



*The*

**UNIVERSITY**  
*of* **VERMONT**

**MS4 AMENDMENT APPLICATION**

**June 16, 2016**

**NATIONAL POLLUTANT DISCHARGE  
ELIMINATIONS SYSTEMS (NPDES)**

**GENERAL PERMIT 3-9014**

**FOR STORMWATER DISCHARGES FROM SMALL MUNICIPAL SEPARATE  
STORM SEWER SYSTEMS**

**Prepared by:  
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**June 16, 2016**

## **2016 AMENDMENT APPLICATION**

### **EPA MS4 PHASE II – GENERAL PERMIT 3-9014**

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#### **Introduction**

Please find enclosed an amendment application for the University of Vermont MS4 General Permit (Stormwater Discharges from Small Municipal Separate Storm Sewer Systems) (7028-9014). We are proposing to amend this permit to include a number of changes over multiple watersheds across campus. The proposed amendment application includes the following:

- North Campus Watershed - The University is proposing to transfer the UVM impervious surfaces from the UVM Medical Center Inpatient Building Project, (permit 3627-INDS.4) to MS4 permit 7028-9014.A. The individual permit included 0.26 acres of new impervious and 0.61 acres of redevelopment impervious on UVM property. Permit 3627-INDS.4 is concurrently being amended to remove the corresponding impervious area. The amendment also includes minor site revisions to the UVM First Year Residential Housing project and removal of the proposed 10,000 s.f. of "Future Impervious" that was previously designated for small unknown future projects. The First Year Residential Housing project was modified at the north east corner of the site to remove some proposed sidewalks. The change resulted in a minor reduction of permitted impervious area.
- East Campus Watershed - The University is proposing to amend the East Campus portion of their MS4 permit to include new and redevelopment impervious related to a proposed Rescue Facility Project and 284 South Patio walkway improvement project. The two projects will include 0.11 acres of new expanded impervious and 0.22 acres of redevelopment impervious. The projects also include the removal of existing impervious area which results in a small net decrease of impervious area for the site. This impervious reduction eliminates the need for a phosphorus offset. In addition to these projects, this amendment includes removing the proposed 15,000 s.f. of "Future Impervious", that was previously designated for small unknown future projects.
- UVM Game Operations Booth (3940-INDS.R) - The University is proposing to transfer the 0.006 acres of permitted impervious to MS4 permit 7028-9014.A. The project is located in the Centennial Brook Watershed.
- UVM - Lake Monsters Pavilion (3627-INDS.1) - The University is proposing to transfer the 0.03 acres of permitted impervious to MS4 permit 7028-9014.A. Runoff from the project discharges to groundwater in the Centennial Brook Watershed.
- UVM - Lake Monsters Dugout Expansion (3627-INDS.2A) - The University is proposing to transfer the 0.012 acres of permitted impervious to MS4 permit 7028-9014.A. Runoff from the project discharges to groundwater in the Centennial Brook Watershed.
- UVM - Centennial Storage Facility (3627-INDS.3) - The University is proposing to transfer the 0.63 acres of permitted impervious to MS4 permit 7028-9014.A. Runoff from the project discharges to groundwater in the Centennial Brook Watershed.

We have provided separate folders with worksheets, calculations, plans and other supporting documents for each item identified above. The revisions to the North and East Campus Watersheds has been formatted in accordance with the Operational Stormwater Discharge Permit requirements.

The table below provides an outline of the permitted impervious by prior permit number and/or watershed.

<b>Project</b>	<b>Permitted Impervious (acres)</b>	<b>Proposed New/Redeveloped Impervious with this Amendment</b>	<b>Existing Permitted INDS Impervious to include with this application</b>
<b>North Campus Watershed*</b>			
North Campus Portion of 7028-9014.A	23.87 ac		
3627-INDS.4			0.87 ac
<b>East Campus Watershed**</b>			
East Campus Portion of 7028-9014.A	44.73 ac		
Rescue Facility and 284 South Patio Projects		0.33 ac	
<b>Southwest Campus Watershed</b>			
South Campus Portion of 7028-9014.A (Facility 1)	18.53 ac		
South Campus Portion of 7028-9014.A (Facility 2)	3.04 ac		
<b>UVM Game Operations Booth - 3940-INDS.R</b>			0.006 ac
<b>UVM Lake Monsters Pavilion - 3627-INDS.1</b>			0.03 ac
<b>UVM Lake Monsters Dugouts - 3627-INDS.2A</b>			0.012 ac
<b>UVM Centennial Storage - 3627-INDS.3</b>			0.63 ac

\* North Campus Permitted Impervious (24.19 acres) reduced 0.32 acres for First Year Housing Project decrease of impervious and removal of "Future Impervious" watershed.

\*\* East Campus Permitted Impervious (45.43 acres) reduced 0.37 acres for impervious decrease from Rescue and 284 South Patio projects and removal of "Future Impervious" watershed.

The University of Vermont first applied for coverage under General Permit #3-9014 on March 10, 2003. The Application was revised and resubmitted on May 9, 2003 after receiving comments from the State of Vermont Agency of Natural Resources. On September 11, 2003 the State of Vermont acknowledged by letter the University's Stormwater Management Plan complies with the terms and conditions of the General Permit. They further indicated that the University's MS4 discharges are eligible for continued coverage under the terms and conditions of the General Permit.

On January 31, 2004, January 31, 2005, April 1, 2006, April 1, 2007, April 1, 2008, April 1, 2009, April 1, 2010, April 1, 2011, April 1, 2012, April 1, 2013, April 1, 2014, and April 1, 2015 the University of Vermont submitted their MS4 Annual Report.

On February 22, 2008, the University of Vermont prepared an application for coverage under General Permit #3-9014 for the second 5-year term. Additional information was provided on March 3, 2008 as requested by the State of Vermont.

On June 3, 2013, the University of Vermont prepared an application for coverage under General Permit #3-9014 for a third 5-year term (2013-2017). The application was deemed complete and effective on October 1, 2013.

The purpose of this document is to report on the status of the University's implementation of the permit requirements, including compliance with the standard of reducing the discharge of pollutants from the University's MS4 discharges to the Maximum Extent Practicable (MEP).

### **Flow Monitoring Update**

On March 16, 2015, Blaine Hastings from the Agency of Natural Resources emailed a proposed "Request for Proposal" for stream flow monitoring. The RFP would establish three year stream monitoring for all Chittenden County impaired streams. If MS4s approve the RFP, the monitoring could be initiated as early as possible in 2016. On June 3, 2015, the MS4s emailed Blaine Hastings to formulate an RFP for flow monitoring (attached).

### **Flow Restoration Plans Update**

#### **Centennial Brook Flow Restoration Plan Project**

The University of Vermont partnered with the Vermont Agency of Transportation, the City of Burlington and the City of South Burlington to hire Horsley-Whitten to complete the technical aspects of Centennial Brook's Flow Restoration Plan. All the MS4 partners met with the Agency of Natural Resources to review the preliminary findings.

Highlights of the preliminary FRP include:

- Both the North Campus Stormwater Treatment and Detention Facility and the Main Street East Stormwater Treatment and Detention Facility could be used as "regional stormwater facilities" shared by the City of Burlington and South Burlington. Future agreements regarding compensation and maintenance shall be required between the University and Burlington/So. Burlington for these regional facilities.
- Although most of the impervious in the watershed was being captured and treated, the model did not reflect full compliance with the Centennial TMDL flow reductions. The estimated unpermitted growth in the TMDL was broadly understood to be high.
- The next step is to have all MS4 partners meet to establish implementation and funding mechanisms. We anticipate submitting FRP for approval prior to 3 year deadline October 1, 2016.

#### **Bartlett Brook Flow Restoration Plan Project**

The City of South Burlington has hired a consultant who has issued a draft (2/2/2015) Flow Restoration Plan for Bartlett Brook. The only land owned by the University of Vermont in the Bartlett Brook Watershed is the Horticulture Farm, which is not part of UVM's MS4 lands. The University participated in the FRP process regarding the Horticulture Farm.

#### **Sunderland Brook Flow Restoration Plan Project**

The Town of Essex and Village of Essex Junction has hired a consultant to complete both the Indian Brook and Sunderland Brook Flow Restoration Plans. The University of Vermont does not own any impervious surface in the Indian Brook Watershed. The University of Vermont owns one student housing complex in the Sunderland Brook Watershed. The County Apartments are located on the southwest corner of Fort Ethan Allen and has a comprehensive stormwater infiltration system that contains the 1 year 24 hour rainstorm event. The consultant started work in June 2014. UVM is participating in the FRP process and assisting in gathering mapping.

**Potash Brook Flow Restoration Plan Project**

We have contacted the City of South Burlington and agreed to partner on the Potash Brook Flow Restoration Plan Project. The University only has two properties subject to the MS4 permit in the Potash Brook Watershed; the Bioresearch Complex and the Forestry Building on Spear Street. Many of UVM properties in Potash are agricultural and exempt from the MS4 permit including Miller Farm, Wheelock Farm and East Woods. South Burlington has started the FRP late in 2014. UVM has provided mapping assistance to the FRP consultant.

**Englesby Brook Flow Restoration Plan Project**

We have contacted the City of Burlington and agreed to partner on the Englesby Brook Flow Restoration Plan Project. The University’s Southwest Watershed is located in Englesby Brook. Both stormwater detention and treatment facilities are fully compliant with the current state stormwater regulations.

Measurable Goal	Description of Goal Implementation	Status
<p><u>Year #1 (2013)</u>                      Convene MS4s to discuss flow monitoring. Work with ANR to determine what an acceptable stream flow monitoring program would look like. What equipment could be used? Who could or could not do it on behalf of the MS4s.</p>	<p><u>Year #1 (2013)</u>                      Convene MS4s to discuss flow monitoring. Issue letter to ANR regarding the three options available to implement the flow monitoring.</p>	Complete
<p><u>Year #2 (2014)</u>                      Convene MS4s to discuss a plan for implementing flow monitoring. Make a final determination regarding whether or not ANR will run the monitoring program. Discuss cost sharing between MS4s for the monitoring project. Discuss how non-traditional MS4s could be involved.</p>	<p><u>Year #2 (2014)</u>                      See stream flow monitoring summary on page 1 of 12.</p>	Complete
<p><u>Year #3 (2015)</u>                      Develop an RFP, invest in equipment and complete other tasks as necessary to being monitoring in year 4.</p>	<p><u>Year #3 (2015)</u>                      See stream flow monitoring summary on page 2 of 13.</p>	Complete
<p><u>Year #4 (2016)</u>                      Begin monitoring in the stormwater impaired streams.</p>	<p><u>Year #4 (2016)</u></p>	
<p><u>Year #5 (2017)</u>                      Continue monitoring in the stormwater impair streams.</p>	<p><u>Year #5 (2017)</u></p>	

# 1. Implementation Status of the Stormwater Management Plan

## A. Minimum Control Measure #1 – Public Education and Outreach

The University of Vermont is one of many key members in the Regional Stormwater Education Program.

Measurable Goal	Description of Goal Implementation	Status
<p><u>Year #1 (2013)</u> Maintain a website for stormwater information, post MS4 NOI, SWMP and annual reports on website, provide links to <a href="http://www.startwaterways.org">www.startwaterways.org</a> web site. Participate in RSEP.</p>	<p><u>Year #1 (2013)</u> The Regional Stormwater Education Program has established a stormwater educational website at <a href="http://www.smartwaterways.org">www.smartwaterways.org</a>. The University has posted over 90 website links regarding stormwater or stormwater education. Go to <a href="http://www.uvm.edu">www.uvm.edu</a> and search under “stormwater”. UVM has posted the MS4 NOI, SWMP, and 2012 annual report within the Campus Planning Section of the UVM website.</p>	Complete
<p><u>Year #2 (2014)</u> Maintain a website for stormwater information, post MS4 NOI, SWMP and annual reports on website, provide links to <a href="http://www.startwaterways.org">www.startwaterways.org</a> web site. Participate in RSEP.</p>	<p><u>Year #2 (2014)</u> The Regional Stormwater Education Program has established a stormwater educational website at <a href="http://www.smartwaterways.org">www.smartwaterways.org</a>. The University has posted over 90 website links regarding stormwater or stormwater education. Go to <a href="http://www.uvm.edu">www.uvm.edu</a> and search under “stormwater”. UVM has posted the MS4 NOI, SWMP, and 2012 annual report within the Campus Planning Section of the UVM website</p>	Complete
<p><u>Year #3 (2015)</u> Maintain a website for stormwater information, post MS4 NOI, SWMP and annual reports on website, provide links to <a href="http://www.startwaterways.org">www.startwaterways.org</a> web site. Participate in RSEP.</p>	<p><u>Year #3 (2015)</u> The Regional Stormwater Education Program has established a stormwater educational website at <a href="http://www.smartwaterways.org">www.smartwaterways.org</a>. The University has posted over 90 website links regarding stormwater or stormwater education. Go to <a href="http://www.uvm.edu">www.uvm.edu</a> and search under “stormwater”. UVM has posted the MS4 NOI, SWMP, and 2013 annual report within the Campus Planning Section of the UVM website</p>	Complete
<p><u>Year #4 (2016)</u> Maintain a website for stormwater information, post MS4 NOI, SWMP and annual reports on website, provide links to <a href="http://www.startwaterways.org">www.startwaterways.org</a> web site. Participate in RSEP.</p>	<p><u>Year #4 (2016)</u></p>	
<p><u>Year #5 (2017)</u> Maintain a website for stormwater information, post MS4 NOI, SWMP and annual reports on website, provide links to <a href="http://www.startwaterways.org">www.startwaterways.org</a> web site. Participate in RSEP.</p>	<p><u>Year #5 (2017)</u></p>	

**B. Minimum Control Measure #2 – Public Involvement Participation**

**The University of Vermont is one of many key members participating in a regional stormwater public involvement and participation program. (See attached)**

<u>Measurable Goal</u>	<u>Description of Goal Implementation</u>	<u>Status</u>
<u>Year #1 (2013)</u> Participate in stream team or other approved regional stormwater public involvement and participation program.	<u>Year #1 (2013)</u> The University of Vermont is one of many key members participating in “The Stream Team”, and approved regional stormwater public involvement and participation program.	Complete
<u>Year #2 (2014)</u> Participate in stream team or other approved regional stormwater public involvement and participation program.	<u>Year #2 (2014)</u> The University of Vermont is one of many key members participating in “The Stream Team”, and approved regional stormwater public involvement and participation program.	Complete
<u>Year #3 (2015)</u> Participate in stream team or other approved regional stormwater public involvement and participation program.	<u>Year #3 (2015)</u> The University of Vermont is one of many key members participating in “The Stream Team”, and approved regional stormwater public involvement and participation program.	Complete
<u>Year #4 (2016)</u> Participate in stream team or other approved regional stormwater public involvement and participation program.	<u>Year #4 (2016)</u>	
<u>Year #5 (2017)</u> Participate in stream team or other approved regional stormwater public involvement and participation program.	<u>Year #5 (2017)</u>	

**C. Minimum Control Measure #3 – Illicit Discharge and Elimination**

<u>Measurable Goal</u>	<u>Description of Goal Implementation</u>	<u>Status</u>
<u>Year #1 (2013)</u> Update utility master plan with recently completed projects	<u>Year #1 (2013)</u> UVM has updated the utility master plan to include Votey Steam project, Waterman Entrance, Greenhouse project and Redstone Lofts.	Complete
<u>Year #2 (2014)</u> Update utility master plan with recently completed projects	<u>Year #2 (2014)</u> UVM has updated the utility master plan to include Simpson water main improvements, 284 East Avenue, Allen House pavement improvements and Pomeroy parking improvements.	Complete
<u>Year #3 (2015)</u> Update utility master plan with recently completed projects	<u>Year #3 (2015)</u> UVM has updated the utility master plan to include Cook shuttle improvements and Centennial storage water line.	Complete
<u>Year #4 (2016)</u> Update utility master plan with recently completed projects	<u>Year #4 (2016)</u>	
<u>Year #5 (2017)</u> Update utility master plan with recently completed projects	<u>Year #5 (2017)</u>	

<u>Measurable Goal</u>	<u>Description of Goal Implementation</u>	<u>Status</u>
<u>Year #1 (2013)</u> Complete dry weather/inspection North Campus	<u>Year #1 (2013)</u> Completed inspections of all pond in deep freeze of 2013-2014 and recorded no flow, or we estimated rate of flow.	Complete
<u>Year #2 (2014)</u> Complete dry weather/inspection at East Campus and Main Street East	<u>Year #2 (2014)</u> Completed in 2013.	Complete
<u>Year #3 (2015)</u> Complete dry weather/inspection at Southwest Campus	<u>Year #3 (2015)</u> Completed in 2013.	Complete
<u>Year #4 (2016)</u> Establish priority for elimination of illicit connection. Eliminate connection in accordance with priority schedule.	<u>Year #4 (2016)</u>	
<u>Year #5 (2017)</u> Establish priority for elimination of illicit connection. Eliminate connection in accordance with priority schedule.  Review catch basins on campus to make sure they all have stickers.	<u>Year #5 (2017)</u>	

**D. Minimum Control Measure #4 – Construction Site Runoff Control**

<u>Measurable Goal</u>	<u>Description of Implementation</u>	<u>Status</u>
<p><u>Year #1 (2013)</u>                      Identify all projects that have Low, Moderate or Individual Permits to Agency of Natural Resources with Annual Report.</p> <p>Submit list of all construction activities that exceed 5,000 s.f. of disturbance that did not require State permit with Annual Report.</p>	<p><u>Year #1 (2013)</u>                      The University had the following projects that disturbed more than 1 acre: Redstone Lofts, Athletic Sidewalk Project.</p> <p>The University had the following low risk projects that exceeded 5,000 s.f. of disturbance that did not require State permit: Trinity Discharge Project, Trinity Directional Drill, Wheeler House, Southwick Parking Lot.</p>	Complete
<p><u>Year #2 (2014)</u>                      Identify all projects that have Low, Moderate or Individual Permits to Agency of Natural Resources with Annual Report.</p> <p>Submit list of all construction activities that exceed 5,000 s.f. of disturbance that did not require State permit with Annual Report.</p>	<p><u>Year #2 (2014)</u>                      The University had the following projects that disturbed more than 1 acre: Athletic Sidewalk Project, Trinity Slope Repair.</p> <p>The University had the following low risk projects that exceeded 5,000 s.f. of disturbance that did not require State permit: None.</p>	Complete
<p><u>Year #3 (2015)</u>                      Identify all projects that have Low, Moderate or Individual Permits to Agency of Natural Resources with Annual Report.</p> <p>Submit list of all construction activities that exceed 5,000 s.f. of disturbance that did not require State permit with Annual Report.</p>	<p><u>Year #3 (2015)</u>                      The University had the following projects that disturbed more than 1 acre: STEM, First Year Student Housing.</p> <p>The University had the following low risk projects that exceeded 5,000 s.f. of disturbance that did not require State permit: None.</p>	Complete
<p><u>Year #4 (2016)</u>                      Identify all projects that have Low, Moderate or Individual Permits to Agency of Natural Resources with Annual Report.</p> <p>Submit list of all construction activities that exceed 5,000 s.f. of disturbance that did not require State permit with Annual Report.</p>	<p><u>Year #4 (2016)</u></p>	
<p><u>Year #5 (2017)</u>                      Identify all projects that have Low, Moderate or Individual Permits to Agency of Natural Resources with Annual Report.</p> <p>Submit list of all construction activities that exceed 5,000 s.f. of disturbance that did not require State permit with Annual Report.</p>	<p><u>Year #5 (2017)</u></p>	

**E. Minimum Control Measure #5 – Post Construction Runoff Control**

<u>Measurable Goal</u>	<u>Description of Implementation</u>	<u>Status</u>
<u>Year #1(2013)</u> Provide site visits to all stormwater treatment facilities to evaluate performance. All projects that disturb more than 1 acre, but do not require a Stormwater Discharge Permit, shall be included in the Annual Report to the Agency of Natural Resources.	<u>Year #1 (2013)</u> The North Campus, East Campus, Southwest Campus and Main Street Stormwater Facilities are reviewed quarterly, if not more frequently. There were no projects at the University of Vermont that disturbed more than 1 acre that did not require a permit.	Complete
<u>Year #2 (2014)</u> Provide site visits to all stormwater treatment facilities to evaluate performance. All projects that disturb more than 1 acre, but do not require a Stormwater Discharge Permit, shall be included in the Annual Report to the Agency of Natural Resources.	<u>Year #2 (2014)</u> The North Campus, East Campus, Southwest Campus and Main Street Stormwater Facilities are reviewed quarterly, if not more frequently. There were no projects at the University of Vermont that disturbed more than 1 acre that did not require a permit.	Complete
<u>Year #3 (2015)</u> Provide site visits to all stormwater treatment facilities to evaluate performance. All projects that disturb more than 1 acre, but do not require a Stormwater Discharge Permit, shall be included in the Annual Report to the Agency of Natural Resources.	<u>Year #3 (2015)</u> The North Campus, East Campus, Southwest Campus and Main Street Stormwater Facilities are reviewed quarterly, if not more frequently. There were no projects at the University of Vermont that disturbed more than 1 acre that did not require a permit.	Complete
<u>Year #4 (2015)</u> Provide site visits to all stormwater treatment facilities to evaluate performance. All projects that disturb more than 1 acre, but do not require a Stormwater Discharge Permit, shall be included in the Annual Report to the Agency of Natural Resources.	<u>Year #4 (2015)</u>	
<u>Year #5 (2017)</u> Provide site visits to all stormwater treatment facilities to evaluate performance. All projects that disturb more than 1 acre, but do not require a Stormwater Discharge Permit, shall be included in the Annual Report to the Agency of Natural Resources.	<u>Year #5 (2017)</u>	

**F. Minimum Control Measure #6 – Pollution Prevention/Good Housekeeping**

Measurable Goal	Description of Goal Implementation	Status
Inspect all catch basins annually	<u>Year #1 (2013)</u> Physical Plant has inspected all catch basins.	Complete
	<u>Year #2 (2014)</u> Physical Plant has inspected all catch basins.	Complete
	<u>Year #3 (2015)</u> Physical Plant has inspected all catch basins.	Complete
	<u>Year #4 (2016)</u>	
	<u>Year #5 (2017)</u>	
Limit salt use. Establish Master Plan policy to restrict use of salt.	<u>Year #1 (2013)</u> The University already has in place a master plan and policy that restricts salt use on Campus.	Complete
	<u>Year #2 (2014)</u> The University already has in place a master plan and policy that restricts salt use on Campus.	Complete
	<u>Year #3 (2015)</u> The University already has in place a master plan and policy that restricts salt use on Campus.	Complete
	<u>Year #4 (2016)</u>	
	<u>Year #5 (2017)</u>	
Sweep all sidewalks and pavements in spring. Identify location of sand disposal.	<u>Year #1 (2013)</u> From April 2013 to June 2013 the University contracted to sweep pavements and walks. The contractor removed the sands from the University Campus and recycled it in a crushed gravel batch plant for road subbase. (A. Marcelino and Company)	Complete
	<u>Year #2 (2014)</u> From April 2014 to June 2014 the University contracted to sweep pavements and walks. The contractor removed the sands from the University Campus and recycled it in a crushed gravel batch plant for road subbase. (A. Marcelino and Company)	Complete
	<u>Year #3 (2015)</u> From April 2015 to June 2015 the University contracted to sweep pavements and walks. The contractor removed the sands from the University Campus and recycled it in a crushed gravel batch plant for road subbase. (A. Marcelino and Company)	Complete

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Sweep all sidewalks and pavements in spring. Identify location of sand disposal.	<u>Year #4 (2016)</u>  <u>Year #5 (2017)</u>	
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Measurable Goal	Description of Goal Implementation	Status
Visually inspect outlet devices once per week and remove debris as required.	<u>Year #1 (2013)</u> Physical Plant has reviewed the trash racks weekly.  <u>Year #2 (2014)</u> Physical Plant has reviewed the trash racks weekly.  <u>Year #3 (2015)</u> Physical Plant has reviewed the trash racks weekly.  <u>Year #4 (2016)</u>   <u>Year #5 (2017)</u>	Complete  Complete  Complete
Visually inspect for winter damage	<u>Year #1 (2013)</u> It is an event that the University has completed every year regardless of requirements of MS4.  <u>Year #2 (2014)</u> It is an event that the University has completed every year regardless of requirements of MS4.  <u>Year #3 (2015)</u> It is an event that the University has completed every year regardless of requirements of MS4.  <u>Year #4 (2016)</u>   <u>Year #5 (2017)</u>	Complete  Complete  Complete
Semi-annual reviews of stormwater treatment facilities.	<u>Year #1 (2013)</u> Spring and fall inspections were completed on the North, Southwest, East Campus, and Main Street Stormwater Facilities.  <u>Year #2 (2014)</u> Spring and fall inspections were completed on the North, Southwest, East Campus, and Main Street Stormwater Facilities.  <u>Year #3 (2015)</u> Spring and fall inspections were completed on the North, Southwest, East Campus, and Main Street Stormwater Facilities.  <u>Year #4 (2016)</u>   <u>Year #5 (2017)</u>	Complete  Complete  Complete

Measurable Goal	Description of Goal Implementation	Status
<u>Year #1 (2013)</u> Meet with CWD and City of Burlington to review source protection plan and stormwater management plan	<u>Year #1 (2013)</u> Krebs & Lansing Consulting Engineers will meet with CWD, City of Burlington and City of South Burlington in 2014 to review changes to MS4 stormwater plans.	Complete
<u>Year #2 (2014)</u> Continue to maintain and inspect grounds and storm system. Continue to complete dry weather and wet weather monitoring of stormwater runoff. Analyze annually.	<u>Year #2 (2014)</u> Krebs & Lansing Consulting Engineers met with City of Burlington and City of South Burlington in 2014.	Complete
<u>Year #3 (2015)</u> Continue to maintain and inspect grounds and storm system. Continue to complete dry weather and wet weather monitoring of stormwater runoff. Analyze annually.	<u>Year #3 (2015)</u> The University of Vermont's Physical Plant Department continues to maintain and inspect the UVM property and storm system.	Complete
<u>Year #4 (2016)</u> Continue to maintain and inspect grounds and storm system. Continue to complete dry weather and wet weather monitoring of stormwater runoff. Analyze annually.	<u>Year #4 (2016)</u>	
<u>Year #5 (2017)</u> Continue to maintain and inspect grounds and storm system. Continue to complete dry weather and wet weather monitoring of stormwater runoff. Analyze annually.	<u>Year #5 (2017)</u>	

## 2. Assessment of Stormwater Management Plan Success in Year 3 (2015)

Even though the University of Vermont historically has prioritized the management of its stormwater, the institution has had a very successful 13th year (2015) of the MS4 permit.

- We feel the stormwater issue has become much more public and with that exposure the public has become more knowledgeable. The regional solution to Minimum Measure 2 has been very effective.
- Projects that were subject to the Individual Permit for Construction Sites; STEM, First Year Student Housing, and Chiller Plant.
- The University had invested in mapping a majority of its storm system prior to the MS4 permit. The Physical Plant Department of the University of Vermont started a Utility mapping program in 2006. The storm system had been mapped previously, but it was very helpful to map water and wastewater lines as part of the investigation for cross connection. Accurate mapping also ensures a future cross connection is not made inadvertently. Additional aerial mapping was completed in 2011.

- In summary, the University had another successful year of managing stormwater runoff including;
  - continuing strong operation and maintenance program through the Physical Plant Department,
  - designing structural and non-structural best management practices into proposed new construction through the Facilities and Design Construction Department, and Campus Planning Services.
  - implementing new best management practices, including construction of a new weather resistant salt storage shed, diverted additional untreated/undetained impervious from Centennial Field complex to North Campus Treatment and Detention Facility, and installed information board at Southwest Campus Treatment and Detention Facility explaining functions of stormwater pond.
  - Although a tremendous amount of work is being completed by Physical Plant as part of the implementation of this permit, they historically have been very proactive in prioritizing stormwater management.

### **3. Year 14 Activities (2016)**

The activities scheduled for completion in Year #14 are identified in the Stormwater Management Plan for the next 5 year term of the permit.

### **4. Proposed Changes to the University's Stormwater Management Plan (SWMP)**

Year #3 (2015)

No changes in this year.

### **5. Shared Permit Obligations**

The University of Vermont is one of many key members in the Regional Stormwater Education Program.

The University of Vermont is one of many key members in the Stream Team, an approved regional stormwater participation program.

END OF REPORT