2023 MS4 Annual Report

Norfolk State University

2023 MS4 Annual Report
Project No. 132887

11/15/2023

2023 MS4 Annual Report

prepared for

Norfolk State University
2023 MS4 Annual Report
Norfolk, Virginia

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11/15/2023

prepared by

Burns & McDonnell Engineering Company, Inc.
Chesapeake, Virginia

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1.0 GENERAL INFORMATION

The general information for this annual report is as follows:

1. The permittee is Norfolk State University, and the permit number is VAR040097.
2. The reporting period for which the annual report is being submitted is from July 1, 2022 to June 30, 2023.
3. The MS4 Map and Information Table has been updated on June 30, 2021. No changes have been made during this reporting period.

2.0 SIGNED 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.".

09/29/23
Date

Signature

Anton V. Kashiri, Associate Vice President Facilities Management

3.0 MINIMUM CONTROL MEASURE

3.1 MCM 1 Public Education and Outreach

3.1.1 High Priority Issues

The following high priority issues were addressed by the permittee in the public education and outreach program:

1. BMP Inspections – Inspect BMP's on campus in accordance with Virginia Stormwater Management Handbook, Section 9.3.7 table 9.7. The stormwater BMPs help filter runoff during rain events and needs to be maintained to help preserve the downstream environment.
2. Vehicle Fluids – Prevent oils and contaminants from university staff and student vehicles from contaminating stormwater runoff. The University owns and maintains several fleet vehicles and maintenance equipment that are stored on campus along with several employee and student parking lots.
3. Trash and Debris Collection and Recycling – On the NSU campus, trash and debris can collect in the stormwater BMPs, the stormwater system and eventually make its way into the Chesapeake Bay and have an impact on seagrasses and fish wildlife. Liter can have an adverse effect on the environment and needs to be stopped at its source.

The MS4 Program Plan was updated recently, the high priority issues will remain the same for the next reporting year.

3.1.2 Strategies

The following strategies were used to communicate each high priority stormwater issue:

1. NSU has hired Brightview landscaping to manage and maintain the BMPs on campus. They will perform inspections and provide training to campus staff.
2. NSU Employees will be required to make daily inspections to the areas where vehicles are stored and maintained for any fluid leaks. Vehicle maintenance has been restricted to vehicle service shop. All auto mechanics, facility workers and new staff receive storm water pollution prevention training.
3. Students have been advised to inspect their vehicles and report any leaks or spills to university staff. Seminars and brochures have been developed to educate the students on actions to take.
4. The university has developed emails and flyers to post around campus to promote recycling and trash pickup events.

5. The University and student organizations have been engaged in hosting campus clean up events, giving students ownership and campus pride.

The strategies used to communicate the high priority issues were adjusted to reflect the high priority issues identified in the MS4 program plan.

3.2 MCM 2 Public Involvement and Participation

3.2.1 Public Input

No input has been received from the public on the MS4 program, including stormwater complaints.

3.2.2 Website

The current website with the most up to date information on the University's MS4 program and stormwater initiatives can be found at the address: https://www.nsu.edu/stormwater-pollution-prevention.

3.2.3 Public Involvement Activities

The public involvement activities implemented by NSU include the following activities that were advertised in the Spartan E-Daily Web emails:

1. Earth Day Week: Event was posted and Campus Announcements sent to all participants. Students, Faculty, Staff and BrightView Landscape Services designed, constructed and planted a vegetable garden, a tree and flowers near the University Greenhouse. The Elizabeth River Project Representatives attended the event.
2. 4 Little cleanups at Princess Anne adopt A spot in collaboration with Keep Norfolk Beautiful
3. Norfolk State University had (6) University Student Groups totaling over 150 students picking up trash and debris throughout the campus and throughout the surrounding community.
4. Norfolk State University had (2) University Student Groups totaling over 30 students planting flowers throughout the campus.

3.2.4 Metrics and Evaluations

A report of the metric as defined for each activity and an evaluation as to whether or not the activity is beneficial to improving water quality is provided for each activity.

1. Earth week event in collaboration with Landscape services and Elizabeth River Project representatives will encourage future involvement in events by students. Plantings.
2. Clean up events will encourage good housekeeping practices on campus.

3. Student group involvement in cleaning events will encourage other students and staff to participate in good housekeeping practices.
4. Students planting flowers on campus will help enrich the campus and encourage students to participate in more event.

3.2.5 MS4 Collaboration

1. Over 100 students participated in research projects focused on river restoration.
2. Collaborating on 3 grants with ERP
3. 4 undergraduate summer interns with ERP
4. Premier Electric Vehicle Demonstration
5. Elizabeth River Project-received a Sustained Distinguished Performance
6. Earth Day Week: Students, Faculty, Staff and BrightView Landscape Services designed, constructed and planted a vegetable garden, a tree and flowers near the University Greenhouse. The Elizabeth River Project Representatives attended the event.
7. Norfolk State University had (2) University Student Groups totaling over 30 students planting flowers throughout the campus.
8. Norfolk State University had (6) University Student Groups totaling over 150 students picking up trash and debris throughout the campus and throughout the surrounding community.
9. Received the Sustained Distinguished Performance via the Elizabeth River Project.

3.3 MCM 3 Illicit Discharge Detection and Elimination

1. There were no illicit discharges reported or detected in this reporting year.

3.4 MCM 4 Construction Site Stormwater Runoff Control

1. There were no construction activities on campus in this reporting year, therefore no inspections on construction activities were conducted.
2. The university has reported that no land disturbance activities have occurred over this reporting year.

3.5 MCM 5 Post-Construction Stormwater Management for New Development and Development on Prior Developed Lands

1. A dry and wet weather inspection was performed for the 18 BMPs and 11 outfalls.
    a. Generally, all BMPs were in good condition, BMP maintenance is underway by BrightView landscaping.
    b. Six of the outfalls could not be located due to overgrown, visual inspections to the surrounding areas were done to an allowable degree. The University has been made aware and measures are being taken to remedy the problems.
2. Brightview Landscape service performed 25 inspections of all outfalls and BMP's during this reporting year.
3. 25 Motorpool Inspections completed for both campus Motorpools.

4. Brightview Landscape Serviced 3 BMP's on campus. BMPs were cut and refreshed during the month of September, 2023.
5. All BMPs on campus have been submitted in the DEQ Warehouse on September 10, 2020. No new BMPs have been installed on campus or added to the DEQ Warehouse.
6. Outfalls to be serviced during the next Phase of project.
7. Contract has been awarded (Outfalls). Phase 2 will start during the next reporting period.

3.6 MCM 6 Pollution Prevention and Good Housekeeping for Facilities Owned or Operated by the Permittee Within the MS4 Service Area

1. Brightview Landscape hired to maintain campus grounds. Brightview completes all BMP and Outfalls inspections. The Director of Grounds manages and reviews all inspections and works with Brightview to eliminate concerns and deficiencies identified via Brightview's inspections.
2. No updates to the SWPPP have been made during this reporting year.
3. No new turf and landscape nutrient management plans were developed in this reporting year.
4. A Stormwater Standard Operating Procedure was implemented in this reporting period.
5. Training held during the reporting period:
    a. 73 employees received training Storwmwater Pollution Prevention Training on 7/22 and 1/11/23.
    b. Stormwater Pollution Prevention facilitated to all New Hire and Wage employees during New Hire Orientation Training. Training occurs on the 6th , 10th, 20th and 25th each month. Training facilitated via ZOOM
6. The objective of the training events is to distribute information on stormwater and bring awareness to prevent Stormwater Pollution.

4.0 EVALUATION OF MS4 PROGRAM IMPLEMENTATION

4.1 MCM Reviews

The updated MS4 program from 2021 have been implemented by NSU and their maintenance staff. The MS4 program was updated due to a DEQ Audit in the early part of 2021. Most of the MCMs were changed to align with the minimum control measures (MCM) described in Part I E of the General Permit.

4.1.1 MCM 1 Public Education and Outreach

The high priority issues from the reporting year will be a continued effort by the university for the next reporting year.

1. University BMP inspection continues to be a high priority. Ongoing training for staff will continue for BMP maintenance. Outreach and education for students about stormwater runoff will also continue.

    i. BMP's and Outfalls are managed by Brightview Landscape Service. Brightview provides training to all effected staff and shares results with Mr. Ward (Director of Grounds). 25 inspections were completed.

2. Waste Minimization will continue to be a high priority issue for the university.

    i. NSU has renewed their partnership with Bay Disposal to provide additional large roll off containers to collect and dispose of major trash and debris items along with additional smaller trash containers that are monitored daily by the NSU Grounds department.
    ii. NSU has renewed their partnership with BrightView Landscape services that provide additional certified staff resources that address daily debris removal.
    iii. BrightView Landscape Services also provided certified staffing resources that implement pesticide and herbicide application as required.
    iv. NSU has a partnership with an Environmental Services Contractor that provides daily monitoring and removal of trash inside of all University Buildings and Facilities throughout the campus.

3. Vehicle fluid leaks will continue to be monitored on campus.

    i. Information facilitated via NSU website and various screens within the Student Center Building. Running Powerpoint that includes stressing to ensure fluids are recycled. All auto mechanics, facilities workers and all campus new hires receive Stormwater Pollution Prevention Training.

4.1.2 MCM 2 Public Involvement and Participation

1. 95% of Campus Stormwater Drains are marked with caps indicating destination.
2. The Elizabeth River Star Program is an on-going program and will be encouraged throughout the year.
3. Students are being advised not to change any of the fluids used in their motor vehicles while on campus. These include motor oil, transmission fluid, anti-freeze, gasoline or diesel and windshield washer fluids.
    a. Informing students on the risks to the environment will help minimize the accumulations of drippings and stains in parking lots and campus streets that can become part of stormwater runoff.
4. Students have been advised to utilize good housekeeping practices while on campus. This includes not littering, throwing away cigarette butts and keeping trash disposal areas clean.
    a. The University has advertised an Earth Day event each year. This years event was posted and Campus Announcements sent to all participants. Students, Faculty, Staff and BrightView Landscape Services designed, constructed and planted a vegetable garden, a tree and flowers near the University Greenhouse. The Elizabeth River Project Representatives attended the event.

b. Students have participated and organized several campus cleaning and planning events over the past report year.

5. The University's website is a source of information on the status of the MS4 Program and all annual reports. Stormwater Pollution and awareness displayed via the NSU Intranet. Webpage promotes Stormwater Pollution Prevention.
6. NSU Spartan E-Daily announcements and CC-TV broadcast provide students and staff with information on stormwater pollution. Running Powerpoint via various screens within the Student Center Building in an effort to promote Stormwater Pollution

4.1.3 MCM 3 Illicit Discharge Detection and Elimination

Norfolk State University (NSU) is committed to the environmental safety and protection of the campus community. This policy contains detailed information regarding requirements for MS4 storm system maintenance.

1. Equipment maintenance will also be an area where illicit discharges have the potential to occur. The University is implementing standard operating procedures and guidelines for the maintenance of equipment coupled with training to prevent any unwanted discharge.
    a. To make equipment operators more accountable for the cleanliness of the equipment and reduce the possibility of petrochemical residue and debris entering the stormwater sewer system Motor vehicle refueling.

2. The University has an underground gasoline storage tank for use in state vehicles. To reduce this area as a possible point source of pollution, refueling of most of those vehicles is performed by the vehicle maintenance staff that have received training. The nozzle has been replaced with one that will close automatically; access to the hose is restricted by locking the nozzle in place, turning off the gasoline pump and restricting refueling to a few hours in the morning when the mechanic is available to oversee the procedure.
    a. This will prevent overflow spills on the pavement that would allow gasoline to enter the stormwater drains, staining the pavement, and reducing the risk of fire.

3. NSU has a partnership with an Environmental Services Contractor that provides daily monitoring and removal of trash inside of all University Buildings and Facilities throughout the campus.
4. Procedures to detect and address non-stormwater discharges, will include the training the facilities groundskeepers and tradesmen how to identify and report illegal dumping. These individuals are to report observations and incidents that could result in illicit discharges, or conditions that could result in non-stormwater contamination. In addition to these detection methods, the main outfall from campus has a large screen that prevents solids from entering

connecting sewers. The University will coordinate with the city to assure this structure remains functional.

5. A formal proposal has been implemented advising the campus community that discharge of any materials, solid or liquid other than water into stormwater inlets is prohibited and infractions shall be subject to appropriate fines and/or penalties.
    a. Proposals of this nature shall be reviewed by the University senior administrators and legal counsel. Enforcement shall include University Police, and if student(s) are involved, summons may be issued to appear before a committee.

6. Removal of grease and oil accumulations from parking lots will require the use of pressure-washing, deployment of petrochemical absorbents around the cleanup site and in front of any affected stormwater inlet.
    a. This will prevent illicit discharges from entering the University's stormwater system.

    b. 25 separate motorpool inspections were completed during this reporting period.

7. In the event that an illicit discharge is identified, it will be reported to DEQ in the Annual Report.

8. Campus stormwater outfalls are continually inspected, and a dry and wet weather inspection is performed annually by an outside source. The Outfall Reconnaissance Inventory (ORI) is the most proven method for screening campus stormwater outfalls. The ORI consists of walking all campus outfalls to document where they are and what condition they are in.
    a. The purpose of the ORI is to identify potential illicit discharges that could impair water quality. The ORI also details on how to find an illicit discharge in the field and the appropriate laboratory strategies to identify particular pollutants.

    b. Outfall maintenance will be performed by Brightview Landscaping during the next reporting year.

4.1.4 MCM 4 Construction Site Stormwater Runoff Control

The BMPs defined under this measure have been implemented beginning in the first permit year, and continuously thereafter. The BMPs includes:

Compliance with Virginia Erosion and Sediment Control and Stormwater Laws for Construction projects:

- Included in affected projects with a general contractor, is a section dedicated to Slope Protection and Erosion Control.
- The University holds the general contractor responsible for maintaining the job site to the satisfaction of the University and all applicable regulations.
- The contractor is required to schedule work in a manner that best provides slope protection and erosion controls by installing grass, ditches, or other means to prevent runoff into stormwater drains.
- The contractor must also clean out any drains that become contaminated with construction site runoff.
- The contractor shall be responsible for any damage to streams or other natural areas or wetlands by the addition of soil, rock, or topsoil, whether deposited by poor construction practice, sedimentation, or wind, and vegetation matter such as whole trees or any part thereof, or remnants from burning or other clearing processes, and waste construction materials such as concrete, broken pipe, equipment parts and any other additions which could be detrimental to said areas.
- Any damages shall be assessed by the University based on site inspections. The contractor shall act as soon as possible to prevent further damage and correct existing damage at no cost to the University. Should the University choose to do so, a remediation contractor shall correct the damage and their fees deducted from the contractor's payments.
- The contractor is to expect periodic site inspections by the erosion and sediment control reviewing authority
- The inspector for the erosion and sediment control reviewing authority shall be allowed access to all areas of the construction site.
- All conditions or practices noted by the inspector, that could result in deteriorated slope protection or erosion control, shall be immediately corrected.
- If the inspector for the erosion and sediment control reviewing authority submits a report to the University or contractor, all infractions or penalties shall be addressed by the contractor at no expense to the University.

- At the agreed conclusion of a project, all temporary erosion control systems shall be removed, and inspection of adjacent stormwater inlets and drains conducted. The contractor shall remove all materials, sediment or vegetation that has entered due to activities related to the construction project.
- For sites in excess of one acre, the contractor shall ensure compliance with all the requirements of VR 680-14-19 (VPDES).
- The University reserves the right to require all architects, engineers, and related consultants to obtain appropriate certifications as specified under the Erosion and Sediment Control law.
- Contractor shall provide the University with legible copies of all correspondence, reports, meeting minutes, etc. that involve stormwater issues.

The goal of implementing these measures is to prevent pollution of stormwater and maintain healthy waterways

4.1.5 MCM 5 Post-Construction Stormwater Management for New Development and Development on Prior Developed Lands

1. The university shall maintain compliance with Virginia Erosion and Sediment Control and Stormwater Laws.

2. Brightview landscaping has been hired to provide additional staff for stormwater maintenance and inspections.

3. The University's Stormwater Master Plan will be implemented to ensure compliance with current regulations. The intent is to supplement the Current Campus Master Plan by providing a guideline for development on campus.

4.1.6 MCM 6 Pollution Prevention and Good Housekeeping for Facilities Owned or Operated by the Permittee Within the MS4 Service Area

1. Tradesmen have been instructed to immediately cleanup releases of any materials they are using and report any quantity that may have entered a stormwater drain. This increases the awareness for stormwater runoff and eliminate sources of illicit materials polluting surface waters.

2. Groundskeepers have been instructed to pick-up debris to prevent shredding by lawn mowers and entering stormwater drains to reduce the amount of pollutants in the stormwater, and promote the free flowing of stormwater in the sewer lines.

3. Absorbent materials are kept available, and a fully enclosed hazardous materials storage shed is used for the staging of hazardous wastes, including contaminated absorbents and personal protective equipment. Storing hazardous wastes isolated from the weather and unauthorized personnel will limit the chances of the material to enter the stormwater system.

4. A Hazardous Substance Policy has been created and will be implemented to prevent hazardous materials from entering the University's stormwater sewer system and other downstream waters

5. A Nutrient Management Plan has been implemented to help reduce the amount of pollutants in the stormwater specifically the application of fertilizers and herbicides will be specified and strictly followed.

6. A company with expertise in hazardous materials has been contracted to provide emergency response to incidents requiring additional resources and equipment. They have the added responsibility of overpacking primary containers and arranging for transportation to approved disposal sites, recyclers, or incinerators. This will assure a release is adequately remediated, storm drains are protected, staff personnel do not become contaminated and disposal protocols are strictly followed.

7. After campus events trash receptacles shall be emptied and stormwater inlets in the area will be checked and trash removed from inlets. An estimate of the amount of trash collected shall be recorded and sited of the greatest accumulations noted.

4.2 Program Effectiveness

1. The MS4 program was updated and implemented in 2021. The program plan has been brought up to current General Permit standards.
2. The University will renew its MS4 permit at the end of this reporting period.

4.3 Program Changes Needed

1. Generally, the program has been updated to include more training and public outreach to make the public aware of the impacts that the community can have on the environment and the stormwater system.

5.0 CHESAPEAKE BAY TMDL ACTION PLAN STATUS REPORT

5.1 BMPs Implemented

There were no new BMPs implemented during the reporting period.

5.2 Credits Acquired

The University did not acquire credits during the reporting period.

5.3 Progress Toward Meeting Required Cumulative Reductions

Parkway Grading has been hired by the university to improve three BMPs on campus. The proposed improvements will start construction during the next reporting cycle. These improvements will help bring the university to their 40% cumulative reductions goal.

Burns & McDonnell will begin work within the first quarter of 2024 to retrofit the remaining BMPs on campus and review any additional measures that may be needed to achieve 100% cumulative reductions.

5.4 BMPs to be Implemented

No new BMPs have been implemented.

Brightview landscape services has begun to perform BMP maintenance on campus. BMP's were cut and refreshed via Brightview Landscape Service during the month on September, 2023. Outfalls will be serviced in the next reporting period.

6.0 LOCAL TMDL ACTION PLAN STATUS REPORT

6.1 Elizabeth River TMDL Action Plan

The Elizabeth River TMDL Action Plan was developed to address pollutants of concern (POC) in accordance with the General Permit requirements where the university has been assigned a waste load allocation (WLA) in an approved TMDL. NSU drains to the Lower Easter Branch segment of the Elizabeth River and is therefore subject to the approved bacteria TMDL for the Elizabeth River.

Wildlife is considered to the be primary source of bacteria-laden runoff for the University's MS4 service area. The most notable wildlife present on campus is waterfowl. These animals are a large contributor to this source of bacteria as they are attracted to open spaces and wet areas present on the campus.

NSU has contracted "Flyaway Geese" Control use trained dogs to prevent geese from nesting on campus.

- Certified dogs (collies) utilized on campus twice a day to chase away geese and ducks.

- Chlorine has been added to various water fountains to deter geese from gathering and nesting. Regular emails and/or fliers are sent out to the University's students, staff and faculty asking them to not feed geese or seagulls on campus.

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CREATE AMAZING.

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