



MS4 ANNUAL REPORT
PERMIT NUMBER VAR040106

September 2012

Subject: GEORGE MASON UNIVERSITY MS4 ANNUAL REPORT, PERMIT NUMBER VAR040106

Dated: September 26, 2012

I certify under penalty of law that all documents and all attachments related to the submission and updating of the GEORGE MASON UNIVERSITY MS4 ANNUAL REPORT were prepared under my direction or supervision in 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 a fine and imprisonment for knowing violations.

Sincerely,



Thomas Calhoun
Vice President of Facilities

Table of Contents

I. INTRODUCTION.....	3
II. ABBREVIATIONS AND ACRONYMS.....	4
III. ANNUAL REPORT ADMINISTRATION.....	5-7
IV. APPENDICES.....	8-65
Appendix – A: Minimum Control Measures.....	8-42
a. Public Education and Outreach on Stormwater Impacts.....	9
b. Public Involvement/Participation.....	15
c. Illicit Discharge Detection and Elimination.....	17
d. Construction Site Stormwater Runoff Control.....	27
e. Post-Construction Stormwater Management.....	33
f. Pollution Prevention/ Good Housekeeping for Mason Facility.....	38
Appendix – B: Notice of Potential Interconnected MS4.....	44-50
Appendix – C: Notice of Corrective Action.....	52-57
Appendix – D: Current and Future Land Disturbing Projects.....	58-60
Appendix – E: Permanent Stormwater Management Facilities.....	62-63
Appendix – F: Drainage Markers.....	64-65

MAPS

Map 1: MS4 Connectivity Maps

Map 1.1: Connectivity Map – Fairfax Campus

Map 1.2: Connectivity Map – Prince William Campus

Map 2: MS4 Internal Outfalls

Map 2.1: Internal Outfalls - Fairfax Campus

Map 2.2: Internal Outfalls - Prince William

I. INTRODUCTION

As legislated by the Virginia Stormwater Management Program (VSMP) Permit Regulations (4VAC50-60 et. seq.), the Virginia Department of Conservation and Recreation (DCR) issued a VSMP General Permit (VAR040106) for small Municipal Separate Storm Sewer Systems (MS4) to George Mason University (Mason) 09 July 2008. This permit holds Mason accountable for developing and implementing an MS4 Program. The program guides Mason's design, construction, maintenance, and management of its facilities and campuses.

George Mason University's MS4 Program shall apply to all activities undertaken by the University, either by its internal workforce or contracted to external entities, where such activities are regulated by VSMP Permit Regulations. During any inspections of George Mason University's land disturbing activities, whether internal or by DCR, EPA, and other applicable environmental agencies, compliance with the permitted MS4 Program (and all parts thereof) will be verified.

George Mason University's MS4 Annual Report is submitted to the DCR for review and approval on an annual basis. George Mason University shall ensure compliance with the VSMP General Permit for MS4s issued 09 July 2008. This submittal constitutes Mason's commitment to execute all provisions contained herein on regulated land disturbing activities, land development projects, and operation and maintenance of installed stormwater management facilities. As such, this report will be made available to all appropriate Mason and DCR personnel and is available for download as a PDF file at:

<http://facilities.gmu.edu/LandDevelopment/storm1.htm>

II. ABBREVIATIONS and ACRONYMS

Abbreviation/ Acronym	Term
BMP	Best Management Practice
DCR	Virginia Department of Conservation and Recreation
EHS	Environmental, Health, & Safety
ESC	Erosion and Sediment Control
FM	Facilities Maintenance
Mason LD	George Mason University Land Development
MS4	Municipal Separate Storm Sewer System
OoS	Office of Sustainability
OCR	Office of Community Relations
PSA	Public Service Announcement
P&TS	Parking and Transportation Services
R&WM	Recycling and Waste Management
SWM	Stormwater Management
VESCL&R	Virginia Erosion and Sediment Control Law and Regulations
VSMP	Virginia Stormwater Management Program

III. ANNUAL REPORT ADMINISTRATION

- 3.1 *George Mason University Annual MS4 Report* submitted to DCR includes the following background information as required by the General Permit:
- 3.1.1 The name and permit number of the program submitting the annual report.
This report is submitted under permit number VAR040106 by Brad Glatfelter under the supervision of Thomas Calhoun, Vice President of Facilities.
- 3.1.2 The annual report permit year.
This Annual Report is for the year from 01 July 2011 to 30 July 2012.
- 3.1.3 Modifications to any operator's department's roles and responsibilities.
There are no changes in Mason LD's roles and responsibilities.
- 3.1.4 Number of new MS4 outfalls and associated acreage by HUC added during the permit year.
There are no new, physically added, MS4 outfalls added during the reporting year. However as a result of a recent outfall reconnaissance study conducted by Mason LD, a total of 18 outfalls were identified both at Fairfax Campus and Prince William Campus, which were not depicted in the existing Mason's MS4 maps. All outfalls that were identified during the study were added to Mason's MS4 database and internal MS4 maps.
- 3.1.5 A signed certification.
Refer to Page 1 of this report.
- 3.1.6 The status of compliance with permit conditions, an assessment of the appropriateness of the identified BMPs and progress towards achieving the identified measureable goals for each of the minimum control measures.
George Mason University continues to implement Best Management Practices in order to meet all requirements of the general permit. A summary of BMPs implemented by George Mason University is included in Section IV of this document. As a result of the annual program evaluation of the University's MS4, Mason LD was able to identify program deficiencies and areas that can be improved. A BMP has been proposed for areas identified as deficient or in the need of improvement. An estimated date of implementation and/or completion for each proposed BMP is provided in Section IV.
- 3.1.7 Results of information collected and analyzed, including monitoring data, if any, during the reporting cycle.
No monitoring data has been collected. However, Mason LD is in the process of developing a quality monitoring program for surface waters within campus. Refer to Section IV for more information on proposed BMPs associated with monitoring procedures.
- 3.1.8 A summary of the stormwater activities the operator plans to undertake during the next reporting cycle.
Refer to Appendix A for a list of the anticipated project expected to begin during the next reporting cycle. Each project includes a stormwater portion.
- 3.1.9 A change in any identified BMPs or measureable goal for any of the minimum control

measures including steps to be taken to address any deficiencies.

Under direction of DCR, Mason is currently reassessing and revising its MS4 Program, BMPs, and minimum controls measures to address deficiencies identified during the program audit by DCR and the EPA on 2011. Refer to Section IV for revised BMPs and minimum controls measures and the anticipated schedule for implementation.

- 3.1.10** Notice that the operator is relying on another government entity to satisfy some of the permit obligations (if applicable).

Currently, Mason does not rely on another government entity to satisfy some of the permit obligations. However, there are future plans to rely on a SWM Pond owned and maintained by Prince William County to satisfy some of the permit obligations as a part of a cooperative development plan for Prince William Campus and the adjacent properties. The plans have been submitted for approval and are currently under review by Prince William County. Mason LD has identified several points where Mason discharges into other regulated MS4. A notification of potential interconnected stormwater system will be addressed to respective jurisdictions. Refer to Appendix B.

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

There are no programs waiting for approval.

- 3.1.12** Information required pursuant to Section I B 9.

No TMDL or WLA is calculated for this permit duration. More information is intended to be provided as the revised program develops.

- 3.1.13** The number of illicit discharges identified and the narrative on how they were controlled or eliminated pursuant to Section II B 3 f.

During calendar year 2011, EHS responded to a total of 38 incidents across the Fairfax, Prince William, and Arlington campuses. Of those 38 incidents, only ten incidents involved the accidental release of materials outside of a building. Because of the nature and location of the incidents, only ten incidents occurred in locations with the potential to impact the environment. No incident required EHS to notify Virginia Department of Environmental Quality (Northern Regional Office) or the incident, and no incident required EHS to supplement its response with contractor assistance. During the permitted year, Mason LD also reported an incident associated with construction of the Graduate Student Housing project at Prince William Campus. A report generated the day of the incident, October 14, 2011, identified violations to the VSMP permit involving unauthorized encroachment of adjacent stream. A Notice of Violation was issued to the contractor the day of the incident and was given a period of 5 day to correct all observations. A copy of this report and Notice of Corrective Action is attached as Appendix C. All contaminated materials were disposed of properly in accordance with applicable laws and regulations.

- 3.1.14** Regulated land-disturbing activities data tracked under Section II 4 c.

Refer to Appendix D for the table of tracked land-disturbing activities.

3.1.15 All known permanent SWM facility data tracked under Section II B 5 b (6) submitted in database format to be prescribed by the department. Upon filing of this list, subsequent reports shall only include those new SWM facilities that have been brought online during the reporting period.

Refer to Appendix E.

3.1.16 A list of new or terminated signed agreements between the operator and any applicable third parties where the operator has entered into an agreement in order to implement minimum control measures or portions of minimum control measures.

There are no new of terminated agreements with third parties.

3.1.17 Copies of any written comments received during a public comment period regarding the MS4 Program Plan or any modifications.

No written comments were received concerning the MS4.

Appendix A:

Minimum Control Measures

Minimum Control Measure No. 1: Public Education and Outreach on Stormwater Impacts							
BMP CATEGORY	PROPOSED BMP	PROGRAM	MEASURABLE GOAL	RESPONSIBLE DPMT	CURRENT PROGRAM IN PLACE	ESTIMATED DATE OF IMPLEMENTATION	ANNUAL OBJECTIVES ACHIEVED/ INTENDED ACHIEVEMENT
1.a - Public Education Program	1.a.1 - Stormwater Management and Runoff Control Measures	Provide information on stormwater pollution prevention programs and stormwater management procedures used by Mason.	Information on SWM and pollution prevention programs is made available to the public through the Facilities Management website and various other mediums. Number of visitors to the website will be tracked through a users web counter.	FM/ Mason LD /OoS	YES	Already in place	Information on SWM and pollution prevention programs Is now available to the public at the facilities website http://facilities.gmu.edu/LandDevelopment/stormMs4.htm . As a result of the information posted online, Mason LD personnel meet with 4 students who requested more information on stormwater management and control practices on campus.
	1.a.2 - Polluted Runoff in Urbanized Areas	Inform the public on how urbanized areas can effect water quality of water resources and provide a list of land disturbing activities on campus.	A publicized list of regulated disturbance disturbing activities expected to be under contract during the reference time period is regularly updated as necessary. Information on the effects of polluted runoff from urbanized areas on water bodies is also available to the public through the facilities management website and various other mediums. Number of visitors to the website will be tracked through a users web counter.	FM/ Mason LD /OoS	YES	Already in place	Keep the public aware of the impacts of runoff from urbanized areas on local waterways. Additionally inform the public about current and future land disturbing activities on campus.

Minimum Control Measure No. 1: Public Education and Outreach on Stormwater Impacts							
BMP CATEGORY	PROPOSED BMP	PROGRAM	MEASURABLE GOAL	RESPONSIBLE PERSON/DPMT	CURRENT PROGRAM IN PLACE	ESTIMATED DATE OF IMPLEMENTATION	ANNUAL OBJECTIVES ACHIEVED/ INTENDED ACHIEVEMENT
1.b - Public Awareness Program	1.b.1 - Environmental Impacts of Illegal Discharges	Provide information on environmental problems associated with illicit discharges.	A friendly reminder identifying the different pollutants resulting from human activity will be provided through various media. Information on water pollutants is also available on the Facilities Management website. Number of visitors to the website will be tracked through a users web counter.	FM/ Mason LD/ OoS/EHS/ Recycling and Waste Management	YES	Already in place	Increase public awareness on environmental impacts of illegal discharges. Keep the public up to date on common pollutants found in the area (if any).
	1.b.2 - Hazardous Waste Management	Inform public, students, and staff of proper storage, use, and disposal of hazardous materials. Identify any temporary satellite accumulation areas available, as well as, procedures to manage waste properly.	Information on proper hazardous material handling, storage and disposal will be provided at least once a year during student and staff training sessions. Information on hazardous waters is also available through EHS website under their Hazard Communication Program. Number of visitors to the website will be tracked through a users web counter.	EHS	YES	Already in place	Annual training to non-academic and academic personnel is provided by EHS to ensure proper disposal of hazardous waste. EHS provides training to Mason's staff for Hazardous waste management. The number of people who attend these sessions is recorded annually. On the last permitted year a total of 341 employees attended the Chemical Safety and Hazard Communication training.

Minimum Control Measure No. 1: Public Education and Outreach on Stormwater Impacts							
BMP CATEGORY	PROPOSED BMP	PROGRAM	MEASURABLE GOAL	RESPONSIBLE PERSON/DPMT	CURRENT PROGRAM IN PLACE	ESTIMATED DATE OF IMPLEMENTATION	ANNUAL OBJECTIVES ACHIEVED/ INTENDED ACHIEVEMENT
	1.b.3 - Recycling and Trash Management	Provide information on the negative impacts of littering and identify advantages of recycling. Identify locations on campus of waste management facilities.	Guidance is provided through the recycling and waste management website on proper disposal of trash. GMU aims to meet or exceed State mandates for recycling disposable materials and reduce the amount of disposable materials transported to landfill. Information of recycling and waste management locations is provided on the recycling and waste management website http://facilities.gmu.edu/physicalplant/recycling/index.htm . Number of pounds of recycled material is tracked for every year.	EHS/R&WM	YES	Already in place	The recycling and waste management website continues to promote programs available for public participation. In 2012 the university collected a total of 1,854,409 pounds of recyclable materials; 6,584,270 pounds of waste giving a total of 8,438,679 pounds with an overall percentage of 22% recycled materials.
1.c - Programs and Initiatives	1.c.1 - Cleanup Project	Participate in stream and campus clean-ups lead by OoS.	Stream and campus clean-up projects will be hosted on campus at least twice a year. Number of pounds of trash is tracked.	OoS	YES	-	Several members of EHS, R&WM and the OoS participate in campus/stream cleanups every year. In 2012, the office of University life also sponsored a stream cleanup on Rabbit Branch, from which 5 large bags of trash were collected.

Minimum Control Measure No. 1: Public Education and Outreach on Stormwater Impacts							
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	1.c.2 - Patriot Pack Out Project	Help local families through donations of clothing, non-perishable food, and small appliances as part of the recycling program in order to facilitate waste reduction at George Mason University.	Patriot Pack Outs take place on campus at the beginning of every summer for resident students to donate unwanted clothes, appliances, and unopened food items. Number of pounds of trash is tracked.	OCR	YES	-	In 2012 the University collected a total of 10,460 pounds of recyclable materials, an increase of 920 pounds from last year. This information is available in the Office of Community Relations' website: http://communityrelations.gmu.edu/patriot_pack_out/ppo_index.html
1.d-f - Target Campaigns	1.d.1 - Utilize diverse strategies to target audiences for public education campaigns.	Utilize diverse media (including but not limited to PSA's, print ads, flyers, etc.) to increase public awareness about stormwater pollution prevention.	Track public education campaigns targeting audience specific to the area serviced by Mason's MS4.	Mason LD/OoS	YES	-	Increase public awareness about stormwater pollution prevention targeting audiences specific to the area serviced by Mason's MS4 using a variety of media. Media is to include ads on Facilities Management website, brochures, and flyers handed out at educational events.

Minimum Control Measure No. 1: Public Education and Outreach on Stormwater Impacts							
BMP CATEGORY	PROPOSED BMP	PROGRAM	MEASURABLE GOAL	RESPONSIBLE PERSON/DPMT	CURRENT PROGRAM IN PLACE	ESTIMATED DATE OF IMPLEMENTATION	ANNUAL OBJECTIVES ACHIEVED/ INTENDED ACHIEVEMENT
	1.e.1 - Target public education campaigns to concerns of target audiences.	Using existing outreach campaigns, where possible, to address viewpoints and concerns of target audiences.	Target audiences are included in public education campaigns described in BMP 1.d.1 whenever possible. Track public education campaigns to concerns of target audiences.	Mason LD/OoS	YES	-	Outreach campaigns focus on increasing stormwater pollution prevention and awareness. Mason's goal for this reporting period is to reach a variety of people and be able to address their viewpoints and concerns. Information on how to report concerns associated with stormwater is available on the Facilities website.
	1.f.1 - Target public education campaigns to groups likely to have significant stormwater impacts.	Continue implementing strategies targeted towards local groups of commercial, industrial, and institutional entities likely to have significant stormwater impacts.	Target industries as included in public education campaigns described in BMP 1.d.1 whenever possible. Number of public education campaigns to groups likely to have significant stormwater impact.	Mason LD/EHS	YES	-	Outreach campaigns focus on groups that require the use of hazardous materials and construction activity which are likely to have significant stormwater impacts. EHS guides and training sessions provide information on safely handling, labeling, and storing of chemical, hazardous, and universal waste. Moreover, Mason LD provides information on pollution prevention for personnel involved in construction activity in order to avoid pollution in surface waters from construction sites.

Minimum Control Measure No. 1: Public Education and Outreach on Stormwater Impacts							
BMP CATEGORY	PROPOSED BMP	PROGRAM	MEASURABLE GOAL	RESPONSIBLE PERSON/DPMT	CURRENT PROGRAM IN PLACE	ESTIMATED DATE OF IMPLEMENTATION	ANNUAL OBJECTIVES ACHIEVED/ INTENDED ACHIEVEMENT
	1.f.2 - Erosion and Sediment Control Program	Identify standards and specifications on ESC, which shall apply to all plan design, construction, and maintenance activity undertaken by Mason, either by its internal workforce or contracted to external entities.	Information on Mason's ESC Standards and Specifications is available on the Facilities Management website. Number of notices to comply will be tracked through regular inspections of construction sites.	Mason LD	YES	-	Mason ESC standards and specifications program has focused on current construction projects to ensure implementation of sediment control practices and that polluted runoff is not reaching waterbodies resulting from construction sites. George Mason University's ESC standards and specifications is available at the facilities website: http://facilities.gmu.edu/LandDevelopment/erosion1.htm
Evaluation of appropriateness and effectiveness of Public Education/Outreach on impacts of stormwater discharges on water bodies	Public education on stormwater impacts is a very effective way to reduce illicit discharges on water bodies as it alerts people, not only on environmental hazards associated with polluted runoff, but also helps identify different ways in which the public can help reduce pollutants in stormwater runoff. Mason's MS4 program continues to conduct stormwater outreach campaigns through the Facilities Management website, brochures, and ads. Additionally, information focusing on car washing and pet waste also educates the public to understand the impact of human activity on stormwater.						

Minimum Control Measure No. 2: Public Involvement/ Participation							
BMP CATEGORY	PROPOSED BMP	PROGRAM	MEASURABLE GOAL	RESPONSIBLE PERSON/DPMT	CURRENT PROGRAM IN PLACE	ESTIMATED DATE OF IMPLEMENTATION	ANNUAL OBJECTIVES ACHIEVED/ INTENDED ACHIEVEMENT
2.a-b - Availability of MS4 Program Material	2.a.1 - Public Awareness Education Material	Provide access to outreach materials on Mason's SWM program through the Facilities Management website. Information available to the public includes: SWM initiatives, pollution prevention strategies, and BMPs included in Minimum Measure No. 1.	Information on Mason's MS4 program is available on the Facilities Management website. This information is updated as needed. Number of visitors to the website will be tracked through a users web counter.	Mason LD	YES	-	Information about Mason MS4 program and stormwater management is available on the Facilities Management website: http://facilities.gmu.edu/LandDevelopment/storm1.htm
	2.b.1 - Access to Annual Reports	Provide access to annual reports on Mason's SWM and MS4 program plan.	MS4 annual reports for the University are posted on the facilities website as submitted to DCR. Number of visitors to the website will be tracked through a users web counter.	Mason LD	YES	-	Annual reports and other information about the MS4 permit will be periodically updated on the Facilities Management website: http://facilities.gmu.edu/LandDevelopment/storm1.htm
2.c - Public Participation in Water Quality Improvement Activities. ASK BRAD	2.c.1 - Voluntary University Programs	Encourage students to volunteer for and/or participate in stream enhancement and education programs, which may include water quality monitoring, stream/campus cleanups, etc.	Track voluntary programs and solicit student participation.	OoS	YES	-	Promote student and staff involvement in stream enhancement and education programs. Mason LD is currently coordinating with faculty personnel to manage water quality monitoring teams composed of students to conduct water testing on campus waterways.

Minimum Control Measure No. 2: Public Involvement/ Participation							
BMP CATEGORY	PROPOSED BMP	PROGRAM	MEASURABLE GOAL	RESPONSIBLE PERSON/DPMT	CURRENT PROGRAM IN PLACE	ESTIMATED DATE OF IMPLEMENTATION	ANNUAL OBJECTIVES ACHIEVED/ INTENDED ACHIEVEMENT
	2.c.2 - Involvement in Other Water Quality Related Programs	Participate in programs promoted by other organizations, which relate to water quality issues.	Track the number of activities in which Mason participates. This year, Mason LD participated in several conferences related to water quality and assisted students in academic projects associated with stormwater quality control.	Mason LD/OoS	YES	-	Increase Mason involvement and participation in programs promoted by other organizations, including public educational events.
Evaluation of appropriateness and effectiveness of Public Involvement on impacts of stormwater discharges on water bodies	Mason seeks to implement more programs to actively engage the public in addressing problems associated with polluted runoff and non-stormwater discharges to impaired waterways. Outreach events represent a great opportunity to educate people on environmental hazards associated with polluted runoff and identify different ways the public can help reduce pollutants in stormwater runoff. Outreach opportunities, such as voluntary programs, are an effective way to get the public involved and educated on stormwater impacts to water resources.						

Minimum Control Measure No. 3: Illicit Discharge Detection and Elimination							
BMP CATEGORY	PROPOSED BMP	PROGRAM	MEASURABLE GOAL	RESPONSIBLE PERSON/DPMT	CURRENT PROGRAM IN PLACE	ESTIMATED DATE OF IMPLEMENTATION	ANNUAL OBJECTIVES ACHIEVED/ INTENDED ACHIEVEMENT
3.a - Illicit Discharge Detection and Elimination Program	3.a.1 - Comply with Existing Regulations.	Comply with existing regulations that prohibit illegal discharges to storm sewers. George Mason University has developed and implemented a program to detect and eliminated illicit discharges. The program is composed of different techniques to prohibit non-stormwater discharges as well as regular inspection and enforcement.	Track the violations and spill responses. Mason's goal is to minimize violations and surfaces discharges. Violations include spills by students, staff and spills from construction activity. Number concerns and comments associated with water pollution, provided by the public, and are also tracked to test the effectiveness of the program in place.	Mason LD/ EHS	YES	-	During the permitting year 2011, a total of 39 incidents were reported to EHS across the Fairfax, Prince William, and Arlington campuses. Of those 39 incidents, only three incidents involved the accidental release of materials outside of a building. Contaminated material was properly disposed. None of the three incidents resulted in any impact to the environment. There was only one reported incident from a construction site at Prince William campus where a stream was disturbed during a rain event. The incident took place on Oct 14, 2011. The contractor was given a Notice of Violation (NOV) and given 5 days to correct all violations. All violations were corrected at the Contractor's expense. A copy of the NOV and report is provided in Appendix B.

Minimum Control Measure No. 3: Illicit Discharge Detection and Elimination							
BMP CATEGORY	PROPOSED BMP	PROGRAM	MEASURABLE GOAL	RESPONSIBLE PERSON/DPMT	CURRENT PROGRAM IN PLACE	ESTIMATED DATE OF IMPLEMENTATION	ANNUAL OBJECTIVES ACHIEVED/ INTENDED ACHIEVEMENT
	3.a.2 - Environmental Compliance Inspections	Inspections for environmental compliance have been implemented as part of the ESC Inspection program in order to control and prevent illicit discharges on construction sites. If a discharge is suspected, EHS is immediately contacted.	Environmental Compliance Inspections is conducted at least bi-weekly on projects under construction. Inspections on the Storm Sewer system and outfalls are conducted twice a year by Mason LD to identify/ track illicit discharges. Track the type and number of illicit discharges identified in construction sites and the general campus area.	Mason LD/EHS	YES	-	Only one incident was reported to Mason LD on discharges from a construction site located in Prince William Campus. Runoff from the construction directly discharged into an adjacent stream. Protection on the construction area was not properly installed and construction activity was performed along the stream banks without authorization and/or proper control measures. The contractor was given a Notice of Violation. This incident was brought up in a recent evaluation to Mason's MS4 program conducted by the EPA. A copy of the Notice of Violation is attached as Appendix B . Resolution to the incident was provided promptly at the contractor's expense.

Minimum Control Measure No. 3: Illicit Discharge Detection and Elimination							
BMP CATEGORY	PROPOSED BMP	PROGRAM	MEASURABLE GOAL	RESPONSIBLE PERSON/DPMT	CURRENT PROGRAM IN PLACE	ESTIMATED DATE OF IMPLEMENTATION	ANNUAL OBJECTIVES ACHIEVED/ INTENDED ACHIEVEMENT
3.b - Storm Sewer System Mapping	3.b.1 - Inventory Regulated Stormwater System	Provide an inventory of Mason's stormwater systems including SWM/BMP structural facilities and internal outfalls within the MS4. Information includes location, drainage areas, maintenance schedule, adequacy etc.	Inventory Mason's stormwater systems. The inventory is maintained by Mason LD and the number of updates to the stormwater system is tracked every year. A data base and a map are updated as needed to add new storm sewer system features installed on site. Mason LD recently conducted an outfall reconnaissance where 15 new outfalls were identified in Fairfax campus and 3 additional outfalls on Prince William campus, which were not depicted on last year's MS4 maps.	Mason LD	YES	Improvements expected to be in place by 2013	A detailed inventory of Mason's stormwater system is maintained by Mason LD through regular inspections and updating existing MS4 maps and database. The inventory includes information on drainage areas, maintenance schedule, type of structure etc, and shall be updated as needed. Currently, GMU's tracking database consists of a complete list of all permanent BMPs, MS4 maps depicting storm sewer lines, internal outfalls and interconnections to other MS4s. However, GMU is working on developing a new Inventory system in which information can be accessed in a more efficient manner. GIS technology will be used to improve our record database. This new technology is expected to be in place by the end of the current permit period, July 2013.

Minimum Control Measure No. 3: Illicit Discharge Detection and Elimination							
BMP CATEGORY	PROPOSED BMP	PROGRAM	MEASURABLE GOAL	RESPONSIBLE DPMT	CURRENT PROGRAM IN PLACE	ESTIMATED DATE OF IMPLEMENTATION	ANNUAL OBJECTIVES ACHIEVED/ INTENDED ACHIEVEMENT
	3.b.2 - Internal MS4 Map	Use existing CAD format maps, surveys, to accurately map stormwater feature locations within Mason's MS4 using GIS Technologies.	Identify internal MS4 features for inventory, annual inspection, and illicit discharge tracking. Track number of updates and additions to the MS4.	Mason LD	YES	Improvements expected to be in place by 2013	All stormwater features within Mason MS4 are currently mapped on the MS4 maps. Currently, GMU keeps track of all existing structural controls through the campus utility maps which can be accessed in CAD. Maps are updated as outfalls are added or removed. Identification of new items is done through regular inspections conducted by Mason LD. An improved system using GIS technologies is to be utilized in order to keep a more detailed record of the existing structures on-site. GIS Maps are to be stored on a password protected server for security purposes. GIS technologies are expected to be in place by the end of the permit period, July 2013.

Minimum Control Measure No. 3: Illicit Discharge Detection and Elimination							
BMP CATEGORY	PROPOSED BMP	PROGRAM	MEASURABLE GOAL	RESPONSIBLE DPMT	CURRENT PROGRAM IN PLACE	ESTIMATED DATE OF IMPLEMENTATION	ANNUAL OBJECTIVES ACHIEVED/ INTENDED ACHIEVEMENT
	3.b.3 - Interconnectivity and MS4 Outfall Map	Use existing CAD-format maps, surveys, and GIS technologies to accurately map interconnectivity with outside stormwater systems.	Identify all interconnections with outside stormwater systems. Track number of updates in the interconnectivity MS4 outfall map.	Mason LD	YES	Improvements expected to be in place by 2013	All stormwater interconnections with outside stormwater systems are currently mapped on the MS4 maps. Maps are updated as connections are added or removed. Currently, Interconnectivity maps are developed in CAD format. However, GIS maps are to be developed in order to improve methods of storing data. GIS Maps are to be stored on a password protected server for security purposes. GIS technologies are expected to be in place by the end of the permit period, July 2013.
3.c - Prohibition of Nonstormwater Discharges	3.c.1 - Inlet Labeling	Install stormwater pollution prohibition plaques on all inlets on campus.	Locate all inlets and install identification plaques. Track number of new inlets added to the system and number of inlets labeled on campus	Mason LD	YES	-	In this permitting year, Mason LD has labeled all existing inlets on every campus with pollution prohibition plates. Attached as Appendix F , a copy of "no dumping" markers placed on all inlets within Mason's MS4.

Minimum Control Measure No. 3: Illicit Discharge Detection and Elimination							
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	3.c.2 - Surface Water Signage	Install pollution prohibition signage at all surface water locations.	Identify and install pollution prohibition signage at surface water locations. Track the number of incidents and illicit discharges reported after installment of signs.	Mason LD/OoS	NO	July 2013	Signage will be provided for all surface waters located on campus. Mason LD is currently working with the Office of Sustainability in the design of the signs as well as the identification of critical locations for these signs. Signs are expected to be in place by the end of the permit period July 2013.
	3.c.4 Illicit discharge and Connection Policy	Create, implement and enforce illicit discharge Policies in order to provide for health, safety and general welfare of the Mason community through the regulation of non-stormwater discharges to the storm drainage system to the maximum extent practicable as required by federal and state law.	Number of illicit discharges and incidents reported in the permit year in order to test effectiveness of policies in place- prohibiting non-stormwater discharges into Mason's MS4 system.	Mason LD	NO	December 2012	Mason LD has recently drafted the George Mason University Illicit Discharge Detection and Elimination Policy, which prohibits non-stormwater discharges into the University's MS4. The policy educates and instructs the public on what illicit discharges are and how to notify Mason LD and/or EHS of a spill. The policy also establishes enforcement procedures for violators. The policy is currently under review by the University Policy Manager. Mason LD expects Mason's IDDE policy to be in place by December 2012.

Minimum Control Measure No. 3: Illicit Discharge Detection and Elimination							
BMP CATEGORY	PROPOSED BMP	PROGRAM	MEASURABLE GOAL	RESPONSIBLE DPMT	CURRENT PROGRAM IN PLACE	ESTIMATED DATE OF IMPLEMENTATION	ANNUAL OBJECTIVES ACHIEVED/ INTENDED ACHIEVEMENT
3.d - Procedures to Prevent, Detect, and Address Illicit Discharges	3.d.1 - MS4 Inspections	Maintain MS4 inspection program that includes all stormwater outfalls. Inspection reports are generated based on visual observation, odor, and other indicators to identify illicit discharges.	Continue with current program. Track number of reports generated on stormwater outfalls.	Mason LD/FM	YES	-	A detail inspection of the MS4 system is performed at least twice a year to ensure proper functioning of facilities and monitoring illicit discharges. Inadequate structures are to be tracked and prioritized for corrective maintenance.
	3.d.2 - Trace and Remove Illicit Discharges	Continue to follow procedure for reporting and tracing illicit discharges and procedures for enforcing policies. Appropriate staff will be instructed with these procedures.	Track number of violations reported by inspectors and the public.	Mason LD/ EHS	YES	-	Standard procedures have been followed for reporting and tracing illicit discharges.
3. e - Minimization of Discharges of hazardous Substances	3.e.1 - Spill Response Program	Maintain current staffing to respond to oil or chemical spill incidents, as well as, other non-stormwater discharges reported by inspectors, students and neighbors.	Continue with current program. Track number spill reports generated and responses.	EHS	YES	-	All reported events of oil or chemical spill are responded to immediately. Staff is available 24 hours a day including weekends to respond to oil and chemical spill events.

Minimum Control Measure No. 3: Illicit Discharge Detection and Elimination							
BMP CATEGORY	PROPOSED BMP	PROGRAM	MEASURABLE GOAL	RESPONSIBLE DPMT	CURRENT PROGRAM IN PLACE	ESTIMATED DATE OF IMPLEMENTATION	ANNUAL OBJECTIVES ACHIEVED/ INTENDED ACHIEVEMENT
	3.e.2 - Hazardous Waste Management Training and procedures	Provides guidance on how to safely manage chemicals and communicate the hazards associated with chemicals used in the workplace through training, safety information, labels, signage and other forms of warning.	Number of people receiving training on hazardous management is tracked in every session. Information on the management and handling of hazardous substances is also available through EHS website under their Hazard Communication Program and the Spill Prevention Control and countermeasures Program.	EHS	YES	-	Annual training is required for all individuals who actively or non-routinely use, store, handle, or generate chemical, hazardous, or universal waste. Employees are responsible for ensuring that waste is properly labeled and stored.
3.f - Illicit Discharge Tracking	3.f.1 - Environmental Compliance Inspection for Construction Sites	As part of the Environmental Compliance Inspections (3.a.2), Mason LD staff will report and trace all nonstormwater discharges from construction sites. Environmental Inspections are to be conducted as part of the ESC and SWM inspections.	Environmental Compliance Inspections will be conducted at least bi-weekly on projects under construction as part of the ESC and SWM inspections. Track the type and number of illicit discharges.	Mason LD	YES	-	All identified illicit discharges will be documented and reported (by Mason LD personnel) to EHS. During an environmental compliance inspection, conducted on Oct 14, 2012, staff from Mason LD observed violations of the permit that resulted in illicit discharges from a construction site at Prince William Campus. Mason LD issued a Notice of Violation and re-inspected the site 5 days later. All observations on Mason LD's final inspection report were addressed. Corrective action was taken at the contractor's expense.

Minimum Control Measure No. 3: Illicit Discharge Detection and Elimination							
BMP CATEGORY	PROPOSED BMP	PROGRAM	MEASURABLE GOAL	RESPONSIBLE DPMT	CURRENT PROGRAM IN PLACE	ESTIMATED DATE OF IMPLEMENTATION	ANNUAL OBJECTIVES ACHIEVED/ INTENDED ACHIEVEMENT
	3.f.2 - Illicit Discharge Reporting	Publicize pollution prevention contact information to report problems related to illicit discharges.	Continue to publicize EHS and Mason LD's contact information for illicit discharges reporting.	Mason LD/EHS	YES	-	EHS and Mason LD's contact information is available to the public on the Facilities website to report illicit discharge at: http://facilities.gmu.edu/LandDevelopment/stormMs4.htm . Spill response information is also provided during training sessions for new members of Mason staff.
	3.f.3 - Illicit Discharge Tracking	Track number of illicit discharges.	Include in annual reports to the DCR any non-stormwater discharges identified during the permitted year. Track number spill responses and reported non-stormwater discharges.	Mason LD/EHS	YES	-	During calendar year 2012, EHS responded to a total of 38 incidents across the Fairfax, Prince William, and Arlington campuses. Because of the nature and location of the incidents, only ten incidents occurred in locations with the potential to impact the environment. No incident required EHS to notify Virginia DEQ of the incident, and no incident required EHS to supplement its response with contractor assistance.

Minimum Control Measure No. 3: Illicit Discharge Detection and Elimination							
BMP CATEGORY	PROPOSED BMP	PROGRAM	MEASURABLE GOAL	RESPONSIBLE DPMT	CURRENT PROGRAM IN PLACE	ESTIMATED DATE OF IMPLEMENTATION	ANNUAL OBJECTIVES ACHIEVED/ INTENDED ACHIEVEMENT
3.g - Notification of connection to other MS4s	3.g.1 - MS4 Interconnection Notification	Notify the respective jurisdiction of locations where Mason's MS4 is physically interconnected to their MS4.	Provide information to the respective jurisdiction annually. Provide additional updates as necessary if new connections are created. Track number of interconnection notifications received and provided by Mason LD.	Mason LD	YES	-	All jurisdictions were notified in writing of Mason's connection to their respective MS4. Mason was also notified in writing by such jurisdictions.
Evaluation of appropriateness and effectiveness of Illicit Discharge Detection on impacts of stormwater discharges on water bodies	Mason's MS4 program looks to pro-actively prevent illicit discharges and negative impacts that can result from such discharges. Training and operating procedures have been created for many activities that could negatively impact the environment, such as washing equipment or properly disposing of chemicals. Other preventive measures include regular environmental compliance inspections, which focuses on possible contamination resulting from construction sites. Mason also uses the assistance of the public and inspectors in discovering and reporting illicit discharges and works hard to respond to problems and prevent future issues associated with stormwater pollution. Such practices are considered to be an effective way to track and control illicit discharges that can represent potential hazard to water bodies.						

Minimum Control Measure No. 4: Construction Site Stormwater Runoff Control							
BMP CATEGORY	PROPOSED BMP	PROGRAM	MEASURABLE GOAL	RESPONSIBLE DPMT	CURRENT PROGRAM IN PLACE	ESTIMATED DATE OF IMPLEMENTATION	ANNUAL OBJECTIVES ACHIEVED/ INTENDED ACHIEVEMENT
4 - Erosion & Sediment Control (ESC) and Stormwater Management (SWM) Program	4.a.(1) - George Mason University Annual Standards and Specifications for ESC and SWM.	The Annual Standards and Specifications for ESC and SWM is a supplementary document to the ESC Laws and Regulations (VESCL&R) stipulated by the Department of Conservation and Recreation (DCR). Such regulations require the contractor to install Erosion and Sediment Controls and it applies to ALL construction activity within Mason Campuses. Regulations stipulated by Mason and DCR, are enforced by Mason LD to ensure proper installment of practices.	Maintain working relationship with DCR to ensure compliance with VESCL&R. The Mason ESC Administrator oversees all plan preparation and implementation.	Mason LD	YES	-	All land disturbing plans are reviewed and permitted by Mason LD. Mason LD also conducts regular inspections to ensure compliance with all laws and regulations on ESC.

Minimum Control Measure No. 4: Construction Site Stormwater Runoff Control							
BMP CATEGORY	PROPOSED BMP	PROGRAM	MEASURABLE GOAL	RESPONSIBLE DPMT	CURRENT PROGRAM IN PLACE	ESTIMATED DATE OF IMPLEMENTATION	ANNUAL OBJECTIVES ACHIEVED/ INTENDED ACHIEVEMENT
	4.a.(2) - Proposed Erosion and Sediment Control Structures.	Section 10 of George Mason University's Annual Standards and Specifications for ESC and SWM provides details on different Best Management Practices (BMP) that the contractor may use alternative to the ones already identified in the VESC Handbook. These practices are annually reviewed and approved by DCR based on effectiveness. Mason LD revises this document as needed.	Encourage the use of structural and non-structural design techniques to create a design that has the goal of mimicking predevelopment characteristics and predevelopment hydrologic conditions.	Mason LD	YES	-	BMP proposed by Mason LD in the 2011 Annual Standards and Specifications have been used by contractors in projects like the Smithsonian Conservation Studies Facility (SCBI) and the Graduate Student Housing in Prince William Campus. See Appendix A , for current projects. The dewatering tube, used in the SCBI project as well as the level spreader, used in Prince William, both BMPs proposed by Mason. Both techniques allow runoff from the construction site to infiltrate into the ground at low flows, as it is in the case of predevelopment conditions. For more information on both techniques. These practices are regularly inspected by Mason LD personnel to ensure proper performance.

Minimum Control Measure No. 4: Construction Site Stormwater Runoff Control							
BMP CATEGORY	PROPOSED BMP	PROGRAM	MEASURABLE GOAL	RESPONSIBLE DPMT	CURRENT PROGRAM IN PLACE	ESTIMATED DATE OF IMPLEMENTATION	ANNUAL OBJECTIVES ACHIEVED/ INTENDED ACHIEVEMENT
	4.a.(3)- VSMP Permit Requirement	A VSMP permit is required for all land disturbing activities greater than or equal to (1) one acre. Mason LD ensures that all required permits are attained prior to commencement of construction and that the permit remains (posted) visible on the job site until the termination of the permit.	Keep track of all land disturbing activity within campus that require a VSMP permit and ensure the existence and availability of the permit.	Mason LD	YES	-	Land Disturbing activities that impacted (1) acre or more within George Mason University received a VSMP permit from DCR prior to start of construction. Mason LD personnel verified that the permit was posted on site as part of regular inspections.

Minimum Control Measure No. 4: Construction Site Stormwater Runoff Control							
BMP CATEGORY	PROPOSED BMP	PROGRAM	MEASURABLE GOAL	RESPONSIBLE DPMT	CURRENT PROGRAM IN PLACE	ESTIMATED DATE OF IMPLEMENTATION	ANNUAL OBJECTIVES ACHIEVED/ INTENDED ACHIEVEMENT
	4.a.(4) - Public Acknowledgment	Mason LD receives public information via email at MasonLD@gmu.edu. This mechanism allows the facilities office to remain informed of any concerns from the public associated with water pollution or construction activity within campus. Procedures on how to contact Mason LD are posted on the facilities website for the public availability. Procedures on consideration and response to public concern are included as part of the training provided to Mason LD's personnel upon employment. This information is also included in the operating procedures for ESC and SWM inspectors and program administrators.	Track number of comments and concerns from the public associated with construction activity. Moreover, ensure all public concerns have been addressed and reported to the appropriate parties.	Mason LD	YES	-	Mason LD did not receive any information from the public associated with construction activity during the permitting year.

Minimum Control Measure No. 4: Construction Site Stormwater Runoff Control							
BMP CATEGORY	PROPOSED BMP	PROGRAM	MEASURABLE GOAL	RESPONSIBLE PERSON/DPMT	CURRENT PROGRAM IN PLACE	ESTIMATED DATE OF IMPLEMENTATION	ANNUAL OBJECTIVES ACHIEVED/ INTENDED ACHIEVEMENT
	4.a. (5) Procedures for Site Inspection and enforcement.	Inspections of ESC measures are conducted bi-weekly and/or within 48 hours of a significant rain event. Procedures on how to conduct inspections and enforcement is provided to Mason LD personnel (Inspectors and program administrator) upon employment. All procedures are based on DCR administrative guidelines.	Applicable sites are inspected as required and any infractions are identified and documented in accordance to specified policies and procedures. Mason LD tracks number of inspections reports generated and number of violations per construction site.	Mason LD	YES	-	Applicable sites were inspected as required and any infractions were identified and documented.
	4.b – DCR Certification	Mason LD requires that all plan reviewers, inspectors, program administrators and construction site Responsible Land Disturbers (RLDs) have appropriate certification for Erosion and Sediment Control as required under DCR's laws.	Mason LD keeps track of all personnel that receive DCR certification for Erosion and Sediment Control. Mason LD also keeps records certifications of RLDs for each construction activity conducted within Campus.	Mason LD	YES	-	All inspectors and plan reviewers in Mason LD have successfully completed DCR's training and have acquired Certification for Combined administration. Mason LD has also verified that there is a registered RLD for construction activity that exceeded 1 acre of disturbance. (1) new employee was certified by DCR in 2012

Minimum Control Measure No. 4: Construction Site Stormwater Runoff Control							
BMP CATEGORY	PROPOSED BMP	PROGRAM	MEASURABLE GOAL	RESPONSIBLE DPMT	CURRENT PROGRAM IN PLACE	ESTIMATED DATE OF IMPLEMENTATION	ANNUAL OBJECTIVES ACHIEVED/ INTENDED ACHIEVEMENT
4.c - Land Disturbance and Cumulative Impervious Area Tracking	4.c (1)&(2)- Track all land disturbing activities and their impact on Mason's cumulative impervious area.	Mason LD tracks all land disturbing activities, and provides disturbed acreage to DCR as part of the Annual Standards and Specifications submission. Mason LD also tracks all projects impact on Mason imperious area footprint, which ultimately affects the Stormwater Management Master Plan.	Continue with current program. Submit totals with Annual Standards and Specifications. Track number of updates to the land disturbing activities database.	Mason LD	YES	-	See attached Appendix A showing a table of all land disturbing activities requiring a formal ESC Permit from Mason LD.
Evaluation of appropriateness and effectiveness of Construction Site Stormwater Runoff Control in addressing discharges.	Mason works hard to eliminate or minimize to the greatest extent practicable the amount of sediment leaving Mason construction sites. Mason LD works closely with Project Managers and Contractors to identify and correct ESC issues. When necessary Mason LD contacts DCR for input and advice. Proper maintenance of ESC controls and proper handling of stormwater on construction sites minimizes sediment discharges into local waterways. Therefore, measures addressing construction site stormwater runoff at GMU are effective and appropriate.						

Minimum Control Measure No. 5: Post-Construction Stormwater Management in New Development and Redevelopment

BMP CATEGORY	PROPOSED BMP	PROGRAM	MEASURABLE GOAL	RESPONSIBLE DPMT	CURRENT PROGRAM IN PLACE	ESTIMATED DATE OF IMPLEMENTATION	ANNUAL OBJECTIVES ACHIEVED/ INTENDED ACHIEVEMENT
5.a - Mason SWM Master Plans	5.a.(1) i- Watershed Master Plans for Future Development and re-development	Mason operates (2) MS4s that drain to 3 different watersheds for which SWM Master Plan are developed and submitted for approval/record to DCR. Future development is to be guided by these plans with respect to stormwater quantity and quality. Mason LD requires through the permitting process the use of structural and non-structural BMPs to treat runoff to the MS4. The use of techniques that mimic predevelopment hydrologic conditions is strongly encouraged by Mason LD. Mason LD provides suggested BMPs in the Annual Standards and Specifications for ESC and SWM.	All development and redevelopment will be guided by the SWM Master Plan. Mason LD will track the percentage of property covered under the approved stormwater master plan.	Mason LD	YES	-	All projects are reviewed for compliance with the watershed management master plans and Virginia stormwater regulations. Cumulative impervious area impacts are tracked to ensure current and future SWM facilities adequacy. The SWM master plan for Fairfax Campus is currently under revision. Mason LD expects to have a revised Master for the main campus by 2014.

Minimum Control Measure No. 5: Post-Construction Stormwater Management in New Development and Redevelopment

BMP CATEGORY	PROPOSED BMP	PROGRAM	MEASURABLE GOAL	RESPONSIBLE DPMT	CURRENT PROGRAM IN PLACE	ESTIMATED DATE OF IMPLEMENTATION	ANNUAL OBJECTIVES ACHIEVED/ INTENDED ACHIEVEMENT
	5.a. (1).ii- Stormwater Management Master Plans and Project Review	Approved SWM Master Plans guide all post-construction SWM. Mason LD has delegated authority to review and approve all SWM plans for construction projects.	Continue to develop and implement current post-construction program. Mason LD will track the percentage of property covered under the approved stormwater master plan.	Mason LD	YES	-	Mason continues to be cognizant of the approved SWM Master Plan to guide all post-construction development. Under its delegated authority, Mason LD has also approved all applicable construction plans. The SWM master plan for Fairfax Campus is currently under revision. Mason LD expects to have a revised Master for the main campus by 2014.

Minimum Control Measure No. 5: Post-Construction Stormwater Management in New Development and Redevelopment

BMP CATEGORY	PROPOSED BMP	PROGRAM	MEASURABLE GOAL	RESPONSIBLE DPMT	CURRENT PROGRAM IN PLACE	ESTIMATED DATE OF IMPLEMENTATION	ANNUAL OBJECTIVES ACHIEVED/ INTENDED ACHIEVEMENT
	5.a.(2) i - George Mason University Annual Standards and Specifications for ESC and SWM.	The Annual Standards and Specifications for ESC and SWM reference both, DCR's VESC handbook and the VSWM handbook. It requires the contractor to address runoff for new development from a quality and quantity perspective. Such requirements are introduced in Mason's LD publication "How-to-Manual". Compliance with these requirements is verified by Mason LD during the plan review and permitting process. All designed techniques for runoff control are to be in accordance with the current master plan, VSWM and Mason Standards and Specifications.	Continue to develop and implement current plan review program. Mason LD is responsible for verifying compliance with SWM requirements during the plan review process.	Mason LD	YES	-	All land disturbing plans were reviewed and permitted by Mason LD. All land disturbing plans were in compliance with VSWM regulations and Mason's Standards and Specifications.

Minimum Control Measure No. 5: Post-Construction Stormwater Management in New Development and Redevelopment

BMP CATEGORY	PROPOSED BMP	PROGRAM	MEASURABLE GOAL	RESPONSIBLE DPMT	CURRENT PROGRAM IN PLACE	ESTIMATED DATE OF IMPLEMENTATION	ANNUAL OBJECTIVES ACHIEVED/ INTENDED ACHIEVEMENT
	5.b.(2) ii - MS4 Permit	Maintain MS4 systems in accordance with MS4 Program Plan that has been approved by DCR. Continue to develop Program to include new policies and technologies in attempt to improve stormwater discharge quality.	Annual report will indicate compliance with approved program. Track number of maintenance work orders issued within the permitting year.	Mason LD	YES	-	Report has been submitted to DCR for review. Comments have been received and incorporated into subsequent revision.
	5.b.(3)- VSMP Permit	A VSMP permit is required for all land disturbing activities greater than or equal to (1) one acre. Mason LD ensures that all permits are attained prior to commencement of construction and that the permit remains (posted) visible on the job site until the termination of the permit.	Keep track of all land disturbing activity within campus that require a VSMP permit and ensure the existence and availability of the permit.	Mason LD	YES	-	Land Disturbing activities that impacted (1) acre or more within George Mason University received a VSMP permit from DCR prior to start of construction. Mason LD personnel verified that the permit was posted on site as part of regular inspections.

Minimum Control Measure No. 5: Post-Construction Stormwater Management in New Development and Redevelopment

BMP CATEGORY	PROPOSED BMP	PROGRAM	MEASURABLE GOAL	RESPONSIBLE DPMT	CURRENT PROGRAM IN PLACE	ESTIMATED DATE OF IMPLEMENTATION	ANNUAL OBJECTIVES ACHIEVED/ INTENDED ACHIEVEMENT
	5.b.(4) - O+M Program for Permanent Structural Stormwater Controls	The O+M mechanisms of the MS4 at George Mason University are based on regular inspections and maintenance activities conducted by Mason LD and the Facilities Maintenance Office. Inspection and maintenance schedules are managed through the computer software program "Maintenance Direct" All inspections, and preventive /corrective maintenance activities are schedule through this program.	Ensure stormwater controls are properly operated and maintained. Replacement of structures where it may be required. Track number of maintenance work orders issued within the permitting year.	Mason LD	YES	-	All structural controls are operating at peak performance. Mason FM performs preventative maintenance on all controls. Preventative maintenance includes dredging and removing trash and debris.
	5.b.(5) - MS4 Inspections	Systems inspections are conducted as a part of the operation and maintenance program discussed in 5.b.(4). Inspection reports are generated.	Continue current program. Track the number of inspection reports generated.	Mason LD	YES	-	Systems are inspected, at minimum twice a year, during preventative maintenance.

Minimum Control Measure No. 5: Post-Construction Stormwater Management in New Development and Redevelopment

BMP CATEGORY	PROPOSED BMP	PROGRAM	MEASURABLE GOAL	RESPONSIBLE PERSON/DPMT	CURRENT PROGRAM IN PLACE	ESTIMATED DATE OF IMPLEMENTATION	ANNUAL OBJECTIVES ACHIEVED/ INTENDED ACHIEVEMENT
	5.b.(6) - Track and catalog permanent SWM structures	Maintain inventory of stormwater management facilities. Catalog and label all system entities. Refer to Appendix C for information on type of structure, geographic location, and number of acres treated.	Continue to update inventory database. Develop GIS map showing maintenance facilities, stormwater conveyance and control structures, and receiving surface water bodies. Currently, GMU's tracking database consists of a complete list of all permanent BMPs. However, GMU is working on developing a new Inventory system in which information can be accessed in a more efficient manner. Include information about HUC, drainage area, maintenance schedule, and adequacy. Update database as new structures are added. Track the number of updates performed in the Stormwater Management Structures database.	Mason LD	YES	Improvements expected to be in place by July 2013	A new database is under development. A detailed inventory of Mason's stormwater system is to be maintained by Mason LD. The inventory will include information on drainage areas, maintenance schedule, type of structure etc, and shall be updated as needed. Moreover, GMU is also working on improving current MS4 system map by implementing GIS technology.
Evaluation of appropriateness and effectiveness of Post-Construction SWM in addressing discharges.	Mason continues to work with DCR to ensure post-construction SWM is adequate and meets the objectives of Mason's SWM Master Plans. Both Mason LD and FM (Landscaping) monitor the SWM system to ensure effectiveness. Preventative maintenance is performed. When functioning properly, the structures control water flow from Mason property to waterways, thereby minimizing erosion and sediment issues. By ensuring the stormwater controls are functioning properly, stormwater can be effectively managed in terms of both water quality and quantity in order to protect the local waterways. BMPs associated with Post-construction stormwater management in new development and redevelopment at GMU is appropriate and effective in addressing discharges into local waterways.						

Minimum Control Measure No. 6: Pollution Prevention/ Good Housekeeping for Mason Facility							
BMP CATEGORY	PROPOSED BMP	PROGRAM	MEASURABLE GOAL	RESPONSIBLE DPMT	CURRENT PROGRAM IN PLACE	ESTIMATED DATE OF IMPLEMENTATION	ANNUAL OBJECTIVES ACHIEVED/ INTENDED ACHIEVEMENT
6.a - Operation and Maintenance Program	6.a.1 - Staff Education	Educate staff on stormwater pollution Prevention, Spill Prevention, Control and Countermeasure, Erosion and Sediment Control and other pollution prevention methods as part of their training.	Provide training on environmental awareness. Track number of individuals trained	Mason LD/ FM/EHS	YES	-	(1) Mason LD staff member received training by DCR on ESC. Also, 289 Mason staff members received training on and chemical safety and proper disposal of chemicals during the reporting period. In addition, 239 staff members at mason received the hazard communication training.
	6.a.2 - Facility Operation and Maintenance Program.	Maintain inventory of current facilities and the appropriate operation and maintenance schedules. Procedures on how to conduct inspections of the MS4 system and schedule information are provided to appropriate personnel through guidelines developed by Mason LD and/or EHS and training upon employment.	Ensure equipment and facilities are properly operated and maintained to reduce or eliminate illicit discharges to stormwater system. Track number of violations reported.	Mason LD/EHS	YES	-	All structural controls are operating at peak performance. Mason FM performs preventative maintenance on all controls. Preventative maintenance includes dredging and removing trash and debris.

Minimum Control Measure No. 6: Pollution Prevention/ Good Housekeeping for Mason Facility							
BMP CATEGORY	PROPOSED BMP	PROGRAM	MEASURABLE GOAL	RESPONSIBLE DPMT	CURRENT PROGRAM IN PLACE	ESTIMATED DATE OF IMPLEMENTATION	ANNUAL OBJECTIVES ACHIEVED/ INTENDED ACHIEVEMENT
6.b - Management of Municipal Facilities	6.b.1 - Parking Lot, Curb Inlet and Street Cleaning	All public areas located on campus are to be cleaned under Mason control including removal of trash and leaves as needed. Parking lots are monitored periodically and cleaned as necessary.	Continue with existing program. Track and evaluate current street cleaning routines and identify areas that need frequent cleaning.	FM	YES	-	Mason contracts a third party street cleaner as needed. Construction contractors are required to keep impervious areas free of sediment and use street cleaners on regular basis.
	6.b.2 - Maintained of Permanent Stormwater Structures	Identify structures that require maintenance and repair.	Improve stormwater quality by keeping stormwater controls properly maintained. Track number of maintenance work orders issued during the year.	FM	YES	-	Efficient stormwater structures that function as the original design intended.
	6.b.4 - Material and Chemical Storage Facilities	Continue to inspect and evaluate storage locations and methods of storing hazardous and other materials to ensure non-contact with stormwater.	Identify locations and methods for hazardous material storage and inspect storage facility on a regular basis. Track number of inspections performed during the year on material and chemical storage facilities.	EHS	YES	-	All hazardous materials storage locations are inspected at least annually.

Minimum Control Measure No. 6: Pollution Prevention/ Good Housekeeping for Mason Facility							
BMP CATEGORY	PROPOSED BMP	PROGRAM	MEASURABLE GOAL	RESPONSIBLE DPMT	CURRENT PROGRAM IN PLACE	ESTIMATED DATE OF IMPLEMENTATION	ANNUAL OBJECTIVES ACHIEVED/ INTENDED ACHIEVEMENT
6.c - Waste Material Management	6.c.1 - Waste Disposal	Mason has programs in place that address proper waste material disposal.	Improper waste material disposal will be reported. Track number of violations reported.	EHS	YES	-	Properly manage waste material through EHS Chemical, Hazardous and Universal Waste program which includes recycling of materials as well as labeling and handling of trash.
	6.c.2 - Dispose of Foliage Waste Properly	Ensure hydrologic conditions are not altered due to improper disposal of foliage waste (i.e. mulching, composting, etc.)	Improper waste material disposal will be reported. Track number of violations reported.	FM	NO	-	Establish guidelines for sustainable disposal of foliage waste. (I.e. mulching, composting, etc.)
6.d - Soluble and Erodible Materials	6.d.1 - Soluble and Erodible Materials	Identify location and evaluate the adequacy of storage methods used for soluble and erodible materials.	Track location of storage facilities and inventory of soluble and erodible materials. Track number of inspections performed to storage facilities as well as quantities of product.	Mason LD/FM	NO	N/A	Currently, the university has no designated place for storing soluble and erodible materials. Therefore materials are purchased as needed and leftovers are discarded or returned as needed. Mason LD is committed remove any unused soluble and/or erodible materials until an adequate storage facility is constructed.

Minimum Control Measure No. 6: Pollution Prevention/ Good Housekeeping for Mason Facility							
BMP CATEGORY	PROPOSED BMP	PROGRAM	MEASURABLE GOAL	RESPONSIBLE PERSON/DPMT	CURRENT PROGRAM IN PLACE	ESTIMATED DATE OF IMPLEMENTATION	ANNUAL OBJECTIVES ACHIEVED/ INTENDED ACHIEVEMENT
	6.f.1 - Fertilizer Application	Ensure compliance with all regulations associated with the application of fertilizers. An Environmental Compliance Officer is in charge of evaluating the effectiveness of methods used in the application of fertilizers.	Update and maintain current program. Track percentage of certified applicators.	FM/EHS	YES	-	Apply appropriate type of fertilizers only when and where needed.
	6. f.2 - Nutrient Management Plan	Ensure compliance with state required Nutrient Management Plans for all lawn and landscaped areas. Certified Nutrient Management Planners work hard to ensure the plans accurate and up to date.	Update and maintain Nutrient Management Plan for review and approval of DCR every three years. Track number of updates to the Nutrient Management Plan.	FM/EHS	YES	-	Nutrient Management Plans were updated for each campus. Nutrient Management plans for all campuses were approved by DCR on April 10, 2012.
Evaluation of appropriateness and effectiveness of Pollution Prevention in addressing discharges.	Proper handling and disposal of chemical materials is supervised through different procedures and requirements in order to minimize impact to local environment. In addition, proper handling of soluble and erodible materials ensures that these materials are only used when necessary. Proper employee training also allows for better management of materials and emphasizes proper environmental stewardship. Therefore, BMPs associated with pollution prevention and good housekeeping at GMU are appropriate and effective in addressing discharges into existing waterbodies.						

Appendix B:

Notice of Potential Interconnected MS4



Mason Land Development Department
4400 University Drive – MailStop 2C1
Fairfax, Virginia 22030-4444

Phone: 703-993-4051
Cell: 571-265-1977
Fax: 703-993-2521

September 18, 2012

Prince William County
Watershed Management Branch
4379 Ridgewood Center Drive
Prince William, VA 22192

Subject: MS4 Permit; Notice of Potential Interconnected Stormwater System

To Whom It May Concern:

George Mason University (Mason) is a Phase II small MS4 and is covered under the Virginia Stormwater Management Program (VSMP) General Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems (Registration Number VAR040106).

The purpose of this letter is to notify you of the potential for interconnections between the stormwater system operated by Mason and the stormwater systems that you operate. The MS4 permit requires that Mason notify in writing, any downstream regulated MS4 to which Mason is physically interconnected. We have identified several points where Mason discharges stormwater into your regulated MS4 stormwater system. Please see attached Figure 1: Map of MS4 Interconnectivity. There is no action required on your part at this time, as this letter is for notification purposed only. Please keep this for your records.

If you have any questions or desire additional information related to this subject, please contact me:

Brad Glatfelter
Land Development
Office – (703) 993-4051
Cell – (571) 265-1977
Email – bglatfel@gmu.edu

Sincerely,

A handwritten signature in blue ink, appearing to read "Brad Glatfelter".

Brad Glatfelter
Mason Land Development

Attachment(s):

(1) Figure 1: Map of MS4 Interconnectivity

Copy To:

Tom Calhoun, Mason, Vice President of Facilities
Robert Endebrock, Mason, Director of Project Management and Construction
Elizabeth Anderson, Leah Maslov, Mason, Land Development
POST



Mason Land Development Department
4400 University Drive – MailStop 2C1
Fairfax, Virginia 22030-4444

Phone: 703-993-4051
Cell: 571-265-1977
Fax: 703-993-2521

September 18, 2012

Fairfax County
DPWES Director's Office
12055 Government Center Pkwy
Fairfax, VA 22035

Subject: MS4 Permit; Notice of Potential Interconnected Stormwater System

Attention: James Patteson, Appointed Director of DPWES

George Mason University (Mason) is a Phase II small MS4 and is covered under the Virginia Stormwater Management Program (VSMP) General Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems (Registration Number VAR040106).

The purpose of this letter is to notify you of the potential for interconnections between the stormwater system operated by Mason and the stormwater systems that you operate. The MS4 permit requires that Mason notify in writing, any downstream regulated MS4 to which Mason is physically interconnected. We have identified several points where Mason discharges stormwater into your regulated MS4 stormwater system. Please see attached Figure 1: Map of MS4 Interconnectivity. There is no action required on your part at this time, as this letter is for notification purposes only. Please keep this for your records.

If you have any questions or desire additional information related to this subject, please contact me:

Brad Glatfelter
Land Development
Office – (703) 993-4051
Cell – (571) 265-1977
Email – bglatfel@gmu.edu

Sincerely,

A handwritten signature in blue ink, appearing to read "Brad Glatfelter".

Brad Glatfelter
Mason Land Development

Attachment(s):

(1) Figure 1: Map of MS4 Interconnectivity

Copy To:

Tom Calhoun, Mason, Vice President of Facilities
Robert Endebrock, Mason, Director of Project Management and Construction
Elizabeth Anderson, Leah Maslov, Mason, Land Development
POST



Mason Land Development Department
4400 University Drive – MailStop 2C1
Fairfax, Virginia 22030-4444

Phone: 703-993-4051
Cell: 571-265-1977
Fax: 703-993-2521

September 18, 2012

City of Fairfax
City Hall Room 316
10455 Armstrong Street
Fairfax, VA 22030

Subject: MS4 Permit; Notice of Potential Interconnected Stormwater System

Attention: Robert Sisson, City Manager

George Mason University (Mason) is a Phase II small MS4 and is covered under the Virginia Stormwater Management Program (VSMP) General Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems (Registration Number VAR040106).

The purpose of this letter is to notify you of the potential for interconnections between the stormwater system operated by Mason and the stormwater systems that you operate. The MS4 permit requires that Mason notify in writing, any downstream regulated MS4 to which Mason is physically interconnected. We have identified several points where Mason discharges stormwater into your regulated MS4 stormwater system. Please see attached Figure 1: Map of MS4 Interconnectivity. There is no action required on your part at this time, as this letter is for notification purposes only. Please keep this for your records.

If you have any questions or desire additional information related to this subject, please contact me:

Brad Glatfelter
Land Development
Office – (703) 993-4051
Cell – (571) 265-1977
Email – bglatfel@gmu.edu

Sincerely,

A handwritten signature in blue ink, appearing to read "Brad Glatfelter".

Brad Glatfelter
Mason Land Development

Attachment(s):

(1) Figure 1: Map of MS4 Interconnectivity

Copy To:

Tom Calhoun, Mason, Vice President of Facilities
Robert Endebrock, Mason, Director of Project Management and Construction
Elizabeth Anderson, Leah Maslov, Mason, Land Development
POST



Mason Land Development Department
4400 University Drive – MailStop 2C1
Fairfax, Virginia 22030-4444

Phone: 703-993-4051
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Fax: 703-993-2521

September 18, 2012

Department of Transportation
Location and Design Division
1401 East Broad Street
Richmond, VA 23219-2000

Subject: MS4 Permit; Notice of Potential Interconnected Stormwater System

Attention: Roy T. Mills, State Stormwater Program Administrator

George Mason University (Mason) is a Phase II small MS4 and is covered under the Virginia Stormwater Management Program (VSMP) General Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems (Registration Number VAR040106).

The purpose of this letter is to notify you of the potential for interconnections between the stormwater system operated by Mason and the stormwater systems that you operate. The MS4 permit requires that Mason notify in writing, any downstream regulated MS4 to which Mason is physically interconnected. We have identified several points where Mason discharges stormwater into your regulated MS4 stormwater system. Please see attached Figure 1: Map of MS4 Interconnectivity. There is no action required on your part at this time, as this letter is for notification purposes only. Please keep this for your records.

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Office – (703) 993-4051
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Email – bglatfel@gmu.edu

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Brad Glatfelter
Mason Land Development

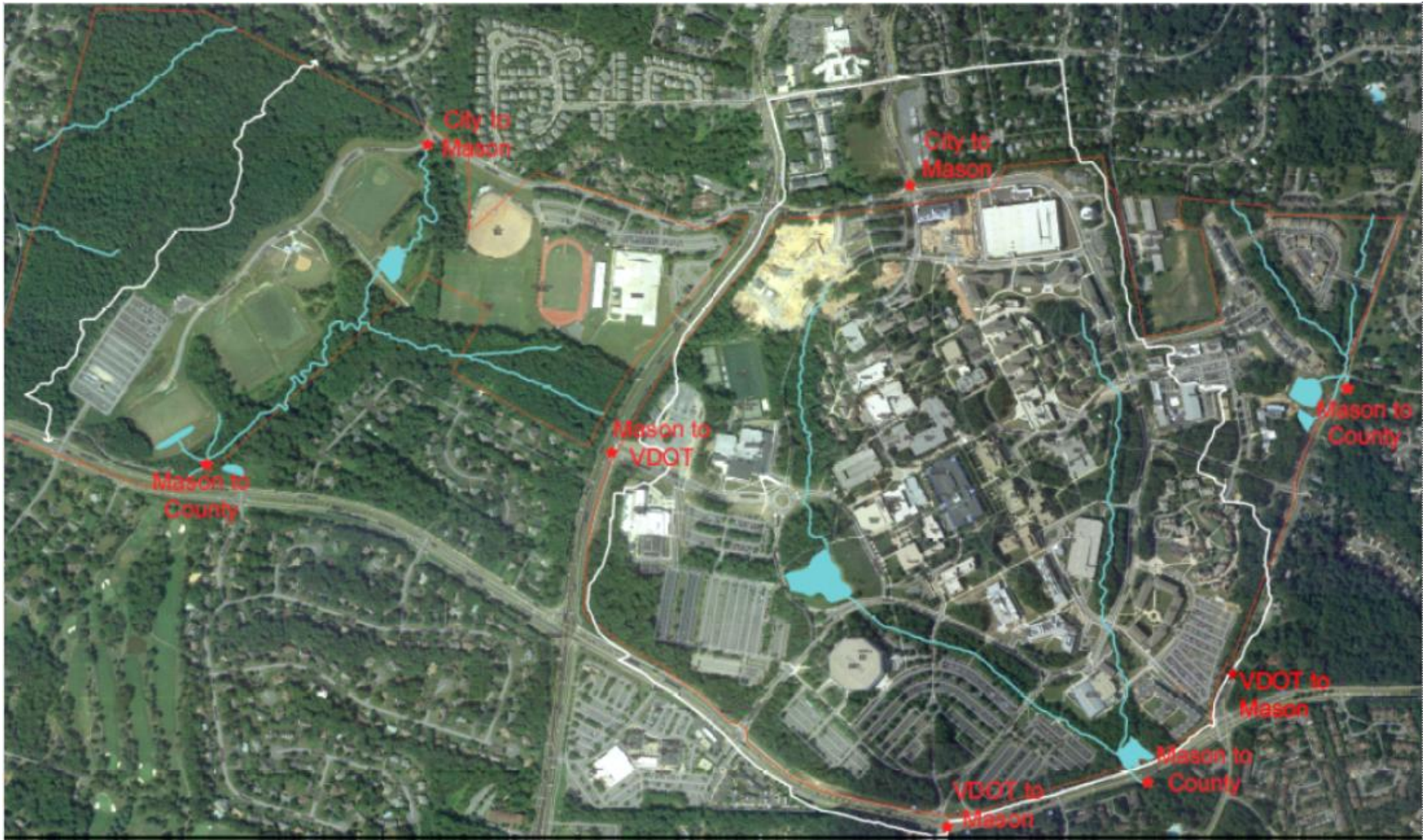
Attachment(s):

(1) Figure 1: Map of MS4 Interconnectivity

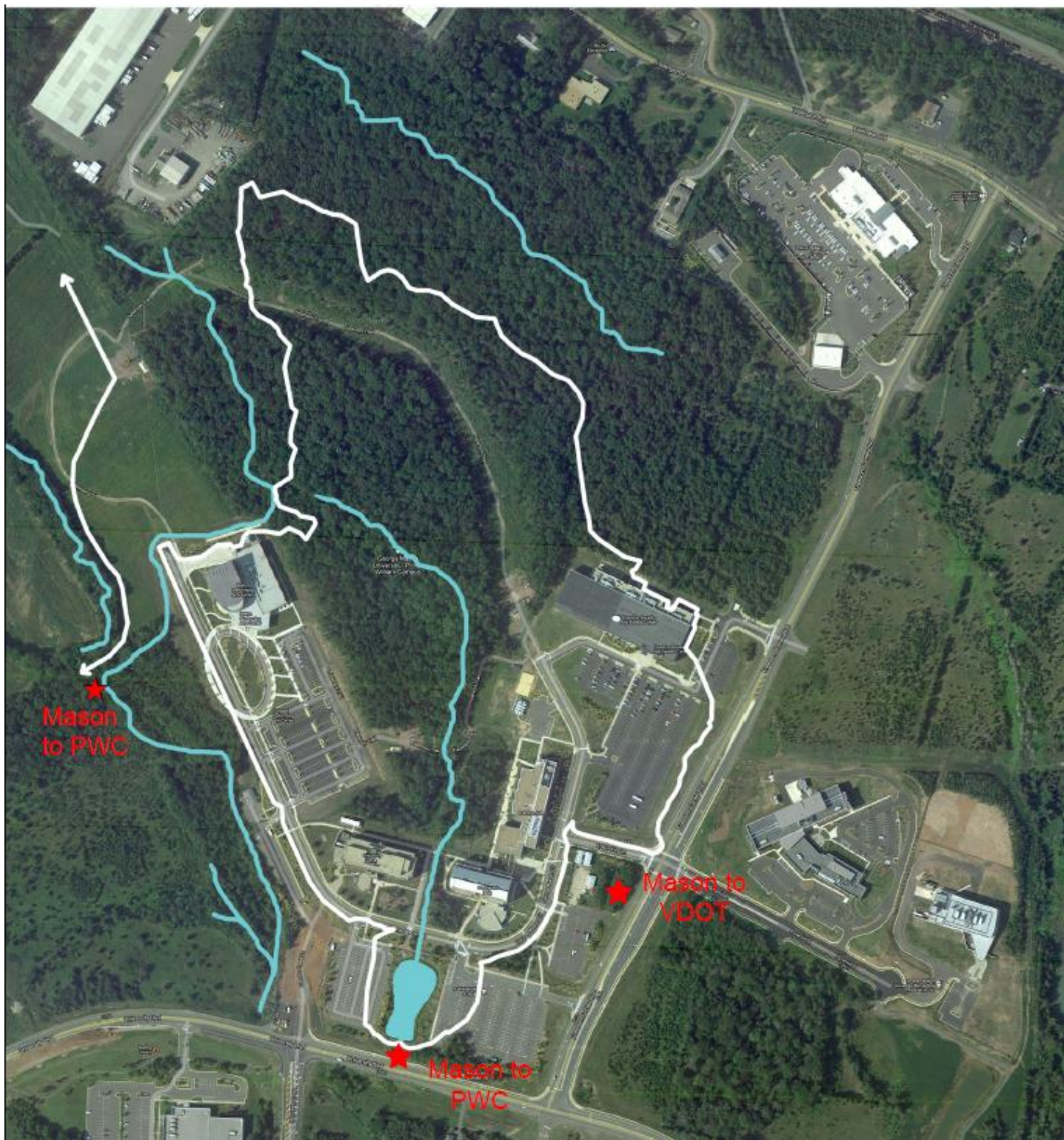
Copy To:

Lauren Mollerup, VDOT, Maintenance Division
Tom Calhoun, Mason, Vice President of Facilities
Robert Endebrock, Mason, Director of Project Management and Construction
Elizabeth Anderson, Leah Maslov, Mason, Land Development
POST

Appendix F.1: Connectivity Map – Fairfax Campus



Appendix F.2: Connectivity Map – Prince William Campus



Appendix C:

Notice of Corrective Action



703-993-2998
Fax: 703-993-2821

October 18, 2011

Gilbane Development
Attn: David Pifflerling, Project Manager

Re: PW PPEA Upper Student Housing and Science Building [Project No: 247-17489 & 247-17848]
VESCL Notice of Corrective Action (NOCA)

Dear Mr. Pifflerling:

On 14 October 2011 George Mason University Land Development (Mason LD) staff inspected both Upper Level Student Housing and Science Building sites, permits #ES-17489 and #ES-17848, for compliance with the Virginia Erosion and Sediment Control Law (VESCL). During the inspection, staff observed the following violations:

- Measures are not installed according to approved E&S plan.
- Drainage Diversions are not stabilized.
- Silt Fence is not properly installed and/or need repaired.
- All outfalls are not constructed in accordance to approved plans.
- Sediment Traps are not installed correctly.

Inspection reports documenting these observations are attached.

Mason LD met with the Contractor (Gilbane) and the earthworks Subcontractor (Harden Group) on Monday, 17 October 2011 at 12:00pm. The purpose of this meeting was to review these infractions and the immediate steps that need to be taken to become compliant. Several recommendations were made during the walk-through, which Gilbane seemed eager and willing to take into consideration:

- Properly stabilize the diversion dams.
- Filtered water should outfall onto stabilized grounds.
- Extend the perimeter diversion dike along the western perimeter of Life Sciences parking lot beyond the elbow in the stream.
- Remove the perimeter silt fence along the western perimeter of the Life Sciences parking lot.
- Remediate/Reestablish and stabilize the bank along eastern stream.
- Consult with Professional Engineer of Record (Bill Vest, Timmons) to ensure proper E&S measures were selected and installed correctly.

The intent of this letter is to formally identify the infractions and to serve as a Notice of Non-Compliance. As such, you have 72 business hours to stabilize the sites in accordance with the VESCL and the approved plans from the date of the latest issued report. In addition, a log must be kept of self-inspections noting deficiencies and the steps taken to address them. This log will be requested at the time of each inspection to ensure preventive measures are being taken.

Immediately, post the VSMP Permit.

George Mason University is very dissatisfied with Gilbane's initial installation, maintenance of controls, and lack of immediate responsiveness after the rainfall. If the discrepancies described above cannot be resolved to the satisfaction of GMU within the time allotted, GMU has the authority to immediately pursue formal enforcement action. Failure to provide corrective action by

20 May 2011 may result in additional enforcement action through the Department of Conservation and Recreation.

However, we do not anticipate such action will be necessary. Gilbane and Harden Group were very assuring during the walk-through. We look forward to continuing this partnership without further incident.

Sincerely,



Brad Glatfelter
Senior Erosion and Sediment Control and Stormwater
Administrator

Attachment:

- (1) E&S Report dated October 7, 2011
- (2) E&S Report dated October 14, 2011

Copy to:

- Robert Endebrock, GMU
- David Pfifferling, Gilbane
- Debbie Switzer, DCR
- Tony Esse, GMU
- Diana Villa, GMU
- Aaron Trout, Gilbane
- Robbie Houser, GMU
- University E&S/SWM File

Reply To:
Facilities Construction Office
4400 University Dr.
Fairfax, VA 22030
PHONE: (703) 933-2511 FAX: (703) 983-2521



LAND DEVELOPMENT INSPECTION REPORT

Project Name: Upper Student Housing Project Location: Prince William
Project Authority: GMU Permit No.: ES-17489
Inspector: Robert Houser Insp. Date/Time: Oct 7, 2011 T: 3:00 PM

Permit Displayed: Mason LD Permit VSMP

STAGE OF CONSTRUCTION

Pre-Cons. Conference Building Construction Construction SWM Facilities
Clearing & Grubbing Finish Grading Maintenance of SWM Facilities
Rough Grading Final Stabilization

State/Local Regulation ⁽¹⁾ (citation)	Violation		Practice/Problem/Violation Location and Description(2)	Corrective Action Required, Completed, and/or Recommendations/Comments	Reference Image
	Initial	Repeat			
MS 1	X		No temporary soil stabilization on dormant areas	Add temporary seeding to sediment traps that are going to be dormant for longer than 30 days	
Comments:					

(1) Refers to applicable regulation found in the most recent publication of the Virginia Erosion and Sediment Control Regulations (MVAC50-30-40), Virginia Stormwater Management Regulations (1VACS-20), or local ESC/SWM ordinance.

(2) Note whether or not off-site damage resulting from the practice, problem, or violation was evident during the inspection.

REQUIRED CORRECTIVE ACTION DEADLINE DATE: Oct 14, 2011 Re-Inspection +/-: 2 Weeks

The required corrective action deadline date applies to all violations noted on this report. If listed violation(s) currently constitute non-compliance as defined in the current version of the DCR Urban Programs Policy & Procedures Manual and/or required corrective actions are not completed by the deadline date, a **NOTICE TO COMPLY, STOP WORK ORDER**, and/or other enforcement actions may be issued to the entity responsible for ensuring compliance on the above project.

Inspector: Robert Houser Robert Houser 10/7/2011
Signature Date

Hand deliver or fax written notification to all appropriate parties within 24 hours of inspection date.

On-Site Recipient: _____ Signature _____ Date _____

Comments: _____

Reply To:
Facilities Construction Office
4400 University Dr.
Fairfax, VA 22030
PHONE: (703) 993-2511 FAX: (703) 993-2521



LAND DEVELOPMENT INSPECTION REPORT

Project Name: Upper Student Housing Project Location: Prince William
Project Authority: GMU Permit No.: ES-17489
Inspector: Diana Villa Insp. Date/Time: Oct 14, 2011 T: 11:00 AM

Permit Displayed: Mason LD Permit VSMP

STAGE OF CONSTRUCTION

Pre-Const. Conference Building Construction Construction SWM Facilities
Clearing & Grubbing Finish Grading Maintenance of SWM Facilities
Rough Grading Final Stabilization

State/Local Regulation ⁽¹⁾ (citation)	Violation		Practice/Problem/Violation Location and Description(2)	Corrective Action Required, Completed, and/or Recommendations/Comments	Reference Image
	Initial	Repeat			
MS 1		X	No temporary soil stabilization in dormant areas	Add temporary seeding.	Figure 1
MS 2	X		No stabilization or protection for stockpiles	Install stockpile protection or stabilize.	Figure 2
MS 5	X		No stabilization measures on diversion dikes	Add temporary seeding on diversion dikes.	Figure 1
MS 19	X		Clear water diversion channel not installed per design.	Clean pipe and reestablish outfall onto stabilized and/or natural undisturbed vegetated area.	Figure 3
MS 19	X		Stream not being protected from sediment deposition.	Reestablish banks and reconstruct diversion dikes per plan. Stream mitigation/restoration might be required.	Figure 4
MS 12	X		Precautions were not taken to prevent encroachment while working along the live watercourse	Provide adequate stabilization to stream banks	
MS 19	X		Precautions were not taken to prevent encroachment while working along the live watercourse	Provide adequate stabilization to stream banks.	

Comments:

- (1) Refers to applicable regulation found in the most recent publication of the Virginia Erosion and Sediment Control Regulations (4VAC50-30-40), Virginia Stormwater Management Regulations (4VAC3-20), or local ESC/SWM ordinance.
- (2) Note whether or not off-site damage resulting from the practice, problem, or violation was evident during the inspection.

REQUIRED CORRECTIVE ACTION DEADLINE DATE: Oct 19, 2011 Re-Inspection +/-: 5 Days

The required corrective action deadline date applies to all violations noted on this report. If listed violation(s) currently constitute non-compliance as defined in the current version of the DCR Urban Programs Policy & Procedures Manual and/or required corrective actions are not completed by the deadline date, a NOTICE TO COMPLY, STOP WORK ORDER, and/or other enforcement actions may be issued to the entity responsible for ensuring compliance on the above project.

Inspector: Diana Villa Diana Villa 10/14/2011
Signature Date

Hand deliver or fax written notification to all appropriate parties within 24 hours of inspection date.
On-Site Recipient: _____
Signature Date

Reply To:
Facilities Construction Office
4400 University Dr.
Fairfax, VA 22030
PHONE: (703) 883-2511 FAX: (703) 883-2521



Comments:

Copy 1-Onsite Project Representative

Copy 2-Project Authority

Copy 3-DCR Project File



Figure 1



Figure 2



Figure 3



Figure 4

Appendix D: Current and Future Land Disturbing Projects

Current & Future Land Disturbing Projects						
Project Name	Total Disturbed Area (ac)	Projected Timeline		Location	On-Site Project Manager	Project Description
		Start	Finish			
Projects Currently Under Construction						
Science & Tech II Addition	3.60	Nov-11	May-13	Fairfax	Alex Iszard (703) 462-4597	Academic Science Addn.
Roanoke River Road	1.9	Aug-11	Dec-11	Fairfax	Brad Glatfelter (571) 265-1977	Campus Entrance
Discovery Hall II	5.20	Jul-11	Aug-13	Prince William	Tony Esse (703) 462-4596	Academic Laboratory Building
Graduate Student Housing	8.00	Oct-11	Nov-12	Prince William	Tony Esse (703) 462-4596	Student Housing
2012 Proposed/Potential Future Construction Projects						
ICAR/POV	1.20 (?)	Dec-12	Aug-13	Mason Neck	Nancy Pickens (571) 296-1137	Conference Center and Housing
Fenwick Library	2.3 (?)	Dec-12	Aug-14	Fairfax	Brian Snyder (703) 993-5041	Academic Library
Baseball Stadium	3(?)	Apr-13	Dec-13	Fairfax	Alex Iszard (703) 993-9220	Baseball Stadium
Sandy Creek Transit Center	2.8 (?)	May-13	Sep-13	Fairfax	Brad Glatfelter (571) 265-1977	Transit Center Upgrades

West Campus Connector Road	15 (?)	May-12	Aug-13	Fairfax	Jim Kaminiski (703) 395-1809	Road and Grade Separated Crossing
Bull Run Hall Addition 4 Stories	3.5(?)	Oct-13	Oct-15	Prince William	Micky Boeckl	Academic Addition
Graduate Housing	20(?)	Aug -13	Aug-15	Fairfax	Nancy Pickens	Student Housing
Academic VII	8	Oct-13	Oct-16	Fairfax	Brian Snyder (703) 993-5041	Academic Building
Potomac Science Center	2	Jan-13	Jun-14	Belmont Bay	Alex Iszard (703) 993-9220	Academic Building
Plant Expansion	0.25	Mar-13	Oct-13	Fairfax	Brian Snyder	Satellite Plant
Shenandoah Housing	1.5	May-13	Jun-14	Fairfax	Nancy Pickens	Student Housing
Shenandoah Dining	0.5	May-13	Feb-14	Fairfax	Hieu Tran	Dining Addition
Rappahannock Housing	1	May-13	Sep-15	Fairfax	Nancy Pickens	Student Housing

Appendix E:

Permanent Stormwater Management Facilities

Inventory of Permanent Stormwater Management Facilities

Facility Name	Type	Location	HUC 8 Code	Virginia Code	Impaired Water	Drainage area	Facility size	BMP Efficiency	TMDL	WQ Treatment Area
						(acres)	(acres)	(%)		(acres)
Braddock Road Pond	Ext. Dry Pond	East Fairfax Campus	1070010	PL29	Pohick Creek	315	~1.40 ac-ft	40	N/A	159.9
Mason Pond	Wet Pond	East Fairfax Campus	1070010	PL29	Pohick Creek	137	~9.79 ac-ft	50	N/A	163.02
Rivanna Basin	Dry Pond	East Fairfax Campus	1070010	PL29	Pohick Creek	28.12	28.12	N/A	N/A	Quantity Only
Krasnow Pond	Dry Pond		1070010	PL29	Pohick Creek	8.5	3.06	44.08	N/A	8.52
Masonvale Pond	Dry Pond		1070010	PL29	Pohick Creek	17.4	8.83	35	N/A	6.99
PW Pond	Wet Pond	Prince William Campus	02070010	PL34	Broad Rum/ Kettle Run	70.53		50	N/A	
MHI Rain Garden #1	Rain Garden	Masonvale Ph. 2	1070010	PL29	Pohick Creek	0.12	0.002	50	N/A	0.9
MHI Rain Garden #2	Rain Garden	Masonvale Ph. 2	1070010	PL29	Pohick Creek	0.08	0.002	50	N/A	0.6
MHI Rain Garden #3	Rain Garden	Masonvale Ph. 2	1070010	PL29	Pohick Creek	0.2	0.002	50	N/A	0.16
MHI Rain Garden #4	Rain Garden	Masonvale Ph. 1	1070010	PL29	Pohick Creek	0.09	0.002	50	N/A	0.07
Vegetated Swale#1	Grass Swale	Masonvale Ph. 1	1070010	PL29	Pohick Creek			35	N/A	
Bio-Swale #1	Bio-Swale	ACAD V X-Walk	1070010	PL29	Pohick Creek	0.6	0.04	35	N/A	0.15
Permeable Pavers	Permeable Surface	Masonvale Ph. 1 & 2	1070010	PL29	Pohick Creek	4.6	.09	40	N/A	4.6
West Campus Pond	Dry Pond	West Campus	02070010		Pohick Creek	46.98			N/A	
Piedmont Rain Garden	Rain Garden	East Fairfax Campus	1070010	PL29	Pohick Creek	0.045	0.006	50	N/A	0.04
Piedmont inflation trench		East Fairfax Campus	1070010	PL29	Pohick Creek	0.05	0.006		N/A	0.03
Piedmont Rain Garden	Rain Garden	East Fairfax Campus	1070010	PL29	Pohick Creek	0.04	0.01	50	N/A	0.02
Roanoke SWM pond	Dry Pond	East Fairfax Campus	1070010	PL29	Pohick Creek	4.98	0.37	40	N/A	0.92
Smithsonian pervious pavers	Permeable Surface	Front Royal	02070005	PS48	Happy Creek	0.96	0.37	50	N/A	0.96
Smithsonian infiltration swale	Bio-Swale	Front Royal	02070005	PS48	Happy Creek	2	0.28	35	N/A	0.98

Appendix F: Drainage Markers

Drainage Markers are placed at all inlets around all three George Mason University main campuses. Any future projects will be marked with the same decal shown below after completion and acceptance of the project.

