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March 31, 2010

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

Re: 2009 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 2009 in compliance with the Village of Essex Junction MS4 Discharge Permit.

Respectfully submitted,

James L. Jutras
Water Quality Superintendent

cc: David Crawford, Village Manager

**2009 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 are presently running 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 out in draft form for public review and comment. The Village received notification of this permit coverage from the Agency of Natural Resources (ANR). Issuance of the final permit remains pending. The Village of Essex Junction fully intends to participate actively in the public comment process and to issue an Notice of Intent to Comply with the updated permit.

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, 2009 through December 31, 2009. 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 has received 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 revision, 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, several appeals to EPA by environmental groups with a basis of 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. There is an information gap in that the cleanup and remediation of decades of pollution will take time.

The culmination of the 2008 efforts related to the SWAG process was the ANR release of a revised report to the Vermont Legislature. The final report was sent in to the Legislature after several revisions and without any additional input on final revisions from the SWAG. The report summarized stormwater activity to date as well as to recommended regulatory and funding mechanisms needed to proceed with the implementation. The Village of Essex Junction continues to actively participate in this collaborative process with state other MS4's and interested parties on any and all water quality related topics.

As important as participation in the regulatory forum is implementation of the 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. We continue this

long tradition as it has direct and indirect benefit to the water quality of the state and to the financial longevity of our municipal utilities. We have employed BMP's long before Phase 2 stormwater permitting requirements. Stormwater system maintenance and management continues at a level that typically exceeds the requirements of existing permits. We continue to maintain all remaining stormwater systems in a manner required by permits and in a way that is considered sound by asset management practices. These BMP's, in compliance with the MS4 permit, will continue to enhance the aquatic environment within our community.

2009 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 regularly attends group meetings as a voting representative for the community. The Village representative continues to serve as the chair of the organization.

These education and outreach efforts are summarized in the appendix of this report. This year also represented a continuation of the final year in a five year permit cycle. Accordingly, the survey results obtained in the last permit year were used as a foundation for the measure one work planning for the next permit cycle. This work will continue upon release of the final permit and will be adjusted, if needed, for compliance with the permit conditions.

New to 2009 was the addition of stormwater information 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 units as well as hundreds of SmartWaterways bookmarks and magnets.

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. Eleven wastewater facility tours occurred during the permit year. Approximately half of the tours focused on water quality and involved schools. Students involved in the tours ranged from 5th grade to College level. The other half of the tours focused 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.

Whenever possible, the school tours start with presentation of the RSEP "After the Storm" 5 minute video. 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 Water Quality. RSEP bookmarks and magnets are a tool distributed to all tour participants.

2. In-class discussions of water quality and stormwater occurred with the cooperation of science teachers at Essex Middle School and Ecology teachers at the Essex High School. This program involved multiple classes and a follow up wastewater facility tour. We then continue the a learning service project with the Town of Essex where they work directly with the Town of Essex Public Works on storm drain stenciling projects in the area surrounding the school.

This year's Essex Town school program was moved to the spring of 2010 for logistical reasons. We plan to cooperate fully with the program as in past years and will report our activity in the 2010 annual report.

3. We provided an in classroom stormwater and water quality presentation to the Essex High School Ecology class. The "Five Corners North" stormwater project was incorporated into the presentation. This recent project remains familiar to most students. This familiarity 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. This year's outreach activity included a comprehensive training with the Essex Junction volunteer fire department. Training brought forward how fire fighting practices can have both positive and negative effect on water quality. Response to vehicle accidents and the quick control of vehicle fluids has a strong value in water quality protection.
5. Essex Junction participated in the Vermont EPSCoR Streams Project High School program which educated teachers and students about water quality issues of streams and rivers in the Lake Champlain Basin. The Whitcomb farm in Essex Junction also participated in the program. Village staff has committed to communicating more with the Whitcomb's to compliment each others efforts when we jointly participate in the same program.
6. 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 800 Bags On Board dispensers with 10 bags each were distributed during the 2009 licensing process. We have moved away from offering refill packages to pet owners as the requests have diminished to none. We continue to coordinate joint purchase and distribution of these pet waste units with the Town of Essex Public Works through the Essex Town Clerk who provide dog licenses for both communities.
7. 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.
8. Police have enforcement capability for pet owners who do not pick up after their pets. New signs continue to be installed where requested and whenever appropriate to inform residents and park users that they are required to pickup after their pets.
9. Public Works staff offered Bags On Board to citizens walking pets and discussed pet impact on water quality when opportunities arise. There were no recorded experiences of this occurring this year. With that noted, 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.
10. 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.

11. 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.
12. Stormwater pollution prevention notices continue to be printed in the Village of Essex Junction newsletter as space allows. With the stormwater line on the postcard style water bills, we now have 6 outreach opportunities in the regular municipal mailings to residents and property owners.
13. Permanent storm drain markers were maintained in Village neighborhoods. "No Dumping, Drains to Stream" is boldly noted on these markers fixed to the actual basin cover. We are finding that placement is very important in minimizing the need to replace markers.
14. There were not water quality checks directly involving citizen volunteers this year. With the shift to spring of the Town of Essex Middle School class involvement, we did not have that outreach opportunity for the 2009 reporting cycle.
15. 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.
16. The Village and Town cosponsored a May Build a Rainbarrel Workshop, held at the Maple Street Park. The program was also sponsored by the Essex Conservation Committee which services both communities.
17. 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.
18. The Village was a sponsor in the Art and Science of Rain Barrels project presented by the Winooski Natural Resources Conservation District and the Essex Technical Center. 50 rain barrels were decorated by students and then offered for sale to the community. The event was sold out.

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

A comprehensive summary report in Illicit Discharge Detection and Elimination (IDDE) was submitted to the ANR in compliance with permit conditions in prior years. In 2009, only two complaints or discoveries were made and one event was noted.

- One report of a cement grout like substance at a catchbasin on Southview Rd at South Street. No offender was found and the material was cleaned up by Public Works.
- Staff responded to one complaint of untreated sewage on Gaines Court. Due to the nature of the report, the Town Health Officer was contacted and he responded to the complaint. There was no problem found.
- One hydraulic oil occurred at the Wastewater facility as a result of a blown hydraulic filter on our vacuum/flusher truck. The spill was immediately contained with proper monitoring and reporting by the public works staff.
- One reported facility ammonia leak that never left containment.

- We responded to an ANR inquiry and verified that the 1992 Old Colchester Road pump station project did indeed include removal of the sewage overflow/pump station bypass.

There was limited IDDE work in the field this year. Prior years identified not specific problems with the exception of one location on lower Maple Street at Tiffany lane. Sewer line and storm line videos were reviewed and there is not any further indication of inappropriate connection of sewer to the storm system.

4.2.4 Construction Site Stormwater Runoff Control

During the permit reporting period, a draft Land Development Code revision for pre construction and post construction stormwater control was forwarded to the Planning Department for review and to start the adoption process. The development director released this draft to the planning commission for review late in 2009. Since then, the community has shifted gears and is in the process of developing an RFP to have a consultant review and revise our land development code. The Water Quality Superintendent will continue to press the fact that stormwater management must be incorporated in the review by the selected consultant. In light of the DRAFT MS4 permit out presently for public review and comment, this evaluation of the Village land development code can now include conditions presented in the MS4 permit as it is released.

In the mean time, all applications are being reviewed as if the Code was in place and fully enforceable. We have had great success with this approach as we have many provisions within the existing land development code that allow us for enforcement of site runoff, stream and property encroachments and other matters of concern related to stormwater management. The code revisions simply consolidate many existing rules and development criteria under a separate section for stormwater management.

In 2009, 145 permits were issued by the planning and zoning department. Of those issued, 39 involved physical construction that would involve excavation and/or additional site work for the construction of homes or additions.

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 development 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.

VERIFYThe Village did not have any applications this year that required review for criteria of sites exceeding 1 Ac disturbed 1 Ac Impervious. We did have some large projects occur (large by a Village perspective). All of these sites obtained state stormwater permits. Site work was monitored by the Project engineers with oversight by the Village Engineer and Village staff during regular construction site review.

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.

The ANR has also provided post construction follow up for sites that maintain state issued permits. Based on information received, there is general conformance with issued permits within the Village of Essex Junction. Systems appear to be functional and in a good state of repair.

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. Over the past reporting year, we fully implemented our capital plan using capital funds supplemented with federal stimulus funds. This allowed the community to complete all sewer line rehabilitation that had been planned over the past few years. As of the completion of the project, all sanitary sewer lines in the community have a good rating or better under the pipeline assessment protocol. What this means is that root intrusion and sedimentation in sewer lines has been completely assessed and remediated, a significant step in insuring reliable operation of the sewer collection system without sewer overflows.

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 2009 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.
- 4) In the past, the Village was awarded two SAFETEA Grants for stormwater enhancements. One grant was approved for purchase of a pipeline jetter/vacuum truck in Fiscal year 2009. The truck arrived and was put into service in the summer of 2009. Approximately 880 structures were cleaned by the Public Works staff. When winter set in, there were still basins to clean. As weather allowed through the winter and early spring, the cleaning work will continue with the goal of 100% cleaning early this year (2010).
- 5) The second SAFETEA grant was for improvements to the Fairview Farms stormwater detention pond. Design is complete and we are awaiting final approval of the plans from the grant administrator, VTrans. The package will be released for bid as soon as approved. The project will likely start in late summer or in the fall of 2010 if approval and release comes through in a timely manner.
- 6) "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.
- 7) Village staff coordinated a joint purchase of "Bags on Board" pet waste disposal systems on behalf of the Village and Town of Essex.
- 8) School department staff attended training on proper use of fertilizer. Essex Junction school and recreation departments were already utilizing the BMP's trained at the seminar.
- 9) Nine Village staff members attended flume training and other erosion control training programs to aid in proper erosion control technique for future projects. Training programs have been provided through the Chittenden County Regional Planning Commission and the Regional Stormwater Education Program as well as Vermont Local Roads and other training opportunities.
- 10) 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 ring 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.

- 11) All infrastructure maps have now been converted to digital format. Staff continues to field verifying map information. Discrepancies are being corrected. Staff is working to expand the infrastructure map management through installation of GIS hardware/software provided under state grant. This project will occur over many years as the asset management development work covers all aspects of the municipal utility and Public Works infrastructure. We are planning to accelerate this work in a cooperative effort with the Town of Essex over the summer of 2010.
- 12) 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.
- 13) The Wastewater facility maintains a Sewage Spill Prevention Plan (SSPP) for the community in compliance with state regulation. This submittal included requirements that are not due until the year 2010. Final comments from the Village are due back to the state to complete the review process.
- 14) Public Works maintained Exempt Small Quantity Generator Status for hazardous materials. This work continues through good management waste minimization practices.
- 15) The Wastewater facility maintains Exempt Small Quantity Generator Status for hazardous materials handling and disposal.
- 16) Catch basin cleaning tailings were stockpiled for testing. Analytical testing was performed by a local laboratory using EPA method 8060 B and modified in the lab to be in accordance with the Vermont Petroleum Cleanup Fund parameters. All parameters were within expected range. This material has not been removed for disposal as winter set in prior to shipping. The material will be properly managed during the summer of 2010. Until then, it remains stockpiled at the WWTF snow dump yard area.
- 17) Street sweepings were not tested this year due to a 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.
- 18) The Vortech swirl separator unit installation at Five Corners North was included in a weekly inspection routine by the Village Public Works Department. Periodic inspection of the discharge orifice insures that debris does not clog the controlled discharge. The open discharge orifice insures operation and controlled release as originally designed.
- 19) Warner Avenue culvert: replacement for a degraded culvert in the upper reaches of Sunderland Brook. Total project cost \$29,110.
- 20) Fairview Farms Stormwater pond improvements were in final design for preparation of bidding in calendar year 2010. Final approval is pending. This project is funded via SAFETEA funds, with the funds administered by VTrans.
- 21) A Municipal Compliance Assistance Program (MCAP) was performed in December of 2009. Written report from the ANR representative is still pending as of the date of this report.

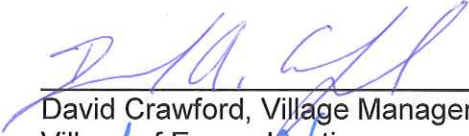
- 22) The Village of Essex Junction accepted a portion of VT Route 15 Pearl Street, from the Susie Wilson Road intersection to the Champlain Valley Exposition. This section of roadway is now completely under the control of the Village of Essex Junction for the purposes of this permit.

CERTIFICATION

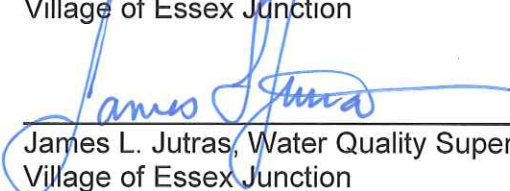
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage 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 31th day of March, 2010.

Signature:


David Crawford, Village Manager
Village of Essex Junction

Signature:


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