Action Plan for the Accotink Creek Chloride TMDL

A Plan to Address NOVA's Assigned Wasteload Allocation for the Annandale Campus

Permit #: VAR040095
Prepared: May 2021

This document addresses Part II B, of the General Virginia Pollution Discharge Elimination System Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer System. This document serves as a specific Total Maximum Daily Load Action Plan to identify the best management practices and other interim milestone activities to be implemented to address the Chloride wasteload allocation assigned to NOVA's regulated MS4 area in the *"Chloride TMDLs for the Accotink Creek Watershed, Fairfax County, Virginia*," approved by the Environmental Protection Agency on May 23, 2018.

Northern Virginia Community College

Annandale Campus

Wetland Studies and Solutions, Inc.®
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EXECUTIVE SUMMARY

Northern Virginia Community College (NOVA) is authorized to discharge stormwater from its municipal separate storm sewer system (MS4) under the Virginia Pollutant Discharge Elimination System (VPDES) General Permit for Discharge of Stormwater from Small MS4s (MS4 General Permit). To maintain permit compliance, NOVA implements an MS4 Program Plan that includes best management practices (BMPs) to address six minimum control measures (MCMs) and special conditions for the Total Maximum Daily Loads (TMDL) in which NOVA has been assigned a wasteload allocation (WLA). The Environmental Protection Agency (EPA) describes a TMDL as a "pollution diet" that identifies the maximum amount of a pollutant the waterway can receive and still meet water quality standards. A WLA determines the required reduction in pollutant of concern loadings from the MS4s to meet water quality standards. The MS4 General Permit serves as the regulatory mechanism for addressing the load reductions described in the TMDL, predominantly through the requirement of a TMDL Action Plan.

The purpose of this Action Plan is to address the WLA assigned to the NOVA Annandale Campus for the upper Accotink Creek Chloride TMDL in accordance with the special conditions in the MS4 General Permit. The TMDL entitled *"Chloride TMDLs for the Accotink Creek Watershed, Fairfax County, Virginia*" (TMDL Report) was approved by the EPA on May 23, 2018 and assigns a "maximum extent practicable" (MEP) WLA to NOVA, Fairfax County, VDOT, Fairfax County Public Schools, City of Fairfax, and Town of Vienna. There are two Virginia mandated chloride criteria discussed in the TMDL documentation – acute and chronic. Acute criteria require no more than one chloride concentration exceeding 860 mg/l every three years which equates to a 77% reduction in the upper Accotink Creek. The chronic criterion for chloride allows no more than one four-day average chloride concentration exceeding 230 mg/l every three year which is equivalent to an 84% reduction from current condition in the upper Accotink Creek. The aggregate MS4 WLA for a total of 4,972,399 lbs/yr or 61% of the TMDL for the upper Accotink Creek. This Action Plan addresses chloride in accordance with the special conditions demonstrating that NOVA uses an adaptive and iterative approach to reduce or eliminate the pollutant to the MEP. Compliance to the special conditions is demonstrated within this Action Plan through:

- ✓ NOVA's MS4 Program Plan MCMs which lists laws, programs, and other regulatory mechanisms relied upon that are applicable to reducing chloride.
- ✓ NOVA's MS4 Public Education and Outreach Program plan and strategy.
- ✓ Proposed future goals (i.e., NOVA's Salt Management Strategy, working group, etc.); and
- ✓ A methodology to measure Action Plan effectiveness through MS4 annual reporting.

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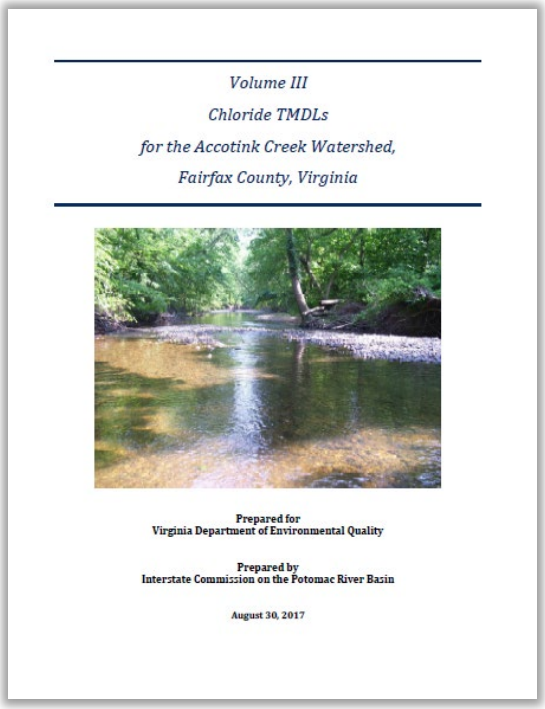
Acronyms

BMP	Best Management Practice
B&G	Buildings and Grounds Maintenance
DEQ	Virginia Department of Environmental Quality
EPA	Environmental Protection Agency
IDDE	Illicit Discharge Detection and Elimination
LA	Load Allocation
MCM	Minimum Control Measure
MEP	Maximum Extent Practicable
MOS	Margin of Safety
MS4	Municipal Separate Stormwater Sewer System
MS4 GP	General Permit for Discharge of Stormwater from Small MS4s
NPDES	National Pollutant Discharge Elimination System
SaMS	Salt Management Strategy
SWPPP	Stormwater Pollution Prevention Plan
SWM	Stormwater Management
TMDL	Total Maximum Daily Load
VPDES	Virginia Pollutant Discharge Elimination System
VSMP	Virginia Stormwater Management Program
WLA	Wasteload Allocation

1.0 INTRODUCTION AND PURPOSE


Volume III
Chloride TMDLs
for the Accotink Creek Watershed,
Fairfax County, Virginia

Prepared for
Virginia Department of Environmental Quality

Prepared by
Interstate Commission on the Potomac River Basin

August 30, 2017

Mandated by Congress under the Clean Water Act, the National Pollutant Discharge Elimination System (NPDES) storm water program includes the Municipal Separate Storm Sewer System (MS4), Construction, and Industrial General Permits. In Virginia, the NPDES Program is administered by the Virginia Department of Environmental Quality (DEQ) through the Virginia Stormwater Management Program (VSMP) and the Virginia Pollutant Discharge Elimination System (VPDES). NOVA is authorized to discharge stormwater from its MS4 under the VPDES General Permit for Discharge of Stormwater from Small MS4s (MS4 General Permit). As part of the MS4 General Permit authorization, NOVA developed and implements a MS4 Program Plan with best management practices (BMPs) to address the six minimum control measures (MCMs) and the special conditions for applicable total maximum daily loads (TMDLs), as outlined in the MS4 General Permit. Implementation of these BMPs is consistent with the provisions of an iterative MS4 Program constituting compliance with the standard of reducing pollutants to the "maximum extent practicable" (MEP).

Deicing salt applied to areas such as roads, sidewalks and driveways is a major source of chloride in developed areas surrounding the upper Accotink Creek. Chloride can disrupt the osmotic regulation of aquatic organisms and therefore was determined to be a pollutant of concern. In 2014, DEQ listed portions of the Accotink Creek watershed on their biennial 303(d) TMDL Priority List and Report due to violations of the state's water quality standard for chloride. Subsequently, a TMDL was developed and approved on May 23, 2018 by the EPA. The TMDL assigned MS4 Permit holders a waste load allocation (WLA) for chloride discharges. The WLA was presented in Volume III of the TMDL as being an Aggregate MS4 WLA for a total of 4,972,399 lbs/yr or 61% of the TMDL for the upper Accotink Creek.

While a numeric WLA was discussed, implementation requires an MEP approach to address reductions. DEQ recognizes that public safety must remain the highest priority and believes that water quality concerns identified through the TMDL for chloride can be addressed while still maintaining the high standards of public safety during snow and ice events. Therefore, the Virginia Salt Management Strategy (SaMS) toolkit was developed by DEQ for implementation strategies. The presented strategies and research are to be used to assist MS4s and other regulated entities

within the watershed by recommending the use of performance-based goals rather than strictly adhering to a numeric TMDL reduction.

1.1 Total Maximum Daily Loads

A TMDL is the amount of pollutant a water body can assimilate and still meet water quality standards for its designated use. Typically, TMDLs are represented numerically in three main components:

- WLA for point source contributions and MS4 Permit operators
- Load Allocations (LA) for non-point source contributions and natural background sources
- Margin of Safety (MOS)

Point source pollution is any single identifiable source from which pollutants are discharged. If point source discharges, including a permitted MS4, are present in the TMDL watershed, then any allocations assigned to that permittee must be in the form of a WLA. The NOVA Annandale Campus's MS4 outfalls are defined as point source discharges; and therefore, fall under this category in the TMDL. Pollution that is not from an identifiable source, such as a pipe or a ditch, but rather originates from multiple sources over a relatively large area, are considered to be non-point source pollution. These sources are typically categorized into agricultural, livestock, and wildlife with LAs assigned for each. The MOS is a required component that accounts for the modeling uncertainty in the response of the waterbody to loading reductions and is implicitly incorporated into a TMDL computation. The TMDL is expressed in the following equation:

$$TMDL = \sum WLA + \sum LA + MOS$$

Virginia provides two water quality standards for chloride concentrations – acute and chronic as part of 9VAC25-260-140. Acute concentrations of chloride cannot exceed one-hour average chloride concentration of 860 mg/l more than once every three years. Chronic concentrations of chloride are calculated as a four-hour average and cannot exceed 230 mg/l more than once every three years. To meet the acute criteria a 77% reduction in the upper Accotink Creek would be required, and for the chronic criteria an 84% reduction would be required. Ultimately the chronic criterion was chosen as the water quality threshold due to being more conservative and protective of the watershed. The TMDL report calculated a total TMDL of 8,217,030 lbs/yr with an aggregate MS4 WLA set to 4,972,399 lbs/yr for the upper Accotink Creek. While a numeric WLA was assigned, implementation of the TMDL will focus on best management practices that include training and use of more efficient and effective technologies to reach MEP.

1.2 MS4 General Permit TMDL Special Conditions

NOVA operates a portion of their regulated MS4 within the Accotink Creek TMDL watershed, at the Annandale campus, and is therefore subject to the TMDL WLAs assigned to MS4s in the TMDL. The special conditions for the TMDL listed in the MS4 General Permit require NOVA to develop a TMDL Action Plan designed to reduce loadings for a POC where NOVA is given a WLA to an impaired water for which a TMDL has been approved by the EPA as described below:

- For TMDLs approved by the EPA prior to July 1, 2013, and in which an individual or aggregate wasteload has been allocated to NOVA, NOVA shall update the previously approved local TMDL action plans to meet the conditions of Part II B 3, B 4, B 5, B 6, and B 7 as applicable, no later than 18 months after the permit effective date and continue implementation of the action plan; and
- For TMDLs approved by EPA on or after July 1, 2013, and prior to June 30, 2018, and in which an individual or aggregate wasteload has been allocated to NOVA, NOVA shall develop and initiate implementation of action plans to meet the conditions of Part II B 3, B 4, B 5, B 6, and B 7 as applicable for each pollutant for which wasteloads have been allocated to NOVA's MS4 no later than 30 months after the permit effective date.

NOVA shall complete implementation of the TMDL action plans as soon as practicable. TMDL action plans may be implemented in multiple phases over more than one permit cycle using the adaptive iterative approach provided adequate progress is achieved in the implementation of BMPs designed to reduce pollutant discharges in a manner that is consistent with the assumptions and requirements of the applicable TMDL.

Each local TMDL action plan developed by NOVA shall include the following:

- The TMDL project name;
- The EPA approval date of the TMDL;
- The wasteload allocated to NOVA (individually or in aggregate), and the corresponding percent reduction, if applicable;
- Identification of the significant sources of the pollutants of concern discharging to NOVA's MS4 and that are not covered under a separate VPDES permit. For the purposes of this requirement, a significant source of pollutants means a discharge where the expected pollutant loading is greater than the average pollutant loading for the land use identified in the TMDL;
- The BMPs designed to reduce the pollutants of concern in accordance with Parts II B 4, B 5, and B 6;
- Any calculations required in accordance with Part II B 4, B 5, or B 6;
- For action plans developed in accordance with Part II B 4 and B 5, an outreach strategy to enhance the public's education (including employees) on methods to eliminate and reduce discharges of the pollutants; and
- A schedule of anticipated actions planned for implementation during this permit term.

1.3 Accotink Creek Chloride TMDL Action Plan

The purpose of NOVA's Action Plan for the Accotink Creek Chloride TMDL is to address each of the local TMDL special conditions listed in Part II B. As an adaptive and iterative approach to meet surface water quality goals, the Action Plan may be revised from time to time to reduce chloride discharges from NOVA's MS4 to the MEP.

The MS4 General Permit requires NOVA to include an inventory of potentially significant sources of chloride owned or operated by the permittee that drains to the MS4 and that are not covered under a separate VPDES permit and describe BMPs designed to reduce the POC. In addition, the following information is required to be included:

- If at any time during the term of this permit, NOVA discovers a previously unidentified significant source of chloride within the permittee's MS4 regulated service area, the permittee shall notify DEQ in writing within 30 days of discovery. This includes installation of new potential sources.

- This Action Plan is incorporated, by reference, into NOVA's MS4 Program Plan, which outlines the BMPs that address the entirety of the conditions set forth in the MS4 General Permit.

2.0 THE ACCOTINK CREEK CHLORIDE TMDL

The TMDL study area includes upper and lower sections of the Accotink Creek as well as Long Branch, a tributary to the Accotink Creek. In total, the watershed is approximately 52 square miles. The upper section begins at the river headwaters in the City of Fairfax and flows to the lower section which begins at Lake Accotink. Long Branch (central) is a tributary which flows into Accotink Creek within the upper Accotink Creek boundary. Figure 1 depicts the study areas, as indicated in the TMDL as well as NOVA's Annandale Campus which lies completely within the upper Accotink Creek watershed.

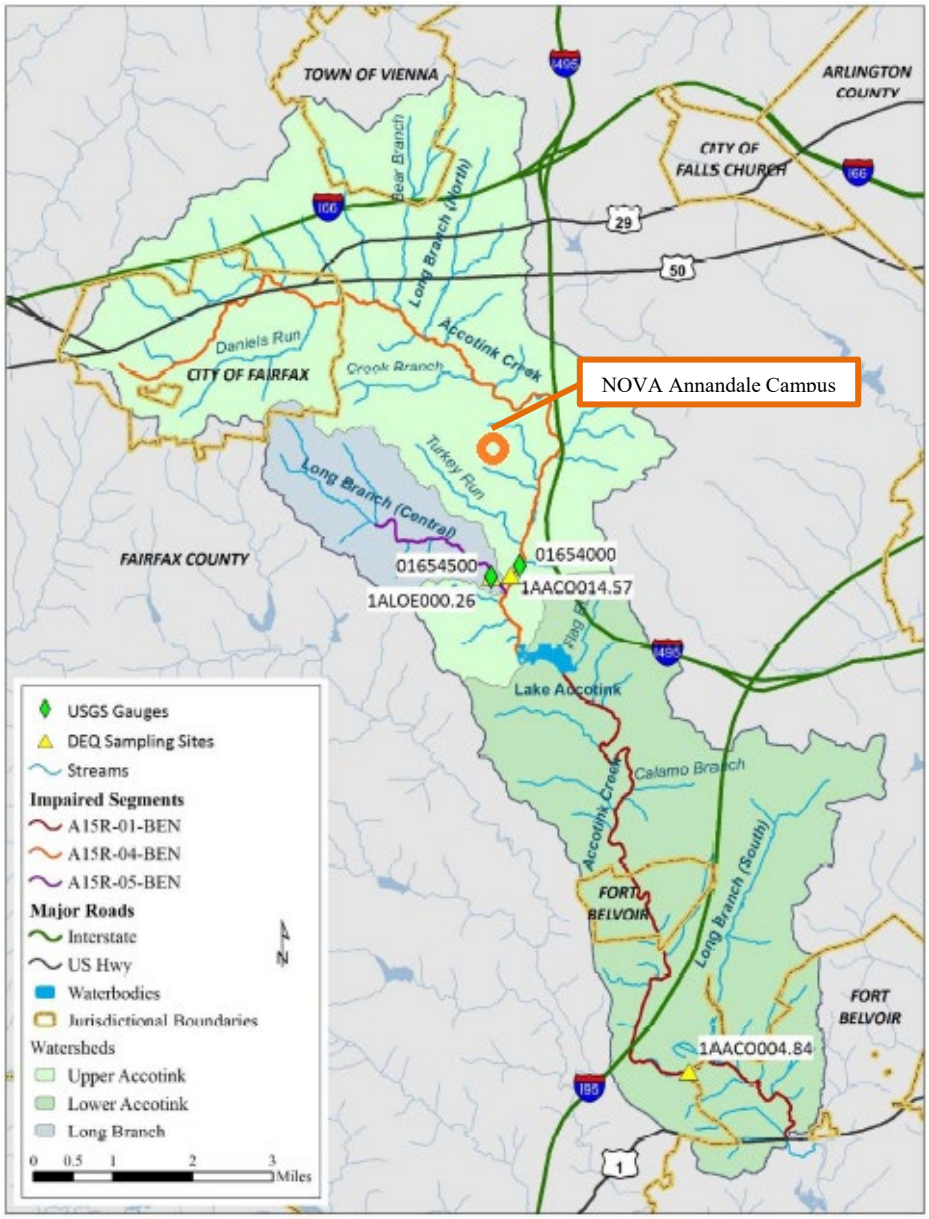


Figure 1. Accotink Creek Watershed Subbasins Map
(base map taken from Volume III TMDL)

Chloride can disrupt the osmotic regulation of aquatic organisms and therefore was determined to be a pollutant of interest. Chloride occurs naturally in water as part of the composition of soil and bedrock, but in urban watersheds chloride is commonly added to the watershed via deicing salts applied to roads, sidewalks, and driveways throughout the winter. Tracked concentrations spike in the winter months and are found at significantly lower values during the spring, summer, and fall. Figure 2 shows the average monthly chloride concentration in Accotink Creek Watershed tracked over the course of a year.

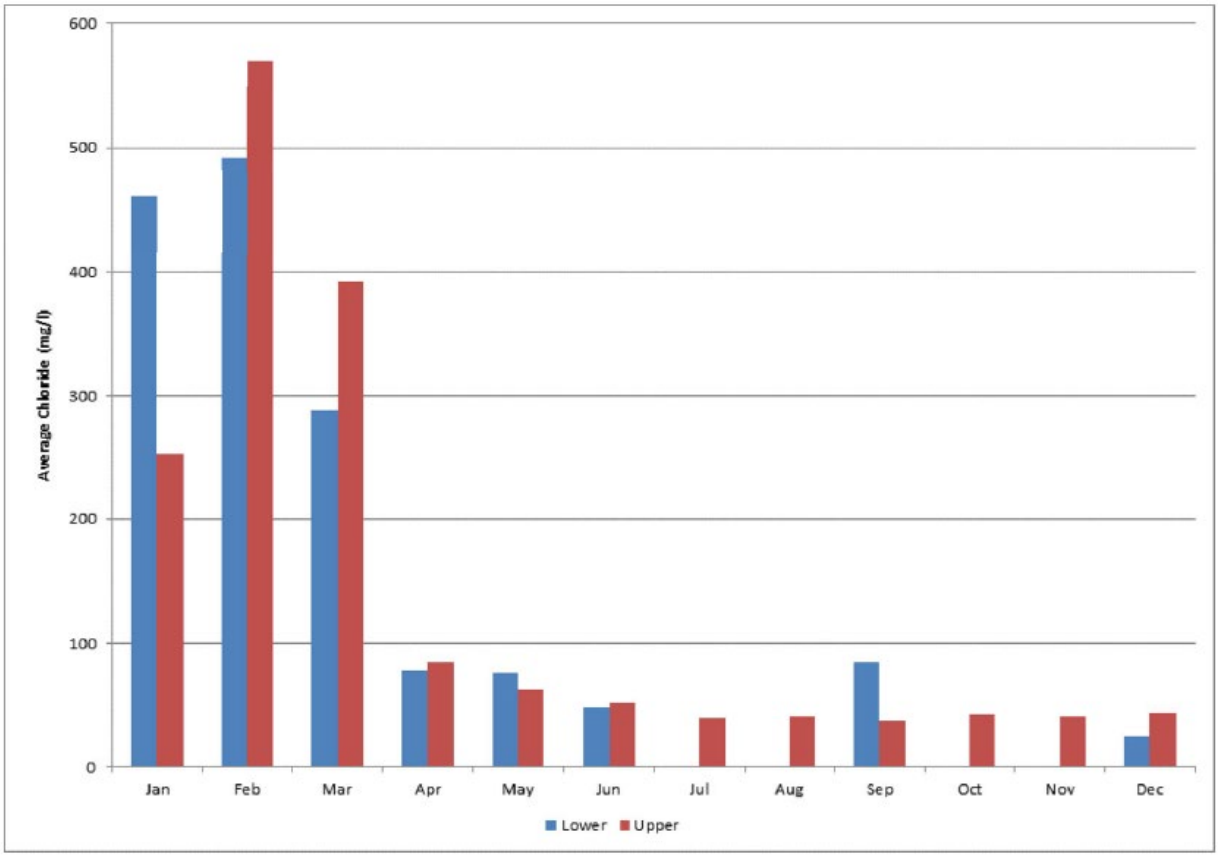


Figure 2. Monthly Average Chloride Values for the Lower and Upper Accotink Creek
(source: Volume III TMDL)

2.1 Wasteload Allocation

The TMDL Report assesses a WLA for chloride to existing point sources, including permitted MS4s. Chloride concentrations typically exceed acute and chronic criteria during the winter months which indicates that chloride water quality exceedances correlate to stormwater carrying deicing salts. The upper Accotink Creek maximum estimated chloride concentration was 3,978 mg/l during preparation of the TMDL. The Virginia chronic chloride concentration was chosen due to being more stringent which requires no more than one four-day average chloride concentration exceeding 230 mg/l every three years (9VAC25-260-140). This correlates to a reduction of 84% in the upper Accotink Creek. The total average annual chloride TMDL for the upper Accotink Creek was set to 8,217,030 lbs/yr.

The TMDL includes reductions from point source and non-point source contributors, including aggregate MS4s, aggregate industrial stormwater WLA, and a 5% future growth. Future growth was set relatively low since 87% of the watershed is already developed commercial, industrial, residential, or transportation. The aggregate MS4 WLA, which NOVA is a part of, was set to 4,972,399 lbs/yr or 61% of the total TMDL for the upper Accotink Creek. While a number was assigned in the TMDL Report, the Clean Water Act §402(p)(3)(B)(iii) requires implementation to the MEP.

2.2 Characterization of Chloride Sources in the TMDL

The SaMS toolkit includes potential sources of Chloride. Chloride is highly soluble and readily travels with water. Chloride contamination can be attributed to deicing and salting techniques used during winter weather. These sources include both rock salt and brines applied to roadways, sidewalks, and driveways within the watershed. Additionally, storage of salts and deicing materials can be potential sources within the watershed (e.g., shipping containers, barns, domes, etc.). A smaller amount of chloride can be found from drinking water sources but in many cases the groundwater and aquifers which drinking water is extracted from become contaminated by the deicing chloride. Additionally, chloride can be found naturally occurring in soils although stormwater flows of deicing chloride tend to contaminate the naturally occurring chloride quantities in soils causing the soil to react differently.

3.0 NOVA ANNANDALE CAMPUS CHARACTERIZATION

The NOVA Annandale campus is located fully within the upper Accotink watershed, located at the approximate middle of the sub watershed as shown on Figure 1. The Accotink Creek continues south through the lower Accotink Creek watershed and ultimately reaches the Accotink Bay which flows into the Potomac River.

3.1 Potential Campus Sources of Chloride

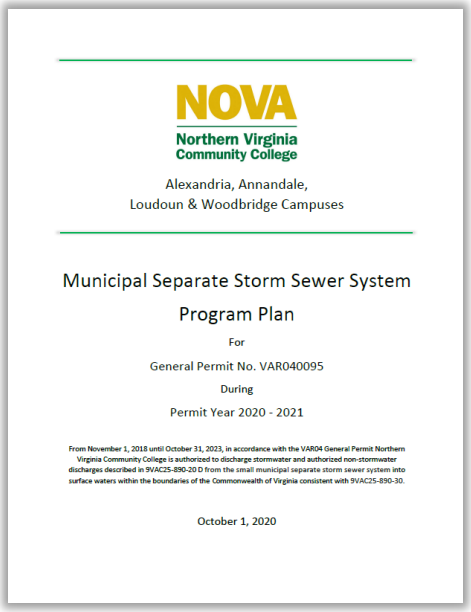
The TMDL considered potential sources of chloride from a point and non-point source contribution to the Accotink Creek watershed. The sources discussed in the SaMS toolkit indicate that runoff carrying deicing and salting material could potentially be a contributor to chloride contamination within the watershed.

3.1.1 Deicing Techniques

For the purposes of public safety, campus staff in anticipation of and during a snow or ice storm will apply deicers on campus roads, parking lots and on walkways to ensure safe access to campus facilities. Deicers are used in highest quantities during January and February but storms in late December or early March also sometimes require the use of deicers. Buildings and Grounds Maintenance (B&G) staff have a pre-season meeting to discuss general snow operation procedures. If a large storm is forecast, an additional meeting may be held to discuss specific operations per storm event. The B&G staff adjust application rates based on the type of snow storm and how heavy the snow is falling. Bulk salt is stored in a shipping container behind the Facilities Building (CW). Bags of magnesium chloride is located on palettes under a covered lean-to in between the CW and the Buildings and Grounds Maintenance Building (CBG). Potential future plans include the installation of salt dome. While storage can be classified as a point source, the *NOVA Good Housekeeping and Pollution Prevention Manual* along with staff training addresses these concerns with the implementation of BMPs specifically for Salt Storage and Operations.

4.0 NOVA'S MS4 AND SWOW REMOVAL PROGRAMS

NOVA's MS4 Permit covers stormwater discharges from areas included within the census urbanized areas including its Annandale Campus within the TMDL watershed. NOVA's collective efforts, as described in the NOVA MS4 Program Plan, result in significant reduction of pollutants that may be discharged from its regulated MS4.


NOVA
Northern Virginia Community College
Alexandria, Annandale, Loudoun & Woodbridge Campuses
Municipal Separate Storm Sewer System Program Plan
For
General Permit No. VAR040095
During
Permit Year 2020 - 2021
From November 1, 2018 until October 31, 2023, in accordance with the VAR04 General Permit Northern Virginia Community College is authorized to discharge stormwater and authorized non-stormwater discharges described in 9VAC25-890-20 D from the small municipal separate storm sewer system into surface waters within the boundaries of the Commonwealth of Virginia consistent with 9VAC25-890-30.
October 1, 2020

4.1 Minimum Control Measures

The MS4 General Permit requires the Program Plan to include BMPs to address the requirements of six MCMs described in Part I E of the MS4 General Permit. The following summary of the NOVA's MS4 Program Plan MCMs list laws, programs, and other regulatory mechanisms relied upon by NOVA that are applicable to reducing chloride.

4.1.1 MCM 1 Public Education and Outreach on Stormwater Impacts

NOVA's MS4 Program includes, by reference, a Public Education and Outreach Program (PEOP) that incorporates educational information about TMDL pollutants of concern. The PEOP includes an increase in stormwater pollution prevention training that focuses on daily operations at NOVA's campuses.

4.1.2 MCM 2 Public Involvement and Participation

NOVA will post this Action Plan on their stormwater pollution prevention webpage at https://www.nvcc.edu/stormwater/. Availability of this Action Plan will increase awareness of the TMDL with webpage visitors.

4.1.3 MCM 3 Illicit Discharge Detection and Elimination

NOVA's MS4 Program includes an Illicit Discharge Detection and Elimination (IDDE) Program with written procedures to detect, identify, and address non-stormwater discharges including illegal dumping to the small MS4 along with policies and procedures for when and how to use legal authorities. NOVA prohibits non-stormwater discharges into the storm sewer system through language provided within the Standards of Conduct for employees, the Student Handbook for students, and in the college's Environmental Compliance Policy. IDDE BMPs are described in the MCM 3 BMPs in the NOVA MS4 Program Plan. The IDDE Program is effective at addressing the pollutants of concern through staff training, prohibition of illicit discharges, and annual outfall screening.

4.1.4 MCM 4 Construction Site Stormwater Runoff Control

NOVA's MS4 Program includes a Construction Site Runoff Control Program that includes mechanisms to ensure compliance and enforcement on regulated construction sites with implementation of the DEQ-approved "*VCCS Annual Standards and Specifications for Erosion and Sediment Control and Stormwater Management."* The standards and specifications are consistent with the Virginia Erosion and Sediment Control and Stormwater Management Laws and Regulations and includes:

- Required plan approval prior to commencement of a regulated land disturbance activity;
- Construction site inspections and enforcement; and
- Certification of post-construction stormwater management facilities.

Through inspections and enforcement, especially regarding stormwater pollution prevention plan inspections, potential for chloride discharges (i.e., deicing during winter construction or storage of onsite chemicals) is minimized. MCM 4 BMPs in the NOVA MS4 Program Plan describe construction site runoff control BMPs.

4.1.5 MCM 5 Post-Construction Stormwater Management

NOVA's MS4 Program includes a Post-Construction SWM Program that ensures water quality criteria in the Virginia Stormwater Management Regulations has been achieved on new developments and developments on prior developed land. Included among these requirements are written policies and procedures in the VCCS Annual Standards and Specifications for Erosion and Sediment Control and Stormwater Management to ensure that stormwater management facilities are designed and installed in accordance with appropriate law and regulations. Although the facilities are designed to achieve target phosphorus reductions, it is thought that water quality BMPs should provide some benefit for potential chloride removal. Post-construction, the Program includes schedules and written procedures to ensure long-term inspections and maintenance of stormwater management BMPs. MCM 5 BMPs in the NOVA MS4 Program Plan describe post-construction stormwater management BMPs.

4.1.6 MCM 6 Good Housekeeping

NOVA's MS4 Program includes a Good Housekeeping and Pollution Prevention Program that includes policies and procedures to ensure that daily operations minimize the exposure of pollutants to rainfall on campus grounds to the MEP. The program is supported with NOVA's Good Housekeeping and Pollution Prevention Manual and biennial training for applicable staff. MCM 6 BMPs in the NOVA MS4 Program Plan describe good housekeeping and pollution prevention BMPs.

No new policies and procedures or modifications to existing policies and procedures were identified as necessary to meet the requirements of the special conditions.

5.0 IMPLEMENTATION OF THE STRATEGY TO REDUCE CHLORIDE

The SaMS toolkit will be used as a guideline to apply less salt, thereby reducing chloride within the MS4. In particular, the SaMS toolkit recommends enhanced winter operations strategies including the following:

1) Using weather reports and road surface conditions to determine the amount of deicing materials needed;
2) Integrating the pretreatment of impervious surface with anti-icing agents like brine or other products with lower chloride content into winter maintenance programs;
3) Increasing snow removal rates prior to deicer application;
4) Upgrading equipment for spreading of deicers;
5) Educating vendors, staff and the public on the optimum time to apply deicers and the optimum rate of application;
6) Training staff in spreader calibration;
7) Improved storage of deicing material; and
8) Improved record keeping.

5.1.1 Good Housekeeping Training

Proper storage of salts used in deicing can eliminate potential introduction of chlorides into the environment. The Good Housekeeping and Pollution Prevention Manual is kept current as part of the MS4 requirements. B&G staff will be trained in BMPs concerning proper storage and operational handling of deicing salts.

5.1.2 Salt Management Working Groups

NOVA will develop Salt Management Working Groups to assist in the decision making and approval processes to implement procedures to achieve the goals of this action plan. In addition, the group will serve as stakeholders to ensure public safety remains the priority while achieving chloride reduction strategies. The following are the proposed Salt Management Working Groups:

Environmental Committee

Salt management will become part of NOVA's Environmental Committee's discussions. The existing Environmental Committee includes appointed faculty and staff such as Campus Provosts, Director of Facilities, Sustainability Officer, Environmental Compliance Officer, Facility Managers, Parking Department Managers, et. al. who will work towards meeting NOVA's environmental stewardship initiatives. Key stakeholders such as the Annandale Facility Manager will be invited to the meetings where salt management strategies can be discussed and decisions made in the effort to reduce the amount of chloride used during snow operations while keeping public safety and college facilities accessible. This Environmental Committee discusses high-level environmental issues whereas the Annandale Facility Salt Management Program Work Group discussed below will evaluate detailed BMPs proposed in the SaMS toolkit.

Annandale Facility Salt Management Program Work Group

The Annandale Facility Salt Management Program Work Group may consist of NOVA's Director and/or Assistant Director of Facilities, Environmental Compliance Officer, Annandale campus Facility Manager and B&G staff. This group will work to discuss the current Winter Operations Procedures, strategize and implement a new Salt Management Program (SMP). Discussions will include SaMS strategies prior to the winter season beginning, during the winter season, and after the season to discuss the success of the program and changes for the future. Meeting minutes will be kept on file for reference. Below are examples of SaMS strategies that NOVA may consider employing:

- Equipment Calibration
- Integration of Liquids
- Reduce Bounce and Scatter of Salt
- Anti-ice Before Events
- Upgrades to Equipment
- Alternate Storage Options
- Refine Application Rates
- Immediate Manual Removal

5.1.3 Evaluate Resources & Implement Interim Strategies

As part of developing a Salt Management Program and Standard Operating Procedures, NOVA will evaluate resources required to achieve chloride reductions. This may include evaluating budgets, equipment, personnel, and record keeping software. In addition, NOVA may need to internally test equipment and strategies to determine feasibility for incorporation into the Standard Operating Procedures. Progress of this evaluation and testing of interim strategies will be reported to DEQ during the MS4 Annual Reporting submittal. This action plan may be updated with more specific goals and strategies once the workgroups convene and determines future actions.

5.1.4 Snow Operations Standard Operating Procedures Manual

After the Salt Management Program has been instituted for a minimum of three years, a Snow Operations Standard Operating Procedures Manual will be written documenting the specific salt management strategies NOVA will employ. The Snow Operations Standard Operating Procedures Manual will be used to satisfy the chloride reductions on the Annandale campus.

5.1.5 Snow Operations Standard Operating Procedures Training

B&G staff who implement the snow operations will be trained on the strategies from the Snow Operations Standard Operating Procedures. Training will include BMPs for proper storage and handling, application rates, chemicals used, plowing map, equipment calibration, etc.

5.1.6 Record Keeping

Records will be maintained and reviewed each year by the Annandale Facility Salt Management Program Work Group. Knowledge and tracking of this information will be useful to determine the success of the program but also annual program costs and future financial projects. Additionally, training rosters of B&G staff will be kept to track training.

6.0 SCHEDULE

NOVA will implement the MS4 Program components described in Section 5 to reduce the potential of chloride discharge to surface waters to the MEP.

Table 1 provides a schedule of anticipated actions recommended or planned during the implementation of this Action Plan.

Table 1: Schedule of Anticipated Actions for Implementation of Chloride Reduction

Action Item	Completion Date
Complete TMDL Action Plan	May 15, 2021
Establish Salt Management Working Groups and Schedule of Meetings	October 1, 2021
Salt Management Working Group Reviews of SaMS and Development Salt Management Program (SMP)	June 30, 2022
• Salt Management Program Progress provided on the MS4 Annual Report (See 5.1.3) • Action Plan Updated as Necessary • Snow Operations Staff Training	October 1, 2022
• Salt Management Program Progress provided on the MS4 Annual Report (See 5.1.3) • Action Plan Updated as Necessary • Snow Operations Staff Training	October 1, 2023
• Salt Management Program Progress provided on the MS4 Annual Report (See 5.1.3) • Action Plan Updated as Necessary • Snow Operations Staff Training	October 1, 2024
Develop Snow Operations Standard Operating Procedure Manual	June 30, 2025
• Salt Management Program Progress provided on the MS4 Annual Report (See 5.1.3) • Action Plan Updated as Necessary • Snow Operations Staff Training	October 1, 2025
Implement SOPs – TMDL End Date	Winter 2025