

# Town of Colchester



## Permit Application for:

**General Permit 3-9014  
National Pollutant Discharge Elimination System (NPDES)  
Number: VTR040000**

**For:  
Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4's)**

*Submitted to:*

**Vermont Agency of Natural Resources  
Department of Environmental Conservation  
Watershed Management Division  
1 National Life Drive, Main 2  
Montpelier, Vermont 05620-3522**

*Submitted by:*

**Town of Colchester  
P.O. Box 55, 781 Blakely Road  
Colchester, Vermont 05446**

*Date Submitted:*

**May 24, 2013**



**Select Board**

Nadine Scibek  
Marc Landry  
Herb Downing  
Kathrine Niquette  
Tom Mulcahy

**Director**

Bryan K. Osborne  
(802) 264-5625

**Assistant Director**

Warner Rackley  
(802) 264-5635

**Operations Manager**

Floyd Sheesley  
(802) 264-5621

**Project Manager**

Kevin McAleer  
(802) 264-5639

**Administrative Coordinator**

Anja Twite  
(802) 264-5620

**Fax Number**

(802) 264-5503

May 24, 2013

Christy Witters  
Vt. Department of Environmental Conservation  
Watershed Management Division  
1 National Life Drive, Main 2  
Montpelier, Vermont 05620-3522

Dear Ms. Witters:

Attached is the Town of Colchester's 2013 permit application for General Permit 3-9014 National Pollutant Discharge Elimination System (NPDES) Number VTR040000. Included in the application are our completed Notice of Intent, our Storm Water Management Plan, and the permit application fee. Please give me a call at 264-5625 if you require any additional information or have any questions.

Sincerely,

  
Bryan K. Osborne  
Director of Public Works

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**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 Colchester  
 Name of Principle Executive Officer (PEO) or Chief Elected Official (CEO): Dawn Francis Title: Town Manager  
 Mailing Address: 781 Blakely Road, Po. Box 55  
 Street/P.O. Box: 781 Blakely Road, Po. Box 55  
 City/Town: Colchester State: VT Zip: 05446  
 Phone: 802-264-5501 Email: dfrancis@colchestervt.gov

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

Name: BRYAN K. Osborne  
 Mailing Address: 781 Blakely Road, PO Box 55  
 Street/P.O. Box: 781 Blakely Road, PO Box 55  
 City/Town: Colchester State: VT Zip: 05446  
 Phone: 802-264-5625 Email: bosborne@colchestervt.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  
 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: MCM1  
 Mailing Address: 110 West Canal St. Suite 202  
 Street/P.O. Box: 110 West Canal St. Suite 202  
 City/Town: Winooski State: VT Zip: 05404  
 Phone: 802-846-4490 x.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: 13

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

Receiving water	# of outfalls	Impaired status	Nature of impairment
Sunderland	42	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	stormwater
Indian Brook	4	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Pond Brook	3	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Gilbrook	3	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Morehouse	2	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	stormwater
Smith Brook	6	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Winooski River	15	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Winooski River Tribs.	3	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Lake Champlain	2	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Malletts Bay	15	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Malletts Bay Tribs.	5	<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: Chawn H. Francis Title: Town Manager

Signature: Chawn H. Francis Date: 5/28/2013

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/hwm/sw\\_ms4.htm](http://www.vtwaterquality.org/stormwater/hwm/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](http://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](http://www.vtwaterquality.org).

# Storm Water Management Program

The following represents the Town of Colchester's Storm Water Management Program, (SWMP) as required by the State of Vermont, Agency of Natural Resources, Department of Environmental Conservation, National Pollutant Discharge Elimination System, (NPDES), General Permit 3-9014 (2012) for Storm Water discharges from Small Municipal Separate Storm Sewer Systems. The SWMP contains measurable goals for the development and implementation of the six minimum measures described in Subparts IV.F and G of the permit, and additional measures necessary to protect water quality described in Part IV of the permit.

## **WATER QUALITY BASED REQUIREMENTS**

Pursuant to Clean Water Act 402(p)(3)(B)(iii), the permit includes provisions which require the permittee to reduce the discharge of pollutants to the maximum extent practicable, protect water quality, and to satisfy the Clean Water Act.

## **REQUIREMENTS TO MEET WATER QUALITY STANDARDS**

Discharges shall not cause or contribute to an exceedance of applicable water quality standards for the receiving water. Applicable water quality standards are the Vermont Water Quality Standards that are in place upon the effective date of the permit.

Except for discharges addressed by part IV.C.1 of the permit, if at any time the Town becomes aware that a discharge causes or contributes to an exceedance of applicable water quality standards, the Town shall within 60 days of becoming aware of the situation eliminate the conditions causing or contributing to the exceedance of water quality standards. If elimination within 60 days is infeasible the Town shall document in its SWMP measures and anticipated timeframes to eliminate the conditions causing or contributing to the exceedance. Within 30 days of eliminating the condition, the Town shall document the measures used to correct the condition in the SWMP. The Town shall include in its annual report a description of any such discharges identified during the reporting period; a description of measures taken to eliminate conditions during the reporting period or the basis of a finding that elimination is infeasible; and a timeframe for completion of all steps necessary to eliminate such discharges. The Town shall comply with any additional requirements or schedules established by the Secretary, including any requirements to submit additional information concerning the potential cause of the exceedance.

## **DISCHARGES TO IMPAIRED WATERS**

The Vermont Agency of Natural Resources has identified both the Morehouse and Sunderland Watersheds as being impaired by storm water. The Town of Colchester intends to achieve compliance through the implementation of the Storm Water Management Plan, (SWMP) contained on the following pages, to include specific actions outlined within the six minimum control measures.

The Vermont Agency of Natural Resources considers several of the unnamed tributaries into Malletts Bay, as well as Smith Hollow Brook and Crooked Creek to be impaired by e-coli based upon the Town's past monitoring efforts. To minimize this pollutant, the Town's SWMP contains several strategies aimed at controlling e-coli contamination. These strategies include controlling sediment through the implementation of Construction Site Storm Water Runoff Controls, and Post-Construction Storm Water Management in New Development and Redevelopment. The plan also works toward the control of illicit discharges through the implementation of the Town's Illicit Discharge Detection and Elimination Program. The Town also intends to continue existing programs associated with animal control to facilitate the removal of dead animals from the roadway system, and, programs to minimize dog waste in Town parks and along multi-use paths. The Town will also continue its Water Quality Monitoring Program which has been in existence now for almost two decades, to continue improving the Town's understanding of e-coli contamination in Malletts Bay. These efforts have been supplemented by a Microbial Source Tracking Program completed as part of the Town's Integrated Water Resources Management Plan.

## **DISCHARGES TO IMPAIRED WATERS WITH AN APPROVED TMDL**

*Flow Restoration Plans* - The Town shall develop and submit a comprehensive Flow Restoration Plan (FRP) for the impaired portions of the Sunderland and Morehouse Brook watersheds within the Town's boundaries. It is the Town's intention to partner with the Town and Village of Essex for the Sunderland Brook Watershed, and the City of Winooski for the Morehouse Brook Watershed. The Town shall submit the FRP's to the Secretary no later than three years after the date of issuance of an authorization to discharge to the Town under this permit. The FRP shall contain the following;

- An identification of the suite of necessary storm water BMP's that will be used to achieve the flow restoration targets.
- A design and construction schedule for the storm water BMP's that has been identified as necessary to achieve the flow restoration targets.
- A financing plan that estimates the cost of implementing the FRP.

- A regulatory analysis that identifies and describes what, if any, additional regulatory authorities will be needed to implement the FRP.
- An identification of regulatory assistance that will be needed to implement the FRP.
- An identification of any third party that is responsible for implementation of the FRP.

Plan to Address Expired Permits – Within six months following the date of issuance of an authorization to discharge, the Town shall submit a plan for addressing expired state permits discharging to the MS4 system to ensure that all permitted facilities demonstrate compliance with the existing expired permit.

Landowner Technical Assistance – Two years after the issuance of an authorization, the Town shall develop a program to identify opportunities for and provide technical assistance to landowners in the implementation by landowners of low impact BMP's. Working through the Town's Conservation Commission, a Do-It-Yourself Rain Barrel Workshop was conducted in April of 2012. In addition to building their own rain barrels for home use, the 19 participants received information on how rain barrels help conserve water, save money and protect waterways. The materials, including the rain barrels were purchased and delivered to the site by the Public Works Department, where the Town's Conservation Commission conducts the necessary training and guidance. Similar efforts are currently taking place in 2013 and the Public Works Department expects to continue this partnership with the Conservation Commission to provide landowners with technical assistance for low impact BMP's.

Protection and Regulation of Development in Stream Corridors – The Town has previously developed and submitted a plan to the VANR outlining options for enhanced protection of stream corridors of storm water impaired waters. The plan includes 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, (updated for this application), a Stream Corridor Buffer Ordinance and other applicable Zoning Regulations, and the development and adoption of Storm Water Control Ordinances. The preparation of the plan was developed after review of the riparian buffer and stream fluvial geomorphological information provided by the VANR as a result of the Agency's preparation of TMDL's as set forth in 10 V.S.A § 1264 (f)(3).

Flow and Precipitation Monitoring Program – The Town shall implement or otherwise fund a flow and precipitation monitoring program, subject to approval by the Secretary, within its watersheds impaired by storm water.

Six Minimum Control Measures – The Town has developed a SWMP which contains the required Six Minimum Control Measures to reduce pollutants to the Maximum Extent Practical.

## **DISCHARGES TO IMPAIRED WATERS WITHOUT AN APPROVED TMDL**

Erosion Controls - Within the Town's SWMP, erosion controls have been adopted. Past efforts have included the design and construction of a storm water outfall treatment structure which collects sediment before storm water is discharged to Malletts Bay, two large river bank stabilization projects on the lower Winooski River located at the Heineberg Access off Heineberg Drive, and along River Road in Colchester, and eight storm water outfall upgrade projects located in the Indian Brook, Colchester Pond Brook, Winooski River, Inner Malletts Bay and Sunderland Watersheds. In 2009, a large storm water outfall project was constructed in Fort Ethan Allen within the Sunderland Watershed.

Gravel Road Maintenance - Although Colchester's limited gravel road system represents only about 25% of the state average, the Town has taken several steps to minimize the runoff from this portion of the transportation system. The Town has developed an alternative methodology to perform Traffic and Engineering studies on gravel roads for the establishment of speed limits. This allows the Town to post speed limits that do not exceed 35 mph along gravel roads, which in turn, significantly reduces the degradation of the gravel surface. Our equipment operators continue to receive regular training on the proper grading of gravel roads which allows less gravel to be applied to the roadways, and minimizes the amount of gravel that enters roadside ditches. The technical specifications of the Town's equipment have been revised to facilitate these proper grading procedures. The Town has also completed several erosion control projects along gravel roads to reinforce roadside ditches to minimize erosion of the ditch lines and the edge of the roadways during periods of high runoff. As a part of new development, the Town's design review process includes assessing the adequacy of storm water culverts, both public and private to avoid flood damage due to high runoff. The Town also cleans roadside ditches of debris and buildup on an as needed basis to ensure that blockages do not result in washouts within the drainage system. Finally, the Town's gravel road system serves primarily agricultural areas, where the Town has taken deliberate steps to preserve this land use, which generally prevents high density development within these areas.

Riparian Buffers - Several years ago, the Town of Colchester developed and adopted a stream bank protection ordinance. Generally, the ordinance does not allow development within 85 feet of major streams and tributaries throughout the community. Supplemental information for this ordinance has been developed and submitted to the ANR. The Town has also developed a Street Tree Master Plan which is aimed at re-establishing the community's urban forest. All new development in Colchester is required to submit for review and approval, a vegetation and landscape plan.

Impervious Surface Minimization - The Town has adopted revisions to its Technical Roadway Standards. The revised standards allow for most roadways to be constructed at a narrower width, and as well, allow increased options for open drainage systems to promote pre-treatment of storm water runoff. New standards have been developed to support High Density Mixed-Use Development, which requires that pedestrian areas contain a minimum of 25% green space. The Town has also revised its Zoning Regulations reducing the allowable impervious surfaces in front yards from 50% to 30%.

Six Minimum Control Measures – The Town has developed a SWMP which contains the required Six Minimum Control Measures to reduce pollutants to the Maximum Extent Practical.

## MINIMUM CONTROL MEASURES

### Public Education and Outreach on Storm Water Impacts

BMP 1-1 Maintain Storm Water Web Site - The Town of Colchester has developed a storm water website which contains local storm water information. The Department's site will be updated as needed to include general, as well as locally relevant information relating to storm water and water quality. The Town's web site is located at [www.colchestervt.gov](http://www.colchestervt.gov).

BMP 1-2,3,4 Participate in RSEP - The Town of Colchester will continue to participate in the regional storm water education and outreach strategy described in the 2013 Memorandum of Understanding between designated MS4's, and the Chittenden County Regional Planning Commission. A copy of this MOU associated with this regional initiative is contained within the appendix of this application.

### Public Involvement and Participation

BMP 2-4 Catch Basin Stenciling - The Town has formed a partnership with both the Boy Scouts and Cub Scouts in Colchester. Building on the Boy Scouts of America, "Leave No Trace" program, the partnership intends to work toward annual stenciling of the Town's storm water basins as part of their regular and ongoing curriculum. While stenciling is being done in each neighborhood, other scouts focus on distributing educational materials regarding their efforts as well as other storm water related issues. These materials also serve to direct citizens to the

RSEP web site for further information. The Town provides all materials including program training for the scouts. Training materials have included products from RSEP as well as a stenciling training video developed by the Colchester Public Works Department. This video may be viewed on the storm water page of the department's web site. Select; "Education" and then; "Catch Basin Stenciling". The goal is to develop a long-term relationship of public involvement and participation, and more importantly, involve younger citizens to more effectively create an improved and sustainable understanding of storm water related issues within our community. During the summer of 2012, the Scouts stenciled a total of 243 catch basins throughout the community, which represents approximately 13% of the total structures.

BMP 2-5 Community Stream Corridor Cleanup – As a part of the Town's Green Up Day activities, the Town works with its Conservation Commission to specifically target its cleanup efforts toward high priority areas. These high priority areas include a total of 25 significant stream crossings of the Town's transportation system. The Town intends to continue supporting and coordinating these significant public involvement initiatives.

BMP 2-6 Storm Water Watch Groups – The Town has previously identified and mapped all eleven sub-watersheds within Colchester. This past summer, the services of three additional community volunteers were secured to serve on our watershed watch groups. This brings the total number of volunteers serving in this capacity to fifteen. The volunteers live in a total of eleven different sub-watersheds, resulting in 100% coverage. Initial educational materials were provided to each of the volunteers to help them understand the types of conditions that can contribute to water quality problems. Information is periodically sent to them on an as needed basis. Future efforts will include the continuing support of this citizen network.

### **Rationale**

The Best Management Practices, (BMP's) identified under this minimum control measure are aimed primarily at improving total species numbers and species density in receiving waters through the reduction of toxins in storm water runoff.

Other alternative BMP's that were considered, yet not adopted under this minimum control measure include a citizen storm water advisory panel, a water quality monitoring program involving citizen volunteers, an on-going public workshop series on storm water awareness, and an "adopt a stream" program. It is anticipated that the selected BMP's will involve a larger percentage of the public than a Citizen Water Advisory Panel. Although the Town does have a long standing water quality monitoring program, it would likely be difficult to locate available volunteers considering the scheduling requirements of such a program. On-going public

workshops would not likely attract significant numbers of residents, or a diverse audience. An “adopt a stream” program presents too many organizational and logistical challenges whereby simpler BMP’s would be equally as effective.

The BMP’s for this measure are designed to reach and involve a diverse cross section of the community’s residents. Included are young children as well as adults, home owners, business owners and professionals.

Implementation of the selected BMP’s will require a behavioral change within the community which could be characterized by an improved level of awareness of what storm water pollution is, and how it occurs. It will also require an increased desire by citizens to become actively involved in the solution of storm water pollution.

The expected water quality outcomes under this minimum control measure are improvements in total species numbers and species density within receiving waters through the reduction of toxins in storm water runoff.

### **Illicit Discharge Detection and Elimination**

BMP 3-1 *Develop and enforce a program to detect and eliminate illicit discharges* – The Town has previously developed a program to detect and eliminate illicit discharges. The program elements include the development and maintenance of a GIS map of the storm sewer system, the development of an illicit discharge ordinance, an illicit discharge detection plan, a public informational component, a mechanism to address specific categories of illicit discharges if necessary, and an annual reporting process.

BMP 3-2 *Develop and maintain a storm sewer GIS or AutoCAD map* – This activity will be an ongoing process for the Town as additional development and associated storm water infrastructure is added. To maintain this data base, a three tiered approach has been developed to document 1) existing storm water infrastructure, 2) additional storm water infrastructure added through the Town’s maintenance efforts and/or capital improvement projects, and 3) additional storm water infrastructure associated with new development.

**Existing Storm Water Infrastructure** - The Town has been the recipient of a \$1.5 million EPA Demonstration Grant. One of the many activities contained within the scope of work is a comprehensive update of the Town’s storm water system mapping. This work is now completed and can be viewed on the Town’s project website at [www.colchesterwaters.net](http://www.colchesterwaters.net). colchestervt.gov

**Future Town Installed Storm Water Infrastructure** – As a part of the previously listed EPA Demonstration Grant, the Department of Public Works has purchased a GIS based Asset Management Program including GPS data collection equipment. This will allow the Town to electronically update its infrastructure mapping as new infrastructure is installed or altered.

**Future Developer Installed Storm Water Infrastructure** - The Town has approved amendments to its sub-division regulations to require that developers provide the Town with as-built information associated with new development, in digital form.

BMP 3-3 *Develop and implement an Illicit Discharge Ordinance* – The Town has developed and implemented an Illicit Discharge Ordinance. The ordinance regulates the contribution of pollutants to the MS4 from storm water discharges by any user, prohibits illicit connections and discharges to the MS4, and establishes legal authority to carry out the IDDE Plan, including conducting inspections, monitoring, and enforcement procedures to ensure compliance with the ordinance. The ordinance was adopted by the Colchester Select Board on July 26, 2005.

BMP 3-4 *Develop and implement an illicit discharge detection plan, focus on impaired waters and random dumping* – The Town developed a IDDE Plan in 2008 containing the following sections;

- Sec. 1.0 Introduction
- Sec. 2.0 Illicit Discharges Defined
- Sec. 3.0 Additional Exemptions
- Sec. 4.0 Illicit Discharge Ordinance
- Sec. 5.0 Development of Storm Sewer Map
- Sec. 6.0 Locating Priority Areas
- Sec. 7.0 Tracing the Source of an Illicit Discharge
- Sec. 8.0 Removing the source of an Illicit Discharge
- Sec. 9.0 Evaluation of the IDDE Program
- Sec. 10.0 Outreach to Employees, Businesses, and the General Public
- Sec. 11.0 BMP's and Measurable Goals

BMP 3-5 *Inform public of illicit discharge and disposal hazards* – Section 10.0 of the Town's IDDE plan outlines the Town's efforts to address this requirement. On an annual basis, the Town's maintenance employees receive training relating to Pollution Prevention/Good Housekeeping for Municipal Operations as part of the Town's Phase II plan. The Department of Public Works has developed an informational brochure designed for local businesses to improve their understanding of illicit discharges. The Public Works Department has partnered

with the Boy Scouts on an annual storm water stenciling program. The Town is a member of RSEP, which provides informational campaigns targeted at the general public covering a wide variety of storm water issues. The Town maintains its own storm water web site providing additional storm water education materials to the community. The Town has also created a citizen storm water watch group in several watersheds throughout the community.

BMP 3-6 Address specific categories of Illicit Discharges, if necessary – The Town has not found the list of non-storm water discharges contained in the permit to be a significant contributor of pollutants to the MS4, and therefore have not addressed these categories within the IDDE plan.

BMP 3-7 Prepare annual report of monitoring and corrective actions taken - The Town has established files to maintain all documents relating to the management of illicit discharges. A complaint system has also been established to receive citizen complaints through a storm water hotline. The hotline is posted on the Town's web site. Annual monitoring of pre-selected outfalls as outlined in the Town's IDDE plan are performed and reported in the Town's annual report to the DEC. When illicit discharges are detected through this program, or come to be known by the Town through other means, the Town takes the appropriate steps to address them under the authority of local ordinances.

### **Rationale**

The BMP's identified under this minimum control measure are aimed primarily at improving total species numbers and species density in receiving waters through the reduction of toxins in storm water runoff.

There were no major alternative BMP's examined under this minimum control measure.

The implementation of this measure will require the support of both the community and its legislative body to support the enforcement of a local ordinance to regulate and prohibit illicit discharges.

The expected water quality outcomes under this minimum control measure are improvements in total species numbers and species density within receiving waters through the reduction of toxins in storm water runoff.

## Construction Site Storm Water Runoff Control

- BMP 4-1 Develop and implement procedures to ensure MS4 construction activities are properly permitted. - The Town will continue to perform plan review of all projects involving land disturbance as a part of the site plan review process and the issuance of building permits. All land disturbances will require a permit from the Town. All permits issued from the Planning and Zoning Office are evaluated by staff, either as an Administrative Review, or through the Town's Development Review Process. Through the permit application process, a determination will be made by the Planning and Zoning Office regarding the total area of land disturbance. This office will determine whether the one-acre and five-acre state regulatory thresholds are met, and report such activities to the Secretary of the Agency of Natural Resources to assure all such projects are properly permitted.
- BMP 4-2 Review existing MS4 regulations for effectiveness in managing construction related E & S and consistency with state construction permits - The Town relies upon the technical specifications within the Public Works Ordinance and the Town's Storm Water Ordinance as the mechanism to require erosion and sediment controls at construction sites. The language within these documents works to ensure effectiveness in managing construction related erosion and sediment and other wastes generated from construction activities that may cause adverse impacts to water quality. These documents also ensure consistency with the requirements of the Secretary's general permits for storm water runoff from large and small construction sites. The erosion control requirements within these documents apply to all land disturbances requiring a permit as required in the Town's Zoning Regulations. Currently, all land disturbances require a permit. Inspection responsibilities for all such permits issued are assigned to the Town's inspectors. Any local violations would be noticed by the inspectors, with enforcement action, if necessary, taken by the Town of Colchester based upon the construction site erosion control requirements within the Town's Public Works and Storm Water Ordinances. The Town will endeavor to inspect all construction sites as often as possible, with emphasis on larger projects, and those projects that are located in areas where run off to receiving waters is more likely. Inspections will also be targeted at phases of the construction that may be more susceptible to problems relating to construction site run off. During regular inspections, Town inspectors will inspect for obvious signs of non-compliance such as eroding soils and turbid waters on state permitted projects. Town inspectors will report any suspected violations on these projects to the Vermont Agency of Natural Resources.

- BMP 4-2a Adopt E & S requirements that are at least as stringent as state requirements – The Town has developed a storm water ordinance which contains a section on construction erosion control requirements that is at least as stringent as state requirements.
- BMP 4-3 Develop and implement an erosion control ordinance that regulates development not subject to state permitting – The Town has developed a storm water ordinance which contains a section on construction erosion control requirements that effectively regulates development activities that are not subject to state or federal erosion control requirements.

### **Rationale**

The BMP's identified under this minimum control measure are aimed primarily at improving the nutrient index within receiving waters by reducing the discharge of phosphorous and nitrogen, improving clean water species counts by reducing storm water runoff volume during construction before storm water controls are completed, and improving total number of species and species density by reducing the discharge of sediment and toxins that are generated by construction activities.

There were no major alternative BMP's under this minimum control measure.

The implementation of this measure will require the support of both the community and its legislative body to support the enforcement of local ordinances to regulate run off from construction sites.

The expected water quality outcomes under this minimum control measure are improvements in the nutrient index, clean water species, total species numbers, and species density within receiving waters through the reduction of phosphorus, nitrogen, sediment and toxins in storm water runoff.

### **Post-Construction Storm Water Management in New Development and Redevelopment.**

- BMP 5-1 Review existing MS4 regulations for effectiveness in managing storm water runoff and consistency with state operational permits - The Town performs plan review of all projects involving land disturbance as a part of the site plan review process and the issuance of building permits. All permit conditions associated with projects involving land disturbance are included in the approved Findings of Fact and Order approved by the Development Review Board. This document becomes the instrument for enforcing the Board's approval.

The Town relies upon the technical specifications within the Public Works Ordinances and the Town's Storm Water Ordinances as the mechanism to address post-construction runoff from new development and redevelopment that result in a land disturbance of greater than one acre and that have less than one acre of impervious surface. The Ordinances contain a combination of structural and non-structural BMP's which are appropriate for the community and consistent with the Agency's 2002 Vermont State Storm Water Management Manual (and any amendments thereto). Additionally, the Ordinances ensure consistency with the requirements of the Secretary's general permits regulating storm water runoff from new development and redevelopment projects that have one or more acres of impervious surface. These post-construction storm water controls and requirements apply to all land disturbances requiring a permit as required in the Town's Zoning Regulations.

- BMP 5-1a Assess changes to regulations to support LID – The Town has taken several steps in support of Low Impact Development. These include the design of parking lots, roadways, the development of stream bank buffer ordinances, homeowner educational efforts through RSEP, as well as offering and/or coordinating public workshops associated with the use and construction of rain barrels, rain gardens and other LID strategies. The Town will continue to assess other opportunities to promote Low Impact Development.
- BMP 5-1b Assess changes to regulations to minimize impervious surfaces through street & parking design – The Town has made significant revisions to its technical specifications for public infrastructure allowing significantly reduced roadway widths for smaller scale development, as well as allowing the option of open drainage plans to promote improved treatment of storm water runoff. Within the Town's Zoning Regulations, the Town requires the design and construction of parking areas to promote storm water management through the use of trees, vegetation and storm water filtration areas all intended to reduce the amount of impervious services and improve overall storm water treatment. The Town will continue to assess other improvements to these and other regulations to determine whether additional improvements can be made.
- BMP 5-1c Adopt requirements that are at least as stringent as state requirements – Through the Town's Public Infrastructure Ordinances, Storm Water Ordinances, Sub-division Regulations and Zoning Ordinances, the Town's requirements related to Post Construction Runoff Control are at least as stringent as state requirements.

BMP 5-2 Develop and implement procedures to identify development – The Town’s Zoning Regulations require all ground disturbing activities to obtain a permit. Through the review of permit applications, the Planning and Zoning Office identifies and records the area of land disturbance and impervious surfaces for all projects requiring local permits. This information is reported to the State each year as a part of the MS4 Annual Report.

BMP 5-3 Develop and implement an ordinance that regulates development – The Town has developed a storm water ordinance that regulates post construction runoff controls for new development or redevelopment projects that disturb greater than or equal to one acre that are part of a larger common plan of development or sale and may not be subject to regulation under the Agency’s post-construction storm water management permit program.

BMP 5-4 Develop and implement inspection procedures for development - The Town utilizes multiple mechanisms to accomplish reasonable and effective site inspection and enforcement of control measures for projects falling under both local and state jurisdiction. These include the following:

- The Town’s full time Building Inspector position spends the majority of its time in the field inspecting new construction or re-construction in progress. Traveling to inspections throughout all areas of the community allows this position to make observations of storm water problems throughout the community.
- The Town’s full time Life Safety Inspector position also spends the majority of its time in the field. This position performs several functions that result in extensive travel and observation throughout the community. These duties include post construction inspection of all new development or re-development to ensure compliance to all applicable fire codes, annual health and safety inspections of all rental housing units, and regular inspection of all on-site wastewater systems.
- The Town’s Highway Division spends virtually all of its time on the Town’s transportation system traveling throughout the community, which involves in many cases, performing maintenance on the public storm water system.
- As a part of this SWMP, the Town has organized Storm Water Watch Groups that provide the opportunity for substantial observation and feedback regarding storm water controls throughout the community.

- Also as a part of this SWMP, the Town has implemented a regular inspection program for storm water outfalls throughout the MS4 designated area. Considering that ultimately all storm water drains to these outfalls, this creates the opportunity to identify up stream storm water control problems that can be traced, identified and addressed appropriately.

In each case, these activities provide multiple opportunities for the Town to observe and react to storm water control problems for both new development and re-development, and report the observations to the appropriate jurisdiction.

BMP 5-5 *Develop and implement procedures to ensure MS4 development activities are properly permitted.* - The Town will continue to perform plan review of all projects involving land disturbance as a part of the site plan review process and the issuance of building permits. All land disturbances will require a permit from the Town. All permits issued from the Planning and Zoning Office are evaluated by staff, either as an Administrative Review, or through the Town's Development Review Process. Through the permit application process, a determination will be made by the Planning and Zoning Office regarding the total area of land disturbance. This office will determine whether the one-acre and five-acre state regulatory thresholds are met, and report such activities to the Secretary of the Agency of Natural Resources to assure all such projects are properly permitted.

### **Rationale**

The BMP's identified under this minimum control measure are aimed primarily at improving clean water species counts by reducing or attenuating storm water runoff volume and by reducing the effects of storm water scouring and flooding.

There were no major alternative BMP's under this minimum control measure.

The implementation of this measure will require the support of both the community and its legislative body to support the enforcement of local ordinances to regulate post-construction storm water runoff.

The expected water quality outcomes under this minimum control measure are improvements to the clean water species by reducing or attenuating storm water runoff volume and by reducing the effects of storm water scouring and flooding.

The regulatory mechanisms used by the Town to address post-construction runoff from new development and re-development include the Public Works Specification and Standards, the Colchester Storm Water Ordinance, the Town's Sub-Division Regulations and the Town's Zoning Regulations. These mechanisms were selected as the most effective approach to managing post construction runoff.

All land disturbances require a permit from the Town. Through the issuance of a permit, the appropriate conditions are attached to the permit, that require the post-development landowner to perform the proper long-term operation and maintenance of the BMP's required through the review and approval process that are not taken under public ownership.

The Town has developed and will continue to use local Zoning Regulations to provide the legal authorities and strategies to protect and regulate development in the stream corridors of storm water impaired waters as defined by 10 V.S.A § 1264 (a)(13).

The Town has developed and submitted a plan to the VANR outlining options for enhanced protection of stream corridors of storm water impaired waters. The plan includes 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. The preparation of the plan was developing after review of riparian buffer and stream fluvial geomorphological information provided by the VANR as a result of the Agency's preparation of TMDL's as set forth in 10V.S.A § 1264 (f)(3).

For those areas of stream corridors that have been developed or otherwise converted to impervious surfaces, the plan for enhanced protection of stream corridors of storm water impaired waters identifies options for stream corridor restoration as outlined.

The Town of Colchester, through both its Public Works Department and Planning and Zoning Department are responsible for the overall management and implementation of the post-construction storm water management program. The Directors from these departments have the primary responsibilities, with specific tasks delegated to the Public Works Operations Manager, Town Engineer, Town's inspectors, and citizen storm water watch groups.

The success of this minimum measure will be evaluated through developing and achieving measurable goals. The selection of measurable goals has been completed in a manner that allows the Town to gauge program effectiveness. Additionally, the measurable goals have been based upon the needs and characteristics of the Town and the area served. Finally, they have been selected to ensure an integrated approach that fully addresses the requirements and intent of this minimum control measure.

## Pollution Prevention/ Good Housekeeping for Municipal Operations

BMP 6-1 Describe operation and maintenance program for reducing pollutant runoff from MS4 operations. – The Town of Colchester has four municipal functions that are impacted by our operation and maintenance program. These include the following:

### **Highway Maintenance:**

*Snow Removal Activities:* - The Town’s snow and ice removal procedures are designed to minimize the use of de-icers and abrasives that may ultimately enter receiving waters. Colchester does not have a “bare roads” policy. The application of de-icers is limited to specific phases of storms and types of weather conditions. During snow events, de-icers are applied when precipitation is beginning to prevent compaction and bonding of snow to the roadway. Under ordinary circumstances, de-icers will not be applied again until the storm has ended to restore the paved surface. To avoid excessive use of de-icers, these materials are not applied at temperatures below their optimal effectiveness range. During freezing rain, or ice storms, de-icers are applied as needed throughout the entire storm event.

The use of abrasives is limited to non-paved roads in rural sections of the community, and paved roads when temperatures are too low for de-icers. The application of abrasives on paved roads is typically limited to critical areas such as steep grades, sharp corners and roadway intersections.

All primary snow removal equipment operated by the Town is equipped with on-board computers that control and regulate the application rates of materials. The Town operates no snow storage areas.

De-icers are stored in an enclosed facility. Abrasives are stored in an open pile on the ground at the Public Works Maintenance Facility. Minimal amounts of de-icers are added to the stock pile to prevent freezing. A silt fence is erected and maintained around the stock pile and an earthen berm and vegetative buffer strip has been constructed at the downstream end of the site.

*Street Sweeping* – The Town owns its own street sweeper. The equipment removes debris from the roadways by vacuum which reduces airborne dust. Town roads are cleaned both in the spring and fall of the year.

*Basin Cleaning* – Storm water basins are currently cleaned on an as needed basis. Emphasis is placed on storm water basins located on steep grades, and structures located near outfalls to receiving waters. Basins are inspected during cleaning.

*Storm Water Outfalls* – The Town has inventoried, assessed and mapped all of its storm water outfall structures. These structures have been placed on a regular inspection schedule as outlined in the Town’s Storm Water Outfall Assessment Program. Inspection forms are used to record any damage or signs of failure. Observations of flow characteristics are also recorded.

*Drainage Ways* – Roadside ditches and drainage ways are inspected routinely during other highway maintenance operations such as street sweeping, grading of gravel roads and roadside mowing. Solid wastes are removed from these drainage ways annually as a part of the Town’s Green-up day activities. Roadside mowing is completed 3-4 times per year, or as needed, to keep the drainage ways clear. Regrading of drainage ways is only done on an as-needed basis to minimize any unnecessary soil disturbance.

*Dust Control* – Dust control material for gravel roads is limited to one application per year. Diluted liquid chloride is used for dust control. Applications are carefully applied to avoid any overspray into roadside drainage ways. The application of dust control material is coordinated with weather conditions to avoid excessive runoff into drainage ways.

*Material Storage* – Construction materials are stored within the Public Works Maintenance Facility yard. An earthen berm and vegetative buffer strip has been constructed at the lower end of the site to prevent any runoff or discharge of sediment from the site.

### **Buildings and Grounds Maintenance:**

*Sanitary Facilities and Wastes* – All Town facilities and primary parks are equipped with bathroom facilities. All facilities are served by on-site wastewater systems, which are pumped and inspected every two to three years depending on the facility and size of tank.

*Solid Wastes* – All solid wastes from Town facilities are removed regularly on a contractual basis. Solid wastes from park lands are collected daily by Town maintenance crews. All solid wastes are properly disposed of in approved landfills.

*Storm Water Runoff* – Most Town facilities are located on relatively flat ground where no concentrated discharge occurs. On facilities that have concentrated discharges, a mixture of BMP’s including grass lined swales, storm water ponds,

storm water control berms and vegetative buffer strips are used. These controls are monitored regularly during grounds maintenance operations.

*Fertilization* – All types and quantities of fertilizers applied to Town owned grounds are in compliance to all state and federal guidelines regulating the use of fertilizers. To prevent over application of phosphorus, soil tests are conducted in advance of applications. Nitrogen is controlled through the use of slow release materials which allow the nitrogen to be used by the soil before reaching ground water. Fertilizers are applied primarily to athletic fields with general open space receiving only limited applications. Any over spray of fertilizers onto impervious surfaces are swept off after each application. Fertilizers are only purchased on an as-needed basis, and are stored inside under cover within approved containers before application.

*Pesticides* – All types and quantities of pesticides applied to Town owned grounds are in compliance to all state and federal guidelines regulating the use of pesticides. The Town uses Integrated Pest Management within its pesticide program for Town owned grounds. This involves testing of soils before applications to determine whether the application of pesticides is necessary.

Any over spray of pesticides onto impervious surfaces are swept off after each application. Pesticides are only purchased on an as-needed basis, and are stored inside under cover within approved containers before application.

*Animal Waste* – Town parks and recreational paths are equipped with supplies to allow pet owners to remove and dispose of pet waste within Town parks.

### **Equipment Maintenance:**

*Equipment Repair* – All Town owned equipment is maintained and repaired within the Town's Public Works Maintenance Facility. Waste oils are collected and burned within an approved waste oil furnace within the maintenance facility. Coolants are recycled through equipment at the facility. All uniforms and rags that may be contaminated with oils, greases and other materials are collected within approved containers and cleaned on a contractual basis by an industrial cleaner. All other solid wastes, including batteries, discarded parts, and oil absorption materials, are collected and stored in approved containers, and disposed of at the appropriate facilities. Where fluids are stored that may be subject to accidental spills, double containment is provided. Aerosol products are managed to minimize the number of containers actively in use within the shop area.

*Equipment Storage* – The majority of the Town’s equipment is stored inside. The Town operates a Capital Equipment Program that allows all equipment to be replaced on a regular basis. Together with the facilities computerized work order and maintenance systems, the Town’s equipment is in very good condition, and is generally free of fluid leaks, rust, paint flakes and other possible contaminants that may be washed from the site during storm water flow conditions.

*Equipment Washing* – The facilities floor drains are connected to an oil and grease/water separator, which is connected to a holding tank. The tank is pumped on an as-needed basis, with the material disposed of in the Town’s sewer system. The washing area outside is located such that wash water runs to a vegetated area and dissipates into the ground. Total outside equipment washing does not exceed thirty vehicles per week. There is no steam cleaning or engine degreasing performed during outside equipment washing.

*Fueling Facility* – The Town’s fueling facility is served by two UST’s with secondary containment. The facility is covered by a fueling canopy to avoid the collection of rain water and subsequent run off from the fueling pad. The fueling pad is slightly elevated to avoid contact from any other site run off that may be directed to the pad. The overall site is graded such that runoff is not directed toward the pad. The fueling system is equipped with both spill and vapor recovery systems. The system is also equipped with an electronic monitoring system that automatically reports fuel levels on a daily basis, and is equipped with an audible alarm connected to a leak detection system.

#### **Wastewater System Maintenance:**

*Overflow Controls* – All Town wastewater pumping stations are equipped with either auxiliary power capability, or emergency storage to prevent overflow conditions. All waste water pumping stations are inspected daily. In the event of an over flow, all practical steps are taken to prevent a discharge including but not limited to, erecting containment systems, flow diversion or emergency pumping and tanker truck operations.

*Chemical Pre-treatment* – All pumping stations equipped with chemical pre-treatment systems store their chemicals in above ground double containment tanks. All waste water pumping stations are inspected daily to ensure both the normal operation of the facilities, as well as the integrity of chemical storage tanks and other systems. Any problems are either repaired immediately by maintenance personnel, or if immediate repairs are not possible, reported to the Public Works Operations Manager to develop and implement a repair plan.

- BMP 6-1a New construction and land disturbance - New construction and land disturbance associated with municipal operations shall be addressed through the provisions of Measure 4 and Measure 5 of this permit.
- BMP 6-1b Maintenance of fleet and buildings, all municipal garages, parks, open space, construction and maintenance practices for gravel roads, snow disposal and storm water systems – See BMP 6-1
- BMP 6-1c Training, maintenance schedules, and inspection procedures for long-term structural controls - Town maintenance crews shall receive annual training associated with the correct procedures to minimize the discharge of sediments, toxins, phosphorus, nutrients and other harmful contaminants, that may be caused through the Town’s municipal operations. Training exercises shall contain at a minimum, an understanding of the location and characteristics of the natural resources that may be vulnerable to municipal operations, sources of contamination that may be generated from the municipal operations, and how they may impact natural resources, procedures to minimize the potential effects of municipal operations on natural resources, and the specific requirements and conditions of the Town’s Phase II permit. See BMP 6-1 for maintenance schedules and inspection procedures for long-term structural controls.
- BMP 6-1d For municipal facilities where fertilizers are applied, prohibit the use of fertilizers containing phosphorus unless warranted by a soil test - All types and quantities of fertilizers applied to Town owned grounds are in compliance to all state and federal guidelines regulating the use of fertilizers. To prevent over application of phosphorus, soil tests are conducted in advance of applications. Nitrogen is controlled through the use of slow release materials which allow the nitrogen to be used by the soil before reaching ground water. Fertilizers are applied primarily to athletic fields with general open space receiving only limited applications. Any over spray of fertilizers onto impervious surfaces are swept off after each application. Fertilizers are only purchased on an as-needed basis, and are stored inside under cover within approved containers before application.
- BMP 6-2 For municipal garages, an MS4 may participate in ANR’s Municipal Compliance Assistance Program - On September 19, 2010, John Daly, Environmental Assistance Specialist within the Vermont Department of Environmental Conservation, conducted an inspection of the Town’s Public Works Maintenance Facility. The Town is in compliance with each of the Direct Compliance Issues identified in the report. Spent diesel and gas fuel filters are being disposed of as outlined. The Town discontinued the use of clay absorbents several years ago. The Town has previously tested its sand blast waste for heavy metals with negative results. No changes in procedures or materials have been made since that

time. Debris from both street sweeping and catch basin cleaning is currently being stored on site at the maintenance facility. The charges from landfills to accept the material as cover material have become cost prohibitive. Subsequently, the Town has had these materials tested and determined that they can be safely disposed of at alternative sites. The Town intends to continue working with the MCAP to ensure continued compliance.

BMP 6-3 Provide a list of all industrial facilities that the MS4 owns or operates that are subject to the MSGP – Currently there are none. The Town understands from the VANR Legal Council that MSGP's are not required for Public Works Garages. The Town has however completed several improvements which would be required under a MSGP if one were required. These include the covering of construction materials such as asphalt, manhole frames and covers, and scrap metal. The sand blasting area has been paved to facilitate the cleanup of the waste material after each occurrence. A holding tank has been installed which is connected to the floor drains within the maintenance facility to capture wash water associated with cleaning equipment. The waste water is periodically removed and discharged into the Town's municipal sewer system. Voters of Colchester approved bonds to allow improvements to several Town buildings, including \$750,000 for the Public Works Maintenance Facility. As a part of this project, a 3,720 square foot cold storage facility has been constructed, allowing much of the Town's equipment and construction materials to be placed under cover. This project also included the replacement of an aging salt storage facility.

### **Rationale**

The BMP's identified under this minimum control measure are aimed primarily at improving the nutrient index within receiving waters by reducing the discharge of phosphorous and nitrogen, and improving the total number of species and species density by reducing the discharge of sediment and toxins that can be generated by municipal operations.

There were no major alternative BMP's under this minimum control measure.

The implementation of this measure will require an increased level of awareness on the part of public employees of how the Town's municipal operation can contribute to water quality both positively and negatively.

The expected water quality outcomes under this minimum control measure are improvements in the nutrient index, total species numbers, and species density within receiving waters through the reduction of phosphorus, nitrogen, sediment and toxins in storm water runoff.

# Appendix

Attachment A: Selected Minimum Control Measures

BMP ID	Public Education	Responsible Dept. or Person	Measurable Goal
1-1	Maintain SW website	Department of Public Works	Annually update departmental storm water website or as otherwise required to provide educational materials to the community with the overall goal of improving water quality.
1-2,3,4	Participate in RSEP, other regional SW ed. strategy, or submit individual plan	Department of Public Works	Annually participate in RSEP to provide educational materials to the region with the overall goal of improving water quality.
1-5a	Develop or acquire informational brochures	N/A	N/A
1-5b	Distribute SW brochures 2x in first year and 1x in subsequent years	N/A	N/A
1-5c	Seek local news media to run at least 2 news or feature stories per year	N/A	N/A
1-5d	For municipalities: Develop school materials and teacher trainings	N/A	N/A
1-5e	For non-traditionals: Develop public ed campaign for facility users	N/A	N/A

Attachment A: Selected Minimum 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	N/A	N/A
Implement a program that includes at least 3 of the following:			
2-1	Form a citizen SW advisory panel	N/A	N/A
2-2	Establish or support a WQ monitoring program involving citizen volunteers	N/A	N/A
2-3	Institute an on-going public workshop series on SW awareness	N/A	N/A
2-4	Institute a continuing storm drain stenciling project	Department of Public Works	Stencile approximately 10% of the Town's basins per year with the overall goal of improving water quality.
2-5	Sponsor periodic community stream corridor clean-up days	Department of Public Works	As a part of the Town's annual Green Up Day activities, strategically target 25 major stream and roadway crossings for the removal of solid waste with the overall goal of improving water quality.
2-6	Establish and support a citizen "stormwater watch" group	Department of Public Works	Maintain storm water watch representatives in all Town watersheds with the overall goal of improving water quality.
2-7	Create or support an "adopt-a-stream" program	N/A	N/A
2-8	Undertake a program similar in content and scope to the above with permission of Secretary	N/A	N/A

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	Department of Public Works	Continue existing program with the overall goal of improving water quality.
3-2	Develop and maintain storm sewer GIS or AutoCAD map	Department of Public Works	Continue existing program with the overall goal of improving water quality.
3-3	Develop and enforce illicit discharge ordinance	Department of Public Works	Continue existing program with the overall goal of improving water quality.
3-4	Develop and implement illicit discharge detection plan, focus on impaired waters and random dumping	Department of Public Works	Continue existing program including the testing of 34 outfalls annually with the overall goal of improving water quality.
3-5	Inform public of illicit discharge and disposal hazards	Department of Public Works	Continue existing program including the annual distribution of IDDE educational materials to the business community with the overall goal of improving water quality.
3-6	Address specific categories of illicit discharges, if necessary	Department of Public Works	Continue existing program with the overall goal of improving water quality.
3-7	Prepare annual report of monitoring and corrective actions taken	Department of Public Works	Continue existing program with the overall goal of improving water quality.

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 activities are properly permitted	Department of Public Works and the Department of Planning & Zoning.	Continue existing program with the overall goal of improving water quality.
4-2	Review existing MS4 regulations for effectiveness in managing construction-related E&S and consistency with state construction permit	Department of Public Works and the Department of Planning and Zoning	Continue existing program with the overall goal of improving water quality.
4-2a	Adopt E&S requirements that are at least as stringent as state requirements	Department of Public Works and the Department of Planning and Zoning	Continue existing program with the overall goal of improving water quality.
4-3	Develop and implement an erosion control ordinance that regulates development not subject to state permitting	Department of Public Works	Continue existing program with the overall goal of improving water quality.

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	Department of Public works and Department of Planning and Zoning	Continue existing program with the overall goals of improving water quality, stream channel stabilization, ground water recharge and flood protection.
5-1a	Assess changes to regulations to support LID	Department of Public works and Department of Planning and Zoning	Continue existing program with the overall goals of improving water quality, stream channel stabilization, ground water recharge and flood protection.
5-1b	Assess changes to regulations to minimize impervious surface through street & parking lot design	Department of Public works and Department of Planning and Zoning	Continue existing program with the overall goals of improving water quality, stream channel stabilization, ground water recharge and flood protection.
5-1c	Adopt requirements that are at least as stringent as state requirements	Department of Public works and Department of Planning and Zoning	Continue existing program with the overall goals of improving water quality, stream channel stabilization, ground water recharge and flood protection.
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	Department of Public works and Department of Planning and Zoning	Continue existing program with the overall goals of improving water quality, stream channel stabilization, ground water recharge and flood protection.
5-3	Develop and implement an ordinance that regulates the development	Department of Public works and Department of Planning and Zoning	Continue existing program with the overall goals of improving water quality, stream channel stabilization, ground water recharge and flood protection.
5-4	Develop and implement inspection procedures for the development	Department of Public works and Department of Planning and Zoning	Continue existing program with the overall goals of improving water quality, stream channel stabilization, ground water recharge and flood protection.
5-5	Develop and implement procedures to ensure MS4 development activities are properly permitted	Department of Public works and Department of Planning and Zoning	Continue existing program with the overall goals of improving water quality, stream channel stabilization, ground water recharge and flood protection.

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:	Department of Public Works and Department of Recreation	Continue the existing program with the overall goal of improving water quality.
6-1a	New construction and land disturbance	Department of Public works and Department of Planning and Zoning	Continue the existing program with the overall goal of improving water quality.
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	Department of Public Works and Department of Recreation	Continue the existing program with the overall goal of improving water quality.
6-1c	Training, maintenance schedules, and inspection procedures for long term structural controls	Department of Public works and Department of Planning and Zoning	Continue the existing program with the overall goal of improving water quality.
6-1d	For municipal facilities where fertilizers are applied, prohibit the use of fertilizers containing phosphorus (unless warranted by a soil test)	Department of Parks and Recreation	Continue the existing program with the overall goal of improving water quality.
6-2	For Municipal garages, an MS4 may participate in ANR's Municipal Compliance Assistance Program	Department of Public Works	Continue the existing program with the overall goal of improving water quality.
6-3	Provide a list of all industrial facilities that the MS4 owns or operates that are subject to the MSGP	Department of Public Works	Continue the existing program with the overall goal of improving water quality.

