

2009 ANNUAL REPORT

VTrans SWMP 2008-2013 Best Management Practices used to Comply with MS4 Minimum Control Measures #1 thru #6

Minimum Control Measure #1 "Public Outreach & Education"						
Minimum Control Measure and BMP	Target Audience	Timeframe	Measurable Goal(s)	Reportable Indicators	Cost Notes	Costs
BMP 1.A Regional Stormwater Education Program	Public, VTrans, Consultants, Municipalities, VANR	Monthly RSEP Meetings for Permit Term	As defined in RSEP MOU and reported annually. The Steering Committee, assisted by the CCPRC and media consultants, will implement media advertising campaign and provided stormwater education services that satisfy the requirements of Minimum Control Measure #1 ("Public Education and Outreach"). The Program Content for each Program Year will be as defined in the Communications Plan for that year as approved by a majority of the RSEP Steering Committee. Annual Program elements will include, at a minimum: 1) operation of the RSEP website, www.smartwaterways.org or its equivalent; 2) the hosting of occasional educational seminars open to the public concerning stormwater pollution prevention and related topics; and, 3) advertisements in various media. In the annual report that is required under Part 5.3 of the Permit, public education and outreach activities and initiatives will be summarized.			
2009 Activity: VTrans continued its participation in the RSEP and paid the \$5,000 annual operating fee.						
2009 Indicators / Measurable Accomplishments: See attached RSEP Annual Review Documents (Attachment A).				Attachment A		
2009 BMP Effectiveness: This BMP has proven to be very effective and will be continued thru the remainder of the Permit Term.						
BMP 1.B VTrans Stormwater Website	Public, VTrans, Consultants, Municipalities, VANR	Manage and Update for Permit Term - Bring Operations Stormwater Web Site on-line by Spring 2009	A summary of actions taken and progress made on the proposed action items, the number of visits recorded on hit counter, and suggestions or comments from public will be reported annually.			
2009 Activity: A new "VTrans Operations Stormwater" web site has been developed and activated in 2009 by VTrans Operations Division, as responsibility for managing compliance with the MS4 GP has been transferred to Operations in November of 2007. The web site is updated as needed and provides the opportunity to review all VTrans MS4 documents.						
2009 Indicators / Measurable Accomplishments: Went live with the new web site and maintained the new web site. The Agency has disabled the web hit counter for budget considerations and there were no public inquiries reported in 2009.				New Web Site Launched	staff time	\$ 5,000
2009 BMP Effectiveness: This BMP has proven to be somewhat effective and will be continued thru the remainder of the Permit Term with minor modification. Due to the hit counter being disabled Agency-wide on all web sites, VTrans will no longer be reporting this information.						
BMP 1.C Storm Drain Markers	Public, VTrans, Municipalities	Install with D-5 forces over Permit Term	Report number and location installed annually.			
2009 Activity: Storm drain markers continued to be installed as structure maintenance was performed.						
2009 Indicators / Measurable Accomplishments: 192 markers were installed on US 7 from Shelburne to So. Burlington.				192 storm drain markers	markers \$2,000 + D5 Labor \$5,000	\$ 7,000
2009 BMP Effectiveness: This BMP has proven to be very effective and will be continued thru the remainder of the Permit Term.						
BMP 1.D VTrans Operations Environmental Coordinator Position	Public, VTrans, MS4 Communities, Federal and State Regulatory Agencies, other professionals	Permit Term	Report on activities performed in support of this BMP annually.			
2009 Activity: The former VTrans Environmental Coordinator position was transferred from the VTrans Program Development-Environmental Section to the VTrans Operations Division and the Operations Environmental Coordinator (OEC) position was filled in November 2007. The primary duty of the OEC is to provide regulatory compliance and support on permitting and compliance with a specific emphasis on State and Federal Stormwater Regulations.						
2009 Indicators / Measurable Accomplishments: The OEC provided support activities associated with managing compliance with the MS4 GP and other Federal and State Stormwater Regulations.				na	time devoted to this BMP not included in above BMPs	\$ 3,000
2009 BMP Effectiveness: This BMP has proven to be very effective and will be continued thru the remainder of the Permit Term.						

Minimum Control Measure #2 "Public Involvement & Participation"						
Minimum Control Measure and BMP	Target Audience	Timeframe	Measurable Goal(s)	Reportable Indicators	Cost Notes	Costs
BMP 2.A VTrans Stormwater Advisory Group (SWAG)	Public, VTrans, public water suppliers, MS4 Communities, State and Federal Regulators	The SWAG meets on a quarterly basis (at a minimum) and more frequently as the need arises.	Meeting meeting dates, agendas, participants, tasks accomplished, and projects undertaken will be summarized annually.			
2009 Activity: VTrans SWAG was replaced with VTrans Stormwater Steering Committee and moved to MCM #6.						
2009 Indicators / Measurable Accomplishments: See MCM #6				See MCM #6	see MCM #6	\$ -
2009 BMP Effectiveness: This BMP has proven to be non-effective in addressing Public Involvement & Participation. It has however proven to be very effective as a Good Housekeeping BMP and will be continued thru the remainder of the Permit Term under its current form but will be moved to MCM#6. VTrans will make this adjustment in its SWMP for the new MS4 Permit due out in 2010.						
BMP 2.B Regional Planning Coordination	Public, MS4 Communities, RPCs	Ongoing and continued involvement	List CCMP and CCRPC public meeting dates that VTrans attended during which transportation projects and stormwater management were discussed.			
2009 Activity: VTrans Policy and Planning Division continues to carry out the Vermont Transportation Planning Initiative (TPI), in coordination with the Chittenden County Metropolitan Planning Organization (CCMPO) and with the Chittenden County Regional Planning Commission (CCRPC). The VTrans Policy and Planning Division Regional Transportation Planning Coordinators worked directly with the CCMP and indirectly (by way of the CCMPO) with CCRPC. The VTrans coordinators and these organizations solicited local input, identified needs, developed regional transportation plans and transportation improvement programs, and provided planning capacity to VTrans on an ongoing basis. The CCMP and the CCRPC provided significant and in-depth public involvement and participation in transportation planning.						
2009 Indicators / Measurable Accomplishments: VTrans will continue to work with the CCMP and the CCRPC to ensure that the public is involved in transportation planning including stormwater management issues.				CCMP & CCRPC	staff time	\$ 79,000
2009 BMP Effectiveness: This BMP has proven to be very effective and will be continued thru the remainder of the Permit Term.						
BMP 2.C Project Related Public Notice/Participation Requirements	Public	Permit Term	Information will be provided about water quality protection related permits acquired for VTrans projects and activities within the VTrans MS4 annually.			
2009 Activity: VTrans obtains environmental permits for most development projects. Several of these permit processes require public notice and allow for substantial public participation and input affecting the final development of transportation projects.						
2009 Indicators / Measurable Accomplishments: COLCHESTER STP 5600(9)S - US7/V2A/VT127 Intersection: Construction GP obtained 3/23/2009 MILTON STP 5800(2) - US7/Lake Rd Intersection: Operational SW permit obtained 4/9/2009; Construction GP obtained 7/30/2009 RICHMOND-WILLISTON IM CULV(16) - I-89 CULVERT Maintenance @ BR 59-2 & 59-4S; Stream Alt permit obtained 10/8/2009; USACE permit obtained 8/19/2009 WINOOSKI NH 089-3(65) - I-89 Exit 15 NB OFF-RAMP & INTERSECTION WITH VT15: Construction GP obtained 7/14/2009				six water quality related permits obtained for projects within MS4	costs are spread agency wide and are difficult to break out...see lump sum on last page.	\$ -
2009 BMP Effectiveness: This BMP has proven to be very effective and will be continued thru the remainder of the Permit Term.						
BMP 2.D Low Impact Development Workshops & Projects	Public, Educators, Developers, Municipalities, VTrans.	Conduct at least three workshops and involve the public in construction of at least two projects over the Permit Term.	Workshop dates, topics, participants, and public involvement in constructing and monitoring LID Projects will be reported annually.			
2009 Activity: VTrans partnered with the Winooski Natural Resource Conservation District, UVM Extension Service, Lake Champlain Basin Program, Vermont Buildings and General Services and SD Ireland to fund, design, and tap into local volunteers to implement LIDs in the VTrans MS4 - specifically at the Williston I-89 Northbound Welcome Center in the Allen Brook Watershed.						
2009 Indicators / Measurable Accomplishments: Fall 2009 completed one demonstration rain garden using volunteers, one demonstration rain barrel using volunteers, and one pervious pavement walkway at Williston Interstate 89 Northbound Welcome Center. This project includes educational signage for each of the three treatment practices.				3 LIDs at one site	\$8200 + staff time	\$ 10,000
2009 BMP Effectiveness: This BMP has proven to be very effective and will be continued thru the remainder of the Permit Term.						
BMP 2.E VTrans Stormwater Website	Public, VTrans, Consultants, Municipalities, VANR	Manage & Update for Permit Term - Operations Stormwater Web Site on-line by Spring 2009	A summary of actions taken and progress made on the proposed action items, the number of visits recorded on hit counter, and suggestions or comments from public will be provided annually.			
2009 Activity: A new "VTrans Operations Stormwater" web site has been developed and activated in 2009 by VTrans Operations Division, as responsibility for managing compliance with the MS4 GP has been transferred to Operations in November of 2007. The web site is updated as needed and provides the opportunity to review all VTrans MS4 documents.						
2009 Indicators / Measurable Accomplishments: Went live with the new web site and maintained the new web site. The Agency has disabled the web hit counter for budget considerations and there were no public inquiries reported in 2009.				see BMP 1.B	see BMP 1.B	\$ -
2009 BMP Effectiveness: This BMP has proven to be somewhat effective and will be continued thru the remainder of the Permit Term with minor modification. Due to the hit counter being disabled Agency-wide on all web sites, VTrans will no longer be reporting this information.						
BMP 2.F VTrans Operations Environmental Coordinator Position	Public, VTrans, MS4 Communities, Federal and State Regulatory Agencies, other professionals	Permit Term	Report on activities performed in support of this BMP annually.			
2009 Activity: The former VTrans Environmental Coordinator position was transferred from the VTrans Program Development-Environmental Section to the VTrans Operations Division and the Operations Environmental Coordinator (OEC) position was filled in November 2007. The primary duty of the OEC is to provide regulatory compliance and support on permitting and compliance with a specific emphasis on State and Federal Stormwater Regulations.						
2009 Indicators / Measurable Accomplishments: The OEC provided support activities associated with managing compliance with the MS4 GP and other Federal and State Stormwater Regulations.				OEC	time devoted to this BMP not included in above BMPs	\$ 5,000
2009 BMP Effectiveness: This BMP has proven to be very effective and will be continued thru the remainder of the Permit Term.						

Minimum Control Measure #3 "Illicit Discharge Detection & Elimination"						
Minimum Control Measure and BMP	Target Audience	Timeframe	Measurable Goal(s)	Reportable Indicators	Cost Notes	Costs
BMP 3.A Maintain GPS and GIS Mapping	Public, Municipalities, Regional Planning Commission, VANR, VTrans Operations and Program Development Staff	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 any changes to the 2007 mapped stormwater management system will be documented by VTrans for use in future mapping updates. Updated mapping GIS/GPS information will be collected and furnished to VANR and CCRPC only after a standard procedure has been agreed upon by VANR, CCRPC, and the MS4s. Additionally, VTrans will provide updates on the names of all known waters that receive a discharge from the VTrans MS4 and the number of outfalls to each identified water as considered necessary due to changes resulting from roadway reconstruction projects or stormwater infrastructure enhancements.			
<p>2009 Activity: In 2008 VTrans mapped the MS4 based on 2008 303(d) data layers provided by ANR; mapped its MS4 outfalls by watershed; and created a map book for use in the field while conducting IDDE inspections. In 2009 VTrans initiated and in 2010 completed a Map of State Owned Impervious Surfaces in Chittenden County MS4 Area and calculated area and percent of impervious per impaired watershed and per municipality (within MS4 designated limits). VTrans also initiated in 2009 and completed in 2010 an update to its 2008 MS4 Outfall Map Book based on 2009 IDDE field investigations and also updated its Outfall and Drop Inlet Counts by Impaired Watershed (making note of outfalls not found or mistakenly including Stevens and Rugg Brook data, and conversion of VT 15 in Essex Jet to Class I). Copies of all mapping documents have been previously distributed to ANR and CCRPC. (see documents under Attachment B)</p> <p>2009 Indicators / Measurable Accomplishments: As of 12-31-2009 the Total Outfalls in the VTrans MS4 = 707 and the Total Drop Inlets in VTrans MS4 = 1140 (see documents under Attachment B)</p>				Attachment B		
2009 BMP Effectiveness: This BMP has proven to be very effective and will be continued thru the remainder of the Permit Term. Specifically, any changes to current mapping will be reported to ANR and CCRPC.				707 VTrans MS4 Outfalls Mapped with updated summaries of outfalls per receiving watershed(s)	GIS time + ccrpc \$1000 + Asset Mngmnt time + staff time	\$ 12,000
BMP 3.B Testing & Monitoring Plan						
	Public, Commercial Developers, Municipalities, VANR, VTrans Operations and Program Development Staff.	Finalize the IDDE Testing and Monitoring Protocol for suspect dry weather non-stormwater discharge by July 2008. Continue outfall testing and monitoring in the Summer of 2008 through the term of the Permit with the goal of inspecting all outfalls one time over the 5 year Permit Term. Testing will occur as discharges are discovered and declared to be suspect as being non-stormwater.	In the 2008-2013 Permit Term, VTrans will develop and adopt an enhanced IDDE Policy and Procedure (BMP 3.F) and an IDDE Testing & Monitoring Protocol (BMP 3.B) to support accomplishments made in the 2003-2008 Permit Term. VTrans will provide a copy of the enhanced IDDE Policy & Procedure and the IDDE Testing and Monitoring Protocol for VTrans MS4 as an attachment to our 2008 annual report. VTrans will provide a summary of the testing and monitoring plan methodology, survey information, locations of suspected non-stormwater discharges, data gathered, and actions taken to eliminate the suspected non-stormwater discharge in each annual report that is required under Part 5.3 of the Permit. Data will be reported using standard Discharge Monitoring Forms (MDRs) provided by the VANR.			
<p>2009 Activity: A plan and prohibition on illicit discharge are in place (see BMP 3.D). VTrans continues to work on an enhanced IDDE Policy & Procedure (BMP 3.F) and an IDDE Testing and Monitoring Protocol (BMP 3.B) to be formally adopted to detect and eliminate non-stormwater discharges into the VTrans stormwater systems in the VTrans MS4. In 2009 VTrans hired VBH-Pioneer to conduct a Phase I IDDE Outfall Screening, Assessment, and Field Investigation using the Center for Watershed Protection IDDE Guidance Manual (2009) as its testing and monitoring protocol. Under Phase I 869 Mapped Outfalls were screened which resulted in field inspection of 833 outfalls, of which 45 suspect outfalls requiring further investigation and evaluation under Phase II. During this assessment, a number of previously mapped outfalls were determined to be duplicative, missing, or mapping errors (see BMP 3.A for more information on Mapping Updates in 2009). The Phase I Final Report was completed in October 2009 and a copy was delivered to ANR Stormwater Section. VTrans contracted with VBH-Pioneer to conduct Phase II Field work and water quality testing at the end of October 2009, water quality sampling on 44 priority outfalls was conducted in 2009 - results and additional work will be reported under the 2010 Annual Report. For VTrans, a non-traditional linear MS4, monitoring for and encounters with illicit discharges occurs at multiple levels. Monitoring for illicit discharges occurs as a standard operation procedure under the Permit. Encountering illicit discharges occurs during project development & design, right-of-way negotiation and acquisition, project construction, maintenance operations, Multi-Sector General Permit (MSGP) inspections, Hazardous Materials Spill Reporting Procedures, or from unsolicited reports from the general public. VTrans BMPs contributing to the testing and monitoring of Illicit Discharges are addressed under the 2008-2013 VTrans MS4 Stormwater Management Plan.</p>						
<p>2009 Indicators / Measurable Accomplishments: In 2009 VTrans hired VBH-Pioneer to conduct a Phase I IDDE Outfall Screening, Assessment, and Field Investigation using the Center for Watershed Protection IDDE Guidance Manual (2009) as its testing and monitoring protocol. Under Phase I 869 Mapped Outfalls were screened which resulted in field inspection of 833 mapped outfalls, of which 45 suspect outfalls requiring further investigation and evaluation under Phase II. The Phase I Final Report was completed in October 2009 and a copy was delivered to ANR Stormwater Section. VTrans contracted with VBH-Pioneer to conduct Phase II Field work and water quality testing at the end of October 2009, water quality sampling on 44 priority outfalls was conducted in 2009 - results and additional work under Phase II will be reported under the 2010 Annual Report. Conducted internal meetings and researched other DOT testing and monitoring programs. The VTrans Roadway Asset Management Unit inspected 205 small culverts (under 6-ft) and 134 DIs in the VTrans MS4 along I-89 and did not report any suspicious water quality issues. The District inspected 10 Culvert Outfalls and 160 Stormwater Structures as part of routine maintenance and did not report any suspicious water quality issues. The Operations Large Culvert Inspection Unit inspected 5 large culverts and did not report any suspicious water quality issues. No Illicit Discharges were reported in 2009.</p>				Screened 869 previously mapped outfalls; inspected and documented conditions at 833 outfalls; contracted to conduct Phase II IDDE water quality sampling at 45 suspect outfalls and conducted first round of field work on 44 priority outfalls.	VHB-Pioneer Phase I \$26,000 + OPS Lg Culvert Unit and D5 and Asset Mngmnt time (\$12,000) + VHB-Pioneer Phase II (partial) \$5,000 plus VTrans staff support	\$ 60,000
2009 BMP Effectiveness: This BMP has proven to be very effective and will be continued thru the remainder of the Permit Term.						
BMP 3.C Coordination with other MS4s in Vermont	MS4 Municipalities, CCRPC, VANR, VTrans Staff.	Coordination is ongoing for the Permit term.	Provide a summary as required under Part 5.3 of the Permit addressing all collaborative efforts underway or completed that address this BMP.			
<p>2009 Activity: Many of the VTrans and other MS4 storm sewer systems are connected and stormwater flows across MS4 jurisdictional boundaries. VTrans representative(s) have participated in monthly VANR/CCRPC hosted Phase 2 "Regional Stormwater Education Program" group meetings where MS4 Communities engage in discussions and share information related to MS4 compliance and initiatives (BMP 1.A). VTrans has coordinated with most MS4 Communities on proposed new private development projects (BMPs 2.A, 2.B, 2.C, and 2.F). The drainage infrastructure inventory / ArcGIS Personal Geo Data Base has been sent to the CCRPC and to the VANR-Stormwater Section and all MS4s, CCRPC, and ANR are working together on a mapping update standardization procedure (BMP 3.A).</p> <p>VTrans Operations Environmental Coordinator (BMP 3.G) and Program Development Environmental Stormwater Engineer (BMP 5.B) continue to participate in the monthly Regional Stormwater Education Program, where data and information is shared between all MS4s. VTrans is also developing an enhanced IDDE Policy & Procedure (BMP 3.F) and an IDDE Testing and Monitoring Protocol (BMP 3.B) which will be developed in partnership with other MS4s in Vermont due to the interconnectivity of the MS4 storm sewer systems and lack of enforcement authority VTrans has over discharges from non-VTrans property. VTrans has coordinated with all MS4s in 2009 in conducting its Phase I and II IDDE Assessment and will continue to do so in 2010.</p>						
<p>2009 Indicators / Measurable Accomplishments: RSEP involvement, mapping coordination, and IDDE coordination.</p> <p>2009 BMP Effectiveness: This BMP has proven to be very effective and will be continued thru the remainder of the Permit Term.</p>				see MCM 1 and MCM 3	see costs under MCM1 and 3	\$ -

Minimum Control Measure #3 "Illicit Discharge Detection & Elimination" CONTINUED						
Minimum Control Measure and BMP	Target Audience	Timeframe	Measurable Goal(s)	Reportable Indicators	Cost Notes	Costs
BMP 3.D Title 19, Section 1111 Permitting	Public, Municipalities, VANR, VTrans.	Ongoing for Permit Term.	A tracking system to account for these types of Section 1111 Permits on an annual basis will be put in place to assist in generating the annual report to VANR. A summary of the number of suspect illicit discharges reported, investigated and acted upon, and the number of Section 1111 permits issued for legal stormwater connections to the VTrans right-of-way, and the number of illicit discharge enforcement actions taken or forwarded to the MS4 Municipalities or VANR, along with an effectiveness statement of this BMP will be reported annually.			
2009 Activity: During the 2003-2008 Permit Term, the Standard Conditions of the Section 1111 were updated to effectively prohibit and regulate illicit discharges. This permitting program is reviewed annually, and where appropriate modified to add further constraints to prevent discharge of non-stormwater discharges or pollutants into the VTrans MS4. The goal of this effort is to ensure proper management of stormwater from non-VTrans projects prior to it entering the VTrans stormwater systems. VTrans Operations Division OEC and Districts and Program Development Stormwater Engineer review Section 1111 proposals and work with VTrans Utilities and Permitting staff and applicants to prohibit physical connections to the State stormwater management system where feasible, disconnect non-stormwater discharges, and to educate private property owners regarding on-site treatment practices available to them.						
2009 Indicators / Measurable Accomplishments: VTrans Operations Division OEC and Districts and Program Development Stormwater Engineer review Section 1111 proposals and work with VTrans Utilities and Permitting staff and applicants to prohibit physical connections to the State stormwater management system where feasible, disconnect non-stormwater discharges and to educate private property owners regarding on-site treatment practices available to them. Of all the projects reviewed in the MS4 Coverage Area, no illicit connections were permitted and no illicit connections were reported nor actions taken against to force disconnection.				none	staff time	\$ 21,000
2009 BMP Effectiveness: This BMP has proven to be very effective and will be continued thru the remainder of the Permit Term.						
BMP 3.E Inform Public Employees, Businesses, & General Public	Public, Municipalities, Professionals, Businesses, VANR, VTrans	Ongoing for the Permit Term	A summary of methods used to inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste, along with a summary of the effectiveness of this BMP will be reported annually.			
2009 Activity: VTrans has continued the various trainings for its District Maintenance Personnel on various topics, including stormwater and illicit discharges (BMPs 1.A through 1.D, 2.A, 2.D, 2.E, 2.F, 3.C through 3.H, 4.E, 4.I, 5.C, and 6.D). VTrans SWAG (now SWSC) and RSEP provide multiple opportunities to inform the public on this topic, as does the VTrans and RSEP Stormwater web sites (BMPs 1.A, 1.B, and 2.E). VTrans will continue to take advantage of activities under the 2008-2013 SWMP to the extent practicable to host as many forums as is practicable to meet the intent of this BMP.						
2009 Indicators / Measurable Accomplishments: VTrans Operations has provided a total of 20 hours of training and outreach to 500 District Staff and BGS Staff in the areas of IDDE, Spill Prevention, Containment and Countermeasures, Spill & Emergency Response.				20 hours	staff time	\$ 2,000
2009 BMP Effectiveness: This BMP has proven to be very effective and will be continued thru the remainder of the Permit Term.						
BMP 3.F Enhanced IDDE Policy & Procedure adoption for VTrans MS4. Policy implementation for Permit Term	Public, Municipalities, VANR, VTrans Roadway, Structures, Environmental, Construction, and Operations staff.	Enhanced IDDE Policy & Procedure adoption for VTrans MS4. Policy implementation for Permit Term	Provide a copy of the Illicit Discharge Detection & Elimination Policy & Procedure for VTrans MS4. A summary and effectiveness of this BMP will be included in the annual report.			
2009 Activity: A plan and prohibition on illicit discharge are in place (see BMP 3.D). VTrans continues to work on an enhanced IDDE Policy & Procedure (BMP 3.F) and an IDDE Testing and Monitoring Protocol (BMP 3.B) to be formally adopted and put into practice to detect and eliminate non-stormwater discharges into the VTrans stormwater systems in the VTrans MS4. VTrans is using the Center for Watershed Protection IDDE Guidance Manual (2009) as its current IDDE Procedure and will look to formalize the use of this in its 2010 SEMP update under the new MS4 Permit. For VTrans, a non-traditional linear MS4, monitoring for and encounters with illicit discharges occurs at multiple levels. Monitoring for illicit discharges occurs as a standard operation procedure under the Permit. Encountering illicit discharges occurs during project development & design, right-of-way negotiation and acquisition, project construction, maintenance operations, Multi-Sector General Permit (MSGP) inspections, Hazardous Materials Spill Reporting Procedures, or from unsolicited reports from the general public. VTrans BMPs contributing to the testing and monitoring of Illicit Discharges are addressed under the 2008-2013 VTrans MS4 Stormwater Management Plan.						
2009 Indicators / Measurable Accomplishments: A plan and prohibition on illicit discharge are in place (see BMP 3.D). VTrans continues to work on an enhanced IDDE Policy & Procedure (BMP 3.F) and an IDDE Testing and Monitoring Protocol (BMP 3.B) to be formally adopted and put into practice to detect and eliminate non-stormwater discharges into the VTrans stormwater systems in the VTrans MS4. In 2009 VTrans hired VBH-Pioneer to conduct a Phase I IDDE Outfall Screening, Assessment, and Field Investigation using the Center for Watershed Protection IDDE Guidance Manual (2009) as its testing and monitoring protocol. It is anticipated that VTrans will adopt the CWP Guidance Document as its standard IDDE testing and monitoring program.				na	staff time	\$ 5,000
2009 BMP Effectiveness: Work under this BMP is moving along slowly, but will prove to be very effective. Therefore it will be continued thru the remainder of the Permit Term.						
BMP 3.G VTrans Operations Environmental Coordinator Position	Public, VTrans, MS4 Communities, Federal and State Regulatory Agencies, other professionals	Permit Term	Report on activities performed in support of this BMP annually.			
2009 Activity: The former VTrans Environmental Coordinator position was transferred from the VTrans Program Development-Environmental Section to the VTrans Operations Division and the Operations Environmental Coordinator (OEC) position was filled in November 2007. The primary duty of the OEC is to provide regulatory compliance and support on permitting and compliance with a specific emphasis on State and Federal Stormwater Regulations.						
2009 Indicators / Measurable Accomplishments: The OEC provided support activities associated with managing compliance with the MS4 GP and other Federal and State Stormwater Regulations.				na	staff time	\$ 10,000
2009 BMP Effectiveness: This BMP has proven to be very effective and will be continued thru the remainder of the Permit Term.						
BMP 3.H VTrans Operations Hazmat/Safety Coordinator Position	VTrans, VANR, other professionals	Permit Term	Report on activities performed in support of this BMP annually.			
2009 Activity: This position was created and filled in 2006 and continues to be instrumental in providing oversight on a number of pollution prevention and good housekeeping measures (see BMP 6.F). The duties of this position support the IDDE Minimum Control Measure #3.						
2009 Indicators / Measurable Accomplishments: VTrans generated and disposed of roughly 1800 lbs of hazardous waste in the MS4 area in 2009 under the supervision of this position. This waste was generated as a result of disposal of petroleum contaminated soil from a spill at the D-5 Maintenance Facility in Essex Jet. VTrans Operations has provided 20 hours of training and outreach to all District 5 Staff in the areas of Spill Prevention, Containment and Countermeasures, Spill Response and Notification Procedures, and Emergency Response.				1800 lbs contaminated soil and 20 hours of training	staff time	\$ 3,000
2009 BMP Effectiveness: This BMP has proven to be very effective and will be continued thru the remainder of the Permit Term.						

Minimum Control Measure #4 "Construction Site Runoff Control"						
Minimum Control Measure and BMP	Target Audience	Timeframe	Measurable Goal(s)	Reportable Indicators	Cost Notes	Costs
BMP 4.A Construction General Permit & Individual Permit Compliance	VTrans Construction Environmental Engineers, Resident Engineers, Contractors and Project Managers, District Maintenance Staff.	Annual review of BMP will be performed for Permit Term	A list of VTrans projects statewide that had coverage under Construction General Permit or an Individual Permit will be reported annually.			
2009 Activity: VTrans continues to comply, and/or requires others working in our right-of-way under a Section 1111 Permit to comply, with ANR issued General Permit 3-9020 (2008) and/or Individual Permit regulating stormwater runoff from construction sites which result in land disturbance equal to or greater than one acres of land.						
2009 Indicators / Measurable Accomplishments: VTrans continues to comply, and requiring others working in our right-of-way under a Section 1111 Permit to comply, with ANR issued General Permit 3-9020 (2008) and/or Individual Permit regulating stormwater runoff from construction sites which result in land disturbance equal to or greater than one acres of land. VTrans projects in the MS4 area under construction during 2009 having coverage under an Individual or General Permit-3-9020 for Construction include: NONE. Those with coverage under Low Risk under CGP 3-9020 include: NONE. We did not have any other projects in the MS4 that had Construction Permits.				No projects with INDV or CGP coverage.	costs are spread agency wide and are difficult to break out...see lump sum on last page.	\$ -
2009 BMP Effectiveness: This BMP has proven to be very effective and will be continued thru the remainder of the Permit Term.						
BMP 4.B VTrans Construction Environmental Engineer (CEE) and Assistant CEE Positions	VTrans, Consultants, Contractors.	Ongoing through the Permit Term.	Report on activities performed in support of this BMP annually.			
2009 Activity: The CEE and ACEE worked to ensure VTrans compliance with the Construction General Permits or Individual Permits, reviewed and updated construction erosion control details and specifications (BMP 4.C), provided training (BMP 4.E) for VTrans Staff Statewide, Consultants and Contractors, and conducted construction site assurance visits (BMP 4.D).						
2009 Indicators / Measurable Accomplishments: The CEE leads an EPSC Working Group that meets quarterly to discuss ongoing compliance under this Minimum Control Measure. Ongoing activities can be found on the VTrans Construction Web Site at http://www.aot.state.vt.us/progdev/Sections/Construction/construct.htm and on the Environmental Stormwater Web Site at http://www.aot.state.vt.us/TechServices/EnvPermit/Stormwater04.htm . Also see related BMPs for more information.				na	staff time on this BMP in addition to other costs noted under other MCMs/BMPs.	\$ 10,000
2009 BMP Effectiveness: This BMP has proven to be very effective and will be continued thru the remainder of the Permit Term.						
BMP 4.C Erosion Prevention & Sediment Control Guidance Materials	VTrans, primarily targeted at construction and maintenance.	Review and update for Permit Term.	A summary update of Standards, Procedures, and Handbooks will be included in the annual report.			
2009 Activity: in 2009 we updated the VTrans EPSC Protocol Language and accompanying documents, updated the EPSC details sheets and improved on the methods by which designers create EPSC Plans, and helped to create Special Provisions regarding EPSC Items such as Block Flocculant, Grass Outlet Sediment Trap, Temporary Sediment Basin, Pipe Slope Drain, and the Agency's trial of an Alternative EPSC Plan Process and related specifications.						
2009 Indicators / Measurable Accomplishments: in 2009 we updated the VTrans EPSC Protocol Language and accompanying documents, updated the EPSC details sheets and improved on the methods by which designers create EPSC Plans, and helped to create Special Provisions regarding EPSC Items such as Block Flocculant, Grass Outlet Sediment Trap, Temporary Sediment Basin, Pipe Slope Drain, and the Agency's trial of an Alternative EPSC Plan Process and related specifications.				Various EPSC Documents and Specifications updates	staff time	\$ 3,000
2009 BMP Effectiveness: This BMP has proven to be very effective and will be continued thru the remainder of the Permit Term.						
BMP 4.D Erosion Prevention & Sediment Control Assurance Visits	VTrans, Consultants, Contractors	Ongoing for Permit Term.	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.			
2009 Activity: This BMP has evolved with the hiring of the VTrans Construction Environmental Engineer and Assistant Construction Environmental Engineer (refer to BMP 4.B). The primary purpose of Erosion Prevention and Sediment Control Assurance Visits is to ensure that VTrans protects natural resources and complies with state and federal regulations through implementation of project Erosion Prevention and Sediment Control Plans and compliance with environmental permit conditions. The CEE and ACEE visit VTrans contracted construction projects to provide input, training, support, and resources relative to erosion prevention and sediment control.						
2009 Indicators / Measurable Accomplishments: The CEE and ACEE conducted multiple assurance visits to every VTrans managed construction project statewide. At which time the ensure permit compliance and recommend corrective actions to maintain water quality standards. In the VTrans MS4, the only projects under construction in 2009 included the ESSEX STP030-1(20) Project.				One Project Essex (20)	staff time	\$ 5,000
2009 BMP Effectiveness: This BMP has proven to be very effective and will be continued thru the remainder of the Permit Term.						
BMP 4.E Stormwater Management - Erosion Prevention & Sediment Control Training	VTrans, Contractors, Consultants, and other professionals.	A broad offering of training classes will continue to be scheduled throughout each year for the Permit Term.	Class titles and number of VTrans employees and other attendees will be reported annually.			
2009 Activity: 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 VTrans and non-VTrans subject experts from around the country.						
2009 Indicators / Measurable Accomplishments: Estimated total of 457 training hours in 2009 (hours x participants).				457 total training hours	staff time	\$ 14,000
<p>VTrans CEE and ACEE presented at:</p> <p>Consultant Inspector Training – approx. 40 attendees – 30 minutes</p> <p>Construction Spring Meeting – approx. 70 attendees – 30 minutes</p> <p>EPSC Protocol Designer Training – approx. 125 attendees – 2 hours</p> <p>2 Regional Closeout Sessions – approx. 40 attendees – 1 hour</p> <p>VTrans CEE and ACEE attended:</p> <p>2009 Northeast Chapter IECA Annual Conference – ACEE attended 16 hours; I attended 8 hours</p> <p>Designing Porous Concrete Pavements for Northern Communities – CEE & ACEE attended – 1 hour</p> <p>Compost Webinar – CEE & ACEE participated – 1.5 hours</p> <p>VTrans attendance at other stormwater management/erosion control trainings:</p> <p>RANDOLPH Park and Ride: pervious pavement facility tour and discussion – 10 participants 2 hrs</p> <p>WNRCD Tour of SW Mitigation Demonstration Projects in Allen and Potash watersheds – 3 VTrans staff 6 hrs</p> <p>Designing Porous Concrete Pavements for Northern Communities presentation - 20 participants 1 hr</p> <p>EPA Green streets retrofit maintenance webcast - 5 VTrans participants 2 hrs</p> <p>Current Issues in Stormwater - 3 VTrans participants 5 hours</p>						
2009 BMP Effectiveness: This BMP has proven to be very effective and will be continued thru the remainder of the Permit Term.						

Minimum Control Measure #4 "Construction Site Runoff Control" CONTINUED						
Minimum Control Measure and BMP	Target Audience	Timeframe	Measurable Goal(s)	Reportable Indicators	Cost Notes	Costs
BMP 4.F Certified Professionals in Erosion and Sediment Control (CPESC) and Certified Professionals in Stormwater Quality (CPSWQ)	VTrans Staff.	VTrans will continue to support the training of the current CPESCs/CPSWQ's and will support CPESC/CPSWQ training for other qualified employees.	The number of CPESC's and CPSWQ's along with an activities summary of the VTrans CPESCs/CPSWQs will be reported annually..			
2009 Activity: Certified Professionals in Erosion and Sediment Control (CPESC) and Certified Professionals in Stormwater Quality (CPSWQ) is an internationally recognized professional certification in the stormwater management field http://www.cpesc.net/ . In 2009 VTrans employees paid for annual dues to maintain CPESCs and CPSWQs and VTrans provided opportunities for others interested in pursuing CPESC or CPSWQ training and certification. The membership provides access to up-to-date information on erosion prevention and sediment control, Stormwater Quality, and training opportunities.						
2009 Indicators / Measurable Accomplishments: VTrans has 5 CPESCS and 1 SPSWQ.				5 CPESCS and 1 SWPWQ	membership dues \$100 per	\$ 600
2009 BMP Effectiveness: This BMP has proven to be very effective and will be continued thru the remainder of the Permit Term.						
BMP 4.G Reporting Erosion Prevention and Sediment Control Noncompliance for Non-VTrans Projects	VTrans, MS4 Communities, VANR.	Ongoing for the Permit Term.	VTrans activities relative to this BMP, including number of alleged violations reported to ANR, will be reported annually.			
2009 Activity: VTrans is using the existing VTrans Access Management Program, Highway Permits, and Development Agreements (Title 19 Section 1111 Permit) to Manage EPSC Activities of non-VTrans Projects that need access to our right-of-way. The Section 1111 Permit Standard Conditions was updated during the 2003-2008 Permit Term and resulted in the writing and adopting of Stormwater Conditions for all VTrans Access Permits. These conditions improve VTrans' control over discharge into the VTrans MS4s of stormwater generated by non-VTrans property owners. This implementation has been done Statewide. The condition also better informs the applicants and others of the responsibilities and requirements for managing stormwater. VTrans Maintenance District personnel responsible for the State Highways in the Phase 2 Communities, have been educated on the importance of identifying EPSC problems suspected to originate outside of the VTrans right-of-way. This stormwater may originate from non-VTrans property, causing a nuisance by discharging eroding material and sediment in stormwater runoff from non-VTrans projects into the VTrans Stormwater Management System. All reports of alleged non-compliance will be made by the DTA or the OEC directly to ANR Enforcement Division.						
2009 Indicators / Measurable Accomplishments: None reported in 2009.				none reported	na	\$ -
2009 BMP Effectiveness: This BMP has proven to be very effective and will be continued thru the remainder of the Permit Term.						
BMP 4.H Erosion Prevention and Sediment Control Review Protocol for VTrans Construction Projects - both jurisdictional and non-jurisdictional under GP-3-9020(2008)	VTrans Program Development Project Managers, Designers, Environmental Specialists, Consultants, and Contractors.	Ongoing for the Permit Term. Policy will be reviewed for efficiency annually.	A list of VTrans projects in the MS4 that had coverage under Construction General Permit or an Individual Permit along with a total number of projects that are under the 1 acre land disturbance threshold (not requiring CGP-3-9020 coverage) but fall under the VTrans 2006 EPSC Protocol for "non-jurisdictional" projects will be reported annually.			
2009 Activity: The VTrans EPSC Protocol was developed in late Fall 2006. The protocol replaces the MOA drafted in 2004 and sets guidelines for Consultants, VTrans Designers, VTrans Construction Management Staff and District field staff for creating and implementing consistent Erosion Prevention and Sediment Control Plans that meet the requirements of the New Construction General Permit CGP 3-9020 (2008) and for those non-jurisdictional projects disturbing less than 1 acre with any potential to impact resources. The guidelines include EPSC Plan Checklists, flowcharts, detail drawings, specifications and general guidance; all of which are posted on the VTrans Environmental Webpage at http://www.aot.state.vt.us/TechServices/EnvPermit/erosionpreventionandsedimentcontrol.htm .						
2009 Indicators / Measurable Accomplishments: VTrans continues to comply, and requiring others working in our right-of-way under a Section 1111 Permit to comply, with ANR issued General Permit 3-9020 (2008) and/or Individual Permit regulating stormwater runoff from construction sites which result in land disturbance equal to or greater than one acres of land. VTrans under 1 acre "non-jurisdictional" projects under construction in the VTrans MS4 during 2009 having been reviewed under the VTrans EPSC Protocol and are: ESSEX STP030-1(20). During 2009, VTrans continued implementation of its EPSC Protocol developed in 2006. It sets guidelines for Consultant and in-house Designers and field staff for creating and implementing consistent Erosion Prevention and Sediment Control Plans that meet the requirements of the New CGP 3-9020 and for those projects disturbing less than 1 acre with any potential to impact resources. The guidelines include EPSC Plan Checklists, flowcharts, detail drawings, specifications and general guidance; all of which are posted on VTrans Environmental Section Webpage.				One project with VTrans EPSC Protocol Coverage.	costs are spread agency wide and are difficult to break out...see lump sum on last page.	\$ 5,000
2009 BMP Effectiveness: This BMP has proven to be very effective and will be continued thru the remainder of the Permit Term.						
BMP 4.I VTrans Operations Environmental Coordinator Position	Public, VTrans, MS4 Communities, Federal and State Regulatory Agencies, other professionals	Permit Term	Report on activities performed in support of this BMP annually.			
2009 Activity: The former VTrans Environmental Coordinator position was transferred from the VTrans Program Development-Environmental Section to the VTrans Operations Division and the Operations Environmental Coordinator (OEC) position was filled in November 2007. The primary duty of the OEC is to provide regulatory compliance and support on permitting and compliance with a specific emphasis on State and Federal Stormwater Regulations.						
2009 Indicators / Measurable Accomplishments: The OEC provided support activities associated with managing compliance with the MS4 GP and other Federal and State Stormwater Regulations.				na	staff time under this BMP not included in the above BMPs	\$ 5,000
2009 BMP Effectiveness: This BMP has proven to be very effective and will be continued thru the remainder of the Permit Term.						

Minimum Control Measure #5 "Post Construction Stormwater Management"						
Minimum Control Measure and BMP	Target Audience	Timeframe	Measurable Goal(s)	Reportable Indicators	Cost Notes	Costs
BMP 5.A Maintain Compliance for Post-Construction Stormwater Management	VTrans Project Designers and design consultants.	Ongoing for the Permit Term.	A list of VTrans projects that complied with the GP-3-9015 or Individual Permit or that followed the internal VTrans procedure for projects not subject to these permits will be reported annually.			
2009 Activity: 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 has also developed an internal procedure to address the permit jurisdictional threshold gap between the VANR GP-3-9015 jurisdictional thresholds and the EPA one acre of land disturbance permit threshold. The goal of this internal procedure is to protect water quality by designing post-construction stormwater management systems on all new and redeveloped VTrans projects in the VTrans MS4 to comply with the Vermont Stormwater Management Manual to the extent that is practical.						
2009 Indicators / Measurable Accomplishments: Operational Stormwater Permits for Milton STP 5800(2) re: Lake Road Intersection. All other non-jurisdictional projects followed this internal procedure. Also, maintained ongoing compliance with 3 Op SW Discharge Permits constructed in MS4.				One project permitted plus maintained compliance with 3 projects previously permitted and constructed before 2009.	costs are spread agency wide and are difficult to break out...see lump sum on last page.	\$ -
2009 BMP Effectiveness: This BMP has proven to be very effective and will be continued thru the remainder of the Permit Term.						
BMP 5.B VTrans Stormwater Engineer Position	VTrans, and other professionals.	The responsibilities of this position are ongoing for the Permit Term.	A summary of this employee's activities in support of this BMP will be reported annually.			
2009 Activity: 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 limited to: 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 VTrans on changes in design and treatment needs for long-term stormwater management systems.						
2009 Indicators / Measurable Accomplishments: The activities of this position support other BMPs under the VTrans SWMP [refer to other BMPs for more information]. VTrans continues to work under the "VTrans Project Post Construction (Operational) Stormwater Protocol", a guidance document compiled with input Agency wide and intended to facilitate the typical Program Development Projects' stormwater processes during the various stages of project development carrying forward into operation and maintenance. The Stormwater Management Engineer lead this effort and the Protocol was adopted in December 2008.				na	staff time	\$ 55,000
2009 BMP Effectiveness: This BMP has proven to be very effective and will be continued thru the remainder of the Permit Term.						
BMP 5.C Stormwater Management - Erosion Prevention & Sediment Control Training	VTrans, Contractors, Consultants, and other professionals.	A broad offering of training classes will continue to be scheduled throughout each year for the Permit Term.	Class titles and number of VTrans employees and other attendees will be reported annually.			
2009 Activity: [see BMP 4.E]						
2009 Indicators / Measurable Accomplishments: [see BMP 4.E]				see BMP 4.E	see BMP 4.E	\$ -
2009 BMP Effectiveness: This BMP has proven to be very effective and will be continued thru the remainder of the Permit Term.						
BMP 5.D Report Noncompliance for Non-VTrans Projects	VTrans, MS4 Communities, VANR.	Ongoing for the Permit Term.	A summary of VTrans activities relative to this BMP, including number of alleged violations reported to ANR, will be reported annually.			
2009 Activity: VTrans is using the existing VTrans Access Management Program, Highway Permits, and Development Agreements (Title 19 Section 1111 Permit) to Manage Post-Construction Stormwater Activities of non-VTrans Projects that need access to our right-of-way. The Section 1111 Permit Standard Conditions was updated during the 2003-2008 Permit Term and resulted in the writing and adopting of Stormwater Conditions for all VTrans Access Permits. These conditions improve VTrans' control over discharge into the VTrans MS4s of stormwater generated by non-VTrans property owners. This implementation has been done Statewide. The condition also better informs the applicants and others of the responsibilities and requirements for managing stormwater. VTrans uses its Construction Environmental Engineer (CEE) and Assistant Construction Environmental Engineer (ACEE) Positions (see BMP 4.B) and Stormwater Engineer Position (BMP 5.B) to ensure compliance. While on-site or traveling through the State, they are in a position to report suspect activity in or near VTrans right-of-way for enforcement or suggest corrective action on the spot. VTrans Maintenance District personnel responsible for the State Highways in the Phase 2 Communities, are educated on the importance of identifying suspect stormwater flowing into our right-of-way.						
2009 Indicators / Measurable Accomplishments: None Reported in 2009				none	costs are reported in MCMS 3, 4, & 5	\$ -
2009 BMP Effectiveness: This BMP has proven to be very effective and will be continued thru the remainder of the Permit Term.						

Minimum Control Measure #5 "Post Construction Stormwater Management" CONTINUED						
Minimum Control Measure and BMP	Target Audience	Timeframe	Measurable Goal(s)	Reportable Indicators	Cost Notes	Costs
BMP 5.E Title 19, Section 1111 Permitting	VTrans, MS4 Communities, VANR, Commercial and Residential Development, Public, other professionals.	Ongoing for the Permit Term.	The VTrans Access Management Program, Highway Permits, and Development Agreements (Title 19 Section 1111 Permit) require a permit be issued to a non-VTrans property owner if they wish to divert stormwater flow into the VTrans right-of-way. A summary of the number of Section 1111 permits issued for legal stormwater connections to the VTrans right-of-way, and the number of illicit discharge enforcement actions taken or forwarded to the MS4 Municipality or VANR, along with an effectiveness statement of this BMP will be reported annually.			
<p>2009 Activity: VTrans is using the existing VTrans Access Management Program, Highway Permits, and Development Agreements (Title 19 Section 1111 Permit) to Manage Post-Construction Stormwater Activities of non-VTrans Projects that need access to our right-of-way. The Section 1111 Permit Standard Conditions was updated during the 2003-2008 Permit Term and resulted in the writing and adopting of Stormwater Conditions for all VTrans Access Permits. These conditions improve VTrans' control over discharge into the VTrans MS4s of stormwater generated by non-VTrans property owners. This implementation has been done Statewide. The condition also better informs the applicants and others of the responsibilities and requirements for managing stormwater.</p> <p>VTrans also uses the Section 1111 Permit process to ensure that there is no increase in peak discharge at the design storm event from pre to post construction conditions prior to issuing the Section 1111.</p>						
<p>2009 Indicators / Measurable Accomplishments: VTrans Operations Division OEC and Districts and Program Development Stormwater Engineer review Section 1111 proposals and work with VTrans Utilities and Permitting staff and applicants to prohibit physical connections to the State stormwater management system where feasible, disconnect non-stormwater discharges and to educate private property owners regarding on-site treatment practices available to them. Of all the projects reviewed in the MS4 Coverage Area, no illicit connections were permitted and no illicit connections were reported nor actions taken against to force disconnection.</p>				none	see BMP 3.D	\$ -
<p>2009 BMP Effectiveness: This BMP has proven to be very effective and will be continued thru the remainder of the Permit Term.</p>						
BMP 5.F VTrans Operations Environmental Coordinator Position	Public, VTrans, MS4 Communities, Federal and State Regulatory Agencies, other professionals	Permit Term	Report on activities performed in support of this BMP annually.			
<p>2009 Activity: The former VTrans Environmental Coordinator position was transferred from the VTrans Program Development-Environmental Section to the VTrans Operations Division and the Operations Environmental Coordinator (OEC) position was filled in November 2007. The primary duty of the OEC is to provide regulatory compliance and support on permitting and compliance with a specific emphasis on State and Federal Stormwater Regulations.</p>						
<p>2009 Indicators / Measurable Accomplishments: The OEC provided support activities associated with managing compliance with the MS4 GP and other Federal and State Stormwater Regulations. A considerable portion of time is spent on reviewing new construction projects by VTrans and by Non-VTrans entities and making sure each project does not affect compliance with post construction stormwater permitting program or the requirements of other federal and state stormwater permitting programs.</p>				na	staff time	\$ 10,000
<p>2009 BMP Effectiveness: This BMP has proven to be very effective and will be continued thru the remainder of the Permit Term.</p>						

Minimum Control Measure #6 "Pollution Prevention & Good Housekeeping"						
Minimum Control Measure and BMP	Target Audience	Timeframe	Measurable Goal(s)	Reportable Indicators	Cost Notes	Costs
BMP 6.A Enhance VTrans MS4 related Maintenance & Best Management Activities	VTrans Operations Division and District Maintenance Staff.	Enhancements of MS4 related maintenance activities, BMPs, policy, and procedures are an ongoing activity and will continue through the Permit Term. Maintenance and servicing infrastructure (ie. catch basin cleaning and street seeding) in the VTrans MS4 performed annually.	VTrans will submit a summary annual report as is required under Part 5.3 of the Permit. This report will include a list of the enhancements put in practice in support of this BMP. VTrans will also provide what data it can to quantify its actions under this BMP including, at a minimum, the number of catch basins cleaned and roadway miles swept in the VTrans MS4 annually. The data will more likely represent quantities by MS4 Municipal Jurisdictional boundaries than by VTrans MS4 limits. VTrans will do its best to refine the data provided, to the extent practicable, to represent the VTrans MS4 area.			
2009 Activity: VTrans continued with this ongoing effort in 2009.						
2009 Indicators / Measurable Accomplishments: Catch Basins Cleaned in 2009 both # of basins and cubic yards of material collected in the VTrans MS4 coverage area = Cleaned 157 basins or 7 c.y. Street Sweeping in 2009 both # lane miles and cubic yards of material collected in the VTrans MS4 coverage area = 37 lane miles or 138 c.y. Green-up in 2009 # tons of trash disposed of all of in the VTrans MS4 coverage area = 7 tons. Hazardous Waste Disposed of in 2008 in # tons including all of D-5 sites in Chittenden County. No waste for D-5 however AOT generated and disposed of roughly 1800 lbs of hazardous waste in the MS4 area in 2009. # of VTrans Culvert Outfalls Inspected/Surveyed in the VTrans MS4 coverage area = 1053 Inspected in Chittenden Cty. Includes field inspection of 833 outfalls by VHB Pioneer + 205 small culvert outfalls by the VTrans Roadway Asset Management Unit + 10 culvert outfalls by the VTrans District as part of routine maintenance + 5 large culvert outfalls by the VTrans Operations Large Culvert Inspection. # of VTrans Catch Basins (Drop Inlets) Inspected in the VTrans MS4 coverage area = 294 Structures inspected in Chittenden Cty. The VTrans Roadway Asset Management Unit inspected 134 DIs in the VTrans MS4 along I-89. The District inspected 160 Stormwater Structures as part of routine maintenance. Best Management Documents developed and adopted in 2009 include: NONE.				CBs Cleaned = 157 / 7 cy Street Sweeping = 37 miles / 138 cy Trash removal = 7 tons Haz Waste Disposal = 1800 lbs Outfalls Inspected = 1053 CB's Inspected = 488	District and staff time	\$ 200,000
2009 BMP Effectiveness: This BMP has proven to be very effective and will be continued thru the remainder of the Permit Term.						
BMP 6.B Erosion Prevention & Sediment Control Guidance Materials	VTrans, primarily targeted at construction and maintenance.	Review and update for Permit Term.	A summary update of Standards, Procedures, and Handbooks will be included in the annual report.			
2009 Activity: in 2009 we updated the VTrans EPSC Protocol Language and accompanying documents, updated the EPSC details sheets and improved on the methods by which designers create EPSC Plans, and helped to create Special Provisions regarding EPSC Items such as Block Flocculant, Grass Outlet Sediment Trap, Temporary Sediment Basin, Pipe Slope Drain, and the Agency's trial of an Alternative EPSC Plan Process and related specifications.						
2009 Indicators / Measurable Accomplishments: in 2009 we updated the VTrans EPSC Protocol Language and accompanying documents, updated the EPSC details sheets and improved on the methods by which designers create EPSC Plans, and helped to create Special Provisions regarding EPSC Items such as Block Flocculant, Grass Outlet Sediment Trap, Temporary Sediment Basin, Pipe Slope Drain, and the Agency's trial of an Alternative EPSC Plan Process and related specifications.				see BMP 4.C	see BMP 4.C	\$ -
2009 BMP Effectiveness: This BMP has proven to be very effective and will be continued thru the remainder of the Permit Term.						
BMP 6.C Erosion Prevention & Sediment Control Assurance Visits	VTrans, Consultants, Contractors	Ongoing for Permit Term.	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.			
2009 Activity: [see BMP 4D]						
2009 Indicators / Measurable Accomplishments: [see BMP 4.D]				see BMP 4.D	See BMP 4.E	\$ -
2009 BMP Effectiveness: This BMP has proven to be very effective and will be continued thru the remainder of the Permit Term.						
BMP 6.D Stormwater Management - Erosion Prevention & Sediment Control Training	VTrans, Contractors, Consultants, and other professionals.	A broad offering of training classes will continue to be scheduled throughout each year for the Permit Term.	Class titles and number of VTrans employees and other attendees will be reported annually.			
2009 Activity: [see BMP 4.E]						
2009 Indicators / Measurable Accomplishments: [see BMP 4.E]				See BMP 4.E	see BMP 4.E	\$ -
2009 BMP Effectiveness: This BMP has proven to be very effective and will be continued thru the remainder of the Permit Term.						
BMP 6.E VTrans Compliance Plan with GP-3-9003 Multi-Sector General Permit	VTrans District 5.	Inspections and EAO Audits will be conducted annually for the Permit Term.	VTrans will conduct an internal annual inspection and audit of the Colchester Fort Ethan Allen District Maintenance Facility in order to keep its non-regulatory SWMP/SPPP up to date and operations at this facility free of deficiencies. At a minimum, to meet the requirements under Minimum Control Measure #6, VTrans will also conduct one inspection and audit at this facility with the VANR Environmental Assistance Office. A summary of Pollution Prevention and Good Housekeeping activities and inspection/audit results will be reported in each annual report that is required under Part 5.3 of the Permit.			
2009 Activity: The Multi-Sector General Permit 3-9003 (MSGP) for Stormwater Discharges Associated with Industrial Activity was issued by ANR Aug 18, 2006. Exempt from coverage under the MSGP are facilities classified as Municipal and Highway Garages. In the VTrans MS4 area, the District 5 Maintenance Facility in Colchester does not require MSGP coverage; however, VTrans has developed Stormwater Management Plan/Pollution Prevention Plan (SWMP/SVPPP) for this facility. It is up to date and undergoing periodic inspections and audits supervised by the VANR Environmental Assistance Office (EAO). The last EAO supervised audit was conducted in April 2009 (Attachment C). This program is managed by the VTrans Operations Environmental Coordinator Position (refer to BMP 6.G for more information). The VTrans Operations Hazmat/Safety Coordinator position was also created and filled in 2006 and continues to be instrumental in providing oversight on a number of spill and pollution prevention and good housekeeping measures including trainings, preparing spill prevention plans and spill containment and cleanup activities.						
2009 Indicators / Measurable Accomplishments: The last EAO inspection was conducted in April 2009 (see Attachment C).				Attachment C	staff time	\$ 1,000
2009 BMP Effectiveness: This BMP has proven to be very effective and will be continued thru the remainder of the Permit Term.						

Minimum Control Measure #6 "Pollution Prevention & Good Housekeeping" CONTINUED						
Minimum Control Measure and BMP	Target Audience	Timeframe	Measurable Goal(s)	Reportable Indicators	Cost Notes	Costs
BMP 6.F VTrans Operations Hazmat/Safety Coordinator Position	VTrans, VANR, other professionals.	Permit Term	Report on activities performed in support of this BMP annually.			
2009 Activity: This position was created and filled in 2006 and continues to be instrumental in providing oversight on a number of pollution prevention and good housekeeping measures (see BMP 6.F). The duties of this position support the IDDE Minimum Control Measure #3.						
2009 Indicators / Measurable Accomplishments: VTrans generated and disposed of roughly 1800 lbs of hazardous waste in the MS4 area in 2009 under the supervision of this position. VTrans Operations has provided 7 hours of training and outreach to all District Staff as well as BGS Staff in the areas of Spill Prevention, Containment and Countermeasures, Spill Response and Notification Procedures, and Emergency Response in the MS4 area.				see BMP 3.E	see BMP 3.E	\$ -
2009 BMP Effectiveness: This BMP has proven to be very effective and will be continued thru the remainder of the Permit Term.						
BMP 6.G VTrans Operations Environmental Coordinator Position	Public, VTrans, MS4 Communities, Federal and State Regulatory Agencies, other professionals	Permit Term	Report on activities performed in support of this BMP annually.			
2009 Activity: The former VTrans Environmental Coordinator position was transferred from the VTrans Program Development-Environmental Section to the VTrans Operations Division and the Operations Environmental Coordinator (OEC) position was filled in November 2007. The primary duty of the OEC is to provide regulatory compliance and support on permitting and compliance with a specific emphasis on State and Federal Stormwater Regulations.						
2009 Indicators / Measurable Accomplishments: The OEC provided support activities associated with managing compliance with the MS4 GP and other Federal and State Stormwater Regulations.				na	staff time under this BMP	\$ 10,000
2009 BMP Effectiveness: This BMP has proven to be very effective and will be continued thru the remainder of the Permit Term.						
BMP 6.H Use Title 19, Section 1111 Permitting	VTrans, MS4 Communities, VANR, Commercial and Residential Development, Public, other professionals.	Ongoing for the Permit Term.	The VTrans Access Management Program, Highway Permits, and Development Agreements (Title 19 Section 1111 Permit) require a permit to be issued to a non-VTrans property owner if they wish to divert stormwater flow into the VTrans right-of-way. A summary of the number of Section 1111 permits issued for legal stormwater connections to the VTrans right-of-way, and the number of illicit discharge enforcement actions taken or forwarded to the MS4 Municipality or VANR, along with an effectiveness statement of this BMP will be reported annually.			
2009 Activity: VTrans is using the existing VTrans Access Management Program, Highway Permits, and Development Agreements (Title 19 Section 1111 Permit) to Manage Post-Construction Stormwater Activities of non-VTrans Projects that need access to our right-of-way. The Section 1111 Permit Standard Conditions was updated during the 2003-2008 Permit Term and resulted in the writing and adopting of Stormwater Conditions for all VTrans Access Permits. These conditions improve VTrans' control over discharge into the VTrans MS4s of stormwater generated by non-VTrans property owners. This implementation has been done Statewide. The condition also better informs the applicants and others of the responsibilities and requirements for managing stormwater.						
VTrans also uses the Section 1111 Permit process to ensure that there is no increase in peak discharge at the design storm event from pre to post construction conditions prior to issuing the Section 1111.						
2009 Indicators / Measurable Accomplishments: VTrans Operations Division OEC and Districts and Program Development Stormwater Engineer review Section 1111 proposals and work with VTrans Utilities and Permitting staff and applicants to prohibit physical connections to the State stormwater management system where feasible, disconnect non-stormwater discharges and to educate private property owners regarding on-site treatment practices available to them. Of all the projects reviewed in the MS4 Coverage Area no illicit connections were permitted and no illicit connections were reported nor actions taken against to force disconnection.				see BMP 3.D	see BMP 3.D	\$ -
2009 BMP Effectiveness: This BMP has proven to be very effective and will be continued thru the remainder of the Permit Term.						
ADDITIONAL MEASURES IMPLEMENTED IN 2009						
MOVE BMP 2.A VTrans Stormwater Steering Committee (SWSC) (formerly Stormwater Advisory Group) UNDER MCM #6	VTrans Staff	The SWSC meets on a quarterly basis (at a minimum) and more frequently as the need arises.	General discussion of topics			
2009 Activity: VTrans SWSC met to discuss MS4 SWMP development and to disseminate information about stormwater regulations, permit programs, policy & procedures, and BMPs through VTrans. This advances integration of the BMPs into design of transportation projects, the acquisition of environmental permits, operation and maintenance activities, and transportation planning.						
2009 Indicators / Measurable Accomplishments: The SWSC met quarterly in 2009. in order to respond to policy and planning needs, rule review, legislative actions, and to disseminate information about stormwater regulations, permit programs, policy and procedures within VTrans.				na	staff time	\$ 2,000
2009 BMP Effectiveness: This BMP has proven to be non-effective in addressing Public Involvement & Participation. It has however proven to be very effective as a Good Housekeeping BMP and will be continued thru the remainder of the Permit Term under its current form but will be moved to MCM#6.						
BMP Activities related to Lake Champlain Phosphorus TMDL	VTrans Staff	ongoing	Report all relevant activities not listed above under MCM #1 thru #6.			
2009 Activity: Sand reduction, phosphorus reduction and roadside bank stabilization projects.						
2009 Indicators / Measurable Accomplishments: VTrans highway traction sand reduced from 1032 cy used in Chittenden County during 2008 to 0 (zero) in 2009; Slope/Ditch repair work at 5 sites.				traction sand reduction = 1032 cy less sand used = 100% reduction. We do not have quantities for the 5 slope/ditch projects.	staff time, equipment, materials	\$ 91,000
2009 BMP Effectiveness: This BMP has proven to be very effective and will be continued thru the remainder of the Permit Term.						
					Other "General Program Support" costs associated with various BMPs that are difficult to separate by individual BMP.	\$ 300,000
					Total Estimate for 2009 Calendar Year (note: more refinement of these costs is necessary to accurately capture costs associated with MS4 Compliance)	\$ 943,600