Old Dominion University – Small MS4 Permit

Illicit Discharge Detection and Elimination Program

Prepared for **Old Dominion University**
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March 17th, 2017

Contents

List of Abbreviations

Title	Abbreviation
Best Management Practice	BMP
Clean Water Act	CWA
Center for Watershed Protection	CWP
Virginia Department of Conservation and Recreation	DCR
Virginia Department of Environmental Quality	DEQ
Environmental Protection Agency	EPA
Federal Water Pollution Control Act	FWPCA
Geographic Information System	GIS
Illicit Discharge Detection and Elimination	IDDE
Illicit Discharge Potential	IDP
Maximum Extent Practicable	MEP
Municipal Separate Storm Sewer System	MS4
Notice of Intent	NOI
National Pollution Discharge Elimination System	NPDES
Old Dominion University	ODU
Stormwater Management	SWM
Stormwater Management Program	SWMP
Stormwater Pollution Prevention Program	SWPPP
Total Maximum Daily Load	TMDL
Virginia Department of Transportation	VDOT
Vanasse Hangen Brustlin	VHB
Virginia Stormwater Management Handbook	VSMH
Virginia Stormwater Management Program	VSMP
Water Quality Act	WQA

Introduction

This Illicit Discharge Detection and Elimination (IDDE) Program has been developed as a requirement of the National Pollutant Discharge Elimination System (NPDES) and is overseen in the State of Virginia by the Department of Environmental Quality's (DEQ) permit for Small Municipal Separate Storm Sewer Systems (MS4's) located in urbanized areas. The purpose of this Program is to implement a campus wide strategy to find, fix and prevent illicit discharges. An overall campus map has been included in **Appendix A**. The following is a four part definition of an illicit discharge:

1. Illicit Discharges are defined as storm drains that have measurable flow during dry weather periods, which contain pollutants or pathogens that could pose a significant threat to the community. A storm drain with measurable flow that does not contain any pollutants is simply considered a discharge.
2. Illicit Discharges typically have a unique frequency, composition and mode of entry into the storm drain system.
3. Illicit Discharges are usually caused when the sewage from a disposal system interacts with the storm drain system. A variety of monitoring techniques can be used to locate and eliminate illegal sewage connections. These techniques trace sewage flows from the outfall back upstream the storm drain system to reach the source of the illicit discharge.
4. Illicit Discharges of other pollutants are produced from specific source areas and operations known as "generating sites". Depending on the regulatory status of specific "generating sites", education, enforcement and other pollution prevention techniques can be used to manage this class of illicit discharges.

The Old Dominion University IDDE Program was initially developed in 2008. However, per 9VAC25-890-40, the IDDE Program is to be updated for the recent General Permit for Stormwater Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems, effective date July 1 2013, expiration date June 30, 2018 **(Appendix B)**. Implementation of the components of this Program is required as a condition of the Permit. The DEQ has been granted authority to administer the VSMP and is therefore the regulatory authority overseeing the implementation of this Program. The Program is also subject to all requirements of the Virginia Stormwater Management Act and the Virginia Stormwater Management Program (VSMP) Permit Regulations.

Permit Background/Regulatory Considerations

In 1972, Congress passed the Federal Water Pollution Control Act (FWPCA), also known as the Clean Water Act (CWA), to restore and maintain the quality of the nation's waterways. The ultimate goal was to make sure that the river and streams were fishable, swimmable, and drinkable. In 1987, the Water Quality Act (WQA) added provisions to the CWA that allowed the EPA to govern stormwater discharges from MS4s. In 1990, the EPA disseminated rules establishing Phase I of the National Pollutant Discharge Elimination System (NPDES) stormwater program.

Under the Phase 1 NPDES regulations, permits for stormwater discharges from municipal separate storm sewer systems were required for eleven "large" and "medium" municipalities in Virginia. The "large" municipalities (250,000+ populations) are Fairfax County, Virginia Beach and Norfolk. The "medium" municipalities (from 100,000 to 250,000 populations) are Arlington County, Prince William County, Henrico County, Chesterfield County, Hampton, Newport News, Portsmouth, and Chesapeake. The Phase 2 stormwater regulations froze the population thresholds for "large" and "medium" municipal separate storm sewer systems at the 1990 Census level, so no additional municipalities will be designated into these categories.

Permits for applications for Phase 1 municipal separate storm sewer systems permit applications required the municipalities to propose a comprehensive Stormwater Management Program (SWMP). This program is required to consist of structural and non-structural measures to control the discharge of pollutants from the storm sewer system to the Maximum Extent Practicable (MEP) and to effectively prohibit non-stormwater discharges to separate storm sewer systems. The Phase 1 permits required the implementation of the SWMP, required storm event monitoring to be conducted by the municipality, and required the municipality to regularly assess the effectiveness of the various stormwater controls employed by the municipality.

Phase 2 regulations required permits to be issued to Small Municipal Separate Storm Sewer Systems (MS4s) located in "urbanized areas" (as defined by the U.S. Census Bureau's 2000 Census). Small MS4s include systems owned by municipalities, federal facilities, State facilities (including VDOT), and public universities. In addition, any Small MS4 located in a Phase 1 "large" or "medium" municipality is required to be permitted under the Phase 2 regulations.

Permits for regulated small municipal separate storm sewer systems require the development, implementation and enforcement of a SWMP that includes the following "six minimum control measures":

1. Public education and outreach on stormwater impacts
2. Public involvement/ participation
3. Illicit discharge detection and elimination
4. Construction site stormwater runoff control
5. Post-construction stormwater management in new development and redevelopment
6. Pollution prevention/good housekeeping for municipal operations.

Regulated Small MS4 permit applications require the applicant to identify:

1. Proposed best management practices and measurable goals for each of the "six minimum control measures"
2. The timing of the implementation of each control measure
3. The person or persons responsible for implementing the Stormwater Management Program (SWMP).

The 2004 Virginia legislature unanimously passed House Bill 1177 transferring regulatory authority of the NPDES programs related to MS4s and construction activities from the State Water Control Board to the Soil and Water Conservation Board and transferred oversight of these programs from the Department of Environmental Quality (DEQ) to the Department of Conservation and Recreation (DCR). This transfer became effective January 29, 2005. Program oversight was transferred again from DCR to DEQ effective July 1, 2013. As a result, DEQ is responsible for the issuance, denial, revocation, termination and enforcement of NPDES permits for the control of stormwater discharges from MS4s and land disturbing activities under the VSMP. The General Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems, in accordance with 9VAC25-890, is effective starting July 1, 2013 and applies to all VSMP Permits for Discharges of Stormwater from Small MS4s until the permit expiration date of June 30, 2018.

Existing Resource Audit

Campus Stormwater Outfalls

The ODU campus is comprised of approximately **173.50 acres** of land situated on the east and west sides of Hampton Boulevard in the City of Norfolk, Virginia. The campus has three major outfalls - one draining to the Elizabeth River, and two draining to the Lafayette River, in addition to six minor outfalls draining to the Elizabeth River.

The West Campus drains to an area generally bound by Elkhorn Avenue to the east, 38th Street to the south, Elizabeth River to the west, and 49th Street to the north. The West Campus is drained by seven separate outfalls. The main outfall collects runoff from a storm sewer collection system with trunk lines running east to west to Powhatan Avenue where they discharge through a 78" CM conduit into a large tidal channel draining to the Elizabeth River. Four additional smaller storm sewer systems collect runoff from the area west of the Powhatan Apartments and parking lot south of Whitehurst Hall. These systems outfall to the same tidal channel by way of RCP culverts ranging in size from 15" to 36". Two additional outfalls are located northwest of Whitehurst Hall and south the L.R. Hill Sports Complex. These outfalls are RCP conduits sized 18" and 42" respectively and outfall directly to the Elizabeth River. The Student Rec Center, the Oceanography and Physics Building, the Soccer Stadium, Bud Metheny Baseball Stadium, Whitehurst Hall, Powhatan Apartments, and L.R. Hill Sports Complex, as well as adjacent parking lots drain through this system.

The Central Campus drains to an area generally bound by Elkhorn Avenue to the west, 49th Street and Bolling Avenue to the north, Hampton Boulevard to the east, and 43rd Street to the south. The system is comprised of a major trunk line running south to north through the heart of campus. Hampton Boulevard has its own major trunk line that also runs south to north. Major campus sites drain through the campus trunk line including Foreman Field, Kaufman Hall, Teletechnet Building, Mills Godwin Building, the Education Building, Batten Arts and Letters Building, Webb Center and the Perry Library. Campus areas fronting Hampton Boulevard drain directly into the Hampton Boulevard trunk line, which was installed in 1992. Both trunk lines cross Hampton Boulevard just north of the Hampton Boulevard/49th Street intersection and connect to a double rectangular box culvert. The double 42" by 60" rectangular box culvert discharges to the Lafayette River just north of Roger's Hall.

The East Campus outfall drains an area generally bound by the Lafayette River to the north, Killam Avenue to the east, 38th Street to the south, and Hampton Boulevard to the west. The storm sewer collection system runs south to north through a trunk line to two 48" storm drainage pipes at 49th Street east of Roger's Hall. This drainage area has recently undergone redevelopment in association with the University Village and Ted Constant Convocation Center.

A summary of the outfalls throughout the ODU campus is provided in *Table 1: Campus Outfall Summary*. It can be noted that these outfalls also service areas outside of the university's maintained property. For further information on the outfall locations and drainage areas see **Appendix A**.

Table 1: *Campus Outfall Summary*

Outfall Number	Location	Description	Outfall Drainage Area (ac)
1	West Campus, South of Whitehurst Hall	78" CMP culvert to tidal canal to Elizabeth River	86.90
2	East Campus, North of Rogers Hall	Double 42"x60" RCP box culvert to tidal canal to Lafayette River	121.09
3	East Campus, East of Rogers Hall	Double 48" RCP culvert to tidal canal to Lafayette River	67.76
4	West Campus, South of Whitehurst Hall	36" RCP culvert to tidal canal to Lafayette River	9.49
5	West Campus, South of Whitehurst Hall	18" RCP culvert to tidal canal to Lafayette River	0.61
6	West Campus, South of Whitehurst Hall	15" RCP culvert to tidal canal to Lafayette River	0.84
7	West Campus, South of Whitehurst Hall	24" RCP culvert to tidal canal to Lafayette River	2.90
8	West Campus, Northwest of Whitehurst Hall	18" RCP culvert to Elizabeth River	4.14
9	West Campus, South of L.R. Hill Sports Complex	42" RCP culvert to Elizabeth River	20.34

Current Resources and Future Needs

In 2008, Old Dominion University developed a self-implemented IDDE Policy to find, fix, and prevent illicit discharges. The Policy established responsibility and legal authority for Illicit Discharge Detection and Elimination on the ODU campus. In addition, an IDDE Program was developed in order to implement the Policy. The Program established means and methods to identify and protect areas of the ODU campus with high potential for illicit discharge, detect and eliminate illicit discharges, and establish program goals and strategies for future enforcement. The Program and Policy will be enforced by the **Director of the Department of Environmental Health and Safety (The Department)**.

During the development of the initial IDDE Policy and Program, the Department created an itemized procedure for determining illicit discharge potential (IDP) risk levels throughout the ODU campus. Based on an assigned IDP risk level, a number of strategies for mitigating risk were developed. Dry weather field screening and laboratory methods were also created to test for illicit discharges at the various outfalls throughout the ODU campus. Methods include specific field and laboratory tests and ways to optimize field assessments in order to gather accurate data and conclusive results. In addition, training for field staff in testing procedures was considered a major factor in gathering accurate field data.

Due to labor requirements and costs, The Department implements dry weather field screening methods to test for illicit discharges at campus outfalls. Department field personal are trained to field analyze campus outfalls for illicit discharges annually using a standard set of metrics. In the event chemical testing of field samples is required, the Department will most likely contract services from a private laboratory. Based on price quote estimates, water quality testing is estimated at $500 per water quality test. A single water quality test for Outfalls 1 and 2 would cost a total of approximately $1,000.

If a hazardous material is found in a sample the **City of Norfolk Fire Department-Hazmat Response Team** should be immediately notified. They can be reached at:

Phone:	(757) 664-6600
Fax:	(757) 624-6832
Address:	100 Brooke Avenue Suite 500 Norfolk, VA 23510
Email:	fire@norfolk.gov

Illicit Discharge Detection and Elimination Policy

Section 1 Purpose and Intent

The purpose of this Policy is to provide for the health, safety, and general welfare of the community of **Old Dominion University** 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 Policy 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 Policy are:

1. To regulate the contribution of pollutants to the MS4 by stormwater discharges by any user.
2. To prohibit Illicit Connections and Discharges to the municipal separate storm sewer system.
3. To establish legal authority to carry out all inspection, surveillance and monitoring procedures necessary to ensure compliance with this Policy.

Section 2 Definitions

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

Authorized Enforcement Agency – Defined as the employees or designees of the Director of the **Old Dominion University-Environmental Health and Safety Office**.

Best Management Practices (BMP's) **-** Schedules of activities, prohibitions of practices, general good housekeeping 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. BMP's 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 - Activities subject to NPDES Construction Permits. Currently these include construction projects resulting in land disturbance of 5 acres or more. Beginning in March 2003, NPDES Storm Water Phase II permits will be required for construction projects resulting in land disturbance of 1 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 within this Policy.

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 drainage system. This includes, but is 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 said drain or connection had been previously allowed, permitted, or approved by an 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 an authorized enforcement agency.

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

Municipal Separate Storm Sewer System (MS4) – The system of conveyances (including sidewalks, roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches man-made channels or storm drains) owned and operated by **Old Dominion University** and designed or used for collecting or conveying storm water, and that is not used for collecting or conveying sewage.

National Pollutant Discharge Elimination System (NPDES) Storm Water Discharge Permit **–** Defined as a permit issued by the 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, facility, corporation or other entity recognized by law and acting as either the owner or as the owner's agent.

Pollutant **-** Anything which causes or contributes to pollution. Pollutants may include, but are not limited to:

- Paints, varnishes, and solvents; oil and other automotive fluids
- Non-hazardous liquid and solid wastes and yard wastes
- Refuse, rubbish, garbage, litter, or other discarded or abandoned objects, ordinances, and accumulations, so that same may cause or contribute to pollution
- Floatables
- Pesticides, herbicides, and fertilizers
- Hazardous substances and wastes
- Sewage, fecal coliform and pathogens
- Dissolved and particulate metals
- Animal wastes
- Wastes and residues that result from constructing a building or structure
- Noxious or offensive matter of any kind

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

Storm Drainage System **-** Publicly-owned 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 **–** Defined as any surface flow, runoff, and drainage consisting entirely of water from any form of natural precipitation, and resulting from such precipitation.

Stormwater Management 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/or Receiving Waters to the Maximum Extent Practicable.

Wastewater **-** Any water or other liquid, other than uncontaminated storm water, discharged from a facility.

Section 3 Applicability

This Policy shall apply to all water entering the storm drain system generated on any developed and undeveloped lands unless explicitly exempted by the *authorized enforcement agency*.

Section 4 Responsibility for Administration

The *authorized enforcement agency* shall administer, implement, and enforce the provisions of this Policy. Any powers granted or duties imposed upon the *authorized enforcement agency* may be delegated in writing by the Office Director of the *authorized enforcement agency* to persons or entities acting in the beneficial interest of or in the employ of the *authorized enforcement agency*.

Section 5 Compatibility with other Regulations

This Policy is not intended to modify or repeal any other policy, rule, regulation, ordinance or other provision of law. The requirements of this Policy are in addition to the requirements of any other policy, rule, regulation, ordinance or other provision of law, and where any provision of this Policy imposes restrictions different from those imposed by any other policy, rule, regulation, ordinance or other provision of law, whichever provision is more restrictive or imposes higher protective standards for human health or the environment shall control.

Section 6 Severability

The provisions of this Policy are hereby declared to be severable. If any provision, clause, sentence, or paragraph of this Policy 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 Policy.

Section 7 Ultimate Responsibility

The standards set forth herein and promulgated pursuant to this Policy are minimum standards; therefore this Policy does not intend nor imply that compliance by any person will ensure that there will be no contamination, pollution, nor unauthorized discharge of pollutants.

Section 8 Discharge Prohibitions

Prohibition of Illegal Discharges

No person shall discharge or cause to be discharged into the MS4 storm drain system or watercourses any materials, including but not limited to pollutants or waters containing any pollutants 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 described as follows:

1. The following discharges are exempt from discharge prohibitions established by this Policy:
    - 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 wet-land flows
    - Swimming pools (if dechlorinated - typically less than one PPM chlorine)
    - Fire fighting activities
    - Any other water source not containing Pollutants.

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 *authorized enforcement agency* 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.

    *The *authorized enforcement agency* may evaluate and remove any of the above exemptions if it is determined that they are causing an adverse impact.

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 Policy if the person connects a line conveying sewage to the MS4, or allows such a connection to continue.
4. Improper connections in violation of this Policy must be disconnected and redirected, if necessary, to an approved onsite wastewater management system or the sanitary sewer system upon approval of the *authorized enforcement agency*.
5. Any drain or conveyance that has not been documented in plans, maps, or equivalent, and which may be connected to the storm sewer system, shall be located by the owner or facility manager upon receipt of written notice of violation from the *authorized enforcement agency* requiring that such locating be completed. Such notice will specify a reasonable time period within which the location of the drain or conveyance is to be determined, that the drain or conveyance be identified as storm sewer, sanitary sewer or other, and that the outfall location or point of connection to the storm sewer system, sanitary sewer system or other discharge point be identified. Results of these investigations are to be documented and provided to the *authorized enforcement agency*.

Section 9 Watercourse Protection

Every person owning a facility through which a watercourse passes, or such person's manager/lessee, shall keep and maintain that part of the watercourse within the property free of trash, debris, excessive vegetation, and other obstacles that would pollute, contaminate, or significantly retard the flow of water through the watercourse. In addition, the owner, manager 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.

Section 10 Industrial or Construction Activity Discharges

Submission of a Notice of Intent (NOI) to the Department of Environmental Quality (DEQ)

- 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 said permit may be required in a form acceptable to the *authorized enforcement agency* prior to the allowing of discharges to the MS4.
- The operator of a facility, including construction sites, required to have an NPDES permit to discharge storm water associated with industrial activity shall submit a copy of the NOI to the *authorized enforcement agency* at the same time the operator submits the original NOI to the DEQ as applicable.
- The copy of the NOI may be delivered to the *authorized enforcement agency* either in person or by mailing to:

  Notice of Intent to Discharge Storm Water
  ODU – Director of Environmental Health and Safety
  4807 Hampton Boulevard
  Hughes Hall Room 2061
  Norfolk, VA 23529-0306

- A person commits an offense if the person operates a facility that is discharging storm water associated with industrial activity without having submitted a copy of the NOI to do so to the *authorized enforcement agency*.

Section 11 Monitoring of Discharges

Applicability

This section applies to all facilities that have storm water discharges associated with industrial activity, including construction activity, to the MS4.

Access to Facilities

- The *authorized enforcement agency* shall be permitted to enter and inspect facilities subject to regulation under this Policy as often as may be necessary to determine compliance with this Policy. 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 *authorized enforcement agency*.
- Facility operators shall allow the *authorized enforcement agency* 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.
- The *authorized enforcement agency* shall have the right to set up on any permitted facility such devices as are necessary in the opinion of the *authorized enforcement agency* to conduct monitoring and/or sampling of the facility's storm water discharge.
- The *authorized enforcement agency* 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.
- 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 *authorized enforcement agency* and shall not be replaced. The costs of clearing such access shall be borne by the operator.
- Unreasonable delays in allowing the *authorized enforcement agency* access to a permitted facility is a violation of a storm water discharge permit and of this Policy. 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 *authorized enforcement agency* reasonable access to the permitted facility for the purpose of conducting any activity authorized or required by this Policy.
- If the *authorized enforcement agency* has been refused access to any part of the premises from which stormwater is discharged, and he/she is able to demonstrate probable cause to believe that there may be a violation of this Policy, or that there is a need to inspect and/or sample as part of a routine inspection and sampling program designed to verify compliance with this Policy or any order issued hereunder, or to protect the overall public health, safety, and welfare of the community, then the *authorized enforcement agency* may seek issuance of a search warrant from any court of competent jurisdiction.

Section 12 Requirements to Prevent, Control, and Reduce Storm Water Pollutants by the Use of Best Management Practices

The *authorized enforcement agency* will adopt requirements identifying Best Management Practices (BMP's) for any activity, operation, or facility which 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 their own expense, reasonable protection from accidental discharge of prohibited materials or other wastes into the MS4 drain system or watercourses through the use of these structural and non-structural BMP's. Further, any person responsible for a property or premise, which is, or may be, the source of an illicit discharge, may be required to implement, at said person's expense, additional structural and non-structural BMP's to prevent the further discharge of pollutants to the MS4. 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 BMP's shall be part of a Stormwater Pollution Prevention Plan (SWPPP) as necessary for compliance with requirements of the NPDES permit.

Section 13 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. Said person shall take all necessary steps to ensure the discovery, containment, and cleanup of such release. In the event of such a release of hazardous materials said person shall immediately notify emergency response agencies of the occurrence via emergency dispatch services. In the event of a release of non-hazardous materials, said person shall notify the *authorized enforcement agency* 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 *authorized enforcement agency* 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*.

*Failure to provide notification of a release as provided above is a violation of this Policy.

Section 14 Notice of Violation

Violations

It shall be unlawful for any person to violate any provision or fail to comply with any of the requirements of this Policy. Any person who has violated or continues to violate the provisions of this Policy, may be subject to the enforcement actions outlined in this Policy or may be restrained by a Cease and Desist Order or otherwise abated in a manner provided by law.

In the event the violation constitutes an immediate danger to public health or public safety, the *authorized enforcement agency* is authorized to enter upon the subject property, without giving prior notice, to take any and all measures necessary to abate the violation and/or restore the property. The *authorized enforcement agency* is authorized to seek costs of the abatement as outlined in this Policy.

Warning Notice

When the *authorized enforcement agency* finds that any person has violated, or continues to violate, any provision of this Policy, or any order issued hereunder, the *authorized enforcement agency* may serve upon that person a written Warning Notice, specifying the particular violation believed to have occurred and requesting the discharger to immediately investigate the matter and to seek a resolution whereby any offending discharge will cease. Investigation and/or resolution of the matter in response to the Warning Notice in no way alleviates the alleged violator of liability for any violations occurring before or after receipt of the Warning Notice. Nothing in this subsection shall limit the authority of the *authorized enforcement agency* to take any action, including emergency action or any other enforcement action, without first issuing a Warning Notice.

Notice of Violation

Whenever the *authorized enforcement agency* finds that a person has violated a prohibition or failed to meet a requirement of this Policy, the authorized enforcement agency may order compliance by written notice of violation to the responsible person.

The Notice Shall Contain:

- The name and address of the alleged violator
- The address when available or a description of the building, structure or land upon which the violation is occurring, or has occurred
- A statement specifying the nature of the violation
- A description of the remedial measures necessary to restore the compliance with this Policy and a time schedule for the completion of such remedial action
- A statement of the penalty or penalties that shall or may be assessed against the person to whom the Notice of Violation is directed
- A statement that the determination of violation may be appealed to the *authorized enforcement agency* by filing a written notice of appeal within *7 (seven) days* of service of the Notice of Violation.
- A statement specifying that, should the violator fail to restore compliance within the established time schedule, the work will be done by a designated governmental agency or contractor and the expense thereof shall be charged to the violator.

The Notice May Require (without limitation):

- The performance of monitoring, analyses, and reporting
- The elimination of illicit connections or discharges
- That violating discharges, practices, or operations shall cease and desist
- The abatement or remediation of storm water pollution or contamination hazards and the restoration of any affected property
- Payment of a fine to cover administrative and remediation costs
- The implementation of source control or treatment BMP's

Section 15 Compensatory Action

In lieu of enforcement proceedings, penalties, and remedies authorized by this Policy, the *authorized enforcement agency* may impose alternative compensatory actions such as:

- Storm drain stenciling
- Attendance at compliance workshops
- Creek/Tributary cleanup (Adopt-A-Stream, Save the Bay, etc.)
- Any substitute form of environmental protection awareness/action deemed appropriate

Section 16 Suspension of MS4 Access

Emergency Cease and Desist Order

It shall be unlawful for any person to violate any provision or fail to comply with any of the requirements of this Policy. If a person has violated or continues to violate the provisions of this Policy, the *authorized enforcement agency* may issue an order to the violator directing it immediately to cease and desist all such violations and directing the violator to:

- Immediately comply with all Policy requirements
- Take such appropriate preventative action as may be needed to properly address a continuing or threatened violation, including immediately halting operations and/or terminating the discharge.

Any person notified of an emergency order directed to it under this subsection shall immediately comply and stop or eliminate its endangering discharge. In the event of a discharger's failure to immediately comply voluntarily with the emergency order, the *authorized enforcement agency* may take such steps as deemed necessary to prevent of minimize harm to the MS4 or waters of the United States, and/or endangerment to persons or to the environment, including immediate termination of a facility's water supply, sewer connection or other utility service. The *authorized enforcement agency* may allow the person to recommence its discharge when it has demonstrated to the satisfaction of the *authorized enforcement agency* that the period of endangerment has passed, unless further termination proceedings are initiated against the discharger under this Policy. A person that is responsible, in whole or part, for any discharge presenting imminent endangerment shall submit a detailed written statement describing the causes of the harmful discharge and the measures taken to prevent any future occurrence, to the *authorized enforcement agency* within *10 (ten) days* of receipt of the prerequisite for, taking any other action against the violator.

Suspension due to Illicit Discharges in Emergency Situations

The *authorized enforcement agency* may, without prior notice, suspend MS4 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 MS4 or Waters of the United States. If the violator fails to comply with a suspension order issued in an emergency, the *authorized enforcement agency* may take such steps as deemed necessary to prevent or minimize damage to the MS4 or Waters of the United States, or to minimize danger to persons.

Suspension due to the Detection of Illicit Discharge

Any person discharging to the MS4 in violation of this Policy may have their MS4 access terminated if such termination would abate or reduce an illicit discharge. The *authorized enforcement agency* will notify a violator of the proposed termination of its MS4 access. The violator may petition the *authorized enforcement agency* for a reconsideration and hearing.

A person commits an offense if the person reinstates MS4 access to premises terminated pursuant to this Section, without the prior approval of the authorized enforcement agency.

Section 17 Civil Penalties

In the event the alleged violator fails to take the remedial measures set forth in the Notice of Violation or otherwise fails to cure the violations described therein within *30 (thirty) days,* or such greater period as the *authorized enforcement agency* shall deem appropriate, after the *authorized enforcement agency* has taken one or more of the actions described above, the *authorized enforcement agency* may impose a penalty not to exceed *$500 (five hundred dollars)* for each day the violation remains unabated after receipt of the Notice of Violation.

Section 18 Criminal Prosecution

Any person that has violated or continues to violate this Policy shall be liable to criminal prosecution to the fullest extent of the law, and shall be subject to a criminal penalty of $*500 (five hundred dollars)* per violation per day and/or imprisonment for a period of time not to exceed *90 (ninety) days*. The *authorized enforcement agency* may recover all attorneys' fees court costs and other expenses associated with enforcement of this Policy, including sampling and monitoring expenses.

Section 19 Appeal of Notice of Violation

Any person receiving a Notice of Violation may appeal the determination of the *authorized enforcement agency*. The notice of appeal must be received within *7 (seven) days* from the date of the Notice of Violation. Hearing on the appeal before the appropriate authority or his/her designee shall take place within *30 (thirty) days* from the date of receipt of the notice of appeal. The decision of the appropriate authority or their designee shall be final.

Section 20 Enforcement Measures after Appeal

If the violation has not been corrected pursuant to the requirements set forth in the Notice of Violation, or, in the event of an appeal, within *30 (thirty) days* of the decision of the appropriate authority upholding the decision of the *authorized enforcement agency*, then representatives of the *authorized enforcement agency* shall enter upon the subject private property and are authorized to take any and 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 the government agency or designated contractor to enter upon the premises for the purposes set forth above.

Section 21 Cost of Abatement of the Violation

Within *30 (thirty) days* after abatement of the violation, the owner of the facility will be notified of the cost of abatement, including administrative costs. The facility owner may file a written protest objecting to the amount of the assessment within *15 (fifteen) days*. If the amount due is not paid within a timely manner as determined by the decision of the appropriate authority or by the expiration of the time in which to file an appeal, the charges shall become a special assessment against the facility and shall constitute a lien on the facility for the amount of the assessment.

Any person violating any of the provisions of this article shall become liable to the state by reason of such violation. The liability shall be paid in not more than 12 equal payments. Interest at the rate of *5 (five)* percent per annum shall be assessed on the balance beginning on the *first day* following discovery of the violation.

Section 22 Violations Deemed a Public Nuisance

In addition to the enforcement processes and penalties provided, any condition caused or permitted to exist in violation of any of the provisions of this Policy is a threat to public health, safety, and welfare, and is declared and deemed a nuisance, and may be summarily abated or restored at the violator's expense, and/or a civil action to abate, enjoin, or otherwise compel the cessation of such nuisance may be taken.

Section 23 Remedies Not Exclusive

The remedies listed in this Policy are not exclusive of any other remedies available under any applicable federal, state or local law and it is within the discretion of the *authorized enforcement agency* to seek cumulative remedies. The *authorized enforcement agency* may recover all attorneys' fees court costs and other expenses associated with enforcement of this ordinance, including sampling and monitoring expenses.

Section 24 Adoption of Policy

This Policy shall be in full force and effect *30 (thirty) days* after its final passage and adoption. All prior Policies and parts of Policies in conflict with this Policy are hereby repealed.

PASSED AND ADOPTED this _____ day of _____, 20____.

Illicit Discharge Potential

In this section, the ways to discover potential IDDE problem areas will be addressed and organized so the **Department of Environmental Health and Safety** can optimize their field time requirement. Listed below is a rating system for the campus areas illicit discharge potential.

- Low Risk – no known illicit discharge problems and mostly new infrastructure and facilities exist in these areas.
- Medium Risk – known problems are confined to a small area or a specific facility on site. Mainly newer infrastructure exists in these areas along with medium risk facilities.
- High Risk – Severe problems are expected in these areas due to known issues or very aged infrastructure along with high risk facilities.

Table 2: Illicit Discharge Potential (IDP) Screening Factors provides factors to help identify the Illicit Discharge Potential of any area of campus. This table does not indicate or guarantee an illicit discharge; it is only a guideline for detection.

Table 2: *Illicit Discharge Potential (IDP) Screening Factors*

Illicit Discharge Potential (IDP) – Screening Factors	
Factors	**Definitions**
1. Past Discharge Complaints	If there is a high frequency of past discharge complaints and past spill responses, these campus areas should be designated as having a high IDP (High Risk).
2. Poor Dry Weather Water Quality	High frequency that individual samples of dry weather water quality exceed allowances for bacteria, nutrients or conductivity. Other indicators are water clarity and color, presence of foam, oil sheen, slime, or odor. Also, if excessive vegetative growth or staining of the outfall banks or structures exists, this campus area should be labeled as having a high IDP (High Risk).
3. Storm Water Outfall Density	If a high frequency of outfalls along a stream exists (i.e. the tidal canal to the south of Powhatan Apartments) then that area should be designated as having a high IDP (High Risk).
4. Age of Infrastructure and Facilities	If the average age of the facilities and infrastructure on campus is greater than 30 years, then these areas should be labeled as having a high IDP (High Risk).
5. Presence of Industrial Operations	Campus areas with over 5% industrial use that are more than 30years old should be designated as having a high IDP (High Risk). If the infrastructure in place served an industrial area that is now being used as Institutional or Residential, it is likely the infrastructure was previously contaminated and should be labeled as having a high IDP (High Risk).
6. Aging and Failing Sewer Infrastructure	Anywhere on campus that sanitary sewer infrastructure exceeds its expected life (i.e. 30-50 years) then that campus area should be considered to have a high IDP (High Risk). Televising sewer lines and compiling information where existing piping is deteriorated or broken would be a good method for determining Illicit Discharges.

A color coded map of the campus and its storm sewer systems has been included in **Appendix C.** Storm piping colored red will be considered a High Risk system for Illicit Discharges. Yellow piping will indicate Medium Risk and green piping will indicate Low Risk. Likewise, if a campus area is shaded red, it has a higher potential for illicit discharges than a green shaded area does. These maps should help identify the areas of campus to focus on illicit discharge detection.

Program Goals and Implementation Strategies

The goals of this program should provide IDDE to the Maximum Extent Practical (MEP) for a five year permit cycle. These goals, at a minimum, should cover:

1. Overall Program Administration
2. Outfall Assessment
3. Preventing Illicit Discharges
4. Finding and Fixing Illicit Discharges

The NPDES Phase II Small MS4 Permit regulations grant communities considerable flexibility to develop program goals, as long as they are defined in a measurable way to gauge permit effectiveness and compliance. The goals should reflect the specific needs of the University. Ultimately, IDDE program goals should be linked to water quality goals. Some basic water quality goals should include:

- ✓ Keep raw or poorly treated sewage out of streams
- ✓ Reduce pollutant loads during dry weather to help meet the Total Maximum Daily Load (TMDL) for a specific water body.
- ✓ Meet bacteria water quality standards during dry weather flows.
- ✓ Reduce toxicant and other harmful pollutants to restore the abundance of aquatic life.

The five year program matrix is attached in **Appendix D**. These goals are just a guideline for IDDE and will not necessarily guarantee water quality goals will be met. If set goals are not being met, the IDDE program should transform and shift resources to other pollution prevention practices that would benefit the community more.

In order to meet the goals set forth in this program, proper implementation strategies must be developed. **The Department of Environmental Health and Safety** must develop a cost effective strategy that is tailored to the severity of illicit discharges found within the community. The Illicit Discharge Potential (IDP) table created in the previous section should be utilized in choosing the implementation strategy. The most important implementation strategy will be targeting, screening, educating and enforcing this Program to the campus areas with the highest IDP. *Table 3: Illicit Discharge (IDP) Implementation Strategies* summarizes community-wide implementation strategies based on the IDP risk evaluation.

Table 3: *Illicit Discharge Potential (IDP) Implementation Strategies*

Illicit Discharge Potential (IDP) Implementation Strategies	
Class	**Action**
Low IDP (Minimal Risk)	✓ Conduct field screening of outfalls in the context of broader watershed assessment and restoration initiatives ✓ Integrate IDDE program efforts into more comprehensive watershed assessment and restoration efforts. ✓ Accomplish inventory and data collection efforts. ✓ Establish a hotline to report suspicious discharges.
Medium IDP (Some Risk)	✓ Conduct limited sampling in the suspect areas. The most cost effective approach will be using campus laboratory services. ✓ Select a set of indicator parameters from the Desktop Assessment Section. ✓ Target education programs to the problem areas. ✓ Establish a hotline to report suspicious discharges.
High IDP (High Risk)	✓ Establish a hotline to report suspicious discharges. ✓ Conduct and repeatedly screen areas. ✓ Apply a more rigorous sampling approach and utilize on-campus laboratories more heavily. ✓ Expand on the use of indicator parameters from the Desktop Assessment Section. ✓ Develop community wide educational programs to increase public awareness, target programs to specific problem areas. ✓ Cross Train ODU employees to expand available effort.

Finding and Isolating Illicit Discharges

This section includes details on how to find an illicit discharge in the field and the appropriate laboratory strategies to identify particular pollutants. Screening of the campus outfalls is likely be the most effective way to find illicit discharges throughout the ODU campus. An initial field assessment of the campus outfalls is necessary to document existing conditions and gather data. Field assessors should be able to locate continuous and intermittent streams. Areas of the ODU campus that are labeled High Risk, or have a High Illicit Discharge Potential (IDP), should take assessment priority. Following the completion of the assessment of high risk areas, finish screening all campus outfalls. Take note of any outfalls with discharges of very high turbidity, irregular pH, strong odors, or unnatural colors. When obvious illicit discharges are found, field crews should take note and start working upstream to find where the source is and eliminate it. While traversing the campus, field crews should be looking for other more common illicit discharges like oil spills, un-permitted car washing or other harmful liquid spills. If these are encountered the appropriate abatement agency should be notified. *Table 4: Field Screening and Data Analysis Processes* provides a step by step process for conducting field screening. *Table 5: Dry Weather Field Screening Tests* summarizes visually and olfactory tests performed during dry weather field screening. *Table 6: Physical and Chemical Water Quality Tests* summarizes additional tests that can be performed in the field or laboratory to determine specific characteristics of outfall discharges.

Table 4: *Field Screening and Data Analysis Processes*

Field Screening and Data Analysis Processes	
Step	**Strategies/Considerations**
1. Acquire necessary mapping, equipment and staff	▪ Use available campus mapping and documents included in **Appendix C**. ▪ Obtain spectrophotometer, basic camera, litmus paper, etc. ▪ One person field crew with specialized training at a minimum or two person crew with basic field training (ideal for screening)
2. Determine appropriate screening times	▪ During dry season ▪ During times when trees are not shedding their leaves ▪ At a minimum of 48 hours after a rain event ▪ Times of low groundwater levels, generally in the middle of summer through fall for the Hampton Roads area
3. Identify where to begin screening	▪ High Risk (High IDP) Areas – Screen these outfalls in the beginning of the first permit cycle. ▪ Medium Risk (Medium IDP) Areas – Screen drainage areas within first permit cycle. ▪ Low Risk (Low IDP) Areas – integrate field screening with broader watershed assessments.
4. Conduct field screening	▪ Mark, document and photograph all campus outfalls. Use the appropriate forms located in **Appendix E**. ▪ Document outfall characteristics ▪ Monitor outfalls that have flows. Place sand bags at outfalls without flows to create a dam for water sampling. ▪ Sample all outfalls with potential problems on different days and at varying times of day. ▪ Track major problems back to the source immediately
5. Compile screening data	▪ Develop database for documented field research ▪ Enter data into system as it is gathered ▪ Start lab analysis of samples taken
6. Designate screened outfalls	▪ Designate outfalls screened as having a "definite, probable, potential or unlikely" illicit discharge potential. Focus efforts on definite and probable outfall areas first.
7. Document the extent of discharge problems	▪ Compile data from field screening, laboratory testing and initial assessment of problem areas. Update initial assessment of outfalls as High, Medium or Low Illicit Discharge Potential (IDP).
8. Develop a monitoring strategy	▪ Set a goal of monitoring 10% of flowing outfalls per calendar year until the entire campus has been inventoried. ▪ Repeat this screening each permit cycle.

***Table 5**: Dry Weather Field Screening Tests*

Dry Weather Field Screening Tests	
Test for:	**Use of Test**
1. Odor	▪ Indicates presence of sanitary wastewater, industrial flows, or biological chemicals.
2. Color	▪ Depending on color, indicates presence of sanitary wastewater, petroleum, detergents or other pollutants.
3. Clarity	▪ Indicates presence of suspended solids, petroleum, or detergents.
4. Floatables	▪ Indicates presence of suspended solids, litter and debris, detergents, or petroleum.
5. Deposits or Stains	▪ Indicates presence of pollutants over a long period of time.
6. Vegetation Condition	▪ Health of adjacent vegetation indicates severity or duration of pollution event.
7. Structural Condition	▪ Indicates age and status of outfall.
8. Biology	▪ Indicates presence of sanitary wastewater, industrial flows, or biological chemicals.

***Table 6**: Physical and Chemical Water Quality Tests*

Physical and Chemical Water Quality Tests	
Test for:	**Use of Test**
1. Conductivity	▪ Indicates presence of Dissolved Solids, measured with a probe.
2. Ammonia	▪ Indicates presence of Sanitary Wastewater if high levels are found, measured with common field test kit.
3. Surfactants	▪ Indicates presence of Detergents or Soaps, measured with a common field test kit.
4. pH	▪ Indicates Commercial or Industrial Flows (not a good indicator of Sanitary Wastewater), measured with a litmus test strip.
5. Temperature	▪ Indicates Sanitary Wastewater or Industrial Flows, measured during cold weather with a thermometer.
6. Hardness	▪ Indicates the difference between Natural and Treated waters, measured with a field test kit.
7. Chlorine	▪ Indicates inflow from Potable Water sources (not a good indicator of Sanitary Wastewater), measured with a field test kit.
8. Fluoride	▪ Indicates inflow from Potable Water sources (not a good indicator of Sanitary Wastewater), measured with a field test kit.
9. Potassium	▪ Indicates presence of Sanitary Wastewater in high levels, measured with a field test kit.
10. Optical Brighteners	▪ Indicates presence of Detergents or Soaps, measured with a common field test kit.
11. Bacteria (fecal coliform, E. Coli and enterococci)	▪ Indicates presence of Sanitary Wastewater if high levels are found, measured with common field test kit.

Alternative/Supplemental tests for Illicit Discharges

This section includes some methods to use individually, or in conjunction with, screening and sampling of the campus storm sewer system. The methods below will help pinpoint the actual illicit connection once field screening and sampling has narrowed the illicit discharge, to a particular building or a reduced section of campus.

Dye Testing

This technique involves flushing non-toxic dye into toilets and sinks inside a building suspected of an illicit discharge. The receiving storm sewer and sanitary sewer manholes from the building will need to be opened for observation of the dyes once flushed down building drains. If the presence of dye is indicated within the storm sewer system, an illicit discharge must exist. Alternating dye colors will help identify where the particular illicit discharge is coming from within the building. Local officials and building personnel should be notified prior to the test. This testing method requires, at a minimum, two people with two-way radios. This method is very definitive in the results and is relatively cheap to perform.

Smoke Testing

This technique involves injecting non-toxic smoke into storm sewer lines and checking for the appearance of smoke from sanitary sewer vents in buildings or from cracks in the storm piping. The method can be performed by dropping a smoke bomb and forcing air through the system or by using smoke generating machines. Testing personnel should be stationed at suspected illicit discharge areas within buildings. Smoke could cause minor irritation to occupants of the buildings, so appropriate measures should be taken to inform the public prior to testing. This method will work to test either storm or sanitary sewer and can cover a broad area if needed. This method provides very definitive results and is relatively cheap to perform.

Video Inspection

This technique involves guiding mobile video cameras through the storm sewer system to observe potential illicit discharges. Observations can be recorded onto DVD's and watches at a later time. This technique is very thorough, typically definitive and unobtrusive to the public. However, it is relatively time consuming and expensive.

Fixing Illicit Discharges

The major goal of this program is to find, fix and prevent illicit discharges. In order to fix an illicit discharge problem, the source of the problem must first be isolated. Using the methods in the previous section, the illicit discharge should be narrowed down to a specific location, such as particular bathroom fixture or sewer vent within the building. Once the source of the problem outfall has been identified the immediate course of action should be to abate the discharge. However, studies have shown that it generally takes 30-90 days to abate an illicit discharge.

Removing the illicit discharge could prove costly for the University. Demolition of portions of the existing building could be required. All methods for removing illicit discharges should have an appropriate mix of education and enforcement involved in the process. Questions related to the illicit discharge and its abatement that should be answered include:

- Who is responsible for the illicit discharge
- What methods can be used to abate the discharge
- What timeframe will be required to abate the discharge
- What is the cost of abatement
- How will the abatement be confirmed

Preventing Illicit Discharges

Intermittent Illicit Discharges

In some cases, intermittent illicit discharges can be impossible to detect. In these situations the most productive course of action is to educate the members of the MS4 community about illicit discharges and how to identify high priority water quality issues. An effective IDDE program provides the public with education and participation in an effort to bestow a sense of environmental and community responsibility. In addition, an effective IDDE program provides strategies and goals to find solutions to high priority water quality issues. ODU has identified three (3) high priority water quality issues that impact potential pollutants on the university campus:

1. Vehicular Pollutants:

ODU receives a significant amount of annual traffic on campus roads and in parking lots. Vehicles that travel through the ODU campus are in various states of operation and may be leaking various fluids such as oil, coolant, and fuel. All of these fluids are considered pollutants. Vehicular maintenance performed in campus parking areas has the potential to generate pollutants through fluid spills, waste debris and other sources. In addition, pollutant laden sediment collects on vehicles during normal use. When these sediments are washed off a vehicle by a storm event or an individual, they enter the storm sewer system.

All of these vehicular pollutants are generated on paved surfaces. However, as vehicles generally spend more time parked than in motion, parking areas are more likely to generate a greater amount of pollutants than roads. ODU implements a number of structural and non-structural Best Management Practices (BMPs) to reduce, intercept, and treat pollutant laden runoff generated in parking areas. Structural BMPs are usually constructed practices and include wet retention ponds, bioretention basins, and other structural BMPs. Non-structural BMPs are generally policies and practices that aim to reduce the amount of pollutants that enter the ODU storm sewer system. These BMPs generally include outreach programs, educational materials, and policies designed to restrict the generation of pollutants.

2. Nutrient Management Pollutants:

Nutrient Management activities include the use of fertilizer and pesticide throughout the ODU campus. In order maintain healthy grass cover, fertilizer is applied on the various lawns and sports fields with non-artificial turf throughout the ODU campus. As it contains concentrated nutrients, excess fertilizer generated by over-application is considered a pollutant. Pesticides are used campus-wide to control invasive and unwanted plant growth. Due to their intended use, pesticides carry harmful chemicals that are considered pollutants. Similar to fertilizer applications, an over-application of pesticide can lead to pollutants entering the storm sewer network.

In order to minimize over-applications of fertilizers and pesticides, ODU optimizes their use and implements the minimum types and amounts necessary for nutrient management activities. The storm drain system is also protected during nutrient management activities in the event that an over-application does occur. In order to lessen impacts of a pollution event, ODU uses organic and naturally derived pesticides. Structural BMPs on the ODU campus have been designed and located to provide treatment to runoff generated on areas with fertilizers and pesticides before it enters the storm network. These BMPs remove a portion the suspended pollutants as required by Virginia Stormwater Management Program (VSMP) Regulations.

3. Litter and Debris:

Significant amounts of litter and debris are generated daily by the ODU campus community. Liter and debris is not readily biodegradable and can potentially carry pollutants. Unless properly disposed of, litter and debris can enter the ODU storm sewer network and eventually reach a campus outfall.

In addition to waste receptacles throughout the campus, ODU employs sweeping programs that cover campus streets, parking lots, and pedestrian areas. Sweeping of streets and parking lots is performed 12 times annually and after every major campus event, such as football and basketball games. Campus pedestrian areas are inspected and swept daily. In addition to a sweeping program, ODU has placed markers on campus storm drains that aim to dissuade individuals from dumping litter and debris into the storm sewer system. Markers are inspected annually to ensure that newly constructed storm drains are marked and to replace missing or damaged markers. ODU provides educational and outreach materials that are designed to inform the campus community about pollution prevention and the proper disposal of litter and debris.

MS4 Stormwater Pollution Prevention Plan (SWPPP)

As required in the MS4 General Permit, an MS4 SWPPP has been created for all three (3) of these high priority water quality issues. This type of SWPPP is different from a Construction SWPPP as it provides means and methods to prevent and respond to pollution events for an MS4, as opposed to a construction activity. Each MS4 SWPPP identifies the various pollutant sources associated with each high quality water issue and provides best management practices that can be implemented for pollution prevention.

Illicit Discharge Prevention

Outreach and Education to the community is the most efficient way to prevent illicit discharges campus wide. If educational materials are focused on specific facility types that are most likely to have illicit discharges, the process becomes even more valuable. These outreach materials should be designed to educate students, teachers and maintenance personnel about illicit discharge detection and elimination (IDDE) at these High Risk (High IDP) facilities. Typical materials include brochures, manuals, posters, pollution prevention vendors and signs. Facilities that would be good candidates for distributing and posting these materials would be buildings with laboratories, at loading docks for buildings that house harmful chemicals, landscaping departments, or any centralized location on campus that would be seen by the majority of the community members. One specific community outreach strategy that has proven effective is storm drain stenciling.

Storm Drain Stenciling alerts the public that everything they put in the drain eventually makes it to a receiving body of water that they would probably use for recreational purposes. This deters the community from depositing leaf litter, trash and other pollutants in the drainage systems. Stenciling will also improve watershed awareness and community stewardship and can be utilized everywhere. Simply a few trained volunteers could systematically stencil all the campus storm drains in a short time frame. Volunteers could be community service recipients, Chesapeake Bay Foundation members, fraternity and sorority members and the general student population. Stenciling programs have proven to be inexpensive, especially considering the positive effect they have on the community and the MS4.

A *Spill Prevention and Response Plan* is another useful method for any potential illicit discharge site. These plans describe the procedures to prevent illicit discharges at suspect sites. They also ensure that a proper procedure is outlined to abate a spill if it should occur. These plans standardize a procedure and educate facility members on how to implement the procedure. In the event of an illicit discharge emergency, a well-educated staff member will act swiftly and effectively to respond with little confusion or miscommunication. The plan should reflect an excellent understanding of how pollutants are handled at the facility and therefore provide a cleanup solution for a particular spill situation. The major components of a Spill Prevention and Response Plan are:

- A site map and evaluation of past spills
- An inventory of materials at the site
- A list of required spill response equipment
- Employee training

A good Spill Prevention and Response Plan will identify potential spill sites and the point they would enter the storm drain system (i.e. loading docks). It should also specify how the materials should be handled to ensure no illicit discharge will occur. It should describe the procedures required to abate a spill. Lastly, it should make certain that appropriate clean up equipment is available nearby for use.

Continuously Training Employees is an integral part of preventing illicit discharges in a community, particularly if there is turnover in staffing. A low budget solution may be to develop free or low cost videos to be watched when the employee is hired and periodically thereafter. Providing posters, signs and training brochures in multiple languages at staff only areas can prove beneficial for a low cost. Additional training could also be provided during winter, spring and summer break since there are fewer students and a lower demand for staff time. Employee training ideally could be conducted on a bi-annual basis to avoid illicit discharges and respond to spills.

IDDE Program Tracking and Evaluation

This portion of the Illicit Discharge Detection and Elimination (IDDE) Program will annually review the goals established in the Program Goals and Implementation Strategies section and in the matrix attached in **Appendix D**. Having an adaptive approach to IDDE is critical in the program's success. This enables the MS4 to abate the worst illicit discharges first in a cost effective manner. The first objective to keep the IDDE program functional throughout its useful life is to develop a tracking and reporting system.

A *Tracking and Reporting System* should be a user friendly interface to track, report, and provide response to illicit discharge problems. A Geographical Information System (GIS) is a likely candidate for establishing this database. This will allow for program directors to measure the effectiveness of the program and for field crews to store the data they continuously collect. Some important pieces of information when setting up the GIS database are:

- Coordinates of each outfall location
- Addresses of all facilities in the community
- Facility use and occupancy information
- Physical characteristics of the outfall (pipe size, material, condition, etc)
- Outfall Reconnaissance Inventory as data is collected
- Digital photos taken
- Follow up monitoring, information from following the ID upstream
- Any hotline or website complaints and the local response
- Maintenance and Inspection data
- Any enforcement actions taken

Secondly, *Evaluating the Program* on an annual basis will guarantee that program directors allocate their resources effectively. The most successful IDDE Programs are adaptable in response to ever changing discharge problems, pollutants and emerging technologies. The tracking system should be designed so that progress toward all the measurable goals can be reported. This way the community can see progress even when it appears that none is being made. The tracking system should include:

- Updated mapping to reflect outfalls found during field screens
- Surveyed streams with locations of dumping, suspect discharges and obvious illicit discharges.
- Litmus indicating results for specific screened outfalls
- Hotline usage and number of confirmed illicit discharges found through the service
- Costs for each of the program components
- Number of discharges abated
- Status of any enforcement options taken

Once the database has been set up for tracking and the system components have been monitored several years, it will be clear to the program director which aspects of the program are improving the water quality of the MS4. For example, if litmus indicating results turn up the greatest number of illicit discharges, maybe the director should allocate a larger percentage of funding for that particular program component, shifting the funds from another component that has proven less successful.

References

Center for Watershed Protection, Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments, October 2004

Center for Watershed Protection. Resources for Detecting Bacterial Sources: 1999

Environmental Protection Agency, Illicit Discharge Detection and Elimination: Regulatory Text

Environmental Protection Agency. Illicit Discharge Detection and Elimination Minimum Control Measure, January 2000

Department of Environmental Quality, Illicit Discharge Detection and Elimination Plan: 2005

University of Virginia, 2004 Annual Report –VPDES Phase II Stormwater Discharge Permit, June 2005

Old Dominion University Nutrient Management Program, ODU Office of Environmental Health and Safety, October 1st, 2015.

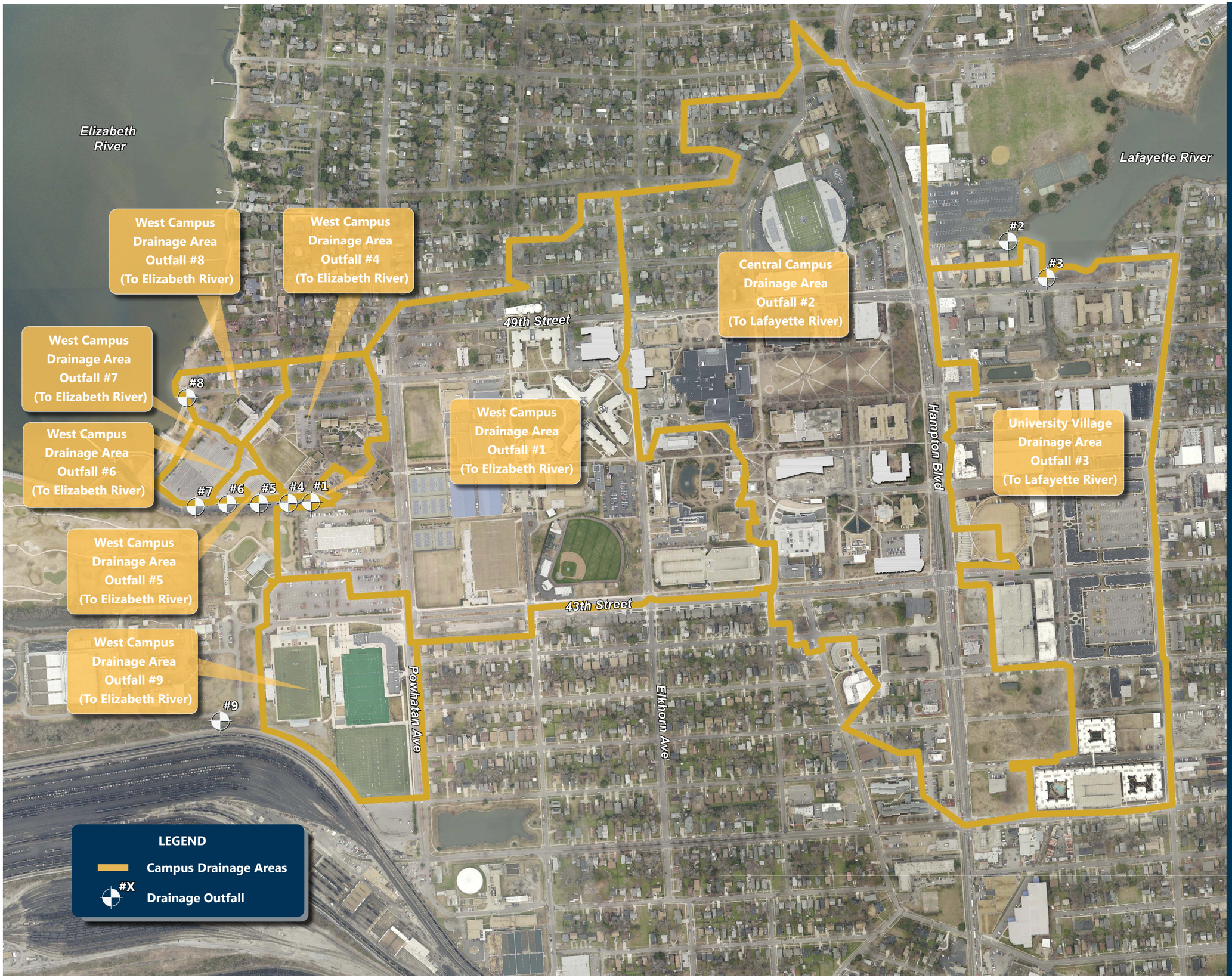
Appendix A:
Exhibits - Overall Campus Maps

Illicit Discharge Detection and Elimination Program

Exhibit 1
Overall Campus Map

0 125 250 Feet

OLD DOMINION UNIVERSITY
IDEA FUSION



Outfall #1
West Campus
78” CMP Culvert to Tidal Canal to Elizabeth River
Approximate Drainage Area = 86.90 AC

Outfall #2
East Campus
Double 42” x 60” RCP Box Culvert to Tidal Canal to Lafayette River
Approximate Drainage Area = 121.09 AC

Outfall #3
East Campus
Double 48” RCP Culvert to Tidal Canal to Lafayette River
Approximate Drainage Area = 67.76 AC

Outfall #4
West Campus
36” RCP Culvert to Tidal Canal to Elizabeth River
Approximate Drainage Area = 9.49 AC

Outfall #5
West Campus
18” RCP Culvert to Tidal Canal to Elizabeth River
Approximate Drainage Area = 0.61 AC

Outfall #6
West Campus
15” RCP Culvert to Tidal Canal to Elizabeth River
Approximate Drainage Area = 0.84 AC

Outfall #7
West Campus
24” RCP Culvert to Tidal Canal to Elizabeth River
Approximate Drainage Area = 2.90 AC

Outfall #8
West Campus
18” RCP Culvert to Elizabeth River
Approximate Drainage Area = 4.14 AC

Outfall #9
West Campus
42” RCP Culvert to Elizabeth River
Approximate Drainage Area = 20.34 AC

Illicit Discharge Detection and Elimination Program

Exhibit 2
Drainage Area Map

0 125 250 Feet

OLD DOMINION UNIVERSITY
IDEA FUSION

Appendix B: Small Municipal Separate Storm Sewer System (MS4) General Permit

prev | next

9VAC25-890-40. General permit.

Any operator whose registration statement is accepted by the department will receive coverage under the following state permit and shall comply with the requirements therein and be subject to all applicable requirements of the Virginia Stormwater Management Act (Article 2.3 (§ 62.1-44.15:24 et seq.) of Chapter 3.1 of Title 62.1 of the Code of Virginia) and the Virginia Stormwater Management Program (VSMP) Regulations (9VAC25-870).

General Permit No.: VAR04

Effective Date: July 1, 2013

Expiration Date: June 30, 2018

GENERAL VPDES PERMIT FOR DISCHARGES OF STORMWATER FROM SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS

AUTHORIZATION TO DISCHARGE UNDER THE VIRGINIA STORMWATER MANAGEMENT PROGRAM AND THE VIRGINIA STORMWATER MANAGEMENT ACT

In compliance with the provisions of the Clean Water Act, as amended and pursuant to the Virginia Stormwater Management Act and regulations adopted pursuant thereto, this state permit authorizes operators of small municipal separate storm sewer systems to discharge to surface waters within the boundaries of the Commonwealth of Virginia, except those waters specifically named in State Water Control Board regulations which prohibit such discharges.

The authorized discharge shall be in accordance with this cover page, Section I—Discharge Authorization and Special Conditions, Section II—MS4 Program and Section III—Conditions Applicable To All State Permits, as set forth herein. The operator shall utilize all legal authority provided by the laws and regulations of the Commonwealth of Virginia to control discharges to and from the MS4. This legal authority may be a combination of statute, ordinance, permit, specific contract language, order or interjurisdictional agreements.

For operators of small MS4s that are applying for initial coverage under this general permit, the schedule to develop and implement the MS4 Program Plan shall be submitted with the completed registration statement.

For operators that have previously held MS4 state permit coverage, the operator shall update the MS4 Program Plan in accordance with the following schedule. Until such time as the required updates are completed and implemented, the operator shall continue to implement the MS4 Program consistent with the MS4 Program Plan submitted with the registration statement.

Table 1: Schedule of MS4 Program Plan Updates Required in this Permit

Program Update Requirement	Permit Reference	Update Completed By
Public Education Outreach Plan (Minimum Control Measure 1 – Public Education and Outreach on Stormwater Impacts)	Section II B 1	12 months after permit coverage
Illicit Discharge Procedures - (Minimum Control Measure 3 – Illicit Discharge Detection and Elimination)	Section II B 3	
Individual Residential Lot Special Criteria (Minimum Control Measure 5 – Post-Construction Stormwater	Section II B 5 c (1) (d)	

Management in New Development and Development on Prior Developed Lands)		
Operator-Owned Stormwater Management Inspection Procedures (Minimum Control Measure 5 – Post-Construction Stormwater Management in New Development and Development on Prior Developed Lands)	Section II B 5	
Identification of Locations Requiring SWPPPs (Minimum Control Measure 6 – Pollution Prevention/Good Housekeeping for Municipal Operations)	Section II B 6 b	
Nutrient Management Plan (NMP) Locations - (Minimum Control Measure 6 – Pollution Prevention/Good Housekeeping for Municipal Operations)	Section II B 6 c (1) (a)	
Training Schedule and Program - (Minimum Control Measure 6 – Pollution Prevention/Good Housekeeping for Municipal Operations)	Section II B 6	
Updated TMDL Action Plans (TMDLs approved before July of 2008) – (Special Conditions for Approved Total Maximum Daily Loads (TMDL) Other Than Chesapeake Bay)	Section I B	
Chesapeake Bay TMDL Action Plan – (Special Condition for Chesapeake Bay TMDL)	Section I C	24 months after permit coverage
Stormwater Management Progressive Compliance and Enforcement – (Minimum Control Measure 4 - Construction Site Stormwater Runoff Control)	Section II B 5	
Daily Good Housekeeping Procedures (Minimum Control Measure 6 – Pollution Prevention/Good Housekeeping for Municipal Operations)	Section II B 6 a	
Other TMDL Action Plans for applicable TMDLs approved between July 2008 and June 2013 - (Special Conditions for Approved Total Maximum Daily Loads (TMDL) Other Than Chesapeake Bay)	Section I B	36 months after permit coverage
Outfall Map Completed - (Minimum Control Measure 3 – Illicit Discharge Detection and Elimination) – Applicable to new boundaries identified as "urbanized" areas in the 2010 Decennial Census	Section II B 3 a (3)	48 months after permit coverage
SWPPP Implementation - (Minimum Control Measure 6 – Pollution Prevention/Good Housekeeping for Municipal Operations)	Section II B 6 b (3)	
NMP Implementation - (Minimum Control Measure 6 – Pollution Prevention/Good Housekeeping for Municipal Operations)	Section II B 6 c (1) (b)	60 months after permit coverage
*Updates should be submitted with the appropriate annual report.		

SECTION I

DISCHARGE AUTHORIZATION AND SPECIAL CONDITIONS

A. Coverage under this state permit. During the period beginning with the date of coverage under this general permit and lasting until the expiration and reissuance of this state permit, the operator is authorized to discharge in accordance with this state permit from the small municipal separate storm sewer system identified in the registration statement into surface waters within the boundaries of the Commonwealth of Virginia and consistent with 9VAC25-890-30.

B. Special conditions for approved total maximum daily loads (TMDL) other than the Chesapeake Bay TMDL. An approved TMDL may allocate an applicable wasteload to a small MS4 that identifies a pollutant or pollutants for which additional stormwater controls are necessary for the surface waters to meet water quality standards. The MS4 operator shall address the pollutants in accordance with this special condition where the MS4 has been allocated a wasteload in an approved TMDL.

1. The operator shall maintain an updated MS4 Program Plan that includes a specific TMDL Action Plan for pollutants allocated to the MS4 in approved TMDLs. TMDL Action Plans may be implemented in multiple phases over more than one state permit cycle using the adaptive iterative approach provided adequate progress to reduce the pollutant discharge in a manner consistent with the assumptions and requirements of the specific TMDL wasteload is demonstrated in accordance with subdivision 2 e of this subsection. These TMDL Actions Plans shall identify the best management practices and other interim milestone activities to be implemented during the remaining terms of this state permit.

a. In accordance with Table 1, the operator shall update the MS4 Program Plans to address any new or modified requirements established under this special condition for pollutants identified in TMDL wasteload allocations approved prior to July 9, 2008.

b. In accordance with Table 1, the operator shall update the MS4 Program Plan to incorporate approvable TMDL Action Plans that identify the best management practices and other interim milestone activities that will be implemented during the remaining term of this permit for pollutants identified in TMDL wasteload allocations approved either on or after July 9, 2008, and prior to issuance of this permit.

c. Unless specifically denied in writing by the department, TMDL Action Plans and updates developed in accordance with this section become effective and enforceable 90 days after the date received by the department.

2. The operator shall:

a. Develop and maintain a list of its legal authorities such as ordinances, state and other permits, orders, specific contract language, and interjurisdictional agreements applicable to reducing the pollutant identified in each applicable WLA;

b. Identify and maintain an updated list of all additional management practices, control techniques and system design and engineering methods, beyond those identified in Section II B, that have been implemented as part of the MS4 Program Plan that are applicable to reducing the pollutant identified in the WLA;

c. Enhance its public education and outreach and employee training programs to also promote methods to eliminate and reduce discharges of the pollutants identified in the WLA;

d. Assess all significant sources of pollutant(s) from facilities of concern owned or operated by the MS4 operator that are not covered under a separate VPDES permit and identify all municipal facilities that may be a significant source of the identified pollutant. For the purposes of this assessment, a significant source of pollutant(s) from a facility of concern means a discharge where the expected pollutant loading is greater than the average pollutant loading for the land use identified in the TMDL. (For example, a significant source of pollutant from a facility of concern for a bacteria TMDL would be expected to be greater at a dog park than at other recreational facilities where dogs are prohibited);

e. Develop and implement a method to assess TMDL Action Plans for their effectiveness in reducing the pollutants identified in the WLAs. The evaluation shall use any newly available information, representative and adequate water quality monitoring results, or modeling tools to estimate pollutant reductions for the pollutant or pollutants of concern from implementation of the MS4 Program Plan. Monitoring may include BMP, outfall, or in-stream monitoring, as appropriate, to estimate pollutant reductions. The operator may conduct monitoring, utilize existing data, establish partnerships, or collaborate with other MS4 operators or other third parties, as appropriate. This evaluation shall include assessment of the facilities identified in subdivision 2 d of this subsection. The methodology used for assessment shall be described in the TMDL Action Plan.

3. Analytical methods for any monitoring shall be conducted according to procedures approved under 40 CFR Part 136 or alternative methods approved by the Environmental Protection Agency (EPA). Where an approved method does not exist, the operator must use a method consistent with the TMDL.

4. The operator is encouraged to participate as a stakeholder in the development of any TMDL implementation plans applicable to their discharge. The operator may incorporate applicable best management practices identified in the TMDL implementation plan in the MS4 Program Plan or may choose to implement BMPs of equivalent design and efficiency provided that the rationale for any substituted BMP is provided and the substituted BMP is consistent with the assumptions and requirements of the TMDL WLA.

5. Annual reporting requirements.

a. The operator shall submit the required TMDL Action Plans with the appropriate annual report and in accordance with the associated schedule identified in this state permit.

b. On an annual basis, the operator shall report on the implementation of the TMDL Action Plans and associated evaluation including the results of any monitoring conducted as part of the evaluation.

6. The operator shall identify the best management practices and other steps that will be implemented during the next state permit term as part of the operator's reapplication for coverage as required under Section III M.

7. For planning purposes, the operator shall include an estimated end date for achieving the applicable wasteload allocations as part of its reapplication package due in accordance with Section III M.

C. Special condition for the Chesapeake Bay TMDL. The Commonwealth in its Phase I and Phase II Chesapeake Bay TMDL Watershed Implementation Plans (WIP) committed to a phased approach for MS4s, affording MS4 operators up to

three full five-year permit cycles to implement necessary reductions. This permit is consistent with the Chesapeake Bay TMDL and the Virginia Phase I and II WIPs to meet the Level 2 (L2) scoping run for existing developed lands as it represents an implementation of 5.0% of L2 as specified in the 2010 Phase I WIP. Conditions of future permits will be consistent with the TMDL or WIP conditions in place at the time of permit issuance.

1. Definitions. The following definitions apply to this state permit for the purpose of the special condition for discharges in the Chesapeake Bay Watershed:

"Existing sources" means pervious and impervious urban land uses served by the MS4 as of June 30, 2009.

"New sources" means pervious and impervious urban land uses served by the MS4 developed or redeveloped on or after July 1, 2009.

"Pollutants of concern" or "POC" means total nitrogen, total phosphorus, and total suspended solids.

"Transitional sources" means regulated land disturbing activities that are temporary in nature and discharge through the MS4.

2. Chesapeake Bay TMDL planning.

a. In accordance with Table 1, the operator shall develop and submit to the department for its review and acceptance an approvable Chesapeake Bay TMDL Action Plan. Unless specifically denied in writing by the department, this plan becomes effective and enforceable 90 days after the date received by the department. The plan shall include:

(1) A review of the current MS4 program implemented as a requirement of this state permit including a review of the existing legal authorities and the operator's ability to ensure compliance with this special condition;

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

(3) The means and methods that will be utilized to address discharges into the MS4 from new sources;

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

Table 2 a: Calculation Sheet for Estimating Existing Source Loads for the James River Basin
***Based on Chesapeake Bay Program Watershed Model Phase 5.3.2**

Subsource	Pollutant	Total Existing Acres Served by MS4 (6/30/09)	2009 EOS Loading Rate (lbs/acre)	Estimated Total POC Load Based on 2009 Progress Run
Regulated Urban Impervious	Nitrogen		9.39	
			6.99	

Regulated Urban Pervious				
Regulated Urban Impervious	Phosphorus		1.76	
Regulated Urban Pervious			0.5	
Regulated Urban Impervious	Total Suspended Solids		676.94	
Regulated Urban Pervious			101.08	

Table 2 b: Calculation Sheet for Estimating Existing Source Loads for the Potomac River Basin

***Based on Chesapeake Bay Program Watershed Model Phase 5.3.2**

Subsource	Pollutant	Total Existing Acres Served by MS4 (6/30/09)	2009 EOS Loading Rate (lbs/acre)	Estimated Total POC Load Based on 2009 Progress Run
Regulated Urban Impervious	Nitrogen		16.86	
Regulated Urban Pervious			10.07	
Regulated Urban Impervious	Phosphorus		1.62	
Regulated Urban Pervious			0.41	
Regulated Urban Impervious	Total Suspended Solids		1,171.32	
Regulated Urban Pervious			175.8	

Table 2 c: Calculation Sheet for Estimating Existing Source Loads for the Rappahannock River Basin

***Based on Chesapeake Bay Program Watershed Model Phase 5.3.2**

Subsource	Pollutant	Total Existing Acres Served by MS4 (6/30/09)	2009 EOS Loading Rate (lbs/acre)	Estimated Total POC Load Based on 2009 Progress Run
	Nitrogen		9.38	

Regulated Urban Impervious				
Regulated Urban Pervious			5.34	
Regulated Urban Impervious	Phosphorus		1.41	
Regulated Urban Pervious			0.38	
Regulated Urban Impervious	Total Suspended Solids		423.97	
Regulated Urban Pervious			56.01	

Table 2 d: Calculation Sheet for Estimating Existing Source Loads for the York River Basin
***Based on Chesapeake Bay Program Watershed Model Phase 5.3.2**

Subsource	Pollutant	Total Existing Acres Served by MS4 (6/30/09)	2009 EOS Loading Rate (lbs/acre)	Estimated Total POC Load Based on 2009 Progress Run
Regulated Urban Impervious	Nitrogen		7.31	
Regulated Urban Pervious			7.65	
Regulated Urban Impervious	Phosphorus		1.51	
Regulated Urban Pervious			0.51	
Regulated Urban Impervious	Total Suspended Solids		456.68	
Regulated Urban Pervious			72.78	

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

Table 3 a: Calculation Sheet for Determining Total POC Reductions Required During this Permit Cycle for the James River Basin
***Based on Chesapeake Bay Program Watershed Model Phase 5.3.2**

Subsource	Pollutant	Total Existing Acres Served by MS4 (6/30/09)	First Permit Cycle Required Reduction in Loading Rate (lbs/acre)	Total Reduction Required First Permit Cycle (lbs)
Regulated Urban Impervious	Nitrogen		0.04	
Regulated Urban Pervious			0.02	
Regulated Urban Impervious	Phosphorus		0.01	
Regulated Urban Pervious			0.002	
Regulated Urban Impervious	Total Suspended Solids		6.67	
Regulated Urban Pervious			0.44	

Table 3 b: Calculation Sheet for Determining Total POC Reductions Required During this Permit Cycle for the Potomac River Basin

***Based on Chesapeake Bay Program Watershed Model Phase 5.3.2**

Subsource	Pollutant	Total Existing Acres Served by MS4 (6/30/09)	First Permit Cycle Required Reduction in Loading Rate (lbs/acre)	Total Reduction Required First Permit Cycle (lbs)
Regulated Urban Impervious	Nitrogen		0.08	
Regulated Urban Pervious			0.03	
Regulated Urban Impervious	Phosphorus		0.01	
Regulated Urban Pervious			0.001	
Regulated Urban Impervious	Total Suspended Solids		11.71	
Regulated Urban Pervious			0.77	

Table 3 c: Calculation Sheet for Determining Total POC Reductions Required During this Permit Cycle for the Rappahannock River Basin

***Based on Chesapeake Bay Program Watershed Model Phase 5.3.2**

Subsource	Pollutant	Total Existing Acres Served by MS4 (6/30/09)	First Permit Cycle Required Reduction in Loading Rate (lbs/acre)	Total Reduction Required First Permit Cycle (lbs)
Regulated Urban Impervious	Nitrogen		0.04	
Regulated Urban Pervious			0.02	
Regulated Urban Impervious	Phosphorus		0.01	
Regulated Urban Pervious			0.002	
Regulated Urban Impervious	Total Suspended Solids		4.24	
Regulated Urban Pervious			0.25	

Table 3 d: Calculation Sheet for Determining Total POC Reductions Required During this Permit Cycle for the York River Basin
***Based on Chesapeake Bay Program Watershed Model Phase 5.3.2**

Subsource	Pollutant	Total Existing Acres Served by MS4 (6/30/09)	First Permit Cycle Required Reduction in Loading Rate (lbs/acre)	Total Reduction Required First Permit Cycle (lbs)
Regulated Urban Impervious	Nitrogen		0.03	
Regulated Urban Pervious			0.02	
Regulated Urban Impervious	Phosphorus		0.01	
Regulated Urban Pervious			0.002	
Regulated Urban Impervious	Total Suspended Solids		4.60	
Regulated Urban Pervious			0.32	

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

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

(8) The means and methods to offset the increased loads from projects as grandfathered in accordance with 9VAC25-870-48, that disturb one acre or greater that begin construction after July 1, 2014, where the project utilizes an average land cover condition greater than 16% impervious cover in the design of post-development stormwater management facilities. The operator shall utilize Table 4 to develop the equivalent pollutant load for nitrogen and total suspended solids.

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

Table 4: Ratio of Phosphorus Loading Rate to Nitrogen and Total Suspended Solids Loading Rates for Chesapeake Bay Basins

Ratio of Phosphorus to Other POCs (Based on All Land Uses 2009 Progress Run)	Phosphorus Loading Rate (lbs/acre)	Nitrogen Loading Rate (lbs/acre)	Total Suspended Solids Loading Rate (lbs/acre)
James River Basin	1.0	5.2	420.9
Potomac River Basin	1.0	6.9	469.2
Rappahannock River Basin	1.0	6.7	320.9
York River Basin	1.0	9.5	531.6

(10) A list of future projects and associated acreage that qualify as grandfathered in accordance with 9VAC25-870-48;

(11) An estimate of the expected costs to implement the requirements of this special condition during the state permit cycle; and

(12) An opportunity for receipt and consideration of public comment regarding the draft Chesapeake Bay TMDL Action Plan.

b. As part of development of the Chesapeake Bay TMDL Action Plan, the operator may consider:

(1) Implementation of BMPs on unregulated lands provided any necessary baseline reduction is not included toward meeting the required reduction in this permit;

(2) Utilization of stream restoration projects, provided that the credit applied to the required POC load reduction is prorated based on the ratio of regulated urban acres to total drainage acres upstream of the restored area;

(3) Establishment of a memorandum of understanding (MOU) with other MS4 operators that discharge to the same or adjacent eight digit hydrologic unit within the same basin to implement BMPs collectively. The MOU shall include a mechanism for dividing the POC reductions created by BMP implementation between the cooperative MS4s;

(4) Utilization of any pollutant trading or offset program in accordance with §§ 62.1-44.19:20 through 62.1-44.19:23 of the Code of Virginia, governing trading and offsetting;

(5) A more stringent average land cover condition based on less than 16% impervious cover for new sources initiating construction between July 1, 2009, and June 30, 2014, and all grandfathered projects where allowed by law; and

(6) Any BMPs installed after June 30, 2009, as part of a retrofit program may be applied towards meeting the required load reductions provided any necessary baseline reductions are not included.

3. Chesapeake Bay TMDL Action Plan implementation. The operator shall implement the TMDL Action Plan according to the schedule therein. Compliance with this requirement represents adequate progress for this state permit term towards achieving TMDL wasteload allocations consistent with the assumptions and requirements of the TMDL. For the purposes of this permit, the implementation of the following represents implementation to the maximum extent practicable and demonstrates adequate progress:

a. Implementation of nutrient management plans in accordance with the schedule identified in the minimum control measure in Section II related to pollution prevention/good housekeeping for municipal operations;

b. Implementation of the minimum control measure in Section II related to construction site stormwater runoff control in accordance with this state permit shall address discharges from transitional sources;

c. Implementation of the means and methods to address discharges from new sources in accordance with the minimum control measure in Section II related to post-construction stormwater management in new development and development of prior developed lands and in order to offset 5.0% of the total increase in POC loads between July 1, 2009, and June 30, 2014. Increases in the POC load from grandfathered projects initiating construction after July 1, 2014, must be offset prior to completion of the project; and

d. Implementation of means and methods sufficient to meet the required reductions of POC loads from existing sources in accordance with the Chesapeake Bay TMDL Action Plan.

4. Annual reporting requirements.

a. In accordance with Table 1, the operator shall submit the Chesapeake Bay Action Plan with the appropriate annual report.

b. Each subsequent annual report shall include a list of control measures implemented during the reporting period and the cumulative progress toward meeting the compliance targets for nitrogen, phosphorus, and total suspended solids.

c. Each subsequent annual report shall include a list of control measures, in an electronic format provided by the department, that were implemented during the reporting cycle and the estimated reduction achieved by the control. For stormwater management controls, the report shall include the information required in Section II B 5 e

and shall include whether an existing stormwater management control was retrofitted, and if so, the existing stormwater management control type retrofit used.

d. Each annual report shall include a list of control measures that are expected to be implemented during the next reporting period and the expected progress toward meeting the compliance targets for nitrogen, phosphorus, and total suspended solids.

5. The operator shall include the following as part of its reapplication package due in accordance with Section III M:

a. Documentation that sufficient control measures have been implemented to meet the compliance target identified in this special condition. If temporary credits or offsets have been purchased in order to meet the compliance target, the list of temporary reductions utilized to meet the required reduction in this state permit and a schedule of implementation to ensure the permanent reduction must be provided; and

b. A draft second phase Chesapeake Bay TMDL Action Plan designed to reduce the existing pollutant load as follows:

(1) The existing pollutant of concern loads by an additional seven times the required reductions in loading rates using the applicable Table 3 for sources included in the 2000 U.S. Census Bureau urbanized areas;

(2) The existing pollutant of concerns loads by an additional eight times the required reductions in loading rates using the applicable Table 3 for expanded sources identified in the U.S. Census Bureau 2010 urbanized areas;

(3) An additional 35% reduction in new sources developed between 2009 and 2014 and for which the land use cover condition was greater than 16%; and

(4) Accounts for any modifications to the applicable loading rate provided to the operator as a result of TMDL modification.

SECTION II

MUNICIPAL SEPARATE STORM SEWER SYSTEM MANAGEMENT PROGRAM

A. The operator of a small MS4 must develop, implement, and enforce a MS4 Program designed to reduce the discharge of pollutants from the small MS4 to the maximum extent practicable (MEP), to protect water quality, to ensure compliance by the operator with water quality standards, and to satisfy the appropriate water quality requirements of the Clean Water Act and its attendant regulations. The MS4 Program must include the minimum control measures described in paragraph B of this section. Implementation of best management practices consistent with the provisions of an iterative MS4 Program required pursuant to this section constitutes compliance with the standard of reducing pollutants to the "maximum extent practicable," protects water quality in the absence of a TMDL wasteload allocation, ensures compliance by the operator with water quality standards, and satisfies the appropriate water quality requirements of the Clean Water Act and regulations in the absence of a TMDL WLA. The requirements of this section and those special conditions set out in Section I B also apply where a WLA is applicable.

B. Minimum control measures.

NOTE regarding minimum control measures for public education and outreach on stormwater impacts and public involvement/participation: "Public" is not defined in this permit. However, the department concurs with the following EPA statement, which was published in the Federal Register, Volume 64, No. 235, page 68,750 on December 8, 1999, regarding

"public" and its applicability to MS4 programs: "EPA acknowledges that federal and state facilities are different from municipalities. EPA believes, however, that the minimum measures are flexible enough that they can be implemented by these facilities. As an example, DOD commentators asked about how to interpret the term "public" for military installations when implementing the public education measure. EPA agrees with the suggested interpretation of "public" for DOD facilities as "the resident and employee population within the fence line of the facility." The department recommends that nontraditional MS4 operators, such as state and federal entities and local school districts, utilize this statement as guidance when determining their applicable "public" for compliance with this permit.

1. Public education and outreach on stormwater impacts.

a. The operator shall continue to implement the public education and outreach program as included in the registration statement until the program is updated to meet the conditions of this state permit. Operators who have not previously held MS4 permit coverage shall implement this program in accordance with the schedule provided with the completed registration statement.

b. The public education and outreach program should be designed with consideration of the following goals:

(1) Increasing target audience knowledge about the steps that can be taken to reduce stormwater pollution, placing priority on reducing impacts to impaired waters and other local water pollution concerns;

(2) Increasing target audience knowledge of hazards associated with illegal discharges and improper disposal of waste, including pertinent legal implications; and

(3) Implementing a diverse program with strategies that are targeted towards audiences most likely to have significant stormwater impacts.

c. The updated program shall be designed to:

(1) Identify, at a minimum, three high-priority water quality issues, that contribute to the discharge of stormwater (e.g., Chesapeake Bay nutrients, pet wastes and local bacteria TMDLs, high-quality receiving waters, and illicit discharges from commercial sites) and a rationale for the selection of the three high-priority water quality issues;

(2) Identify and estimate the population size of the target audience or audiences who is most likely to have significant impacts for each high-priority water quality issue;

(3) Develop relevant message or messages and associated educational and outreach materials (e.g., various media such as printed materials, billboard and mass transit advertisements, signage at select locations, radio advertisements, television advertisements, websites, and social media) for message distribution to the selected target audiences while considering the viewpoints and concerns of the target audiences including minorities, disadvantaged audiences, and minors;

(4) Provide for public participation during public education and outreach program development;

(5) Annually conduct sufficient education and outreach activities designed to reach an equivalent 20% of each high-priority issue target audience. It shall not be considered noncompliance for failure to reach 20% of the target audience. However, it shall be a compliance issue if insufficient effort is made to annually reach a minimum of 20% of the target audience; and

(6) Provide for the adjustment of target audiences and messages including educational materials and delivery mechanisms to reach target audiences in order to address any observed weaknesses or shortcomings.

d. The operator may coordinate their public education and outreach efforts with other MS4 operators; however, each operator shall be individually responsible for meeting all of its state permit requirements.

e. Prior to application for continued state permit coverage required in Section III M, the operator shall evaluate the education and outreach program for:

(1) Appropriateness of the high-priority stormwater issues;

(2) Appropriateness of the selected target audiences for each high-priority stormwater issue;

(3) Effectiveness of the message or messages being delivered; and

(4) Effectiveness of the mechanism or mechanisms of delivery employed in reaching the target audiences.

f. The MS4 Program Plan shall describe how the conditions of this permit shall be updated in accordance with Table 1.

g. The operator shall include the following information in each annual report submitted to the department during this permit term:

(1) A list of the education and outreach activities conducted during the reporting period for each high-priority water quality issue, the estimated number of people reached, and an estimated percentage of the target audience or audiences that will be reached; and

(2) A list of the education and outreach activities that will be conducted during the next reporting period for each high-priority water quality issue, the estimated number of people that will be reached, and an estimated percentage of the target audience or audiences that will be reached.

2. Public involvement/participation.

a. Public involvement.

(1) The operator shall comply with any applicable federal, state, and local public notice requirements.

(2) The operator shall:

(a) Maintain an updated MS4 Program Plan. Any required updates to the MS4 Program Plan shall be completed at a minimum of once a year and shall be updated in conjunction with the annual report. The operator shall post copies of each MS4 program plan on its webpage at a minimum of once a year and within 30 days of submittal of the annual report to the department.

(b) Post copies of each annual report on the operator's web page within 30 days of submittal to the department and retain copies of annual reports online for the duration of this state permit; and

(c) Prior to applying for coverage as required by Section III M, notify the public and provide for receipt of comment of the proposed MS4 Program Plan that will be submitted with the registration statement. As part of the reapplication, the operator shall address how it considered the comments received in the development of its MS4 Program Plan. The operator shall give public notice by a method reasonably calculated to give actual notice of the

action in question to the persons potentially affected by it, including press releases or any other forum or medium to solicit public participation.

b. Public participation. The operator shall participate, through promotion, sponsorship, or other involvement, in a minimum of four local activities annually (e.g., stream cleanups; hazardous waste cleanup days; and meetings with watershed associations, environmental advisory committees, and other environmental organizations that operate within proximity to the operator's small MS4). The activities shall be aimed at increasing public participation to reduce stormwater pollutant loads; improve water quality; and support local restoration and clean-up projects, programs, groups, meetings, or other opportunities for public involvement.

c. The MS4 Program Plan shall include written procedures for implementing this program.

d. Each annual report shall include:

(1) A web link to the MS4 Program Plan and annual report; and

(2) Documentation of compliance with the public participation requirements of this section.

3. Illicit discharge detection and elimination.

a. The operator shall maintain an accurate storm sewer system map and information table and shall update it in accordance with the schedule set out in Table 1.

(1) The storm sewer system map must show the following, at a minimum:

(a) The location of all MS4 outfalls. In cases where the outfall is located outside of the MS4 operator's legal responsibility, the operator may elect to map the known point of discharge location closest to the actual outfall. Each mapped outfall must be given a unique identifier, which must be noted on the map; and

(b) The name and location of all waters receiving discharges from the MS4 outfalls and the associated HUC.

(2) The associated information table shall include for each outfall the following:

(a) The unique identifier;

(b) The estimated MS4 acreage served;

(c) The name of the receiving surface water and indication as to whether the receiving water is listed as impaired in the Virginia 2010 303(d)/305(b) Water Quality Assessment Integrated Report; and

(d) The name of any applicable TMDL or TMDLs.

(3) Within 48 months of coverage under this state permit, the operator shall have a complete and updated storm sewer system map and information table that includes all MS4 outfalls located within the boundaries identified as "urbanized" areas in the 2010 Decennial Census and shall submit the updated information table as an appendix to the annual report.

(4) The operator shall maintain a copy of the current storm sewer system map and outfall information table for review upon request by the public or by the department.

(5) The operator shall continue to identify other points of discharge. The operator shall notify in writing the downstream MS4 of any known physical interconnection.

b. The operator shall effectively prohibit, through ordinance or other legal mechanism, nonstormwater discharges into the storm sewer system to the extent allowable under federal, state, or local law, regulation, or ordinance. Categories of nonstormwater discharges or flows (i.e., illicit discharges) identified in 9VAC25-870-400 D 2 c (3) must be addressed only if they are identified by the operator as significant contributors of pollutants to the small MS4. Flows that have been identified in writing by the department as de minimis discharges are not significant sources of pollutants to surface water and do not require a VPDES permit.

c. The operator shall develop, implement, and update, when appropriate, written procedures to detect, identify, and address unauthorized nonstormwater discharges, including illegal dumping, to the small MS4. These procedures shall include:

(1) Written dry weather field screening methodologies to detect and eliminate illicit discharges to the MS4 that include field observations and field screening monitoring and that provide:

(a) A prioritized schedule of field screening activities determined by the operator based on such criteria as age of the infrastructure, land use, historical illegal discharges, dumping or cross connections.

(b) The minimum number of field screening activities the operator shall complete annually to be determined as follows: (i) if the total number of outfalls in the small MS4 is less than 50, all outfalls shall be screened annually or (ii) if the small MS4 has 50 or more total outfalls, a minimum of 50 outfalls shall be screened annually.

(c) Methodologies to collect the general information such as time since the last rain, the quantity of the last rain, site descriptions (e.g., conveyance type and dominant watershed land uses), estimated discharge rate (e.g., width of water surface, approximate depth of water, approximate flow velocity, and flow rate), and visual observations (e.g., order, color, clarity, floatables, deposits or stains, vegetation condition, structural condition, and biology).

(d) A time frame upon which to conduct an investigation or investigations to identify and locate the source of any observed continuous or intermittent nonstormwater discharge prioritized as follows: (i) illicit discharges suspected of being sanitary sewage or significantly contaminated must be investigated first and (ii) investigations of illicit discharges suspected of being less hazardous to human health and safety such as noncontact cooling water or wash water may be delayed until after all suspected sanitary sewage or significantly contaminated discharges have been investigated, eliminated, or identified. Discharges authorized under a separate VPDES or state permit require no further action under this permit.

(e) Methodologies to determine the source of all illicit discharges shall be conducted. If an illicit discharge is found, but within six months of the beginning of the investigation neither the source nor the same nonstormwater discharge has been identified, then the operator shall document such in accordance with Section II B 3 f. If the observed discharge is intermittent, the operator must document that a minimum of three separate investigations were made in an attempt to observe the discharge when it was flowing. If these attempts are unsuccessful, the operator shall document such in accordance with Section II B 3 f.

(f) Mechanisms to eliminate identified sources of illicit discharges including a description of the policies and procedures for when and how to use legal authorities.

(g) Methods for conducting a follow-up investigation in order to verify that the discharge has been eliminated.

(h) A mechanism to track all investigations to document: (i) the date or dates that the illicit discharge was observed and reported; (ii) the results of the investigation; (iii) any follow-up to the investigation; (iv) resolution of the investigation; and (v) the date that the investigation was closed.

d. The operator shall promote, publicize, and facilitate public reporting of illicit discharges into or from MS4s. The operator shall conduct inspections in response to complaints and follow-up inspections as needed to ensure that corrective measures have been implemented by the responsible party.

e. The MS4 Program Plan shall include all procedures developed by the operator to detect, identify, and address nonstormwater discharges to the MS4 in accordance with the schedule in Table 1. In the interim, the operator shall continue to implement the program as included as part of the registration statement until the program is updated to meet the conditions of this permit. Operators, who have not previously held MS4 permit coverage, shall implement this program in accordance with the schedule provided with the completed registration statement.

f. Annual reporting requirements. Each annual report shall include:

(1) A list of any written notifications of physical interconnection given by the operator to other MS4s;

(2) The total number of outfalls screened during the reporting period, the screening results, and detail of any follow-up actions necessitated by the screening results; and

(3) A summary of each investigation conducted by the operator of any suspected illicit discharge. The summary must include: (i) the date that the suspected discharge was observed, reported, or both; (ii) how the investigation was resolved, including any follow-up, and (iii) resolution of the investigation and the date the investigation was closed.

4. Construction site stormwater runoff control.

a. Applicable oversight requirements. The operator shall utilize its legal authority, such as ordinances, permits, orders, specific contract language, and interjurisdictional agreements, to address discharges entering the MS4 from the following land-disturbing activities:

(1) Land-disturbing activities as defined in § 62.1-44.15:51 of the Code of Virginia that result in the disturbance of 10,000 square feet or greater;

(2) Land-disturbing activities in jurisdictions in Tidewater Virginia, as defined in § 62.1-44.15:68 of the Code of Virginia, that disturb 2,500 square feet or greater and are located in areas designated as Resource Protection Areas (RPA), Resource Management Areas (RMA) or Intensely Developed Acres (IDA), pursuant to the Chesapeake Bay Preservation Area Designation and Management Regulations adopted pursuant to the Chesapeake Bay Preservation Act;

(3) Land-disturbing activities disturbing less than the minimum land disturbance identified in subdivision (1) or (2) above for which a local ordinance requires that an erosion and sediment control plan be developed; and

(4) Land-disturbing activities on individual residential lots or sections of residential developments being developed by different property owners and where the total land disturbance of the residential development is 10,000 square feet or greater. The operator may utilize an agreement in lieu of a plan as provided in § 62.1-44.15:55 of the Code of Virginia for this category of land disturbances.

b. Required plan approval prior to commencement of the land disturbing activity. The operator shall require that land disturbance not begin until an erosion and sediment control plan or an agreement in lieu of a plan as provided in § 62.1-44.15:55 is approved by a VESCP authority in accordance with the Erosion and Sediment Control Law (§ 62.1-44.15:51 et seq. of the Code of Virginia). The plan shall be:

(1) Compliant with the minimum standards identified in 9VAC25-840-40 of the Erosion and Sediment Control Regulations; or

(2) Compliant with department-approved annual standards and specifications. Where applicable, the plan shall be consistent with any additional or more stringent, or both, erosion and sediment control requirements established by state regulation or local ordinance.

c. Compliance and enforcement.

(1) The operator shall inspect land-disturbing activities for compliance with an approved erosion and sediment control plan or agreement in lieu of a plan in accordance with the minimum standards identified in 9VAC25-840-40 or with department-approved annual standards and specifications.

(2) The operator shall implement an inspection schedule for land-disturbing activities identified in Section II B 4 a as follows:

(a) Upon initial installation of erosion and sediment controls;

(b) At least once during every two-week period;

(c) Within 48 hours of any runoff-producing storm event; and

(d) Upon completion of the project and prior to the release of any applicable performance bonds.

Where an operator establishes an alternative inspection program as provided for in 9VAC25-840-60 B 2, the written schedule shall be implemented in lieu of Section II B 4 c (2) and the written plan shall be included in the MS4 Program Plan.

(3) Operator inspections shall be conducted by personnel who hold a certificate of competence in accordance with 9VAC25-850-40. Documentation of certification shall be made available upon request by the VESCP authority or other regulatory agency.

(4) The operator shall promote to the public a mechanism for receipt of complaints regarding regulated land-disturbing activities and shall follow up on any complaints regarding potential water quality and compliance issues.

(5) The operator shall utilize its legal authority to require compliance with the approved plan where an inspection finds that the approved plan is not being properly implemented.

(6) The operator shall utilize, as appropriate, its legal authority to require changes to an approved plan when an inspection finds that the approved plan is inadequate to effectively control soil erosion, sediment deposition, and runoff to prevent the unreasonable degradation of properties, stream channels, waters, and other natural resources.

(7) The operator shall require implementation of appropriate controls to prevent nonstormwater discharges to the MS4, such as wastewater, concrete washout, fuels and oils, and other illicit discharges identified during land-

disturbing activity inspections of the MS4. The discharge of nonstormwater discharges other than those identified in 9VAC25-890-20 through the MS4 is not authorized by this state permit.

(8) The operator may develop and implement a progressive compliance and enforcement strategy provided that such strategy is included in the MS4 Program Plan and is consistent with 9VAC25-840.

d. Regulatory coordination. The operator shall implement enforceable procedures to require that large construction activities as defined in 9VAC25-870-10 and small construction activities as defined in 9VAC25-870-10, including municipal construction activities, secure necessary state permit authorizations from the department to discharge stormwater.

e. MS4 Program requirements. The operator's MS4 Program Plan shall include:

(1) A description of the legal authorities utilized to ensure compliance with the minimum control measure in Section II related to construction site stormwater runoff control such as ordinances, permits, orders, specific contract language, and interjurisdictional agreements;

(2) Written plan review procedures and all associated documents utilized in plan review;

(3) For the MS4 operators who obtain department-approved standards and specifications, a copy of the current standards and specifications;

(4) Written inspection procedures and all associated documents utilized during inspection including the inspection schedule;

(5) Written procedures for compliance and enforcement, including a progressive compliance and enforcement strategy, where appropriate; and

(6) The roles and responsibilities of each of the operator's departments, divisions, or subdivisions in implementing the minimum control measure in Section II related to construction site stormwater runoff control. If the operator utilizes another entity to implement portions of the MS4 Program Plan, a copy of the written agreement must be retained in the MS4 Program Plan. The description of each party's roles and responsibilities, including any written agreements with third parties, shall be updated as necessary.

Reference may be made to any listed requirements in this subdivision provided the location of where the reference material can be found is included and the reference material is made available to the public upon request.

f. Reporting requirements. The operator shall track regulated land-disturbing activities and submit the following information in all annual reports:

(1) Total number of regulated land-disturbing activities;

(2) Total number of acres disturbed;

(3) Total number of inspections conducted; and

(4) A summary of the enforcement actions taken, including the total number and type of enforcement actions taken during the reporting period.

5. Post-construction stormwater management in new development and development on prior developed lands.

a. Applicable oversight requirements. The operator shall address post-construction stormwater runoff that enters the MS4 from the following land-disturbing activities:

(1) New development and development on prior developed lands that are defined as large construction activities or small construction activities in 9VAC25-870-10;

(2) New development and development on prior developed lands that disturb greater than or equal to 2,500 square feet, but less than one acre, located in a Chesapeake Bay Preservation Area designated by a local government located in Tidewater, Virginia, as defined in § 62.1-44.15:68 of the Code of Virginia; and

(3) New development and development on prior developed lands where an applicable state regulation or local ordinance has designated a more stringent regulatory size threshold than that identified in subdivision (1) or (2) above.

b. Required design criteria for stormwater runoff controls. The operator shall utilize legal authority, such as ordinances, permits, orders, specific contract language, and interjurisdictional agreements, to require that activities identified in Section II B 5 a address stormwater runoff in such a manner that stormwater runoff controls are designed and installed:

(1) In accordance with the appropriate water quality and water quantity design criteria as required in Part II (9VAC25-870-40 et seq.) of 9VAC25-870;

(2) In accordance with any additional applicable state or local design criteria required at project initiation; and

(3) Where applicable, in accordance with any department-approved annual standards and specifications.

Upon board approval of a Virginia Stormwater Management Program authority (VSMP Authority) as defined in § 62.1-44.15:24 of the Code of Virginia and reissuance of the Virginia Stormwater Management Program (VSMP) General Permit for Discharges of Stormwater from Construction Activities, the operator shall require that stormwater management plans are approved by the appropriate VSMP Authority prior to land disturbance. In accordance with § 62.1-44.15:27 M of the Code of Virginia, VSMPs shall become effective July 1, 2014, unless otherwise specified by state law or by the board.

c. Inspection, operation, and maintenance verification of stormwater management facilities.

(1) For stormwater management facilities not owned by the MS4 operator, the following conditions apply:

(a) The operator shall require adequate long-term operation and maintenance by the owner of the stormwater management facility by requiring the owner to develop a recorded inspection schedule and maintenance agreement to the extent allowable under state or local law or other legal mechanism;

(b) The operator or his designee shall implement a schedule designed to inspect all privately owned stormwater management facilities that discharge into the MS4 at least once every five years to document that maintenance is being conducted in such a manner to ensure long-term operation in accordance with the approved designs.

(c) The operator shall utilize its legal authority for enforcement of maintenance responsibilities if maintenance is neglected by the owner. The operator may develop and implement a progressive compliance and enforcement strategy provided that the strategy is included in the MS4 Program Plan.

(d) Beginning with the issuance of this state permit, the operator may utilize strategies other than maintenance agreements such as periodic inspections, homeowner outreach and education, and other methods targeted at promoting the long-term maintenance of stormwater control measures that are designed to treat stormwater runoff solely from the individual residential lot. Within 12 months of coverage under this permit, the operator shall develop and implement these alternative strategies and include them in the MS4 Program Plan.

(2) For stormwater management facilities owned by the MS4 operator, the following conditions apply:

(a) The operator shall provide for adequate long-term operation and maintenance of its stormwater management facilities in accordance with written inspection and maintenance procedures included in the MS4 Program Plan.

(b) The operator shall inspect these stormwater management facilities annually. The operator may choose to implement an alternative schedule to inspect these stormwater management facilities based on facility type and expected maintenance needs provided that the alternative schedule is included in the MS4 Program Plan.

(c) The operator shall conduct maintenance on its stormwater management facilities as necessary.

d. MS4 Program Plan requirements. The operator's MS4 Program Plan shall be updated in accordance with Table 1 to include:

(1) A list of the applicable legal authorities such as ordinance, state and other permits, orders, specific contract language, and interjurisdictional agreements to ensure compliance with the minimum control measure in Section II related to post-construction stormwater management in new development and development on prior developed lands;

(2) Written policies and procedures utilized to ensure that stormwater management facilities are designed and installed in accordance with Section II B 5 b;

(3) Written inspection policies and procedures utilized in conducting inspections;

(4) Written procedures for inspection, compliance and enforcement to ensure maintenance is conducted on private stormwater facilities to ensure long-term operation in accordance with approved design;

(5) Written procedures for inspection and maintenance of operator-owned stormwater management facilities;

(6) The roles and responsibilities of each of the operator's departments, divisions, or subdivisions in implementing the minimum control measure in Section II related to post-construction stormwater management in new development and development on prior developed lands. If the operator utilizes another entity to implement portions of the MS4 Program Plan, a copy of the written agreement must be retained in the MS4 Program Plan. Roles and responsibilities shall be updated as necessary.

e. Stormwater management facility tracking and reporting requirements. The operator shall maintain an updated electronic database of all known operator-owned and privately-owned stormwater management facilities that discharge into the MS4. The database shall include the following:

(1) The stormwater management facility type;

(2) A general description of the facility's location, including the address or latitude and longitude;

(3) The acres treated by the facility, including total acres, as well as the breakdown of pervious and impervious acres;

(4) The date the facility was brought online (MM/YYYY). If the date is not known, the operator shall use June 30, 2005, as the date brought online for all previously existing stormwater management facilities;

(5) The sixth order hydrologic unit code (HUC) in which the stormwater management facility is located;

(6) The name of any impaired water segments within each HUC listed in the 2010 § 305(b)/303(d) Water Quality Assessment Integrated Report to which the stormwater management facility discharges;

(7) Whether the stormwater management facility is operator-owned or privately-owned;

(8) Whether a maintenance agreement exists if the stormwater management facility is privately owned; and

(9) The date of the operator's most recent inspection of the stormwater management facility.

In addition, the operator shall annually track and report the total number of inspections completed and, when applicable, the number of enforcement actions taken to ensure long-term maintenance.

The operator shall submit an electronic database or spreadsheet of all stormwater management facilities brought online during each reporting year with the appropriate annual report. Upon such time as the department provides the operators access to a statewide web-based reporting electronic database or spreadsheet, the operator shall utilize such database to complete the pertinent reporting requirements of this state permit.

6. Pollution prevention/good housekeeping for municipal operations.

a. Operations and maintenance activities. The MS4 Program Plan submitted with the registration statement shall be implemented by the operator until updated in accordance with this state permit. In accordance with Table 1, the operator shall develop and implement written procedures designed to minimize or prevent pollutant discharge from: (i) daily operations such as road, street, and parking lot maintenance; (ii) equipment maintenance; and (iii) the application, storage, transport, and disposal of pesticides, herbicides, and fertilizers. The written procedures shall be utilized as part of the employee training. At a minimum, the written procedures shall be designed to:

(1) Prevent illicit discharges;

(2) Ensure the proper disposal of waste materials, including landscape wastes;

(3) Prevent the discharge of municipal vehicle wash water into the MS4 without authorization under a separate VPDES permit;

(4) Prevent the discharge of wastewater into the MS4 without authorization under a separate VPDES permit;

(5) Require implementation of best management practices when discharging water pumped from utility construction and maintenance activities;

(6) Minimize the pollutants in stormwater runoff from bulk storage areas (e.g., salt storage, topsoil stockpiles) through the use of best management practices;

(7) Prevent pollutant discharge into the MS4 from leaking municipal automobiles and equipment; and

(8) Ensure that the application of materials, including fertilizers and pesticides, is conducted in accordance with the manufacturer's recommendations.

b. Municipal facility pollution prevention and good housekeeping.

(1) Within 12 months of state permit coverage, the operator shall identify all municipal high-priority facilities. These high-priority facilities shall include: (i) composting facilities, (ii) equipment storage and maintenance facilities, (iii) materials storage yards, (iv) pesticide storage facilities, (v) public works yards, (vi) recycling facilities, (vii) salt storage facilities, (viii) solid waste handling and transfer facilities, and (ix) vehicle storage and maintenance yards.

(2) Within 12 months of state permit coverage, the operator shall identify which of the municipal high-priority facilities have a high potential of discharging pollutants. Municipal high-priority facilities that have a high potential for discharging pollutants are those facilities identified in subsection (1) above that are not covered under a separate VPDES permit and which any of the following materials or activities occur and are expected to have exposure to stormwater resulting from rain, snow, snowmelt or runoff:

(a) Areas where residuals from using, storing or cleaning machinery or equipment remain and are exposed to stormwater;

(b) Materials or residuals on the ground or in stormwater inlets from spills or leaks;

(c) Material handling equipment (except adequately maintained vehicles);

(d) Materials or products that would be expected to be mobilized in stormwater runoff during loading/unloading or transporting activities (e.g., rock, salt, fill dirt);

(e) Materials or products stored outdoors (except final products intended for outside use where exposure to stormwater does not result in the discharge of pollutants);

(f) Materials or products that would be expected to be mobilized in stormwater runoff contained in open, deteriorated or leaking storage drums, barrels, tanks, and similar containers;

(g) Waste material except waste in covered, non-leaking containers (e.g., dumpsters);

(h) Application or disposal of process wastewater (unless otherwise permitted); or

(i) Particulate matter or visible deposits of residuals from roof stacks, vents or both not otherwise regulated (i.e., under an air quality control permit) and evident in the stormwater runoff.

(3) The operator shall develop and implement specific stormwater pollution prevention plans for all high-priority facilities identified in subdivision 2 of this subsection. The operator shall complete SWPPP development and implementation shall be completed within 48 months of coverage under this state permit. Facilities covered under a separate VPDES permit shall adhere to the conditions established in that permit and are excluded from this requirement.

(4) Each SWPPP shall include:

(a) A site description that includes a site map identifying all outfalls, direction of flows, existing source controls, and receiving water bodies;

(b) A discussion and checklist of potential pollutants and pollutant sources;

(c) A discussion of all potential nonstormwater discharges;

(d) Written procedures designed to reduce and prevent pollutant discharge;

(e) A description of the applicable training as required in Section II B 6 d;

(f) Procedures to conduct an annual comprehensive site compliance evaluation;

(g) An inspection and maintenance schedule for site specific source controls. The date of each inspection and associated findings and follow-up shall be logged in each SWPPP;

(h) The contents of each SWPPP shall be evaluated and modified as necessary to accurately reflect any discharge, release, or spill from the high priority facility reported in accordance with Section III G. For each such discharge, release, or spill, the SWPPP must include the following information: date of incident; material discharged, released, or spilled; and quantity discharged, released or spilled; and

(i) A copy of each SWPPP shall be kept at each facility and shall be kept updated and utilized as part of staff training required in Section II B 6 d.

c. Turf and landscape management.

(1) The operator shall implement turf and landscape nutrient management plans that have been developed by a certified turf and landscape nutrient management planner in accordance with § 10.1-104.2 of the Code of Virginia on all lands owned or operated by the MS4 operator where nutrients are applied to a contiguous area greater than one acre. Implementation shall be in accordance with the following schedule:

(a) Within 12 months of state permit coverage, the operator shall identify all applicable lands where nutrients are applied to a contiguous area of more than one acre. A latitude and longitude shall be provided for each such piece of land and reported in the annual report.

(b) Within 60 months of state permit coverage, the operator shall implement turf and landscape nutrient management plans on all lands where nutrients are applied to a contiguous area of more than one acre. The following measurable outcomes are established for the implementation of turf and landscape nutrient management plans: (i) within 24 months of permit coverage, not less than 15% of all identified acres will be covered by turf and landscape nutrient management plans; (ii) within 36 months of permit coverage, not less than 40% of all identified acres will be covered by turf and landscape nutrient management plans; and (iii) within 48 months of permit coverage, not less than 75% of all identified acres will be covered by turf and landscape nutrient management plans. The operator shall not fail to meet the measurable goals for two consecutive years.

(c) MS4 operators with lands regulated under § 10.1-104.4 of the Code of Virginia shall continue to implement turf and landscape nutrient management plans in accordance with this statutory requirement.

(2) Operators shall annually track the following:

(a) The total acreage of lands where turf and landscape nutrient management plans are required; and

(b) The acreage of lands upon which turf and landscape nutrient management plans have been implemented.

(3) The operator shall not apply any deicing agent containing urea or other forms of nitrogen or phosphorus to parking lots, roadways, and sidewalks, or other paved surfaces.

d. Training. The operator shall conduct training for employees. The training requirements may be fulfilled, in total or in part, through regional training programs involving two or more MS4 localities provided; however, that each operator shall remain individually liable for its failure to comply with the training requirements in this permit.

Training is not required if the topic is not applicable to the operator's operations and therefore does not have applicable personnel provided the lack of applicability is documented in the MS4 Program Plan. The operator shall determine and document the applicable employees or positions to receive each type of training. The operator shall develop an annual written training plan including a schedule of training events that ensures implementation of the training requirements as follows:

(1) The operator shall provide biennial training to applicable field personnel in the recognition and reporting of illicit discharges.

(2) The operator shall provide biennial training to applicable employees in good housekeeping and pollution prevention practices that are to be employed during road, street, and parking lot maintenance.

(3) The operator shall provide biennial training to applicable employees in good housekeeping and pollution prevention practices that are to be employed in and around maintenance and public works facilities.

(4) The operator shall ensure that employees, and require that contractors, who apply pesticides and herbicides are properly trained or certified in accordance with the Virginia Pesticide Control Act (§ 3.2-3900 et seq. of the Code of Virginia).

(5) The operator shall ensure that employees and contractors serving as plan reviewers, inspectors, program administrators, and construction site operators obtain the appropriate certifications as required under the Virginia Erosion and Sediment Control Law and its attendant regulations.

(6) The operator shall ensure that applicable employees obtain the appropriate certifications as required under the Virginia Erosion and Sediment Control Law and its attendant regulations.

(7) The operators shall provide biennial training to applicable employees in good housekeeping and pollution prevention practices that are to be employed in and around recreational facilities.

(8) The appropriate emergency response employees shall have training in spill responses. A summary of the training or certification program provided to emergency response employees shall be included in the first annual report.

(9) The operator shall keep documentation on each training event including the training date, the number of employees attending the training, and the objective of the training event for a period of three years after each training event.

e. The operator shall require that municipal contractors use appropriate control measures and procedures for stormwater discharges to the MS4 system. Oversight procedures shall be described in the MS4 Program Plan.

f. At a minimum, the MS4 Program Plan shall contain:

(1) The written protocols being used to satisfy the daily operations and maintenance requirements;

(2) A list of all municipal high-priority facilities that identifies those facilities that have a high potential for chemicals or other materials to be discharged in stormwater and a schedule that identifies the year in which an individual SWPPP will be developed for those facilities required to have a SWPPP. Upon completion of a SWPPP, the SWPPP shall be part of the MS4 Program Plan. The MS4 Program Plan shall include the location in which the individual SWPPP is located;

(3) A list of lands where nutrients are applied to a contiguous area of more than one acre. Upon completion of a turf and landscape nutrient management plan, the turf and landscape nutrient management plan shall be part of the MS4 Program Plan. The MS4 Program Plan shall include the location in which the individual turf and landscape nutrient management plan is located; and

(4) The annual written training plan for the next reporting cycle.

g. Annual reporting requirements.

(1) A summary report on the development and implementation of the daily operational procedures;

(2) A summary report on the development and implementation of the required SWPPPs;

(3) A summary report on the development and implementation of the turf and landscape nutrient management plans that includes:

(a) The total acreage of lands where turf and landscape nutrient management plans are required; and

(b) The acreage of lands upon which turf and landscape nutrient management plans have been implemented; and

(4) A summary report on the required training, including a list of training events, the training date, the number of employees attending training and the objective of the training.

C. If an existing program requires the implementation of one or more of the minimum control measures of Section II B, the operator, with the approval of the board, may follow that program's requirements rather than the requirements of Section II B. A program that may be considered includes, but is not limited to, a local, state or tribal program that imposes, at a minimum, the relevant requirements of Section II B.

The operator's MS4 Program Plan shall identify and fully describe any program that will be used to satisfy one or more of the minimum control measures of Section II B.

If the program the operator is using requires the approval of a third party, the program must be fully approved by the third party, or the operator must be working towards getting full approval. Documentation of the program's approval status, or the progress towards achieving full approval, must be included in the annual report required by Section II E 3. The operator remains responsible for compliance with the permit requirements if the other entity fails to implement the control measures (or component thereof).

D. The operator may rely on another entity to satisfy the state permit requirements to implement a minimum control measure if: (i) the other entity, in fact, implements the control measure; (ii) the particular control measure, or component thereof, is at least as stringent as the corresponding state permit requirement; and (iii) the other entity agrees to implement the control measure on behalf of the operator. The agreement between the parties must be documented in writing and retained by the operator with the MS4 Program Plan for the duration of this state permit.

In the annual reports that must be submitted under Section II E 3, the operator must specify that another entity is being relied on to satisfy some of the state permit requirements.

If the operator is relying on another governmental entity regulated under 9VAC25-870-380 to satisfy all of the state permit obligations, including the obligation to file periodic reports required by Section II E 3, the operator must note that fact in the registration statement, but is not required to file the periodic reports.

The operator remains responsible for compliance with the state permit requirements if the other entity fails to implement the control measure (or component thereof).

E. Evaluation and assessment.

1. MS4 Program Evaluation. The operator must annually evaluate:

a. Program compliance;

b. The appropriateness of the identified BMPs (as part of this evaluation, the operator shall evaluate the effectiveness of BMPs in addressing discharges into waters that are identified as impaired in the 2010 § 305 (b)/303(d) Water Quality Assessment Integrated Report); and

c. Progress towards achieving the identified measurable goals.

2. Recordkeeping. The operator must keep records required by the state permit for at least three years. These records must be submitted to the department only upon specific request. The operator must make the records, including a description of the stormwater management program, available to the public at reasonable times during regular business hours.

3. Annual reports. The operator must submit an annual report for the reporting period of July 1 through June 30 to the department by the following October 1 of that year. The reports shall include:

a. Background Information.

(1) The name and state permit number of the program submitting the annual report;

(2) The annual report permit year;

(3) Modifications to any operator's department's roles and responsibilities;

(4) Number of new MS4 outfalls and associated acreage by HUC added during the permit year; and

(5) Signed certification;

b. The status of compliance with state permit conditions, an assessment of the appropriateness of the identified best management practices and progress towards achieving the identified measurable goals for each of the minimum control measures;

c. Results of information collected and analyzed, including monitoring data, if any, during the reporting period;

d. A summary of the stormwater activities the operator plans to undertake during the next reporting cycle;

e. A change in any identified best management practices or measurable goals for any of the minimum control measures including steps to be taken to address any deficiencies;

f. Notice that the operator is relying on another government entity to satisfy some of the state permit obligations (if applicable);

g. The approval status of any programs pursuant to Section II C (if appropriate), or the progress towards achieving full approval of these programs; and

h. Information required for any applicable TMDL special condition contained in Section I.

F. Program Plan modifications.

1. Program modifications requested by the operator. Modifications to the MS4 Program are expected throughout the life of this state permit as part of the iterative process to reduce the pollutant loadings and to protect water quality. As such, modifications made in accordance with this state permit as a result of the iterative process do not require modification of this permit unless the department determines that the changes meet the criteria referenced in 9VAC25-870-630 or 9VAC25-870-650. Updates and modifications to the MS4 Program may be made during the life of this state permit in accordance with the following procedures:

a. Adding (but not eliminating or replacing) components, controls, or requirements to the MS4 Program may be made by the operator at any time. Additions shall be reported as part of the annual report.

b. Updates and modifications to specific standards and specifications, schedules, operating procedures, ordinances, manuals, checklists, and other documents routinely evaluated and modified are permitted under this state permit provided that the updates and modifications are done in a manner that (i) is consistent with the conditions of this state permit, (ii) follow any public notice and participation requirements established in this state permit, and (iii) are documented in the annual report.

c. Replacing, or eliminating without replacement, any ineffective or infeasible strategies, policies, and BMPs specifically identified in this permit with alternate strategies, policies, and BMPs may be requested at any time. Such requests must be made in writing to the department and signed in accordance with 9VAC25-870-370, and include the following:

(1) An analysis of how or why the BMPs, strategies, or policies are ineffective or infeasible, including information on whether the BMPs, strategies, or policies are cost prohibitive;

(2) Expectations regarding the effectiveness of the replacement BMPs, strategies, or policies;

(3) An analysis of how the replacement BMPs are expected to achieve the goals of the BMPs to be replaced;

(4) A schedule for implementing the replacement BMPs, strategies, and policies; and

(5) An analysis of how the replacement strategies and policies are expected to improve the operator's ability to meet the goals of the strategies and policies being replaced.

d. The operator follows the public involvement requirements identified in Section II B 2 (a).

2. MS4 Program updates requested by the department. In a manner and following procedures in accordance with the Virginia Administrative Process Act, the Virginia Stormwater Management regulations, and other applicable state law and regulations, the department may request changes to the MS4 Program to assure compliance with the statutory requirements of the Virginia Stormwater Management Act and its attendant regulations to:

a. Address impacts on receiving water quality caused by discharges from the MS4;

b. Include more stringent requirements necessary to comply with new state or federal laws or regulations; or

c. Include such other conditions necessary to comply with state or federal law or regulation.

Proposed changes requested by the department shall be made in writing and set forth the basis for and objective of the modification as well as the proposed time schedule for the operator to develop and implement the modification. The operator may propose alternative program modifications or time schedules to meet the objective of the requested modification, but any such modifications are at the discretion of the department.

SECTION III

CONDITIONS APPLICABLE TO ALL STATE PERMITS

A. Monitoring.

1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

2. Monitoring shall be conducted according to procedures approved under 40 CFR Part 136 or alternative methods approved by the U.S. Environmental Protection Agency, unless other procedures have been specified in this state permit.

3. The operator shall periodically calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at intervals that will insure accuracy of measurements.

B. Records.

1. Monitoring records/reports shall include:

a. The date, exact place, and time of sampling or measurements;

b. The individual(s) who performed the sampling or measurements;

c. The date(s) and time(s) analyses were performed;

d. The individual(s) who performed the analyses;

e. The analytical techniques or methods used; and

f. The results of such analyses.

2. The operator shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this state permit, and records of all data used to complete the registration statement for this state permit, for a period of at least three years from the date of the sample, measurement, report or request for coverage. This period of retention shall be extended automatically during the course of any unresolved litigation regarding the regulated activity or regarding control standards applicable to the operator, or as requested by the board.

C. Reporting monitoring results.

1. The operator shall submit the results of the monitoring required by this state permit with the annual report unless another reporting schedule is specified elsewhere in this state permit.

2. Monitoring results shall be reported on a Discharge Monitoring Report (DMR); on forms provided, approved or specified by the department; or in any format provided the date, location, parameter, method, and result of the monitoring activity are included.

3. If the operator monitors any pollutant specifically addressed by this state permit more frequently than required by this state permit using test procedures approved under 40 CFR Part 136 or using other test procedures approved by the U.S. Environmental Protection Agency or using procedures specified in this state permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or reporting form specified by the department.

4. Calculations for all limitations that require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this state permit.

D. Duty to provide information. The operator shall furnish to the department, within a reasonable time, any information that the board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this state permit or to determine compliance with this state permit. The board may require the operator to furnish, upon request, such plans, specifications, and other pertinent information as may be necessary to determine the effect of the wastes from his discharge on the quality of surface waters, or such other information as may be necessary to accomplish the purposes of the CWA and Virginia Stormwater Management Act. The operator shall also furnish to the department upon request, copies of records required to be kept by this permit.

E. Compliance schedule reports. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this state permit shall be submitted no later than 14 days following each schedule date.

F. Unauthorized stormwater discharges. Pursuant to § 62.1-44.15:26 of the Code of Virginia, except in compliance with a state permit issued by the board, it shall be unlawful to cause a stormwater discharge from a MS4.

G. Reports of unauthorized discharges. Any operator of a small MS4 who discharges or causes or allows a discharge of sewage, industrial waste, other wastes or any noxious or deleterious substance or a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR Part 110, 40 CFR Part 117 or 40 CFR Part 302 that occurs during a 24-hour period into or upon surface waters; or who discharges or causes or allows a discharge that may reasonably be expected to enter surface waters, shall notify the department of the discharge immediately upon discovery of the discharge, but in no case later than within 24 hours after said discovery. A written report of the unauthorized discharge shall be submitted to the department within five days of discovery of the discharge. The written report shall contain:

1. A description of the nature and location of the discharge;

2. The cause of the discharge;

3. The date on which the discharge occurred;

4. The length of time that the discharge continued;

5. The volume of the discharge;

6. If the discharge is continuing, how long it is expected to continue;

7. If the discharge is continuing, what the expected total volume of the discharge will be; and

8. Any steps planned or taken to reduce, eliminate and prevent a recurrence of the present discharge or any future discharges not authorized by this state permit.

Discharges reportable to the department under the immediate reporting requirements of other regulations are exempted from this requirement.

H. Reports of unusual or extraordinary discharges. If any unusual or extraordinary discharge including a "bypass" or "upset," as defined herein, should occur from a facility and the discharge enters or could be expected to enter surface waters, the operator shall promptly notify, in no case later than within 24 hours, the department by telephone after the

discovery of the discharge. This notification shall provide all available details of the incident, including any adverse effects on aquatic life and the known number of fish killed. The operator shall reduce the report to writing and shall submit it to the department within five days of discovery of the discharge in accordance with Section III I 2. Unusual and extraordinary discharges include but are not limited to any discharge resulting from:

1. Unusual spillage of materials resulting directly or indirectly from processing operations;

2. Breakdown of processing or accessory equipment;

3. Failure or taking out of service some or all of the facilities; and

4. Flooding or other acts of nature.

I. Reports of noncompliance. The operator shall report any noncompliance which may adversely affect surface waters or may endanger public health.

1. An oral report shall be provided within 24 hours to the department from the time the operator becomes aware of the circumstances. The following shall be included as information which shall be reported within 24 hours under this paragraph:

a. Any unanticipated bypass; and

b. Any upset which causes a discharge to surface waters.

2. A written report shall be submitted within five days and shall contain:

a. A description of the noncompliance and its cause;

b. The period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and

c. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

The board or its designee may waive the written report on a case-by-case basis for reports of noncompliance under Section III I if the oral report has been received within 24 hours and no adverse impact on surface waters has been reported.

3. The operator shall report all instances of noncompliance not reported under Sections III I 1 or 2, in writing, at the time the next monitoring reports are submitted. The reports shall contain the information listed in Section III I 2.

NOTE: The immediate (within 24 hours) reports required to be provided to the department in Sections III G, H and I may be made to the appropriate Regional Office Pollution Response Program as found at http://deq.virginia.gov/Programs/PollutionResponsePreparedness.aspx. Reports may be made by telephone or by fax. For reports outside normal working hours, leave a message and this shall fulfill the immediate reporting requirement. For emergencies, the Virginia Department of Emergency Services maintains a 24-hour telephone service at 1-800-468-8892.

4. Where the operator becomes aware of a failure to submit any relevant facts, or submittal of incorrect information in any report to the department, it shall promptly submit such facts or correct information.

J. Notice of planned changes.

1. The operator shall give notice to the department as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

a. The operator plans an alteration or addition to any building, structure, facility, or installation from which there is or may be a discharge of pollutants, the construction of which commenced:

(1) After promulgation of standards of performance under § 306 of the Clean Water Act that are applicable to such source; or

(2) After proposal of standards of performance in accordance with § 306 of the Clean Water Act that are applicable to such source, but only if the standards are promulgated in accordance with § 306 within 120 days of their proposal;

b. The operator plans alteration or addition that would significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this state permit; or

2. The operator shall give advance notice to the department of any planned changes in the permitted facility or activity; which may result in noncompliance with state permit requirements.

K. Signatory requirements.

1. Registration statement. All registration statements shall be signed as follows:

a. For a corporation: by a responsible corporate officer. For the purpose of this subsection, 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 which 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 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;

b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

c. For a municipality, state, federal, or other public agency: By either a principal executive officer or ranking elected official. For purposes of this subsection, a principal executive officer of a public agency includes:

(1) The chief executive officer of the agency, or

(2) A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

2. Reports, etc. All reports required by state permits, and other information requested by the board shall be signed by a person described in Section III K 1, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

a. The authorization is made in writing by a person described in Section III K 1;

b. 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 operator. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.); and

c. The written authorization is submitted to the department.

3. Changes to authorization. If an authorization under Section III K 2 is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Section III K 2 shall be submitted to the department prior to or together with any reports, or information to be signed by an authorized representative.

4. Certification. Any person signing a document under Sections III K 1 or 2 shall make the following 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."

L. Duty to comply. The operator shall comply with all conditions of this state permit. Any state permit noncompliance constitutes a violation of the Virginia Stormwater Management Act and the Clean Water Act, except that noncompliance with certain provisions of this state permit may constitute a violation of the Virginia Stormwater Management Act but not the Clean Water Act. State permit noncompliance is grounds for enforcement action; for state permit termination, revocation and reissuance, or modification; or denial of a state permit renewal application.

The operator shall comply with effluent standards or prohibitions established under § 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if this state permit has not yet been modified to incorporate the requirement.

M. Duty to reapply. If the operator wishes to continue an activity regulated by this state permit after the expiration date of this state permit, the operator shall submit a new registration statement at least 90 days before the expiration date of the existing state permit, unless permission for a later date has been granted by the board. The board shall not grant permission for registration statements to be submitted later than the expiration date of the existing state permit.

N. Effect of a state permit. This state permit does not convey any property rights in either real or personal property or any exclusive privileges, nor does it authorize any injury to private property or invasion of personal rights, or any infringement of federal, state or local law or regulations.

O. State law. Nothing in this state permit shall be construed to preclude the institution of any legal action under, or relieve the operator from any responsibilities, liabilities, or penalties established pursuant to any other state law or regulation or under authority preserved by § 510 of the Clean Water Act. Except as provided in state permit conditions on

"bypassing" (Section III U), and "upset" (Section III V) nothing in this state permit shall be construed to relieve the operator from civil and criminal penalties for noncompliance.

P. Oil and hazardous substance liability. Nothing in this state permit shall be construed to preclude the institution of any legal action or relieve the operator from any responsibilities, liabilities, or penalties to which the operator is or may be subject under §§ 62.1-44.34:14 through 62.1-44.34:23 of the State Water Control Law or § 311 of the Clean Water Act.

Q. Proper operation and maintenance. The operator shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances), which are installed or used by the operator to achieve compliance with the conditions of this state permit. Proper operation and maintenance also includes effective plant performance, adequate funding, adequate staffing, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems, which are installed by the operator only when the operation is necessary to achieve compliance with the conditions of this state permit.

R. Disposal of solids or sludges. Solids, sludges or other pollutants removed in the course of treatment or management of pollutants shall be disposed of in a manner so as to prevent any pollutant from such materials from entering surface waters.

S. Duty to mitigate. The operator shall take all reasonable steps to minimize or prevent any discharge in violation of this state permit that has a reasonable likelihood of adversely affecting human health or the environment.

T. Need to halt or reduce activity not a defense. It shall not be a defense for an operator in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this state permit.

U. Bypass.

1. "Bypass," as defined in 9VAC25-870-10, means the intentional diversion of waste streams from any portion of a treatment facility. The operator may allow any bypass to occur that does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Sections III U 2 and U 3.

2. Notice.

a. Anticipated bypass. If the operator knows in advance of the need for a bypass, prior notice shall be submitted, if possible at least 10 days before the date of the bypass.

b. Unanticipated bypass. The operator shall submit notice of an unanticipated bypass as required in Section III I.

3. Prohibition of bypass.

a. Bypass is prohibited, and the board or its designee may take enforcement action against an operator for bypass, unless:

(1) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

(2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if

adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance; and

(3) The operator submitted notices as required under Section III U 2.

b. The board or its designee may approve an anticipated bypass, after considering its adverse effects, if the board or its designee determines that it will meet the three conditions listed above in Section III U 3 a.

V. Upset.

1. An "upset", as defined in 9VAC25-870-10, constitutes an affirmative defense to an action brought for noncompliance with technology based state permit effluent limitations if the requirements of Section III V 2 are met. A determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is not a final administrative action subject to judicial review.

2. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

3. An operator who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

a. An upset occurred and that the operator can identify the cause(s) of the upset;

b. The permitted facility was at the time being properly operated;

c. The operator submitted notice of the upset as required in Section III I; and

d. The operator complied with any remedial measures required under Section III S.

4. In any enforcement proceeding the operator seeking to establish the occurrence of an upset has the burden of proof.

W. Inspection and entry. The operator shall allow the department as the board's designee, or an authorized representative (including an authorized contractor acting as a representative of the administrator), upon presentation of credentials and other documents as may be required by law, to:

1. Enter upon the operator's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this state permit;

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this state permit;

3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this state permit; and

4. Sample or monitor at reasonable times, for the purposes of assuring state permit compliance or as otherwise authorized by the Clean Water Act and the Virginia Stormwater Management Act, any substances or parameters at any location.

For purposes of this subsection, the time for inspection shall be deemed reasonable during regular business hours, and whenever the facility is discharging. Nothing contained herein shall make an inspection unreasonable during an emergency.

X. State permit actions. State permits may be modified, revoked and reissued, or terminated for cause. The filing of a request by the operator for a state permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any state permit condition.

Y. Transfer of state permits.

1. State permits are not transferable to any person except after notice to the department. Except as provided in Section III Y 2, a state permit may be transferred by the operator to a new operator only if the state permit has been modified or revoked and reissued, or a minor modification made, to identify the new operator and incorporate such other requirements as may be necessary under the Virginia Stormwater Management Act and the Clean Water Act.

2. As an alternative to transfers under Section III Y 1, this state permit may be automatically transferred to a new operator if:

a. The current operator notifies the department at least two days in advance of the proposed transfer of the title to the facility or property;

b. The notice includes a written agreement between the existing and new operators containing a specific date for transfer of state permit responsibility, coverage, and liability between them; and

c. The board does not notify the existing operator and the proposed new operator of its intent to modify or revoke and reissue the state permit. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in Section III Y 2 b.

Z. Severability. The provisions of this state permit are severable, and if any provision of this state permit or the application of any provision of this state permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this state permit, shall not be affected thereby.

Statutory Authority

§ 62.1-44.15:28 of the Code of Virginia.

Historical Notes

Former 4VAC50-60-1240, derived from Virginia Register Volume 21, Issue 3, eff. January 29, 2005; amended, Virginia Register Volume 24, Issue 20, eff. July 9, 2008; Volume 29, Issue 4, eff. November 21, 2012; Volume 29, Issue 17, eff. July 1, 2013; amended and renumbered, Virginia Register Volume 30, Issue 2, eff. October 23, 2013.

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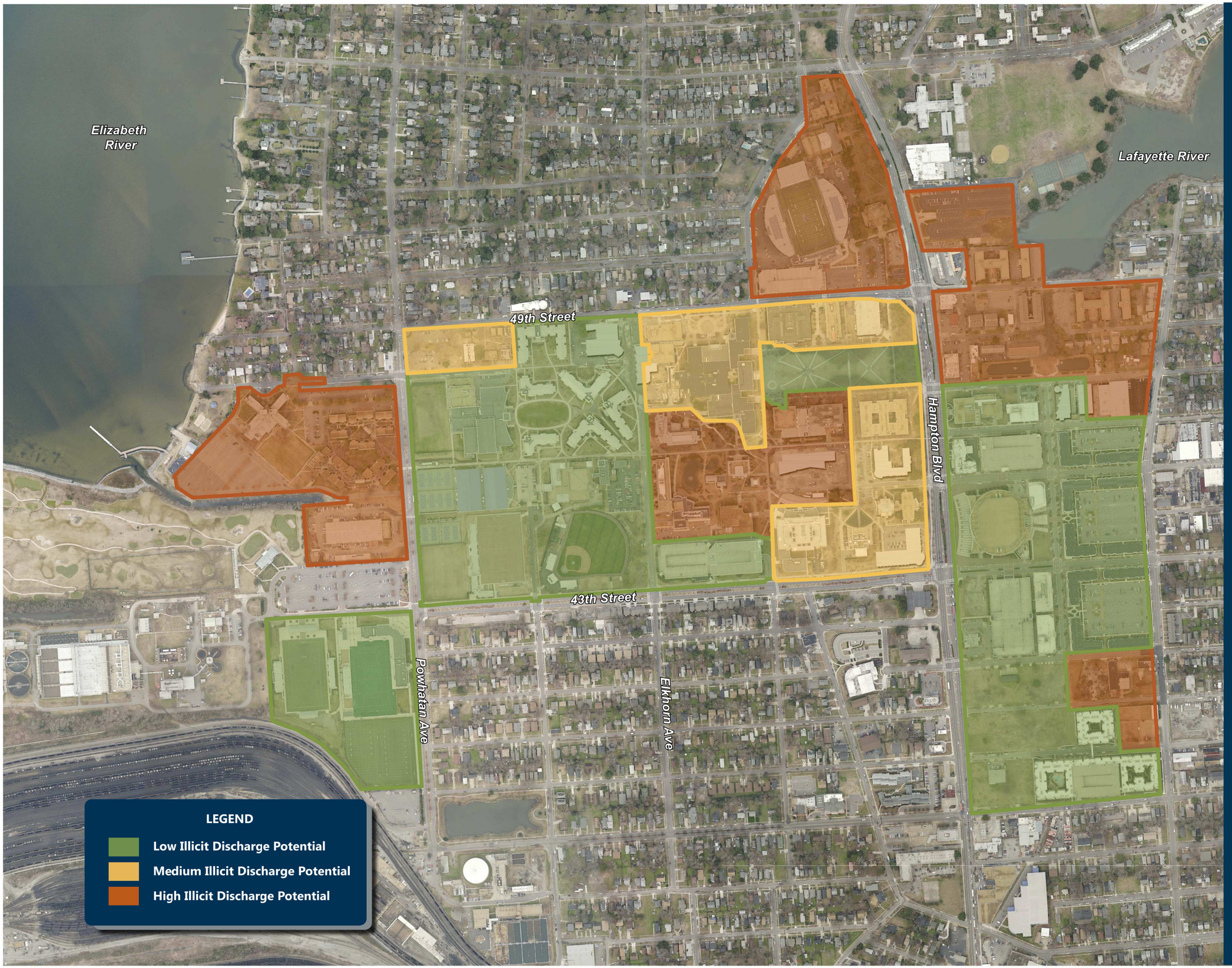
Appendix C:
Illicit Discharge Potential (IDP) Graphics



Illicit Discharge Detection and Elimination Program

Exhibit 3
Illicit Discharge Potential Map

0 125 250 Feet

OLD DOMINION UNIVERSITY
IDEA FUSION

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DRAINAGE TO OUTFALL #2
DRAINAGE AREA: 121.09 Acres

BOLLING AVENUE
BLUESTONE AVENUE
MONTERAY AVENUE
HAMPTON BOULEVARD
LONGWOOD DRIVE
SPONG HALL
LOT 2
ROLLINS HALL
LOT 35
LOT 5
LOT 34
Guest House (Monterey House)
CRITTENTON HALL NROTC
NORTH STANDS
S.B. BALLARD STADIUM FOREMAN FIELD
VISITORS LOCKER
WEST STANDS
EAST STANDS
LARCHMONT ELEMENTARY SCHOOL
W.H.R.O. MEDIA BUILDING

Legend

- LOW ILLICIT DISCHARGE POTENTIAL
- MEDIUM ILLICIT DISCHARGE POTENTIAL
- HIGH ILLICIT DISCHARGE POTENTIAL
- MAJOR OUTFALL SAMPLING POINT
- MINOR OUTFALL SAMPLING POINT
- MAJOR NODE IN SYSTEM TO TEST
- DRAINAGE AREA DIVIDE
- PARKING LOTS AND LOADING DOCKS
- BEST MANAGEMENT PRACTICES
- HIGH POTENTIAL POLLUTANT SOURCE
- GROUNDS

0 50 100 Feet

vhb

Old Dominion University
Norfolk, Virginia
Illicit Discharge Potential Map
Sheet 1 of 13

OUTFALL #8

DRAINAGE TO OUTFALL #8
DRAINAGE AREA: 4.44 Acres

DRAINAGE TO OUTFALL #4
DRAINAGE AREA: 9.49 Acres

DRAINAGE TO OUTFALL #7
DRAINAGE AREA: 2.90 Acres

DRAINAGE TO OUTFALL #6
DRAINAGE AREA: 0.84 Acres

DRAINAGE TO OUTFALL #5
DRAINAGE AREA: 0.61 Acres

DRAINAGE TO OUTFALL #1
DRAINAGE AREA: 86.90 Acres

OUTFALL #7

OUTFALL #6

OUTFALL #5

OUTFALL #4

OUTFALL #1

48TH STREET

WHITEHURST HALL

POWHATAN APARTMENTS I

POWHATAN APARTMENTS II

LOT 32

LOT 42

LOT 41

INTRAMURAL FIELDS

BOAT HOUSE

SAILING CENTER

GAZEBO

ELIZABETH RIVER

Legend

- LOW ILLICIT DISCHARGE POTENTIAL
- MEDIUM ILLICIT DISCHARGE POTENTIAL
- HIGH ILLICIT DISCHARGE POTENTIAL
- MAJOR OUTFALL SAMPLING POINT
- MINOR OUTFALL SAMPLING POINT
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- GROUNDS

0 50 100 Feet

Old Dominion University
Norfolk, Virginia
Illicit Discharge Potential Map
Sheet 2 of 13

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Legend

0 50 100 Feet

- LOW ILLICIT DISCHARGE POTENTIAL
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- GROUNDS

vhb

Old Dominion University
Norfolk, Virginia
Illicit Discharge Potential Map
Sheet 3 of 13

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DRAINAGE TO OUTFALL #2
DRAINAGE AREA: 121.09 Acres

DRAINAGE TO OUTFALL #3
DRAINAGE AREA: 67.76 Acres

WEST STANDS
EAST STANDS
S.B. BALLARD STADIUM
FOREMAN FIELD
AINSLIE FOOTBALL
COMPLEX
KOCH HALL
LOT 1
LOT 6
LOT 8
LOT 9
LOT 5
MELROSE
PARKWAY
BOULEVARD AVENUE
HAMPTON BOULEVARD
49TH STREET
48TH STREET
49TH STREET
STADIUM GARAGE
(GARAGE E)
VISITOR LOT
KORNBLAU ALUMNI
CENTER
PRESBYTERIAN
MINISTRY
CATHOLIC STUDENT
CENTER
WEBB CENTER
VIP LOT
CONSTANT
HALL
CONSTANT
HALL
VISUAL ARTS
BUILDING
DRAGAS
HALL

Legend

- LOW ILLICIT DISCHARGE POTENTIAL
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0 50 100 Feet

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Old Dominion University
Norfolk, Virginia
Illicit Discharge Potential Map
Sheet 4 of 13

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OUTFALL #2

OUTFALL 3

DRAINAGE TO OUTFALL #3
DRAINAGE AREA: 67.76 Acres

LAFAYETTE RIVER

49TH STREET

47TH STREET

ROGERS MAIN

RODGERS EAST ANNEX

LOT 33

LOT 11

LOT 56

LOT 28

LOT 15

LOT 18

LOT 37

GRESHAM MAIN

GRESHAM EAST ANNEX

VRBW FOUNDATION HOUSE

NUSBAUM APARTMENTS A-N

NUSBAUM APARTMENTS O-Y

NUSBAUM APARTMENTS 1-12

BROCK COMMONS

RETENTION POND

RETENTION POND

GILLUM AVENUE

Legend

- LOW ILLICIT DISCHARGE POTENTIAL
- MEDIUM ILLICIT DISCHARGE POTENTIAL
- HIGH ILLICIT DISCHARGE POTENTIAL
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- MINOR OUTFALL SAMPLING POINT
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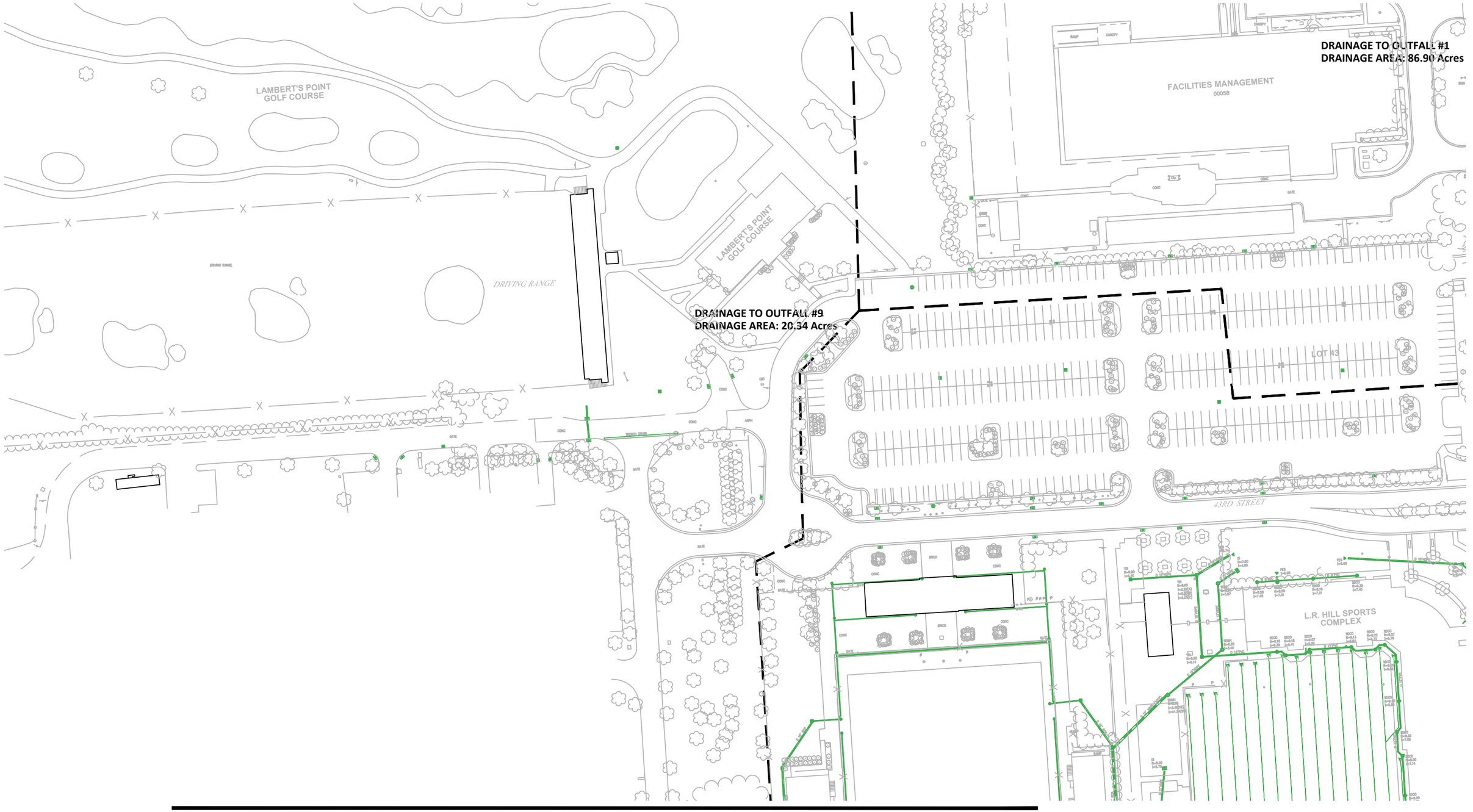
- HIGH POTENTIAL POLLUTANT SOURCE
- GROUNDS

0 50 100 Feet

vhb

Old Dominion University
Norfolk, Virginia
Illicit Discharge Potential Map
Sheet 5 of 13



Legend

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0 50 100 Feet

vhb

Old Dominion University
Norfolk, Virginia
Illicit Discharge Potential Map
Sheet 6 of 13

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DRAINAGE TO OUTFALL #1
DRAINAGE AREA: 86.90 Acres

FOLKES-STEVENS TENNIS CENTER
TENNIS COURTS
TENNIS COURTS
SOCCER STADIUM
SOCCER LOCKER ROOMS
BLEACHERS
ATHLETIC ADMINISTRATION BUILDING
LOT 70
LOT 23
OCEANOGRAPHY & PHYSICS BUILDING
ELKHORN AVENUE
PUMP HOUSE
BATTING CAGE
SKILLS
BULLPEN
BUD METHANY BASEBALL FACILITY
BUD METHANY BASEBALL FACILITY
BUD METHANY BASEBALL FACILITY
BLEACHERS
BLEACHERS
BLEACHERS
DETENTION POND
LOT38
ELKORN AVENUE (GARAGE
PARKING & TRANSPORA
43RD STREET
PARKER AVENUE
ROSHTAN AVENUE

Legend

- LOW ILLICIT DISCHARGE POTENTIAL
- MEDIUM ILLICIT DISCHARGE POTENTIAL
- HIGH ILLICIT DISCHARGE POTENTIAL
- MAJOR OUTFALL SAMPLING POINT
- MINOR OUTFALL SAMPLING POINT
- MAJOR NODE IN SYSTEM TO TEST
- DRAINAGE AREA DIVIDE
- PARKING LOTS AND LOADING DOCKS
- BEST MANAGEMENT PRACTICES
- HIGH POTENTIAL POLLUTANT SOURCE
- GROUNDS

0 50 100 Feet

vhb

Old Dominion University
Norfolk, Virginia
Illicit Discharge Potential Map
Sheet 7 of 13

\\VABEDATA\projects\31311.67 ODU IDDE Update-SWPPP\tech\CAD\31311.67-Figures - IDDEP.dwg

DRAINAGE TO OUTFALL #1
DRAINAGE AREA: 86.90 Acres

DRAINAGE TO OUTFALL #2
DRAINAGE AREA: 121.09 Acres

WEBB UNIVERSITY CENTER
KAUFMAN HALL
EDUCATION BUILDING
UNIVERSITY THEATRE
47TH STREET
HAMPTON BOULEVARD
ENGINEERING SYSTEMS BUILDING
ALFRIEND CHEMISTRY BUILDING
MARY DENSON PRETLOW PLANETARIUM
KAPLAN ORCHID CONSERVATORY
LOT 19
LIONS CHILD STUDY CENTER
LOT 29
BATTEN ARTS AND LETTERS BUILDING
LEARNING COMMONS
PHYSICAL SCIENCES BUILDING
MARRIOTT SPRIN SUITES HOTI

Legend

0 50 100 Feet

- LOW ILLICIT DISCHARGE POTENTIAL
- MEDIUM ILLICIT DISCHARGE POTENTIAL
- HIGH ILLICIT DISCHARGE POTENTIAL
- MAJOR OUTFALL SAMPLING POINT
- MINOR OUTFALL SAMPLING POINT
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- GROUNDS

vhb

Old Dominion University
Norfolk, Virginia
Illicit Discharge Potential Map
Sheet 8 of 13

\\VABEDATA\projects\31311.67 ODU IDDE Update-SWPPP\tech\CAD\31311.67-Figures - IDDEP.dwg

Legend

- LOW ILLICIT DISCHARGE POTENTIAL
- MEDIUM ILLICIT DISCHARGE POTENTIAL
- HIGH ILLICIT DISCHARGE POTENTIAL
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- DRAINAGE AREA DIVIDE
- PARKING LOTS AND LOADING DOCKS
- BEST MANAGEMENT PRACTICES
- HIGH POTENTIAL POLLUTANT SOURCE
- GROUNDS

0 50 100 Feet

Old Dominion University
Norfolk, Virginia
Illicit Discharge Potential Map
Sheet 9 of 13

\\VABEDATA\projects\31311.67 ODU IDDE Update-SWPPP\tech\CAD\31311.67-Figures - IDDEP.dwg

Legend

- LOW ILLICIT DISCHARGE POTENTIAL
- MEDIUM ILLICIT DISCHARGE POTENTIAL
- HIGH ILLICIT DISCHARGE POTENTIAL
- MAJOR OUTFALL SAMPLING POINT
- MINOR OUTFALL SAMPLING POINT
- MAJOR NODE IN SYSTEM TO TEST
- DRAINAGE AREA DIVIDE
- PARKING LOTS AND LOADING DOCKS
- BEST MANAGEMENT PRACTICES
- HIGH POTENTIAL POLLUTANT SOURCE
- GROUNDS

0 50 100 Feet

Old Dominion University
Norfolk, Virginia
Illicit Discharge Potential Map
Sheet 10 of 13

\\VABEDATA\projects\31311.67 ODU IDDE Update-SWPPP\tech\CAD\31311.67-Figures - IDDEP.dwg

Legend

- LOW ILLICIT DISCHARGE POTENTIAL
- MEDIUM ILLICIT DISCHARGE POTENTIAL
- HIGH ILLICIT DISCHARGE POTENTIAL
- MAJOR OUTFALL SAMPLING POINT
- MINOR OUTFALL SAMPLING POINT
- MAJOR NODE IN SYSTEM TO TEST
- DRAINAGE AREA DIVIDE
- PARKING LOTS AND LOADING DOCKS
- BEST MANAGEMENT PRACTICES
- HIGH POTENTIAL POLLUTANT SOURCE
- GROUNDS

0 50 100 Feet

vhb

Old Dominion University
Norfolk, Virginia
Illicit Discharge Potential Map
Sheet 11 of 13

\\VABEDATA\projects\31311.67 ODU IDDE Update-SWPPP\tech\CAD\31311.67-Figures - IDDEP.dwg

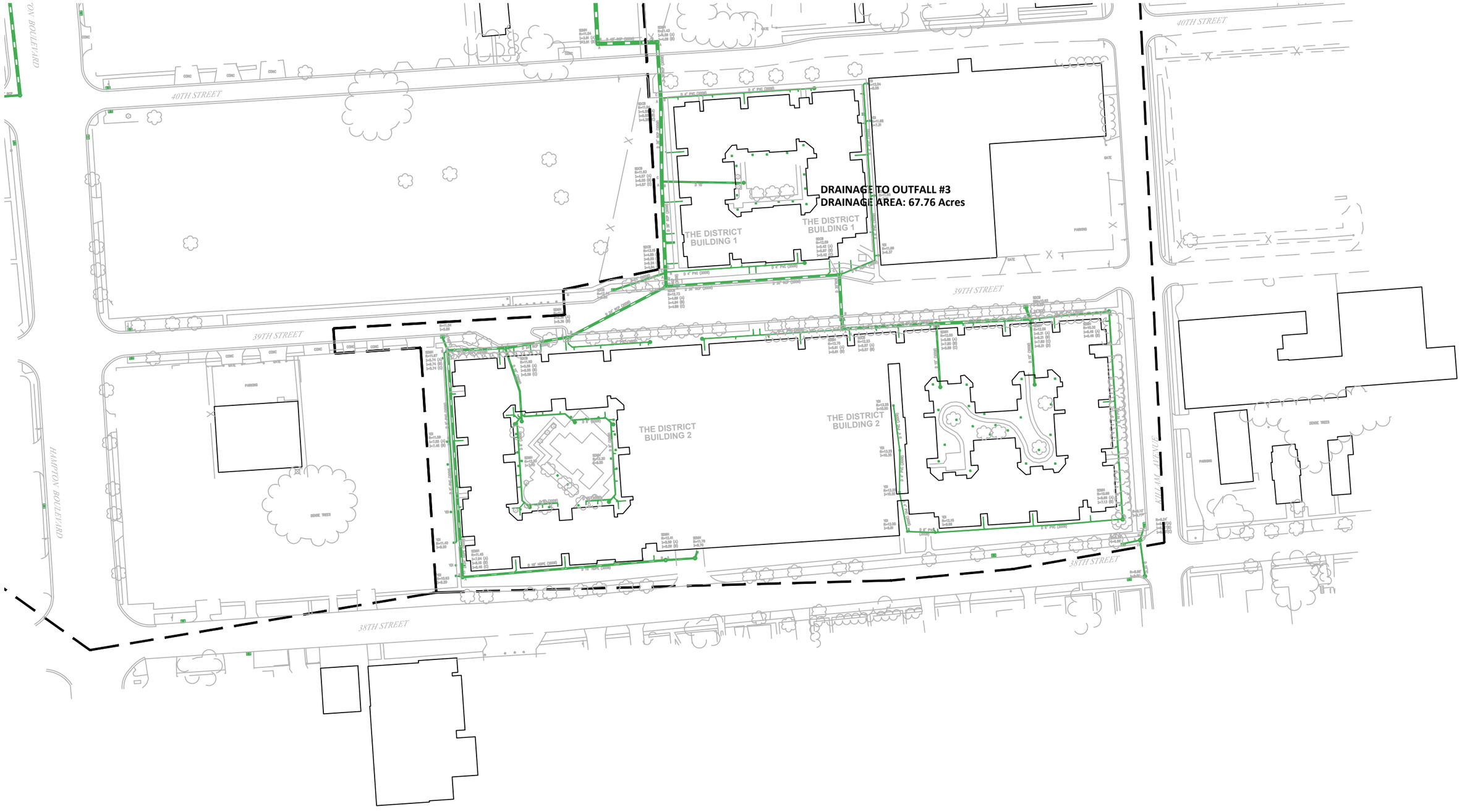
Legend

- LOW ILLICIT DISCHARGE POTENTIAL
- MEDIUM ILLICIT DISCHARGE POTENTIAL
- HIGH ILLICIT DISCHARGE POTENTIAL
- MAJOR OUTFALL SAMPLING POINT
- MINOR OUTFALL SAMPLING POINT
- MAJOR NODE IN SYSTEM TO TEST
- DRAINAGE AREA DIVIDE
- PARKING LOTS AND LOADING DOCKS
- BEST MANAGEMENT PRACTICES
- HIGH POTENTIAL POLLUTANT SOURCE
- GROUNDS

0 50 100 Feet

Old Dominion University
Norfolk, Virginia
Illicit Discharge Potential Map
Sheet 12 of 13

\\VABEDATA\projects\31311.67 ODU IDDE Update-SWPPP\tech\CAD\31311.67-Figures - IDDEP.dwg



Legend

- LOW ILLICIT DISCHARGE POTENTIAL
- MEDIUM ILLICIT DISCHARGE POTENTIAL
- HIGH ILLICIT DISCHARGE POTENTIAL
- MAJOR OUTFALL SAMPLING POINT
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- HIGH POTENTIAL POLLUTANT SOURCE
- GROUNDS

0 50 100 Feet

vhb

Old Dominion University
Norfolk, Virginia
Illicit Discharge Potential Map
Sheet 13 of 13

Appendix D:
IDDE Program Goal Matrix

Five-Year Stormwater Management Plan Outline
Old Dominion University - Department of Environmental Health and Safety
Stormwater Phase II Compliance: August 2016-2021

MINIMUM MEASURE 3: ILLICIT DISCHARGE DETECTION AND ELIMINATION

BMP Category	Best Management Practice (BMP) or Task towards future BMP	Measurable Goal	Current Programs in Place	Responsible Party	Estimated Annual Cost	Anticipated Funding Source	2016-2017 Annual Objectives Achieved	2017-2018 Annual Objectives Achieved	2018-2019 Annual Objectives Achieved	2019-2020 Annual Objectives Achieved	2020-2021 Annual Objectives Achieved
Illicit Discharge Prohibition	**Proposed Program: Comply with Existing Regulations and work towards compliance with IDDE Program Manual developed in 2007**										
	1 Proposed Program: Comply with existing regulations	Measurable Goal: Track notices of violation									
	2 Proposed Program: Comply with proposed IDDE Policy	Measurable Goal: Ultimately have no notices of violation for surface discharges in a given permit year									
Illicit Discharge Detection	**Proposed Program: Map Campus Stormwater Outfalls**										
	1 Mapping of Campus Storm Sewer System	Measurable Goal: Updating mapping at least once per year for new projects and any unmapped areas (budget $1500 per project area)									
	2 Proposed Program: Locate priority areas or facilities likely to have an illicit discharge	Measurable Goal: Using IDDE Program Developed, develop a list of campus areas and facilities that have a high illicit discharge potential (IDP)									
	Proposed Program: Inspect Stormwater Outfalls for dry weather discharges										
	1 Proposed Program: Train Field Investigation Personnel	Measurable Goal: Hire part time field investigation employees or allocate time for current employees (2 person crew) to be educated on detection of illicit outfalls.									
	2 Proposed Program: Field Investigation of outfalls	Measurable Goal: Take water samples at the two major outfall sampling points (#1 and #2 behind FMB and Roger's Hall) of the campus. Inspectors will screen outfalls using methods described in the Finding Illicit Discharges Section in the IDDE Program Manual.									
		Measurable Goal: Visually screen ALL campus outfalls and nodes yearly. Inspectors will screen outfalls using methods described in the Finding Illicit Discharges Section in the IDDE Program Manual.									
	3 Proposed Program: Trace and Remove Illicit Discharge	Measurable Goal: Using test results from #2 above, if pollutants are above safe levels, develop a strategy for working upstream to determine where sources of illicit discharges exist around the campus									
	Proposed Program: Inspect and Replace/Repair Sanitary Sewer pipes as necessary to prevent illicit discharges										
		Measurable Goal: Updating mapping at least once per year for new projects and any unmapped areas (budget $1500 per project area)									
		Measurable Goal: Replace/Repair/Slip-Line sanitary sewer lines indicated as Poor Condition on the 2008 Campus wide sanitary sewer system study/survey									
	Proposed Program: Stormwater catch basin stenciling program										
		Measurable Goal: Continue maintenance of the SW markers on existing drainage inlets and provide markers on new storm drains as they are constructed.									

MINIMUM MEASURE 3: ILLICIT DISCHARGE DETECTION AND ELIMINATION

BMP Category	Best Management Practice (BMP) or Task towards future BMP	Measurable Goal	Current Programs in Place	Responsible Party	Estimated Annual Cost	Anticipated Funding Source	2016-2017 Annual Objectives Achieved	2017-2018 Annual Objectives Achieved	2018-2019 Annual Objectives Achieved	2019-2020 Annual Objectives Achieved	2020-2021 Annual Objectives Achieved
Illicit Discharge Education	Proposed Program: Evaluate and Expand the existing IDDE education program										
		Measurable Goal: Prepare and distribute handouts for campus community addressing illicit discharges from their specific activities that may impact stormwater quality.									
	Proposed Program: Create an illicit discharge reporting program										
		Measurable Goal: Publicize pollution prevention telephone numbers and/or web sites to report illicit discharges around campus									

Abbreviations
FM - ODU Facilities Management
EHSO - Environmental Health and Safety Office
DC - Design and Construction Department
AOB - Annual Operating Budget
CP - Capital Project
SWB - Stormwater Budget
N/A - Not Applicable

Definitions
ODU Fiscal Year - July 1st through June 30th
ODU 2017 Fiscal Year - July 1, 2016 through June 30, 2017
ODU 2018 Fiscal Year - July 1, 2017 through June 30, 2018
ODU 2019 Fiscal Year - July 1, 2018 through June 30, 2019
ODU 2020 Fiscal Year - July 1, 2019 through June 30, 2020
ODU 2021 Fiscal Year - July 1, 2020 through June 30, 2021

Appendix E:
Sample IDDE Program Forms

- List of Known Stormwater Outfalls
- Manhole Inspection Sheet
- Outfall Inspection Sheet
- Outfall Sample Collection Field Sheet
- Sewer and Storm Drain Improvement Tracking Sheet
- Catch Basin Cleaning Record
- Illicit Discharge Hotline Incident Tracking Sheet
- Spill Response Procedure Template
- Water Quality Testing Price Quotes

OLD DOMINION UNIVERSITY
IDEA FUSION

LIST OF KNOWN STORMWATER OUTFALLS

Elizabeth River (East/West Tidal Canal south of Powhatan Apartments)

1. 78″ ERCP at Powhatan Avenue
4. 36″ RCP from Powhatan Apartments and Whitehurst Hall
5. 18″ RCP from Lot 42 – Whitehurst Hall
6. 15″ RCP from Lot 42 – Whitehurst Hall
7. 24″ RCP from Lot 42 – Whitehurst Hall
8. 18″ RCP at 48th Street – Whitehurst Hall
9. 42″ RCP at L.R. Hill Sports Complex

Lafayette River

2. 60″ x 36″ Double Box Culvert behind Roger's Hall
3. (2) 48″ RCP crossing 49th Street beside Roger's Hall

*This list does not represent all campus outfalls, only the outfalls known prior to field research

OLD DOMINION UNIVERSITY
IDEA FUSION

MANHOLE INSPECTION FORM

Location I.D. _____ Photograph # _____

Inspection Date: _____ Time: _____ Weather Conditions: _____ Temp ____°C

Tributary Area: _____

Street: _____ Town: _____ State: ____

Manhole Type: Sanitary Sewer_____ Storm Drain_____ Combined Sewer_____

Inspection: Not Found_____ Surface_____ Internal_____ Follow Up Inspection_____

Time Since Last Rainfall: < 48 hours _____ 48 – 72 hours _____ > 72 hours _____

Inspector: _____

Observations of Manhole:

Standing Water in Manhole: ❑ Yes ❑ No _____

Flow in Manhole: ❑ Yes ❑ No _____ Depth of Flow: _____ in.

Sediment in Manhole: ❑ Yes ❑ No_____ If Yes: Percent of Pipe Filled: _____ %

Color of Water: ❑ None ❑ Yellow Brown ❑ Green Gray ❑ Other _____

Turbidity: ❑ None ❑ Cloudy ❑ Opaque ❑ Other _____

Velocity: ❑ Slow ❑ Medium ❑ Fast _____

Blockages: ❑ Yes ❑ No _____

Floatables: ❑ None ❑ Sewage ❑ Oily Sheen ❑ Foam ❑ Other _____

(Describe) _____(Collect Sample)

Odor: ❑ None ❑ Sewage ❑ Oil ❑ Soap ❑ Sulfide ❑ Gas ❑ Rancid/Sour ❑ Other _____

Field Testing:

pH _____ Temp _____ Spec. Cond. _____ Surfactants: ❑ Yes ❑ No _____ Ammonia: ❑ Yes ❑ No _____

Contamination:

Known Industrial or Commercial uses in Drainage Area: ❑ Yes ❑ No

Describe _____

Found During Inspection: ❑ Yes ❑ No _____

If Yes: (Observation/Positive Test Kit Results) _____

If No, Sandbag placed: ❑ Yes ❑ No _____ If Yes: Date _____

Sandbag Checked (Date): _____

Flow: ❑ Captured ❑ Not Captured _____

If Flow Captured: ❑ Visual Evidence ❑ Test Kit Positive ❑ Test Kit Negative (Not Contaminated)) _____

OLD DOMINION UNIVERSITY
IDEA FUSION

MANHOLE INSPECTION FORM

Condition of Manhole:

Grade: At _____ Above_____ Below _____

Common Manholes:

High Outlet: Blocked Yes ___ No ___ NA ___

Lovejoy: Cover Plate in Place Yes ___ No ___ NA ___

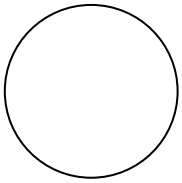
	Good	Fair	Poor	Comments
Pavement	_____	_____	_____	_____
Cover	_____	_____	_____	_____
Frame	_____	_____	_____	_____
Corbel	_____	_____	_____	_____
Walls	_____	_____	_____	_____
Floor	_____	_____	_____	_____

Construction Material:

	Brick	Precast	Other
Corbel	____	_____	_____
Walls	____	_____	_____
Floor	____	_____	_____

Comments: Manhole Correct as Mapped ❑ Yes _____ ❑ No _____

N↑



Plan of Manhole

OLD DOMINION UNIVERSITY
IDEA FUSION

OUTFALL INSPECTION FORM

Location I.D. _____ Photograph # _____

Inspection Date: _____ Time: _____ Weather Conditions: _____ Temp ____°C

Tributary Area: _____

Street: _____ Town: _____ State: ____

Culvert Size and Shape: _____

Inspection: Not Found_____ Surface_____ Internal_____ Follow Up Inspection_____

Time Since Last Rainfall: < 48 hours _____ 48 – 72 hours _____ > 72 hours _____

Inspector: _____

Observations of Outfall:

Access to End of Pipe: ❑ Yes ❑ No _____If No: (Why) _____

End of Pipe Flows into: ❑ Lake ❑ Stream ❑ Wetland ❑ Ditch ❑ Other _____

End of Pipe Submerged: ❑ Yes ❑ No _____ If Yes: (How Much) _____%

End of Pipe Crushed: ❑ Yes ❑ No _____ If Yes: (How Much) _____%

Gate on End of Pipe: ❑ Yes ❑ No _____

If Yes, is grate Locked: ❑ Yes ❑ No _____

If Yes, is grate plugged: ❑ Yes ❑ No _____

Sediment Accumulation in Pipe: ❑ Yes ❑ No_____ If Yes: (How Much) _____%

Debris Accumulation in Pipe: ❑ Yes ❑ No_____ If Yes: (How Much) _____%
Describe: _____

Sediment Accumulation in Receiving Area ❑ Yes ❑ No_____ If Yes: (How Much) _____%

Debris Accumulation in Receiving Area: ❑ Yes ❑ No_____ If Yes: (How Much) _____%
Describe_____

Water Flowing: ❑ Yes ❑ No _____

Color of Water: ❑ None ❑ Yellow Brown ❑ Green Gray ❑ Other _____

Turbidity: ❑ None ❑ Cloudy ❑ Opaque ❑ Other _____

Depth of Water: _____

Velocity: ❑ Slow ❑ Medium ❑ Fast _____Estimate _____

Blockages: ❑ Yes ❑ No _____

Floatables: ❑ None ❑ Sewage ❑ Oily Sheen ❑ Foam ❑ Other _____
Describe _____(Collect Sample)

Odor: ❑ None ❑ Sewage ❑ Oil ❑ Soap ❑ Sulfide ❑ Gas ❑ Rancid/Sour ❑ Other _____

Deposits/Stains: ❑ None ❑ Sediment ❑ Oily ❑ Other_____
Describe _____(Collect Sample)

Vegetative Conditions: ❑ Normal ❑ Excessive Growth ❑ Inhibited Growth _____
Extent_____

OLD DOMINION UNIVERSITY
IDEA FUSION

OUTFALL INSPECTION FORM

Damage to Outfall Structure:

Type of Structure : _____

Damage to Structure: ❑ None ❑ Concrete Cracking ❑ Concrete Spalling ❑ Paint Peeling ❑ Corrosion
❑ Other _____ Extent _____

Field Testing:

pH _____ Temp _____ Spec. Cond. _____ Surfactants: ❑ Yes ❑ No _____ Ammonia: ❑ Yes ❑ No _____

Contamination:

Known Industrial or Commercial uses in Drainage Area: ❑ Yes ❑ No

Describe _____

Found During Inspection: ❑ Yes ❑ No _____

If Yes: (Observation/Positive Test Kit Results) _____

If No, Sandbag placed: ❑ Yes ❑ No _____ If Yes: Date _____

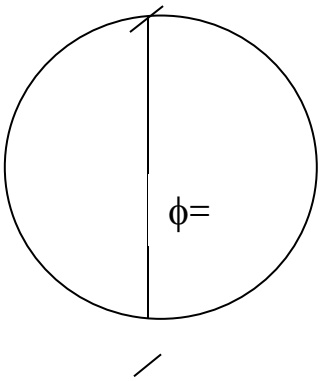
Sandbag Checked (Date): _____

Flow: ❑ Captured ❑ Not Captured _____

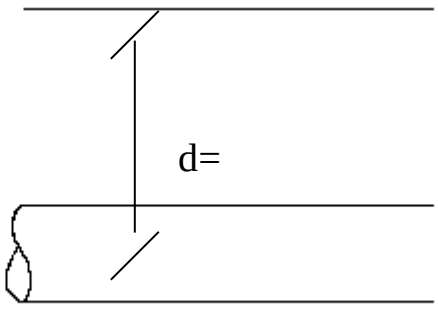
If Flow Captured: ❑ Visual Evidence ❑ Test Kit Positive ❑ Test Kit Negative (Not Contaminated)) _____

Comments: **N↑**

Circular/Arch:



Profile:



Material:
Depth of Flow:

L=
S=

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed:		Outfall ID:	
Today's date:		Time (Military):	
Investigators:		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: Last 48 hours:		
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	

Land Use in Drainage Area (Check all that apply):

☐ Industrial ☐ Open Space

☐ Ultra-Urban Residential ☐ Institutional

☐ Suburban Residential Other: _____

☐ Commercial Known Industries: _____

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☐ **Closed Pipe**	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☐ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☐ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: _____	In Water: ☐ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☐ No *If No, Skip to Section 5*				
Flow Description (If present)	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
☐Flow #2	Flow depth		In	Tape measure
	Flow width	____' ____"	Ft, In	Tape measure
	Measured length	____' ____"	Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			°F	Thermometer
pH			pH Units	Test strip/Probe
Ammonia			mg/L	Test strip

Investigation Notes	
Initial investigation date:	Investigators:
☐ No investigation made	Reason:
☐ Referred to different department/agency:	Department/Agency:
☐ Investigated: No action necessary	
☐ Investigated: Requires action	Description of actions:
Hours between call and investigation:	Hours to close incident:
Date case closed:	
Notes:	

ODU SEWER AND STORM DRAIN IMPROVEMENT TRACKING SHEET

	Date	Location	Company	Field Work Completed	Follow-Up Work Completed	Costs	Comments
Sewer							
Storm							
Other							

OLD DOMINION UNIVERSITY
IDEA FUSION

Old Dominion University - Department of Environmental Health and Safety

Stormdrain – Catch Basin Cleaning Record

Date: _____Cleaning Contractor Name: _____

Operator Name:_____

Start Time: _____ End Time:_____

Daily Work Log

Street Name	No. of Catchbasins Cleaned	Length of Storm Drain Cleaned	Dump Bed Size in cubic Yards = _____ No. of Loads	Detailed Comments (such as "damaged structures", "could not clean due to parked cars", "evidence of illegal dumping"," excessive leaf litter", etc.)
TOTALS:				

Notes:

Illicit Discharge Hotline Incident Tracking Sheet

Incident ID:

Responder Information	
Call taken by:	Call date:
Call time:	Precipitation (inches) in past 24-48 hrs:
Reporter Information	
Incident time:	Incident date:
Caller contact information (*optional*):	

Incident Location *(complete one or more below)*

Latitude and longitude:			
Stream address or outfall #:			
Closest street address:			
Nearby landmark:			
Primary Location Description	**Secondary Location Description:**		
☐ Stream corridor *(In or adjacent to stream)*	☐ Outfall	☐ In-stream flow	☐ Along banks
☐ Upland area *(Land not adjacent to stream)*	☐ Near storm drain	☐ Near other water source (storm water pond, wetland, etc.):	
Narrative description of location:			

Upland Problem Indicator Description

☐ Dumping	☐ Oil/solvents/chemicals	☐ Sewage
☐ Wash water, suds, etc.	☐ Other: _____	

Stream Corridor Problem Indicator Description

Odor	☐ None	☐ Sewage	☐ Rancid/Sour	☐ Petroleum (gas)
	☐ Sulfide (rotten eggs); natural gas	☐ Other: Describe in "Narrative" section		
Appearance	☐ "Normal"	☐ Oil sheen	☐ Cloudy	☐ Suds
	☐ Other: Describe in "Narrative" section			
Floatables	☐ None:	☐ Sewage (toilet paper, etc)	☐ Algae	☐ Dead fish
	☐ Other: Describe in "Narrative" section			
Narrative description of problem indicators:				
Suspected Violator (name, personal or vehicle description, license plate #, etc.):				

OLD DOMINION UNIVERSITY
IDEA FUSION

Spill Response Procedure

Initial Notification

In the event of a spill the facility and/or construction manager or supervisor will be notified immediately.

Facility Manager (name) _____

Facility Manager (phone) _____

Construction Manager (name) _____

Construction Manager (phone) _____

Assessment - Initial Containment

The supervisor or manager will assess the incident and initiate containment control measures with the appropriate spill containment equipment included in the spill kit kept on-site. The supervisor will first contact the Fire Department and then notify the Police Department, Board of Health and Conservation Commission. The fire department is ultimately responsible for matters of public health and safety and should be notified immediately.

Fire Department Phone: 911

Police Department: 911

Board of Health Phone: _____

Conservation Commission Phone: _____

Further Notification

Based on the assessment from the Fire Chief, additional notification to a cleanup contractor may be made. The Massachusetts Department of Environmental Protection (DEP) and the EPA may be notified depending upon the nature and severity of the spill. The Fire Chief will be responsible for determining the level of cleanup and notification required. The attached list of emergency phone numbers shall be posted in the main construction/facility office and readily accessible to all employees.

OLD DOMINION UNIVERSITY
IDEA FUSION

HAZARDOUS WASTE / OIL SPILL REPORT

Date_____/_____/_____ Time_____ AM / PM

Exact location (Transformer #)_____

Type of equipment_____Make_____Size_____

S / N_____Weather Conditions_____

On or near water ☐ Yes If yes, name of body of water_____
☐ No

Type of chemical / oil spilled_____

Amount of chemical / oil spilled_____

Cause of spill_____

_____

Measures taken to contain or clean up spill_____

_____

_____

Amount of chemical / oil recovered_____Method_____

Material collected as a result of clean up

_____drums containing_____

_____drums containing_____

_____drums containing_____

Location and method of debris disposal_____

_____

Name and address of any person, firm, or corporation suffering damages_____

_____

Procedures, method, and precautions instituted to prevent a similar occurrence from recurring____

_____

Spill reported to General Office by_____Time_____AM / PM

Spill reported to DEP / National Response Center by_____

DEP Date_____/_____/_____ Time_____ AM / PM Inspector_____

NRC Date_____/_____/_____ Time_____ AM / PM Inspector_____

Additional comments_____

_____

EMERGENCY RESPONSE EQUIPMENT

INVENTORY

The following equipment and materials shall be maintained at all times and stored in a secure area for long-term emergency response need.

--	SORBENT PADS	X BALES
--	SORBENT BOOM	X FEET
--	SAND BAGS (empty)	X
--	SEWER PIPE PLUGS	X
--	SPEEDI-DRI ABSORBENT	X
--	SQUARE END SHOVELS	X
--	PICK	X
--	PRY BAR	X
--	DRAIN COVERS	X

OLD DOMINION UNIVERSITY
IDEA FUSION

EMERGENCY NOTIFICATION PHONE NUMBERS

1. SUPERVISOR/MANAGER
   NAME: _____ MOBILE: _____
   PHONE: _____ HOME PHONE: _____

   ALTERNATE:
   NAME: _____ MOBILE: _____
   PHONE: _____ HOME PHONE: _____

2. FIRE DEPARTMENT
   EMERGENCY: 911
   BUSINESS:

   POLICE DEPARTMENT
   EMERGENCY: 911
   BUSINESS:

3. CLEANUP CONTRACTOR: _____
   ADDRESS: _____
   PHONE: _____

4. VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
   EMERGENCY:
   SOUTHEAST REGION:

5. NATIONAL RESPONSE CENTER
   PHONE: (800) 424-8802

   ALTERNATE: U.S. ENVIRONMENTAL PROTECTION AGENCY
   EMERGENCY:
   BUSINESS:

6. CONSERVATION COMMISSION
   CONTACT:

   BOARD OF HEALTH
   CONTACT:

7. FACILITY MANAGER
   NAME: _____
   PHONE: _____

SUBMITTED TO:
VHB
Attn: Lara Hamze
351 McLaws
Williamsburg, VA 23185
phone: (757) 279-2851
email: lhamze@vdh.com

PRICE QUOTE
VDH07-16
July 8, 2016

SUBMITTED BY:
James R. Reed and Associates
Elaine Claiborne
770 Pilot House Drive
Newport News, VA 23606
phone: (757) 873-4703
Fax: (757) 873-1498

RE: Water Testing

PARAMTER	METHOD	QUANTITATION LEVEL (mg/L)	HOLDING TIME	QTY	UNIT COST
Phosphorus/ Phosphate	365.1	0.1/0.31	28 days	1	$ 35.00
Total Nitrogen	351.2/353.2	0.5	28 days	1	$ 55.00
Total Suspended Solids	SM 2540D	1	7 days	1	$ 22.00
Sodium	200.7	0.5	6 months	1	$ 13.00
Calcium	200.7	0.01	6 months	1	$ 13.00
Magnesium	200.7	0.025	6 months	1	$ 13.00
Potassium	200.7	0.025	6 months	1	$ 13.00
Ammonia	SM 4500NH3	0.1	28 days	1	$ 30.00
Chloride	SM4500Cl G	1	28 days	1	$ 30.00
Sulfate	SM 4500SO4E	5	28 days	1	$ 45.00
Alkalinity	SM 23020B	1	14 days	1	$ 25.00
Bicarbonate					included
Carbonate					included
Nitrate*	353.2	0.05	28 days/48 hours*	1	$ 45.00
Copper	200.7	0.001	6 months	1	$ 13.00
Zinc	200.7	0.005	6 months	1	$ 13.00
Iron	200.7	0.01	6 months	1	$ 13.00
Aluminum	200.7	0.05	6 months	1	$ 13.00
Metals Prep				1	$ 13.00

Total Cost/Sample $ 404.00

NOTES:
Cost includes sample containers.
*****To determine Nitrate, Nitrite must be performed within 48 hours of collection
*Cost includes Nitrite analysis.
Samples must be stored and transported on ice to be received at the lab <6oC.
Terms: Net 30 upon setting up account, COD-Credit Card

- Add approximately $84.00 for Bacteria, pH, color, and odor testing.
- Total Cost/Sample ≈ $500.00