



City of Burlington Stormwater Management Program MS4 Annual Report for Calendar Year 2014

In accordance with State of Vermont permit 7022-9014 issued to the City of Burlington on October 1, 2013, we are submitting the following annual report documenting stormwater activities completed in calendar year 2014.

1) Minimum Measure 1- Public Education and Outreach

- Total Payment made to RSEP: **\$5,000**
- Total Online Media Impressions:
 - Spring: **720,000; 2489 clicks**
 - Fall: **220,500 + video pre-roll; 832 clicks**
- # visitors to the Regional Stormwater Education Program (RSEP) website: **7728**
 - RSEP web address: www.smartwaterways.org
- Maintenance/continued update of municipality's stormwater website
 - <http://www.burlingtonvt.gov/DPW/Stormwater-Management>
- Supplemental information for minimum measure 1 can be found in **Appendix A** (RSEP Annual Review)

2) Minimum Measure 2 – Public Involvement and Participation

- Payment made to the Chittenden County Stream Team (CCST): **\$1800**
 - CCST website address: <http://www.ccstreamteam.org>
 - Outreach Participation: 427 Burlington residents
 - Hands On Participation: 66 Burlington residents
- Green Up Day
 - Tons of Trash collected: **2.1**
 - # of tires collected in Burlington: **18**
 - # of cubic yards of scrap metal collected: **1.5**
 - # of participants: **309**
- Supplemental information for minimum measure 2 can be found in **Appendix B** (CCST Annual Report)
- Launch of Adopt a Drain Program: <http://www.burlingtonvt.gov/DPW/ADOPT-A-DRAIN>
 - Number of drains adopted: 133
 - Number of drain adopters: 92
- **City of Burlington Build Your Own Rain Barrel Workshop (July 31, 2014) – 23 citizens**

3) Minimum Measure 3 – Illicit Discharge Detection and Elimination

- Illicit discharges detected and eliminated: none
- Number of stormwater outfalls inspected: **60**
 - See map of outfall inspections in Appendix C: 2014 Maintenance Report
- (Number of stormwater outfalls sampled/tested: **0** (No visual indications triggering testing))
- Stormwater Infrastructure Mapping
 - Up to date sewer mapping is available at: <http://www.burlingtonvt.gov/DPW/Mapping-Links>
 - Draft sewershed/watershed mapping is available city wide, see: <http://arcg.is/190ncqo>
- **A regulatory review related to addressing the specific categories of illicit discharges specified in 3-9014 (2012) has been completed**; an update to Chapter 26 (Wastewater, Stormwater and Pollution Control ordinance) to include these additional categories is **still pending** other likely changes to Chapter 26, which may now happen in 2015 (possible update in post construction stormwater management standards, credit manual requirements, etc.).

4) Minimum Measure 4 – Construction Site Runoff Control

- Number of project local EPSCs reviewed: **91**
- Number of construction site inspections: **16**
 - 11 general BMP inspections
 - 5 stabilization inspections

5) Minimum Measure 5 – Post Construction Runoff Control

- Number of project stormwater management plans reviewed: **23**
- Number of small stormwater management systems (no State permit) inspected: **none**
- Number of public stormwater management systems inspected: **14**
- Development/implementation of maintenance agreement/easement recording process: **postponed until 2015**
- City Projects related to Post Construction Runoff Control in MS4
 - Completion of bio-retention/traffic calming at Hyde Street
 - Installation of two stabilized channels/infiltration zones at Cherry Street alley and Mill Street

6) Minimum Measure 6 – Pollution Prevention and Good Housekeeping

- See map of 2014 CB inspections and cleaning in **Appendix C: 2014 Stormwater Maintenance Report**
- # of catch basins inspected: **564**
- # of catch basins cleaned: **511**
- # of manholes inspected: **25**
- # of manholes cleaned: **17**
- Linear feet of storm lines cleaned:
 - 535 linear ft
- # of catch basins repaired: **37** (See Appendix C: 2014 Catch Basin Rebuild/Repairs Map)
- # lane miles swept (at least once annually during Operation Clean Sweep): **96**

- # of dog bags distributed: **approximately 11,000**
- # of tons of material collected by street sweeping and catch basin cleaning:
 - Street sweeping: **1387 yards**
 - As of CY 2015, we have improved our street sweeping capabilities by purchasing a regenerative air vacuum sweeper.
 - Catch Basin Cleaning: We have gained approval for CB materials handling policy from the State which means that we no longer are sending our material to the landfill and having it weighed. We are working on a new, volume based system to track CB material for 2015
 - Importantly, starting midway in CY 2014, the Stormwater program gained direct oversight of the Vac-con operators for the non-winter months. As such, we anticipate completing a higher rate of CB cleaning in CY 2015.
- MCAP Audit completed: **no** (last done in 2008, will occur again this permit cycle)
- Number of municipal employees attending annual RSEP training (9/18/2014): “Salt Impacts and Best Management Practices” = **5** (2 water resources staff, 3 street department staff)
- Additional Trainings attended by City staff:
 - Portland, ME Sustainability Directors Meeting (topic: stormwater) 6/10/2014: 1 staff member
 - Permeable Interlocking Concrete Pavements lunch/learn 6/24/2014 : 3 water resources staff and numerous engineering, streets, planning and zoning and CEDO staff)
 - WEFTEC, New Orleans, September 28-October 1 (3 Water Resources staff)
- Municipal Repair/Good Housekeeping Projects:
 - Repair of bike path culvert outfall

7) Other Stormwater Activities and Reporting

- FY 14 Stormwater Budget Actual Expenses: **\$1,081,274**
- FY 15 Stormwater Budget Proposed Expenses: **\$1,144,249**
- Current stormwater ISU = \$1.687 (see: <http://www.burlingtonvt.gov/DPW/Billing>)

8) Flow Restoration Plan (FRP) Development Progress

- The City of Burlington is required to participate in the development of three FRPs for discharges from the City to Centennial Brook, Englesby Brook and Potash Brook. The City intends to work with other MS4s to develop these FRPs and submit to the State prior to October 1, 2016.
 - **Centennial Brook FRP:** The City began work with UVM, VTRANS and South Burlington on the FRP for Centennial Brook in 2013. Stormwater retrofits have been identified throughout the watershed and the draft plan has been presented to the State for review. The City and other MS4s must still prepare a financial and implementation plan prior to final submission to the State before October 1, 2016
 - **Englesby Brook FRP:** The City has received a \$63,249 LTF grant through VTRANS for the development of the Englesby Brook FRP. Work on the Englesby FRP is currently underway and our consultant, Stone Environmental (with Horsley-Witten), has been working with Emily Schelley. We anticipate completion of the Englesby Brook FRP by June 30, 2015.

- **Potash Brook FRP:** We are cooperating with South Burlington's larger Potash FRP effort which is underway as of early 2015.

9) Flow Monitoring Progress

- Legislation enabling VT DEC to collect funding from the regulated MS4s for the purposes of conducting stream flow monitoring was enacted with the passage of H.650 in the 2014 legislative session. Per our plan submitted in our 2013 Annual Report, the City is participating in the State led effort to release an RFP and execute a multi-year contract for Flow Monitoring to begin in 2016.

10) Expired Permits Progress

- Our progress on the expired permits has been delayed as we have been focusing on the flow restoration process which will provide the needed insight into identifying retrofit needs for these properties, and thus the preferred path towards compliance. Additionally, with the delay of the release of the new RDA permit until summer 2015, neither we, nor the expired permit holders, can know the full picture of either compliance method. At this point, our main concern is ensuring that any needed stormwater upgrades (identified as part of the flow restoration plans) occur. It may be hard to negotiate maximizing stormwater upgrades in exchange for permit takeover by the MS4 if the RDA permit may provide an easier and less costly mechanism for compliance by the permit holders. On the other hand, in situations where there is no commingling of flow of the private property and the public right of way within the permitted site, it may be desirable to minimize our regulatory liability if we can ensure that the RDA permits will achieve sufficient flow reductions. Moreover, there does not currently appear to be a mechanism for MS4s to take over these expired permits until H.35 is passed.
- We are currently pursuing the Flow Restoration Plan for Englesby Brook, which contains the majority of the expired permits and will have a clearer picture of our intended path towards compliance on these properties once the BMP identification is complete early this summer 2015. We are also participating with the Flow Restoration Plan development for Potash Brook being led by South Burlington and anticipate a similar schedule for BMP identification.
- At this point, we propose the following revised plan for addressing the Expired Permits in our community:
 - **April 2015 – June 2015:**
 - Include expired permit properties in Flow Restoration Plan analysis
 - Confirm discharge locations for expired permits to verify discharges to the MS4 vs. direct discharge to impaired watershed
 - Confirm whether there is any commingling of private and MS4 flow from permitted sites.
 - Review feasibility requirements of the draft RDA permit and determine City's preferred path for compliance for private properties.
 - **June 2015:** Contact expired permit holders and notify them of October 1, 2015 deadline for compliance requirement; indicate compliance options.
 - Ascertain willingness to cooperate; if any are immediately unwilling, consider immediate RDA petition to State

- Obtain MOUs of intended cooperation, if appropriate
- **June 2015 - August 2015**
 - Petition State to RDA any properties which are not going to be covered under MS4
 - Advance legal measures to allow for transfer of permit responsibility to MS4 where applicable (pending H.35)
 - Including schedule for any immediately required maintenance and schedule for implementation of required upgrades
- **October 1, 2015:** Deadline for any RDA petitions to State; expired permits will either be identified as subject to a NPDES RDA permit or incorporated into the City's MS4 permit coverage.

11) Permit deadlines for Permit Year 2015

- **October 1, 2015:**
 - Submit FRP progress report
 - Submit RDA petition for any expired permits that aren't going to be included in our MS4 coverage
 - Submit a report documenting the status of the remaining expired permits
 - Begin developing a LID technical assistance program for landowners
 - Submit a report on how we are protecting and regulating development in stormwater impaired stream corridors
 - Submit a plan for enhanced protection of stormwater impaired stream corridors if our current regulations need enhancement.

12) Plans/Projects for Permit Year 2015

- Development of Integrated Stormwater and Wastewater Plan: <http://www.burlingtonvt.gov/DPW/Stormwater/IMSWP>
- Implementation of Stormwater Friendly Sidewalk: <http://www.burlingtonvt.gov/DPW/Stormwater-Friendly-Sidewalk>

13) Proposed Changes

- There are no changes proposed to the SWMP at this time.

Certifications:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."



3/26/2015

Megan Moir, CPESC, CPSWQ,
Stormwater Program Manager

Date Signed

APPENDIX A:

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.

Spring 2014 Campaign 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
Total clicks		2489	\$7,655.12	\$3.08

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
Total Clicks		832	\$3,806	\$4.57

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.

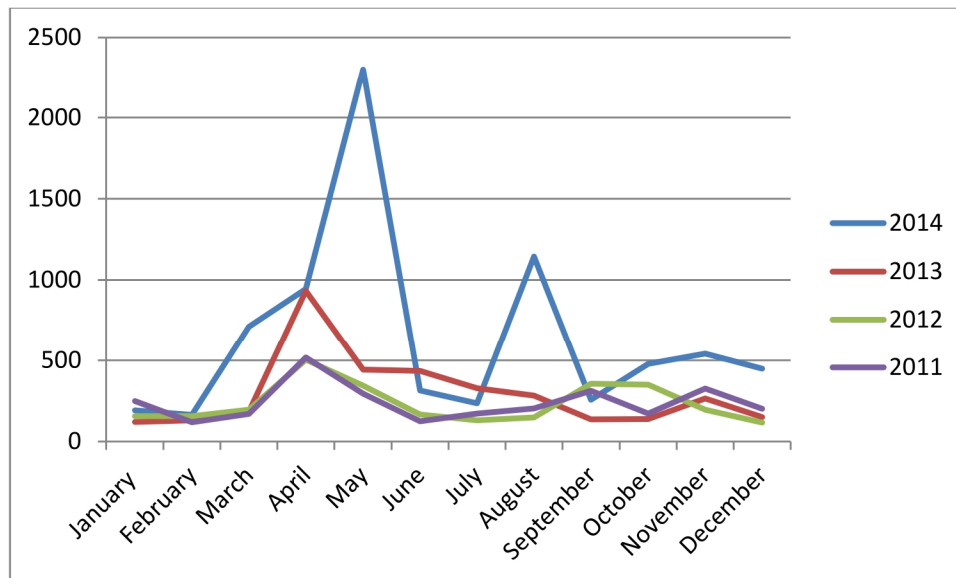
In 2015, we still plan to update site content to improve the clarity of language.

Traffic to Program Website (www.smartwaterways.org)

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



Chittenden County Stream Team Summary of Activities January-December 2014

This report summarizes CCST activities in the 2014 calendar year. Demographic data about participant numbers from each town is presented in tabular form following the narrative.

Social Media

Facebook

- 104 “likes”-- a 25% increase in likes from 2013 annual report numbers (83 likes)
- 36% of the people who like CCST are from Burlington (37 people)
- 53.8% of the people who like CCST live in CCST member towns (56 people)

CCST Website

Google Analytics provides website traffic data from January 1, 2014 to December 31, 2014:

- 1,454 website visits, spending an average of 2 minutes and 2 seconds on the website per visit. The number of visits is up 81.5% from 2013 (801 visits)
- 3,683 page views, up 40% from 2013 (2,619 views)
- 74.7% of visitors were new visitors to the site.
- The highest spike in page views occurred on May 7th, with 28 visits. This was shortly after a rain barrel workshop was held in Shelburne that received some press and after a few other activities including a rain garden clean-up day, outreach at Green-Up Day in South Burlington and outreach at the Winooski Natural Resources Conservation District’s Annual Tree Sale. Other spikes occurred in the days following the Connecting the Drops rain barrel auction and throughout the summer after outreach events. On average, the busiest months for web traffic were April, May, June and July.

Newsletter and e-correspondence

- In 2014, there were 295 subscribers to the CCST newsletter, up 13% from 261 in 2013.
- A fall newsletter was sent out in September with a 37.1% open rate. CCST E-News open rate is high; the typical open rate for similar industries is between 20-25% according to research completed by Mail Chimp.
- The Mail Chimp email list was used throughout the year to announce rain barrel workshops and to request volunteers for water quality monitoring.

Organizational Partnerships

The Chittenden County Stream Team partnered with twelve different organizations in 2014.

- A local gardener donated plants for the Stream Team’s rain gardens. In 2014, Ann Pearce provided CCST with dozens of iris, lobelia and native grasses for multiple rain gardens (Chamberlin School, South Burlington; Williston Town Hall Annex, Williston; and Coast Guard Station, Burlington).
- CCST worked with multiple schools and school groups this year for hands-on events and for outreach opportunities. The Stream Team partnered with teachers from Williston Central School, Winooski Elementary School, Winooski’s summer school education program and ECHO’s summer kid’s environmental program.
- CCST partnered with towns and other local organizations to host two rain barrel workshops. CCST partnered with the Shelburne Natural Resources Committee and the Shelburne Recreation



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Summary of Activities January-December 2014

Department for a rain barrel workshop in April. CCST partnered with Essex Junction's Department of Recreation and Parks to host a rain barrel workshop in May.

- In October, CCST held a stormwater walk for local residents in the town of Williston in partnership with the Town of Williston.
- During the 2014 Connecting the Drops outreach campaign and events, CCST partnered with the Let it Rain program (administered by Winooski Natural Resources Conservation District and UVM's Lake Champlain Sea Grant) to develop outreach materials. Lake Champlain Sea Grant staff member Becky Tharp recruited the artists for the displayed rain barrels and coordinated press and advertising. The Regional Stormwater Education Program (RSEP) contributed funds to pay for advertising and additional costs associated with the Connecting the Drops campaign. CCST partnered with the towns of Essex and Essex Junction and their public works departments to provide outreach for Connecting the Drops, display the barrels and engage citizens.

Media

The Chittenden County Stream Team had four media appearances this year. Copies of each article are archived in the CCST 3-ring binder housed at the office of the CCST chair (if applicable).

- Vermont Public Radio story about Shelburne rain barrel workshop. (4/21/14)
<http://digital.vpr.net/post/environmental-group-teaches-vermonters-build-diy-rain-barrels>
- National SeaGrant Newsletter article on Connecting the Drops (July 18, 2014)
<http://seagrant.noaa.gov/News/FeatureStories/TabId/268/ArtMID/715/ArticleID/261/Urban-Stormwater-Management-Research-and-Outreach.aspx>
- Interview with FOX44 about Connecting the Drops (06/09/2014)
<http://www.mychamplainvalley.com/story/d/story/rain-barrels-raise-awareness-for-stormwater-pollut/15632/ha1pUEXjsU6tSu6jMHQ5vw>
- Kids VT Feature (July 2014 Issue) "Connecting the Drops in Essex Junction"
<http://issuu.com/kidsvt/docs/kvt0714> available on Page 7.

Outreach

Outreach events include tabling and the distribution of educational materials or information. There were seven outreach events in 2014. See Table 1 below for detailed outreach audience information.

- Green-Up Day in South Burlington (5/03/2014, 25 people)
- Five Corners Farmers Market (7/11/2014, 31 people)
- Essex Junction Block Party (7/19/2014, 58 people)
- Stormwater Outreach to Winooski Summer School Program (7/30/2014, 22 people)
- Winooski Farmers Market (8/24/2014, 38 people)
- Targeted Outreach Materials Delivered to Oneida Acres Neighborhood in Williston (10/02/2014, 38 people)
- South Burlington Harvest Festival (10/13/2014, 25 people)



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Event-Driven Tasks

There were ten hands-on events held and the continuation of on-going tasks including water-level monitoring in Shelburne, rain garden adoption and maintenance, and water quality monitoring in 2014. Detailed participation data is provided in Table 2.

- Shelburne Rain Barrel Workshop (4/19/2014)
 - Partnered with the Shelburne Natural Resources Committee and the Shelburne Department of Parks and Recreation
 - 45 participants built 32 rain barrels. All participants received outreach materials about rain barrels and stormwater
- University of Vermont Students Provide Maintenance to Rain Gardens (4/30/2014)
 - Five UVM students provided maintenance to the gardens at Landry Park in Winooski and at the Williston Town Hall Annex
- Allen Brook Stream Clean-Up (4/22/2014)
 - Partnered with Williston Central School, 48 children and 4 adults participated in the clean-up and discussion on stormwater and watershed health.
- Connecting the Drops 2.0 Rain Barrel Workshop (6/14/2014)
 - Partnered with Essex Junction's Department of Recreation and Parks, the Towns of Essex and Essex Junction and Lake Champlain Sea Grant to prepare and advertise for the event.
 - 36 participants built 26 rain barrels. All participants received outreach materials about rain barrels and stormwater.
- Volunteer Water Quality Monitoring Training (6/15/2014) and Sampling
 - Interest in the water quality monitoring program was high; 32 people contacted CCST to find out more information about volunteering. Of those who contacted CCST, 15 volunteers participated in the water quality monitoring training session. Sampling occurred on five scheduled dates (6/24, 7/08, 7/22, 8/05, 8/19)
 - Analyzed sampling data was uploaded to the CCST [website](#).
- Rain Barrel Painting and Education with the Winooski Elementary School Summer Environmental Program (6/25/2014)
 - 18 school children and 3 teachers participated in learning about rain barrels and painting rain barrels. The school has installed two of the barrels on their property
- Rain Barrel Decorating at the Essex Junction Block Party for Connecting the Drops 2.0 (7/19/2014)
 - 27 people participated in the rain barrel decorating activity during the Block Party; most also signed up to win a rain barrel.
- Rain Garden Work Days with ECHO Kid's Program (7/30/2014 and 8/7/2014)
 - 14 middle school-aged children worked to pull weeds and plant new rain garden plants at the Coast Guard Station rain garden in Burlington on 7/30/14.
 - 18 elementary school-aged children cleaned out trash, pulled weeds and applied mulch to the Coast Guard Station rain garden in Burlington on 8/07/2014.
- Indian Brook and Pearl Street Park Clean-Up (9/20/2014)
 - Partnered with the Town of Essex



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- Nine volunteers participated in the clean-up day
- Williston Neighborhood Stormwater Walk (10/26/2014)
 - Partnered with Williston Planning Department
 - 15 residents of the Oneida Acres neighborhood in Williston participated in an education stormwater walk through their neighborhood. Stormwater issues and current strategies to address these issues were discussed. Residents received outreach materials encouraging the installation of rain gardens.
- Adopt-a-Rain Garden
 - On-going volunteer activity: rain garden adopters maintain gardens during spring, fall and summer by ensuring they are functioning properly and weeded/planted as needed. There are currently seven rain garden adopters (3, Burlington, 1 Essex Junction, 2 Williston, 1 South Burlington)
 - Rain Garden Status Information: Landry Park rain garden in Winooski is in need of repair. Callahan Park rain garden in Burlington has a sink hole, but it functions well and has an active volunteer adopter. Farrell Park in South Burlington needs a new adopter. The remaining CCST managed rain gardens are in great shape with active adopters.
 - Donated rain garden plants were planted in the Chamberlin School garden in South Burlington, the Williston Town Hall Annex garden, Landry Park garden in Winooski, and in the Coast Guard Station garden in Burlington. The other gardens did not need additional plants this year. Mulch was applied to these four gardens in 2014.
- Shelburne Longmeadow Flow Monitoring
 - Data collected by a volunteer (Shelburne) was compiled through July 2014
 - Data storage and analysis has been transferred to a member of the Shelburne Natural Resources Committee, CCST ended its participation in the data collection portion of this effort
 - CCST developed a final report on the water-level data collection and project history

The target towns for hands-on participation in 2014 were Essex, Essex Junction and Williston. The target numbers (based on the attached workplan) were met in all three towns. There were a total of 249 event participants in 2014, exceeding the workplan goal of 100 participants. Based on the participation numbers from 2014 and time since CCST has targeted each town, the towns targeted for outreach in 2015 are Shelburne, Burlington and Milton.



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Summary of Activities January-December 2014

Table 1: Participation in Outreach Activities

Participation in Outreach Activities											
CCST Participant Town											
Activity	Location	Burlington	South Burlington	Essex	Essex Jct	Milton	Shelburne	Williston	Winooski	Other/Unkown	Total
Facebook 'Likes'	N/A	37	6	1	2	0	3	3	4	48	104
Website Visits	N/A	334	51	93	0	2	27	64	6	422	877
e-news Mailing List	N/A	44	31	8	28	23	11	22	23	105	295
Green-Up Day	South Burlington	0	25	0	0	0	0	0	0	0	25
5 Corners Farmers Market	Essex Junction	0	2	12	14		0	0	0	1	31
Essex Junction Block Party	Essex Junction	6	0	18	30	0	0	0	0	4	58
Winooski Summer School	Winooski	0	0	0	0	0	0	0	22	0	22
Winooski Farmers Market	Winooski	5	0	0	0	0	0		29	4	38
Oneida Acres Outreach	Williston	0	0	0	0	0	0	38	0	0	38
South Burlington Harvest Festival	South Burlington	1	20	0	0	0	0	4	0	0	25
	Total	427	135	132	74	25	41	131	84	584	1513

**Colchester represents a portion of the “other” participants, with 41 Colchester residents engaged with CCST outreach events (See Table 3 for details).

Since participation numbers for Williston and Winooski in 2013 and CCST had not focused on South Burlington in some time, these were the outreach target towns in 2014. Displayed in the table below, 2014 outreach efforts in these towns were a success and all workplan goals were met.. Hands-on events are planned for these 3 towns in 2015.



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Table 2: Participation in Hands-On /Event-Driven Projects

Hands-On Project Participation (Event Driven Tasks)											
CCST Participant Town											
Activity	Location	Burlington	South Burlington	Essex	Essex Jct	Milton	Shelburne	Williston	Winooski	Other/ Unkown	Total
Volunteer Thank You Event	Winooski	2	2	1	0	2	0	1	0	2	10
Shelburne Rain Barrel Workshop	Shelburne	5	4	0	0	0	22	10	3	1	45
UVM Student Rain Garden Maintenance	Williston and Winooski	5	0	0	0	0	0	0	0	0	5
Allen Brook Stream Clean-Up	Williston	0	0	0	0	0	0	52	0	0	52
CtD2.0 Rain Barrel Workshop	Essex Junction	0	0	16	17	0	0	3	0	0	36
Water Quality Monitoring Training	South Burlington	4	4	0	1	0	1	5	0	0	15
Water Quality Monitoring Volunteers	Multiple	6	3	0	1	0	1	3	0	0	14
Rain Barrel Painting/Stormwater Education	Winooski	21	0	0	0	0	0	0	0	0	21
Adopt-A-Rain Garden Maintenance Days	Multiple	2	4	0	3	0	0	1	0	0	10
ECHO Kids Rain Garden Maintenance and Education (2 events)	Burlington	21	0	0	0	0	0	0	11	0	32
Oneida Acres Stormwater Walk	Burlington	0	0	0	0	0	0	15	0	0	15
Indian Brook and Pearl Street Park Clean-Up	Essex	0	0	9	0	0	0	0	0	0	9
	Total	66	17	26	22	2	24	90	14	3	264



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Chittenden County Stream Team

Summary of Activities January-December 2014

Other Vermont towns that are not part of the Chittenden County Stream Team participate in CCST activities. The chart below identifies towns with significant participation (Table 3).

Table 3. Participation in CCST Activities from Non-Member Towns

CCST Outreach and Event Participation Beyond Participating MS4 Towns								
	Town	Jericho	Richmond	Hinesburg	Charlotte	Colchester	Montpelier	Other Towns
Facebook Likes	N/A	3	0	2	0	4	4	35
Website Activity	N/A	6	0	2	0	25	58	788
Mailing List Members	N/A	2	1	0	1	9	0	92
Outreach at Essex Jct 5 Corners Farmers Market	Essex Jct	0	0	0	0	1	0	0
Outreach at Essex Junction Block Party (CtD 2.0)	Essex Jct	0	0	0	0	0	2	2
Outreach at Winooski Farmers Market	Winooski	0	2	0	0	2	0	0
Shelburne Rain Barrel Workshop	Shelburne	0	0	0	1	0	0	0
	Total	11	3	4	2	41	64	917

Connecting the Drops 2.0

In 2013, the Winooski Natural Resources Conservation District received a grant from the Ecosystem Restoration Program, VT DEC, for Let it Rain, a technical and financial assistance program aimed at supporting landowners in the installation of low impact development practices, and subsequently received funding from the Lake Champlain Basin Program to support this initiative with funding for outreach and education to landowners about stormwater. Connecting the Drops emerged from Let it Rain as an art and education installation about stormwater, featuring rain barrels, in downtown Burlington in the summer of 2013. WNRCD received a \$40,000 grant from ECOS to develop Connecting the Drops. 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.

Based on the successful outcomes of the 2013 campaign, RSEP members requested a proposal for a second year of the Connecting the Drops Project, known as Connecting the Drops 2.0 (CtD 2.0). With a significantly smaller scope, Lake Champlain Sea Grant (LCSG) worked with CCST to develop a "traveling" version of the Connecting the Drops exhibit to be held in Essex Junction during the summer of 2014. Five professionally-painted rain barrels with informational signage and the Kids VT stormwater story panels were installed at Maple Street Park in Essex Junction on June 9th, 2014. There were two outreach events associated with the CtD 2.0 campaign and a rain barrel workshop. The build-a-rain-barrel workshop was held at Maple Street Park on June 14, 2014 and served to kick off the rain barrel exhibit. The workshop was attended by 36 people who built a total of 26 barrels. CCST provided outreach at the 5 Corners Farmers Market on July 11, 2014 and at the Essex Junction Block Party on July 19, 2014. The artist-decorated rain barrels were given away on stage at the Block Party. Throughout the five weeks that the artist-decorated rain barrels were on display in Maple Park, before the Block party, 71 people applied through the Let it Rain website to win a rain barrel



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(Table 4); an additional 36 people signed up during the Block Party for a total of 107 sign-ups. Full reports on the details of the CtD 2.0 and 2013's Connecting the Drops campaign are available and on file with the CCST chairs.

Table 4. Rain Barrel Sign-Ups by Town

Demographics of People who Signed up to Win a Rain Barrel through QR Code	
Town	Number of People
Williston	12
Essex	13
Essex Junction	22
South Burlington	0
Burlington	6
Shelburne	0
Milton	1
Winooski	0
Other	17
TOTAL	71

No town information is available on the 36 people who signed up to win a rain barrel during the Block Party. The 71 people who signed up through the website, did so while the barrels were on display at Maple Street Park

In 2014, RSEP contributed \$2,857.28 to support the operations of CtD2.0. These funds helped compensate the five professional artists (\$1,000), paid for advertising (\$1,729.20) and signage (\$45.00). LCSG contributed 57 hours of in-kind personnel time. The municipal entities of Essex and Essex Junction contributed 10 hours of in-kind labor from interns and 15 hours of staff personnel time for event planning. Kids VT also provided \$750 of in-kind advertising as a sponsor of CtD2.0.

A portion of RSEP's funds went to supplement CCST personnel hours to lead outreach and hands-on events for CtD 2.0. In FY 15, RSEP provided CCST with a grant of \$4,031.16 to support increased staff time to conduct CtD2.0 and to meet additional requests for outreach and hands-on participation in the CCST target communities. CCST staff used 42.5 personnel hours and \$67.65 of mileage to plan and execute CtD2.0. There was a \$38.88 profit on materials for the CtD2.0 rain barrel workshop; participants were charged \$30 for the workshop to cover supply costs. In total, CCST spent \$1,728.77 for the entire CtD 2.0 campaign.

Connecting the Drops 2.0 had a significant impact on CCST's very successful year in 2014. The amount spent by CCST (\$1,728.77) is six percent of CCST's FY15 budget. This relatively small budget percentage had a large impact on the overall participation numbers in 2014. All workplan targets for outreach and event participation in Essex and Essex Junction were exceeded through the CtD 2.0 events. Additionally, the draw of signing up to win a rain barrel at the Essex Junction Block Party brought outreach numbers at a single event higher than any previous CCST numbers, for a total of 58 people reached at the Essex Junction Block party. Not only did these people sign up to win a barrel, but many of them took outreach materials, talked with CCST staff and/or decorated CCST's chalkboard rain barrel. A comparison of participation numbers in Essex and Essex Junction in 2013 and 2014 for equivalent events and interactions is provided below (Table 5). The elevated numbers may be attributed to the increased CCST presence and advertising efforts that occurred through CtD2.0.



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Table 5. Participation Comparisons in Essex and Essex Junction between 2013 and 2014

A Comparison of Participation in Essex and Essex Junction in 2013-2014								
	e-news		Facebook "likes"		5 Corners Farmers Market		Essex Junction Block Party	
	2013	2014	2013	2014	2013	2014	2013	2014
Essex	14	28	1	2	9	14	10	30
Essex Junction	7	8	0	1	0	12	3	18

Based on the participation numbers from 2013 and 2014, Connecting the Drops is a successful and repeatable strategy to engage target towns in both outreach and hands-on events. The scaled-down version held in Essex and Essex Junction in 2014 helped efficiently meet workplan goals at a small cost.



APPENDIX C:



GREG JOHNSON
STORMWATER & GIS TECHNICIAN

Date: December 9, 2014

MEMO

To: Megan Moir, Laurie Adams, Rob Green, Chapin Spencer

From: Greg Johnson, Burlington Stormwater Program

Subject: 2014 SW Maintenance Report

This memo summarizes figures from 2014 maintenance records recorded in the GIS. This document serves as a chance to step back and look at our achievements, and areas where improvement can be made.

Catch Basins

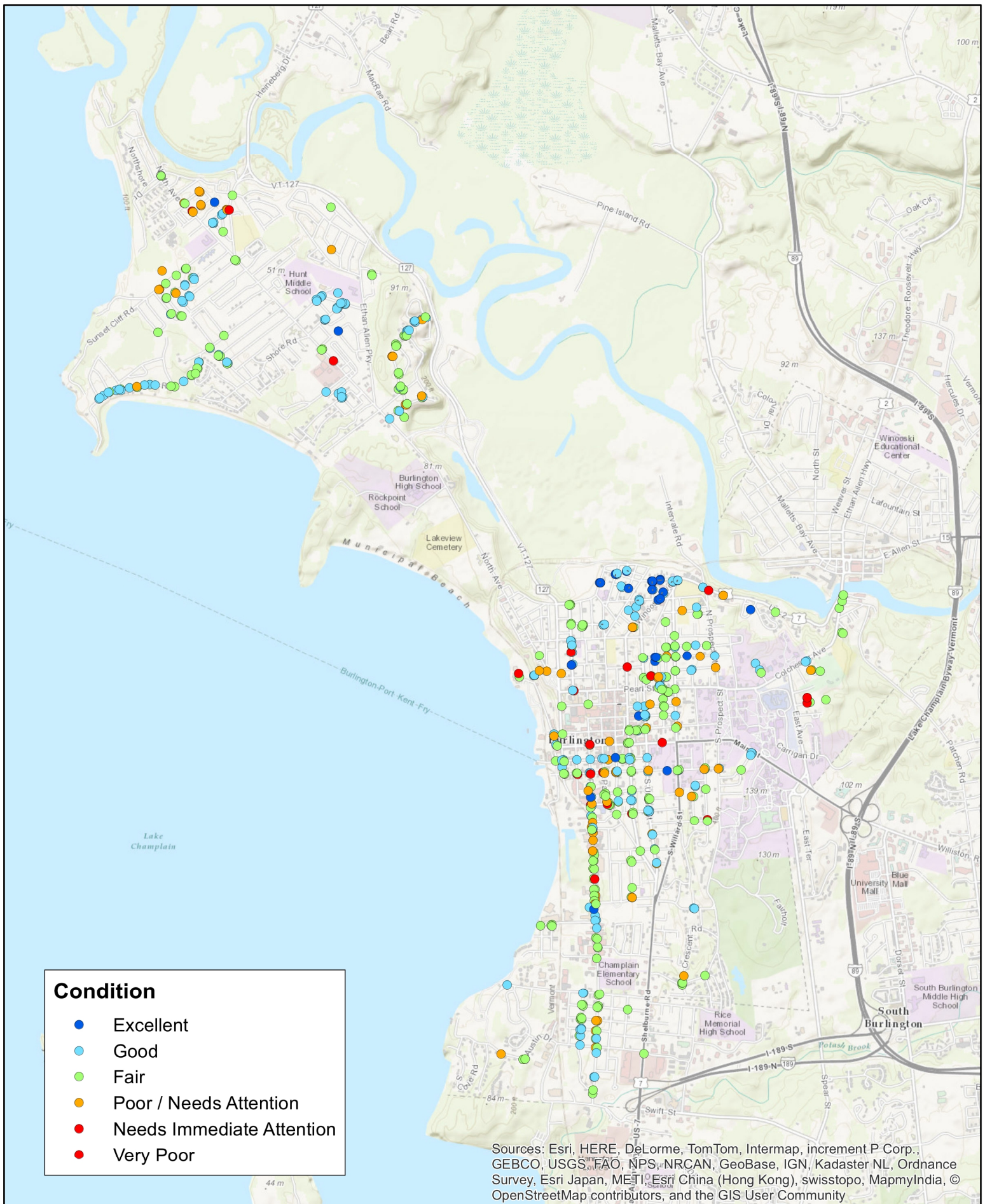
1. **564** Catch Basins inspected
 - a. **511** catch basin cleanings
 - b. **17%** of inspected basins were in very poor/needs immediate attention condition (94)
 - i. **14%** of VP/NIA basins were repaired in the same season
2. **37** recorded structure rebuilds or repairs (includes new structures for CIP and Paving Projects)

Other Structures

1. All **13** Stormwater Infiltration systems cleaned once
 - a. **10** systems were cleaned a second time in the fall
 - b. No apparent clogging of filter fabric in isolation chambers
2. Oakledge Swirl Separator system cleaned

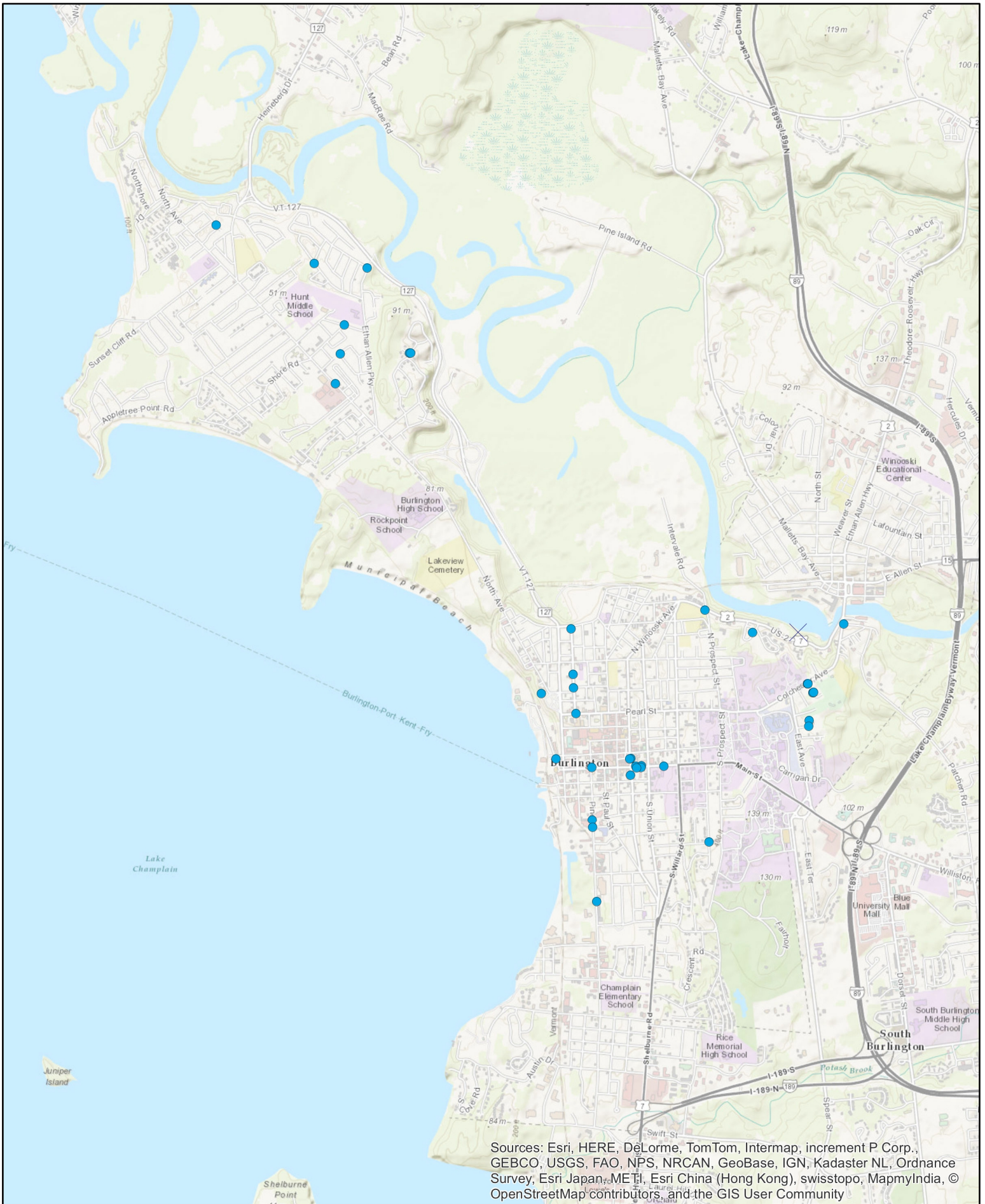
Outfalls

1. **51** Outfalls inspected
 - a. **45%** of outfalls inspected were in poor or very poor condition (23)
-



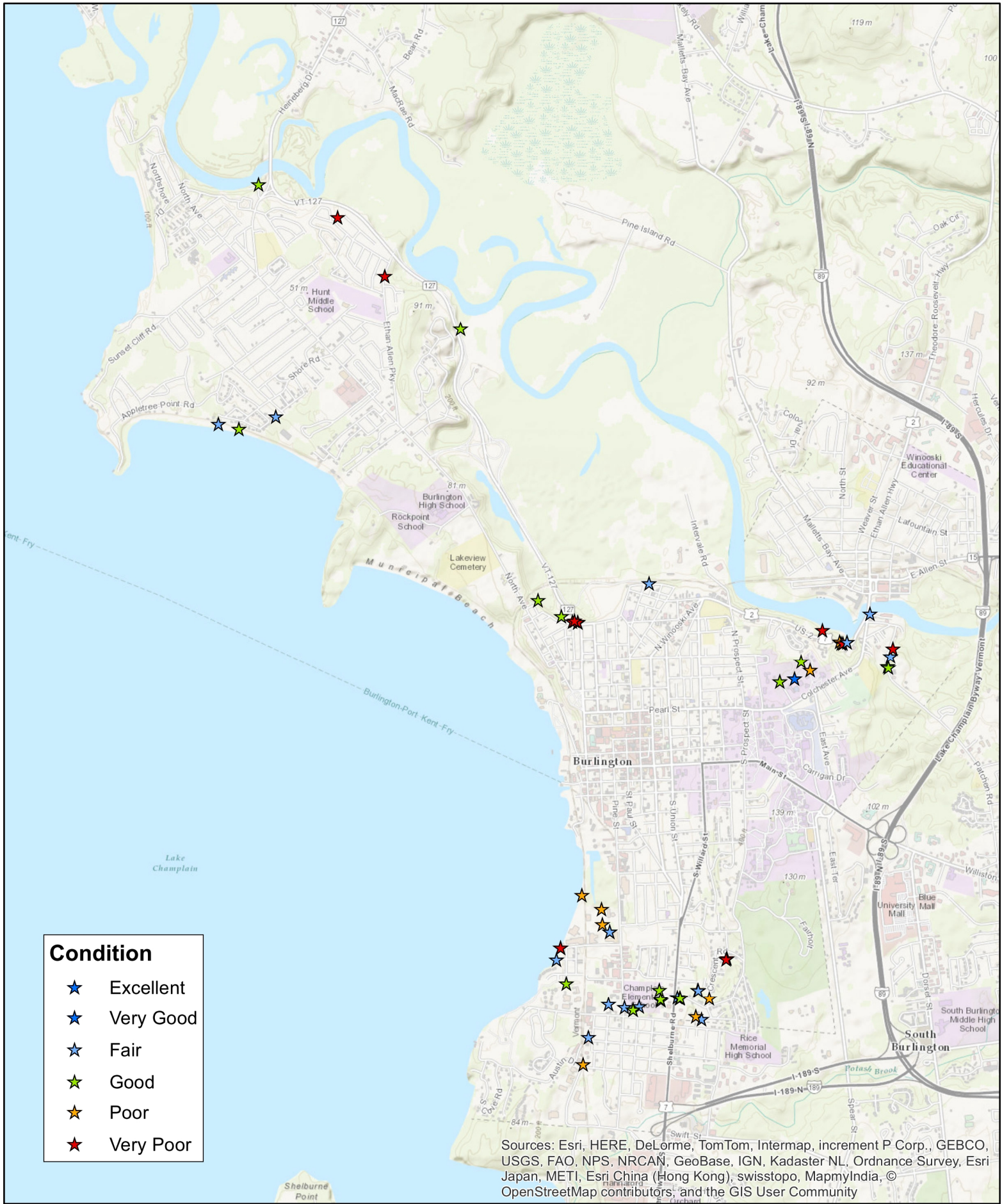
2014 CATCH BASIN INSPECTIONS AND CLEANINGS

1:44,000



2014 CATCH BASIN REBUILD/REPAIRS

1:44,000



2014 OUTFALL INSPECTIONS

1:44,000