

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



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: Town of Essex
 Name of Principle Executive Officer (PEO) or Chief Elected Official (CEO): Patrick Scheidel Title: Town Manager
 Mailing Address:
 Street/P.O. Box: 81 Main Street
 City/Town: Essex Jct State: VT Zip: 05452
 Phone: (802) 878-1341 Email: pscheidel@essex.org

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

Name: Dennis Lutz, P.E.; Public Works Director
 Mailing Address:
 Street/P.O. Box: 81 Main Street
 City/Town: Essex Jct State: VT Zip: 05452
 Phone: (802) 878-1344 Email: dlutz@essex.org

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
 Or, if you are relying on another entity to implement a MCM, please complete the following: MCM 2

Organization: CCRPC Contact: Dan Albrecht
 Minimum Control Measure being implemented: Public Education and Outreach
Public Participation & Involvement
 Mailing Address:
 Street/P.O. Box: 110 West Canal Street, Suite 202
 City/Town: Winooski State: VT Zip: 05404
 Phone: (802) 846-4490, ext. 29 Email: dalbrecht@ccrpcvt.org

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: 8.35 square miles

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

Receiving water	# of outfalls	Impaired status	Nature of impairment
Indian Brook	37	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Non-support of aquatic life
Sunderland Brook	44	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Non-support of aquatic life
Alder Brook	88	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Not Applicable in Essex
Winooski River	56	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Not Applicable in Essex
Browns River	16	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Not Applicable in Essex
		<input type="checkbox"/> Yes <input type="checkbox"/> No	
		<input type="checkbox"/> Yes <input type="checkbox"/> No	
		<input type="checkbox"/> Yes <input type="checkbox"/> No	
		<input type="checkbox"/> Yes <input type="checkbox"/> No	
		<input type="checkbox"/> Yes <input type="checkbox"/> No	
		<input type="checkbox"/> Yes <input type="checkbox"/> 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. 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: Dennis Lutz, P.E. Title: Public Works Director

Signature: [Signature] Date: 3 June 2013

Submit this **Original** form and the \$1320 fee 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 within 10 days of receipt of this Notice by the Municipal Clerk. 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://www.vtwaterquality.org/stormwater/htm/sw_ms4.htm

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 www.vtwaterquality.org.

NOTICE OF INTENT

General Permit 3-9014

**National Pollutant Discharge Elimination System
(NPDES) Number: VTR040000
For Storm-water Discharges from Small Municipal Separate
Storm Systems
For the Permit Dated 5 December 2012**

Section II: Notice of Intent Requirements

Section II.B.1.a.

Town of Essex
81 Main Street
Essex Junction, VT 05452
Telephone Number (Town Clerk): 802 879-0413
FAX Number (81 Main Street): 802 878-1353
E-mail address: essex.org

Section II.B.1.b.

Dennis E. Lutz, P.E., Public Works Director
Town of Essex
81 Main Street
Essex Junction, VT 05452
Telephone Number (Public Works): 802 878-1344
Fax Number (Public Works): 802 878-1355
E-mail address: dlutz@essex.org

Section II.B.1.c.

The MS4 area in the Town is estimated at 8.35 square miles (5203 acres)
Refer to map in the SWMP Appendix C to this permit.

Section II.B.2.a.

Indian Brook – Impairment due to non-support of aquatic life (Appendix H)
19 municipal outfalls within the MS4 boundaries
2 or more state-highway outfalls within the MS4 boundaries
25 private outfalls within the MS4 boundaries
46 Total

Sunderland Brook - Impairment due to non-support of aquatic life (Appendix I)
17 municipal outfalls within the MS4 boundaries
29 private outfalls within the MS4 boundaries
46 Total

- Alder Brook – Impairment not applicable in Town of Essex
 - 64 municipal outfalls, the majority of which are within the MS4 boundaries
 - 12 or more state highway outfalls, the majority of which are within the MS4 boundaries
 - 16 private outfalls, the majority of which are within the MS4 boundaries
 - 92 Total
- Winooski River – Impairment not applicable in Town of Essex
 - 46 municipal outfalls within the MS4 boundaries
 - 3 or more state highway outfalls within the MS4 boundaries
 - 7 private outfalls within the MS4 boundaries
 - 56 Total
- Browns River – Impairment not applicable in Town of Essex
 - 12 municipal outfalls within the MS4 boundaries
 - 1 or more state highway outfalls within the MS4 boundaries
 - 5 private outfalls within the MS4 boundaries
 - 18 Total

(NOTE: All the noted outfalls and maps are included in the SWMP Appendix E. The number of the outfall corresponds to a numbered outfall on the GIS map showing the Town’s inventory of storm-water systems).

Section II.B.2.b.

A regional MS4 group has been established (including the City of Burlington, the Town of Essex, the Town of Colchester, the Village of Essex Junction, the Town of Shelburne, the City of South Burlington, the Town of Milton, the Town of Williston, the City of Winooski, the University of Vermont, the Vermont Agency of Transportation and the Burlington International Airport) working collectively through an MOU and assisted by the lead Agency (the Chittenden County Regional Planning Commission) to satisfy the requirements of Public Education and Outreach Minimum Measure 1. Additionally through an MOU, the regional MS4 group works with the Chittenden County Stream Team (CCST) to satisfy the requirements of Public Education and Outreach Minimum Measure 2.

The Chittenden Solid Waste District of which the Town is a member assists in satisfying the requirements under Public Education and Outreach, Public Participation and Involvement and Illicit Discharge Detection and Elimination and Pollution Protection/Good Housekeeping for Municipal Operations Minimum Measures.

Section II.B.2.c

The measurable goals are identified in the tables attached to and a component part of the NOI and SWMP. The tables by year of the permit list the Best Management Practices including the measurable goals and the timeframes for implementation. The designated lead Department within the Town is the Public Works Department, headed by the Director of Public Works.

Section II.B.2.d.

The Stormwater Management Plan with Appendices, including the NOI and attached NOI implementation tables, provide the overall strategy for permit compliance on all stormwater related issues. Specific details of the approach to be taken by Essex are included in Sections 5.0, *Identified Expired Existing Impaired Watershed Permits and Non-Permitted Outfalls in the Impaired Watersheds*, 6.0, *Phase 2 Municipal Separate Storm Sewer System (MS4)*, and Section 7.0, *Essex Compliance Program*.

The water quality results, TMDLs and geomorphological assessments relative to the impaired streams are identified in the SWMP Appendices G through K. Both watersheds and the Alder Brook non-impaired watershed contribute runoff which ultimately reaches Lake Champlain. Lake Champlain has water quality issues related to phosphorous and a revised TMDL has not yet been issued by EPA relative to this waterbody (reference Section 3.1.3 of this NOI).

The general strategy to improve water quality in the **impaired** watersheds involves the following:

- 1) reduction in the level of sediment reaching the streams through greater infiltration of stormwater, construction of treatment elements, and in-system storage
- 2) reduction in the level of dissolved nutrients reaching the streams through continuing emphasis on municipal operations such as catch basin cleaning and street sweeping
- 3) erosion control and stream bank stabilization especially for new developments, contractor operations, runoff from rural and gravel roadways
- 4) increased attenuation of storm-water runoff through increased storage to dampen peak runoff
- 5) reduction in toxins reaching the streams

To implement the strategy within the impaired watershed, the following physical actions will be undertaken both to comply with the NPDES Phase II permit:

- 1) to reduce the level of sediment reaching the stream:
 - a) All publicly-owned catch basins within the Town, including the impaired areas, will be inspected annually and cleaned as necessary based on the inspection results. Catch basins with debris filling more than 50% of the sump capacity will be cleaned. The material removed from the sumps shall be handled in a manner consistent with current State policy. The Town has a constructed dewatering and holding facility to test and store the material before burial.
 - b) The Town sweeps all the paved roads within the Town outside the Village of Essex Junction at least twice per year, generally in the spring following winter melt and in the fall before the onset of winter conditions.
 - c) Pet waste control measures will be used as per previous permits.
 - d) Community stream clean-ups and Green-up Day activities will occur.

- e) Existing expired permits will be issued in the impaired waterways with the compliance either by the Town or through the State RDA process. Compliance with original permit conditions may help to reduce the sediment load.
 - f) A Flow Restoration Plan will be developed with other MS4 permittees in the impaired watersheds aimed at making infrastructure changes to reduce the sedimentation level. Some of the options may involve re-construction of gravel roadway ditches, increased culvert sizes, construction of treatment systems such as ponds or infiltration systems, changes to catch basin locations and others.
- 2) to reduce the level of dissolved nutrients reaching the stream
- a) Many of the items listed under sediment reduction will also help to reduce the level of nutrients reaching the stream.
 - b) Continuation of the Household Hazardous Waste Collection Program run by the Chittenden Solid Waste District will assist in this effort.
 - c) Water quality testing to determine source of nutrients and resulting actions taken to reduce specific high nutrient contributors will help reduce nutrients.
 - d) The FRP will likely have an element of the facilities that will result in additional nutrient removal, especially with regard to phosphorous.
- 3) to control erosion and stabilize stream banks
- a) Construction of improved storm-water treatment systems as identified on a project and location specific basis through the FRP.
 - b) Continued enforcement of the Town's riparian buffer ordinance provisions and potential future changes due to review by the CCRPC (SWMP Appendices Q and W).
 - c) Continued enforcement of the Town's adopted Stormwater Ordinance and potential future changes due to review by the CCRPC (SWMP Appendix P).
 - d) Ongoing inspection of new development and Town construction activities
 - e) Post construction compliance inspections.
 - f) Repair and replacement of failed or defective existing piped systems.
 - g) Reconstruction of gravel road ditches and increased culvert sizing.
- 4) to increase attenuation of stormwater runoff:
- a) Many of the items listed under sediment reduction will also assist in increasing the attenuation of flows.
 - b) Construction of facilities under the FRP either for increased detention, infiltration or treatment
 - c) Municipal and development compliance with the State Stormwater Procedures and the Technical Management Manual and Town ordinances
- 5) to reduce the level of toxins reaching the stream:

- a) Items listed under sediment reduction, nutrient reduction, erosion control and stormwater attenuation assists in the control of toxins.
- b) Stricter control through enforcement of the Stormwater Ordinance and Riparian Buffer provisions of the Zoning Ordinance directed at control of toxins will help reduce the potential for toxins reaching the streams

Section III: Stormwater Management Program

A Stormwater Management Program (Plan) has been submitted and the NOI is a component of that plan.

Section VI: Discharge Requirements

The Town's plan relative to compliance with this section of the permit is contained in the SWMP, reference sections 5.0, *Identified Expired Existing Impaired Watershed Permits and Non-Permitted Outfalls in the Impaired Watersheds*, 6.0, *Phase 2 Municipal Separate Storm Sewer System (MS4)*, and Section 7.0, *Essex Compliance Program*.

Section IV.H Minimum Control Measures:

Section IV.H.1 Public Education and Outreach:

Sections included under IV.H.1.a

1. The Town will work with the Chittenden Solid Waste District specifically with respect to the household hazardous waste program.
2. Pet bags and pet waste receptacles will be provided and maintained at designated locations.
3. Pet bags will be provided at time of dog licensing.
4. The Selectboard will be updated periodically on stormwater issues of relevance to the community with meetings televised and made available through the Town web page.
5. The Town has agreed to participate with other Chittenden County MS4 communities in a regional stormwater educational program (RSEP). A copy of the signed Memorandum of Understanding is included as SWMP Appendix L.
6. The Town will maintain and periodically update a storm-water information section on the Town website.
7. A summary report of actions completed each year will be provided to the Agency of Natural Resources as well as a final summary at the end of the five-year permit cycle.
8. The Town has identified other items within this BMP that exceed the minimum permit requirements. Since these items exceed the minimum requirements, there is no permit requirement to respond to the questions found in sections IV.H.1.b.1 through IV.H.1.b.8 of the permit. However, other actions to be taken include items such as preparation of material for handout at Town Meeting and other events, targeting of educational materials to identified groups for specific problems such as deposition of material in catch basins, participation in local or regional school educational programs, etc.

Section IV.H.2 **Public Involvement/Participation**

Sections included under IV.H.2.a

The Town has selected the following measures:

1. Storm–drain marking maintenance project (item 3 in the BMP list for PP; ongoing marking and public participation in educating people about the importance of keeping unauthorized material out of catch-basins will be done.
2. Annual corridor clean-up (item 4 in the BMP list for PP).
3. Ongoing collaboration with the Town Conservation Committee as the citizen stormwater advisory panel (item 7 in the BMP list for PP).
4. The Town has agreed to participate with other Chittenden County MS4 communities in the Chittenden County Stream Team (item 5 in the BMP list for PP, SWMP Appendix M).
5. In addition, the Town has proposed added measures (items 1, 2, 6 and 8 in the BMP list for PP)

Section IV.H.2.c

Reference item 5 in the Illicit Discharge Detection and Elimination Table

Section IV.H.3 **Illicit Discharge Detection and Elimination**

Section IV.H.3.a.1

Reference BMPs listed in the Table on Illicit Discharge Detection and Elimination.

Section IV.H.3.a.2

Reference Item 1 in the BMP list for Illicit Discharge Detection and Elimination.

The GIS maps have been completed and include known public and private storm-water systems.

Section IV.H.3.a.3

Reference item 5c in the BMP list for Illicit Discharge Detection and Elimination.

Section IV.H.3.a.4

Reference item 4c in the BMP list for Illicit Discharge and Detection Elimination. The Town will continue to use summer interns where possible to collect site data on catch basins, pipelines and outfalls as well as perform limited water quality testing as needed. The data will then be used to determine if further investigation is warranted. If needed, full time staff and our outside consultants will be used to determine what remedial actions under the Stormwater Ordinance need to be taken.

Section IV.H.3.a.5

Reference the Public Education and Outreach Component of the permit, Section IV.H.1.

Section IV.H.3.a.6

The Town will address these issues if identified as a significant contributor of pollutants in Essex or if EPA mandates that a particular category or type of discharge must be addressed and/or regulated during the permit period.

Section IV.H.3.a.7

Reference item 8 in the BMP list for Illicit Discharge Detection and Elimination.

Section IV.H.3.b.1

Reference section IV.H.3.a.2 and IV.H.3.a.4

Section IV.H.3.b.2

The Town has adopted a Stormwater Ordinance which covers Illicit Discharges. A copy is included as SWMP Appendix P.

Section IV.H.3.b.3

See Section IV.H.3.b.2 and BMPs listed on the Illicit Discharge Detection and Elimination Table.

Section IV.H.3.b.4

The monitoring and sampling program on the impaired waterways will involve selected outfall monitoring and catch basin testing. The catch basin testing will be done primarily using detection for "optical brighteners" (dried collected sampling cloths tested using ultraviolet light).

Section IV.H.3.b.4.a

The Town has GIS mapping which identifies the areas with municipal sewerage coverage as well as areas with onsite systems. There are very limited areas in Essex with onsite systems that impact on the watersheds in question. However, the data obtained from the annual monitoring programs will provide the basis for decisions regarding the higher priority areas for further checking. In addition to the optical brightener testing, odor, and visual checks for pollutants will be used (frothy, shiny surface, floatables, color/turbidity, pipe stains/pipe deposits, etc). More specific water-quality tests may be run to assist in identifying illegal discharges as the need arises.

Section IV.H.3.b.4.b

Storm-water systems will be segmented into major contributing branches and testing done both at the lowest downstream manhole in the system or the outfall and at major nodes in the branched system. Those nodes that test positive for illicit discharges will be further broken down into more subsystems. If the source cannot be identified within a reach, other methods can be used such as televising the line to look for illicit connections or going building to building within the stretch to identify the problem discharge.

Section IV.H.3.b.4.c

If the source is easily removed through such means as catch basin cleaning, then the action will be taken directly by the Town. If the source is an illicit connection such as a

washing machine connected to the storm-system, then the Town Ordinance governs what procedures will be taken to insure compliance.

Section IV.H.3.b.4.d

Reference the BMPs listed on the Table for Illicit Discharge Detection and Elimination.

Section IV.H.3.b.5

The general public and businesses will be informed through the Public Education and Outreach Process (section IV.H.1), through the Chittenden County Stream Team (section IV.H.2.a) and through information placed on the Town website (see item 6c on the Public Education and Outreach Table). Specific businesses identified as being a Selected Contributor or within a group designated as being a Selected Contributor within an impaired watershed will be further informed through Town ordinance enforcement. Public employees will be informed as a component of training under Section IV.H.6.

Section IV.H.3.b.6

Reference Section II.B.1.b

Section IV.H.3.b.7

Reference the BMPs listed on the table for Illicit Discharge Detection and Elimination.

Section IV.H.4 Construction Site Runoff Control

Section IV.H.4.a.1

Reference item 4c in the table on Construction Site Storm Water Runoff Control.

Section IV.H.4.a.2

Reference item 1c in the table on Construction Site Storm Water Runoff Control.

Section IV.H.4.a.3

Reference item 5c in the table on Construction Site Storm Water Runoff Control.

Section IV.H.4.b

Reference item 1c in the table on Construction Site Storm Water Runoff Control.

Section IV.H.4.c.1

The Town currently has new developer requirements for storm-water and erosion control within its Public Works Specifications, Subdivision Regulations and Zoning Ordinance. The Public Works Specifications are in the process of being updated. New developments which involve the creation of new public infrastructure are required to post Letters of Credit and sign Highway Agreements guaranteeing conformance with approved plans. The Town inspects these projects during the 15 month construction period and also during a subsequent three-year warrantee period (during which the Town holds 10% of the construction cost).

The Town will comply with the general permits covering stormwater runoff 3-9010 covering previously permitted projects or 3-9015 covering projects involving 1 acre or

more of disturbed area or 1 acre or more of impervious area to the degree that the Town is directly involved with each type of permit.

The Town will continue to monitor and report construction activities meeting the thresholds. The Public Works Specifications will also be updated to ensure that all stormwater requirements within the Town are consistent internally and consistent with new State guidelines and current practice.

The procedures for site inspection are already in place on major projects (see Section IV.H.4.b). Smaller projects that do not involve letters of credit, such as single family home construction, are inspected by the Zoning Administrator prior to the issuance of a certificate of occupancy. SWMP Appendix P of the Town Stormwater Ordinance applies to all projects regardless of size or impervious area.

The Town will make information available at the Community Development Office to provide to all parties seeking Town permits on the requirements of the State's Construction General Permits.

The specific procedures to notify the State are as noted in the BMP tables for the 6 minimum measures.

Section IV.H.4.c.2

Reference Section II.B.1.b

Section IV.H.4.c.3

See the BMPs listed in the Table for Construction Site Storm Water Runoff Control.

Section IV.H.5 Post-Construction Storm Water Management in New Development and Redevelopment

Section IV.H.5.a

See the BMPs listed in the Table on Post-Construction Storm Water Management/New Development/Redevelopment.

Section IV.H.5.b

Reference the information in Section IV.H.4.b and the BMPs listed in the Table on Post-Construction Stormwater Management/New Development/Redevelopment.

Sections included under IV.H.5.c

Reference item 5c in the table on Post-Construction Site Stormwater Management/New Development/Redevelopment.

Section IV.H.5.d

Reference item 3c in the table on Post-Construction Site Stormwater Management/New Development/Redevelopment.

Sections included under IV.H.5.e

Reference item 4c in the table on Post-Construction Site Stormwater Management/New Development/Redevelopment.

Sections included under IV.H.5.f

Reference item 1c in the table on Post-Construction Site Stormwater Management/New Development/Redevelopment.

Sections IV.H.5.g.1 and IV.H.5.g.2

The current practice places the responsibility for compliance for the first three years beyond Town acceptance of a development in the hands of the developer. During this time, the Town will sweep the streets once they are accepted as public roads. All other work is the responsibility of the developer and an escrow account is maintained for the three years to guarantee performance.

At the end of the three-year warranty period the Town accepts responsibility for the public infrastructure. In some cases, the ownership of certain portions of the system, such as a stormwater treatment basin, is transferred from the developer to a Homeowners Association or to the Town or to a combination of infrastructure responsibility. The BMP Table on Post-Construction Site Stormwater Management/New Development/Redevelopment covers all projects and building permit applications without regard to project size or amount of impervious area.

Section IV.H.5.g.3

The current practice of periodic site inspection on all projects will continue. Complaints received at the Town are routinely investigated. Development sites within impaired watersheds will be checked more frequently due to the potential impact on the receiving waters.

The corrective actions could include such items as cleaning of catch basins, repair of pipes and/or structures, outfall protection, added erosion protection, treatment basin, treatment structure cleaning or legal enforcement under the authority of the Stormwater Ordinance.

Section IV.H.5.g.4

Reference section II.B.1.b

Section IV.H.5.g.5

See the BMPs listed in the Table on Post-Construction Storm Water Management/New Development/Redevelopment.

Section IV.H.6 Pollution Prevention/Good Housekeeping for Municipal Operations

Section IV.H.6.a.1

See the BMPS listed in the Table on Pollution Prevention/Good Housekeeping for Municipal Operations

Section IV.H.6.a.2

The only Town facility impacted by the Multi-Sector General Permit (MSGP) is the closed Town landfill site and it is currently operating under a No Exposure Certification

for Conditional Exclusion (Number 4453-9003). A copy of this Certification is included in SWMP Appendix EE.

Sections IV.H.6.b.1 and IV.H.6.b.2.a

The Table on Pollution Prevention/Good Housekeeping for Municipal Operations in identifies the operations and maintenance program that the Town currently operates relative to its publicly owned infrastructure. The following work items will be accomplished by the municipal workforce or contract forces as part of a routine maintenance program:

- a) All catch basins within the Town will be inspected at least annually or as required by 9010 permits. Catch basins with more than 50% of the sump capacity filled will be cleaned; pipes that are identified as containing excessive debris will be cleaned.
- b) The Town will sweep paved streets at least twice per year -- once in the spring and once in the fall and periodically as needed throughout the summer.
- c) Defective pipe systems, erosion problems and outfall problems will be scheduled for correction consistent with the extent of the problem, the potential impact on water quality and the availability of funds.
- d) Municipal outfalls will be inspected at least once every two years and repaired as needed.
- e) Municipal stormwater treatment systems for which the Town is responsible shall be inspected annually and maintained in accord with issued permits.

Section IV.H.6.b.2.b

Compliance with employee training (item 1c), compliance with the Winter Operations Plan (item 11c), the availability of spill prevention kits (item 2c) and the recycling of waste products (item 3c) will act as added controls.

The Town salt shed is covered and salt is not being added to the winter sand storage pile. In addition, the Town has a storm-water detention basin at the highway garage complex that acts to prevent the discharge of pollutants.

Section IV.H.6.b.2.c

At the present time, the Town uses many methods to dispose of waste material. Solid waste is removed via contract and containers or taken directly to the Chittenden County Solid Waste District (CCSWD) Drop-off Site, municipal waste petroleum products are recycled through commercial vendors and hazardous wastes are also taken to the CCSWD.

Clean waste soil is taken to private property owners, if the site is suitable for disposal and the material is acceptable as clean fill. Street sweeping residue is collected and allowed to air dry, with any liquid directed to the stormwater detention basin at the highway garage. When air-dried, the material is mixed with other earth products (clean waste fill) and placed at the Town landfill site at a designated location not subject to erosion or sediment runoff.

Residual cleanings from catch basins are stored after removal from the catch basin on an impervious surface at the landfill. When dried and documented as having acceptable contaminant residuals, the material is land applied in a similar manner to the street

sweepings. If the test results are not acceptable, the material is aerated and retested at a later date until found to be acceptable.

The Town recycles other product such as used concrete sidewalk, concrete curbs and asphalt by regrinding and reusing the waste product as base course gravel in new construction.

Section IV.H.6.b.3

Reference Section II.B.1.b

Section IV.H.6.b.4

Reference the BMPs in the Table on Pollution Prevention/Good Housekeeping for Municipal Operations

I. Sharing Responsibility

The Tables outline the areas where the Town is relying on other parties to meet elements of its storm-water program under this permit.

SWMP Appendix L contains a signed copy of the Memorandum of Understanding on the Regional Storm-water Educational Program.

Section II.B.2.b covers the areas that the Chittenden Solid Waste District provides service to the Town of Essex.

J. Reviewing and Updating Storm Water Management Programs

The Town will conduct an annual review of its permit including a review of the progress made under each of the six control measures. The Town may elect to request changes to the permit following the procedures outlined in this section. It also understands that the Secretary of the Agency may make changes to the permit, following the procedures in this section.

Section V. Monitoring, Record Keeping and Reporting

Section V.A Monitoring

The Town agrees to monitor as noted under section 7.5 in the SWMP and to keep records of all monitoring that the Town undertakes.

Section V.B Record Keeping

The Town agrees to maintain records as noted under this section of the permit. It is not the intent of the Town to provide cost documentation on permit compliance to VANR or EPA without funds and/or resources from those Agencies to collect and administer the documentation and record keeping required to provide such data.

Section V.C Reporting

The Town takes strong exception to the 30-day time frame following the end of the permittee's fiscal year for submitting its Annual Report. This is an unrealistic and difficult requirement that cannot be managed by the Town.

First, the annual report should be based on calendar year. Almost every stormwater activity under the permit occurs during the non-winter months. Stormwater actions generally take place between March/April and October/November of a given year. Infrastructure inspections take place in the spring/early summer and then actions such as cleaning, repair, reconstruction occur the same year before snowfall. The current calendar year basis enables all the seasonal stormwater activities to be reported in a single year's report.

Additionally, the annual reports take significant time to prepare. Cost reporting for any month does not download to Departments until at least 30 days following the end of the previous month. A 30 day reporting time line would be akin to requiring filing of income taxes 30 days after the end of the calendar year.

The schedule for reporting was developed during previous permit cycles after much discussion and agreement between the permit parties and the State.

The Town will continue to submit its annual report as of close of business on the 31st of December with the report due on the 1st of April.

Section VI Standard Permit Condition

Section VI.H Signatory Requirement:

"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 insure 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."


Dennis E. Lutz, P.E.
Public Works Director/Town Engineer

Attachment A: Selected .mum Control Measures

BMP ID	Public Education	Responsible Dept. or Person	Measurable Goal
1-1	Maintain SW website	Public Works Department/Town GIS Coordinator	Update quarterly
1-2, 3, 4	Participate in RSEP, other regional SW ed. strategy, or submit individual plan	Public Works Department/CCRPC	Total Media Impressions, Visitors to RSEP website
1-5a	Develop or acquire informational brochures	See 1-2, 3, 4	See 1-2, 3, 4; provide at annual meeting and at library and Town Clerk's office
1-5b	Distribute SW brochures 2x in first year and 1x in subsequent years	See 1-2, 3, 4	See 1-2, 3, 4
1-5c	Seek local news media to run at least 2 news or feature stories per year	See 1-2, 3, 4	See 1-2, 3, 4
1-5d	For municipalities: Develop school materials and teacher trainings	See 1-2, 3, 4	See 1-2, 3, 4
1-5e	For non-trationals: Develop public ed campaign for facility users	Not Applicable	Not applicable
1-6	Pet bags and waste receptacles at designated Town locations and events	Public Works Department	Number of bags purchased and dollar amount, number of dogs licenses renewed/new
1-7	Update Selectboard on stormwater related issues	Public Works Department	As applicable
1-8	Annual report and summary of actions taken	Public Works Department	As applicable

Attachment A: Selected .mum Control Measures

BMP ID	Public Participation	Responsible Dept. or Person	Measurable Goal
2-9	Participate in the Stream Team or other regional SW participation program, or submit individual plan	Public Works Department/CCRPC	Number of participants in outreach and hands on participation activities
Implement a program that includes at least 3 of the following:			
2-1	Form a citizen SW advisory panel	Public Works Department/Town Conservation Committee	As applicable
2-2	Establish or support a WQ monitoring program involving citizen volunteers	Not Applicable	
2-3	Institute an on-going public workshop series on SW awareness	See 2-9	See 2-9
2-4	Institute a continuing storm drain stenciling project	Public Works Department	Number of stormw drains marked
2-5	Sponsor periodic community stream corridor clean-up days	Public Works Department	Number of participants and amount of waste collected
2-6	Establish and support a citizen "stormwater watch" group	Not Applicable	
2-7	Create or support an "adopt-a-stream" program	Not Applicable	
2-8	Undertake a program similar in content and scope to the above with permission of Secretary	Not Applicable	
2-9	Compliance with all state and local public notice requirements	Public Works Department	As applicable
2-10	Annual Report and summary of actions taken	Public Works Department	As applicable

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	Public Works Department	Conduct a minimum of 25 OB tests annually and chemical testing as applicable for follow up
3-2	Develop and maintain storm sewer GIS or AutoCAD map	Public Works Department/Town GIS Coordinator	Number of outfalls, storm drains, and culverts owned/inspected by the Town
3-3	Develop and enforce illicit discharge ordinance	Public Works Department	Ordinance in place, as applicable
3-4	Develop and implement illicit discharge detection plan, focus on impaired waters and random dumping	Public Works Department	Number of illicit discharges detected and eliminated
3-5	Inform public of illicit discharge and disposal hazards	Public Works Department	Annually in written handout for Town meeting
3-6	Address specific categories of illicit discharges, if necessary	Public Works Department	As applicable
3-7	Prepare annual report of monitoring and corrective actions taken	Public Works Department	Reported annually in NPDES Phase 2 Reports
3-8	Recycling program for household hazardous wastes	Public Works Department/CCSWD	Not measureable for Essex alone

Attachment A: Selected .mum Control Measures

BMP ID	Construction Site Runoff Control	Responsible Dept. or Person	Measurable Goal
4-1	Develop and implement procedures to ensure MS4 construction activities are properly permitted	Public Works Department	Number of construction site inspections
4-2	Review existing MS4 regulations for effectiveness in managing construction-related E&S and consistency with state construction permit	Public Works Department	As applicable
4-2a	Adopt E&S requirements that are at least as stringent as state requirements	Public Works Department	Adopted
4-3	Develop and implement an erosion control ordinance that regulates development not subject to state permitting	Public Works Department	Number of enforcement actions taken by the Town
4-4	Town construction activity compliance with NPDES (state) permit covering erosion for land disturbances of 1-5 acres and also for those over 5 acres	Public Works Department	Number of projects disturbing greater than 1 acre of land
4-5	Annual Report and summary of actions taken	Public Works Department	As applicable in Annual Report

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	Public Works Department/CCRPC	Review by end of permit year #2 with CCRPC
5-1a	Assess changes to regulations to support LID	Public Works Department/CCRPC	Review by end of permit year #2 with CCRPC
5-1b	Assess changes to regulations to minimize impervious surface through street & parking lot design	Public Works Department/CCRPC/Town Community Development	Review by end of permit year #2 with CCRPC
5-1c	Adopt requirements that are at least as stringent as state requirements	Public Works Department	As applicable; procedure in place
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	Public Works Department	Number of development/redevelopment activities that disturb greater than 1 acre of land and/or projects that involve the creation of 1/2 acre or more of impervious area
5-3	Develop and implement an ordinance that regulates the development	Public Works Department	As applicable; procedure in place
5-4	Develop and implement inspection procedures for the development	Public Works Department	As applicable; procedure in place
5-5	Develop and implement procedures to ensure MS4 development activities are properly permitted	Public Works Department	Number of construction site inspections
5-6	Annual report and summary of actions taken	Public Works Department	As applicable in Annual Report

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:	Public Works Department	See 6-1a, 6-1b, 6-1c, 6-1d
6-1a	New construction and land disturbance	Public Works Department	Number of construction sites inspections, land disturbance projects greater than 1 acre, and projects disturbing greater than 1/2 acre or more of impervious surface
6-1b	Maintenance of fleet and buildings, all municipal garages, parks, open space, construction and maintenance practices for gravel backroads, snow disposal and stormwater systems	Public Works Department	Amount of sand/salt used during winter season, amount of debris collected from street sweeping activities, number of catch basins cleaned and inspected, amount of debris removed from catch basins
6-1c	Training, maintenance schedules, and inspection procedures for long term structural controls	Public Works Department	Number of employees trained on municipal stormwater practices, number of catch basins/outfalls/culverts inspected and repaired, date spill prevention kit checked
6-1d	For municipal facilities where fertilizers are applied, prohibit the use of fertilizers containing phosphorus (unless warranted by a soil test)	Public Works Department	Not Applicable
6-2	For Municipal garages, an MS4 may participate in ANR's Municipal Compliance Assistance Program	Public Works Department	Town participates in program
6-3	Provide a list of all industrial facilities that the MS4 owns or operates that are subject to the MSGP	Public Works Department	List of Town facilities that operate under the MSGP permit
6-4	Town participates in Green-Up day to assist in removing debris from parks and selected roads	Public Works Department/Parks and Recreation Department	Number of participants involved/amount of waste collected
6-5	Annual report and summary of actions taken	Public Works Department	As applicable in Annual Report

1. Public Education and Outreach

Keys: 1) shaded areas denote shared, contracted or service provided by others in whole or in part
 2) The letter "c" after the item number denotes that the action is continuous and not a single event

Year and Activity 2013-2018	Actions and Timing	Actions by the Town / Others	Measurable Goals	Values to be Measured	
1c.	Distribute educational material and advertise household hazardous waste program	ongoing Town participates as a member of CSWD and provides site for CSWD drop-off and Rover ----- CSWD distributes flyers, advertises Rover and provides site for collection	Town maintains CSWD membership; CSWD maintains materials hazardous collection point; Rover schedule advertised at least annually	See 5c	
2c.	Pet bags and waste receptacles available at Indian Brook Park (3), Ft Ethan Park (1), Pearl Street Park(2), Sand Hill Park(1), Essex Way at Myers Park (1), Hagan Dr (1), Foster Rd (1) and Sydney Drive at the Town Recreation lands (1)	Ongoing during the period from May to October and when the Parks are officially open; periodic during the winter months	Town Recreation Dept furnishes bags and dispenser and removes waste ----- Also distributed by volunteers	Install and maintain a minimum of seven dispensers on a seasonal basis at referenced Town parks and municipal locations; demonstrate increased purchase over time	Number of pet bags purchased by the Town over time
3c.	Bags-on-Board or similar dog bags provided by the Town upon re-licensing of dogs and at other events on a periodic basis	Ongoing Town Clerks office provides to owners of dogs at time of license renewal ----- Town provides to organizations and sponsored events	Demonstrate continued hand-out program and increased purchase of product over time	Number of new and renewed dog licenses	

1. Public Education and Outreach

Keys: 1) shaded areas denote shared, contracted or service provided by others in whole or in part

Year and Activity 2013-2018	Actions and Timing	Actions by the Town / Others	Measurable Goals	Values to be Measured	
4c.	Provide periodic update to Selectboard on storm water issues	ongoing	Town staff to provide input to Selectboard at meetings; most meetings televised; Channel 17 now has televised meetings on the Web via access on the Town website ----- Assistance by Channel 17	Periodic update provided to the Selectboard on storm-water issues (min of 2 times per year with meetings televised and accessible by the public)	As Applicable
5c.	Participate as a member community in the regional stormwater education and outreach program (RSEP)	See agreement between the parties for details- Media production, radio, television and newspaper coverage	Pay annual fee of up to \$5000 and provide a member on the Steering Committee for overview of the education and outreach program ----- CCRPC and signature parties to the agreement	Maintain membership in the County MOU group and meet the goals outlined in the signed MOU	Total Paid Media Impressions, number of visitors to RSEP website
6c.	Maintain and update a storm-water information section on the Town's website	Post information on stormwater to the Town's webpage on a periodic basis, to include NPDES Phase II permit NOI, annual reports and five-year summary	Town staff will make additions to its website and to provide links to other appropriate storm-water websites ----- None	Maintain the stormwater portion of the Town website; the two primary parts of the web site will be: 1) links to other storm-water sites 2) information on Town storm-water programs/issues	Update quarterly

1. Public Education and Outreach

Keys: 1) shaded areas denote shared, contracted or service provided by others in whole or in part

Year and Activity 2013-2018	Actions and Timing	Actions by the Town / Others	Measurable Goals	Values to be Measured	
7. Year Five Only	Prepare and submit a report of actions taken at the end of each permit year and a summary report of all actions at the end of the five-year period	Review records of activities taken during the year and at the end of the five-year permit cycle and submit report to VANR prior to end of permit life	Collect data throughout the permit life documenting the Town's effort and provide to the State ----- ----- As needed from outside sources	Written summary report provided to VANR and EPA prior to the end of the permit period and at the end of each year.	As Applicable

2. Public Participation and Involvement

Keys: 1) shaded areas denote shared, contracted or service provided by others in whole or in part
2) the letter "c" after the item denotes that the action is continuous and not a single event

Year and Activity 2013-2018	Actions and Timing	Actions by the Town / Others	Measurable Goals	Values to be Measured	
1c.	Community participates in Green-up Day in the spring	Ongoing on an annual basis	Town participates in State-wide effort by advertising, organizing local crews and pick-up/disposal of collected debris ----- CSWD and State provide advertising/bags for clean-up; CSWD takes trash at no charge	Town to organize and assist clean-up crews; haul waste to CSWD; Provide for specific stream section clean-ups	Number of participants and amount of waste collected
2c.	Compliance with all State and local public notice requirements	Ongoing; annual reporting of new state stormwater permits issued within Essex	The Town complies routinely with all public notice requirements ----- None	Town to comply with all public notice requirements	As Applicable
3c	Storm drain stenciling project	Utilize students and other groups to maintain markings and marker on catch basins	Town to determine type of marker and to organize and document effort ----- Students and other volunteers to assist	Maintain 100% marking of all catch basins within the Town outside the Village	Number of catch basins marked per year
4	Conduct annual community clean-up; starting with the impaired waterways	Do either in connection with green-up day or as stand alone event	Town to organize and advertise; seek volunteers ----- Possible use of CSWD Community Clean-up fund	Perform annual clean-up in each impaired watershed every year. Perform clean-up on non-	See 1c

2. Public Participation and Involvement

Keys: 1) shaded areas denote shared, contracted or service provided by others in whole or in part

Year and Activity 2013-2018	Actions and Timing	Actions by the Town / Others	Measurable Goals	Values to be Measured	
			and other outside sources of money; seek no cost volunteers	impaired watersheds on an as needed basis but at least once every 2 yrs	
5c.	Participate as a member with other MS4 communities in the Chittenden County Stream Team (CCST)	See agreement between the parties for details -	Pay annual fee of up to \$1800 and provide a member on the Steering committee for overview of participation and involvement program ----- CCRPC and signature parties to the agreement	Maintain membership in the County MOU group and meet the goals outlined in the signed MOU	Number of participants in outreach and hands-on activities
6c	Post the NOI, the annual NPDES Phase 2 reports and the 5 year summary report on the Town Web page; other stormwater information as the Town identifies as appropriate	Periodic update of the stormwater section of the Town web page as the referenced reports are completed and submitted to the ANR	Town staff to update web page	Noted information to be available on the Town web page within 30 days of submittal to the ANR.	As Applicable
7c.	The Town Conservation Committee to continue to serve as a citizen storm-water advisory panel	Conservation Committee to continue providing input on stormwater issues of interest	Town to continue to train/educate and utilize in continuing development of storm-water program ----- Volunteer effort by Committee members; no other outside assistance	Conservation Committee to receive storm-water information updates; to be kept abreast of Town storm-water issues and to help Town administer	As Applicable

2. Public Participation and Involvement

Keys: 1) shaded areas denote shared, contracted or service provided by others in whole or in part

Year and Activity 2013-2018	Actions and Timing	Actions by the Town / Others	Measurable Goals	Values to be Measured	
			needed	and implement the storm-water program	
8. Year Five Only	Prepare summary report of actions taken	Review records of activities taken during the five-year permit and submit report to VANR prior to the end of the permit life	Collect data throughout the permit life documenting the Town' effort and provide to the State ----- As needed from outside sources	Written summary report provided to VANR and EPA prior to the end of the permit period	As Applicable

3. Illicit Discharge Detection and Elimination

Keys: 1) shaded areas denote shared, contracted or service provided by others in whole or in part
 2) the letter "c" after the item denotes that the action is continuous and not a single event

Year and Activity: 2013 - 2018	Actions and Timing	Actions by the Town / Others	Measurable Goals	Values to be Measured	
1c	Update GIS based stormwater map as new information is obtained	GIS-based mapping updated based on new developments, Town projects and continuing investigative results	Town GIS coordinator captures data and updates data base on at least an annual basis ----- CCRPC receives updated map and incorporates into their data base	Map updated each fall/winter as new development occurs or as existing systems are changed	As Applicable
2c	Update permit list	State copies Town on all new storm water permits	Town adds permits to data base ----- State to provide permits to Town	Public Works to maintain data base of existing permits; requires information from VANR on new permits to keep data-base current	As Applicable
3c	Recycling program for household hazardous wastes	System in place through CCSWD	Town is a member of the CCSWD and has made available area at the CCSWD Essex Drop-off site for this activity ----- CCSWD runs program and provides public notification of services provided	Town maintains CSWD membership; CSWD maintains hazardous materials collection point and responsibility: Rover schedule advertised at least annually.	Not measureable for Essex alone

3. Illicit Discharge Detection and Elimination

Keys: 1) shaded areas denote shared, contracted or service provided by others in whole or in part
2) the letter "c" after the item denotes that the action is continuous and not a single event

Year and Activity: 2013 - 2018	Actions and Timing	Actions by the Town / Others	Measurable Goals	Values to be Measured	
4c	Monitoring plan approved which prioritizes municipal storm drain outfalls for investigation of potential pollutant loadings ; also plan addresses detection of non-stormwater discharges to include illegal dumping	Impaired watersheds to have highest priority; visual inspection of each outfall on at least a two year cycle; 100% check during year five of the permit; added water quality testing to be conducted at suspected illicit discharge locations	Town to perform part of investigation ----- VANR input on potential problem locations; contract with environmental consultant if necessary; water quality testing in the form of optical brightener tests and outside lab if necessary	Implementation of monitoring plan; visual inspection of all outfalls on a bi-yearly basis; annual checks of target outfalls with optical brightener and follow-on testing as necessary; problem locations tested as per monitoring plan	Number of outfalls inspected and water quality tests results
5c	Compliance with Town Stormwater ordinance on illicit discharge and connections	Compliance with ordinance and provide for public education effort on ordinance	Town to enforce ordinance -----	Town to enforce provisions of ordinance through periodic inspection and testing as necessary	Number of illicit discharges detected and eliminated
6c	Maintain data base system to capture history of monitoring actions taken	Maintain the monitoring data via the annual NPDES Phase 2 reports	Town to maintain data base ----- Share data with State in annual NPDES permit compliance status reports	Data base maintained	As Applicable
7c	Investigate storm water systems for source control/changes	Investigate storm systems on a priority basis with areas of	Town to conduct or arrange for investigation as needed -----	Investigations made and remedial action taken by the Town as	See 5c

3. Illicit Discharge Detection and Elimination

Keys: 1) shaded areas denote shared, contracted or service provided by others in whole or in part
 2) the letter "c" after the item denotes that the action is continuous and not a single event

Year and Activity: 2013 - 2018	Actions and Timing	Actions by the Town / Others	Measurable Goals	Values to be Measured	
	on systems identified in 4c if monitoring results support the need for added controls	poorest water quality /impaired watersheds first	Outside contract services as needed	necessary from monitoring results	
8 Year Five Only	Prepare summary report of actions taken	Review records of activities taken during the five year permit and submit report to VANR prior to end of permit life	Collect data throughout the permit life documenting the Town's effort and provide to the State ----- As needed from outside sources	Written summary report provided to VANR and EPA prior to the end of the permit period	As Applicable

4. Construction Site Storm Water Runoff Control

Keys: 1) shaded areas denote shared, contracted or service provided by others in whole or in part
 2) the letter "c" after the item denotes an action that is continuous and not a single event

Year and Activity 2013-2018	Actions and Timing	Actions by the Town / Others	Measurable Goals	Values to be Measured	
1c.	Modify existing planning zoning and subdivision regulations, other ordinances, Public Works Specs as necessary to effectively manage construction related erosion and sediment waste	Ongoing modification of existing planning, zoning and subdivision regulations and other ordinances as necessary and complete/adopt revised public Works Specifications	Existing storm water and riparian regulations and stormwater system design and installation requirements to be revised ----- Permits to be issued by the State under new technical standards; Town to be notified of all changes	Town passes modifications to existing Zoning regulations, ordinances and specifications to meet intent of State storm-water standards and local permit requirements	As Applicable
2c.	Inspection by PW of new development including storm water systems and erosion control approved as part of the Town development process	ongoing	Town inspects new development infrastructure during construction and has controls thru the first three years by warranty on new subdivisions ----- Developer required to correct deficiencies within first three years until Town accepts project	Town inspects all new development with respect to storm-water infrastructure and erosion control practices	Number of construction site inspections

4. Construction Site Storm Water Runoff Control

Keys: 1) shaded areas denote shared, contracted or service provided by others in whole or in part
 2) the letter "c" after the item denotes an action that is continuous and not a single event

Year and Activity 2013-2018	Actions and Timing	Actions by the Town / Others	Measurable Goals	Values to be Measured	
3c.	Town construction activity compliance with NPDES (state) permit covering erosion for land disturbances of 1-5 acres and also for those over 5 acres	Town to comply on all municipal projects that meet the threshold criteria on a project by project basis	Town to comply on all municipal projects that meet the threshold criteria on a project by project basis	Town complies with State construction activity permitting on all Town projects	Number of projects disturbing greater than 1 acre of land
4c.	Town to implement procedures identifying construction activities that meet the regulatory thresholds and to report such activities to the State when such activities are not properly permitted or in observed violation of known permits	Town to provide information to the ANR on projects, new or ongoing, that meet the 1 acre land disturbance threshold in the annual NPDES permit report as well as reporting of any observed stormwater permit violations on the projects in excess of 1 acre of disturbed land	Town procedures identified and adopted ----- State to provide to the Town public notices for State storm water permits issued in the community	Submittal of annual NPDES phase 2 report	Number of projects in violation of permits
5c	Enforcement of Erosion Control Ordinance or General Zoning Ordinance for actions not subject to State or Federal requirements	Town to enforce documents	Town to enforce provisions of local ordinance ----- None	Ordinance enforced and situations documented locally as appropriate; any enforcement actions to be noted in the annual report	Number of enforcement actions taken by the Town

4. Construction Site Storm Water Runoff Control

Keys: 1) shaded areas denote shared, contracted or service provided by others in whole or in part
 2) the letter "c" after the item denotes an action that is continuous and not a single event

Year and Activity 2013-2018	Actions and Timing	Actions by the Town / Others	Measurable Goals	Values to be Measured	
6.	Prepare summary report of actions taken	Review records of actions taken during the five year permit and submit report to VANR prior to the end of the permit life	Collect information throughout the permit life documenting the Town's effort and provide to the State. ----- As needed from outside sources	Written summary report provided to VANR and EPA prior to the end of the permit period	As Applicable

5. Post-Construction Storm Water Management / New Development/Redevelopment

Keys: 1) shaded areas denote shared, contracted or service provided by others in whole or in part
2) the letter "c" after the item denotes an action that is continuous and not a single event

Year and Activity 2013-2018	Actions and Timing	Actions by the Town/Others	Measurable Goals	Values to be Measured	
1c.	Compliance by new developments with existing storm water requirements set by the Planning Commission/Zoning Board and covered by the PW specs during the three-year post construction period of the Highway Agreement.	Inspections upon completion of construction and at least prior to the 3 rd year anniversary of the construction; other times as available.	The Town requires the developer to take action to correct existing deficiencies such as erosion of banks, non-functioning pipes. Damaged catch basins using the Letter of Credit as leverage ----- Deficiencies noted by the Town on infrastructure reported to the responsible party; source of revenue exists to enforce compliance during the first three years	Inspections conducted by the Town; certifications provided by engineer of record; records of inspection and letters of credit maintained by the Town	Number of inspections that have resulted in necessary actions to be or have been taken by the developer
2.c	Municipal compliance with State Storm-water Procedures and the Vermont State Storm-water Management Manual	Compliance effective when documents adopted by the State or on a time schedule as set forth in the documents	Town to comply on all municipal projects ----- State to publish requirements and notify Town of all changes	All new municipal projects to be in compliance with State storm-water regulations	As Applicable
3c	Town to report to the State projects that involve one acre or greater of disturbance and/or	The Town will report on an annual basis all development projects	Town Community Development office and Public Works office to	All required information provided in the annual report.	Number of projects that involve one acre or

5. Post-Construction Storm Water Management / New Development/Redevelopment

Keys: 1) shaded areas denote shared, contracted or service provided by others in whole or in part
2) the letter "c" after the item denotes an action that is continuous and not a single event

Year and Activity 2013-2018	Actions and Timing	Actions by the Town/Others	Measurable Goals	Values to be Measured
	creation of ½ acre or more of impervious area, whether or not such projects involve the issuance of a state stormwater permit.	that meet the acre disturbance and impervious area criteria that are either approved by the Town or receive a building permit from the Town for construction	require all new development projects to identify both the amount of impervious area created and the amount of land area disturbed. For projects involving only local stormwater permits, the maintenance of such facilities shall be the responsibility of the applicant unless the Town is the applicant or co-applicant. It is not the responsibility of the Town to maintain or provide maintenance records of locally permitted projects of which the Town is not a party. ----- State to provide to Town all current State Storm-water permits issued in the community	greater of disturbance and/or creation of ½ acre or more of impervious area

5. Post-Construction Storm Water Management / New Development/Redevelopment

Keys: 1) shaded areas denote shared, contracted or service provided by others in whole or in part
2) the letter "c" after the item denotes an action that is continuous and not a single event

Year and Activity 2013-2018	Actions and Timing	Actions by the Town/Others	Measurable Goals	Values to be Measured	
4c	Implementation of the Stormwater Ordinance, Zoning Regulations and Public Works Specifications adopted by the Town with regard to Post Construction stormwater management in new development and redevelopment	Compliance with current regulations through inspections on a periodic basis both during and after development warranty periods	Town to inspect as needed and document results of inspections; enforce compliance with permit and standards requirements if currently in non-compliance	Post compliance inspections meet the requirement of approved permits or Town standards	As Applicable
5c.	Modify existing planning, zoning, and subdivision regulations, other ordinances, Public Works Specs as necessary to effectively manage construction-site runoff	Review regulations and ordinances and complete/adopt revised Public Works Specifications within the 5 year permit period	Existing stormwater and riparian regulations and stormwater system design and installation requirements to be revised	Town passes modifications to existing Zoning regulations, ordinances and specifications to meet intent of State stormwater standards and local permit requirements	As Applicable
6c.	Prepare summary report of actions taken	Review records of actions taken during the five year permit and submit a report to VANR prior to the end of the permit life	Collect information throughout the permit life documenting the Town's effort and provide to the State ----- As needed from outside sources	Written summary report provided to VANR and EPA prior to the end of the permit period.	As Applicable

6. Pollution Prevention/Good Housekeeping for Municipal Operations

Keys: 1) shaded areas denote shared, contracted or service provided by others in whole or in part
2) the letter "c" after the item denotes that the action is continuous and not a single event

**Year and Activity:
2013-2018**

**Actions and
Timing**

**Actions by
the Town /Others**

**Measurable
Goals**

**Values to
be Measured**

1c	Employees to be trained annually on good municipal storm-water practices	Annual training	Town will conduct training or arrange for training through other sources ----- RSEP, VT Local Roads, ANR, AGC or others	Public Works employees to be provided a minimum of 4 hours of storm-water related training every year	Numbers of employees trained on municipal stormwater practices
2c	Maintain spill prevention kit at the highway garage	Check on periodic but not less than annual basis	Town to purchase and maintain materials for spill control at the Highway garage	At least one spill prevention kit maintained in working order at the Highway garage	Date spill kit checked
3c	Municipal recycling of petroleum wastes from internal operations	Ongoing	Town collects all waste petroleum products from its internal operations and recycles through vendors	All petroleum products properly maintained and disposed/recycled	As Applicable
4c	Town participates in Green-Up day to assist in removing debris from parks and selected roads	Annual event	Town picks up debris collected by volunteers and takes the waste products to the CCSWD for disposal ----- CCSWD accepts debris and disposes or recycles	Town to organize and assist clean-up crews; haul waste to CCSWD	Number of participants involved and amount of waste collected

6. Pollution Prevention/Good Housekeeping for Municipal Operations

Keys: 1) shaded areas denote shared, contracted or service provided by others in whole or in part
2) the letter "c" after the item denotes that the action is continuous and not a single event

Year and Activity: 2013-2018	Actions and Timing	Actions by the Town /Others	Measurable Goals	Values to be Measured	
5c	Municipal street sweeping	Paved streets to be swept at least twice per year in the municipality –once in the spring and once in the fall. Periodically as needed during the <i>summer</i>	Town crew to sweep roads or arrange for contract sweeper ----- Shared services with other communities or contract work as <i>necessary</i>	Sweep paved streets at least twice per year; maintain records of sweeping operations	Amount of debris collected from sweeping operations
6c	Catch basin and pipe cleaning	All catch basins within the Town will be inspected at least annually or as required by individual 9010 permits.. Catch basins with more than 50% of the sump filled will be cleaned; pipes will be cleaned as necessary	Town to clean basins or arrange for cleaning by others ----- Use of contract services likely due to shortage of in-house equipment	Inspect all catch basins within the Town to annually and clean catch basins with more than 50% accumulation of debris in the sump; pipes will be cleaned as necessary	Number of catch basins cleaned and inspected; Amount of debris removed from catch basins
7c	Repair and replacement of defective or failed catch basins and pipes	Replacement made as determined necessary	Town inspections to determine need ----- Use of contract services may be necessary	Repair/replacement of defective catch basins to be made as deficiencies are noted	Number of catch basins replaced/repared
8c	Participate in the Municipal Compliance Assistance Program	Periodic participation during the permit life	Town to comply with program for municipal facilities	Town to participate in the Municipal Compliance Assistance program and	As applicable; Town participates in the program

6. Pollution Prevention/Good Housekeeping for Municipal Operations

Keys: 1) shaded areas denote shared, contracted or service provided by others in whole or in part
2) the letter "c" after the item denotes that the action is continuous and not a single event

Year and Activity: 2013-2018	Actions and Timing	Actions by the Town /Others	Measurable Goals	Values to be Measured
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			VANR to conduct program	achieve a satisfactory rating	
9c	Inspection and maintenance of municipal stormwater treatment facilities	Inspection and maintenance on an annual basis or on a more frequent basis if needed	Town staff to inspect and Town crews to maintain Use of contract services may be necessary	Repair/maintenance is conducted as deficiencies are noted	Number of municipal stormwater treatment facilities inspected/repaired
10c	Inspect outfall locations of all municipal outfalls on a minimum two-year cycle and all non-municipal outfalls at least once during the permit cycle	Town staff or contract labor to inspect municipal outfalls and provide list for repair, maintenance or further investigation on an annual basis	Town staff to inspect and Town crews to fix ----- Contract inspectors and construction contractors may be used to augment Town forces	Town outfalls that are found to be deficient are fixed on a routine basis and kept in working condition; erosion at the outfall to be controlled through continuing maintenance program	Number of outfalls inspected and repaired
11c	Annual Approval and overall compliance with a Winter Maintenance Operations Plan	Public Works Staff prepares and operates procedurally in accord with the document; Selectboard approves after public input in late fall every year	Public Works Staff prepares and operates procedurally in accord with the document; Selectboard approves after public input in late fall	Operate the winter operations in accord with the adopted Winter Operations Plan which also acts to reduce the impact of winter operations on the environment	Amount of salt and sand used during winter season
12	Provide summary report of actions	Review records of actions taken during the five-year permit	Collect information throughout the permit life documenting the	Written Summary Report provided to VANR and EPA prior to the end of	As Applicable

6. Pollution Prevention/Good Housekeeping for Municipal Operations

Keys: 1) shaded areas denote shared, contracted or service provided by others in whole or in part
2) the letter "c" after the item denotes that the action is continuous and not a single event

Year and Activity:
2013-2018

**Actions and
Timing**

**Actions by
the Town /Others**

**Measurable
Goals**

**Values to
be Measured**

		and submit a report to VANR prior to the end of the permit life	Town's effort and provide to the State ----- As needed from outside sources	the permit period	
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