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Municipality/Organization: City of Fitchburg

EPA NPDES Permit Number: MAR041189

Mass DEP Transmittal Number: W-

Annual Report Number

& Reporting Period: year 11: April 1, 2013 through March 31, 2014

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NPDES PII Small MS4 General Permit Annual Report (Due: May 1, 2014)

Part I. General Information

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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 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 the information, 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.

Signature: 

Printed Name: Lisa A Wong

Title: Mayor

Date: 4/28/14

Part II. Self-Assessment 2013

The City of Fitchburg has completed the required self assessment and has determined that at the end of the eleventh year reporting period the City was in compliance with all provisions of the approved NOI, except for the following provisions.

Part III PC-3: Operation and maintenance agreement to inspect existing stormwater BMP's at post construction sites.

In addition to the efforts outlined in Part III of this report the City has, during the designated reporting period, continued a storm water sampling and inspection program in selected drainage basins. Over the course of the previous ten years of the stormwater program illicit connection detection efforts have resulted in the detection of 18 illicit connections to the stormwater system. During the course of this reporting year two new illicit connections were detected and mapped in the following locations: Merriam Parkway Extension and at 181 Upham St. One illicit connection that was reported in the 2012 report at 87 Pine Street was corrected. Two illicit connections identified in the 2012 report at; 245 Summer Street, and 37 Fairbanks Street have yet to be corrected. The four current illicit connections, detailed in this report, will be corrected by May 1, 2015.

Illicit connection detection to the storm water system continues to be an important part of the City's ongoing effort to map and characterize both the wastewater collection system as well as the storm drain system. To that end, as reported in previous years, the City has established a dedicated crew of three individuals that are assigned to the wastewater division. The collection system crew will, as part of their duties, be looking for illicit connections to the stormwater system. In addition, the City has added two Professional Engineers to the DPW staff over the last three years. These two staff members are devoting part of their time to stormwater issues and will continue to be an important part of the City's effort's to administer the program.

The City continues to partner with the Nashua River Watershed Association to conduct additional stormwater outfall sampling events during the year. The City is also an integral member of the Nashua River Greenway Committee. In part, the Committee's goal is to advocate for the protection, preservation, restoration, and responsible use Fitchburg's water resources, and riverfront land.

In year six of the program all known outfalls were inspected during dry weather. Samples were collected and analyzed for coliform bacteria, MBAS, and Nitrogen if flow was present. All outfalls were sampled during a rain event; samples were analyzed for Total coliform, E-Coli, MBAS, and Nitrogen. Sample results from five out of forty outfalls were identified as having elevated levels of bacteria. Follow-up sampling on those five discharges was performed and the associated drain system investigated for the possibility of illicit connections. Mapping and digital photos of all outfalls was completed during the sixth reporting period.

The City is acutely aware of the requirements that the anticipated reissuance of a revised and updated MS4 permit will have on the program and the substantial demands it will place on our limited resources. We are actively evaluating every aspect of the current program and we are developing alternatives that will allow us to comply with the increased requirements of the reissued permit within the anticipated deadlines.

Included in this report is an article from the **Nashua River Watershed Association's** web page on their efforts to track and report sources of bacterial contamination in the North Nashua. Fitchburg has and will continue to partner with the NRWA to monitor and remove sources of pollution from the North Nashua.

TRACKING SOURCES OF BACTERIAL CONTAMINATION

The Cities of Fitchburg and Leominster are both striving to make recreation and outdoor pursuits along the North Nashua River feasible and more attractive. The NRWA's water monitoring data indicates that the North Nashua River is the river reach of highest concern in the Nashua River watershed. The monitoring shows that water quality does not always meet the state standards for boating and swimming.



With funding from the Massachusetts Environmental Trust from 2009 through 2011, the NRWA and the City of Fitchburg successfully worked together to track and eliminate sources of bacteria in storm drains and buried streams leading to the North Nashua River and its tributaries. Using data from the NRWA's monitoring program to determine where high bacteria (*E.coli*) results were detected in the river, samples were then taken from nearby outfalls or pipes flowing in the area. The flow was then followed up the pipe through the stormwater system to determine where counts were the highest. The area of highest contamination was then investigated through means such as in-home dye testing to help pinpoint the exact location of the problem. Some contamination sources were tracked to cracked sewer pipes, and some to a crossed connection from sewer to storm drain, or even an illicit hookup to the storm system. NRWA continues to work with the City as funding is available. As part of the project, the NRWA also worked with students from the Cleghorn Neighborhood Center in Fitchburg on storm drain stenciling in English and Spanish, and worked with students from the Fitchburg Public High School on making displays to model sewer infrastructure. The goal of these activities was to help students to understand how stormwater is managed in their community and how it impacts their local water quality.

NRWA staff also worked with the City of Leominster to collect samples at targeted locations to locate pollution sources and determine nutrient concentrations in their community. Results of sampling were shared with the Department of Public Works in both communities within a week of testing.

Part III Summary of Minimum Control Measures

Municipal Good Housekeeping

BMP ID #	BMP Description	Responsible Det./ Person	Measurable Goal	Progress on Goal Permit years 1 - 11	Planned Activities year 12
MH-1	Pet waste collection	BOH	Distribute brochures	Educational material distributed in water bills year 11	continue activity
MH-2	Parking lot and street cleaning	DPW	Increase frequency	Street and parking lots sweeping program active nine months per year. All streets swept a minimum of once per year. Main lines swept multiple times per year. Purchase new street sweeper	continue program
MH-3	Catch basin cleaning	DPW	Implement program to track and increase frequency	Catch basin cleaning program active nine months per year. Second catch basin cleaner added to program. Additional man hours allocated to program goal is to clean all catch basins a minimum of 1x/yr.	Continue program. Prioritize problem areas in order to devote additional time and effort in those areas. Work towards compliance with new regulations.
MH-4	Spill Response & Prevention	Fire Dept.	Formalize program provide education	Conduct annual review and training at specific sites including wastewater, water and DPW facilities. Purchased new training videos in year 10 for this purpose.	Update training to comply with anticipated new regulations

Part III Summary of Minimum Control Measures

Public Education and Outreach

BMP ID #	BMP Description	Responsible Det./ Person	Measurable Goal	Progress on Goal Permit years 1 - 11	Planned Activities year 12
PE-1	Partnership Program	DPW / BOH	Establish education and outreach program	City established environmental task force. Group activities include streamside clean-up, community policing of environmental issues, outreach to schools and volunteer participation. City is also a member of the Nashua River Greenway Committee	review and update program as necessary to comply with anticipated new regulations.
PE-2	Web Site Creation	Planning Dept.	Website for storm water pollution prevention	maintain City web site link to EPA storm water information	Continue activity
PE-3	Brochures and fact sheet	DPW	Door hangers distributed	new storm water mailer distributed via water and sewer bills in year 11	Update to comply with anticipated new regulations
PE-4	Classroom Education	School Dept.	50% of K-12 every 2 yrs.	Storm water education introduced as part of science curriculum grades 4 and 6	Education program to be evaluated as part of overall pain update

Part III
Summary of Minimum Control Measures

Public Involvement and Participation

BMP ID #	BMP Description	Responsible Det./ Person	Measurable Goal	Progress on Goal Permit years 1 - 11	Planned Activities year 12
PP-1	Watershed Organization	Water Dept. Public Private Partnership	Organize watershed Committee	Watershed land maps updated and overlaid on topo. maps. Sensitive land parcels identified and prioritized for purchase or protection. Work with Nashua River Watershed Group to perform storm water sampling identify illicit connections. work with North County Land Trust to establish conservation restriction on 1800 acres of watershed land. Purchase CR on 176 acres of private land for watershed protection. purchase in fee 124 acres of private watershed land. Receive State Watershed land protection grant in year 11 to acquire additional 163 acres of watershed land.	Continue to pursue grant opportunities to protect additional watershed land and open space areas through conservation restrictions and purchase of private land in sensitive and critical watershed and buffer areas.
PP-2	Stream cleanings	DPW	Civic Clean up days	Community service work crews from Dept. of Corrections performed stream side clean up. Civic clean up days held each spring in all City wards. Stream clean up part of program.	Continue program. Work with Nashua River Watershed Committee and Nashua River Greenway Committee to perform sampling and stream inspection and clean-up.
PP-3	Storm drain stenciling	DPW	Civilian stenciling program	No progress made on stenciling program	Evaluate activity as part of overall pain upgrade

Part III Summary of Minimum Control Measures

Post Construction Runoff Control

BMP ID #	BMP Description	Responsible Det./ Person	Measurable Goal	Progress on Goal Permit years 1 - 11	Planned Activities year 12
PC-1	Post construction runoff ordinance	Planning Dept.	Develop Ordinance	Standards and program developed by joint effort between Con-Com and City Engineering. Formalized into planning board requirements. Selected developments inspected for stormwater BMP maintenance and effectiveness. Conducted verbal review of requirements with Planning Board and Con-Com. found to be effective.	Continued effort to review and update the City Ordinance to insure compliance and establish authority to enforce projected new stormwater permit regulations.
PC-2	Site plan review for post construction	Planning Dept.	Adopt Standards	Post construction site plan review conducted for all planned sub-divisions and major construction sites	Review existing program. Update to insure compliance with anticipated revised permit.
PC-3	Operation and maintenance agreement	DPW	Develop Model	No progress made	Develop model and scope of work

Part III Summary of Minimum Control Measures

Construction Site Runoff Control

BMP ID #	BMP Description	Responsible Det./ Person	Measurable Goal	Progress on Goal Permit years 1 - 11	Planned Activities year 12
RC-1	Site Plan Review	Planning Dept.	Establish standards	Revised standards requiring BMP. Implemented and applied to all new construction regulated under Planning Board	Review existing program. Update to insure compliance with anticipated revised permit.
RC-2	Erosion/Sediment control ordinance	Planning Dept.	Develop Ordinance	Existing ordinance updated	Comprehensive review and update of ordinance and delegation of responsibility for enforcement.
RC-3	Storm water Pollution Prevention Plan	DPW	Require Plan for all projects	Plan required for all sub-division projects and major construction projects	Continue to review construction sites and other applicable projects for compliance. Update requirements to comply with anticipated regulations.
RC-4	BMP measures for sediment/erosion	Con-Com	Establish for construction sites	Con-Com reviews and inspects sites for compliance with approved plans and BMP	Continue practice

Part III Summary of Minimum Control Measures

BMP's for Meeting TMDL

BMP ID #	BMP Description	Responsible Det./ Person	Measurable Goal	Progress on Goal Permit years 1 - 11	Planned Activities year 12
TM-1	Parking lot and street cleaning	DPW	Formalize Program	see municipal house keeping	continue activity
TM-2	Catch Basin cleaning	DPW	Formalize Program	see municipal house keeping	continuity activity
TM-3	Install deep sumps	Planning/ Engineering	Require all new development to install	Deep sumps installed in all new and rebuilt catch basins	prioritize all remaining catch basins without drop inlets
TM-4	Install gas and oil separators	DPW	Establish requirement	All new garage and other potential oil using activity required to install oil water separation	continue activity and inspect established locations for compliance
TM-5	Detention Basins	Planning/ Engineering	Establish design and requirement standards	Design and standards established. Enforce standards for new construction, inspect older construction for function and effectiveness	continue activity

Part III
Summary of Minimum
Control Measures

Illicit Discharge Detection
and Elimination

BMP ID #	BMP Description	Responsible Det./ Person	Measurable Goal	Progress on Goal Permit years 1 - 11	Planned Activities year 12
ID-1	Storm Drain Map	DPW	Update Storm drain map	All known storm drains inspected for dry flow, sampled as necessary. All outfalls inspected and sampled during rain event. Mapping and digital photos completed. Resample and follow-up on target outfalls. 3 person collection crew and Civil Engineer tasked to allocate some time to storm water activities. Additional PE added to staff for collections system supervision. Will devote time to stormwater mapping and IDDE.	Develop scope of work for upgrading maps as required by anticipated regulations. Develop alternatives and cost to perform the work.
ID-2	Non-storm water discharge ordinance	Planning	Non-storm water ordinance	ordinance in place	Review and upgrade stormwater ordinance to comply with requirements in revised permit.
ID-3	Industrial/Business Connections	IDC	Establish monitoring program	Continue survey of industrial and commercial connections as part of combined sewer separation project	continue program
ID-4	Illicit discharge elimination	BOH / DPW/Wastewater	Establish Program	Illicit connection program established. Total of 18 illicit sewer connections to storm system identified 16 eliminated.	Planning stage to implement increased stormwater IDDE requirements posted in draft revised permit.
ID-5	Illegal dumping task force	Public private partnership	Form Task Force Quarterly Meetings	City established environmental task force. A public and private partnership. Group activities include streamside clean up, community policing of environmental issues, outreach to schools and volunteer participation	Continue program