

Vermont Agency of Transportation Stormwater Management Program

July 23, 2003 (updated 8/13/03)

Introduction

The Vermont Agency of Transportation (VTrans) is committed to stewardship of the natural and cultural resources of the State of Vermont. This commitment is reflected in the VTrans Mission Statement,

The Agency's Mission is to maintain a transportation system that allows for the safe movement of people and goods in a cost-effective, environmentally sensitive and timely manner.

VTrans has been designated as an operator of a non-traditional Municipal Separate Storm Sewer System (MS4) under the National Pollutant Discharge Elimination System (NPDES), General Permit 3-9014 (Permit) for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems administered by the Vermont Agency of Natural Resources (ANR). The Permit is issued in accordance with the following state and federal laws and rules: the Vermont Water Pollution Control statute, 10 V.S.A. Chapter 47, including §§ 1259, 1263, and 1264; the Vermont Water Pollution Control Rules, Chapter 13, including the rule governing general permits in Section 13.12; the federal Clean Water Act, as amended, 33 U.S.C.A. 1251 et seq., including 33 U.S.C.A. 1342(p); and the regulations of the federal Environmental Protection Agency including 40 CAR 122.26, 40 CAR 122.28 and 40 I.E. 122.30 to 122.37.

VTrans is required to comply with the conditions of the Permit on State Highways, other transportation facilities, and VTrans maintenance facilities that are located in the 2000 Census Urbanized Areas (UA) and in the watersheds of waters that are principally impaired by collected stormwater runoff when the watersheds are located entirely or partially in the UAs. Municipalities that contain the UAs are also designated as MS4s. The other Vermont MS4s are Burlington, Colchester, Essex, Essex Junction, Shelburne, South Burlington, Williston, and Winooski, Burlington International Airport and the University of Vermont.

The VTrans MS4, which is regulated by this Permit, is approximately two (2) square miles. The area includes approximately 90 miles of State Highway and one Maintenance Garage located within the UAs and the associated impaired waters. Please refer to the attached VTrans Geographic Information Systems (GIS) map for a display of the VTrans MS4.

This document defines the VTrans Stormwater Management Program (VTrans SWMP) as required in Part 2 of the Permit. The VTrans SWMP will advance and evolve through the term of the Permit. VTrans will coordinate the implementation of the VTrans SWMP with the related activities of all other MS4s in Vermont.

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The following statements and current and proposed Best Management Practices (BMPs) meet the terms of the Permit.

Information in response to Part 3.1.2 of the Permit; Water Quality Controls to Impaired Waters: The BMPs listed herein will control to the maximum extent practical discharges of pollutants of concern from the VTrans MS4 to the watersheds of waters that are principally impaired by collected stormwater runoff when the watersheds are located entirely or partially in the UAs and meet the requirements of Part 3.1.2.

Three waters are impaired by pollutants other than stormwater runoff. Muddy Brook and McCabes Brook are impaired by sediment. The BMPs listed herein that address control of sediment 3.D, 4.A – 4.H, 5.E, and 6.A will to the maximum extent practical control discharge of sediment into Muddy Book and McCabes Brook from the VTrans MS4. Unnamed tributaries of Mallets Bay are impaired by *Escherichia coli* (e.coli). E.coli can grow in sediment that collects in the sumps of catchbasins and other closed stormwater management system features. VTrans will contribute to reducing e. coli in the streams through controlling sediment in the VTrans stormwater by implementing BMPs 3.A - 3.D, 5.A, 5.D, 5.E, and 6.A listed herein. Animal carcasses are another media where e.coli can grow. VTrans will continue the practice of removing road-kill from the roadway system.

Information in response to Part 3.1.3 of the Permit; Consistency with Total Maximum Daily Load (TMDL) Requirements: VTrans will strive to ensure consistency with the Lake Champlain Phosphorous TMDL through adoption of the BMPs defined in the VTrans SWMP. The following are general responses to the specific Lake Champlain TMDL recommendations referenced in Part 3.1.3 of the Permit: 1) Please refer to VTrans current and proposed BMPs for the Construction Site Runoff Control Minimum Control Measure listed herein, 2) There are no State “gravel backroads” in the VTrans MS4, however, VTrans does support the Vermont Local Roads program, 3) Historically, roads were built in riparian buffers and in many cases the road’s right-of-way (ROW) contains the riparian buffer. VTrans will investigate BMPs to improve the stewardship of the riparian buffers within the VTrans MS4 during the term of this Permit, 4) Please refer to VTrans current and proposed BMPs for the Post-Construction Stormwater Management in New Development and Redevelopment Minimum Control Measure listed herein.

Information in response to Part 4.1.3 of the Permit: The BMPs listed herein were chosen, because VTrans believes that they will result in surface water protection. Other BMPs were considered and were not selected for a variety of reasons. Alternative BMPs may be developed in subsequent years of the Permit. If it is found that the BMPs listed in the VTrans SWMP are not effective in surface water protection, they will be discontinued after appropriate consultation with ANR.

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Information in response to Part 4.1.4 of the Permit: VTrans will initiate consultation with the Champlain Water District (CWD) to specifically address water source protection zones within the VTrans MS4. These consultations will begin no later than October 1, 2003. Progress reports will be supplied to ANR. If changes to VTrans SWMP are necessary because of this consultation and agreements between CWD and VTrans, they will be made after appropriate consultation with ANR.

The Six Minimum Control Measures, with Current and Proposed Best Management Practices

1. Public Education and Outreach Minimum Control Measure

Permit Requirement: According to Part 4.2.1.1 of the Permit, in order to meet the Public Education and Outreach Minimum Control Measure the operator of an MS4,

”...must implement a public education program to distribute educational materials to the community or conduct equivalent outreach activities about the impacts of storm water discharges on water bodies and the steps that the public can take to reduce pollutants in storm water runoff.”

VTrans will comply with the requirements of this Minimum Control Measure by fully participating in the Regional Stormwater Education Program Memorandum of Understanding. Please refer to item # 6 on the attached Notice of Intent form.

Proposed VTrans Best Management Practices:

1.A VTrans Stormwater Website – The VTrans website currently has an Environmental Section, which contains information on environmental permit activities and the environmental stewardship activities of VTrans. The website will be expanded to include Stormwater pages to provide stormwater related educational material to the public. All VTrans stormwater related guidance materials and up-to-date information and reports will be available on this site as links. The site will include specific information and links concerning stormwater management in the MS4s. The Stormwater site will include a “Contact Us” link so that the public can directly contact VTrans staff involved in stormwater issues by normal mail, telephone, or email. The site will include a “hit counter” to track visits. The site will also encourage suggestions and comments to allow for public input on the VTrans SWMP, website content, and VTrans stormwater management activities. When available there will also be links to other stormwater websites.

The primary goal of this BMP is to involve the public in the management of the VTrans MS4 by providing detailed information and creating a venue for the public to comments,

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make suggests, and provide input. The website will also function as an Electronic Community Hotline for the public to inform VTrans of water quality problems and potential illicit discharges in the VTrans MS4.

Target Audience – Public.

Timeframe – Begin work on Stormwater pages in the fall of 2003. Publish in spring of 2004 and continue updating.

Measurable Goal – In the annual report that is required under Part 5.3 of the Permit, the number of visits recorded on hit counter will be listed and a summary of the suggestions or comments from public will be provided.

2. Public Involvement/Participation Minimum Control Measure

Permit Requirement: According to the Part 4.2.2.1 of the Permit, in order to meet the Public Involvement/Participation Minimum Control Measure the operator of an MS4 must:

“...at a minimum, comply with state, tribal, and local public notice requirements when implementing a public involvement/participation program...”

Current VTrans Best Management Practices:

2.A VTrans Stormwater Work Group – VTrans has formed an internal multi-divisional Stormwater Work Group (SWWG) to guide the agency in its compliance with the Permit and other stormwater regulations. The SWWG coordinates the on-going development and implementation of the VTrans SWMP. One of the primary purposes of the SWWG is to disseminate information about stormwater regulations, permit programs, and BMPs throughout the agency. This will advance integration of the BMPs into design of transportation projects, the acquisition of environmental permits, operation and maintenance activities, and transportation planning. The SWWG will also involve the public in future development of the VTrans SWMP. VTrans divisions that are represented include, Program Development Division, Policy and Planning Division, and Operations Division.

Target audience – VTrans staff statewide and the public.

Timeframe – Continue this BMP. SWWG meets at least once per month for the duration of the Permit.

Measurable Goal – List of tasks accomplished and projects undertaken will be summarized in the annual report that is required under Part 5.3 of the Permit.

2.B Regional Planning Coordination – VTrans Policy and Planning Division carries out the Vermont Transportation Planning Initiative (TPI) in coordination with the Regional

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Planning Commissions (RPC) and the Chittenden County Metropolitan Planning Organization (CCMPO). The VTrans Policy and Planning Division employs Regional Transportation Planning Coordinators to work directly with the CCMPO and RPCs. The VTrans coordinators and these organizations solicit local input, identify needs, develop regional transportation plans and transportation improvement programs, and provide planning capacity to VTrans on an ongoing basis. The CCMPO and the RPCs provide significant and in-depth public involvement and participation in transportation planning.

VTrans will continue to work with the CCMPO and the RPC including Chittenden County RPC (CCRPC) to ensure that the public is involved in transportation planning including stormwater management issues.

Target Audience — Public.

Timeframe – Continuing involvement with these organizations.

Measurable Goal — In the annual report that is required under Part 5.3 of the Permit, dates will be listed of CCMPO and CCRPC public meetings that VTrans attended during which transportation projects and stormwater management are discussed.

2.C Project Related Public Notice/Public Participation Requirements for Obtaining Environmental Permits – VTrans must obtain environmental permits for most development projects. Those related to water quality protection include U.S. Army Corps of Engineers 404 Permit, Vermont Wetlands Rules Conditional Use Determination, ANR Stormwater Section permits, Clean Water Act Section 401 Water Quality Certification, and for some projects an Act 250 Permit. Several of these permit processes require public notice and allow for substantial public participation and input affecting the final development of transportation projects.

Target Audience — Public.

Timeframe – Ongoing throughout the term of the Permit.

Measurable Goal — In the annual report that is required under Part 5.3 of the Permit, information will be provided about water quality protection related permits acquired for VTrans projects and activities within the VTrans MS4.

Proposed VTrans Best Management Practices:

2.D Storm Drain Stenciling – VTrans will develop and implement a storm drain stenciling plan within the VTrans MS4. The plan will incorporate involvement with public volunteers. When appropriate VTrans will coordinate this effort with the storm water stenciling efforts of the other MS4s.

Target Audience — Public and VTrans employees.

Timeframe – Implement during 2004.

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Measurable Goal — The goal of this plan is to place warnings at storm drains to advise citizens not to dump pollutants down the storm drain and to involve the public in maintenance of the VTrans MS4. The number of storm drains stenciled and the percentage of the total in the VTrans MS4 will be provided in the annual report that is required under Part 5.3 of the Permit once this BMP is underway.

2. E VTrans Stormwater Website – The VTrans website currently has an Environmental Section, which contains information on environmental permit activities and the environmental stewardship activities of VTrans. The website will be expanded to include Stormwater pages to provide stormwater related educational material to the public. All VTrans stormwater related guidance materials and up-to-date information and reports will be available on this site as links. The site will include specific information and links concerning stormwater management in the MS4s. The Stormwater site will include a “Contact Us” link so that the public can directly contact VTrans staff involved in stormwater issues by normal mail, telephone, or email. The site will include a “hit counter” to track visits. The site will also encourage suggestions and comments to allow for public input on the VTrans SWMP, website content, and VTrans stormwater management activities. When available there will also be links to other stormwater websites.

The primary goal of this BMP is to involve the public in the management of the VTrans MS4 by providing detailed information and creating a venue for the public to comments, make suggests, and provide input. The website will also function as an Electronic Community Hotline for the public to inform VTrans of water quality problems and potential illicit discharges in the VTrans MS4.

Target Audience – Public.

Timeframe – Begin work on Stormwater pages in the fall of 2003. Publish in spring of 2004 and continue updating.

Measurable Goal – In the annual report that is required under Part 5.3 of the Permit, the number of visits recorded on hit counter will be listed and a summary of the suggestions or comments from public will be provided.

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3. Illicit Discharge Detection and Elimination Minimum Control Measure

Permit Requirement— According to the Part 4.2.3.1.2 of the Permit, in order to meet the Illicit Discharge Detection and Elimination Minimum Control Measure the operator of an MS4 must,

“Develop, if not already completed, a storm sewer geographic information systems or AutoCAD map of your MS4, showing the location of all outfalls and the names and location of all waters of the State and waters of the United States that receive discharges from those outfalls. You are encouraged to include a map or the location of all separate private stormwater systems within your MS4’s boundaries...”

Proposed VTrans Best Management Practice:

3.A Continue the Global Positioning System (GPS) and Geographic Information System (GIS) Mapping Project – In the summer of 2002, VTrans piloted a stormwater system mapping effort in the VTrans MS4 in preparation for this Permit requirement. The goals of the pilot program were to develop a system for completing the mapping effort and determine needed level of effort and funding. The pilot project mapped 10% of the total system required to be mapped. An in-house manual was developed and data collection and information analysis procedures were refined.

The stormwater system mapping project is continuing during the summer of 2003. The in-house manual was altered and modified to increase effectiveness and efficiency.

Timeframe – The project is continuing during the summer and fall of 2003. The project will be completed by fall of 2006. There will be on-going update of information through the term of the Permit.

Measurable Goals – In the annual report that is required under Part 5.3 of the Permit, a summary of the status of the project and include maps will be provided.

3.B Develop and implement a testing and monitoring plan – A testing and monitoring plan will be developed to detect non-stormwater discharges into the VTrans stormwater systems in the VTrans MS4. Starting 2004 survey during dry weather 25% of the storm drain system outfalls per year will be conducted to identify non-storm water flows. Once each year's survey is complete, areas with suspicious discharges will be further inspected to detect suspected direct connections to the wastewater system and identify areas where wastewater might be leaking into adjacent storm drainpipes.

Timeframe – The survey for dry weather discharge will begin in 2004. The survey and initial investigation of suspected non-stormwater discharges will be completed no later than fall of 2007.

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Measurable Goal – A summary of the survey information, locations of suspected non-stormwater discharges, and data gathered will be included in the annual report that is required under Part 5.3 of the Permit.

3.C Coordinate efforts under this Minimum Control Measure with other MS4s in Vermont— Many of the VTrans and other MS4 storm sewer systems are connected. VTrans will work with the other MS4s to ensure that the data and information gathered is properly shared.

Timeframe – Begin coordination during 2003.

Measurable Goal – Procedures and agreed on approaches to eliminate non-stormwater leaks into the VTrans MS4 from property owners in other MS4s. An annual summary of this effort will be included in the annual report that is required under Part 5.3 of the Permit.

3.D Review the existing VTrans Access Management Program, Highway Permits, and Development Agreements – VTrans has an existing program that issues permits for residential and commercial driveway access to the State Rights-of-Way (ROW). VTrans also issues permits for non-VTrans projects within the ROW. The program includes review of proposals for open and/or closed connection to the VTrans MS4 from residential and commercial property owners. This program will be reviewed and where appropriate modified to add further constraints to prevent discharge of non-stormwater discharges or pollutants into the VTrans MS4. The goal of the modifications will be to ensure proper management of stormwater from non-VTrans projects prior to it entering the VTrans stormwater systems.

Timeframe — A review of this VTrans program is underway. A report on conclusions from the review will be completed by fall of 2004.

Measurable Goal – The VTrans Access Management Program, Highway Permits, and Development Agreements that effectively prohibit discharge of non-stormwater discharges or pollutants into the VTrans MS4. Summary and effectiveness of this BMP will be included in the annual report that is required under Part 5.3 of the Permit.

4. Construction Site Runoff Control Minimum Control Measure

Permit Requirement— According to the Part 4.2.4.1. of the Permit, in order to meet the Construction Site Runoff Control Minimum Control Measure the operator of an MS4 must,

“Pursuant to EPA rules at 40 C.F.R. 122.34(b)(4) you must develop and to the extent allowable under state or local law enforce a program to reduce pollutants in any stormwater runoff to your small MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. Reduction of stormwater discharges from construction activity disturbing less than one acre

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must be included in your program if that construction activity is part of a larger common plan of development or sale that would disturb one acre or more.

The Secretary is also required to regulate stormwater runoff from construction activities that result in a land disturbance of greater than or equal to one acre. The Secretary has issued General Permit 3-9001 (2002) (NPDES Number: VTR100001) for stormwater runoff from large construction sites that regulates construction activities, which result in a land disturbance equal to or greater than five acres of land. (An amended version of this permit is expected to be issued in 2003). The Secretary also expects to issue General Permit 3-9013 (2003) (NPDES Number: VTR100002) for stormwater runoff from small construction sites which regulates construction activities which result in a land disturbance equal or greater than one and less than five acres of land. If a construction project with a potential to discharge stormwater, which results in a land disturbance of equal to or greater than one acre does not qualify for coverage under one of these general permits then an individual NPDES permit from the Secretary is required. Projects subject to Act 250 jurisdiction are subject to requirements for controlling construction-related erosion under that program as well.

Instead of adopting your own program to regulate stormwater runoff from construction activities that meet the requirements of 40 C.F.R 122.34(b)(4) you may qualify for coverage under this general permit by developing and implementing a program to assist the Secretary in the Agency's regulation of such discharges."

Current VTrans Best Management Practices:

4.A Construction General Permits and Individual Permits Compliance Plan – VTrans will comply with ANR issued General Permit 3-9001 (2003) for Stormwater Runoff from Large Construction Sites, General Permit 3-9013 (2003) for Stormwater Runoff from Small Construction Sites and if a project conditions requires Individual Permits.

Timeframe – On going.

Measurable Goals – A list of VTrans projects statewide that had coverage under the Construction General Permits or an Individual Permit will be included in the annual report that is required under Part 5.3 of the Permit.

4.B VTrans Construction Environmental Engineer (CEE) Position – VTrans has created a full-time position to ensure that VTrans construction projects meet the conditions and goals of environmental permits. A primary goal of the CEE is VTrans compliance with the Construction General Permits or Individual Permits. The employee will visit VTrans construction sites throughout the state as an educator, monitor, and technical expert.

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Time frame – Position was filled by May 26, 2003.

Measurable Goals – A summary of this employee's activities will be in the annual report that is required under Part 5.3 of the Permit.

4.C *Erosion Prevention and Sediment Control Guidance Materials* – In 2002 VTrans developed an “Environmental Field Handbook for Culvert and Ditching Procedures”. This Handbook was distributed agency wide to be used as a guide for maintenance activities. It is based on field application of the VTrans Statewide Culvert and Ditching Procedures that have been in effect since 1997. The Culvert and Ditching Procedures were developed with participation from the ANR, US Army Corps of Engineer, US Environmental Protection Agency, US Fish and Wildlife Service, and the Federal Highway Administration. Additionally, the VTrans Standard Specifications for Construction 2001 has extensive standards for erosion prevention and sediment control.

Target Audience – VTrans staff statewide, primarily target construction and maintenance staff.

Timeframe — Review and update the VTrans Standard Specifications, the Culvert and Ditching Procedures, and Handbook are taking place during the 2003 construction season and the documents will be updated during winter of 2003 – 2004. Review and update annual as needed.

Measurable Goal – A process will be developed to measure the use and effectiveness of Standards, Procedures, and Handbook techniques in design of projects and in the field.

4.D *Erosion Prevention and Sediment Control Assurance Visit* – In 2002, VTrans began a collaborative internal effort to increase the effectiveness of erosion and sediment control at all VTrans construction sites. One part of that effort was creation of the Erosion and Sediment Control Team that made Erosion Prevention and Sediment Control Assurance Visits to each VTrans construction site twice during the 2002 construction season. The Team toured sites with VTrans Regional Engineers, Resident Engineers, and project contractors. An Erosion Prevention and Sediment Control Checklist was completed and a summary report was produced.

The primary purpose of Erosion Prevention and Sediment Control Assurance Visits is to assure that VTrans protects natural resources and complies with state and federal regulations through implementation of project Erosion Prevention and Sediment Control Plans and environmental permit conditions. The Team visits VTrans projects to provide input/training/support/resources relative to erosion prevention and sediment control. The Team is making Assurance Visits during the 2003 construction season.

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Target Audience – VTrans staff statewide

Timeframe — On going. Update the Erosion Prevention and Sediment Control Assurance Visit protocol and Checklist during the winter of 2003 – 2004. This BMP will be review annually and update as needed.

Measurable Goal — The annual report that is required under Part 5.3 of the Permit will track frequency of visits, provide summary of information gathered, and corrective actions taken.

4.E *Stormwater Management and Erosion Prevention and Sediment Control Training* – VTrans offers a broad range of formal training on erosion and sediment control and stormwater management design to agency staff. These training classes are instructed by non-VTrans subject experts from around the country. Class titles have included, “Practical Approaches for Effective Erosion and Sediment Control”, “Erosion and Sediment Control at Water Crossings”, and “Urban Drainage Design”. More classes are scheduled for 2003. When space allows the training classes are open to employees of

ANR, the Federal Highway Administration, the U.S. Department of Agriculture Natural Resources Conservation Service, and consulting companies.

VTrans also provides an extensive amount of annual erosion and sediment control training to maintenance and construction employees through internal training meetings. VTrans staff is encouraged to seek training opportunities outside the agency.

Additionally, in 2002 VTrans provided a one-day training workshop for construction contractors that included a session on erosion and sediment control and compliance with regulations.

Target audience – VTrans staff statewide and other professionals.

Timeframe – A broad offering of training classes will continue to be scheduled. In 2004, emphasis will be on training VTrans employees involved with the management of the VTrans MS4.

Measurable Goal – Class titles and number of VTrans employees and other attendees will be listed in the annual report that is required under Part 5.3 of the Permit.

4.F *Certified Professionals in Erosion and Sediment Control (CPESC)*

Certified Professionals in Erosion and Sediment Control (CPESC) is an internationally recognized professional certification in the stormwater management field <http://www.cpesc.net/> VTrans has paid for seven employees to take the CPESC training. At this time, three VTrans employees are CPESCs, one employee is a CPESC in-training, and two employees have not yet taken the qualifying exam.

Timeframe – VTrans will continue to support the training of the current CPESCs and will support CPESC training for other qualified employees.

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Measurable Goal – The activities of the VTrans CPESCs will be summarized in the annual report that is required under Part 5.3 of the Permit.

Proposed VTrans Best Management Practices:

4.G *Develop and Implement Procedures to report noncompliance of non-VTrans projects* – This BMP will meet the requirements of Part 4.2.4.1.2 of the Permit that states,

“Procedures to assist the Secretary in inspecting permitted construction sites for compliance with the conditions of their permits. In conducting such inspections your staff will not be expected to be familiar with the erosion control plans. However, you should inspect for obvious signs of noncompliance such as eroding soils and turbid waters. You will only be expected to report suspected violations to the Agency and not to initiate an independent enforcement action. In reporting these activities the nontraditional and traditional MS4s will cooperate when stormwater runoff moves across MS4 jurisdictional boundaries.”

Timeframe – This BMP will be developed during 2004. The BMP will be fully implemented by 2006.

Measurable Goals – A summary of VTrans activities relative to this BMP will be provided in the annual report that is required under Part 5.3 of the Permit.

4.H *Review the existing VTrans Access Management Program, Highway Permits, and Development Agreements* – Details of this proposed BMP are included under Illicit Discharge Detection and Elimination Minimum Control Measure, 3.D. Its design and implementation will also help meet the requirements of Construction Site Runoff Control Minimum Control Measure.

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

Permit Requirement— According to the Permit section 4.2.5.1.1., in order to meet the Construction Site Runoff Control Minimum Control Measure the operator of an MS4 must,

“Pursuant to 40 C.F.R 122.34(b)(5) you must develop, implement, and to the extent allowable under State or local law, enforce a program to address post-construction stormwater runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale, that discharge into your small MS4. Your program must ensure that controls are in place that would prevent or minimize water quality impacts.

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Pursuant to 10 V.S.A. §§ 1263, 1264 and Agency rules and procedures adopted there under, the Secretary is required to regulate post-construction stormwater runoff from activities that result in creation of new or expansion of old impervious surface of greater than one or two acres depending on the size of the watershed and nature of the resources affected. Therefore, there is a gap between what the Agency's post-construction stormwater management permit program regulates and the land disturbances equal to one or more acre of land that MS4s must regulate.

To qualify for coverage under this general permit you must develop, implement, and enforce a program to reduce pollutants in any post-construction stormwater runoff to your small MS4 from activities that result in a land disturbance of greater than or equal to one acre and that are not subject to regulation under the Agency's post-construction stormwater management permit program. You must also develop and implement a program to assist the Secretary in the regulation of sites, which are within the jurisdiction of the Agency's post-construction stormwater management permit program. Nontraditional and traditional MS4s will cooperate when stormwater runoff moves across MS4 jurisdictional boundaries."

Current VTrans Best Management Practices:

5.A Develop and Implement a Compliance Plan for Post-Construction Stormwater Management for VTrans Projects – VTrans is complying with the requirements of ANR permit "Stormwater Discharges from New Development and Redevelopment to non-WIP Waters General Permit 3-9015." VTrans is developing internal procedure to address the "gap" between 3-9015 and the one acre of land disturbance threshold of this Permit. The goal of this internal procedure is to protect water quality by designing post-construction stormwater management systems on new and redeveloped VTrans projects in the VTrans MS4. The designs of these systems will use the Vermont Stormwater Management Manual to the extent that is practical.

Timeframe – A final draft of this internal procedure will be completed by winter of 2003 – 2004 and will be finalized through consultation with ANR.

Measurable Goals – A list of VTrans projects that complied with the 3-9015 permit and that followed the internal VTrans procedure will be included in the annual report that is required under Part 5.3 of the Permit.

5.B VTrans Stormwater Management Engineer Position – VTrans has created a full-time Stormwater Management Engineer position. The VTrans Stormwater Management Engineer's primary duty is to provide engineering support on the design and retrofitting of VTrans stormwater management systems. The tasks related to this duty include but are not be limited to:

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- stormwater management system engineering assistance to VTrans project managers, designers, and others,
- review of stormwater management system plans of projects that have been developed both in house and by consultants as part of the environmental permitting process,
- design stormwater management systems for VTrans projects,
- assist in VTrans compliance with state issued General Permit 3-9010, General Permit 3-9015, National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) General Permit, and other permits that involve long-term stormwater management,
- assist Resident Engineers on redesign of long-term stormwater management systems.

Time frame – The Stormwater Management Engineer position was created and filled by February 17, 2003 with a permanent full-time employee.

Measurable Goals – A summary of this employee's activities will be in the annual report that is required under Part 5.3 of the Permit.

5.C *Stormwater Management and Erosion and Sediment Control Training* — Details of this proposed BMP are included under Public Education and Outreach Minimum Control Measures, 4.E. Its design and implementation will also meet the requirements of Post-Construction Stormwater Management in New Development and Redevelopment Minimum Control Measure.

Proposed VTrans Best Management Practices:

5.D *Develop and Implement Procedures to report noncompliance of non-VTrans projects* – This BMP will meet the requirements of Part 4.2.5.1.5.1. of the Permit that states,

“Develop and implement procedures to assist the Secretary in inspecting permitted development and redevelopment projects for compliance with the conditions of their permits. In conducting such inspections your staff will not be expected to be familiar with the post-construction site plans submitted to the Secretary by the permittee. However, you should inspect for obvious signs of noncompliance such as eroding soils, turbid water, structural deficiencies, catch basins in need of cleaning and other readily observable problems. You will only be expected to report suspected violations to the Agency and not to initiate an independent enforcement action. Nontraditional and traditional MS4s will cooperate when stormwater runoff moves across MS4 jurisdictional boundaries.”

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Timeframe – This BMP will be developed during 2004. The BMP will be fully implemented by 2006.

Measurable Goals – A summary of VTrans activities relative to this BMP will be provided in the annual report that is required under Part 5.3 of the Permit.

5.E Review the existing VTrans Access Management Program, Highway Permits, and Development Agreements – Details of this proposed BMP are included under Illicit Discharge Detection and Elimination Minimum Control Measure, 3.D Its design and implementation will also help meet the requirements of Construction Site Runoff Control Minimum Control Measure.

6. Pollution Prevention/Good Housekeeping Minimum Control Measure

Permit Requirement— According to the Part 4.2.6.1.1. of the Permit , in order to meet the Pollution Prevention/Good Housekeeping Minimum Control Measure the operator of an MS4 must,

“...describe your operation and maintenance program for preventing or reducing pollutant runoff from municipal operations, including, at a minimum: new construction and land disturbance and maintenance of fleet and buildings, parks, open space, construction and maintenance practices for gravel backroads, and stormwater systems. The program must include a training component, maintenance schedules, and inspection procedures for long term structural controls.”

Current VTrans Best Management Practices:

6.A Enhance VTrans MS4 related Maintenance Activities – VTrans Pollution Prevention/Good Housekeeping activities are the responsibility of the VTrans Operations Division. The Operations Division is responsible for all maintenance activities on the state highways and at state-owned airport and rail facilities; and for administering the aviation, rail and public transit programs. Operations is made up of nine district offices, the Central Garage, Traffic Shop, the Aviation, Rail and Public Transit Sections, and the Headquarters unit. In addition, Operations oversees an Occupational Health and Safety Program, a Hazardous Waste and Materials Program, Maintenance Programs and Roadside Vegetation Management throughout the State. VTrans Operations Division undertakes many activities that remove pollutants from the VTrans MS4, including but not limited to street sweeping, cleaning of storm drains, slope stabilization, cleaning and repairing of highway drainage ditches, and activities at maintenance facilities. The stormwater and erosion and sediment control related activities within the VTrans MS4 will be reviewed in detail for effectiveness in controlling and removing pollutants from the VTrans MS4. The activities will be altered and

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modified when appropriate to the maximum extent practical to ensure control and removal of pollutants from the VTrans MS4.

Timeframe – Review began in 2002 and will be completed in 2004. Alternations and modifications of activities will be ongoing.

Measurable Goals – VTrans will submit a report of the conclusions of the review in the annual report that is required under Part 5.3 of the Permit. At that time, Measurable Goals will be defined.

6.B *Erosion and Sediment Control Guidance Materials* — Details of this proposed BMP are included under Construction Site Runoff Control Minimum Control Measure, 4.C. Its design and implementation will also meet the requirements of Pollution Prevention/Good Housekeeping Minimum Control Measure.

6.C *Erosion and Sediment Control Assurance Visit* – Details of this proposed BMP are included under Construction Site Runoff Control Minimum Control Measure, 4.D. Its design and implementation will also meet the requirements of Pollution Prevention/Good Housekeeping Minimum Control Measure.

6.D *Stormwater Management and Erosion and Sediment Control Training* — Details of this proposed BMP are included under Construction Site Runoff Control Minimum Control Measure, 4.E. Its design and implementation will also meet the requirements of Pollution Prevention/Good Housekeeping Minimum Control Measure.

Proposed VTrans Best Management Practices:

6.E *Develop and Implement a Compliance Plan with the General Permit 3-9003 Multi-Sector General Permit For Stormwater Discharges Associated With Industrial Activity* – Permit section 4.2.6.1.3 requires the operator of an MS4,

“...must provide a list of industrial facilities you own or operate that affect your MS4 and are subject to an individual NPDES Multi-Sector Permit or the Agency’s General Permit 3-9003 Multi-Sector General Permit For Stormwater Discharges Associated With Industrial Activity (expected to be adopted in 2003) (NPDES Number: VTR050001) (MSGP). Include the NPDES permit number, a copy of the Industrial NOI form or the “no exposure” certification for each facility. A “no exposure certification” or a Stormwater Pollution Prevention Plan prepared for an industrial facility that you own or operate which is in compliance with the requirements of an individual NPDES permit or the MSGP satisfies the requirements of section 4.2.6 for that facility.”

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VTrans is developing internal procedures to comply with the requirements of the MSGP. VTrans has developed draft templates to create Storm Water Pollution Prevention Plans (SWPPP) for each facility that requires a SWPPP. Employees are being trained in the design of SWPPPs and the use of SWPPP templates. Tests of the templates are being completed.

In the VTrans MS4 area, the District 5 Maintenance garage in Colchester will need to comply with the MSGP.

Timeframe – The MSGP has not been finalized or issued by ANR. VTrans will continue to participate in the development of this permit program as an interested stakeholder. VTrans will fully develop and implement appropriate BMPs, once this permit program is finalized and the MSGP is issued.

Measurable Goals – Once the MSGP has been finalized and issued by ANR, VTrans will develop a strategy for addressing Measurable Goals that are based on the requirements of the MSGP.

Monitoring, Record Keeping, and Reporting

The VTrans Stormwater Work Group will evaluate the VTrans Stormwater Management Program on an ongoing basis to ensure that the program complies with the Permit, that the BMPs in use or being developed are appropriate, and that the VTrans SWMP is successfully progressing toward achieving the measurable goals.

VTrans will meet the requirements of Monitoring, Record Keeping, and Reporting found in Part 5 of the Permit.

Contact

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BMP Table

BMP ID	Name	Timeframe	Measurable Goals
No BMP ID	Public Education and Outreach Minimum Control Measure	VTrans will participate for the term of the Permit.	VTrans is participating in the Regional Stormwater Education Program
1.A	VTrans Stormwater Website	Begin work on Stormwater pages in the fall of 2003. Publish in spring of 2004 and continue updating.	In the annual report that is required under Part 5.3 of the Permit, the number of visits recorded on hit counter will be listed and a summary of the suggestions or comments from public will be provided.
2.A	VTrans Stormwater Work Group	At least once per month during term of Permit	List of tasks accomplished and projects undertaken will be summarized in annual report
2.B	Regional Planning Coordination	Continuing involvement with these organizations.	In the annual report that is required under Part 5.3 of the Permit, dates will be listed of CCMPO and CCRPC public meetings that VTrans attended during which transportation projects and stormwater management are discussed.
2.C	Project Related Public Notice/ Public Participation Requirements for Obtaining Environmental Permits	Ongoing and throughout the term of the Permit.	In the annual report that is required under Part 5.3 of the Permit, information will be provided about water quality protection related permits acquired for VTrans projects and activities within the VTrans MS4.
2.D	Storm Drain Stenciling	Pilot during 2004. Based on safety factors and results of pilot project, will determine # and % of drains done per year.	Number of drains and the % of total in VTrans MS4.

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BMP Table

BMP ID	Name	Timeframe	Measurable Goals
3.A	Continue the Global Positioning System (GPS) and Geographic Information System (GIS) Mapping Project	The project is continuing during the summer and fall of 2003. The project will be completed by fall of 2004. There will be on-going update of information through the term of the Permit.	In the annual report that is required under Part 5.3 of the Permit, a summary of the status of the project and include maps will be provided.
3.B	Develop and Implement a Survey and Testing Plan	The survey for dry weather discharge will begin in 2004. The survey and initial investigation of suspected non-stormwater discharges will be completed no later than fall of 2007.	A summary of the survey information, locations of suspected non-stormwater discharges, and data gathered will be included in the annual report that is required under Part 5.3 of the Permit.
3.C	Coordinate efforts under this Minimum Control Measure with other MS4s in Vermont	Begin coordination during 2003.	Procedures and agreed on approaches to eliminate non-stormwater leaks into the VTrans MS4 from property owners in other MS4s. An annual summary of this effort will be included in the annual report that is required under Part 5.3 of the Permit.
3.D	Review the existing VTrans Access Management Program, Highway Permits, and Development Agreements	Review of the existing program is underway.	The VTrans Access Management Program, Highway Permits, and Development Agreements that effectively prohibit discharge of non-stormwater discharges or pollutants into the VTrans storm sewer system. Summary and effectiveness of this BMP will be included in the annual report that is required under Part 5.3 of the Permit.
4.A	Construction General Permits and Individual Permits Compliance Plan	On-going.	A list of VTrans projects statewide that had coverage under the Construction General Permits or an Individual Permit will be included in the annual report that is required under Part 5.3 of the Permit.
4.B	VTrans Construction Environmental Engineer	Full-time position was created and filled by May 26, 2003.	A summary of this employee's activities will be in the annual report that is required under Part 5.3 of the Permit.

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BMP Table

BMP ID	Name	Timeframe	Measurable Goals
4.C	Erosion and Sediment Control Guidance Materials	Review and update the VTrans Standard Specifications, the Culvert and Ditching Procedures, and Handbook are taking place during the 2003 construction season and the documents will be updated during winter of 2003 – 2004. Review and update annual as needed.	A process will be developed to measure the use and effectiveness of Standards, Procedures, and Handbook techniques in design of projects and in the field.
4.D	Erosion and Sediment Control Assurance Visits	On going. Update the Erosion and Sediment Control Assurance Visit protocol and Checklist during the winter of 2003 – 2004. This BMP will be review annually and update as needed.	The annual report that is required under Part 5.3 of the Permit will track frequency of visits, provide summary of information gathered, and corrective actions taken.
4.E	Stormwater Management and Erosion Control Training	A broad offering of training classes will continue to be scheduled. In 2004, emphasis will be on training VTrans employees involved with the management of the VTrans MS4. Training classes will be offered annual.	Class titles and number of VTrans employees and other attendees will be listed in the annual report that is required under Part 5.3 of the Permit.
4.F	Certified Professional in Erosion and Sediment Control (CPESC)	VTrans will continue to support the training of the current CPESCs and will support CPESC training for other qualified employees.	The activities of the VTrans CPESCs will be summarized in the annual report that is required under Part 5.3 of the Permit.
4.G	Develop and Implement Procedures to report non-compliance of non-VTrans Projects	This BMP will be developed during 2004. The BMP will be fully implemented by 2006.	A summary of VTrans activities relative to this BMP will be provided in the annual report that is required under Part 5.3 of the Permit.

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BMP Table

BMP ID	Name	Timeframe	Measurable Goals
4.H	Review the existing VTrans Access Management Program, Highway Permits, and Development Agreements	Review of the existing program is underway.	The VTrans Access Management Program, Highway Permits, and Development Agreements that effectively prohibit discharge of non-stormwater discharges or pollutants into the VTrans storm sewer system. Summary and effectiveness of this BMP will be included in the annual report that is required under Part 5.3 of the Permit.
5.A	Development and Implement a Compliance Plan for Post-Construction Stormwater Management for VTrans Projects	A final draft of this internal procedure will be completed by winter of 2003 – 2004 and will be finalized through consultation with ANR.	A list of VTrans projects that complied with the 3-9015 permit and that followed the internal VTrans procedure will be included in the annual report that is required under Part 5.3 of the Permit.
5.B	VTrans Stormwater Management Engineer Position	The Stormwater Management Engineer position was created and filled by February 17, 2003 with a permanent full-time employee.	A summary of this employee's activities will be in the annual report that is required under Part 5.3 of the Permit.
5.C	Stormwater Management and Erosion Control Training	A broad offering of training classes will continue to be scheduled. In 2004, emphasis will be on training VTrans employees involved with the management of the VTrans MS4. Training classes will be offered annual.	Class titles and number of VTrans employees and other attendees will be listed in the annual report that is required under Part 5.3 of the Permit.
5.D	Develop and Implement Procedures to report non-compliance of non-VTrans Projects	This BMP will be developed during 2004. The BMP will be fully implemented by 2006.	A summary of VTrans activities relative to this BMP will be provided in the annual report that is required under Part 5.3 of the Permit.

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BMP Table

BMP ID	Name	Timeframe	Measurable Goals
5.E	Review the existing VTrans Access Management Program, Highway Permits, and Development Agreements	Review of the existing program is underway.	The VTrans Access Management Program, Highway Permits, and Development Agreements that effectively prohibit discharge of non-stormwater discharges or pollutants into the VTrans storm sewer system. Summary and effectiveness of this BMP will be included in the annual report that is required under Part 5.3 of the Permit.
6.A	Enhance VTrans MS4 related Maintenance Activities	Review began in 2002 and will be completed in 2004. Alternations and modifications of activities will be ongoing.	VTrans will submit a report of the conclusions of the review in the annual report that is required under Part 5.3 of the Permit. At that time, Measurable Goals will be defined.
6.B	Erosion and Sediment Control Guidance Materials	Review and update the VTrans Standard Specifications, the Culvert and Ditching Procedures, and Handbook are taking place during the 2003 construction season and the documents will be updated during winter of 2003 – 2004. Review and update annual as needed.	Develop a process to measure the use and effectiveness of Standards, Procedures, and Handbook Techniques in the field
6.C	Erosion and Sediment Control Assurance Visits	Continue BMP. Update the Erosion and Sediment Control Assurance Visit protocol and Checklist during the winter of 2003 – 2004. Review and update annual as needed.	In the annual report that is required under Part 5.3 of the Permit will track frequency of visits, provide summary of information gathered, and corrective actions taken.
6.D	Stormwater Management and Erosion Control Training	A broad offering of training classes will continue to be scheduled. In 2004, emphasis will be on training VTrans employees involved with the management of the VTrans MS4. Training classes will be offered annual.	Class titles and number of VTrans employees and other attendees will be listed in the annual report that is required under Part 5.3 of the Permit.

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BMP Table

BMP ID	Name	Timeframe	Measurable Goals
6.E	Develop and Implement a Compliance Plan with the Multi-Sector General Permit 3-9003 for Stormwater Discharges Associated with Industrial Activity	The MSGP has not been finalized or issued by ANR. VTrans will continue to participate in the development of this permit program as an interested stakeholder. VTrans will fully develop and implement appropriate BMPs, once this permit program is finalized and the MSGP is issued.	Once the MSGP has been finalized and issued by ANR, VTrans will develop a strategy for addressing Measurable Goals that are based on the requirements of the MSGP.