CITY OF BURLINGTON
PHASE II STORMWATER MANAGEMENT PLAN
October 1, 2016

A. INTRODUCTION

The City of Burlington is located along the shores of Lake Champlain in the northwest section of Vermont. With a population of approximately 40,000 residents, it is the most populated city within the state.

The Stormwater Management Program (SWMP) documented here outlines the City's plan and measureable goals for the development and implementation of the six minimum measures described in Subparts IV.G and H of the 3-9014 (2012) MS-4 permit. Additionally, it outlines our intent to comply and schedule for compliance with requirements related to discharges to stormwater impaired waters.

Please note that this SWMP is not an exhaustive list of the programs and practices that the City intends to implement and/or continue over the course of the next five years. Annual reports will document these additional efforts and enhancements undertaken by the City in addition to compliance reporting related to the measures and requirements laid out herein.

B. NOTICE OF INTENT

A notice of intent to comply with the Stormwater Phase II program is attached at the end of this document on a form provided by the VTDEC, along with attachment A (Summary of Best Management Practices) and attachment B (Timeframe for implementation). Note that the estimated area served by MS4s on this form has been designated as 2.9+ square miles to signify a potential increase in service area that will be quantified with the completion of updated sub-watershed delineations for the ___ additional outfalls that have been added in the last round of mapping updates

Water from the City of Burlington discharges to the following named water-bodies, some of which are impaired.

- Lake Champlain (impaired due to Phosphorus)
- Winooski River
- Intervale Wetland Tributary to Winooski River
- Englesby Brook (impaired due to Stormwater and E. Coli)
- Centennial Brook (impaired due to Stormwater)
- Potash Brook (impaired due to Stormwater and E. Coli)

The best management practices detailed in the Minimum Measures section of this SWMP apply to all of the discharges from the City of Burlington. Additional measures related to discharges to the impaired watersheds are detailed in Section E: Discharges to Impaired Waters.

C. RESPONSIBILITY FOR IMPLEMENTATION OF THE STORMWATER MANAGEMENT PLAN

Since the last permit cycle, Burlington has joined the ranks of South Burlington in establishing a dedicated, user-fee funded stormwater management program. This program was established in 2009 with update of the City's Chapter 26 "Sewers and Water Pollution Control" ordinance to the Chapter 26 "Wastewater, Stormwater and Pollution Control" ordinance (available at: http://bit.ly/18JQA1v). The ordinance provides for additional regulatory controls related to construction and post-construction runoff and also established a dedicated stormwater user fee to support implementation and operation of the Burlington Stormwater Management Program (BSWMP). Revenue generated from the user fee is reserved for expenditure on stormwater infrastructure repair, maintenance and improvement, implementation of this MS-4 SWMP, and administration of the local stormwater regulatory and project review program.

The BSWMP is housed within the Department of Public Works and currently has one full-time staff person, with support from Engineering, Right of Way Maintenance, customer service, and billing services staff in Public Works. The majority of the elements in this SWMP are implemented directly by the BSWMP and Public Works. However, as with previous permit cycles, we intend to work closely with staff from the Parks & Recreation, the Burlington School Department and Burlington Electric Department to ensure that our SWMP is implemented citywide.

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D. MINIMUM CONTROL MEASURES

The purpose of the minimum control measures is to minimize impacts to water quality from Municipal Separate Storm Sewer Systems (MS4). This section outlines each of the best management practice to be continued from previous permit cycles or enhanced for each of the six (6) minimum control measures, including measureable outcomes that will be reported on during each annual report. A summary of BMPs, measureable outcomes and responsible parties is provided in Attachment A to the NOI. A schedule of implementation of the BMPs is provided in Attachment B to the NOI.

The BMPs listed below do not constitute a complete listing of the planned programmatic efforts of the BSWMP, but rather the minimum measures that will be completed as part of compliance efforts with the MS4 (2012) permit.

1. Public Education and Outreach on Storm Water Impacts

In order to education and provide outreach to the public on stormwater impacts, the City of Burlington will continue to partner with other area MS4 communities under a Memorandum of Understanding (MOU) for the period March 10, 2013 through March 9, 2018 to operate a Regional Stormwater Education Program (RSEP). A copy of the final MOU with Burlington's signature is provided at the end of this document.

This program, through its lead agency (CCRPC) and contractors hired by RSEP, will include, at a minimum:

- Development and implementation of an on-going media advertising campaign
- Operation of the RSEP website (www.smartwaterways.org)
- Hosting of occasional education seminars open to the public concerning stormwater pollution prevention and related topics.

As with the previous permit cycle, RSEP will also engage a contractor to utilize appropriate survey methods of the RSEP communities to evaluate the effect of our media efforts.

Separately the BSWMP will also continue maintenance and expansion of its own stormwater related website at: http://www.burlingtonvt.gov/DPW/Stormwater/Stormwater-Management/ with pages and links related to:

- City's Chapter 26 Stormwater Erosion Control and Stormwater Management Ordinance
- Reference Links: links to Smart Waterways, other stormwater related links
- Get Involved: listing volunteer opportunities, workshops, lectures etc
- Stormwater Project information

In addition to the above efforts, the city shall undertake other public education and outreach efforts such as social media outreach and technical assistance to homeowners and will report on these supplemental items in annual reports.

Responsible Parties: RSEP Steering Committee, BSWMP

Measureable Outcomes:

- Annual # of media impressions
- Annual # visitors to RSEP website
- Continued active participation in the RSEP Steering Committee
- Continued maintenance of the Burlinton Stormwater web pages, with minimum semi-annual review and update of information.

2. Public Involvement/Participation

Successful stormwater management programs depend on public support. The purpose of the efforts under this minimum measure is to move beyond awareness by encouraging the public to participate in stormwater/water quality related activities. The success of the regional approach to MCM 1 achieved by RSEP has led to the creation of a regional

public involvement and participation campaign called the Chittenden County Stream Team (CCST). This allows the pooling of funds to hire a contractor who coordinates workshops and hands-on project opportunities throughout Chittenden County. Citizens from any of the member towns can attend these opportunities, which rotate through the various MS4 towns. This regional approach creates more opportunities for Burlington citizens to become involved in protecting our regional waterbodies (which cut across political boundaries).

Through the Regional Stormwater Public Involvement and Participation Program MOU (July 2011 – June 2016, extended until June 30, 2017), a contractor prepares annual program to be approved by the Steering Committee. This program shall include the following minimum elements:

- operation of the program's website at www.ccstreamteam.org (or its equivalent)
- hosting/organization of workshops, projects and other events to engage the public
- recruitment of volunteers to engage in and promote public involvement and participation

Separately, the City will continue to sponsor stream clean-up days. The city through its Community and Economic Development Office (CEDO) will coordinate and sponsor clean-up days for area streams and rivers. These clean-up days will most likely continue to coincide with Vermont's Green Up day, typically held the first or second Saturday in May of each year. Depending on the amount of trash and debris surveyed ahead of time, the waterbodies to be reviewed will include the ongoing clean up of Englesby Brook, and may include parts of Centennial Brook and the Winooski River within Burlington. In our annual reports the city will summarize tons of trash removed and number of clean-ups held.

In addition to the above efforts, the city shall attempt to undertake other public involvement and participation efforts such as partnering with other organizations on workshops opportunities for Burlington citizens and will report on these supplemental items in annual reports.

Responsible Parties: Chittenden County Stream Team and Burlington Stormwater Management Program Staff

Measureable Outcomes:

- # of CCST website visits
- # of participants in workshops and opportunities
- # of participants in stream clean-up/green-up projects
- # of tons of trash removed

3. Illicit Discharge Detection and Elimination

This program will continue the illicit discharge detection program started during the first permit cycle. Its purpose is to detect and eliminate non-stormwater discharges to the city's approximately 173 MS4 outfalls, including potential direct and indirect sanitary

sewer discharges, illegal dumping of pollutants such as petroleum products and septage, and industrial waste discharges. Components of this program shall include:

- GIS Map Updates. We are in the final stages of a city-wide update of our GIS Map of our stormwater system, which has involved capturing the work that has been done in the system over the last 30 years. Since the last SWMP update cycle, an additional 97 outfalls (many of which serve only a few catch basins and are on the beltline) have been identified. For this permit cycle, we propose to continue improving the quality of our GIS data (see enhancements)
- Monitoring. We propose to visit and sample each outfall at least twice during this permit cycle. Burlington will continue to use a number of tools to aid in the monitoring and detection of illicit discharges from all MS4 areas. These tools have been used successfully to locate and correct illicit connections. They may include, but are not limited to:
  A. Bacteria testing of MS4 discharges during dry weather. While any type of watershed will exhibit high bacteria counts during wet weather, these concentrations should be low during dry periods when outfall flows are primarily derived from groundwater sources.
  B. Experience has shown that the use of optical brightener (OB) in conjunction with bacteria testing is a good combination to detect possible direct or indirect wastewater contamination. Most detergents used in clothes washing contain optical brighteners that absorbs onto an unbleached cotton pad. The advantage of this test is that the pad is continuously sampling flow for the period of time it is in service and even small concentrations of OB can be detected.
  C. Fluoride testing. Fluoride is added to the municipal water supply as a dental decay preventative. Since fluoride concentrations are low in the groundwater around Burlington and does not appear to bind to soils, it has been used for years in the city to detect the intrusion of drinking water or wastewater in groundwater samples. We propose to fluoride as another tool in detection.
  D. Ammonia testing. Concentrations of ammonia greater than 1 mg/l is generally considered to be a positive indicator of sewage.
  E. Surfactant testing
- Filming of Stormwater Pipes: As part of Pollution Prevention (MCM 6) efforts, we will be filming stormwater sewer pipes with our remote controlled sewer camera vehicle. During these structural evaluations, we will also look for evidence of illicit connections or discharges. We are currently undertaking a Citywide pipe assessment project that will involve filming critical (based on likelihood and consequence of structural failure) sewer pipes, including some storm pipes.
- Enforcement. Chapter 26 of the City of Burlington's Ordinance, Sewers and Water Pollution Control, currently contains multiple protections and mechanisms for enforcement related to illicit connections and illegal discharges. The most relevant sections of Chapter 26 (Available in its entirety at: http://bit.ly/18JQA1v) are listed below:
  - In Article III, Division 2 (http://bit.ly/16BA1VB):
    - 26-112: prohibitions against the discharge of wastes and pollutants to the City Right of Way, sewer system or surface water

        - 26-114: requirements for MSGP permits for industrial facilities and authority of the City to request proof of compliance
        - 26-115: authority of the City to enter and inspect properties which discharge stormwater and to conduct monitoring
        - 26-116: requirements that the owner/operators of commercial or industrial establishments provide protection from discharge of wastes and pollutants off their property
        - 26-117: requirements for notifications of spills
    - In Article I (http://bit.ly/10RTeKX)
        - 26-2: Definition of illegal discharge and illicit connection
        - 26-4: Enforcement Remedies, including fines, stop work orders and the authority to seek an order specifically requiring:
            - The elimination of illicit connections and/or non-stormwater discharges to the MS4;
            - The discontinuance of practices, activities, or operations that lead to violations of this chapter;
            - The abatement or remediation of stormwater pollution or contamination hazards and the restoration of any affected property;
            - The implementation of source control or treatment through the use of best management practices;
            - The performance of monitoring, analysis, and reporting.

Planned Enhancements:

GIS Map IV.H.3.a (4)*: Continue improvements to our Stormwater GIS*

- QA/QC and finish base update of GIS stormwater database by second permit year
- Improve subwatershed boundary delineation for all MS-4 outfalls. Complete sub-watershed delineations for stormwater impaired watershed by the end of the second permit year. The rest to be completed by the end of the permit cycle.
- Implement procedure/workflow for updating GIS annually.
- Develop ability for "network analysis" to trace upstream contribution to any detection of illegal discharge.

Locating Additional Non-Stormwater Discharges with emphasis on stormwater impaired waters IV.H.3.a (4): We will perform Hot-Spot Surveys for separate storm sewer watersheds. This involves walking the watershed and identifying the location of potential sources of illegal discharges ranging from improper dumpster placement, disposal of grease by restaurants, management of waste at service stations, as well as erosion hot spots (areas with chronic erosion due to foot or vehicle traffic and/or water related erosion). We will also identify locations within the public Right of Way (primarily chronic erosion locations) which are generating illegal discharge of sediment. We will prioritize surveys for outfalls discharging to the impaired waters, but intend to complete these by the end of the permit cycle. Surveys for other watersheds will be completed as staffing/resources allow.

We will develop a targeted outreach/compliance program to work with these businesses to resolve/prevent these illegal discharges and will work with Public Works employees to repair chronic erosion.

Education/Outreach Development IV.H.3.a (5)*:*
By the end of the permit cycle, we will develop an enhanced education program that informs public employees, business and general public of hazards associated with illegal discharges and improper disposal of wastes. Ideally this will be achieved through our regional approach in MM1 and MM2 in order to pool resources for the development or acquisition of training materials. Otherwise, the City will develop the program on it's own.

> Businesses: Develop or acquire informational material to distribute to businesses; target distribution based on results of Hot Spot Survey.
>
> Public Employees. Develop or acquire training materials to train Public Works, Parks and Police to recognize suspicious activities around storm drains and adjacent to waterbodies. Specifically, public works employees shall be trained to recognize some of the telltale signs of illicit discharges, including color & odor of suspicious discharges, solids observations, nutrient enrichment and learning to differentiate the difference between petroleum and biological sheens.
>
> General Public: Develop or acquire informational materials for dissemination to the general public regarding suspicious activities around storm drains, and telltale signs of illicit discharges, including color & odor of suspicious discharges, solids observations, nutrient enrichment and learning to differentiate the difference between petroleum and biological sheens.

Regulatory Review: Within the permit cycle, as per IV.H.3.a (6) we will examine whether an amendment is necessary to Sec 26-113 "Exemptions" to address the potential contribution of certain non-stormwater discharges currently exempted from prohibition.

Measureable Outcomes:

- # of outfalls tested each year
- # of illicit connections/illegal discharges found
- # of subwatersheds delineated
- Development of workflow for maintaining updated GIS
- # of subwatersheds in which Hot Spots Surveys have been completed
- Progress on development of Hot Spot Outreach Program
- Progress on development/acquisition/distribution of informational materials and education/outreach efforts

Responsible Parties: BSWMP Staff; possibly RSEP and CCST for education component

4. Construction Site Storm Water Runoff Control

In order to achieve maximum protection of our sewer system and waterbodies from construction site runoff, the City has adopted stringent review requirements within Article III (http://bit.ly/15vz1hX) of our Chapter 26 Ordinance. These provisions include comprehensive requirements for the reduction of pollutants from construction activities and require that all projects which result in the disturbance of more than 400 s.f. submit, at a minimum, a small project erosion and sediment control plan for review by the BSWMP. Article III, Division 3 (http://bit.ly/19AN60g) "Erosion Prevention and Sediment Control" details the requirements of this small project plan, as well requirements for EPSC plans for larger projects, and provides for authority to inspect the various phases of construction. It also clearly states that no project shall be granted a zoning permit, building permit, excavation permit or any other approval for land disturbance regulated under this article without the approval of an EPSC plan by DPW. As part of the review and approval process, projects which may require coverage by a State General or Individual Construction Permit are required to provide evidence of an authorization to discharge prior to initiation of earth disturbance. Projects require inspection prior to issuance of a final certificate of occupancy to ensure that the site is stabilized appropriately.

The City views this ordinance and small jurisdictional trigger as key to reducing the cumulative impacts of the many small projects in the City which do not require a State permit.

Additionally, as documented in MCM 6, the city will provide basic erosion prevention and sediment control training to its construction employees and will ensure that all city projects have appropriate erosion prevention and sediment control plans in place.

In this permit cycle, the City hopes to make the following improvements:

- Increase in # of general site inspections
- Code Enforcement Inspector training: training of Code Enforcement Officers so that they may assist in final stabilization inspections for project closeout for small project erosion control plans.

Measureable Outcomes:

- # of projects reviewed and approved
- # of general site inspections completed

- Responsible parties: Burlington Stormwater Management Program; P&Z

5. Post-Construction Stormwater Management in New Development and Redevelopment

In order to achieve maximum protection of our sewer system and waterbodies from post-construction site runoff and impervious surfaces, the City has adopted stringent review requirements within Article III (http://bit.ly/15vz1hX) of our Chapter 26 Ordinance. This allows for the review of any project disturbing greater than 400 sq.ft. for potential post

construction stormwater impacts. For smaller projects, the BSWMP makes a determination as to whether a stormwater management plan is necessary depending on the nature of the impact and the type of property. Stormwater management plans are mandatory for major impact, subdivision or planned unit development projects.

- Residential properties (single family and duplex) with a total resulting impervious area of greater than 2500 sq. ft. (the average amount of impervious surface for single family and duplex properties) may be required to submit a residential stormwater management form in which the project evaluates what the increase in connected impervious surface will be and proposes methods of disconnecting the impervious surface. They receive technical assistance to assist them in filling out the form and mitigating connected impervious.
- Commercial projects and major impact, subdivision or planned unit development projects are required to submit a stormwater management plan which includes the components listed in Article III, Division 4 (http://bit.ly/13eY6Nd) "Stormwater Management." Projects which require State coverage under a General Permit or Individual Permit are additionally required to submit evidence of an authorization to discharge prior to initiation of earth disturbance. In addition to managing any net new impervious surface, projects in the commercial category are strongly encouraged to address runoff from 25-50% of the existing impervious within the project limits based on feasibility evaluations. Projects are required to develop a maintenance plan, and the City has the authority to require filing of a maintenance and access easement with the land records to ensure long term maintenance as well as perform/require annual inspections (26-158(b)(6)). As per 26-157, the City encourages the use of alternative management practices and technology (green infrastructure) over the traditional "grey" practices. Lastly, projects are required either request an inspection or submit an initial certification of compliance that the stormwater management plan has been implemented prior to the issuance of a certificate of occupancy by the zoning office.

Planned Enhancements during this Permit Cycle:

- Development of the Burlington Stormwater Management Manual which will contain 1) a jurisdictional rubric identifying which categories of projects require which elements of a stormwater management plan and 2) performance standards and feasibility criteria that are specific to the receiving water and whether the discharge is to the separate or combined sewer system.
  - In order to provide for flexibility in meeting the more clearly defined and stringent standards that are anticipated in this Manual, the City will also examine the feasibility of allowing for off-site stormwater management and/or a payment in lieu of fee as a way of providing for the same mitigation impact across different projects.
- Development and implementation of maintenance agreement and easement form and process for the recording of these documents in the land records.
- Perform random site inspections/request for inspection records from properties that have submitted and implemented stormwater management plans.

Measureable Outcomes:

- # of stormwater management plans reviewed
- # of post-construction system inspections
- # of requests/review of post construction system inspection documents
- Progress on development of the Burlington Stormwater Management Manual
- Progress on development and implementation of the maintenance agreement/easement recording process

Responsible parties: Burlington Stormwater Management Program Staff, P&Z

6. Pollution Prevention/Good Housekeeping for Municipal Operations

It has been recognized that industrial activities from both private and municipal operations can be a source of pollutants to stormwater runoff. The purpose of this minimum control measure is to evaluate and minimize the impacts associated with municipal activities, including: wastewater facilities, vehicle maintenance areas, public construction activities, material storage areas, recreational facilities, storm drain management, street maintenance, parking facilities management and emergency operations.

The City of Burlington owns, operates and maintains three (3) wastewater treatment facilities that serve the entire municipality and a small adjacent portion of South Burlington. These facilities have received "no exposure" certification under the state Multi-Sector General Permits (MSGP). These MSGP permit numbers are as follows: 4420-9003.R Riverside WWTP, 4418-9003.R Burlington Main WWTP and 4417-9003.R North WWTP. They shall reevaluate their practices and refile for "no exposure" certification at that time. The city also owns and operates the Burlington McNeil Plant which complies with MSGP # 5528-9003.R. The 2011 MSGP is currently under administrative continuance. As such, these authorizations are deemed valid by VTDEC until such time as a replacement permit is issued.

The city will conduct an MCAP or equivalent audit of the Central Maintenance Facility at 645 Pine Street once during the permit cycle.

Measureable Outcome:

- Performance of the MCAP or equivalent audit
- Any resulting improvements made to the facility

Responsible parties: Burlington Stormwater Management Program Staff, Assistant Director Water Quality, Parks Department and Burlington Electric.

Vehicle maintenance and material storage areas are combined in this section as they both reside at the same location at 645 Pine Street in Burlington. This facility is exempt from the Multi Sector General Permit (MSGP) requirements, however they have implemented many practices to prevent pollution (i.e. covered salt/sand storage and fueling station, oil & grit separator (OGS) from maintenance areas, chemical containment, etc.) and shall continue these types of practices in the future.

Additionally we have improved our outdoor vehicle washing area provide for maximum containment of sediment and oil.

Responsible parties: Burlington Stormwater Management Program Staff

Municipal construction protocols. All city departments involved in construction or soil disturbance activities shall develop protocols to assure that these activities utilize proper EPSC practices. This shall be achieved through supply of typical control materials, training of municipal personnel in the proper use of these supplies, and the development of a framework that involves a "general" EPSC plan for typical planned municipal construction projects and an "individual" EPSC plan for special projects that may present a higher risk to receiving waters. Public construction activities include planned excavation activities for the repair or replacement of underground utilities, street construction and sidewalk construction.

- Underground construction. All city departments involved with utilities shall provide supplies and train employees to keep excavated soils and subsurface waters relating to underground work from entering the municipal storm drain system to the maximum extent practicable.
- Street/Sidewalk construction. The city shall continue practices to keep excavated soils, stormwater runoff from street and sidewalk construction from entering the municipal storm drain to the maximum extent practicable.
- Training. The city shall continue training of construction employees on the latest erosion control measures. Distribute copies of the "Low Risk Site Handbook for Erosion Prevention and Sediment Control" and internally to city employees.

Measureable Outcomes:

- Development and implementation of a "general" EPSC plan/protocol for typical municipal construction projects, and identification of situations in which an "individual" plan is needed
- Training for Public Works employees at least twice per permit cycle
- Training or informational materials distributed to Burlington Electric, Burlington Telecom, Burlington Parks and Recreation, Burlington School Department

Responsible parties: Burlington Stormwater Management Program, Burlington Electric, Burlington Telecom, Parks & Recreation, Public Works, and School Department.

Municipally Owned Greenspace: Approximately thirty (30) sites throughout Burlington are designated as parks or open spaces, and are maintained by the Department of Parks & Recreation. The City proposes to continue each of the following program elements

- Chemical application. While the Department of Parks & Recreation complies with the city ordinance on pesticide and herbicide use, the city shall continue review and update of policies for application of pesticides, herbicides, and fertilizers that include a list of approved pesticides and selective and environmentally responsible uses, product and application information, application equipment use and maintenance, and record keeping. These policies

shall also include provisions to minimize chemical application during wet seasons and terminate chemical application during storm events. In addition, the city continues to practice Integrated Pest Management (IPM) techniques to the maximum extent practicable.

- Chemical storage. While the city complies with Occupation Safety & Health Administration (OSHA) and U.S. Department of Agriculture (USDA) requirements for storage and use of landscape chemicals, it shall review and update, if necessary, its policies to reduce exposure of chemicals to stormwater during storage.
- Landscape wastes. While all landscape wastes generated from municipal activities are brought to local compost facility, the city shall review and update, if necessary, its procedures to prevent the disposal of landscape waste into the municipal storm drain system.
- Phosphorus Fertilizer Use: The city will prohibit the use of any phosphorus containing fertilizer on municipally controlled parks and recreational fields unless warranted by a current soil test. If P-fertilizer is used, a copy of the soil test will be submitted with the annual reports.
- Dog Waste Prevention: The Burlington Parks & Recreation Department maintains 12 dog bag stations across the city; annually they distribute approximately 110,000 dog poop bags. As part of this permit cycle, we will work with the Parks & Recreation Department to determine if there are any other target areas for dog bag stations or equivalent solutions. Education on the importance of cleaning up after pets will be included as part of MCM 1.
- Erosion control. The city shall review and update its procedures to revegetate bare or exposed soils to prevent erosion during storm events or snowmelt.
- Training. The city shall continue to train employees in the proper handling, use and disposal of landscape chemicals, wastes, plantings and erosion control. This training shall be documented for incorporation into the annual report.

Measureable Outcomes:

- Documentation of Parks and Recreation Policy related to chemical application and storage, phosphorus fertilizer prohibition and erosion control, to be completed by the end of the second permit year
- # of dog bag stations, # of dog bags distributed
- Submission of any soil tests done showing the need for P-fertilizer.

Responsible parties: Burlington Stormwater Management Program; Staff from Parks & Recreation

It is important to note that a few years ago the Parks & Recreation Department and the Conservation Board started a Burlington Conservation Legacy Program. The purpose of this program is to ensure long term stewardship of natural areas or conservation lands in the city, acquire more of these areas as they become available and engage the public to participate in this process. More information on this program can be found at: http://www.enjoyburlington.com/Parks/ConservationLegacy.cfm

Storm Infrastructure Maintenance: Storm system infrastructure management involves the cleaning and repair of catch basins, inspection and repair of storm drain pipes, and inspection and repair of outfalls. Each of these elements are important to minimizing sediment and other pollutants loading to our waterbodies. The City proposes to continue the following activities as part of our comprehensive program:

- Mapping and GIS database. The city will continue update and improve mapping of all elements of our Stormwater infrastructure. Additionally, we are transitioning towards improved asset management and tracking of maintenance and repair activities through leveraging service records which can be associated with the geo-located feature in our GIS. This will enable us to prioritize catch basin cleaning frequency using the information collected in the catch basin inspection procedure below. Additionally, using network analysis, we will identify which catch basins are MS4 catch basins vs. catch basins on the combined sewer so that we can prioritize maintenance based on receiving system.
- Catch basin inspection and maintenance. The city shall inspect MS4 catch basins at least once per permit cycle, and using asset management techniques will begin to prioritize which basins require more frequent cleaning. Inspections records will involve recording the condition of each basin, depth of sediment, relative amount and type of trash and floatables found, any of suspicious materials found (i.e. oil, sanitary products, etc.), and whether or not the catch basin has a "drains to waterway" medallion or other indication.
- Waste materials. The city shall document the quantity and final disposal of waste materials collected during catch basin cleaning operations.
- Catch basin installation/replacement/repair. Wherever possible, the city installs catch basins with a minimum 18" sump to maximize capture of gross solids. We shall document which basins have been repaired and whether improvements were installed to retain floatables and pollutants to the maximum extent practicable.
- Storm sewer inspection and repair. With the use of our remote controlled sewer pipe camera we have begun a program of inspecting storm sewer pipes for structural issues. In particular, we are focusing on our corrugated metal storm pipes which have become corroded due to application of salt during the winter. The city shall document the inspection and/or repair of any storm drain pipes. Our intent is to inspect all of the corrugated metal pipes by the end of the permit cycle.
- Outfall Inspection and Capital Improvement Program: Many of the city's stormwater outfalls are experiencing erosion and structural challenges. These outfalls will continue to be inspected at least twice per permit cycle. As part of our comprehensive program, we will utilize Clean Water State Revolving funds to undertake a planning study to study and prioritize the outfalls in the worst condition, prepare designs for remediation and construction improvements by the end of the permit cycle.

Measureable Outcomes:

- Updated # of MS-4 catch basins
- # of catch basins inspected and cleaned annually

- # tons of material collected from catch basins annually
- # of catch basins repaired
- # of linear feet of storm sewer pipes inspected
- # of linear feet of storm sewer pipes repaired
- Progress on video inspection of corrugated metal pipes
- Progress on Outfall Inspections and Outfall Capital Improvement Program

Responsible parties: Burlington Stormwater Management Program Staff; Assistant Director of Right of Way Services; Public Works Right of Way staff

Street sweeping and winter safety: Street maintenance is performed in Burlington in the form of street sweeping and winter operations such as snow plowing, snow removal and street sanding/salting. Each year, Burlington Public Works removes over 1500 tons of material from the approximately 100 miles of streets in the city. In addition to sweeping each street as weather permits, the city has implemented a program called Operation Clean Sweep. The highlights of this program are that it occurs each spring, uses the city's snow/maintenance lights to get parked cars off the streets, and involves three to four sweepers working nights to thoroughly clean every street.

Burlington proposes to include each of these activities into a comprehensive program that includes:

- Mapping. To date, it has been challenging to document in a GIS which streets are swept outside of the city's Operation Clean Sweep program. As part of a continued commitment to implement this feature of our street sweeping program and improve our ability to track our best management practice efforts, the city has implemented a (GPS) that may be used to capture sweeping route which can be uploaded to GIS.
- Waste materials. The city shall document the quantity and final disposal of waste materials collected during sweeping operations.
- Greenbelt restoration. The city recognizes the impacts of the sidewalk snow removal process to the greenbelt areas and shall repair damaged areas and clean up debris to prevent transfer of materials to the storm drain system.
- Sanding/Salting. The first priority of this type of operation is clean streets and sidewalks for public safety. The city's current standard procedure is to minimize use of salt by keeping the main arteries free of snow and ice while reducing chemical use on the less-traveled side streets. Additionally, salt use is moderated to reduce costs of the snow-fighting program. The BSWMP will work with the Assistant Director of Right of Way to review and update snow fighting protocols and minimize or mitigate the impacts of chloride.
- Training. The city shall further train employees on efficient use of de-icing chemicals and proper disposal of waste materials.

Measureable Outcomes:

- Progress on tracking Street Sweeping through GPS technology
- # tons of street sweeping grit collected annually.

- Review and update of salt use/application protocols to minimize or mitigate the impacts of chlorides

Responsible parties: Burlington Stormwater Management Program, Assistant Director of Right of Way Services

Burlington Public Works is responsible for management of municipal parking facilities, including parking garages and parking lots. The City proposes to include each of these activities into a comprehensive program that includes:

- Mapping. The city shall incorporate the location and inspection records of all its municipal parking facilities into its GIS database.
- Inspection of parking facilities: Parking facilities will be inspected at least once during the permit cycle to ensure that any stormwater features and other pollution prevention BMPs are being properly maintained.

Measureable Outcomes:

- Map of all municipal parking facilities
- Inspection of parking facilities (at least once per permit cycle)

Responsible parties: Burlington Stormwater Management Program; Assistant Director of Parking and Fleet Services

Emergency Operations are defined to be unplanned construction activities such as repair of water, sewer or storm pipes as a result of breaks or other related failures. While these occurrences are intermittent and can be seasonal (i.e. water main breaks due to frozen ground), municipal employees should attempt to reduce pollution entering MS4 systems to the maximum extent possible. In light of this type of situation, Burlington to its program that includes:

- Underground construction. The city shall continue to implement procedures used to keep excavated soils and subsurface waters relating to underground work from entering the municipal storm drain system to the maximum extent practicable. It is important to note that these procedures will be different than the program used for planned construction as a result of new issues like season and repair urgency.
- Training. The city shall continue to train construction employees at least twice per permit cycle on the latest erosion control measures and when to apply them.

Measurable outcomes:

- Documentation of minimum procedures that shall be installed during emergency operations as soon as possible.
- # of attendees at erosion control training

Responsible parties: Burlington Stormwater Management Program; Assistant Director of Right of Way Services

E. DISCHARGES TO IMPAIRED WATERS (PART IV.C)

Discharges to Impaired Waters with an Approved TMDL:

Watersheds Impaired Due to Stormwater:

This iteration of the Phase II MS4 permit requires specific measures related to the development and implementation of Flow Restoration Plans for Stormwater Impaired Watersheds. These streams experience excess peak flow and reduced based flow typical of urbanized areas, resulting in excessive sedimentation and poor biological indicators. The city is prepared to comply with the requirements related to the stormwater impaired watersheds for this permit cycle but is currently evaluating alternative mechanisms for long term holistic water quality improvements under the integrated wastewater and stormwater permitting framework proposed by the EPA. There are three (3) State designated 303(d) impacted streams that flow through Burlington's city limits:

Englesby Brook provides drainage to roughly 570 acres of developed land primarily in Burlington with a part within South Burlington and flows directly into Lake Champlain. Englesby has an EPA approved Total Maximum Daily Load (TMDL VT05-10) that utilizes sediment with stormwater runoff volume as its surrogate for the pollutant of concern.

Centennial Brook, with a watershed area of approximately 915 acres, provides drainage primarily for South Burlington and the UVM/FAHC campus, draining into the Winooski River. Centennial also has an EPA approved Total Maximum Daily Load (TMDL VT08-02) that utilizes sediment with stormwater runoff volume as its surrogate for the pollutant of concern.

Potash Brook has a watershed area of over 4,500 acres located nearly entirely in South Burlington with two small segments with our city limits. Potash has an EPA approved Total Maximum Daily Load (TMDL VT05-11) that utilizes sediment with stormwater runoff volume as its surrogate for the pollutant of concern.

Flow Restoration Plan Requirements and Schedules:

Per the schedule, this amended SWMP includes Flow Restoration Plans for Englesby, Centennial and Potash Brooks.

Remaining FRP related deadlines are detailed below:

Due date from Issuance of Authorization under MS-4 Permit	Action for Englesby, Centennial and Potash Brooks
October 1 and April 1 of every year after 2016	Submit a semi-annual report* related to implementation of the FRPs, including any associated phosphorus reductions that occur as a result of the implementation measures undertaken as part of the flow reduction targets
By 10/1/2033	Implementation of the measures specified in the FRP (not more than 20 years)

* We shall submit a report on a semi-annual basis detailing steps taken towards the development and implementation of the FRP. The report will address actions taken to implement all FRP components, including the extent of BMP implementation, an estimate of the extent of completion for remaining items, and an assessment of the ability to meet outstanding schedule items. The FRP report will include a written statement signed by a designer that any BMP built or implemented within the preceding 6 month period was constructed in compliance with the approved plans. We will also include in each FRP report an estimate of any associated reductions in phosphorus loading that occur as a result of implementation measures we have undertaken to meet the flow reduction targets.

The Flow Restoration Plan (FRP) will contain the items listed in part IV.C.1.e(1) related to our commensurate share of impervious surface contributing to the impaired water including:

- identification of required controls to achieve the necessary flow restoration targets for our commensurate share of impervious surface draining to the specific impaired water
- design and construction schedule
- financial plan
- regulatory analysis
- identification of regulatory assistance
- third party implementation

The above elements will become part of our approved SWMP as they are approved by the Agency.

Additional requirements for Stormwater Impaired Watersheds:
Additionally, commencing no later than two (2) years after the issuance of our authorization to discharge we will undertake the following activities:

- Initiate the development of a program to identify opportunities for and provide technical assistance to landowners in the implementation by landowners of low impact BMPs such as maximizing disconnection, maximizing infiltration of stormwater runoff, preventing and eliminating soil erosion, and preventing and eliminating the delivery of pollutants to stormwater conveyances. Details of this program will be submitted to the Agency upon completion and will become part of our SWMP upon approval.
- Begin preparation of a report to the Agency of legal authorities or strategies that we have adopted to protect and regulate development in the stream corridors of stormwater impaired waters. This report will be submitted to the Agency upon completion and will become part of our SWMP upon approval.
- Begin preparation of a plan for outlining options for enhanced protection of stream corridors of stormwater impaired waters. The plan will include a map of stream corridors depicting areas that have been converted to impervious surface and areas that are undeveloped or have not been converted to impervious surface.

In preparing this plan, we will review riparian buffer and stream fluvial geomorphological information provided to us by the Agency as a result of the Agency's preparation of the stormwater TMDLs. The plan will identify enhanced protection options for areas of the stream corridor that have not yet been developed or otherwise converted to impervious surface or options for restoration for those areas which have already been developed or otherwise converted to impervious surface. This plan will be submitted to the Agency upon completion and will become part of our SWMP upon approval.

Watersheds Impaired Due to E. Coli:
Both Englesby and a section of Potash have been designated as having *E. Coli* impairments. They are listed in Appendix 8 and 10 respectively of the Statewide TMDL for Bacteria-Impaired Waters (September 2011).

The Minimum Control Measures provide compliance with several of the Implementation measures listed in the TMDL, including providing post-construction structural and non-structural BMPs that can reduce bacteria concentrations, the various elements of our IDDE program, and education and measures related to reducing pet waste.

Within this permit cycle, the city will evaluate possible additional enhancements that can be made under the above listed minimum measures to enhance our Bacteria reduction efforts in the Englesby and Potash Brooks.

We will describe efforts related to implementation of control measure which have been or are planned to be implemented to control bacteria pollution in our annual repots.

Discharges to Impaired Waters with an Approved TMDL:
Lake Champlain Phosphorus Impairment
Burlington is located entirely within the Lake Champlain basin, so all surface runoff enters the lake either through direct discharges or indirectly from flows to small streams and the Winooski River. The previously approved Lake Champlain Phosphorus TMDL was repealed and a new version released June 17, 2016.

As with the Bacteria TMDL implementation, we believe that many of the elements of our Minimum Control Measures provide for the reduction of phosphorus loading to Lake Champlain.

In addition to implementing the Minimum Control Measures city-wide, the city will review its SWMP once it is given guidance by VTDEC regarding the requirements of a Phosphorus Control Plan.

F. UPDATING STORMWATER MANAGEMENT PROGRAMS

This stormwater management plan with associated programs shall be reviewed as part of the annual reporting requirements outlined in the section below. After review, it is understood this plan can be updated provided that:

- Program components are added to the latest approved plan revision.
- Ineffective or unfeasible components are replaced with alternates upon written request and approval by VTDEC.
- The plan is changed upon request by VTDEC.

Responsible parties: Burlington Stormwater Management Program

G. MONITORING, RECORD KEEPING AND REPORTING

All monitoring information shall be recorded in accordance with the requirements of the NPDES permit. This includes recording of:

- The date, place and time of sampling or field measurements.
- The name(s) of the individuals who sampled or performed measurements.
- The date(s) the analyses were performed and name of individuals performing the analyses.
- Analytical techniques or methods used and results of such analyses.
-

All records shall be retained for a period of at least three (3) years. The VTDEC has the right to request copies of records at any time.

Responsible parties: Burlington Stormwater Management Program

H. ANNUAL REPORTING

Annual reports will be submitted to VTDEC by April 1 of each year. This report shall include:

- Status of compliance with permit conditions.
- Measureable outcome reporting.
- A summary of stormwater activities planned during the next reporting cycle.
- Proposed changes to stormwater management plan as outline in section F above.
- If applicable, notice whether or not another entity is responsible for any of the permit obligations.

Responsible parties: Burlington Stormwater Management Program

CHITTENDEN COUNTY
REGIONAL STORMWATER EDUCATION PROGRAM
MEMORANDUM OF UNDERSTANDING
FOR THE PERIOD MARCH 10, 2013 THROUGH MARCH 9, 2018

This Memorandum of Understanding ("MOU") establishes an agreement among the Parties (as specified in Section 1) for a group of Municipal Separate Storm Sewer Systems ("MS4s") to contract to operate a Regional Stormwater Education Program ("Program") that conforms with and satisfies the relevant requirements regarding Minimum Control Measure One ("Public Education and Outreach") of the Phase II NPDES Permit for Program Years 2013--2018), as established in General Permit 3-9014 (2012) (MS4 Permit") as continued or renewed by the Vermont Department of Environmental Conservation ("VTDEC").

1. **Parties to the MOU** – The parties to this agreement are:

    a. **MS4s** – the undersigned municipalities and other entities and any other MS4 that may execute this agreement following approval of that MS4's inclusion as a party to this MOU by a 2/3^{rds} majority of the voting members of the Steering Committee and

    b. **Lead Agency** – the Chittenden County Regional Planning Commission ("CCRPC"), unless a majority of the Steering Committee favors a different lead agency or the CCRPC no longer wishes to act as the Lead Agency.

2. **Steering Committee**

    a. **Composition** – The voting members of the Steering Committee shall consist of one representative from each of the MS4s who are signatory to this Agreement as designated by each MS4. The voting members may, by a 2/3^{rds} majority vote, invite one or more other organizations to each appoint a representative to serve as a new member, a non-voting member or as an advisory member of the Steering Committee. Such organizations may include, but not be limited to, the Lake Champlain Committee, the Champlain Water District, the Chittenden Solid Waste District, other MS4s, or other municipalities.

    b. **Duties** – The voting members of the Steering Committee shall advise the Lead Agency on the development and performance of Program Services and on matters bearing on the administration of this agreement. The Steering Committee will endeavor to meet, quarterly or more often as needed.

3. **Lead Agency**

    a. **Duties** – The Lead Agency will provide Administrative Services in terms of administering this MOU and agreements with contractors (including executing contracts, receiving and disbursing funds, and monitoring the provision of services) on behalf of the MS4s. The Lead Agency shall not provide services related to this program for entities outside of the MS4 signatories. Additional coordination shall be only at the direction of the Steering Committee or its chair. The Lead Agency may also provide other Non-Administrative services (including, but not limited to, public education and outreach activities, public relations, grant writing, web site editing, etc.) as

directed by the Steering Committee and at a level consistent with each year's Program Budget as described in Section 6.a. The Lead Agency is not a guarantor that services will be performed.

b. **Compensation** – The MS4s agree to compensate the Lead Agency for the actual costs of performing Administrative and Non-Administrative duties defined in Section 3.a. Compensation shall be for hourly wages, appropriate overhead and expenses. Compensation for Administrative Duties shall not exceed ten (10%) percent of the Program Budget as specified in Section 6 without prior approval of a simple majority of the Steering Committee present at the time of the vote or by email response. Personnel costs for Lead Agency staff engaged in Administrative or Non-Administrative Duties shall be calculated at a rate of salary plus fringe. The Lead Agency shall submit invoices no more frequently than monthly. Invoices shall provide a description of work tasks completed by the Lead Agency for that billing period with sufficient detail to the satisfaction of the steering committee.

4. **Selection of Contractors** – In general, the Steering Committee shall competitively bid for contract(s) for Program Services that collectively satisfy the requirements for Minimum Control Measure One ("Public Education and Outreach") of the Phase II NPDES Permit for Program Years 2013 – 2018 as established by the MS4 Permit and as defined in Section 5. All contracts shall be awarded based on qualifications, price, and the ability of the entity to provide services that meet the relevant MS4 Permit requirements. However, upon consent of the majority of the voting members of the Steering Committee present, the RSEP may waive the bid process for select contracts. Contracts may be up to 5 years in length and shall include, but not be limited to, language specifying the right of the RSEP to cancel a contract if services are not being adequately provided and language specifying that payments to contractors shall be made only for services rendered.

5. **Program Services** – The Steering Committee, assisted by the Lead Agency and contractors, will implement a media advertising campaign and provide stormwater education services that satisfy the requirements of Minimum Control Measure One ("Public Education and Outreach") of the Phase II NPDES Permit for Program Years 2013 – 2018), as established by the MS4 Permit, in accordance with Section 5.a..

a. **Program Content** – The Program Content for each Program Year will be as defined in the Communications Plan for that year as approved by a majority of the Steering Committee. Annual Program elements will include, at a minimum: 1) operation of the Program's website, www.smartwaterways.org or its equivalent, 2) the hosting of occasional educational seminars open to the public concerning stormwater pollution prevention and related topics, and 3) advertisements in various media.

6. **Program Budget, Costs, and Payments**

a. **Program Budget**

1) The annual Program Budget shall consist of the sum of the annual $5,000 payments for a given Program Year made by participating MS4s plus any Public Participation payment as described below in Sections 6b and 6c, respectively.

2) Prior to March 1st of every year, the Steering Committee shall adopt a Program Budget governing expenditures for the subsequent program year. Budget categories shall include, but not be limited to: Lead Agency Administrative Duties, Lead Agency Non-Administrative Duties, Media Advertising Purchases, Media Marketing Consulting Services, and Other Contractual Services.

b. **Participating MS4 Maximum Annual Costs and Payments** – Except as otherwise provided for in this section or in section 12c, each MS4 that is a party to this MOU shall by July 30 of each program year make a single annual payment of $5,000 to pay for Program Services (as defined in Section 5) and Lead Agency services (as defined in Section 3.a.). In the event that costs are less than anticipated or that grants or other funding sources become available, a majority of the voting members of the Steering Committee may decide to reduce each MS4's payment by an equal amount. The Steering Committee may require additional dues from new members joining after March 9, 2013 to help defray program development costs incurred since the Program's inception.

c. **Public Participation Payments** – Any payments made by an MS4 (regardless of whether or not the MS4 is a Party to this MOU) to the Lead Agency as a part of compliance with Section 4.2.2.1 of the MS4 Permit (governing payments in lieu of undertaking specific Public Involvement/Participation Activities) shall pay for Program Services as defined in Section 5.

d. **Other Funds** – Any funds made available to the Program other than Participating MS4 Costs and Payments (pursuant to Section 6.b.) or Public Participation Payments (pursuant to Section 6.c.) shall be dedicated to reducing the annual costs of each MS4 participating in the Program, except as a majority of the voting members of the Steering Committee may decide.

e. **Excess Funds** – Any funds remaining at the end of a Program Year, less any earmarked set aside funds (such as survey funds, etc), shall be carried over to the next Program Year, unless a 2/3^{rds} majority of the voting members of the Steering Committee decides otherwise. Following the payment for all Program Services and Lead Agency services at the end of Program Year 2018, any funds remaining shall be carried forward for successive years where program services continue under successive agreements. Any funds refunded to the MS4s participating in this MOU shall be refunded based upon a prorated portion depending upon the number of months of participation by that MS4, except that any additional payments made by a member beyond its $5,000 annual payments shall be first refunded in full, except for payments made in lieu of performance of Minimum Measure #2.

f. **In-Kind Services** – Program Services (as defined in Section 5) that are provided by a member may be used to offset the Participating MS4 Costs and Payment of that member by such amount as may be determined by a majority of the voting members of the Steering Committee.

7. **Contracts Required** – All contracts with Contractors to provide Program Services shall be conditioned upon approval by a 2/3^{rds} majority of the voting members of the Steering Committee.

8. **Withdrawal Prohibited** – No MS4 that is a party to this MOU may withdraw from this MOU, except for early termination as defined in Section 9 of this MOU. Early termination of a signatory may be considered by the Steering Committee with 12 months' notice of withdrawal for cause and with a 2/3^{rds} majority approval of the voting members of the Steering Committee

9. **Early Termination** – This MOU shall become null and void with no further obligation of the parties if:
   a. a majority of the voting members of the Steering Committee does not approve one or more contracts for the provision of Program Services within 90 days after execution of this MOU or

b. VTDEC determines that the Program outlined in this MOU does not meet the requirements for minimum control measure #1 ("Public Education and Outreach") of the Phase II NPDES Permit for Programs Years 2013 – 2018) and the parties to this MOU are unable to craft a Program to satisfy VTDEC.
c. alternate contractual arrangements for MM1 compliance are developed and a vote to dissolve this MOU is approved by a 2/3rds majority approval of the voting members of the Steering Committee.

10. **Automatic Termination** – This MOU will terminate at the end of Program Year 2018.

11. **Amendment** – Unless a specific section of this MOU provides otherwise, this MOU may be amended only upon the unanimous consent of all of the Parties.

12. **Adding New MS4 Entities** – New MS4 entities shall be allowed to become party to this MOU with a 2/3rds majority approval of the voting members of the Steering Committee. The new party agrees to:
    a. pay for costs directly associated with re-evaluation and reconfiguration of the Program's existing Communications Plan to ensure that planned media advertising purchases appropriately cover the geographic area served by their MS4, unless waived by a 2/3rds majority approval of the voting members of the Steering Committee. The new MS4 shall coordinate this work with the Lead Agency and RSEP Chair using existing RESP program contractors.
    b. The new MS4 obtains approval from the permitting agency indicating that their participation in the established Program would satisfy their requirements under minimum control measure #1 ("Public Education and Outreach") of the Phase II NPDES Permit for Programs Years 2013 – 2018)
    c. The new MS4 makes five additional annual payments of $ 500.00 to the Program in recognition of Program development costs incurred since the program's inception.

13. **Counterparts** – This MOU may be executed in multiple counterparts, each of which is deemed an original and all of which constitute one and the same document. Each such counterpart may be a facsimile copy and such facsimile copy shall be deemed an original.

Signature of Lead Agency

_____ _____

Charles Baker, Executive Director Date
Chittenden County Regional Planning Commission

Signatures of Members

Gene Richards, Interim Director of Aviation
Burlington International Airport — Date

Steven Goodkind, Director of Public Works
The City of Burlington Department of Public Works — Date 3/27/13

Bryan K. Osborne, Director of Public Works
The Town of Colchester — Date

Dennis E. Lutz, PE, Public Works Dir. / Town Engineer
The Town of Essex — Date

Authorized Signer
The Village of Essex Junction — Date

Brian M. Palaia, Town Manager
The Town of Milton — Date

Dean Pierce, Director of Planning and Zoning
The Town of Shelburne — Date

Bob Rusten, Interim Temporary City Manager
The City of South Burlington — Date

Brian Searles, Secretary of Transportation
The Vermont Agency of Transportation — Date

Linda Seavey, Director, Campus Planning Services
The University of Vermont — Date

Richard McGuire, Town Manager
The Town of Williston — Date

Katherine Decarreau, City Manager
The City of Winooski — Date

CHITTENDEN COUNTY
REGIONAL STORMWATER PUBLIC INVOLVEMENT AND PARTICIPATION PROGRAM
MEMORANDUM OF UNDERSTANDING
FOR THE PERIOD JULY 2011 THROUGH JUNE 2016

This Memorandum of Understanding ("MOU") establishes an agreement among the Parties (as specified in Section 1) for a group of Municipal Separate Storm Sewer Systems ("MS4s") to contract to operate a Regional Stormwater Public Involvement and Participation Program ("Program") that conforms with and satisfies the relevant requirements regarding Minimum Control Measure Two ("Public Involvement and Participation) of the Phase II NPDES Permit for Program Years 2011 -2016), as established in General Permit 3-9014 (MS4 Permit") as continued or renewed by the Vermont Department of Environmental Conservation ("VTDEC").

1. **Parties to the MOU** – The parties to this agreement are:

   a. **MS4s** – the undersigned municipal MS4s and non-traditional MS4s and any other MS4 that may execute this agreement following approval of that MS4's inclusion as a party to this MOU by a majority of the voting members of the Stream Team Steering Committee as defined in Section 2.a. below and

   b. Lead Agency – the Chittenden County Regional Planning Commission ("CCRPC"), unless a majority of the Steering Committee favors a different lead agency or the CCRPC no longer wishes to act as the Lead Agency and withdraws it services pursuant to Section 9 below.

2. Steering Committee

   a. **Composition** – The voting members of the Steering Committee shall consist of one representative from each of the MS4s who are full level signatory members to this Agreement as designated by each MS4. The voting members may, by a majority vote, invite organizations to appoint a representative to serve as a non-voting, advisory member of the Steering Committee.

   b. **Duties** – The voting members of the Steering Committee shall advise the Lead Agency on the development and performance of Program Services and on matters bearing on the administration of this agreement. The Steering Committee will attempt to meet quarterly or more often as needed.

3. **Lead Agency**

   a. **Duties** – The Lead Agency will provide Services in terms of administering this MOU and agreements with contractors (including executing contracts, receiving and disbursing funds, and monitoring the provision of services) on behalf of the MS4s. The Lead Agency may also provide other Services (including, but not limited to, public involvement and participation activities, public relations, grant writing, etc.) as directed by the Steering Committee and at a level consistent with each year's Program Budget as described in Section 6.a.

b. **Compensation** – The MS4s agree to compensate the Lead Agency for the actual costs of performing Duties defined in Section 3.a. Compensation for Duties shall not exceed ten (10%) percent of the Program Budget as specified in Section 6 without prior approval of a majority of the Steering Committee. Personnel charges for Lead Agency staff shall be calculated at a rate of salary plus fringe.

4. **Selection of Primary and Sub-Contractors** – In general, the Steering Committee shall competitively bid for contract(s) for Program Services that collectively satisfy the requirements for Minimum Control Measure Two ("Public Involvement and Participation) of the Phase II NPDES Permit for Program Years 2011 – 2016 as established by the MS4 Permit and as defined in Section 5. All contracts shall be awarded based on qualifications, price, and the ability of the entity to provide services that meet the relevant MS4 Permit requirements. Contracts may be up to 5 years in length and shall include, but not be limited to, language specifying the right of the Committee to cancel a contract if services are not being adequately provided and language specifying that payments to contractors shall be made only for services rendered.

   Contracting for services under this MOU will comply with the Fair Employment Practices and Americans with Disabilities Act: the Steering Committee agree to comply with the requirement of Title 21 V.S.A Chapter 5, Subchapter 6, relating to fair employment practices, to the full extent applicable. The Steering Committee shall also ensure, to the full extent required by the Americans with Disabilities Act of 1990 that qualified individuals with disabilities receive equitable access to the services, programs,and activities provided by the Steering Committee under this MOU. This provision will also be included in all contracts and subcontracts executed under this MOU involving state or federal funds.

   The Steering Committee recognizes the important contribution and vital impact which small businesses have on the state's economy. In this regard, the Steering Committee will ensure a free and open bidding process that affords all businesses equal access and opportunity to compete. The Steering Committee also recognizes the existence of businesses owned by minorities and women and will make a good faith effort to encourage these firms to compete for contracts involving state or federal funds.

5. **Program Services** – The Steering Committee, assisted by the Lead Agency and contractor(s), will implement a public involvement and participation campaign known as the Chittenden Country Stream Team (CCST) that satisfies the relevant requirements of Minimum Control Measure Two ("Public Involvement and Participation) of the Phase II NPDES Permit for Program Years 2011 – 2016), as established by the MS4 Permit, in accordance with Section 5.a.

   a. Program Content – The Program Content for each Program Year will be as approved by a majority of the Steering Committee. Annual Program elements will include, at a minimum:
      i. operation of the Program's website www.ccstreamteam.org or its equivalent.
      ii. the hosting and/or organization of workshops, projects and other events to engage the public.

iii. the recruitment of volunteers to engage in and promote public involvement and participation.
iv. end of MS4 permit year annual reporting on Minimim Control Measure 2 compliance efforts to the MS4s for inclusion in MS4 annual reports to ANR.

6. **Program Budget, Costs, and Payments**

a. **Program Budget**
1. The annual Program Budget shall consist of the sum of the annual $1,800 payment for each Program Year made by participating MS4s plus any other funds available to the Program by majority vote of the Steering Committee as specified in Section 6.c below. Prior to February of every year, the Steering Committee shall adopt a Program Budget governing expenditures for the subsequent program year. Budget categories shall include, but not be limited to: Lead Agency Duties, Contractual Services and Expenses.

b. **Participating MS4 Maximum Annual Costs and Payments** – Except as otherwise provided for in this section, each MS4 that is a party to this MOU shall by July 30 of each program year make a single annual payment of $1,800 to pay for Program Services (as defined in Section 5) and Lead Agency Services (as defined in Section 3.a.). In the event that costs are less than anticipated or that grants or other funding sources become available, a majority of the voting members of the Steering Committee may decide to reduce each MS4's payment by an equal amount or to credit the following Program Year assessment to each MS4. Any MS4 is allowed to join in prior to April 1, 2012 without penalty. The Steering Committee may require additional dues from new members joining on or after April 1, 2012 to help defray program development costs incurred since the Program's inception.

c. **Other Funds** – Any funds made available to the Program shall be dedicated to reducing the annual costs of each MS4 participating in the Program, except as a majority of the voting members of the Steering Committee may decide.

d. **Excess Funds** – Any funds remaining at the end of a Program Year shall be carried over to the next Program Year, unless a majority of the voting members of the Steering Committee decides otherwise. Following the payment for all Program Services and Lead Agency Services at the end of Program Year 2016, any funds remaining shall be carried forward for successive years where Program Services continue under successive agreements. Any funds refunded to the MS4s participating in this MOU shall be refunded based upon a prorated portion depending upon the number of months of participation by that MS4, except that any additional payments made by a member beyond its $1,800 annual payment shall be first refunded in full.

7. **Contracts Required** – All contracts with Contractors to provide Program Services shall be conditioned upon approval by a majority of the voting members of the Steering Committee and consistent with Section 4 above.

8. **MS4 Withdrawal Prohibited** – No MS4 that is a party to this MOU may withdraw from this MOU, except for early termination as defined in Section 10 of this MOU.

9. **Termination of Lead Agency**
   The CCRPC or the Steering Committee by a majority vote of its full membership may elect to terminate the Agreement for Lead Agency Services by providing 90 days written notice to the other party.

10. **Early Termination** – This MOU shall become null and void with no further obligation of the parties if:
    a. a majority of the voting members of the Steering Committee does not approve one or more contracts for the provision of Program Services within 120 days after execution of this MOU or
    b. VTDEC determines that the Program outlined in this MOU does not meet the relevant requirements for Minimum Control Measure Two ("Public Involvement and Participation") of the Phase II NPDES Permit for Programs Years 2011 – 2016) and the parties to this MOU are unable to craft a Program to satisfy VTDEC.

11. **Automatic Termination** – This MOU will terminate at the end of Program Year 2016.

12. **Amendment** – Unless a specific section of this MOU provides otherwise, this MOU may be amended only upon the unanimous consent of all of the Parties.

13. **Counterparts** – This MOU may be executed in multiple counterparts, each of which is deemed an original and all of which constitute one and the same document. Each such counterpart may be a facsimile or PDF copy and such facsimile or PDF copy shall be deemed an original.

Signature of Lead Agency

Charles L Baker

Charles Baker, Executive Director
Chittenden County Regional Planning Commission

5/1/2011
Date

Signatures of Members

Robert McEwing, Interim Director of Aviation The Burlington International Airport	Date
Steven Goodkind, Director of Public Works The City of Burlington Department of Public Works	4/15/11 Date
Bryan K. Osborne, Director of Public Works The Town of Colchester	Date
Dennis E. Lutz, PE, Public Works Dir. / Town Engineer The Town of Essex	Date
David Crawford, Village Manager The Village of Essex Junction	Date
Brian Palaia, Town Manager The Town of Milton	Date
Bernard T. Gagnon, Public Works Director The Town of Shelburne	Date
Sanford I. Miller, City Manager The City of South Burlington	Date
Brian Searles, Secretary of Transportation Vermont Agency of Transportation	Date
Linda Seavey, Director, Campus Planning Services The University of Vermont	Date
Richard McGuire, Town Manager The Town of Williston	Date
Katherine R. Decarreau, City Manager The City of Winooski	Date

AMENDMENT #1 TO

CHITTENDEN COUNTY
REGIONAL STORMWATER PUBLIC INVOLVEMENT AND PARTICIPATION PROGRAM
MEMORANDUM OF UNDERSTANDING
FOR THE PERIOD JULY 2011 THROUGH JUNE 2016

This Memorandum of Understanding ("MOU") establishes an agreement among the Parties (as specified in Section 1) for a group of Municipal Separate Storm Sewer Systems ("MS4s") to contract to operate a Regional Stormwater Public Involvement and Participation Program ("Program") that conforms with and satisfies the relevant requirements regarding Minimum Control Measure Two ("Public Involvement and Participation) of the Phase II NPDES Permit for Program Years 2011 -2016), as established in General Permit 3-9014 (MS4 Permit") as continued or renewed by the Vermont Department of Environmental Conservation ("VTDEC").

1. **Parties to the MOU** – The parties to this agreement are:

   a. **MS4s** – the undersigned municipal MS4s and non-traditional MS4s and any other MS4 that may execute this agreement following approval of that MS4's inclusion as a party to this MOU by a majority of the voting members of the Stream Team Steering Committee as defined in Section 2.a. below and

   b. **Lead Agency** – the Chittenden County Regional Planning Commission ("CCRPC"), unless a majority of the Steering Committee favors a different lead agency or the CCRPC no longer wishes to act as the Lead Agency and withdraws it services pursuant to Section 9 below.

.....

11. **Automatic Termination** – This MOU will terminate at the end of Program Year 2016.

12. **Amendment** – Unless a specific section of this MOU provides otherwise, this MOU may be amended only upon the unanimous consent of all of the Parties.

13. **Counterparts** – This MOU may be executed in multiple counterparts, each of which is deemed an original and all of which constitute one and the same document. Each such counterpart may be a facsimile or PDF copy and such facsimile or PDF copy shall be deemed an original.

xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

Section 11 of the original MOU is hereby amended to extend the termination date to June 30, 2017.

Signatures of the Parties approving this Amendment are as follows:

Signature of CCRPC

Andy Montroll, Board Chair — Date
Chittenden County Regional Planning Commission

Signatures of Members

Gene Richards, Director of Aviation — Date
The Burlington International Airport

Chapin Spencer, Director of Public Works — 6-30-16 Date
The City of Burlington Department of Public Works

Dennis E. Lutz, PE, Public Works Director — Date
The Town of Essex

James Jutras, Water Quality Superintendent — Date
The Village of Essex Junction

Donna Barlow Casey, Town Manager — Date
The Town of Milton

Joe Colangelo, Town Manager — Date
The Town of Shelburne

Kevin Dorn, City Manager — Date
The City of South Burlington

Chris Cole, Secretary of Transportation — Date
Vermont Agency of Transportation

Linda Seavey, Director, Campus Planning Services — Date
The University of Vermont

Richard McGuire, Town Manager — Date
The Town of Williston

Katherine R. Decarreau, City Manager — Date
The City of Winooski

VERMONT

Vermont Department of Environmental Conservation
Water Quality Division
103 South Main Street, Building 10 North
Waterbury, VT 05671-0408

Agency of Natural Resources

[phone] 802-338-4842

October 27, 2011

Burlington Department of Public Works
Attn: Laurie Adams
P.O. Box 878
Burlington, VT 05402

Under Administrative Continuance

Re: No Exposure Certification No. 4420-9003.R

Dear Ms. Adams,

The Department of Environmental Conservation has reviewed the No Exposure Certification for Conditional Exclusion from the Multi-Sector General Permit (MSGP) 3-9003 (NPDES# VTR050001) from Burlington Department of Public Works submitted on August 18, 2011.

Riverside Wastewater Treatment Facility, located on Riverside Avenue in Burlington, Vermont has been assigned a Certification Number, noted above. Please note that the No Exposure exclusion from the requirement for coverage under the MSGP is conditional. Thus, in order to maintain eligibility for No Exposure status, facilities with No Exposure Certifications must comply with the No Exposure terms and conditions of the VT MSGP 3-9003 found in Part 1.6 of the MSGP. A copy of MSGP Section 1.6 is enclosed for your convenience.

If circumstances change and industrial materials or activities become exposed to rain, snow, snowmelt, and/or runoff, then you no longer qualify for conditional exclusion from the requirements of the MSGP and your discharge becomes subject to enforcement or a citizen suit as an un-permitted discharge. If you anticipate such changes in your circumstances you should prepare a Stormwater Pollution Prevention Plan (SWPPP) and apply for and obtain coverage under the MSGP prior to such change of circumstances.

If you have any questions, please call me at (802) 338-4889 or visit the website at www.vtwaterquality.org/stormwater.htm.

Sincerely,

Jenna Calvi
Green Infrastructure Coordinator
Vermont Stormwater Management Program

VERMONT

Vermont Department of Environmental Conservation
Water Quality Division
103 South Main Street, Building 10 North
Waterbury, VT 05671-0408

Agency of Natural Resources

[phone] 802-338-4842

October 27, 2011

Burlington Department of Public Works
Attn: Laurie Adams
P.O. Box 878
Burlington, VT 05402

Re: No Exposure Certification No. 4417-9003.R

Dear Ms. Adams,

The Department of Environmental Conservation has reviewed the No Exposure Certification for Conditional Exclusion from the Multi-Sector General Permit (MSGP) 3-9003 (NPDES# VTR050001) from Burlington Department of Public Works submitted on August 18, 2011.

North Wastewater Treatment Facility, located on North Avenue in Burlington, Vermont has been assigned a Certification Number, noted above. Please note that the No Exposure exclusion from the requirement for coverage under the MSGP is conditional. Thus, in order to maintain eligibility for No Exposure status, facilities with No Exposure Certifications must comply with the No Exposure terms and conditions of the VT MSGP 3-9003 found in Part 1.6 of the MSGP. A copy of MSGP Section 1.6 is enclosed for your convenience.

If circumstances change and industrial materials or activities become exposed to rain, snow, snowmelt, and/or runoff, then you no longer qualify for conditional exclusion from the requirements of the MSGP and your discharge becomes subject to enforcement or a citizen suit as an un-permitted discharge. If you anticipate such changes in your circumstances you should prepare a Stormwater Pollution Prevention Plan (SWPPP) and apply for and obtain coverage under the MSGP prior to such change of circumstances.

If you have any questions, please call me at (802) 338-4889 or visit the website at www.vtwaterquality.org/stormwater.htm.

Sincerely,

Jenna Calvi
Green Infrastructure Coordinator
Vermont Stormwater Management Program

VERMONT

Vermont Department of Environmental Conservation
Water Quality Division
103 South Main Street, Building 10 North
Waterbury, VT 05671-0408

Agency of Natural Resources

[phone] 802-338-4842

October 27, 2011

Burlington Wastewater Treatment Facility
Attn: Laurie Adams
P.O. Box 878
Burlington, VT 05402

Re: No Exposure Certification No. 4418-9003.R

Dear Ms. Adams,

The Department of Environmental Conservation has reviewed the No Exposure Certification for Conditional Exclusion from the Multi-Sector General Permit (MSGP) 3-9003 (NPDES# VTR050001) from Burlington Department of Public Works submitted on August 18, 2011.

Burlington Wastewater Treatment Facility, located on LaValley Lane in Burlington, Vermont has been assigned a Certification Number, noted above. Please note that the No Exposure exclusion from the requirement for coverage under the MSGP is conditional. Thus, in order to maintain eligibility for No Exposure status, facilities with No Exposure Certifications must comply with the No Exposure terms and conditions of the VT MSGP 3-9003 found in Part 1.6 of the MSGP. A copy of MSGP Section 1.6 is enclosed for your convenience.

If circumstances change and industrial materials or activities become exposed to rain, snow, snowmelt, and/or runoff, then you no longer qualify for conditional exclusion from the requirements of the MSGP and your discharge becomes subject to enforcement or a citizen suit as an un-permitted discharge. If you anticipate such changes in your circumstances you should prepare a Stormwater Pollution Prevention Plan (SWPPP) and apply for and obtain coverage under the MSGP prior to such change of circumstances.

If you have any questions, please call me at (802) 338-4889 or visit the website at www.vtwaterquality.org/stormwater.htm.

Sincerely,

Jenna Calvi
Green Infrastructure Coordinator
Vermont Stormwater Management Program

1.6 Conditional Exclusion for No Exposure.

If all of your industrial materials or activities are protected by a storm resistant shelter to prevent exposure to rain, snow, snowmelt and/or runoff then you may be eligible for a conditional exclusion from the requirements of this General Permit that require the preparation of a SWPPP and related monitoring of stormwater quality. To qualify for conditional exclusion, you must file an application and certification of No Exposure on forms provided by the Agency and receive approval from the Secretary. If you obtain coverage under this option you will be subject to the limitations and conditions set forth in this section with which you must comply in order to maintain eligibility for exclusion. The requirements pertaining to a demonstration that all your industrial materials or activities are protected by a storm resistant shelter to prevent exposure to rain, snow, snowmelt and/or runoff are set forth in Part 1.6.2 below.

If you meet the requirements of Part 1.6.2, and file a No Exposure Certification on forms provided by the Secretary you are no longer authorized by nor required to comply with this permit upon submission of a no exposure certification to the Agency. If you are no longer required to have permit coverage because of a no exposure exclusion and have submitted a No Exposure Certification form to the Agency, you are not required to submit an NOT.

1.6.1 Certification of No Exposure

In the event that you have elected to apply for conditional exclusion from permit requirements by certifying "No Exposure" as set forth in Part 1.6 of this general permit then you must submit a No Exposure Certification on forms provided by the Secretary.

1.6.2 Requirements to Demonstrate No Exposure

To demonstrate that all your industrial materials or activities are protected by a storm resistant shelter to prevent exposure to rain, snow, snowmelt and/or runoff you must:

1.6.2.1 Provide a storm resistant shelter to protect industrial materials and activities from exposure to rain, snow, snow melt, and runoff;

1.6.2.2 Demonstrate and certify that none of the following materials or activities are, or will be in the foreseeable future, exposed to precipitation:

- Using, storing or cleaning industrial machinery or equipment, and areas where residuals from using, storing or cleaning industrial machinery or equipment remain and are exposed to stormwater;
- Materials or residuals on the ground or in stormwater inlets from spills/leaks;
- Materials or products from past industrial activity;
- Material handling equipment (except adequately maintained vehicles);

- Materials or products during loading/unloading or transporting activities;
- Materials or products stored outdoors (except final products intended for outside use, e.g., new cars, where exposure to stormwater does not result in the discharge of pollutants);
- Materials contained in open, deteriorated or leaking storage drums, barrels, tanks, and similar containers;
- Materials or products handled/stored on roads or railways owned or maintained by the discharger;
- Waste material (except waste in covered, non-leaking containers, e.g., dumpsters);
- Application or disposal of process wastewater (unless otherwise permitted); and
- Particulate matter or visible deposits of residuals from roof stacks/vents not otherwise regulated, i.e., under an air quality control permit, and evident in the stormwater outflow.

1.6.3 Materials and Activities Which Need Not Be Sheltered to Demonstrate No Exposure

To demonstrate no exposure, storm resistant shelter is not required for the following industrial materials and activities:

1.6.3.1 Drums, barrels, tanks, and similar containers that are tightly sealed, provided those containers are not deteriorated and do not leak ("Sealed" means banded or otherwise secured and without operational taps or valves);

1.6.3.2 Adequately maintained vehicles used in material handling; and

1.6.3.3 Final products, other than products that would be mobilized in stormwater discharge (e.g., rock salt).

1.6.4 Limitations on No Exposure Demonstrations

1.6.4.1 The demonstration of no exposure can only be made on a facility-wide basis, not for individual outfalls. If a facility has some discharges of stormwater that would otherwise be No Exposure discharges, permit requirements under this permit may be adjusted accordingly for these discharges.

1.6.4.2 If circumstances change and industrial materials or activities become exposed to rain, snow, snowmelt, and/or runoff, then you no longer qualify for conditional exclusion from the requirements of this permit and your discharge becomes subject to enforcement as an un-permitted discharge. If you anticipate such

changes in your circumstances you should prepare a SWPPP and apply for and obtain coverage under this general permit prior to the change of circumstances.

1.6.4.3 Notwithstanding the provisions of this Part 1.6, the Secretary retains the authority to require coverage under this general permit (and deny coverage under this Part 1.6) upon making a determination that the discharge causes, has a reasonable potential to cause, or contributes to an instream excursion above an applicable water quality standard.

1.6.5 Conditions for Claiming and Maintaining No Exposure Status

In order to claim and maintain No Exposure status you must:

1.6.5.1 In accordance with the requirements set forth in Part 1.6, submit a signed certification of No Exposure stating that all your industrial materials or activities are protected by a storm resistant shelter to prevent exposure to rain, snow, snowmelt and/or runoff.

1.6.5.2 Submit the signed No Exposure certification forms to the Agency once every five years;

1.6.5.3 Allow the Agency to inspect the facility to determine compliance with the No Exposure conditions;

1.6.5.4 Allow the Agency to make any No Exposure inspection reports available to the public upon request;

1.6.5.5 For facilities that discharge through an MS4, upon request you must submit a copy of the certification of No Exposure to the MS4 operator, as well as allow inspection and public reporting by the MS4 operator; and

1.6.5.6 Any time there is a change in the owner or operator of your facility you must notify the Agency within 30 days of the change. The No Exposure form is non-transferable. If a new owner or operator takes over the facility, the new owner or operator must complete and submit a new form to claim No Exposure.

1.7 Alternative Permits.

1.7.1 Agency Requiring Coverage under an Alternative Permit.

The Secretary may require you to apply for and/or obtain authorization to discharge under either an individual NPDES permit or an alternative NPDES general permit. The Secretary may determine at his or her own discretion that an individual or an alternative general permit is required. The Secretary may require any person who files a NOI to apply for an individual permit if the discharge does not qualify for coverage under this general permit or the Secretary

Under Administrative Continuance

Permit No. 5528-9003.R

STATE OF VERMONT
AGENCY OF NATURAL RESOURCES
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

AUTHORIZATION TO DISCHARGE STORMWATER UNDER MULTI-SECTOR GENERAL PERMIT 3-9003 NPDES VTR 050001

A determination has been made that the applicant (here in after "permittee"):

Burlington Electric Department
585 Pine Street
Burlington, VT 05401

meets the criteria necessary for inclusion under General Permit 3- 9003. Subject to the conditions and eligibility provisions of General Permit No. 3-9003, the permittee is authorized to discharge stormwater from the McNeil Generating Station located on Intervale Road in Burlington, Vermont to the Winooski River.

1. Effective Date and Expiration Date of this Authorization: This authorization to discharge shall become effective on March 12, 2012 and shall continue until August 4, 2016. The permittee shall reapply for coverage at least one hundred and eighty (180) days prior to August 4, 2016.

2. Compliance with General Permit 3-9003 and this Authorization: The permittee shall comply with this authorization and all the terms, conditions and eligibility provisions of General Permit 3-9003. General Permit 3-9003 contains a number of detailed requirements which are applicable to your facility and your discharge-related activities. These include, but are not limited to, the inspection, monitoring and reporting requirements listed below. Please read and follow the permit carefully to ensure that you remain in compliance with all permit conditions.

3. Inspection Requirement: The permittee shall conduct monthly facility inspections and an annual comprehensive site inspection in accordance with Part 4 of the General Permit. The permittee shall also conduct quarterly visual assessments of stormwater discharges from the facility.

4. Monitoring Requirement: The permittee must conduct quarterly benchmark monitoring at stormwater outfalls for the following parameters, in accordance with Part 6 of the General Permit. Monitoring data must be submitted to the Secretary on a Discharge Monitoring Report (DMR) form no later than 30 days after receipt of laboratory results.

Subsector	SIC Code	Parameter	Monitoring Concentration
Subsector O1. Steam Electric Generating Facilities	SE	Total Iron	1.0 mg/L

The stormwater discharges from this facility are subject to the following annual effluent limitations when this activity is occurring at the facility. The permittee must monitor annually at stormwater outfalls in accordance with Part 6 of the General Permit. Monitoring data must be submitted to the Secretary on a Discharge Monitoring Report (DMR) form no later than 30 days after receipt of laboratory results.

Industrial Activity	Parameter	Effluent Limit
Discharges from coal storage piles at Steam Electric Generating Facilities	TSS	50 mg/l2
	pH	6.0 min - 9.0 max

5. Annual Reporting: The permittee must prepare an annual report that includes the findings from the annual comprehensive site inspection and any corrective action documentation. The report must be submitted to the Secretary within 45 days of conducting the annual compliance inspection. In no case shall the report be submitted later than October 15 every year.

6. Operating Fees: This discharge is subject to operating fees under 3 V.S.A. §2822. The permittee shall submit payment of annual operating fees to the Department. The first year's statement is enclosed and a billing statement for such fees will be sent to the permittee each year. Any permit non-compliance, including a failure to pay the annual operating fee, constitutes a violation of 10 V.S.A. Chapter 47 and may be grounds for an enforcement action or revocation of this authorization to discharge.

7. Rights to Appeal to the Environmental Court: Pursuant to 10 V.S.A. Chapter 220, any appeal of this decision must be filed with the clerk of the Environmental Court within 30 days of the date of the decision. The Notice of Appeal must specify the parties taking the appeal and the statutory provision under which each party claims party status; must designate the act or decision appealed from; must name the Environmental Court; and must be signed by the appellant or their attorney. In addition, the appeal must give the address or location and description of the property, project or facility with which the appeal is concerned and the name of the applicant or any permit involved in the appeal. The appellant must also serve a copy of the Notice of Appeal in accordance with Rule 5(b)(4)(B) of the Vermont Rules for Environmental Court Proceedings.

For further information, see the Vermont Rules for Environmental Court Proceedings, available on line at www.vermontjudiciary.org. The address for the Environmental Court is 2418 Airport Road, Suite 1, Barre, VT 05641 (Tel.# 802-828-1660).

8. Dated at Winooski, VT this 12th day of March, 2012.

David K. Mears, Commissioner
Department of Environmental Conservation

By Padraic Monks
Padraic Monks, Program Manager
Stormwater Management Program

Notice of Intent (NOI) - Amendment

for Stormwater Discharges from
Municipal Separate Storm Sewer Systems (MS4)
General Permit 3-9014

VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION
WATERSHED MANAGEMENT DIVISION

For Dept. Use Only
Notice of Intent No:

Submission of this Notice of Intent (NOI) constitutes notice that the entity in Section A intends to be authorized to discharge pollutants to waters of the State under Vermont's Municipal Separate Storm Sewer Systems (MS4) permit. Submission of the NOI also constitutes notice that the party identified in Section A of this form has read, understands and meets the eligibility conditions; agrees to comply with all applicable terms and conditions; and understands that continued authorization under the MS4 General Permit is contingent on maintaining eligibility for coverage. In order to be granted coverage, all information required on this form and the Minimum Control Measure attachments must be completed and a complete Stormwater Management Program (SWMP) Plan must be submitted.

A. Permittee Information

Name of MS4: City of Burlington

Name of Principle Executive Officer (PEO) or Chief Elected Official (CEO): Miro Weinberger

Title: Mayor

Mailing Address:
Street/P.O. Box: 149 Church Street

City/Town: Burlington State: VT Zip: 05401

Phone: 802.865.7272 Email: miro@burlingtonvt.gov

B. Primary contact responsible for overall coordination of SWMP, if different than PEO/CEO

Name: Megan J. Moir

Mailing Address:
Street/P.O. Box: P.O. Box 878

City/Town: Burlington State: VT Zip: 05402

Phone: 802.863.4501 Email: mmoir@burlingtonvt.gov

C. Partnering organization responsible for Minimum Control Measure implementation (if applicable)

If you are participating in the CCRPC MOU to implement MCM1 &/or MCM2 check here: ☒ MCM 1 ☒ MCM 2

Or, if you are relying on another entity to implement a MCM, please complete the following:

Organization: Contact:

Minimum Control Measure being implemented:

Mailing Address:
Street/P.O. Box:

City/Town: State: Zip:

Phone: Email:

Organization: Contact:

Minimum Control Measure being implemented:

Mailing Address:
Street/P.O. Box:

City/Town: State: Zip:

Phone: Email:

D. Municipal Separate Storm Sewer System (MS4) Information

Estimate of the square mileage served by the MS4: 2.9+ (to be verified in permit cycle)

Identify the names of all know waters that receive a discharge from the MS4:

Receiving water	# of outfalls	Impaired status	Nature of impairment
Lake Champlain	48	☒ Yes ☐ No	Phosphorus
Winooski River	42	☐ Yes ☒ No	
Englesby Brook	19	☒ Yes ☐ No	Stormwater, Bacteria
Centennial Brook	9	☒ Yes ☐ No	Stormwater
Potash Brook	8	☒ Yes ☐ No	Stormwater, Bacteria
Winooski via Intervale Wetland	47	☐ Yes ☒ No	
		☐ Yes ☐ No	
		☐ Yes ☐ No	

E. Stormwater Impaired Waters Information

Does the MS4 discharge into a stormwater impaired water? ☒ Yes ☐ No

If yes, the MS4 must comply with all requirements listed in Part IV.C. of the permit, including the requirement to develop a Flow Restoration Plan (FRP) for the stormwater impaired water.

F. Incorporation of Previously Permitted Stormwater Systems

As part of this application, is the MS4 incorporating a stormwater system that was previously authorized under a State stormwater permit? ☒ Yes ☐ No

If yes, the MS4 must complete and attach an MS4 Incorporation Form for each permit it is incorporating.

List permit numbers here: 2-0152

G. Certification

This NOI shall be signed by a principal executive officer, ranking elected official or other duly authorized employee consistent with 40 CFR §122.22(b) and certified as follows:

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 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.

Name: Megan Moir Title: Assistant Director DPW – Water Resources

Signature: Megan J Moir Digitally signed by Megan J Moir DN: cn=Megan J Moir, c=US, o=Burlington DPW, ou=Water Resources, email=mmoir@burlingtonvt.gov Reason: I attest to the accuracy and integrity of this document Location: Burlington, VT Date: 2016.10.01 10:54:57 -04'00' Date: 10/1/2016

Submit this *Original* form to:

MS4 Permit Coordinator
VTDEC · Watershed Management Division
Stormwater Management Program
One National Life Drive
Montpelier, Vermont 05620-3522

Instructions for Public Comment, Public Hearings, and Appeals

PUBLIC COMMENT

Public comments concerning this Notice of Intent to discharge under General Permit No 3-9014 and the accompanying Stormwater Management Plan (SWMP) are invited and must be submitted during the public notice period. Comments should address how the application complies or does not comply with the terms and conditions of General Permit No. 3-9014. A letter of interest should be filed by those persons who elect not to file comments but who wish to be notified if the comment period is extended or reopened for any reason. All written comments received within the time frame described above will be considered by the Department of Environmental Conservation in its final ruling to grant or deny authorization to discharge under General Permit No. 3-9014.

All submitted NOIs and SWMPs can be found on the Stormwater Program's website at:
http://dec.vermont.gov/watershed/stormwater/permit-information-applications-fees/ms4-permit

Send written comments to: VT DEC, Watershed Management Division
Stormwater Management Program, MS4 Permit Coordinator
One National Life Drive
Montpelier, VT 05620-3522

PUBLIC HEARING REQUEST

During the notice period, any person may submit a written request to this office for a public hearing to consider the proposed permit authorization. The request must state the interest of the party filing such request and the reasons why a hearing is warranted. A hearing will be held if there is a significant public interest (including the filing of requests or petitions for such hearing) in holding such a hearing. If the Secretary determines that useful information and data may be obtained thereby, the Secretary may hold a public hearing any time prior to the issuance of the authorization. Notice of a public hearing will be circulated 30 days prior to the hearing. (40 C.F.R. § 124.12 and Vermont Water Pollution Control Permit Regulations, Chapter 13.3G)

APPEALS

Pursuant to 10 V.S.A. Chapter 220, any appeal of this decision must be filed with the clerk of the Environmental Court within 30 days of the date of the decision. The appellant must attach to the Notice of Appeal the entry fee of $250.00, payable to the state of Vermont.

The Notice of Appeal must specify the parties taking the appeal and the statutory provision under which each party claims party status; must designate the act or decision appealed from; must name the Environmental Court; and must be signed by the appellant or their attorney. In addition, the appeal must give the address or location and description of the property, project or facility with which the appeal is concerned and the name of the applicant or any permit involved in the appeal.

The appellant must also serve a copy of the Notice of Appeal in accordance with Rule 5(b)(4)(B) of the Vermont Rules for Environmental Court Proceedings.

For further information, see the Vermont Rules for Environmental Court Proceedings, available on line at www.vermontjudiciary.org. The address for the Environmental Court is 2418 Airport Road, Suite 1, Barre, VT 05641 (Tel. # 802-828-1660)

A copy of General Permit No. 3-9014 may be obtained by calling (802) 490-6173; by visiting the Department at the above address between the hours of 7:45 am and 4:30 pm; or by downloading from the Watershed Management Division's Web site at http://dec.vermont.gov/watershed/stormwater.

MS4 Incorporation Form for State Issued Stormwater Permits

Please complete this form for each previously issued state stormwater permit that the MS4 plans to incorporate into the MS4 authorization. The stormwater management practices associated with the permit listed below shall be listed in the MS4's Stormwater Management Program (SWMP) under Minimum Control Measure 5, Post-Construction Stormwater Management.

1. Stormwater System Name: Crescent Terrace
2. Location: Crescent Terrace, Burlington, VT
3. Stormwater Permit Number: 2-1052
4. Current Permit Status: (Issued, Expired, Title 3) Expired
5. Narrative Describing the Stormwater System:
   stormwater runoff from paved roads and driveways, roofs and natural terrain via overland flow across "grassed and/or vegetated terrain to a catch basin and rip-rapped outfall to an unnamed tributary"
6. Current Compliance Status:
   - [x] Compliant with previously issued state permit
   - [ ] Planned compliance within 24 mos; Estimated Compliance Date: _____
   - [ ] Not constructed – plan for construction as part of FRP; Estimated construction schedule: _____
   - [ ] Substantially deteriorated – plan for construction as part of FRP; Estimated construction schedule: _____
7. Plans (for expired permits, list plan numbers and attach):

   No plans appear to be available from State. Only Schedule Ds

8. Proof of Legal Responsibility (list and attach):

   The roadway is an accepted City Street. There is no known HOA - only single family homes.

STATE OF VERMONT
AGENCY OF ENVIRONMENTAL CONSERVATION
DEPARTMENT OF WATER RESOURCES

D APPLICATION FOR PERMIT TO DISCHARGE WASTES

SCHEDULE D - DRAINAGE DISCHARGES Date 9-6-85

D-1 Applicant Blumer-Rose Inc. Activity Crescent Terrace

D-2 Discharge S/N 001 Designation 12" storm drain, from cul-de-sac

D-3 Exact location on receiving water (describe and locate on map) Approximately 10,000 ft. upstream from Lake Champlain.

D-4 How are wastes conveyed to receiving water? Catch basins and storm drain pipes.

D-5 Type of Discharge

[XX] STORMWATER

Source and Drainage Area (in acres): Paved Roads 0.46 A. Unpaved Roads - A.

Paved driveways 0.04 A. Unpaved Parking Lots - A. Roofs 0.09 A.

Natural Terrain - A. Lawn and natural areas 0.81 A. Total 1.40 A.

Design Criteria: Rainfall Intensity 4.3 in/hr. Rainfall Duration 1/6 hrs.

Return Frequency 10 yrs. Coefficient 0.61 Peak Runoff Rate 3.7 CFS

Treatment: [ ] None [XX] Catch Basin or Settling Basin with Submerged Outlet

[ ] Detention Pond: Area _____A. Volume _____CF Depth _____Ft.

Detention Time _____hrs. and Peak Discharge _____CFS for design storm

Outlet structure(s) _____

[ ] Recharge Basin: Area _____A. Max. Volume _____CF Max. Depth _____Ft.

Inches rainfall stored _____in. Exfiltration Rate _____CF/hr.

[ ] Other (describe) _____

[ ] GROUNDWATER AND RETURN FLOWS

Source: [ ] Foundation Drain [ ] Curtain Drain [ ] Spring [ ] Well [ ] Mine [ ] Quarry

[ ] Pond [ ] Water Wheel or Turbine [ ] Filter Backwash [ ] _____

Discharge: Est. discharge _____CFS Frequency and duration _____

Pumping required? _____ Contaminants present _____

Treatment: _____

D-6 Additional Information _____

INSTRUCTIONS ON REVERSE

FORM WR-82D (7/78)

STATE OF VERMONT
AGENCY OF ENVIRONMENTAL CONSERVATION
DEPARTMENT OF WATER RESOURCES

D APPLICATION FOR PERMIT TO DISCHARGE WASTES

SCHEDULE D - DRAINAGE DISCHARGES Date 9-6-85

D-1 Applicant Blumer-Rose, Inc. Activity Crescent Terrace

D-2 Discharge S/N 002 Designation 12" storm drain

D-3 Exact location on receiving water (describe and locate on map) Approximately 10,000' upstream from Lake Champlain and 30' downstream from S/N 001.

D-4 How are wastes conveyed to receiving water? Overland and swale flow, inlet & storm drain.

D-5 Type of Discharge

[xx] STORMWATER

Source and Drainage Area (in acres): Paved Roads - A. Unpaved Roads - A.

Paved ~~Parking Lots~~ driveways 0.09 A. Unpaved Parking Lots - A. Roofs 0.17 A.

Natural Terrain - A. Lawns and natural areas 0.78 A. Total 1.04 A.

Design Criteria: Rainfall Intensity 4 in/hr. Rainfall Duration 1/5 hrs.

Return Frequency 10 yrs. Coefficient 0.53 Peak Runoff Rate 2.2 CFS

Treatment: [ ] None [ ] Catch Basin or Settling Basin with Submerged Outlet

[ ] Detention Pond: Area ____ A. Volume ____ CF Depth ____ Ft.

Detention Time ____ hrs. and Peak Discharge ____ CFS for design storm

Outlet structure(s) ____

[ ] Recharge Basin: Area ____ A. Max. Volume ____ CF Max. Depth ____ Ft.

Inches rainfall stored ____ in. Exfiltration Rate ____ CF/hr.

[xx] Other (describe) Overland and grassed swale flow prior to inlet riprap and overland flow below outfall.

[ ] GROUNDWATER AND RETURN FLOWS

Source: [ ] Foundation Drain [ ] Curtain Drain [ ] Spring [ ] Well [ ] Mine [ ] Quarry

[ ] Pond [ ] Water Wheel or Turbine [ ] Filter Backwash [ ] ____

Discharge: Est. discharge ____ CFS Frequency and duration ____

Pumping required? ____ Contaminants present ____

Treatment: ____

D-6 Additional Information ____

INSTRUCTIONS ON REVERSE

FORM WR-82D (7/78)

Attachment A: Selected Minimum Control Measures

BMP ID	Public Education	Responsible Dept. or Person	Measurable Goal
1-1	Maintain SW website	RSEP	# of website visitors
1-2	Participate in RSEP, other regional SW ed. strategy, or submit individual plan	BSWMP, RSEP	# of media impressions

Attachment A: Selected Minimum Control Measures

BMP ID	Public Participation	Responsible Dept. or Person	Measurable Goal
2-9	Participate in the Chittenden County Stream Team	BSWMP, CCST	# of CCST website visits; # of participants in workshops/involvement opportunities
Implement a program that includes at least 3 of the following:			
2-5	Sponsor periodic community stream corridor clean-up days	BSWMP, CEDO	# of participants in stream clean-up/green-up projects; # tons of trash collected

Attachment A: Selected Minimum Control Measures

BMP ID	Illicit Discharge Detection & Elimination	Responsible Dept. or Person	Measurable Goal
3-1	Develop and enforce a program to detect and eliminate illicit discharges	BSWMP	See 3-7; monitor outfalls at least twice/permit cycle
3-2	Develop and maintain storm sewer GIS or AutoCAD map	BSWMP	Progress on delineation of subwatersheds; progress on development of workflow/methods for maintaining updated GIS
3-3	Develop and enforce illicit discharge ordinance	BSWMP	Already implemented
3-4	Develop and implement illicit discharge detection plan, focus on impaired waters and random dumping	BSWMP	Progress on completion of hot-spot surveys
3-5	Inform public of illicit discharge and disposal hazards	BSWMP (possibly RSEP, CCST)	Progress on development/acquisition/distribution of informational materials and education/outreach efforts
3-6	Address specific categories of illicit discharges, if necessary	BSWMP	Progress on addressing specific categories of illicit discharges; regulatory review to determine if amendment is needed in Chapter 26
3-7	Prepare annual report of monitoring and corrective actions taken	BSWMP	# of outfalls tested, # of illicit connections/discharges found and corrected.

Attachment A: Selected Minimum Control Measures

BMP ID	Construction Site Runoff Control	Responsible Dept. or Person	Measurable Goal
4-1	Develop and implement procedures to ensure MS4 construction activites are properly permitted	BSWMP	Completed
4-2	Review existing MS4 regulations for effectiveness in managing construction-related E&S and consistency with state construction permit	BSWMP	Completed
4-2a	Adopt E&S requirments that are at least as stringent as state requirements	BSWMP	Completed
4-3	Develop and implement an erosion control ordinance that regulates development not subject to state permitting	BSWMP, P&Z	# of projects reviewed and approved; # of general site inspections completed

Attachment A: Selected Minimum Control Measures

BMP ID	Post Construction Runoff Control	Responsible Dept. or Person	Measurable Goal
5-1	Review existing MS4 regulations for effectiveness in managing stormwater runoff and consistency with state operational permit	BSWMP	Completed; ongoing implementation of program
5-1a	Assess changes to regulations to support LID	BSWMP, P&Z	Completed
5-1b	Assess changes to regulations to minimize impervious surface through street & parking lot design	BSWMP, Public Works,P&Z	Completed
5-1c	Adopt requirments that are at least as stringent as state requirements	BSWMP	In place, see Chapter 26; report # of projects reviewed and approved; # of post construction inspections; # of review of post construction system inspection reports; progress on development of Burlington Stormwater Management Manual; progress on development and implementation of maintenance agreement/easement recording process.
For development and redevelopment that disturbs ≥ 1 acre but is not subject to state permitting:			
5-2	Develop and implement procedures to identify the development	BSWMP	Procedure in place; ongoing implementation
5-3	Develop and implement an ordinance that regulates the development	BSWMP	Ordinance in place; ongoing implementation
5-4	Develop and implement inspection procedures for the development	BSWMP	Ordinance provides for inspection authority; # of inspections performed
5-5	Develop and implement procedures to ensure MS4 development activites are properly permitted	BSWMP	Procedure in place

Attachment A: Selected Minimum Control Measures

BMP ID	Pollution Prevention & Good Housekeeping	Responsible Dept. or Person	Measurable Goal
6-1	Describe operation and maintenance program for reducing pollutant runoff from MS4 operations, including, at a minimum:	BSWMP, Right of Way Services, all city departments	See below:
6-1a	New construction and land disturbance	BSWMP	Progress in the development of a "general" EPSC plan/protocol and identification of situations when more formal EPSC plan is needed; # of trainings; Status of distribution of informational materials to outher City Departments
6-1b	Maintenance of fleet and buildings, all municipal garages, parks, open space, contruction and maintenance practices for gravel backroads, snow disposal and stormater systems	BSWMP, Right of Way Services, Parks & Rec	Documentation of Parks & Rec policy rleated to chemical application and storage, phosphorus fertilizer prohibition and erosion control; # of dog bag stations, # of dog bags distributed;
6-1c	Training, maintenance schedules, and inspection procedures for long term structural controls	BSWMP, Right of Way Services	# of catch basins cleaned and repaired; # of tons of material collected from catch basins and street sweeping activities, # of linear feet of pipe inspected, repaired; Progress on Outfall Inspections and Capital Improvement Processs
6-1d	For municipal facilities where fertilizers are applied, prohibit the use of fertilizers containing phosphorus (unless warranted by a soil test)	BSWMP, Parks & Rec	prohibition of use of Phosphorus fertilizer without soil test; copies of any soil tests performed to validate use of Phosphorus fertilizer
6-2	For Municipal garages, an MS4 may participate in ANR's Municipal Compliance Assistance Program	BSWMP, Public Works	performance of the MCAP or equivalent audit; any resulting improvements made in response to the audit
6-3	Provide a list of all industrial facilities that the MS4 owns or operates that are subject to the MSGP	BSWMP, Public Works, BED	list of MSGP facilities; compliance with MSGP

Attachment B: Minimum Control Measure Implementation Timeframe

BMP ID	Permit Year One				Permit Year Two				Permit Year Three				Permit Year Four				Permit Year Five				Next Permit
	Spring 2013	Summer 2013	Fall 2013	Winter 2013-2014	Spring 2014	Summer 2014	Fall 2014	Winter 2014-2015	Spring 2015	Summer 2015	Fall 2015	Winter 2015-2016	Spring 2016	Summer 2016	Fall 2016	Winter 2016-2017	Spring 2017	Summer 2017	Fall 2017	Winter 2017	
Public Education																					
1-1																					
1-2																					
Public Participation																					
2-9	Ongoing participation in CCST																				
2-5	GUD				GUD				GUD				GUD				GUD				
Illicit Discharge Detection & Elimination																					
3-1	Outfalls monitored twice during permit cycle																				
3-2	GIS updates ongoing				Completion of outfall GPS; subwshed delineation for SW impaired wsheds				GIS Updates on-going				GIS updates on-going				Completion of all subwshed delineations				
3-3	Ordinance already developed				Ongoing enforcement				Ongoing enforcement				Ongoing enforcement				Ongoing enforcement				
3-4					Hot Spot surveys completed for SW Impaired Watersheds												Hot Spot Surveys complete for all subwsheds				
3-5	Ongoing				Ongoing				Ongoing				Ongoing				Ongoing				
3-6		Complete Regulatory Review			Amendment to Chapter 26 if necessary																
3-7					Reporting				Reporting				Reporting				Reporting				

Attachment B: Minimum Control Measure Implementation Timeframe

BMP ID	Permit Year One				Permit Year Two				Permit Year Three				Permit Year Four				Permit Year Five				Next Permit
	Spring 2013	Summer 2013	Fall 2013	Winter 2013-2014	Spring 2014	Summer 2014	Fall 2014	Winter 2014-2015	Spring 2015	Summer 2015	Fall 2015	Winter 2015-2016	Spring 2016	Summer 2016	Fall 2016	Winter 2016-2017	Spring 2017	Summer 2017	Fall 2017	Winter 2017	
Construction Site Runoff Control																					
4-1	Ongoing implementation																				
4-2	Complete																				
4-2a	Complete																				
4-3	Ongoing implementation																				
Post-Construction Runoff Control																					
5-1	Complete																				
5-1a	Complete																				
5-1b	Complete																				
5-1c	Ongoing implementation of procedures																				
5-2	Ongoing implementation of procedures																				
5-3	Ongoing implementation of procedures																				
5-4	Ongoing implementation of procedures																				
5-5	Ongoing implementation of procedures																				
Pollution Prevention and Good Housekeeping																					
6-1	Ongoing implementation																				
6-1a	Ongoing implementation																				
6-1b	Ongoing implementation																				
6-1c	Ongoing training, maintenance and inspections																				
6-1d					Documentation of Parks and Rec Policies related to P-fertilizer																
6-2	Perform MCAP Audit at least once during permit cyle																				
6-3	Maintain compliance with MSGP																				