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March 30, 2011

Agency of Natural Resources  
DEC – Water Quality Division  
Stormwater Management Section  
103 South Main Street – Bldg. 10 North  
Waterbury, Vermont 05671-0408

Re: 2010 Report of General Activity  
General Permit 3-9014  
NPDES VTR 040000

Dear Stormwater Management:

Please accept this report of permit related activity for calendar year 2010 in compliance with the Village of Essex Junction MS4 Discharge Permit, as continued.

Respectfully submitted,

James L. Jutras  
Water Quality Superintendent

cc: David Crawford, Village Manager

**2010 ANNUAL REPORT  
VILLAGE OF ESSEX JUNCTION  
STORMWATER MANAGEMENT  
PHASE 2 MS 4  
GENERAL PERMIT 3-9014  
NPDES-VTR 040000**

The Village of Essex Junction, VT submitted a Notice of Intent to seek continued coverage under General Permit 3-9014 prior to the expiration of current permit. We remain under permit continuation while the Vermont Agency of Natural Resources processes the revised MS4 permit. As of the submittal date of this report, the permit is still under EPA review. The Village received notification of this permit continuance from the Agency of Natural Resources (ANR). The Village of Essex Junction intends to issue a Notice of Intent to Comply with the permit when it is released.

This report of permitted activity is submitted in accordance with the terms and conditions of the General Permit. Activity discussed is for the period of January 1, 2010 through December 31, 2010. This annual report will address the six permit criteria as presented in the Village of Essex Junction application narrative and compliance schedule (Section 4 of the Application).

- 1) Public education and outreach on stormwater.**
- 2) Public participation/involvement in stormwater management and decision making.**
- 3) Illicit discharge detection and elimination.**
- 4) Control of construction site stormwater runoff.**
- 5) Control of post-construction runoff.**
- 6) Municipal pollution prevention/good housekeeping.**

Over this past year, water quality continues to receive more than its share in emphasis over prior reporting periods. Several activities on a state level led to a new peak of activity. Processes include but are not limited to: Lake Champlain TMDL disapproval, Stormwater Advisory Group report to the Vermont Legislature, release of the DRAFT Phase 2 stormwater permit for public review and comment, Phosphorus related court cases regarding the Montpelier wastewater treatment facility permit, appeals to EPA by environmental groups for removing permitting primacy from the ANR. Though a significant amount of work is ongoing in the water quality arena, citizens and environmental groups are becoming impatient and want further action without recognition of progress made despite firm regulatory ground. There is an information gap in that the cleanup and remediation of decades of pollution will take time. The Village of Essex Junction continues to actively participate in any stormwater collaborative process with state other MS4's and interested parties. The aim is to participate in progress in dialogue wherever the opportunity may present itself.

Participation in the regulatory forum is important. Even more important is the implementation of our community stormwater management plan. Essex Junction continues to employ comprehensive Best Management Practices (BMPs) for stormwater system maintenance. The Village of Essex Junction has traditionally pursued asset management through infrastructure maintenance. Both activities are one in the same with the same end, maintaining infrastructure equates to cleaner water. This long tradition has direct and indirect benefit to the water quality of the state and to the financial longevity of our municipal utilities. Stormwater system maintenance and management continues at a level that typically exceeds the requirements of existing permits and is a sound management practice.

## 2010 COMPLIANCE ACTIVITY

### **4.2.1 Public Education and Outreach**

The Village of Essex Junction is in compliance with this section of the permit by means of active participation in the Chittenden County Regional Stormwater Education Program (RSEP). The Water Quality Superintendent chairs this committee and regularly attends meetings as a voting representative for Essex Junction.

These education and outreach efforts are summarized in the appendix of this report. This year represented a continuation of the final year in a five year permit cycle. This work will continue upon release of the final permit and will be adjusted, if needed, for compliance with the updated permit conditions.

Stormwater information was presented again in the entry foyer at the Village annual meeting. The stormwater display contained information developed through the RSEP programs and included additional information pertinent to the Village community. We also continued the tradition of including stormwater literature and handouts at the information booth located at the Village of Essex Junction annual block party in July. Hand outs included 150 Bags on Board pet waste pick up units as well as hundreds of SmartWaterways bookmarks and magnets. All of these promotional items are continuously available at the Village Offices. In aid to outer MS4's, the Village donated surplus magnets and bookmarks to both VTTrans and to Colchester.

This year also showed re-launch of the Village of Essex Junction stormwater web site. This site had been removed from the Village web site during redevelopment of the base site. The minimum requirements were reinstated in July and additional work is ongoing with a new Village web site to be updated and launched in March 2011.

### **4.2.2 Public Involvement/Participation**

Opportunities are explored to increase opportunities to expand direct public involvement.

Various education and outreach activities occurred throughout the year:

1. Nine wastewater facility tours occurred during the permit year. Most tours focused on water quality and involved local schools. Students involved in the tours ranged from local day care to College level. Most tours included discussion on renewable energy. Where the focus of the energy tours was different, the base overview remained the same: Water Quality with the wastewater process and stormwater management as key pieces to water quality improvements and our place in as communities within a watershed that drains to Lake Champlain.

School tours start with presentation of the RSEP "After the Storm" 5 minute video when not shown in the classroom prior to site visit. Tour discussion includes water pollution control, pet waste control, toxic chemical disposal, fertilizer use, yard waste management and car washing. We continue to teach awareness about the connection between personal practices and personal responsibility when it comes to protecting our regional Water Quality. RSEP bookmarks and magnets are made available to all tour participants or provided to students during any in class presentation.

2. In-class discussions of water quality and stormwater occurred with Laurie Wight at Essex Middle School. The Essex Middle School program involved in-class presentation to multiple classes and a follow up wastewater facility tour. This year we had direct involvement with students in field testing water samples collected in puddles for E. Coli. Though sampling location and protocol were not ideal, the students interest was in an area where we had not visited before. Two samples were tested and found to be 12 colonies per 100 ml and 1986 colonies per 100 ml for the two samples collected by the student. Due to the student sampling the puddles and the possible contamination, these values are reported in the interest of the discussion and not reported as water quality monitoring results. Resources were also provided to other students via email.
3. We continued the developing tradition of an annual presentation to Ellen Eccleston's Ecology class at Essex High School. The presentation includes discussion of the "Five Corners North" stormwater project. This project remains familiar to most students and provides an excellent opportunity to incorporate impervious surface area discussions into the presentation in a forum where the students easily understood the project and the stormwater/water quality impacts. The Essex High School in class program also involved storm drain stenciling on the school grounds.
4. New this year was a site visit and plant tour by Deborah Higgins science classes from Camels Hump Middle School. Tours coupled with her in class preparation were based on renewable energy. Through discussion prior to the tour, the water quality component was expanded on for presentation in sections covered by her later in the school year.
5. The adult summer reading program at Brownell Library was titled 'Water Your Mind'. Various programs included discussions about Lake Champlain, water ecology and gardening. Rain gardens were presented in a group discussion. The library also coordinated a tour of the wastewater facility entitled 'Where does the Poop Go?' This tour included discussion on water quality as well as the subject matter covered by the title.
6. As demonstrated by the various outreach efforts noted above, the village continues to take every opportunity to incorporate water quality into discussions with the public, regardless of the reason for the initial contact or subject matter. By leading the discussion to impacts on water quality and personnel responsibility maintaining the waters of the state, we find that all participants and subject matter are connected by water quality interests.
7. Our water quality efforts continue with the Whitcomb farm in Essex Junction. In past reports, Village staff has committed to communicating more with the Whitcomb's to enhance programs where it make economic and environmental sense. The Village already recycles biosolids (sludge) from our wastewater facility at the Whitcomb farm in Essex Junction and the Farr Farm in Richmond as part of their nutrient management plans. This year the village began discussions with the Whitcomb's for their farm to accept liquid biosolids instead of cake. By facilitating this discussion, equipment purchased by the farm for subsurface injection of liquid biosolids will also be used for injection of animal manures at their Essex Junction and Williston farms. Direct injection of fertilizer instead of surface spreading of manure and biosolids minimizes the potential for runoff. All nutrients are directly incorporated to the zone of plant root uptake and are better maintained in the soil and take up by the crop.

8. Bags On Board pet waste bags were offered free to pet owners securing pet licenses at the Town Clerk's office and at the Village Municipal offices. Approximately 600 + Bags On Board dispensers with 10 bags each were distributed during the 2010 licensing process. We continue to coordinate joint purchase and distribution of these pet waste units with the Town of Essex Public Works. Distribution is through the Essex Town Clerk who provides dog licenses for both communities. Bags on Board are also available at the village office.
9. We continue to maintain the pet waste dispenser system along the Countryside Bike path that connects to the Town of Essex. This installation by the Village provides for pet waste management for this active bike path.
10. There continues to be a trend of observing more citizens are walking their dogs prepared to pick up after their pet, thus eliminating the need to provide a friendly reminder. The awareness continues to demonstrate a marked change from the time prior to our outreach and education efforts throughout the county.
11. Assorted pollution posters were displayed at the Town and Village offices when appropriate and when space is available. Don't P on your lawn brochures are distributed and maintained in public display racks at the Brownell Library and Village offices.
12. The Village uses a post card method of water billing making "Envelope Stuffers" unavailable as an outreach method. With that noted, water bills include pollution prevention references with direction to SmartWaterWays.org.
13. Stormwater pollution prevention notices continue to be printed in the Village of Essex Junction newsletter as space allows. This year contained a ½ page article in the March newsletter mailed to all homes and posted on the Village web site.
14. Regular postings occur on neighborhood pages of Front Porch Forum. These regular postings are often forwarded for posting from the CCRPC who acts as the central distribution for information for the MS4 communities.
15. Inventory of storm drain "Do Not Dump" markers was not taken in 2010. Comprehensive system inspection was substantially by Town of Essex interns in a cooperative review sponsored by the Town. The entire Essex and Essex Junction communities were inspected by the same individuals. Findings of the Town inspectors were verified by the Water Quality Superintendent and seasonal staff. With the community wide inspection, emphasis was on system integrity, identification of map conflicts, calibration of maps and subsequent finish work on cleaning all catch basins.
16. The demonstration Rain Garden at the Brownell Library was maintained at the post construction level from the prior year. No additional planting were installed this year.
17. The Village cosponsored "Redesigning Your Driveway to Improve Stormwater Management" on October 20. Approximately 20 people from around Chittenden County attended and learned how to improve drainage while minimizing erosion.
18. The Village of Essex Junction newsletters continue to provide a forum to present articles on stormwater management and its importance to the community. Water quality and stormwater management is also noted in the Wastewater Treatment Plant and Water Quality Reports printed annually as part of the Village annual report provided to citizens for the Annual Village Meeting.
19. The annual Village Block Party continued to provide pet waste disposal information as well as stormwater information as part of the information booth operation. 170 Bags on Board Units as well as hundreds of bookmarks and magnets were provided to residents by Village Trustees who attended the booth.

20. The Village Water Quality Superintendent actively participated in the Minimum Measure 2 pilot regional public involvement and participation program as part of the steering committee. A summary report of the pilot project and measurable items is provided in the appendix of this report.
21. Village and Town jointly participated in a build a rain barrel workshop held at the Maple Street Park.
22. The Village utilized municipal access and resources to better inform neighborhoods of stormwater related activity by means of Front Porch Forum. Multiple postings were made based on information forwarded by CCRPC that were of general interest. Such postings included scout rain barrel sales, Minimum Measure 2 pilot outreach programs and similar information of general interest to the community.
23. Staff noted policing of their neighbors when they noted littering or other behavior that is detrimental to the environment. Staff are active walkers and members of the community. Any direct citizen contact is normally reported to the WQ Superintendent.
24. We continue active discussion with Champlain Water District on watershed relevant items. The CWD general manager is a Village resident and we have several times per year where we discuss watershed related items. This year's topic was often related to the Minimum Measure 2 pilot program. SmartWaterways was again used in the Annual CWD water quality report as part of their watershed source protection activity. They also continue with their Municipal Utility Watch Program which can be useful in both water source protection and water quality violation reporting in the region.
25. We had several discussions with IBM representatives regarding pending stormwater rules, the various appeals and general impact of this activity on operations.
26. There was an unusual amount of activity noted in the section of Indian Brook between the Essex Police Department and Essex Rescue. On several occasions, we received reports of people in the stream performing monitoring. Upon investigation, we find that the easy access and nearby parking is desirable for high schools and various other programs to access Indian brook for water quality monitoring and demonstrations. Included this year was a summer program by Fisheries where macro-invertebrates were examined as well as the existing fishery conditions. With an estimate 6 – 12 groups accessing the stream per year, we are fortunate that the easy access is upstream of the states sampling point. One can't help but wonder if all of this favorable public participation may have a detrimental effect on monitoring at the states sampling location. We will continue to monitor this situation and respond to any reports of activity in any stream within the community.

General compliance detail for public involvement is available from the Village of Essex Junction Water Quality Superintendent upon request.

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

Illicit Discharge Detection and Elimination (IDDE) was submitted to the ANR in compliance with permit conditions in prior years. In 2010, complaints or discoveries are as noted below:

- Five reports or discoveries of suspected or potential IDDE:
  - Paint was noted as visible on one basin cover. Investigation found it to be tile or grout material. The homeowner was immediately contacted by the Water Quality superintendent and the homeowner denied any improper action. The area was monitored while home improvement projects appeared to continue.
  - One report of oil in stormwater. It was a false alarm and the sheen was as a result of bacterial action.
  - A Transformer explosion resulted in mineral oil leakage. This oil was contained by the fire department and cleaned up by an environmental contractor.
  - Waste oily material was discovered by Public Works staff on Railroad Street. A newly developed IDDE door hanger was distributed to the immediate area as there were no responses to knocks on the door.
  - Fire Department responded to leaking hydraulic fluid from a CCTA bus.
- Expanded IDDE work throughout the community with Optical Brightener testing. The Joint Town/Village effort resulted in a community wide testing with only one area indicating the need for follow-up. This is the section of lower Maple Street near Tiffany Lane basins 593 and downstream 594. This has been reported in past years but without indication of the direct cause.
- The Village 'Sewer Charge Exempt' list was carefully reviewed and updated. This list identifies all homes in the Village, known to have on-site septic disposal systems and are not connected to the community sewer. The list was reviewed as two homes with septic systems were connected to the sewer (or will be) as part of the planned residential development known as Village Haven. In all, six homes were identified as being connected to the sewer. Six additional homes were identified with septic systems and added to the list.
- Staff met with maintenance staff of the Essex Park prior to winterization of the Maple Street Pool. Staff was very cooperative with the Village in discussing procedures and methods to eliminate disposal of pool water that could be toxic to the stream environment. Several calls were received from homeowners at the Village office about pool water disposal. This appears to be a growing topic generated out of increased awareness of the affects of stormwater education efforts.
- The Village wastewater facility assisted the Town of Williston with IDDE testing of multiple samples. Please reference the Williston annual report for any reported tests.
- This year brought a new IDDE category: Pre IDDE. A call was received from a state staff member who noted a carwash planned in our community. Charity car washes are not regulated but the Water Quality Superintendent contacted the group sponsoring the car wash. We discussed water minimization, environmentally friendly soap options and disposal of buckets of soapy water down a sink rather than storm drains. This same concern was relayed to the fire department coordinators for the carwashes held at the Essex Junction Fire Department. All have indicated that they will make effort to minimize the impact of these charity events on the environment.

As noted earlier, the Village has developed an IDDE door hanger for use in situations where a specific home cannot be identified for a reported illicit discharge. This door hanger is available for review upon request.

#### **4.2.4 Construction Site Stormwater Runoff Control**

During the permit reporting period, the Land Development Code was revised for pre construction and post construction stormwater control and adopted by the Village Trustees. The revised Land Development Code contains provisions to address many items identified as required in the DRAFT MS4 permit which is still pending as of the time of this report.

All applications received by the planning department continue to be reviewed for potential impacts of site runoff on the environment. We continue to have good success with homeowner cooperation in maintaining the site to prevent stormwater pollution. The code revisions simply consolidate many existing rules and development criteria under a separate section for stormwater management.

In 2010, 158 permits were issued by the planning and zoning department. Of those issued, 37 involved physical construction that would involve excavation and/or additional site work for the construction of homes or additions. This year, six project permits were issued for reduction of site impervious area by means of demolition of existing outbuildings or reduction of paved surface on the property.

Regardless of the project size, the Village continues to include the RSEP Fact sheets for home construction and painting with every permit issued in the community. Also included in the hand out material is information from the Chittenden Solid Waste District (CSWD) related to proper disposal of waste construction materials. Staff review of submitted plans includes a detailed review to insure that stormwater management is incorporated into any project that is approved in the Village. When development includes common area for multiple owners, we insure that there is a mechanism to allow for maintenance of all stormwater related infrastructure. With the recent release of the states small construction site management handbook, staff is considering a shortened version with applicable excerpts that would lend itself well to the typical home improvement project and the Do It Yourself homeowner.

Every site is visited by planning staff as part of the construction permit and certificate of occupancy processes. Planning staff continue to be the front line inspection for site specific inspection related to erosion control. Public Works is also a primary source of inspection of the entire village as they are on the road and in all of the neighborhoods on a regular basis as part of their ongoing maintenance operations.

The Village had one application this year that required review for criteria of sites exceeding 1 Ac disturbed, 1 Ac Impervious for a proposed project on upper Lincoln Street. The project owner secured the services of a stormwater engineer for innovative design of the site to allow for maximum infiltration of stormwater from the developed project. The site went through several reviews by staff and the Village Engineer prior to approval. Construction is still pending.

The existing Whitcomb 2 and 3 developments still have ongoing construction that Village staff continues to monitor as part of this minimum measure and minimum measure 5. The Village has accepted this infrastructure as municipal understanding that there will be incremental site development in accord with the original permit. Periodic site inspections are performed to insure that good erosion control measures continue to be used to prevent soil tracking and soil erosion from impacting the stormwater infrastructure or the nearby streams.

Village Haven is a state permitted site that has had ongoing construction throughout the summer. There were periodic inspections by staff, the Village Engineer and by various planning department staff as part of normal operations. With a flat site and highly permeable soils, no significant problems were anticipated nor were any found.

As part of other site and field visitation, one significant erosion problem was found on Sunderland Brook in the vicinity of Susie Wilson Road. The site involved is located in the Town of Essex. Contact was made with the Public Works department. They were aware of the erosion problem and the developer had already been reported to the state.

#### **4.2.5 Post Construction Stormwater Management**

Post construction engineer's inspection and as-built verification are existing procedures regardless of whether infrastructure is private or accepted by the municipality. Staff movement throughout the community provides for monitoring and reporting of problem areas. Required reporting or follow-up investigations are pursued as needed. Staff is tracking any such follow up action under the illicit discharge monitoring forms developed by the Village of Essex Junction last year.

Stormwater management files have been established for all permitted sites that we are aware of in the Village. Post construction stormwater management is inherent in the design review provided by the Village and the Village Engineer. This year, we had several permits within the municipal jurisdiction that were up for renewal: Woods End 3268-9010 as well as the Whitcomb 1,2 and 3 projects, 3866-9010, 3072-9015 and 3547-9010. With state prompting, the Village agreed to consolidate all three of the Whitcomb phases into one permit now numbered 3547-9010R. Additionally, it was found by the State that renewal of the Park Street outfall permit # 3270-9010 was not required as it should not have been permitted originally. Regardless of permit status, all stormwater infrastructure in the Village is inspected annually. Maintenance and repairs are scheduled along with work required in permit areas. As an MS4, this is the most efficient way to manage the infrastructure and it provides for consistency regardless of permit requirements.

As noted in the prior section for minimum measure 4, we received application for pavement reduction of 400 square feet on a parcel immediately adjacent to Sunderland Brook. Site restoration will enhance site infiltration.

This past year we also received complaint of standing water in sections of drainage outside of Village control. The concern cited by abutting homeowners was mosquito control. Where the Village has no access or easement, this remains a civil matter. We have pursued area within the Village right of way to see if there are ways to improve our drainage and to alleviate some of the concern.

As part of the joint Village Town project sponsored by the Town of Essex, the Village actively reviewed sites for opportunities to improve existing infrastructure. An active file is being kept with locations where municipal land exists 'off stream' with culverts, etc that may allow for retrofit to hold water and allow infiltration and/or controlled release.

Fairview Farms stormwater detention pond improvement are funded as part of a SAFETEA grant. This past year, the project was modified from a dry pond to wet pond configuration. Final design and VTrans approval has been received and the improvements will proceed in the 2011 construction season.

Rain garden books were purchased as noted in the prior sections of this report. These will be made available where opportunities exist so that homeowners have the resources they need to proceed with these stormwater enhancement opportunities in developed areas.

The Village continues to review any and all applications for both construction and post construction stormwater management. We work to insure that BMP's are used wherever practical, regardless of the size or nature of construction.

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

Many of the operations noted within Table 1, Phase II Compliance Program, were programs existing within the community prior to implementation of regulations. Additional compliance, beyond what is stated, includes:

- 1) Pollution prevention – In prior years, we have noted that the Village of Essex Junction completed work on a comprehensive sanitary sewer collection system closed circuit TV and pipeline assessment project.

Pipeline flushing and TV inspection continue as part of a five year maintenance cycle. This background information provided full compliance with VT Act 43 sewage spill prevention emergency response planning requirements due April 1, 2009. The Village submittal complied with the 2010 reporting requirements as well. At this time, we believe that the Village of Essex Junction is the only community to have carried these monitoring and reporting requirements this far.

- 2) No root control was performed on sewage infrastructure during 2010 due to the implementation of the capital plan as noted in 1 above. Now that the system is completely evaluated and up to the best normal operating standards, root control needs will be minimal. Village staff will reassess sewer root control needs as part of the normal pipeline cleaning and maintenance routine.
- 3) Sewer flushing and other infrastructure management maps were updated and simplified as part of the comprehensive sewer system work. Digitized maps are available on paper and on computer for ready use in the field. This data work continues within the public work department based on staff availability. To aid in this work, the Village utilized available surplus STAG Funds from our Five Corners North project to secure pipeline assessment equipment. A digital pole mounted camera, a digital push camera and a hand held GIS field unit were purchased. The GIS unit is the same model purchased by the Town of Essex. By having the same type of equipment, future cooperative efforts will be supported in effort and in format.

- 4) Comprehensive system inspection was substantially by Town of Essex interns in a cooperative review sponsored by the Town. The entire Essex and Essex Junction communities were inspected by the same individuals. Findings of the Town inspectors were verified by the Water Quality Superintendent and seasonal staff. With the community wide inspection, emphasis was on system integrity, identification of map conflicts, calibration of maps and subsequent finish work on cleaning all catch basins.
- 5) "Scoop the Poop" – a community education program regarding dog waste was continued. Some pertinent information about related activity is provided earlier in this annual report.
- 6) Village staff coordinated a joint purchase of "Bags on Board" pet waste disposal systems on behalf of the Village and Town of Essex.
- 7) Limited staff training through the MS4 program was taken advantage of this year due to conflict in schedule. The Village Water Quality Superintendent was able to attend and transfer necessary information to the Public Works Superintendent.
- 8) Long term catch basin repairs continue by using concrete rather than bricks and mortar. This effective construction method generates longer lasting repairs and eliminates grade riling maintenance work resulting from bricks and mortar in the frost zone of the roadway. The number of repairs needed was down again this year to only a few. This method of construction continues to be a valuable tool in our asset management tool kit.
- 9) As reported in past annual reports, staff worked with Town of Essex Public Works staff to enhance infrastructure maps. Staff continues to identify and correct discrepancies found. This work will continue over many years as ongoing quality control.
- 10) All Public Roads in the Village of Essex Junction were swept with our recuperative street sweeper. Many of the community roads were swept more than once and some were covered up to three times. A tally of cubic yards of dirt and organic matter removed from the roadways and catch basins is presented in tabular form at the end of this report.
- 11) The Wastewater facility maintains a Sewage Spill Prevention Plan (SSPP) for the community in compliance with state regulation. This plan is subject to periodic review as required by permit.
- 12) Public Works maintained Exempt Small Quantity Generator Status for hazardous materials. This work continues through good management waste minimization practices.
- 13) The Wastewater facility maintains Exempt Small Quantity Generator Status for hazardous materials handling and disposal.
- 14) Catch basin cleaning tailings were stockpiled. The material was properly managed during the summer of 2010 at a state approved waste management area.
- 15) Street sweepings were not tested this year due to a prior regulatory determination. Regardless, material was disposed of in compliance with operating permits at the Ted Beaudoin site on 262 Middle Road, Milton. Solid waste ID CH990.

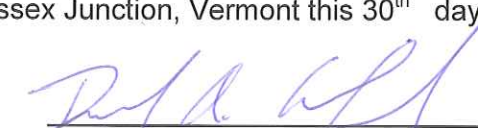
- 16) The Vortech swirl separator unit installation at Five Corners North was included in a periodic inspection routine by the Village Public Works Department. Over 39 periodic inspections were performed as well as regular preventative maintenance of the system during 2010.
- 17) Fairview Farms Stormwater pond improvements are approved for construction in 2011. The bid was recently advertised. Stormwater detention pond improvements are funded as part of a SAFETEA grant. This past year, the project was modified from a dry pond to wet pond configuration. The improvements will proceed in the 2011 construction season.
- 18) The Village is evaluating discussion related to creation of a dog park. This park request was prompted by residents. There has been no formal action to date but if the park request is acted on, it will allow for more focused opportunity for public outreach and education related to proper disposal of pet waste.
- 19) This past year the Village Wastewater facility received the EPA Operations and Maintenance Excellence Award for Vermont.
- 20) In a collaborative effort with the Whitcomb Farm, the village began negotiations to have the farm manage liquid biosolids from the wastewater facility instead of dewatered cake. The Whitcomb's are currently accepting solids from the wastewater plant under agreement with the Chittenden Solid Waste District and their contractor, New England Organics. By working directly with the Whitcombs for liquid management in lieu of dewatered cake, the farm will be required to purchase equipment for subsurface injection of the biosolids. With subsurface injection equipment, the farm will be able to manage manure with the same equipment. This will inject fertilizer to the root zone for stable fertilizer application and minimization of runoff. With the farms nutrient management plan, this enhancement will lead to more efficient operations and reduced nutrient runoff potential for the benefit of the Whitcomb farm and Lake Champlain.

### CERTIFICATION

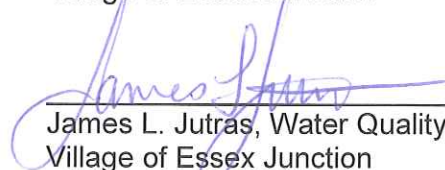
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information submitted 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.

Dated at Essex Junction, Vermont this 30<sup>th</sup> day of March, 2010.

Signature:

  
\_\_\_\_\_  
David Crawford, Village Manager  
Village of Essex Junction

Signature:

  
\_\_\_\_\_  
James L. Jutras, Water Quality Superintendent  
Village of Essex Junction

## **Chittenden County Regional Stormwater Educational Program Annual Review: 2010- 2011 Program Year Summary**

During the 2010-2011 program year (March 1, 2010 through February 28, 2011) of the Regional Stormwater Educational Program (RSEP) included some new elements while maintaining a consistent stream of public education and outreach. The program included paid media and website redesign to educate the public about the effects of stormwater runoff on water bodies and the simple steps that the public can take to reduce these effects.

As in previous years, key messages of the campaign have remained the same, and include stormwater runoff and stormwater systems education, tips on prevention methods related to pet waste, car washing, fertilizer/chemicals, and home construction erosion or debris. Within the stormwater runoff and stormwater system messaging, there has been an increasing emphasis on water volume. Marketing Partners, Inc. continues to work on a contract basis with RSEP to implement the public outreach campaign.

RSEP Communications Plan goals achieved in 2010-2011 have included:

- Complete website re-design and rebuild, including installation of Content Management System (CMS) software; new design/layout development; transfer of existing website content to the new CMS site; launch and troubleshooting of the newly designed site; and training of the selected CCRPC representative to make website content updates.
- New print creative was developed to reflect the look and feel of the new website.
- Extension of the “Soil Test” campaign in partnership with the University of Vermont (UVM) Agricultural Testing Lab to provide residents within the MS4 a free soil test. The ad campaigns drove people to the RSEP website where 261 eligible residents downloaded a printable coupon during this program year. UVM continues to track the number of coupons redeemed during paid media campaigns running in the spring and fall. Twenty-eight tests were submitted.
- The 2010 spring media campaign included a low-frequency schedule of four weeks of radio spots on VPR and WCPV; four weeks of cable TV spots; print ads in Seven Days; and four weeks of advertising on Front Porch Forum (an opt-in community e-newsletter). The spring 2010 media budget totaled \$4,988.60, a significant reduction as compared to the 2009 spring media budget.
- Another small paid media campaign was completed throughout Chittenden County in fall of 2010 that consisted of two weeks of print ads in core community papers, radio spots airing for four weeks on VPR, and four weeks of placement on Front Porch Forum. The fall 2010 ad campaign budget totaled \$7,500. This also represents a significant reduction in media budget as compared to the 2009 fall media budget.
- Compiled website and other media visibility tracking data in order to monitor outreach effectiveness.
- Continued to collaborate with partners in furthering stormwater education outreach.

**Gross Impressions/Audience Reach  
Chittenden County Regional Stormwater Educational Program  
Annual Review: 2010-2011 Program Year Summary**

**1. Unpaid Media (Public Relations)**

In program year 2010-2011, there was no public relations effort. There were no impressions measured.

**2. Total Paid Media Impressions, 2010-2011 (Spring and Fall campaigns)**

The 2010-2011 paid media budget was less than half of the previous program year. The number of media spots, time period that paid media appeared, and the number of media outlets were reduced.

Print: 509,569\*

Cable TV: 15,444 (Nielsen program ratings)

Radio: 130,172 (based on Arbitron ratings of adult listeners age 25-54, M-F 6a – midnight)

Online: 67,800 (based on circulation reported by media outlet)

Total impressions: 722,985

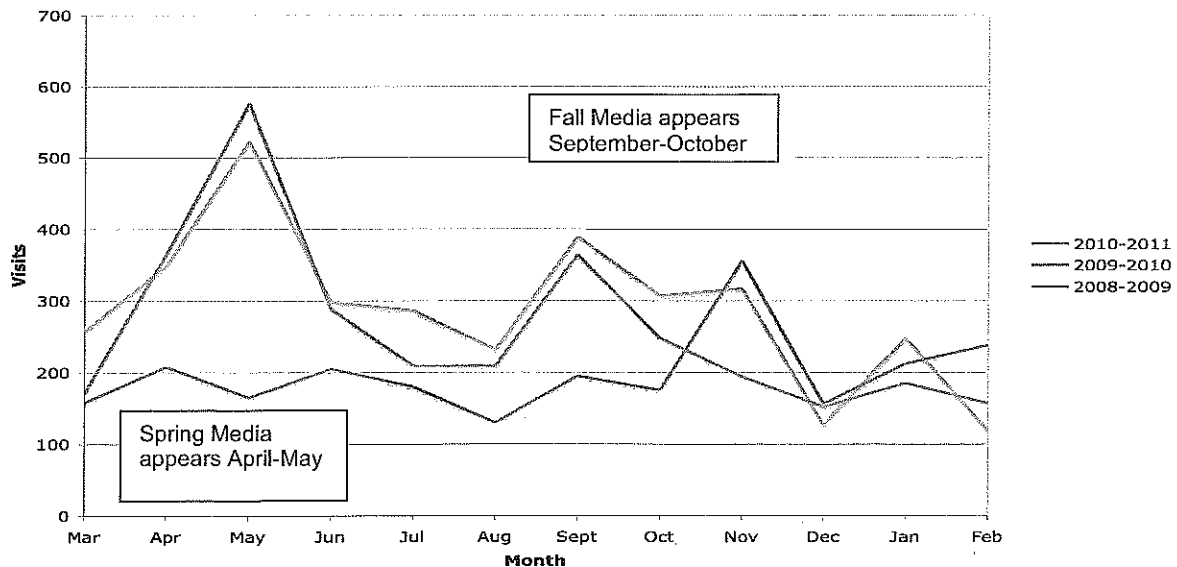
*\*Impressions are based on circulation as reported by outlet and an average readership of 2.34 per issue for community newspapers.*

**3. Website**

Below is the website visitor information for 2010, as compared to the two most recent preceding years. Website traffic increases are marked in conjunction with paid media campaigns.

**Smartwaterways.org Website Visits**

**3-Year Comparison**



*NOTE: This chart includes data Google Analytics for reporting. In program years 2004-5 to 2007-8, Urchin website pageviews were reported. As noted previously, Google Analytics provides a more accurate picture of actual website traffic, hence the switch in 2008.*

## Memo:

To: Jim Jutras, WWTF/PW Director  
From: Terry Hass, Assistant Zoning Administrator  
Date: February 9, 2011  
Re: Stormwater Runoff as of December 2010

### CONSTRUCTION SITE STORMWATER RUNOFF AS OF DECEMBER 2010

<u>Project Name</u>	<u>Address</u>	<u>Lot Size</u>	<u>Lot Coverage</u>
Rivers Edge	65 Cascade Street	31.74 Acres	2.53 Acres
Whitcomb Heights II	Cushing, Dunbar and Lavoie Drive	99.59 Acres	8.84 Acres
Village Haven	Roscoe Court	4.91 Acres	1.96 Acres
JIDDU-SITTU Complex (portion of property in Town of Essex)	235-241 Pearl Street	6.80 Acres	1.17 Acres
Riverside in the Village	Franklin Street Fuller Place	27.87 Acres	*8.37 Acres

As of December 31, 2010 the Village of Essex Junction issued Certificates of Occupancy for 69 units of Apartments and 60 units of Condominiums

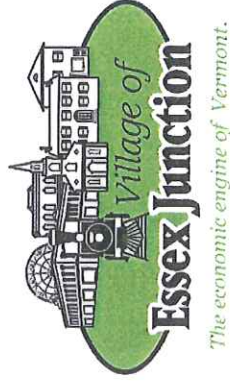
\*Under construction, the following is a list of buildings permitted:

Bldg. #3 Apartments**	10 Franklin Street	6 units	C/O issued 05/28/02
Bldg. #6 Apartments**	12 Franklin Street	6 units	C/O issued 12/19/02
Bldg. #7 Apartments**	10 Fuller Place	6 units	C/O issued 08/29/02
Bldg. #8 Apartments**	8 Fuller Place	6 units	C/O issued 08/29/02
Bldg. #9 Condominiums	14 Franklin Street	6 units	
Bldg. #10 Apartments**	6 Fuller Place	3 units	C/O issued 10/19/06
Bldg. #11 Apartments**	2 Fuller Place	6 units	C/O issued 09/07/05
Bldg. #12 Apartments**	4 Fuller Place	6 units	C/O issued 09/11/07
Bldg. #14 Apartments**	5 Fuller Place	6 units	C/O issued 08/27/09
Bldg. #15 Apartments**	9 Fuller Place	24 units	C/O issued 10/07/09
Bldg. #19 Condominiums	21 Franklin Street	6 units	C/O issued 04/09/09
Bldg. #20 Condominiums	23 Franklin Street	6 units	C/O issued 04/09/09
Bldg. #21 Condominiums	25 Franklin Street	6 units	C/O issued 12/03/08
Bldg. #22 Condominiums	27 Franklin Street	6 units	C/O issued 12/03/08
Bldg. #23 Condominiums	29 Franklin Street	6 units	C/O issued 12/03/08
Bldg. #24 Condominiums	31 Franklin Street	6 units	C/O issued 07/23/08
Bldg. #25 Condominiums	33 Franklin Street	6 units	C/O issued 07/23/08
Bldg. #26 Condominiums	35 Franklin Street	6 units	C/O issued 07/23/08

<u>Project Name</u>	<u>Address</u>	<u>Lot Size</u>	<u>Lot Coverage</u>
Bldg. #27 Condominiums	37 Franklin Street	6 units	C/O issued 07/23/08
Bldg. #28 Condominiums	39 Franklin Street	6 units	C/O issued 07/23/08
Parking Garage (Not to be built)			

\*\*Student Housing buildings were converted to apartments

Village of Essex Junction  
 2010 Quantity Summary  
 MS4 2009 reporting year



<u>Catch Basin Cleanings</u>	
# cleaned	110
Cubic Yards Collected	12
Tons Collected	
<u>Street Sweepings</u>	
Road Miles	115
Cubic Yards Collected	88
<u>Fall Leaf Clean up</u>	
Cubic Yards Collected	51
<u>Green UP Day</u>	
Tons Disposed	2
<u>Sewer Line Flushing</u>	
lineal Feet of sewer main flushed	31100
<u>Hazardous Waste</u>	
Tons Disposed	
<u>Outfalls Surveyed/inspected</u>	all
<u>Catch Basin Inspections</u>	All 1700
<u>Storm Drains Marked (new)</u>	6
<u>Illicit Discharges Detected</u>	5
<u>Illicit Discharges Eliminated</u>	0
<u>Construction Site Erosion Inspections</u>	
<u>Site Plan Review for stormwater Management</u>	6
<u>\$\$ Spent on Stormwater Program</u>	
<u>Municipal Employee Training Workshop attendees</u>	1
<u>Pet Waste Bags Distributed</u>	
# Containers	750
# bags	7500
<u>Channel Protection Vol Created (Acre.Ft)</u>	500 +/-

Note:  
 some values presented are estimate based on  
 field records maintained at Public Works





**Table 1: Village of Essex Junction  
Phase II Compliance Program**

Permit Years 2008 through 2012

Status	Implementation																					
	Spring 08	Summer 08	Fall 08	Winter 08/09	Spring 09	Summer 09	Fall 09	Winter 09/10	Spring 10	Summer 10	Fall 10	Winter 10/11	Spring 11	Summer 11	Fall 11	Winter 11/12	Spring 12	Summer 12	Fall 12	Winter 12/13		
Complete		X							X						X							
Complete																						
As required													X									
As determined		X	X							X				X								
Make Detailed Record of Corrective Actions Taken																						
Existing																						
Existing program to be utilized with public ed. Opportunities by the Village																						
		X																				
	X	X																				
	X	X																				
	X	X																				

**4.2.3 Illicit Discharge Detection and Elimination**

a. A storm water sewer map, showing the location of all outfalls, waters of the state receiving discharges from those outfalls

Annual update of map

b. A plan to detect and address non-storm water discharges, including illegal dumping

1. Illicit discharge ordinance
2. Optical brightener testing all outfalls
3. Follow up OB testing
  - i. Pursue positives through dye tracing, pipeline TV or other appropriate means
  - ii. Remove/Correct the sources of pollution
  - iii. Document actions as taken
  - iiii. Outfall monitoring/photo record update (once per permit cycle, then as needed)

4. Reporting mechanism for citizen complaint of illicit discharge detection (including phone number and on-line submittal)

5. Maintain listing of septic systems within community businesses, and the general public about the hazards associated with illegal discharges and improper disposal of waste

e. Address significant pollutant contributions from non-storm water discharges

1. Lawn fertilizing
2. Residential car washing
3. Dog waste
4. Pool drainage

**Table 1: Village of Essex Junction  
Phase II Compliance Program**

Permit Years 2008 through 2012

Status	Implementation																				
	Spring 08	Summer 08	Fall 08	Winter 08/09	Spring 09	Summer 09	Fall 09	Winter 09/10	Spring 10	Summer 10	Fall 10	Winter 10/11	Spring 11	Summer 11	Fall 11	Winter 11/12	Spring 12	Summer 12	Fall 12	Winter 12/13	
Land Development Code is updated as needed/as required																					
Existing via Development Review																					
Existing via Development Review																					
Maintain Existing Complaint recording mechanisms																					
Maintain Existing Site Inspection and Monitoring Checks With Staff and Village Engineer																					
Ongoing	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Ongoing Develop process, monitor	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

**4.2.4 Construction Site Storm Water Runoff Control**

1. Ordinance to require erosion and sediment controls, controls for other wastes, and sanctions to ensure compliance
2. Procedures for site plan review that consider potential water quality impacts
3. Procedures for site inspection and enforcement of control measures
4. Procedures for receipt and consideration of information submitted by the public (develop complaint form; online submittal and/or phone number to call)
- b. Erosion control requirements under Act 250 and VT ANR (state enforced) and local land development code
5. Track record and report project applications reviewed under local ordinance
6. Track record and report project applications reviewed under State Permit Processes.
7. Track and report field inspections related to stormwater management



**Table 1: Village of Essex Junction  
Phase II Compliance Program**

Permit Years 2008 through 2012

Status	Implementation																				
	Spring 08	Summer 08	Fall 08	Winter 08/09	Spring 09	Summer 09	Fall 09	Winter 09/10	Spring 10	Summer 10	Fall 10	Winter 10/11	Spring 11	Summer 11	Fall 11	Winter 11/12	Spring 12	Summer 12	Fall 12	Winter 12/13	
See BMP's	X	X	X					X	X	X		X	X	X		X	X				X
Existing																					
Existing																					
Existing																					
Existing indoor maintenance area																					
New Storage Facility Constructed Summer 2007																					
Sand Piles Eliminated, stored inside of Salt storage shed bay.																					
Sand Minimized and stored inside of Salt storage shed bay.																					
Existing - 2 Locations minimum with more available as needed at CVE, Hiawatha School, others																					
Develop																					
Existing Project Review Process, Municipal projects are governed under the LDC.																					
To Be Redone once (minimum) During Permit Cycle.																					
As Required Based on Inspection findings																					
Installation completed																					
Existing	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Developed																					
As Required																					
Yes	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Yes	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Existing																					
Existing																					
Existing																					
current practice for the Village is not to use herbicides, pesticides or fertilizer.																					
existing as needed: Exempt Small Quantity Generator with the Chittenden Solid Waste District																					
Existing within Planning Department																					
Existing	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

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

- Maintenance activities, schedules, and long-term inspection procedures for structural and non-structural storm water controls to reduce pollutant discharge from separate storm sewers
- Controls for reducing or eliminating discharge of pollutants from municipal areas
  - Sweep streets, roads, and highways
  - Sweep municipal parking lots
  - Sweep and maintain maintenance and storage yards
  - Fleet or maintenance shops with outdoor storage areas
  - Covered salt storage
  - Temp sand storage
  - Permanent Covered sand storage
  - Snow disposal areas without direct runoff
- Procedures for properly disposing of waste removed from the separate storm sewers and areas listed as municipal responsibility
- Ensure that new projects assess water quality
- EPA / VTANR voluntary inspection of facilities (Municipal Compliance Assistance Program)
- Follow up VTANR MCAP evaluation
- Grease/oil separator at garages
- Maintenance of oil/water separator
- Develop written winter operations policy for snow removal
- Update winter operations plan
- Maintain spill prevention program and spill control kits in Public Works Vehicles.
- Village involvement in Green Up Day
- Catch Basin inspection
- Maintain and clean catch basins based on spring inspection
- Employee training for reducing storm water pollution
- Employee training on good erosion control practices
- By current practice, the Village does not use fertilizer or chemicals for vegetation.
- Municipal waste oil recycling at wastewater and Public Works
- Develop permit files for projects in the Village
- Maintain permit files for stormwater projects in the Village