of being **AWARE** of and **ALERT** to conditions that could result in the discharge of pollutants to storm water sources.

To make employees aware of the **BMPs** utilized at City facilities and help them understand what is expected of them.

# TRAINING TOPICS

## Why Storm Water?

## BMPs

- Vehicle Washing
- Chemical Storage Activities
- Sand/Soil Stockpiling
- Vehicle Fueling & Parking
- Waste Containers & Drum Management
- Outdoor Storage
- Preventive Maintenance
- Spill Prevention & Response

# Why storm water?

## Storm water is -

...the #1 source of nonpoint source pollution.

...an untreated source of pollution, unlike many forms of air and municipal water discharges.

...a three-fold concern for our water sources, carrying chemical, solid wastes and 'natural' (sediments & brush) pollutants into our water sources.

...responsible for as much as 75% of the average water body's pollution.

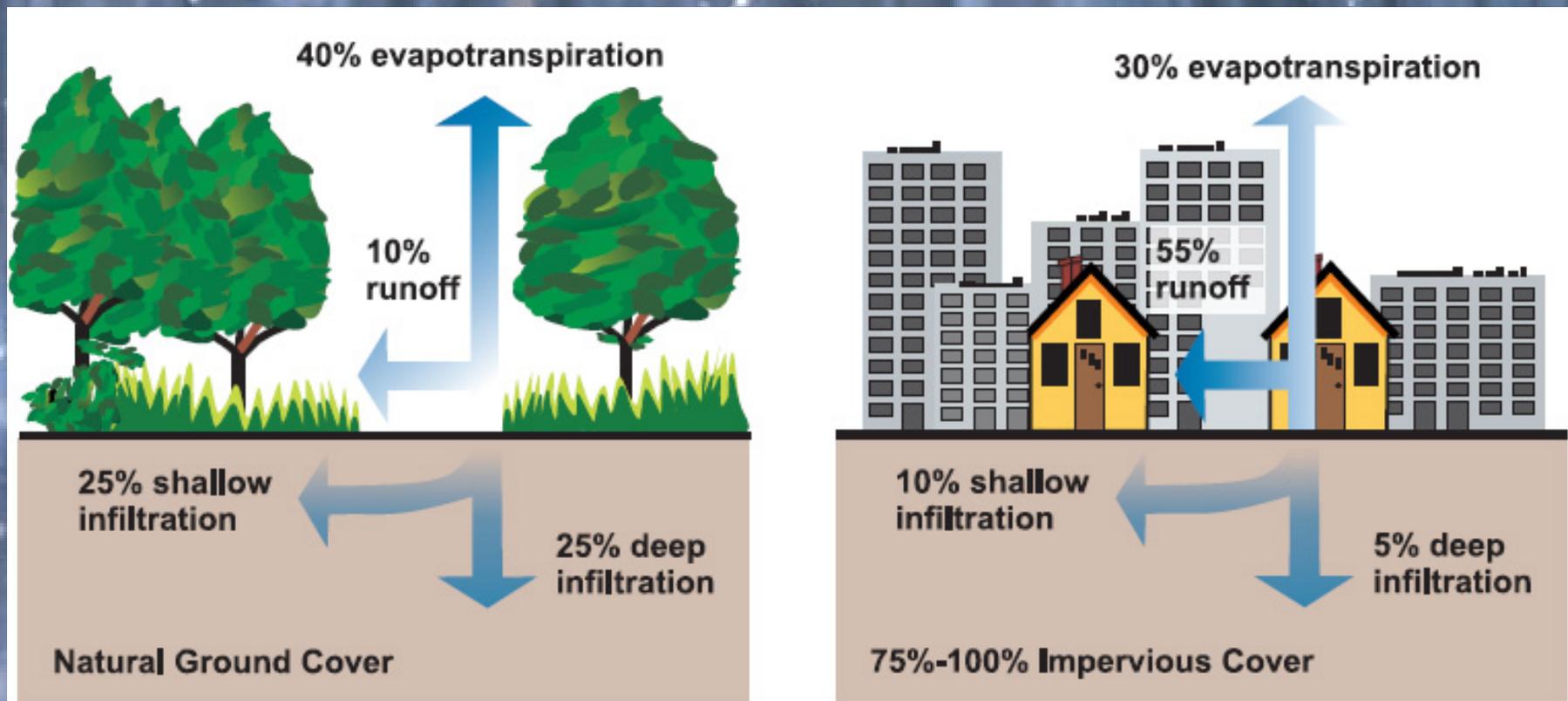
## Storm water causes -

...vital plant species to be choked of essential oxygen and light.

...excessive growth of algal species that starve plants and micro-organisms of their food and light.

...human drinking water sources to be contaminated with e.coli, fecal coliform, PCBs and other potentially fatal bacteria.

...significant alterations of fish and amphibian reproductive capability and behavior.



**When land is converted from its natural cover to such impervious covers as stone and asphalt, storm water runoff increases exponentially...**

**...And with the increased runoff...**



**...and any oils & chemicals  
on the ground are carried  
into storm drains &  
ultimately into nearby  
water courses**

Don't forget about the dangers  
of runoff *VOLUME*...



# Best Management Practices (BMPs)

**"A BMP is a technique, process, activity, or structure used to reduce the pollutant content of a storm water discharge. BMPs include simple nonstructural methods, such as good housekeeping and preventive maintenance. BMPs may also include structural modifications, such as the installation of bioretention measures."**

*Environmental Protection Agency*

## **BMPs can be...**

- 1. *Behavioral changes***
- 2. *Procedural changes***  
**and**
- 3. *Structural controls***

**...that are implemented or practiced with the goal of reducing the pollutants in storm water runoff.**

# **BMP: Vehicle Washing**



Washing equipment & vehicles is often a vital part of municipal operations. Washing operations that take place outside & without appropriate controls, however, contribute oils & salts from the equipment, detergents & phosphorous from the washes, & sands, sediments & grass clippings to our water sources via catch basins & other water conveyances.

# Washing DO's & DON'Ts :

**✗** Washing vehicles & equipment outside, on paved or graveled areas

**✗** Rinsing debris & unused materials from vehicles or equipment prior to washing

**✓** Vehicles should be washed inside of facilities fitted with floor drains that drain to appropriate treatment systems. If such facilities do not exist, vehicles & equipment should be washed on flat, grassy areas away from other water courses.

**✓** Any unused materials should be scraped, shoveled or broomed from vehicles & equipment and properly collected for disposal. Rinsing unused sediments and materials onto the ground only means that those materials will end up in our water sources.

# BMP: Chemical Storage

Improper chemical storage contributes ethylene glycol, diesel fuels, oils, antifreeze and heavy metals, arsenic and alkaline wastes to our water sources.



**Inadequate storage containers directly adjacent to concrete valley gutter.**

# BMP: Chemical Storage

Containers should be sound, sealed, non-corrosive & leak-proof, & should be stored above ground level in a covered area.



Improper chemical storage contributes ethylene glycol, diesel fuels, oils, antifreeze & heavy metals, arsenic & alkaline wastes to our water sources.

All portable containers should be tightly sealed & clearly labeled. Tanks & other more permanent storage containers must be kept in good working order, free of leaks or other deficiencies. Berm areas around permanent storage facilities to avoid contamination & recycle all appropriate materials as soon as possible.

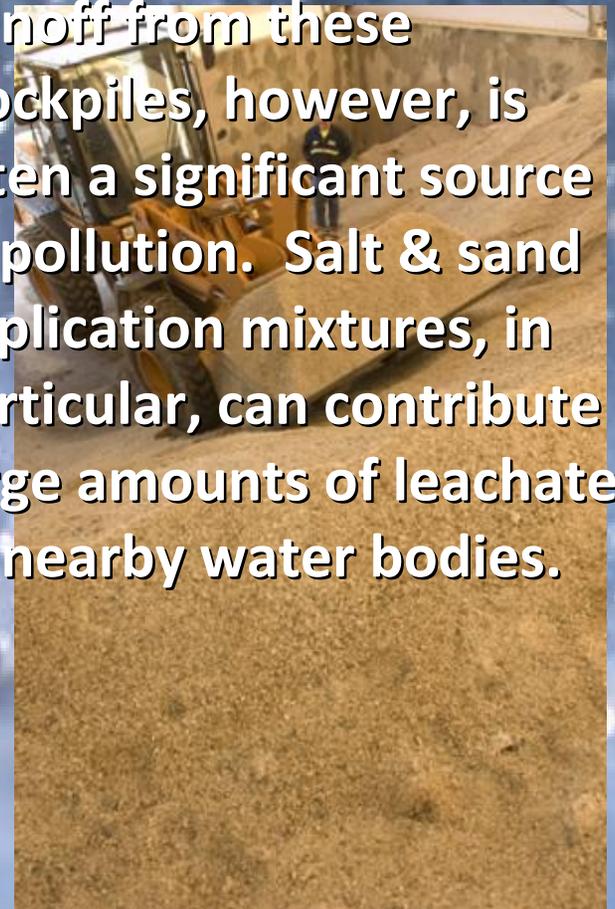
# BMP: Sand/Soil Stockpiling

Sands, soils & aggregates are used for a wide variety of municipal activities and are thus an integral part of any



. This  
in

Runoff from these stockpiles, however, is often a significant source of pollution. Salt & sand application mixtures, in particular, can contribute large amounts of leachate to nearby water bodies.



# BMP: Sand/Soil Stockpiling

These materials should be stockpiled in an enclosed, roofed facility that prevents runoff from the access bays. Where this is not possible, stockpiles should remain tarped at all times. The perimeters of all stockpiles should be bermed to prevent sediment & chemical runoff. Consider checkdams in the drainage courses of these stockpiles.



## BMP: Sand/Soil Stockpiling

Checkdams in the drainage courses of stockpiles are a good way to redirect undirected runoff and capture many of the sediments the runoff will contain.



# BMP: Vehicle Fueling & Parking

Since multiple departments traditionally use a single municipal fueling station, these in particular can be a significant source of storm water runoff pollution. Fuels and oils spill onto the surrounding impervious surfaces to be tracked throughout by the tires of multiple vehicles per day, and what remains is carried into nearby water courses.



**Parking areas contribute large amounts of pollutants to our waters annually.**

# BMP: Vehicle Fueling & Parking

As well, numerous vehicles are frequently parked at municipal facilities. The cumulative contribution of these parked vehicles can have a damaging impact on water resources.



# BMP: Vehicle Fueling & Parking

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- fueling areas without curbs or barriers
- fueling areas without spill rags or absorbents readily available
- no or irregular cleaning & maintenance of fueling areas
- vehicle \ machinery parking on paved surfaces
- leaky vehicles or machinery parked without drip pans
- vehicles or machinery parked near runoff or water courses

- daily cleanup of fueling areas
- covered fueling areas
  - spill cleanup using granular absorbents, swept up and not hosed down
- spill rags available at every fueling station
- vehicle & machinery parked with drip pans
- parking on pervious areas like grass away from any drainage or water courses

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R**

# BMP: Waste Containers & Drum Management

Barrels & drums are commonly used for containment & storage in municipal activities. If not done properly, these containers often become sources of stormwater pollution. Make sure:

- All containers are appropriate for their use (no caustic chemicals in plastic drums)
- All containers are properly lidded & sealed
- Containers are stored well above ground level in a covered area
- Containers are regularly inspected for leakage or spillage



## BMP: Waste Containers & Drum Management



Any hazardous waste products must be stored in covered drums & staged in an assigned area with secondary containment to prevent containment.

# BMP: Outdoor Storage



Storing equipment in enclosed facilities fitted with proper drainage & catchment systems is ideal, but this is not always feasible or affordable.

Even where it is not, taking measures to avoid and/or prevent pollutant exposure such as that seen here is necessary.



# BMP: Outdoor Storage

Consider the following BMPs for outdoor storage...

- ✓ Confine storage of raw materials, parts, and equipment to designated areas away from high traffic, outside drainage pathways and away from surface waters.
- ✓ Provide secondary containment around chemical storage areas.
- ✓ Provide diversion berms, dikes or grassed swales around the perimeter of the area to limit run-on and runoff.
- ✓ Direct storm water runoff to an on-site retention pond.
- ✓ Use drip pans\drums under parts & equipment during storage.

# BMP: Preventative Maintenance



Preventative maintenance can be applied as a BMP across many areas of municipal operations. Implementing a system of regular & preventative vehicle & equipment maintenance will keep many avoidable pollutants out of the City's watercourses. Determine which vehicles & equipment require maintenance & construct a program that encompasses routine preventative maintenance of these.

# BMP: Preventative Maintenance

Make sure your Preventative Maintenance program encapsulates the following:

- ✓ An exhaustive list of all equipment & vehicles that require maintenance
- ✓ Schedules of how often each item requires maintenance
- ✓ The type of maintenance each item requires
- ✓ Designates an individual or individuals responsible for performing the necessary maintenance
- ✓ Designates an individual who will be responsible for administration of the Preventative Maintenance program
- ✓ Provides a documentation log for the program

## BMP: Spill Prevention & Response

Spill prevention and response is an integral BMP for municipal facilities. Anything that is not swept up and cleaned entirely will end up at the outfall! Some key practices for this BMP are:

- *Identifying areas where significant materials can spill into or enter your storm water discharge systems*
- *Ensuring that employees are aware of emergency response procedures, including material handling and storage*
- *Ensuring that appropriate spill clean-up equipment is accessible*



# BMP: Spill Prevention & Response

## SPILL PREVENTION & RESPONSE PLAN

**2. Spill Control Techniques** Once a spill has occurred, the employee needs to decide whether the spill is small enough to handle without outside assistance. Only employees with training in spill response should attempt to contain or clean up a spill.

NOTE: If you are cleaning up a spill yourself, make sure you are aware of the hazards associated with the materials spilled, have adequate ventilation, and proper personal protective equipment. Treat all residual chemical and cleanup materials as hazardous waste.

Spill control equipment should be located wherever significant quantities of hazardous materials are received or stored. MSDSs, absorbents, over-pack containers, container patch kits, spill dams, shovels, floor dry, acid/base neutralizers, and "caution-keep out" signs are common spill response items.

### 3. Spill Response and Cleanup

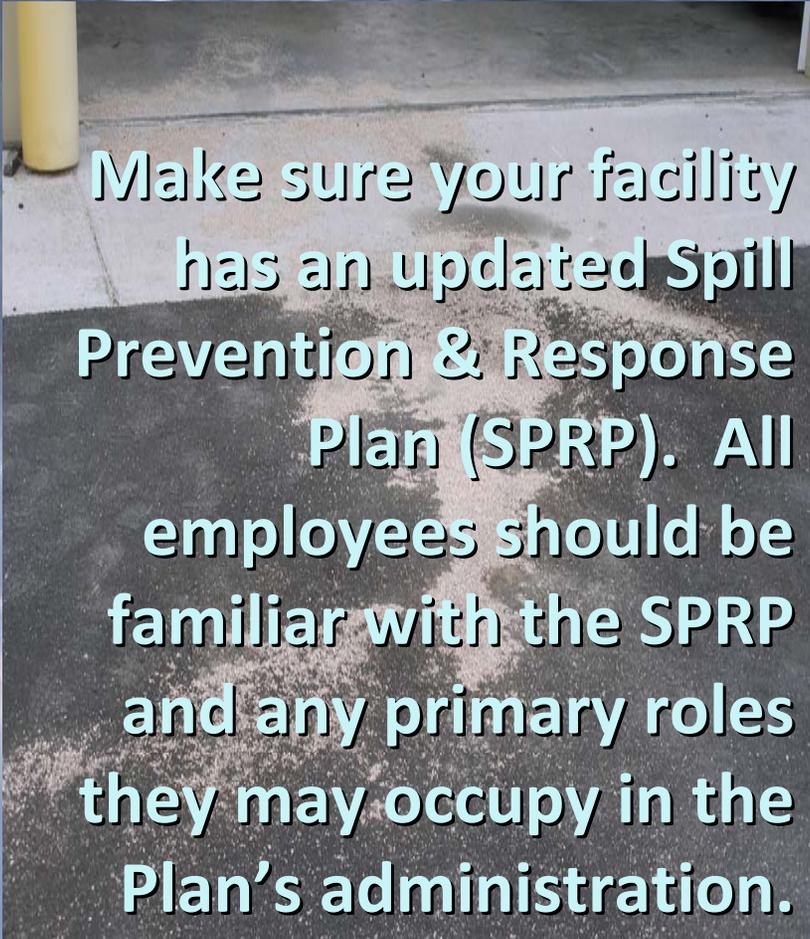
Chemical spills are divided into three categories: Small, Medium and Large. Response and cleanup procedures vary depending on the size of the spill.

**Small Spills:** Any spill where the major dimension is less than 18 inches in diameter. Small spills are generally handled by internal personnel and usually do not require an emergency response by police or fire department HAZMAT teams.

- Quickly control the spill by stopping or securing the spill source. This could be as simple as uprighting a container and using floor-dry or absorbent pads to soak up spilled material. Wear gloves and protective clothing, if necessary.
- Put spill material and absorbents in secure containers if any are available.
- Consult with the Facility Responsible Person and the MSDS for spill and waste disposal procedures.
- In some instances, the area of the spill should not be washed with water. Use Dry Cleanup Methods and **never** wash spills down the drain, onto a storm drain or onto the driveway or parking lot.
- Both the spilled material and the absorbent may be considered hazardous waste and must be disposed of in compliance with state and federal environmental regulations.

**Medium Spills:** Spills where the major dimension exceeds 18 inches, but is less than 6 feet. Outside emergency response personnel (police and fire department HAZMAT teams) should usually be called for medium spills. Common sense, however, will dictate when it is necessary to call them.

- Immediately try to help contain the spill at its source by simple measures only. This means quickly uprighting a container, or putting a lid on a container, if possible. Do not use absorbents unless they are immediately available. Once you have made a quick attempt to contain the spill, or once you have quickly determined you cannot take any brief containment measures, leave the area and alert Emergency Responders at 911. Closing doors behind you while leaving helps contain fumes from spills. Give police accurate information as to the location, chemical, and estimated amount of the spill.
- Evaluate the area outside the spill. Engines and electrical equipment near the spill area must be turned off. This eliminates various sources of ignition in the area. Advise Emergency Responders on how to turn off engines or electrical sources. Do not go back into the spill area once you have left. Help emergency responders by trying to determine how to shut off heating, air conditioning equipment, or air circulating equipment, if necessary.
- If emergency responders evacuate the spill area, follow their instructions in leaving the area.
- After emergency responders have contained the spill, be prepared to assist them with any other information that may be necessary, such as MSDSs and questions about the facility. Emergency responders or trained personnel with proper personal protective equipment will then clean up the spill residue. Do not re-enter the area until the responder in charge gives the all clear. Be prepared to assist these persons from outside the spill area with MSDSs, absorbents, and containers.
- Reports must be filed with proper authorities. It is the responsibility of the spiller to inform both his/her supervisor and the emergency responders as to what caused the spill. The response for large spills is similar to the procedures for medium spills, except that the exposure danger is greater.



Make sure your facility has an updated Spill Prevention & Response Plan (SPRP). All employees should be familiar with the SPRP and any primary roles they may occupy in the Plan's administration.

## “Good Housekeeping” IS a BMP

Remember that pollution prevention at municipal facilities is essentially a “good housekeeping” effort. Examining and subsequently altering your own actions to ensure a reduction in the amount and type of pollution that results from your activities and is discharged into local waterways is good housekeeping, in a nutshell. Be proactive: look for problems and address them before they get worse.



**Storage near an outfall**



**Untreated spill**

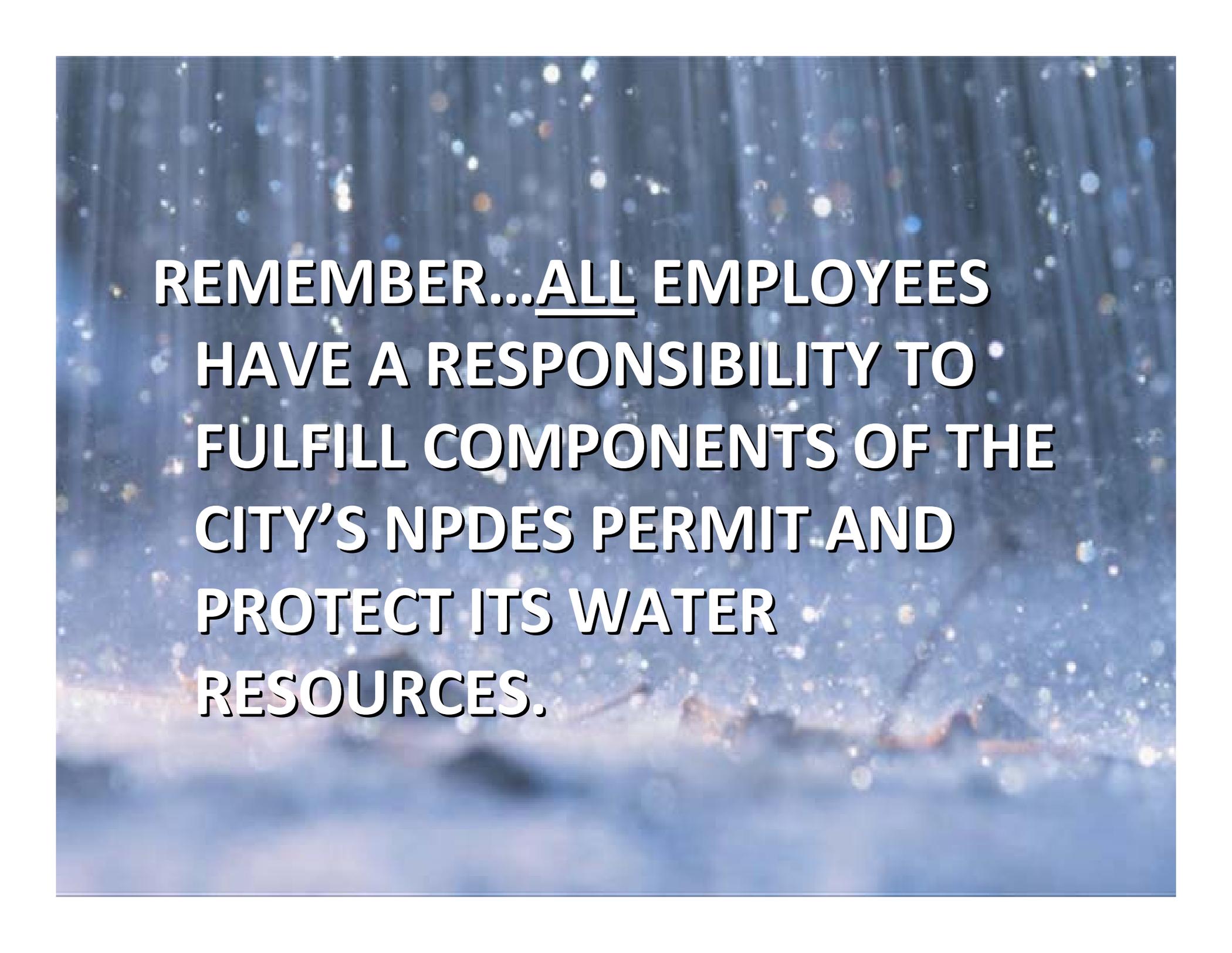
## “Good Housekeeping” things to remember...

- ☞ Make sure that there are no discharges from building bay doors or other pathways
- ☞ Disconnect downspouts, particularly those to paved areas or near water courses
- ☞ Make sure that spill response equipment is readily available throughout buildings & that all employees are familiar with it
- ☞ Sweep floors & spills instead of washing
- ☞ Designate individuals to periodically inspect ‘hotspots’ for pollution



*Downspouts contribute pollutants and to runoff velocity of stormwater*



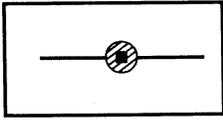


**REMEMBER...ALL EMPLOYEES  
HAVE A RESPONSIBILITY TO  
FULFILL COMPONENTS OF THE  
CITY'S NPDES PERMIT AND  
PROTECT ITS WATER  
RESOURCES.**

# **BMP PT02**

**EROSION & SEDIMENT CONTROLS IN ROAD, UTILITY  
AND BRIDGE MAINTENANCE**

## STD &amp; SPEC 3.07

STORM DRAIN  
INLET PROTECTIONDefinition

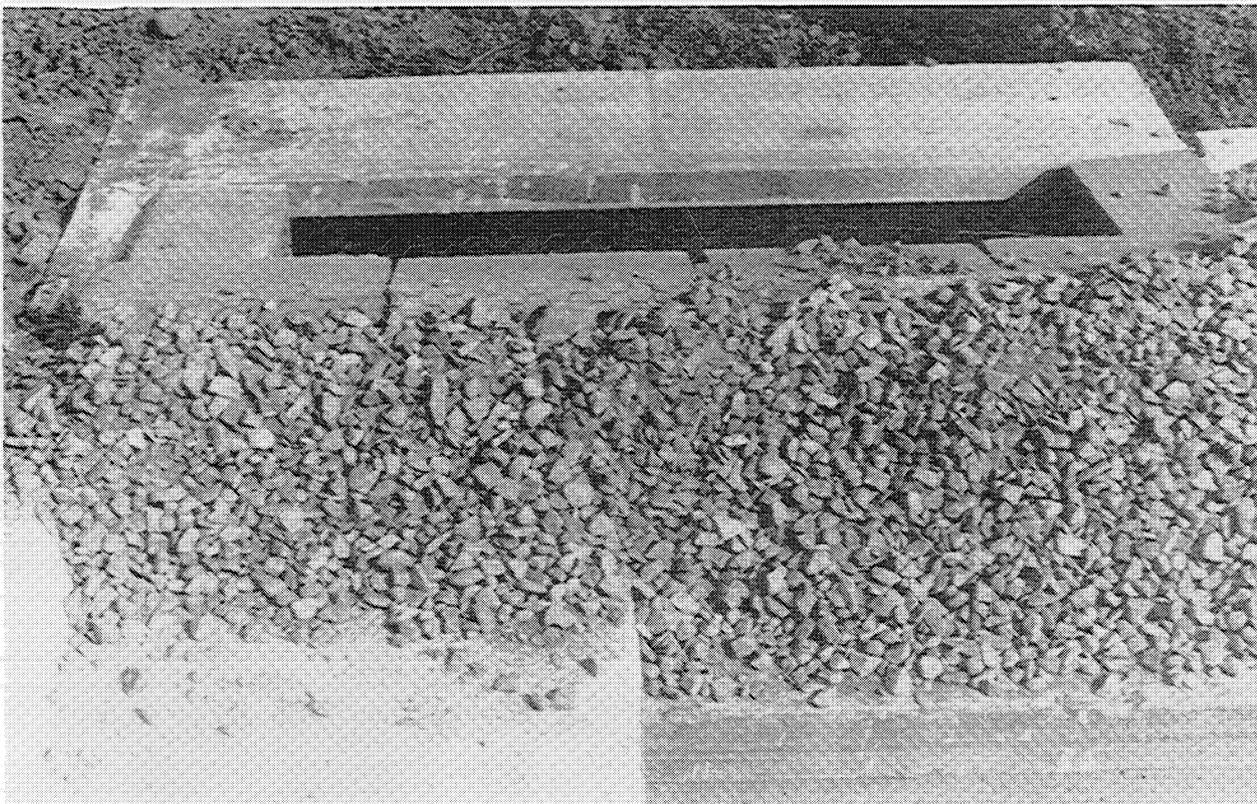
A sediment filter or an excavated impounding area around a storm drain drop inlet or curb inlet.

Purpose

To prevent sediment from entering storm drainage systems prior to permanent stabilization of the disturbed area.

Conditions Where Practice Applies

Where storm drain inlets are to be made operational before permanent stabilization of the corresponding disturbed drainage area. Different types of structures are applicable to different conditions (see Plates 3.07-1 through 3.07-8).



### Planning Considerations

Storm sewers which are made operational prior to stabilization of the associated drainage areas can convey large amounts of sediment to natural drainageways. In case of extreme sediment loading, the storm sewer itself may clog and lose a major portion of its capacity. To avoid these problems, it is necessary to prevent sediment from entering the system at the inlets.

This practice contains several types of inlet filters and traps which have different applications dependent upon site conditions and type of inlet. Other innovative techniques for accomplishing the same purpose are encouraged, but only after specific plans and details are submitted to and approved by the appropriate Plan-Approving Authority.

Care should be taken when choosing a specific type of inlet protection. Field experience has shown that inlet protection which causes excessive ponding in an area of high construction activity may become so inconvenient that it is removed or bypassed, thus transmitting sediment-laden flows unchecked. In such situations, a structure with an adequate overflow mechanism should be utilized.

The following inlet protection devices are for drainage areas of one acre or less. Runoff from larger disturbed areas should be routed to a TEMPORARY SEDIMENT TRAP (Std. & Spec. 3.13) or a TEMPORARY SEDIMENT BASIN (Std. & Spec. 3.14).

The best way to prevent sediment from entering the storm sewer system is to stabilize the site as quickly as possible, preventing erosion and stopping sediment at its source.

Stone is utilized as the chief ponding/filtering agent in most of the inlet protection types described in this specification. The various types of "coarse aggregates" which are depicted are able to filter out sediment mainly through slowing down flows directed to the inlet by creating an increased flow path for the stormwater (through void space in the respective stone). The stone filtering medium by no means slows stormwater flowrate as does filter cloth and therefore cannot provide the same degree of filter efficiency when smaller silt and clay particles are introduced into stormwater flows. However, as mentioned earlier, excessive ponding in busy areas adjacent to stormwater inlets is in many cases unacceptable - that is why stone must be utilized with many installations.

Fortunately, in most instances, inlet protection utilizing stone should not be the sole control measure. At the time that storm sewer inlet and associated appurtenances become operational, areas adjacent to the structures are most likely at final grade or will not be altered for extended periods; this is the time when TEMPORARY SEEDING (Std. & Spec. 3.31) and other appropriate controls should be implemented to enhance sediment-loss mitigation. In addition, by varying stone sizes used in the construction of inlet protection, a greater degree of sediment removal can be obtained. As an option, filter cloth can be used with the stone in these devices to further enhance sediment removal. Notably, the potential inconvenience of excessive ponding must be examined with these choices, especially the latter.

### Design Criteria

1. The drainage area shall be no greater than 1 acre.
2. The inlet protection device shall be constructed in a manner that will facilitate clean-out and disposal of trapped sediment and minimize interference with construction activities.
3. The inlet protection devices shall be constructed in such a manner that any resultant ponding of stormwater will not cause excessive inconvenience or damage to adjacent areas or structures.
4. Design criteria more specific to each particular inlet protection device will be found on Plates 3.07-1 through 3.07-8.
5. For the inlet protection devices which utilize stone as the chief ponding/filtering medium, a range of stone sizes is offered; VDOT #3, #357, or #5 Coarse Aggregate should be used. The designer/plan reviewer should attempt to get the greatest amount of filtering action possible (by using smaller-sized stone), while not creating significant ponding problems.
6. In all designs which utilize stone with a wire-mesh support as a filtering mechanism, the stone can be completely wrapped with the wire mesh to improve stability and provide easier cleaning.
7. Filter Fabric may be added to any of the devices which utilize "coarse aggregate" stone to significantly enhance sediment removal. The fabric, which must meet the physical requirements noted for "extra strength" found in Table 3.05-B, should be secured between the stone and the inlet (on wire-mesh if it is present). As a result of the significant increase in filter efficiency provided by the fabric, a larger range of stone sizes (VDOT #1, #2 or #3 Coarse Aggregate) may be utilized with such a configuration. The larger stone will help keep larger sediment masses from clogging the cloth. Notably, significant ponding may occur at the inlet if filter cloth is utilized in this manner.

### Construction Specifications

1. Silt Fence Drop Inlet Protection
  - a. Silt Fence shall conform to the construction specifications for "extra strength" found in Table 3.05-B and shall be cut from a continuous roll to avoid joints.
  - b. For stakes, use 2 x 4-inch wood (preferred) or equivalent metal with a minimum length of 3 feet.

- c. Space stakes evenly around the perimeter of the inlet a maximum of 3-feet apart, and securely drive them into the ground, approximately 18-inches deep (see Plate 3.07-1).
- d. To provide needed stability to the installation, frame with 2 x 4-inch wood strips around the crest of the overflow area at a maximum of 1½ feet above the drop inlet crest.
- e. Place the bottom 12 inches of the fabric in a trench (see Plate 3.07-1) and backfill the trench with 12 inches of compacted soil.
- f. Fasten fabric securely by staples or wire to the stakes and frame. Joints must be overlapped to the next stake.
- g. It may be necessary to build a temporary dike on the downslope side of the structure to prevent bypass flow.

## 2. Gravel and Wire Mesh Drop Inlet Sediment Filter

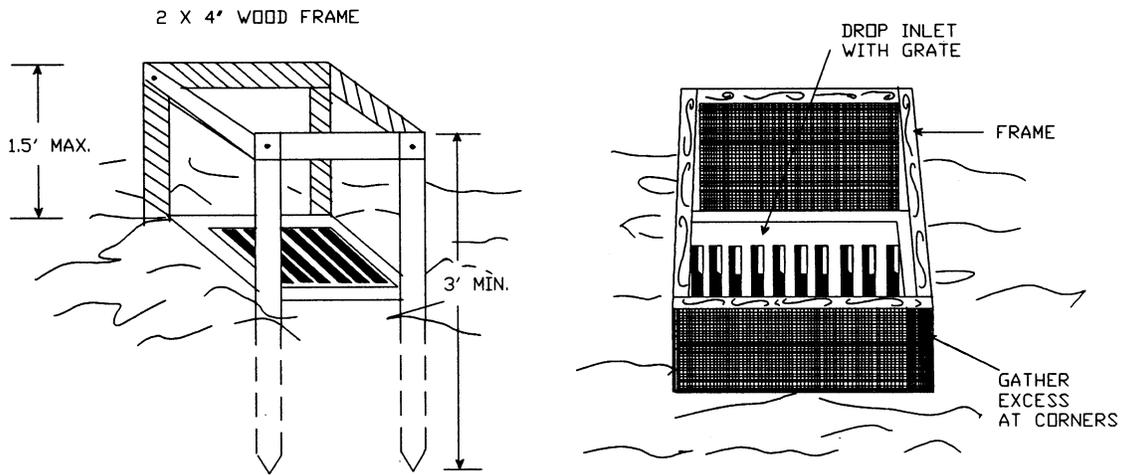
- a. Wire mesh shall be laid over the drop inlet so that the wire extends a minimum of 1 foot beyond each side of the inlet structure. Wire mesh with 1/2-inch openings shall be used. If more than one strip of mesh is necessary, the strips shall be overlapped.
- b. Coarse aggregate shall be placed over the wire mesh as indicated on Plate 3.07-2. The depth of stone shall be at least 12 inches over the entire inlet opening. The stone shall extend beyond the inlet opening at least 18 inches on all sides.
- c. If the stone filter becomes clogged with sediment so that it no longer adequately performs its function, the stones must be pulled away from the inlet, cleaned and/or replaced.

Note: This filtering device has no overflow mechanism; therefore, ponding is likely especially if sediment is not removed regularly. This type of device must never be used where overflow may endanger an exposed fill slope. Consideration should also be given to the possible effects of ponding on traffic movement, nearby structures, working areas, adjacent property, etc.

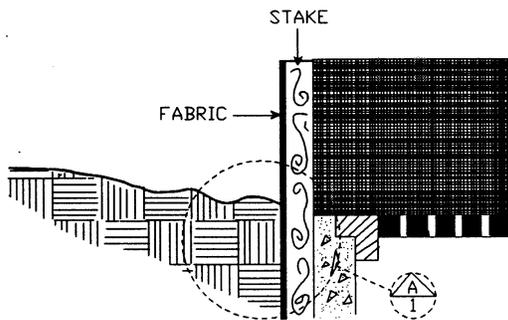
## 3. Block and Gravel Drop Inlet Sediment Filter

- a. Place concrete blocks lengthwise on their sides in a single row around the perimeter of the inlet, with the ends of adjacent blocks abutting. The height of the barrier can be varied, depending on design needs, by stacking combinations of 4-inch, 8-inch and 12-inch wide blocks. The barrier of blocks shall be at least 12-inches high and no greater than 24-inches high.

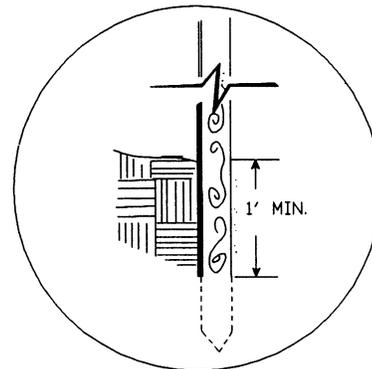
# SILT FENCE DROP INLET PROTECTION



PERSPECTIVE VIEWS



ELEVATION OF STAKE AND FABRIC ORIENTATION



DETAIL A

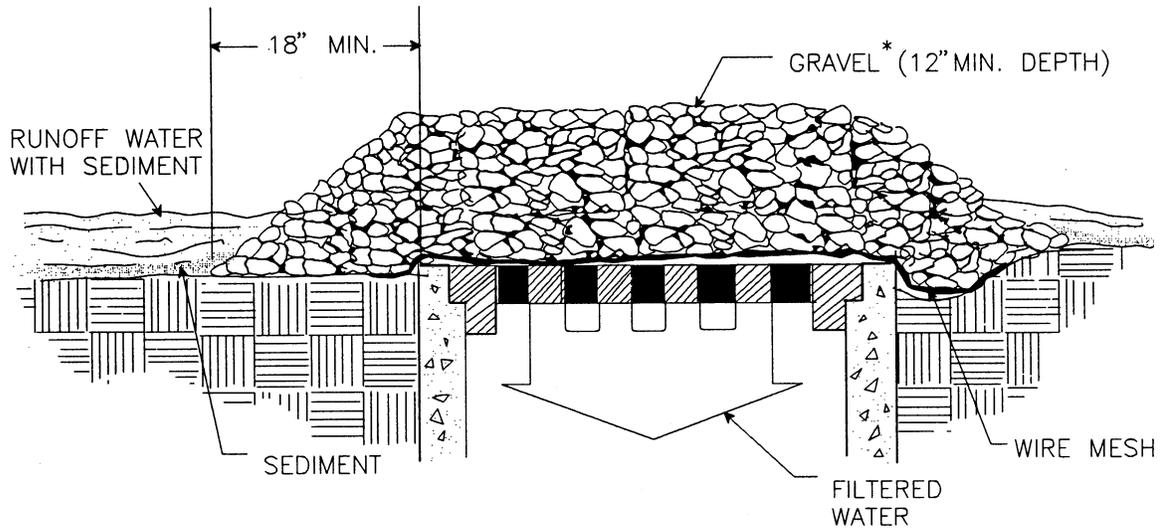
## SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE THE INLET DRAINS A RELATIVELY FLAT AREA (SLOPE NO GREATER THAN 5%) WHERE THE INLET SHEET OR OVERLAND FLOWS (NOT EXCEEDING 1 C.F.S.) ARE TYPICAL. THE METHOD SHALL NOT APPLY TO INLETS RECEIVING CONCENTRATED FLOWS, SUCH AS IN STREET OR HIGHWAY MEDIANS.

Source: N.C. Erosion and Sediment Control Planning and Design Manual, 1988

Plate 3.07-1

## GRAVEL AND WIRE MESH DROP INLET SEDIMENT FILTER



### SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE HEAVY CONCENTRATED FLOWS ARE EXPECTED, BUT NOT WHERE PONDING AROUND THE STRUCTURE MIGHT CAUSE EXCESSIVE INCONVENIENCE OR DAMAGE TO ADJACENT STRUCTURES AND UNPROTECTED AREAS.

\* GRAVEL SHALL BE VDOT #3, #357 OR #5 COARSE AGGREGATE.

- b. Wire mesh shall be placed over the outside vertical face (webbing) of the concrete blocks to prevent stone from being washed through the holes in the blocks. Wire mesh with 1/2-inch openings shall be used.
- c. Stone shall be piled against the wire to the top of the block barrier, as shown in Plate 3.07-3.
- d. If the stone filter becomes clogged with sediment so that it no longer adequately performs its function, the stone must be pulled away from the blocks, cleaned and replaced.

#### 4. Excavated Drop Inlet Sediment Trap

- a. The excavated trap shall be sized to provide a minimum storage capacity calculated at the rate of 134 cubic yards per acre of drainage area. A trap shall be no less than 1-foot nor more than 2-feet deep measured from the top of the inlet structure. Side slopes shall not be steeper than 2:1 (see Plate 3.07-4).
- b. The slope of the basin may vary to fit the drainage area and terrain. Observations must be made to check trap efficiency and modifications shall be made as necessary to ensure satisfactory trapping of sediment. Where an inlet is located so as to receive concentrated flows, such as in a highway median, it is recommended that the basin have a rectangular shape in a 2:1 (length/width) ratio, with the length oriented in the direction of the flow.
- c. Sediment shall be removed and the trap restored to its original dimensions when the sediment has accumulated to one-half the design depth of the trap. Removed sediment shall be deposited in a suitable area and in a manner such that it will not erode.

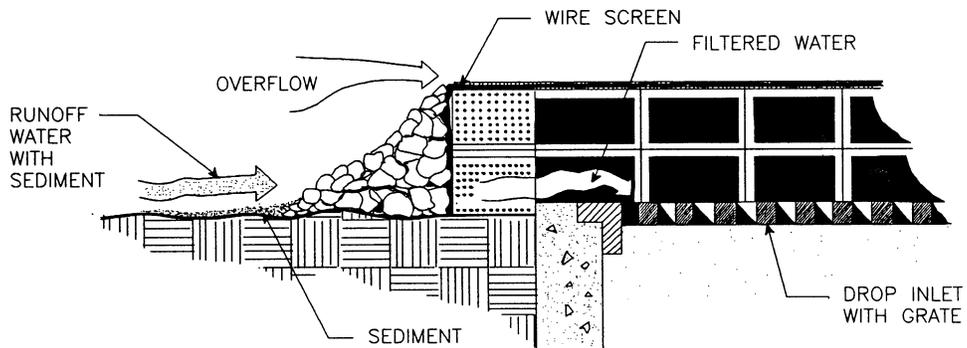
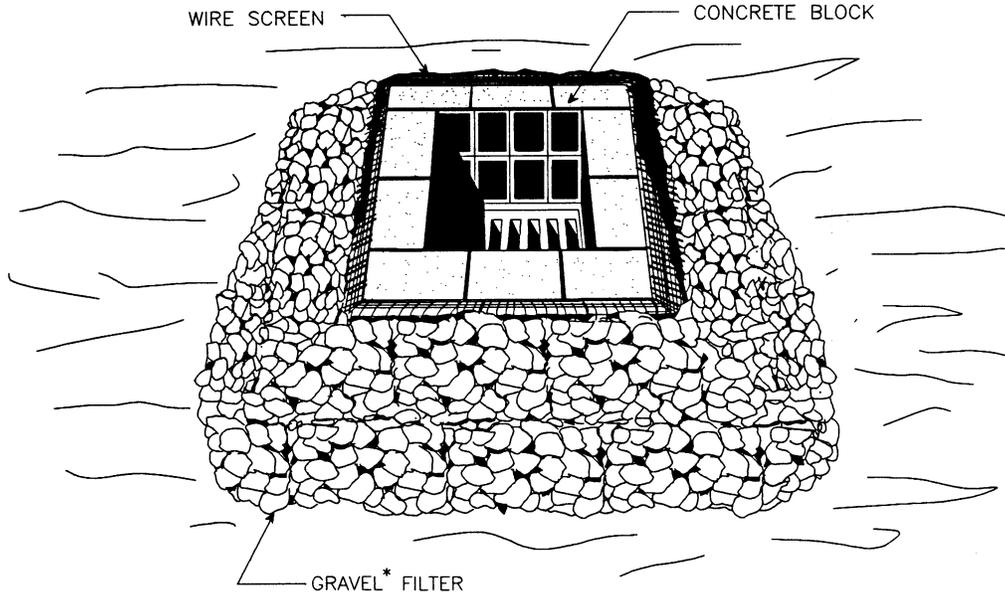
#### 5. Sod Drop Inlet Sediment Filter

- a. Soil shall be prepared and sod installed according to the specifications in Std. & Spec. 3.33, SODDING.
- b. Sod shall be placed to form a turf mat covering the soil for a distance of 4 feet from each side of the inlet structure, as depicted in Plate 3.07-5.

#### 6. Gravel Curb Inlet Sediment Filter

- a. Wire mesh with 1/2-inch openings shall be placed over the curb inlet opening so that at least 12 inches of wire extends across the inlet cover and at least 12 inches of wire extends across the concrete gutter from the inlet opening, as depicted in Plate 3.07-6.

# BLOCK AND GRAVEL DROP INLET SEDIMENT FILTER

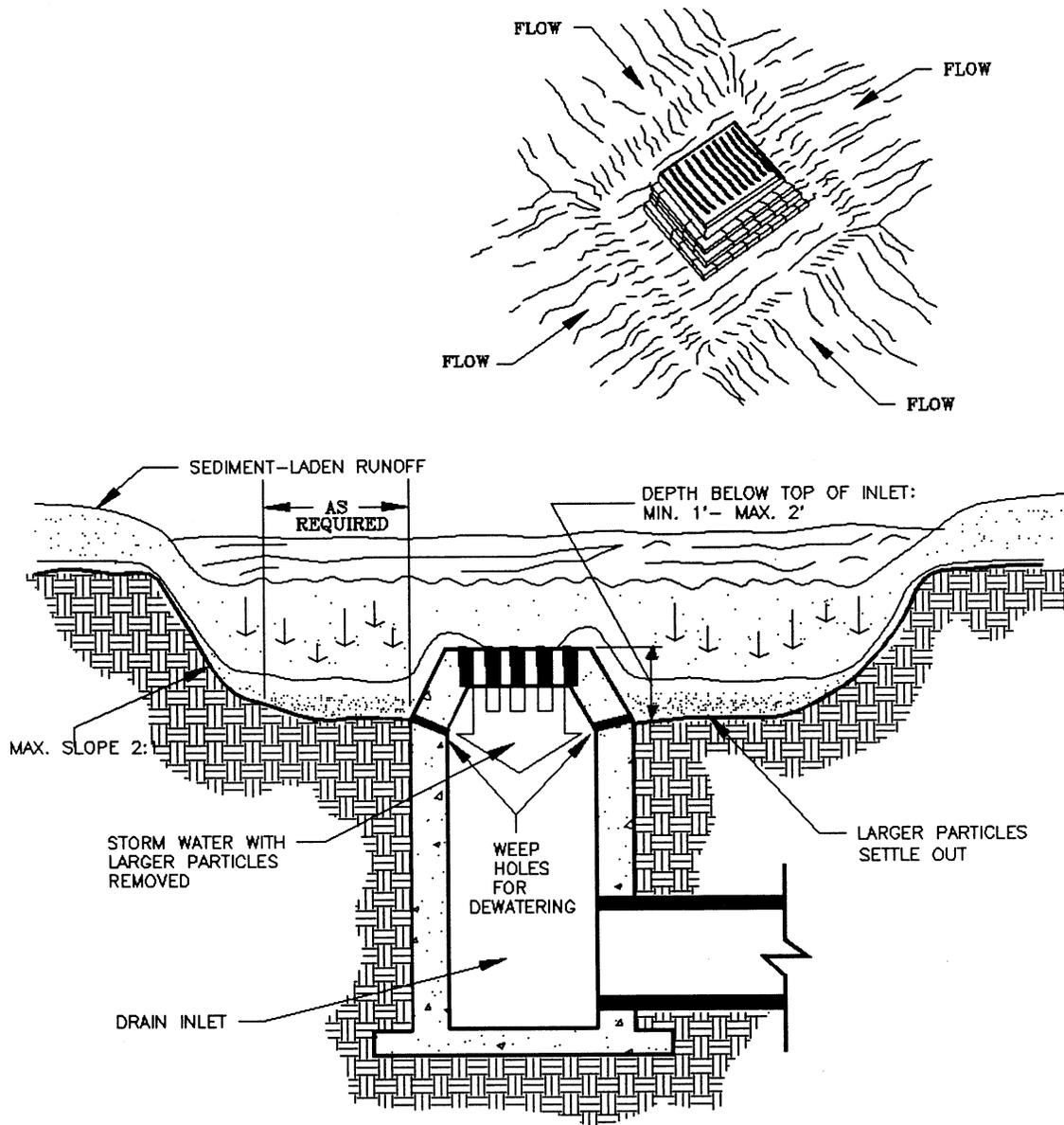


## SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE HEAVY FLOWS ARE EXPECTED AND WHERE AN OVERFLOW CAPACITY IS NECESSARY TO PREVENT EXCESSIVE PONDING AROUND THE STRUCTURE.

\* GRAVEL SHALL BE VDOT #3, #357 OR #5 COARSE AGGREGATE.

# EXCAVATED DROP INLET SEDIMENT TRAP



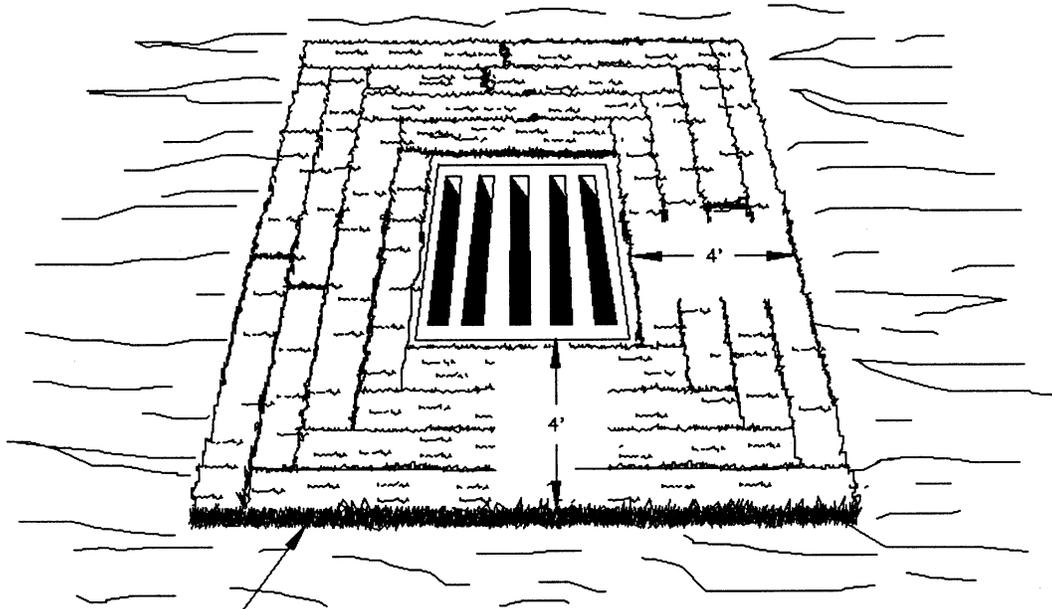
### SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE HEAVY FLOWS ARE EXPECTED AND WHERE AN OVERFLOW CAPABILITY AND EASE OF MAINTENANCE ARE DESIRABLE.

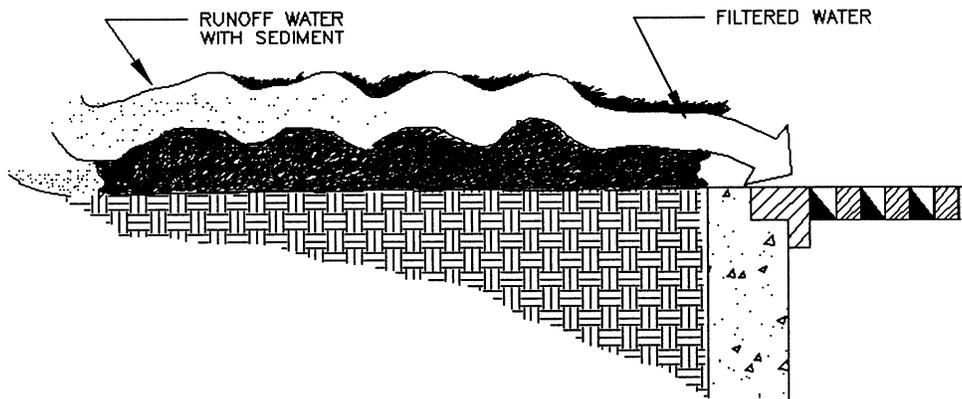
Source: Michigan Soil Erosion and Sediment Control Guidebook, 1975, and USDA-SCS

Plate 3.07-4

# SOD DROP INLET SEDIMENT FILTER



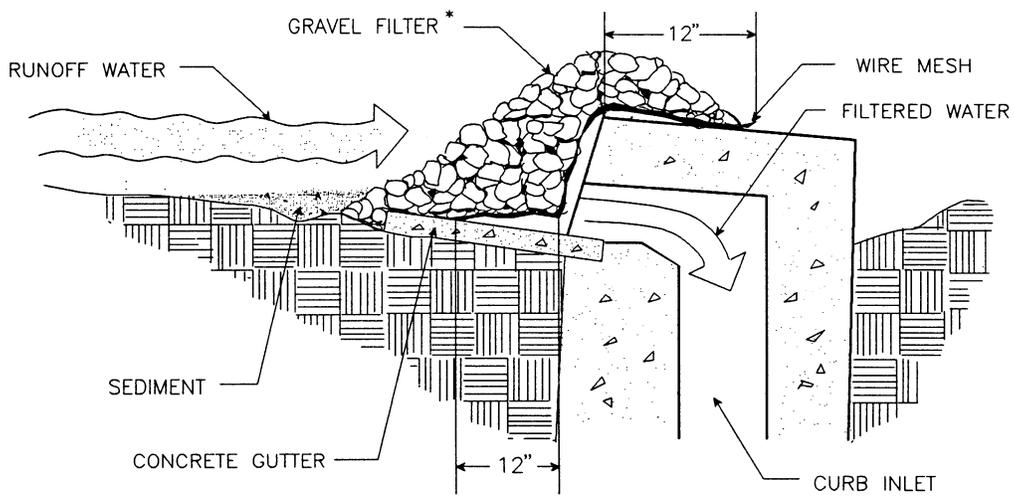
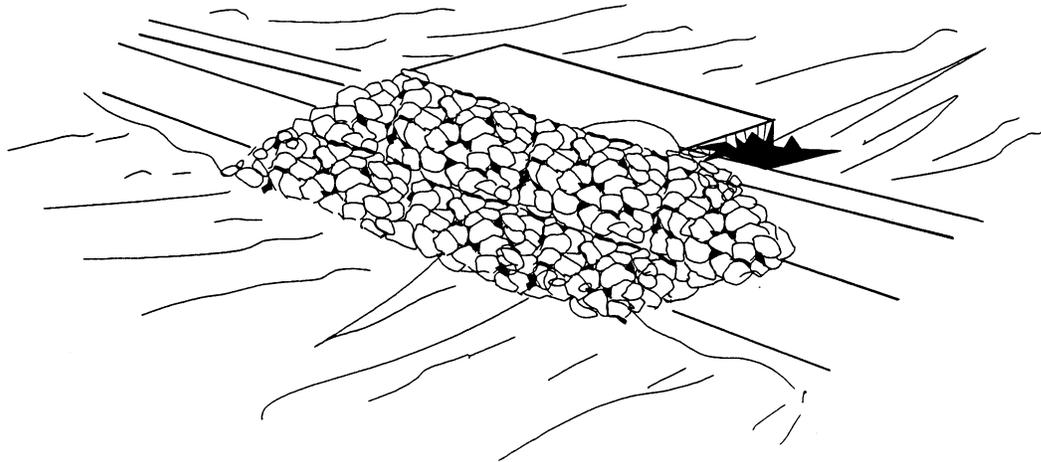
FOUR 1-FOOT WIDE STRIPS OF SOD ON EACH SIDE OF THE DROP INLET



## SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE ONLY AT THE TIME OF PERMANENT SEEDING, TO PROTECT THE INLET FROM SEDIMENT AND MULCH MATERIAL UNTIL PERMANENT VEGETATION HAS BECOME ESTABLISHED.

# GRAVEL CURB INLET SEDIMENT FILTER



### SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE AT CURB INLETS WHERE PONDING IN FRONT OF THE STRUCTURE IS NOT LIKELY TO CAUSE INCONVENIENCE OR DAMAGE TO ADJACENT STRUCTURES AND UNPROTECTED AREAS.

\* GRAVEL SHALL BE VDOT #3, #357 OR 5 COARSE AGGREGATE.

- b. Stone shall be piled against the wire so as to anchor it against the gutter and inlet cover and to cover the inlet opening completely.
- c. If the stone filter becomes clogged with sediment so that it no longer adequately performs its function, the stone must be pulled away from the block, cleaned and replaced.

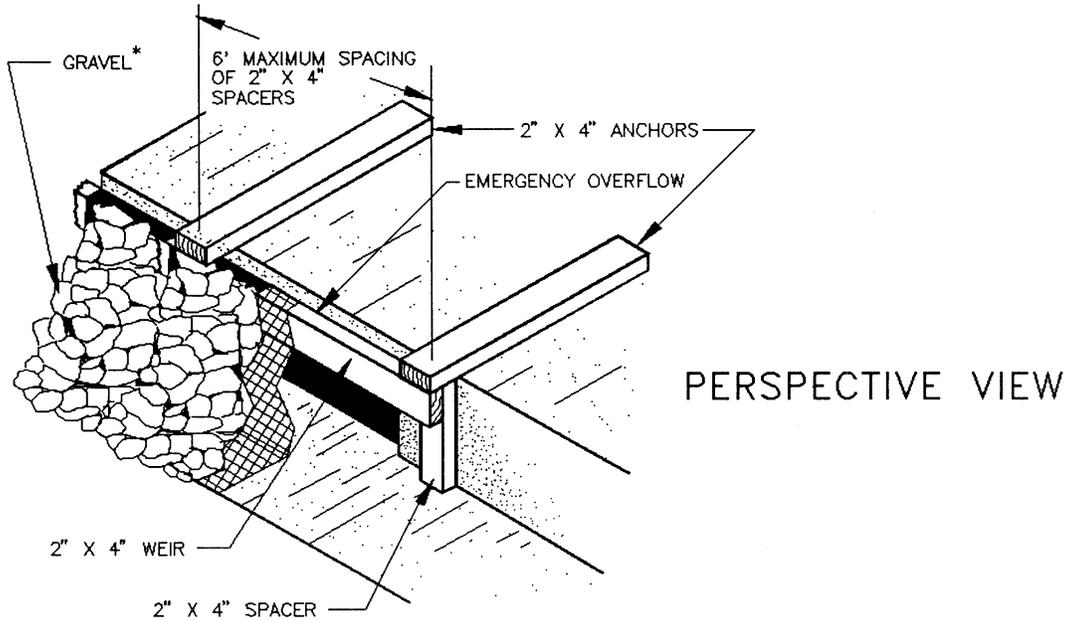
7. Curb Inlet Protection with 2-inch x 4-inch Wooden Weir

- a. Attach a continuous piece of wire mesh (30-inch minimum width x inlet throat length plus 4 feet) to the 2-inch x 4-inch wooden weir (with a total length of throat length plus 2 feet) as shown in Plate 3.07-7. Wood should be "construction grade" lumber.
- b. Place a piece of approved "extra-strength" filter cloth of the same dimensions as the wire mesh over the wire mesh and securely attach to the 2-inch x 4-inch weir.
- c. Securely nail the 2-inch x 4-inch weir to the 9-inch long vertical spacers which are to be located between the weir and inlet face at a maximum 6-foot spacing.
- d. Place the assembly against the inlet throat and nail 2-foot (minimum) lengths of 2-inch x 4-inch board to the top of the weir at spacer locations. These 2-inch x 4-inch anchors shall extend across the inlet tops and be held in place by sandbags or alternate weight.
- e. The assembly shall be placed so that the end spacers are a minimum 1 foot beyond both ends of the throat opening.
- f. Form the wire mesh and filter cloth to the concrete gutter and against the face of curb on both sides of the inlet. Place coarse aggregate over the wire mesh and filter fabric in such a manner as to prevent water from entering the inlet under or around the filter cloth.
- g. This type of protection must be inspected frequently and the filter cloth and stone replaced when clogged with sediment.
- h. Assure that storm flow does not bypass inlet by installing temporary earth or asphalt dikes directing flow into inlet.

8. Block and Gravel Curb Inlet Sediment Filter

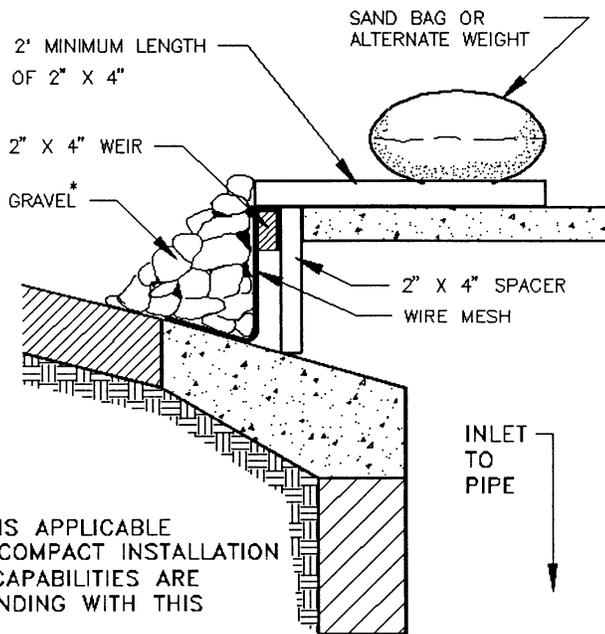
- a. Two concrete blocks shall be placed on their sides abutting the curb at either side of the inlet opening.

# CURB INLET PROTECTION WITH 2-INCH X 4-INCH WOODEN WEIR



PERSPECTIVE VIEW

SIDE ELEVATION



SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE TO CURB INLETS WHERE A STURDY, COMPACT INSTALLATION IS DESIRED. EMERGENCY OVERFLOW CAPABILITIES ARE MINIMAL, SO EXPECT SIGNIFICANT PONDING WITH THIS MEASURE.

\* GRAVEL SHALL BE VDOT COARSE AGGREGATE #3, #357 OR #5

Source: 1983 Maryland Standards and Specifications for Soil Erosion and Sediment Control, and USDA-SCS

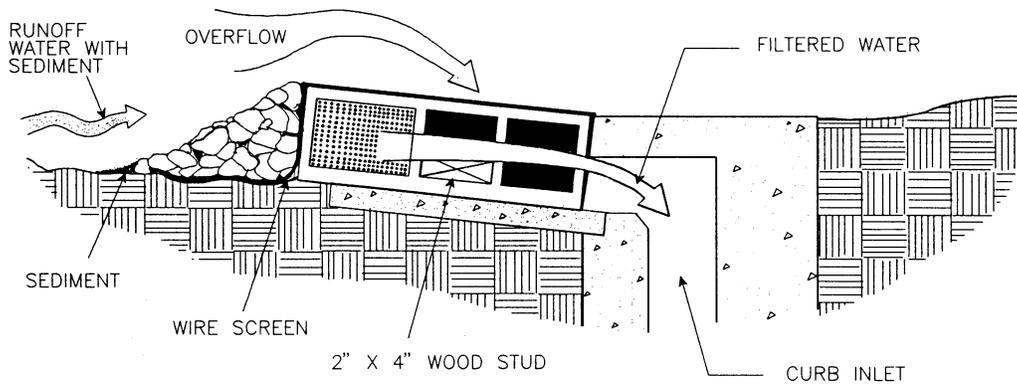
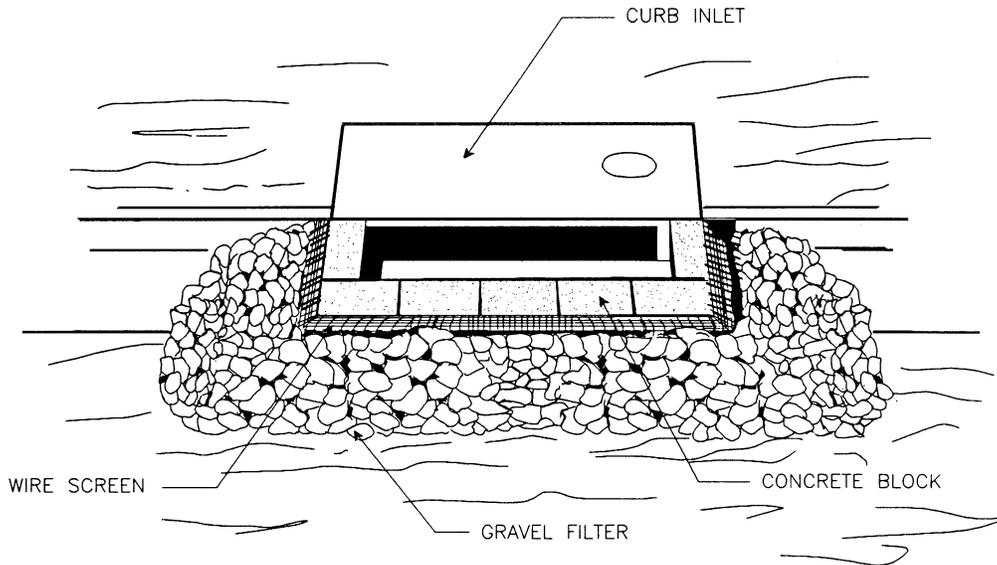
Plate 3.07-7

- b. A 2-inch x 4-inch stud shall be cut and placed through the outer holes of each spacer block to help keep the front blocks in place.
- c. Concrete blocks shall be placed on their sides across the front of the inlet and abutting the spacer blocks as depicted in Plate 3.07-8.
- d. Wire mesh shall be placed over the outside vertical face (webbing) of the concrete blocks to prevent stone from being washed through the holes in the blocks. Wire mesh with 1/2-inch openings shall be used.
- e. Coarse aggregate shall be piled against the wire to the top of the barrier as shown in Plate 3.07-8.
- f. If the stone filter becomes clogged with sediment so that it no longer adequately performs its function, the stone must be pulled away from the blocks, cleaned and/or replaced.

#### Maintenance

1. The structure shall be inspected after each rain and repairs made as needed.
2. Sediment shall be removed and the trap restored to its original dimensions when the sediment has accumulated to one half the design depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.
3. Structures shall be removed and the area stabilized when the remaining drainage area has been properly stabilized.

# BLOCK & GRAVEL CURB INLET SEDIMENT FILTER

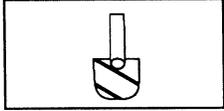


### SPECIAL APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE AT CURB INLETS WHERE AN OVERFLOW CAPABILITY IS NECESSARY TO PREVENT EXCESSIVE PONDING IN FRONT OF THE STRUCTURE.

\* GRAVEL SHALL BE VDOT #3, #357 OR #5 COARSE AGGREGATE

## STD &amp; SPEC 3.08



## CULVERT INLET PROTECTION

Definition

A sediment filter located at the inlet to storm sewer culverts.

Purposes

1. To prevent sediment from entering, accumulating in and being transferred by a culvert and associated drainage system prior to permanent stabilization of a disturbed project area.
2. To provide erosion control at culvert inlets during the phase of a project where elevation and drainage patterns change, causing original control measures to be ineffective or in need of removal.



### Conditions Where Practice Applies

Where culvert and associated drainage system is to be made operational prior to permanent stabilization of the disturbed drainage area. Different types of structures are applicable to different conditions (see Plates 3.08-1 and 3.08-2).

### Planning Considerations

When construction on a project reaches a stage where culverts and other storm sewer appurtenances are installed and many areas are brought to a desired grade, the erosion control measures used in the early stages normally need to be modified or may need to be removed altogether. At that time, there is a need to provide protection at the points where runoff will leave the area via culverts and drop or curb inlets.

Similar to drop and curb inlets, culverts which are made operational prior to stabilization of the associated drainage areas can convey large amounts of sediment to natural drainageways. In case of extreme sediment loading, the pipe or pipe system itself may clog and lose a major portion of its capacity. To avoid these problems, it is necessary to prevent sediment from entering the culvert by using one of the methods noted in this section.

### General Guidelines (All Types)

1. The inlet protection device shall be constructed in a manner that will facilitate clean-out and disposal of trapped sediment and minimize interference with construction activities.
2. The inlet protection devices shall be constructed in such a manner that any resultant ponding of stormwater will not cause excessive inconvenience or damage to adjacent areas or structures.
3. Design criteria more specific to each particular inlet protection device will be found in Plates 3.08-1 through 3.08-2.

### Design Criteria

1. Silt Fence Culvert Inlet Protection
  - a. No formal design is required.
  - b. Silt fence culvert inlet protection has an expected maximum usable life of three months.
  - c. The maximum area draining to this practice shall not exceed one acre.

## 2. Culvert Inlet Sediment Trap

- a. Runoff storage requirements shall be in accordance with information outlined under Std. & Spec. 3.13, TEMPORARY SEDIMENT TRAP.
- b. Culvert inlet sediment traps have a maximum expected useful life of 18 months.
- c. The maximum area draining to this practice shall not exceed 3 acres.

### Construction Specifications

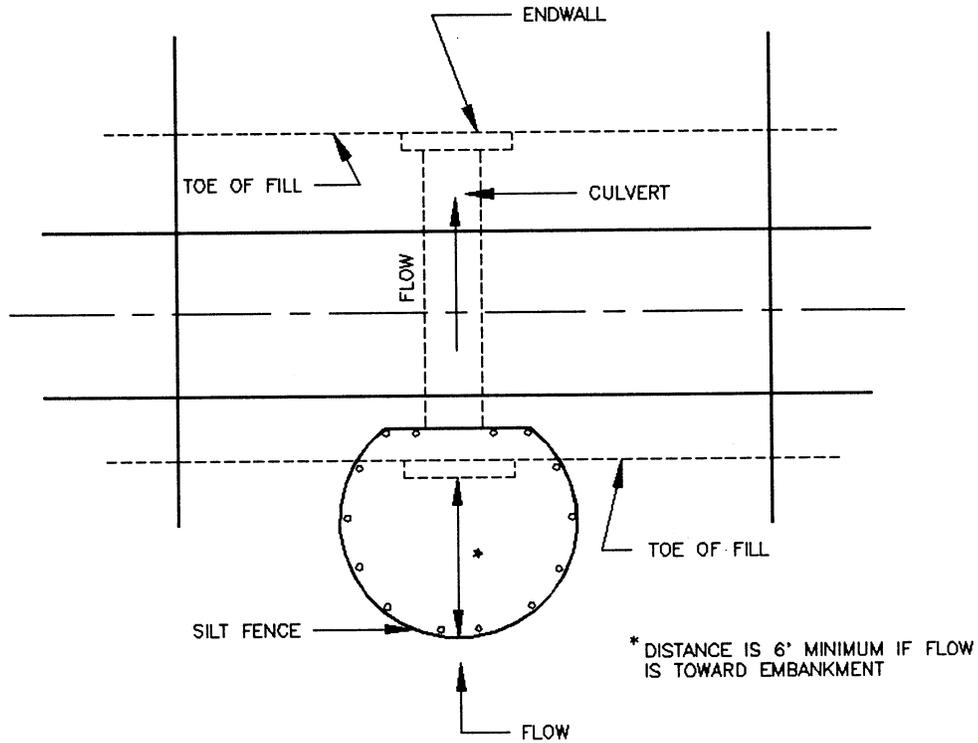
#### 1. Silt Fence Culvert Inlet Protection

- a. The height of the silt fence (in front of the culvert opening) shall be a minimum of 16 inches and shall not exceed 34 inches.
- b. Extra strength filter fabric with a maximum spacing of stakes of 3 feet shall be used to construct the measure.
- c. The placement of silt fence should be approximately 6 feet from the culvert in the direction of incoming flow, creating a "horseshoe" shape as shown in Plate 3.08-1.
- d. If silt fence cannot be installed properly or the flow and/or velocity of flow to the culvert protection is excessive and may breach the structure, the stone combination noted in Plate 3.08-1 should be utilized.

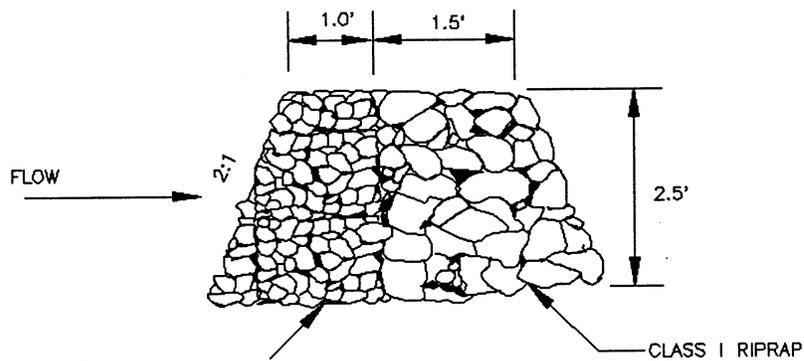
#### 2. Culvert Inlet Sediment Trap

- a. Geometry of the design will be a "horseshoe" shape around the culvert inlet (see Plate 3.08-2).
- b. The toe of riprap (composing the sediment filter dam) shall be no closer than 24" from the culvert opening in order to provide an acceptable emergency outlet for flows from larger storm events.
- c. All other "Construction Specifications" found within Std. & Spec. 3.13, TEMPORARY SEDIMENT TRAP, also apply to this practice.
- e. The proper installation of the culvert inlet sediment trap is a viable substitute for the installation of the TEMPORARY SEDIMENT TRAP.

# SILT FENCE CULVERT INLET PROTECTION



## OPTIONAL STONE COMBINATION \*\*

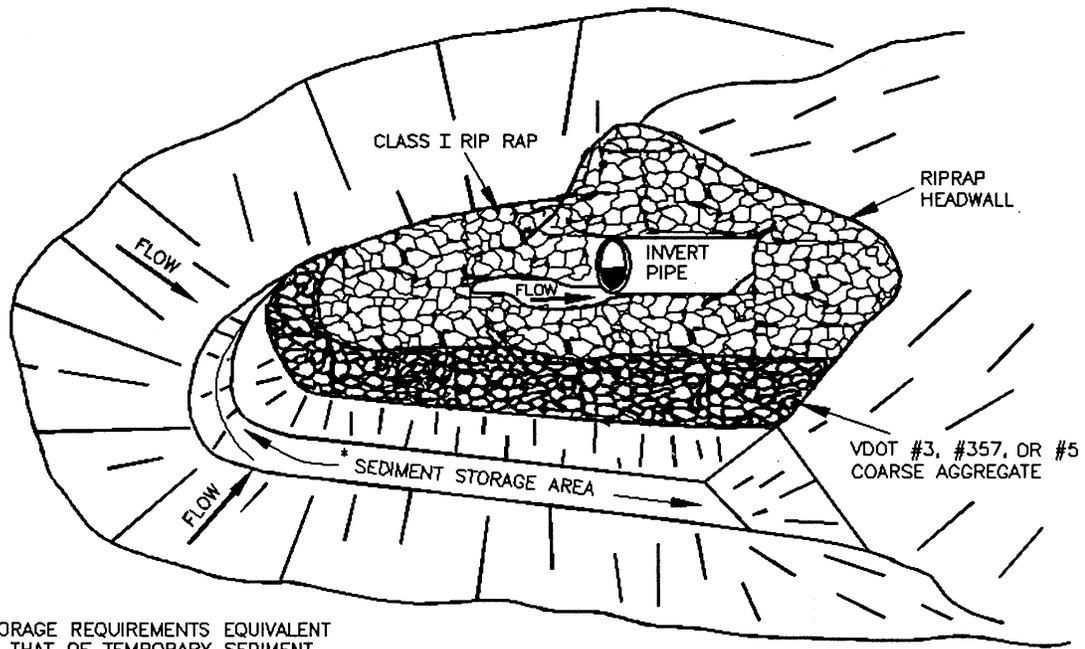


\*\* VDOT #3, #357 OR #5 COARSE AGGREGATE TO REPLACE SILT FENCE IN "HORSESHOE" WHEN HIGH VELOCITY OF FLOW IS EXPECTED

Source: Adapted from VDOT Standard Sheets and Va. DSWC

Plate 3.08-1

# CULVERT INLET SEDIMENT TRAP

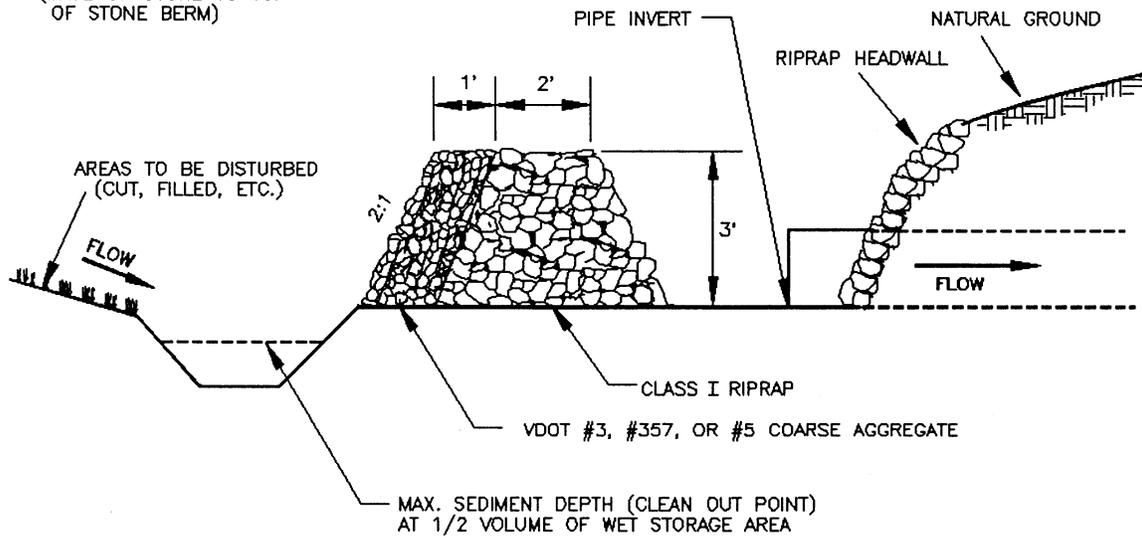


\*STORAGE REQUIREMENTS EQUIVALENT TO THAT OF TEMPORARY SEDIMENT TRAP, STD. & SPEC. 3.13

67 C.Y./ACRE WET STORAGE (BELOW BASE OF STONE)

67 C.Y./ACRE DRY STORAGE (BASE OF STONE TO TOP OF STONE BERM)

## PERSPECTIVE VIEW

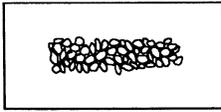


## ELEVATION

Maintenance

1. The structure shall be inspected after each rain and repairs made as needed.
2. Aggregate shall be replaced or cleaned when inspection reveals that clogged voids are causing ponding problems which interfere with on-site construction.
3. Sediment shall be removed and the impoundment restored to its original dimensions when sediment has accumulated to one-half the design depth. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode and cause sedimentation problems.
4. Temporary structures shall be removed when they have served their useful purpose, but not before the upslope area has been permanently stabilized.

## STD &amp; SPEC 3.19



## RIPRAP

Definition

A permanent, erosion-resistant ground cover of large, loose, angular stone with filter fabric or granular underlining.

Purposes

1. To protect the soil from the erosive forces of concentrated runoff.
2. To slow the velocity of concentrated runoff while enhancing the potential for infiltration.
3. To stabilize slopes with seepage problems and/or non-cohesive soils.



### Conditions Where Practice Applies

Wherever soil and water interface and the soil conditions, water turbulence and velocity, expected vegetative cover, etc., are such that the soil may erode under the design flow conditions. Riprap may be used, as appropriate, at stormdrain outlets, on channel banks and/or bottoms, roadside ditches, drop structures, at the toe of slopes, as transition from concrete channels to vegetated channels, etc.

### Planning Considerations

#### Graded vs. Uniform Riprap

Riprap is classified as either graded or uniform. A sample of graded riprap would contain a mixture of stones which vary in size from small to large. A sample of uniform riprap would contain stones which are all fairly close in size.

For most applications, graded riprap is preferred to uniform riprap. Graded riprap forms a flexible self-healing cover, while uniform riprap is more rigid and cannot withstand movement of the stones. Graded riprap is cheaper to install, requiring only that the stones be dumped so that they remain in a well-graded mass. Hand or mechanical placement of individual stones is limited to that necessary to achieve the proper thickness and line. Uniform riprap requires placement in a more or less uniform pattern, requiring more hand or mechanical labor.

Riprap sizes can be designed by either the diameter or the weight of the stones. It is often misleading to think of riprap in terms of diameter, since the stones should be angular instead of spherical. However, it is simpler to specify the diameter of an equivalent size of spherical stone. Table 3.19-A lists some typical stones by weight, spherical diameter and the corresponding rectangular dimensions. These stone sizes are based upon an assumed specific weight of 165 lbs./ft<sup>3</sup>.

Since graded riprap consists of a variety of stone sizes, a method is needed to specify the size range of the mixture of stone. This is done by specifying a diameter of stone in the mixture for which some percentage, by weight, will be smaller. For example, d<sub>85</sub> refers to a mixture of stones in which 85% of the stone by weight would be smaller than the diameter specified. Most designs are based on d<sub>50</sub>. In other words, the design is based on the average size of stone in the mixture. Table 3.19-B lists VDOT standard graded riprap sizes by diameter the weight of the stone.

To ensure that stone of substantial weight is used when implementing riprap structures, specified weight ranges for individual stones and composition requirements should be followed. Such guidelines will help to prevent inadequate stone from being used in construction of the measures and will promote more consistent stone classification statewide. Table 3.19-C notes these requirements.

TABLE 3.19-A

## SIZE OF RIPRAP STONES

Weight (lbs.)	Mean Spherical Diameter (ft.)	Angular Shape:	
		Length (ft.)	Width, Height (ft.)
50	0.8	1.4	0.5
100	1.1	1.75	0.6
150	1.3	2.0	0.67
300	1.6	2.6	0.9
500	1.9	3.0	1.0
1,000	2.2	3.7	1.25
1,500	2.6	4.7	1.5
2,000	2.75	5.4	1.8
4,000	3.6	6.0	2.0
6,000	4.0	6.9	2.3
8,000	4.5	7.6	2.5
20,000	6.1	10.0	3.3

Source: VDOT Drainage Manual

### Sequence of Construction

Since riprap is used where erosion potential is high, construction must be sequenced so that the riprap is put in place with the minimum possible delay. Disturbance of areas where riprap is to be placed should be undertaken only when final preparation and placement of the riprap can follow immediately behind the initial disturbance. Where riprap is used for outlet protection, the riprap should be placed before or in conjunction with the construction of the pipe or channel so that it is in place when the pipe or channel begins to operate.

### Design Criteria

#### Gradation

The riprap shall be composed of a well-graded mixture down to the one-inch size particle such that 50% of the mixture by weight shall be larger than the  $d_{50}$  size as determined from the design procedure. A well-graded mixture as used herein is defined as a mixture composed primarily of the larger stone sizes but with a sufficient mixture of other sizes to fill the progressively smaller voids between the stones. The diameter of the largest stone size in such a mixture shall be  $1\frac{1}{2}$  times the  $d_{50}$  size.

**TABLE 3.19-B**  
**GRADED RIPRAP - DESIGN VALUES**

<u>Riprap Class</u>	<u>D<sub>15</sub> Weight (lbs.)</u>	<u>Mean D<sub>15</sub> Spherical Diameter (ft.)</u>	<u>Mean D<sub>50</sub> Spherical Diameter (ft.)</u>
Class AI	25	0.7	0.9
Class I	50	0.8	1.1
Class II	150	1.3	1.6
Class III	500	1.9	2.2
Type I	1,500	2.6	2.8
Type II	6,000	4.0	4.5

Source: VDOT Drainage Manual

The designer, after determining the riprap size that will be stable under the flow conditions, shall consider that size to be a minimum size and then, based on riprap gradations actually available in the area, select the size or sizes that equal or exceed the minimum size. The possibility of damage by children shall be considered in selecting a riprap size, especially if there is nearby water or a gully in which to toss the stones.

#### Thickness

The minimum thickness of the riprap layer shall be 2 times the maximum stone diameter, but not less than 6 inches.

#### Quality of Stone

Stone for riprap shall consist of field stone or rough unhewn quarry stone of approximately rectangular shape. The stone shall be hard and angular and of such quality that it will not disintegrate on exposure to water or weathering and it shall be suitable in all respects for the purpose intended. The specific gravity of the individual stones shall be at least 2.5.

Rubble concrete may be used provided it has a density of at least 150 pounds per cubic foot, and otherwise meets the requirement of this standard and specification.

**TABLE 3.19-C**  
**GRADED RIPRAP - WEIGHT ANALYSIS**

<u>Riprap Class/Type</u>	<u>Weight Range* (lbs.)</u>	<u>Requirements for Stone Mixture</u>
Class AI	25-75	Max. 10% > 75 lbs.
Class I	50-150	60% > 100 lbs.
Class II	150-500	50% > 300 lbs.
Class III	500-1,500	50% > 900 lbs.
Type I	1,500-4,000	Av. wt. = 2,000 lbs.
Type II	6,000-20,000	Av. wt. = 8,000 lbs.

\* In all classes/types of riprap, a maximum 10% of the stone in the mixture may weigh less than the lower end of the range.

Source: Adapted from VDOT Road and Bridge Specifications

### Filter Fabric Underlining

A lining of engineering filter fabric (geotextile) shall be placed between the riprap and the underlying soil surface to prevent soil movement into or through the riprap. Table 3.19-D notes the minimum physical properties of the filter fabric.

Filter fabric shall not be used on slopes greater than 1½:1 as slippage may occur and should be used in conjunction with a layer of coarse aggregate (granular filter blanket is described below) when the riprap to be placed is Class II or larger.

### Granular Filter

Although the filter cloth underlining or bedding is the preferred method of installation, a granular (stone) bedding is a viable option when the following relationship exists:

$$\frac{d_{15} \text{ filter}}{d_{85} \text{ base}} < 5 < \frac{d_{15} \text{ filter}}{d_{15} \text{ base}} < 40$$

and,

$$\frac{d_{50} \text{ filter}}{d_{50} \text{ base}} < 40$$

In these relationships, filter refers to the overlying material and base refers to the underlying material. The relationships must hold between the filter material and the base material and between the riprap and the filter material. In some cases, more than one layer of filter material may be needed. Each layer of filter material should be approximately 6-inches thick.

**TABLE 3.19-D**

**REQUIREMENTS FOR FILTER FABRIC USED WITH RIPRAP**

<u>Physical Property</u>	<u>Test Method</u>	<u>Requirements</u>
Equivalent Opening Size	Corps of Engineers CWO 2215-77	Equal or greater than U.S. No. 50 sieve
Tensile Strength* @ 20% (maximum)	VTM-52	30 lbs./linear in. (minimum)
Puncture Strength	ASTM D751*	80 lbs. (minimum)

\* Tension testing machine with ring clamp, steel ball replaced with 5/16 diameter solid steel cylinder with hemispherical tip centered within the ring clamp.

Seams shall be equal in strength to basic material.

Additional fabric material or non-corrosive steel wire may be incorporated into the fabric to increase overall strength.

Source: VDOT Road and Bridge Specifications

### Riprap at Outlets

Design criteria for sizing the stone and determining the dimensions of riprap pads used at the outlet of drainage structure are contained in OUTLET PROTECTION (Std. & Spec. 3.18). A filter fabric underlining is required for riprap used as outlet protection.

### Riprap for Channel Stabilization

Riprap for channel stabilization shall be designed to be stable for the condition of bank-full flow in the reach of channel being stabilized. The design procedure in Appendix 3.19-a, which is extracted from the Federal Highway Administration's Design of Stable Channels with Flexible Linings (82), shall be used. This method establishes the stability of the rock material relative to the forces exerted upon it.

Riprap shall extend up the banks of the channel to a height equal to the maximum depth of flow or to a point where vegetation can be established to adequately protect the channel.

The riprap size to be used in a channel bend shall extend upstream from the point of curvature and downstream from the bottom of the channel to a minimum depth equal to the thickness of the blanket and shall extend across the bottom of the channel the same distance (see Plate 3.19-1).

### Freeboard and Height of Bank

For riprapped and other lined channels, the height of channel lining above the water surface should be based on the size of the channel, the flow velocity, the curvature, inflows, wind action, flow regulation, etc.

The height of the bank above the water surface varies in a similar manner, depending on the above factors plus the type of soil.

Plate 3.19-2 is based on information developed by the U.S. Bureau of Reclamation for average freeboard and bank height in relation to channel capacity. This chart should be used by the designer to obtain a minimum freeboard for placement of riprap and top of bank.

### Riprap for Slope Stabilization

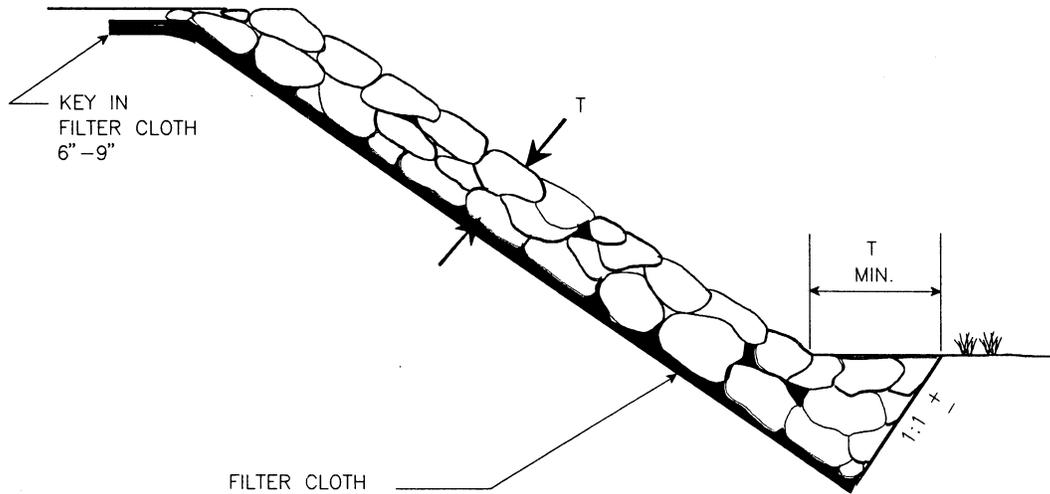
Riprap for slope stabilization shall be designed so that the natural angle of repose of the stone mixture is greater than the gradient of the slope being stabilized (see Plate 3.19-5).

### Riprap for Lakes and Ponds Subject to Wave Action

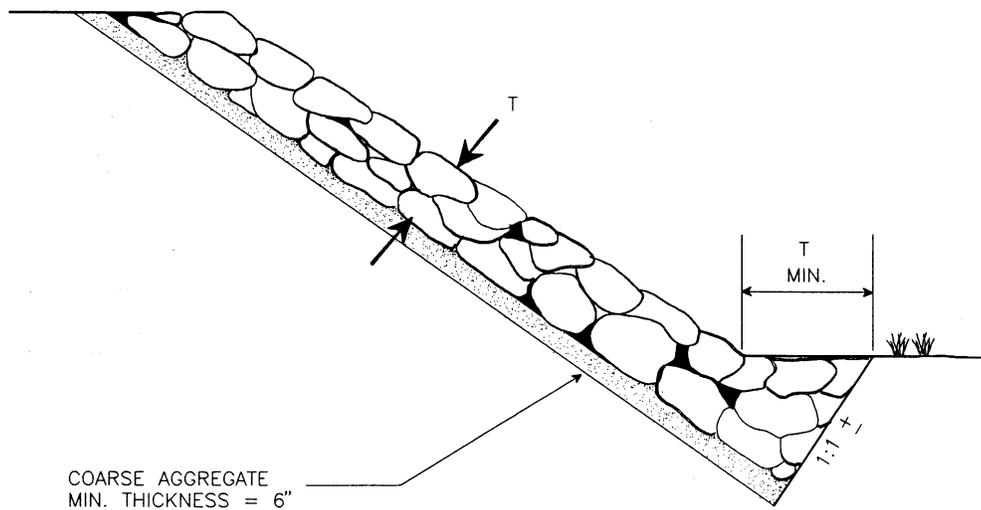
Riprap used for shoreline protection on lakes and ponds may be subject to wave action. The waves affecting the shoreline may be wind-driven or created by boat wakes. Consult

# TOE REQUIREMENTS FOR BANK STABILIZATION

## FILTER CLOTH UNDERLINER (PREFERRED)



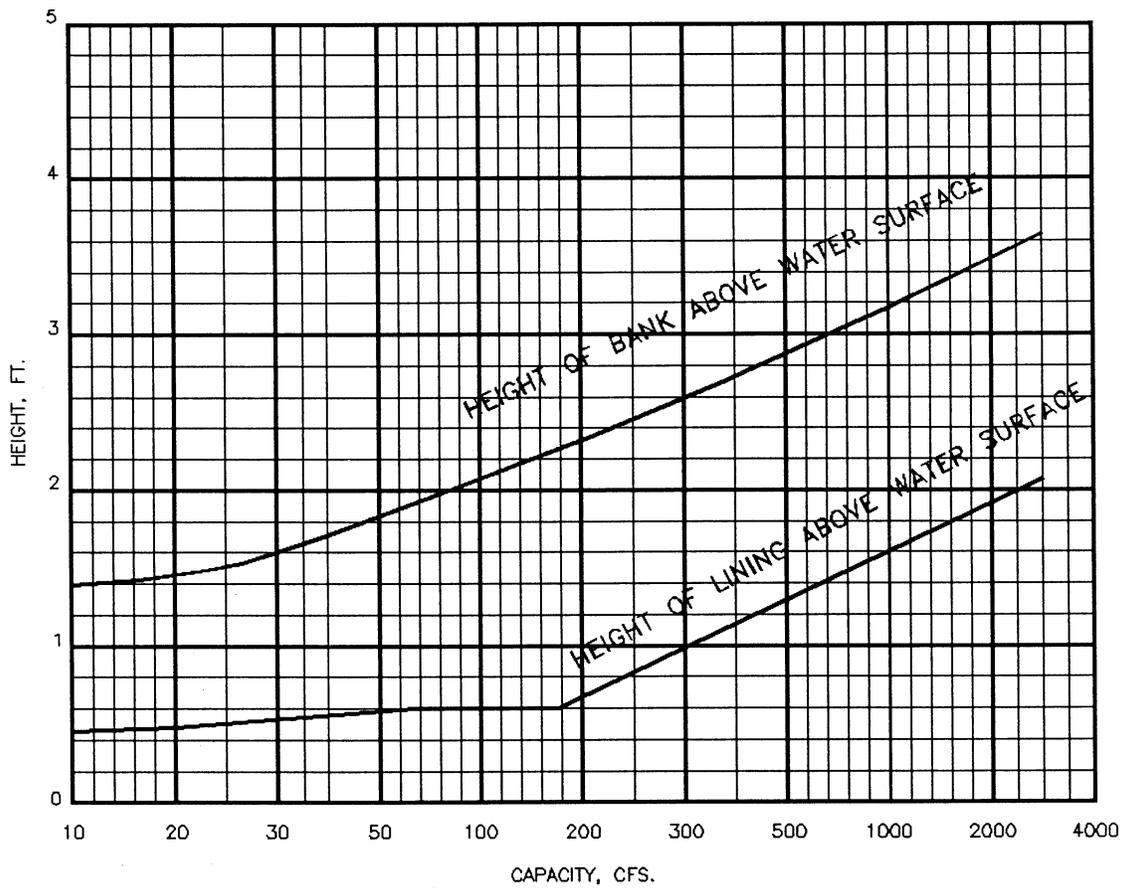
## GRANULAR FILTER



Source: Adapted from VDOT Drainage Manual

Plate 3.19-1

# RECOMMENDED FREEBOARD AND HEIGHT OF BANK OF LINED CHANNELS



Source: U. S. Bureau of Reclamation

Plate 3.19-2

the latest edition of the VDOT Drainage Manual ("Design of Slope Protection to Resist Wave Action") for specific design criteria in determining the required size of stones and the design wave height for such an installation. Use the equations in Appendix 3.19-b to calculate other pertinent design parameters. For more in-depth design criteria concerning these installations, see the U.S. Army Corps of Engineers' Shore Protection Manual (59).

#### Riprap for Abrupt Channel Contractions

Refer to latest edition of VDOT Drainage Manual.

#### Riprap for Installations Subject to Tidal and Wave Action

The design of riprap structures for tidal areas is beyond the scope of the VESCL and VESCR. The DSWC's Shoreline Programs Bureau provides advice regarding minimum design parameters for these installations. Notably, a riprap design for shoreline protection in tidal areas must meet all applicable state and federal requirements and should be carried out by a qualified professional.

#### Construction Specifications

Subgrade Preparation: The subgrade for the riprap or filter shall be prepared to the required lines and grades. Any fill required in the subgrade shall be compacted to a density approximately that of the surrounding undisturbed material. Brush, trees, stumps and other objectionable material shall be removed.

Filter Fabric or Granular Filter: Placement of the filter fabric should be done immediately after slope preparation. For granular filters, the stone should be spread in a uniform layer to the specified depth (normally 6 inches). Where more than one layer of filter material is used, the layer should be spread so that there is minimal mixing of the layers.

When installing geotextile filter cloths, the cloth should be placed directly on the prepared slope. The edges of the sheets should overlap by at least 12 inches. Anchor pins, 15 inches long, should be spaced every 3 feet along the overlap. The upper and lower ends of the cloth should be buried at least 12 inches. Care should be taken not to damage the cloth when placing the riprap. If damage occurs, that sheet should be removed and replaced. For large stone (Class II or greater), a 6-inch layer of granular filter will be necessary to prevent damage to the cloth.

Stone Placement: Placement of riprap should follow immediately after placement of the filter. The riprap should be placed so that it produces a dense well-graded mass of stone with a minimum of voids. The desired distribution of stones throughout the mass may be obtained by selective loading at the quarry, controlled dumping of successive loads during final placing, or by a combination of these methods. The riprap should be placed to its full thickness in one operation. The riprap should not be placed in layers. The riprap should not be placed by dumping into chutes or similar methods which are likely to cause

segregation of the various stone sizes. Care should be taken not to dislodge the underlying material when placing the stones.

The finished slope should be free of pockets of small stone or clusters of large stones. Hand placing may be necessary to achieve the required grades and a good distribution of stone sizes. Final thickness of the riprap blanket should be within plus or minus 1/4 of the specified thickness.

#### Maintenance

Once a riprap installation has been completed, it should require very little maintenance. It should, however, be inspected periodically to determine if high flows have caused scour beneath the riprap or filter fabric or dislodged any of the stone. Care must be taken to properly control sediment-laden construction runoff which may drain to the point of the new installation. If repairs are needed, they should be accomplished immediately.

## APPENDIX 3.19-a

### RIPRAP DESIGN IN CHANNEL

The design method described below is adapted from Hydraulic Engineering Circular No. 15 of the Federal Highway Administration. It is applicable to both straight and curved sections of channel where the flow is tangent to the bank of the channel.

#### Tangent Flow - Federal Highway Administration Method

This design method determines a stable rock size for straight and curved sections of channels. It is assumed that the shape, depth of flow, and slope of the channel are known. A stone size is chosen for the maximum depth of flow. If the sides of the channel are steeper than 3:1, the stone size must be modified accordingly. The final design size will be stable on both sides of the channel and the bottom.

1. Enter Plate 3.19-3 with the maximum depth of flow (feet) and channel slope (feet/foot). Where the two lines intersect, choose the  $d_{50}$  size of stone. (Select the  $d_{50}$  for the diagonal line above the point of intersection).
2. If channel side slopes are steeper than 3:1, continue with step 3; if not, the procedure is complete.
3. Enter Plate 3.19-4 with the side slope and the base width to maximum depth ratio (B/d). Where the two lines intersect, move horizontally left to read  $K_1$ .
4. Determine from Plate 3.19-5 the angle of repose for the  $d_{50}$  size of stone and the side slope of the channel. (Use  $42^\circ$  for  $d_{50}$  greater than 1.0. Do not use riprap on slopes steeper than the angle of repose for the size of stone).
5. Enter Plate 3.19-6 with the side slope of the channel and the angle of repose for the  $d_{50}$  size of stone. Where the two lines intersect, move vertically down to read  $k_2$ .
6. Compute  $d_{50} \times K_1/K_2 = d'_{50}$  to determine the correct size stone for the bottom and side slopes of straight sections of channel.

#### For Curved Sections of Channel

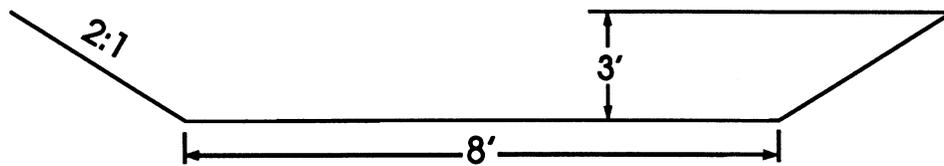
1. Compute the radius of the curve ( $R_o$ ), measured at the outside edge of the bottom.
2. Compute the ratio of the top width of the water surface ( $B_s$ ) to the radius of the curve ( $R_o$ ),  $B_s/R_o$ .
3. Enter Plate 3.19-7 with the ratio  $B_s/R_o$ . Move vertically until the curve is intersected. Move horizontally left to read  $K_3$ .

4. Compute  $d'_{50} \times K_3 = d_{50c}$  to determine the correct size stone for bottom and side slopes of the curved sections of channel.

Example Problem

Given:

A trapezoidal channel 3 feet deep, 8 foot bottom width, 2:1 side slopes, and a 2% slope.



Calculate:

A stable riprap size for the bottom and side slopes of the channel.

Solution:

1. From Plate 3.19-3, for a 3-foot-deep channel on a 2% grade,  $d_{50} = 0.75$  feet or 9 inches.
2. Since the side slopes are steeper than 3:1, continue with step 3.
3. From Plate 3.19-4,  $B/d = 8/3 = 2.67$ ,  $Z = 2$ ,  $K_1 = 0.82$ .
4. From Plate 3.19-5, for  $d_{50} = 9$  inches,  $\theta = 41^\circ$ .
5. From Plate 3.19-6, for  $Z = 2$  and  $\theta = 41^\circ$ ,  $K_2 = 0.73$ .
6.  $d_{50} \times K_1/k_2 = d'_{50} = 0.75 \times 0.82/0.73 = 0.84$  feet.  
 $0.84 \text{ feet} \times \frac{12 \text{ inches}}{1 \text{ foot}} = 10.08$ . Use  $d'_{50} = 10$  inches.

Given:

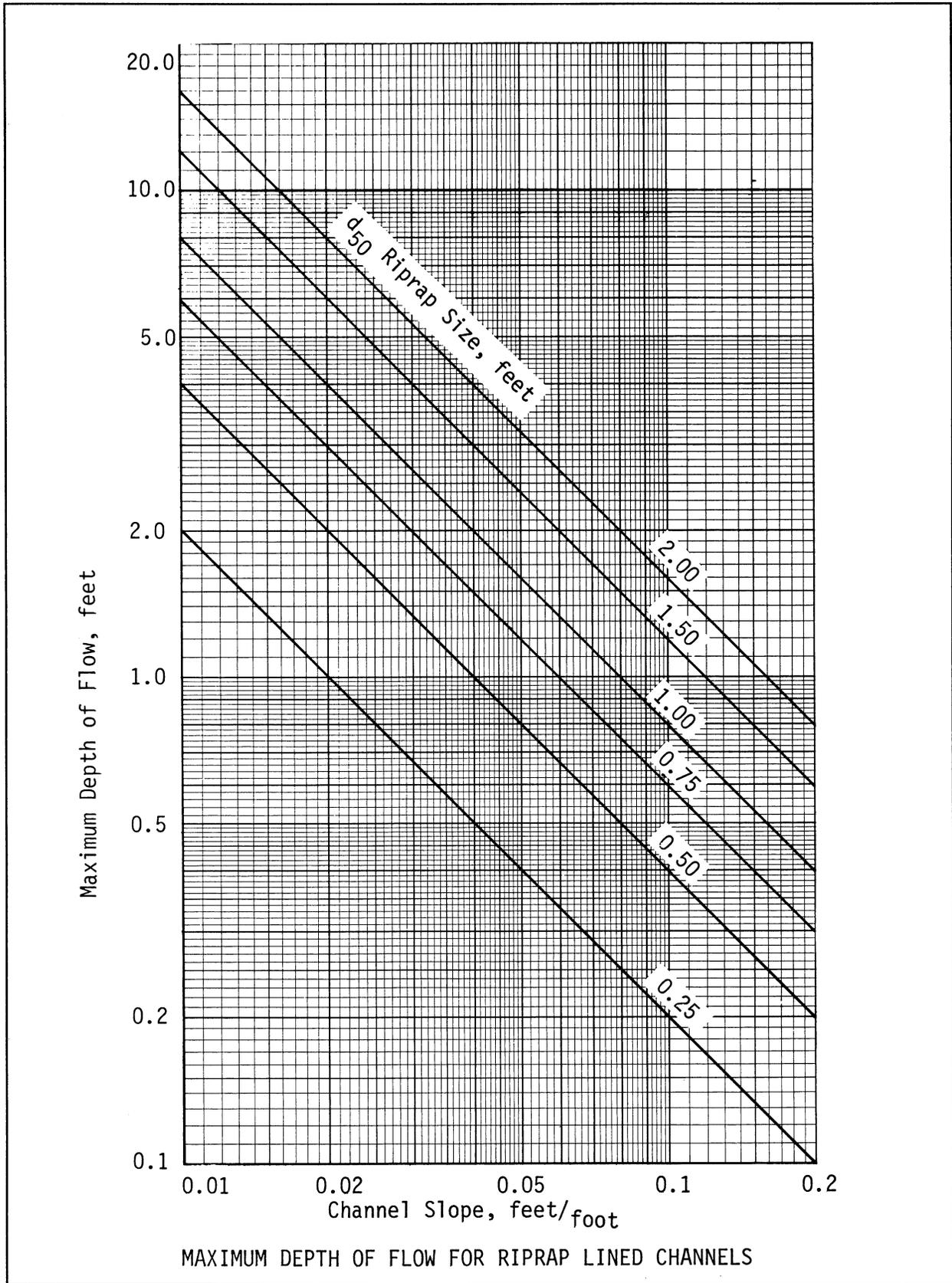
The preceding channel has a curved section with a radius of 50 feet.

Calculate:

A stable riprap size for the bottom and side slopes of the curved section of channel.

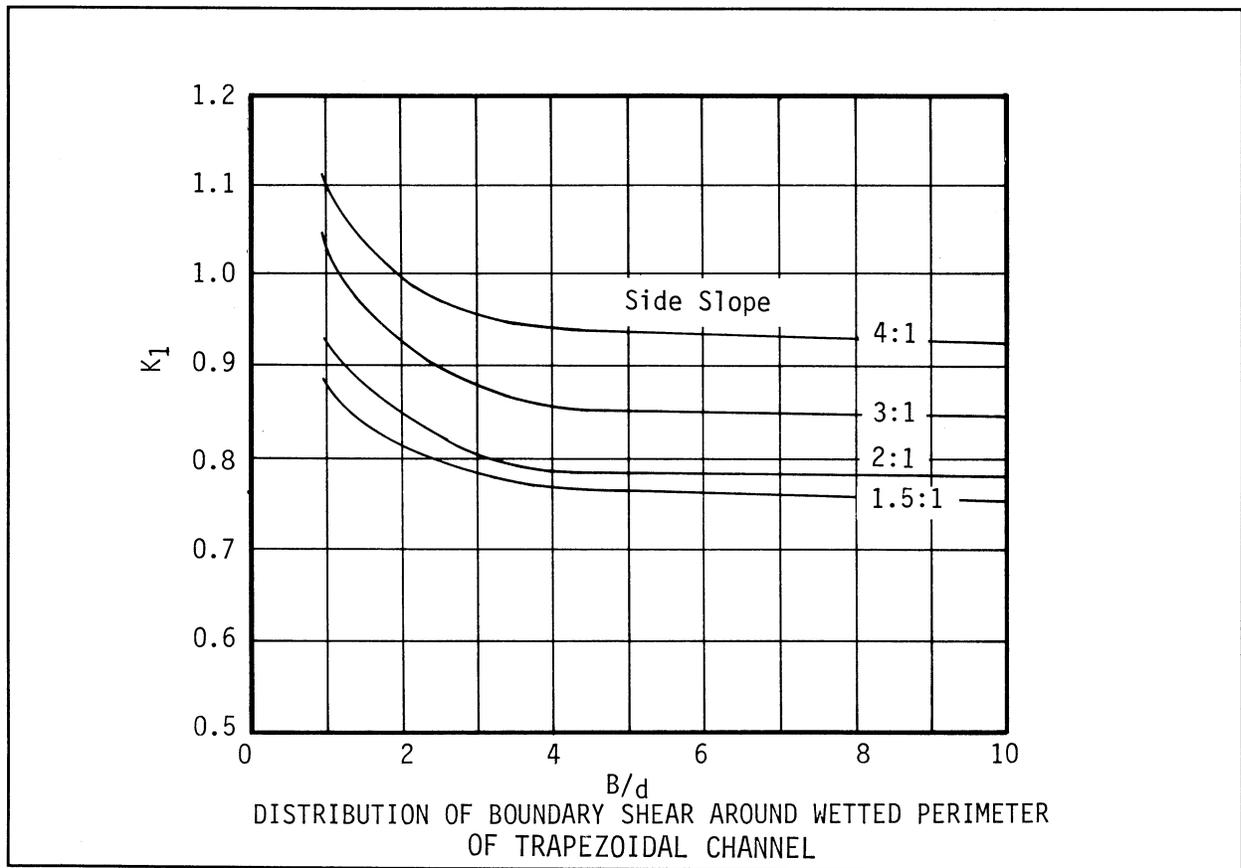
Solution:

1.  $R_o = 50$  feet
2.  $B_s/R_o = 20/50 = 0.40$
3. From Plate 3.19-7, for  $B_s/R_o = 0.40$ ,  $K_3 = 1.1$
4.  $d'_{50} \times K_3 = 0.84 \times 1.1 = 0.92$  feet  
 $0.92$  feet  $\times \frac{12 \text{ inches}}{1 \text{ foot}} = 11.0$ .



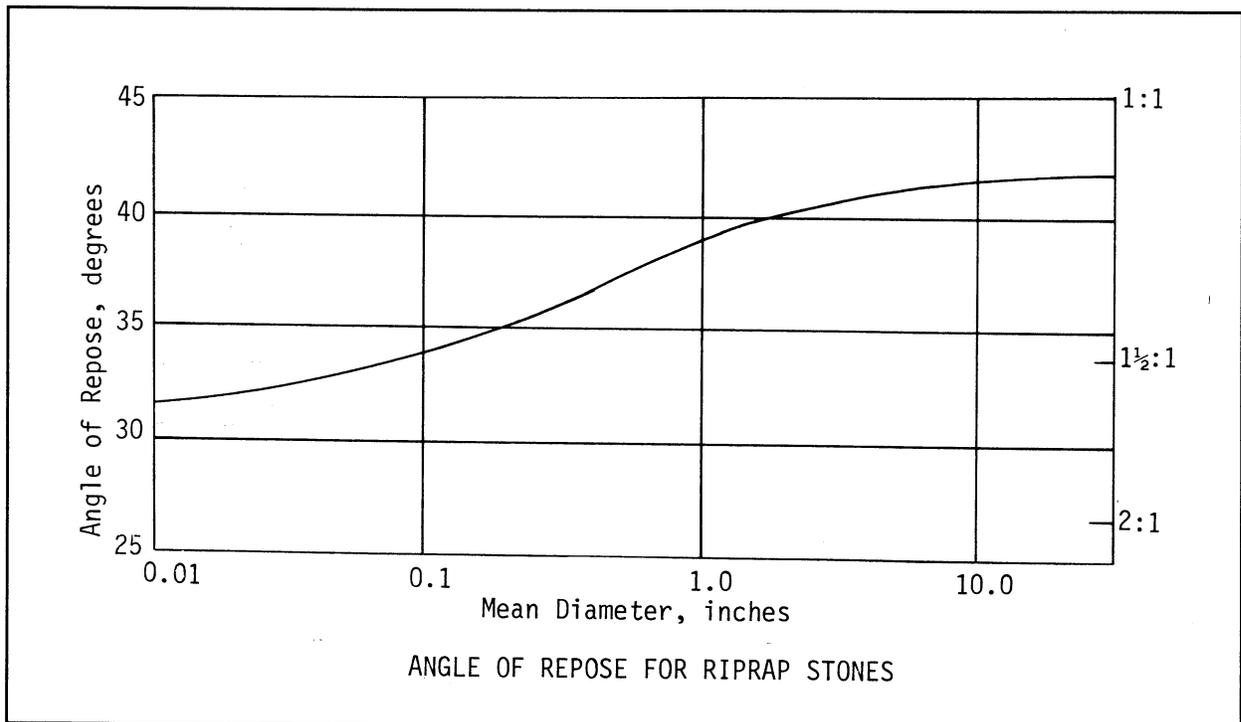
Source: VDOT Drainage Manual

Plate 3.19-3



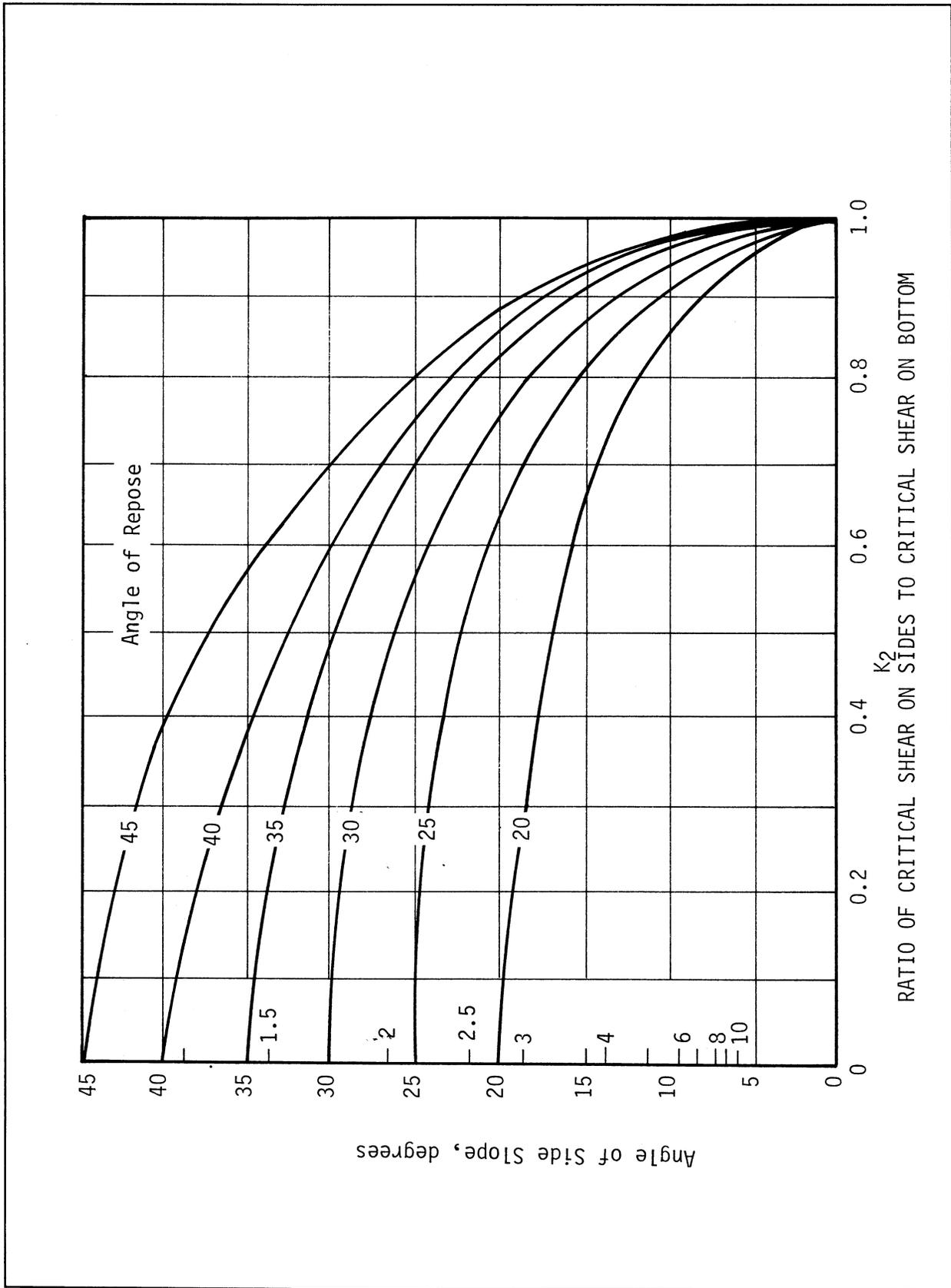
Source: VDOT Drainage Manual

Plate 3.19-4



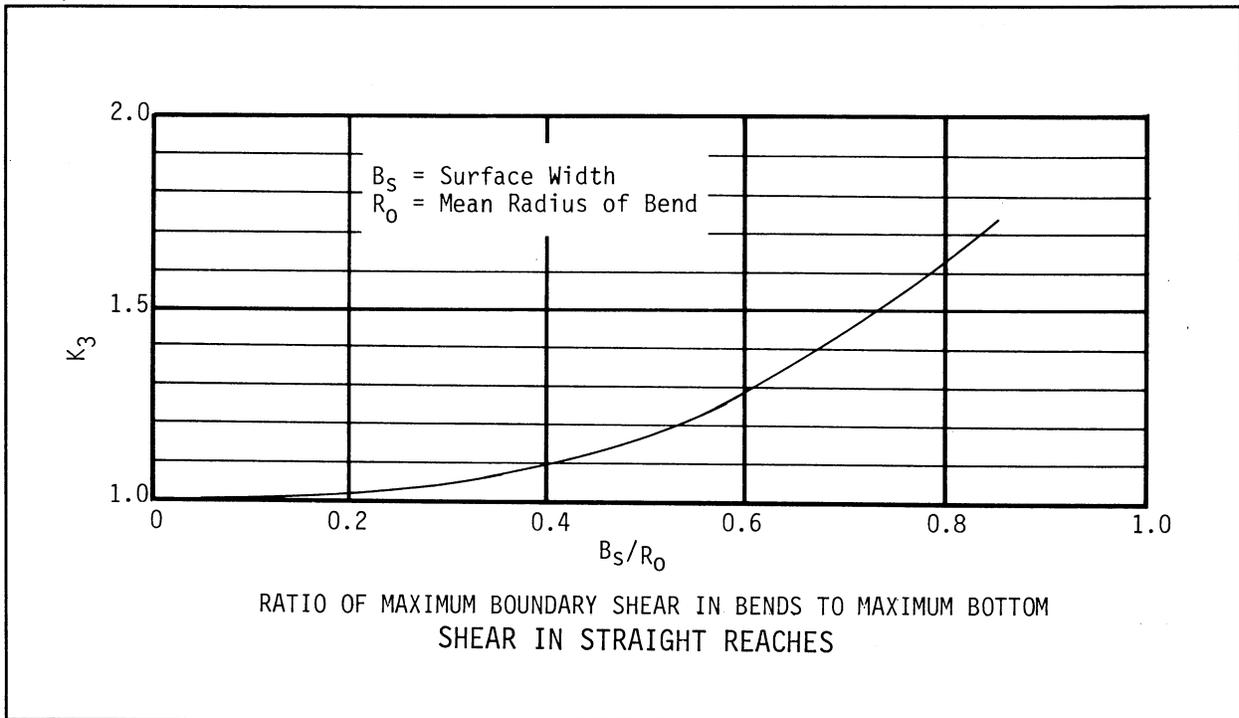
Source: VDOT Drainage Manual

Plate 3.19-5



Source: VDOT Drainage Manual

Plate 3.19-6



Source: VDOT Drainage Manual

Plate 3.19-7

## APPENDIX 3.19-b

**RIPRAP DESIGN EQUATIONS FOR LAKES  
AND PONDS SUBJECT TO WAVE ACTION**

In many instances, riprap is installed along the shoreline of nontidal ponds and lakes in order to protect them from the continual scour of wind-driven waves. The following methods/equations will produce minimum design parameters for size of stone, depth of buried toe (or width of riprap apron) and height of structure above average water level.

- I. **Size of Riprap Required** - See VDOT Drainage Manual ("Design of Slope Protection to Resist Wave Action").
- II. **DWH (Design Wave Height)** - See VDOT Drainage Manual ("Design of Slope Protection to Resist Wave Action") or U.S. Army Corps of Engineers' Shore Protection Manual.
- III. **Depth of Buried Toe** = DWH at design wind speed.
- IV. **Width of Riprap Apron (Alternative to Buried Toe)** =  $DWH \times 2$
- V. **Height of Structure (Above the Average Water Level)** =  $DWH \times 1.5$

# Basin Cleaning 2015-16

Run Date: 11/02/2016 11:53 AM

Reference No	Request Address One	Action Taken	Code Number	Work Completion Date
<a href="#">W027199-071315</a>	Marvin @ Chesterfield Aves	Cleaned storm drains	1500 - Clean Catch Basin	7/6/2015
<a href="#">W027200-071315</a>	Charlotte @ Meridian Aves.	Cleaned storm drains the cages on Bobby Walkers property	1500 - Clean Catch Basin	7/6/2015
<a href="#">W027201-071315</a>	1217 Boulevard	Cleaned storm drains behind Big Lots	1500 - Clean Catch Basin	7/6/2015
<a href="#">W027251-071415</a>	118 Lakeside Dr.	Clean debris from storm grates	1500 - Clean Catch Basin	7/13/2015
<a href="#">W027318-072115</a>	Charlotte @ Meridian Aves.	Cleaned catch cages and drainage ditch on Bobby Walkers property	1500 - Clean Catch Basin	7/14/2015
<a href="#">W027378-072715</a>	City Wide	Removed 1/4 ton of debris from: 318 Jefferson Ave - Curb Inlet removed trash and silt, 100 Royal Oak Ave - Curb Inlet removed Trash, 600 Pinehurst Ave - Curb Inlet removed car parts	1500 - Clean Catch Basin	7/2/2015
<a href="#">W027379-072715</a>	Boulevard	Collected 1/4 cubic yards of debris from: At A Ave - Catch Basin removed silt and trash. At Fairfax Ave - Curb Inlet removed Trash. At Shuford Ave - Catch Basin removed trash and silt.	1500 - Clean Catch Basin	7/9/2015
<a href="#">W027382-072715</a>	City Wide	Collected 1/4 ton of debris from: 101 Seaton Dr - Curb Inlet removed grass and silt, 700 Forest View Dr - Curb Inlet removed grass, 102 Friar Ln - Curb Inlet removed grass and silt, 217 Biltmore Dr - Curb Inlet removed trash and silt.	1500 - Clean Catch Basin	7/2/2015

Reference No	Request Address One	Action Taken	Code Number	Work Completion Date
<a href="#">W027426-073015</a>	City Wide	Collected 1/2 cubic yards of debris from: Branders Bridge Rd @ Wakefield Ave - Curb Inlet removed trash, grass and silt, E. Westover @ Hamilton Aves - 2 Curb Inlets removed grass and Trash, 217 Dupuy Ave - 2 Curb Inlets removed Grass, trash and silt, 111 Hanover Ave - Curb Inlet removed grass and silt	1500 - Clean Catch Basin	7/29/2015
<a href="#">W027439-073015</a>	Meridian @ Charlotte Aves.	Cleaned catch gates	1500 - Clean Catch Basin	7/29/2015
<a href="#">W027440-073015</a>	1217 Boulevard	Cleaned catch grate behind Big Lots	1500 - Clean Catch Basin	7/29/2015
<a href="#">W027494-080315</a>	City Wide	Collected 1/4 cubic yards of debris from: 113 Moore Ave - Curb Inlet removed grass and trash, 308 Eastman Ave - Catch Basin removed Trash and silt, 215 George Ave - Curb Inlet removed grass and silt	1500 - Clean Catch Basin	7/31/2015
<a href="#">W027586-080715</a>	Canterbury Ln.	Shoveled silt and pine needles from Inlet	1500 - Clean Catch Basin	8/10/2015
<a href="#">W027591-081015</a>	121 Lakeside Dr.	cleaned storm drain	1500 - Clean Catch Basin	8/7/2015
<a href="#">W027592-081015</a>	Sherwood Dr.	Cleaned storm drain	1500 - Clean Catch Basin	8/7/2015
<a href="#">W027593-081015</a>	Chesterfield @ Marvin Aves	Cleaned storm drain	1500 - Clean Catch Basin	8/7/2015
<a href="#">W027596-081015</a>	City Wide	Cleaned debris from Storm Drain grates at: Meridian, Chesterfield @ Marvin Aves, Brookhill @ Forest View Drs, Forest View Dr @ Swim Club, Behind Colonial Apartments, Sherwood Dr @ Boulevard	1500 - Clean Catch Basin	8/6/2015
<a href="#">W027616-081115</a>	City Wide	Removed 1/2 cubic yard of debris from: Boulevard at Train trussel - Catch Basin removed trash and grass clippings, 2102 Snead Ave - Catch Basin removed trash and silt, 313 Walnut Ave - Curb Inlet removed grass and trash, 399 Danville Ave - Curb Inlet removed trash and silt, 234 Cameron Ave - Curb Inlet removed grass, trash and silt.	1500 - Clean Catch Basin	8/6/2015

Reference No	Request Address One	Action Taken	Code Number	Work Completion Date
<a href="#">W027617-081115</a>	City Wide	Removed 1/4 cubic yard of debris from: 705 Lundy Ave - Curb Inlet removed grass and trash, 110 Lakeside Dr - Curb Inlet removed silt and trash, 118 Lakeview Ave - Catch Basin removed silt and trash, 3300 Boulevard - Curb Inlet removed car parts	1500 - Clean Catch Basin	8/7/2015
<a href="#">W027619-081115</a>	City Wide	Collected 1/4 cubic yards of debris from: 1907 Wakefield Ave - Catch Basin removed Silt and Grass, 2100 Boulevard - Curb Inlet removed Trash, 1703 Franklin Ave - Curb Inlet removed Silt and trash	1500 - Clean Catch Basin	8/10/2015
<a href="#">W027622-081115</a>	City Wide	Rainy day cleaned the following basins: Wakefield Ave, Westover Ave, Lakeside Dr, Grates at Meridian and Charlotte Aves, Chesterfield Ave, Branders Bridge Rd, Conduit Rd, Boulevard, Old Town Creek, Snead Ave	1500 - Clean Catch Basin	8/10/2015
<a href="#">W027682-081415</a>	City Wide	Cleaned the following storm drains: Behind Big lots, Chesterfield @ Marvin Aves, Hamilton @ Westover Aves, catch cages on Roslyn Bobby Walkers, Meridian @ Charlotte Aves.	1500 - Clean Catch Basin	8/11/2015
<a href="#">W027916-090215</a>	City Wide	Collected 1/4 cubic yards of debris from: 403 Gould Ave - Curb Inlet removed grass and silt, 208 Crescent Ave - Curb Inlet removed silt and trash, 500 Braxton Ave - Curb Inlet removed Grass and Trash.	1500 - Clean Catch Basin	8/13/2015

Reference No	Request Address One	Action Taken	Code Number	Work Completion Date
<a href="#">W027917-090215</a>	City Wide	Collected 1/4 cubic yards of debris from: 124 Stratford Dr - Curb Inlet removed Grass and Silt, 207 Stratford Dr - Curb Inlet removed grass and silt, 4438 Berkshire Ln - Curb Inlet removed Silt, 4451 Berkshire Ln - Curb Inlet - Curb Inlet removed Silt and Trash, 118 Pinecliff Dr - Curb Inlet removed Silt and Trash.	1500 - Clean Catch Basin	8/14/2015
<a href="#">W027922-090215</a>	Lyons Ave.	Removed 2 cubic yards of Grass, Trash and Silt from 211 and 212 Lyons	1500 - Clean Catch Basin	8/25/2015
<a href="#">W027925-090215</a>	Washington Ave.	Removed Grass and silt from basins at: Virginia and Washington and at Jefferson and Washington removing 1/2 ton of debris	1500 - Clean Catch Basin	8/26/2015
<a href="#">W027961-090315</a>	233 Huntington Rd.	Removed 1/4 cubic yards trash, grass and silt from 2-curb Inlets	1500 - Clean Catch Basin	9/1/2015
<a href="#">W027962-090315</a>	City Wide	Collected 1/4 cubic yards of debris from: 406 Dick Ewell Ave - Catch Basin removed trash and grass, 1013 Kensington Ave - Curb Inlet removed Trash and Silt, 314 Highland Ave - Curb Inlet removed grass and silt, 603 Walnut Ave - Curb Inlet removed Car Parts and a Hub cap, 318 Prince Albert Ave - Curb Inlet removed trash and silt.	1500 - Clean Catch Basin	9/2/2015
<a href="#">W028011-091115</a>	Davis Ave.	Cleaned 2-Curb Inlets removed grass, silt and trash in the 200 Block	1500 - Clean Catch Basin	9/3/2015
<a href="#">W028015-091115</a>	City Wide	Collected 1/4 cubic yards of debris from: 523 Roslyn Ave - Curb Inlet removed Trash and Silt, 605 Pinehurst Ave - Curb Inlet removed Trash and Pine needles, 203 Ingram Ave - Curb Inlet removed trash	1500 - Clean Catch Basin	9/4/2015

Reference No	Request Address One	Action Taken	Code Number	Work Completion Date
<a href="#">W028017-091115</a>	City Wide	Collected 1/4 cubic yards of debris from: 822 Old Town Dr - Curb Inlet removed Trash, 1703 Franklin Ave - Curb Inlet removed silt and trash, 2207 Franklin Ave - Curb Inlet removed Trash, 508 Compton Rd - Curb Inlet removed Silt and Trash, 2600 Bent Oaks Dr - Curb Inlet removed Grass and Silt.	1500 - Clean Catch Basin	9/10/2015
<a href="#">W028146-092115</a>	City Wide	Removed 1/2 cubic yard of debris from: 200 Newcastle Dr - Curb Inlet removed trash, silt and grass, 1016 Avon Ct - Curb Inlet removed silt and grass, 1024 Taylor Ln - Curb Inlet removed Trash, 151 Brandywine Rd - Curb Inlet removed Silt and trash	1500 - Clean Catch Basin	9/11/2015
<a href="#">W028147-092115</a>	Biltmore Dr.	Behind houses Cut grass, clean basins, ditch, cut low hanging limbs and small trees. used bush hog to cut tall weeds and grass. Cut up small tree and limbs that were cut with polesaw. Used weedeater to cut weeds/grass around 3 catch basins. Removed 1/4 cubic yards of leaves, dirt and vines around 3 catch basins. Sprayed around basins using 1 gallon of round up lots of vines growing into basins	1500 - Clean Catch Basin	9/14/2015
<a href="#">W028148-092115</a>	115 Boykins Ave.	Collected 1/4 cubic yards of Trash and silt from a Catch Basin	1500 - Clean Catch Basin	9/15/2015
<a href="#">W028149-092115</a>	102 Friar Ln.	cleaned curb Inlet removed silt and grass	1500 - Clean Catch Basin	9/15/2015
<a href="#">W028152-092115</a>	114 Chesterfield Ave.	Removed 1/4 cubic yard of silt from Catch basin	1500 - Clean Catch Basin	9/18/2015
<a href="#">W028153-092115</a>	112 Hanover Ave.	Cleaned curb Inlet removed trash and silt	1500 - Clean Catch Basin	9/18/2015

Reference No	Request Address One	Action Taken	Code Number	Work Completion Date
<a href="#">W028168-092315</a>	City Wide	Collected 1/4 cubic yards of debris from: 1146 Wicker Dr - Curb Inlet removed Silt and Trash, 212 Pinecliffe Dr - Curb Inlet removed Silt and Grass, 901 Ayshire Ln - Curb Inlet removed Silt and Trash, 119 Dunoon Ct - Curb Inlet removed Trash	1500 - Clean Catch Basin	9/21/2015
<a href="#">W028193-092515</a>	Meridian @ Charlotte Aves.	cleaned 2 grates and the ends of culvert	1500 - Clean Catch Basin	9/24/2015
<a href="#">W028256-093015</a>	Flintlock Dr.	Collected 1/4 cubic yard of debris from: 101 Flintlock Dr - Curb Inlet removed Leaves and sticks, 102 Flintlock Dr - Curb Inlet removed Leaves.	1500 - Clean Catch Basin	9/22/2015
<a href="#">W028257-093015</a>	126 Swift Creek Ln.	Cleaned Catch Basin removed Leaves and Silt	1500 - Clean Catch Basin	9/22/2015
<a href="#">W028258-093015</a>	City Wide	Collected 1/4 cubic yard of debris from: 1216 Burlington Dr - Curb Inlet removed Trash and Silt, 1305 Duke of Gloucester St - Curb Inlet removed trash, 207 Breezy Hill Dr - Curb Inlet removed leaves and silt.	1500 - Clean Catch Basin	9/24/2015
<a href="#">W028260-093015</a>	601 Pinehurst Ave.	Collected 1/4 cubic yard of debris from Curb Inlet removed pine needles and trash	1500 - Clean Catch Basin	9/25/2015
<a href="#">W028261-093015</a>	406 Roslyn Ave.	Collected 1/4 cubic yard of debris from a Curb Inlet removed grass, silt and trash	1500 - Clean Catch Basin	9/25/2015
<a href="#">W028262-093015</a>	City Wide	Collected 1/4 cubic yard of debris from: 4749 Ridgecrest Ln - Curb Inlet removed leaves and silt, 1307 River Oak Dr - Curb Inlet removed Trash, 1100 Wellington Rd - Curb Inlet removed Pine needles, 105 Lexington Dr - Curb Inlet removed trash and silt	1500 - Clean Catch Basin	9/28/2015

Reference No	Request Address One	Action Taken	Code Number	Work Completion Date
<a href="#">W028263-093015</a>	City Wide	Collected 1/4 yard of debris from: 114 Chesterfield Ave - Catch Basin removed Silt and Leaves, 162 Wright Ave - Curb Inlet removed Trash and grass, 125 roanoke Ave - Curb Inlet removed Leaves and silt, 1207 Meridian Ave - Catch Basin removed Trash and Sticks	1500 - Clean Catch Basin	9/29/2015
<a href="#">W028265-093015</a>	City Wide	Cleaned storm drains at: Meridian @ Charlotte Aves, Behind Big Lots, Chesterfield Ave, Marvin Aves both sides.	1500 - Clean Catch Basin	9/29/2015
<a href="#">W028297-100515</a>	Meridian Ave.	Cleaned catch gate Meridian Ave ditch	1500 - Clean Catch Basin	9/30/2015
<a href="#">W028298-100515</a>	Roslyn Rd.	Cleaned catch cage behind Bobby Walker's property	1500 - Clean Catch Basin	9/30/2015
<a href="#">W028299-100515</a>	121 Lakeside Dr.	Removed debris from grate so water will flow	1500 - Clean Catch Basin	10/2/2015
<a href="#">W028300-100515</a>	Wakefield Ave.	Removed debris from storm drain so water will flow	1500 - Clean Catch Basin	10/2/2015
<a href="#">W028301-100515</a>	Shuford Ave @ Boulevard	Removed debris from storm drain so water will flow	1500 - Clean Catch Basin	10/2/2015
<a href="#">W028302-100515</a>	Marvin @ Chesterfield Aves	Removed debris from 2 storm drain so water will flow	1500 - Clean Catch Basin	10/2/2015
<a href="#">W028303-100515</a>	Charlotte @ Meridian Aves.	Removed debris from drainage ditch so water will flow	1500 - Clean Catch Basin	10/2/2015
<a href="#">W028307-100515</a>	City Wide	August Ln, Appomattox Ct and Drive, Ashby, Archer, Atlantic, Avon Ct, Ayrshire Rd, Azalea Ln, B, Battery Pl, Beech, Beechwood, Bent Oaks Dr, Bermuda, Biltmore Dr, Boulevard, Bradsher, Brame Branders Bridge Rd, Braxton, Brian Ln, Briarcliffe Ct and Dr, Brijadan Ln, Bristol, Brockwell Ln, Brooke Ct, Brookedge Dr, Brookhill Ave and Ct, Buckingham Dr, Burlington Dr, Babell Dr, Cambridge Pl, Camelot Ct, Canterbury Ln, Cedar Ln, Cedar Ridge Ct, Cedarwood, Center,	1500 - Clean Catch Basin	10/1/2015

Reference No	Request Address One	Action Taken	Code Number	Work Completion Date
		Charles, Charles Dimmock Pkwy, Charlotte, Chestnut, Choptank Ct, Cloverhill, Colonial, Comstock Dr, Concord, Courtland Dr, Covington Rd, D, Dale, Dana, Danville, Davis, Deerwood Dr, Dick Ewell, Dimmock Ct, Dogwood Dr, Dover Ln, Drake, Jefferson, Kent, Keswick Rd, Lafayette, Lake, Lakeside Dr, Lakeview, Lynchburg, Lyons, MacArthur, Mallard Dr, Maple, Meadow View Rd, Meridian, Moore, Moorman, MT Pleasant Dr, N. Temple Rd, N. Valley Rd, Newcastle Dr, Norfolk, Norwood Dr, Nottingham Dr, Old Town Dr, Orange, Orchard, Orkney Rd, Park, Pickett, Prince Albert, Red Fox Rd, Richmond, Ridge Rd, Roslyn, Royal Oak, Ryan, S. Valley Rd, James, Jackson, Dupuy, Elmwood Dr, Essex Rd, Fairfax, Fischer, Franklin, George, Germar Ct, Gills Dr, Hamilton, Hampton, Hanover, Hardy, Hargrave, Helen, Hemlock, Hermitage Rd, Heron Run Dr, E and W Highland Ct, Hill Pl, Hillcrest, holly, Homestead Dr, Hope Ridge Ct, Huntington Rd, Ivey, School, Sherwood Dr, Shuford, Springdale, Swift Creek Ln, Temple, Tussing Ln, W. Eilerslie, Wakefield, Walnut, Waterfront Dr, Wellington Rd, West, White Bank Rd, White Sand Ct, Wicker Dr, Wildwood, Williamsburg Rd, Windmere Dr, Windsor, Winston, Woodlawn, Woodside, Wright, Yacht Basin Dr, Yew, Yorkshire Re, Yorktown Dr.		
<a href="#">W028308-100515</a>	703 Forest View Dr.	Removed a flatbed load of brush blocking C&G so water will flow	1500 - Clean Catch Basin	10/1/2015

Reference No	Request Address One	Action Taken	Code Number	Work Completion Date
<a href="#">W028310-100515</a>	City Wide	Sherwood Dr, Ridge Rd, Chesterfield, Oakwood, Boulevard, Conduit Rd, Old Town Creek, Meridian Ditch	1500 - Clean Catch Basin	10/2/2015
<a href="#">W028316-100515</a>	City Wide	Collected 1/4 cubic yards of debris from: Shuford Ave @ Boulevard - Catch Basin removed trash, Pickwick Ave Alley - Catch Basin removed grass and leaves, Chesterfield Ave - BMP removed Trash and Leaves.	1500 - Clean Catch Basin	9/30/2015
<a href="#">W028601-102915</a>	Branders Bridge Rd @ Wakefield Ave.	Removed Trash and Leaves from Curb Inlet	1500 - Clean Catch Basin	10/5/2015
<a href="#">W028602-102915</a>	Conduit Rd @ Temple Ave.	Removed Trash and metal screen near Concrete median 2-Curb Inlet	1500 - Clean Catch Basin	10/5/2015
<a href="#">W028603-102915</a>	Southpark Blvd.	Removed Trash, Grass and silt from curb inlet at Exxon Gas Station. Collecting 1/2 cubic yard of debris today	1500 - Clean Catch Basin	10/5/2015
<a href="#">W028606-102915</a>	208 Orchard Ave.	Removed trash and leaves from catch basin	1500 - Clean Catch Basin	10/9/2015
<a href="#">W028607-102915</a>	124 Carroll Ave.	Removed silt and leaves from a Curb Inlet	1500 - Clean Catch Basin	10/9/2015
<a href="#">W028608-102915</a>	148 Chesterfield Ave.	Removed Trash and silt from a Curb Inlet	1500 - Clean Catch Basin	10/9/2015
<a href="#">W028609-102915</a>	155 Chesterfield Ave.	Removed Trash and Leaves from a Curb Inlet	1500 - Clean Catch Basin	10/9/2015
<a href="#">W028610-102915</a>	114 Chesterfield Ave.	Removed Silt and Leaves from a Catch Basin. Collected 1/2 yards of debris for the day	1500 - Clean Catch Basin	10/9/2015
<a href="#">W028611-102915</a>	1016 Avon Ct.	Removed Grass, Leaves and silt from a Curb Inlet	1500 - Clean Catch Basin	10/13/2015
<a href="#">W028612-102915</a>	1024 Taylor Ln.	Removed Trash and silt from a Curb Inlet	1500 - Clean Catch Basin	10/13/2015
<a href="#">W028613-102915</a>	1218 Briarcliff Dr.	Removed Trash and silt from a Curb Inlet	1500 - Clean Catch Basin	10/13/2015
<a href="#">W028614-102915</a>	4438 Berkshire Ln.	Removed Leaves and silt from a Curb Inlet. Collected 1/4 cubic yards of debris for the day	1500 - Clean Catch Basin	10/13/2015

Reference No	Request Address One	Action Taken	Code Number	Work Completion Date
<a href="#">W028616-102915</a>	233 Huntington Rd.	Collected 1/4 cubic yard of debris from 2-curb Inlets removed leaves, grass and trash	1500 - Clean Catch Basin	10/14/2015
<a href="#">W028619-102915</a>	89 Sherwood Dr.	Removed Trash and silt from a Catch Basin	1500 - Clean Catch Basin	10/15/2015
<a href="#">W028620-102915</a>	922 Forest View Dr.	Removed Leaves and silt from a Curb Inlet	1500 - Clean Catch Basin	10/15/2015
<a href="#">W028621-102915</a>	115 Norwood Dr.	Removed Leaves and Sticks from a Curb Inlet	1500 - Clean Catch Basin	10/15/2015
<a href="#">W028622-102915</a>	303 Fairmount Dr.	Removed Trash and silt from a Curb Inlet. Collecting 1/4 cubic yard of debris for the day	1500 - Clean Catch Basin	10/15/2015
<a href="#">W028623-102915</a>	210 Pickett Ave	Removed Trash from a Catch Basin	1500 - Clean Catch Basin	10/16/2015
<a href="#">W028624-102915</a>	517 Springdale Ave.	Removed Trash and silt from a Catch Basin near Traffic Engineering Office	1500 - Clean Catch Basin	10/16/2015
<a href="#">W028625-102915</a>	2803 Woodlawn Ave.	Removed Trash and silt from a Curb Inlet	1500 - Clean Catch Basin	10/16/2015
<a href="#">W028626-102915</a>	117 Laurens Ln.	Removed Car parts from a Curb Inlet	1500 - Clean Catch Basin	10/16/2015
<a href="#">W028627-102915</a>	112 Cedar Creek Ln.	Removed a bag of Trash from a Curb Inlet. Collected 1/2 cubic yard of debris for the day	1500 - Clean Catch Basin	10/16/2015
<a href="#">W028630-102915</a>	101 Cloverhill Ave.	Removed Trash and silt from a Catch Basin	1500 - Clean Catch Basin	10/19/2015
<a href="#">W028631-102915</a>	2900 Cedar Ln.	Removed Trash from a Catch Basin	1500 - Clean Catch Basin	10/19/2015
<a href="#">W028632-102915</a>	409 Taswell Ave.	Removed Leaves and Sticks from a Curb Inlet. Collected 1/4 cubic yard of debris for the day	1500 - Clean Catch Basin	10/19/2015
<a href="#">W028633-102915</a>	1214 Hermitage Rd.	Removed pine needles from a Curb Inlet	1500 - Clean Catch Basin	10/21/2015
<a href="#">W028634-102915</a>	1106 Clifton Dr.	Removed Trash and silt from a Curb Inlet	1500 - Clean Catch Basin	10/21/2015
<a href="#">W028635-102915</a>	1230 Dana Ln.	Removed Leaves and silt from a Curb Inlet	1500 - Clean Catch Basin	10/21/2015
<a href="#">W028636-102915</a>	5213 Cedar Ridge Ct.	Removed Trash from a Curb Inlet. Collected 1/4 cubic yard of debris for the day	1500 - Clean Catch Basin	10/21/2015

Reference No	Request Address One	Action Taken	Code Number	Work Completion Date
<a href="#">W028638-102915</a>	Yacht Basin Dr.	Collected 1/4 cubic yards of debris from 4 catch basins removing leaves, grass, sticks and trash	1500 - Clean Catch Basin	10/22/2015
<a href="#">W028641-102915</a>	City Wide	Collected 1/4 cubic yard of debris from: 723 Old Town Dr - Curb Inlet removed Trash and Leaves, 816 Old Town Dr - Curb Inlet removed Leaves and silt, 712 Keswick Rd - Curb Inlet removed sticks and Trash, 500 Compton Rd - Catch Basin removed leaves and Trash, 1215 Oakwood Dr - Curb Inlet removed Silt, Leaves and Trash	1500 - Clean Catch Basin	10/27/2015
<a href="#">W028642-102915</a>	City Wide	Collected 1/4 cubic yard of debris from: 418 Lyons Ave - Curb Inlet removed Trash, 313 Dick Ewell Ave - Catch Basin removed Trash and Silt, 1013 Kensington Ave - Curb Inlet removed Leaves and Silt, Richmond Ave @ Boulevard - Curb Inlet removed Car parts, Hub cap, metal and plastic, 206 Lee Ave - Curb Inlet removed Trash and Silt	1500 - Clean Catch Basin	10/28/2015
<a href="#">W028656-110215</a>	City Wide	Checked/cleaned storm drains; Sherwood Dr, Chesterfield, Wakefield, Boulevard behind Big lots	1500 - Clean Catch Basin	10/27/2015
<a href="#">W028658-110215</a>	City Wide	Rain checked/cleaned the following storm drains: Sherwood Dr, Yew, Maple Ln, Wakefield, Bradshire, Crescent Hanover, Chesterfield, Conduit Rd.	1500 - Clean Catch Basin	10/28/2015
<a href="#">W028663-110215</a>	Chesterfield Ave.	Cut back bushes at the retention pond removing 4 flat bed loads	1500 - Clean Catch Basin	10/30/2015
<a href="#">W028680-110215</a>	City Wide	Rain checked/cleaned the following: Franklin a grate inlet, Lakewood Dr a grate inlet, Charlotte @ Meridian Aves a Culvert Inlet, Westover a grate inlet	1500 - Clean Catch Basin	10/25/2015

Reference No	Request Address One	Action Taken	Code Number	Work Completion Date
<a href="#">W028730-110615</a>	City Wide	Collected 1/4 cubic yard of debris from: 113 Royal Oak - Curb Inlet removed sticks and Trash, 319 Jefferson - Curb Inlet removed Leaves and sticks, Jackson @ Boulevard - Curb Inlet removed Trash, Washington @ Boulevard - Curb Inlet removed Trash and Silt, 402 Washington - Curb Inlet removed Sticks, Trash and Silt.	1500 - Clean Catch Basin	10/30/2015
<a href="#">W028731-110615</a>	City Wide	Collected 1/4 cubic yards of debris from: 116 Essex Rd - Curb Inlet removed Pine needles, 2013 Snead - Curb Inlet removed Trash and Silt, 335 Ridge Rd - Catch Basin removed Sticks and Trash, 313 Walnut Ave - Curb Inlet removed two smashed pumpkins	1500 - Clean Catch Basin	11/2/2015
<a href="#">W028742-110615</a>	121 Yew Ave.	Cleaned a curb inlet removed silt and trash	1500 - Clean Catch Basin	11/3/2015
<a href="#">W028743-110615</a>	102 George Ave.	Cleaned a curb inlet removed Leaves and trash	1500 - Clean Catch Basin	11/3/2015
<a href="#">W028744-110615</a>	206 Hargrave Ave.	Cleaned a curb inlet removed silt and Leaves. Collected 1/2 cubic yard of debris for the day	1500 - Clean Catch Basin	11/3/2015
<a href="#">W028745-110615</a>	City Wide	Rain day Cleaned/checked the following storm drains: Sherwood Dr, Chesterfield, Wakefield, Conduit Rd,	1500 - Clean Catch Basin	11/2/2015
<a href="#">W028897-112315</a>	Meridian Ave.	Cleaned catch gates	1500 - Clean Catch Basin	11/19/2015
<a href="#">W028899-112315</a>	Roslyn Rd.	Cleaned catch cage behind Bobby Walker's property	1500 - Clean Catch Basin	11/19/2015
<a href="#">W028941-113015</a>	138 Chesterfield Ave.	Removed 1 cubic yard of debris Leaves, dirt, trash and silt from a catch basin	1500 - Clean Catch Basin	11/12/2015
<a href="#">W028942-113015</a>	228 Washington Ave.	Removed .5 cubic yards of Leaves from a Catch Basin	1500 - Clean Catch Basin	11/12/2015
<a href="#">W028944-113015</a>	520 Roslyn Ave.	Removed .5 cubic yard of Leaves and silt from a Catch Basin	1500 - Clean Catch Basin	11/12/2015

Reference No	Request Address One	Action Taken	Code Number	Work Completion Date
<a href="#">W028945-113015</a>	Southpark Blvd.	At South Ave removed trash, car parts, hub cap and a tail pipe from a Curb Inlet	1500 - Clean Catch Basin	11/13/2015
<a href="#">W028946-113015</a>	Temple Ave @ Conduit Rd.	Removed leaves and trash from a Curb Inlet	1500 - Clean Catch Basin	11/13/2015
<a href="#">W028947-113015</a>	2600 Conduit Rd	At Home Depot Entrance removed a bag of leaves from a Curb Inlet collecting 1/4 cubic yards of debris for the day	1500 - Clean Catch Basin	11/13/2015
<a href="#">W028950-113015</a>	1313 Canterbury Ln.	Removed leaves from a Curb Inlet raked to the side the leave truck will pick up in Area 3	1500 - Clean Catch Basin	11/19/2015
<a href="#">W028951-113015</a>	4749 Ridgecrest Ln	Removed leaves from a Curb Inlet raked to the side the leave truck will pick up in Area 3	1500 - Clean Catch Basin	11/19/2015
<a href="#">W028952-113015</a>	1310 Wellington Rd.	Removed leaves from a Curb Inlet raked to the side the leave truck will pick up in Area 3	1500 - Clean Catch Basin	11/19/2015
<a href="#">W028954-113015</a>	513 Braxton Ave.	Removed trash from a Curb Inlet	1500 - Clean Catch Basin	11/20/2015
<a href="#">W028955-113015</a>	211 Maple Ln	Removed Leaves and trash from a Curb Inlet collecting 1/4 cubic yards of debris for the day.	1500 - Clean Catch Basin	11/20/2015
<a href="#">W028956-113015</a>	500 Compton Rd.	Removed Leaves and trash from a Catch Basin	1500 - Clean Catch Basin	11/23/2015
<a href="#">W028957-113015</a>	1101 Yacht Basin Dr.	Removed Leaves from a Curb Inlet	1500 - Clean Catch Basin	11/23/2015
<a href="#">W028958-113015</a>	1205 Yacht Basin Dr.	Removed leaves from a Curb Inlet - Collected 1/2 cubic yards of debris for the day	1500 - Clean Catch Basin	11/23/2015
<a href="#">W028959-113015</a>	922 Forest View Dr.	Removed leaves from a Curb Inlet	1500 - Clean Catch Basin	11/24/2015
<a href="#">W028960-113015</a>	803 Forest View Dr.	Removed Leaves from a Curb Inlet - Collecting 1/4 cubic yards of debris for the day	1500 - Clean Catch Basin	11/24/2015
<a href="#">W028970-120215</a>	City Wide	Checked/Cleaned Sherwood Dr, Boulevard, W. Westover, End of Plumtree, Conduit Rd, Shuford, Wakefield.	1500 - Clean Catch Basin	11/30/2015

Reference No	Request Address One	Action Taken	Code Number	Work Completion Date
<a href="#">W028971-120215</a>	City Wide	Checked/cleaned Westover, Hamilton, Franklin, Brookhill, Forest View Dr, Ridge Rd at Temple, Marvin at Chesterfield, Charlotte at Meridian, Fairfax near Meridian.	1500 - Clean Catch Basin	11/30/2015
<a href="#">W028973-120215</a>	157 Brandywine Rd.	Removed a bag of trash from a Curb Inlet	1500 - Clean Catch Basin	11/4/2015
<a href="#">W028974-120215</a>	209 Windmere Dr.	Removed Leaves and silt from a Curb Inlet	1500 - Clean Catch Basin	11/4/2015
<a href="#">W028975-120215</a>	113 Princeton Rd.	Removed Trash and silt from a Curb Inlet. Collected 1/4 cubic yard of debris for the day	1500 - Clean Catch Basin	11/4/2015
<a href="#">W028976-120215</a>	Conduit Rd @ Hardy Ave.	Basin falling apart, Tops are crumbling - removed Leaves, Concrete, car parts, grass, trash and silt from 2-Curb Inlets collected 1 cubic yard of debris	1500 - Clean Catch Basin	11/5/2015
<a href="#">W028977-120215</a>	Park Ave @ Conduit Rd	Removed leaves, Trash and silt form 2 curb inlets collected 1/4 cubic yard of debris	1500 - Clean Catch Basin	11/5/2015
<a href="#">W028979-120215</a>	406 Dick Ewell Ave.	Removed Leaves and trash from a Catch Basin	1500 - Clean Catch Basin	11/9/2015
<a href="#">W028980-120215</a>	421 Lyons Ave.	Removed trash from a Curb Inlet	1500 - Clean Catch Basin	11/9/2015
<a href="#">W028981-120215</a>	243 Lee Ave.	Removed leaves and silt from a Curb Inlet	1500 - Clean Catch Basin	11/9/2015
<a href="#">W028982-120215</a>	Lee Ave	Removed Trash and Silt from a Curb Inlet	1500 - Clean Catch Basin	11/9/2015
<a href="#">W028983-120215</a>	318 Jefferson Ave	Removed leaves from a Curb Inlet - Collected 1/4 cubic yards of debris for the day	1500 - Clean Catch Basin	11/9/2015
<a href="#">W028984-120215</a>	194 Charlotte Ave.	Removed leaves and Silt from a Curb Inlet	1500 - Clean Catch Basin	11/30/2015
<a href="#">W028985-120215</a>	123 Wright Ave.	Removed leaves and Trash from a Curb Inlet	1500 - Clean Catch Basin	11/30/2015
<a href="#">W028986-120215</a>	312 Fairfax Ave.	Removed a bag of trash and Silt from a Curb Inlet. - Collected 1/4 cubic yards of debris for the day	1500 - Clean Catch Basin	11/30/2015

Reference No	Request Address One	Action Taken	Code Number	Work Completion Date
<a href="#">W029016-120415</a>	Sherwood Dr @ Boulevard	At old 7-11 store Collected 3 cubic yard of Pine needles and trash from a Catch basin also, removed a flat bed load of brush	1500 - Clean Catch Basin	12/1/2015
<a href="#">W029017-120415</a>	214 Moore Ave.	Removed leaves and trash from a Curb Inlet	1500 - Clean Catch Basin	12/1/2015
<a href="#">W029018-120415</a>	308 Eastman Ave	Removed Trash and silt from a Catch Basin collected 1/4 cubic yards of debris	1500 - Clean Catch Basin	12/1/2015
<a href="#">W029144-122215</a>	1909 Wakefield Ave.	Cleaned Storm drain of leaves.	1500 - Clean Catch Basin	12/22/2015
<a href="#">W029160-122815</a>	City Wide	Checked/cleaned storm drains with grates at: Fischer and Westover, Hamilton and Westover, 1905 and 2209 Franklin Ave, Lakeside Dr, Suffolk and Boulevard, 327 Ridge Rd.	1500 - Clean Catch Basin	12/17/2015
<a href="#">W029168-122815</a>	City Wide	Cleaned storm drains with grates at: 327 Ridge Rd, 1905 and 2209 Franklin Ave, Maple Ln at Franklin Ave, opened grate at Charlotte and Meridian, Suffolk at Boulevard, Westover at Hamilton	1500 - Clean Catch Basin	12/22/2015
<a href="#">W029205-123015</a>	Charles Ave.	Flushed storm drain water went down. After hours Overtime	1500 - Clean Catch Basin	12/24/2015
<a href="#">W029224-123115</a>	Lafayette Ave @ Boulevard	Removed 1/4 cubic yards of leaves, silt and trash from a Curb Inlet used 200 gallons of water	1500 - Clean Catch Basin	12/21/2015
<a href="#">W029225-123115</a>	Sherwood Dr @ Bridge	Removed 2 cubic yards of leaves, silt and trash from 4 Curb Inlets at each end of Bridge and used 500 gallons of water	1500 - Clean Catch Basin	12/21/2015
<a href="#">W029226-123115</a>	Sherwood Dr @ Springdale Ave.	Removed 1 cubic yards of leaves, silt and trash from a Curb Inlet and used 300 gallons of water	1500 - Clean Catch Basin	12/21/2015
<a href="#">W029227-123115</a>	1907 Wakefield Ave.	Removed leaves from a catch basin raked in a pile for leaf collection	1500 - Clean Catch Basin	12/22/2015
<a href="#">W029229-123115</a>	114 Chesterfield Ave.	Removed leaves from a Catch Basin	1500 - Clean Catch Basin	12/28/2015

Reference No	Request Address One	Action Taken	Code Number	Work Completion Date
<a href="#">W029230-123115</a>	318 Jefferson Ave	Removed trash and leaves from a Curb Inlet	1500 - Clean Catch Basin	12/28/2015
<a href="#">W029231-123115</a>	228 Washington Ave.	Removed leaves from a catch basin collecting 1/4 cubic yards of debris for the day	1500 - Clean Catch Basin	12/22/2015
<a href="#">W029232-123115</a>	233 Huntington Rd.	Removed 1/4 cubic yards of leaves and trash from 2 Curb Inlets	1500 - Clean Catch Basin	12/29/2015
<a href="#">W029233-123115</a>	919 Germar Ct.	Removed 1/4 cubic yards of leaves from a Curb Inlet	1500 - Clean Catch Basin	12/29/2015
<a href="#">W029234-123115</a>	100 Red Fox Rd.	Removed 1/4 cubic yards of Pine needles and trash from a Curb Inlet	1500 - Clean Catch Basin	12/29/2015
<a href="#">W029235-123115</a>	121 Princeton Rd	Removed 1/4 cubic yards of leaves and card board from a Curb Inlet	1500 - Clean Catch Basin	12/29/2015
<a href="#">W029380-011916</a>	151 Chesterfield Ave.	Used shovel to removed sticks, leaves and trash	1500 - Clean Catch Basin	1/21/2016
<a href="#">W029499-020216</a>	335 Ridge Rd.	Cleaned catch basin removed Sticks and Trash	1500 - Clean Catch Basin	1/4/2016
<a href="#">W029500-020216</a>	2102 Snead Ave.	Cleaned catch basin removed Sticks and Trash	1500 - Clean Catch Basin	1/4/2016
<a href="#">W029501-020216</a>	2013 Snead Ave.	Cleaned catch basin removed Trash. Collected 1/4 cubic yards of debris for the day	1500 - Clean Catch Basin	1/4/2016
<a href="#">W029502-020216</a>	3607 Hawick Dr.	Cleaned Curb Inlet removed Leaves and Trash	1500 - Clean Catch Basin	1/5/2016
<a href="#">W029503-020216</a>	920 Yorkshire Dr.	Cleaned Curb Inlet removed Silt and Trash	1500 - Clean Catch Basin	1/5/2016
<a href="#">W029504-020216</a>	118 Bluffs Dr.	Cleaned Curb Inlet removed silt, gravel and Trash	1500 - Clean Catch Basin	1/5/2016
<a href="#">W029505-020216</a>	107 Bluffs Ct.	Cleaned Curb Inlet removed Silt and Trash. Collected 1/4 cubic yards of debris for the day.	1500 - Clean Catch Basin	1/5/2016
<a href="#">W029509-020216</a>	206 Hargrave Ave.	Cleaned Curb Inlet removed silt and Trash	1500 - Clean Catch Basin	1/8/2016
<a href="#">W029510-020216</a>	112 Yew Ave.	Cleaned Curb Inlet removed Trash	1500 - Clean Catch Basin	1/8/2016
<a href="#">W029511-020216</a>	115 George Ave.	Cleaned Curb Inlet removed Leaves and silt. Collected 1/4 cubic yards of debris for the day.	1500 - Clean Catch Basin	1/8/2016

Reference No	Request Address One	Action Taken	Code Number	Work Completion Date
<a href="#">W029513-020216</a>	113 Royal Oak Ave.	Cleaned Curb Inlet removed Leaves and Silt	1500 - Clean Catch Basin	1/11/2016
<a href="#">W029514-020216</a>	318 Jefferson Ave	Cleaned Curb Inlet removed Silt and Trash	1500 - Clean Catch Basin	1/11/2016
<a href="#">W029515-020216</a>	302 Hamilton Ave.	Cleaned Curb Inlet removed Trash	1500 - Clean Catch Basin	1/11/2016
<a href="#">W029516-020216</a>	235 Cameron Ave.	Cleaned Curb Inlet removed Leaves and Silt. Collected 1/4 cubic yards of debris for the day	1500 - Clean Catch Basin	1/11/2016
<a href="#">W029517-020216</a>	95 Sherwood Dr.	Cleaned Catch Basin removed Leaves and Trash	1500 - Clean Catch Basin	1/12/2016
<a href="#">W029518-020216</a>	115 Boykins Ave.	Cleaned Catch Basin removed Leaves and Silt	1500 - Clean Catch Basin	1/12/2016
<a href="#">W029520-020216</a>	922 Forest View Dr.	Cleaned Curb Inlet removed Leaves, Silt and Trash. Collected 1/2 cubic yards of debris for the day	1500 - Clean Catch Basin	1/12/2016
<a href="#">W029521-020216</a>	103 Laurens Ln.	Cleaned Curb Inlet removed Silt and Trash	1500 - Clean Catch Basin	1/13/2016
<a href="#">W029523-020216</a>	705 Lundy Ave.	Cleaned Curb Inlet removed Silt and Gravel	1500 - Clean Catch Basin	1/13/2016
<a href="#">W029525-020216</a>	130 Sadler Ave.	Cleaned Curb Inlet removed Silt and Trash	1500 - Clean Catch Basin	1/13/2016
<a href="#">W029529-020216</a>	1230 Dana Ln.	Removed Leaves and Trash from a Curb Inlet.	1500 - Clean Catch Basin	1/15/2016
<a href="#">W029530-020216</a>	356 Mallard Dr.	Removed Leaves and Silt from a Curb Inlet.	1500 - Clean Catch Basin	1/15/2016
<a href="#">W029531-020216</a>	1112 Peace Cliff Ct.	Removed Leaves from a Curb Inlet. Collected 1/4 cubic yards of Debris for the Day	1500 - Clean Catch Basin	1/15/2016
<a href="#">W029532-020216</a>	618 Ryan Ave.	Removed Leaves, silt and Trash from a Curb Inlet.	1500 - Clean Catch Basin	1/19/2016
<a href="#">W029533-020216</a>	203 Ingram Ave.	Removed Trash from a Curb Inlet.	1500 - Clean Catch Basin	1/19/2016
<a href="#">W029534-020216</a>	406 Roslyn Ave.	Removed Silt and Trash from a Curb Inlet. Collected 1/4 cubic yards of debris for the day	1500 - Clean Catch Basin	1/19/2016

Reference No	Request Address One	Action Taken	Code Number	Work Completion Date
<a href="#">W029599-021116</a>	City Wide	Collected 1/2 cubic yards of debris from: 111 Hanover Ave - Curb Inlet removed Trash and Silt, 114 Chesterfield Ave - Catch Basin removed Silt, 153 Windsor Ave - Curb Inlet removed Silt and Leaves, 337 Shade Tree Dr - Removed car parts and silt, 127 School Ave - Curb Inlet removed Trash and Silt	1500 - Clean Catch Basin	2/2/2016
<a href="#">W029601-021116</a>	City Wide	Collected 1/2 cubic yards of debris from: Chesterfield Ave - BMP removed Leaves and Trash, A Ave @ Boulevard - Catch Basin removed Trash and Silt, 526 Roslyn Ave - Curb Inlet removed Trash and Silt, 116 Essex Rd - Curb Inlet removed Leaves and Silt, 113 Princeton Rd - Curb Inlet removed cardboard and silt, 151 Brandywine Rd - Curb Inlet removed pine needles and silt.	1500 - Clean Catch Basin	2/3/2016
<a href="#">W029602-021116</a>	1314 Canterbury Ln.	Curb Inlet removed Leaves	1500 - Clean Catch Basin	2/4/2016
<a href="#">W029603-021116</a>	318 Jefferson Ave	Curb Inlet removed Trash and Silt	1500 - Clean Catch Basin	2/4/2016
<a href="#">W029607-021116</a>	City Wide	Collected 1/4 cubic yards of debris from: 200 Pinecliff Dr - Curb Inlet removed Silt and Trash, 1156 Cumberland Dr - Curb Inlet removed Silt, 1146 Wicker Dr - Curb Inlet removed Leaves and Silt	1500 - Clean Catch Basin	2/8/2016
<a href="#">W029608-021116</a>	City Wide	Collected 1/2 cubic yards of debris from: 119 Dunoon Ct - Curb Inlet removed Cardboard and silt, 3607 Hawick Dr - Curb Inlet removed Silt, 921 Williamsburg Rd - Curb Inlet removed Trash and Silt, 604 Walnut Ave - Curb Inlet removed Silt, 307 Highland Ave - Curb Inlet removed Trash and Silt,	1500 - Clean Catch Basin	2/9/2016
<a href="#">W029626-021116</a>	Meridian @ Charlotte Aves.	Cleaned storm drain gates	1500 - Clean Catch Basin	2/3/2016
<a href="#">W029628-021116</a>	Charlotte @ Meridian Aves.	Opened catch gates	1500 - Clean Catch Basin	2/4/2016

Reference No	Request Address One	Action Taken	Code Number	Work Completion Date
<a href="#">W029631-021116</a>	Roslyn Rd.	Cleaned catch basin on Bobby Walker's property	1500 - Clean Catch Basin	2/4/2016
<a href="#">W029660-021516</a>	3600 Hawick Dr.	On 2/11/16 Cleaned concrete drainage ditch, cut down trees, debris at dead end from Hawick and Edinborough and removed. Put down topsoil where ruts were made by equipment. On 2/12/16 put down grass seed where trees and other debris was cleaned out.	1500 - Clean Catch Basin	2/12/2016
<a href="#">W029693-021816</a>	1907 Wakefield Ave.	Cleaned grate inlet	1500 - Clean Catch Basin	2/17/2016
<a href="#">W029790-022916</a>	Roslyn Rd.	Checked and cleaned grates at I-95 Bobby Walkers property	1500 - Clean Catch Basin	2/22/2016
<a href="#">W029805-022916</a>	City Wide	Rain checked/cleaned storm drains on Boulevard, Conduit Rd, Kent, Meridian, Chesterfield, Washington, Westover, Roslyn Rd	1500 - Clean Catch Basin	2/23/2016
<a href="#">W029807-022916</a>	City Wide	Checked/cleaned storm drain grates at: 2209-1907 Wakefield, Marvin at Chesterfield Aves, City Parking lot at Hamilton and Boulevard, Pickwick Ave Alley, Suffolk at Boulevard, Fischer at Westover, Lafayette at Westover, Hamilton at Westover, Off Boulevard behind Big Lots, 327 Ridge Rd, 121 Lakeside Dr, 1000 Forest View Dr.	1500 - Clean Catch Basin	2/23/2016
<a href="#">W029809-022916</a>	114 Chesterfield Ave.	Cleaned catch basin removed Silt and trash	1500 - Clean Catch Basin	2/10/2016
<a href="#">W029810-022916</a>	318 Jefferson Ave	Cleaned curb Inlet removed silt and sticks collected 1/4 cubic yards of debris for the day	1500 - Clean Catch Basin	2/10/2016
<a href="#">W029811-022916</a>	1400 Covington Rd.	Cleaned catch basin removed silt and trash	1500 - Clean Catch Basin	2/11/2016
<a href="#">W029812-022916</a>	1305 Duke of Gloucester St.	Cleaned curb Inlet removed silt	1500 - Clean Catch Basin	2/11/2016
<a href="#">W029813-022916</a>	1372 Whitehall Dr.	Cleaned curb Inlet removed silt and a hub cap collecting 1/4 cubic yard of debris for the day	1500 - Clean Catch Basin	2/11/2016

Reference No	Request Address One	Action Taken	Code Number	Work Completion Date
<a href="#">W029814-022916</a>	1025 Taylor Ln.	Cleaned curb Inlet removed silt and sticks	1500 - Clean Catch Basin	2/12/2016
<a href="#">W029815-022916</a>	125 Stratford Dr.	Cleaned curb Inlet removed silt and Trash	1500 - Clean Catch Basin	2/12/2016
<a href="#">W029816-022916</a>	107 Princeton Rd.	Cleaned curb Inlet removed Trash collecting 1/4 cubic yards of debris for the day	1500 - Clean Catch Basin	2/12/2016
<a href="#">W029817-022916</a>	E. Westover @ Hamilton Aves.	Cleaned curb Inlet removed Clothes and trash	1500 - Clean Catch Basin	2/16/2016
<a href="#">W029818-022916</a>	Shuford @ E. Westover Aves	Cleaned curb Inlet removed Trash and sticks	1500 - Clean Catch Basin	2/16/2016
<a href="#">W029819-022916</a>	Sherwood Dr @ Boulevard	Cleaned catch basin removed pine needles. Collecting 1/2 cubic yards of debris for the day.	1500 - Clean Catch Basin	2/16/2016
<a href="#">W029820-022916</a>	School Ave.	Collected 1/4 cubic yards of debris from: 127 School Ave - Curb Inlet removed Silt and pine needles. School Ave @ Conduit Rd - Curb Inlet removed trash and silt.	1500 - Clean Catch Basin	2/17/2016
<a href="#">W029821-022916</a>	313 Dick Ewell Ave.	Cleaned Catch Basin removed Trash and silt	1500 - Clean Catch Basin	2/18/2016
<a href="#">W029822-022916</a>	501 Lyons Ave.	Cleaned curb Inlet removed Trash	1500 - Clean Catch Basin	2/18/2016
<a href="#">W029823-022916</a>	1012 Floral Ave.	Cleaned Catch Basin removed silt and trash Collecting 14 cubic yards of debris for the day	1500 - Clean Catch Basin	2/18/2016
<a href="#">W029824-022916</a>	206 Lee Ave.	Cleaned curb Inlet removed Trash	1500 - Clean Catch Basin	2/19/2016
<a href="#">W029825-022916</a>	113 Royal Oak Ave.	Cleaned curb Inlet removed silt and Trash	1500 - Clean Catch Basin	2/19/2016
<a href="#">W029826-022916</a>	526 Roslyn Ave.	Cleaned curb Inlet removed silt and Trash. Collecting 1/4 cubic yards of debris for the day	1500 - Clean Catch Basin	2/19/2016
<a href="#">W029827-022916</a>	114 Chesterfield Ave.	Cleaned Catch Basin removed silt and Leaves	1500 - Clean Catch Basin	2/22/2016
<a href="#">W029828-022916</a>	302 Hamilton Ave.	Cleaned curb Inlet removed silt and Trash	1500 - Clean Catch Basin	2/22/2016

Reference No	Request Address One	Action Taken	Code Number	Work Completion Date
<a href="#">W029829-022916</a>	127 Lafayette Ave.	Cleaned curb Inlet removed silt and Cardboard collecting 1/4 Cubic yards of debris	1500 - Clean Catch Basin	2/22/2016
<a href="#">W029832-022916</a>	Pickwick Ave Alley	Cleaned catch basin removed leaves and silt	1500 - Clean Catch Basin	2/23/2016
<a href="#">W029833-022916</a>	Beech Ave. Alley	Cleaned catch basin and pipe removed leaves	1500 - Clean Catch Basin	2/23/2016
<a href="#">W029834-022916</a>	Laurel Pkwy @ Boulevard	Cleaned catch basin removed Trash and silt	1500 - Clean Catch Basin	2/23/2016
<a href="#">W029835-022916</a>	A Ave @ Boulevard	Cleaned catch basin removed Trash and silt. Collecting 1/2 cubic yards of debris.	1500 - Clean Catch Basin	2/23/2016
<a href="#">W029836-022916</a>	1314 Canterbury Ln.	Cleaned catch basin removed leaves and sticks	1500 - Clean Catch Basin	2/24/2016
<a href="#">W029837-022916</a>	318 Jefferson Ave	Cleaned catch basin removed Sticks and Trash. Collecting 1/4 cubic yards of debris for the day	1500 - Clean Catch Basin	2/24/2016
<a href="#">W029838-022916</a>	302 Lynchburg Ave.	Cleaned Curb Inlet removed Trash and silt	1500 - Clean Catch Basin	2/25/2016
<a href="#">W029839-022916</a>	399 Danville Ave.	Cleaned Curb Inlet removed Sticks and silt	1500 - Clean Catch Basin	2/25/2016
<a href="#">W029840-022916</a>	600 Pinehurst Ave.	Cleaned Curb Inlet removed Trash and silt	1500 - Clean Catch Basin	2/25/2016
<a href="#">W029841-022916</a>	Fairfax Ave @ Boulevard	Cleaned Curb Inlet removed Hub Cab and silt. Collecting 1/4 cubic yards of debris for the day	1500 - Clean Catch Basin	2/25/2016
<a href="#">W030048-033016</a>	301 Jennick Dr.	Removed a goose from a curb inlet	1500 - Clean Catch Basin	3/1/2016
<a href="#">W030049-033016</a>	Southpark Blvd @ South Ave.	Removed Cardboard, Hub cap and trash from a Curb Inlet	1500 - Clean Catch Basin	3/1/2016
<a href="#">W030050-033016</a>	233 Huntington Rd.	Collected 1/4 cubic yards of Silt and a trash bag from 2-Curb Inlets	1500 - Clean Catch Basin	3/1/2016
<a href="#">W030051-033016</a>	117 Orange Ave.	Removed silt and trash from a Curb Inlet	1500 - Clean Catch Basin	3/2/2016
<a href="#">W030052-033016</a>	302 Hillcrest Ave.	Removed silt and leaves from a Catch Basin	1500 - Clean Catch Basin	3/2/2016

Reference No	Request Address One	Action Taken	Code Number	Work Completion Date
<a href="#">W030053-033016</a>	304 Eastman Ave.	Removed a hub cap and trash from a Catch Basin Collecting 1/2 cubic yard of debris for the day	1500 - Clean Catch Basin	3/2/2016
<a href="#">W030054-033016</a>	147 Windsor Ave.	Removed trash, silt and leaves from a Curb Inlet	1500 - Clean Catch Basin	3/2/2016
<a href="#">W030057-033016</a>	125 Roanoke Ave.	Removed trash and sticks from a Curb Inlet	1500 - Clean Catch Basin	3/2/2016
<a href="#">W030058-033016</a>	1207 Meridian Ave.	Removed trash and silt from a Curb Inlet	1500 - Clean Catch Basin	3/2/2016
<a href="#">W030059-033016</a>	220 Piedmont Ave.	Collected 1/2 cubic yard of debris for the day. Removed a Hub cap and trash from a Curb Inlet	1500 - Clean Catch Basin	3/2/2016
<a href="#">W030060-033016</a>	723 Old Town Dr.	Removed Trash and Sticks form a Curb Inlet	1500 - Clean Catch Basin	3/4/2016
<a href="#">W030061-033016</a>	608 Charles Ave.	Removed Trash and Silt from a Curb Inlet	1500 - Clean Catch Basin	3/4/2016
<a href="#">W030062-033016</a>	631 E. Ellerslie Ave.	Removed Trash from a Curb Inlet	1500 - Clean Catch Basin	3/4/2016
<a href="#">W030063-033016</a>	605 Fairlie Rd.	Removed Hub Cab and Silt from a Curb Inlet. Collecting 1/4 cubic yards of debris for the day	1500 - Clean Catch Basin	3/4/2016
<a href="#">W030064-033016</a>	Boulevard @ A Ave.	Removed Trash from a Catch Basin	1500 - Clean Catch Basin	3/14/2016
<a href="#">W030065-033016</a>	Shuford Ave @ Boulevard	Removed Trash and Silt from a Catch Basin	1500 - Clean Catch Basin	3/14/2016
<a href="#">W030066-033016</a>	125 Carroll Ave.	Removed Trash and Sticks from a Curb Inlet collecting 1/4 cubic yards of debris for the day.	1500 - Clean Catch Basin	3/14/2016
<a href="#">W030067-033016</a>	212 Lyons Ave.	Removed Trash and Trash Bag from a Curb Inlet	1500 - Clean Catch Basin	3/15/2016
<a href="#">W030068-033016</a>	Conduit Rd @ Roslyn Ave.	Removed Trash and Silt from a Catch Basin	1500 - Clean Catch Basin	3/15/2016
<a href="#">W030069-033016</a>	Southpark Circle @ Southpark Blvd	Removed Trash and Cardboard from a Curb Inlet. Collecting 1/4 cubic yards of debris for the day.	1500 - Clean Catch Basin	3/15/2016
<a href="#">W030071-033016</a>	1230 Dana Ln.	Removed Toys and Silt from a Curb Inlet	1500 - Clean Catch Basin	3/21/2016
<a href="#">W030072-033016</a>	1107 Clifton Dr.	Removed Trash from a Curb Inlet	1500 - Clean Catch Basin	3/21/2016

Reference No	Request Address One	Action Taken	Code Number	Work Completion Date
<a href="#">W030073-033016</a>	106 Lexington Dr.	Removed Wood and Silt from a Curb Inlet	1500 - Clean Catch Basin	3/21/2016
<a href="#">W030074-033016</a>	1219 Choptank Ct.	Removed Sticks from a Curb Inlet. Collecting 1/4 cubic yards of debris for the day	1500 - Clean Catch Basin	3/21/2016
<a href="#">W030076-033016</a>	1907 Wakefield Ave.	Removed Trash and Leaves from a Catch Basin	1500 - Clean Catch Basin	3/22/2016
<a href="#">W030077-033016</a>	B Ave @ Boulevard	Removed Trash and Hub Cab from a Curb Inlet	1500 - Clean Catch Basin	3/22/2016
<a href="#">W030079-033016</a>	300 Fairmount Dr.	Removed Trash and a bag of trash from a Curb Inlet	1500 - Clean Catch Basin	3/28/2016
<a href="#">W030080-033016</a>	101 Flintlock Dr.	Removed Sticks from a Curb Inlet	1500 - Clean Catch Basin	3/28/2016
<a href="#">W030081-033016</a>	114 Laurens Ln.	Removed Cardboard and Silt from a Curb Inlet. Collecting 1/4 cubic yards of debris for the day.	1500 - Clean Catch Basin	3/28/2016
<a href="#">W030125-033116</a>	1000 Forest View Dr.	Cleaned storm drains	1500 - Clean Catch Basin	3/28/2016
<a href="#">W030126-033116</a>	2209 Wakefield Ave.	Cleaned storm drains	1500 - Clean Catch Basin	3/28/2016
<a href="#">W030128-033116</a>	1907 Wakefield Ave.	Cleaned storm drains	1500 - Clean Catch Basin	3/28/2016
<a href="#">W030129-033116</a>	Franklin Ave.	Cleaned storm drains	1500 - Clean Catch Basin	3/28/2016
<a href="#">W030130-033116</a>	1217 Boulevard	Cleaned storm drains and cleaned up trash behind Big Lots	1500 - Clean Catch Basin	3/28/2016
<a href="#">W030131-033116</a>	Chesterfield @ Marvin Aves.	Cleaned storm drains	1500 - Clean Catch Basin	3/28/2016
<a href="#">W030132-033116</a>	121 Lakeside Dr.	Cleaned storm drains	1500 - Clean Catch Basin	3/28/2016
<a href="#">W030264-041216</a>	City Wide	Checked/cleaned the following 121 Lakeside Dr, 1000 Forest View Dr, Fischer @ Westover Aves, 2209 Wakefield, 1907 Wakefield.	1500 - Clean Catch Basin	4/7/2016
<a href="#">W030265-041216</a>	654 Boulevard	Checked and cleaned	1500 - Clean Catch Basin	4/7/2016
<a href="#">W030284-041216</a>	Branders Bridge Rd @ Wakefield Ave.	Removed trash from Curb Inlet	1500 - Clean Catch Basin	4/1/2016
<a href="#">W030285-041216</a>	1907 Wakefield Ave.	Removed trash and leaves from Catch Basin	1500 - Clean Catch Basin	4/1/2016
<a href="#">W030286-041216</a>	Shuford Ave @ Boulevard	Removed trash from Catch Basin	1500 - Clean Catch Basin	4/1/2016
<a href="#">W030287-041216</a>	Pickwick Ave Alley	Removed trash and leaves from Catch Basin	1500 - Clean Catch Basin	4/1/2016

Reference No	Request Address One	Action Taken	Code Number	Work Completion Date
<a href="#">W030288-041216</a>	Lakeview Ave @ Lakeview Park Rd.	Collected 1/4 cubic yards of debris for the day. Removed trash and sticks from Catch Basin	1500 - Clean Catch Basin	4/1/2016
<a href="#">W030289-041216</a>	3267 Longhorn Dr.	Removed trash from Curb Inlet	1500 - Clean Catch Basin	4/4/2016
<a href="#">W030290-041216</a>	209 Honey Creek Ct.	Removed a broken skate board from Curb Inlet	1500 - Clean Catch Basin	4/4/2016
<a href="#">W030291-041216</a>	112 E. Highland Ct.	Removed trash and leaves from Curb Inlet	1500 - Clean Catch Basin	4/4/2016
<a href="#">W030292-041216</a>	Pickwick Ave @ Boulevard	Removed cardboard and a hub cap from Curb Inlet. Collected 1/4 cubic yards of debris for the day	1500 - Clean Catch Basin	4/4/2016
<a href="#">W030325-041916</a>	City Wide	Checked/cleaned rainy day the following: Boulevard behind Big Lots, Temple, Conduit Rd, Wakefield	1500 - Clean Catch Basin	4/12/2016
<a href="#">W030335-041916</a>	City Wide	Cleaned storm grates at the following locations: 114 Chesterfield, 1023 Forest View Dr, Yacht Basin at Wildwood, 209 E. Westover, Sherwood Dr at Boulevard	1500 - Clean Catch Basin	4/12/2016
<a href="#">W030346-041916</a>	City Wide	Rain day cleaned the following storm drains: Suffolk Ave @ Boulevard, Hamilton @ Westover Aves, 327 Ridge Rd, 121 Lakeside Dr, 1000 Forest View Dr, 2209 Wakefield, 1907 Wakefield, Pickwick Ave Alley, Marvin @ Chesterfield Aves.	1500 - Clean Catch Basin	4/11/2016
<a href="#">W030352-041916</a>	114 Chesterfield Ave.	Removed silt and pine needles from a Catch Basin	1500 - Clean Catch Basin	4/5/2016
<a href="#">W030353-041916</a>	228 Washington Ave.	Removed Trash from a Catch Basin	1500 - Clean Catch Basin	4/5/2016
<a href="#">W030354-041916</a>	1225 W. Roslyn Rd	Removed Trash and a hub cap from a Catch Basin	1500 - Clean Catch Basin	4/15/2016
<a href="#">W030355-041916</a>	1013 Kensington Rd.	Removed silt and gravel from a Curb Inlet	1500 - Clean Catch Basin	4/15/2016
<a href="#">W030356-041916</a>	E. Westover Ave @ Conduit Rd	Removed Trash and sticks from a Catch Basin. Collected 1/2 cubic yards of debris for the day	1500 - Clean Catch Basin	4/15/2016
<a href="#">W030358-041916</a>	1307 River Oaks Dr.	Removed trash from a Curb Inlet	1500 - Clean Catch Basin	4/7/2016
<a href="#">W030359-041916</a>	1372 Whitehall Dr.	Removed stick from a Curb Inlet	1500 - Clean Catch Basin	4/7/2016

Reference No	Request Address One	Action Taken	Code Number	Work Completion Date
<a href="#">W030360-041916</a>	1301 Hermitage Rd.	Removed sticks and trash from a Curb Inlet. Collected 1/4 cubic yards of debris for the day	1500 - Clean Catch Basin	4/7/2016
<a href="#">W030393-042016</a>	301 Jennick Dr.	Removed trash and silt from a Curb Inlet	1500 - Clean Catch Basin	4/11/2016
<a href="#">W030394-042016</a>	Conduit Rd @ Temple Ave.	Removed Trash, a hub cap and silt form a Curb Inlet. Collecting 1/4 cubic yard of debris for the day	1500 - Clean Catch Basin	4/11/2016
<a href="#">W030396-042016</a>	1101 Canterbury Ln.	Removed cardboard and clothes from a Curb Inlet	1500 - Clean Catch Basin	4/12/2016
<a href="#">W030397-042016</a>	417 Nottingham Dr.	Removed sticks from a Curb Inlet	1500 - Clean Catch Basin	4/12/2016
<a href="#">W030398-042016</a>	212 Biltmore Dr.	Removed Stick and Trash from a Catch Basin. Collecting 1/4 cubic yards of debris for the day	1500 - Clean Catch Basin	4/12/2016
<a href="#">W030518-050216</a>	1000 Forest View Dr.	Checked/cleaned storm drains	1500 - Clean Catch Basin	4/29/2016
<a href="#">W030519-050216</a>	1023 Forest View Dr.	Checked/Cleaned storm drains	1500 - Clean Catch Basin	4/29/2016
<a href="#">W030520-050216</a>	Sherwood Dr @ Boulevard	Checked/Cleaned 2 storm drains	1500 - Clean Catch Basin	4/29/2016
<a href="#">W030521-050216</a>	Newcastle Dr.	Checked/Cleaned storm drains at Colonial Apartments in Alley	1500 - Clean Catch Basin	4/29/2016
<a href="#">W030522-050216</a>	Boulevard	Checked/Cleaned storm drains behind Big Lots	1500 - Clean Catch Basin	4/29/2016
<a href="#">W030523-050216</a>	209 E. Westover Ave.	Checked/Cleaned storm drains	1500 - Clean Catch Basin	4/29/2016
<a href="#">W030524-050216</a>	300 Royal Oak Ave.	Checked/Cleaned storm drains	1500 - Clean Catch Basin	4/29/2016
<a href="#">W030525-050216</a>	Chesterfield @ Marvin Aves.	Checked/Cleaned storm drains	1500 - Clean Catch Basin	4/29/2016
<a href="#">W030526-050216</a>	316 N. Temple Ave.	Checked/Cleaned storm drains	1500 - Clean Catch Basin	4/29/2016
<a href="#">W030527-050216</a>	313 Brookedge Dr.	Checked/Cleaned storm drains	1500 - Clean Catch Basin	4/29/2016
<a href="#">W030529-050216</a>	313 Brookedge Dr.	Checked/Cleaned storm drains	1500 - Clean Catch Basin	4/29/2016
<a href="#">W030531-050216</a>	Meridian Ave.	Open storm gates and cleaned debris out	1500 - Clean Catch Basin	4/29/2016

Reference No	Request Address One	Action Taken	Code Number	Work Completion Date
<a href="#">W030539-050216</a>	City Wide	Collected 1/4 cubic yards of debris from: 508 Windmere Dr - Catch Basin, removed Sticks and Leaves, 1042 Hoperidge Ct - Curb Inlet removed leaves and silt, 901 Ayshire Ln - Curb Inlet removed a trash bag of trash, 127 School Ave - Curb Inlet removed trash and silt	1500 - Clean Catch Basin	4/27/2016
<a href="#">W030541-050216</a>	City Wide	Collected 1/4 Cubic Yards of debris from: 114 Chesterfield Ave - Catch Basin removed Silt, 208 Orchard Ave - Catch Basin removed Trash, 403 Gould Ave - Curb Inlet removed Silt, 510 Battery Pl - Curb Inlet removed Trash	1500 - Clean Catch Basin	4/22/2016
<a href="#">W030546-050216</a>	City Wide	Collected 1/4 cubic yards of debris from: 318 Jefferson - Curb Inlet removed sticks and trash, Boulevard @ Suffolk - Catch Basin removed Trash, 2105 Snead - Catch Basin removed Trash and Gravel, 311 Brookedge Dr - Catch Basin removed Trash and Silt, 336 Ridge Rd - Catch Basin removed silt and trash	1500 - Clean Catch Basin	4/28/2016
<a href="#">W030548-050216</a>	Boulevard @ A Ave.	Cleaned catch basin removed silt and trash	1500 - Clean Catch Basin	4/29/2016
<a href="#">W030549-050216</a>	384 Southpark Cr.	At Chick Fill A removed a dead goose from a Curb Inlet	1500 - Clean Catch Basin	4/29/2016
<a href="#">W030581-050416</a>	City Wide	Cleaned storm drains at the following locations: E, Roslyn Rd on Booby Walker's property, Meridian Ave ditch gates, Behind Big Lots, Chesterfield at Marvin Ave both sides, Westover at Hamilton Aves both sides, 1000 Forest View Dr, Pickwick Ave Alley.	1500 - Clean Catch Basin	5/3/2016
<a href="#">W030597-050616</a>	Fisher at Westover Aves.	Checked/Cleaned storm drains rainy day	1500 - Clean Catch Basin	5/3/2016
<a href="#">W030598-050616</a>	Lafayette at Westover Aves	Checked/Cleaned storm drains rainy day	1500 - Clean Catch Basin	5/3/2016

Reference No	Request Address One	Action Taken	Code Number	Work Completion Date
<a href="#">W030599-050616</a>	Hamilton @ Westover Aves	Checked/Cleaned storm drains rainy day	1500 - Clean Catch Basin	5/3/2016
<a href="#">W030600-050616</a>	327 Ridge Rd.	Checked/Cleaned storm drains rainy day	1500 - Clean Catch Basin	5/3/2016
<a href="#">W030601-050616</a>	Suffolk Ave @ Boulevard	Checked/Cleaned storm drains rainy day	1500 - Clean Catch Basin	5/3/2016
<a href="#">W030602-050616</a>	1000 Forest View Dr.	Checked/Cleaned storm drains rainy day	1500 - Clean Catch Basin	5/3/2016
<a href="#">W030617-050916</a>	City Wide	Checked/cleaned the following storm drains: Conduit Rd, Boulevard, Meridian Ditch and Wakefield. Rainy Day	1500 - Clean Catch Basin	5/3/2016
<a href="#">W030628-050916</a>	City Wide	Removed 1/4 cubic yards of debris from: 208 E. Westover - Curb Inlet removed Trash and Silt, 418 E. Westover Ave - Curb Inlet removed Trash, Silt and Sticks, Fairfax @ Boulevard - Curb Inlet removed Hub Cap and Silt, Roanoke @ Boulevard - Curb Inlet removed Trash and Clothes, 518 Waterfront Dr - Ditch removed a Baby Stroller.	1500 - Clean Catch Basin	5/2/2016
<a href="#">W030629-050916</a>	Pickwick Ave Alley	Removed leaves and trash	1500 - Clean Catch Basin	5/3/2016
<a href="#">W030630-050916</a>	114 Chesterfield Ave.	Removed pine needles from a Catch Basin. Collected 1/4 cubic yards of debris for the day	1500 - Clean Catch Basin	5/3/2016
<a href="#">W030632-050916</a>	Pickwick Ave Alley	Removed silt and gravel from a Catch Basin	1500 - Clean Catch Basin	5/4/2016
<a href="#">W030633-050916</a>	Battery Pl @ Dupuy Ave.	removed asphalt and plywood from a Curb Inlet	1500 - Clean Catch Basin	5/4/2016
<a href="#">W030634-050916</a>	1314 Canterbury Ln.	Removed Silt, sticks and trash from a Curb Inlet	1500 - Clean Catch Basin	5/4/2016
<a href="#">W030635-050916</a>	School Ave @ Conduit Rd.	Removed Silt, trash and pine needles from a Curb Inlet	1500 - Clean Catch Basin	5/4/2016
<a href="#">W030636-050916</a>	1307 River Oaks Dr.	Removed Silt, Stick and Gum Balls off the tree from a Curb Inlet. Collecting 1 cubic yards of debris for the day	1500 - Clean Catch Basin	5/4/2016

Reference No	Request Address One	Action Taken	Code Number	Work Completion Date
<a href="#">W030639-050916</a>	630 Charles Ave.	Removed grass, silt and sticks from a Curb Inlet	1500 - Clean Catch Basin	5/5/2016
<a href="#">W030640-050916</a>	208 Crestwood Dr.	Removed Silt and pine needles from Curb Inlet. Removed Ivy from top of Inlet. Cleaned gutters of silt. Removed 1/2 cubic yards of debris	1500 - Clean Catch Basin	5/5/2016
<a href="#">W030641-050916</a>	Dunlop Farms Blvd.	Removed trash from a Curb Inlet	1500 - Clean Catch Basin	5/6/2016
<a href="#">W030642-050916</a>	Hardy Ave @ Conduit Rd.	Removed trash and silt from Curb Inlet	1500 - Clean Catch Basin	5/6/2016
<a href="#">W030643-050916</a>	E. Westover Ave @ Conduit Rd	Removed Sticks from a Curb Inlet. Collecting 1/4 cubic yards of debris for the day.	1500 - Clean Catch Basin	5/6/2016
<a href="#">W030708-051616</a>	Meridian Ave.	Checked/cleaned storm grates for debris	1500 - Clean Catch Basin	5/13/2016
<a href="#">W030716-051616</a>	City Wide	Checked/Cleaned the following: 2209 Wakefield, City parking lot at Hamilton Ave, 327 Ridge Rd, 121 Lakeside Dr, Fischer at Westover Aves, Hamilton at Westover Aves and 3 at Chesterfield and Marvin Aves.	1500 - Clean Catch Basin	5/6/2016
<a href="#">W030774-052016</a>	Roslyn Rd.	Cleaned catch basin gate at I-95 Bobby Walker's property	1500 - Clean Catch Basin	5/17/2016
<a href="#">W030782-052016</a>	City Wide	Rainy day checked/cleaned the following storm drains: Sherwood Dr, Boulevard, Yacht Basin Dr, Wakefield, Conduit Rd, Washington, Cameron, Westover	1500 - Clean Catch Basin	5/17/2016
<a href="#">W030788-052016</a>	City Wide	Rainy day Checked/cleaned the following storm drains: 1000 Forest View Dr, 121 Lakeside Dr, 327 Ridgecrest Ln, 1217 Boulevard behind Big Lots, Hamilton at Westover Aves, Fischer at Westover Aves, Suffolk at Boulevard, Marvin at Chesterfield Aves.	1500 - Clean Catch Basin	5/17/2016

Reference No	Request Address One	Action Taken	Code Number	Work Completion Date
<a href="#">W030840-052616</a>	City Wide	Rainy day checked/cleaned the following: 654 Boulevard cleaned grate, 1000 Forest View Dr, Fischer and Westover Aves, Hamilton and Westover Aves, Marvin and Chesterfield Aves, City parking lot at Hamilton Ave, Closed gate at Charlotte and Meridian Aves.	1500 - Clean Catch Basin	5/24/2016
<a href="#">W030921-060216</a>	111 Lakeside Dr.	Removed pine needles and silt from Curb Inlet	1500 - Clean Catch Basin	5/10/2016
<a href="#">W030923-060216</a>	212	Removed Trash and silt from Curb Inlet	1500 - Clean Catch Basin	5/10/2016
<a href="#">W030924-060216</a>	Richmond Ave @ Boulevard	Removed Trash, Cardboard and silt from Curb Inlet. collecting 1/4 cubic yards of debris for the day	1500 - Clean Catch Basin	5/10/2016
<a href="#">W030925-060216</a>	104 Royal Oak Ave.	Removed Trash and silt from Curb Inlet	1500 - Clean Catch Basin	5/11/2016
<a href="#">W030926-060216</a>	523 Roslyn Ave.	Removed Grass and silt from Curb Inlet	1500 - Clean Catch Basin	5/11/2016
<a href="#">W030927-060216</a>	600 Pinehurst Ave.	Removed trash, asphalt and silt from Curb Inlet	1500 - Clean Catch Basin	5/11/2016
<a href="#">W030929-060216</a>	922 Forest View Dr.	Removed Trash, grass clippings and silt from Curb Inlet	1500 - Clean Catch Basin	5/12/2016
<a href="#">W030930-060216</a>	913 Lakewood Dr.	Removed Gravel and silt from Curb Inlet	1500 - Clean Catch Basin	5/12/2016
<a href="#">W030931-060216</a>	115 Norwood Dr.	Removed a cardboard box from Curb Inlet	1500 - Clean Catch Basin	5/12/2016
<a href="#">W030932-060216</a>	101 Cloverhill Ave.	Removed trash and silt from Curb Inlet. Collecting 1/2 cubic yard of debris for the day	1500 - Clean Catch Basin	5/12/2016
<a href="#">W030933-060216</a>	404 Lakeview Ave.	Removed trash from a Catch Basin	1500 - Clean Catch Basin	5/13/2016
<a href="#">W030934-060216</a>	A Ave @ Boulevard	Removed Trash and silt from a Catch Basin	1500 - Clean Catch Basin	5/13/2016
<a href="#">W030935-060216</a>	Shuford Ave @ Boulevard	Removed Trash from a Catch Basin	1500 - Clean Catch Basin	5/13/2016
<a href="#">W030936-060216</a>	Archer Ave @ Boulevard	Removed Trash and silt from Curb Inlet. Collecting 1/4 cubic yards of debris for the day	1500 - Clean Catch Basin	5/13/2016

Reference No	Request Address One	Action Taken	Code Number	Work Completion Date
<a href="#">W030945-060216</a>	Pickwick Ave Alley	Removed Trash and silt from a Catch Basin	1500 - Clean Catch Basin	5/17/2016
<a href="#">W030946-060216</a>	1314 Canterbury Ln.	Removed Sticks and silt from a Curb Inlet	1500 - Clean Catch Basin	5/17/2016
<a href="#">W030947-060216</a>	1112 Peace Cliff Ct.	Removed grass and silt from a Curb Inlet	1500 - Clean Catch Basin	5/17/2016
<a href="#">W030948-060216</a>	202 Woodbridge Rd	Removed a cardboard box from a Curb Inlet. Collected 1/4 cubic yard of debris for the day.	1500 - Clean Catch Basin	5/17/2016
<a href="#">W030949-060216</a>	E. Westover Ave @ Conduit Rd	Removed Sticks and trash from a Curb Inlet	1500 - Clean Catch Basin	5/18/2016
<a href="#">W030952-060216</a>	1100 Yacht Basin Dr.	2-catch basins on wood side of road removed 1/2 cubic yards of leaves, silt and sticks	1500 - Clean Catch Basin	5/19/2016
<a href="#">W031008-060716</a>	1907 Wakefield Ave.	Removed Trash and silk from a Catch Basin	1500 - Clean Catch Basin	5/31/2016
<a href="#">W031009-060716</a>	2100 Boulevard	Removed trash and car parts from a Curb Inlet	1500 - Clean Catch Basin	5/31/2016
<a href="#">W031010-060716</a>	125 Roanoke Ave.	Removed trash and sticks from a Curb Inlet	1500 - Clean Catch Basin	5/31/2016
<a href="#">W031011-060716</a>	156 Windsor Ave.	Removed trash and a trash bag from a Curb Inlet	1500 - Clean Catch Basin	5/31/2016
<a href="#">W031304-062816</a>	City Wide	Checked/cleaned the following storm drains: 3 at Marvin and Chesterfield, 1000 Forest View Dr, 327 Ridgecrest Ln, Fischer @ Westover, Westover @ Hamilton, 2209 and 1907 Wakefield, Lafayette @ Westover, 121 Lakeside Dr.	1500 - Clean Catch Basin	6/17/2016
<a href="#">W031335-070116</a>	Charlotte @ Meridian Aves.	open storm gates and clean debris	1500 - Clean Catch Basin	6/17/2016
<a href="#">W031336-070116</a>	Roslyn Rd.	Cleaned catch basin gate at I-95 Bobby Walker's property	1500 - Clean Catch Basin	6/17/2016
<a href="#">W031338-070116</a>	Roslyn Rd.	Cleaned catch basin gate at I-95 Bobby Walker's property	1500 - Clean Catch Basin	6/23/2016
<a href="#">W031349-070116</a>	Conduit Rd.	Checked/cleaned storm drains	1500 - Clean Catch Basin	6/23/2016

Reference No	Request Address One	Action Taken	Code Number	Work Completion Date
<a href="#">W031381-070116</a>	Sherwood Dr @ Boulevard	At the Refresh convenience store removed pine needles, trash and silt from a Catch Basin	1500 - Clean Catch Basin	6/23/2016
<a href="#">W031382-070116</a>	Sherwood Dr @ Boulevard	At Refresh convenience store removed 1/4 cubic yards of pine needles, trash and silt from a Catch basin	1500 - Clean Catch Basin	6/23/2016
<a href="#">W031384-070116</a>	318 Jefferson Ave	Removed trash from a Curb Inlet	1500 - Clean Catch Basin	6/24/2016
<a href="#">W031385-070116</a>	1314 Canterbury Ln.	Removed trash and grass clippings from a Curb Inlet	1500 - Clean Catch Basin	6/24/2016
<a href="#">W031386-070116</a>	A Ave @ Boulevard	Removed trash and silt from a Catch Basin. Collected 1/4 cubic yard of debris for the day	1500 - Clean Catch Basin	6/24/2016
<a href="#">W031387-070116</a>	1013 Kensington Rd.	Removed trash and silt from a Curb Inlet	1500 - Clean Catch Basin	6/28/2016
<a href="#">W031388-070116</a>	203 Lee Ave.	Removed trash and grass clippings from a Catch Basin	1500 - Clean Catch Basin	6/24/2016
<a href="#">W031389-070116</a>	399 Danville Ave.	Removed cardboard boxes from a curb inlet	1500 - Clean Catch Basin	6/28/2016
<a href="#">W031390-070116</a>	302 Hamilton Ave.	Removed sticks and trash from a Curb Inlet. Collected 1/4 cubic yard of debris for the day	1500 - Clean Catch Basin	6/28/2016

368 Requests

# Basin Repair 2015-16

Run Date: 11/02/2016 12:16 PM

Reference No	Request Address One	Action Taken	Code Number	Work Completion Date
<a href="#">W026247-042315</a>	508 Compton Rd.	On 5/4/15 Metal pipe bottom and sides are gone, pipe needs to be replaced, Called in MU and spoke to resident. On 7/7/15 Replacement of pipe used mini excavator to dig out pipe removing 24 tones of asphalt, dirt and old pipe. replaced 3-14' sections of 12" PVC pipe, used 6 tons #5 stone and 18 tons of Crush and run from Utilities division. On 7/8/15 Built forms to pour basin front walls and new floor in basin at 509 Compton. On 7/10/15 Used 12 bags 80lb each of ready mix concrete, poured front walls on 2 basin and new floor in basin at 509 Compton. On 7/13/15 Stripped forms	1501 - Repair Catch Basin	7/10/2015
<a href="#">W027133-070815</a>	3607 Hawick Dr.	On 7/13/15 called Mu to mark utilities. on 7/15/15 saw cut asphalt and concrete On 7/16/15 used jackhammer to break up concrete around basin. Removed 8 tons of asphalt, concrete and dirt. On 7/17/15 removed 4 tons of dirt with backhoe. Basin wall at bottom was poorly built causing some of the problem. Weep hole had no screen, put a screen in front of weep hole, placed 4 tons #5 stone in hole, placed 8 tons crush and run on top of #5 stone and packed with backhoe and hammer.	1501 - Repair Catch Basin	7/17/2015

Reference No	Request Address One	Action Taken	Code Number	Work Completion Date
<a href="#">W027377-072715</a>	400 Waterfront Dr.	On 7/1/15 placed cone on top of gravel that utilities division had placed. Marked area with white paint and called MU to mark utilities. On 7/14/15 saw cut asphalt and concrete. On 7/15/15 climbed down into basin found weep hole had no screen in front of it causing hole and concrete to break. On 7/16/15 using utilities backhoe removed asphalt and concrete. Placed screen in front of weep hole, placed 3 tons of #5 stone and 3 tons of crush and run stone all from Utilities.	1501 - Repair Catch Basin	7/16/2015
<a href="#">W027424-073015</a>	Dunlop Farms Blvd @ Longhorn Dr.	On 7/27/15 Saw cut asphalt and C&G to make repairs. On 7/28/15 Used backhoe to remove 16 tons of asphalt, concrete and dirt from around and in front of basin to be repaired. Used screen wire to cover weep hole in wall causing problem. Used jackhammer to take out C&G that was broken. Use Rammer to pack stone where C&G was broken and sinking. Used 6 tons of #5 stone in hole and packed with backhoe and rammer. Used 10 tons of Crush and run and packed with backhoe and rammer all stone came from Utilities Division	1501 - Repair Catch Basin	7/28/2015

Reference No	Request Address One	Action Taken	Code Number	Work Completion Date
<a href="#">W027427-073015</a>	Dunston Point Pkwy @ Waterfront Dr.	On 7/29/15 called MU to locate utilities repairing 2 basins. On 7/31/15 Saw cut asphalt and C&G the area to repair basins. On 8/4/15 Removed asphalt and dirt, jack hammered C&G removing 10 tons of debris. Fixed weep hole and basin wall causing C&G to break and settle. Used 1/2 of a 5 gallon bucket of cement for outside basin wall, used 2 tons of #5 and 8 tons of crush and run stone to fill in hole. All stone from the Utilities Division. On 8/5/15 2nd repair removed 8 tons of asphalt, dirt and C&G, repaired weep hole with screen wire. Used 2 tons of #5 and 6 tons of Crush and run stone to fill hole. all from the Utilities Division	1501 - Repair Catch Basin	8/5/2015
<a href="#">W027823-082515</a>	207 Clements Ct.	Low spot caused by weep hole in basin wall not having a screen in front of it. Dug down to weep hole with shovels, placed screen wire in front of weep hole, placed 1-5 gallon bucket #5 stone against screen wire, placed 1-ton of topsoil in low spot to cover stone, raked and planted grass seed.	1501 - Repair Catch Basin	9/1/2015
<a href="#">W030093-033016</a>	3210 Boulevard	Used pipe saw to cut concrete in front of Curb Inlet, used jack hammer and air compressor to take out concrete. Concrete broken and settled causing sinkholes. Put new screen wire over weep hole in basin wall. Placed 1/2 ton crush run stone in holes, tamped, placed topsoil on top and around basin in grass behind curb and seeded area.	1501 - Repair Catch Basin	3/16/2016

Reference No	Request Address One	Action Taken	Code Number	Work Completion Date
<a href="#">W030094-033016</a>	Springdale Ave @ Sherwood Dr.	On 3/7/16 Removed old basin with backhoe it had been ran over broken and very old, Placed a flared end concrete pipe 18" back in place of basin. Started rebuilding new manhole with concrete and 4x8 concrete bricks, used 3-60lb bags read mix concrete and 20 bricks. Coned off area for the night. On 3/8/16 Used 4-60lb bags of ready mix concrete and 20 bricks to finish building manhole so ring can be sat on. used ring and lid from shop yard. Placed concrete between bricks and poured concrete around bricks and pipe to seal and sturdy manhole. New flared end pipe sits on top of old concrete footing still in good shape 12" thick pipe will not settle. Backfilled with 1/2 ton topsoil on top of 1 ton of #5 stone and seeded area.	1501 - Repair Catch Basin	3/8/2016
<a href="#">W031002-060616</a>	208 CRESCENT AVE	Used backhoe to remove 8 tons of asphalt, concrete and dirt. Found large void under gutter and asphalt caused by a weep hole "no screen" and pipe separated from basin wall. Used 1/2 5 gallon bucket of plug cement to fix pipe and hole. Put screen wire in front of weep hole. Water line runs through concrete at the bottom of basin. Used a 5 gallon bucket to rock dust to cover water line that had been exposed, used 3 tons of #5 stone in hole, 5 tons of crush and run in hole on top of other stone and tamped area. All stone came from Utilities yard	1501 - Repair Catch Basin	6/21/2016

# Clean Drain Pipe 2015-16

Run Date: 11/02/2016 12:34 PM

Reference No	Request Address One	Action Taken	Code Number	Work Completion Date
<a href="#">W029228-123115</a>	920 Lakeview Ave.	Flushed a 12" concrete pipe under road, removed pine needles and dirt using 500 gallons of water. Water went down. This area sees a lot of water when it rains heavy, water flows into City from the County.	1504 - Clean Drainage Pipe	12/22/2015
<a href="#">W029831-022916</a>	Lakeview @ Lenoir Aves	Removed leaves and trash from pipe	1504 - Clean Drainage Pipe	2/23/2016
<a href="#">W030547-050216</a>	319 Ridge Rd.	Used backhoe, dump truck, Shovels and pitchfork removed 3 tons of silt, Leaves, Brush, gravel from culverts	1504 - Clean Drainage Pipe	4/29/2016
<a href="#">W030953-060216</a>	Elmwood Dr @ Cedarwood Ave.	Removed 1 cubic yard of sticks, gravel, silt and leaves from a spillway	1504 - Clean Drainage Pipe	5/19/2016
<a href="#">W031339-070116</a>	Ingram Ave.	Cleaned right-of-way 20' section with backhoe, debris packed against the mouth of pipe not allowing water to flow	1504 - Clean Drainage Pipe	6/23/2016
<a href="#">W031372-070116</a>	Maple Ln.	Cut tall grass along ditch at dead end	1504 - Clean Drainage Pipe	6/13/2016
<a href="#">W031374-070116</a>	Swift Creek Ln.	Cut tall grass drainage ditch at Old railroad bed	1504 - Clean Drainage Pipe	6/13/2016

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# Curb & Gutter Cleaning 2015-16

Run Date: 11/02/2016 12:46 PM

Reference No	Request Address One	Action Taken	Code Number	Work Completion Date
<a href="#">W027127-070715</a>	211 Moorman Ave.	Used loader to scrape gutter removing 1 tons of trash, grass, dirt, silt and chunks of asphalt	1507 - Clean Curb and Gutters	7/13/2015
<a href="#">W027130-070715</a>	303 Hamilton Ave.	Used broom and blower to clean sidewalk and gutters	1507 - Clean Curb and Gutters	7/8/2015
<a href="#">W027136-070815</a>	3613 Hawick Dr.	Removed debris from area	1507 - Clean Curb and Gutters	7/8/2015
<a href="#">W027146-070915</a>	Conduit Rd @ Ivey Ave.	Shoveled grass and dirt from gutters	1507 - Clean Curb and Gutters	7/9/2015
<a href="#">W027147-070915</a>	Hamilton @ Lynchburg Aves	Shoveled grass and dirt from gutters	1507 - Clean Curb and Gutters	7/9/2015
<a href="#">W027289-072015</a>	126 Verbov Ave.	Used loader, shovels and broom to scrape gutters removing 2 cubic yards of grass, silt, dirt and gravel. Will spray vines at a later date	1507 - Clean Curb and Gutters	7/21/2015
<a href="#">W027367-072315</a>	Crescent Ave.	Removed limbs, cut grass and limbs back with slopemower, cleaned curb and sprayed for weeds/grass in area.	1507 - Clean Curb and Gutters	7/24/2015
<a href="#">W027813-082415</a>	Cottage Grove Ave.	Cut grass, shoveled sand and grass removed and sprayed	1507 - Clean Curb and Gutters	8/25/2015
<a href="#">W027825-082615</a>	129 1/2 West Westover Ave.	Cleaned sand from gutters	1507 - Clean Curb and Gutters	8/27/2015
<a href="#">W027918-090215</a>	Springdale Ave @ Sherwood Dr.	Used weedeater and shovel to remove grass from C&G	1507 - Clean Curb and Gutters	8/17/2015
<a href="#">W027919-090215</a>	Sherwood Dr.	Cut grass in cracks sidewalk and C&G between Springdale Ave and Forest View Dr blew sidewalk off and used street sweeper to sweep up about 1 cubic yard of trash, grass, sand and glass.	1507 - Clean Curb and Gutters	8/17/2015
<a href="#">W027932-090215</a>	Conduit Rd.	Cut/chopped grass and trimmed from High School to Ellerslie Ave. Sweeper swept up debris removing grass, silt, dirt, pine needles and trash.	1507 - Clean Curb and Gutters	8/28/2015

Reference No	Request Address One	Action Taken	Code Number	Work Completion Date
<a href="#">W028012-091115</a>	Davis Ave.	Used weedeater to trimmed grass out of curb, used slope mower and bush hog tractor to cut brush and tall grass behind curb in the 200 block	1507 - Clean Curb and Gutters	9/3/2015
<a href="#">W028185-092515</a>	Temple Ave.	Cut up grass on and around concrete Islands	1507 - Clean Curb and Gutters	9/22/2015
<a href="#">W028186-092515</a>	Conduit Rd.	Cut up grass on and around concrete Islands	1507 - Clean Curb and Gutters	9/22/2015
<a href="#">W028271-100115</a>	119 Hamilton Ave.	Cleaned gutters removed 1/8 flat bed load of debris	1507 - Clean Curb and Gutters	10/1/2015
<a href="#">W028343-100815</a>	100 through the 300 block of Lafayette Ave.	Cut up grass in C&G then sweeper swept street	1507 - Clean Curb and Gutters	10/9/2015
<a href="#">W028534-102215</a>	202 Lynchburg Ave.	removed a small amount of debris from gutters	1507 - Clean Curb and Gutters	10/23/2015
<a href="#">W028766-111015</a>	3613 Hawick Dr.	Sand is not coming from Perthshire it is washing from under her driveway due to drain tiles from downspouts under driveway. The driveway has stress cracks from undermining. Shoveled leaves and sand from wedge. Used leaf machine 283 to vacuum up leaves and sand	1507 - Clean Curb and Gutters	11/10/2015
<a href="#">W029048-120915</a>	220 Virginia Ave.	See Ref WO29045 for additional information. On 12/10/15 Cleaned gutters and cut back brush removed 1 flat bed load of debris. Also, there was a van in the way no one answered the door to remove so we could not reach the rest	1507 - Clean Curb and Gutters	12/10/2015
<a href="#">W029223-123115</a>	513 Old Town Dr	Used flusher to vacuum and flush basin and pipe removed 2 cubic yards of leaves, trash and sticks and 500 gallons of water to flush	1507 - Clean Curb and Gutters	12/18/2015
<a href="#">W029364-011516</a>	1006 Colonial Ave.	Swept street and cleaned gutters	1507 - Clean Curb and Gutters	4/1/2016
<a href="#">W029704-021916</a>	Ellerslie Ave.	Shoveled grass/sand from gutters and blew off sidewalks in front of sweeper and sweeper swept up.	1507 - Clean Curb and Gutters	2/18/2016

Reference No	Request Address One	Action Taken	Code Number	Work Completion Date
<a href="#">W029859-030116</a>	Boulevard	Started blowing off sidewalks and cutting grass out of curb so sweeper can clean areas.	1507 - Clean Curb and Gutters	2/29/2016
<a href="#">W029904-030916</a>	Boulevard	On 3/1/15 cut up dirt and blew off sidewalks for sweeper to swept street. On 3/2/16 Finished blowing off sidewalks.	1507 - Clean Curb and Gutters	3/1/2016
<a href="#">W030637-050916</a>	Marvin Ave @ Cambridge Pl	Used loader and shovel to remove 1 ton of silt, trash and leaves form gutter leading to Curb Outlet.	1507 - Clean Curb and Gutters	5/4/2016
<a href="#">W030658-051016</a>	220 Virginia Ave	Removed debris from Gutters	1507 - Clean Curb and Gutters	5/10/2016
<a href="#">W031013-060716</a>	Conduit Rd.	Cut grass in gutter over hanging in curb form E. Ellerslie Ave to School Ave. both sides collected 4 cubic yards of grass, silt, dirt and gravel with sweeper.	1507 - Clean Curb and Gutters	6/2/2016

# Ditch Cleaning 2015-16

Run Date: 11/02/2016 12:26 PM

Reference No	Request Address One	Action Taken	Code Number	Work Completion Date
<a href="#">W026493-051415</a>	Snead Ave @ Spring Dr.	removed 10 tons of grass, dirt, silt, gravel and trash. Placed 4 tons of rip rap in ditch, used existing rip rap to rebuild channel. Asphalt crew will place asphalt in bottom and side of ditch starting from corner of rip rap stone.	1503 - Clean Drainage Ditch	8/3/2015
<a href="#">W026898-061815</a>	1107 W. Roslyn Rd	Found trash on ground from passing cars, also trash cans left out with tops flipped up causing part of the problem. Removed 1 trash bag of trash.	1503 - Clean Drainage Ditch	7/27/2015
<a href="#">W027042-063015</a>	2203 Wakefield Ave.	On 6/30/15 spoke to resident about issue informed him that we will start cleaning tomorrow he will move car. On 7/2/15 started cleaning removed 1/2 ton of debris with loader and shovels. On 7/9/15 finished scraped silt, grass and gravel from edge of road removing 1 ton of debris used dump truck 258, loader and shovels	1503 - Clean Drainage Ditch	7/9/2015
<a href="#">W027504-080315</a>	South Ave.	Used loader to remove 4 tons grass, dirt, grave and trash. 50' of ditch is cleaned	1503 - Clean Drainage Ditch	7/30/2015
<a href="#">W027908-090115</a>	113 West Highland Court	Removed dead tree limb from ditch and sprayed vines on edge of ditch. Used 1-gallon of roundup	1503 - Clean Drainage Ditch	9/2/2015
<a href="#">W027923-090215</a>	517 Springdale Ave.	Cut drainage ditch at Sign Shop	1503 - Clean Drainage Ditch	8/25/2015
<a href="#">W027926-090215</a>	Wakefield Ave.	Cut and sprayed for weeds/grass	1503 - Clean Drainage Ditch	8/26/2015
<a href="#">W027927-090215</a>	Chesterfield Ave.	Cut drainage ditch with bush hog	1503 - Clean Drainage Ditch	8/27/2015
<a href="#">W027928-090215</a>	Chesterfield Ave.	Cut drainage ditch with bush hog in the 100 block	1503 - Clean Drainage Ditch	8/27/2015
<a href="#">W027929-090215</a>	Branders Bridge Rd.	Cut drainage ditch culverts with bush hog	1503 - Clean Drainage Ditch	8/27/2015

Reference No	Request Address One	Action Taken	Code Number	Work Completion Date
<a href="#">W027933-090215</a>	Meridian Ave.	Concrete bottom between Charlotte and Fairfax Aves, removed 5 loads of debris, silt, trash, grass and cattails. Used Loader, Excavator, Unit 258 and 249	1503 - Clean Drainage Ditch	8/31/2015
<a href="#">W028016-091115</a>	Branders Bridge Rd.	Removed 20 tons of silt, dirt and grass from the front of drainage ditch culvert	1503 - Clean Drainage Ditch	9/9/2015
<a href="#">W028155-092215</a>	Pondola Ln.	Removed bag from stream with hoe fork	1503 - Clean Drainage Ditch	9/22/2015
<a href="#">W028217-092815</a>	Meridian Ave.	Trimmed with weedeaters	1503 - Clean Drainage Ditch	9/25/2015
<a href="#">W028304-100515</a>	Meridian @ Fairfax Aves.	Removed debris from drainage ditch so water will flow	1503 - Clean Drainage Ditch	10/2/2015
<a href="#">W028305-100515</a>	119 Piedmont Ave.	Removed debris from drainage ditch so water will flow	1503 - Clean Drainage Ditch	10/2/2015
<a href="#">W028306-100515</a>	Cedar Ln @ Tazwell Ave	Removed dirt from ditch so water will flow	1503 - Clean Drainage Ditch	10/2/2015
<a href="#">W028309-100515</a>	Ingram Ave.	Cleaned ditch at the dead end near railroad	1503 - Clean Drainage Ditch	10/1/2015
<a href="#">W028380-101015</a>	309 Wright Ave.	Cut tall grass with weedeaters	1503 - Clean Drainage Ditch	10/14/2015
<a href="#">W028729-110615</a>	Swift Creek Ln.	Used pole saw to cut low hanging limbs, chipped limbs with chipper blew into the wooden area, used weedeater to trim ditch and around trees and cut grass with mower.	1503 - Clean Drainage Ditch	10/29/2015
<a href="#">W028949-113015</a>	White Bank Rd.	On 11/17/15 Hauled 6 dump truck loads (48) tons of rock soil form PW Complex placed in area of standing water used backhoe to break up soil. On 11/15/15 sowed a 5-gallon bucket of grass seed and placed 2 bundles on top	1503 - Clean Drainage Ditch	11/17/2015
<a href="#">W028953-113015</a>	Maple Ln.	Removed 4 tons of debris, Leaves, sticks and silt at dead end from ditch in front of pipe. Danny and Anthony helped get equipment to Job site.	1503 - Clean Drainage Ditch	11/20/2015
<a href="#">W029143-122215</a>	555 Roslyn Ave.	Used shovels to remove silt and leaves to allow water to drain	1503 - Clean Drainage Ditch	12/23/2015

Reference No	Request Address One	Action Taken	Code Number	Work Completion Date
<a href="#">W029146-122315</a>	913 Edinborough Dr.	On 12/28/15 Investigated area found pipe going under I-95 is completely stopped up with trash, leaves, sticks and dirt. Possible a state issue, unable to get to it from the City's side of fence. Will get with Mike West and Scott Thornton to see what can be done. This is a main drainage ditch has a concrete bottom and sides. Water was very high. On 2/11/16 Cleaned ditch and cut all trees near ditch	1503 - Clean Drainage Ditch	2/11/2016
<a href="#">W029216-123115</a>	Branders Bridge Rd.	Collected 3 tons of dirt, silt and leaves from ditch At City Limits	1503 - Clean Drainage Ditch	12/14/2015
<a href="#">W029217-123115</a>	E Ave @ Cedar Ln.	Collected 1/4 ton of dirt, silt and leaves from ditch	1503 - Clean Drainage Ditch	12/14/2015
<a href="#">W029506-020216</a>	Woodlawn @ Davis Aves	Scraped edge of road to catch basin Standing water removed 3 tons of debris dirt and silt. There is no curb and gutter in this area.	1503 - Clean Drainage Ditch	1/6/2016
<a href="#">W029508-020216</a>	White Bank Rd.	Used motor grader, loader and dump truck to remove 4 loads 24 tons of leaves, sticks, silt and trash from ditch. Used leave truck and removed 4 cubic yards of leaves.	1503 - Clean Drainage Ditch	1/7/2016
<a href="#">W029527-020216</a>	Charles Ave.	Removed 1/2 dump truck load and used leaf machine to remove leaves from Holly Ave to Conduit Rd.	1503 - Clean Drainage Ditch	1/14/2016
<a href="#">W029528-020216</a>	Conduit Rd.	Removed 1/2 dump truck load and used leaf machine to remove leaves from Charles Ave to Home Depot Entrance.	1503 - Clean Drainage Ditch	1/14/2016

Reference No	Request Address One	Action Taken	Code Number	Work Completion Date
<a href="#">W029897-030816</a>	322 Ivey Ave	Used loader to scrape out silt and leaves removing 1/2 ton from ditch. Placed 2-14' x 4" PVC pipes in ditch so she can get out of her backyard without getting stuck in ditch. Placed 1 ton of Crush and run stone around and on top of pipe, and packed stone small plate tamper. She was very pleased. All material came from Utilities Division yard.	1503 - Clean Drainage Ditch	3/11/2016
<a href="#">W029908-030916</a>	Maple Ave.	Cut and removed tree in drainage ditch at the dead end	1503 - Clean Drainage Ditch	3/4/2016
<a href="#">W030003-032116</a>	Charles Dimmock Pkwy	On 3/14/16 Cut and removed 4 flatbed loads of brush from ditch in front of Old Landfill entrance. On 3/15/16 Cut and removed 2 flatbed loads of brush and 5 trash bags of trash from ditch	1503 - Clean Drainage Ditch	3/14/2016
<a href="#">W030078-033016</a>	Wright Ave.	Cut low tree limbs from W. Westover Ave to Wright Ave Old railroad bed alone ditch. Chipped with chipper and blew chips into the woods	1503 - Clean Drainage Ditch	3/22/2016
<a href="#">W030182-040416</a>	311 Brookedge Drive	Used leaf machine to vacuum leaves, garage and other debris off storm drain collected 3 wheel barrow loads	1503 - Clean Drainage Ditch	4/6/2016
<a href="#">W030228-040816</a>	Meridian Ave.	Cleaned catch gates	1503 - Clean Drainage Ditch	4/5/2016
<a href="#">W030462-042616</a>	501 Lake Avenue	Cleaned ditch removed all debris so water will flow	1503 - Clean Drainage Ditch	4/26/2016
<a href="#">W030530-050216</a>	314 Charlotte Ave	Clean flow line out so water would drain	1503 - Clean Drainage Ditch	4/29/2016

Reference No	Request Address One	Action Taken	Code Number	Work Completion Date
<a href="#">W030611-050916</a>	109 Swift Creek Ln.	On 5/19/16 hauled 6 tons #5 stone to Old railroad bed for the resident On 5/20/16 Removed 3 tons of dirt and silt at the edge of the road in front of property. Used loader placed dirt on old railroad bed will spread out later, placed #5 stone from old railroad bed to job site, spread 4 tons of stone on edge of road at 2 ends of driveway at this property and packed stone. The edge of road has low spots man not correct the entire problem this area has no drains or ditches.	1503 - Clean Drainage Ditch	5/20/2016
<a href="#">W030725-051716</a>	555 Roslyn Ave.	Used shovel to removed 1/4 cubic yards of silt and grass from gutter	1503 - Clean Drainage Ditch	5/18/2016
<a href="#">W030866-052716</a>	624 Ryan Ave	Tv'd drainage pipe fron Pinehurst 500'. No blockage seen. No drainage problem on Ryan.	1503 - Clean Drainage Ditch	5/31/2016
<a href="#">W030955-060216</a>	501 Lake Ave.	Cleaned back of shop around dumpster and drainage ditch. placed a new sock boom in ditches a 10' boom near milling pile and a 20' boom near fence close to park	1503 - Clean Drainage Ditch	5/22/2016
<a href="#">W031337-070116</a>	Charlotte @ Meridian Aves.	Cleaned ditch gates	1503 - Clean Drainage Ditch	6/23/2016
<a href="#">W031353-070116</a>	Branders Bridge Rd.	Picked up litter in drainage ditch	1503 - Clean Drainage Ditch	6/24/2016
<a href="#">W031354-070116</a>	Meridian Ave.	Picked up trash from drainage ditch	1503 - Clean Drainage Ditch	6/24/2016
<a href="#">W031376-070116</a>	517 Springdale Ave.	Used backhoe to shift rip rap near the edge of road. placed 1/2 ton asphalt on edge of road where water was causing a wash out around road signs at sign shop ditch.	1503 - Clean Drainage Ditch	6/16/2016
<a href="#">W031377-070116</a>	2500 Boulevard	At Greens Auto sales drainage pipe placed 3/4 ton of asphalt in front of pipe at the end of sidewalk washing away. Rip rap stone already there.	1503 - Clean Drainage Ditch	6/16/2016

# Repair Drop Inlet 2015-16

Run Date: 11/02/2016 12:42 PM

Reference No	Request Address One	Action Taken	Code Number	Work Completion Date
<a href="#">W029975-031516</a>	654 Boulevard	On 3/14/16 removed plastic drain box, dug out hole and poured new footing for DI-1 inlet. On 3/15/16 formed and poured new DI-1 inlet 12" deep. On 3/16/16 stripped inlet forms and installed DI-1 grate	1506 - Repair Drop Inlet	3/16/2016
<a href="#">W030442-042516</a>	303 Fairmount Dr.	On 4/22/16 started patching holes inside of drop inlet box and filling sinkholes with #5 gravel and poured concrete strip by driveway back. On 4/27/16 finished patching hole in inlet and poured concrete under gutter pan (sinkhole)	1506 - Repair Drop Inlet	4/27/2016

# Storm Sewer Cleaning 2015-16

Run Date: 11/02/2016 12:20 PM

Reference No	Request Address One	Action Taken	Code Number	Work Completion Date
<a href="#">W029789-022916</a>	Meridian Ave.	Checked and cleaned drainage grates	1502 - Clean Storm Sewer	2/24/2016
<a href="#">W030173-040416</a>	121 Lakeside Dr.	Cleaned storm drains	1502 - Clean Storm Sewer	4/1/2016
<a href="#">W030174-040416</a>	901 Lakeview Ave.	Cleaned storm drains	1502 - Clean Storm Sewer	4/1/2016
<a href="#">W030175-040416</a>	917 Lakeview Ave.	Cleaned storm drains	1502 - Clean Storm Sewer	4/1/2016
<a href="#">W030176-040416</a>	2209 Wakefield Ave.	Cleaned storm drains	1502 - Clean Storm Sewer	4/1/2016
<a href="#">W030177-040416</a>	1907 Wakefield Ave.	Cleaned storm drains	1502 - Clean Storm Sewer	4/1/2016
<a href="#">W030178-040416</a>	Franklin Ave.	Cleaned storm drains	1502 - Clean Storm Sewer	4/1/2016
<a href="#">W030179-040416</a>	1217 Boulevard	Cleaned storm drains behind Big Lots	1502 - Clean Storm Sewer	4/1/2016
<a href="#">W030180-040416</a>	Marvin @ Chesterfield Aves	Cleaned storm drains	1502 - Clean Storm Sewer	4/1/2016
<a href="#">W030181-040416</a>	1023 Forest View Dr.	Cleaned storm drains	1502 - Clean Storm Sewer	4/1/2016

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# Repair Storm Sewer 2015-16

Run Date: 11/02/2016 12:38 PM

Reference No	Request Address One	Action Taken	Code Number	Work Completion Date
<a href="#">W026885-061715</a>	1205 Yacht Basin Dr.	On 6/17/15 Investigated area, placed cone on top of hole until it can be repaired. On 6/24/15 Call in a MU to mark utilities. On 7/1/15 removed 6 tons of asphalt and dirt, placed a screen wire over weep hole causing problem. and placed 4 tons of #5 stone and 2 tons of crush and run from Utilities.	1505 - Repair Storm Sewer	7/1/2015
<a href="#">W027190-071315</a>	Charlotte @ Meridian Aves.	Repaired grates and installed 3 braces to make grates stronger.	1505 - Repair Storm Sewer	7/2/2015
<a href="#">W027615-081115</a>	Temple Ave @ Conduit Rd.	On 8/6/15 Cut concrete with pipe saw, concrete broken and collapsed into ground. Pipe separated causing ground to give away. On 8/11/15 Used air compressor, Jack hammer and loader to remove broken concrete. Picked up 2-5gal buckets of plug cement for job from Water Works HD Supply. On 8/12/15 Removed 6 tons of concrete and dirt, minded separated pipe that caused hole and concrete to break and cave in. Used 2 buckets of plug cement, 6 tons of #5 stone from Utilities Division and existing dirt to cover stone and pipe.	1505 - Repair Storm Sewer	8/12/2015

Reference No	Request Address One	Action Taken	Code Number	Work Completion Date
<a href="#">W028145-092115</a>	110 Windmere Dr.	In August street was swept. On 9/16/15 used backhoe to dig out asphalt, C&G and dirt removing 18 tons of debris. Dug down to pipe were old tree roots were wrapped around pipe, pulled roots away from pipe and found small separations. Used 1/2 of a 5 gallon bucket plug to repair, used 18 tons of crush and run stone to fill hole and tamped with backhoe. All stone came from the Utilities Division.	1505 - Repair Storm Sewer	9/16/2015
<a href="#">W028151-092115</a>	301 Kingfisher Way	On 9/15/15 saw cut asphalt and concrete. On 9/17/15 Sinkhole around Curb Inlet, used backhoe to dig out asphalt and broken C&G around basin, weep hole in basin wall need a screen in front of it. This caused hole to form and break C&G. Placed 2 tons #5 stone in hole, 6 tons Crush and run stone on top and tamped with backhoe. All stone came from Utilities Division	1505 - Repair Storm Sewer	9/17/2015
<a href="#">W028318-100515</a>	518 and 529 Waterfront Drive	On 10/6/15 saw cut asphalt and concrete. On 10/7/15 called in MU tickets. On 10/20/15 Used backhoe to remove 16 tons asphalt, concrete, dirt, trash and building materials. Used screen wire in front of both curb inlets, weep holes, concrete poured improperly and trash in ground causing problem. Used 8 tons of #5 stone from Utilities and 8 tons crush and run stone from Pw Complex	1505 - Repair Storm Sewer	10/20/2015

Reference No	Request Address One	Action Taken	Code Number	Work Completion Date
<a href="#">W028643-102915</a>	219 Old Brickhouse Ln.	Used Ut Backhoe, dump truck 244, asphalt saw removed 8 tons of asphalt, concrete and dirt. 1/4 ton asphalt bolder, 1 sand bag and #3 stone did not work fixing problem, Corrected problem by placing a screen over weep hole, placed 2 tons #5 stone and 6 tons crush and run back in hole.	1505 - Repair Storm Sewer	10/6/2015
<a href="#">W029715-021916</a>	208 Crescent Ave	On 2/19/16 Investigated and spoke to resident, placed cone over hole water is running in basin will fix problem when it dries out. On 2/29/16 Used a 60lb bag of ready mix concrete to fill in crack. The wall and floor had separated causing problem and used a 5 gallon bucket of dirt to fill in hole that was in the grass	1505 - Repair Storm Sewer	2/29/2016
<a href="#">W029769-022616</a>	1704 Franklin Ave.	Used a 60lb bag of concrete to fill hole in the mount of the curb inlet.	1505 - Repair Storm Sewer	2/29/2016
<a href="#">W030012-032216</a>	Conduit Rd.	Purchased a tube of asphalt caulk from Home Depot, put on manhole lid to hold down the lid. Do not have any heavy road bearing lids	1505 - Repair Storm Sewer	3/23/2016
<a href="#">W030041-033016</a>	701 Forest View Dr.	On 3/23/16 Started patching bottom of metal pipe. On 3/24/16 Repaired flow line of metal pipe with geoplug 5 buckets and 60' of 5mil concrete cloth and screwed it in place. See REF# W029881 for additional information.	1505 - Repair Storm Sewer	3/24/2016
<a href="#">W031325-070116</a>	Charlotte @ Meridian Aves.	Repaired gate on storm sewer the rain water had bent the gate and stripped the anchor out of walls	1505 - Repair Storm Sewer	6/22/2016

# Department of Public Works Facilities

- DPW Area
- Impervious
- SW Controls
- BMPs
- Hotspots
- Use
- Use
- Administration
- Equipment Maintenance
- Fleet Maintenance
- Fueling Station
- Parking
- Stockpile
- Storage
- Discharges

