Christopher Newport University – Municipal Separate Storm Sewer System (MS4) Program Plan for the July 1, 2018 through June 30, 2023 Permit Term

September 2022

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LIABILITY STATEMENT

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Abbreviations

AS&S	Annual Standards and Specifications
BMP	Best Management Practice
CFA	Certified Fertilizer Applicator
CGP	Construction General Permit
CNU	Christopher Newport University
DCR	Department of Conservation and Recreation
DEQ	Department of Environmental Quality
ESC	Erosion and Sediment Control
HUC	Hydrologic Unit Code
IDDE	Illicit Discharge Detection and Elimination
MCM	Minimum Control Measure
MEP	Maximum Extent Practicable
MS4	Municipal Separate Storm Sewer System
NMP	Nutrient Management Plan
SOP	Standard Operating Procedure
SWM	Stormwater Management
SWPPP	Stormwater Pollution Prevention Plan
TMDL	Total Maximum Daily Load
VDACS	Virginia Department of Agriculture and Consumer Services
VPDES	Virginia Pollutant Discharge Elimination System
VSMP	Virginia Stormwater Management Program

1.0 INTRODUCTION

1.1 BACKGROUND INFORMATION

The Virginia General VPDES Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4s) requires Christopher Newport University (CNU) to develop and implement a comprehensive stormwater management (SWM) program consistent with the Virginia General Permit (VAR04), originally effective on July 9, 2008. The current permit term for the MS4 General Permit for CNU (VAR040090) is from November 1, 2018 to October 31, 2023.

CNU's Stormwater Management Program is based on six minimum control measures (MCM) as required by the Virginia General Permit. These goals and objectives were developed to reduce the discharge of pollutants from the University's MS4 to the "maximum extent practicable", provide adequate progress in meeting water quality standards, and satisfy the appropriate water quality requirements of the State Water Control Law and its attendant regulations.

The CNU regulated small MS4 is contained within the campus boundaries as shown on the CNU SWPPP Orthophotograph (Figure 3) in Appendix A. The campus is located in the Lower James River watershed within the Hydrologic Unit Codes (HUC) JL38 and JL43. The Campus is also located within the City of Newport News and therefore drains, in part, to the City of Newport News regulated MS4.

All outfalls from the CNU MS4 are included in the CNU Stormwater Management Master Plan by VHB (June 2019), and also provided in Appendix A (Figure 3). An updated Overall Storm Sewer Map dated March 23, 2016 and outfall information table are also included in Appendix A. Based on this updated mapping and a field visit in 2016, it was determined that in addition to the one main stormwater outfall (Outfall 1) for the CNU MS4, there is a second and third outfall (Outfall 2 & Outfall 3). This second outfall drains stormwater from the area of the Ferguson Center for the Arts which is part of CNU and within the MS4 boundary while the third drains mostly residential area near Outfall 2.

1.2 PURPOSE OF THE PROGRAM PLAN

The MS4 Program Plan was originally submitted to the permitting agency in June 2010 and has been revised annually to reflect updates required in the general permit. This revised MS4 Program Plan reflects requirements in the latest general permit and contains MCMs as required by the permit which are also reflected in the annual reports required by the permit. The Plan will continue to be updated annually to reflect requirements outlined in the permit.

The six MCMs listed below are presented in Sections 7 through 12 of this Plan.

1. Public Education and Outreach
2. Public Involvement and Participation
3. Illicit Discharge Detection and Elimination
4. Construction Site Stormwater Runoff Control
5. Post-Construction Stormwater Management for New Development and Development on Prior Developed Lands
6. Pollution Prevention and Good Housekeeping for Facilities Owned or Operated by the Permittee Within the MS4 Service Area

Annual reports as required by the permit will serve to convey the required information and detail the status of compliance with the permit conditions as well as the appropriateness of best management practices (BMPs) identified in the Program Plan towards achieving measurable goals for each MCM.

1.3 RESPONSIBLE PERSONNEL

The following personnel are listed as the responsible persons for implementing, coordinating, and/or reporting on tasks or measurable goals as outlined within this MS4 Program Plan. The MS4 Program Plan and annual reports are coordinated through the Grounds Department at CNU. However, many of the MCMs are coordinated through other departments with different people listed as the responsible party and key personnel for each MCM. The MCM Summary Table in Appendix B lists the responsible party and key personnel for each MCM identified in the MS4 Program Plan. This table may be updated in future MS4 annual reports.

Ms. M. Christine Ledford, CPA
Associate Vice President for Administration and Finance
757-594-8459

Mr. R. Dean Whitehead
Director of Grounds
757-594-8416

Mr. Chris Webb
Associate Director of Grounds
757-594-8898

Ms. Michelle Campbell
Director of Capital Outlay Management
757-594-7867

Mr. Kyle McMullin
Athletic Director
757-594-7290

Mr. Scott Roberts
Associate Architect
757-594-8192

Mr. Scott Gesele
Director of Facilities Management
757-594-7863

David Duncan, P.E., ENV SP
Consultant, Timmons Group (TG)
757-213-6669

Mr. JD Hines, P.E.
Consultant, VHB
757-233-3280

Mr. Bruce Bronstein
Interim Chief Communications Officer
757-594-7699

Ms. Jackie Roquemore
Environmental Health and Safety Manager
757-594-7280

Mr. Brian Kelley
Sustainability Coordinator
757-594-8028

1.4 NOTICE THAT THE PERMITTEE UTILIZES ANOTHER ENTITY TO IMPLEMENT PORTIONS OF THE MS4 PROGRAM

The CNU campus is located within the City of Newport News. The CNU regulated MS4 boundary drains to Lake Maury, a BMP within the City of Newport News stormwater regulated MS4. The Lake Maury Watershed Plan is an agreement between CNU, the Mariners' Museum, and the City of Newport News regarding Lake Maury. A copy of the Lake Maury Watershed Plan is provided in Appendix H.

1.5 NOTIFICATIONS AND REPORTS

The following Notifications and Reports are required by the General permit and will be submitted appropriately.

1. Oral and written reports of compliance or noncompliance submitted no later than 14 days following each schedule date.
2. Notification of unusual or extraordinary discharge.
3. Notification of planned changes is required when there are any planned physical alterations or additions to the permitted facility.
4. CNU shall submit a new registration statement at least 90 days before the expiration date of the existing state permit if CNU wishes to continue an activity regulated by the state permit.

2.0 SIGNED CERTIFICATION

As required by CNU's MS4 Permit (VAR040090), the following certification is provided in accordance with Section 9VAC25-870-370 of the Virginia Stormwater Management Program (VSMP) Regulations.

Signed Certification

Certification Statement and Requirements

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

1. For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy-making or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided the manager is authorized to make management decisions that govern the operation of the regulated facility, including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for state permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

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

3. For a municipality, state, federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

Duly Authorized Representatives

A person is a duly authorized representative only if:

1. The authorization is made in writing by a person described above;

2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. A duly authorized representative may thus be either a named individual or any individual occupying a named position;

3. If an authorization under Part III K 2 is no longer accurate because a different individual or position has responsibility for the overall operation of the MS4, a new authorization satisfying the requirements of Part 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; and

4. The written authorization is submitted to the department.

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.

_____

Responsible Official Signature Date

VAR040090 Christopher Newport University

Permit Number MS4 Name

3.0 SPECIAL CONDITIONS FOR TMDL ACTION PLANS

As required by the permit, CNU must include status reports on the implementation of required Total Maximum Daily Load (TMDL) Action plans with the appropriate annual report. There are currently no waste-load allocations assigned to University from any approved TMDL reports so there is no anticipated TMDL Action Plan for CNU for special conditions other than the Chesapeake Bay TMDL. The Chesapeake Bay TMDL Action Plan was developed for CNU by Koontz-Bryant and was submitted under separate cover to the Department of Environmental Quality (DEQ) following the 2014-2015 reporting year. A draft second phase Chesapeake Bay TMDL Action Plan was submitted by CNU to the DEQ on June 1, 2018 as part of the permit reapplication package as required by the Virginia General Permit. Conditions of future permits will be consistent with the TMDL or WIP conditions in place at the time of permit issuance.

4.0 ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE) POLICY

CNU developed and adopted an Illicit Discharge Detection and Elimination Policy in 2009-2010 (adopted by CNU on July 1, 2010). The IDDE Policy and information about it was added to the university's website in 2010-2011 and a link to the policy is provided below. It was finalized and implemented during the 2015-2016 reporting year and is included in Appendix F of the Program Plan. Starting in the 2017-2018 reporting year, all new CNU employees in residential housing, facility management, grounds, and trades will be trained in hazardous communication and the training will also include the IDDE policy. CNU will document any illicit discharges that are detected annually in each year's annual report.

http://cnu.edu/public/stormwater/_pdf/idde_plan_and_policy.pdf

5.0 STANDARD OPERATING PROCEDURES (SOPS)

In an effort to further pollution prevention and minimize illicit discharges, CNU developed Standard Operating Procedures (SOPs) for various activities with the potential to impact water quality. The SOPs include the following:

- Equipment maintenance and washing
- Outdoor special events and festivals
- Kitchen waste: fats, oils, and greases (FOG) transfer, storage, and disposal
- Equipment fueling activities
- Landscape maintenance
- Liquid materials loading, unloading, and storage
- Trash & recycling handling, storage, transfer, and disposal
- Parking lot, streets, and roads maintenance
- Pressure washing and exterior surface cleaning
- Spill prevention, control, clean up and reporting

The site-specific SOPs were also included in departmental training where applicable and are included in Appendix D of the Program Plan. A link to the SOPs is provided below.

http://cnu.edu/public/stormwater/_pdf/stormwater_standard_operating_procedures.pdf

6.0 STORMWATER POLLUTION PREVENTION PLAN (SWPPP) FOR HIGH-PRIORITY FACILITIES

The MS4 permit includes a requirement for identification of high-priority facilities with a high potential of discharging pollutants. The permit defines "high-priority facilities" as facilities owned or operated by the permittee that actively engage in one or more of the following activities: (i) composting, (ii) equipment storage and maintenance, (iii) materials storage, (iv) pesticide storage, (v) storage for public works, (vi) recycling, (vii) salt storage, (viii) solid waste handling and transfer, and (ix) vehicle storage and maintenance. Within 12 months of state permit coverage, CNU is required to identify which of the high-priority facilities have a high potential of discharging pollutants. CNU previously identified the Grounds and Plant Operations Departments as well as the dumpster refuse area as being high-priority facilities.

CNU is required to maintain and implement a site-specific stormwater pollution prevention plan (SWPPP) for each high-priority facility identified. High-priority facilities that have a high potential for discharging pollutants are those facilities 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:

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

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

(3) Material handling equipment;

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

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

(6) 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;

(7) Waste material except waste in covered, nonleaking containers (e.g., dumpsters);

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

(9) 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.

CNU developed a SWPPP for high-priority facilities included in Appendix G of the Program Plan. It was finalized and implemented during the 2015-2016 reporting year and was updated during the 2019-2020 reporting year. The update included the addition of new individual facility maps for each location with multiple SWPPP materials/activities as well as area maps for simpler facilities, such as dumpsters, located near to each other, updated any areas or locations that had changed, and identified several additional locations such as Loading/Unloading Areas and Processing and Storage areas on the new maps as required by the SWPPP. A link to the SWPPP is provided below.

http://cnu.edu/public/stormwater/_pdf/cnu_stormwater_pollution_prevention_plan.pdf

Stormwater Pollution Prevention Plan (SWPPP) for High-Priority Facilities

The SWPPP should be utilized as part of staff training and made available to employees at the applicable site.

Each SWPPP as required in the permit shall include the following:

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

(2) A description and checklist of the potential pollutants and pollutant sources;

(3) A description of all potential non-stormwater discharges;

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

(5) A description of the applicable training as required in the permit;

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

(7) An inspection frequency of no less than once per year and maintenance requirements for site specific source controls. The date of each inspection and associated findings and follow-up shall be logged in each SWPPP; and

(8) A log of each unauthorized discharge, release, or spill incident reported in accordance with Part III G including the following information:

  (a) Date of incident;

  (b) Material discharged, released, or spilled; and

  (c) Estimated quantity discharged, released or spilled.

The permittee shall review the contents of any site specific SWPPP no later than 30 days after any unauthorized discharge, release, or spill reported in accordance with the permit to determine if additional measures are necessary to prevent future unauthorized discharges, releases, or spills. If necessary, the SWPPP shall be updated no later than 90 days after the unauthorized discharge.

If activities change at a facility such that the facility no longer meets the criteria of a high-priority facility with a high potential to discharge pollutants as described in the permit, the permittee may remove the facility from the list of high-priority facilities with a high potential to discharge pollutants.

Additional high-priority facilities may be identified in the future and if so, will be included with the MS4 Annual Report and updated Program Plan. No later than June 30 of each year, the permit requires CNU to annually review any high-priority facilities owned or operated by CNU for which a SWPPP has not been developed to determine if the facility has a high potential to discharge pollutants. If a facility is determined to be a high-priority facility with a high potential to discharge pollutants, CNU shall develop a SWPPP meeting the requirements of the permit no later than December 31 of that same year.

7.0 MINIMUM CONTROL MEASURE NO. 1 – PUBLIC EDUCATION AND OUTREACH

7.1 RESPONSIBLE PARTY

The MCM Summary Table in Appendix B provides the responsible party and key personnel for each MCM identified in the MS4 Program Plan.

7.2 SUMMARY

MCM No. 1 provides for a public education and outreach program to increase the public's knowledge of how to reduce stormwater pollution and of the hazards associated with illegal discharges and improper disposal of waste. This measure includes the posting of educational materials around the campus, hosting informational workshops, and other activities. The goals of this measure include increasing the public's knowledge of how to reduce stormwater pollution, increasing the public's knowledge of hazards associated with illegal discharges and improper disposal of waste, and implementing a diverse program with strategies that are targeted towards individuals or groups most likely to have significant stormwater impacts.

The "public" in the case of CNU is defined as the faculty, staff, students, contractors, and visitors to the campus. Therefore, most of these outreach efforts will be part of an on-campus effort to increase the CNU community's knowledge about the steps that they can take to reduce stormwater pollution. These efforts will also be coordinated with MCM No. 2 in order to increase individual and group involvement in local water quality improvement initiatives. CNU will continue to explore opportunities to partner with the adjacent MS4s on education and outreach efforts to engage the broader community through an off-campus effort where possible.

CNU identified three high-priority stormwater issues to meet the goal of educating the public. CNU will use two or more of the strategies outlined in the permit to communicate to the public the high-priority stormwater issues including how to reduce stormwater pollution. These issues have remained as the high-priority water quality issues for the CNU MS4. CNU also identified the public audience for each measure and developed relevant messages and outreach materials associated with each issue. During the 2019-2020 reporting year the annual events held from March to June were canceled due to the SARS-COV-2 Global Pandemic. In the wake of the Pandemic, repercussions continue to grow and their impact on CNU and the Program Plan will be documented in each Annual Report from the 2019-2020 Report on.

7.3 BMPS

The three high-priority stormwater issues for CNU are listed below along with public education and outreach information associated with each of the three issues. CNU will use two or more of the following strategies listed in Table 1 below to communicate to the public the high-priority stormwater issues including how to reduce stormwater pollution.

Table 1 Strategies for Public Education and Outreach

Strategies	Examples (provided as examples and are not meant to be inclusive or limiting)
Traditional written materials	Informational brochures, newsletters, fact sheets, utility bill inserts, or recreational guides for targeted groups of citizens
Alternative materials	Bumper stickers, refrigerator magnets, t-shirts, or drink koozies
Signage	Temporary or permanent signage in public places or facilities, vehicle signage, billboards, or storm drain stenciling
Media materials	Information disseminated through electronic media, radio, televisions, movie theater, or newspaper
Speaking engagements	Presentations to school, church, industry, trade, special interest, or community groups
Curriculum materials	Materials developed for school-aged children, students at local colleges or universities, or extension classes offered to local citizens
Training materials	Materials developed to disseminate during workshops offered to local citizens, trade organizations, or industrial officials

1) Litter & Street Debris

Litter and street debris are a stormwater issue that is constantly observed and managed by the CNU Grounds Department. Contributors towards this stormwater issue include all the CNU public that work, attend, or visit the university. Therefore, the public audience for this issue includes faculty, staff, students, and visitors.

Grounds Department staff hosts a table providing stormwater education materials, including those specific to litter and street debris, at various campus events annually including the Garden Symposium, held at CNU in April each year, and at the CNU Farmer's Market on multiple dates in the fall. CNU is continuing to look into alternative ways to distribute educational materials to the CNU MS4 public including additional use of social media instead of or in addition to email distribution and/or educational tables set up at events with stormwater informational materials.

All stormwater related social media will continue to be done through the CNU

Green accounts. https://www.facebook.com/sustainCNU/

For the 2019-2020 reporting year, the CNU Sustainability (@sustainCNU) Facebook account posted information on stormwater issues under the hashtag #stormwaterMonday. Litter and street debris is one of the topics that is regularly included in the educational information posted on the CNU Sustainability Facebook page.

Additional ongoing programs to support this message include the installation/replacement of storm drain medallions (Appendix C) on all campus storm drain inlets. Initial installation was completed in 2009-2010 and the program is still ongoing with missing or damaged medallions replaced annually. These storm drain medallions which read, “No dumping, Drains to Waterway”, are visible on every storm drain inlet throughout the CNU campus and serve as a visual reminder to not pollute. CNU will continue the installation/replacement of the storm drain medallions.

2) Construction Site Runoff

At times, the university has up to several construction projects ongoing at any one time. Therefore, construction site runoff is a high-priority stormwater issue. The public audience for this issue is the contractors, subcontractors and VSMP inspectors who are working on campus at the construction sites.

Educational signs (Appendix C) were developed in 2010-2011 to explain the importance of proper erosion and sediment control practices and its connection to stormwater quality. The signs were initially installed in 2011-2012 at all active on-campus construction projects and the program is still ongoing to inspect and replace any missing or damaged signs as needed. The signs are visible on campus to all persons who walk next to the construction fencing adjacent to the project location.

In addition, contractors at CNU were previously trained utilizing a video series called “Preventing Storm Water Pollution: What Can We Do” produced by North Central Texas Council of Governments for governmental agencies. Specifically, contractors were shown the modules entitled “Preventing Stormwater Pollution – What We Can Do” and “Construction Activities and Land Disturbances”. CNU is looking at rotating biennial presentations/training materials to present similar but varying content. The training is planned to be biennial, as needed. Contractor training was developed using PowerPoint for the 2018-2019 reporting year. Stormwater and Sustainability training were conducted during the 2019-2020 reporting year. Training logs are kept to track the number of people viewing the modules. Training logs are provided in the annual report.

3) Nutrient Management

The CNU Grounds Department identified nutrient management as a third high-priority stormwater issue. The university takes pride in a clean and green campus but also works to not over-apply nutrients and diligently follows the approved Nutrient Management Plans (NMPs) for the campus. The University has identified two public audiences for this issue: the Grounds Department staff as they are the only ones involved in nutrient application and management to campus and athletic grounds, and students and faculty who could take some of this information and apply it to their own homes.

The CNU Grounds Department currently has several Certified Fertilizer Applicators trained through the Virginia Department of Agriculture and Consumer Services (VDACS). In addition, the training of Grounds Department in nutrient management takes place biennially to ensure that nutrients are only applied in accordance with the university’s approved NMP. In-house nutrient management training consists of *Training Module 10* –

Management Strategies that Optimize the Environmental Benefits of Turfgrass from the Virginia Cooperative Extension Fertilizer Applicator Certification Training which contains information on the basic principles and benefits of environmentally safe application of fertilizers. Grounds Department staff are usually trained biennially to ensure that nutrients are only applied in accordance with the university's approved NMP (Appendix C). Training logs are kept each year to track the number of people viewing the modules. Information on the training materials and training logs are provided in the annual report. Continued training and awareness by the Grounds Department will ensure that nutrients are managed on campus in such a way as they will not contribute to water quality issues.

For the students and faculty, CNU anticipates that at least annually by September 1st, information will be made available to appropriate parts of CNU's public on nutrient management that can be used at their personal residences. Documentation on information and distribution will be collected. Information will be prepared from sources such as askHRgreen.org.

In addition to the high-priority issues listed above, the CNU Grounds Department website (http://cnu.edu/operations/) (Appendix C) is an important part of the public education and outreach program at CNU. The website contains MS4 information including the annual report and program plan and has continually been updated each year to include additional information related to stormwater and pollution prevention including copies of the permit, the latest annual report, program plan, educational information about stormwater, links to other stormwater-related websites and stormwater incident reporting information. The latest program plan and annual report can be found on the CNU website at the link provided below.

http://cnu.edu/public/stormwater/

CNU implements this MCM through the BMPs provided below. Information concerning each BMP including a detailed description, measurable goals, BMP status, and future activities is provided in Table C-1 in Appendix C. The MCM Summary Table in Appendix B provides the responsible party and key personnel for each MCM and BMP. Additional public education and outreach information is provided in Appendix C.

- MS4 Program Update
- CNU MS4 Website
- CNU Sustainability Facebook Site
- Premium Item Giveaways
- Storm Drain Medallions
- Construction Signage
- Construction Site Runoff Training
- Litter and Street Debris Education
- Nutrient Management Training

8.0 MINIMUM CONTROL MEASURE 2 – PUBLIC INVOLVEMENT AND PARTICIPATION

8.1 RESPONSIBLE PARTY

The MCM Summary Table in Appendix B provides the responsible party and key personnel for each MCM identified in the MS4 Program Plan.

8.2 SUMMARY

MCM No. 2 provides for public involvement and participation by making the MS4 Program Plan available for public review and input. The Program Plan, along with reporting information concerning illicit discharges, land disturbing, or stormwater pollution complaints, can be found on the CNU website at the link provided below. Any annual updates to the Program Plan will be posted to the website along with the annual report. More importantly, MCM2 provides for public participation in watershed activities that further the education and awareness of stormwater impacts to receiving water quality. The latest program plan and annual report can be found on the CNU website at the link provided below.

http://cnu.edu/public/stormwater/

Through this MCM, CNU developed a series of activities that will actively involve the students, faculty, and staff and, to the maximum extent practicable, the community at large. CNU will continue to identify programs and partnership opportunities with adjacent MS4s.

8.3 BMPS

During each reporting year, CNU participates in a minimum of four local events/activities aimed at increasing public participation to reduce stormwater pollutant loads, improve water quality, and support local restoration and clean-up projects, programs, groups, meetings, and other opportunities for public involvement. These events/activities will be documented in the annual report.

CNU shall implement no less than four activities per year from two or more of the categories listed in Table 2 below to provide an opportunity for public involvement to improve water quality and support local restoration and clean-up projects, dependent on availability and safety measures for in-person as allowed or development of virtual events as precipitated by the pandemic begun in 2020.

Table 2 Public Involvement Opportunities

Public Involvement	Examples (provided as examples and are not meant to be inclusive or limiting)
Monitoring	Establish or support citizen monitoring group
Restoration	Stream or watershed clean-up day, adopt-a-water way program
Educational events	Booth at community fair, demonstration of stormwater control projects, presentation of stormwater materials to schools to meet applicable educational Standards of Learning or curriculum requirements, watershed walks, participation on environmental advisory committees
Disposal or collection events	Household hazardous chemicals collection, vehicle fluids collection
Pollution prevention	Adopt-a-storm drain program, implement a storm drain marking program, promote use of residential stormwater BMPs, implement pet waste stations in public areas, adopt-a-stream program

The CNU Grounds Department website (http://cnu.edu/operations/) (Appendix C) is an important part of the public education and outreach program at CNU. The website contains MS4 information including the annual report and program plan and has continually been updated each year to include additional information related to stormwater and pollution prevention including copies of the permit, the latest annual report, program plan, educational information about stormwater, links to other stormwater-related websites and stormwater incident reporting information. It is also a mechanism for the public to report spills and stormwater pollution complaints.

CNU students typically participate in community service activities with various clubs and activities annually, dependent on safety and availability during the pandemic begun in 2020. Students who are members of the Rotaract Club participate in an annual trash cleanup event along the Noland Trail surrounding Lake Maury. Rotaract is part of Rotary International, a global, service-oriented organization that creates positive change in the world. Rotaract clubs bring together people ages 18-30 to exchange ideas with leaders in the community, develop leadership and professional skills, and have fun through service. CNU students also participate in an annual Day One of Service each year in August. This community service day includes students participating in public education and/or outreach in projects related to stormwater management and the environment. Effectiveness of these events will be determined by number of bags of trash collected, and number of volunteers participating in each event. Additional community service opportunities for public education/outreach associated with high-priority water quality issues may also be identified during 2020-2021.

Another annual event is the Garden Symposium held at CNU in April each year. CNU Grounds Department staff hosts a table providing stormwater education materials at the event. In addition to the Garden Symposium, CNU Grounds Department staff hosts a table providing stormwater education materials at the CNU Farmer's Market on multiple dates in the fall of each year.

Minimum Control Measure 2 – Public Involvement and Participation

CNU implements this MCM through the BMPs provided below. Information concerning each BMP including a detailed description, measurable goals, BMP status, and future activities is provided in Table C-2 in Appendix C. The MCM Summary Table in Appendix B provides the responsible party and key personnel for each MCM and BMP. Additional public involvement/participation information is provided in Appendix C.

- MS4 Program Update
- CNU MS4 Website
- Community Service
- Campus Public Involvement/Participation Event
- Garden Symposium
- Pet Waste Stations

9.0 MINIMUM CONTROL MEASURE NO. 3 – ILLICIT DISCHARGE DETECTION AND ELIMINATION

9.1 RESPONSIBLE PARTY

The MCM Summary Table in Appendix B provides the responsible party and key personnel for each MCM identified in the MS4 Program Plan.

9.2 SUMMARY

The MCM includes a requirement for development and maintenance of an accurate MS4 map and information table. All outfalls, provided in Appendix A (Figure 3), from the CNU MS4 are included in the CNU Stormwater Quality and Quantity Management Study by Koontz-Bryant, P.C., (May 2002, revised December 2008 and December 2011). An updated Overall Storm Sewer Map dated March 23, 2016 and outfall information table are also included in Appendix A. The outfall locations were confirmed by VHB in their 2019 Stormwater Management Master Plan (June 2019). In addition to the main stormwater outfall (Outfall 1) for the CNU MS4, there is a second outfall (Outfall 2). This second outfall drains stormwater from the area of the Ferguson Center for the Arts which is part of CNU and within the MS4 boundary.

This MCM includes a requirement to prohibit, through ordinance, policy, standard operating procedures, or other legal mechanism, to the extent allowable under federal, state, or local law, regulations, or ordinances, unauthorized non-stormwater discharges into the storm sewer system. CNU developed and adopted an Illicit Discharge Detection and Elimination (IDDE) Policy in 2009-2010 (adopted by CNU on July 1, 2010). The IDDE Policy and information about it was added to the university's website in 2010-2011 and a link to the policy is provided below. CNU developed a procedure and format for tracking training efforts, inspections, and other activities related to the IDDE program, it was finalized in 2011-2012, and illicit discharge detection tracking and reporting is an ongoing activity. Starting in the 2017-2018 reporting year, all new CNU employees in residential housing, facility management, grounds, and trades are trained in hazardous communication and the training will also include the IDDE policy. CNU will document any illicit discharges that are detected annually in the annual report.

The IDDE policy is included in Appendix F of the Program Plan. A link to the IDDE policy is provided below.

http://cnu.edu/public/stormwater/_pdf/idde_plan_and_policy.pdf

http://cnu.edu/public/stormwater/

An SOP for stormwater outfall screening was developed by CNU along with a standard outfall reconnaissance inventory/sample collection field sheet to be used when staff is conducting illicit discharge inspections of storm drainage system outfalls. Copies of the SOP and field sheet are provided in Appendix D. The CNU MS4 contains one main stormwater outfall (Outfall 1) and a second outfall (Outfall 2) that drains stormwater from the area of the Ferguson Center for the Arts which is part of CNU and within the MS4 boundary. An updated Overall Storm Sewer Map dated March 23, 2016 and outfall information table are included in Appendix A. The outfalls are inspected annually, and the inspection reports are included in the annual report.

In an effort to further pollution prevention and minimize illicit discharges, CNU has developed SOPs for various activities with the potential to impact water quality. The SOPs include the following:

- Equipment maintenance and washing
- Outdoor special events and festivals
- Kitchen waste: FOG transfer, storage, and disposal
- Equipment fueling activities
- Landscape maintenance
- Liquid materials loading, unloading, and storage
- Trash & recycling handling, storage, transfer, and disposal
- Parking lot, streets, and roads maintenance
- Pressure washing and exterior surface cleaning
- Spill prevention, control, clean up and reporting

The following webpage contains a link to CNU's SOPs and they are also provided in Appendix D. SOPs were last updated in 2016. The site-specific SOPs will also be included in departmental training where applicable.

http://cnu.edu/public/stormwater/_pdf/stormwater_standard_operating_procedures.pdf

The CNU Stormwater website also contains links to educational information related to pollution prevention and reporting of illicit discharges. Information on illicit discharges is included in the annual report. The CNU Sustainability (@sustainCNU) Facebook account posts monthly information on stormwater issues using the hashtag #stormwaterMonday. Litter and street debris and proper disposal of various wastes are some of the topics that are regularly included in the educational information posted on the CNU Sustainability Facebook page.

CNU developed a written training plan including a schedule of training events and a means for documentation of each training event including the training date, number of employees attending the training, and the objective of each training event. CNU also developed departmental training using PowerPoint in 2016. Training was conducted during the 2019-2020 reporting year. Information on the training materials is provided in Appendix J. Training will be conducted on a biennial basis and will occur again during the 2021-2022 reporting year. Training logs are provided in the annual reports. In addition, a small amount of introductory training regarding pollution prevention and SOPs will be provided to all new employees during their orientation.

9.3 BMPS

CNU implements this MCM through the BMPs provided below. Information concerning each BMP including a detailed description, measurable goals, BMP status, and future activities is provided in Table C-3 in Appendix C. The MCM Summary Table in Appendix B provides the responsible party and key personnel for each MCM and BMP. Additional illicit discharge detection and elimination program information is provided in Appendix F.

- IDDE Policy
- CNU Stormwater Study
- CNU MS4 Website
- Illicit Discharge Detection Tracking and Reporting
- Outfall Inspections
- Recycling Program
- Pollution Prevention Materials
- Pollution Prevention Training

10.0 MINIMUM CONTROL MEASURE NO. 4 – CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

10.1 RESPONSIBLE PARTY

The MCM Summary Table in Appendix B provides the responsible party and key personnel for each MCM identified in the MS4 Program Plan.

10.2 SUMMARY

Any construction activities that take place on the CNU campus are regulated by the Virginia Stormwater Management Act and Virginia Stormwater Management Program (VSMP) Regulation (9VAC25-870). In addition, all projects must obtain a CGP if the area of disturbance is equal to or greater than one acre or less than one acre that is part of a larger common plan of development or sale. Therefore, this MCM includes provisions to verify that all construction activities are in compliance with these regulations and permits.

CNU developed and submitted annual standards and specifications (AS&S) to DEQ that were most recently approved by DEQ in a letter dated March 12, 2020. A copy of the approved AS&S are included in this MS4 Program Plan in Appendix G. The AS&S are also provided on the CNU website (as an appendix within the MS4 Program Plan) at the link provided below.

http://cnu.edu/public/stormwater/

The University Architect's office maintains copies of permit authorization letters for all construction projects, reviews each project's Stormwater Pollution Prevention Plan (SWPPP), and reviews copies of all contractors' inspection reports on a quarterly basis to track compliance with the SWPPP.

The contractor for each construction project is required to inspect the project in accordance with the inspection frequency specified in the CGP. CNU audits the compliance of the contractor by reviewing the inspection documentation, revisions to the SWPPP, and overall site compliance quarterly.

If the contractor is found not to be in compliance, CNU has the following language in their standard contract (General Conditions of the Contract CO-7) which provides the ability for CNU to enforce compliance.

- Paragraph 16(a) Inspections govern the original installation of the erosion and sedimentation control measures shown on the project documents. CNU project inspectors make sure that the materials and installation meet all of the requirements shown on the documents. Typically contractors comply with CNU's requests to avoid further action by the Owner or Architect/Engineer.

- Paragraph 16(e) Inspections govern the approach CNU would take if erosion and sediment control measures were not functioning properly during the construction phase. Using the SWPPP Form or a standard Field Report the problem would be brought to the attention of the contractor with a Recommended

> Correction Action Deadline stipulated. Typically the contractor reacts to this type of direction. If the contractor failed to do so the Owner and the Architect/Engineer (A/E) could implement paragraph 16(e).

Also, in CNU's A/E Terms and Conditions, DGS 30-018, CO-3a, the default is defined as the following:

> 26. DEFAULT
> In case of the A/E's failure to deliver the reports, documents, 'Record Drawings', or services in accordance with the Contract terms and conditions, the Owner, after due written notice, may procure same from other sources, and the A/E shall be responsible for any resulting additional procurement and administrative costs. This remedy shall be in addition to any other remedies which the Owner may have.

If CNU decides to terminate the contract, that is also in the terms and conditions as follows:

> 27. TERMINATION OF CONTRACT BY THE OWNER / AGENCY
> The owner may terminate the Contract for cause or for convenience after giving thirty (30) days written notice to the A/E, or as otherwise specified below. The written notice shall include a statement of reasons for the termination. Delivery of Materials: Any termination shall not relieve the A/E of the obligation to deliver to the Owner all products of the services for which the A/E has been or will be compensated, including, but not limited to, the original drawings and specifications, copies of electronic files, calculations, and analyses. Unless otherwise agreed to in writing, the A/E shall deliver the materials to the Owner within thirty (30) days of receipt of the notice of termination. Failure to do so shall result in the withholding of final payment and shall constitute a material or substantial breach of contract.

The terms and conditions are part of all A/E term contracts.

If there are any concerns about construction activities on campus, the CNU public can contact the University Architect's office to discuss the issues and find out more information.

10.3 BMPS

CNU implements this MCM through the BMPs provided below. Information concerning each BMP including a detailed description, measurable goals, BMP status, and future activities is provided in Table C-4 in Appendix C. The MCM Summary Table in Appendix B provides the responsible party and key personnel for each MCM and BMP. Additional construction site stormwater runoff control information is provided in Appendix E.

- Annual Standards and Specifications
- Project Inspections
- Erosion and Sediment Control (ESC) Contract Provisions
- Construction Site Runoff
- Construction Signage
- Land Disturbing Activities Tracking

11.0 MINIMUM CONTROL MEASURE NO. 5 – POST-CONSTRUCTION STORMWATER MANAGEMENT

11.1 RESPONSIBLE PARTY

The MCM Summary Table in Appendix B provides the responsible party and key personnel for each MCM identified in the MS4 Program Plan.

11.2 SUMMARY

CNU is responsible to prevent stormwater pollution from its facilities on an on-going basis in accordance with the Virginia Stormwater Management Act (§ 62.1-44.15:24 et seq. of the Code of Virginia) and VSMP Regulations (9VAC25- 870). CNU shall address post-construction stormwater runoff that enters the MS4 by implementing a post-construction stormwater runoff management program. CNU developed and submitted annual standards and specifications (AS&S) to the DEQ in December 2019, and were approved by the DEQ in a letter dated 3/12/2020. A copy of the approved AS&S are included in this MS4 Program Plan in Appendix G. The AS&S are also provided on the CNU website (as an appendix within the MS4 Program Plan) at the link provided below.

http://cnu.edu/public/stormwater/

Stormwater management for the CNU campus has been evaluated and documented in the CNU Stormwater Management Master Plan by VHB (June 2019). This study serves to document CNU's on-going compliance with the VSMP Stormwater Management requirements, including the long-term operation and maintenance of the structural BMPs located on the campus.

The DEQ Construction Stormwater Database is utilized to report each stormwater management facility installed after July 1, 2014, to address the control of post-construction runoff from land disturbing activities for which CNU is required to obtain a General VPDES Permit for Discharges of Stormwater from Construction Activities.

All known permanent stormwater management facilities that are operator owned and within the MS4 boundary are inspected by CNU personnel on an annual basis. Inspections are performed based on the Written Procedures for the Inspection of Operator Owned Stormwater Management Facilities prepared by CNU. Copies of the inspection reports are kept on file as part of the MS4 documentation. Records of past BMP inspections are maintained as part of the MS4 program and the inspection program will be continued and evaluated annually. Inspection reports are provided in the annual report. CNU will perform maintenance of permanent stormwater management facilities, if needed, based on the results of the BMP inspections. Any necessary maintenance performed will be documented and included as part of the annual report. The written procedures for the Inspection and Maintenance program are located in Section 5 of the AS&S.

Inspection reports to be used for inspections of Best Management Practices (BMPs) are the DEQ Example BMP Inspection and Maintenance checklists from the DEQ 2013 Virginia Stormwater Management Handbook, Chapter 9 – BMP Inspection and Maintenance, provided on the DEQ website at the link below.

https://swbmp.vwrrc.vt.edu/references-tools/2013-draft-handbook/

Minimum Control Measure No. 5 – Post-Construction Stormwater Management

CNU maintains an electronic database or spreadsheet of all known stormwater management facilities that discharge into the MS4. The database also includes all BMPs implemented by CNU to meet the Chesapeake Bay TMDL load reduction as required by the permit. The electronic database/spreadsheet will be updated no later than 30 days after a new stormwater management facility is brought online, a new BMP is implemented to meet a TMDL load reduction as required in the permit, or discovered it is an existing stormwater management facility. No later than October 1 of each year, CNU will electronically report the stormwater management facilities and BMPs implemented between July 1 and June 30 using the DEQ BMP Warehouse and associated reporting template for any practices not reported in accordance with the permit, including stormwater management facilities installed to control post-development stormwater runoff from land disturbing activities less than one acre in accordance with the Chesapeake Bay Preservation Act regulations and for which a General VPDES Permit for Discharges of Stormwater from Construction Activities was not required.

Table 3, provided below, lists all known permanent stormwater management facilities during the annual reporting year from July 1, 2019 to June 30, 2020. See CNU's 2019 Stormwater Master Plan for maps showing the stormwater management facilities.

Table 3 Permanent Stormwater Management Facilities

BMP Label	BMP Description	Type of Structural Stormwater Facility	Coordinates	Geographic Location (HUC)	Where Applicable, the Impaired Surface Water that the Facility Discharges Into	Number of Acres Treated
BMP 2	James River Residence Hall	Extended Detention Basin	Lat. 37.064330 Long. - 76.496709	JL 38 & 43/G11	N/A	5.37
BMP 4	Lake Maury	Retention	Lat. 37.056520 Long. - 76.484747	JL43/G11	N/A	153.70
BMP 5	Parking Lot A	Bioretention	Lat. 37.060208, Long. -76.489488	JL43/G11	N/A	1.06
BMP 6	Turf Field Replacement	Bioretention	Lat. 37.063252, Long. -76.498511	JL43/G11	N/A	2.18
BMP 7	Parking Lot C1/C2	Stormkeeper Sediment Strip	Lat. 37.062798, Long. -76.489513	JL43/G11	N/A	1.39

11.3 BMPS

CNU implements this MCM through the BMPs provided below. Information concerning each BMP including a detailed description, measurable goals, BMP status, and future activities is provided in Table C-5 in Appendix C. The MCM Summary Table in Appendix B provides the responsible party and key personnel for each MCM and BMP. Additional post-construction stormwater management information is provided in Appendix I.

- CNU Stormwater Study
- ESC Contract Provisions
- BMP Inspections
- BMP Tracking
- BMP Maintenance

12.0 MINIMUM CONTROL MEASURE NO. 6 – POLLUTION PREVENTION AND GOOD HOUSEKEEPING FOR FACILITIES OWNED OR OPERATED BY THE PERMITTEE WITHIN THE MS4 SERVICE AREA

12.1 RESPONSIBLE PARTY

The MCM Summary Table in Appendix B provides the responsible party and key personnel for each MCM identified in the MS4 Program Plan.

12.2 SUMMARY

MCM 6 provides for a comprehensive pollution prevention and good housekeeping program for facilities owned or operated by CNU within the MS4 service area. The ultimate goal of pollution prevention/good housekeeping is to prevent or reduce pollutant runoff from campus operations. This measure includes both training and awareness of stormwater impacts to receiving water quality as well as on-campus activities which both prevent and reduce pollutant runoff to the MS4.

This MCM includes a requirement to maintain and implement written procedures for those activities at facilities owned or operated by CNU, such as road, street, and parking lot maintenance; equipment maintenance; and the application, storage, transport, and disposal of pesticides, herbicides, and fertilizers. CNU developed SOPs for various activities with the potential to impact water quality. The SOPs will be updated during the 2020-2021 reporting year, and include the following:

- Equipment maintenance and washing
- Outdoor special events and festivals
- Kitchen waste: FOG transfer, storage, and disposal
- Equipment fueling activities
- Landscape maintenance
- Liquid materials loading, unloading, and storage
- Trash & recycling handling, storage, transfer, and disposal
- Parking lot, streets, and roads maintenance
- Pressure washing and exterior surface cleaning
- Spill prevention, control, clean up and reporting

The following webpage contains a link to CNU's SOPs and they are also provided in Appendix D. The site-specific SOPs are also included in departmental employee training where applicable. Starting in the 2017-2018 reporting year, all new CNU employees in residential housing, facility management, grounds, and trades were trained in hazardous communication and the training included the IDDE policy and pollution prevention.

http://cnu.edu/public/stormwater/_pdf/stormwater_standard_operating_procedures.pdf

CHRISTOPHER NEWPORT UNIVERSITY – MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PROGRAM PLAN FOR THE JULY 1, 2018 THROUGH JUNE 30, 2023 PERMIT TERM

Minimum Control Measure No. 6 – Pollution Prevention and Good Housekeeping for Facilities Owned or Operated by the Permittee within the MS4 Service Area

The MCM includes a requirement for identification of high-priority facilities with a high potential of discharging pollutants. Within 12 months after permit coverage, CNU is required to maintain and implement a site-specific SWPPP for each high-priority facility identified. CNU previously identified the Grounds and Plant Operations Departments as well as the dumpster refuse area as being high-priority facilities. Additional high-priority facilities may be identified in the future and if so, will be included with the MS4 annual report. The permit requires CNU to annually evaluate high-priority facilities owned or operated by CNU for which a SWPPP has not been developed to determine if the facility has a high potential to discharge pollutants and, if so, CNU should develop a SWPPP for that facility the same year. The SWPPP should be utilized as part of staff training and made available to employees at the applicable site.

CNU developed a SWPPP for high-priority facilities. It was finalized and implemented during the 2015-2016 reporting year, and updated in the 2019-2020 reporting year and in 2022 by Timmons Group. A link to the SWPPP is provided below.

http://cnu.edu/public/stormwater/_pdf/cnu_stormwater_pollution_prevention_plan.pdf

This MCM includes a requirement to implement turf and landscape nutrient management plans developed by a certified turf and landscape nutrient management planner on all lands owned or operated by the MS4 permittee where nutrients are applied to a contiguous area greater than one acre. The university takes pride in a clean and green campus but also works to not over-apply nutrients and diligently follows the approved Nutrient Management Plans (NMPs) for the campus. There are two separate NMPs that cover the CNU campus, one for the campus grounds/turf and a separate one for the athletic fields/turf. The current NMP for the CNU grounds was approved by the Virginia Department of Conservation and Recreation (DCR) and is effective until July 5, 2024 and covers an area of 48 acres. The DCR requires a new plan every three years. The athletics NMP covers an area of 13.73 acres, and is effective until April 19, 2024. The CNU Grounds Department will continue to operate using the approved NMPs and will continue to evaluate/update the NMPs once every three years, as needed. The NMPs will be reviewed/updated again in 2021 and re-submitted to the DCR for approval.

Training of Grounds Department staff in nutrient management usually takes place biennially to ensure that nutrients are only applied in accordance with the university's approved NMP. In-house nutrient management training consists of *Training Module 10 – Management Strategies that Optimize the Environmental Benefits of Turfgrass* from the Virginia Cooperative Extension Fertilizer Applicator Certification Training which contains information on the basic principles and benefits of environmentally safe application of fertilizers. Training logs are kept each year to track the number of people viewing the modules. Information on the training materials and training logs are provided in the annual report. Information on the training plan is provided in Appendix J. Continued training and awareness by the Grounds Department will ensure that nutrients are managed on campus in such a way as they will not contribute to water quality issues.

Employees and contractors hired by the permittee who apply pesticides and herbicides are trained or certified in accordance with the Virginia Pesticide Control Act Certification by VDACS Pesticide and Herbicide Applicator program shall constitute compliance with this requirement. Continued training and awareness by the Grounds Department will ensure that nutrients are managed on campus in such a way as they will not contribute to water quality issues.

Pollution prevention educational materials were developed in 2010-2011, initially distributed to all faculty, staff, and students on September 22, 2011 and added to the website. Pollution prevention educational materials have also been distributed annually.

CNU developed a written training plan including a schedule of training events including a means for documentation of each training event including the training date, number of employees attending the training, and the objective of each training event. Information on the training materials is provided in Appendix J. Training will be conducted on a biennial basis and will occur again during the 2020-2021 reporting year. Training logs are provided in the annual report. Starting in the 2017-2018 reporting year, all new CNU employees in residential housing, facility management, grounds, and trades will be trained in hazardous communication and the training will also include the IDDE policy and pollution prevention. In addition, a small amount of introductory training regarding pollution prevention and SOPs will be provided to all new employees during their orientation.

The CNU Stormwater website contains links to educational information related to pollution prevention and reporting of illicit discharges.

12.3 BMPS

CNU implements this MCM through the BMPs provided below. Information concerning each BMP including a detailed description, measurable goals, BMP status, and future activities is provided in Table C-6 in Appendix C. The MCM Summary Table in Appendix B provides the responsible party and key personnel for each MCM and BMP. Additional pollution prevention/good housekeeping information is provided in Appendix D.

- Pollution Prevention Materials
- Pollution Prevention Training
- Grounds Clean-Up
- Illicit Discharge Detection Tracking and Reporting
- Nutrient Management Plan
- Nutrient Management Training
- Underground Infrastructure Cleaning
- Street Sweeping
- Storm Drain Medallions

13.0 ACKNOWLEDGING STATE PERMIT LEGAL RESPONSIBILITIES

13.2 Property Rights

CNU acknowledges the 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.

13.3 Legal Action

CNU acknowledges nothing in the 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 the Clean Water Act per the General Permit, Part III, Section O. Except as provided in state permit on "bypassing" and "upset" nothing in this state permit shall be construed to relieve the operator from civil and criminal penalties for noncompliance.

13.4 Oil and Hazardous Waste Liability

CNU acknowledges nothing in the 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 the State Water Control Law or the Clean Water Act per the General Permit, Part III, Section P.

13.5 Maintaining Compliance

CNU Acknowledges 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 per the General Permit, Part III, Section T.

14.0 BYPASS SECTION

14.2 Bypass Conditions

A "Bypass," as defined in 9VAC25-870-10, means the intentional diversion of waste streams from any portion of a treatment facility. CNU acknowledges they 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 ensure efficient operation.

14.3 Notice of Bypass

CNU acknowledges the following requirements:

- Anticipated bypass: If the operator knows in advance of the need for a bypass, the operator shall submit prior notice to the department, if possible, at least 10 days before the date of the bypass.
- Unanticipated bypass: The operator shall submit notice of an unanticipated bypass as required in Part III I of the General Permit.

14.4 Prohibition of Bypass

CNU acknowledges, except as provided in Part III U 1 of the General Permit, bypass is prohibited, and the board or department may take enforcement action against an operator for bypass, unless the Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; There were no feasible alternatives to the bypass. 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 the operator submitted notices as required under Part III U 2. The department may approve an anticipated bypass, after considering its adverse effects, if the department determines that it will meet the three conditions listed in Part III U 3 a of the General Permit.

15.0 UPSET SECTION

15.2 Upset Conditions

An "upset," as defined in 9VAC25-870-10, means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based state permit effluent limitations because of factors beyond the reasonable control of the operator. 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.

CNU acknowledges an upset constitutes an affirmative defense to an action brought for noncompliance with technology-based state permit effluent limitations if the requirements of Part III V 4 of the General Permit 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. 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.

15.3 Upset Defense

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

1. An upset occurred and that the operator can identify the causes of the upset;
2. The permitted facility was at the time being properly operated;
3. The operator submitted notice of the upset as required in Part III I; and
4. The operator complied with any remedial measures required under Part III S.

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

16.0 INSPECTION AND ENTRY SECTION

CNU Acknowledges they shall allow the department as the board's designee, EPA, or an authorized representative (including an authorized contractor), 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 and photograph 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 ensuring permit compliance or as otherwise authorized by the Clean Water Act and the Virginia Stormwater Management Act, any substances or parameters at any location.

17.0 TRANSFER AND SEVERABILITY OF STATE PERMITS

17.2 Transfer of State Permits

CNU acknowledges that state permits are not transferable to any person except after notice to the department.

Except as provided in Part III Y 2 of the General Permit, 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.

As an alternative to transfers under Part III Y 1 of the General Permit, this state permit may be automatically transferred to a new operator if:

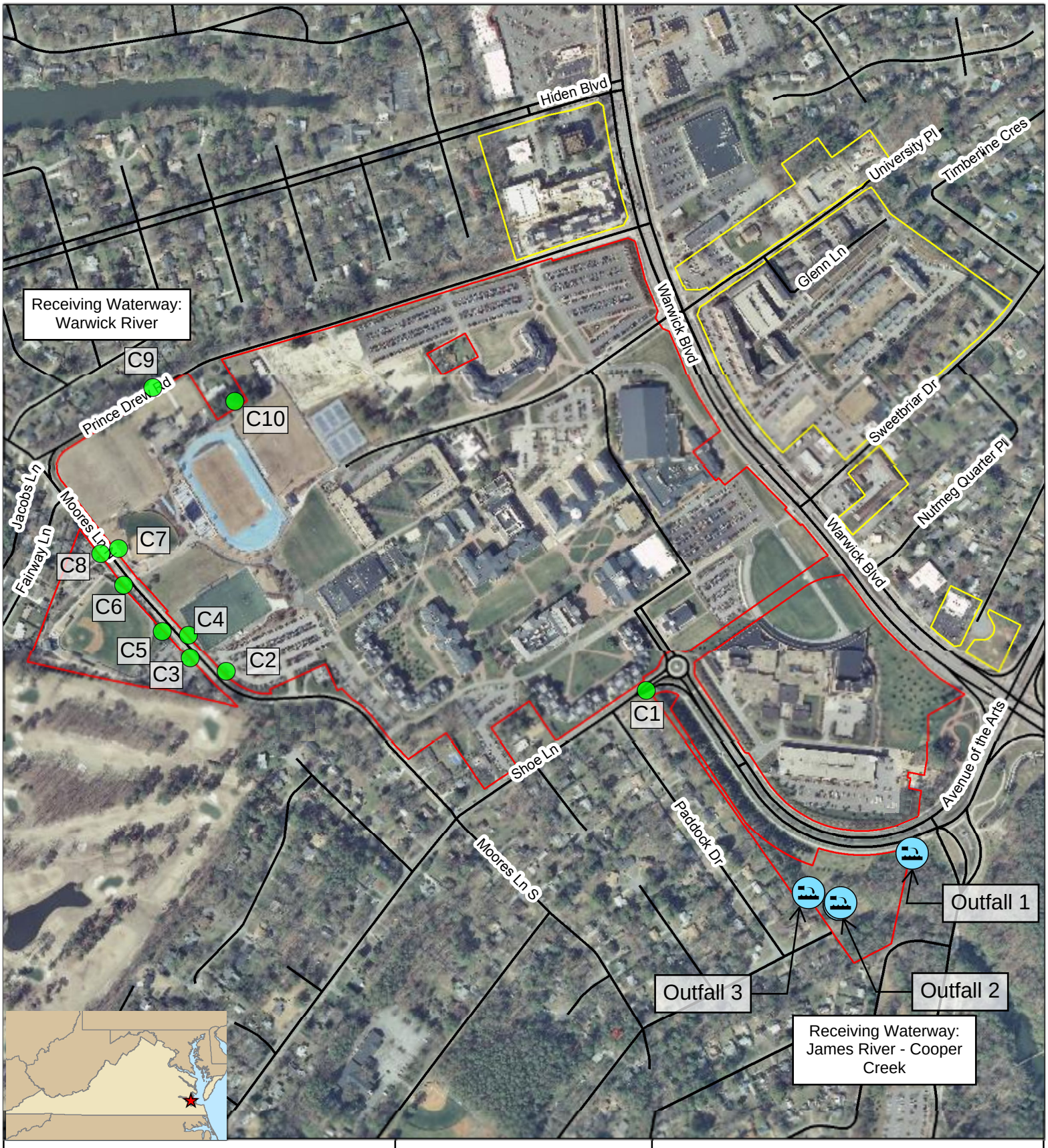
1. The current operator notifies the department at least 30 days in advance of the proposed transfer of the title to the facility or property;
2. The notice includes a written agreement between the existing and new operators containing a specific date for transfer of state permit responsibility, coverage, and liability between them; and
3. The department 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 Part III Y 2 b.

17.3 Severability of State Permits

CNU acknowledges 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.

MS4 PROGRAM PLAN APPENDICES

Appendix A STORMWATER PLANS, MAPS, STUDIES



Legend

- CNU MS4 General Permit Boundary
- CNU Property under Newport News' MS4
- Roads
- Outfalls
- Connection with City of Newport News

Service Layer Credits: Virginia Geographic Information Network; Road Data from City of Newport News' GIS; 2015. MS4 Boundary data from Koontz-Bryant, PC; 2015.Updated by Timmons Group; 2021.

0 450 900

Feet

N

1:7,000

1 inch ~ 600 feet

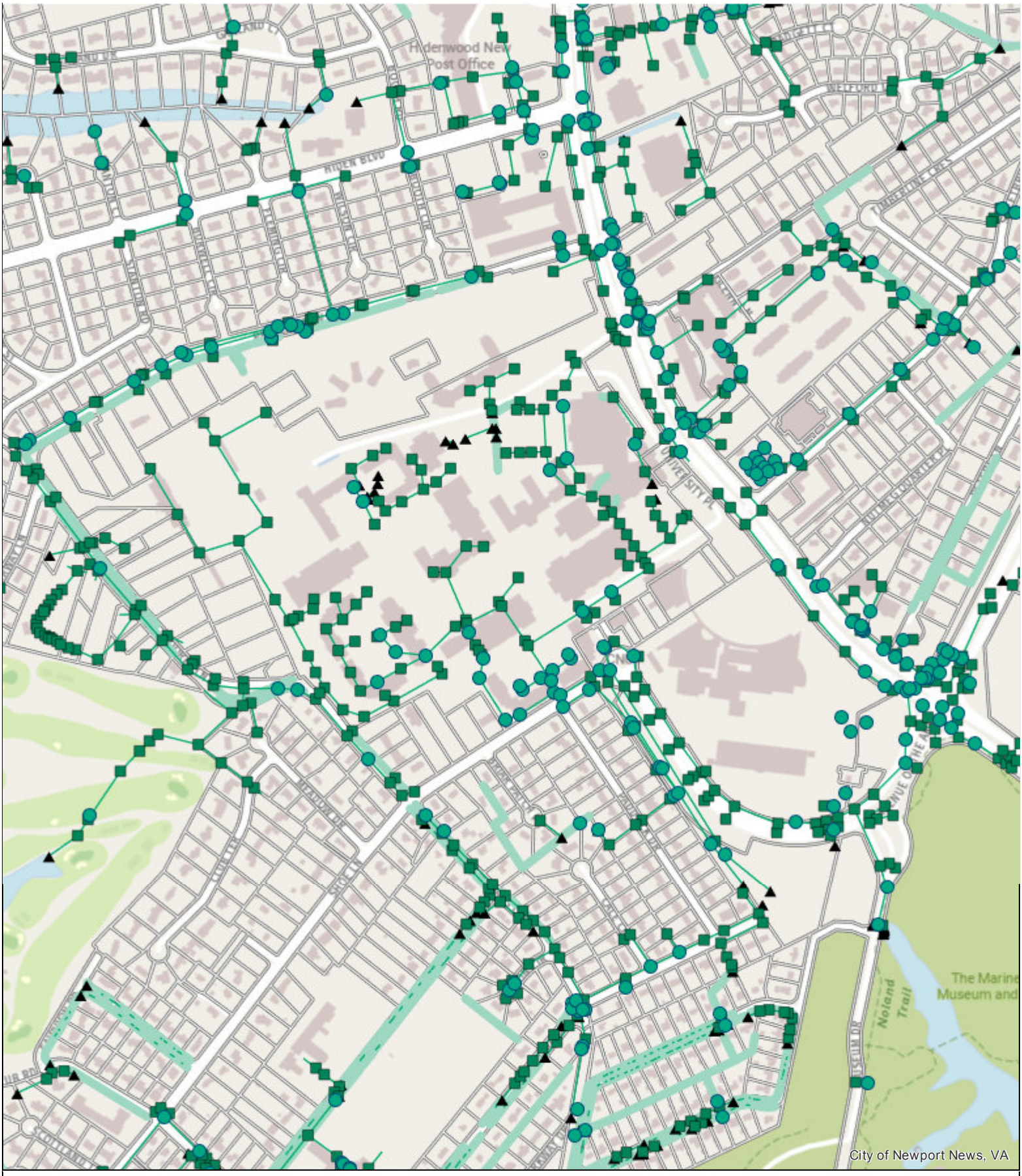
Figure 3: SWPP Orthophotograph

Christopher Newport University
1 Ave. of the Arts
Newport News, VA
June 2016

CHRISTOPHER NEWPORT UNIVERSITY

Document Path: Z:\Infrastructure Design\Private\Projects\SWPPP_3_Ortho.mxd

Last Updated: 6/27/2016



N

City of Newport News Storm System around CNU

0.15 mi

Legend

- Buildings
- Chesapeake Bay Preservation Areas
- CNU MS4 Boundary
- Half Mile Radius
- PavedAreas
- Roads
- Schools
- WaterBodies
- Wetlands
- Outfalls

Service Layer Credits: MS4 Boundary and outfalls derived from Koontz-Bryant, PC; 2014. All other data derived City of Newport News GIS; 2015. Updated by Timmons Group; 2021.

0 500 1,000

Feet

N

1:10,000

1 inch~833 feet

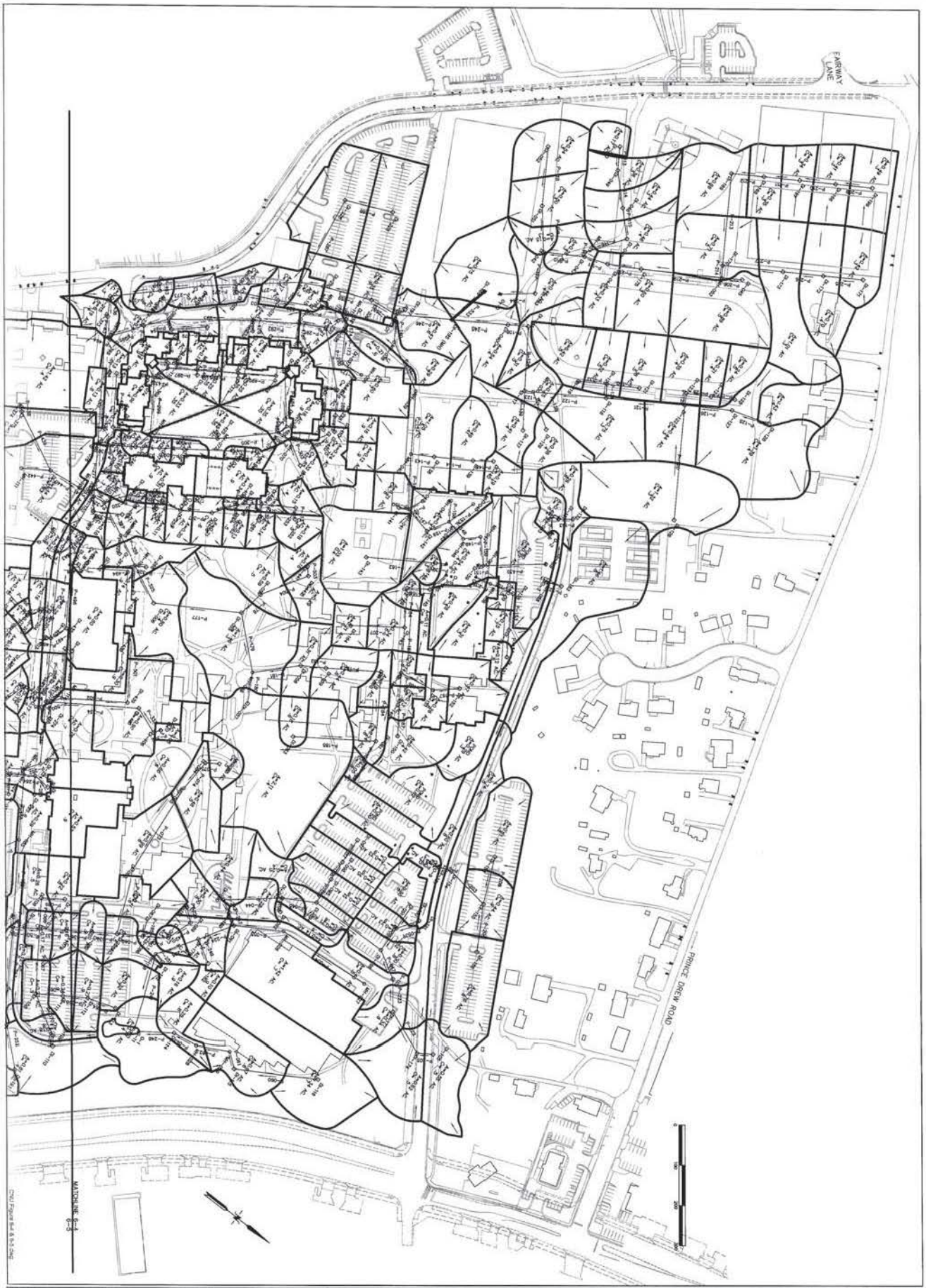
Figure 2: SWPP GIS Data

Christopher Newport University
1 Ave. of the Arts
Newport News, VA
June 2016

CHRISTOPHER NEWPORT UNIVERSITY

Document Path: Z:\Infrastructure Design\Private\Projects\SWPPP_2_GIS_Data.mxd

Last Updated: 6/27/2016



6-4

JN: 1585

SCALE: 1"= 100'

DATE: APRIL 30, 2002

CHRISTOPHER NEWPORT UNIVERSITY

NEWPORT NEWS VIRGINIA

2008 "C" VALUES, DRAINAGE AREAS AND STORM SEWER

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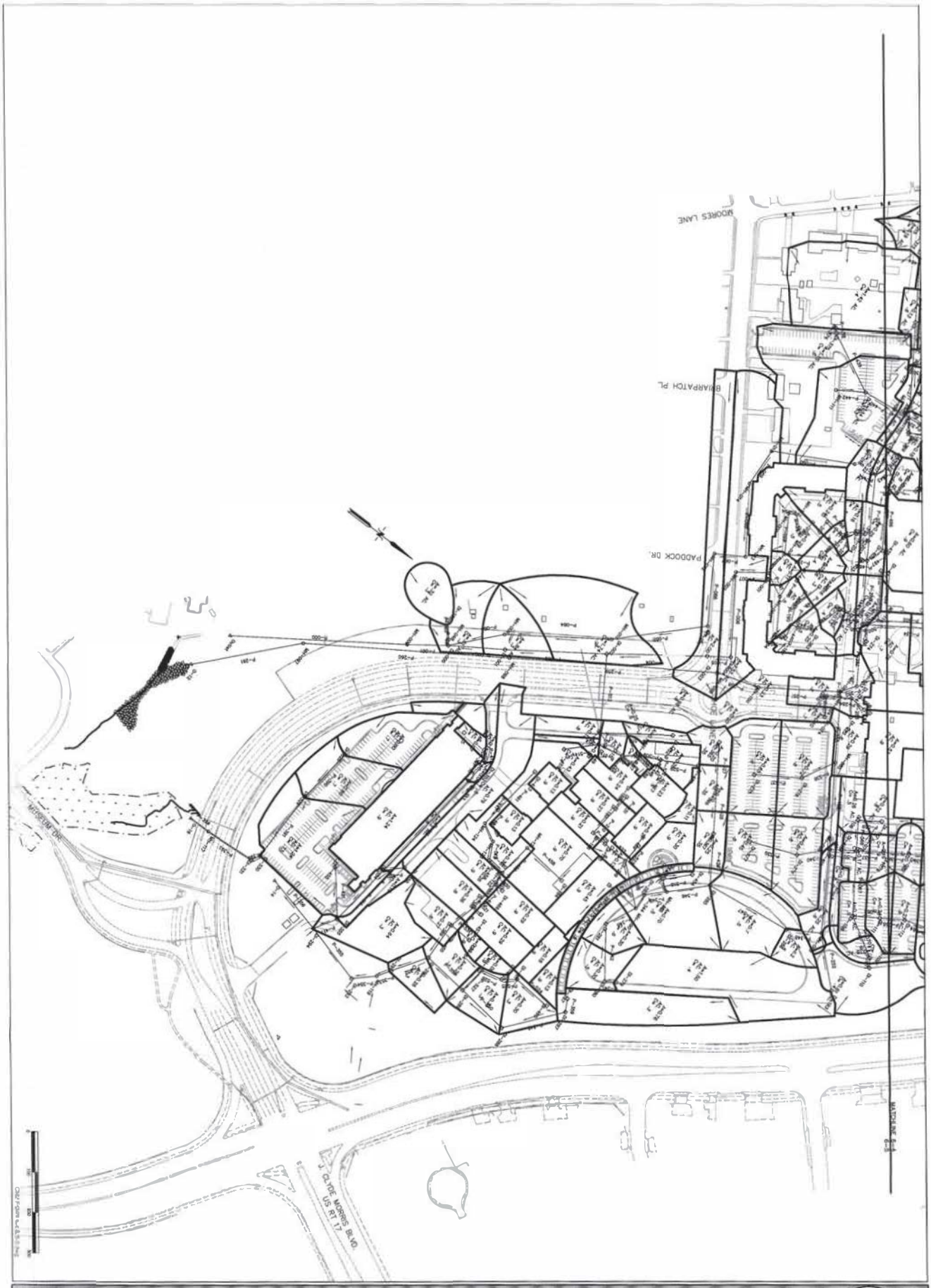
DRAWN: VLS
CHECKED: PFH

REVISIONS:



6-5	JN: 1585	SCALE: 1"= 100'	DATE: APRIL 30, 2009	CHRISTOPHER NEWPORT UNIVERSITY NEWPORT NEWS VIRGINIA 2008 "C" VALUES, DRAINAGE AREAS AND STORM SEWER	KOONTZ-BRYANT, P.C. A Full Service Civil Consulting Firm 1703 N PARHAM ROAD, SUITE 202 RICHMOND, VIRGINIA 23229 (804) 740-9200 FAX (804) 740-7338 kbpc@koontzbryant.com	DESIGNED: WWW DRAWN: VLS CHECKED: PFH	REVISIONS:

4-3-1

JN	1585
SCALE	1"=150'
DATE	DECEMBER 21, 2011

CHRISTOPHER NEWPORT UNIVERSITY

NEWPORT NEWS VIRGINIA

2011 UPDATED BOUNDARY AND IMPERVIOUS AREA

KOONTZ-BRYANT, P.C.
A Full Service Civil Consulting Firm
1703 N PARHAM ROAD, SUITE 202
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(804) 740-9200 FAX (804) 740-7338
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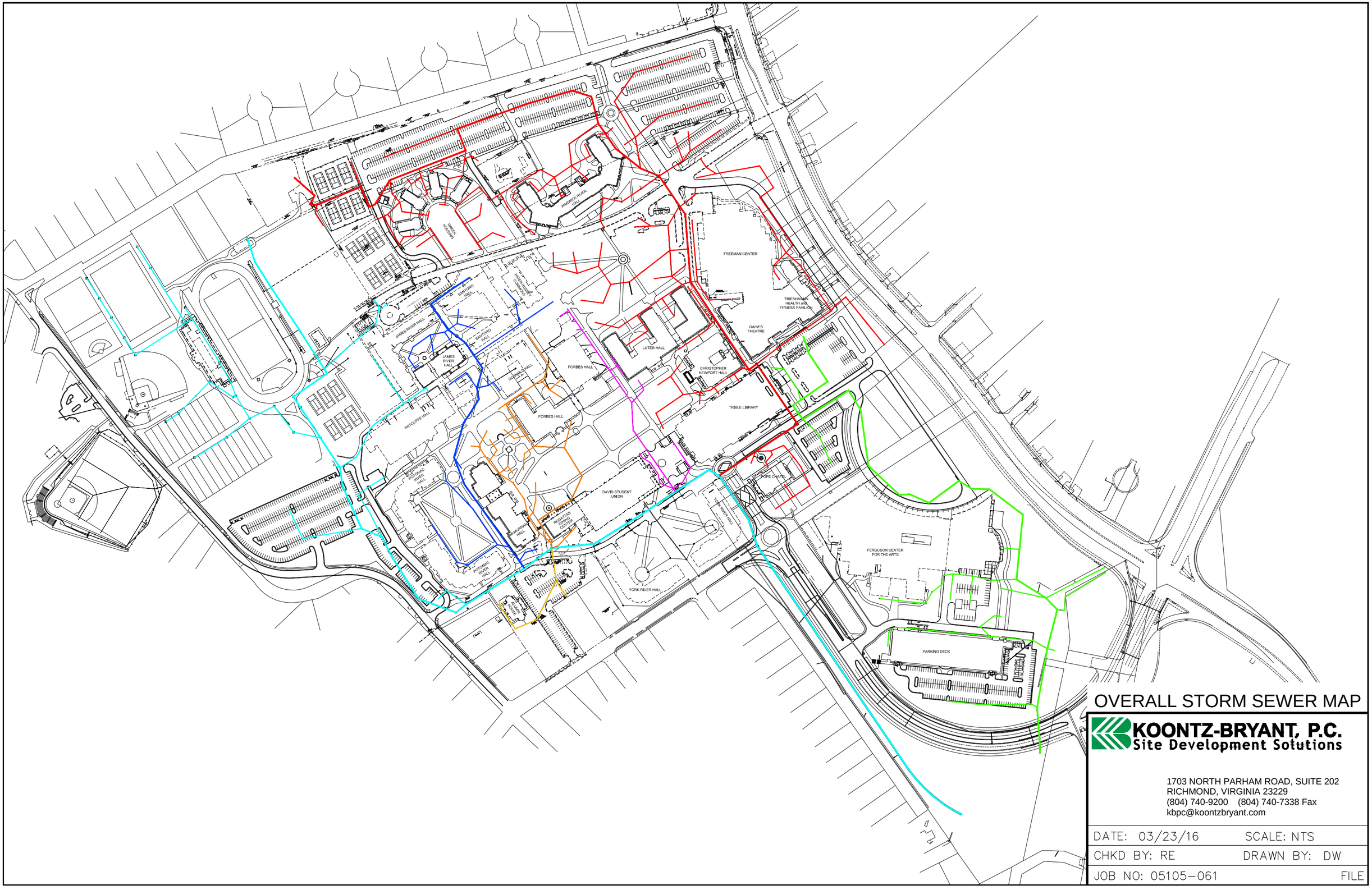
DRAWN:	JBM
CHECKED:	FFH

COMMONWEALTH OF VIRGINIA
PAUL F. HINSON
Lic. No. 023660
12-21-11
PROFESSIONAL ENGINEER

CNU Campus

		Project Post-development Impervious Area (acres)	Project Pre-development Impervious Area (acres)	Campus Post-development Impervious Area (acres)
				59.00
S-01-0720-01-1	CNU Residence Hall III (partially built when flown)	0.34	0.00	59.34
S-01-0720-02-1	CNU Track Complex (Stadium Seating)	1.33	1.39	59.28
S-01-0720-04-0	CNU Performing Arts Center, Phase 1	8.67	9.80	58.15
S-02-LJ-03	CNU Performing Arts Center, Phase II	6.90	8.67	56.38
S-03-LJ-01	CNU Track Complex - Football Stadium, Phase 2	0.13	0.00	56.51
S-03-LJ-02	CNU Soccer Practice Field	-0.79	0.00	55.72
S-03-LJ-03	CNU Tennis Courts	0.24	0.00	55.96
S-03-LJ-04	CNU Residence Hall IV	-1.32	0.00	54.64
S-03-LJ-06	CNU Parking Deck	4.16	0.00	58.80
S-03-LJ-07	CNU Clearing, Grubbing and Demolition Plan (Baseball Facility)	0.00	0.00	58.80
S-03-LJ-08	CNU Demo 78 Moores Ln.	0.00	0.05	58.75
S-03-LJ-09	CNU Demo 82 Moores Ln.	0.00	0.15	58.60
S-03-LJ-10	CNU Demo 262 Prince Drew Dr.	0.00	0.10	58.50
S-03-LJ-11	CNU Demo 300 Prince Drew Dr.	0.00	0.04	58.46
S-03-LJ-12	CNU Storm Sewer Infrastructure Improvements	-0.66	0.00	57.80
S-03-LJ-14	CNU Moores Lane Demo Projects (67, 71, 77 & 79)	0.00	0.37	57.43
S-03-LJ-15	CNU Baseball Field	0.72	0.00	58.15
S-03-LJ-15	CNU Werwick Blvd. Demo Projects	0.00	0.00	58.15
S-04-01	CNU Student Center	1.84	0.92	59.07
S-04-02	CNU Library and Information Technology Center	1.09	0.75	59.41
S-04-07	CNU Demo 87 Moore's Lene	0.00	0.05	59.35
S-04-08	CNU Temporary Construction Access Road	0.25	0.07	59.53
S-04-11	CNU Demo 61 Moore's Lane	0.00	0.04	59.50
S-04-15	CNU Demo 63 Moore's Lane	0.00	0.08	59.42
S-04-17	CNU Beseball Field Press Box and Seating Area	0.93	0.72	59.63
S-04-18	CNU Softball Field	0.19	0.00	59.82
S-05-03	CNU Fine Arts Loop Road	0.96	1.21	59.57
S-05-04	CNU Moores Lane Parking Lot	2.57	1.55	60.59
S-05-05	CNU Dumpster Yard	0.16	0.16	60.59
S-05-15	CNU Beseball Field Parking Lot	0.67	0.05	61.21
S-05-16	CNU Student Center Parking Lot	1.27	0.00	62.48
S-07-15	CNU McMurran Hall Liberal Arts Building	1.16	1.56	62.08
S-08-10	CNU Artificial Turf Field	0.00	0.00	62.08
SW2-09-11	CNU Science Building	2.07	1.67	62.48
S-09-01	CNU Soccer Concession Building	-0.03	0.00	62.45
SW2-09-13	CNU Track Renovations	1.75	1.39	62.81
SW2-09-26	CNU Freeman Center	4.74	3.58	63.97
SW2-09-33	CNU Loop Road Phase 2	0.65	0.55	64.07
SW2-10-05	CNU Chapel	0.65	1.30	63.42
SW2-10-09	CNU New Hall	1.54	1.39	63.57
SW2-10-14	CNU Res Hall V	1.46	2.09	62.94
SW2-11-02	CNU Master Plan Parking Lots - Phase 1	9.71	2.50	70.15
S-09-21	CNU Ratcliffe Hall Atheletic Addition	0.75	0.49	70.41
Per 2011 Master Plan Update	*Adjustment per field changes to the softball fields*	-0.18	0.00	70.23
Per 2011 Master Plan Update	*Adjustment per field changes to track and concession walks*	0.06	0.00	70.29
Per 2011 Master Plan Update	*Adjustments per field changes of walkways/demo on McMurran Hall and the Science Building including the Chiller Plant*	0.77	0.00	71.06
Per 2011 Master Plan Update	*Adjustment for 12 Moores Lane to remain*	0.15	0.00	71.21
Per 2011 Master Plan Update	Adjustment per removal of 30 spaces in Master Parking Lots	-0.11	0.00	71.10
SW2-12-01	Hiden-Hussey Commons Additions Phase 1	0.33	0.00	71.43
Per WEG - CNU Entry Plaza	CNU Entry Plaza - Within CNU Campus	0.05	0.00	71.48
Per WEG - CNU Entry Plaza	CNU Entry Plaza - Within Existing VDOT ROW (in Transfer)	0.22	0.00	71.70
SW2-12-07	Adjustment per parking lot size Revised CNU Master Plan Parking	-0.11	0.00	71.59
In for Approval	Proposed Student Success Center	0.97	1.16	71.40
In for Approval	Proposed New Hall Parking Lot Demo and Walkway Design	0.31	1.12	70.59
In for Approval	CNU Bell Tower	0.16	0.00	70.75
Proposed	CNU Tennis Center	1.35	1.30	70.80
In for Approval	Proposed Greek Housing Project - Phase 1	1.27	0.37	71.70
	Total CNU Campus Study Area			147.24
	Percent Impervious Area			48.70%



OVERALL STORM SEWER MAP

KOONTZ-BRYANT, P.C.
Site Development Solutions

1703 NORTH PARHAM ROAD, SUITE 202
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(804) 740-9200 (804) 740-7338 Fax
kbpc@koontzbryant.com

DATE: 03/23/16	SCALE: NTS
CHKD BY: RE	DRAWN BY: DW
JOB NO: 05105-061	FILE

Outfall Information Table

Outfall#	Location	Coordinates	Drainage Area (Acres)	Receiving Water	Impaired Water	TMDL WLAs	Predominant Land Use	Hydrological Unit Code
Outfall 1	Southeast corner Of campus	37.060206 -76.488779	23.7	Lake Maury James River Cooper Creek	No	Chesapeake Bay	Impermeable Pavement and Lawn area	HUC JL43/020802060906
Outfall 2	Southeast corner of campus	37.059276 -76.490011	98.6	Lake Maury James River Cooper Creek	No	Chesapeake Bay	Impermeable and Permeable area	HUC JL43/020802060906 & JF38/020802060901
Outfall 3	Southeast corner of campus	37.059169 -76.490238	11.4	Lake Maury James River Cooper Creek	No	Chesapeake Bay	Impermeable and Permeable area	HUC JL43/020802060906
Connection C1 with Newport News	Southeast corner of campus	37.061835, -76.492533	~2.2 of Newport News	Lake Maury James River Cooper Creek	No	Chesapeake Bay	Impermeable and Permeable area	HUC JL43/020802060906
Connections C2-C8 with Newport News	Southwest side of campus	37.062238, -76.499657	~9.3	James River Cooper Creek	No	Chesapeake Bay	Sports fields, Impermeable and Permeable area	HUC JL43/020802060906
Connection C9 with Newport News	West corner of campus	37.065635, -76.500397	~0.8	Warwick River	No	Chesapeake Bay	Impermeable and Permeable area	HUC JF38/020802060901
Connection C10 with Newport News	Northwest corner of campus	37.065513, -76.499038	~0.4 of Newport News	Lake Maury James River Cooper Creek	No	Chesapeake Bay	Impermeable and Permeable area	HUC JL43/020802060906

Appendix B MCM SUMMARY OF RESPONSIBLE PERSONNEL

Table B-1 MCM Summary Table

MCM No. 1 – Public Education and Outreach		
BMP	**Responsible Party**	**Key Personnel**
1.1 – MS4 Program Update	Dean Whitehead	Dean Whitehead
1.2 – CNU MS4 Website	Dean Whitehead	Bruce Bronstein
1.3 – CNU Sustainability Facebook Site	Dean Whitehead	Bruce Bronstein
1.4 – Premium Item Giveaways	Dean Whitehead	Dean Whitehead
1.5 – Storm Drain Medallions	Dean Whitehead	Scott Gesele
1.6 – Construction Signage	Dean Whitehead	Bruce Bronstein Scott Gesele Dean Whitehead
1.7 – Construction Site Runoff Training	Dean Whitehead	Dean Whitehead
1.8 – Litter and Street Debris Education	Dean Whitehead	Dean Whitehead
1.9 – Nutrient Management Training	Dean Whitehead	Chris Webb
MCM No. 2 – Public Involvement/Participation		
BMP	**Responsible Party**	**Key Personnel**
2.1 – MS4 Program Update	Dean Whitehead	Dean Whitehead
2.2 – CNU MS4 Website	Dean Whitehead	Bruce Bronstein
2.3 – Community Service	Dean Whitehead	Dean Whitehead
2.4 – Campus Stormwater Events	Dean Whitehead	Dean Whitehead
2.5 – Garden Symposium	Dean Whitehead	Dean Whitehead
2.6 – Pet Waste Stations	Dean Whitehead	Dean Whitehead
MCM No. 3 – Illicit Discharge Detection and Elimination		
BMP	**Responsible Party**	**Key Personnel**
3.1 – IDDE Policy	Jackie Roquemore	Jackie Roquemore
3.2 – CNU Stormwater Study	Dean Whitehead	Michelle Campbell David Duncan, TG Mr. JD Hines, VHB
3.3 – CNU MS4 Website	Dean Whitehead	Bruce Bronstein
3.4 – Illicit Discharge Detection Tracking and Reporting	Jackie Roquemore	Jackie Roquemore
3.5 – Outfall Inspections	Dean Whitehead	Chris Webb
3.6 – Pollution Prevention Materials	Dean Whitehead	Dean Whitehead
3.7 – Pollution Prevention Training	Dean Whitehead	Dean Whitehead
MCM No. 4 – Construction Site Stormwater Runoff Control		

BMP	Responsible Party	Key Personnel
4.1 – Annual Standards and Specifications	Michelle Campbell	Michelle Campbell Scott Roberts Dean Whitehead
4.2 – Project Inspections	Michelle Campbell	Michelle Campbell Scott Roberts Dean Whitehead Chris Webb
4.3 – ESC Contract Provisions	Michelle Campbell	Michelle Campbell Scott Roberts Dean Whitehead David Duncan, TG Mr. JD Hines, VHB
4.4 – Construction Site Runoff	Dean Whitehead	Dean Whitehead
4.5 – Construction Signage	Dean Whitehead	Bruce Bronstein Scott Gesele Dean Whitehead Chris Webb
4.6 – Land Disturbing Activities Tracking	Michelle Campbell	Michelle Campbell David Duncan, TG Mr. JD Hines, VHB
MCM No. 5 – Post-Construction Stormwater Management		
BMP	**Responsible Party**	**Key Personnel**
5.1 – CNU Stormwater Study	Dean Whitehead	Michelle Campbell Mr. JD Hines, VHB
5.2 – ESC Contract Provisions	Dean Whitehead	Michelle Campbell Scott Roberts Scott Gesele Dean Whitehead Chris Webb David Duncan, TG Mr. JD Hines, VHB
5.3 – BMP Inspections	Dean Whitehead	Dean Whitehead Chris Webb
5.4 – BMP Tracking	Dean Whitehead	Michelle Campbell David Duncan, TG
5.5 – BMP Maintenance	Dean Whitehead	Dean Whitehead Chris Webb
MCM No. 6 – Pollution Prevention/Good Housekeeping for Municipal Operations		
BMP	**Responsible Party**	**Key Personnel**
6.1 – Pollution Prevention Materials	Dean Whitehead	Dean Whitehead
6.2 – Pollution Prevention Training	Dean Whitehead	Dean Whitehead
BMP	**Responsible Party**	**Key Personnel**
6.3 – Grounds Clean-Up	Dean Whitehead	Dean Whitehead

		Chris Webb
6.4 – Illicit Discharge Detection Tracking and Reporting	Jackie Roquemore	Jackie Roquemore
6.5 – Nutrient Management Plan	Dean Whitehead	Dean Whitehead Chris Webb
6.6 – Nutrient Management Training	Dean Whitehead	Dean Whitehead
6.7 – Underground Infrastructure Cleaning	Dean Whitehead	Scott Gesele Dean Whitehead Chris Webb
6.8 – Street Sweeping	Dean Whitehead	Dean Whitehead Chris Webb
6.9 – Storm Drain Medallions	Dean Whitehead	Scott Gesele Dean Whitehead Chris Webb
6.10 – Daily Good Housekeeping Procedures	Dean Whitehead	Jackie Roquemore Dean Whitehead

Appendix C MCM SUMMARY TABLE

Table C-5 MCM No. 1 – Public Education and Outreach

BMP	Description	Measurable Goal	Standard SOPs	Future Activities
1.1 – MS4 Program Update	Conduct a self-assessment and update of the MS4 Program to identify and proactively address issues and deficiencies, as well as identify opportunities to improve program effectiveness.	Annual report	MS4 Program Plan Update in 2019-2020.	The MS4 Program was revised again during the 2019-2020 reporting year to reflect MS4 Program Plan updates required in the general permit. The plan will continue to be updated as needed to reflect requirements outlined in the permit.
1.2 – CNU MS4 Website	Update the CNU website to include information on the MS4 Program, MS4 general permit, MS4 Program Plan and annual reports, educational information about stormwater, links to other stormwater-related websites and stormwater incident reporting information.	Updated CNU website to include information on the MS4 Program. Annual review and update based on changes to CNU policies and/or staffing.	Website annually reviewed and updated to include current MS4 information.	Additional stormwater information will continue to be added to the website in 2019-2020 as the website is updated.
1.3 – CNU Sustainability Social Media Campaign	CNU utilizes a Sustainability Facebook page which shares stormwater educational messages and provides event updates to students, faculty, and staff.	Number of messages, and responsiveness to information from the public.	Website reviewed on an on-going basis, new material provided to audience throughout the year.	Continue to develop and share new ideas, strategies, and events that promote stormwater pollution prevention.
1.5 – Premium Item Giveaways	Give items to the CNU public that share messages to reduce stormwater pollution.	Numbers of items given away at events.	Annually review types of items and opportunities to distribute.	Provide items to students, faculty, and staff at planned outreach events.
1.5 – Storm Drain Medallions	Install storm drain medallions on all campus storm drain inlets to help remind the CNU community about stormwater pollution. The medallions read, “No dumping, Drains to Waterway”. .	Numbers of medallions installed/replaced. During the 2019-2020 reporting year, no new storm drain medallions were installed or replaced.	Install storm drain medallions on all campus storm drain inlets. Evaluate storm drain medallions annually. Replace any missing or damaged medallions as needed.	Monitoring of the storm drain medallions is an ongoing activity. Any missing or damaged medallions observed in 2020-2021 will be replaced. New medallions will be installed on newly constructed campus storm drains.
1.6 – Construction Signage	Develop a sign to be placed on construction site fencing at all on-campus construction projects explaining the importance of proper erosion and sediment control practices and its connection to stormwater quality.	Ensure that educational signs are present on fencing at all on-campus construction projects. Report on number of signs posted annually.	Inspect and replace any missing or damaged signs as needed.	Installation of educational signage at new on-campus construction projects will be an ongoing activity in 2019-2020. Any missing or damaged signs observed will be replaced.

BMP	Description	Measurable Goal	Standard SOPs	Future Activities
1.7 – Construction Site Runoff Training	Construction site runoff was identified as one of the three high-priority water quality issues at CNU. CNU will conduct biennial training for contractors on construction site runoff pollution prevention.	Conduct biennial training to contractors on construction site runoff pollution prevention. Document each training event including the training date, number of people attending the training, and the objective of each training event.	Construction site runoff pollution prevention training will be a biennial and ongoing activity, as needed based on active construction projects, for contractors associated with all new regulated land disturbing activities on campus.	Current training consists of PowerPoint presentations but CNU is looking at rotating biennial presentations/training materials to present similar but varying content.
1.8 – Litter and Street Debris Education	Litter and street debris was identified as one of the three high-priority water quality issues at CNU. CNU will conduct public education/outreach regarding the impacts of litter and street debris on stormwater discharges.	Number of events held, number of audience reached. Noticeable reduction in litter expected on an on-going basis.	Continue to develop and share new ideas, strategies, and events that promote stormwater pollution prevention on an annual basis.	Distribution of educational materials to the CNU public related to litter and street debris is an ongoing activity. For the 2019-2020 reporting year, CNU will continue to conduct public education/outreach regarding this issue and continue to look into alternative ways to distribute educational materials to the CNU MS4 public.
1.9 – Nutrient Management Training	Nutrient management was identified as one of the three high-priority water quality issues at CNU.	Train CNU Grounds Department staff as certified fertilizer applicators to ensure that nutrients are only applied in accordance with CNU's approved Nutrient Management Plans.	Continue to train Grounds Department staff and document training (names, date, etc.) regarding nutrient management.	This is an ongoing program with biennial training.

Table C-6 MCM No. 2 – Public Involvement and Participation

BMP	Description	Measurable Goal	Standard SOPs	Future Activities
2.1 – MS4 Program Update	Conduct a self-assessment and update of the MS4 Program to identify and proactively address issues and deficiencies, as well as identify opportunities to improve program effectiveness.	Annual report	MS4 Program Plan Update in 2019-2020.	The MS4 Program was revised again during the 2019-2020 reporting year to reflect MS4 Program Plan updates required in the general permit. The plan will continue to be updated as needed to reflect requirements outlined in the permit.
2.2 – CNU MS4 Website	Update the CNU website to include information on the MS4 Program, MS4 general permit, MS4 Program Plan and annual reports, educational information about stormwater, links to other stormwater-related websites and stormwater incident reporting information.	Updated CNU website to include information on the MS4 Program. Annual review and update based on changes to CNU policies and/or staffing.	Website annually reviewed and updated to include current MS4 information.	Additional stormwater information will continue to be added to the website in 2019-2020 as the website is updated.
2.3 – Community Service	CNU students participate in annual trash cleanup events and other various events around campus and the community to pick up litter and educate others about the problems of stormwater pollution.	Students participating in public education and/or outreach in projects related to stormwater management.	Community service activities are ongoing with various clubs and organization.	The Rotaract cleanup day is held annually. Additional community service opportunities for public education/outreach associated with high- priority water quality issues may also be identified during 2020-2021.
2.4 – Campus Public Involvement/ Participation Event	CNU Grounds Department staff host a table providing stormwater education materials at the CNU Farmer's Markets. CNU students participate various events around campus and the community to educate others about the problems of stormwater pollution.	Number of events that took place; Number of CNU community who participated and received stormwater pollution information.	Participate through promotion, sponsorship, or other involvement, in a minimum of four local activities annually 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.	CNU will look to host similar campus public involvement/participation events again for the 2019-2020 reporting year. Due to the COVID-19 Pandemic these events are being converted into virtual outreach/events until in person gatherings can be conducted safely.

BMP	Description	Measurable Goal	Standard SOPs	Future Activities
2.5 – Garden Symposium	CNU Grounds Department staff host a table providing stormwater education materials at the Garden Symposium held at CNU on every spring.	Number of people reached at the event	Participate through promotion, sponsorship, or other involvement, in a minimum of four local activities annually 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	CNU will look to provide stormwater educational materials at future Garden Symposium events at CNU and other similar events.
2.6 – Pet Waste Stations	CNU installed two pet waste stations on campus to encourage faculty, staff, students, and visitors to collect and properly dispose of pet waste.	On-going refilling of bags and trash/debris from the pet waste station. Installing new stations as needed around campus.	Participate through promotion, sponsorship, or other involvement, in a minimum of four local activities annually 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.	The Pet Waste Stations will continue to remain on campus to educate faculty, staff, students, and visitors on the importance of water quality.

Table C-7 MCM No. 3 – Illicit Discharge Detection and Elimination

BMP	Description	Measurable Goal	Standard SOPs	Future Activities
3.1 – IDDE Policy	Develop and adopt an Illicit Discharge, Detection and Elimination (IDDE) Policy to prevent the discharge of contaminated stormwater runoff from CNU properties and operations into the MS4.	Timely and appropriate response of the CNU community to spills and illegal dumping of pollutants.	IDDE Policy was adopted by CNU on 7/1/10 and is updated as needed.	Information on the IDDE Policy and contact info to report spills and complaints is on the university's website. The IDDE policy will be reviewed and updated as needed.
3.2 – CNU Stormwater Study	Develop and maintain an updated storm sewer system map. CNU developed a Stormwater Quality and Quantity Study in 2002 which was revised in 2008 and 2011. This study contains detailed information on the existing stormwater conveyance system at CNU. The study also provides detailed storm sewer mapping including drainage areas.	Storm sewer system map. Review CNU Stormwater Plan and update any necessary information based on changes to the campus and/or stormwater conveyance system.	Completed 2008-2009; Water quality calculations updated in 2011 with Lake Maury as BMP; Water quality calculations updated again in 2014 (submitted in 2015) for the Greek Housing project; Reviewed and updated in June of 2019 by VHB in the CNU Stormwater Management Master Plan. Information from the stormwater studies are provided in Appendix A.	The stormwater study will continue to be reviewed and updated as needed based on changes to the university's stormwater conveyance system and based on permit requirements.
3.3 – CNU MS4 Website	Update the CNU website to include information on the MS4 Program, MS4 general permit, MS4 Program Plan and annual reports, educational information about stormwater, links to other stormwater-related websites and stormwater incident reporting information.	Updated CNU website to include information on the MS4 Program. Annual review and update based on changes to CNU policies and/or staffing.	Website annually reviewed and updated to include current MS4 information.	Additional stormwater information will continue to be added to the website in 2019-2020 as the website is updated.

BMP	Description	Measurable Goal	Standard SOPs	Future Activities
3.4/6.4 – Illicit Discharge Detection Tracking and Reporting	Develop a procedure and format for tracking training efforts, inspections, and other activities related to the IDDE program. As part of the IDDE program, CNU will document any illicit discharges that are detected.	Number of IDDE events reported and tracked.	A standard operating procedure (SOP) for stormwater outfall screening was developed by CNU along with a standard outfall reconnaissance inventory/sample collection field sheet to be used when staff is conducting illicit discharge inspections of storm drainage system outfalls. Copies of the SOP and field sheet are provided in Appendix D.	Illicit discharge detection tracking and reporting will be an ongoing activity.
3.5 – Outfall Inspections	Inspect each MS4 outfall on an annual basis. Outfall inspections will be documented and kept as part of the MS4 documentation.	Inspect each MS4 outfall on an annual basis. Maintain records of outfalls that were inspected.	Inspect outfalls annually and record findings. Keep records for annual reporting.	MS4 outfalls will continue to be inspected on an annual basis in 2019-2020.
3.6/6.1 – Pollution Prevention Materials	CNU will prepare and distribute educational materials about the impacts of stormwater discharges on water bodies.	Numbers of faculty, staff, and students to receive educational materials regarding pollution prevention.	Prepare and present appropriate pollution prevention materials to students, faculty and staff at events and through outreach.	Distribution of pollution prevention materials will be an ongoing activity. Materials will be distributed annually. CNU is continuing to look into alternative ways to distribute educational materials to the CNU MS4 public in 2019-2020 .
3.7/6.2 – Pollution Prevention Training	CNU will conduct biennial training to applicable staff on pollution prevention.	Conduct biennial training to applicable staff on pollution prevention. Document each training event including the training date, number of employees attending the training, and the objective of each training event.	CNU developed departmental training using PowerPoint. Other types of training options are being explored.	Pollution prevention training will be a biennial and ongoing activity. Training will be conducted again during the 2019-2020 reporting year.

Table C-8 MCM No. 4 – Construction Site Stormwater Runoff Control

BMP	Description	Measurable Goal	Standard SOPs	Future Activities
4.1 – Annual Standards and Specifications	CNU developed and submitted annual standards and specifications (AS&S) to DEQ in December 2019; the AS&S were then approved by the DEQ in a letter dated 3/12/2020.	Annual standards and specifications.	Utilize AS&S for compliance with regards to new construction in order to control construction site discharge and in post-construction situations as appropriate.	Continue current program, comply with approved annual standards and specifications (AS&S).
4.2 – Project Inspections	The contractor for each construction project is required to inspect the project in accordance with the inspection frequency specified in the CGP. CNU audits the compliance of the contractor by reviewing the inspection documentation, revisions to the SWPPP, and overall site compliance quarterly.	Review copies of inspection reports; Review of each project's SWPPP on a quarterly basis.	Review copies of all contractors' inspection reports and review each project's Stormwater Pollution Prevention Plan (SWPPP) on a quarterly basis to track compliance with the SWPPP.	Continue current program, evaluate annually. Records maintained by the University Architect's office.
4.3 – ESC Contract Provisions	Require that for all contracts for construction projects with land-disturbing activities meeting the requirements in the MS4 permit and CGP, the primary contractor must obtain a CGP, and must also carry out all the provisions required of the Construction Site Operator	Copies of permit notice of coverage letters for all construction projects and review each project's Stormwater Pollution Prevention Plan (SWPPP).	Maintain copies of permit notice of coverage letters for all construction projects and review each project's Stormwater Pollution Prevention Plan (SWPPP) on a quarterly basis to track compliance with the SWPPP.	Continue current program, evaluate annually. Records maintained by the University Architect's office.
4.3 – Construction Site Runoff Training	Construction site runoff was identified as one of the three high-priority water quality issues at CNU. CNU will conduct biennial training for contractors on construction site runoff pollution prevention.	Conduct biennial training to contractors on construction site runoff pollution prevention. Document each training event including the training date, number of people attending the training, and the objective of each training event.	Construction site runoff pollution prevention training will be a biennial and ongoing activity, as needed based on active construction projects, for contractors associated with all new regulated land disturbing activities on campus.	Current training consists of PowerPoint presentations but CNU is looking at rotating biennial presentations/training materials to present similar but varying content.

BMP	Description	Measurable Goal	Standard SOPs	Future Activities
4.5 – Construction Signage	Develop a sign to be placed on construction site fencing at all on-campus construction projects explaining the importance of proper erosion and sediment control practices and its connection to stormwater quality.	Ensure that educational signs are present on fencing at all on-campus construction projects. Report on number of signs posted annually.	Inspect and replace any missing or damaged signs as needed.	Installation of educational signage at new on-campus construction projects will be an ongoing activity in 2019-2020. Any missing or damaged signs observed will be replaced.
4.6 – Land Disturbing Activities Tracking	Track regulated land-disturbing activities on campus and submit the number of regulated land-disturbing activities and the total disturbed acreage associated with each. Keep this information on file as part of the MS4 documentation and include as part of the MS4 Annual Report.	Number of regulated land-disturbing activities on campus and the total disturbed acreage.	Track the number of regulated land-disturbing activities on campus and report the total disturbed acreage.	Continue current program, evaluate annually.

Table C-9 MCM No. 5 – Post-Construction Stormwater Management

BMP	Description	Measurable Goal	Standard SOPs	Future Activities
5.1 – CNU Stormwater Study	Develop and maintain an updated storm sewer system map. CNU developed a Stormwater Quality and Quantity Study in 2002 which was revised in 2008 and 2011. This study contains detailed information on the existing stormwater conveyance system at CNU. The study also provides detailed storm sewer mapping including drainage areas.	Storm sewer system map. Review CNU Stormwater Plan and update any necessary information based on changes to the campus and/or stormwater conveyance system.	Completed 2008-2009; Water quality calculations updated in 2011 with Lake Maury as BMP; Water quality calculations updated again in 2014 (submitted in 2015) for the Greek Housing project; Reviewed and updated in June of 2019 by VHB in the CNU Stormwater Management Master Plan. Information from the stormwater studies are provided in Appendix A.	The stormwater study will continue to be reviewed and updated as needed based on changes to the university's stormwater conveyance system and based on permit requirements.
5.2 – ESC Contract Provisions	Require that for all contracts for construction projects with land-disturbing activities meeting the requirements in the MS4 permit and CGP, the primary contractor must obtain a CGP, and must also carry out all the provisions required of the Construction Site Operator	Copies of permit notice of coverage letters for all construction projects and review each project's Stormwater Pollution Prevention Plan (SWPPP).	Maintain copies of permit notice of coverage letters for all construction projects and review each project's Stormwater Pollution Prevention Plan (SWPPP) on a quarterly basis to track compliance with the SWPPP.	Continue current program, evaluate annually. Records maintained by the University Architect's office.
5.3 – BMP Inspections	Inspect all known permanent stormwater management facilities on an annual basis. Keep copies of inspection reports on file as part of the MS4 documentation.	Records of BMPs that were inspected.	Inspect all BMPs annually. Utilize inspection forms and methods provided by DEQ.	Continue current program, evaluate annually.
5.4 – BMP Tracking	Track all known permanent stormwater management facilities on an annual basis and submit information including the type of facility, geographic location (HUC), impaired surface water that the facility is discharging into (if applicable), and the number of acres treated by the facility.	Update BMP database as needed.	Track all known permanent stormwater management facilities on an annual basis. Keep this information on file as part of the MS4 documentation and included as part of the MS4 Annual Report.	Continue current program, evaluate annually.
5.5 – BMP Maintenance	Properly maintain all structural BMPs on the CNU campus and/or under the operational control of CNU in effective operating condition in accordance with good engineering practices and, where applicable, manufacturer specifications.	Continue CNU BMP maintenance program as needed based on results of annual BMP inspections. Maintain records of BMP maintenance activities.	Perform maintenance of permanent stormwater management facilities will be performed, if needed, based on the results of BMP inspections performed as part of this MS4 Program Plan. Any necessary maintenance performed on permanent stormwater management facilities will be documented and included as part of the MS4 Annual Report.	Continue current program, evaluate annually.

Table C-10 MCM No. 6 – Pollution Prevention and Good Housekeeping

BMP	Description	Measurable Goal	Standard SOPs	Future Activities
3.6/6.1 – Pollution Prevention Materials	CNU will prepare and distribute educational materials about the impacts of stormwater discharges on water bodies.	Numbers of faculty, staff, and students to receive educational materials regarding pollution prevention.	Prepare and present appropriate pollution prevention materials to students, faculty and staff at events and through outreach.	Distribution of pollution prevention materials will be an ongoing activity. Materials will be distributed annually. CNU is continuing to look into alternative ways to distribute educational materials to the CNU MS4 public in 2019-2020.
3.7/6.2 – Pollution Prevention Training	CNU will conduct biennial training to applicable staff on pollution prevention.	Conduct biennial training to applicable staff on pollution prevention. Document each training event including the training date, number of employees attending the training, and the objective of each training event.	CNU developed departmental training using PowerPoint. Other types of training options are being explored.	Pollution prevention training will be a biennial and ongoing activity. Training will be conducted again during the 2019-2020 reporting year.
6.3 – Grounds Clean-Up	Continue the CNU Grounds Department clean-up program to remove trash and debris on a regular basis.	The estimated amount of material that is collected annually.	The quantity of trash removed from campus grounds will be kept on file as part of the MS4 Program Plan documentation.	The grounds clean-up program is an ongoing activity.
3.4/6.4 – Illicit Discharge Detection Tracking and Reporting	Develop a procedure and format for tracking training efforts, inspections, and other activities related to the IDDE program. As part of the IDDE program, CNU will document any illicit discharges that are detected.	Number of IDDE events reported and tracked.	A standard operating procedure (SOP) for stormwater outfall screening was developed by CNU along with a standard outfall reconnaissance inventory/sample collection field sheet to be used when staff is conducting illicit discharge inspections of storm drainage system outfalls. Copies of the SOP and field sheet are provided in Appendix D.	Illicit discharge detection tracking and reporting will be an ongoing activity.

BMP	Description	Measurable Goal	Standard SOPs	Future Activities
6.5 – Nutrient Management Plan	Implement a Nutrient Management Plan (NMP) for the athletic facilities and the balance of the campus. There are two separate approved NMPs that cover the CNU campus.	Operation under approved NMPs for the CNU campus. Reviewing of the NMP and updating any necessary information.	The CNU grounds and athletics departments currently operate using approved NMPs and will continue to evaluate/update the NMPs once every three years and provide any updates, as needed.	The CNU grounds and athletics departments will continue to operate using the approved NMPs. The NMPs will be reviewed/updated again in 2021 and re-submitted to DCR for approval.
6.6 – Nutrient Management Training	Nutrient management was identified as one of the three high-priority water quality issues at CNU.	Training of CNU Grounds Department staff as certified fertilizer applicators to ensure that nutrients are only applied in accordance with CNU's approved Nutrient Management Plans.	Continue to train Grounds Department staff and document training (names, date, etc.) regarding nutrient management.	This is an ongoing program with biennial training.
6.7 – Underground Infrastructure Cleaning	Perform maintenance by cleaning a portion of the campus stormwater infrastructure (catch basins, storm drain pipes) on an annual basis.	Annual maintenance of CNU underground infrastructure	Contract to clean selected storm drain pipes on campus as needed on an annual basis.	Continue current program, evaluate annually.
6.8 – Street Sweeping	Continue the ongoing street sweeping program. Vacuum sweep selected campus roads and parking lots on an annual basis. Document the quantity of material collected on an annual basis to include in the annual report.	Amount of material that is removed annually.	Street sweeping of campus roads and parking lots was performed by contracted services. CNU Grounds personnel also blow debris from roads and parking lot areas onto turf areas to be mulched or picked up with turf maintenance activities on a regular basis.	Continue current program, evaluate annually. Debris removal from roads and parking lots is an ongoing activity.
6.9 – Storm Drain Medallions	Install storm drain medallions on all campus storm drain inlets to help remind the CNU community about stormwater pollution. The medallions read, "No dumping, Drains to Waterway". .	Numbers of medallions installed/replaced. During the 2019-2020 reporting year, no new storm drain medallions were installed or replaced.	Install storm drain medallions on all campus storm drain inlets. Evaluate storm drain medallions annually. Replace any missing or damaged medallions as needed.	Monitoring of the storm drain medallions is an ongoing activity. Any missing or damaged medallions observed in 2020-2021 will be replaced. New medallions will be installed on newly constructed campus storm drains.

BMP	Description	Measurable Goal	Standard SOPs	Future Activities
6.10 – Daily Good Housekeeping Procedures	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.	Completion and implementation of written good housekeeping procedures/SOPs.	Daily good housekeeping written procedures (SOPs) are to be maintained and implemented on an on-going basis.	Continue to include written procedures in pollution prevention training; update as needed.

Appendix D STANDARD OPERATING PROCEDURES (SOPS)

CHRISTOPHER NEWPORT
UNIVERSITY

Standard Operating Procedures (SOPS) to Prevent Stormwater Pollution

Grounds Department
1 Avenue of the Arts, Newport News, VA 23606
Phone: (757) 594-8700
Email: Grounds@cnu.edu

Table of Contents:

Christopher Newport University (CNU), an agency of the Commonwealth of Virginia, has a permit to operate a Municipal Separate Storm Sewer System (MS4) issued by the Virginia Department of Environmental Quality. This permit authorizes CNU to discharge stormwater pursuant to the Virginia Stormwater Management Program and the Virginia Stormwater Management Act. Since storm drain systems are not connected to a sanitary sewer treatment plant, water traveling through the storm drain system flows untreated directly to local streams, rivers and lakes.

Standard Operating Procedures (SOPS) have been developed to prevent pollution from entering our storm drain system. Each SOP has been written to identify procedures and methods that will prevent illicit discharges. Illicit discharges are not allowed and can result in significant fines and other penalties from regulatory agencies.

The SOPS herein were developed and adopted on June 30, 2016. They will be reviewed annually, before September 1, to make any modifications or additions to the procedures.

Christopher Newport University
Standard Operating Procedures to Prevent Stormwater Pollution
Modification Table

Record of Change	Type	Notes
6/30/16	Development of SOP	
8/15/2022	SOP Addition	Added Dewatering Utility Construction and Maintenance Activities
9/21/22	Annual Review, Update and Reformatting	

Contact Information

Title or Organization	Contact	Office Phone
CNU Police Department (CNU PD)	Dispatch	4-7777
National Response Center (NRC)	Call Center	800-424-8802
Virginia Department of Environmental Quality (DEQ)	Tidewater Office	757-518-2000
Virginia Department of Environmental Quality 24-Hour Hotline (DEQ)	Call Center	1-800-468-8892
Director of Grounds/MS4 Program Manager	Dean Whitehead	4-8416
Director of Environmental, Health, & Safety (EHS)	Jackie Roquemore	4-7280
Director of Housing	Zac Holmes	4-8480
Director of Facilities Management	Scott Gesele	4-7863
Dining of Dining Services	June Miles	4-7624
Director of Catering	Erika Nestler	4-7007
Director of Events, Scheduling and Conferences	John Murray	4-8164
Director of Building Operations	Wes Mann	4-8517
Director of Capital Outlay Management	Michelle Campbell	4-7867
Associate Director of Athletics	Matt Kelchner	4-7584
Executive Director of University Events and Special Projects	Amie Dale	4-7672

SOP:	**Equipment Maintenance and Washing**
Purpose of SOP:	**Procedures for the proper management of equipment maintenance and washing.**
SOP Administrator:	**Grounds Department**
Responsible Department:	**Grounds, Facilities Management, Housing, Dining, Building Operations**

Managers and Supervisors are responsible for ensuring that employees are properly informed of and trained on how to follow the procedures for this SOP. Contractors should also be notified to follow SOP while working for the University.

I. Stormwater Protection Equipment and Materials

- Spill Kit and equipment for dry clean up (socks, absorbent pads, absorbents, broom, and dustpan)
- Drip pans
- Wash Pad

II. Standard Operating Procedures

1. Equipment Maintenance and Repair
    a. Move leaking equipment indoors or onto impervious surface and under cover.
    b. Use drip pans or absorbent pads under equipment if needed.

2. If equipment is inoperable tag equipment, "**DO NOT USE"**.

3. Perform all maintenance activities (except for emergencies) indoors.

4. Transfer fluids from drip pans to appropriate waste containers.

5. Routinely check equipment for signs of leaks.
    a. Notify the supervisor if a leak is discovered or suspected.

6. Sweep and pick up trash in maintenance and repair areas daily.

III. Equipment Washing

1. Small equipment should only be washed inside at designated washing areas.
    a. Mop buckets and mop water may only be dumped inside at designated areas.

2. Large equipment in good condition, with no signs of leaks, may be washed at the wash pad located at the Grounds Department.

3. Make sure equipment is properly drained of all fluids prior to washing at the wash pad.
    a. In the event of leak or spill, immediately reposition the equipment, and notify your supervisor

4. Only use approved water-based or detergent cleaners.

SOP:	**Outdoor Events**
Purpose of SOP:	**Procedures for outdoor events to prevent wastes or wastewater from entering storm drains and waterways**
SOP Administrator:	**Grounds Department**
Responsible Department:	**Grounds, Facilities Management, Events, Catering**

Managers and Supervisors are responsible for ensuring that employees are properly informed of and trained on how to follow the procedures for this SOP. Contractors should also be notified to follow SOP while working for the University.

I. Stormwater Protection Equipment and Materials

- Covered waste and recycling containers
- Spill Kit and equipment for dry clean up (socks, absorbent pads, absorbents, broom, and dustpan)
- Storm drain inlet protection (drain covers, booms, berms)

II. Standard Operating Procedures

1. General Stormwater Protection

    a. Do NOT dump any liquids or other materials outside.
    b. Have the proper equipment available to clean-up spills and be ready to clean-up spills immediately.
    c. Ensure that vendors dispose of the wastes in an appropriate manner.
    d. Ensure storm drains have adequate inlet protection.

2. Waste Management and Disposal

    a. Provide an adequate number of receptacles to prevent litter.
    b. Empty waste and recycling containers as needed to prevent overflow
    c. Waste and recycling receptacles should have a weather proof cover.

3. Cleaning Up After the Event

    a. Clean the area using dry methods (sweeping, absorbents, etc.).
    b. Pick up all litter and garbage and properly dispose of it. Do not sweep anything into a storm drain.
    c. Discard waste drinks down a kitchen drain.

4. Spills

    a. Refer to SOP: Spill Prevention, Control, Clean Up and Reporting on page 20.
    b. Small spills (<5 gallons) that pose no immediate danger to human life or property notify MS4 Program Manager (4-8700).
    c. Small Spills (<5 gallons) of a hazardous substance that is an immediate danger to human life or property notify CNU Police (4-7777), EHS Director (4-7280), and MS4 Program Manager (4-8700).
    d. Large Spills (>5 gallons) of any substance report to CNU Police (4-7777), EHS Director (4-7280), and MS4 Program Manager (4-8700).

Things to Know: What spilled, Where it is located, Estimated amount of product

SOP:	**Kitchen Waste: Fats, Oils, and Greases (FOG) Transfer, Storage, and Disposal**
Purpose of SOP:	**Procedures for the management, handling, and storage of kitchen grease to prevent the discharge of pollutants to stormwater.**
SOP Administrator:	**Grounds Department**
Responsible Department:	**Dining Services, Catering**

Managers and Supervisors are responsible for ensuring that employees are properly informed of and trained on how to follow the procedures for this SOP. Contractors should also be notified to follow SOP while working for the University.

I. Stormwater Protection Equipment and Materials

- Weather proof and double walled FOG containers
- Tight sealing transfer containers
- Tarps and tie downs
- Spill Kit and equipment for dry clean up (socks, absorbent pads, absorbents, broom, and dustpan)

II. Standard Operating Procedures

1. Kitchen Management of Fats, Oils, and Greases (FOG)

    a. Scrape, wipe, or sweep off FOG using dry methods (e.g. paper towels) before washing any cooking equipment.
    b. Equipment (including trays, carts, pots, pans, etc.) may only be washed indoors.
    c. Use dry methods (absorbents) to clean up spills in the kitchen.
    d. Mop water may only be disposed of into indoor drains connected to the sanitary sewer.
    e. Empty collection pans or grease recovery devices before they become full.
    f. Collect used oil into transfer container with a sealing lid.

2. Transfer of FOG from Kitchen to Exterior FOG Container

    a. Prepare your route from the kitchen to the exterior FOG container.
        - Eliminate obstacles that might lead to a slip, trip, fall and potential spill.
        - Ensure that a spill kit is easily accessible in the event of a spill.
        - Place absorbent pads in the FOG transfer area.
    b. Use a container with a sealing lid to bring waste FOG outside to the Grease Receptacle. Do not transport waste FOG with pots, pans, trays, or other containers that lack a sealing lid.
        - It is safer to make multiple transfers of smaller volumes than to attempt to handle larger quantities at once.
        - Whenever possible, only transfer to the exterior FOG container when it is not raining.
    c. Using both hands, carefully transfer the waste FOG from transfer container to the exterior FOG container. Pour the FOG in such a way to minimize splashes and drips.
        - In the event of a spill notify your supervisor immediately and refer to SOP: Spill Prevention, Clean Up and Reporting
    d. Ensure that the exterior FOG container is properly covered.
    e. Return transfer container inside and wipe any excess FOG with a paper towel

3. Contractor Pickup of Exterior FOG Container

a. The disposal truck driver shall check in with the University upon arrival.

b. The University representative shall ensure that the appropriate spill cleanup and response equipment and personal protective equipment are readily available and easily accessible. Refer to SOP - Spill Prevention, Control, Clean Up and Reporting.
c. The University representative shall verify that the volume of waste FOG in the tank does not exceed the available capacity of the disposal hauler's vehicle.
d. Catch basins and drain manholes should be adequately protected during transfer.
e. The truck driver and the University representative shall both remain with the vehicle during the tank draining process.
f. When draining is complete and the hoses are removed, buckets should be placed underneath connection points to catch drippings.
g. The disposal hauler vehicle shall be inspected prior to departure to ensure that the hose is disconnected from the tank.
h. The University representative shall inspect the loading point and the tank to verify that no leaks have occurred, or that any leaked or spilled material has been cleaned up and disposed of properly (SOP - Spill Prevention, Control, Clean Up and Reporting and SOP - Pressure Washing and Exterior Surface Cleaning).

SOP:	**Equipment Fueling Activities**
Purpose of SOP:	**Procedures for the proper management of the transfer and dispensing of fuel.**
SOP Administrator:	**Grounds Department**
Responsible Department:	**Grounds, Facilities Management, Housing, Building Operations, Athletics**

Managers and Supervisors are responsible for ensuring that employees are properly informed of and trained on how to follow the procedures for this SOP. Contractors should also be notified to follow SOP while working for the University.

I. Stormwater Protection Equipment and Materials

- Spill Kit and equipment for dry clean up (socks, absorbent pads, absorbents, broom, and dustpan)
- Drip pans

II. Standard Operating Procedures

1. Dispensing of Fuel from Above Ground Storage Tanks (AGSTs)
    a. Turn off all equipment prior to dispensing fuel.
        - Do not use any mobile electronic devices when dispensing fuel.
    b. Ensure that the fuel type is the proper type of fuel.
    c. Inspect the fueling hose and dispenser for any signs of cracking or leaking prior to dispensing any fuel.
        - Report leaks in hoses or tanks to your supervisor immediately.
    d. Stay with the equipment while dispensing fuel, do not "top off" fuel tanks.
        - In the event of spill use dry methods (absorbents) to clean up the spill (refer to SOP: Spill Prevention, Control, Clean Up and Reporting)
        - Notify your supervisor immediately.

2. Dispensing of Fuel from Flammable Containers
    a. Mobile/field fueling shall be minimized. Whenever, practical equipment should be transported to a designated fueling area at Grounds.
    b. When performing mobile/field fueling select an area on concrete at least 25 feet up gradient from a storm drain.
    c. Turn off all equipment prior to dispensing fuel.
        - Do not use any mobile electronic devices when transferring fuel.
        - If possible, transfer fuel over a drip pan or absorbent pad.
        - In the event of a spill use dry methods to clean up the spill.
        - Notify your supervisor immediately

3. Maintenance & Inspection
    a. Fueling areas, storage tanks, and transfer equipment should be inspected monthly.
    b. Spill Kits should be inspected and inventoried on a regular basis.
    c. Any equipment, tanks, pumps, piping and fuel dispensing equipment found to be leaking or in disrepair must be repaired or replaced immediately.

SOP:	**Grounds Maintenance**
Purpose of SOP:	**Procedures for grounds keeping maintenance activities**
SOP Administrator:	**Grounds Department**
Responsible Department:	**Grounds**

Managers and Supervisors are responsible for ensuring that employees are properly informed of and trained on how to follow the procedures for this SOP. Contractors should also be notified to follow SOP while working for the University.

I. Stormwater Protection Equipment and Materials

- Spill kit and equipment for dry clean up (socks, absorbent pads, absorbent materials, broom, and dustpan)
- Storm drain inlet protection devices (drain covers, booms, berms)
- Tarps with tie downs

II. Standard Operating Procedures

1. General Landscaping Maintenance

    a. Remove litter, debris, and trash from the landscape prior to mowing activities. Properly dispose of the materials in a designated receptacle.
    b. During blowing operations, take care not to blow clippings, dirt, sand, or debris into storm drains or stormwater conveyance structures.
    c. After mowing or pruning activities, all debris should be disposed of at designated area.
    d. Five-day weather forecast should be checked to avoid fertilizing before heavy rain or during a drought. Fertilizer applications are made during period of maximum plant uptake based on plant species.
    e. Whenever possible, control soil erosion by seeding, sod, mats, mulching, terracing or other approved methods.
    f. Do not apply bark or mulch on top of plastic sheeting unless the area is enclosed. Bark or mulch on plastic is easily washed off by heavy rainfall.

2. Landscaping Materials Storage

    a. All bagged materials (i.e. fertilizer, ice melt, etc.) must be stored indoors whenever possible. If they must be stored outdoors, place them under cover.
    b. All dry materials stored outside should be covered and when possible have secondary containment.
        - When storing stockpiles of sand, salt, dirt, mulch, and gravel, cover piles with a tarp.
        - Contain stormwater run-off from stock piles using a barrier or berm.
    c. Place containers on paved or impervious surfaces and as far from (or at a lower elevation than) storm drain inlets and drainage ditches as possible.
    d. Provide a spill kit near storage areas.
    e. Clean-up any spills, leaks or discharges promptly.
    f. Inspect all containers stored outdoors regularly.
    g. If a container is found to be leaking, either empty the contents into a leak-tight container or place entire leaking container inside of a larger leak-tight container. Clean up any spills or leaks promptly.
    h. Do not drain accumulated water from secondary containment structures unless approved by a supervisor.

3. Contractors

    a. Contracts should include Stormwater Pollution Prevention language (e.g. The contactor, including any associated subcontractors, shall use the correct controls to ensure that all activities do not cause a condition of pollution at the University).
    b. Ensure that contractors implement proper Best Management Practices (BMPs) to prevent stormwater pollution and know whom to contact in case of spill.

SOP:	**Liquid Materials Loading, Unloading, and Storage**
Purpose of SOP:	**Procedures for the proper management of the loading, unloading, and storage of liquid materials.**
SOP Administrator:	**Grounds Department**
Responsible Department:	**Grounds, Facilities Management, Warehouse**

Managers and Supervisors are responsible for ensuring that employees are properly informed of and trained on how to follow the procedures for this SOP. Contractors should also be notified to follow SOP while working for the University.

I. Stormwater Protection Equipment and Materials

- Spill Kit and equipment for dry clean up (socks, absorbent pads, absorbents, broom, and dustpan)
- Drip pans
- Storm drain pollution control devices (berms or covers)
- Wheel chocks

II. Standard Operating Procedures

1. Transfer of Liquid Materials
   a. Direct delivery and receiving vehicles to park in a designated area where leaks can be contained and where they will not enter a storm drain or ditch.
   b. Only transfer liquids only over paved (impervious) surfaces. Spills on soils are very difficult to clean up.
   c. Do not load or unload materials near a storm drain inlet unless it is equipped with a shut-off valve, drain cover or seal or other method to keep spills out of the storm sewer or the drain is at a higher elevation.
   d. If transfers must take place near a storm drain inlet, place a cover or mat over the inlet to protect it during transfer operations.
   e. Only load or unload a vehicle after it is immobilized (e.g., wheels are chocked) and (if flammable materials are involved) grounding cables are attached. These measures will prevent accidental movement and static build-up.
   f. At least one qualified University representative must attend any transfer operation for the entire duration of the loading or unloading operation.
   g. Place drip pans or buckets under all hose or pipe connections and leave them in- place until the loading or unloading operation is complete. Dispose of any leaked material properly.
   h. Keep loading and unloading areas neat and tidy. Sweep outdoor areas as needed.

2. Contractors
   a. Contracts should include Stormwater pollution prevention language (e.g. The contactor, including any associated subcontractors, shall use the correct controls to ensure that all activities do not cause a condition of pollution at the University).
   b. Ensure that contractors implement proper Best Management Practices (BMPs) to prevent stormwater pollution and know whom to contact in case of spill.

SOP:	**Trash & Recycling Handling, Storage, Transfer, and Disposal**
Purpose of SOP:	**Procedures for the proper management, handling, and storage of waste, trash, or recycling to prevent the discharge of pollutants to stormwater.**
SOP Administrator:	**Grounds Department**
Responsible Department:	**Grounds, Facilities Management, Housing, Dining, Catering, Events, Building Operations, Athletics**

Managers and Supervisors are responsible for ensuring that employees are properly informed of and trained on how to follow the procedures for this SOP. Contractors should also be notified to follow SOP while working for the university.

I. Stormwater Protection Equipment and Materials

- Dumpster lids/covers (Tarps with tie-downs are acceptable)
- Storm drain inlet protection devices (drain covers, booms, berms, and/or filter fabric)

II. Standard Operating Procedures

1. Trash & Recycling Handling, Storage, Transfer, and Disposal
    a. All waste and recycle receptacles must be leak proof with tight-fitting lids and closed at all times.
    b. Place waste or recycle receptacles indoors or under a roof or overhang whenever possible.
    c. Prior to transporting waste, trash, or recycling ensure that containers are not leaking (double bag if needed) and properly secure to the vehicle.
    d. Clean and sweep up around outdoor waste containers regularly.
    e. Clean up any liquid leaks or spills with dry clean-up methods. (See SOP: Spill Prevention, Clean Up and Reporting).
    f. Arrange for wastes or recyclables to be picked up regularly and disposed at approved disposal facilities.
    g. Never place hazardous materials, liquids, or liquid-containing wastes in a dumpster, recycle or trash receptacle.
        - Please contact the Environmental Health Safety Department for information on proper disposal
    h. If any liquid, non-hazardous waste is generated, it must be disposed of in the sanitary sewer (if approved), transported to a disposal site that will accept that type of wastewater, or cleaned up using dry methods.
    i. Do not wash out waste containers (trash cans) or recycling containers outdoors or in a parking lot.
    j. Containers, compactors and dumpsters must be returned to the waste disposal contractor for cleaning at the contractor's facility.
    k. When working in the field, place all wastes in appropriate containers near the work site. If no public containers are available, containerize or bag the wastes and bring them back to the shop for proper disposal.

2. Dumpsters
    a. Locate dumpsters on a flat, paved surface and install berms or curbs around the storage area to prevent run-on and run-off.
    b. Keep lids on dumpsters closed at all times unless adding or removing material.
    c. In the event that a dumpster lid is missing or damaged report it to Facilities Management.
    d. If using an open top roll off dumpster, cover and tie down with a tarp unless adding materials
    e. Inspect regularly for leaks and correct if there is a problem.
    f. Regularly sweep the area and pick up trash/debris.

3. Compactors
    a. Regularly check the hydraulic fluid hoses and reservoir to ensure there are no cracks or leaks
        - In the event of leak, report it immediately to the compactor service contractor and refer to SOP: Spill Prevention, Clean Up and Reporting.
        - Inspect regularly for leaks and correct if there is a problem.
        - Regularly sweep the area and pick up trash/debris.

SOP:	**Parking Lot, Streets, and Roads Maintenance**
Purpose of SOP:	**Procedures for general maintenance of parking lots, parking garages, elevated parking structures, streets, or roads.**
SOP Administrator:	**Grounds Department**
Responsible Department:	**Grounds, Facilities Management**

Managers and Supervisors are responsible for ensuring that employees are properly informed of and trained on how to follow the procedures for this SOP. Contractors should also be notified to follow SOP while working for the University.

I. Stormwater Protection Equipment and Materials

- Spill kit and equipment for dry clean up (socks, absorbent pads, absorbent materials, broom, and dustpan)
- Storm drain inlet protection devices (drain covers, booms, berms, and/or filter fabric)

II. Standard Operating Procedures

1. General Maintenance
   a. Clean leaves, trash, and other debris from parking lots and garages including stormwater conveyance systems regularly.
   b. Sweep parking lots with a street sweeper annually.
      - Sweeping should occur after sanding/deicing events
      - Sweeping should occur after special events or construction
   c. Use dry clean-up methods (e.g. absorbents) to clean up any automotive spills/leaks and dispose of them properly.
   d. Ensure any storm drains/catch basins are marked with a stormwater medallion.

2. Paving, Patching, Re-surfacing, and Concrete Projects
   a. Re-seal, pave, or patch on dry days when no rain is expected and stop paving activities well before rainfall is expected.
   b. Use cold patch products when possible.
   c. Preheat, transfer, or load hot asphalt far away from storm drain inlets.
   d. Protect or block nearby, downstream, storm drain inlets from debris from maintenance work (asphalt cap, chip sealing, concrete breaking, or saw cutting). Leave inlet protection in place until the job is complete. Clean up debris from around inlets and dispose of properly.
   e. A concrete wash-out area shall be designated at each capital construction site and managed by the project superintendent for the duration of the project. For all other university projects, the washout site shall be next to the Ground Department off University Place. It shall include, at a minimum:
      - A concrete wash-out bag or other leak-proof container/settling basin.
      - A pool or containment system that holds the bag to prevent any seepage into the ground or overflows due to inadequate sizing or precipitation.
      - The bag can be disposed of properly after the material has dried in a manner consistent with the handling of other construction wastes. Liquid concrete wastes shall not be discharged to surface waters.

3. Painting and Striping
   a. Schedule painting, marking, and striping projects during dry weather only. Cease all activities when rain threatens.
   b. Set-up a preparation area on a tarp/drop cloth to catch any drips or spills.

c. Block nearby storm drain inlets (within 25 feet and down gradient of project) when painting or striping.
d. Take care not to paint over storm drain medallions.
e. Properly clean painting supplies at your shop, do not wash out paint to the storm drains.

4. Contractors
    a. Contracts should include Stormwater pollution prevention language (e.g. The contactor, including any associated subcontractors, shall use the correct controls to ensure that all activities do not cause a condition of pollution at the University).
    b. Ensure that contractors implement proper Best Management Practices (BMPs) to prevent stormwater pollution and know whom to contact in case of spill.

SOP:	**Pressure Washing and Exterior Surface Cleaning**
Purpose of SOP:	**Stormwater pollution prevention procedures for the cleaning of exterior surfaces such as sidewalks, building exteriors, and graffiti removal**
SOP Administrator:	**Grounds Department**
Responsible Department:	**Facilities Management, Housing, Building Operations, Athletics**

Managers and Supervisors are responsible for ensuring that employees are properly informed of and trained on how to follow the procedures for this SOP. Contractors should also be notified to follow SOP while working for the University.

I. Stormwater Protection Equipment and Materials

- Spill kit and equipment for dry clean up (socks, absorbent pads, absorbent materials, broom, and dustpan)
- Wet vacuum and holding tank
- Storm drain inlet protection devices (drain covers, booms, berms)

II. Standard Operating Procedures

1. General Surface Cleaning and Pressure Washing
    a. Use dry clean-up methods prior to any pressure washing. Use absorbents (kitty litter, rags, sand, etc.) to clean up spills, sweeping, vacuuming, and scraping off dried debris. The waste material should be disposed of as solid waste.
    b. Pressure wash with minimal water.
    c. If you do not use any chemicals or detergents and are only cleaning surfaces of ambient dust, then you may direct the wastewater to nearby landscaping or vegetated area or contain it onsite and allow it to evaporate.
    d. When discharging wash water to landscaping, make sure water is absorbed into vegetated or permeable surfaces (gravel, porous pavement) and does not cause erosion or run off into a storm drain or paved area.
    e. All other wash water must be captured for proper disposal.
    f. Solids should be removed from the area prior to pressure washing and a filter bag or similar filtration device should be used to remove suspended solids from the wastewater.
    g. A visible sheen must not be evident in the discharge. Use an absorbent pad or boom to eliminate any oil from the discharge.
    h. Do not pressure wash an entire building. Spot clean, steam clean, or scrape dirty areas rather than pressure washing the entire structure.

1. Heat Transfer Equipment and HVAC Equipment Cleaning
    a. HVAC or chiller condenser tube flushing liquid must be captured and disposed of properly.

2. Storm Drain Protection
    a. Prior to pressure washing, identify where all storm drains are located; wash water must not be allowed to flow down gutters or enter storm drains.
    b. Block or cover all storm drains with booms and weighted storm drain covers before pressure washing.
    c. Determine where water will pool for collection. Use a wet vacuum up the wastewater or allow water to evaporate.

3. Disposal of Wash Water
    a. Use a wet vacuum to collect water for disposal to the sanitary sewer.

b. Once water is collected, dispose of it properly. Check with CNU Grounds to see if collected wash water may be disposed of into a sanitary sewer drain.

4. Contractors
    a. Contracts should include Stormwater pollution prevention language (e.g. The contactor, including any associated subcontractors, shall use the correct controls to ensure that all activities do not cause a condition of pollution at the University).

    b. Ensure that contractors implement proper Best Management Practices (BMPs) to prevent stormwater pollution and know whom to contact in case of spill.

SOP:	**Dewatering Utility Construction and Maintenance Activities**
Purpose of SOP:	**Procedure for disposal of water pumped during maintenance or construction operations**
SOP Administrator:	**Grounds Department**
Responsible Department:	**Facilities Management, Capital Outlay**

Managers and Supervisors are responsible for ensuring that employees are properly informed of and trained on how to follow the procedures for this SOP. Contractors should also be notified to follow SOP while working for the University.

I. Stormwater Protection Equipment and Materials

- Drum (55 gallon)
- Sediment bag
- Storm drain inlet protection devices (drain covers, booms, berms)
- Vegetated Swale
- Silt Fence
- Straw bales

II. Standard Operating Procedures

1. Tunnels, Vaults, Electrical Manholes, and other Structures
    a. Visually inspect the water to be removed. Determine if there are visible pollutants in the water to be pumped and the potential sources of those pollutants on site.

    b. Water collected in vaults or tunnels often results from rainwater or groundwater infiltration. If there is no reason to suspect the water has become contaminated as determined by the visual inspection and lack of potential pollutant sources, clear water can be pumped into a nearby vegetated area and allowed to infiltrate. The dewatering procedure should be monitored to ensure the pumped water does not travel from the vegetated area or cause localized erosion. If a suitable vegetated area is not available, the pumped water can be discharged to the sanitary sewer or hauled off from site for disposal at an appropriate treatment facility.

    c. Water that is suspected of having chemical or biological contamination or to contain anything other than pure rain or groundwater should be evaluated for proper disposal options by Environmental Health and Safety (EHS) or MS4 Program Coordinator. Proper disposal options could include discharging the water to the sanitary sewer, hauling it to an off-site permitted disposal facility, or if it is deemed appropriate, to the surface.

2. Excavations
    a. CNU staff and/or the contractor are encouraged to take appropriate measures to restrict the flow of water from the surface into an excavation if possible.

    b. Visually inspect the water to be removed. Water in excavations usually results from groundwater infiltration or rainfall. Determine if the water is laden with sediment or shows visible signs of any other contaminants.

c. Sediment laden water may be allowed to settle to remove suspended solids prior to dewatering. Once the water is clear, the water can be pumped into a nearby vegetated area to promote infiltration and filtration.

d. Sediment laden water that needs to be removed immediately must be pumped through an appropriately sized sediment bag following manufacturer's specifications. Discharge water from the sediment bag should be directed into a vegetated area, wherever possible, but is allowed to discharge into stormwater conveyances after passing through the sediment bag. The sediment bag must be routinely inspected during the pumping operation to make sure that it is functioning properly and has not become clogged. If muddy water is being released from the sediment bag, additional measures may be needed to minimize impacts from the discharge. This could include surrounding the bag with a silt fence and straw bales or placing the bag on a gravel pad.

SOP:	**Spill Prevention, Control, Clean Up and Reporting**
Purpose of SOP:	**Procedures for spill prevention, control, clean up and reporting.**
SOP Administrator:	**Grounds Department**
Responsible Department:	**All**

Managers and Supervisors are responsible for ensuring that employees are properly informed of and trained on how to follow the procedures for this SOP. Contractors should also be notified to follow SOP while working for the University.

I. Stormwater Protection Equipment and Materials

- Spill Kit and equipment for dry clean up (socks, absorbent pads, absorbents, broom, and dustpan)
- Storm drain inlet protection (drain covers, booms, berms)
-

II. Stormwater Pollution Prevention Plan

1. Standard Operating Procedures
    1. Spill Prevention

        - Whenever possible, liquid or hazardous materials should be handled, used, stored, re-packing, and transferred indoors or under cover.
        - Deliveries of bulk liquids should be supervised. Down gradient storm drain inlets should be covered during deliveries.
        - Cover and contain containers, materials, and wastes.

    2. Spill Kit Maintenance

        - Spill kits are located at each high priority area identified in the SWPPP.
        - Each department manager is responsible for spill kit(s) inventory and the reordering of supplies.

    3. Spill Clean Up and Storm Drain Protection

        - Clean up minor spills (< 5 gallons) immediately.
        - Block any down gradient storm drains with berms, covers, absorbent socks or “pigs”.
        - Never hose down spills or leaks.
        - Always use “Dry Clean-up Methods” for clean-up of liquid spills (gasoline, diesel, paint, kitchen grease)
        - absorbents (loose absorbents, sheets, pillows, pigs, or socks) on the spill.
        - Spread Sweep up or pick up the absorbed materials.
        - Dispose of wastes properly and in accordance with all regulations.
        - If fluids are leaking or have spilled on an impermeable surface, such as a roadway, locate nearest down gradient storm drain and dike or berm the drain to prevent fluids from entering it.
        - After clean-up, be sure to sweep up the contaminated absorbent and remove the berm or dike at the storm drain.
        - If fluids are leaking or have spilled on a permeable surface, such as gravel, soil or grass, mark the area and report the spill to your supervisor.

4. Internal Reporting of Spills

For Employees (Non-supervisors)

a. Notify your direct supervisor immediately
    - What spilled, Where it is located, Estimated amount of product

For Supervisors

a. Small spills (<5 gallons) that pose no immediate danger to human life or property notify MS4 Program Manager (4-8700).
b. Small Spills (<5 gallons) of a hazardous substance that is an immediate danger to human life or property notify CNU Police (4-7777), EHS Director (4-7280), and MS4 Program Manager (4-8700).
c. Large Spills (>5 gallons) of any substance report to CNU Police (4-7777), EHS Director (4-7280), and MS4 Program Manager (4-8700).

5. Regulatory (External) Reporting of Spills
    a. If a spill or leak is of a hazardous substance that exceeds 1 pint or is of an unknown substance of any amount, call **CNU PD.**
        - Notify the **Virginia Department of Environmental Quality.**
        - If a spill occurs during *nights, weekends, or holidays* notify the **Virginia Department Emergency Management's 24-hour hotline.**
        - **Notify the National Response Center.**
        - Any spill or discharge of any pollutant (ex: oil, paints, fuels, hazardous liquids, sediment, or super-chlorinated water) that reaches storm drains or enters "Waters of the State" must be reported to the Virginia Department of Environmental Quality (757-518-2000) within 24 hours of the release or suspected release.
    b. If the spill is more than 25 gallons of a petroleum product from a regulated storage tank or delivery truck or any amount that causes a sheen on nearby surface water, it must be reported immediately to:
        - **Virginia Department of Environmental Quality.**
        - **National Response Center.**

***Emergency Numbers are found on page 4. ***

Appendix E STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

CHRISTOPHER NEWPORT
UNIVERSITY

Stormwater Pollution Prevention Plan (SWPPP)

CHEMICAL OR OIL SPILL EMERGENCY: CNU POLICE 757-596-7777, Ext. 4-7777
VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY: 757-518-2000
NATIONAL SPILL RESPONSE CENTER: 800-424-8802

CHRISTOPHER NEWPORT UNIVERSITY

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List of Appendices

Revision History

Number	Descriptionof Change	Pages	Date	Name
1	Review and updated information	N/A	12/1/20	Dean Whitehead
2	Review and updated information	N/A	1/26/21	Timmons Group
3	Review and updated information per DEQ audit	N/A	8/09/22	Timmons Group

Section 1: Introduction

The Virginia General VPDES Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4s) requires Christopher Newport University (CNU) to develop and implement a comprehensive stormwater management (SWM) program consistent with the Virginia General Permit (VAR04), originally effective on July 9, 2008. CNU registered for continuation of coverage on January 10, 2008, and was approved by the Virginia Department of Conservation and Recreation (DCR) on July 15, 2008 (MS4 General Permit VAR040090). The program was transferred from the DCR to the Virginia Department of Environmental Quality (DEQ) in 2013. CNU re-registered for continuation of coverage and was approved by the DEQ on July 1, 2013 (MS4 General Permit VAR040090). The new general permit term is from July 1, 2018 to June 30, 2023. A copy of the permit is available in Appendix D.

CNU's Stormwater Management Program is based on six minimum control measures (MCM) as required by the Virginia General Permit. These goals and objectives were developed to reduce the discharge of pollutants from the University's MS4 to the maximum extent practicable (MEP), protect water quality, ensure compliance with water quality standards, and to satisfy the appropriate water quality requirements of the Clean Water Act and its attendant regulations.

This SWPPP does not cover any new construction associated with capital improvement project activities. New construction activities must have a stormwater management plan approved by the VSMP authority as authorized under the Virginia Stormwater Management Program (VSMP) Regulation (9VAC25-870).

1.1 Area of Coverage

CNU is a regulated small MS4 contained within the boundaries as shown on Figure 3 (Appendix C). The University's MS4 area encompasses what is known as "main campus." Main campus is generally bounded to the north by Prince Drew Rd., to the east by Warwick Blvd., to the west by N. Moores Ln., to the south by Shoe Ln. and to the southeast by Ave. of the Arts. The University's MS4 discharges through 3 outfalls into ditches which flow into the Warwick River (a Chesapeake Bay Tributary). The CNU MS4 area of the campus is located in the Lower James River watershed within the Hydrologic Unit Code JL43.

Additionally, there are parts of the campus east of Warwick Blvd. (known as "east campus") which do not discharge to the University's MS4. The east campus area discharges to the City of Newport News' MS4 (Appendix C: Figure 3).

1.2 Allowable Non-Stormwater Discharges

The following are the only non-stormwater discharges authorized under the MS4 (9VAC25-870-400), provided that all discharges comply with the effluent limitations set forth in the MS4:

- Discharges from fire-fighting activities
- Fire hydrant flushings
- Potable water, including water line flushings
- Uncontaminated condensate from air conditioners, coolers, and other compressors and from the outside storage of refrigerated gases or liquids
- Irrigation drainage

- Landscape watering provided all pesticides, herbicides, and fertilizers have been applied in accordance with the approved labeling
- Pavement wash waters where no detergents or hazardous cleaning products are used, and the wash waters do not come into contact with oil and grease deposits or other toxic or hazardous materials (unless cleaned up using dry clean-up methods). Permittees are prohibited from directing authorized pavement wash waters directly into surface water or storm drain inlet unless appropriate control measures that meet the non-numeric effluent limits have been implemented. Where appropriate control measures are not in place, wash water runoff must first undergo treatment prior to discharge such as filtration, detention, or settlement. This type of water will be directed to grass areas when appropriate prior to discharging
- Routine external building washdown/power washwater that does not use detergents or hazardous cleaning products – this type of water will be directed towards grass areas prior to discharging – see section 5.3.3
- Uncontaminated groundwater or spring water
- Foundation or footing drains where flows are not contaminated with process materials
- Incidental windblown mist from cooling towers that collects on rooftops or adjacent portions of the facility, but not intentional discharges from the cooling tower (i.e. - "piped" cooling tower blowdown or drains)

All other non-stormwater discharges requiring VPDES permit coverage are not authorized by CNU's MS4 General Permit.

1.3 Permit Compliance

As per Part III Section L of the General Permit, 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.

1.4 Contents of the SWPPP

This plan includes the elements list in Table 1-1.

Table 1: SWPP Plan Elements

Description	Plan Location
Stormwater Pollution Prevention Team	Section 2
Site Descriptions	Section 3
Summary of Potential Pollutant Sources	Section 4
Description of Control Measures	Section 5

Description	Plan Location
Schedules and Procedures	Section 6
Signature Requirements	Section 7

1.5 SWPPP Availability

A complete copy of the current SWPPP is maintained by CNU electronically. The SWPPP is immediately available to University employees; local, state, and federal officials; and the operator(s) of an MS4 receiving discharges from the site.

1.6 Additional Documentation Requirements

CNU keeps the following inspection and monitoring records with the SWPPP to demonstrate compliance with the conditions of the MS4 General permit:

- Documentation of maintenance and repairs of control measures, including the date(s) of regular maintenance, date(s) of discovery of areas in need of repair/replacement, and for repairs, date(s) that the control measure(s) returned to full function, and the justification for extended maintenance/repair schedules
- Inspection reports
- Description of deviations from the schedule for visual assessments and/or monitoring, and the reason for the deviations
- Description of corrective action triggering event/condition
- Documentation to support any determination that pollutants of concern are not expected to be present above natural background levels if the University discharges directly to impaired waters, and that such pollutants were not detected in the discharge or were solely attributable to natural background

1.7 Record Keeping Requirements

CNU retains copies of this SWPPP (including modifications made during the term of this permit), additional documentation requirements, all reports and certifications required by MS4 General Permit, monitoring data, and records of all data for a period of at least three years from the date that coverage under the current MS4 General Permit expires or is terminated.

Section 2: Stormwater Pollution Prevention Team

The stormwater pollution prevention team is responsible for overseeing development of the SWPPP, later modifications to it, and for compliance with the requirements in this permit. Each member of the stormwater pollution prevention team must have ready access to either an electronic or paper copy of applicable portions of this permit, the most updated copy of the SWPPP, other relevant documents, or information that must be kept with the SWPPP.

For the purposes of this Plan, the members of the Pollution Prevention Team Roster are summarized in Table 2 below:

Table 2: Pollution Prevention Team Roster and Responsibilities

Member Name or Title	Member Responsibility
VP for Administration & Auxiliary Services	Team Member - Certifying official and provides any upper management advice or directives.
Director of Grounds	SWPPP Coordinator/Team Leader - Coordinates plan development, plan implementation, employee training, inspections, and best management practices.
Director of Facilities Management	Team Member - Supports plan development, plan implementation, employee training, inspections, and best management practices.
Associate Director of Grounds	Team Member - Oversees preventative maintenance procedures, and monthly inspections to ensure that control measures (such as covers for outside dumpsters) are in place and are in proper working condition
Environmental Health & Safety Manager	Team Member - Supports plan development, plan implementation employee training, inspections, and best management practices.
Sustainability Coordinator	Team Member - Supports plan development, plan implementation employee training, inspections, and best management practices.
Consultant	Assist in plan development and provide technical advice on plan implementation.

Section 3: Site Descriptions

3.1 University Activities

CNU is a four-year public university in Newport News, Virginia. CNU enrolls 5,000 students each year and has approximately 1,000 employees. The University's campus is sited on 260 acres featuring approximately 40 buildings. The MS4 discharges through 3 outfalls into ditches which flow into the Warwick River and the James River – Cooper River (tributaries of the Chesapeake Bay). The campus is located in the Lower James River watershed with the Hydrologic Unit Codes (HUC0 JL38 and JL43). Please see Appendix C for a complete site map.

The following University Departments have operational control (i.e. authority over daily operations) over on-site activities with the potential to contribute to stormwater pollution:

- Grounds Department
- Plant Operations
- Auxiliary Services
- Athletics

3.2 High Priority Areas

Many of the University's operations occur within structures and/or under cover. However, there are 7 Facilities and 13 solid waste locations at the University with on-site activities with the potential to contribute to stormwater pollution (Appendix C: Figure 4). Annually, CNU will conduct a comprehensive site compliance evaluation and investigation for each High Priority Area using the maps and inspection forms in the appendices. Any updates will be made to the documents and unauthorized discharge, release, or spill incidents will be documented and reported as appropriate. Any issues with compliance will be documented and reported to CNU to resolve. Unauthorized discharges will be documented in Appendix F. The IDDE policy will be followed for any potential illicit discharges that are identified during dry weather screening activities

3.2.1 Waste Management Areas

The University has 1 centralized Municipal Solid Waste (MSW) dumpster yard (Appendix C: Figure 4.9). Additionally, there are 14 other locations on campus which feature dumpster and/or compactor corrals. All the waste management areas are used for the temporary storage of MSW in dumpsters until a licensed and contracted waste hauler can empty the dumpsters (5-6 times per week). The locations are outlined in Table 3:

Table 3 Waste Management Areas

Location	Operational Control	Front End Load MSW Dumpsters	Front End Load Recycling Dumpsters	Roll-Off MSW Dumpsters	Compactor	FOG Container
Main Dump Site	Plant Operations	9	3	1 + 1[†]	-	-
CNU Apartments*	Auxiliary Services (H)	2	2	1[†]	-	-
CNU Landing*	Auxiliary Services (H)	2	-	1[†]	-	-
CNU Village*	Auxiliary Services (H)	2	-	1[†]	1	1
Commonwealth Hall*	Plant Operations	1	-	-	-	-
David Student Union	Auxiliary Services	-	-	-	1	1
Ferguson Center	Auxiliary Services	2	2	-	-	-
Freeman Center	Auxiliary Services	1	1	-	-	-
Greek Housing	Auxiliary Services (H)	1	1	1[†]	-	-
Grounds*	Grounds Department	-	-	1	-	-
Hiden-Hussey Commons	Auxiliary Services (D)	-	-	-	1	1
James River Hall	Auxiliary Services (H)	2	-	1[†]	-	-
Off-site warehouse	Auxiliary Services (H)	-	-	1[†]	-	-

Plant Operations*	Plant Operations	-	1	1 + 1[1]	-	-
Potomac Hall	Auxiliary Services (H)	-	-	1[1]	-	-
Santoro Hall	Auxiliary Services (H)	2	-	1[1]	-	-
York River Hall	Auxiliary Services (H)	-	-	1[1]	-	-

Areas marked with an asterisk "*" discharge stormwater to the City of Newport News' MS4 permitted storm drains, while the unmarked areas discharge into CNU's MS4 permitted drains. "1" indicates a recurring, but short-term container. Auxiliary Services (H) = Housing, Auxiliary Services (D) = Dining.

3.2.2 Plant Operations Building

Plant Operations (Plant Ops) is located at 11 Sweetbriar Drive in Newport News and is under the operational control of Plant Operations. This area houses the facilities management personnel including: Mechanical, Electrical, Plumbing, Housekeeping, and Warehouse staff. On-site operational activities primarily occur indoors. The area consists of one building with a paved employee parking lot to the west, Sweetbriar Dr. to the south, a paved staging area to the north, and University Parking to the east (Appendix C: Figure 4.6). The area discharges stormwater via sheet flow into the City of Newport News' MS4. The following activities at this area have the potential to contribute to stormwater pollution:

- Exterior storage of materials
  - e.g. scrap metal, stone, wood, etc.
- Materials handling
  - e.g. paint, chemicals, etc.
- Shipping and receiving areas
- Solid waste management dumpster storage

3.2.3 Grounds Department Compound

The Grounds Department compound is located at 437 University Place in Newport News and is under the operational control of the Grounds Department. This area houses the landscaping management personnel and equipment. The area consists of 3 buildings, 2 storage structures, and equipment wash pad. The wash pad drains to the sanitary sewer and is not connected to the stormwater system. This area also has two double walled Above Ground Storage Tanks (AGST) on location for gasoline and diesel fuel. To the northern portion of the area is a wooded lot, to the east i s a private residential lot, to the south is University Place, and to the west is an unpaved temporary construction vehicle parking area (Appendix C: Figure 4.5). The area discharges stormwater via sheet flow into the City of Newport News' MS4. The following activities at this area have the potential to contribute to stormwater pollution:

- Exterior storage of materials
  - e.g. dirt, sand, mulch, fuel etc.
- Materials handling
  - e.g. Fertilizers, pesticides, fungicides, herbicides and fueling
- Shipping and receiving areas
- Solid waste management dumpster storage

3.2.4 Athletics Department Operations

The Athletics Department Operations is located at 220 Prince Drew Road in Newport News and is under the operational control of the Grounds Department with support from the Athletics Department. This area houses game day event staff and athletic equipment. The area consists of 2 buildings. To the northern portion of the area is a grass field, to the west is a grass athletics practice field, to the south of the property is the University's track and football stadium, to the east of the property is a private residence (Appendix C: Figure 4.9). The area discharges stormwater via underground drainage infrastructure to the University's outfalls. The following activities at this area have the potential to contribute to stormwater pollution:

- Exterior storage of materials
  - e.g. dirt, sand, mulch, fuel etc.

- Materials handling
  - e.g. Fertilizers, pesticides, fungicides, herbicides and fueling

3.2.5 David Student Union

The David Student Union is located at 1 Ave. of the Arts in Newport News and is under the operational control of Auxiliary Services. This area houses one of two of the University's dining halls. The area consists of one building. To the north of the area is a grass lawn, to the east is semi-permeable brick plaza, to the south is a paved road (University Place), and to the west is concrete loading dock (Appendix C: Figure 4.8). The area discharges stormwater via underground drainage infrastructure to the University's outfalls. The following activities at this area have the potential to contribute to stormwater pollution:

- Materials handling
  - e.g. transfer food stuffs and cooking oils
- Shipping and receiving areas
- Solid waste management dumpster storage

3.2.6 Hiden-Hussey Commons

The Hiden-Hussey Commons is located at 1 Ave. of the Arts in Newport News and is under the operational control of Auxiliary Services. This area houses one of two of the University's dining halls. The area consists of one building. To the north of the area is a paved road (University Place), to the east is semi-permeable brick cart path, to the south is semi-permeable brick cart path, and to the west is a residence hall (Appendix C: Figure 4.2). The area to the northwest of the building discharges stormwater via sheet-flow to University Place. The remaining areas around the building discharge stormwater via underground drainage infrastructure to the University's outfalls. The following activities at this area have the potential to contribute to stormwater pollution:

- Materials handling
  - e.g. transfer food stuffs and cooking oils
- Shipping and receiving areas
- Solid waste management dumpster storage

3.2.7 Commonwealth Hall

Commonwealth Hall, a leased property, is located at 12306 Warwick Blvd. in Newport News is under joint operational control of Plant Operations and Auxiliary Services. The area serves as storage space and as office space for residential housing maintenance personnel, the University Mail Room, and the University sign shop. The area consists of two buildings and an employee parking lot. To the north of the area is a private residential lot, to the west is Sweetbriar Dr., to the south is a commercial lot, and to the east is a commercial lot (Appendix C: Figure 4.7). The area discharges stormwater via sheet flow into the City of Newport News' MS4. The following activities at this area have the potential to contribute to stormwater pollution:

- Materials handling
  - e.g. Signage materials
- Shipping and receiving areas
- Solid waste management dumpster storage

3.3 General Location Map

This SWPPP provides a general location (e.g., U.S. Geological Survey (USGS)) quadrangle map with enough detail to identify the location of the University and all receiving waters for the stormwater discharges (Appendix C: Figure 1).

3.4 Site Maps

In addition to the general location map, the SWPPP must include a map that shows the following:

- Boundaries of the campus, and the size of the campus in acres
- The location and extent of significant structures and impervious surfaces
- Direction of stormwater flow (using directional arrows)
- Locations of all existing structural control measures
- Locations of all receiving waters, including wetlands, in the immediate vicinity of the facility. Indicating if of the waters are listed as impaired and which are identified as Federal, state or tribal Tier 2 or Tier 2.5 waters
- Locations of all stormwater conveyances including ditches, pipes, and swales
- Locations of potential pollutant sources
- Locations of all stormwater monitoring points
- Locations of stormwater inlets and outfalls, with a unique identification code for each outfall (e.g., Outfall 1, Outfall 2, etc.)
- Municipal separate storm sewers systems (MS4) and where the facility discharges to them
- Locations of the following activities where such activities are exposed to precipitation:
    - Vehicle and equipment maintenance and/or cleaning areas
    - Loading/unloading areas
    - Locations used for the treatment, storage, or disposal of wastes
    - Processing and storage areas
    - Immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility
- Locations and sources of run-on to the facility from adjacent property that contains significant quantities of pollutants

In order to meet these requirements described above, CNU has developed the enclosed Stormwater Site Plans for each High Priority Area as identified in Section 3.2. A copy of all maps is available in Appendix C.

Section 4: Potential Pollutant Sources

4.1 Summary of Potential Pollutant Sources

The SWPPP documents the areas at the University where materials or activities are exposed to stormwater or from which allowable non-stormwater discharges may be released. Materials or activities include, but are not limited to the following:

- Material handling equipment or activities
- Machinery
- Raw Materials
- Municipal Solid Waste

Material handling activities include, but are not limited to the following: storage, loading, and unloading, transportation, disposal, or conveyance of materials. Table 4 provides a summary of University activities exposed to stormwater:

4.1.1 Site Activities & Potential Pollutants

The list must include the pollutant(s) or pollutant constituents (e.g., crankcase oil, zinc, sulfuric acid, and cleaning solvents) associated with each identified activity with the potential to be exposed to stormwater, and could be discharged from the University.

Table 5 in this section summarizes the pollutants for each identified activity for the previous three years.

Table 4: Potential Pollutants Associated with University Activities

University Operations	Activities	Sediment	Nutrients	Trash	Metals	Bacteria	Oil &	Organics	Pesticides	Oxygen Demanding Substances
Roads, Streets, and Parking Lot Operation and Maintenance	Sweeping and Cleaning	X		X	X		X			X
	Street Repair, Maintenance, and Striping/Painting	X		X	X		X	X		
Plaza, Sidewalk, and Parking Lot Maintenance and Cleaning	Surface Cleaning	X	X			X	X			X
	Graffiti Cleaning	X	X		X			X		
	Sidewalk/Paver Repair	X		X						
	Controlling Litter	X		X		X	X			X
	Mowing/Trimming/Planting	X	X	X		X			X	X
	Fertilizer & Pesticide Management	X	X						X	
Landscape Maintenance	Managing Landscape Wastes			X					X	X
	Erosion Control	X	X							
	Inspection and Cleaning of Stormwater Conveyance Structures	X	X	X		X		X		X
Drainage System Operation and Maintenance	Controlling Illicit Connections and Discharges	X	X	X	X	X	X	X	X	X
	Controlling Illegal Dumping	X	X	X	X	X	X	X	X	X
	Maintenance of Inlet and Outlet Structures	X		X	X		X			X
	Solid Waste Collection		X	X	X	X	X	X		X
	Waste Reduction and Recycling			X	X					X
Waste Handling and Disposal	Collection of MSW			X	X		X	X	X	
	Controlling Litter			X	X	X		X		X
	Controlling Illegal Dumping	X		X		X	X		X	X

4.1.2 Spills and Leaks

This plan identifies locations where potential spills and leaks could occur that might contribute pollutants to stormwater discharges, and the corresponding outfall(s) that would be affected by such spills and leaks. The University shall document all significant spills and leaks of oil or toxic or hazardous pollutants that actually occurred at exposed areas, or that have drained to a stormwater conveyance in the three years prior to the date in which the SWPPP was prepared or amended.

The EPA has defined "significant spills" to include, but not be limited to, releases of oil or hazardous substances in excess of quantities that are reportable under the CWA or the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). The MS4 does not relieve the University of any reporting requirements relating to spills or other releases of oils or hazardous substances. Any operator 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.

A spill, leak, or discharge is any flow that occurs during a 24-hour period into or upon state surface waters or that may reasonably be expected to enter state surface waters. In such an event, the University shall notify the Department of Environmental Quality (DEQ) 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 DEQ and the CNU MS4 Program Coordinator within five days of discovery of the discharge. The written report shall contain:

a. A description of the nature and location of the discharge;
b. The cause of the discharge;
c. The date on which the discharge occurred;
d. The length of time that the discharge continued;
e. The volume of the discharge;
f. If the discharge is continuing, how long it is expected to continue;
g. If the discharge is continuing, what the expected total volume of the discharge will be; and
h. Any steps planned or taken to reduce, eliminate and prevent a recurrence of the present discharge or any future discharges not authorized by this general permit.

CNU has not experienced any reportable spills or leaks at the University of pollutants in the three years prior to the date of the development of this SWPPP. Please refer to site maps in Appendix C for identified areas locations where potential spills and leaks could occur that might contribute pollutants to stormwater discharges, and the corresponding outfall(s) that would be affected by such spills and leaks.

4.1.3 Non-stormwater Discharges

CNU regularly performs evaluations, in accordance with our IDDE Policy (Appendix B), to identify the presence of non-stormwater discharges and to confirm that all unauthorized discharges have been eliminated in compliance with all regulations. The details of each IDDE incident recorded electronically by the Grounds Department and are available upon request.

4.1.4 Sampling Data

All stormwater discharge sampling data required by the MS4 General Permit collected at the University are available with CNU's annual MS4 report.

Section 5: Control Measures

The selection, design, installation, and implementation of control measures (including best management practices) must be accordance with good engineering practices and manufacturer's specifications and done to address the selection and design considerations as per Part I Section E of the MS4 General Permit.

In the event the University finds that the control measures are not achieving their intended effect of minimizing pollutant discharges, the University shall modify these control measures. Regulated stormwater discharges from the University include stormwater run-on that commingles with stormwater discharges associated with University operations.

5.1 Control Measure Selection and Design Considerations

The University considers the following when selecting and designing control measures:

- Preventing stormwater from coming into contact with polluting materials is generally more effective, and less costly, than trying to remove pollutants from stormwater
- Using control measures in combination is more effective than using control measures in isolation
- Assessing the type and quantity of pollutants, including their potential to impact receiving water quality
- Minimizing impervious areas at the University and increasing infiltrating runoff onsite can reduce runoff and improve ground water recharge and stream base flows
- Attenuating flow using open vegetated swales and natural depressions
- Conserving and/or restoring riparian buffers will help protect streams from stormwater runoff
- Using treatment interceptors (e.g., swirl separators and sand filters) may be appropriate

5.2 Minimize Exposure

As described in Part I Section E.6 of the General Permit all facilities must minimize the exposure of daily operations, equipment maintenance, and materials handling (including loading and unloading, storage, disposal, cleaning, maintenance, and fueling operations) to rain, snow, snowmelt, and runoff by either locating these materials and activities inside or protecting them with storm resistant coverings (although significant enlargement of impervious surface area is not recommended). In minimizing exposure, the facility should pay particular attention to the following:

- Use grading, berms, or curbing to prevent runoff of contaminated flows and divert run-on away from these areas
- Locate materials, equipment, and activities so that potential leaks and spills are contained or diverted before discharge
- Clean up spills and leaks promptly using dry methods (e.g., absorbents) to prevent the discharge of pollutants
- Unless infeasible, store leaky vehicles and equipment indoors or, if stored outdoors, use drip pans and absorbents
- Use spill/overflow protection equipment
- Perform all vehicle and/or equipment cleaning on the wash pad connected to the sanitary sewer

- Drain fluids from equipment and vehicles that will be decommissioned or will remain unused for extended periods of time
- Ensure that all washwater, with the exception of discharges from pavement wash water and routine building washdown drains to a sanitary sewer, sump, or other proper collection system (i.e., not the stormwater drainage system)

The discharge of vehicle and equipment washwater, including tank cleaning operations, is not authorized by this permit. These wastewaters must be authorized and covered under a separate VPDES permit, discharged to a sanitary sewer in accordance with applicable industrial pretreatment requirements, or disposed of otherwise in accordance with applicable law.

5.3 Good Housekeeping

The University incorporates best management practices into its daily operations that contribute to preventing pollutants from entering storm water inlets, and adversely affecting the natural environment. Potential sources of storm water pollution include spills and leaks from oil, grease, fuel, and chemicals onto paved surfaces, chemical product in wash water, lawn and garden products on pavement, exposed bulk storage piles and common floatable trash. Specific SOPs area available in Appendix E.

5.3.1 Parking Lots, Streets, and Roads Maintenance

Street sweeping is regularly completed to prevent waste material from entering stormwater drains via parking lots and streets. A schedule is established that best addresses the rate of accumulation of materials on pavements and hardscapes, and is adjusted for significant events (e.g. snowfall, sand, salt application). Materials collected during cleaning activities are not stored temporarily on site, rather delivered to a permitted landfill.

If leaked vehicle fluid is discovered, the vehicle is moved away from storm drains or a drip pan is placed under the leaking equipment until the vehicle can be re-located. Leaks and spills on pavement are contained and cleaned up using absorbent material.

5.3.2 Equipment and Vehicles

The vehicle maintenance garage is located at the Grounds Maintenance Building on the east side of campus. The vehicle maintenance garage does not have floor drains, therefore, the likelihood of discharging contaminated runoff or stormwater is very low.

Vehicle maintenance is performed indoors and/or under cover. Any oil or other vehicle fluid spills are contained and cleaned using absorbent materials, then disposed of into appropriate recycling containers. Leaking vehicles are removed from service until repaired and a drip pan is used to capture fluid leaks during storage and/or maintenance. Vehicles washed with detergents should be washed in areas which drain to a sanitary sewer or they can be washed with a water-based, phosphate free car wash over grassy areas not located near storm drains. Leaking vehicle batteries are stored in secondary containers.

Lawn mowers, weed eaters, blowers, etc. are fueled, maintained and stored within Grounds Maintenance Buildings on concrete floors.

5.3.3 Outdoor Buildings

Maintenance of building exteriors may involve a number of different practices, from cleaning to resurfacing. Pressure washing, for example, can concentrate organic sediment, precipitates, surface material, and cleaning solutions into the waste water, which is characterized as an illicit discharge if it enters the MS4. Power washing water, cleaning agents, and other compounds should not enter the storm sewer system or water bodies. Care should be taken to prohibit fluids from flowing into roof drains, downspouts, and any other conveyances leading to them.

Building washing is performed on dry days and uses minimal water. Dirty areas are prioritized rather than cleaning or pressure washing an entire building to minimize water use. Prior to outdoor washing, storm drains and possible conveyances are protected with drain covers, wattles, booms, or booms. Dry cleanup methods are employed to remove debris prior to washing surfaces. Wash wastewater that does not contain chemicals or cleaning agents is directed to nearby landscaping or vegetated areas to infiltrate in grass. Downstream inlets that may receive discharge will be protected as appropriate while diverting this wastewater to grass areas. Wastewater containing chemical pollutants must be captured and disposed of in the sanitary sewer. Suspended solids and oils that are present in wastewater are removed using booms, absorbent pads, or other devices.

For outdoor painting, water-based paints and thinners are used instead of oil-based whenever possible. Prior to painting, paint is mixed indoors or on an impermeable ground cover placed on the ground to prevent spills from contaminating ground soil or entering storm drain inlets. Unused waste latex paint is solidified prior to disposal in trash and oil-based paints are collected and disposed of as hazardous waste.

5.3.4 Grounds & Landscaping

The MS4 permit requires that a turf and landscape nutrient management plan be developed by a certified turf and landscape management planner in accordance with § 10.1-104.2 of the Code of Virginia on all lands owned by CNU where nutrients are applied to a contiguous area greater than one acre. Designated CNU staff tracks the total acreage where turf and landscape management plans are required and where such plans have been implemented, and they shall summarize the schedule and its implementation in annual permit reports.

Typical landscape maintenance practices can produce stormwater contaminants such as pesticides, soil, fertilizers, and debris which can pollute receiving water bodies. Maintaining an attractive campus landscape can require considerable efforts in pruning, watering, and fertilizing.

The Grounds Department performs maintenance and landscaping of campus grounds. Turf areas are minimized via groundcovers, wildflowers, and shrubs, thereby reducing mowing and water requirements. Whenever possible, drought and heat-resistant turf species, and regional, indigenous plants are selected for planting. Low-volume irrigation methods and minimal watering are provided to avoid water runoff. Lawn wastes generated from lawn mowing are composted through use of recycling deck mowers, and re-tilled into the soil of planting areas or mixed into mulch. Grass clippings and additional vegetation (i.e. leaves and vegetative debris) are collected and removed from campus to a permitted landfill. Leaves, clippings, and compost are managed so that runoff does not enter storm drain system.

Trash containers, recycling containers, and cigarette butt containers are placed in high pedestrian traffic areas, common areas, entrances to buildings, and sidewalk entries from parking lots. Additional temporary trash receptacles are installed during University events for collecting increased volumes of trash. Dumpsters are located at secured sites on campus and on flat, concrete surfaces that do not slope or drain directly into a storm drain system. Dumpsters have drain holes to prevent accumulation of rainwater inside. Recycling bins

are provided within the campus dumpster sites for collection of recyclable waste material. Outdoor trash receptacles are emptied daily or at rate necessary to prevent overflow of trash. All trash receptacles are covered to reduce the amount of rainwater entering the container and the potential for leakage.

5.3.5 Application and Storage of Pesticides, Herbicides, and Fertilizers

Grounds and building maintenance crews occasionally use pesticides and herbicides in routine operations, and the mixing and loading of applications into equipment is often in the same areas where fueling and maintenance occurs. Consequently, these are the areas where an accidental discharge into the MS4 is likely to occur. Care should be taken to properly store, handle, and apply these chemicals in much the same manner as other hazardous materials, and only adequately trained staff should be responsible for their use.

Minimum amounts of pesticides, herbicides, and fertilizers are stored to limit amount of bulk storage. All product containers (original and secondary) are labeled and stored in high, dry locations, according to manufacturer's specifications and applicable regulations. Storage areas are inspected regularly for leaks or spills; cleanup is immediate to prevent chemicals from reaching the storm drain system. Fertilizers are applied during periods of maximum plant uptake based on plant species. Prior to application, the five-day weather forecast is checked to avoid treatments before heavy rain or during a drought event. Unused waste product is disposed of as regulated waste.

5.3.6 Exterior Material Storage

Certain loose material storage (e.g. bulk piles of mulch, topsoil, sand, salt and de-icing material) may flow into street gutters and eventually stormwater inlets during heavy rain events. Materials are stored in storage containers, or under impervious cover to prevent flow.

Pre-bagged calcium chloride is used for deicing. De-icing agents containing urea or other forms of nitrogen or phosphorus are not used on parking lots, roadways, and sidewalks, or other paved surfaces. Grounds crew are trained in appropriate application techniques. Rinse water from cleaning de-icing equipment is directed away from storm drains.

5.3.7 Chemical Storage

Certain loose material storage (e.g. bulk piles of mulch, topsoil, sand, salt and de-icing material) may flow into street gutters and eventually stormwater inlets during heavy rain events. Materials are stored in storage containers, or under impervious cover to prevent flow.

Pre-bagged calcium chloride is used for deicing. De-icing agents containing urea or other forms of nitrogen or phosphorus are not used on parking lots, roadways, and sidewalks, or other paved surfaces. Grounds crew are trained in appropriate application techniques. Rinse water from cleaning de-icing equipment is directed away from storm drains.

5.4 Maintenance

The University must maintain all control measures that are used to achieve compliance with the MS4 General Permit in effective operating condition, as well as all equipment and systems to help prevent discharges of pollutants from them. This includes:

- Performing inspections and preventive maintenance of stormwater drainage, source controls, and equipment and systems that could fail
- Diligently maintaining nonstructural control measures (i.e.- keep spill response supplies available and confirm personnel appropriately trained)
- Cleaning catch basins when the depth of debris reaches two-thirds (2/3) of the sump depth and keeping the debris surface at least six inches below the outlet pipe

If the University finds that control measures need to be replaced or repaired, the facility must immediately take all reasonable steps to prevent or minimize the discharge of pollutants until a permanent solution is installed and made operational.

CNU employs the following activity specific maintenance BMP techniques:

- CNU schedules routine shipments for solid waste containers in an effort to minimize the potential for stormwater contamination
- CNU performs periodic inspections and clean-outs of stormwater conveyances in accordance with the following schedule:
    - Roof drains – semi-annually
    - Catch basin – annually
    - Visual inspection of outfall structure – annually

5.5 Spill Prevention and Response Procedures

The University must minimize the potential for leaks, spills and other releases that may be exposed to stormwater, and develop plans for effective response to such spills if or when they occur. At a minimum, the following must be implemented:

- Plainly label containers that could be susceptible to spillage or leakage to encourage proper handling and facilitate rapid response if spills or leaks occur
- Implement procedures for material storage and handling, including the use of secondary containment and barriers between material storage and traffic areas, or a similarly effective means
- Develop training on the procedures for expeditiously stopping, containing, and cleaning up leaks, spills, and other releases
- Keep spill kits on-site, located near areas where spills may occur
- Notify appropriate facility personnel, emergency response agencies, and regulatory agencies when a leak, spill, or other release occurs

Where a leak, spill or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity occurs during a 24-hour period, the facility must notify the National Response Center (NRC) at (800) 424-8802 as soon as the facility has knowledge of the discharge.

Additionally, state or local requirements may require the reporting of spills or discharges to local emergency response personnel and public health or drinking water supply agencies. Contact information must be in locations that are readily accessible and available.

Please see Appendix E for the SOP's regarding spill prevention and cleanup.

5.6 Erosion and Sediment Controls

The University must minimize erosion by stabilizing exposed soils and by placing flow velocity dissipation devices at discharge locations. The University must also use structural and non-structural control measures to prevent the discharge of sediment.

If an erosion or sediment problem is discovered through the regular inspections at the University, CNU will take corrective actions at that time. If any erosion or sediment controls are put in place, they will be documented and

maintained at the end of this section.

5.7 Management of Runoff

The University must divert, infiltrate, reuse, contain, or otherwise reduce stormwater runoff, to minimize pollutants in the discharges. CNU will carefully examine the results from visual monitoring and any required analytical testing of the University stormwater outfalls. If problems are identified, they will be addressed immediately and additional BMPs will be implemented to minimize stormwater pollution.

5.8 Salt Storage

The University must enclose or cover storage piles of salt, or piles containing salt, used for deicing (including maintenance of paved surfaces). The University must implement appropriate measures (e.g., good housekeeping, diversions, containment) to minimize exposure resulting from adding to or removing materials from the pile. Piles do not need to be enclosed or covered if stormwater runoff from the piles is not discharged or if discharges from the piles are authorized under VPDES permit.

The University has bulk salt storage at the Grounds Department (Appendix C: Figure 4.5). The salt is stored outside, under cover, on a concrete pad and surrounded on three sides by a concrete berm.

5.9 Employee Training

The University will train all employees who work in areas where materials or activities are exposed to stormwater, or who are responsible for implementing activities necessary to meet the conditions of this permit (i.e. - inspectors, maintenance personnel), including all members of the Pollution Prevention Team. The following personnel must understand the requirements of this permit and their specific responsibilities with respect to those requirements:

- Personnel who are responsible for the design, installation, maintenance, and/or repair of controls
- Personnel responsible for the storage and handling of chemicals and materials that could become contaminants in stormwater discharges
- Personnel who are responsible for conducting and documenting monitoring and inspections
- Personnel who are responsible for taking and documenting corrective actions

Personnel must be trained in at least the following if related to the scope of their job duties (i.e. - only personnel responsible for conducting inspections need to understand how to conduct inspections):

- An overview of what is in the SWPPP
- Spill response procedures, good housekeeping, maintenance requirements, and material management practices
- The location of all controls on the site and how they are to be maintained
- The proper procedures to follow with respect to pollution prevention requirements
- When and how to conduct inspections, record applicable findings, and take corrective actions

5.10 Water Quality-Based Effluent

5.10.1 Water Quality

Discharge from the University must be controlled as necessary to meet applicable water quality standards as per Part I Section B of the General Permit. The DEQ expects that compliance with the conditions in the General Permit will control discharges to meet applicable water quality standards. If the University becomes aware, or the DEQ determines, that the discharge does not meet water quality standards, the University must take appropriate corrective action. The University must also comply with additional federal or local regulations. The University must implement all

controls necessary to comply with a waste load allocation an approved total maximum doily load (TMDL).

5.10.2 Discharges to Quality Impaired Waters

Discharges from the University will be considered to discharge to an impaired waterway if the first waterway to which the facility discharge is identified by a state, tribe, or the EPA as not meeting an applicable water quality standard (included on the Section 303(d) of the CWA list), or is included in on EPA-approved or established TMDL. For discharges that enter a storm sewer system prior to discharge, the first waterway to which the facility discharge is the waterbody that receives the stormwater discharge from the storm sewer system.

CNU discharges to Warwick River, which is listed as an Impaired Waterway according to the Virginia 2014 Integrated List of Waters pursuant to Sections 303(d) and 305(b) of the Clean Water Act. The Warwick River is listed by the Virginia DEEQ under 2014 Impaired Waters (Category 4A/4D) TMDL Approved and (Category 4B) Other Control Measures Present. The cause of this listing is recreation and the pollutant affecting this waterway is Enterococcus. The Warwick River was initially listed as an Impaired Waterway in 2008 with 2020 listed as the TMDL development date.

Section 6: Schedules and Procedures

6.1 Inspections

6.1.1 Routine Inspections

During normal operating hours the University shall conduct inspections of areas of the campus covered by the MS4 General Permit, including the following:

- Areas where materials or activities are exposed to stormwater
- Areas identified in the SWPPP and those that are potential pollutant sources
- Areas where spills and leaks have occurred in the past 3 years
- Discharge points
- Control measures used to comply the permit

Inspections shall be conducted at least once per year, and be more often if found to be needed. Increased frequency may be appropriate for some types of equipment, processes and stormwater control measures, or areas of the facility with significant activities and materials exposed to stormwater.

Inspections must be performed by qualified personnel. Inspectors must consider the results of visual and analytical monitoring (if any) for the past year when planning and conducting inspections.

During the inspection the staff must examine or look for the following:

- Materials, residue or trash that may have or could come into contact with stormwater
- Leaks or spills from industrial equipment, drums, tanks and other containers
- Offsite tracking of waste materials, or sediment where vehicles enter or exit the site
- Control measures needing replacement, maintenance or repair

When conducting an inspection during a stormwater discharge, control measures implemented to comply with effluent limits must be observed to ensure they are functioning correctly. If discharge locations are inaccessible, nearby downstream locations must be inspected.

6.1.1.1 *Routine Inspection Documentation*

The findings of the routine inspections must be documented and maintained with this SWPPP. The inspection documentation must include, but not necessarily be limited to the following:

- The inspection date and time
- The name(s) and signature(s) of the inspector(s)
- Weather conditions at the time of the inspection

- All observations relating to the implementation of control measures at the University, including:
    - A description of discharges occurring at the time of the inspection
    - Previously unidentified discharges and/or pollutants from the site
    - Evidence of, or the potential for, pollutants entering the drainage system
    - Observations regarding the physical condition of and around all outfalls including flow dissipation devices, and evidence of pollutants in discharges and/or the receiving water
    - Control measures needing maintenance, repairs, or replacement
- Additional control measures needed to comply with the permit requirements
- Incidents of noncompliance observed

If the University performed a discharge visual assessment during the inspection, the University may include the results of the assessment with the report, as long as all components of both types of inspections are included in the report.

A Routine Inspection form is located in Appendix A of this SWPPP.

6.1.2 Visual Assessment of Stormwater Discharges

If needed, the University may collect a stormwater sample from each outfall (monitoring point) and conduct a visual assessment the samples. The samples should be collected in such a manner that they are representative of the stormwater discharge from the University. The following visual assessments must be made:

- Collect the grab sample in a clean, clear glass, or plastic container. and examine in a well-lit area
- Collect the grab sample within the first 30 minutes of an actual discharge from a measurable storm event. If it is not possible to collect the sample within the first 30 minutes of discharge, the sample must be collected as soon as practicable after the first 30 minutes and the facility must document why it was not possible to take samples within the first 30 minutes. In the case of snowmelt, samples must be taken during a period with a measurable discharge from the site
- Collect the grab sample from a measurable storm event or discharge that occurred at least 72 hours (3 days) from the previous discharge. The 72-hour storm interval does not apply if the facility document that less than a 72-hour interval is representative for local storm events during the sampling period

Sampling personnel must visually inspect or observe the sample for the following water quality characteristics:

- Color
- Odor
- Clarity (diminished)
- Floating solids
- Settled solids
- Suspended solids

- Foam
- Oil sheen
- Other obvious indicators of stormwater pollution

Whenever the visual assessment shows obvious signs of stormwater pollution, the University must initiate the corrective action procedures.

Exceptions to Quarterly Visual Assessments are as follows:

- Adverse Weather Conditions: When adverse weather conditions prevent the collection of samples, the facility may take a substitute sample during the next qualifying storm event. Documentation of the rationale for no visual assessment must be included with the SWPPP records
- Substantially Identical Outfalls: If the University has two or more outfalls that the University believes discharge substantially identical effluents, the University may conduct visual assessments of the discharge at just one of the outfalls and report that the results also apply to the substantially identical outfall(s). Visual assessments must be conducted at each substantially identical outfall on a rotating basis.

6.1.2.1 *Visual Assessment Documentation*

The results of the visual assessments must be documented and maintained with this SWPPP. The visual assessment documentation must include, but not be limited to:

- Sample location(s)
- Sample collection date and time, and visual assessment date and time for each sample
- The name(s) and signature(s) of the inspector(s)
- Nature of the discharge (i.e. - runoff or snowmelt)
- Results of observations of the stormwater discharge
- Probable sources of observed stormwater contamination
- If applicable, why it was not possible to take samples within the first 30 minutes

A Visual Assessment form is located in Appendix A of this SWPPP.

Section 7: Signature Requirements

The SWPPP, including changes to the SWPPP to document corrective actions taken, and all reports submitted to DEQ, must be signed by a responsible University official or by a duly authorized representative of that person. A responsible University official means:

- A president or vice-president of the University in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the University; or
- A Director of University Grounds or Facilities, provided, the Director is authorized to make management decisions which govern the operation of the University including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures

All other changes to the SWPPP, and other compliance documentation required must be signed and dated by the person preparing the change or documentation.

7.1 Plan Certification

I certify under penalty of law that I have read and understand this document and that this document and all attachments were prepared in accordance with a system designed to assure that qualified personnel properly gathered and evaluated 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.

University Official:_____ **Title:** _____

Signature:_____ **Date:** _____

Appendix A – Inspection Forms

9-C.10.0. BIORETENTION PRACTICES: O&M CHECKLIST

Inspection Date_____
Project_____ **Site Plan/Permit Number**_____
Location_____ **Date BMP Placed in Service**_____
Date of Last Inspection_____ **Inspector**_____
Owner/Owner's Representative_____
As-Built Plans available: Y / N

Facility Type: Level 1 _____ Level 2 _____

Facility Location:
- G Surface
- G Underground

Filtration Media:
- ☐ No filtration (e.g., dry well, permeable pavement, infiltration facility, etc.
- ☐ Sand
- ☐ Bioretention Soil
- ☐ Peat
- ☐ Other: _____

Hydraulic Configuration:
- ☐ On-line facility
- ☐ Off-line facility

Type of Pre-Treatment Facility:
- ☐ Sediment forebay (above ground)
- ☐ Sedimentation chamber
- ☐ Plunge pool
- ☐ Stone diaphragm
- ☐ Grass filter strip
- ☐ Grass channel
- ☐ Other: _____

Ideally, Bioretention facilities should be inspected and cleaned up annually, peferably during the Spring. During the first 6 months following construction of a bioretention facility, the site should be inspected at least twice after storm events that exceed 1/2-inch of rainfall. Watering is needed once a week during the first 2 months following installation, and then as needed during the first growing season (April-October), depending upon rainfall. If vegetation needs to be replaced, one-time spot fertilization may be needed, preferably using an organic rather than a chemical fertilizer. Each facility should have a customized routine maintenance schedule addressing issues such as the following: grass mowing, weeding, trash removal, .mulch raking and maintenance, erosion repair, reinforcement plantings, tree and shrub pruing, and sediment removal.

Element of BMP	Potential Problem	Problem? Y / N	Investigate? Y / N	Repaired? Y / N	How to fix problem	Who Will Address Problem	Comments
Contributing Drainage Area	Adequate vegetation				Supplement as necessary	Owner or professional	
	There is excessive trash and debris				Remove immediately	Owner or professional	
	There is evidence of erosion and / or bare or exposed soil				Stabilize immediately	Owner or professional	
	There are excessive landscape waste or yard clippings				Remove immediately and recycle or compost	Owner or professional	
	Oil, grease or other unauthorized substances are entering the facility				Identify and control the source of this pollution. It may be necessary to erect fences, signs, etc	Owner or professional	

Element of BMP	Potential Problem	Problem? Y / N	Investigate? Y / N	Repaired? Y / N	How to fix problem	Who Will Address Problem	Comments
Pre-Treatment	There is adequate access to the pre-treatment facility				Establish adequate access	Professional and, perhaps, the locality	
	Excessive trash, debris, or sediment.				Remove immediately	Owner or professional	
Pre-Treatment (continued)	There is evidence of clogging (standing water, noticeable odors, water stains, algae or floating aquatic vegetation, or oil/grease)				Identify and eliminate the source of the problem. If necessary, remove and clean or replace the clogged material.	Professional	
	There is evidence of erosion and / or exposed soil				Stabilize immediately	Owner or professional	
	There is dead vegetation or exposed soil in the grass filter				Restabilize and revegetate as necessary	Owner or professional	
Inlets	Check for sediment build-up at curb cuts, gravel diaphragms or pavement edges that prevent flow from getting into the bed, and check for bypassing.				Remove sediment and correct any other problems that block inflow.	Owner or professional	
	There is excessive trash, debris, or sediment.				Remove immediately	Owner or professional	
	There is evidence of erosion at or around the inlet				Repair erosion damage and reseed or otherwise restabilize with vegetation	Owner or professional	
	Inflow is hindered by trees and/or shrubs.				Remove woody vegetation from points of inflow and directly above underdrains. (Trees and shrubs may be located closer to the perimeter.)	Owner or professional	
Side Slopes (*Annually, after major storms*)	There is evidence of rill or gully erosion or bare soil				Identify the source of erosion damage and prevent it from recurring. Repair erosion damage and reseed or otherwise restabilize with vegetation	Owner or professional	
	There is excess sediment accumulation				Remove immediately	Owner or professional	
	Side slopes support nuisance animals.				Animal burrows must be backfilled and compacted. Burrowing animals should be humanely removed from the area.	Professional	
Vegetation (*monthly*)	Plant composition is consistent with the approved plans and any stakes or wires are in good condition.				Determine if existing plant materials are at least consistent with general Bioretention design criteria and replace inconsistent species.	Professional	
	There should be 75-90% cover (mulch plus vegetation), and the mulch cover				Supplement vegetation and mulch as needed.		

Element of BMP	Potential Problem	Problem? Y / N	Investigate? Y / N	Repaired? Y / N	How to fix problem	Who Will Address Problem	Comments
	should be 2-3 inches deep.						

Element of BMP	Potential Problem	Problem? Y / N	Investigate? Y / N	Repaired? Y / N	How to fix problem	Who Will Address Problem	Comments
Vegetation (*monthly*) **(continued)**	There is evidence of hydrocarbons or other deleterious materials, resulting in unsatisfactory plant growth or mortality,				Replace contaminated mulch. If problem persists, test soils for hydrocarbons and other toxic substances. If excess levels are found, the soils, plants and mulch may all need to be replaced in accordance with the approved construction plans.	Professional	
	Invasive species or weeds make up at least 10% of the facility's vegetation				Remove invasive species and excessive weeds immediately and replace vegetation as needed.	Owner or professional	
	The grass is too high				Mow within a week. Grass species should be selected that have dense cover, are relatively slow growing, and require the least mowing and chemical inputs. Grass should be from 6-10 inches high.	Owner or professional	
	Vegetation is diseased, dying or dead				Remove and replace. Increase watering, but avoid using chemical fertilizers, unless absolutely necessary.	Professional	
	Winter-killed or salt-killed vegetation is present.				Replace with hardier species.	Owner or professional	
Filter Media (*Annually*)	The filter media is too low, too compacted, or the composition is inconsistent with design specifications				Raise the level, loosen and amend or replace the media, as needed, to be consistent with the state design criteria for Bioretention (85-88% sand 8-12% soil fines 3-5% organic matter in form of leaf compost). Other remediation options are described in the maintenance section of the state design criteria for Bioretention	Professional	
	The mulch is older than 3 years or is otherwise in poor condition				The mulch must be replaced every 2-3 years	Professional	
	There is evidence that chemicals, fertilizers, and/or oil/grease are present				Remove undesirable chemicals from media and facility immediately, and replace mulch or media as needed	Professional	
	There is excessive trash, debris, or sediment.				Remove trash and debris immediately. Check plant health and, without damaging plants, manually remove the sediment, especially if the depth exceeds 20% of the facility's design depth.	Owner or professional	
	There is evidence of concentrated flows, erosion or exposed soil				Identify the source of erosion damage and prevent it from recurring. Repair the erosion damage and reseed or otherwise restabilize with vegetation.	Professional	

Element of BMP	Potential Problem	Problem? Y / N	Investigate? Y / N	Repaired? Y / N	How to fix problem	Who Will Address Problem	Comments
Filter Media (*Annually*) **(continued)**	The filter bed is clogged and/or filled inappropriately				Redistribute the soil substrate and remove sediment within 2 weeks.	Professional	
	The topsoil is in poor condition (e.g., the pH level is not 6-7, the composition is inappropriate, etc.)				Ensure a 3-inch surface depth of topsoil consistent with the state design criteria for Bioretention (loamy sand or sandy loam texture, with less than 5% clay content, and organic matter content of at least 2%). If the pH is less than 6.5, spread limestone.	Professional	
Underdrain/ Proper Drainage	The perforated pipe is not conveying water as designed				Determine if the pipe is clogged with debris or if woody roots have pierced the pipe. Immediately clean out or replace the pipe, as necessary.	Professional	
	The underlying soil interface is clogged (there is evidence on the surface of soil crusting, standing water, the facility does not dewater between storms, or water ponds on the surface of basin for more than 48 hours after an event).				Measure the draw-down rate of the observation well for three days following a storm event in excess of 1/2 inches in depth. .After three days, if there is standing water on top but not in the underdrain, this indicates a clogged soil layer. If standing water is both on the surface and in the underdrain, then the underdrain is probably clogged. This should be promptly investigated and remediated to restore proper filtration. Grading changes may be needed or underdrain repairs made. The filter media may need to be raked, excavated and cleaned or replaced to correct the problem. Holes that are not consistent with the design and allow water to flow directly through a planter to the ground must be plugged.	Professional	
Planters	The planter is unable to receive or detain stormwater prior to infiltration. Water does not drain from the reservoir within 3-4 hours of after a storm event.				Identify and correct sources of clogging. Topsoil and sand/peat layer may need to be amended with sand or replaced all together.	Owner or professional	
	The planter has structural deficiencies, including rot, cracks, and failure, or the planter is unable to contain the filter media or vegetation				Make needed repairs immediately.	Owner or professional	
Outlet/ Overflow Spillway	Outlets are obstructed or erosion and soil exposure is evident below the outlet.				Remove obstructions and stabilize eroded or exposed areas.	Owner or Professional	

Element of BMP	Potential Problem	Problem? Y / N	Investigate? Y / N	Repaired? Y / N	How to fix problem	Who Will Address Problem	Comments
Outlet/ Overflow Spillway (continued)	There is excessive trash, debris, or sediment at the outlet				Remove immediately, and keep the contributing area free of trash and debris.	Owner or professional	
	Any grates present are in good condition				Repair or replace as necessary	Owner or professional	
Observation Well	Is the observation well still capped?				Repair, as necessary.	Professional	
Overall	Access to the Infiltration facility or its components is adequate				Establish adequate access. Remove woody vegetation and debris that may block access. Ensure that hardware can be opened and operated.	Professional and, perhaps, the locality	
	There is evidence of standing water				Fill in low spots and stabilize; correct flow problems causing ponding.	Owner or professional	
	Mosquito proliferation				Eliminate stangant pools and establish vegetation; treat for mosquitoes as needed. If sprays are considered, then a mosquito larvicide, such as Bacillus thurendensis or Altoside formulations can be applied *only if absolutely necessary*.	Owner or professional	
	Complaints from local residents				Correct real problems	Owner or professional	
	Encroachment on the bioretention area or easement by buildings or other structures				Inform involved property owners of BMPs status ; clearly mark the boundaries of the receiving pervious area, as needed	Owner or professional (and perhaps the locality)	

9-C.16.0. EXTENDED DETENTION PONDS: O&M CHECKLIST

Inspection Date_____
Project_____ **Site Plan/Permit Number**_____
Location_____ **Date BMP Placed in Service**_____
Date of Last Inspection_____ **Inspector**_____
Owner/Owner's Representative_____
As-Built Plans available: Y / N

Facility Type: Level 1 _____ Level 2 _____

Pond characteristics and functions (check all that apply)
- ☐ Water quality treatment
- ☐ Channel protection
- ☐ Ties into groundwater

Hydraulic Configuration:
- ☐ On-line facility
- ☐ Off-line facility

Type of Pre-Treatment Facility:
- ☐ Sediment forebay (above ground)
- ☐ Vegetated buffer area
- ☐ Grass filter strip
- ☐ Grass channel
- ☐ Other: _____

Ideally, Extended Detention Ponds should be inspected annually. ED Ponds are prone to a high clogging risk at the ED low-flow orifice. Ideally, the orifice should be inspected at least twice a year after initial construction. The constantly changing water levels in ED Ponds make it difficult to mow or manage vegetative growth. The bottom of ED Ponds often become soggy, and water-loving tees such as willows may invade and will need to be managed. Periodic mowing of the stormwater buffer is only required along maintenance rights-of-way and the embankment. The remaining buffer may be managed as a meadow (mowing every other year) or forest. Frequent removal of sediment from the forebay (every 5-7 years, or when 50% of the forebay capacity is filled) is essential to maintain the function and performance of the ED Pond. Sediments excavated from ED Ponds are usually not considered toxic or hazardous, so they can be safely disposed of either by land application of land filling.

Element of BMP	Potential Problem	Problem? Y / N	Investigate? Y / N	Repaired? Y / N	How to Fix Problem	Who Will Address Problem	Comments
Contributing Drainage Area	Adequate vegetation				Supplement as needed.	Owner	
	There is excessive trash and debris				Remove immediately.	Owner or professional	
	There is evidence of erosino and/or bare or exposed soil				Stabilize immediately.	Owner or professional	
	There is excessive landscape waste and yard clippings				Remove immediately.	Owner or professional	
Pre-Treatment	There is adequate access to the pre-treatment facility				Establish adequate access	Professional and, perhaps, the locality	
	There is excessive trash and debris				Remove immediately.	Owner or professional	
	There is evidence of erosion and/or exposed soil.				Immediately identify and correct the cause of the erosion and stabilize the eroded or bare area.	Owner or professional	

Element of BMP	Potential Problem	Problem? Y / N	Investigate? Y / N	Repaired? Y / N	How to Fix Problem	Who Will Address Problem	Comments
Pre-Treatment (continued)	Sediment deposits are 50% or more of forebay capacity.				Dredge the sediment to restore the design capacity; sediment should be dredged from forebays at least every 5-7 years, and earlier, as needed.	Professional	
	The sediment marker is not vertical.				Adjust the sediment depth marker to a vertical alignment	Professional	
	There is evidence of clogging				Clear blockages of the riser or orifice(s) and make other adjustments needed to meet the approved design specifications	Professional	
	There is dead vegetation				Revegetate, as needed	Owner or professional	
Inlet	The inlet provides a stable conveyance into the pond				Stabilize immediately, as needed, and clear blockages.	Owner or professional	
	There is excessive trash, debris, or sediment.				Remove immediately	Owner or professional	
	There is evidence of erosion/undercutting at or around the inlet				Repair erosion damage and restabilize	Owner or professional	
	There is cracking, bulging, erosion or sloughing of the forebay dam.				Repair and restabilize immediately.	Professional	
	There is woody growth on the forebay dam.				Remove within 2 weeks of discovery.	Professional	
	There is evidence of nuisance animals.				Animal burrows must be backfilled and compacted. Burrowing animals should be humanely removed from the area.	Professional	
	There is more than 1 inch of settlement.				Add fill material and compact the soil to the design grade	Owner or Professional	
	The inlet alignment is incorrect.				Correct immediately.	Owner or Professional	
Vegetation	Plant composition is consistent with the approved plans				Determine if existing plant materials are consistent with the general Wet Pond design criteria, and replace inconsistent species.	Professional	
	Invasive species are present.				Remove invasive species immediately and replace vegetation as needed.	Professional	
	Trees planted in the buffer and on wetland islands and peninsulas need watering during the first growing season				Consider watering every 3 days for first month, and then weekly during first year (April – October), depending on rainfall.	Owner or professional	
	Grass around the facility is overgrown				Mow (at least twice a year) to a height of 4”-9” high and remove grass clippings.	Owner or professional	

Element of BMP	Potential Problem	Problem? Y / N	Investigate? Y / N	Repaired? Y / N	How to Fix Problem	Who Will Address Problem	Comments
Vegetation (continued)	Vegetation is dead or reinforcement planting is needed.				Remove and replace dead or dying vegetation.	Professional	
Permanent Pool and Side Slopes	There is excessive trash and/or debris.				Remove immediately	Owner or professional	
	There is evidence of sparse vegetative cover, erosion or slumping side slopes.				Repair and stabilize physical damage, and reseed or plant additional vegetation.	Owner or professional	
	There is evidence of nuisance animals.				Animal burrows must be backfilled and compacted. Burrowing animals should be humanely removed frm area.	Owner or professional	
	There is significant sediment accumulation.				Conduct a bathymetric study to determine the impact to design volumes, and dredge if necessary.	Professional	
Riser/Principle Spillway and Low-Flow Orifice(s)	There is adequate access to the riser for maintenance.				Establish adequate access	Professional and, perhaps, the locality	
	Pieces of the riser are deteriorating, misaligned, broken or missing.				Repair immediately.	Professional	
	Adjustable control valves are accessible and operational.				Repair, as needed.	Professional	
	Reverse-slope pipes and flashboard risers are in good condition.				Repair, as needed.	Professional	
	Seepage into conduit				Seal conduit	Professional	
	There is evidence of clogging				Clear blockages of the riser or orifice(s) and make other adjustments needed to meet the approved design specs.	Professional	
	There is excessive trash, debris, or other obstructions in the trash rack.				Remove immediately.	Owner or professional	
Dam/ Embankment and Abutments	There is sparse veg. cover, settlement, cracking, bulging, misalignment, erosion rills deeper than 2 inches, or sloughing.				Repair and restabilize immediately, especially after major storms.	Professional	
	There are soft spots, seepage, boggy areas or sinkholes.				Reinforce, fill and stabilize immediately.		
	There is evidence of nuisance animals.				Animal burrows must be backfilled and compacted. Burrowing animals should be humanely removed from the area.		
	There is woody vegetation on the embankment.				Removal of woody species near or on the embankment and maintenance access areas should be done when discovered, but at least every 2 years.		

Element of BMP	Potential Problem	Problem? Y / N	Investigate? Y / N	Repaired? Y / N	How to Fix Problem	Who Will Address Problem	Comments
Overflow/Emergency Spillway	There is woody growth on the spillway.				Removal of woody species near or on the emergency spillway should be done when discovered, but at least every 2 years.	Owner or professional	
	There is excessive trash, debris, or other obstructions.				Remove immediately.	Owner or professional	
	There is evidence of erosion/backcutting				Repair erosion damage and reseed	Owner or professional	
	There are soft spots, seepage or sinkholes.				Reinforce, fill and stabilize immediately.	Owner or professional	
	Only one layer of stone armoring exists above the native soil.				Reinforce rip-rap or other armoring materials.	Professional	
Outlet	The outlet provides a stable conveyance from the pond.				Stabilize immediately, as needed, and clear blockages.	Owner or professional	
	There is woody growth within 5 feet of the outlet pipe barrel.				Prune vegetation back to leave a clear discharge area.	Owner or Professional	
	There is excessive trash, debris, or other obstructions.				Remove immediately.	Owner or professional	
	There are excessive sediment deposits at the outlet.				Remove sediment.	Professional	
	Discharge is causing undercutting, erosion or displaced rip-rap at or around the outlet.				Repair, reinforce or replace rip rap as needed, and restabilize.	Professional	
Overall	Access to the facility or its components is adequate.				Establish adequate access. Remove woody vegetation and debris that may block access. Ensure that hardware can be opened and operated.	Professional and, perhaps, the locality	
	Fences are inadequate				Collapsed fences must be restored to an upright position. Jagged edges and damaged fences must be repaired or replaced.	Professional	
	Water levels in one or more cells are abnormally high or low.				Clear blockages of the riser or orifice(s) and make other adjustments needed to meet the approved design specifications.	Professional	
	Complaints from local residents				Correct real problems.	Owner or professional	
	Mosquito proliferation				Eliminate stagnant pools and stock the basin with mosquito fish to provide natural mosquito & midge control. Treat for mosquitoes as needed. If spraying, then use mosquito larvicide, (e.g., Bacillus thurendensis or Altoside formulations) *only if absolutely necessary*.	Owner or professional	

Element of BMP	Potential Problem	Problem? Y / N	Investigate? Y / N	Repaired? Y / N	How to Fix Problem	Who Will Address Problem	Comments
Overall (continued)	Encroachment on the pond or easement by buildings or other structures				Inform involved property owners of BMPs status ; clearly mark the boundaries of the receiving pervious area, as needed	Owner or professional (and perhaps the locality)	
	Safety signage is not adequate.				Provide sufficient, legible safety signage.	Owner or professional	

9-C.9.0. INFILTRATION PRACTICES: O&M CHECKLIST

Inspection Date_____
Project_____ **Site Plan/Permit Number**_____
Location_____ **Date BMP Placed in Service**_____
Date of Last Inspection_____ **Inspector**_____
Owner/Owner's Representative_____
As-Built Plans available: Y / N

Facility Type: Level 1 _____ Level 2 _____

Facility Location:
- G Surface
- G Underground

Filtration Media:
- ☐ No filtration (e.g., dry well, permeable pavement, infiltration facility, etc.
- ☐ Sand
- ☐ Bioretention Soil
- ☐ Peat
- ☐ Other: _____

Hydraulic Configuration:
- ☐ On-line facility
- ☐ Off-line facility

Type of Pre-Treatment Facility:
- ☐ Sediment forebay (above ground)
- ☐ Sedimentation chamber
- ☐ Plunge pool
- ☐ Stone diaphragm
- ☐ Grass filter strip
- ☐ Grass channel
- ☐ Other: _____

Ideally, infiltration facilities should be inspected annually. Spill Prevention measures should be used around infiltration facilities when handling substances that contaminate stormwater. Releases of pollutants should be corrected as soon as identified.

Element of BMP	Potential Problem	Problem? Y / N	Investigate? Y / N	Repaired? Y / N	How to Fix Problem	Who Will Address Problem	Comments
Contributing Drainage Area	There is excessive trash and debris				Remove immediately	Owner or professional	
	There is evidence of erosion and / or exposed soil				Stabilize immediately	Owner or professional	
	Vegetative cover is adequate				Supplement as needed	Owner or professional	
	There are excessive landscape waste or yard clippings				Remove immediately and recycle or compost	Owner or professional	
Pre-Treatment Facility	There is adequate access to the pre-treatment facility				Establish adequate access	Professional and, perhaps, the locality	
	There is excessive trash, debris, or sediment.				Remove immediately	Owner or professional	

Element of BMP	Potential Problem	Problem? Y / N	Investigate? Y / N	Repaired? Y / N	How to Fix Problem	Who Will Address Problem	Comments
Pre-Treatment Facility (continued)	There is evidence of erosion and/or exposed soil				Stabilize immediately	Owner or professional	
	There is evidence of clogging (standing water, noticeable odors, water stains, algae or floating aquatic vegetation)				Identify and eliminate the source of the problem. If necessary, remove and clean or replace the clogged material.	Professional	
	There is dead vegetation or exposed soil in the grass filter				Restabilize and revegetate as necessary	Owner or professional	
Inlets	Inlets provide a stable conveyance into facility				Stabilize immediately, as needed.	Owner or professional	
	There is excessive trash/debris/sediment.				Remove immediately	Owner or professional	
	There is evidence of erosion at or around the inlet				Repair erosion damage and reseed or otherwise restabilize with vegetation	Owner or professional	
Embankment, Flow Diversion Structures (e.g., Dikes, Berms, etc.) and Side Slopes	There is evidence of erosion or bare soil				Identify the source of erosion damage and prevent it from recurring. Repair erosion damage and reseed or otherwise restabilize with vegetation	Owner or professional	
	There is excess sediment accumulation				Remove immediately	Owner or professional	
	Water is not detained in the infiltration basin				Check for a breach in the containment structure and repair immediately.	Professional	
	Side slopes support nuisance animals.				Animal burrows must be backfilled and compacted. Burrowing animals should be humanely removed frm area.	Professional	
Maintaining Facility Capacity and Proper Drainage	Look for weedy growth on the stone surface indicating sediment accumulation and potential clogging				Identify and control sources of sediment and debris. Remove sediment and debris in excess of 4" in depth every 2-5 years (or sooner if performance is affected).	Professional	
	Measure the draw-down rate of the observation well for three days following a storm event in excess of 1/2 inches in depth. If standing water is still observed after three days, this is a clear sign that clogging is a problem.				Immediately clear debris from the underdrain. Replace the underdrain if necessary. If needed, regrade and till to restore infiltration capacity (the need for this can be prevented by preventing upstream erosion and subsequent sediment transport to the facility).	Professional	
	There is excessive trash/debris				Remove immediately	Owner or professional	

Element of BMP	Potential Problem	Problem? Y / N	Investigate? Y / N	Repaired? Y / N	How to Fix Problem	Who Will Address Problem	Comments
Vegetation	Grass within the practice is overgrown				Grass must be mowed to a height of 4"-9" and grass clippings removed (ideally recycled or composted).	Owner or professional	
	Pioneer trees are sprouting in the base of the facility				Remove trees to prevent roots from puncturing the filter fabric, allowing sediment to enter		
	Vegetation forms an overhead canopy that may drop leaf litter, fruit and other vegetative materials that may cause clogging.				Prune or remove vegetation as necessary	Owner or professional	
Observation Well	Is each observation well still capped?				Repair, as necessary.	Professional	
Outlet	Outlets are obstructed or erosion and soil exposure is evident below the outlet.				Remove obstructions and stabilize eroded or exposed areas.	Owner or Professional	
	Evidence of flow bypassing facility				Repair immediately	Professional	
	There is excessive trash, debris, or sediment at the outlet				Remove immediately	Owner or professional	
Overflow or Emergency Spillway	The pipe or spillway is not effectively conveying excess water to an adequate receiving system				Clear sediment and debris whenever 25% or more of the conveyance capacity is blocked. When damaged pipe is discovered, it must be repaired or replaced immediately. Identify and control sources of erosion damage. Replace or reinforce stone armament whenever only one layer of stone remains.	Professional	
Structural Components	Evidence of structural deterioration				Repair as necessary	Professional	
	Evidence of spalling or cracking of structural components				Repair or replace, as necessary	Professional	
	Grates are in good condition				Repair or replace, as necessary	Owner or professional	
Overall	Access to the Infiltration facility or its components is adequate				Establish adequate access. Remove woody vegetation and debris that may block access. Ensure that manholes, valves and/or locks can be opened and operated.	Professional and, perhaps, the locality	
	There is evidence of standing water				Fill in low spots and stabilize; correct flow problems causing ponding	Owner or professional	

Element of BMP	Potential Problem	Problem? Y / N	Investigate? Y / N	Repaired? Y / N	How to Fix Problem	Who Will Address Problem	Comments
Overall (continued)	Mosquito proliferation				Eliminate standing water and establish vegetation; treat for mosquitoes as needed. If sprays are considered, then a mosquito larvicide, such as Bacillus thurendensis or Altoside formulations can be applied *only if absolutely necessary*.	Owner or professional	
	Complaints from local residents				Correct real problems	Owner or professional	
	Encroachment on the infiltration area or easement by buildings or other structures				Inform involved property owners of BMPs status ; clearly mark the boundaries of the receiving pervious area, as needed	Owner or professional (and perhaps the locality)	

Watershed/Subshed:	Assessed by:
Outfall ID:	Date of Last Rainfall: Rainfall Quantity:
Date: Time:	

TYPE	MATERIAL	SHAPE		SUBMERGED	GENERAL OBSERVATIONS
☐ Closed Pipe	☐ Concrete ☐ PVC/Plastic ☐ Metal ☐ Brick ☐ Other:	☐ Circular ☐ Other:	☐ Single ☐ Double	In Water: ☐ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully	
☐ Open Channel	☐ Concrete ☐ Earthen ☐ Other:	☐ Trapezoid: ☐ Parabolic: ☐ Other:			
Flow	☐None ☐Trickle ☐Moderate ☐Substantial ☐Estimate flow rate_____				

FOR BOTH FLOWING and NON-FLOWING OUTFALLS:

INDICATOR	DESCRIPTION	COMMENTS
☐ Pipe Condition	☐Chip/Cracked ☐Corrosion ☐Peeling Paint ☐Other_____	
☐ Odor	☐Gas ☐Sewage ☐Sulfide ☐Other_____	
☐ Deposits/Stains	☐Oily ☐Flow Line ☐Paint ☐Iron	
☐ Vegetation	☐Normal ☐Inhibited ☐Excessive	
☐ Pipe Benthic Growth	☐Brown ☐Orange ☐Green ☐ Other_____	
☐ Pool Quality	☐Good ☐Odors ☐Algae ☐Colors ☐Oils ☐Suds	

FOR FLOWING OUTFALLS:

INDICATOR	DESCRIPTION	RELATIVE SEVERITY INDEX		
☐ Odor	☐ Sewage ☐ Petroleum/gas ☐ Sulfide ☐ Rancid/sour ☐ Other: _____	☐1 - Faint	☐2 - Easily detected	☐3 - Noticeable from a distance
☐ Color	☐ Clear ☐ Brown ☐ Orange ☐ Grey ☐ Other:_____	☐1 – Trace colors	☐2 – Faint Colors	☐3 – Clearly visible
☐ Turbidity	See Severity	☐1- Slight Cloudiness	☐2 – Cloudy	☐3 - Opaque
☐ Floatables (not including trash)	☐ Sewage ☐ Suds ☐ Iron ☐ Petroleum (oil sheen)	☐1 – Few/slight	☐2 - Some; indication of origin	☐3 – Many

Watershed/Subshed:	Assessed by:
Outfall ID:	Date of Last Rainfall:
Date: Time:	Rainfall Quantity:

TYPE	MATERIAL	SHAPE		SUBMERGED	GENERAL OBSERVATIONS
☐ Closed Pipe	☐ Concrete ☐ PVC/Plastic ☐ Metal ☐ Brick ☐ Other:	☐ Circular ☐ Other:	☐ Single ☐ Double	In Water: ☐ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully	
☐ Open Channel	☐ Concrete ☐ Earthen ☐ Other:	☐ Trapezoid: ☐ Parabolic: ☐ Other:		Depth:_____ Width (top):_____ (bottom):_____	
Flow	☐None ☐Trickle ☐Moderate ☐Substantial ☐Estimate flow rate_____				

FOR BOTH FLOWING and NON-FLOWING OUTFALLS:

INDICATOR	DESCRIPTION	COMMENTS
☐ Pipe Condition	☐Chip/Cracked ☐Corrosion ☐Peeling Paint ☐Other_____	
☐ Odor	☐Gas ☐Sewage ☐Sulfide ☐Other_____	
☐ Deposits/Stains	☐Oily ☐Flow Line ☐Paint ☐Iron	
☐ Vegetation	☐Normal ☐Inhibited ☐Excessive	
☐ Pipe Benthic Growth	☐Brown ☐Orange ☐Green ☐ Other_____	
☐ Pool Quality	☐Good ☐Odors ☐Algae ☐Colors ☐Oils ☐Suds	

FOR FLOWING OUTFALLS:

INDICATOR	DESCRIPTION	RELATIVE SEVERITY INDEX		
☐ Odor	☐ Sewage ☐ Petroleum/gas ☐ Sulfide ☐ Rancid/sour ☐ Other: _____	☐1 - Faint	☐2 - Easily detected	☐3 - Noticeable from a distance
☐ Color	☐ Clear ☐ Brown ☐ Orange ☐ Grey ☐ Other:_____	☐1 – Trace colors	☐2 – Faint Colors	☐3 – Clearly visible
☐ Turbidity	See Severity	☐1- Slight Cloudiness	☐2 – Cloudy	☐3 - Opaque
☐ Floatables (not including trash)	☐ Sewage ☐ Suds ☐ Iron ☐ Petroleum (oil sheen)	☐1 – Few/slight	☐2 - Some; indication of origin	☐3 – Many

Support Facilities
Inspection Report

Inspections must be conducted by a person with the knowledge and skills to assess conditions and activities that could impact stormwater quality at the facility and evaluate the effectiveness of best management practices required by this permit. Retain a copy of the completed and signed form with the SWPPP for at least 3 years.

INSPECTOR NAME:	**INSPECTION TIME:**	**INSPECTION DATE:**

WEATHER INFORMATION:

Description of Weather Conditions (e.g., sunny, cloudy, raining, snowing, etc.):

_____

_____

Was stormwater (e.g., runoff from rain or snowmelt) flowing at outfalls and/or discharge areas shown on the Site Map during the inspection? **(Yes X No)** **Comments:**

I. POTENTIAL POLLUTANT SOURCE AREA INSPECTION AND BMP EVALUATION

SWPPP and Site Map: Have a copy of the SWPPP and site map with you during the inspection so that you can ensure they are current and accurate. Use it as an aide in recording the location of any issues you identify during the inspection. • Is the Site Map current and accurate? • Is the SWPPP inventory of activities, materials and products current?	**Findings and Remedial Action Documentation:** Describe any findings below and the schedule for remedial action completion including the date initiated and date completed or expected to be completed.

I. POTENTIAL POLLUTANT SOURCE AREA INSPECTION AND BMP EVALUATION

Vehicle/Equipment Areas

Equipment cleaning:

Is equipment washed and/or cleaned only in designated areas?

- Observe washing: Is all wash water captured and properly disposed of?

Equipment fueling:

- Are all fueling areas free of contaminant buildup and evidence of chronic leaks/spills?
- Are all chemical liquids, fluids, and petroleum products, on an impervious surface that is surrounded with a containment berm or dike that is capable of containing 10% of the total enclosed tank volume or 110% of the volume contained in the largest tank, whichever is greater?
- Are structures in place to prevent precipitation from accumulating in containment areas?
  - If not, is there any water or other fluids accumulated within the containment area?
  - Note: If containment areas are not covered to prevent water from accumulating, the SWPPP must include a plan describing how accumulated water will be managed and disposed of.

Equipment maintenance:

- Are maintenance tools, equipment and materials stored under shelter, elevated and covered?
- Are all drums and containers of fluids stored with proper cover and containment?
- Are exteriors of containers kept outside free of deposits?
- Are any vehicles and/or equipment leaking fluids? Identify leaking equipment.
- Is there evidence of leaks or spills since last inspection? Identify and address.
- Are materials, equipment, and activities located so that leaks are contained in existing containment and diversion systems (confine the storage of leaky or leak-prone vehicles and equipment awaiting maintenance to protected areas)?

Add any additional site-specific BMPs:

_____

_____

_____

_____

_____

Findings and Remedial Action Documentation:

I. POTENTIAL POLLUTANT SOURCE AREA INSPECTION AND BMP EVALUATION

Good Housekeeping BMPs ***Are paved surfaces free of accumulated dust/sediment and debris?*** • Date of last quarterly vacuum/sweep • Are there areas of erosion or sediment/dust sources that discharge to storm drains? ***Are all waste receptacles located outdoors:*** • In good condition? • Not leaking contaminants? • Closed when is not being accessed? • External surfaces and area free of excessive contaminant buildup? ***Are the following areas free of accumulated dust/sediment, debris, contaminants, and/or spills/leaks of fluids?*** • External dock areas • Pallet, bin, and drum storage areas • Maintenance shop(s) • Equipment staging areas (loaders, tractors, trailers, forklifts, etc) • Around bag-house(s) • Around bone yards ***Other areas of industrial activity:*** _____ _____ _____ _____ _____	**Findings and Remedial Action Documentation:**
Spill Response and Equipment Are spill kits available, in the following locations? • Fueling stations • Transfer and mobile fueling units • Vehicle and equipment maintenance areas Do the spill kits contain all the permit required items? • Oil absorbents capable of absorbing 15 gallons of fuel. • A storm drain plug or cover kit. • A non-water containment boom, a minimum of 10 feet in length with a 12 gallon absorbent capacity. • A non-metallic shovel. • Two five-gallon buckets with lids. Are contaminated absorbent materials properly disposed of?	**Findings and Remedial Action Documentation:**

I. POTENTIAL POLLUTANT SOURCE AREA INSPECTION AND BMP EVALUATION	
General Material Storage Areas • Are damaged materials stored inside a building or another type of storm resistance shelter? • Are all uncontained material piles stored in a manner that does not allow discharge of impacted stormwater? • Are scrap metal bins covered? • Are outdoor containers covered?	**Findings and Remedial Action Documentation:**
Stormwater BMPs and Treatment Structures Visually inspect all stormwater BMPs and treatment structures devices, discharge areas infiltration and outfalls shown on the Site Map. • Are BMPs and treatment structures in good repair and operational? • Are BMPs and treatment structures free from debris buildup that may impair function? • The permit requires Permittees to clean catch basins when the depth of debris reaches 60% of the sump depth. In addition, the Permittee must keep the debris surface at least 6 inches below the outlet pipe. Based on this, do catch basins need to be cleaned? • Are berms, curbing or other methods used to divert and direct discharges adequate and in good condition?	**Findings and Remedial Action Documentation:**

Observation of Stormwater Discharges	**Findings and Remedial Action Documentation:**
• Is the discharge free of floating materials, visible oil sheen, discoloration, turbidity, odor, foam or any other signs of contamination? • Water from washing vehicles or equipment, steam cleaning and/or pressure washing is considered process wastewater and is not allowed to comingle with stormwater or enter storm drains. Is process water comingling with stormwater or entering storm drains? Illicit discharges include domestic wastewater, noncontact cooling water, or process wastewater (including leachate). • Were any illicit discharges observed during the inspection?	

II. CORRECTIVE ACTION AND SWPPP MODIFICATIONS DESCRIPTIONS:

Additional space to describe inspection findings and corrective actions if needed. Provide brief explanation of the general location and the rationale for the additional or different BMPs.

Since the initial site inspection, the following hot spot issues of concern have been addressed:

III. CERTIFICATION STATEMENTS AND SIGNATURES:

Inspector – Certification

This section must be completed by the person who conducted the site inspection prior to submitting this form to the person with signature authority or a duly authorized representative of that person.

☐ The facility is in compliance with the terms and conditions of the SWPPP and the City of Fairfax MS4 Permit.

☐ *The facility is out of compliance with the terms and conditions of the SWPPP and the City of Fairfax MS4 Permit. This report includes the remedial actions that must be taken to meet the requirements of the SWPPP and permit, including a schedule of implementation of the remedial actions.*

"I certify that this report is true, accurate, and complete, to the best of my knowledge and belief."

Inspector's Name – Printed	**Inspector's Signature**	**Inspector's Title**	**Date**

Permittee – Certification

☐ The facility is in compliance with the terms and conditions of the SWPPP and the City of Fairfax MS4 Permit.

☐ *The facility is out of compliance with the terms and conditions of the SWPPP and the City of Fairfax MS4 Permit. This report includes the remedial actions that must be taken to meet the requirements of the SWPPP and permit, including a schedule of implementation of the remedial actions.*

"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 gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering 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."

PRINTED NAME of person with **Signature Authority** or a **Duly Authorized Representative**[1]	SIGNATURE of person with **Signature Authority** or a **Duly Authorized Representative**[1]	**DATE**

[1] ***A person is duly authorized representative only if the authorization specifies either an individual or a position having responsibility for the overall operation of the regulated* facility*, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters.***

ROUTINE VISUAL INSPECTION LOG

Date of Inspection: _____ **Time of Inspection:** _____
Name of Inspector (s): _____
Signature of Inspector (s): _____

Inspection Period (Check One)
☐ 1st Quarter (January through March) ☐ 2nd Quarter (April through June)
☐ 3rd Quarter (July through September) ☐ 4th Quarter (October through December)

Weather conditions during inspection: _____

Any discharges occurring at time of inspection: ☐ Yes ☐ No
If Yes explain: _____

Any previously unidentified discharges of pollutants from the site: ☐ Yes ☐ No
If Yes explain: _____

Any control measures needing maintenance or repairs: ☐ Yes ☐ No
If Yes explain: _____

Any failed control measures that need replacement: ☐ Yes ☐ No
If Yes explain: _____

Any incidents of Noncompliance observed: ☐ Yes ☐ No
If Yes explain: _____

Any additional control measures needed to comply with the permit requirements:
☐ Yes ☐ No
If Yes explain: _____

In and around catch basin and outfalls		
Catch basin / Outfalls free of debris	☐ Yes	☐ No
Any discharges	☐ Yes	☐ No
Any sheen or chemical odors evident on effluent	☐ Yes	☐ No
General Cleanliness of area	☐ Good	☐ Bad
Comments (Note specific outfall comment is for):		

Additional Comments:

_____
_____
_____
_____

VISUAL ASSESSMENT LOG

Date Sample Taken: _____ **Time Sample Taken:** _____
Name of Sampler (s): _____
Signature of Sampler (s): _____

Date of Visual Assessment: _____ **Time of Visual Assessment:** _____
Name of Assessor (s): _____
Signature of Assessor (s): _____

Visual Assessment Period (Check One):
☐ 1st Quarter (January through March) ☐ 2nd Quarter (April through June)
☐ 3rd Quarter (July through September) ☐ 4th Quarter (October through December)

Sample location(s): _____ Outfall #; _____ Other
If other explain: _____

Weather conditions during sampling: _____

Nature of discharge: _____ Runoff; _____ Snowmelt; _____ Other
If other explain: _____

Sample taken within first 30 minutes of Discharge: _____ Yes; _____ No
If no explain why: _____

Quality of sample:

- Color _____
- Odor _____
- Clarity _____
- Floating Solids _____
- Settled Solids _____
- Suspended Solids _____
- Foam _____
- Oil Sheen _____
- Other _____

Probable sources of any observed stormwater contamination: _____
_____
_____
_____

Any corrective action required as a result of quarterly visual assessment: _____ Yes; ___ No
If yes explain: _____
_____
_____
_____

Appendix B – IDDE Policy

https://cnu.edu/public/stormwater/_pdf/idde_plan_and_policy.pdf

Appendix C – Maps

https://cnu.edu/public/stormwater/_pdf/stormwater_discharges_at_the_campus.pdf

Appendix D – MS4 General Permit

https://law.lis.virginia.gov/admincode/title9/agency25/chapter890/section40/

Appendix E –
Standard Operating Procedures (SOPs)

https://cnu.edu/public/stormwater/_pdf/stormwater_standard_operating_procedures.pdf

Appendix F –

Log of UNAUTHORIZED DISCHARGE, RELEASE, OR SPILL INCIDENT REPORTED

Documentation of any unauthorized discharges, release, or spill incidents reported must be noted and retained with the SWPPP as required by the MS4 General Permit 9VAC25-890-40. Please contact CNU to see findings, responses, and follow-up actions for potential illicit discharges.

Incident date	Site	Material discharged, released, or spilled	Estimated quantity of material discharged, released, or spilled

Appendix F ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE)

CHRISTOPHER NEWPORT
UNIVERSITY

Illicit Discharge Detection and Elimination (IDDE) Policy

Grounds Department
1 Avenue of the Arts, Newport News, VA 23606
Phone: (757) 594-8700
Email: Grounds@cnu.edu

Revised: 8/15/22

Background

Christopher Newport University (CNU) is the owner and operator of registered small municipal separate storm sewer system (MS4). A Stormwater Quality and Quantity Management Study was developed for the University by Koontz-Bryant in 2002 and revised in 2008. This study contains detailed information on the existing stormwater conveyance system at the University Based on the stormwater study, the University area encompasses 142.5 acres. The study also provides a map (updated in 2008) showing drainage areas and storm sewer mapping. CNU further had a Stormwater Master Plan developed in 2019 by VHB that updates the stormwater plan for the campus, providing an approximate total institutional footprint of 152 acres that includes the MS4 area and other facilities that CNU operates in the adjacent City of Newport News MS4.

1. Purpose of Policy

The purpose of this policy is to provide for the protection of the environment at CNU, and the surrounding areas, through the regulation of non-stormwater discharges to the storm drainage system to the maximum extent practicable as required by federal, state, and local law. This policy establishes MS4 in order to comply with requirements of the National Pollutant Discharge Elimination System (NPDES) permit process, as implemented through the Virginia Stormwater Management Program (VSMP) permit for CNU. The objectives of this policy are as follows:

A. To prevent or minimize to the maximum extent practicable, the discharge of pollutants from University properties and operations into the storm drainage system.

B. To develop, implement and enforce a program to detect and eliminate illicit discharges, as defined by 9VAC25-870-400 and 9VAC25-870-10, into the regulated small MS4.

C. To comply with the requirements of CNU's stormwater permit.

2. Definitions

Best Management Practices (BMPs): Activities, prohibitions of practices, general 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. BMPs also include treatment practices, operating procedures, and practices to control site runoff, spillage or leaks, sludge or water disposal, or drainage from raw materials storage.

Contractor: Any individual or company, including a subcontractor, hired to perform services on university property.

Hazardous substance: Any substance designated under the Code of Virginia or 40 CFR Part 116 pursuant to § 311 of the CWA.

Illicit discharge: Any discharge to a municipal separate storm sewer that is not composed entirely of stormwater, except discharges pursuant to a separate VPDES or state permit (other than the state permit for discharges from the municipal separate storm sewer), discharges resulting from firefighting activities, and discharges identified by and in compliance with 9VAC25-870-400 D 2 c (3).

Municipal separate storm sewer (MS4): A conveyance or system of conveyances otherwise known as a municipal separate storm sewer system, including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains:

1) Owned or operated by a federal, state, city, town, county, district, association, or other public body, created by or pursuant to state law, having jurisdiction or delegated authority for erosion and sediment control and stormwater management, or a designated and approved management agency under § 208 of the CWA that discharges to surface waters;
2) Designed or used for collecting or conveying stormwater;
3) That is not a combined sewer; and
4) That is not part of a publicly owned treatment works.

Municipal Separate Storm Sewer System (MS4): All separate storm sewers that are defined as "large" or "medium" or "small" municipal separate storm sewer systems or designated under 9VAC25-870-380 .

Municipal Separate Storm Sewer System Management Program or MS4 Program: A management program covering the duration of a permit for a municipal separate storm sewer system that includes a comprehensive planning process that involves public participation and intergovernmental coordination, to reduce the discharge of pollutants to the maximum extent practicable, to protect water quality, and to satisfy the appropriate water quality requirements of the CWA and regulations and the Virginia Stormwater Management Act and attendant regulations, using management practices, control techniques, and system, design and engineering methods, and such other provisions that are appropriate.

National Pollutant Discharge Elimination System (NPDES) Storm Water Discharge Permit: A permit issued by EPA (or by a State under authority delegated pursuant to 33 USC §1342(b)) that authorizes the discharge of pollutants to waters of the United States, whether the permit is applicable on an individual, group, or general area-wide basis.

Non-stormwater discharge: Any discharge to the storm drain system that is not composed entirely of stormwater.

Outfall: When used in reference to municipal separate storm sewers, a point source at the point where a municipal separate storm sewer discharges to surface waters and does not include open conveyances connecting two municipal separate storm sewers, or pipes, tunnels or other conveyances which connect segments of the same stream or other surface waters and are used to convey surface waters.

Point source: Any discernible, confined, and discrete conveyance including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel, or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural stormwater runoff.

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; and noxious or offensive matter of any kind.

Source: Any building, structure, facility, installation, or activity from which there is or may be a discharge of pollutants.

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

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

Wetlands: Those areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas.

Visitor: A person who is not enrolled at, compensated by, or an affiliate of the University.

3. Applicability

This policy is applicable to all students, faculty, staff, contractors, and visitors of the University. This policy shall apply to all water entering the storm drain system generated on any lands owned or operated by the University.

4. Responsibility for Administration.

The University shall administer, implement, and enforce the provisions of this policy.

5. Compatibility with Other Regulations

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

6. Severability

The provisions of this policy are declared to be severable. If any provision of this policy is held invalid, this determination will not affect the other provisions or application of this policy.

7. Illicit Discharges

No CNU employee, student, visitor, contractor, or department shall cause or allow discharges into the University's storm drainage system which are not composed entirely of stormwater, except for the allowed discharges provided in the Virginia Stormwater Management Program (VSMP) Regulations

(9VAC25-870). The spilling, dumping, or disposal of materials other than stormwater to the storm drainage system are strictly prohibited.

Prohibited discharges include, but are not limited to:

- Wastewater from washout of concrete
- Wastewater from the washout and cleanout of stucco, paint, form release oils, curing compounds, and other construction materials
- Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance
- Oils, toxic substances, or hazardous substances from spills or other releases
- Soaps, solvents, or detergents used in equipment and vehicle washing

8. Allowed Discharges

The following discharges to the storm drainage system are allowed, as per 9VAC25-890-20 as they are considered to be not significant contributors of pollutants to the MS4:

- Discharges that are covered under a separate individual or general VPDES or VSMP permit for non-stormwater discharges.

- Discharges or flows which are not significant contributors of pollutants to the municipal separate storm sewer system:

    - Water line flushing, managed in a manner to avoid an instream impact;
    - Landscape irrigation;
    - Diverted stream flows;
    - Rising groundwaters;
    - Uncontaminated groundwater infiltration, as defined at 40 CFR 35.2005(20);
    - Uncontaminated pumped groundwater;
    - Discharges from potable water sources;
    - Foundation drains;
    - Air conditioning condensation;
    - Irrigation water;
    - Springs;
    - Water from crawl space pumps;
    - Footing drains;
    - Lawn watering;
    - Individual residential car washing;
    - Flows from riparian habitats and wetlands;
    - Dechlorinated swimming pool discharges;
    - Street wash water;
    - Discharges or flows from firefighting activities;
    - Discharges from noncommercial fundraising car washes if the washing uses only biodegradable, phosphate-free, water-based cleaners; or
    - Other activities generating discharges identified by the department as not requiring VPDES authorization.

9. Procedures

Inspections

CNU shall, at a minimum, visually inspect all outfalls once per year to evaluate the physical condition of the outfalls and to ensure that there no flows present from potential illicit discharges. In the event a flow is observed, or evidence suggests that illicit discharges may exist, further investigation shall be administered by any of the following methods as appropriate:

1. Date of inspection and follow-up
2. Tracing discharge up the storm sewer system;
3. Sampling of a discharge for analysis in order to determine if a pollutant is present and to identify the pollutant;
4. Implement BMPs to eliminate illicit discharges;
5. Scheduling of follow up observations; and,
6. Any other appropriate measures deemed necessary.

Flows suspected of containing illicit discharges due to the presence of odors, colors or sheens shall be further analyzed, which may include testing. If determined to be a naturally occurring issue and not an illicit discharge, no further analysis will be performed. Test parameters may include but are not limited to ammonia, detergent, chlorine, phosphorus, nitrogen, pH, conductivity, turbidity, temperature, and dissolved oxygen. The results of the inspections and testing shall be maintained in a format to allow tracking of outfall locations, inspection dates, chemical tests conducted, and follow-up procedures implemented to correct any detected illicit discharge. The physical condition of the outfall shall also be noted during the inspections. Illicit discharge data will be used in the preparation of the annual report to the Virginia Department of Environmental Quality.

Notification of Spills and Illicit Discharges

Once a spill or illicit discharge has been observed, the incident shall be immediately reported to the University MS4 Program Coordinator. In the event the program coordinator is unavailable, any member of the Stormwater Pollution Prevention Team or University Police may be notified. Failure to provide notification of the incident shall be a violation of this policy.

The MS4 Program Coordinator, or designee, shall conduct and an initial investigation within one business day of receiving notification. The MS4 Program Coordinator shall determine appropriate measures taken in order to prevent further discharge(s) and to begin remediation of pollution.

Tracking

Field surveys and instances of illicit discharges or spills shall be tracked in our IDDE Database and include:

1. Date discharge observed/reported;
2. Location of discharge;
3. Summary;
    a. Results of investigation;
    b. Any follow-up to investigation;
    c. Resolution of investigation; and,
4. Date investigation closed.

Enforcement and Penalties

Whenever the University finds that a violation of this Policy has occurred, CNU may order compliance by written notice to the responsible party. Such notice may require without limitation:

1. The performance of monitoring, analyses, and reporting;
2. The elimination of prohibited discharges or connections;
3. Cessation of any violating discharges, practices, or operations;
4. The abatement or remediation of stormwater pollution or contamination hazards and the restoration of any affected property;
5. Payment of any fee, penalty, or fine assessed against Christopher Newport University to cover remediation cost;
6. The implementation of new stormwater management practices; and
7. Disciplinary action up to and including dismissal, where appropriate.

The listed requirements will be at the expense of the responsible party. In the event that adequate measures are not initiated, the University may issue work orders to correct the violation and bill the responsible party for expenses incurred.

10. Training and Education

A training program for Stormwater Pollution Prevention/Good Housekeeping and IDDE is presented to applicable employees upon hire and no less than once per 24 months. Educational materials for Stormwater Pollution Prevention and IDDE are distributed through various forms of media to the members of the University.

Illicit Discharge Detection Tracking and Reporting (BMP 3.4, BMP 6.4)

CHRISTOPHER NEWPORT UNIVERSITY

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:		
Latitutde:	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

CHRISTOPHER NEWPORT UNIVERSITY

STANDARD OPERATING PROCEDURE
Stormwater Outfall Screening

Illicit Discharge, Detection, and Elimination (IDDE): Outfall Reconnaissance Inventory (ORI)	
Purpose of the SOP:	This SOP provides a basic checklist for managers and field crews conducting illicit discharge inspections of storm drainage system outfalls

Reference: Brown et al., *Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments,* Center for Watershed Protection, Ellicott City, 2004.

Planning Considerations:

- ❑ Inspections are to occur during dry weather (no runoff producing precipitation in last 48 hours)
- ❑ Conduct inspections with at least two staff per crew
- ❑ Conduct inspections during low groundwater and leaf off conditions if possible
- ❑ Complete Site Info section on Outfall Reconnaissance Inventory Form before leaving the office

Field Methods:

- ❑ Ensure outfall is accessible
- ❑ Inspect outfall only if safe to do so
- ❑ Characterize the outfall by recording information on the Outfall Reconnaissance Inventory Form
- ❑ Photograph the outfall with a digital camera (use dry erase board to identify outfall)
- ❑ If dry weather flow is present and does not appear to be an illicit discharge, attempt to identify the source of the flow (document flow for future comparison)
- ❑ Document dry outfalls for future comparison
- ❑ Follow procedure below if an illicit discharge is suspected
- ❑ Do not enter private property without permission

Equipment List:

1. Stormwater system map
2. Outfall Reconnaissance Inventory Forms
3. City identification
4. Digital camera (spare batteries)
5. Cell phone
6. Clip board and pencils
7. Dry erase board and pens
8. Flashlight (spare batteries)
9. Disposable gloves
10. Folding wood ruler
11. Temperature probe
12. pH probe
13. Ammonia test strips
14. Five 1-liter (polyethylene) sample bottles
15. Watch with second hand
16. Calculator
17. Hand sanitizer
18. Safety vests
19. First aid kit
20. Machete
21. Cooler
22. Permanent marker

Procedures to Follow if Illicit Discharge is Suspected:

- ❑ Use Outfall Reconnaissance Inventory Form to document observations
- ❑ Visually inspect general area for possible sources
- ❑ Take photos
- ❑ Estimate flow
- ❑ Collect samples if they would help with source identification
- ❑ Refer to Investigating Illicit Discharges SOP for further directions on source identification

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☐ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

Section 6: Overall Outfall Characterization

☐ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1. Sample for the lab?	☐ Yes	☐ No		
2. If yes, collected from:	☐ Flow	☐ Pool		
3. Intermittent flow trap set?	☐ Yes	☐ No	If Yes, type: ☐ OBM	☐ Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

Appendix G ANNUAL STANDARDS AND SPECIFICATIONS

Refer to the most recently approved AS&S for the current year. The following is the initial approved AS&S for this permit cycle.

Commonwealth of Virginia

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

1111 E. Main Street, Suite 1400, Richmond, Virginia 23219
P.O. Box 1105, Richmond, Virginia 23218
(800) 592-5482
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Matthew J. Strickler
Secretary of Natural Resources

David K. Paylor
Director
(804) 698-4000

March 12, 2020

Ms. M. Christine Ledford
Senior Associate Vice President for Administration and Finance
1 Avenue of the Arts
Newport News, VA 23606

Transmitted electronically: christine.ledford@cnu.edu

Subject: Christopher Newport University – Annual Standards and Specifications for Erosion & Sediment Control and Stormwater Management (AS&S for ESC and SWM)

Dear Ms. Ledford:

The Virginia Department of Environmental Quality ("DEQ") hereby approves the Annual Standards and Specifications for Erosion & Sediment Control and Stormwater Management for Christopher Newport University's (CNU) dated "December 2019". This coverage is effective from March 12, 2020 to March 11, 2021.

To ensure compliance with approved specifications, the Virginia Erosion and Sediment Control Law and the Virginia Stormwater Management Act, DEQ staff will conduct random site inspections, respond to complaints, and provide on-site technical assistance with specific erosion and sediment control and stormwater management measures and plan implementation.

Please note that your approved Annual Standards and Specifications include the following requirements:

1. Variance, exception, and deviation requests must be submitted separately from this Annual Standards and Specifications submission to DEQ. DEQ may require project-specific plans associated with variance requests to be submitted for review and approval.

2. The following information must be submitted to DEQ for each project at least two weeks in advance of the commencement of regulated land-disturbing activities. Notifications shall be sent by email to: StandardsandSpecs@deq.virginia.gov
    - i: Project name or project number;
    - ii: Project location (including nearest intersection, latitude and longitude, access point);
    - iii: On-site project manager name and contact info;
    - iv: Responsible Land Disturber (RLD) name and contact info;
    - v: Project description;
    - vi: Acreage of disturbance for project;

vii: Project start and finish date; and
viii: Any variances/exceptions/waivers associated with this project.

3. Project tracking of all regulated land disturbing activities (LDA) must be submitted to the DEQ on an annual basis. Project tracking records shall contain the same information as required in the two week e-notifications for each regulated LDA.

4. Erosion & Sediment Control and Stormwater Management plans must be reviewed by DEQ-Certified Plan Reviewers. CNU, as the AS&S holder, retains the authority to approve plans and must do so in writing. Should an AS&S holder contract out to a third party to fulfill the Plan Reviewer certification, this certified Plan Reviewer may recommend approval of the plan but final approval must come from the AS&S holder.

To ensure an efficient information exchange and response to inquiries, the DEQ Central Office is your primary point of contact. Central Office staff will coordinate with our Regional Office staff as appropriate.

Thank you very much for your submission and continued efforts to conserve and protect Virginia's precious natural resources.

Sincerely,

Erin Ervin Belt

Erin Ervin Belt, Manager
Office of Stormwater Management

Case Decision Information:
As provided by Rule 2A:2 of the Supreme Court of Virginia, you have thirty days from the date of service (the date you actually received this decision or the date it was mailed to you, whichever occurred first) within which to appeal this decision by filing a notice of appeal in accordance with the Rules of the Supreme Court of Virginia with the Director, Department of Environmental Quality. In the event that this decision is served on you by mail, three days are added to that period.

2019 Annual Standards and Specifications

Christopher Newport University

2019 Annual Standards and Specifications for Erosion and Sediment Control and Stormwater Management

PREPARED FOR

CHRISTOPHER NEWPORT UNIVERSITY

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757.594.7000

PREPARED BY

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August 2019

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Letter of Endorsement

Subject: Christopher Newport University Annual Standards and Specifications for Erosion and Sediment Control and Stormwater Management.

Dated: August 2019

I certify under penalty of law that all documents and all attachments related to the submission and updating of the Christopher Newport University Annual Standards and Specifications for Erosion and Sediment Control and Stormwater Management have been 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,

M. Christine Ledford

Senior Associate Vice President for Administration and Finance

Introduction

Christopher Newport University (CNU) has incorporated Annual Standards and Specifications for Erosion and Sediment Control (ESC) and Stormwater Management (SWM) that are integral components of Christopher Newport University's design, construction, maintenance, and management of the University's facilities and campuses. The Christopher Newport University Annual Standards and Specifications for ESC and SWM submittal has been developed to provide information regarding CNU's implementation in accordance with the Virginia Erosion and Sediment Control Law (§62.1-44 et. seq.), the Virginia Erosion and Sediment Control Regulations (9VAC25-840 et. seq.), the Virginia Erosion and Sediment Control Certification Regulations (9VAC25-850 et. seq.), the Virginia Stormwater Management Act (§62.1-44 et. seq.), and the Virginia Stormwater Management Program (VSMP) Permit Regulations (9VAC25-870 et. seq.) as related to municipal separate storm sewer systems (MS4) and regulated construction activities.

Christopher Newport University Annual Standards and Specifications for ESC and SWM shall be administered by the University Architect's Office, Grounds Department, or Facilities Management department depending on the type of project. The Annual Standards and Specifications shall apply to all design, construction and maintenance activities undertaken by Christopher Newport University, either by its internal workforce or contracted to external entities, where such activities are regulated by the Virginia ESC Law and Regulations or the Virginia SWM Act and VSMP Permit Regulations. During any inspections of Christopher Newport University's land disturbing activities

by DEQ, EPA or other such environmental agencies, compliance with the approved Christopher Newport University Annual Standards and Specifications for ESC and SWM (and all parts thereof), the Virginia ESC Law and Regulations, the Virginia SWM Act and the VSMP Permit Regulations will be expected.

Christopher Newport University Annual Standards and Specifications for ESC and SWM are submitted to the Virginia Department of Environmental Quality (DEQ) for review and approval on an annual basis, per 9VAC25-870-170 and §62.1-44.15:55D, or as determined by the DEQ. Christopher Newport University shall ensure that project specific plans are developed and implemented in accordance with these Annual Standards and Specifications.

This submittal constitutes Christopher Newport University's commitment to execute all provisions contained herein on regulated land disturbing activities and land development projects. As such, this submittal will be made available and utilized as an operational guidance document for Christopher Newport University projects.

While the Department of Environmental Quality, or Board, will remain the ESC and VSMP Authority, CNU shall be able to act as the authority in order to implement all aspects of the program except for the following items:

- Construction General Permit registration statement review and acceptance. (9VAC25-880-50)
- Construction General Permit issuance.
- Construction General Permit enforcement.
- Construction General Permit Notice of Termination (9VAC25-880-60, CGP Part I.F)
- Acceptance of variances and exceptions.

Acronyms and Abbreviations

AFG	Architect, Facilities, or Grounds
Bay	Chesapeake Bay
BMP	Best Management Practice
Board	Virginia Soil & Water Conservation Board
CNU	Christopher Newport University
CWA	Clean Water Act
CSS	Combined Sewer System
DCR	Department of Conservation and Recreation
DEQ	Department of Environmental Quality
EOR	Engineer of Record
EPA	Environmental Protection Agency
ERP	Enforcement Response Plan
ESC	Erosion & Sediment Control
FM	Facilities Management
GIS	Geographic Information Systems
GPS	Global Positioning System
HUC	Hydrologic Unit Code
IDDE	Illicit Discharge Detection & Elimination
LID	Low Impact Development
MEP	Maximum Extent Practicable
MCM	Minimum Control Measure
MS	Minimum Standard
MS4	Municipal Separate Storm Sewer System
NPDES	National Pollution Discharge Elimination System
NOI	Notice of Intent
NOV	Notice of Violation
POC	Pollutants of Concern
RLD	Responsible Land Disturber
SOP	Standard Operating Procedures
SWM	Stormwater Management
SWPPP	Stormwater Pollution Protection Plan
TMDL	Total Maximum Daily Load
UA	Urbanized Area
VESCL&R	Virginia Erosion & Sediment Control Law & Regulations
VPDES	Virginia Pollution Discharge Elimination System
VRRM	Virginia Runoff Reduction Method
VSMP	Virginia Stormwater Management Program
VSMPGCP	Virginia Stormwater Management Program General Construction Permit
WLA	Waste Load Allocation

Section 1: Annual Standards and Specifications Administration

All projects involving land-disturbing activity subject to the Virginia Erosion and Sediment Control Law (§62.1- 44 et seq. as amended), the Virginia Erosion and Sediment Control Regulations (9VAC25-840 et seq. as amended), and the Virginia Erosion and Sediment Control Certification Regulations (9VAC25-850 et seq. as amended) and the Virginia Stormwater Management Act (62.1-44. et seq.) and the VSMP Regulations (9VAC25-870 et. seq. as amended) shall be bound by the CNU Annual Standards and Specifications for ESC and SWM.

1.1. CNU Annual Standards and Specifications for ESC & SWM approved by DEQ are composed of general specifications. The general specifications for ESC and SWM that apply to the land-disturbing activities, include by reference the following:

- *Virginia Erosion and Sediment Control Law* (§62.1-44 et seq. as amended);
- *Virginia Erosion and Sediment Control Regulations* (9VAC25-840 et seq. as amended);
- *Virginia Erosion and Sediment Control and Stormwater Management Certification Regulations* (9VAC25- 850 et seq. as amended);
- *Virginia Erosion and Sediment Control Handbook*, 1992, as amended;
- *Virginia Stormwater Management Act* (§62.1-44 et seq. as amended);
- *Virginia Stormwater Management Permit Regulations* (9VAC25-870 et seq. as amended);
- *Virginia Stormwater Management Handbook*, 1999, as amended;
- *Virginia Stormwater Construction General Permit Regulations* (9VAC25-880 et seq. as amended);
- *Virginia Stormwater BMP Clearinghouse* at https://www.swbmp.vwrrc.vt.edu/
- Technical Bulletins, as amended, on the Virginia DEQ website at www.deq.virginia.gov
- Memos, as amended, on the Virginia DEQ website at www.deq.virginia.gov.

1.2. In accordance with 9VAC25-870-170, individual stormwater and ESC plans, to the maximum extent practicable, shall comply with any locality's VSMP authority's technical requirements adopted pursuant to the Act. It shall be the responsibility of the state agency to demonstrate that the locality's VSMP authority's technical requirements are not practicable for the project under consideration.

1.3. Any land-disturbing work, as defined by VESCL&R, must be vetted through AFG offices. Prior to starting a land-disturbing project, the project must have plans stamped and approved by the EOR.

1.4. Site specific ESC plans shall be prepared for all projects involving a regulated land-disturbing activity greater than 10,000 square feet disturbed area, 2,500 square feet in all areas designated as Chesapeake Bay Act Preservation Areas, or when deemed necessary by an EOR if development is outside the purview of the VESCL&R and poses potential environmental implications. Site specific ESC plans shall be submitted to EOR for review. Prior to starting a land-disturbing project, the project must have plans stamped approved by EOR. In addition, if the addition of impervious surfaces is part of the scope, a SWM narrative and/or schematic must be submitted concurrently to explain/show how the run-off will be treated.

1.5. Site specific SWM plans shall be prepared for all projects involving a land-disturbing activity of 10,000 square feet or more and/or that requires:

a. A Virginia Stormwater Management Program General Permit for Discharges from Construction Activities (VSMPGP)
b. Land-disturbing activity contained within a watershed of a regional water quality Stormwater management facility
c. Incorporates the use of a LID and/or BMP
d. Changes the University MS4

Site specific SWM plans shall be submitted to an AFG office or EOR for review. Prior to starting a land-disturbing project requiring a SWM plan, the project must have an approval issued by a qualified AFG representative or EOR and proof a state permit coverage.

Please note that the Chesapeake Bay Preservation Areas land disturbance threshold is greater than or equal to 2,500 square feet.

1.6. An AFG representative or EOR may request DEQ to grant project specific variance or exception, in terms of ESC and SWM, respectively, to the approved Christopher Newport University Annual Standards and Specifications for ESC and SWM. All requested variances and exceptions are to be considered unapproved until written approval from DEQ is received. Refer to Section 6 for more information on variances and exceptions.

1.7. The University Architect's office will only be responsible for capital construction projects. These projects will have an Engineer of Record (EOR) and a Certified Land Disturber (CLD) who will monitor and report on all of the requirements of the Annual Standards and Specifications that apply to capital construction project.

Section 2: Annual Standards and Specifications Personnel

AFG shall be the authority for Christopher Newport University projects. The following is a breakdown in responsibilities and titles regarding the Christopher Newport University Annual Standards and Specifications for ESC and SWM. Responsibilities may be combined in terms of staffing resources only if the person responsible for the task(s) is qualified per Section 1.1.3. CNU may enter into agreements or contracts with soil and water conservation districts, planning district commissions, adjacent localities, or other public or private entities to carry out or assist with the responsibilities of this article if individuals within those entities performing tasks are qualified per Section 1.1.3. The following titles are designated to ensure compliance with erosion and sediment control and stormwater management regulations on all Christopher Newport University projects.

2.1. "Certified ESC Inspector" means an employee or agent of Christopher Newport University who: (i) holds a certificate of competence from the Board in the area of project inspection; or, (ii) is enrolled in the Board's training program for project inspection and successfully completes such program within one year after enrollment; and (iii) shall be responsible to inspect as mandated by the VESCL&R erosion and sediment control measures to ensure proper installation in accordance with the approved plan and record the state and effectiveness of such measures in an effort to minimize site erosion and sediment control.

2.2. "Certified SWM Inspector" means an employee or agent of Christopher Newport University who: (i) holds a certificate of competence from the Board in the classification of project inspector in the area of SWM; or, (ii) is enrolled in the Board's training program for project inspector and successfully completes such program within one year after enrollment; and, (iii) shall be responsible to inspect construction sites for SWPPP compliance.

2.3. "Certified ESC Plan Reviewer" means an employee or agent of Christopher Newport University who: (i) holds a certificate of competence from the Board in the area of plan review; (ii) is enrolled in the Board's training program for plan review and successfully completes such program within one year after enrollment; or (iii) is licensed as a professional engineer, architect, certified landscape architect, or land surveyor pursuant to Article 1 (§ 54.1-400 et seq.) of Chapter 4 of Title 54.1 of the Code of Virginia; or (iv) is a professional soil scientist as defined in Chapter 22 (§ 54.1-2200 et seq.) of Title 54.1 of the Code of Virginia.

2.4. "Certified SWM Plan Reviewer" means an employee or agent of Christopher Newport University who: (i) holds a certificate of competence from the Board in the classification of plan reviewer in the area of SWM; or, (ii) is enrolled in the

Board's training program for plan reviewer and successfully completes such program within one year after enrollment.

2.5. "Certified ESC Program Administrator" means an employee or agent of Christopher Newport University who: (i) holds a certificate of competence from the Board in the area of program administration; or, (ii) is enrolled in the Board's training program for program administration and successfully completes such program within one year after enrollment.

2.6. "Certified SWM Program Administrator" means an employee or agent of Christopher Newport University who: (i) holds a certificate of competence from the Board in the classification of program administration in the area of SWM; or, (ii) is enrolled in the Board's training program for program administration and successfully completes such program within one year after enrollment.

2.7. "Certified ESC Combined Administrator" means an employee or agent of Christopher Newport University who: (i) holds a certificate of competence from the Board in the area of program administration, plan review and project inspection; or, (ii) is enrolled in the Board's training program for program administration, plan review and project inspection and successfully completes such program within one year after enrollment.

2.8. "Certified SWM Combined Administrator" means an employee or agent of Christopher Newport University who: (i) holds a certificate of competence from the Board in the classification of program administration, plan reviewer and project inspector in the area of SWM; or, (ii) is enrolled in the Board's training program for program administration, plan reviewer, and project inspector and successfully completes such program within one year after enrollment.

Please note that any person who holds a valid and unexpired certificate of competence issued by the board in the classification of ESC or SWM, or who obtains such a certificate, and who later successfully obtains an additional certificate may surrender both certificates of competence to the board and request in writing issuance of a dual certificate showing certification in both classifications. Such a request must be made while both the ESC and SWM certificates of competence obtained are valid and unexpired.

Section 3: Annual Standards and Specifications Implementation

A qualified AFG or EOR representative shall be considered the plan approving authority for ESC and SWM. ESC and SWM plans shall comply with Christopher Newport University Annual Standards and Specifications for Erosion and Sediment Control and Stormwater Management, the Virginia Erosion and Sediment Control Law (62.1-44 et, seq,), the Virginia Stormwater Management Act (62.1-44 et. Seq.), associated ESC and SWM regulations, and the Virginia Stormwater Management Program Permit regulations (9VAC25-870 et. Seq.). Refer to Section 1.1 for more information on general specifications.

The use of the VESCH, along with the accompanying technical documents and guidance, control measures is strongly preferred. Non-VESCH control measures, BMPs, and specifications may be included in the AS&S submittal, but their use may be further reviewed and approved by the applicable DEQ Regional Office on a project-specific basis.

3.1. Submittals: Two complete sets of ESC/SWM plans, narratives and necessary attachments shall be submitted to one of the AFG offices or EOR for review and approval prior to any land-disturbing activities. A qualified AFG representative or EOR shall have 30 days to review the plan and provide written comments. Re-submittals shall include revision notes referenced to written comments. Prior to commencement of any land-disturbing activities, the project must have received plan approval from a qualified AFG representative.

When non-VESCH control measures are used, all applicable practical information including definition, purpose, conditions where practice applies, planning considerations, design criteria, construction specifications, design tables and plates, and maintenance and inspections shall be included in the ESC Plan. Non-VESCH and proprietary control measures shall be installed per the manufacturer's instructions and with the intent of the VESCH specifications. Should non-VESCH control measures fail to effectively control soil erosion, sediment deposition, and non-agricultural runoff, then VESCH control measures shall be utilized.

Projects requiring a CGP must submit a complete and accurate Registration Statement, Fee Form, and the AS&S Entity Information form (presented in Appendix F) to AFG office. CNU will submit the completed application package to DEQ for issuance of the CGP. CNU will submit a notice of termination to the DEQ upon completion of the project. Refer to section 5.3 for additional information concerning project close out procedures.

The DEQ shall be notified of any material changes which may impact the Registration Statement, Fee Form, AS&S Entity Information form and/or permit coverage. Notification of changes may be sent via email to: constructionGP@deq.virginia.gov

3.2. Plan Reviews: Plan reviews shall be conducted by qualified personnel as defined in section 2. When approved, at least five complete sets must be submitted to be stamped approved by a qualified AFG office or EOR for ESC/SWM. These plan sets will be allocated as follows: (1) EOR, (2) Contractor, (2) appropriate AFG office representative.

3.3. Delegation of Authority: In accordance with the General VPDES Permit for Discharges of Stormwater from Construction Activities the individuals or positions with delegated authority to sign inspection reports and/or amend the SWPPP must be identified. If the individual or position identified on the Title Sheet of the SWPPP changes or additional individuals or positions are given this responsibility after the preconstruction meeting occurs, the changes/additions must be noted below and submitted to the Authority.

3.4. Pre-Construction Conference: Prior to commencement of a land disturbance, a pre-construction conference shall be held in order to clarify ESC/SWM roles, responsibilities and obligations of all parties involved with the land- disturbing activity. At a minimum, the pre-construction conference will be attended a qualified representative from one of the AFG offices, EOR, and Contractor Project Manager or Superintendent. by the CNU Project Manager, CNU Construction Inspector, CNU Stormwater Coordinator and the project RLD.

3.5. Inspections: Site inspections shall be conducted by qualified personnel as defined in section 2.

3.6. Enforcement: A qualified AFG representative or EOR shall be responsible for ensuring that corrective action is taken in response to comments and violations listed on inspection reports. In the event that the project manager is unable to get the contractor to comply with requests, documentation will be forwarded to the Director of AFG for further enforcement action as deemed appropriate. This could include notifying the DEQ of project non-compliance for further enforcement and possible fines.

3.7. Changes and Amendments to Approved Plans: Amendments to approved plans must be reviewed and approved by a qualified AFG representative or EOR. Revisions shall not be considered approved until written notice is provided. The project SWPPP will need to be updated with approved changes and amendments. If a change will increase the land disturbance to a higher permit fee, the difference in fees will be paid to the DEQ.

Section 4: Plan Review and Approval

Detailed requirements of specific items to be included in the ESC and SWM plans are in the ESC/SWM Plan Prepared/Reviewer Checklist (Appendix A) and General Erosion and Sediment Control Notes (Appendix B).

4.1. Construction Plans

a. Complete ESC and SWM plans shall be provided in the construction plans.
b. Plans shall include the amount of disturbed area listed per phase and proposed net increase in impervious area.
c. Minimum Standards 1 through 19 (9VAC25-840-40) shall be listed in the construction plans.
d. Construction sequence of operations shall be provided on the construction plans with staged implementation of erosion and sediment control measures for each phase. The area which may be disturbed in each phase shall be set forth in the construction plans.
e. Plans shaft provide information on the maintenance of BMPs or reference the narrative section that contains the information.
f. Profiles shall be included for all closed and open storm systems. The profile shall include the existing surface, final surface, proposed water elevations, pipes, pipe crossings, and hydraulic grade line. Surcharges shall be clearly indicated on the profile.
g. SWM calculations include but are not limited to: ditch computations, stormwater routing, storm inlet computations, pipe capacity computations, BMP computations, pond routings and computations, etc.
h. Proof of adequate outfall and adequacy of the receiving channel to the SWM treatment facility needs to be provided.
i. Plans shall comply, to the maximum extent practicable, with any locality's VSMP ESC and SWM technical requirements or demonstrate that the locality's VSMP ESC and SWM technical requirements are not practicable for the project.
j. Stockpile/lay-down areas and trailer locations shall be provided on the erosion and sediment control plans for all phases.
k. Any on-site changes shall be documented on the approved site plan and within the SWPPP.

Section 5: Inspections

Periodic inspections shall be conducted as required by state law for ESC and SWM. Periodic inspections shall be conducted, at a minimum, at least once in very two-week period and within 48 hours following any runoff producing storm even. Inspectors shall be notified 24 hours prior to installation of BMPs and shall be present for installation of BMPs. In addition, inspections shall be made during or immediately following initial installation of erosion and sediment controls and at the completion of the project. Completion of the project will only be considered after establishment of permanent stabilization, not completion of construction.

5.1 Erosion and Sediment Control Inspections: Construction sites shall be inspected by Certified ESC or SWM inspectors. The ESC/SWM Inspection Report form provided in Appendix C shall be used on each site inspection visit. All measures shown on the plan shall be inspected. All issues and violations shall be photographed and documented in the report. Critical areas that require continuous inspections shall also be identified on the site plan. The inspection report shall specify the required corrective action for each issue or violation noted and a date by which all corrective actions must be completed. A copy of the ESC/SWM Inspection Report will be emailed to the CNU project manager and any other persons identified during the pre-construction meeting.

5.2 Stormwater Management Inspections: Construction sites shall be inspected by qualified personnel along with ESC inspections. The ESC/SWM Inspection Report form provided in Appendix C will also be used to record SWM inspections and shall be filled out on each site inspection. All stormwater BMPs must be identified on the site plan. All measures shown on the plan shall be inspected. All issues and violations shall be photographed and documented in the report. Critical areas that require continuous inspections shall also be identified on the site plan. The inspection report shall specify the required corrective action for each issue or violation noted and a date by which all corrective actions must be completed. A copy of the ESC/SWM Inspection Report will be emailed to those identified during the pre-construction meeting.

5.3 Project Close-Out: Project completion is defined as the achievement of permanent stabilization, verification of final product according to approved plans, completion of TV inspection of the installed storm sewer system and receipt of as-built certification of SWM BMPs (if applicable). Project completion, concerning ESC and SWM, will be noted using the ESC/SWM Inspection Report form. A notice of termination will be submitted to DEQ in accordance with 9VAC25-880-60.

5.4 Post-Construction Inspections: Post-construction (maintenance) inspections for permanent SWM BMPs shall be made on an annual basis and in accordance

with the manufacturer's recommendations, engineer's recommendations, and/or stormwater regulation requirements. The BMP Field Assessment Worksheet provided in Appendix D shall be used during inspections. In the case where maintenance or repair is required, fund requests and/or work orders shall be made in order to have items corrected.

5.5 Violations and Documentation: Violations shall be documented in the ESC/SWM Inspection Report, including photographs, descriptions, and necessary corrective actions. If a violation continues to be repeated, then a Notice to Comply will be issued and DEQ notified. At the discretion of a qualified AFG representative, the land disturbance approval may be suspended and/or revoked; at which time all land disturbing activity must cease until corrective actions have been completed. Alternatively, a qualified AFG has the option to contract with a 3rd party to install and maintain ESC and/or SWM measures in accordance with the approved plan, complete any necessary corrective actions, and/or abate any related damages. Once the site is brought back into compliance to the satisfaction of a qualified AFG representative, site work may resume. All associated costs to bring site into compliance will be the responsibility of the contractor.

Section 6: Variances and Exceptions

Variances and exceptions to regulations must ensure protection of off-site properties and resources from damage. Economic hardship is not sufficient reason to request a variance or an exception from VESCL&R or Christopher Newport University Annual Specifications for ESC and SWM. Variances and exceptions are considered to be project specific.

For a variance or exception to become part of the project ESC and SWM plans, a written request must be submitted to the AFG office, or EOR, for a cursory review. If acceptable, the request will then be forwarded to the DEQ Central Office for final review and approval. This request must include an explanation and description of the specific condition necessitating the request. The request must also include a detailed description of the alternative practice and justification that the practice meets the intent of the regulation for which the variance or exception is sought. (Ref. 9VAC25-840-50).

6.1. Variance or Exception Request Policy and Procedure:

a. The design professional shall draft a letter of request to AFG office or EOR and shall be accompanied by complete details and documentation, including justification and impacts associated with the request.
b. A cursory review will be completed by CNU AFG or EOR to ensure the request is complete and then will forward to the DEQ Central Office.
c. All requests shall be considered unapproved until written approval from AFG office or EOR DEQ is received. CNU may, at DEQ's discretion, be required to produce documentation to demonstrate the applicability of variance requests. Final approval rests with DEQ.
d. All approved variances or exceptions shall be included as part of the site plan. Listed in the General notes section of the ESC/SWM plans for land disturbing activities and in included in the Narrative.

Section 7: Land-Disturbing Activities

Land-disturbing activities that obtain an initial state permit or commence land disturbance prior to July 1, 2014, shall be conducted in accordance with the Part II C (9VAC25-870-93 et seq.) technical criteria. Such projects shall remain subject to the Part II C technical criteria for two additional state permit cycles. After such time, portions of the project not under construction shall become subject to any new technical criteria adopted by the board (9VAC25-870-47 B).

Land-disturbing activities that obtain an initial state permit on or after July 1, 2014, shall be conducted in accordance with the Part II B (9VAC25-870-62 et seq.) technical criteria, except as provided for in 9VAC24-870-48. Land-disturbing activities conducted in accordance with the Part IIB technical criteria shall remain subject to the Part IIB technical criteria for two additional state permit cycles. After such time, portions of the project not under construction shall become subject to any new technical criteria adopted by the board (9VAC25-870-47 B).

Grandfathered land-disturbing activities shall be subject to the Part II C technical criteria (9VAC25-870- 93 et sag.). Land-disturbing activities will be considered grandfathered if they meet the conditions of 9VAC25-870-48. Grandfathered land disturbing activities shall be subject to Part II C technical criteria for one additional state permit cycle. After such time, portions of the project not under construction shall become subject to any new technical criteria adopted by the board (9VAC25-870-48 C).

The required phosphorous nutrient reductions may be allowed in accordance with the criteria set forth in VAC25-870-69 "Offsite compliance options". Qualified projects must meet any of the following conditions:

a. Be below 5-acres of disturbed land
b. The post-construction phosphorous reduction is less than 10 pounds
c. At least 75 % of the required reduction can be achieved on site
d. If at least 75 % reduction cannot be achieved onsite and the operator can demonstrate that:
    - Alternative site designs have been considered that may accommodate on-site BMPs
    - On-site BMPs have been considered in alternative site designs to the maximum extent practicable
    - Appropriate on-site BMPs will be implemented
    - Full compliance with post development non-point nutrient runoff compliance requirements cannot practicably be met on-site.

7.1 Proposed Land-disturbing activities: A list of regulated land-disturbing activities expected to be under contract during the referenced time period is included in

Appendix E. The list includes project location, estimated disturbed acreage by watershed, and approximate start and completion dates for each project.

7.2 Current and Pact Land-disturbing activities: A list of completed and on-going regulated land-disturbing activities either under contract or terminated during the previously referenced time period are included in Appendix E. The list includes project location, project start and completion date, and actual disturbed area.

7.3 Project Tracking and Notification: CNU will provide a quarterly tracking report to DEQ identifying project name, location, on-site project manager (with contact information), project description, project status (design or construction), estimated disturbed acreage, start and finish dates, applicable DEQ-Certified RLD information, dates of inspections, and any variances/exemptions/waivers associated with the project.

DEQ e-notifications shall be made 2 weeks prior to initiating a regulated land disturbing activity.

Section 8: Construction Requirements

All contractors performing land disturbing activities on campus property are required through contract documents to follow existing ESC requirements and obtain all applicable permits before construction activity commences. The CO-7 General Conditions of the Construction Contract requires that the contractor have a DEQ-certified responsible land disturber on- site. In addition to contract language, all work performed on University property is required to comply with the Construction and Professional Services Manual (CPSM) published by the Bureau of Capital Outlay Management and CNU's Design and Construction Guidelines.

8.1 DEQ'S Responsibilities: DEQ shall have sixty days in which to comment on any ECS and SWM standards and specifications submitted to it for review, and its comments shall be binding on CNU and any private business hired by CNU (§62.1- 44.15:55. B).

a. Enforcement by the DEQ for SWM will be in accordance with §62.1-44.15:27 F. Enforcement shall be administered by the Department and the Board where applicable in accordance with the provisions of this article. Enforcement by the DEQ for ESC will be in accordance with §62.1-44.15:54.E and §62.1- 44.15:56G. The Department and the Board, where applicable, shall provide project oversight and enforcement as necessary and comprehensive program compliance review and evaluation. The Department may take enforcement actions in accordance with this article and related regulations.

b. In accordance with §62.1-44.15:31.C, the Department shall perform random site inspections or inspections in response to a complaint to assure compliance with this article, the ESC law, and regulations adopted thereunder.

c. DEQ fees for services rendered for SWM will be in accordance with §62.1-44.15:31.D. ESC fees, in accordance with §62.1-44.15:55.D, to enforce approved specifications will be equal to the lower of (i) $1,000 or (ii) an amount sufficient to cover the costs associated with standard and specification review and approval, project inspections, and compliance.

8.2 CNU'S responsibilities pertaining to construction requirements shall include:

a. CNU shall ensure compliance with the approved plans and annual standards and specifications (§62.1-44.15:56.G).

b. Upon request by the DEQ, CNU shall provide a copy of the approved plan sheets and narrative for each regulated land-disturbing activity as outlined in Section 1.1.

c. CNU will notify DEQ of the Responsible Land Disturber including RLD name, certification number and contact information at least 2 weeks prior to construction.

d. CNU will notify DEQ of any newly emerging projects involving regulated land-disturbing activities during the current year as soon as they are known and prior to any land-disturbance.

e. CNU shall provide DEQ with the appropriate information, in a timely manner, when requested, including:

- Inspection Reports
- Complaint Logs
- Complaint Responses

f. Weekly e-Reporting to the DEQ — Tidewater Regional Office, if required, will include:

- Inspection reports
- Pictures
- Complaint logs and complaint responses
- Other compliance documents

Section 9: Long Term Maintenance

Project plans shall contain information on the long-term maintenance requirements for the post- construction BMPs. The BMPs will be consistent with the Virginia Stormwater BMP clearing house and sections 9VAC25-870-112 and 200.B. Permanent stormwater facilities shall be inspected on an annual basis and after any storm which causes the capacity of the facility principal spillway to be exceeded and random inspections will be made during construction of the facilities. The following information will be printed on the approved stormwater management plan:

- A description of the requirements for maintenance and maintenance inspection of the stormwater management facilities and a recommended schedule of maintenance inspection and maintenance.

- The identification of a person or persons who will be responsible for maintenance inspection and maintenance.

- The maintenance inspection schedule and maintenance requirements should be in accordance with the Virginia BMP Clearinghouse, the Virginia SWM Handbook, the MS4 permit (if applicable) and/or the manufacturer's specifications.

- The types of land cover on the site will be clearly depicted (i.e. different type of hatching for each land cover), including the acreage for each cover type. The acreage should be labeled in all of the subareas and provide a table that adds the land cover up by type on the sheet.

- The metes and bounds will be drawn all the way around any conserved open space.

- Any conserved open space will be labelled as "Runoff Reduction Compliance Forest/ Open Space"

- The following note will be included on the sheet: "The Runoff Reduction Compliance Forest/Open Space area shown here shall be maintained in a forest/open space manner until such time that an amended storm water management plan is approved by the VSMP Authority."

9.1 CNU Roles and Responsibilities

CNU Certified SWM Program Administrator shall ensure BMPs are scheduled for annual inspection, beginning on their first anniversary based on the date of Notice of Termination for the subject Construction General Permit, or as otherwise indicated in section 5 of this document. The CNU SWM Program Administrator will provide pertinent BMP information to CNU's MS4 Coordinator.

a) CNU Certified SWM Project Inspector will conduct annual post construction inspections or inspections as indicated in section 5 of this document of BMPs and report results to the CNU Certified SWM Program Administrator. The post construction inspections will be conducted in accordance with the maintenance requirements laid out in the Virginia Stormwater BMP clearing house for each BMP. Copies of BMP inspection reports will be maintained for five (5) years.

b) CNU Facilities Services will be responsible for committing the necessary resources to maintain BMPs and correct deficiencies noted during these inspections.

c) CNU shall, on a fiscal year basis (July 1 to June 30), submit a Report to the DEQ by October 1 of each year, as prescribed in 9VAC25-870-126. The information provided shall include the following:
    a. Information on each permanent stormwater management facility completed during the fiscal year to include type of stormwater management facility, geographic coordinates, acres treated, and the surface waters or karst feature into which the stormwater management facility will discharge
    b. Number and type of enforcement actions during the fiscal year
    c. Number of exceptions granted during the fiscal year.

d) CNU shall keep records in accordance with 9VAC25-870-126 B, as follows:
    - Project Records — including approved SWM plans, shall be kept for 3 years after state permit termination or project completion.
    - SWM facility inspection records shall be documented and retained for at least five years from the date on inspection.
    - Construction record drawings shall be maintained in perpetuity or until a SWM facility is removed.

All registration statements submitted in accordance with 9VAC25-870-59 shall be documented and retained for at least three years from the date of project completion or state permit terminations.

Appendix A: ESC/SWM Plan Submitter's Checklist

ESC/SWM Plan Preparer/Reviewer Checklist

The Erosion and Sediment Control (ESC) Plan consists of the Narrative (including any supporting calculations) and the construction sheets (site plan), as noted below.

SECTION 1: General

_____ **1.1 Complete Set of Plans and Supporting Documentation**- Include all sheets pertaining to the site grading and stormwater and any activities impacting erosion and sediment control and drainage:

- ☐ Existing Conditions
- ☐ Demolition
- ☐ Site Grading
- ☐ Erosion and Sediment Control
- ☐ Storm sewer systems
- ☐ Stormwater management facilities
- ☐ Landscaping
- ☐ On-site and off-site borrow and disposal areas that do not have separate approved ESC Plans
- ☐ Calculations

_____ 1.**2 Professional's Seal** – The designer's original seal, signature, and date are required on the cover sheet of each Narrative and each set of Plan Sheets. A facsimile is acceptable for subsequent Plan Sheets.

_____ **1.3 Number of Plan Sets**– Two sets of ESC Plans are to be submitted to one of the AFG offices or EOR. Five sets are required for approval. Distribution of the approved plans will be as follows:

2 – Contractor

1 – EOR

2 – AFG Office

_____ **1.4 Variances** – Variances requested at the time of plan submission are governed by Section 9VAC25-840-50 of the Virginia Erosion and Sediment Control Regulations and Christopher Newport University Annual Standards and Specifications for ESC and SWM.

_____ **1.5 Completed Plan Preparer/Reviewer Checklist** – Include a completed and signed ESC Plan Preparer/Reviewer Checklist.

SECTION 2: ESC MINIMUM STANDARDS

Yes	No	NA		
[]	[]	[]	MS-1	Have temporary and permanent stabilization been addressed in the narrative?
[]	[]	[]		Are practices shown on the plan?
[]	[]	[]		Temporary and permanent seed specifications?
[]	[]	[]		Lime and fertilizer?
[]	[]	[]		Mulching?
[]	[]	[]		Blankets/Matting?
[]	[]	[]		Pavement/Construction Road Stabilization?
[]	[]	[]	MS-2	Has stabilization of soil stockpiles, borrow areas, and disposal areas been addressed in the on the plan?
[]	[]	[]		Have sediment trapping measures been provided?
[]	[]	[]	MS-3	Has the establishment and maintenance of permanent vegetative stabilization been addressed?
[]	[]	[]	MS-4	Does the plan specifically state that sediment-trapping facilities shall be constructed as a first step in land-disturbing activities?
[]	[]	[]	MS-5	Does the plan specifically state that stabilization of earthen structures is required immediately after installation? Is this noted for each measure on the plan?
[]	[]	[]	MS-6	Are sediment traps and sediment basins specified where needed and designed to the standard specification?
[]	[]	[]	MS-7	Have the design and temporary/permanent stabilization of cut and fill slopes been adequately addressed? Is Surface Roughening provided for slopes steeper than 3:1?
[]	[]	[]	MS-8	Have adequate temporary or permanent conveyances (paved flumes, channels, slope drains) provided for concentrated stormwater runoff on cut and fill slopes?
[]	[]	[]	MS-9	Has water seeping from a slope face been addressed (e.g., subsurface drains)?
[]	[]	[]	MS-10	Is adequate inlet protection provided for all operational storm drain and culvert inlets?
[]	[]	[]	MS-11	Are adequate outlet protection and/or channel linings provided for all stormwater conveyance and receiving channels? Is there a schedule indicating:
[]	[]	[]		Dimensions of the outlet protection? Lining? Size of riprap?
[]	[]	[]		Cross section and slope of the channels? Type of lining? Size of riprap, if used?
[]	[]	[]	MS-12	Are in-stream protection measures required so that channel impacts are minimized?
[]	[]	[]	MS-13	Are temporary stream crossings of non-erodible material required where applicable?
[]	[]	[]	MS-14	Are all applicable federal, state and local regulations pertaining to working in or crossing live watercourses being followed?
[]	[]	[]	MS-15	Has immediate restabilization of areas subject to in-stream construction (bed and banks) been adequately addressed?
[]	[]	[]	MS-16	Have disturbances from underground utility line installations been addressed?
[]	[]	[]		No more than 500 linear feet of trench open at one time?
[]	[]	[]		Effluent from dewatering filtered or passed through a sediment-trapping device?
[]	[]	[]		Proper backfill, compaction, and restabilization?

[] [] [] MS-17 Is the transport of soil and mud onto public roadways properly controlled? (i.e., Construction Entrances, wash racks, transport of sediment to a trapping facility, cleaning of roadways at the washing before sweeping and shoveling)

[] [] [] MS-18 Has the removal of temporary practices been addressed?
Have the removal of accumulated sediment and the final stabilization of the resulting disturbed areas been addressed?

[] [] [] MS-19 Are properties and waterways downstream from development adequately protected from deposition, erosion, and damage due to increases in volume, velocity and peak flow rate of stormwater

[] [] [] Is concentrated stormwater runoff leaving the development site discharged to an adequate man-made receiving channel, pipe or storm sewer system?

[] [] [] Are calculations provided to verify the adequacy of all channels and pipes?

[] [] [] If existing natural receiving channels or previously constructed man-made channels or pipes are adequate, have provisions been made to prevent downstream erosion?

[] [] [] Have increased volumes of sheet flows that may cause erosion or sedimentation on adjacent property

[] [] [] Have water quantity requirements under 9VAC25-870-66 been satisfied? Provide documentation.

SECTION 3: NARRATIVE

_____ **3.1 Project description** – This section shall describe the nature and purpose of the land-disturbing activity.

Provide project specific information. Also include the following:

- □ Provide the area (acres to the nearest hundredth) to be disturbed. This disturbed area (limits of disturbance) shall include laydown, access and any other areas that may be disturbed during the course of the project. This area shall provide adequate space for the contractor to perform required work for excavation and grading.
- □ Provide the existing impervious area and the increase, or decrease, in impervious area (acres).
- □ Estimated schedule for project. (Start/end dates, or estimated length of project in months or years)
- □ Ultimate developed condition of the site.

_____ **3.2 Existing site conditions** – This section shall provide a description of the existing topography (% slopes), ground cover, and drainage (on-site and receiving channels).

- □ Discuss any existing drainage or erosion problems and how they are to be corrected.
- □ Provide the size of drainage areas in pre-development and post-development conditions.

_____ **3.3 Adjacent areas** – This section shall provide a description of all neighboring areas such as residential developments, agricultural areas, streams, lakes, roads, etc., that may be affected by the land disturbance. Discuss any environmentally sensitive areas, including any on-site or adjacent water bodies included in the Virginia 303(d) list of impaired waters, and any possible problems during and after construction (traffic issues, dust control, increases in runoff, etc.).

_____ **3.4 Off-site areas** – This section shall describe any off-site land-disturbing activities that may occur (borrow sites, disposal areas, easements, etc.). Identify the Owner of the off-site area and the locality responsible for plan review. Include a statement that any off-site land-disturbing activity associated with this project must have an approved ESC Plan. Submit documentation of the approved ESC Plan for each of these sites.

_____ **3.5 Soils** – This section shall provide a description of the soils on the site, giving such information as soil name, mapping unit, erodibility, permeability, surface runoff, and a brief description of depth, texture and soil structure.

- ☐ Indicate reference for additional soil information if not included within this section.
- ☐ Provide a reference to where a copy of the soil survey map can be found within the plan set or engineering report.

_____ **3.6 Critical areas** – This section shall provide a description of areas on the site that may have potentially serious erosion problems or that are sensitive to sediment impacts (e.g., critical slopes, watercourses, wet weather / underground springs, etc.). Discuss any area(s) of the project which may become critical during the project.

_____ **3.7 Erosion and sediment control measures** – This section shall provide a description of the structural and vegetative methods that will be used to control erosion and sedimentation on the site. Controls should satisfy applicable minimum standards and specifications in Chapter 3 of the latest edition of the Virginia Erosion and Sediment Control Handbook (VESCH).

_____ **3.8 Management strategies / Sequence of construction** – This section shall address management strategies, the sequence of construction, and any phasing for the installation of ESC measures. The sequence of construction shall provide specific details concerning the construction and installation and phasing of ESC and SWM measures.

_____ **3.9 Permanent stabilization** – This section shall provide a brief description, including specifications, of how the site will be stabilized after construction is completed. List any soil testing requirements. A permanent vegetative cover shall be established on denuded areas not otherwise permanently stabilized. Permanent vegetation shall not be considered established until a ground cover is achieved that is uniform, mature enough to survive and will inhibit erosion.

_____ **3.10 Maintenance of ESC measures** – This section shall provide a schedule of regular inspections, maintenance, and repair of erosion and sediment control structures should be set forth. List who will be responsible for ESC maintenance during the course of the project. VESCH control measures shall be maintained in accordance with the VESCH maintenance schedules, and non-VESCH control measures shall be maintained in accordance with the manufacturer's recommendations.

_____ **3.11 Calculations for temporary erosion and sediment control measures** – For each temporary ESC measure, provide the calculations required by the standards and specifications. All calculations showing pre-development and post-development runoff should be provided including any worksheets, assumptions, and engineering decisions.

_____ **3.12 Stormwater management** –Will the development of the site cause an increase in peak runoff rates? Will the increase in runoff cause flooding or channel degradation downstream? Reference where each piece of information can be found within the plan set or engineering report.

Describe the strategy to control stormwater runoff:

- ☐ Provide exhibits showing the drainage divides, the direction of flow, and the size (acreage) of each of the site drainage areas that discharge runoff off-site, both existing and proposed.
- ☐ Provide calculations for pre- and post-development runoff from these drainage areas.
- ☐ Ensure that Minimum Standard 19 is satisfied for each off-site receiving channel, including those that receive runoff from stormwater management facilities.

- ☐ Provide calculations for the design of each permanent stormwater management facility.
- ☐ Ensure that increased volumes of sheet flows are diverted to a stable outlet, to an adequate channel, pipe or pipe system, or to a stormwater management facility.
- ☐ Provide adequacy calculations (capacity and erosion resistance) for all on-site stormwater conveyances in accordance with the next checklist item.

_____ **3.13 Calculations** – Provide the following design calculations as applicable:

- ☐ Drainage area map with time of concentration (TC) path shown and points of analysis with worksheets.
- ☐ TC calculation/nomograph
- ☐ Locality IDF curve
- ☐ Composite runoff coefficient or RCN calculation
- ☐ Peak runoff calculations
- ☐ Stormwater conveyance channel design calculations
- ☐ Storm drain and storm sewer system design calculations
- ☐ Hydraulic Grade Line if any pipe in the system is more than 90% full for a 10-year storm
- ☐ Culvert design calculations
- ☐ Drop Inlet backwater calculations
- ☐ Curb inlet length calculations
- ☐ Water quality calculations for BMPs including worksheets

_____ **3.14 Maintenance of SWM Facilities** – Provide a table with a description of requirements for maintenance of the facility and a recommended schedule for inspections and maintenance.

_____ **3.15 Water Quality** – Is the plan in compliance with 9VAC25-870-63 water quality criteria requirements for new development and development on prior developed land?

_____ **3.16 Water Quantity** – Is the plan (including prescribed calculations) in compliance with 9VAC25-870-66 water quantity criteria requirements?

_____ **3.17 General Construction Permit –** Ensure that the stormwater management criteria outlined in the general construction permit (9VAC25-88 Part II.A3) are met as well as, the elements presented in 9VAC25-870-55.

_____ **3.18 BMP Calculations -** Provide supporting calculations for each best management practice with a checklist; include a completed Design and Plan Review Checklist from Appendix 3 of the Virginia Stormwater Management Handbook. The Virginia Runoff Reduction Method or an equivalent method approved by the board (9VAC25-870-65) shall be used to determine water quality criteria.

_____ **3.19 Specifications for Stormwater and Stormwater Management Structures** – Provide specifications for stormwater and stormwater management structures, i.e., pipe materials, pipe bedding, and stormwater structures.

_____ **3.20 Page Numbers** – Number the pages of the Narrative and the Calculations.

_____ **3.21 General Information** – Narrative contains project specific information, and where appropriate general information has been modified to represent the project specific information and situation.

SECTION 4: SITE PLAN

_____ **4.1 Owner Contact Information** – On the cover sheet, provide name, address, telephone number and email of the owner representative/project manager.

_____ **4.2 Vicinity Map** – A small map locating the site in relation to the surrounding area. Include any landmarks

_____ **4.3 Indicate North** – The direction of north in relation to the site.

_____ **4.4 Limits of Disturbance**– Areas which are to be cleared and graded and areas to be protected during construction. This disturbed area shall include laydown, access and any other areas that may be disturbed during the course of the project. Provide notes on how areas will be marked and for areas NOT to be disturbed.

_____ **4.5 Existing Contours** – The existing contours of the site shall be shown as dashed light lines and elevation labeled adequately.

_____ **4.6 Final Contours and Elevations** – Changes to the existing contours, including final drainage patterns. Note the finished floor elevation (FFE) of all buildings on site, including basements. Proposed contour lines shall be solid and bolder than existing contour lines and the elevations labeled.

_____ **4.7 Profile of Storm Drain System** – Proposed storm drainage components shall be provided in a profile. Pipe diameter, material, inverts, stationing, percent slope, proposed and existing grade, etc. shall be included as part of the profile.

_____ **4.8 Existing Vegetation** –The existing tree lines, grassed areas, or unique vegetation.

_____ **4.9 Soils Map** –The boundaries of different soil types, K factor and soil survey classifications.

_____ **4.10 Existing Drainage Patterns** – The dividing lines and the direction of flow for the different drainage areas. Include the size (acres) of each drainage area.

_____ **4.11 Proposed Drainage Patterns** – The dividing lines and the direction of flow for the different drainage areas. Include the size (acres) of each drainage area.

_____ **4.12 Critical Areas** – Note all areas with potentially serious erosion problems.

_____ **4.13 Site Development** – Show all improvements such as buildings, parking lots, access roads, utility construction, etc.

_____ **4.14 Landscape Plan** – Include a plan showing location and plant selection for landscaped areas.

_____ **4.15 Location of Practices** – Show locations of ESC and SWM practices to be used on the site. Use standard symbols and abbreviations from ESC and SWM handbooks. A legend denoting symbols, line uses and other special characters shall be provided.

_____ **4.16 Offsite Areas** – Include any off-site land-disturbing activities (e.g., borrow sites, disposal areas, etc.) not covered by a separate approved ESC Plan. Discuss who has final authority for off-site areas and who will be responsible for stabilization.

_____ **4.17 Detail Drawings** – Show detail drawings of all SWM and ESC practices to be implemented. Any structural practices used that are not referenced to the ESC handbook or local handbooks should be explained and illustrated with detail drawings. Details should be provided which are clearly dimensioned and reflect the ability to be "built" in the field according to proper design criteria. Alternative ESC/SWM measures must have proper drawings to indicate how and where they are to be constructed.

_____ **4.18 Erosion and Sediment Control Notes** – At a minimum, include the erosion and sediment control notes found in Appendix B. Ensure that all applicable Minimum Standards not covered elsewhere in the plan have been addressed. Ensure that the requirements of Part II.A.2 of the General Construction Permit (9VAC25-880) are addressed.

_____ **4.19 Minimum Standards** – Minimum Standard 1 through Minimum Standard 19 shall be included in the plan set.

_____ **4.20 Legend** – Provide a complete listing of all ESC and SWM measures to be used, including the VESCH uniform code symbol and the standard and specification number. Include any other items necessary to identify pertinent features in the plan.

_____ **4.21 Property Lines and Easements** – Show all property and easement lines. For each adjacent property, list the deed book and page number and the property owner's name and address.

Project Name: _____

Plan Preparer's Signature:_____Date:_____

Appendix B: General Erosion and Sediment Control Notes

General Erosion and Sediment Control Notes

ES-1: Unless otherwise indicated, all vegetative and structural erosion and sediment control practices shall be constructed and maintained according to minimum standards and specifications of the Virginia Erosion and Sediment Control Handbook and Virginia Regulations 9VAC25-840 Erosion and Sediment Control Regulations.

ES-2: The plan approving authority (JMU Stormwater Coordinator) must be notified at least one week prior to the pre-construction conference, one week prior to commencement of land disturbing activity and one week prior to final inspection. The name of the certified responsible land disturber, including their certification number and contact information must be provided to the plan approving authority prior to actual engagement in land disturbing activity.

ES-3: All erosion and sediment control measures shall be placed prior to or as a first step in clearing.

ES-4: A copy of the approved erosion and sediment control plan and access to the Virginia Erosion and Sediment Control Handbook shall be maintained on the site at all times.

ES-5: Prior to commencing land disturbing activities in areas other than indicated on these plans (including, but not limited to, off-site borrow or waste areas), the contractor shall submit a supplementary erosion control plan to the JMU Stormwater Coordinator for review and approval or submit documentation that the other area is currently covered under a separate approved erosion and sediment control plan.

ES-6: The contractor is responsible for installation of any additional erosion control measures necessary to prevent erosion and sedimentation as determined by the plan approving authority.

ES-7: All disturbed areas are to drain to approved sediment control measures at all times during land disturbing activities and during site development until final stabilization is achieved, after which, upon approval of the plan approving authority, the controls shall be removed. Disturbed soil areas resulting from the removal of temporary measures shall be permanently stabilized.

ES-8: During dewatering operations, water shall be pumped into an approved filtering device.

ES-9: The contractor shall inspect all erosion control measures at least once in every two-week period and within 48 hours following any runoff producing storm event. The operator shall inspect in accordance with the Construction General Permit requirements when applicable. Any necessary repairs or cleanup to maintain the effectiveness of the erosion control devices shall be made immediately. Contractor shall submit evidentiaries of inspection reports to the owner or within the Stormwater Pollution Prevention Plan (SWPPP).

ES-10: The contractor is responsible for the removal of sediment that has been transported onto paved or public roads. At a minimum, tracking shall be cleaned by the end of each work day.

ES-11: Temporary/Permanent stabilization operations shall be initiated within 7 days after reaching final grade or upon suspension of grading operations for anticipated duration of greater than 14 days or upon completion of grading operations for a specific area.

ES-12: The contractor shall be responsible for preventing surface and air movement of dust from exposed soils.

Appendix C: ESC/SWM Inspection Report

VSMP AUTHORITY GENERAL PERMIT SITE INSPECTION CHECKLIST

(All section references below are to the Construction GP 9VAC25-870-70 effective 7/1/14)

Project Name: _____ Permit Number: _____

Project Address: _____ County/City: _____

Project Operator: _____ Operator Telephone: _____

Operator Address: _____ County/City: _____ ZIP:_____

Inspector Name: _____ Inspection Date: _____ Time: _____

Date of Last Measurable Storm Event: _____ Amount (inches) _____ Storm Duration (hours) _____

		Yes	No	N/A
1	Copy of notice of coverage letter posted near main entrance: Part II(C)			
2	Information for public access to electronic format or had copy of SWPPP posted near main entrance:			
3	Copy of complete SWPPP available onsite: Part II(A)			
3a	Signed copy of registration statement: Part II(A)1.a			
3b	Copy of permit: Part II(A)1.b			
3c	Copy of notice of coverage letter: Part II(A)1.c			
3d	Narrative description of the nature of construction activity: Part II(A)1.d			
3e	Legible site plan: Part II(A)1.e			
3f	Approved ESC plan or ESC plan developed in accordance with department approved annual standards and specifications: Part II(A)3			
3g	Approved SWM plan or SWM plan developed in accordance with department approved annual standards and specifications: Part II(A)4			
3h	Pollution prevention plan: Part II(A)4			
3i	Requirements for discharges to impaired waters, surface waters with an applicable TMDL, exceptional waters: Part II(A)5			
3j	Contact information for qualified personnel conducting inspections: Part II(A)6			
3k	SWPPP signed in accordance with Part III K: Part II(A)8			
4	SWPPP is being amended, modified and updated: Part (B)			
4a	SWPPP clearly identifies the contractor(s) that will implement and maintain each control measure identified in SWPPP: Part II(B)3			
4b	Record dates when major grading activities occurred: Part II(B)4.a(1)			
4c	SWPPP amendments, modifications, or updates singed in accordance with Part III K: Part II(B)5			
5	SWPPP inspections carried out: Part II(F)			
5a	Inspections conducted at required frequency: Part II(F)2			
5b	Inspection reports summarize findings of inspections including corrective actions: Part II(F)4.a-i			
5c	Inspection reports have date and signature of qualified personnel conducting inspections and the operator or authorized representative: Part II(F)4.j			
5d	Inspection reports retained as part of SWPPP: Part II(F)4			
6	Erosion and sediment controls implemented: Part II(A)2.c			
6a	Volume and velocity of stormwater runoff controlled within site to minimize erosion: Part			
6b	Stormwater discharges, including peak flow rates and total stormwater volume controlled to minimize erosion at outlets and to minimize downstream channel and stream bank erosion: Part II(A)2.c(2)			
6c	Soil exposed during construction activity minimized: Part II(A)2.c(3)			
6d	Disturbance of steep slopes minimized: Part II(A)2.c(4)			
6e	Natural buffers around surface waters provided and maintained, stormwater directed to vegetated areas to increase sediment removal, and maximizes stormwater infiltration: Part			
6f	Soil compaction minimized and topsoil preserved: Part II(A)2.c(7)			
6g	Stabilization of disturbed areas initiated immediately whenever any clearing, grading, or excavating, or other land-disturbing activities have permanently ceased on any portion of the site, or temporarily ceased on any portion of the site and will not resume for more than 14			
6h	Outlet structures utilized that withdraw stormwater from the surface when discharging from sediment basins or sediment traps: Part II(A)2.c(9)			
7	Pollution prevention plan implemented: Part II(A)4			

7a	Prevent and respond to leaks, spills and other releases including (i) procedures for expeditiously stopping, containing, and cleaning up spills, leaks, and other releases; and (ii) procedures for reporting leaks, spills, and other releases: Part II(A)4.e(1)			
7b	Prevent discharge of spilled and leaked fuels and chemicals from vehicle fueling and maintenance activities (e.g. providing secondary containment such as spill berms, decks, spill containment pallets, providing cover where appropriate, and having spill kits readily available: Part II(A)4.e(2)			
7c	Prevent discharge of soaps, solvents, detergents, and wash water from construction materials, including clean-up of stucco, paint, form release oils, and curing compounds: Part			
7d	Minimize discharge of pollutants from vehicle and equipment washing, wheel wash water and other types of washing: Part II(A)4.e(4)			
7e	Direct concrete wash water into a leak proof container or leak proof settling basin: Part II(A)4.e(5)			
7f	Minimize discharge of pollutants from storage, handling, and disposal of construction products, materials and wastes: Part II(A)4.e(6)			
7g	Prevent discharge of fuels, oils, and other petroleum products, hazardous or toxic wastes, and sanitary wastes: Part II(A)4.e(7)			
7h	Address any other discharge from the potential pollutant-generating activities not addressed above: Part II(A)4.e(8)			
8	Appears to be impact(s) to receiving waters: Part I(B)6, Part I(D), or Part II(A)2c(2) or (5)			

VSMP CONSTRUCTION GP SITE INSPECTION CHECKLIST

Project Name: _____ Permit Number: _____

Project Address: _____ County/City: _____

Inspector Name: _____ Inspection Date: _____ Time: _____

STAGE OF CONSTRUCTION

Pre-Construction Conference		*Building Construction*		*Construction of SWM Facilities*	
Clearing & Grading		*Finish Grading*		*Maintenance of SWM Facilities*	
Rough Grading		*Final Stabilization*		*Other:*	

#	*State Regulation*[1]			*Description and Location of Condition Observed*[2]*, Recommended Corrective Actions, and Other Comments*
		Initial	*Repeat*	

1 - Refers to applicable regulation found in the most recent publication of the Virginia Erosion and Sediment Control Regulations (9VAC25-840), the General Permit for Discharges of Stormwater from Construction Activities (9VAC25-880), or the Virginia Stormwater Management Program Regulations (9VAC25-870).

2 – Note whether or not off-site impacts resulting from the condition observed was evident during the inspection.

Recommended Corrective Action Deadline: _____

Targeted Reinspection Date: ±2 weeks _____

The recommended corrective action deadline date applies to all conditions noted on this report unless otherwise noted. If listed condition(s) currently constitute non-compliance and/or corrective actions are not completed by the deadline, other enforcement actions may be issued to the entity responsible for ensuring compliance on the above project.

Certified Inspector Name/Number: _____

Signature: _____ Date: _____

Appendix D: BMP Field Assessment Worksheet

BMP Field Assessment Worksheet

Christopher Newport University
AFG Office
1 University Place
Newport News, VA 23606
Stormwater Coordinator: Dean Whitehead
757-594-8416

BMP ID:		Zone:
Inspector:		Rating Key
Inspection Date:		0 = Good Condition. No Action Required 1 = Moderate Condition. See recommendation 2 = Degraded Condition. Routine maintenance, and/or repair needed. 3 = Serious Condition. Immediate need for maintenance, repair, and/or replacement. N/A = Not applicable
Inspection Time:		
Last Storm Event:		
Notes:		

Contributing Drainage Area	Rating
Inlet	
Vegetation/Mulch	
Structure	
Outlet	
Other	
Other	
Other	
Overall Rating	

Appendix E: Projects

Christopher Newport University
Land Disturbing Activities
July 1, 2019 thru June 30, 2023

Project Name	Project Location	Project Manager	Contact Information	Project Description	Approx. Area (acres)	Proposed Construction Start Date	Proposed Construction Finish Date

Appendix F: Annual Standards & Specifications Information Sheet

Annual Standards & Specification (AS&S) Entity Information
General VPDES Permit for Discharges of Stormwater from Construction Activities (VAR10)

(To be completed by the AS&S Entity and submitted with the VAR10 Registration Statement)

1. Annual Standards & Specifications Entity/Holder:		
2. AS&S Coverage Verification		
	a. Operator:	
	b. Project name:	
	c. Technical Criteria Used:	
	d. Estimated Area to be Disturbed (acres):	
3. Plan Approval Verification		
	a. Erosion & Sediment Control (ESC) Plan Reviewer Name:	
	i. ESC Plan Reviewer Certification Number:	
	b. Stormwater Management (SWM) Plan Reviewer Name:	
	i. SWM Plan Review Certification Number	

Printed Name:	**Title:**
Signature:	**Date:**

(Please sign in ink. This must be signed by an employee of the AS&S entity who has oversight of this project and is aware of its coverage under their AS&S.)

Instructions for completion:

2.a. Operator = Owner, operator, developer, person or general contractor that the AS&S holder is allowing to operate under their DEQ approved AS&S.
2.b. Project Name = Name of the construction activity as it appears on the Registration Statement.
2.c. Stormwater Management Technical Criteria = The technical criteria used for this project will be either IIB or IIC per the SWM Regulations; 9VAC25-870.
2.d. Estimated Area to Be Disturbed = Provide the estimated area (to the nearest one-hundredth acre) to be disturbed by the construction activity. Include the estimated area of land disturbance that will occur at any off-site support activity to be covered under this general permit.

(Further questions can be directed to the Stormwater Construction General Permitting personnel; constructiongp@deq.virginia.gov)

Appendix H LAKE MAURY AGREEMENT

LAKE MAURY WATERSHED PLAN

THIS AGREEMENT, made this ___ day of January, 2005, by and among **THE MARINERS' MUSEUM**, a Virginia corporation, hereinafter "Museum" and the **CITY OF NEWPORT NEWS**, a municipal corporation, hereinafter the "City," **CHRISTOPHER NEWPORT UNIVERSITY**, a public State agency, hereinafter "**CNU**."

WHEREAS, the City Manager of the City presented to the Newport News City Council on or about September 10, 2002 a "white paper" entitled "Lake Maury Watershed Management Plan" attached hereto as Exhibit A; and

WHEREAS, the City Manager further updated City Council by Memorandum dated May 9, 2003, and Memorandum dated June 12, 2003, which are attached hereto as Exhibits B and C, respectively; and

WHEREAS, City Council adopted a Resolution Number 10474-03 authorizing and directing that the City Manager develop and implement a Lake Maury Watershed Management Plan, said Resolution attached hereto as Exhibit D.

NOW, THEREFORE, WITNESSETH: That for and in consideration of the mutual promises, covenants, and conditions contained herein, and to document their agreement to implement this Lake Maury Watershed Plan, the parties do agree as follows:

Article 1. Objectives.

1.1 The objectives of this Lake Maury Watershed Management Plan (the "Plan") are to

1.1.1 develop studies from time to time to evaluate the adequacy of the hydraulic control structure that regulates the lake level and outflow, evaluate dredging needs, identify cost effective watershed and lake management practices,

identify locations in the lake where "in-lake" facilities may provide for the long-term protection and viability of Lake Maury, and identify cost-effective, water quality enhancing, watershed and lake management practices;

1.1.2 provide a plan to fund the long-term, non-routine maintenance of Lake Maury;

1.1.3 provide for the water quality protection for the main body of Lake Maury;

1.1.4 provide for the development of in-lake, and/or upstream storm water management structures;

1.1.5 provide for engineering services related to developing the Plan and updating it from time to time;

1.1.6 provide a funding mechanism to provide a financial resource for City to meet the obligations assumed hereunder;

1.1.7 to document the undertakings of CNU; and

1.1.8 document the undertakings of the Museum.

Article 2. Establishment of "In-lake" and/or upstream Storm Water Management Structures.

2.1 Contemplation. It is the contemplation of the parties hereto that the objective of enhancing the water quality protection for the main body of Lake Maury is promoted by the development of storm water management structures. In specific agreed-upon coves of Lake Maury, these structures will be designed to remove pollutants from storm water run-off and to trap silt in the cove to prevent the pollutants and the silt from entering the main body of Lake Maury (each

improved cove to be described as a "Cove Facility") and, thus, provide additional protection to the James River and the Chesapeake Bay.

2.2 First Cove Facility. The first Cove Facility to be established will be designed to accept the storm water run-off from improvements being done by CNU to its property and the widening of Warwick Boulevard ("Lakeside Cove"). The design of Lakeside Cove facility will be approved by the parties hereto. The cost of the design and the permitting of Lakeside Cove will be paid for by CNU (said cost currently estimated to be $85,000.00).

2.3 Second Cove Facility. In consideration for an easement related to Sweetbriar Drainage Improvements to be dedicated to City by Museum, City agrees to designate the cove area immediately northeast of Riverside Hospital where the Sweetbriar Drainage Improvements discharge as the location for the Second Cove Facility. City will promptly begin design of a storm water management facility for that cove to be complete approximately December 2005, with construction to be complete based on a mutually agreed schedule depending on funding. The design will address water quality protection of Lake Maury and aesthetic considerations to the appropriate standard of care. Museum will be provided opportunity for comment at 60% and 90% design levels.

2.4 Additional Cove Facilities. Museum and City anticipate that additional Cove Facilities may be established in Lake Maury in other coves of Lake Maury, all as might be subsequently agreed by Museum and City. It is understood that the availability of funding for both initial construction and on-going maintenance shall be a factor guiding decisions related to additional Cove Facilities.

2.5 Undertaking by City. Each Cove Facility will have to be maintained, dredged and cleaned out from time to time. City hereby assumes responsibility to maintain, dredge, and clean out each Cove Facility that may be established.

Article 3. Long-term, Non-Routine Maintenance.

3.1 Non-routine maintenance of Lake Maury is understood to mean:

3.1.1 dredging of the main body of Lake Maury;

3.1.2 the maintenance and upgrades to major structure elements, such as the dam structure and spillways (hydraulic control structure that regulates lake level and outflow);

3.1.3 agreed-upon watershed and lake management practices (such as shore line stabilization); and

3.1.4 agreed-upon cost effective, water quality enhancing, watershed and lake management practices.

3.2 The City and the Museum recognize that the Lake Maury Account discussed in Article 6 will likely be insufficient to fund all the long-term, non-routine maintenance. The City and the Museum agree to further discuss the establishment of a satisfactory funding mechanism for the non-routine maintenance of Lake Maury after completion of the study referenced in Article 8.

Article 4. Routine Maintenance to be Performed by Museum.

4.1 The routine maintenance of Lake Maury consists of removing, if necessary, downed trees and other debris, including trash, that might enter into Lake Maury, monitoring from time to time the water quality of Lake Maury, cooperating with the Virginia Department of Game and Inland Fisheries to maintain and monitor the fish population of the Lake, and cooperating with other such City, State, and Federal agencies as might be appropriate.

4.2 Museum hereby assumes the responsibility for the routine maintenance of Lake Maury as aforesaid.

Article 5. Routine Maintenance to be Performed by City.

5.1 In addition to 2.4 above, City hereby reaffirms and hereby agrees to maintain its practice of maintaining ditches and storm water channels maintained by the storm water divisions of the departments of Engineering and Public Works of the City of Newport News, including any drainage easements that had heretofore been granted by Museum to City.

Article 6. Establishment of the Lake Maury Account.

6.1 In order to assist City and to provide a source of funding for City's obligations hereunder, City agrees to establish a Lake Maury Account (the "Account") within City's Storm Water Management fund as follows:

6.1.1 CNU and Museum will each contribute to the Account on an annual basis $10,000.00 per year, to be increased every three years based on the difference in the cost of living for the three year period: the Washington-Baltimore Consumer Price Index – All Urban Consumers shall be the CPI statistic used.

6.1.2 The annual storm water management fees collected by the City from the Museum and CNU will be contributed to the Lake Maury Fund. Each of CNU and Museum agree to continue to pay the storm water management fees assessed by City.

6.1.3 City will manage the Account and all expenditures from the Account will be agreed upon by Museum and City.

6.1.4 City will identify other significant users of Lake Maury Watershed and seek contributions, where appropriate, in its discretion from such users to the Account.

6.1.5 City may further identify other storm water management fees which, in its discretion, would be appropriate to be part of the Account.

6.1.6 City recognizes that the long-term, non-routine maintenance may require significant expenditures that would require borrowing. It is anticipated such borrowings may be repaid from the Account by specific agreement between City and Museum. The City agrees to consider using its borrowing capacity to fund such long-term, non-routine maintenance.

Article 7. VDOT Allocation.

7.1 A sum of $400,000.00 is anticipated to be paid by VDOT to Museum by reason of the establishment of Lakeside Cove. Museum will contribute this entire fund to the Account, except for the necessary funds to fund (estimated to be $105,000.00) the Study described in Article 8 hereof. The City will use these funds to build the Lakeside Cove (estimated to be $250,000.00) and any funds not so utilized will be added to the Lake Maury Fund.

Article 8. Study.

8.1 Purpose of the Study.

8.1.1 Museum will retain a consultant acceptable to City to conduct a Study that will, in general,

8.1.1.1 update a 1979 Malcolm Pirnie Study to obtain an accurate depiction of the existing drainage conditions and patterns, including the adequacy of the existing outfall structure;

8.1.1.2 make recommendations for necessary improvements;

8.1.1.3 evaluate the adequacy of the control structure that regulates

the level of Lake Maury and outflow that should be utilized;

8.1.1.4 evaluate dredging needs of Lake Maury;

8.1.1.5 identify the cost effective, water quality enhancing, watershed and lake management practices; and

8.1.1.6 identify other locations where in-lake facilities may provide for the long-term protection of Lake Maury.

8.2 Uses by City and Museum.

8.2.1. The City and the Museum will use the Study to develop the priorities for the implementation of the non-routine maintenance of the Lake and Dam.

8.2.2. The Study will be used by City and Museum to seek state and federal resources to assist in the funding of the implementation of the Study recommendations.

8.2.3 City may use the Study to identify the need for and location of Cove Facilities.

IN WITNESS WHEREOF, the parties acknowledge their agreement by the signatures of their duly authorized representatives on the date above written.

THE MARINERS' MUSEUM, a Virginia Corporation

By: JB Lightower

Name: JOHN B. HIGHTOWER

Title: PRESIDENT

CITY OF NEWPORT NEWS, VIRGINIA, a Municipal Corporation

By: _____
e Name: Edgar E. Maroney
Title: City Manager

ATTEST:

_____
City Clerk

APPROVED AS TO FORM:

_____
City Attorney

CHRISTOPHER NEWPORT UNIVERSITY, a Public State Agency

By: _____
Name: PAUL S. TRIBLE, JR.
Title: PRESIDENT

sdm2902

SUPPLEMENTAL MEMORANDUM OF AGREEMENT BETWEEN MARINER'S MUSEUM AND CHRISTOPHER NEWPORT UNIVERSITY (CNU) CONCERNING THE STREAM MODIFICATIONS REQUIRED FOR CNU'S USE OF LAKE MAURY FOR STORMWATER MANAGEMENT

15 March 2006

The undersigned agree and recognize that future corrective actions regarding the stream as required under the MOA dated 12 July 2005 may necessitate additional authorization from the Virginia Department of Environmental Quality (DEQ), in accordance with the Virginia Water Protection Regulation. The DEQ's review will likely involve both the proposed action and the degree of degradation. Future DEQ authorization may include a requirement that compensatory mitigation be provided to address a net loss of stream channel or wetlands acreage and function.

This plan is agreed to by the following:

CHRISTOPHER NEWPORT UNIVERSITY

By: W. L. Bruce, Exec. V.P. Date: 3/24/06

MARINER'S MUSEUM

By: _____ Date: _____

cc: DCR
DEQ, Mark Kalnins
COE, Lesley Leonard
City of Newport News
Koontz-Bryant, PC
Stokes Environmental Associates, Ltd.

Appendix I POST-CONSTRUCTION INSPECTION PROCEDURES

CNU MS4: Written Procedures for the Inspection of Operator Owned Stormwater Management Facilities

Stormwater Management Facility Information

The following table lists all known permanent stormwater management facilities during the annual reporting year from July 1, 2014 to June 30, 2015.

BMP Label	BMP Description	Type of Structural Stormwater Facility	Geographic Location (HUC)	Where Applicable, the Impaired Surface Water that the Facility Discharges Into	Number of Acres Treated
BMP 2	James River Residence Hall	Extended Detention Basin	JL38/G11 & JL43/G11	N/A	5.37
BMP 3	Track Complex – Stadium Seating	Extended Detention Basin	JL38/G11	N/A	1.70
Lake Maury	Lake Maury	Wet Pond	JL43/G11	N/A	153.7

Notes: BMPs 2 and 3 were removed from the CNU Stormwater Master Plan when Lake Maury was approved as the CNU BMP. These BMPs will continue to be inspected until they are removed from the campus. Lake Maury is not an operator owned BMP and is not located on CNU MS4 property.

Inspection Frequency

All known permanent stormwater management facilities that are operator owned and within the MS4 boundary are inspected by CNU personnel on an annual basis.

Inspections

Things to look for during the inspections of the operator owned BMPs include the following:

1. Inflow pipe(s)
    a. Scour
    b. Metal pipe corrosion
    c. Blockage
2. Equipment access
    a. Easement width
    b. Vegetation growth in easement
    c. Slope
    d. Fences
    e. Locks

3. Side-slope condition
    a. Ability to mow
    b. Vegetative cover
    c. Rill erosion
    d. Slumping
4. Embankment integrity
    a. Trees and woody vegetation on the embankment
    b. Well-maintained grass cover
    c. Sloughing
    d. Burrows
    e. Seepage through embankment
    f. Moist areas on toe
    g. Voids/moisture around barrel
5. Pool outflow pipe/drain
    a. "Plumbing" can be accessed and is in operable condition
    b. Drains flowing?
6. Barrel and riser
    a. Barrel corrosion or joint deflection
    b. Seepage around barrel
7. Outfall stabilization
    a. Erosion
    b. Rip-rap displacement
    c. Blockage
8. Outfall channel condition
    a. Check for pipe under-cutting
    b. Pond slime
    c. Downstream channel stability
9. Other common problems
    a. Graffiti/vandalism
    b. Lock or fence problems
    c. Illegal dumping
    d. Geese
    e. Mosquitos

Inspection Reports

Copies of the inspection reports are kept on file as part of the MS4 documentation. Inspection reports to be used for inspections of permanent stormwater management facilities are the DEQ example post-construction BMP inspection checklists from the DEQ Inspector stormwater management training course and materials provided on the DEQ website at the link below and attached.

http://www.deq.virginia.gov/ConnectWithDEQ/TrainingCertification/InspectorSWMParticipantGuide.aspx

Records of past BMP inspections are maintained as part of the MS4 program and the inspection program will be continued and evaluated annually.

Maintenance

CNU will perform maintenance of permanent stormwater management facilities, as needed, based on the results of the BMP inspections. Any necessary maintenance performed will be documented and included as part of the annual report.

Common BMP maintenance issues include the following:

1. Debris and litter
    a. Clogging
    b. Damage to vegetated areas
    c. Stagnant pool formation
    d. Mosquito habitats
    e. Excessive surface algae
    f. Decreased facility aesthetics
2. Erosion
    a. Sediment clogging
    b. Unstable banks
    c. Diminished structural integrity of an embankment from animal burrows
    d. Sinkholes on embankments or basin and channel bottoms
3. Sediment buildup
    a. Reduced effectiveness of pretreatment practice
    b. Blockage at inlet
    c. Reduced infiltration rates
4. Vegetation
    a. Erosion
    b. Well-maintained grass cover
    c. Inadequate vegetative covver
    d. Excessive sediment accumulation
    e. Reduced pollutant removal

Appendix J TRAINING PLAN

CNU Stormwater Training plan: Permit Years 2019-2023

1. Field Personnel in the Departments of Grounds, Facilities, and Operations receive IDDE training every 24 months.

Objective: To be able to recognize and report illicit discharges

Number of Employees: All current employees in this department

Time Frame: June 2019, June 2021, June 2023

Documentation of each training event will be kept on file for three (3) years. This training involves an in-class session to include a PowerPoint presentation given by a DEQ - certified Combined Administrator.

Training may include viewing a video overview of the IDDE process created by the local Hampton Roads Planning District Commission. The video addresses what a suspected illicit discharge might look like.

IDDE Video - Identifying Illicit Discharges in the Coastal Plain (Part 1 for general employees)

https://www.youtube.com/watch?v=N8Ng90PL7Tk

IDDE Video - Identifying Illicit Discharges in the Coastal Plain (Part 2 for environmental staff)

https://www.youtube.com/watch?v=jTTNWNM8LWc

2. Employees performing road, street, and parking lot maintenance receive training in pollution prevention and good housekeeping associated with those activities every 24 months.

Objective: To be able to follow the appropriate CNU Standard Operating Procedures (SOPs) developed for these practices

Number of Employees: All current employees performing road, street, and parking lot maintenance

Time Frame: June 2019, June 2021, June 2023

Documentation of each training event will be kept on file for three (3) years. This training involves an in-class session to include a PowerPoint presentation given by a DEQ - certified Combined Administrator.

This training may include modules and quizzes from a stormwater pollution prevention training program developed by a third party.

3. Employees working in and around maintenance, public works, or recreational facilities receive training in good housekeeping and pollution prevention practices associated with those facilities no less than once per 24 months.

Objective: To be able to follow the appropriate CNU Standard Operating Procedures (SOPs) developed for these practices

Number of Employees: All current employees

Time Frame: June 2019, June 2021, June 2023

Documentation of each training event will be kept on file for three (3) years. This training involves an in-class session to include a PowerPoint presentation given by a DEQ - certified Combined Administrator.

This training may include modules and quizzes from a stormwater pollution prevention training program developed by a third party.

4. Employees of CNU who apply pesticides and herbicides shall maintain their Certifications by the Virginia Department of Agriculture and Consumer Services (VCACS) Pesticide and Herbicide Applicator programs.

Objective: To keep certifications current and to prevent over-applying and/or inappropriately applying chemicals.

Number of Employees: Employees of CNU who apply pesticides and herbicides

Time Frame: As needed

Additional training for proper nutrient management and pesticide application occurs on an as-needed basis. This training involves an in-class session to include a PowerPoint presentation given by a certified applicator. Documentation of each training event will be kept on file for three (3) years.

5. Employees and contractors serving as plan reviewers, inspectors, program administrators, and construction site operators will obtain and maintain the appropriate certifications as required under the Virginia Erosion and Sediment Control Law and its attendant regulations.

Objective: To keep certifications current and to prevent stormwater pollution

Number of Employees: All employees and contractors serving as plan reviewers, inspectors, program administrators, and construction site operators

Time Frame: As needed

Additional training for erosion and sediment control at active construction sites occurs on an as-needed basis. This training involves an in-class session to include a PowerPoint presentation given by a DEQ - certified Combined Administrator. Documentation of each training event will be kept on file for three (3) years.

6. Employees and contractors implementing the stormwater program will obtain and maintain the appropriate certifications as required under the Virginia Stormwater Management Act and its attendant regulations.

Objective: To keep certifications current and to prevent stormwater pollution

Number of Employees: Employees and contractors implementing the stormwater program

Time Frame: As needed

Additional training for erosion and sediment control at active construction sites occurs on an as-needed basis. This training involves an in-class session to include a PowerPoint presentation given by a DEQ - certified Combined Administrator. Documentation of each training event will be kept on file for three (3) years.

7. Employees whose duties include emergency response will be trained in spill response. Training of emergency responders such as firefighters and law-enforcement officials on the handling of spill releases as part of a larger emergency response training shall satisfy this training requirement and be documented in the training plan.

Objective: To prevent stormwater pollution through emergency response

Number of Employees: All personnel from the local fire department

Time Frame: As needed

Christopher Newport University relies on the Newport News Fire Department for any spill response issues, due to their regular training and expertise in handling emergency situations and spill releases. The University works in partnership with local emergency responders and the Department of Environmental Quality (DEQ) as needed.