



DEPARTMENT OF PUBLIC WORKS

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March 25, 2015

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

Dear Ms. Witters:

In accordance with annual permit reporting requirements and requested updates for additional 2014 Permit programs, please find attached to this cover letter the following reports and supporting documents:

- Town of Colchester's 2014 Annual Report for General Permit 3-9014
- Stormwater Impaired Waters Flow Monitoring – Letter of Intent dated December 23, 2013 and follow up documents
- Expired Permits Within Impaired Watersheds – Letter of Intent dated March 20, 2014 and follow up documents
- Flow Restoration Plan – Copies of Contract with Watershed Consulting Assoc. and excerpt from Draft Sunderland Brook FRP Report

Please give me a call at 264-5625 if you require any additional information or have any questions.

Sincerely,



Bryan K. Osborne  
Director of Public Works

# Town of Colchester



**Colchester**  
VERMONT

## 2014 Annual Report for:

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

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

*Submitted to:*

**Vermont Agency of Natural Resources  
Department of Environmental Conservation  
Water Quality Division, Storm Water Management Program  
103 South Main Street, Building 10 North  
Waterbury, Vermont 05671-0408**

*Submitted by:*

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

*Date Submitted:*

**March 25, 2015**

**TOWN OF COLCHESTER  
GENERAL PERMIT 3-9014  
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM  
NUMBER: VTR040000**

**2014 ANNUAL REPORT**

**Minimum Measure 1**

**Public Education and Outreach**

The Town of Colchester has participated throughout 2014 in the Regional Storm Water Education Program, (RSEP) along with other MS4 communities from Chittenden County. Activities as identified in the MOU contained in the Town's NOI and application have been successfully completed, and are more specifically outlined in the Chittenden County Regional Storm Water Educational Program, Annual Review: 2014 Program Report and Calendar Year Summary, Prepared by J. Andrews Marketing with assistance from CCRPC.

The Town has also developed a storm water web site, which displays a variety of storm water related information, including the Town's MS4 Permit Plan. The information can be viewed at [www.colchestervt.gov/PublicWorks/Stormwater.shtml](http://www.colchestervt.gov/PublicWorks/Stormwater.shtml).

**Minimum Measure 2**

**Public Involvement and Participation**

1. Citizen volunteers established to complete stenciling of the second 50% of the storm water structures within the MS4 designated areas. – The Town of Colchester, working with volunteers from the community, completed an extensive stenciling program during the summer of 2004. Residents from the Hidden Oaks sub-division in Colchester worked with the Department of Public Works to stencil approximately 800, or about 98% of all storm water structures throughout the community. The Department purchased the necessary equipment and materials to perform the work, which was completed primarily through the use of curb markers. Actual stenciling on the pavement was used where no curbs existed. The volunteers included several young children from residential neighborhoods. Training, supervision and a general education on good water resource management was provided by the Town. The efforts received media coverage through the local new papers. This accomplished all of the required work under this activity for years two and three of the permit. In 2006, the last two remaining sub-divisions that had not yet been stenciled were completed by high school students as a school project. Regular inspection accomplished through basin

cleaning, street sweeping and regular travel on the transportation system revealed that only a limited number of curb markers required replacement. These were done by DPW crews as they were identified. However, in 2007 a Cub Scout volunteer did assist the Town with these efforts.

At this point, regular inspections are concluding that many of the markers and stenciling now need to be replaced or updated. To continue addressing this need, the Town has formed a partnership with both the Boy Scouts and Cub Scouts in Colchester. Building on the Boy Scouts of America, "Leave No Trace" program, the partnership intends to work toward annual stenciling of the Town's storm water basins as part of their regular and ongoing curriculum. While stenciling is being done in each neighborhood, other scouts focus on distributing educational materials regarding their efforts as well as other storm water related issues. These materials also serve to direct citizens to the RSEP web site for further information. The Town provides all materials including program training for the scouts. Training materials have included products from RSEP as well as a stenciling training video developed by the Colchester Public Works Department. This video may be viewed on the storm water page of the department's web site. Select, "Education" and then; "Catch Basin Stenciling". The goal is to develop a long term relationship of public involvement and participation, and more importantly, involve younger citizens to more effectively create an improved and sustainable understanding of storm water related issues within our community.

2. *Citizen volunteers established to participate in a stream corridor clean-up day and complete clean-up of 40% of Sunderland Brook* – In 2004, the Town of Colchester was able to secure funding through the Chittenden Solid Waste District, under the District's Community Cleanup Fund, to retain a consultant to perform field reconnaissance of the Sunderland Watershed. This effort resulted in the identification and inventorying of nine (9) illegal dumping sites within the watershed. All information was collected in GIS format and mapped for future clean up efforts.

From 2004 – 2006, the Town cleaned up six of the nine sites as described in previous annual reports, much of which involved the use of citizen volunteers. The sites that were cleaned up included sites A-1, A-2, A-3, A-4, J-1 and J-3 as identified in the 2004 field reconnaissance. In 2008, the Town focused on the three remaining dump sites. It was discovered that site J-2 had already been cleaned up and restored by others. The Town with its own forces cleaned up sites A-5 and J-4 using Local Community Implementation Grant funds awarded to the Town by the VDEC. Of the nine sites identified through the 2004 field reconnaissance, all sites have now been cleaned up with volunteer assistance through the first six years of the MS4 Program. Similar to the Town's stenciling program, volunteers in some cases included children supervised by adults, with their efforts published in the local news papers.

3. Citizen Volunteer Green Up Day Activities - The Town has a significant volunteer base who regularly participates in activities aimed at preserving the community's abundant natural resources. For the 19<sup>th</sup> consecutive year, the Commission has organized this event for the community. During Green Up Day, a total of 323 Colchester citizens participated in cleanup activities collecting 5.5 tons of roadside litter (more than any other community in Chittenden County,) 233 tires, and 3.5 cubic yards of metal.
4. Storm Water Watch Groups established within 100% of the sub-watersheds located within the MS4 designated areas – The Town has previously identified and mapped all eleven sub-watersheds within Colchester. Since inception, the Town has continued to expand the coverage areas and currently has a total of fifteen community volunteers secured to serve on our watershed watch groups. The volunteers live in a total of eleven different sub-watersheds, resulting in 100% coverage. Initial educational materials were provided to each of the volunteers to help them understand the types of conditions that can contribute to water quality problems. Information is periodically sent to them on an as needed basis. Future efforts will include using the existing storm water watch group network to solicit the participation of additional citizens to serve in this capacity.
5. Rain Barrel Workshop. – The Town's seven member Conservation Commission sponsored a Do-it-Yourself Rain Barrel Workshop in April in cooperation with the Winooski Natural Resources Conservation District and the Colchester Department of Public Works. In addition to building their own rain barrels for home use, the 10 participants received information on how rain barrels help conserve water, save money and protect waterways.
6. Rain Garden Refresh – The Town's Conservation Commission also participated in a springtime cleanup of the rain garden along the Holy Cross Road bike path. As noted in the 2012 report, the rain garden was designed by local resident and landscape architect Paul Simon and constructed as part of a joint effort by the Commission and Dept. of Public Works. For the cleanup effort, commission members helped cleanup, weed, and refresh plants in the rain garden.
7. Citizen Leaf Collection – On November 2-3, 2014, the Town held a citizen leaf collection weekend. A total of seven loads in 40 - cubic yard containers, containing 63.35 tons of leaves, were collected and dropped off at Airport Park by residents and then hauled away by the Chittenden Solid Waste District to Green Mountain Compost in Williston to be turned into compost for sale.
8. April Stools Day – Conservation Commission Members volunteered at Niquette Bay State Park to clean up dog droppings at local state parks in an event co-sponsored by the Lake Champlain Committee and Vermont Department of Forests, Parks, and Recreation.

## Minimum Measure 3

### Illicit Discharge Detection and Elimination

1. Update storm water system base map as required – This activity will be an ongoing process for the Town as additional development and associated storm water infrastructure is added. To maintain this database, a three tiered approach has been developed to document 1) existing storm water infrastructure, 2) additional storm water infrastructure added through the Town's maintenance efforts and/or capital improvement projects, and 3) additional storm water infrastructure associated with new development.

**Existing Storm Water Infrastructure** - The Town has been the recipient of a \$1.5 million EPA Demonstration Grant. One of the many activities contained within the scope of work is a comprehensive update of the Town's storm water system mapping. This work is now completed and can be viewed on the Department of Public Work's website at <http://colchestervt.gov/PublicWorks/colchesterwaters/>.

**Future Town Installed Storm Water Infrastructure** - The Department of Public Works continues to move toward additional in house GIS capabilities. In support of this approach, the Town has added two additional GIS ArcView work stations within the Public Works Department. Under the previously mentioned EPA Demonstration Grant, the Town has recently purchased a software package (VueWorks / Edgesoft) that will provide a GIS based Asset Management Program to further enhance the Town's abilities to perform future mapping updates of its storm water system.

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

2. Develop and implement an Illicit Discharge Ordinance – The Town has developed and implemented an Illicit Discharge Ordinance. The ordinance regulates the contribution of pollutants to the MS4 from storm water discharges by any user, prohibits illicit connections and discharges to the MS4, and establishes legal authority to carry out the IDDE Plan, including conducting inspections, monitoring, and enforcement procedures to ensure compliance with the ordinance. The ordinance was adopted by the Colchester Select Board on July 26, 2005.
3. Perform inspection of all storm water outfalls within the MS4 designated area, and sample all outfalls with dry weather flows – The Town completed inspections of all permitted outfalls with reporting requirements as identified within the Town's IDDE Plan, and outfalls identified in an Outfall Reconnaissance

Inventory completed for the Town of Colchester, by the Department of Environmental Conservation in March of 2006. A total of 34 storm water outfalls were inspected. Testing included the *E-coli*, use of optical brighteners, as well as testing for pH.

4. Identify any illicit discharges and take the appropriate actions to correct all illicit discharges detected – No illicit discharges were detected as part of the outfall inspections or reported during 2014.
5. Update training for public employees as a part of the Town's program for Pollution Prevention and Good Housekeeping. – On September 18, 2014, the Colchester Public Works employees received training at the Municipal Employees MS4 Training Workshop held at the Town of Essex Training Center.
6. Provide updated educational materials to the Colchester Community Development Corporation for distribution to the business community – Educational brochures developed for local businesses were distributed through the Town's Community Development Office. Approximately 130 brochures were provided for distribution.
7. Accomplish additional educational outreach as outlined in Minimum Measure 2 – The Town has accomplished additional educational outreach through the development and implementation of a storm drain stenciling program, stream corridor clean up initiatives, and the establishment of citizen storm water watch groups.
8. Document all actions – The Town has established files to maintain all documents relating to the management of illicit discharges. A complaint system has also been established to receive citizen complaints through a storm water hotline. The hotline is posted on the Town's web site. There were no calls recorded in 2014.

#### **Minimum Measure 4**

##### **Construction Site Storm Water Runoff Control**

1. Conduct plan review for all land disturbances requiring permits under Planning and Zoning – The Town continues to perform plan review of all projects involving land disturbance as a part of the site plan review process and the issuance of building permits. In 2014, the Town reviewed and issued permits for a total of 393 projects involving land disturbances.
2. Inspect all locally permitted projects causing land disturbance for compliance to local erosion control ordinance, and take appropriate actions, including enforcement for violations. Report any suspected violations to ANR – In 2014, Town inspectors performed 1,310 site visits associated with 393 permitted

projects involving land disturbances to ensure compliance to local erosion control ordinances.

## **Minimum Measure 5**

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

1. Conduct development review process for all land disturbances requiring permits and require the appropriate post-construction storm water controls - The Town continues to perform plan review of all projects involving land disturbance as a part of the site plan review process and the issuance of building permits. In 2014, the Town reviewed and issued permits for a total of 393 projects involving land disturbances. Projects were required to conform to the Town's storm water regulations.
2. Attach O&M permit conditions to approvals for all land disturbances that are not taken under public ownership – All permit conditions associated with projects involving land disturbance were included in the approved Findings of Fact and Order approved by the Development Review Board. These documents become the instrument for enforcing the Board's approval.
3. Perform inspection activities as outlined in Section 5-4 and report any suspected violations to the appropriate jurisdiction - In 2014, the Town inspectors performed 1,310 site visits associated with 393 permitted projects involving land disturbances to ensure compliance to local erosion control ordinances.

## **Minimum Measure 6**

### **Pollution Prevention/Good Housekeeping for Municipal Operations**

1. Maintain the improvements and procedures outlined in the MCAP program – On September 19, 2010, John Daly, Environmental Assistance Specialist within the Vermont Department of Environmental Conservation, conducted an inspection of the Town's Public Works Maintenance Facility. The Town is in compliance with each of the Direct Compliance Issues identified in the report. Spent diesel and gas fuel filters are being disposed of as outlined. The Town discontinued the use of clay absorbents several years ago. The Town has previously tested its sand blast waste for heavy metals with negative results. No changes in procedures or materials have been made since that time. Debris from both street sweeping and

catch basin cleaning is currently being stored on site at the maintenance facility. The charges from landfills to accept the material as cover material have become cost prohibitive. Subsequently, the Town has had these materials tested and determined that they can be safely disposed of at alternative sites.

2. Maintain the improvements and procedures outlined in the Multi-Sector General Permit for the Town's Public Works Maintenance Facility – The Town currently understands from the VANR Legal Council that MSGP's are not required for Public Works Garages. The Town has however completed several improvements which would be required under a MSGP if one were required. These include the covering of construction materials such as asphalt, manhole frames and covers, and scrap metal. The sand blasting area has been paved to facilitate the clean up of the waste material after each occurrence. A holding tank has been installed which is connected to the floor drains within the maintenance facility to capture wash water associated with cleaning equipment. The waste water is periodically removed and discharged into the Town's municipal sewer system. Voters of Colchester previously approved bonds to allow improvements to several Town buildings, including \$750,000 for the Public Works maintenance Facility. As a part of this project, a 3,720 square foot cold storage facility has been constructed, allowing much of the Town's equipment and construction materials to be placed under cover. This project also included the replacement of an aging salt storage facility.
3. Maintain operation and maintenance program as identified in Section 6-1 – The maintenance program as identified in Section 6-1 reflects the Town's standard operating procedures and basic maintenance requirements within the community. Current and future budget plans reflect a continuation of these activities.
4. Conduct employee training as specified in Section 6-1c – On September 18, 2014, the Colchester Public Works employees received training at the Municipal Employees MS4 Training Workshop.

## **Minimum Measure 1**

### **Public Education and Outreach on Storm Water Impacts**

**Attachments:**

1. Regional Storm Water Educational Program:
  - a. Annual Review: 2014 Calendar Year Summary
  - b. FY15 Communications Plan – February 2015 Update
2. Connecting the Drops Program II for 2014 in Essex Junction
  - a. Final Report dated 09/30/14
  - b. Projected/Actual Costs dated 10/03/14
3. Invoice and payment of 2013 RSEP contribution.
4. Public Works storm water web page.

**Chittenden County Regional Stormwater Educational Program  
Annual Review: 2014 Calendar Year Summary**

The 2014 calendar year marks our first full year of new campaign strategy and full spend on campaigns, and has provided a high level of marketing success. We have driven thousands more people to our website than ever before (7728 vs. 3542 the previous year). Also, based on the rich amount of data that comes with online advertising, we're able to continue to adapt strategy based on the results.

Also during this program year we refreshed our website, modernizing the look a bit while also updating the back end so that the site can withstand updates to Wordpress well into the future. The updated site also gave us the opportunity to clean up old and broken links so that visitors have access to the best and most current stormwater resources in Vermont and nationwide.

**Spring Advertising Campaign**

This campaign marked the return to the Spring/Fall cycle that has been typical for RSEP, and provided the program with its largest ever spike in web traffic. The focus on online advertising has proven quite successful for RSEP, with 80% of web visits being driven by online ads which account for 38% of the overall spending.

Because web advertising also provides a strong data set, we were able to assess these results and refine them for future campaigns, with the goal of even better results.

<b>Spring 2014 Campaign Online Media Results</b>				
<b>Tactic</b>	<b>Impressions</b>	<b>Clicks</b>	<b>Cost</b>	<b>Cost per click</b>
Google	pay-per-click	1512	\$1,195.12	\$0.79
WCAX	120,000	129	\$1,000.00	\$7.75
Front Porch Forum	210,000	465	\$1,510.00	\$3.25
Free Press	210,000	121	\$1,410.00	\$11.65
Xfinity.com	105,000	184	\$2,000.00	\$10.87
Seven Days	75,000	78	\$540.00	\$6.92
<b>Total clicks</b>		<b>2489</b>	<b>\$7,655.12</b>	<b>\$3.08</b>

**Fall Campaign**

Fall campaign results closely align with Spring results in several notable ways. Again, the web ad strategy drove strong traffic to the site. Bounce rates during the campaign windows were also consistent. As stated above, we made some tactical changes to the media plan based on Spring results.



Through that effort we drove down cost-per-click for some media. Changes to the Google ads drove up cost, however. We will revert back to text-only ads for 2015 to achieve the highest possible return on our investment.

Fall 2014 Campaign Online Media Results				
	Impressions	Clicks	Cost	Cost per Click
WCAX	75,000 impressions	86	\$600	\$6.98
Xfinity	video pre-roll	131	\$750	\$5.73
Front Porch Forum	58,000 impressions	127	\$756	\$5.95
Google	pay-per-click	411	\$1,000	\$2.43
Seven Days	87,500 impressions	77	\$700	\$9.09
<b>Total Clicks</b>		<b>832</b>	<b>\$3,806</b>	<b>\$4.57</b>

### Web Refresh

In late 2014, the SmartWaterWays website experienced problems due to the old Wordpress theme on which it was built. J Andrews Marketing worked with RSEP to choose a new theme and migrate the full site over. We also worked with a web subcommittee to simultaneously identify old and broken links and update the site content to ensure the best possible user experience. Finally, we also migrated the Stormville game from Flash to html, so that it is now functional for users that access the site from their iPhone or iPad.

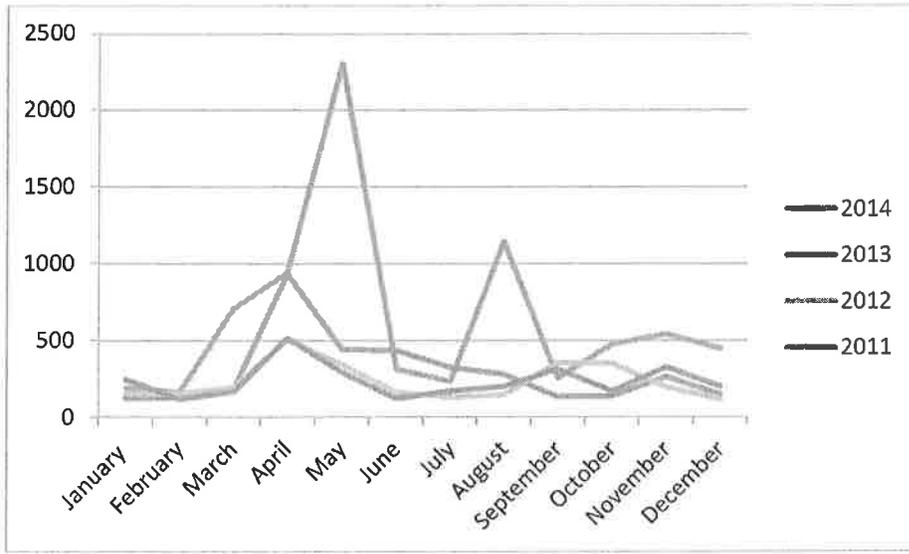
In 2015, we still plan to update site content to improve the clarity of language.

### Traffic to Program Website ([www.smartwaterways.org](http://www.smartwaterways.org))

Below is the website visitor information for 2014, as compared to the three most recent preceding years. The site had 7,488 visits during 2014, more than double the amount of 2013 and by far our most successful year for the web on record. Website traffic increases/spikes are in conjunction with media campaigns.

The Connecting the Drops program ran for Williston and Essex in the June/July timeframe, keeping web traffic high in between campaigns.



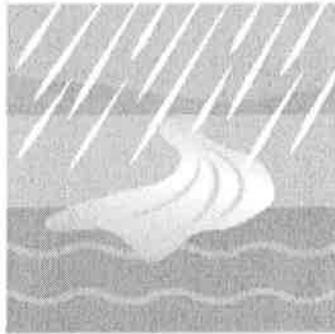


TOTAL	TIME PERIOD
7728	2014
3542	2013
2817	2012
2859	2011



Regional Stormwater Education Program  
FY15 Communications Plan  
February 2015 Update

**SMART**  
WaterWays



Add Up To  
Cleaner Water

Presented by  
Julia Andrews  
J Andrews Marketing  
[julia@jandrewsmarketing.com](mailto:julia@jandrewsmarketing.com)  
802-324-9273

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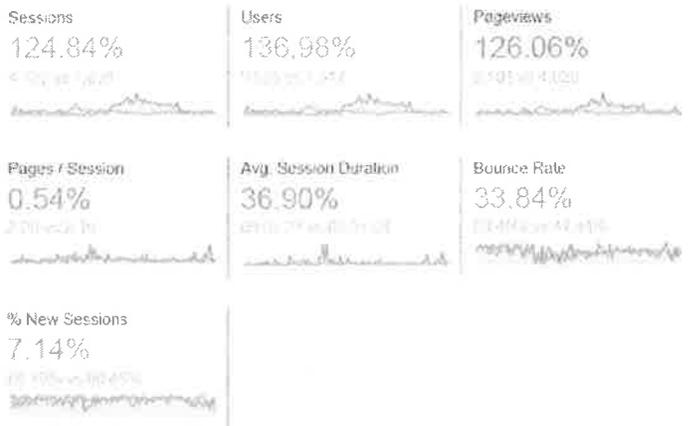
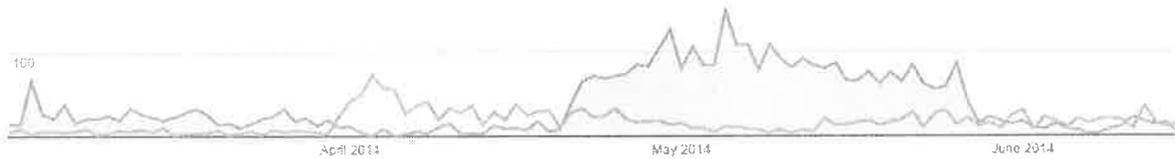
## FY 14 Campaign: Overview

The FY 2014 campaign strategy departed from previous RSEP campaigns in two key ways. First, due to agency transition timing, RSEP did not conduct a fall campaign in late 2013. This resulted in two campaigns running during the spring and summer of 2014. Secondly, the organization approved a shift in marketing strategy away from print and toward more online ads.

The results for the Spring 2014 campaign were very positive. As seen in the graphs below, the shift to the web-based advertising drove significantly more people to the website.

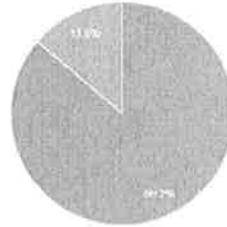
### Spring Campaign 2014 vs. Same Period in 2013

Mar 1, 2014 - Jun 15, 2014: Sessions  
 Mar 1, 2013 - Jun 15, 2013: Sessions

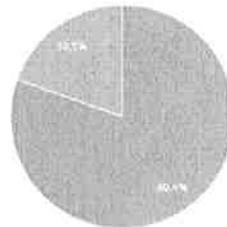


Legend: New Visitor (light grey), Returning Visitor (dark grey)

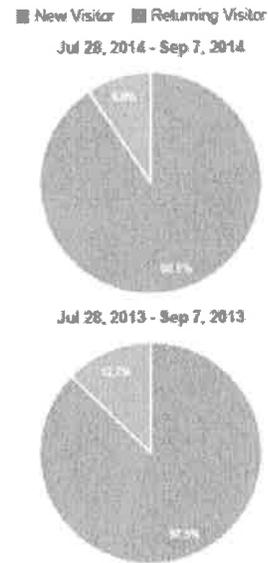
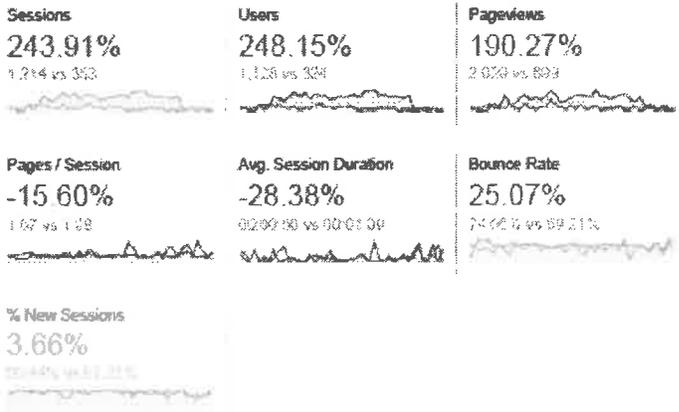
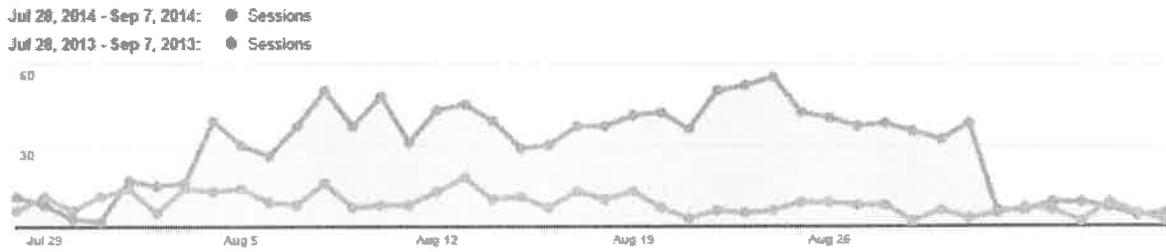
Mar 1, 2014 - Jun 15, 2014



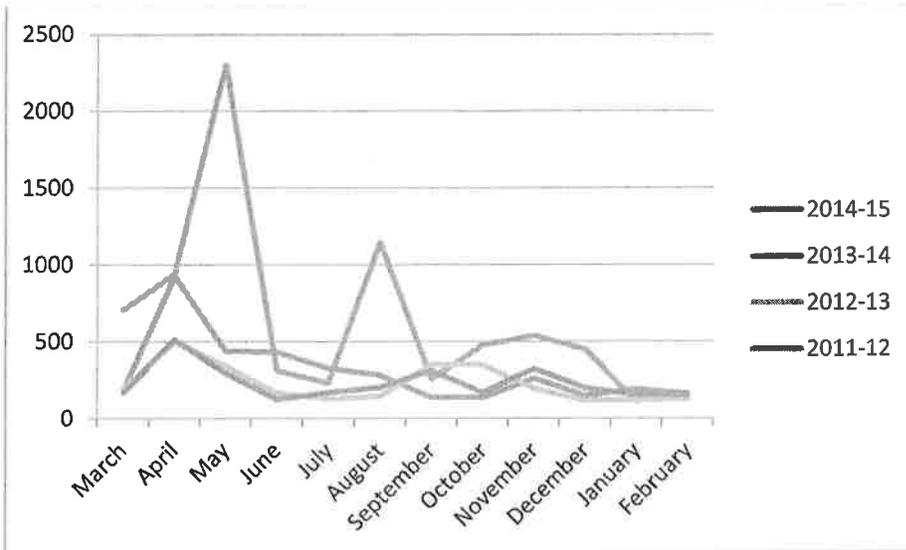
Mar 1, 2013 - Jun 15, 2013



**Fall 2014 Campaign vs. Same Period in 2012 (Note: There was not a Fall 2013 campaign.)**



**RSEP Web Traffic, 2011---2015**



TOTAL	TIME PERIOD
7488	March 2014-Feb. 2015
3645	March 2013-Feb. 2014
2756	March 2012-Feb. 2013
2804	March 2011-Feb. 2012

**Accomplishments**

- Updated the logo for Smart Water Ways, to modernize the look and make it more appealing to our audience.
- Extended the new branding with a website refresh that cleans up the use of fonts, uses more appealing, relatable photos and colors, and highlights more recent accomplishments of the program.
- Shifted the advertising strategy away from print and toward online ads, while still using a range of media to provide our audience with multiple impressions during the campaign window.
- Met with key reporters to inform them of RSEP’s activities. This has resulted in local press coverage of key stormwater issues and solutions.
- Did a second website refresh to address technical issues, most notably that the theme being used did not update properly with Wordpress. The new theme will automatically update, alleviating future problems. Old and broken links were also cleaned up at this time.

## Spring Campaign 2014: Slow the Flow

This campaign aimed to address the issue of using landscaping techniques to slow the flow of stormwater over your property. With the increased strength and frequency of summer storms, this messaging can make an impact on flooding and related issues.

This campaign marked the return of the full campaign spend (\$20,000) for the first time since the move toward an online strategy. While 2013 campaigns that were online-heavy indicated that this strategy would be successful, the spring 2014 campaign results were dramatically better than other campaigns that were run in the past.

The online portion of the media buy represents 38% of the total spend, but generated 80% of the clicks during the campaign window.

Of the online media purchased, the Burlington Free Press performed most poorly with a low click rate and highest cost per click. In the future, we should consider spending those dollars elsewhere. Front Porch Forum far outpaced other online media.

The bounce rate for this campaign was slightly higher than in previous campaigns. However, with dramatically increased traffic we are still getting many more people to SmartWaterWays.org.

Analysis of Google Adwords indicates the rain garden creative performed slightly better than the rain barrel creative, with higher clicks and a more efficient cost per click (\$0.75 vs. \$0.85). However, these numbers are so close that it's unclear that one of the versions is better than the other. These variations could be because the rain barrel creative was in the latter half of the campaign, when interest is typically a little lower than in the beginning.

Online Media Results				
Tactic	Impressions	Clicks	Cost	Cost per click
Google	pay-per-click	1512	\$1,195.12	\$0.79
WCAX	120,000	129	\$1,000.00	\$7.75
Front Porch Forum	210,000	465	\$1,510.00	\$3.25
Free Press	210,000	121	\$1,410.00	\$11.65
Xfinity.com	105,000	184	\$2,000.00	\$10.87
Seven Days	75,000	78	\$540.00	\$6.92
<b>Total clicks</b>		<b>2489</b>	<b>\$7,655.12</b>	<b>\$3.08</b>

**Slow the Flow Campaign, \$20k buy**

**Campaign Results for April 21-June 1, 2014, 2014**

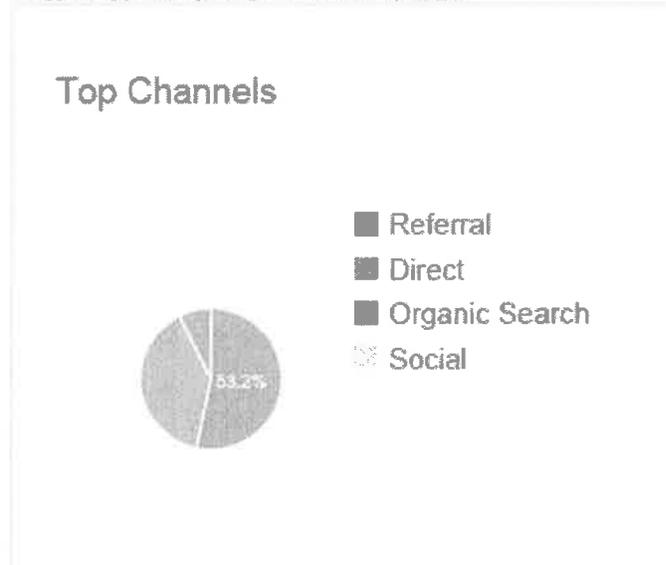
Total Clicks	3094
Unique Clicks	2771
New Users	2742
Returning Users	352
Pages/session	2.18
Time on Site	1:14
Bounce Rate	61.02%

**Previous Spring Campaign (March 31-May 11, 2013), \$20k buy**

Total Clicks	1055
Unique Clicks	889
New Users	861
Returning Users	194
Pages/session	2.41
Time on Site	1:04
Bounce Rate	35.92%

During the campaign window, more than half of the traffic generated was Referral traffic (meaning it came from another site). It's also of interest that the Bounce Rate for that traffic is lower than the average bounce rate. Again, it is unclear if traffic generated by Front Porch Forum is being classified correctly.

**Traffic Types, Spring 2014 Campaign**



		Acquisition			Behavior		
		Sessions	% New Sessions	New Users	Bounce Rate	Pages / Session	Avg. Session Duration
		3,054	88.59%	2,741	61.02%	2.18	00:01:14
1	Referral	1,647			58.04%		
2	Direct	1,218			67.32%		
3	Organic Search	226			48.67%		
4	Social	3			66.67%		

**Top 10 Keywords**

1. Garden
2. Gardening
3. Fertilizer
4. Rivers
5. Lake Champlain
6. Vermont garden
7. Garden drainage solutions
8. Rain garden
9. Water garden
10. Garden tips

**Top Referring Sites**

1. Googleads.doubleclick.net
2. Wcax.com
3. Burlingtonfreepress.com
4. Digital.vpr.net
5. Xfinity.comcast.net
6. Sevendaysvt.com
7. Classifieds.sevendays.vt.com
8. Ad.doubleclick.net
9. L.yimg.com (Yahoo, part of the Burlington Free Press online buy)
10. Smartwaterways.com

### **Top Content**

1. Home
2. Problems & Solutions
3. Resources
4. Stormville
5. Problems & Solutions/Excess Water

### **Location of users**

89.41% of all traffic came from within the United States; 41.16% came from within Vermont. While the Vermont number is lower than in the other campaign window, it still represents 1,269 clicks from within the state. Also, if you dig deeper, you'll see that our neighboring states (NY, NH, and MA) rank right below Vermont in the amount of traffic. I suspect this is because our local media outlets do not actually geo-target, so everyone who comes to those sites will see our ads. For example, WCAX has many viewers in adjoining states, so sites of that nature are likely driving most out of state traffic.

## **FY15 Campaigns**

### **Fall 2014 Campaign**

In the fall window, RSEP ran the Slow the Flow creative again with excellent results. Based on performance of the spring campaign, we made some variations to the media plan. Most notably, we dropped the underperforming Free Press ads, and moved from Google text ads to display ads. Finally, we changed the display ads on Xfinity to video pre-roll.

While the cost-per-click for Xfinity was greatly reduced, the Google display ads were less efficient than text-only ads. In 2015, these learnings will be used to develop the media buys.

<b>Fall 2014 Campaign, Online Media Results</b>				
	<b>Impressions</b>	<b>Clicks</b>	<b>Cost</b>	<b>Cost per Click</b>
WCAX	75,000 impressions	86	\$600	\$6.98
Xfinity	video pre-roll	131	\$750	\$5.73
Front Porch Forum	58,000 impressions	127	\$756	\$5.95
Google	pay-per-click	411	\$1,000	\$2.43
Seven Days	87,500 impressions	77	\$700	\$9.09
<b>Total Clicks</b>		<b>832</b>	<b>\$3,806</b>	<b>\$4.57</b>

As you can see below, the Fall 2014 campaign compares favorably to the 2012 campaign in many ways, most notably in the amount of traffic to the site. It is also of interest that the bounce rate (people who click on the site and quickly move off) is similar for both campaigns, and is similar to the Spring 2014 campaign as well.

**Fall 2014 Slow the Flow Campaign, \$10k buy  
Campaign Results for August 4-31, 2014**

Total Clicks	
Unique Clicks	2771
New Users	2742
Returning Users	352
Pages/session	2.18
Time on Site	1:14
Bounce Rate	61.02%

**Previous Fall Campaign (NOTE: 2012 RESULTS), \$10k buy**

Total Clicks	456
Unique Clicks	386
New Users	370
Returning Users	86
Pages/session	2.25
Time on Site	2:11
Bounce Rate	61.40%

In the Fall campaign, the instance of direct traffic (URL is pasted or typed into the browser) fell by 20% to 47.7%, which is more in line with typical campaign results than the Spring campaign. It is still somewhat high, but again it appears that this is being driven by Front Porch Forum clicks. If Front Porch Forum clicks are backed out of the Direct Traffic total, Direct Traffic to the site would be a reasonable 36.6%.

Referral Traffic is predictably coming from our advertising partner sites (with the exception of semalt.com—they are a bot site, meaning they are performing automated tasks on a variety of sites on the Internet.) Wunderground.com, weather.com, and ehow.com are all part of the Google content network.

**Referral Traffic Sources, Fall 23014 Campaign**

Source	Acquisition			Behavior		
	Sessions	% New Sessions	New Users	Bounce Rate	Pages / Session	Avg. Session Duration
	498 % of Total: 43.53% (1,144)	93.98% Avg for View: 91.17% (3.06%)	468 % of Total: 44.67% (1,043)	73.29% Avg for View: 74.21% (+1.24%)	1.61 Avg for View: 1.65 (-2.62%)	00:00:46 Avg for View: 00:00:47 (-2.84%)
1. googleads.g.doubleclick.net	171 (34.34%)	92.40%	158 (33.76%)	73.68%	1.61	00:00:45
2. wcax.com	38 (7.63%)	94.74%	36 (7.69%)	63.16%	1.50	00:00:42
3. sevendaysvt.com	27 (5.42%)	96.30%	26 (5.56%)	55.56%	2.67	00:02:04
4. xfinity.comcast.net	25 (5.02%)	96.00%	24 (5.13%)	88.00%	1.12	00:00:02
5. classifieds.sevendaysvt.com	10 (2.01%)	90.00%	9 (1.92%)	50.00%	2.30	00:01:07
6. semalt.semalt.com	9 (1.81%)	100.00%	9 (1.92%)	100.00%	1.00	00:00:00
7. wunderground.com	9 (1.81%)	100.00%	9 (1.92%)	44.44%	2.44	00:01:57
8. weather.com	7 (1.41%)	100.00%	7 (1.50%)	42.86%	3.00	00:01:16
9. ehow.com	4 (0.80%)	50.00%	2 (0.43%)	50.00%	1.50	00:02:21
10. smartwaterways.com	4 (0.80%)	100.00%	4 (0.85%)	0.00%	3.00	00:01:59

**Top Content**

1. Home
2. Rain Gardens
3. Solutions
4. Reduce Runoff
5. Excess Stormwater

**Location of Users**

83.2% of all traffic generated from within the United States; of that, 68% came from within Vermont, a significant improvement from the Spring Campaign. Also, within Vermont, the top 5 towns accessing the site during the campaign window were all participating towns (in order Burlington, South Burlington, Essex, Colchester, Shelburne).

## Recommendations for Spring 2015

Spring 2014 represented the strongest campaign results to date for RSEP. As such, we'd recommend continuing this strategy through 2015, while looking for opportunities to incrementally improve results. For example, we've experimented with different types of online ads with Google and Xfinity, and we can use those results to make the best possible choices for 2015 advertising.

In 2015, RSEP identify and pursue additional public relations activities and to time them to enhance campaign results. As the debate about how best to fund and execute lake clean up continues, opportunities may arise to participate in the public debate.

Additionally, as we move out of the maintenance year window, RSEP should develop a professional, step-by-step video of how to build a rain barrel that can be used in a variety of ways. Primarily, it can act as a valuable asset in educating the public and would work well with our campaign creative. It could also help RSEP enhance its sphere of influence by encouraging other Vermont stormwater and water quality groups to link to it. It could also be useful to members of the press with whom we engage.

Finally, during the Spring 2015 Campaign, RSEP should use a small portion of the budget to experiment with other advertising media that should achieve similar (if not superior) results. Some ideas that come to mind are using video pre-roll ads on YouTube, or audio ads on Spotify and/or Pandora.

### **Media Buy Recommendations, Spring 2015**

The below graph of media spending for the Spring Campaign reflects the above advice.

	Cost
<b>Radio (20%)</b>	
WVMT	
WEZF (Star 92.9)	
WEAV	
VPR	
<b>Radio total</b>	<b>\$5,000</b>
<b>Web (40%)</b>	
WCAX	
Front Porch Forum	
Google ad network	
Xfinity.com	

Seven Days	
Pandora/Spotify	
<b>Web total</b>	<b>\$8,000</b>
<b>TV (20%)</b>	
WCAX	
WFFF	
Xfinity	
<b>TV Total</b>	<b>\$5,000</b>
<b>Print (10%)</b>	
Seven Days	<b>\$2,000</b>
<b>TOTAL</b>	<b>\$20,000</b>

## Connecting the Drops II

### Final Report 09-30-14

#### Sponsorship Amount:

#### Contact Information:

*Name & title:* Becky Tharp, Land Use Planning and Water Quality Educator

*Organization:* Lake Champlain Sea Grant (LCSG)

*Address:* 705 Spear St. Room 123, South Burlington, VT 05403

*Phone #:* 802-656-2514

*E-mail:* rtharp@uvm.edu

#### Project Overview:

In 2013, the Winooski Natural Resources Conservation District received a grant from the ECOS Project for \$40,000 to develop a public stormwater-based outreach and education exhibit featuring rain barrels in downtown Burlington in the Summer of 2013. RSEP provided an additional \$12,500 to leverage the exhibit's exposure for logo placement on print and web ads, signage, website, fliers, and verbal recognition at public events associated with the exhibit. A full report for that project was provided to RSEP in October 2013 entitled "Connecting the Drops Rain Barrel Project: RSEP Sponsorship."

Based on the successful outcomes of the 2013 campaign, RSEP members requested a proposal for a second year of the Connecting the Drops Project. With a significantly smaller scope, Lake Champlain Sea Grant developed a "traveling" version of the Connecting the Drops exhibit to be held in Essex Junction during the summer of 2014 for an estimated cost of \$3,848. (A full and detailed budget with proposed and actual costs is attached to this report.) RSEP goals (as communicated to LCSG during a January 21, 2013 meeting with Dan Albrecht, Annie Costandi, and Chelsea Mandigo) for the 2014 exhibit were an increase in visibility of the Program through press and events.

#### Summary of Activities:

- 5 professionally painted rain barrels were installed at Maple Street Park in Essex Junction on June 9, 2014
- The Kids VT Stormwater Story was updated for the 2014 installation and reprinted onto plastic panels
- Storyboards and "Win-a-Rain-Barrel" panels were installed on top of barrels and on posts at installation
- WNRCD held a build-a-rain-barrel workshop in June at Maple Street Park with 36 participants making 26 barrels – CtDII ads promoted this event.
- Print and web advertisements were run with Williston Observer, Essex Reporter, Kids VT, and Front Porch Forum
- Promotional article run in Kids VT in July
- Promotional exhibit fliers were posted in public areas and shared at WNRCD tabling events
- Barrels were removed from the park on July 16 and given away at the Essex Junction Block Party on July 19
- 71 people signed up to win a rain barrel on the website. 36 signed up in person at the Block Party – a total of 107 sign-ups.
- All barrels went home to people living in the Vermont Champlain Basin.

RGEP Connecting the Drops 2.0 Proposal - 2014 - Lake Champlain Sea Grant (Rebecca Tharp)

Element Description	Materials Costs - Estimated	Material Costs - Actual	Labor - Estimated	Labor - Actual
Installed Rain Barrels + hardware, building barrels and cleaning supplies	\$150.00	\$112.50	\$227.50	\$295.58
Mileage	\$28.00	\$70.52		
Professional artists fee (5 x \$200)	\$1,000.00	\$1,000.00		
Community Rain Barrel Workshop - CCST	\$500.00	-\$195.00	\$525.00	\$480.00
Signage (printing rigid signs for top of barrels)	\$400.00	\$272.08		
Placement/ Installation of barrels			\$140.00	\$224.00
RB Signage fastening hardware	\$50.00	\$45.00		
Community Outreach Events	\$100.00	\$0.00	\$350.00	\$720.00
<b>Advertising</b>				
Essex Reporter Ads	\$350.00	\$306.00		
Williston Observer Ads	\$270.00	\$259.20		
Front Porch Forum (30,000 impressions)	\$250.00	\$420.00		
Kids VT and 7Days	\$750.00	\$750.00		
<b>Totals</b>	<b>\$3,848.00</b>	<b>\$3,040.30</b>	<b>\$1,242.50</b>	<b>\$1,719.58</b>

Materials cost difference (less than projected)

\$807.70

Labor cost difference (More than projected)

\$477.08

TOWN OF COLCHESTER  
GENERAL ACCOUNT  
P.O. BOX 55  
COLCHESTER, VT 05446

*People's United Bank*  
BURLINGTON, VERMONT  
58-6 / 118

CHECK NO.  
36046

036046

VENDOR 5402	CHECK DATE 07/22/2014	CHECK AMOUNT \$5,000.00
----------------	--------------------------	----------------------------

**PAY** \*\*\*\*\*5,000 DOLLARS AND NO CENTS

TO THE ORDER OF REGIONAL STORMWATER EDUCATION PROGR  
110 WEST CANAL STREET STE 202  
WINOOSKI VT 05404

MP  
AUTHORIZED SIGNATURE

⑈036046⑈ ⑆221172186⑆ ⑈1⑈99⑈0020⑈7⑈

36046

TOWN OF COLCHESTER P.O. BOX 55 COLCHESTER, VT 05446

WAR15-03

036046

INVOICE DATE	INVOICE NUMBER	INVOICE DESCRIPTION	NET INVOICE AMOUNT	PO NO.	VOUCHER
07/01/14	68	REGIONAL STORMWATER EDUCA	5,000.00		

5402 REGIONAL STORMWATER EDUCATION PROGR 5,000.00 36046

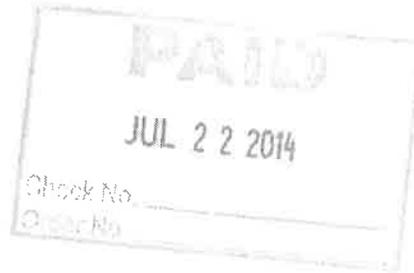
Regional Stormwater Education Program

Invoice

110 West Canal Street  
 Suite 202  
 Winooksi, VT 05404

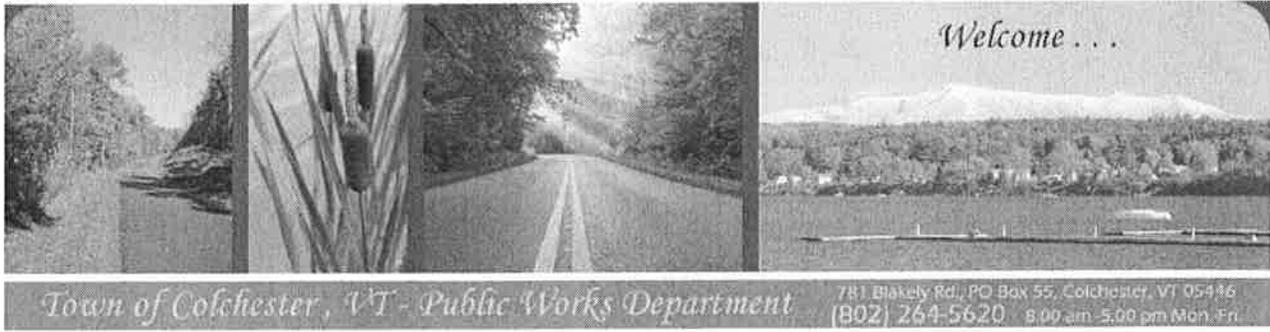
Date	Invoice #
7/1/2014	68

Bill To Mr. Brian Osborne Director of Public Works Town of Colchester PO Box 55 Colchester, VT 05468	5408
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P.O. No.	Terms	Project
	Due on receipt	

Quantity	Description	Rate	Amount
1	Regional Stormwater Education Program, Year 12	5,000.00	5,000.00
100043H - 480015 			
<b>Total</b>			\$5,000.00



February 5, 2015

- [Town Departments](#)
- [Public Works Home](#)
- [Volunteer Opportunities](#)
- [Meet the Director](#)

- [Data Collection](#)
- [Education](#)
- [Erosion Plan Application](#)
- [Maintenance](#)
- [Ordinance](#)
- [Permits](#)
- [Public Involvement](#)
- [Reports](#)
- [Storm Water Permitting Chart](#)
- [Storm Water Plan Application](#)
- [Storm Water Plans](#)

**Search**

**Colchester, VT**  
 7°F / -14°C  
**Partly Cloudy**  
 at 03:53 PM  
  
 Click for Forecast

### Welcome to the Storm Water Page

The Town of Colchester is rich in natural resources. There are approximately 30 miles of shoreline on Lake Champlain, while the arms of Malletts Bay surround almost 10 square miles of the lake. The Town's southern border has about 9 miles of frontage on the Winooski river, and the northwestern border has about 3 miles of frontage on the Lamoille River. Inland from the lake lies Colchester Pond, a 186 acre water body. With 165 mapped wetlands, comprising a total of 3,066 acres, and many unmapped wetlands, Colchester has one of the most diversified and valuable collections of habitats in Vermont. For these reasons and many more, Colchester has made water quality a priority for many years. In keeping with these priorities, the Colchester Public Works Department has focused substantial resources on managing storm water runoff within the community.

[What is Storm Water Runoff?](#)

[Why is Storm Water Runoff a Problem?](#)

[Why and how to manage Storm Water?](#)



[Public Works Home](#) | [Volunteers](#) | [Permits](#) | [Meet with Director](#) | [Storm Water](#) | [Wastewater](#) | [Equipment Maintenance](#) | [Planning](#) | [Capital Projects](#) | [Ordinances](#) | [Water Quality Results](#) | [Data Collection](#) | [Stormwater Plans](#) | [Education](#) | [Public Involvement](#) | [Capital Improvements](#) | [Maintenance](#) | [Colchester Home](#) | [Town Manager](#) | [Assessor](#) | [Burnham Memorial Library](#) | [Community & Economic Development](#) | [Finance](#) | [Human Resources](#) | [Parks & Recreation](#) | [Planning & Zoning](#) | [Town Clerk](#)

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 Web Development by Off the Page Creations

## **Minimum Measure 2**

### **Public Involvement and Participation**

**Attachments:**

1. Storm Water Watch Groups
2. Colchester Conservation Commission 2014 Report
  - a. Green Up Day
  - b. Fall Leaf Collection
  - c. Rain Garden Spring Cleanup/Refresh
  - d. Rain Barrel Workshop
  - e. De-Poop the Park

## Storm Water Watch Group Briefing

Greetings and thank you for agreeing to be a part of a storm water watch group we are assembling throughout the community. The establishment of this citizen network is a key part of our overall water quality plan. Community involvement accomplishes an important component of public education, which is essential to an effective plan.

Your role is to provide your eyes and ears relative to water quality problems in your area, and report them to us. We will then evaluate the problem, and attempt to address it in the best way we can. Periodically, we will send you information that will hopefully assist in your efforts.

Attached to this e-mail, I have included a map that illustrates the sub-watersheds where the full storm water watch group will be established. There are now representatives working in the following water sheds:

- Colchester Pond Brook
- Crooked Creek
- Indian Brook
- Inner Malletts Bay
- Morehouse Brook
- Outer Malletts Bay
- Smith Brook
- Sunderland Brook
- Winooski River
- Gilbrook
- Lake Champlain

One of the leading problems relative to storm water pollution is sediment. Sediment comes from a variety of different sources. We spread sand on the roadways as a part of our winter maintenance operations. In order to prevent this practice from being problematic, it is critical that we have sound street sweeping and basin cleaning programs to remove the sand before it finds its way into a receiving waterway. It also comes from construction sites or other forms of land disturbance, both big and small. When the soil is exposed and it rains, erosion occurs and washes the sand and soil into receiving waterways. It also occurs from channel erosion where storm flows have reached a level where stream channels are being eroded and transferring sediment down stream.

Although a primary concern with Vermont's waterways is sediment, we are also concerned about other pollutants as well that may enter into our storm water systems and waterways. These are referred to as illicit discharges. These are typically discharges to the storm water system that consist of flows other than pure storm water. Examples would include oils, chemicals or untreated sewage.

Generally the types of things you should be looking for are erosion problems, anything other than storm water being placed or directed into the storm water system, or flows coming out of storm water systems during dry weather conditions.

Before you begin thinking that the entire responsibility for water quality monitoring for your area rest entirely on your shoulders, keep in mind that our storm water management plan contains

inspection programs where storm water basins and outfalls are inspected by our staff each year. Land disturbances are required to be permitted through our Planning and Zoning Offices, and are subject to inspection by Town staff. We can not see everything however and will benefit greatly from another set of eyes and ears.

Below are a few links that will provide you with additional information that you may find both informative and useful.

[www.amr.state.vt.us/dec/waterq/stormwater.htm](http://www.amr.state.vt.us/dec/waterq/stormwater.htm)

This link will take you to the storm water section of the Vermont Agency of Natural Resources web-site. Select "Publications" and you will find the Vermont Handbook for Erosion Prevention and Sediment Control.

[www.epa.gov/npdes/pubs/fact2-5.pdf](http://www.epa.gov/npdes/pubs/fact2-5.pdf)

This link will take you to a section of the EPA's site where you will find a fact sheet on Illicit Discharge Detection and Elimination Minimum Control Measure.

[www.smartwaterways.org](http://www.smartwaterways.org)

This web-site has been developed by the Chittenden County Regional Storm Water Education Program, (RSEEP), to which Colchester is a member. It has been designed to provide public education on storm water and is advertised through a state wide social marketing campaign.

For additional materials that you may find useful, please visit our website at [www.colchestervt.gov/PublicWorks/Stormwater.shtml](http://www.colchestervt.gov/PublicWorks/Stormwater.shtml). Here you will find our NPDES Phase II MS4 General Permit. This is a federal permit we are required to maintain. This document contains our plan that demonstrates compliance to this permit. You will also find our Illicit Discharge Detection Plan and our Storm Water Ordinance. Please feel to look around our site where you will find other useful and interesting information.

Again, thanks for all of your help. Please feel free to contact me anytime at 264-5625 with any questions.

Bryan K. Osborne  
Director of Public Works

## Storm Water Watch Group

<u>Watershed</u>	<u>Representative</u>
1. Inner Malletts Bay	Tom Berry Moe Germain Anita Socinski
2. Smith Brook	Jeff Barton
3. Colchester Pond Brook	Betsy Orselet
4. Winooski River	Evan Fitzgerald Marc Landry
5. Crooked Creek	Harlan Lachman
6. Indian Brook	Jean Osborne
7. Sunderland Brook	Meg McGovern
8. Morehouse Brook	Sherry LaBarge
9. Outer Malletts Bay	Tracy Byrnes
10. Gilbrook	Alan Dicinson
11. Lake Champlain Watershed	Pam Loranger Buzz Hoerr



- Parcel Line
- MS4 Watersheds
- Colchester Pond Broo
- Crooked Creek
- Gilbrook
- Indian Brook
- Inner Malletts Bay
- Lake Champlain
- Morehouse Brook
- Outer Malletts Bay
- Smith Brook
- Sunderland Brook
- Winoski River

## **Colchester Conservation Commission 2014 Annual Report**

The Conservation Commission was involved in a number of projects and events that benefited Colchester and its residents this past year.

One of its biggest events was the annual Green Up Day, May 3, which attracted 323 volunteers who picked up 5.5 tons of roadside litter (more than any community in Chittenden County), 233 tires and 3.5 cubic yards of metal. This is the 19th year that the Commission has organized this event.

The Commission also oversaw the annual leaf collection weekend, Nov. 2-3 at Airport Park, which provided residents with an accessible option to driving to the landfill to dispose of their leaves and Halloween pumpkins. The Chittenden Solid Waste District hauled 63.35 tons of leaves--seven loads in 40-cubic-yard containers--to Green Mountain Compost in Williston to turn into compost for retail sale.

Colchester Blooms!, established by the Commission in FY-09, again raised money to plant colorful annuals in public spaces. Volunteers spent 21 hours in June planting more than 1,200 annuals and perennials at Bayside Park, the flagpole bed by Bayview Eats, Bayside Activity Center and the traffic islands at the intersection of Blakely Road and Malletts Bay Avenue. The beds were prepared for planting by Levinsky Landscaping, a Colchester company, with watering and maintenance throughout the season by Pinnacle Properties.

Among other primary activities for the year were hosting the third annual Do-It-Yourself Rain Barrel Workshop at Bibens ACE Hardware in April and site visits to Niquette Bay State Park, Law Island and Winooski Valley Park District's newest acquisition, the Eben Wolcott property on East Road, to assess the natural resources of these sites.

Members also volunteered at Niquette Bay State Park on April Stools Day, co-sponsored by the Lake Champlain Committee and Vermont Department of Forests, Parks and Recreation, to clean up dog droppings at local state parks. The Commission currently is drafting a tree ordinance for the town with the assistance of the latter agency and the Vermont Urban and Community Forestry Program.

**COLCHESTER CONSERVATION COMMISSION**

**AGENDA**

**March 17, 2014 7pm**  
**Activity Center**  
**Lakeshore Dr. Colchester, Vt.**

1. Call meeting to order.
2. Roll call.
3. Approval of minutes.
4. Business
  - a. Niquette Bay State Park cleanup
  - b. Tree ordinance
  - c. Rain Barrel workshop
  - d. Colchester Blooms! Letter to business
5. Other Business
6. Adjourn



Kristina Sherman and Matt Romeo, 10, of Colchester, pick up litter on the side of Porters Point Road in Colchester on Saturday morning for Green Up Day.



Lynn Mazza, of Colchester, lifts a large trash bag full of litter she found off of Middle Road.

# GREEN UP DAY

Sergio Valero, of Colchester, looks for trash alongside Route 2.



Old tires are removed from a creek near Middle Road in Colchester.



## Burnham Memorial Library



**"Dragons Love Tacos,"**  
by Adam Rubin, illustrated by Daniel Salmieri  
Juvenile Picture Book, 2012

Reviewed by *Josh Mace, Adult Services*

Everyone loves tacos – especially dragons! In their delightfully illustrated book, Rubin and Salmieri explain the facts about dragons and tacos. It turns out the only thing dragons like more than tacos are parties – so when you combine the two, you are in for a treat. However, there are a few do's and don'ts to keep in mind, and one particular party foul that can put a real damper on your entire soiree. Salmieri's drawings

## Two join Turning Point Center of Chittenden County

The Turning Point Center of Chittenden County, located in Burlington, announces the appointments of Kim Morrill, of Colchester, as Weekday Operations Manager, and Tom Schaefer, as Weekend Operations Manager to the Center.

40-degrees. Members of the teams were from Champlain Oil Company, Team Too Legit from Almarin Volvo, Harry Sheres, Quinny Dippers,

Chillers, Marian's Team and the Middlebury College Rugby Club. The Malletts Bay Fire Department and

upcoming events visit [www.ephepsv.org](http://www.ephepsv.org) or call 802-318-1575.

See more photos on page 16.

# Gearing up for Green Up Day

## Annual clean up event on tap for Saturday

"Green Up means clean up" will be the motto of the day on Saturday, as Green Up Day volunteers scour Vermont collecting litter from 8 a.m. to 12 p.m. Colchester residents have already started signing up to help give the Town a fresh look for spring.

"I've been getting a lot of calls and emails from people and groups who want to volunteer to pick up an area," explained Colchester Green Up Day Coordinator Tim Moran, of the Colchester Conservation Commission. "It's very encouraging that people are willing to go out there and pick up. It's a nice thing to do for the community."

A first time Green Up Day coordinator, Moran said he doesn't know how many volunteers to expect on Saturday but noted that Colchester has had between 250 and 340 over the last five years.

Moran and other members of the Colchester Conservation Commission will begin distributing bags and road assignments to residents at the Colchester Police Department starting at 8 a.m. Saturday. Instructions on where to leave filled bags for pick up by the Town's road crews will be provided when volunteers receive their bags.

Volunteers can participate in the event for any length of time and may select their own road or area to clean, provided that it has not already been assigned.

While advanced registration is not required, large groups of volunteers are encouraged to contact Moran at 802-980-7007 prior to Saturday's event to prearrange an area to clean up.

*Editor's note: To learn more about Green Up Day, visit <http://www.greenupvermont.org/>*

—Kelly March

# Should the town clerk be elected?

## Clerk recommends charter change

By JASON STARR  
The Colchester Sun

Colchester voters have elected Town Clerk and Treasurer Karen Richard every cycle since 1998. But Richard now believes that decision should be taken out of voters' hands.

She's recommending to the town's Governance Committee—a group of citizens studying possible changes to the town charter—that the position of town clerk and treasurer be hired by the town manager like any other department head.

The committee plans to submit a report to the selectboard recommending that and a handful of other charter changes that voters would have to approve in November's election.

Richard said her views have changed over the years on the subject but now, with the town clerk/treasurer responsible for collecting approximately \$50 million in property taxes, it's critical to have someone qualified to do the job, she said—not just someone who can win an election.

"You don't have to be qualified to be elected, and we're getting more complicated here. We've grown to the point of having more skills in the office," said Richard. "We're too large in this

community to elect a popular person who doesn't have the skills."

Richard said she plans to retire within the next five years. Selectboard members sought her opinion on the issue to begin the process of changing the charter ahead of her retirement.

Richard, who serves as chairwoman of the legislative committee of the Vermont Municipal Clerks' and Treasurers' Association, said she's watched disagreements in other towns between an elected clerk and elected selectboard members devolve into political power struggles.

"I've seen what happens when the town clerk doesn't get along with the selectboard," she said. "If you go through the same hiring process as all the other departments, I don't see a problem with that."

Curt Taylor has deliberated on the issue as a member of the Governance Committee over a series of meetings for the past six months. He said the selectboard will collect public input on the change before placing a question on the November ballot.

The committee is also considering three other charter change proposals that would need voter approval: instituting a local option tax—a 1 percent sales tax that several neighboring towns have in place; reducing the 8 percent charge on late property tax payments; and eliminating archaic elected positions such as grand juror.

proposal to a 3.7 percent, in according to school adminis

The proposal would taxpayers about \$50 for \$100,000 of home value, for example, the owner of a \$3 home would see an increase of about \$150 in their annual tax. However, a majority of Col residents receive reduced their bills through the St Vermont-based income.

The School Board in bucked Superintendent Waters' recommendation for not funding for new middle computers into a separate question. Computer funding original budget proposal was \$1.0 million.

"I agree that it's not board member Craig Kier during an April 1 meeting which the board decided the ballot question, "but concerned about putting this on the ballot because it was the budget that got turned putting this separate article ballot could be taken neg and drag the budget down."

"I'm thinking we work the summer and fall at other ways to fund it, when a fee or some other way to in," he said.

The board also can the s existing technology into specialist a year earlier planned. The position was two years ago to help K-5 to integrate technology use classroom lessons.

"We will continue to s with technology and integr but our programs will con Waters said at the April 1 m. "We will find some way to f

—See SCHOOLS on

There is an old saying that you can look at a glass half empty or half full. This can be said of Vermont Health Connect (VHC). The performance of VHC has not been as bad as opponents say nor has it been as rosy as some predicted. Now that open enrollment for 2014 has ended, it is a good time to see how VHC has helped Vermonters and examine what can be improved.

Our organization is one of 31 navigator organizations across Vermont funded to help Vermonters learn about and enroll in coverage through VHC.

My goal is to help Vermonters get health care, and that is the way through which I look at it. For me, the glass is half full.

The Department of Vermont Health Access estimates that navigators reached Vermonters more than 1.5 million times through their outreach efforts, which included direct mailings, visits at venues like libraries, farmers markets and fairs, informational presentations, one-on-one assistance. The success of these outreach efforts is unprecedented and as many Vermonters were reached more than one time during their eligibility coverage through VHC. Preliminary numbers show approximately 126,000 Vermonters are enrolled in coverage through VHC, including those enrolled through their employer, Vermonters transitioned from VHAP and Mount Health, and Vermonters who enrolled directly in individual and private plans.

While the glass is more than full in terms of outreach, we acknowledge that many Vermonters faced a number of challenges enrolling, and some of those challenges are ongoing. Without the flexibility of Blue Cross Blue Shield of Vermont's online application process and web portal did not smoothly. At peak times, wait times for the call center are very long.

The creation of VHC was an enormously complicated task, and it required unprecedented cooperation and buy-in from both the public and private sectors and advocates, who worked tirelessly to improve VHC and make it work for all Vermonters. The state has worked feverishly to identify and correct ongoing issues with applications and enrollment. Without the flexibility of Blue Cross Blue Shield of Vermont and MVP — the two insurance companies offering coverage through VHC — VHC would not be operating as smoothly as it is. The Office of the Health Care Advocate is helping to identify some of the requirements of the Affordable Care Act that cause problems with VHC that need to be remedied. While VHC remains unaffordable for many low and middle income Vermonters who are also coping with the high cost of living expenses like food, gas and heating.

The open enrollment period is a serious deterrent to access to coverage. Except for those who are eligible for Medicaid and those who have a qualifying event, enrollment coverage in 2014 is now over. Vermonters who lose their insurance until 2015. The open enrollment period for 2015 will be only three months long. Vermont Health Connect has been an historic undertaking, providing affordable health coverage to thousands of Vermonters. But it is does not provide universal access to coverage — it is only the foundation from which we can build a truly affordable universal health system for all Vermonters.

Sutton Fay is policy director for the Vermont Center for Health Care Security Education Fund.

*The open enrollment period is a serious deterrent to access to health coverage. Except for those who are eligible for Medicaid and those who have a qualifying event, enrollment coverage in 2014 is now over. The open enrollment period for coverage in 2015 will be only three months long.*



# project

Den 13 of Colchester Cub Scout Pack 865 has completed a totem pole showing the Scout ranks of Bobcat, Tiger, Wolf, Bear and Eagle. Pictured top left are Webelos Scouts Ethan Frank, John Blair and Boy Scout Den Chief Connor Zwonik. Pictured bottom left to right are Logen Crocker and Wyatt Lugo. Not pictured are den members Jake Perrotte, Draven LaPine and Ethan Ravlin. Luke Perrotte also contributed to the carving wood burning, painting and staining.

PHOTO CONTRIBUTED

## Letters To The Editor

### Family Fun and Safety Night thank you

Colchester Rescue would like to thank all of the members of the community who came out and visited with us at Annual Family Fun and Safety Night in honor of EMS week on May 20. Over the month of May, Colchester Rescue has hosted and taken part in several community events to expand the knowledge and understanding of what to do in an emergency, and how to prevent injuries from occurring.

Colchester Rescue would also like to thank the following local businesses who offered donations to make the event possible: Vermont Information Processing, Dick Maxza's General Store, McKenzie Country Classics, Coca-Cola, Louns Club, and Vermont Teddy Bear Company.

Colchester Rescue would also like to thank the following departments for their support during the event: Colchester Police Department, Colchester Technical Rescue, Colchester Center Volunteer Fire Company, Mulletts Day Fire Department, and St. Michaels Fire and Rescue, and of course the members of Colchester Rescue for their outstanding participation.

Looking forward to next year — May 20, 2015!

Jamie Burdick  
Colchester, Vermont

### Gracious retirement

It's been my pleasure and honor to teach in Colchester for the past 28 years. As I head toward the end of my last year in a Colchester School District classroom, I'd like to thank parents

for the gift of your children. My students at Union Memorial School, Malletts Bay School and Colchester High School have taught and inspired me a great deal, and I leave classroom teaching filled with wonderful memories.

Thank you so much!

Mary Ann Barnes  
Colchester

### Green Up Day's impact

The Colchester Conservation Commission would like to thank everyone who participated in Green Up Day on May 3. A total of 323 volunteers helped green up and clean up our roadsides and parks, including several volunteers from several organizations: Green Mountain Power, Police Chopper, Vermont Public Radio, the Colchester High School National Honor Society, Colchester Family Practice, Cub Scout Pack 355 and a Colchester Daisy Scout Troop. A special thank you to the Colchester Rite Aid for donating gloves and to the town road crew for their part in helping to pick up trash along town roads and collect the filled Green Up bags. Thanks also to the Colchester-Milton Rotary Club and the Colchester Lions Club, who hosted the barbecue for volunteers. The Chittenden Solid Waste District just released the totals for trash collection. Colchester collected 5 tons of roadside trash, more than any other community in Chittenden County. In addition, volunteers picked up 233 tires and 3.5 cubic yards of metal.

Theresa Carroll  
Colchester Conservation Commission chairwoman

## An opposing view of the Legislature's performance

By HEIDI E. SCHEUERMANN

There have been many opinions about how successful the 2013-2014 legislative session was.

Just prior to adjournment, Gov. Peter Shumlin told the House of Representatives "we have made this biennium one of the most productive in recent memory." In other press reports, House Speaker Shap Smifin called the last session, "incredibly productive."

But does this predictable self-congratulatory back-slapping tell the real story? Unfortunately, no. It belies the lack of real results in the areas most important to the working families, and overall economic vitality, of our state.

A more accurate characterization of the two-year session is one of missed opportunities and challenges unmet. While there were some positive developments and some important legislation passed, the issues many Vermonters wanted so desperately for us to address were not.

Indeed, there were some modest accomplishments. After many years of prodding from Republican members, we took another step in addressing our state's \$3 billion unfunded pension liabilities. We made necessary reforms to the welfare system, by turning the aptly named "benefits cliff" into more of a "benefits slope" and creating better opportunities for low-income Vermonters to work and achieve independence. And, we passed the economic development bill on which Rep. Paul Rabinoff (D-Middlebury) and I worked tirelessly.

While these measures are each modest steps forward, they are in no way the comprehensive, long-term commitment to economic development and fiscal responsibility that our state so desperately needs and deserves. In some ways, they could be fairly characterized as band-aids

*While there were some positive developments and some important legislation passed, the issues many Vermonters wanted so desperately for us to address were not.*

"unemployment" rate, keep in mind that since January 2011, 8,850 Vermonters have dropped out of the workforce. Sure, some new jobs are being created — but too many Vermonters have to work more than one of them to make ends meet.

Consider too that there has been a stunning lack of accountability and transparency around health care reform. The rollout of Vermont Health Connect was disastrous, all at the expense of families and businesses. Yet, nobody, absolutely nobody, has been held accountable for these failures.

In addition to this abysmal administrative boondoggle, legislative leaders and the governor continue to insist that we march down an undefined path to a \$2.2 billion taxpayer funded health care system. The only thing we know for sure is that their political promises of lower costs, better care, and guaranteed insurance for all continue — with absolutely no honest plan for getting us there.

When this effort launched in 2011, the law required that the governor present a financing plan by January of last year. As of today, there is no proposal.

The lack of any action at all to reform education funding and provide property tax relief is another disappointment. For years, Vermonters have been pleading for reforms. Yet, for years, those pleas have been ignored. As the cries for reform continued last year, the Legislature (instead passed a 5- and 6-cent tax increase — knowing full well that there would be similar increases this year.

Even as 36 school budgets went down to defeat on Town Meeting Day, nothing was done to reform the system. In fact, property taxes will continue to rise this year by 4 and 7 cents, followed by yet another 7.9 cent increase next year.

In November you will have an opportunity to hold all elected officials accountable.

## THE COLCHESTER SUN

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**From:** Floyd Sheesley  
**Sent:** Tuesday, April 08, 2014 7:24 AM  
**To:** mnhinc; Bryan Osborne  
**Subject:** RE: Rain Barrel

Theresa,  
Please let me know how many barrels you will need and we will pick them up and deliver them to ACE one of those days.

thanks

Floyd Sheesley  
Operations Manager  
802-264-5621 Office  
802-316-1046 Cell

---

**From:** mnhinc <[mnhinc@comcast.net](mailto:mnhinc@comcast.net)>  
**Sent:** Tuesday, April 8, 2014 5:34 AM  
**To:** Bryan Osborne  
**Cc:** Floyd Sheesley  
**Subject:** Rain Barrel

Hi Bryan & Floyd,  
We are running our rain barrel workshop again April 21 at Ace hardware. Can I ask you to pick up the barrels from International foods again? I would like to get them on Thursday, April 17 or Friday April 18. Please let me know if this is possible.

Thanks

Theresa Carroll  
Conservation Commission

**From:** mnhinc [<mailto:mnhinc@comcast.net>]  
**Sent:** Monday, November 03, 2014 7:29 AM  
**To:** Bryan Osborne; Dawn Francis; Glen Cuttitta  
**Cc:** CSWD Clare Innes; CSWD Lee  
**Subject:** Colchester Leaf drop

Everything went well this weekend with the leaf drop. It was a lower turn out, perhaps since it was so windy. We had the normal complaints – “it's too early, can we have it another weekend” but overall people are thankful for the closer spot to bring leaves. One guy brought 118 bags in a Toyota corolla. You can imagine we saw him a lot.

The rolloff wasn't at the park as in past years but that seemed to work better and we didn't have to worry about trash being put in it.

Please let me know what the tonnage is once it's all collected. The conservation commission likes to put the info in the paper.

Thank you,  
Theresa Carroll  
802-373-3644 cell

**From:** Lee Tuure [mailto:ltuure@cswd.net]  
**Sent:** Wednesday, November 05, 2014 3:02 PM  
**To:** mnhinc; Bryan Osborne; Dawn Francis; Glen Cuttitta  
**Cc:** Clare Innes; Floyd Sheesley  
**Subject:** RE: Colchester Leaf drop

We hauled out seven 40cy loads of leaves to our Green Mountain Compost Facility totaling 49.82 tons. For comparison purposes, last year was also seven 40cy loads, but totaled 63.35 tons.

*Lee*

**From:** mnhinc [mailto:mnhinc@comcast.net]  
**Sent:** Monday, November 03, 2014 7:29 AM  
**To:** Col Bryan K. Osborne; Col Dawn Francis; Col Glen Cuttitta,  
**Cc:** Clare Innes; Lee Tuure  
**Subject:** Colchester Leaf drop

Everything went well this weekend with the leaf drop. It was a lower turn out, perhaps since it was so windy. We had the normal complaints – “it’s too early, can we have it another weekend” but overall people are thankful for the closer spot to bring leaves. One guy brought 118 bags in a Toyota corolla. You can imagine we saw him a lot.

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Please let me know what the tonnage is once it’s all collected. The conservation commission likes to put the info in the paper.

Thank you,  
Theresa Carroll  
802-373-3644 cell

# Town video series in the works

A series of videos are coming out this year, and the Town of Colchester will be the star of the show.

The videos are an initiative of Colchester's Economic Development Department, which has contracted with CGI Communications of Rochester, N.Y., to produce the series. Filming will take place in June for a late-summer release.

According to Economic Development Director Kathi O'Reilly, the five videos — approximately 90 seconds apiece — will cover five different themes: a general welcome, quality of life, recreation, economic

development and community organizations/non-profits. They will be incorporated into the town's ongoing effort to rebrand itself to attract new businesses and residents.

The videos will be produced at no cost to the town, O'Reilly said. CGI Communications will be advertising to local businesses that are incorporated into the videos to cover the cost of production. If advertising sales falter, the town still receives the videos, O'Reilly said. CGI is producing similar videos for other towns in Vermont this year, including Colchester's neighbor to the north, Milton.

O'Reilly plans to post the videos to the

*"Colchester is a desirable place to live and work, and my job is to keep our name out there."*

Kathi O'Reilly  
Economic Development Director

town's website (which is expected to undergo a redesign later this year) as well as use them on social media sites and sites that provide information about relocating.

"In the past, relocation was done through magazines and print media. Now, when

businesses are looking to relocate, they're going to look at a magazine. They're going to look online," O'Reilly said. "Colchester is a desirable place to live and work, and we need to keep our name out there."

O'Reilly initiated an overall rebranding last year when she was hired to revive the town's economic development department. The department has not been staffed for over a year.

"We need to market ourselves in the best possible way," O'Reilly said.

— J

## Volunteers de-poop state parks

By JASON STARR  
The Colchester Sun

The thawing landscape is revealing a winter's worth of wolf waste.

A group of citizen stewards organized by the Lake Champlain Committee and the Vermont Department of Forests, Parks and Recreation set out on foot Saturday to clean up three lakeside state parks that are popular dog-walking sites. Among the turnout were members of the conservation commissions in Colchester and Milton as well as the Colchester Democratic caucus.

They removed 650 piles of poop, Lake Champlain Committee Executive Director Lori Fisher reported. The majority came from Colchester's Niquette Bay State Park. Other cleanup sites were Sand Bar State Park in Milton and Grand Isle State Park. "April Stools Day," it was billed.

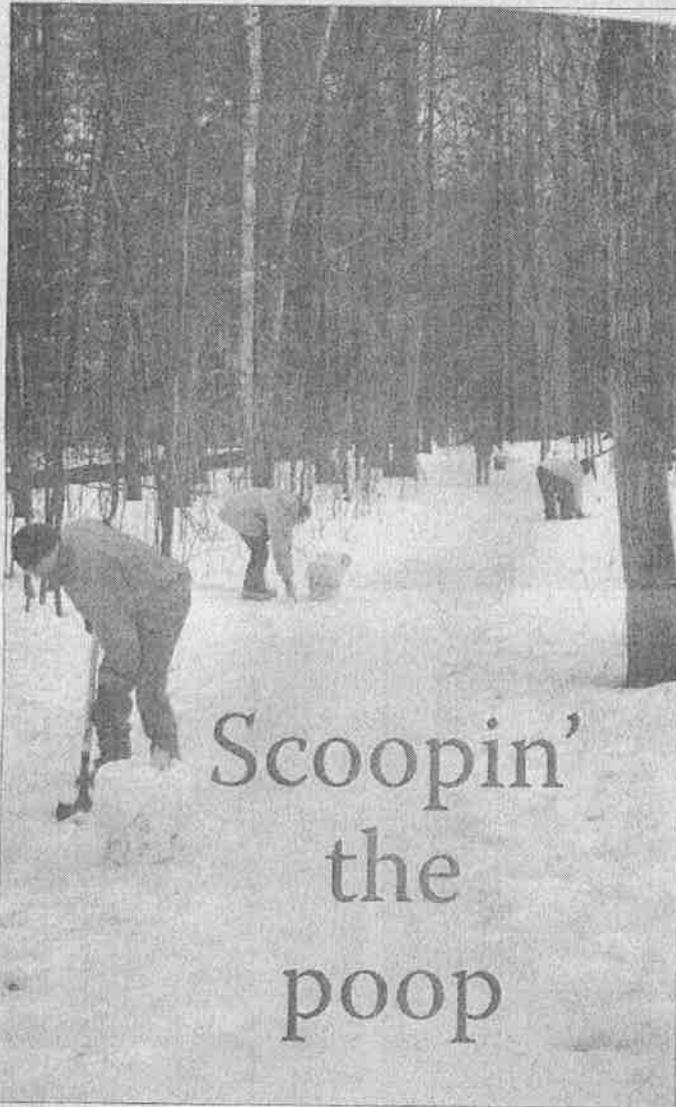
Pet waste is a contributor to e-coli contamination in Lake Champlain and phosphorous overloading that can lead to toxic blooms of blue-green algae. Fisher said more pet waste remains not only in the parks cleaned Saturday but also throughout the watershed. She urged dog-walkers and other people out and about this spring to carry bags they can use to clean up the environment.

Saturday's volunteers found some pet waste had been bagged up but left on the trails, likely the result of dog walkers not wanting to carry full poop bags throughout a walk, placing it down, then forgetting to pick it up on their return. Fisher said.

"Bagging dog waste and dropping it on the path for someone else to step in or pick up isn't helpful," Fisher wrote in an e-mail recap of the cleanup day. "People need to pack out what they pack in and that includes doggie deposits."

Fisher also wrote that dogs running off-leash are bound to deposit waste their owners may not be able to locate. As a remedy, she explained Colchester dog owner Pam Keyser's practice of "karma poop".

"Here's how it works," Fisher wrote. "When your dog is off-leash, chances are pretty good that when it's out of sight, it will occasionally



Volunteers remove dog waste from Niquette Bay State Park in Malletts Bay on Saturday as part of the Lake Champlain Committee's 'April Stools Day.'

BOB HENNEBERGER

deposit a poodle doodie. Practicing the art of karma poop, Pam always picks up a few extra piles of dog don every time she goes to the park and hopes that others will do the same."

In April's past, the Lake Champlain Committee would encourage poop pickup early in the month,

but they had not partnered with the Department of Forests, Parks and Recreation on an official "Stools Day" until this year. Fisher hopes to expand the event beyond the three state parks to other state and municipal parks throughout the watershed.

## Renovated children's area reopened at Burnham Library

A more colorful, inviting children's area in the basement of Burnham Library last week — a relief to library staff and after renovations took more than twice as planned.

Splashes of teal, orange, purple and blue highlight the newly painted and carpeted floor. Along the wall is a staircase leading to the children's space. Libby Davidson has begun a new project she plans to complete mostly during library hours this spring.

Library Director Kelly Tomasek's first year at Burnham, worked with the Department of Public Works to bid the painting and carpeting job. The low bidder was a work crew from the Chittenden County Correctional Facility; a women's prison in South Burlington.

The project stretched from an anticipated three weeks to seven weeks, during which the children's room was closed, because of fluctuations in the number of prisoners; painters on site and concerns about security, Tomasek said.

Meanwhile, the carpeting, which special ordered from out of state, got to the site one of the early spring nor'easter storms affected the East Coast. Having only a portion of the children's collection available to patrons and carving out play space for the library's youngest visitors called for patience all around.

"The staff was great and the patrons were great," Tomasek said. "We did our best to meet everyone's needs. People are happy that we're open."

One of the more popular aspects of renovation is that the wall between the children's room and the teen room is a chalkboard. Also, the story pit in the corner of the children's room is more inviting with the new carpet. The remodeling isn't over as new furniture and shelving for an additional reading area are still on the way.

— Jason

## 'No hills, no frills'

Half Marathon Unplugged on tap

Unplugged has grown from a small event with about 100 runners in 2007 to around 1,200 finishers last year. The race reached its registration capacity of 1,400 participants just two weeks, with the first wave selling out in one day.

"The race has grown exponentially over the years," reflected. "The first year had just a few hundred runners each year it has grown. We added a second wave to the race two years ago after the event sold out on the first day. The

## **Minimum Measure 3**

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

Attachments:

1. Information and records relating to the Town's IDDE Program
2. IDDE information provided to the Colchester Community Development Office for distribution to the business community
3. Emails and maps relating to investigations of odors reported by Stone Environmental during field checks for GIS mapping

<i>Location</i>	<i>ID#</i>	<i>2014</i>				
		<i>Date</i>	<i>Flow</i>	<i>pH</i>	<i>OB</i>	<i>E. Coli</i>
Lexington Road	6 / CP1397	10/31/2014	Dry			
112 Wyndham Road	7 / CP1399	10/31/2014	Y	7.2	Neg	<1
Coventry Road	8 / CP1398	10/31/2014	N	7.2		
196 Liberty Lane	11 / CP1402	10/31/2014	Y	7.0	Neg	22
122 Foreman Drive	18 / CP1428	10/31/2014	N	7.2		
12 Woodrose	5 / OC1483	10/31/2014	Dry			
Severance Road	48 / CP1391	10/31/2014	Dry			
Young Street		10/31/2014	Dry			
Opposite Shore Acres	B3-016	10/31/2014	N			
Between Moorings & Sho	B3-017	10/31/2014	Dry			
Moorings Baffle Box	B3-018	10/31/2014	Y	7.4	Neg	12
1086 E. Lakeshore Drive	C2-001	10/31/2014	N	8.2		
1063 E. Lakeshore Drive	C2-002	10/31/2014	Dry			
E, Lakeshore Drive	C2-003	10/31/2014	Dry			
1277 E. Lakeshore Drive	C2-004	10/31/2014	Dry			
Lefevre's	C2-005	10/31/2014	Dry			
230 Stone Drive	C2-006	10/31/2014	N	7.2		
230 Stone Drive	C2-007	10/31/2014	N	8.0		
Tower Ridge	C3-002	10/31/2014	Dryn			
Ever Breeze	C3-003	10/31/2014	N	7.4		
Blakely Road	C3-004	10/31/2014	N	7.4		
Opposite Williams Road	C3-005	10/31/2014	Dry			
Opposite Williams Road	C3-006	10/31/2014	Dry			
Acorn Lane	C3-018	10/31/2014	Damp			
Acorn Lane	C3-019	10/31/2014	Y	8.0	Neg	3
Champlain Drive	C3-021	10/31/2014	Dry			
118 Orchard Drive	C3-025	10/31/2014	N	7.0		
Route 2 & 7 (Shaws)	C4-015	10/31/2014	N	7.2		
Shaw's 1	C4-017	10/31/2014	N	7.2		
Hampton Inn / I89 Ramp	C4-018	10/31/2014	Dry			

		<i>2014</i>				
<i>Location</i>	<i>ID#</i>	<i>Date</i>	<i>Flow</i>	<i>pH</i>	<i>OB</i>	<i>E.Coli</i>
Shaw's 2	C4-019	10/31/2014	Dry			
Main Street	D3-010	10/31/2014	Dry			
Fort Ethan Allen	D4-001	10/31/2014	Dry			
Fort Ethan Allen	D4-003	10/31/2014	N	7.2		

## Illicit Discharge Information

Based upon population density, Colchester, Vermont has been designated as an operator of a Phase II regulated Small Municipal Separate Storm Sewer System (MS4), and is required to develop a storm water management program to meet the conditions of its National Pollutant Discharge Elimination System (NPDES) permit. The development of an Illicit Discharge Detection and Elimination Plan is one of six minimum control measures that are required within the program.

### What is an "Illicit Discharge"?

Federal regulations define an illicit discharge as "... any discharge to an MS4 that is not composed entirely of storm water..." with some exceptions. These exceptions include discharges from NPDES-permitted industrial sources and discharges from fire-fighting activities. Illicit discharges are considered "illicit" because MS4s are not designed to accept, process, or discharge such non-storm water wastes.

### Why are Illicit Discharge Detection and Elimination Efforts Necessary?

Discharges from MS4s often include wastes and wastewater from non-storm water sources. Illicit discharges enter the system through either direct connections (e.g., wastewater piping connected to storm water drains) or indirect connections (e.g., spills or disposal of used paint, oil, etc., into a storm water drain.) The result is untreated discharges that contribute high levels of pollutants, including heavy metals, toxics, oil and grease, solvents, nutrients, viruses, and bacteria to receiving water bodies. Pollutant levels from these illicit discharges have been shown in EPA studies to be high enough to significantly degrade receiving water quality and threaten aquatic, wildlife, and human health.

### Colchester's Storm Water Management Program

The Town's Storm Water Management Program will include the development of an Illicit Discharge Detection and Elimination Plan, as well as, an Illicit Discharge Ordinance. You are encouraged to provide you valuable input into the development of these initiatives. The overall program also contains a strong education component. This education bulletin is one example of the implementation of these efforts. For further information, please visit the following links:

- U.S. Environmental Protection Agency
- Vermont Agency of Natural Resources

Or contact:

- Town of Colchester, Department of Public Works [bosborne@town.colchester.vt.us](mailto:bosborne@town.colchester.vt.us)

#### Sources of Illicit Discharge

- Sanitary wastewater
- Effluent from septic tanks
- Car wash wastewaters
- Improper oil disposal
- Radiator flushing disposal
- Laundry wastewaters
- Spills from roadway accidents
- Improper disposal of auto and household toxics

# Town of Colchester

## Department of Public Works

Presents:

## An Informational Bulletin for Local Business



## U.S. EPA Storm Water Phase II Final Rule

### Illicit Discharge Detection And

### Elimination Minimum Control Measure

*"...improve the overall quality of life within the community through the development of a superior infrastructure that promotes and encourages planned responsible commercial, industrial and residential growth in a manner that preserves and enhances our environment and natural resources."*

Colchester Public Works  
Mission Statement



1. Ok folks, Corporate says we have some water quality issues to deal with



4. What does that mean?



2. So Bob, what is an illicit discharge anyway?



5. Well Bill, it could be things like sanitary waste, improper oil disposal or industrial cleaning products.



3. Bill, it's basically any discharge that is not composed entirely of storm water



6. Bob, how do these discharges happen?



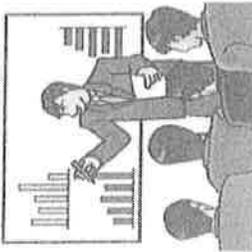
7. Bill, pollutants can enter the storm water system either through direct pipe connections, or spills collected by drain outlets.



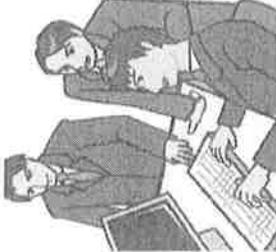
8. So what's the big deal Bob, doesn't it all get treated at the plant?



9. No Bill, storm water doesn't go to treatment plants. It goes directly to rivers and lakes



10. Studies have shown that these pollutants can damage aquatic, wildlife and human health.



11. Hmm, environmental damage, that's not good for business



12. Ok, people, lets get to work. I want a plan on my desk by Friday to prevent illicit discharges from our company

**From:** Bryan Osborne  
**Sent:** Thursday, April 10, 2014 4:19 PM  
**To:** 'Pease, Jim'  
**Cc:** Witters, Christy; Warner Rackley  
**Subject:** RE: IDDE

Thanks Jim. I have spoken to Dave Braun who has provided additional information about these locations. I do not believe they showed up into the report and I had not drilled down into the data layers as you had. Thanks for being so thorough. We have our summer Water Quality Coordinator starting soon and we will give him these to see what he can find.

Thanks, Bryan

Bryan K. Osborne  
Director of Public Works  
Town of Colchester  
P.O. Box 55, Colchester, Vt. 05446  
Tel. (802) 264-5625  
e-mail [bosborne@colchestervt.gov](mailto:bosborne@colchestervt.gov)

---

**From:** Pease, Jim [<mailto:Jim.Pease@state.vt.us>]  
**Sent:** Monday, April 07, 2014 10:09 AM  
**To:** Bryan Osborne  
**Cc:** Witters, Christy  
**Subject:** IDDE

Bryan:

I happened to be going thru the 2009 GIS stormwater infrastructure data layer for Colchester, which was collected by Stone Environmental I believe, and noticed that there are at least 7 streets where wastewater was definitely suspected in the catchbasin(s). Just wanted to make sure that the Town is following up on them. I don't believe I saw any discussion on this streets in previous MS4 reports. You can find this information in the attributes of the GIS point layer. The streets are:

Joey, FoxRun, Blackberry, Village and Wall; the first 3 all appear to be in the same general area. I may have heard about Village St before. Wall St is in the Sunderland Brook watershed.

There was also a note about a suspected gas leak at the Mobil Station on Porters Point Rd.

Not sure if I send this note to Warner or Floyd or you.

Jim

**From:** Dave Braun [<mailto:dbraun@stone-env.com>]

**Sent:** Thursday, April 10, 2014 12:52 PM

**To:** Bryan Osborne

**Subject:** stormwater structures with odors noted during 2009 infrastructure inventory

Hello Bryan,

We reviewed the comments field in the stormwater infrastructure geodatabase and labelled structures in which odors were noted. There are three maps in the attached document. Map 1 is of the Village Drive area, Map 2 is of the Julie/Jeffrey/Fox Run neighborhoods, and Map 3 is of the intersection of Heineberg Drive and Porters Point Road. These maps are just quick displays of the data. The field notes are a little rough and I did not attempt to edit them.

I hope it helps,

Dave

**David C. Braun**

Water Quality Scientist

Direct / 802.229.5379 Cell / 802.272.8819

E-Mail / [dbraun@stone-env.com](mailto:dbraun@stone-env.com)

Stone Environmental, Inc.

535 Stone Cutters Way, Montpelier, Vermont 05602

Tel / 802.229.4541 Fax / 802.229.5417

Web Site / [www.stone-env.com](http://www.stone-env.com)



Unstable structure of rim and asphalt removed. Obvious wastewater contamination.

Obvious wastewater contaminated - flies and smells. Resident says it floods and pools.

C:\Proj\5511654-W Colchester\WP Data\Map Documents\Colchester\_CatchBasin\W\Concerns\_Map1.mxd 4/15/2014 sab

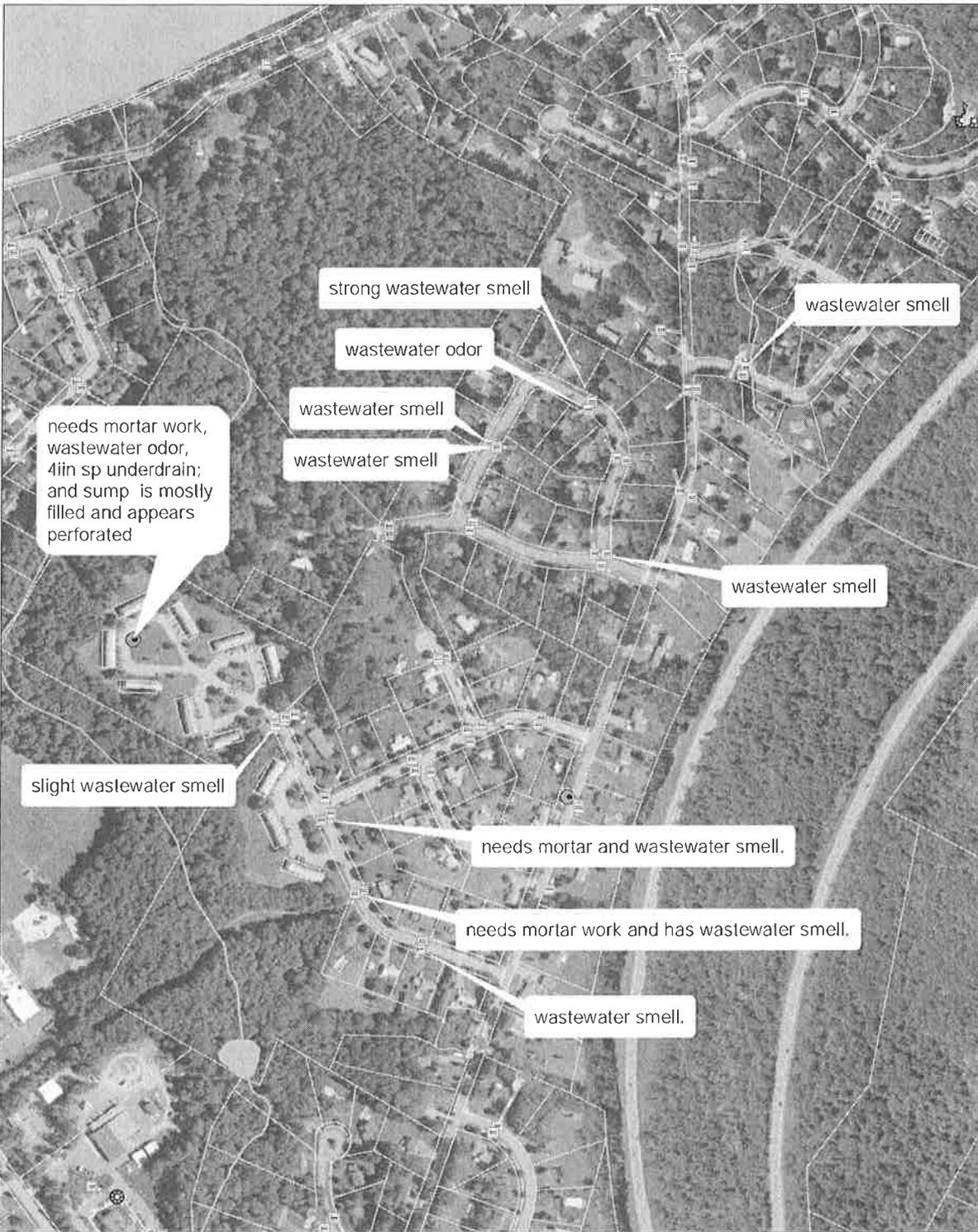
		Outfall	Stormline
		Other Structure	Culvert
		Catch Basin	Infiltration trench
		Dry Well	Underdrain
		Manhole	Roof drain
		Pond outlet	Retention Ponds

Catch Basins with Concerns

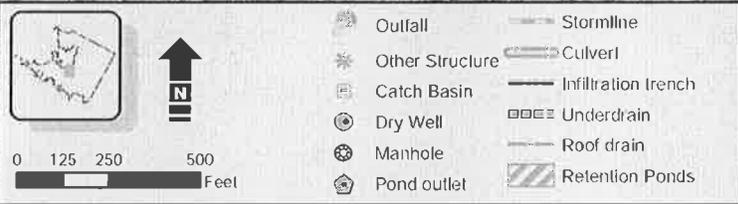
Colchester, Vermont

Map #1

Sources: Parcel Boundaries: Town of Colchester; Stormwater Infrastructure: Town of Colchester and Stone Environmental; Hydrography: NHD; Administrative Boundaries: VCGI; Imagery: Esri



D:\proj\0511494-10\_Colchester\WP\Drawings\Map\Documents\Colchester\_CatchBasinsWithConcerns\_Map2.mxd 4/9/2014 lab



**Catch Basins with Concerns**

Colchester, Vermont

Map #2

Sources: Parcel Boundaries: Town of Colchester; Stormwater Infrastructure: Town of Colchester and Stone Environmental; Hydrography: NHD; Administrative Boundaries: VCGI; Imagery: Esri



gas tank leak into stormwater system.

D:\Proj\051124\_W\_Colchester\WIP\Data\MapDocuments\Colchester\_CatchBasinsWithConcerns\_Misc2.mxd 4/19/20 14:48:3



Catch Basins with Concerns

Colchester, Vermont

Map #3

Sources: Parcel Boundaries: Town of Colchester; Stormwater Infrastructure: Town of Colchester and Stone Environmental; Hydrography: NHD; Administrative Boundaries: VCGI; Imagery: Esri

## Warner Rackley

---

**From:** Bryan Osborne  
**Sent:** Wednesday, April 23, 2014 7:32 AM  
**To:** Steffen Parker  
**Cc:** Warner Rackley  
**Subject:** RE: WQ Reports

Stef

This looks great. Let us know when you will be starting this work and Warner will make sure that he has any pertinent information from septic permits to you. I would also like you to provide me with some specific times that you will be working on this project so that I can get some shots of our IDDE efforts as well. Finally for more efficient communications, please select "Reply All" when I have copied someone in our e-mail correspondence.

Thanks, Bryan

---

**From:** Steffen Parker  
**Sent:** Tuesday, April 22, 2014 10:47 PM  
**To:** Bryan Osborne  
**Subject:** Re: WQ Reports

Bryan,

Greetings. Here is the next version of the protocol. I look forward to taking on this new challenge.

I will start the water sampling on Monday, June 16th and will be doing it Mondays & Wednesdays again this summer. The best time to catch me would be at 7:00 AM at Bayside.

Take care - STEF

---

Steffen Parker, aka Stef the Water Quality Guy  
Town of Colchester, Vermont  
802.264.5628  
Lay Monitor, Vermont Water Quality Division, ANR  
802.343.6282

Colchester Water Results: [colchestervt.gov/water/swim.htm](http://colchestervt.gov/water/swim.htm)

Vermont Water Results: [www.vtwaterquality.org/lakes/htm/lp\\_volunteer.htm](http://www.vtwaterquality.org/lakes/htm/lp_volunteer.htm)

**TOWN OF COLCHESTER**  
***Proposed PROTOCOL for SUPPLEMENTAL INSPECTIONS***  
**Infrastructure Inventory**  
**Integrated Water Resources Management Program Task 1** WATER  
**QUALITY REPORT**  
**SPRING – SUMMER 201408**

**ADDRESSES (all in Colchester, VT):**

Julie Drive (5 locations); Fox Run (1 location); Blackberry Circle (4 locations); Joey Drive (1 location); Village Drive (2 locations);

**INFRASTRUCTURE:**

Street level storm drains; steel grate covers; concrete lined; various depths, inflows and outflows

**REQUEST:**

As part of the Infrastructure Inventory; Integrated Water Resources Management Program: Task 1 report prepared by Stone Environmental, Inc. in collaboration with Forcier, Aldrich & Associates, the locations noted above were identified as having a wastewater smell during their inspections held during the spring & summer of 2009. That indication ranged from 'wastewater smell' to 'obvious wastewater contamination', but these indications were only made on the metadata that accompanied the report, not in the body of the report itself.

When these concerns were made known to the Town of Colchester, this supplemental inspections were initiated.

**CONCERNS / RATIONALE:**

A significant amount of time has transpired since these observations were made. As well, we do not know under what conditions they were made. Both of these factors may make replicating the observations very challenging and may require multiple visits to each site to assure that the issues initially raised are still present.

Establishing whether these observations remain current is essential before taking any further actions in this regard; actions that would include the determination of sources for the pollutants involved.

**PROPOSED PROTOCOL:**

- Review of septic system permits for the areas around the identified storm drains
  - The review will look for any information pertinent to this process and will note such in the report generated
- Initial observation of listed storm drains done within 36 hours of significant rain event on all sites
  - Record property locations adjacent to the storm drain
  - Check for wastewater smell
    - If present, collect sample for E.Coli analysis
    - If present, run an Optical Brightener test (5 day rotation)
- Secondary observation done during dry spell (60 hours + of dry weather) on all sites
  - Check for wastewater smell
    - If present, there is adequate fluid and this site was not done following the first observation, collect sample for E.Coli analysis
    - If present, there is adequate flow and this site was not done following the first observation, run an Optical Brightener test (5 day rotation)

**REPORTING:**

A complete set of records on all observations and test results compiled and made available.

## Warner Rackley

---

**From:** Warner Rackley  
**Sent:** Thursday, May 15, 2014 3:14 PM  
**To:** Steffen Parker  
**Cc:** Denise Johnson-Terk; Bryan Osborne  
**Subject:** RE: Schedule for testing  
**Attachments:** Julie\_Dr\_139\_Fail\_041191.pdf; Village\_Dr\_324\_Pmt\_86-06.pdf

Steffen,

Denise checked for permits or complaints for the following lots:

Lots in Village Area were as follows:

316, 324, and 330 Village Drive

Lots off of Williams Rd were as follows:

43 Joey Dr  
102, 113, 118, 123, 182, and 219 Blackberry Cir  
51, 108, 144, 212, 209, 249, 374, and 139 Julie Dr

Permits for some areas were more complete than others. Although the infiltration beds appear to go onto the lots in some areas, most of the septic tanks were located in the rear. For those that were available, we scanned the files. Due to the size, I did not try to attach all. Let me know if you'd like to have copies. The records for some of the apartment buildings at the end of Julie were kind of spotty. There were decent records on the initial builds in the early 80s, but not much follow up. There appears to have been a failure notice issued in 91 for Buildings 9 and 10, but I did not see a later permit for repair. One additional note regarding the system for 324 Village Dr. The system appears to have a piped yard drain or combination infiltration/drain that may pick up flow very close to the infiltration bed and discharge directly to the inlet in the 90° curve. Copies of the failure notice and 06 permit for 324 Village are attached.

Thank you,  
Warner C. Rackley, PE  
Asst. Public Works Director  
Town of Colchester  
781 Blakely Road, PO Box 55  
Colchester, VT 05446-0055  
Office: (802) 264-5635  
Fax: (802) 264-5503  
Email: [wrackley@colchestervt.gov](mailto:wrackley@colchestervt.gov)

---

**From:** Warner Rackley  
**Sent:** Tuesday, May 13, 2014 9:22 AM  
**To:** Steffen Parker  
**Cc:** Denise Johnson-Terk; Bryan Osborne  
**Subject:** RE: Schedule for testing

Steffen,

## Warner Rackley

---

**From:** Steffen Parker  
**Sent:** Thursday, August 21, 2014 8:03 PM  
**To:** Warner Rackley  
**Subject:** Re: Any news on the homes that were being checked for illicit discharge

Warner,

Greetings. I did the initial survey of all of the storm water drains listed as having sewage smell in the documentation that Bryan gave me in May and did not find one that had any issues. I just haven't had the chance to write up the report on that yet (been out of the region for 28 days since mid-June).

No need for any enforcement from Denise at this point.

Thanks - STEF

---

Steffen Parker, aka Stef the Water Quality Guy  
Town of Colchester, Vermont  
802.264.5628  
Lay Monitor, Vermont Water Quality Division, ANR  
802.343.6282

Colchester Water Results: [colchestervt.gov/water/swim.htm](http://colchestervt.gov/water/swim.htm)

Vermont Water Results: [www.vtwaterquality.org/lakes/html/lp\\_volunteer.htm](http://www.vtwaterquality.org/lakes/html/lp_volunteer.htm)

## **Minimum Measure 4**

### **Construction Site Storm Water Runoff Control**

**Attachments:**

1. Report of land disturbing activities greater than 1 acre, and greater than 5 acres.



**Colchester**  
VERMONT

781 Blakely Road • PO Box 55 • Colchester, Vermont • 05446 • 802.264.5500

[www.colchestervt.gov](http://www.colchestervt.gov)

MEMORANDUM

TO: Bryan Osborne, Director of Public Works  
FROM: Sarah Hadd, Director of Planning & Zoning   
DATE: January 23, 2015  
RE: Stormwater Reporting Calendar Year 2014

---

Please find attached a spreadsheet enumerating projects advanced to construction for the period January 1, 2014 through December 31, 2014 with more than an acre of land disturbance. In calendar year 2014, the Department issued in total 393 permits and conducted 1,310 inspections including violation investigations.

Should you need any additional information, including copies of the individual permits, please feel free to contact me directly.

<u>Project</u>	<u>Description</u>	<u>Location</u>	<u>Contact</u>	<u>Acreage Disturbed</u>	<u>Impervious Surface Acreage</u>
Benway	4 condo units	128 Foley Road, Tax Map 48, Parcel 9	David Burke	1	0.52
Chastenay	3 lots	538 Bean Road, Tax Map 40, Parcel 68	O'Leary - Burke Civil Assoc.	1.5	
GB New England 2 LLC	construct a 13,255 sq. ft. drug store/pharmacy with a drive thru window	69 Mountain View Drive, Tax Map 3, Parcel 010003	VHB Engineers	1.34	1.42
Myers/Willi ams Rathe Road	construction of a mini storage facility in ten (10) individual buildings with one office totaling 69,200 sq. ft. and outdoor storage	Rathe Road, Tax Map 3, Parcel 23- 5	O'Leary Burke Civil Associates	5.21	5.13
Rivers Edge LLC	2/22 condos	East Lakeshore Drive, Tax Map 67, Parcel 11-1	O'Leary - Burke Civil Assoc.	5	2.33

## **Minimum Measure 5**

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

**Attachments:**

1. Report of land disturbing activities that resulted in more than 1 acre of impervious surface.



**Colchester**  
VERMONT

781 Blakely Road • PO Box 55 • Colchester, Vermont • 05446 • 802.264.5500

[www.colchestervt.gov](http://www.colchestervt.gov)

MEMORANDUM

TO: Bryan Osborne, Director of Public Works  
FROM: Sarah Hadd, Director of Planning & Zoning   
DATE: January 23, 2015  
RE: Stormwater Reporting Calendar Year 2014

---

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Rivers Edge LLC	2/22 condos	East Lakeshore Drive, Tax Map 67, Parcel 11-1	O'Leary - Burke Civil Assoc.	5	2.33

## **Minimum Measure 6**

### **Pollution Prevention/Good Housekeeping for Municipal Operations**

Attachment:

1. Sign in sheets and emails regarding Employee Training held at Essex Town Training Center on September 18, 2014.
2. Memo and email documenting MS4 cleaning activities.
3. 2014 MS4 Indicators

## Warner Rackley

---

**From:** Pease, Jim <Jim.Pease@state.vt.us>  
**Sent:** Wednesday, August 06, 2014 9:39 AM  
**To:** Nate Stansberry (nates@rutlandcity.org); A.robtoy@stalbansvt.com; Aaron Martin (amartin@essex.org); acostandi@essex.org; Carrie Johnson (satownmanager@comcast.net); Chelsea Mandigo (Chelsea@essexjunction.org); Chip Sawyer (C.Sawyer@stalbansvt.com); Dean Pierce (dpierce@shelburnevt.org); Dennis Lutz (DENNIS@essex.org); Digiammarino, Craig; Erik Bailey ; Floyd Sheesley; Gregory G. Goyette (greg.goyette@stantec.com); Heather Kendrew; Callahan, Jennifer; Jim Jutras (jim@essexjunction.org); Joe Zingale (rutlandtown@comcast.net); Armstrong, Jon; Lani Ravin; Laurie Adams (LAdams@burlingtonvt.gov); Linda Seavey (Linda.Seavey@uvm.edu); Lisa Sheltra; Megan Moir (mmoir@burlingtonvt.gov); Bryan Osborne; Roger Hunt (rhunt@town.milton.vt.us); Sarah Hadd; Tom DiPietro (tdipietro@sburl.com); Warner Rackley  
**Cc:** Dan Albrecht (dalbrecht@ccrpcvt.org)  
**Subject:** Municipal Employees Training Workshops-Sept 18

The 2014 Municipal Employees Training Workshop will be held on Thursday September 18 at the Town of Essex Public Works training facility at 188 Sand Hill Road in Essex.

The workshop will be on the Impacts of Salt in Vermont waters and Best Management Practices for Salt Spreading and Storage. Angela Shambaugh a lake scientist from VTDEC Watershed Management Division will discuss salt impacts, toxicity and aquatic life impairment and Bruce Nichols, VTrans District 3 Manager and salt brine expert will discuss winter road maintenance practices, the statewide salt brine program and salt storage.

There are two classes limited to about 55 people/class. **Please send me the Town name, the workshop # preference, and how many employees will be attending.** Classes will be filled on a first come first serve basis.

Also please note that the training facility floor was recently cleaned and waxed and all employees will be asked to either have clean boots or will need to clean their boots prior to entry.

Workshop #1 – 9:30-11

Workshop #2 - 11:15-12:45

Thanks,

Jim  
Jim Pease  
Watershed Management Division  
VTDEC  
I National Life  
Montpelier, VT 05620  
[Jim.Pease@state.vt.us](mailto:Jim.Pease@state.vt.us)  
(802) 490-6116

MUNICIPAL EMPLOYEES MS4 TRAINING WORKSHOP-ESSEX TOWN  
 TRAINING CENTER-SALT IMPACTS & BEST MANAGEMENT PRACTICES  
 9:30- 11& 11:15-12:45 SESSIONS, SEPT 18, 2014

Name

Town/MS4

Name	Town/MS4
JAMES BADILLO	Winooski
Brian Latippe	Winooski
Tyler Walton	Winooski
GUY CARBELLIE	Winooski
Paul Latre	CITY OF ST. ALBANS
Erik Bailey	Winooski
DAN P. McGRATH	Colchester
TOM MANNING	Colchester
JAY NADEN	Winooski
AARON MARTIN	ESSEX TOWN
Ernest Oaker	" "
GREG MAKOWITZ	CITY OF SB
Bill Marin	CITY OF SB
Robert Whittan	TOWN OF ESSEX
Chelsea Mandigo	Village of Essex Jct.
Tom DiPietro	S. Burlington
JOE GELU	S. Burl
Mike McCarthy	So. Burl.
Jamie Goddette	So. Burl.
Scott Jacobs	So Burl.

MUNICIPAL EMPLOYEES MS4 TRAINING WORKSHOP-ESSEX TOWN  
 TRAINING CENTER-SALT IMPACTS & BEST MANAGEMENT PRACTICES  
 9:30- 11 & 11:15-12:45 SESSIONS, SEPT 18, 2014

Name	Town/MS4
David Janat	Town of Colchester
Bob Provost	" "
Doug Landry	" "
Lerry Lamphere	" "
Matt Crepeau	" "
Peter Dugli	Town of Essex
Les Benoit	So. Burlington
Bruce Harr	WILLISTON
James Sheppard	Williston
Dennis Lutz	Essex
Ken Booker	Essex
Paul Strout	Williston
Noel's Pomeroy	Williston
Lisa Sheltra	Williston
Benny Becker	Williston
Roger Boyer	Williston
William LeBeau	S. Burl.
Rick Peet	Williston
MARIA Siple	Colchester
Buzzy Julien	Colchester

MUNICIPAL EMPLOYEES MS4 TRAINING WORKSHOP-ESSEX TOWN  
 TRAINING CENTER-SALT IMPACTS & BEST MANAGEMENT PRACTICES  
 9:30- 11 & 11:15-12:45 SESSIONS, SEPT 18, 2014

Name

Town/MS4

Name	Town/MS4
Jeff Smith	Colchester
Scott Smith	Colchester
Kris Remillard	St. Albans
Wayne Mitchell	ST ALBANS
Corey Gratton	St. Albans
Kevin McAleen	Town of Colchester
Eric Barkyoumb	Town of Essex
Ken Nichols	Town of Colchester
Dloyd Sheesley	Town of Colchester
Rick Jones	Essex Jct
Paul W. White	Essex Jct
Phil Martin	Essex Jct
Colin Judge	VTrans D5
Brian Burns	City of St. Albans

MUNICIPAL EMPLOYEES MS4 TRAINING WORKSHOP-ESSEX TOWN  
 TRAINING CENTER-SALT IMPACTS & BEST MANAGEMENT PRACTICES  
 9:30- 11& 11:15-12:45 SESSIONS, SEPT 18, 2014

Name

Town/MS4

Name	Town/MS4
Diane Perley diane.perley	VTrans D8 e state-ut.us
Dean Reberg	Essex
Jeffery Glat	Essex
Tyler Bortz	Essex
Tom KABUSK	ESSEX X
Brian Roy	" Highway
Rick Somes	Essex
David Mettrot	SBPW
Nick Cannon	SBPW
ANDREW NOONAN	SBPW
Craig Lambert	SBPW
JOE TOUGVILL	Essex
Rob Green	Burlington
Madeline Brumberg	S Burlington
Bob Cota	S Burl.
Dieget	S Burl
Dick Hammond	Burl
Angie De	Burl
Bob DeLong	BTV
Paul Blaha	BTV Airport

MUNICIPAL EMPLOYEES MS4 TRAINING WORKSHOP-ESSEX TOWN  
 TRAINING CENTER-SALT IMPACTS & BEST MANAGEMENT PRACTICES  
 9:30- 11 & 11:15-12:45 SESSIONS, SEPT 18, 2014

Name	Town/MS4
Loren Cole	BURLINGTON
Frank Goodrich	BTV airport
Samie McShon	ESSEX
Annie Costandi	ESSEX
KEVIN CATE	SOUTH BURLINGTON DPW
Scott Phillips	Burlington DPW
Megan Mai	Burlington DPW
GREG JOHNSON	BURLINGTON DPW
Bruce Trombly	Milton PL
Chris Lamphere	PW Milton
JOHN BURLIN	PW MILTON
James Cameron	Milton PW
Dan Guillemette	South Burlington
Mike Wille	SO. BURL.
SHAWN LeBLANC	SO. BURL.
Dustin K... ..	Milton

## Warner Rackley

---

**From:** Pease, Jim <Jim.Pease@state.vt.us>  
**Sent:** Thursday, September 19, 2013 2:49 PM  
**To:** Steve Beauregard (Satpublicworks@comcast.net); Aaron Martin (amartin@essex.org); acostandi@essex.org; Armstrong, Jon; Callahan, Jennifer; Chelsea Mandingo; Dean Pierce (dpierce@shelburnevt.org); Dennis Lutz (DENNIS@essex.org); Digiammarino, Craig; Erik Bailey ; Floyd Sheesley (fsheesley@colchestervt.gov); Gregory G. Goyette (greg.goyette@stantec.com); Heather Kendrew; Jessica Andreoletti (JAndreoletti@willistontown.com); Jim Jutras (jim@essexjunction.org); Lani Ravin; Laurie Adams (LAdams@ci.burlington.vt.us); Linda Seavey (Linda.Seavey@uvm.edu); Lisa Sheltra; Megan Moir (mmoir@ci.burlington.vt.us); Osborne Bryan (bosborne@colchestervt.gov); Roger Hunt; Sarah H. Hadd ; Tom DiPietro (tdipietro@sburl.com); W. Rackley  
**Subject:** Municipal Employee Workshop attendance sheet

Attached along with the handout. Thank you to Tom DiPietro and the City of South Burlington staff for hosting the workshop. We are interested in any feedback you can provide.

Jim

Jim Pease  
Watershed Management Division  
VTDEC  
I National Life  
Montpelier, VT 05620  
[Jim.Pease@state.vt.us](mailto:Jim.Pease@state.vt.us)  
(802) 490-6116

# Memo

**To:** Warner Rackley, Assistant Director of Public Works

**From:** Floyd Sheesley, Operations Manager

**Cc:**

**Date:** February 25, 2015

**Re:** MS4 Permit information

---

We currently have 314 catch basins and 58 outfalls associated with 35 Stormwater Permits that are inspected at least annually.

Catch basin cleanings totaled approximately 14 cubic yards of material and the town collected approximately 60 cubic yards of street sweepings last spring and approximately 58 cubic yards of leaf debris in the fall.

<b>2014 MS4 INDICATORS</b>	<b>MS4</b>
CATCH BASIN CLEANING CYDS or #BASINS CLEANED ESTIMATE 1 TON/CY and .6 CYDS/CB	14 CY
STREET SWEEPING (DIRT&LEAVES) CYDS OR #ROAD MILES SWEEP ESTIMATE .17TONS/MILE & 1 TON/CY	118 CY (60 CY-Dirt & 58 CY-Leaves)
GREEN-UP & STREAM CLEAN-UPS #TONS OF TRASH DISPOSED (CSWD-just trash not metals or tires)	5.5 Tons
HAZ WASTES DISPOSED OR REUSED LBS (CSWD JULY-JULY)	
#STORMWATER OUTFALLS SURVEYED	58
#CATCHBASIN INSPECTIONS	314
#STORM DRAINS MARKED	57
#ILLCIT DISCHARGES DETECTED	0
#ILLCIT DISCHARGES ELIMINATED	0
#CONSTRUCTION EROSION SITE INSPECTIONS	1,310
#SITE PLAN REVIEWS FOR SW MANAGEMENT	393
# SW DISCHARGE PERMIT RENEWALS	35
DOLLARS SPENT ON STORMWATER PROGRAM	\$450,000
MUNICIPAL EMPLOYEE TRAINING WORKSHOP ATTENDANCE (HRS)	21 Hrs (14 EA @ 1.5 Hrs)
#PET WASTE BAGS DISTRIBUTED	24,000
CHANNEL PROTECTION VOL. CREATED (CUBIC FEET OR ACRE-FT)	

## **Additional Requirements for Discharges to Impaired Waters**

### **Attachments:**

1. Chittenden County MS4 Cooperative Flow Monitoring Program
  - a. Letter of intent dated December 23, 2013
  - b. H.650 – MS4 Monitoring update
  - c. Email regarding Flow Monitoring RFP dated March 16, 2015
2. Plan for Addressing Expired Permits
  - a. Letter of Intent dated March 20, 2014
  - b. Email for RDA Referrals dated January 9, 2014
  - c. Email regarding Expired
3. Impaired Basin Flow Restoration Plan (FRP)
  - a. Executed Contract between Town of Essex and Watershed Consulting Assoc., LLC
  - b. Excerpt from Draft Sunderland Brook Flow Restoration Plan



**DEPARTMENT OF PUBLIC WORKS**

December 23, 2013

**Select Board**

Nadine Scibek  
Marc Landry  
Herb Downing  
Kathrine Niquette  
Tom Mulcahy

**Town Manager**

Dawn Francis

**Director**

Bryan K. Osborne  
(802) 264-5625

**Assistant Director**

Warner Rackley  
(802) 264-5635

**Operations Manager**

Floyd Sheasley  
(802) 264-5621

**Project Manager**

Kevin McAleer  
(802) 264-5639

**Administrative Coordinator**

Robin Parry  
(802) 264-5620

**Fax Number**

(802) 264-5503

Ms. Christy Witters  
Vermont DEC  
Watershed Management Division  
1 National Life Drive  
Montpelier, VT 05620-3522

Dear Ms. Witters

The Chittenden County MS4's will cooperatively pursue a MS4 flow monitoring program in compliance with NPDES General Permit 3-9014 section IV.C.1.(e)(7). Participating communities include Burlington, Colchester, Essex, Essex Junction, Milton, Shelburne, South Burlington, Williston, Winooski, Burlington International Airport, University of Vermont and Vermont Agency of Transportation.

This cooperative effort is for the following streams:

Allen Brook (Williston), Bartlett Brook (South Burlington), Centennial Brook (South Burlington), Englesby Brook (Burlington), Indian Brook (Essex / Essex Jct.), Morehouse Brook (Winooski), Munroe Brook (Shelburne), Potash Brook (South Burlington) and Sunderland Brook (Colchester / Essex /Essex Junction)

Compliance will be gained by flow and precipitation monitoring in one of three ways:

1. Work directly with the Agency of Natural Resources for flow monitoring compliance paid for in a fee simple manner.
2. Contract with the United States Geological Survey (USGS) to install, maintain, and collect data and report for all flow monitoring stations according to the timeline attached (Attachment A).
3. Work with the Chittenden County Regional Planning Commission (CCRPC) as lead agency to oversee a contract to install, maintain, and collect data and report for all flow monitoring stations according to the timeline attached (Attachment A).

Please let me know if you require anything further.

Sincerely,

Bryan K. Osborne  
Director of Public Works

## Attachment A

- January 2, 2014 – The Vermont MS4 communities (hereafter referred to as “the MS4s”) submit a schedule to the Vermont ANR that describes how stream flow monitoring requirements found in the MS4 permit will be met. In order to achieve consistency of results, cost savings, and efficiency in management of the new Stream Flow Monitoring Program (SFMP), the MS4’s will work collaboratively to create and implement a single SFMP consistent with requirements found in the approved MS4 permit.
- March 2014 – Vermont ANR approves the SFMP prepared by the MS4s.
- April – June 2014 – The MS4’s create an MOU that specifies cost sharing and project management for the SFMP. The MS4’s create a scope of work that defines the role and responsibilities of the program manager who will oversee stream monitoring efforts. The MS4s create a scope of work for the contractor who will complete stream monitoring activities and report to the program manager.
- July – August 2014 – The MS4’s release an RFP or otherwise take steps to retain a Program Manager for the SFMP. The MS4’s release an RFP to obtain a contractor who would implement the SFMP.
- September - December 2014 – Municipalities will be working on their FY16 budgets (July 1, 2015 through June 30, 2016) and will include funding for stream flow monitoring based on costs received through the previous RFP process.
- February 2015 – April 2015 – Municipal budgets, including funding for the SFMP, are approved for FY16.
- July 2015 – March 2016 – The program manager and contractor begin work on the SFMP. This includes purchasing equipment, establishing data collection sites, collecting stream cross section data, and performing other tasks as necessary to ensure that successful stream flow monitoring data will be generated starting in the Spring of 2016. The MS4s will hold quarterly meetings to review the progress of the SFMP with the Program Manager.
- April -May 2016 – Installation of stream flow monitoring equipment and collection of stream flow data begins in stormwater impaired streams in Chittenden County.

water, a tax on flushable products, a rooms and meals tax, a liquor and wine tax, and a rental vehicle tax. The Chamber was willing to consider supporting a reasonable flat per parcel fee on developed land if the Legislature had been able to show the amount of money needed, how the money would be spent, and a shared commitment to water quality improvements by matching the revenue created through a parcel fee with revenue from the General Fund. Without a clear picture of costs or any appropriated funds, the House voted out a version of the bill that was gutted of all revenue and spending provisions. Representative Bill Johnson (R/D- Canaan) introduced an amendment that would make the bill effective one year after the General Assembly appropriates or generates funds necessary to support the requirements of the bill. The only provision that would still be effective upon passage is the provision requiring a water quality restoration financing report from the Agency of Natural Resources by January 1, 2015. During the legislative session, ANR was simultaneously developing a plan for the U.S. EPA, much of which may be able to be implemented without any action from the legislature.

**H. 740 - Transportation Improvement Fees:** Introduced to address the problem of the "last one in pays" phenomenon, H. 740 creates the mechanism for establishing Transportation Improvement Districts (TIDs) and accompanying Transportation Impact Fees (TIFs) to pay for traffic improvements and infrastructure. Under the bill, a fee may be assessed for a project that will require transportation improvements within a designated TID, created by the Agency of Transportation (AOT). The fee may be assessed either by a District Commission through the request for an Act 250 permit or by the AOT through the request for a highway access permit. District Commissions may also require payment of a fee outside a TID. The bill also sets out the factors that must be considered when formulating a fee, including the number of trips to be generated by the project and the project's proportional share of the capital costs of the transportation improvement, among others. The bill also clarifies that if a TID were created in an area where a District Commission had previously assessed impact fees (through future conditions in Act 250 permits) on only some of the landowners in the district, those landowners would be relieved of the inequitable allocation, and it would be assessed proportionally against all the landowners in the TID. The House Transportation Committee heard testimony from many in the development community and made revisions to craft a workable bill. The bill passed both chambers and will become effective on July 1, 2014.

**H. 650 - MS4 Monitoring:** H.650 created the Ecosystem Restoration and Water Quality Improvement Special Fund, which would be used to assist municipalities with monitoring, education, and other requirements of the MS4 permitting program. The bill passed easily in both chambers. Under the bill, the Secretary of Natural Resources will collect money for and make disbursements from the Fund related to the Secretary's oversight of monitoring required under the MS4 program. The bill sets out a mechanism for municipalities to create memoranda of understanding with the Secretary where the municipality agrees to contribute to the Fund its share of money required by ANR for MS4 monitoring, oversight, and administration. The Fund may also consist of money appropriated by the General Assembly as well as public or private funds.

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#### Other Bills of Interest:

## Warner Rackley

---

**From:** Hastings, Blaine <Blaine.Hastings@state.vt.us>  
**Sent:** Monday, March 16, 2015 3:49 PM  
**To:** C.Sawyer@stalbansvt.com; d.cloud@stalbansvt.com; satplanner@comcast.net; satownmanager@comcast.net; amartin@essex.org; klengineers@comcast.net; bpalaia@town.milton.vt.us; bhoar@willistonvt.com; crobinson@shelburnevt.org; Digiammarino, Craig; dpierce@shelburnevt.org; DENNIS@essex.org; doug.campbell@stantec.com; Floyd Sheesley; greg.goyette@stantec.com; HKendrew@btv.aero; jsherrard@willistonvt.org; jcnadeau@winooski.vt.gov; Callahan, Jennifer; jim@essexjunction.org; jcolangelo@shelburnevt.org; jon.leinwohl@stantec.com; jrabidoux@sburl.com; Lani.Ravin@uvm.edu; Linda.Seavey@uvm.edu; LSheltra@willistonvt.com; mmoir@burlingtonvt.gov; Bryan Osborne; rhunt@town.milton.vt.us; Sarah Hadd; tdipietro@sburl.com; Warner Rackley  
**Cc:** Monks, Padraic; Witters, Christy; Schelley, Emily; Clear, Tim  
**Subject:** Flow Monitoring RFP for Comment  
**Attachments:** MS4 monitoring RFP\_DraftForComment.docx

Hello MS4ers,

We are moving along with the process of setting up the details of the RFP and contracting structure. In lieu of another face-to-face meeting, we are asking that MS4s submit written comments and feedback to the latest draft RFP attached here. This will help to more efficiently collect and assess the differing thoughts of the group, and eventually arrive at an acceptable plan for the group. Your written comments would be appreciated by Friday March 27<sup>th</sup>, with the aim of getting the RFP released in April. We have incorporated comments from the last face-to-face meeting. In order to make this program administratively feasible, the RFP has been written so that this ultimately comes down to a contract for data. Much of the setup costs, equipment purchasing, access agreements, and decommissioning responsibility lies with the selected bidder. This is reflected in the specific deliverables listed on page 2. A thorough QA/QC plan and weighting of demonstrated competence and experience during the selection process will help ensure the data is collected and delivered with the required level of quality.

We also added information as a result of contracting considerations and discussions we've had here at DEC. This includes a structure that establishing a 5-year "umbrella" agreement with a contractor, that describes the work and costs, and memorializes the agreement to do the work, but actual work to be delivered and paid for will be tasked via individual sub-contracts of shorter duration. This more flexible approach enables us to have a formalized agreement before the list of gages and MS4 funding is finalized, upon which we can contract for specific work. The proposed plan is for an initial task order of 3 years, so as to allow the contractors to capitalize setup costs over a long enough period of time, and make it worth their while to acquire equipment and go through the effort to establish the monitoring program. The 3-year contract will come with an option to renew annually for the 4<sup>th</sup> and 5<sup>th</sup> year, after which a new umbrella agreement will have to be established.

An important aspect to this is the timeline of budgeting and commitments (for both MS4s and the contractor). For a variety of reasons it becomes more challenging to establish a program with the moving parts that come with year-to-year funding considerations (as well as year-to-year changes in scope once streams start becoming delisted). So, with your RFP comments we'd also ask each MS4 to comment on their ability to budget and distribute the necessary funds for their gage(s). Specifically:

- To what degree are you able to commit to funding your gage(s) prior to the March, 2016 budget vote?
- Assuming the FY '16-'17 budget is approved, to what degree could you allocate funds prior to July 1, 2016? (i.e. for gage installation & commencement of monitoring)

- Are you able to commit/budget beyond year-to-year, allowing for the 3-year task order approach described above?

Knowing the number of gages that will be needed and for how long now, will enable us to move along with the process to ensure monitoring can commence as early as possible in 2016. This additionally has to take into account the signing of an MOU between ANR and each MS4 outlining the funding agreement once the funding is approved, and which requires 30-days of public notice prior to taking effect.

Lastly, we are going to send invites to internal and external subject matter experts to come up with valid and feasible target flow metrics to be used to evaluate progress of flow restoration. Examples might be watershed yield relative to rainfall, lag-to-peak times, flashiness indices, etc. If any of you would like to participate in this workgroup, please let me know.

Thank you for your feedback,

Blaine



VERMONT DEPARTMENT OF  
ENVIRONMENTAL CONSERVATION  
**WATERSHED**  
MANAGEMENT DIVISION  
MONITORING, ASSESSMENT &  
PLANNING PROGRAM

**Blaine Hastings, *Hydrologist***

1 National Life Drive, Main 2

Montpelier, VT 05620-3522

802-490-6156 / [Blaine.Hastings@state.vt.us](mailto:Blaine.Hastings@state.vt.us)

[www.watershedmanagement.vt.gov](http://www.watershedmanagement.vt.gov)

Check out *Flow*, the official blog of the WsMD:

<http://vtwatershedblog.com/>



DEPARTMENT OF PUBLIC WORKS

March 20, 2014

**Select Board**

Nadine Scibek  
Marc Landry  
Herb Downing  
Kathrine Niquette  
Tom Mulcahy

**Town Manager**

Dawn Francis

**Director**

Bryan K. Osborne  
(802) 264-5625

**Assistant Director**

Warner Rackley  
(802) 264-5635

**Operations Manager**

Floyd Sheesley  
(802) 264-5621

**Project Manager**

Kevin McAleer  
(802) 264-5639

**Administrative Coordinator**

Robin Parry  
(802) 264-5620

**Fax Number**

(802) 264-5503

Ms. Christy Witters  
Vermont DEC  
Watershed Management Division  
1 National Life Drive  
Montpelier, VT 05620-3522

Dear Ms. Witters

The NPDES General Permit 3-9014 issued to the Town of Colchester requires that the municipality ... "submit to the Secretary (of the Agency of Environmental Conservation) for approval a plan for addressing expired State stormwater permits discharging to the permittee's MS4 system."

The Town of Colchester has reviewed the list provided by the Agency of Environmental Conservation for expired permits discharging to impaired streams within the system. Of the seven individual projects listed, we found that the following four projects would need to be incorporated into the Town's MS4 Permit:

Permit 1-0052 - Eagle Park Subdivision  
Permit 1-0674 - Shepard/Gardner Subdivision (Wall Street)  
Permit 1-0959 - Hidden Oaks Extension  
Permit 2-1165 - Hidden Oaks Subdivision

Due to the age of the above developments, it was determined that almost all stormwater management facilities were located within publicly maintained streets. It was also determined that no single entity or home owners association (HOA) existed for any to the above developments. Therefore, it was determined that the best course of action was simply to incorporate these permits into the Town's system.

As for the remaining three expired permits, it was determined that all impervious surfaces and associated treatment facilities were on private property and currently maintained by private corporations and/or HOA groups. It was also determined that the associated discharges flowed directly to the impaired stream without commingling with MS4 flows. These three project areas were as follows:

Permit 1-0609 - Westbury Mobile Home Park  
Permit 2-0762 - Wells Townhome Apartments  
Permit 2-0843 - Meadowood Townhomes (Pheasant Woods)

Based on the above findings, the best course of action for the Town was determined to be referral to the State for application of their Residual Designation Authority (RDA.) Prior to referral, the Dept. of Public Works did reach out to all three projects by contact of association members, management groups, and/or consulting agents. Meetings were held at Town Hall with each group individually to inform them of potential pending requirements. In response to questions

received during these meetings, contact was made with your office in January of this year. Based on those conversations and email correspondence, it is our understanding that the above three expired permits have been added to the Agency's list for RDA application.

Regarding the incorporation of the first four permits into the Town's MS4 Permit, it is our understanding that the process and paperwork for this procedure is still under development and review. Once the procedures have been finalized, the Town fully intends on performing the necessary transfers including fulfilling the associated maintenance and reporting requirements.

Please let me know if you require anything further.

Sincerely,

  
Warner C. Rackley, PE  
Asst. Director of Public Works/Town Engineer

## Warner Rackley

---

**From:** Witters, Christy <Christy.Witters@state.vt.us>  
**Sent:** Thursday, January 09, 2014 12:45 PM  
**To:** Warner Rackley  
**Cc:** Bryan Osborne; Schelley, Emily  
**Subject:** RE: Sunderland expired permits that discharge directly to stream

Thank you, Warner.

Emily will be looking into these permits and we will let you know if we have any additional information. As of now, we will not expect to see RDA petitions for these 3 properties from the Town of Colchester.

Thanks, Christy



Christy Witters, AICP  
*MS4 and MSGP Program Coordinator*  
1 National Life Drive, Main 2  
Montpelier, VT 05620-3522  
802-490-6173 / [christy.witters@state.vt.us](mailto:christy.witters@state.vt.us)  
[www.watershedmanagement.vt.gov](http://www.watershedmanagement.vt.gov)

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**From:** Warner Rackley [<mailto:WRackley@colchestervt.gov>]  
**Sent:** Wednesday, January 08, 2014 9:57 AM  
**To:** Witters, Christy  
**Cc:** Bryan Osborne; Schelley, Emily  
**Subject:** Sunderland expired permits that discharge directly to stream

Christy,

Based on my understanding of your discussion with Bryan this morning, some of the expired permits on the Town's list may in fact be direct discharges that will be RDA'd by the State without any input being necessary from the Town. To confirm that we are all on the same page concerning responsibilities, Bryan asked me to forward a list of these projects with any supporting information I could find that might help clarify private discharges directly to the impaired stream versus those that come with MS4 flows prior to stream entry.

Based on our inspection and interpretation of the plans, it appears that three of the seven expired permits discharge directly to the impaired portion of Sunderland Brook. Those permits are as follows:

- 1-0609 Westbury MHP
- 2-0762 Westbrook Condos (Wells Avenue Townhomes)
- 2-0843 Pheasant Woods (Meadowood Townhomes)

The best information that I could find that clearly shows the discharges for these basins was from GIS maps provided by Emily (see attached.) As you can see on the attached map provided for Westbury, a substantial portion of the park was constructed prior to establishment of permit requirements. All of the permitted areas are along the perimeter of the development away from publicly maintained roadways and are closer to the stream than the earlier phases. Also, all of

the paved roadways within the park outside of Severance ROW are privately maintained. So no discharges from the permitted areas mix with MS4 flows prior to stream entry.

As for the townhomes off of Wells Ave, all flows from buildings and paved areas flow to inlets along the private street and flow to an infiltration pond just upstream of Sunderland. So even if the pond volume is exceeded, overflows will flow directly to Sunderland without mixing with MS4 flows.

As shown on the attached map for Pheasant Woods, there are two basins for this development. The slightly larger portion of impervious surfaces flows to a current permit maintained by the HOA. The remainder of the surfaces discharge through a wooded area to an unnamed tributary. This tributary in turn flows (by-passes) under Eagle Park Drive with no direct connection to stormwater flows along Eagle Park Dr. As a side note, the stormwater discharges for Eagle Park development itself were also covered by an expired stormwater permit (1-0052.) Since Eagle Park Dr is a publicly maintained roadway, the current plan is for the Town to incorporate 1-0052 into the Town's SWMP.

Hopefully, the above information helps clarify that these three permits are direct discharges to Sunderland Brook and will be addressed by the RDA process. If you have questions or have a different interpretation, please give us a call or email.

Thank you,  
Warner C. Rackley, PE  
Asst. Public Works Director  
Town of Colchester  
781 Blakely Road, PO Box 55  
Colchester, VT 05446-0055  
Office: (802) 264-5635  
Fax: (802) 264-5503  
Email: [wrackley@colchestervt.gov](mailto:wrackley@colchestervt.gov)

## Warner Rackley

---

**From:** Schelley, Emily <Emily.Schelley@state.vt.us>  
**Sent:** Thursday, March 19, 2015 10:06 AM  
**To:** Warner Rackley  
**Subject:** RE: Reporting for Expired Permits

Hi Warner,

I think you can go ahead and use the normal inspection form. We don't yet have a process for officially transferring these permits to under the MS4 authorization just yet, so they are still technically individual permits. I think your proposal for the Eagle Park inspections sounds fine, and we'll put a note in our records as to the relationship between the two inspections.



**Emily Schelley, Environmental Analyst, Stormwater Section**  
1 National Life Drive, Main 2  
Montpelier, VT 05620-3522  
802-490-6172 / [Emily.Schelley@state.vt.us](mailto:Emily.Schelley@state.vt.us)  
[www.watershedmanagement.vt.gov](http://www.watershedmanagement.vt.gov)

---

**From:** Warner Rackley [<mailto:WRackley@colchestervt.gov>]  
**Sent:** Thursday, March 19, 2015 9:24 AM  
**To:** Schelley, Emily  
**Subject:** Reporting for Expired Permits

Emily,

Now that the FRP report for Sunderland is getting close, it looks like the four permit areas that we will be incorporating into our system will not be at the top of the list for potential projects. Since it looks like these permit areas will need to be included with either our annual MS4 permit report or the usual post springtime reports for general and individual permit sites, I was wondering what format or special forms would need to be provided for these areas. Should we just provide the usual inspection report and system map referencing the expired number or are there other forms that need to be provided?

For one of these areas, the Eagle Park Development has a more recent Individual permit for an offset project that we already report on. I believe the bulk of the runoff flows to the offset with only a couple of CBs and a cross culvert that by-passes upstream water going around the offset. I'm assuming that the reports should not overlap. Should what we report on for the expired permit only include the bypass areas not covered by the current permit?

FYI – the four permit areas that we were taking in were as follows:

- 1-0052 – Eagle Park
- 1-0674 – Wall Street
- 1-0959 – Hidden Oaks 2
- 2-1165 – Hidden Oaks 1

Thanks,



**Warner C. Rackley, PE**  
Asst. Public Works Dir./Town Engineer

Town of Colchester  
781 Blakely Rd. | P.O. Box 55  
Colchester, Vermont 05446  
P: 802.264.5635 | F: 802.264.5503

[colchestervt.gov](http://colchestervt.gov)

*Notice – Under Vermont's Public Records Act, all e-mail, e-mail attachments as well as paper copies of documents received or prepared for use in matters concerning Town business, concerning a Town official or staff, or containing information relating to town business are likely to be regarded as public records which may be inspected by any person upon request, unless otherwise made confidential by law. If you have received this message in error, please notify us immediately by return email. Thank you for your cooperation.*



PO Box 4413  
 Burlington, VT 05673  
 P: (802) 497-2367  
 www.watershedca.com

**Sunderland & Indian Brook Flow Restoration Plan Development**  
**SCOPE OF SERVICES / COST ESTIMATE**  
**5/23/14**

Dennis Lutz, P.E.  
 Public Works Director  
 Town of Essex  
 81 Main St.  
 Essex Junction, VT 05452

RE: Design Services Agreement for Sunderland and Indian Flow Restoration Plan Development

**SUMMARY**

This agreement is written pursuant to the Town of Essex (OWNER) request for Watershed Consulting Associates, LLC (DESIGNER) to provide design consulting services as outlined below.

**SCOPE OF SERVICES**

Design services are to be performed by the DESIGNER as detailed in the "Sunderland and Indian Brook Watershed Flow Restoration Plan Development" Request for Proposal Response as prepared by Watershed Consulting Associates, LLC dated April 16, 2014, and the revised project timeline dated May 20, 2014 (**Attachments No. 1 and 2**). Any changes in scope, including an increase or decrease in the amount of the DESIGNER'S compensation, shall be mutually agreed upon in writing by and between the OWNER and the DESIGNER and shall be incorporated into this AGREEMENT by a written Amendment signed by both parties.

**BASIS OF COMPENSATION**

Item	Project Manager	Staff Engineer	Staff Scientist	Total
<b>Labor Summary</b>				
Total Labor Hours	196	174	174	544
Hourly Rate	\$90.00	\$65.00	\$65.00	
WCA labor Total	\$17,640.00	\$11,310.00	\$11,310.00	\$40,260.00
<b>Direct Expense Summary</b>				
mileage expense	100 miles @ 0.56/mile			\$56.00
GPS expense	150/day			\$450.00
Expense Total				\$506.00
WCA Total				\$40,766.00
Aldrich + Elliott (A&E) Total				\$11,620.00
EIV Technical Services, Inc. Total				\$1,304
Unit Cost per 30% plan beyond 4 included under Task 5 as authorized by OWNER				\$3,505
<b>Project Total</b>				<b>\$53,690.00</b>

Not-to-Exceed Services:

A fee based on expenses incurred in the interest of the Project, to include direct labor equal to the actual salaries of personnel, overhead expense of 1.59 times direct labor and profit of 10% of direct labor and overhead, plus reimbursable expenses per **Attachment No. 3**. The cost to the OWNER will be at or below the NTE fee indicated above.

All invoices will accurately depict all services provided from the Agreement and any authorized Amendment date through the date of each invoice.

It is understood that the DESIGNER'S labor rates are adjusted annually in January, and that the fees for services provided under this AGREEMENT and any fully executed Amendment(s) shall be the current rates at the time that the work is performed. Refer to Attachment No. 3-**Schedule of Fees & Reimbursable Expenses**.

**TERMS AND CONDITIONS**

Refer to **Attachment No. 4** for the **Terms and Conditions** that govern this AGREEMENT and any fully executed Amendment(s).

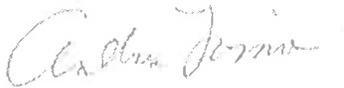
**DURATION OF SERVICES**

The DESIGNER shall commence services on the Date of Execution of this AGREEMENT, and shall fully complete all authorized services no later than February 28, 2015, unless the contract is extended by a change order.

**OFFER OF PROFESSIONAL DESIGN SERVICES**

The DESIGNER, as an independent agent, offers to provide the services as described in this AGREEMENT, for the compensation and duration specified

Watershed Consulting Associates, LLC



Andres Torizzo  
Principal

**OWNER ACCEPTANCE**

The OWNER acknowledges this to be a binding AGREEMENT and agrees to the conditions as stated. The DESIGNER is hereby directed to proceed with the scope of services on the Date of Execution identified below

Indian and Sunderland Brook Flow Restoration Plan Development

The OWNER acknowledges that it has the financial resources and intends to pay for services rendered in accordance with the conditions as stated herein and acknowledges that if invoices are not paid in full within sixty (60) days of date of invoice, that the DESIGNER may stop work, without consequence of liability of any kind, until the invoices are paid.

The OWNER warrants that the signature below is that of its duly authorized representative of the OWNER who possesses the full legal authority to execute this AGREEMENT on behalf of the OWNER.

The OWNER acknowledges that this AGREEMENT is comprised of, and incorporates by reference, **Attachment Nos. 1 through 4.**

OWNER: Town of Essex, Vermont

  
Authorized Representative

3 JUNE 2014  
Date of Execution

**ATTACHMENT No. 1**

**SCOPE OF SERVICES**

Task 1: Kickoff Meetings, Data Acquisition & Review

Subtask 1.1: Meet with MS4 Communities

Subtask 1.2: Meet with VANR

Task 2: VTBMPDSS Base and Credit Model Evaluation and Revision

Subtask 2.1: Baseline model data review and revision

Subtask 2.2: Existing model data review and revision

Task 3: Identification of Controls

Subtask 3.1: Create List of Potential BMPs

Subtask 3.2: Future Growth Allocation Review

Subtask 3.3: Determination of BMP Importance Toward Flow Targets

Subtask 3.4: Potential BMP Review with Partners (Review 3.1, 3.2, and 3.3)

Subtasks 3.5 and 3.6: BMP DSS Model Inputs and Submission to ANR

Subtasks 3.7: BMP DSS Model Output Discussion

Task 4: Assessment of Proposed BMP's

Subtask 4.1: Refine Model Inputs

Optional Task 4.2: Development of BMP Ranking Matrix and Prioritization

Task 5: Flow Restoration Plan Preparation

Subtask 5.1-5.4: FRP Development, FRP Draft Reviews, Final FRP

Add on Task as authorized by OWNER: 30% concept plan development beyond 4 included in base scope.

**END of ATTACHMENT NO. 1**

*Indian and Sunderland Brook Flow Restoration Plan Development*

ATTACHMENT No. 2

Project Schedule

Project Task	2014										2015	
	April	May	June	July	Aug.	Sep.	Oct	Nov	Dec	Jan	Feb	
Task 1: Coordination Meetings			6/13									
1.1: Meet with MS4 Committees												
1.2: Meet with VANR												
Task 2: VTI BMP/DSS Base/Credit Model Evaluation and Revision				8/1								
2.1: Baseline model data review and Revision												
2.2: Existing model data review and Revision												
Task 3: Identify Possible Stormwater BMPs								10/31				
3.1: Create List of Potential BMP Locations												
3.2: Future Growth Allocation Review												
3.3: Determination of BMP Importance to Targets												
3.4: BMP review with MS4 Partners												
3.5: Create BMP DSS Model Inputs												
3.6: Submit BMP DSS input to ANR												
3.7: Meet with Committees to Discuss Model Output												
Task 4: Refine Model Inputs									11/26			
4.1: Refine Model Inputs, Confirm BMP list												
Optional 4.2: Develop Ranking Matrix, Rank BMPs												
4.2.1: Develop Ranking Matrix, Rank BMPs												
4.2.2: Model WQ Benefits, Secondary Ranking												
Task 5: Flow Restoration Plan Preparation (Indian and Sunderland Brook Watersheds)										1/7		2/28
5.1: FRP Development and Concept Plan Preparation											1/23	
5.2: FRP Review and Revision												
5.3: FRP Review by ANR												
5.4: Finalize FRP												2-28

END of ATTACHMENT NO. 2

**ATTACHMENT No. 3**

**Schedule of Fees and Reimbursable Expenses**

Hourly rates for services rendered shall be invoiced as set forth in the AGREEMENT. A schedule of billing rates for DESIGNER's personnel are as follows:

Andres Torizzo, Principal	\$90
Joanie Stultz, Water Quality Engineer	\$65
Dana Allen, Water Quality Scientist	\$65
Kerrie Garvey, GIS Specialist	\$65

The expense items as listed below will be billed as follows:

**Sub consultant and Vendor Expenses:** @cost

- Aldrich & Elliott
- EIV Technical Services

**Travel Related Expenses**

- Auto travel (to include gas and other services charges) @GSA rate
- Meals & Lodging @cost

**Reproduction Expenses (provided in-house)**

- Reproductions (provided in-house)
  - 24 x 36 black and white copy @\$10/each
  - 24 x 36 color copy @\$20/each

**Equipment Rental (provided in-house)**

- Mapping-grade GPS @\$150/day, \$75/half day

**Administrative Expenses**

- Postage @cost
- Shipping @cost
- Other Administrative Expenses @cost

**END of ATTACHMENT NO. 3**

**ATTACHMENT No. 4**

**TERMS AND CONDITIONS**

**Access to Site**

Unless otherwise stated, the Design Professional will have access to the site for activities necessary for the performance of the services. The Design Professional will take reasonable precautions to minimize damage due to these activities, but has not included in the fee the cost of restoration of any resulting damage.

**Billings/Payments**

Invoices for services and reimbursable expenses shall be submitted, at the Design Professional's option, either upon completion of the services or on a monthly basis. Invoices shall be payable within 30 days after the invoice date. A service charge of 1.5% (or the legal rate) per month will be applied to the unpaid balance after 60 days. Retainers shall be credited on the final invoice. The Client agrees to pay all costs of collection, including reasonable attorneys' fees.

**Hidden Conditions and Hazardous Materials**

A condition is hidden if concealed by existing finishes or is not capable of investigation by reasonable visual observation. If the Design Professional has reason to believe that such a condition may exist, the Client shall authorize and pay for all costs associated with the investigation of such a condition. If (1) the Client fails to authorize such investigation after due notification, or (2) the Design Professional has no reason to believe that such a condition exists, the Design Professional shall not be responsible for the existing condition nor any resulting damages to persons or property. The Design Professional shall have no responsibility for the discovery, presence, handling, removal, disposal or exposure of persons to hazardous materials of any form.

**Indemnifications**

The Design Professional and the Client mutually agree, to the fullest extent permitted by law, to indemnify and hold each other harmless from any and all damage, liability or cost (including reasonable attorneys' fees and defense costs) to the extent caused by their own negligent acts, errors or omissions and those of anyone for whom they are legally liable, and arising from the project that is the subject of this agreement. Neither party is obligated to indemnify the other in any manner whatsoever for the other's own negligence.

**Risk Allocation**

In recognition of the relative risks and benefits of the project to both the Client and the Design Professional, the Client agrees, to the fullest extent permitted by law, to limit the Design Professional's total liability to the Client, for any and all damages or claim expenses (including attorneys' fees) arising out of this agreement, from any and all causes, to the total amount of \$100,000, the amount of the Design Professional's fee (whichever is greater) or another amount agreed upon when added under Special Conditions.

**Termination of Services**

This agreement may be terminated upon 10 days written notice by either party should the other fail to perform their obligations hereunder. In the event of termination, the Client shall pay the Design Professional for all services rendered to the date of termination, all reimbursable expenses, and reasonable termination expenses.

**Dispute Resolution**

Any claim or dispute between the Client and the Design Professional shall be submitted to non-binding mediation, subject to the parties agreeing to a mediator(s). Unless otherwise specified, this agreement shall be governed by the laws of the principal place of business of the Design Professional.

**END of ATTACHMENT NO.4**



# SUNDERLAND BROOK FLOW RESTORATION PLAN

MS4 General Permit Requirement (IV.C.1)

February 20, 2015

**Prepared for:**  
*Town of Essex,*  
81 Main St.  
Essex Junction, VT 05452



**Prepared by:**  
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In Partnership with:

*Town of Essex, VT*  
*Village of Essex*  
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*Town of Colchester, VT*  
*Vermont Department of*  
*Transportation*



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## **I. Disclaimer**

The intent of this plan is to present the data collected, evaluations, analysis, designs, and cost estimates for the Sunderland Brook Flow Restoration Plan (FRP) Project, completed under a contract between the Town of Essex and the hired consultant team, Watershed Consulting Associates, LLC and Aldrich & Elliott, PC. The Sunderland Brook FRP was prepared to meet the compliance requirement for the Sunderland Brook impervious surface owners (the Town of Essex, Village of Essex Junction, Town of Colchester, and the Vermont Agency of Transportation (VTRANS) under the National Pollutant Discharge Elimination System (NPDES) General Permit 3-9014 (VTDEC 2012) for stormwater discharges to impaired waters. The presented plan is in draft form, and will be revised by the Town of Essex and MS4 partners, as needed. **At this time, the MS4s are not bound in any way to the proposed BMP list.**

## 1 Executive Summary

Watershed Consulting Associates, LLC, and partners Aldrich and Elliott, PC (A+E) were commissioned to develop the following Flow Restoration Plan (FRP) for the Sunderland Brook watershed under contract with the Town of Essex, in partnership with the Village of Essex Junction, Town of Colchester, University of Vermont (UVM), and the Vermont Department of Transportation (VTRANS). The plan was developed in accordance with the MS4 General Permit #3-9014 Subpart IV.C.1 as a part of the participating MS4's Stormwater Management Program (SWMP). The purpose of the FRP is to provide a planning tool for the MS4 entities to implement stormwater Best Management Practices (BMP's) over a twenty (20) year timeframe, in an effort to return Sunderland Brook to its attainment condition.

As a part of the FRP development, an assessment was completed to determine to what extent current stormwater controls have reduced high flows (flows occurring less than 0.3% of the time) from the pre-2002 condition, as required by the Sunderland Brook Total Maximum Daily Load (TMDL) for stormwater. The Vermont Best Management Practice Decision Support System (BMPDSS) model, a GIS-based hydrologic model used to assess the impact of various stormwater Best Management Practice (BMP) scenarios, was used for the assessment. Several revisions to existing BMP drainage areas and BMP design configurations were identified during field inspection and accounted for in the revised models. After the existing model scenarios were reviewed, new BMPs were identified, inspected, and assessed in the BMPDSS.

According to the review completed under this contract, Sunderland Brook is currently meeting its attainment condition with a considerable factor of safety. The MS4's **do not need to implement any new stormwater controls under the MS4 permit requirement IV.C.1.** Therefore, the FRP prepared under this contract provides the MS4 entities a list of possible projects, in the event future biomonitoring of the stream reveals non-compliance with the Vermont Water Quality standards, but there is no requirement to implement any of the projects at this time.

The final evaluated BMP list includes 7 sites—three (3) new infiltration basins, three (3) new underground retention chamber systems, and one (1) green stormwater infrastructure (GSI) practice. The proposed BMPs were assessed with the BMPDSS model, and determined to provide a -17.85% reduction in the high-flow which addresses 482% of the TMDL high-flow target (Q0.3%), through reduction of runoff from the 1-year Design storm. While not an actionable target, the low-flow (baseflow) was estimated to increase by 8.33%, which addresses 231% of the low-flow target. The total planning level cost for implementation of the proposed projects is \$2,072,832.

The projects were ranked using a comprehensive matrix. . Four (4) projects were selected from the top ranked projects for 30% engineering including 1) an infiltration basin at the VTRANS garage along Tracy Rd, 2) an underground storage chamber system at Fort Ethan Allen, 3) runoff mitigation from Outfall 31 with an infiltration gallery, located at 6 Morse Dr. and 4) an infiltration basin in the ROW at 292 Morse Dr. to manage runoff to Outfall 199. Preliminary 30% engineering