TOWN OF WESTBOROUGH, MA
Department of Public Works

Annual Report

FOR

NPDES PHASE II
SMALL MS4
GENERAL PERMIT

YEAR 12

Department of Public Works

John M. Walden, Manager

April 17, 2015

NPDES Phase II Small MS4 General Permit
Annual Report – Year 12

Z:\DPW Engineering\NPDES Stormwater\MS4 Yr 12 (April 2015)\Attachment - Narrative section.docx

Municipality/Organization: Town of Westborough

EPA NPDES Permit Number: MAR041173

MA DEP Transmittal Number: X264504

Annual Report No & Report Period: No. 12 (March 2014-March 2015)

NPDES Phase II Small MS4 General Permit

Annual Report

Part I. General Information:

Contact Person: John M. Walden, Manager, Department of Public Works,

Telephone #: (508) 366-3070 Email: jwalden@town.westborough.ma.us

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: G Barrette

Printed Name: George Barrette

Title: Chairman, Board of Selectmen

Date: April 17, 2015

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1.0 INTRODUCTION AND BACKGROUND

In 1990, The United States Environmental Protection Agency (EPA) began implementing a storm water management program under the National Pollutant Discharge Elimination System (NPDES). This program, known as Phase I of the NPDES storm water program, was intended to reduce pollution in storm water discharges for large urban areas with population of 100,000 or greater.

On December 1999, the Phase II Rule of the NPDES storm water program was published to address Municipal Separate Storm Sewer Systems (MS4s) within urban areas of populations less than 100,000 that were not addressed under the Phase I program. Objectives of the Phase II rule is for the MS4s to develop implement and enforce a storm water program designed to reduce the discharge of pollutants to the maximum extent practicable, to protect water quality, and to satisfy the appropriate water quality requirements of the Clean Water Act.

On May 1, 2003, the EPA issued the General Permit for Storm Water Discharges from MS4s. The general permit requires that the storm water program for each MS4 submit an annual evaluation. The following report contains information required by the Stormwater permit and describes the activities that occurred from the previous calendar year. The report follows the format that has generally been accepted and used by other Towns in Massachusetts.

The Town of Westborough filed the NPDES Phase II Storm Water Management Plan in March 2003. The Town submitted the Annual Report for year one on May 4, 2004, year two on April 25, 2005, year three on April 27, 2006, year four on April 30, 2007, year 5 on April 30, 2008, year 6 on April 30, 2009, year 7 on April 27, 2010, year 8 on April 19, 2011, year 9 on April 26, 2012, year 10 on April 26, 2013, and year 11 on April 21, 2014. The original permit was intended to cover a five year period; however, it is now entering its thirteenth year. A new 2014 draft permit was issued on September 30, 2014 with a comment period closing December 29, 2014. The EPA received many requests to extend the comment period therefore EPA reopened the comment period for the 2014 draft general permit through February 27, 2015. Because it is not known when the final new permit will be issued this Annual Report will continue to follow the 2003 format.

2.0 SELF - ASSESSMENT

The Town of Westborough continues to have success at implementing Westborough's Comprehensive Stormwater Management Program. This year the Town has made progress in several areas, as well as, initiating some new public outreach measures.

Westborough maintained its membership with the Central Massachusetts Regional Stormwater Coalition (CMRSWC). The objectives of the group are to develop tools to comply with the MS4 Permit, prepare for increased regulation and expand regional participation. The CMRSWC was awarded $80,000 through the State funded CIC Program. The grant encourages self-sustainability and CMRSWC will use some of the funds to study ways to continue as a coalition without State funding. The group will also complete the following tasks:

1. Maintaining, upgrading and calibrating equipment purchased in FY2012 and FY2013 to ensure longevity.
2. Increasing Town use of materials, including one-on-one time with each.

The CMRSWC has completed 10 tasks:

1. Develop an Online Database for Data Management.
2. Develop an Integrated Stormwater Mapping System.
3. Develop a Sump Pump Discharge Policy.
4. Develop a Stormwater Pollution Prevention Plan (SWPPP) template.
5. Develop a Salt/Sand Application Decision Tree to reduce chloride loadings to surface water.
6. Create a Small Development Stormwater Best Management Practice Toolbox.
7. Develop a Request for Proposals (RFP) for Consulting Services for outfall inspection, system mapping, water quality monitoring, and other stormwater management activities.
8. Develop a Methodology for the 30 Communities to reach a common benchmark. Standard Operation Procedures for activities such as construction site inspection, dry and wet weather outfall inspection, catch basin inspection and cleaning, and other stormwater activities.
9. Develop a Stormwater Training DVD/CD with modules to reach multiple audiences, including municipal officials, the general public, and municipal staff.
10. Develop an Educational Website.
11. Purchased tablet computers and mobile WIFI devices for each town.
12. Provided training on Leica devices, water monitoring meters and kits.

The CMRSWC was anticipating a $200,000 grant, and when they were awarded $80,000, they needed to ask each town for an additional $4,000 to fulfill all the goals set forth for the upcoming year. The money again will allow towns to address EPA mandates through low-cost regional approach; properly address water quality controls and avoid Federal fines from non compliance. There are currently 30 Towns participating in the inter-municipal agreement. Westborough felt that the investment would be well worth the benefits that this group has to offer.

The Town continues to execute the street sweeping program and uses BMP practices at the DPW Facility. In the upcoming reporting years, the program should be expanded to include all municipally owned properties, as well as, continue to improve the program that is currently in place. Drainage improvements that occurred during this reporting year are described in the Highway Division's summary of activities in Section 3.VI.C.

The Town contracted Engineering Consultants, Woodard & Curran (W&C), to perform a two phase drainage inspection to evaluate portions of the drainage system and look for illicit discharges. The investigation focused on areas that have corrugated metal pipe and areas known for drainage issues. A report will be given to the Town that prioritizes the areas investigated.

Due to a change in personnel, the public outreach program and public participation activities were not all completed. The Town will focus on completing and enhancing these activities in the next reporting year.

The Town will file an NOI when the Draft General Permit for Stormwater Discharges from small MS4 Massachusetts communities is finalized and issued. At that time a thorough re-evaluation of the Westborough Stormwater Program will need to occur. We anticipate that we will need to make many changes to the program due to more stringent requirements of the General Permit, as well as, a more expanded scope of work.

3.I. Public Education and Outreach Narrative

3.II. Public Participation and Involvement Narrative

3.III. Illicit Discharge Detection and Elimination

3.IIII. Construction Site SW Runoff Control

3.V. Post Construction SW. Management

3.VI. Pollution Prevention/ Good Housekeeping

I. Public Education and Outreach Narrative

BMP ID#

I.A A "Sewer vs. Drain" display and handouts were distributed at the Spring and Fall Town Meetings. [See Attached for photos of the displays]

I.B Westborough Girl Scout Troop #11032 created three educational public service videos on stormwater pollution that is still being aired on all three Westborough TV stations year round. The Topics covered include:

- Scoop the Poop – animal waste pollutes humans drinking water supply
- Wash your car on the grass so soapy suds don't go into catch basins
- Don't litter – it's bad for the environment and can pollute stormwater

See attached and the video can be seen on the following link:
http://www.youtube.com/watch?v=H 3Od3-alT8

I.C Westborough TV aired a "Stormwater Matters" Outreach and Ad Campaign created by the Engineering Department. The ad consists of five bulletins covering different stormwater issues such as lawn care, car care, picking up after pets, not littering, and keeping storm drains clean. This series of ads began running March 23, 2015.

I.D The Town's Department of Public Works website has a dedicated section for just Stormwater Information. The town will continue showing the video on how a catch basin gets cleaned out. This is a fun tool to educate others on catch basin maintenance. This video is also being used in classrooms and other various educational workshops. Visit:

http://www.town.westborough.ma.us/Public_Documents/WestboroughMA_DPW/Stormwater%20Information/

The Town's goal is to enhance the webpage to be more user friendly in the future.

I.E A creative three dimensional display is shown at the Westborough Library twice a year. See attached photos of the stormwater awareness display.

I.F In effort to reach out to more residents, the Town created an informational brochure that will be included in the next water billing cycle. A copy of this brochure is attached.

I.G The Town will be evaluating whether the Enviroscape demonstrations to the girl scouts is still an effective tool. A quick survey of Westborough's scout troops showed that interest has greatly diminished in attending this presentation. [see attached]

BMP ID#	BMP Category	BMP Description	Responsible Dept. / Person	Measurable Goal (s)	Progress on Goal(s) Permit Year 12	Planned Activities Permit YR 13
I. Public Education and Outreach						
I.A	General Public	Educational Posters with handouts	DPW	Display educational posters with handouts at Spring & Fall Town Meetings	Completed	• Continue to display posters at Town Meeting. • Investigate other possible display sites available in Town •Maintain existing posters and look into ways to create new ones
I.B		Cable TV outreach	DPW	Continue to run the PSA created by the Girl Scouts	Completed. "Stormwater Matters" series	• Continue to run PSA throughout year. • Outreach to Girl and Boy Scouts in Town to see if will make a new PSA
I.C			DPW	**NEW YR12.** Bulletin campaign to be aired on "Westborough TV"	Created "Stormwater Matters" bulletin series	• Continue to run bulletin throughout year. • Create new bulletin series based on public feedback
I.D		Town Website	DPW	Post stormwater information on Town Website	Completed.	• Work with the MIS/GIS Department to create a more user friendly website • Post stormwater brochure in BMP# I.F. on website
I.E		Educational Stormwater Display	DPW	Exhibit a stormwater display at the Library and Senior Center	Improvement needed. As a result of a change in personnel, the library display was only shown in the Spring of 2014. Senior center did not have display in this reporting period	• The library display has already been scheduled to appear in April 2015 and September 2015 •Coordinate with Senior center director on display availability and new ideas
I.F	Homeowners		DPW	**NEW YR12.** Mail educational flyers	A brochure was created by the Engineering Division and will be mailed with the water billing Spring of 2015. Every Westborough Homeowner on public water will receive a brochure.	• Make revisions/improvements to brochure based on feedback. • When funds allow, create additional brochures for different quarterly water billing mailings.
I.G	Students	Education	DPW	Conduct age appropriate presentations including EnviroScape demonstrations	Improvement needed. In previous years, 2 to 3 presentations were conducted to 3rd and 6th grade girl scouts.	• Work with local Girl and Boy Scout Troops on generating interest in attending such presentations • Work with the DPW in creating a tour of the trucks, garage and salt storage shed.
I. Public Education and Outreach - NEW GOALS for YR13						
	Businesses	Target potential high commercial polluters		Educate business owners	N/A	• Mail industry specific educational flyers to local businesses
	Students	Education		Improve education efforts to school students	N/A	• Reach out to other youth group types and encourage teaching curriculum to include stormwater issues
	General Public	Education and outreach		Improve education and outreach materials	N/A	• Contact groups such as, SuAsCo Council, for assistance on distribution materials and ideas
	General Public	Education and outreach	Con Com Officer	Educate town owned detention basin abutters	N/A	• The Conservation Commission Officer's office will send out an educational letter to all residence in close proximity to the 50 Town-owned detention basins educating the residents about the function of the basins and to not dump yard debris within the basins.

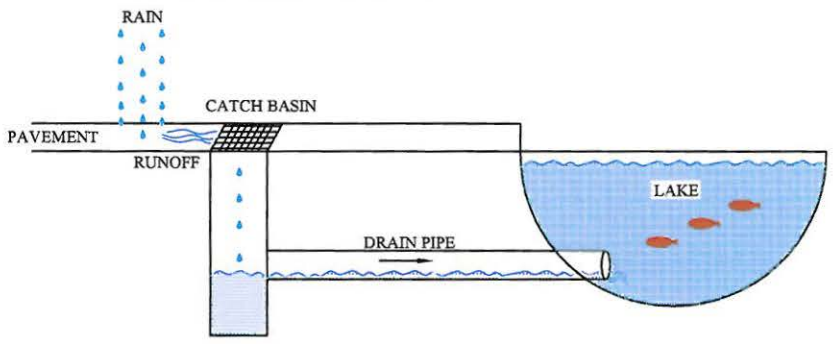
BMP # I.A

Stormwater Poster Display

STORM DRAIN VS. SEWER

WHERE DOES THE WATER GO?

STORM DRAIN

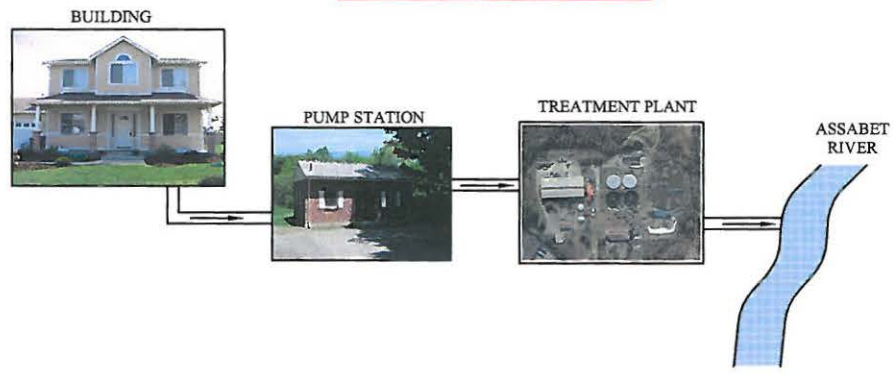


Stormwater pollution is the leading cause of water quality problems in the U.S.

Stormwater runoff is water that flows over the earth's surface and does not seep into the ground.

1. Stormwater runs off the pavement and into catch basins, also known as storm drains.
2. The water then flows through a series of underground pipes that are for the sole use of stormwater.
3. The pipes usually discharge in the woods or waterbodies like ponds, lakes, rivers, streams and wetlands.
4. The stormwater does not get treated.

SEWER



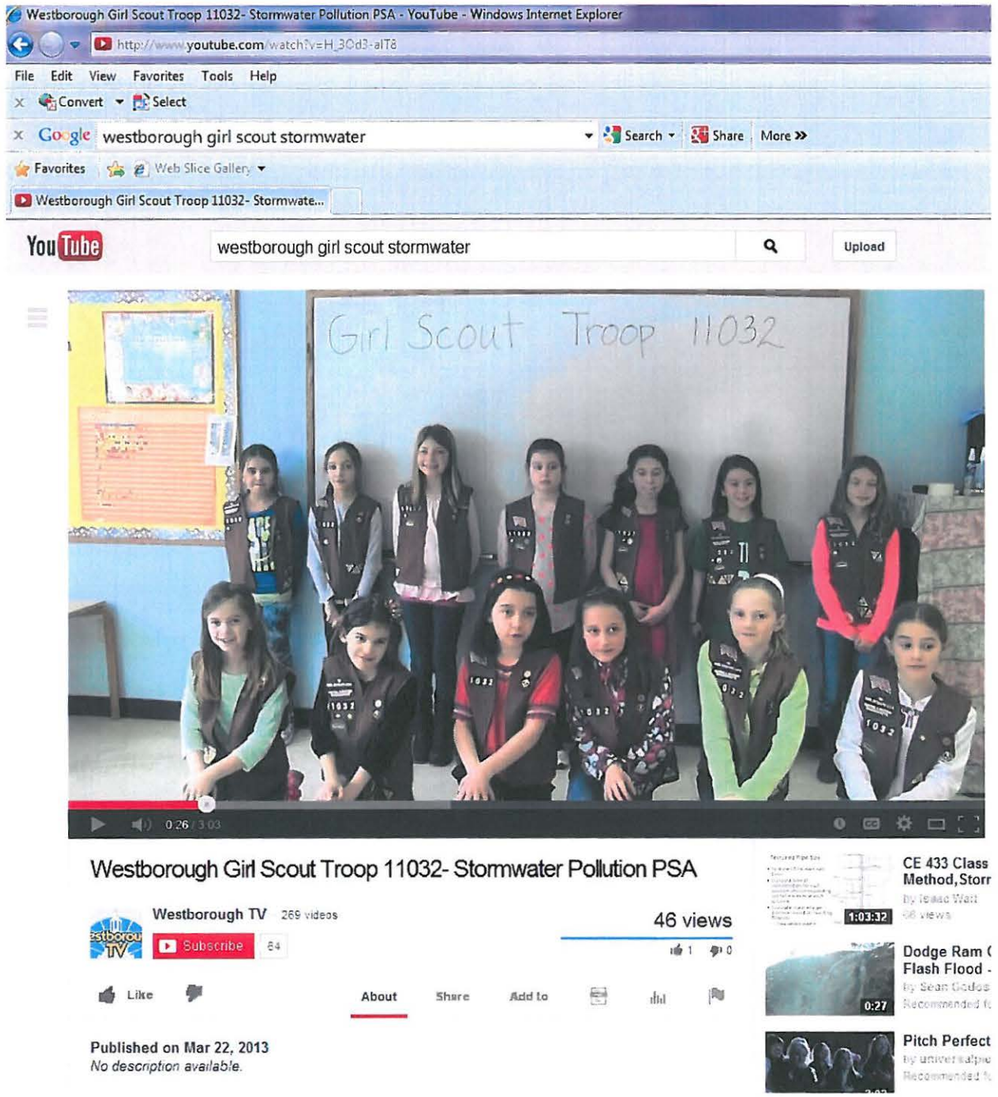
1. Wastewater leaves homes, schools, businesses and other buildings through a sewer pipe.
2. The wastewater then flows through a series of underground pipes that are for the sole use of sewage.
3. The pipes go to the nearest sewer pump station, where the waste is pumped to the sewer treatment plant.
4. The wastewater gets treated at the plant and discharges into the Assabet River.

Now you know that pollution from stormwater runoff can contaminate our water supply. So what can you do to prevent this problem? Here are some tips to help you on your way to a pollution solution:

- **Never Dump Anything Down Storm Drains**
- Use Fertilizers Sparingly
- Control Soil Erosion by Planting Over Bare Spots in Landscape
- Collect Rainwater in Rain Barrels for Lawn Use
- Sweep Driveways, Sidewalks and Roads Instead of Using Hose
- Compost Yard Waste
- Properly Dispose of Hazardous Household Chemicals
- Avoid Pesticides
- Direct Downspouts Away From Paved Surfaces
- Use Car Wash Instead of Washing Car in Driveway or wash your car on the lawn.
- Check Car for Leaks and Recycle Motor Oil
- Properly Dispose of Pet Waste
- Inspect and Pump Septic Tank Regularly
- Tell Others what you've learned.

BMP # I.A

BMP # I.B
Girl Scout PSA



Stormwater Matters

Stormwater pollution costs taxpayers money. Minimizing pollution means minimizing cleanup and compliance costs

Go to the Westborough DPW website for more information

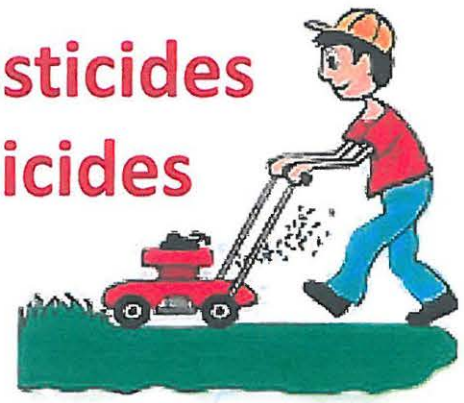
BMP # I. C

STORMWATER OUTREACH ON LOCAL TV

Do Your Part to Reduce Stormwater Pollution

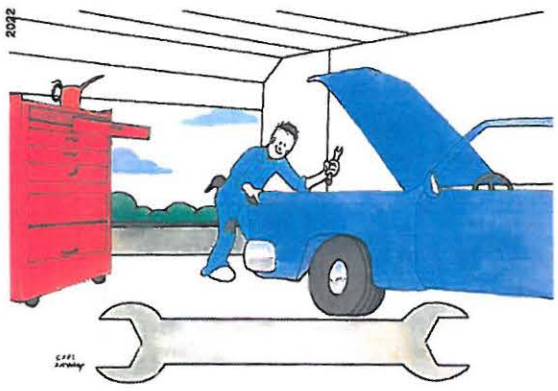
Pick up after your pets

Avoid pesticides & herbicides



See more ways you can help on the Westborough DPW website

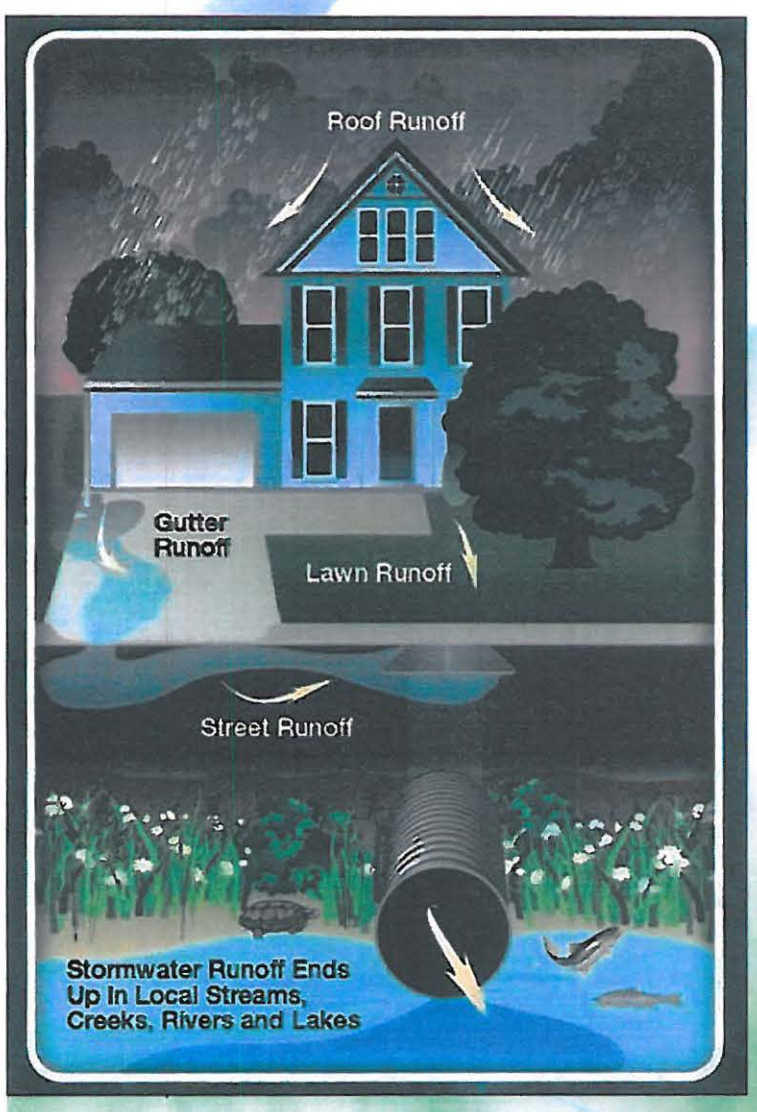
Do Your Part to Reduce Stormwater Pollution



Maintain your vehicles

Use low phosphate detergents

See more ways you can help on the Westborough DPW website



Pollutants like oil, antifreeze, paint, pesticides & household chemicals reach and contaminate our drinking water supply

Participate in Hazardous Waste Disposal Day

FALL 2015

BMP # I. D

WESTBOROUGH DPW WEBSITE

Town of WESTBOROUGH MASSACHUSETTS

"The Hundredth Town"

ABOUT | DEPARTMENTS | BOARDS & COMMISSIONS | TOWN MEETINGS | ECONOMIC DEVELOPMENT

- For Residents
- For Businesses
- For Visitors
- Online Payments
- Subscribe to News
- Westborough TV
- Online GIS
- Community Links
- Schools
- Library
- Home

CODE RED

Common Cause

Sign up for Paperless Billing

Stormwater Information

Printer-Friendly Version

Home · Public Works · Stormwater Information

Web Pages and Documents:

Web Page	Details	Size
VIDEO: Catch Basin Cleaning	Wed, Dec 28, 2011 3:12 PM	2K
Where does the water go?	Tue, Aug 9, 2011 11:32 AM	376K
Stormwater Permit Application	Thu, Apr 14, 2011 9:00 AM	50K
Stormwater Permit Data Sheet	Fri, Jan 14, 2011 9:42 AM	13K
Westborough Stormwater Information	Mon, Jun 22, 2009 8:54 AM	61K
Westborough Illicit Discharges Bylaw	Wed, Jun 3, 2009 2:41 PM	36K
Westborough Stormwater Bylaw	Wed, Jun 3, 2009 2:40 PM	68K

TOWN OF WESTBOROUGH

34 West Main St., Westborough, MA 01581 PH: (508) 366-3020 FAX: (508) 366-3099

Virtual Towns & Schools Website

BMP # I.E

Library Display Case

Library Display Case

Don't wash your car in the driveway. Wash on the grass.

- Using a commercial car wash.
- Washing cars on gravel, grass, or other permeable surfaces.
- Blocking off the storm drain during charity carwash events or using an insert to catch wash water.
- Pumping soapy water from car washes into a sanitary sewer drain.
- If pumping into a drain is not feasible, pumping car wash water onto grass or landscaping to provide filtration.
- Using hoses with nozzles that automatically turn off when left unattended.
- Using only biodegradable soaps.

Limit pesticide use. Don't over-fertilize your lawn.

- Sweep up driveways and gutters.
- Leave the grass clippings on the lawn to lessen the need for fertilizer.
- Never discard yard waste down storm drains or into waterways or wetlands.
- Reseed bar areas with drought-tolerant varieties of lawn grass.
- Mow 2.5 to 3 inches high with a sharp blade to encourage dense growth and deter weeds.

Check your car for leaks and recycle used oil.

- Maintain your car regularly to prevent fluid leaks.
- Clean up spilled automotive fluids with sand or kitty litter and dispose of it properly.
- Never hose spills into the street or down a storm drain.

Pick up after your pet.

- Pet waste can pollute our waters.
- Dispose of pet waste by flushing it down the toilet or putting it in the trash.
- Never throw pet waste into a storm drain or waterway.

Never dump anything into a storm drain.

- Clear sand, leaves, litter, debris and snow away from storm drains.
- Support municipal efforts to conduct regular street sweeping and catch basin cleaning.
- Participate in a neighborhood cleanup or storm drain marking project.

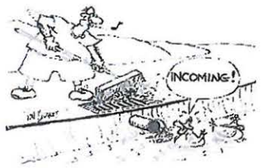
Don't litter.

- Never throw anything into a storm drain.
- Recycle paper, plastic, cans and bottles.
- Participate in the neighborhood cleanup day.
- Get involved in water protection issues in your community.

BMP # I. F

INFORMATIONAL BROCHURE

Why do I care about the problem?



- Rain water and melted snow that is not readily absorbed into the ground, flows to the storm drain system and discharges untreated water directly to streams, ponds, lakes, rivers and wetlands.
- Pollution costs the tax payers money. Minimizing pollution means minimizing cleanup and compliance costs.
- EPA will soon be passing more stringent regulations on municipalities with heavy fines for non-compliance.
- It's good for the environment!

NO DUMPING DRAINS TO WATERWAY

Town of Westborough

Doing Your Part to Reduce Stormwater Pollution

Westborough Department of Public Works

131 Oak Street
Westborough, MA 01581
(508) 366-3076
lallain@town.westborough.ma.us

How bad could it be?

- Typical pollutants like oil, antifreeze, paint, pesticides and household chemicals reach and contaminate drinking water supplies.
- Pesticides, leaves, grass and dirt can release excess nutrients that promote algae blooms. When algae dies and decomposes, it removes oxygen which is essential to the survival of fish and plants.
- Pet waste is rich in nutrients as well but, they also include fecal bacteria which can make humans and animals sick.
- Detergents contain surfactants that destroy the external mucus layers that protect fish.

Keeping Stormwater Clean

Pet Waste

- Pick up after your pets. Pet waste washes bacteria and parasites into our waters.

Working on Vehicles

- Wash your car on the lawn or at a car wash that recycles used water. Sending soap run off down the driveway and into the storm drain harms the environment and is a violation of state and federal laws.
- Use low phosphate detergents in small amounts
- Maintain your vehicles. Repair auto fluid leaks immediately. Don't wash oil, grease or chemicals into the storm drain system. Instead, use kitty litter, saw dust or commercial clean up kits and place them in the garbage.
- Don't pour liquids down the drain. Properly dispose of oil and other auto waste at an approved facility.

Lawn & Garden Care

- Avoid pesticides and herbicides.
- Use organic, time-release fertilizers .
- Compost yard waste or have it hauled away. Keep it off the streets and out of the gutter
- Use a mulching mower. You can decrease your use of fertilizers by 25%.
- Participate in the rain barrel program. Go to the Town of Westborough DPW website for more information.

Did you know ? ...

1 gallon of motor oil pollutes a million gallons of water!

BMP # I.G

EnviroScape Display

II. Public Participation and Involvement Narrative

BMP ID#

II.A CB stenciling work involves spray painting a variety of "Dump No Waste" stencils on the road next to each catch basin. Unfortunately, only one Boy Scout participated in the stenciling program this year therefore only a few streets were completed. An example of his work is attached. The Town feels this BMP is worth continuing next year as well as trying to increase participation. The BMP is an effective tool to:

- inform residents that catch basins are connected to water bodies
- discourage residents from pouring anything into the catch basins

II.B The Westborough DPW will continue to host the Westborough Board of Health's annual household hazardous waste collection day which typically occurs sometime in the fall. By providing a place for residents to dispose of their household wastes; such as oils, paints, solvents and unrestricted pesticides, we hope to prevent people from dumping into catch basins and polluting our waters. (See attached)

II.C The Town has renewed its involvement in the Rain Barrel Program. This program helps the local watershed by slowly releasing rainwater from the rain barrel into residents' gardens resulting in decreased stormwater runoff and pollution. Additionally, this assists in recharging the ground water. (See attached)

II.D The Town of Westborough Community Land Trust organizes a "Town Wide Earth Day Clean-up" every year. Volunteers of all ages come together to pick up litter from around our lakes, streams and streets. (See attached)

II.E Westborough Girl Scout Troop #11032 created three educational public service videos on stormwater pollution that is still being aired on all three Westborough TV stations year round. The Topics covered include:

- Scoop the Poop – animal waste pollutes humans drinking water supply
- Wash your car on the grass so soapy suds don't go into catch basins
- Don't litter – it's bad for the environment and can pollute stormwater

See attached and the video can be seen on the following link:
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BMP ID#	BMP Category	BMP Description	Responsible Dept. / Person	Measurable Goal (s)	Progress on Goal(s) Permit Year 12	Planned Activities Permit YR 13
II. Public Involvement and Participation						
II.A	General Public	Catch Basin Stenciling	DPW	Solicit and have volunteers perform CB stenciling	Ongoing. A limited number of Catch Basins were stenciled in permit year 12 due to lack of interest from the boy scouts.	• Concentrate on completing CB's in the downtown area first. • Continue asking groups to participate in stenciling program
II.B		Hazardous Waste Collection Day	BOH*	Hold Hazardous Waste Collection Day annually	Completed. The Board of Health continues to hold an household hazardous waste day annually.	• Continue to work with the Board of Health in running the collection day.
II.C		Rain Barrel program	DPW	Participate in the rain Barrel program in coordination with The Great American Rain Barrel Company	Completed. The Town of Westborough participates in this annually.	• Continue to participate in program. • create a link on Town website for residents to obtain information
II.D		Earth Day Clean-up	WCLT*	Earth Day Clean-up	Completed. The Town of Westborough participates in this annually.	• Continue assisting the WCLT in Earth Day activities • Reach out and determine if WCLT can participate in any other activities that would contribute to the stormwater campaign
II.E.	Students	Educate the public and fellow students	DPW	Create educational videos	Ongoing. The third grade Brownie Troop #30508 created 3 videos that are on local cable station all year round.	• The last videos were published March 22, 2013, reach out to the scouts and encourage them to make new ones
II. Public Involvement and Participation - NEW GOALS for YR13						
	General Public	Hold a public meeting to educate public on stormwater awareness	DPW	Advertise and hold public meeting	N/A	• Conduct a basic stormwater information presentation
	Students	Education		Improve school student involvement	N/A	• Investigate having a poster and/or photo contest for school students

WCLT* Westborough Community Land Trust

BOH* Board of Health

BMP # II.A
CB Stencil Program

BMP # II.B
Hazardous Waste Collection Day

Town Plans Hazardous Waste Drop-Off Day

Gather up your paint cans and electronics; Westborough's hosting a hazardous waste day.

By Charlene Arsenault (Patch Staff) September 4, 2014 at 4:12pm

The town of Westborough is holding a hazardous waste drop-off day on Sunday, Sept. 27, from 7:30 a.m. to noon at the DPW Facility, 183 Oak St.

Items allowed for drop-off include automotive supplies such as wax, fluids and oils. Most paints and solvents are acceptable for drop-off, and unrestricted pesticides, as well. Hobby supplies such as house chemistry sets and propane tanks are allowed. Household supplies approved for dumping include dyes, spot remover and moth balls.

There is a significant list of items not allowed, and also restrictions on the method of packaging the items.

View the full list of approved and restricted items, and other specifics, here.

BMP # II.C

Rain Barrel Program

BMP # II.D
Earth Day Clean-up

Westborough Community Land Trust (WCLT)

April 24, 2014 ·

Saturday is our annual Earth Day Clean-up. Come out and participate in making our town more attractive (now that the litter is not hidden by snow). http://westboroughlandtrust.org/

Westborough Community Land Trust

Show your community spirit-- make Westborough cleaner and greener! Rally your family and friends to join the annual town-wide Earth Day Litter Clean-up, sponsored by the Westborough Community Land Trust on Saturday, April 26....
westboroughlandtrust.org

Saturday
April 25, 2015
Earth Day Event
6:30 AM, 9:30 AM

Earth Day Town-Wide Clean-Up

Join the annual town-wide litter clean-up sponsored by WCLT!

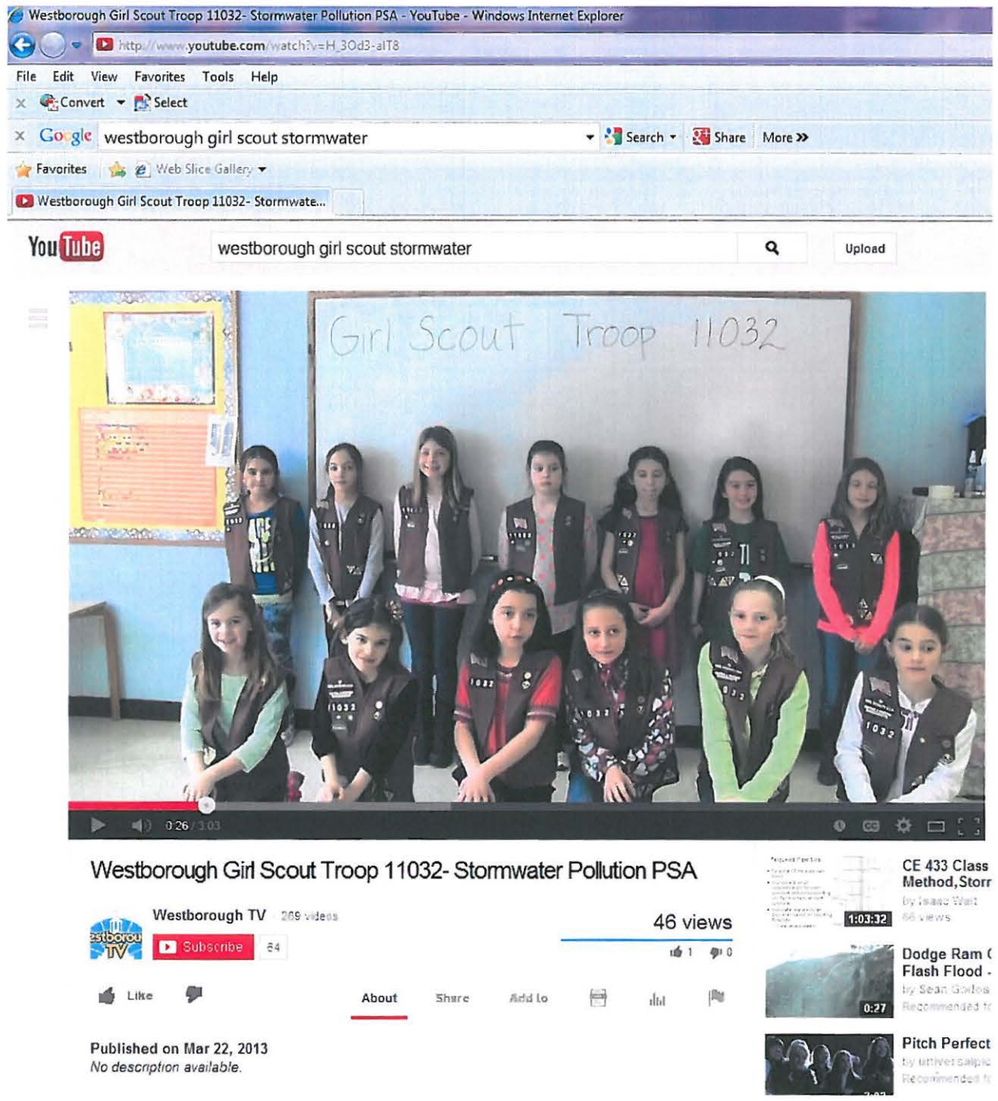
Early birds meet at 6:30 a.m. at West Meadow Plaza or Bellows Road.

Families are invited at 9:30 a.m. to Lake Chauncy parking lot to be assigned a site to clean up.

Wear gloves, long sleeves, and sturdy shoes—trash bags will be provided. Rally your co-workers or neighbors to form a team to pick up litter and beautify our streets!

Contact: earthday@westboroughlandtrust.org

BMP # II.E
Girl Scout PSA



III. Illicit Discharge Detection and Elimination

BMP ID#

III.A & IIIB The Town hired a college summer intern who spent the majority of time in the field performing field verification, field mapping and editing the mapping system to reflect actual site conditions. A summary of the changes can be found below under # III.C.

The college intern also spent a significant amount of time working with the Town's Consultant, Woodard & Curran, on the drain inspection study discussed further in # III.F. Based on the intern's recommendations, the Highway Department performed 12 manhole and catch basin repairs. One major drainage project was completed by DPW personnel. The failed corrugated culvert pipe at Ruggles Street and Valley Brook Road was excavated and replaced with a 30" HDPE drain pipe. The old corrugated pipe was replaced at the manhole in the street to the outfall headwall. Also, a 12" corrugated metal pipe was replaced with HDPE pipe from the catch basin to the trunk line.

The cost & time estimate associated with mapping this year.

Personnel	Time (Hours)	Cost ($)
1 Senior Volunteer	250	$2,500
1 College Intern	360	$4,680
Engineering Division	520	$13,000
MIS/GIS Director	30	$ 1125
Totals	**1160 hours**	**$ 21,305**

III. C. The Town has made progress on mapping. A summer intern and senior volunteer dedicated their efforts in enhancing the mapping system. As a result of this work the following work occurred:

- Catch basin inspection reports were numbered using the GIS id number and started entering the information into an excel spreadsheet. We hope to utilize the spreadsheet information in the future with (linkable) information in the mapping program.
- There were 86 point features (i.e. catch basins, manholes, etc.) added to the map system.
- Corrections resulted in 47 point features being deleted.
- An additional 12 point features were spatially adjusted.
- There were 129 line features (culverts and drain pipes) added.
- Corrections of line features resulted in 59 deleted.

III. D. The Town's Conservation Officer has revealed numerous instances of restaurants dumping grease and mop water into the storm drainage system. All of these violations have been cured and continue to be routinely monitored both by the Conservation Officer and the Board of Health. Furthermore, the Conservation Officer continues to ensure that the 29 oil/water separators that are located on private property but are tied directly into the Town's sewer system are maintained on a yearly basis. Inspection letter is attached.

III.E. Since January 2012, the Highway Department continues to survey catch basins while they are being cleaned. The properties of each catch basin in town are evaluated, inspected and recorded on CB (Catch Basin) Inspection Sheet. This includes the rough measurement of material removed from each basin. A sample inspection sheet is attached.

An important part of inspection is for the worker to look for indicators of illicit connections. All the data is being recorded in a spreadsheet and will be integrated into the GIS mapping program in the future.

III. F. The DPW signed a contract with Woodard & Curran to conduct a conditions assessment and develop a remedial plan for specific town – owned storm drains and culverts. Approximately 19,000 linear feet of existing drain pipe with diameters ranging from 8" to 36" was inspected with CCTV and cleaned where needed. No cross connections or illicit discharges were found.

As a result of inspections, the Town will begin to prioritize drainage areas to address. The actual work on these areas will occur as time and funding allows. [no attachment]

III. G. The Town completed its Sewer System Evaluation Study (SSES) with AECOM to perform work on its SSES program. The object of the study is to identify sources of Inflow and Infiltration into the wastewater system. A portion of the funds were dedicated to the investigation and inspection of the Towns interceptor from the downtown area to the WWTP which was constructed in 1968. The conclusion of the study is that the aging interceptor is deteriorating and is need of re-lining. The Town received the final report in February 2015. [shown in attachment]

III. H. The Town of Westborough has a Discharges to Municipal Storm Drain System bylaw that was adopted at the May of 2008 Annual Town Meeting. This bylaw functions as the IDDE bylaw required in the NPDES Permit. To date the program has been an effective, appropriate and enforceable program. [see attached]

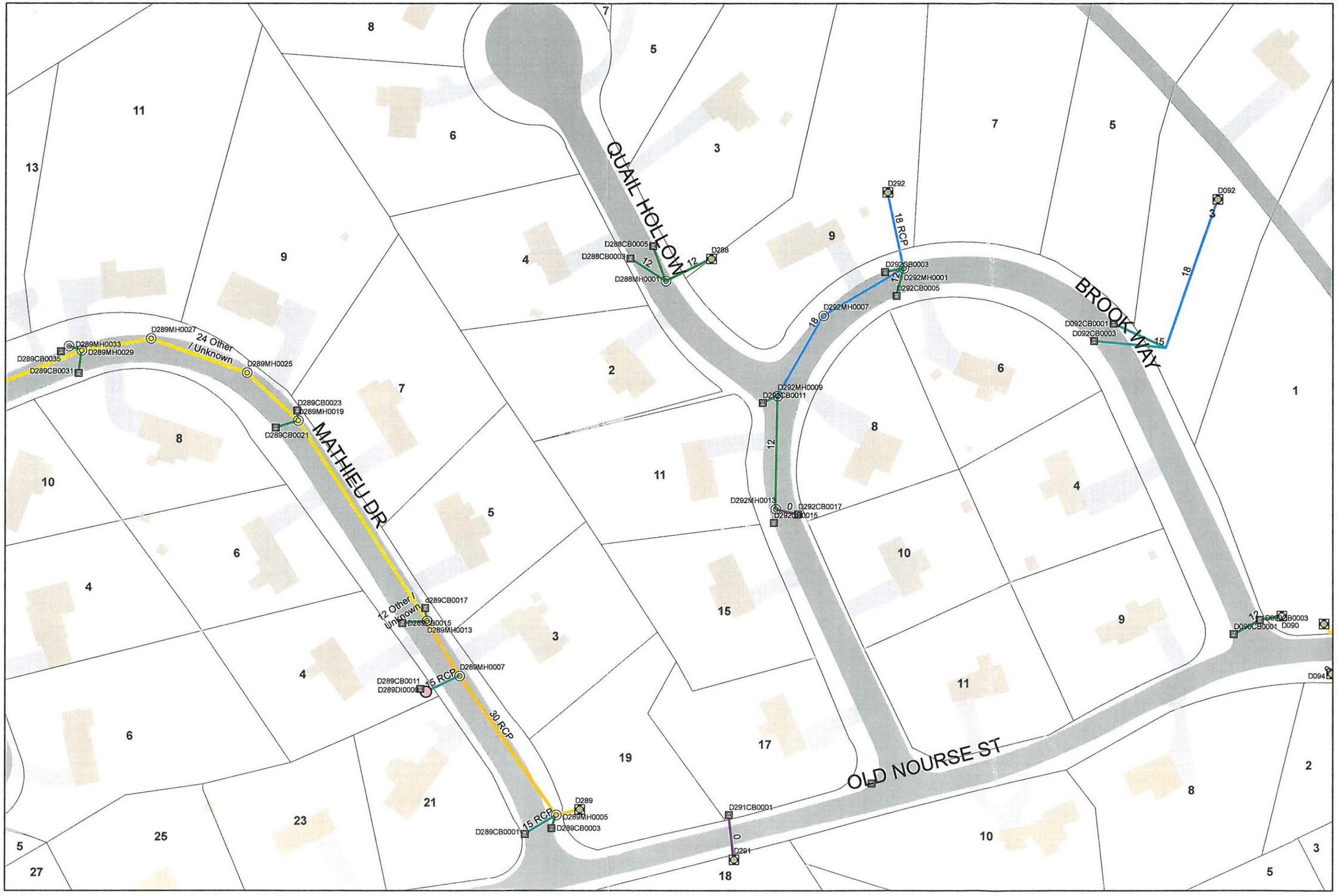
BMP ID#	BMP Category	BMP Description	Responsible Dept. / Person	Measurable Goal (s)	Progress on Goal(s) Permit Year 12	Planned Activities Permit YR 13
III. Illicit Discharge Detection and Elimination						
III.A	Stormwater System Mapping	Continue GIS Mapping	DPW	Focus on QA/QC of the maps between the field and the database	Ongoing. A full time summer intern took map sheets in the field and checked for accuracy. Discrepancies were GPS'd in and/or added by visual observation.	• The Town would benefit greatly with the purchase of its own GPS unit. Currently the Town shares 2 GPS units among a 30 town coalition and therefore access to the units is limited. • Continue correcting and updating maps as time allows and gather information from projects being completed in Town.
III.B			DPW	Map all and inspect all outfalls. Monitor outfall for contrition and begin water quality field testing.	In previous years, the outfall mapping was completed. Inspections have not occurred on a regular basis nor was water quality monitoring performed.	• Perform & record inspection of all outfalls in Town • Begin water quality program with goal of 20% outfalls tested during year 13.
III.C			GIS/MIS	Make changes and up-dates to main database	Ongoing. Utilized a senior volunteer to assist in mapping updates	• Enhance the mapping to allow for links associated with specific drainage features. • Seek out additional qualified volunteers
III.D		Inventory commercial properties whose drain system directly discharges into municipal drainage system	CON COM Officer	**NEW YR12.** Identify, create a database and map all of the commercial properties. Indentify which sites discharge directly into the municipal drainage system.	The database has been created and continues to be updated. Mapping has not occurred at this time due to time and financial constraints.	• Work with MIS Director to have the information integrated into the Town mapping system. • Seek additional funding to continue and expand these efforts.
III.E.		Identify and eliminate illicit discharges from non-residential sites	CON COM Officer	**NEW YR12.** Identify sites that are illicitly discharging into the municipal drainage system and take corrective action where applicable	The database has been created to highlight these sites. The Con Com officer has taken the steps to eliminate the discharges.	• Work with MIS Director to have the information integrated into the Town mapping system. • Seek additional funding to continue and expand these efforts.
III.F	IDDE Plan	During CB Cleaning activities look for illicit discharges	DPW	Record conditions of each CB on "CB Inspection Sheet". Create and record information on a computer spreadsheet	DPW crews continue to fill out CB Inspection forms.	• Crews have found the existing inspection form cumbersome. Revise form to better suit crew needs. • Continue logging all inspection information in spread sheet. • Integrate information into GIS Mapping Database.
III.G		Drain Inspection Program	DPW	Contract camera work to inspect existing drainage networks	The DPW contracted with Woodard & Curran for perform study	• Use results from study to investigate any possible illicit connections • Create prioritized list.
III.H		Sewer System Evaluation Study (SSES)	DPW	Continue with SSES activities	Final report submitted February 2015	• Review report and begin obtaining funds for prioritized areas.
III.I	Bylaw Ordinance	IDDE by-law	DPW	Implementation of IDDE by-law	Continue on monitoring for potential Illicit discharges and address any with the authority of the by-law	• Research and evaluate if by-law needs updating. • Update bylaw officially.
III. Illicit Discharge Detection and Elimination - NEW GOALS for YR13						
	Inspection & Enforcement	Illicit discharge elimination	DPW/ Bldg Dept	Solicit help from other Town departments in continuing to find and/or prevent illicit connections	N/A	Investigate the potential of enlisting Town Plumbing Inspector to inspect all plumbing permit work for potential cross connections or illicit discharges in to storm drain system.
	Investigation	search for illicit discharges	DPW	DPW will investigate/apply grant programs and opportunities for funding assistance.	N/A	Research funding options for future studies and apply when applicable

DRAINAGE INDEX MAP - SECTION

BMP # III.A, B & C
SAMPLE OF WESTBOROUGH MAPPING

N
W E
S

1 inch = 94 feet



LEGEND
- POND
- STREAM
- WETLAND/MARSH
- PARCEL BOUNDARIES

BMP # III. D

SAMPLE STORMWATER MAINTENANCE LETTER

TOWN OF WESTBOROUGH
MASSACHUSETTS

45 West Main Street
Forbes Municipal Building,
2nd Floor, Suite 22
Westborough, Ma. 01581

May 27, 2014

RE: 2014 Stormwater Maintenance Inspection

Dear Property Owner/Manager:

The Town of Westborough acting through its Planning Board and Conservation Commission will once again be performing site inspections on all commercial/industrial/high density residential properties in Town. In May of this year, Cumberland Farms was the recipient of the Stormwater Management and Water Quality Award for their efforts in the protection Westborough's natural resources. I personally want to thank all of the property owners/managers for their cooperation last year in fulfilling their obligations in maintaining their drainage structures. **Please contact me at your earliest convenience so that we can set up a mutual time to inspect your property(s), this meeting is mandatory to ensure compliance.** The intent of the site inspections is to ensure that the following maintenance activities are performed on your property(s):

- Clean catchbasins/leaching catchbasins, oil/water separators or similar structure(s) via a sediment ***vacuum*** truck.
- Maintain (i.e. mow) all detention basin(s).
- Remove all vegetation within 20-feet of any drainage structure(s), (i.e. headwalls, drainage outfalls, or related structures).
- Remove vegetation within all drainage swales and rip-rap aprons.
- Remove trash from within drainage swales, detention basins, and wetlands.
- Sweep pavement surfaces.
- If your property is subject to an Operation and Maintenance Plan pursuant to a permit either by or jointly required by the Planning Board and the Conservation Commission please adhere to those site specific requirements.

I will be able to assist you and your contractors should any questions arise regarding any of the above maintenance requirements. I can meet with your contractors on-site so that they have a clear understanding of the scope of work so that you can receive accurate quotes.

BMP # III. E

Street _____ Catalog # _____

Map # _____ Section# _____ Date _____

Catch Basin Field Data Sheet

Depth before cleaning _____

Depth after cleaning _____

Indicators of Illicit Discharge

Odor? *Y* *N* Describe odor: *Sewage* *Gas* *Sour* *Sulfur* *Other:* _____

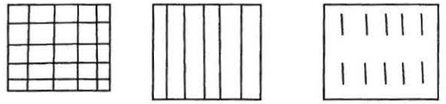
Color? *Clear* *Brown* *Grey* *Green* *Yellow* *Red* *Orange* *Other:* _____

Is the water cloudy? *Y* *N*

Anything floating? *Sewage* *Toilet Paper* *Petroleum* *Other:* _____

Condition of the structure

Frame _____ Grate _____



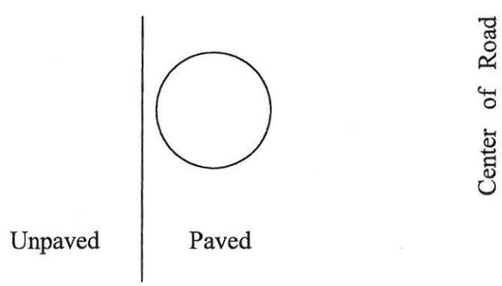
Collar _____ Invert _____

Brickwork _____ Type: *Masonry Block* *Precast* *Other:* _____

Hood present? *Y* *N* *Condition:* _____

Are Drain Pipes on the map? *Y* *N* *(if not, draw them in)*

Size and type of pipes *(Draw)*



Initials of Inspector: _____

BMP # III. G

Sewer System Evaluation Survey
Westborough, Massachusetts

Prepared for:

Town of Westborough
Department of Public Works
131 Oak Street
Westborough, Massachusetts 01581

Prepared by:

AECOM Technical Services, Inc.
250 Apollo Drive
Chelmsford, Massachusetts 01824

February 2015
J.N. 112560

BMP # III. H

WESTBOROUGH ILLICIT DISCHARGE BYLAW

BYLAW GOVERNING DISCHARGES TO

THE MUNICIPAL STORM DRAIN SYSTEM

SECTION 1. PURPOSE

Increased and contaminated stormwater runoff is a major cause of impairment of water quality and flow in lakes, ponds, streams, rivers, wetlands and groundwater; contamination of drinking water supplies; alteration or destruction of aquatic and wildlife habitat; and flooding.

Regulation of illicit connections and discharges to the municipal storm drain system is necessary for the protection of the Town of Westborough's water bodies and groundwater, and to safeguard the public health, safety, welfare and the environment.

The objectives of this by-law are:

1. to prevent pollutants from entering the town's municipal separate storm sewer system (MS4);

2. to prohibit illicit connections and unauthorized discharges to the MS4;

3. to require the removal of all such illicit connections;

4. to comply with state and federal statutes and regulations relating to stormwater discharges; and

5. to establish the legal authority to ensure compliance with the provisions of this by-law through inspection, monitoring, and enforcement.

SECTION 2. DEFINITIONS

For the purposes of this by-law, the following shall mean:

AUTHORIZED ENFORCEMENT AGENCY: The Town of Westborough Department of Public Works (DPW) Manager, its employees or agents designated to enforce this by-law.

BEST MANAGEMENT PRACTICE (BMP): An activity, procedure, restraint, or structural improvement that helps to reduce the quantity or improve the quality of stormwater runoff.

BMP # III. H

WESTBOROUGH ILLICIT DISCHARGE BYLAW

POLLUTANT: Any element or property of sewage, agricultural, industrial or commercial waste, runoff, leachate, heated effluent, or other matter whether originating at a point or nonpoint source, that is or may be introduced into any municipal storm drain system including private sources/systems or to waters of the Commonwealth. Pollutants shall include without limitation:

(1) paints, varnishes, and solvents;

(2) oil and other automotive fluids;

(3) non-hazardous liquid and solid wastes and yard wastes;

(4) refuse, rubbish, garbage, litter, or other discarded or abandoned objects, ordnances, accumulations and floatables;

(5) pesticides, herbicides, and fertilizers;

(6) hazardous materials and wastes; sewage, fecal coliform and pathogens;

(7) dissolved and particulate metals;

(8) animal wastes;

(9) rock, sand, salt, soils;

(10) construction wastes and residues; and

(11) and noxious or offensive matter of any kind.

PROCESS WASTEWATER: Water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any material, intermediate product, finished product, or waste product.

RECHARGE: The process by which groundwater is replenished by precipitation through the percolation of runoff and surface water through the soil.

STORMWATER: Storm water runoff, snow melt runoff, and surface water runoff and drainage.

SURFACE WATER DISCHARGE PERMIT. A permit issued by the Department of Environmental Protection (DEP) pursuant to 314 CMR 3.00 that authorizes the discharge of pollutants to waters of the Commonwealth of Massachusetts.

BMP # III. H
WESTBOROUGH ILLICIT DISCHARGE BYLAW

SECTION 7. PROHIBITED ACTIVITIES

Illicit Discharges. No person shall dump, discharge, cause or allow to be discharged any pollutant or non-stormwater discharge into the MS4 (see definition), into a watercourse, or into the waters of the Commonwealth or the United States.

Illicit Connections. No person shall construct, use, allow, maintain or continue any illicit connection to the municipal storm drain system, regardless of whether the connection was permissible under applicable law, regulation or custom at the time of connection.

Obstruction of Municipal Storm Drain System. No person shall obstruct or interfere with the normal flow of stormwater into or out of the municipal storm drain system without prior written approval from The DPW Manager or its agent.

SECTION 8. EXEMPTIONS

Discharge or flow resulting from fire fighting activities.

DPW ice and snow control operations.

The following non-stormwater discharges or flows are exempt from the prohibition of non-stormwaters provided that the source is not a significant contributor of a pollutant to the municipal storm drain system:

(1) Waterline flushing;

(2) Flow from potable water sources;

(3) Springs;

(4) Natural flow from riparian habitats and wetlands;

(5) Diverted stream flow;

(6) Rising groundwater;

(7) Uncontaminated groundwater infiltration as defined in 40 CFR 35.2005(20), or uncontaminated pumped groundwater;

(8) Water from exterior foundation drains, roof drains, footing drains (not including active groundwater dewatering systems), crawl space pumps, sump pumps, or air conditioning condensation;

Authorized Enforcement Agency no later than the next business day. The reporting person shall provide to the Authorized Enforcement Agency written confirmation of all telephone, facsimile or in-person notifications within three business days thereafter. If the discharge of prohibited materials is from a commercial or industrial facility, the facility owner or operator of the facility shall retain on-site a written record of the discharge and the actions taken to prevent its recurrence. Such records shall be retained for at least three years.

SECTION 11. ENFORCEMENT

The DPW Manager or its agent shall enforce this by-law, regulations, orders, violation notices, and enforcement orders, and may pursue all civil and criminal remedies for such violations.

Civil Relief. If a person violates the provisions of this by-law, regulations, permit, notice, or order issued thereunder, the DPW Manager or its agent may seek injunctive relief in a court of competent jurisdiction restraining the person from activities which would create further violations or compelling the person to perform abatement or remediation of the violation.

Orders. The DPW Manager or its agent may issue a written order to enforce the provisions of this by-law or the regulations thereunder, which may include: (a) elimination of illicit connections or discharges to the MS4; (b) performance of monitoring, analyses, and reporting; (c) that unlawful discharges, practices, or operations shall cease and desist; and (d) remediation of contamination in connection therewith.

If the enforcing person determines that abatement or remediation of contamination is required, the order shall set forth a deadline by which such abatement or remediation must be completed. Said order shall further advise that, should the violator or property owner fail to abate or perform remediation within the specified deadline, the Town of Westborough may, at its option, undertake such work, and expenses thereof shall be charged to the violator.

Within thirty (30) days after completing all measures necessary to abate the violation or to perform remediation, the violator and the property owner will be notified of the costs incurred by the Town of Westborough, including administrative costs. The violator or property owner may file a written protest objecting to the amount or basis of costs with the DPW Manger or its agent within thirty (30) days of receipt of the notification of the costs incurred. If the amount due is not received by the expiration of the time in which to file a protest or within thirty (30) days following a decision of the DPW Manager or its

IIII. Construction Site SW Runoff Control

BMP ID#

IIII.A The Town's Stormwater By law [see attachment BMP V.A for a copy of the By law] requires all projects that disturb one acre or more to meet the Massachusetts Stormwater Management Standards including:

- No increase in post-development peak rate of runoff
- No increase in post-development peak volume of runoff
- Recharging groundwater
- Water Quality Volume
- TSS Removal
- 72-hour drawdown
- No new stormwater conveyances

IIII.B June 2009, the Town began issuing and keeping track of all Stormwater Permits for projects that disturb over 5,000 square feet of land. Plans are continuously being reviewed for site runoff control. These projects have been permitted with local Stormwater Pollution Prevention Plans. Construction inspections continue for all projects. See attached for listing of stormwater permits pulled.

We found that many homeowners felt overwhelmed by the Town's Stormwater requirements. Therefore, in the fall of 2012, we developed a simple document titled "Stormwater Permit Requirements". For each small project (less than 5,000 square feet of disturbance) the DPW prepared a list of conditions that must be met by the owner. We have continued to issue this document and are revising it as necessary.

IIII.C The Town's Conservation Officer prepares very detailed set of Orders of Conditions under the Wetlands Protection Act that aim to prevent construction sites from discharging runoff from the limits of approved construction. This has been highly successful and the Orders of Conditions include assistance in reviewing certain construction elements by the Town's Engineering Department. This procedure assists in ensuring that detention basins are sized correctly, groundwater elevations conform to previous modeling, and that the overall utilities are installed in conformance with the approved plans.

IIII.D The Town's Conservation Officer will continue to perform on-site inspections of all projects that have Orders of Conditions during the construction phase. A site report with any violations found will be completed and filed in the Town records.

BMP ID#	BMP Category	BMP Description	Responsible Dept. / Person	Measurable Goal (s)	Progress on Goal(s) Permit Year 12	Planned Activities Permit YR 13
IIII. Construction Site Storm Water Runoff Control						
IIII.A	Regulatory Mechanism	Bylaw to regulate erosion and sediment (E&S) control on construction sites	DPW/ Planning Dept	Develop and implement a bylaw for E&S control utilizing appropriate BMPs	Completed. Stormwater By-law adopted in Year 6.	• Perform a review of the by-law and update as necessary
IIII.B	Stormwater Management Policy	Pre-construction review of stormwater control plan	DPW	Review all incoming projects for compliance of stormwater management policy and BMPs on project sites	Completed. DPW continues to review all submissions and evaluate proposed BMPs for conformance of regulations	• Continue to require stormwater permits • Review and update permit as necessary • Continue reviewing all incoming plans for stormwater applicability • Continue requiring local control and reporting.
IIII.C	Stormwater Management Policy	Pre-construction review of stormwater control plan	CON COM Officer	Review all incoming projects from the Conservation Commission Officer's point of view apply stormwater management policy if project meets criteria.	Completed. Con Com Officer continues to review all project submissions for stormwater policy applicability and write detail Order of Conditions to ensure compliance.	• Continue reviewing all in coming plans and projects.
IIII.D	Inspection & Enforcement	Conduct construction site inspections. Keep inspection records and violation reports	DPW/ CON COM Agent	Designate staff and perform inspections. Follow stormwater by-law procedures for any violations	Completed. Trained staff perform regular inspections of all active construction sites. Maintain all records.	• Continue site inspections and writing site inspection reports. • Maintain files on all inspection including violations • review current procedures and evaluate whether any adjustments should be made
IIII. Construction Site Storm Water Runoff Control - NEW GOALS for YR13						

BMP # IIII. B

Permit No. _____
Fee Collected _____

Department of Public Works
Town of Westborough,
Massachusetts

STORMWATER PERMIT

Location of Property_____

Name of Applicant_____ Phone_____

Address_____ Cell Ph._____

Name of Owner_____ Phone_____

Address_____ Cell Ph._____

Name of Contractor_____ Phone_____

Address_____ Cell Ph._____

Description of work to be done:	Check all that apply □ Disturb more than 5,000 SF of land □ Stockpile more than 100 CY of excavate or fill □ Disturb more than 43,560 SF of land □ Major alteration of drainage characteristics

Instructions:

1. Complete and sign this form.
2. Attach the fee and 4 copies of the plan.
3. Deliver this form, the fee, the Stormwater Management plans and narrative to the DPW.
4. The DPW will notify the Conservation Commission, Building Department and Planning Board upon submission.

The undersigned hereby requests the DPW and Conservation Commission review and consider my/our application for a Stormwater Management Permit and, by finding full conformance with the Westborough Bylaws governing said application, grant a Stormwater Management Permit to allow the activities described on this form.

_____ _____
Applicant's Signature Owner/Agent Signature

Issued By: _____ Date: _____

APPLICATION FOR STORMWATER PERMITS

PERMIT #	CONTRACTOR	LOCATION	DATE	PAID
2014-3	CUTLER ASSOCIATES BOB GRYZB 43 Harvard St. Worcester, MA	155A OAK STREET (SPECTRUM MEN'S FACILITY)	4-29-14	$750.00
2014-4	Mountainside	289 Turnpike	5-9-14	$100. —
2014-5	Vantage Builders	168 Frances Rd	6-2-14	$100. pd
2014-6	CM+B	303 Turnpike	6-6-14	$25 pd
2014-7	Westboro Toyota	271 Turnpike	8-13-14	$750 pd
2014-8	Robert Portal	40 Hopkinton	9-10-14	$25 pd
2014-9	Kistler + Knapp Bldrs	23 Jacob Amsden		
2014-10	Fryer Engineering	40 Washington St.	11-12-14	$100 pd
2014-11	MS Construction	45 Belknap St.	11-21-14	$25
2014-12	BLV Homes	76-78 Lyman ST	12-11-14	$25
2014-13	Gary Kaye	206 Ruggles ST	12-23-14	$25

APPLICATION FOR STORMWATER PERMITS

PERMIT #	CONTRACTOR	LOCATION	DATE	PAID
SWP2015-1	Tenatee	24 Nourse St	1-6-15	$25 pd
SWP2015-2	Lomountain Roos	130 Turnpike Rd	3-12-15	$100 pd

BMP # IIII. B

Department of Public Works
Town of Westborough,
Massachusetts

STORMWATER PERMIT DATA SHEET
November 15, 2010

Applicability

- Disturb more than 5,000 SF of land
- Stockpile more than 100 CY of excavate or fill
- Disturb more than 43,560 SF of land
- Major alteration of drainage characteristics

Instructions:

1. Complete and sign the Stormwater Permit form.
2. Attach the fee and 4 copies of the plan.
3. Deliver this form, the fee, the Stormwater Management plans and narrative to the DPW.
4. The DPW will notify the Conservation Commission, Building Department and Planning Board upon submission.

Filing Fees

Permit Type:	Filing Fee:
Disturbing less than 1 acre	
• Limited Review	$25
• Commercial Limited Review	$100
Disturbing more than 1 acre	
• Single Family	$100
• Residential/Subdivision	$500
• Commercial	$750

Make check payable to "Town of Westborough"

V. Post Construction SW. Management

BMP ID#

V.A The stormwater By-law adopted in reporting Year 6 continues to be an effective tool in the Town's efforts to mitigate degradation of the Towns water bodies. See attached for a copy of the By-law.

V.B All new development and redevelopment in town must design, construct and maintain stormwater management practices that improve upon the pre-development runoff conditions following construction. The post-construction rate and volume of discharges are not permitted to exceed the pre-development conditions. These goals are accomplished by use of infiltration and drainage system improvements.

- The Town's Stormwater Bylaw requires that all projects which disturb more than one acre comply with the DEP Stormwater Management Requirements. The DPW reviews projects with no wetlands the same as they would if there were wetlands. All projects must meet Stormwater Management Requirements. This includes:
  - Mitigating peak rate and volume of runoff
  - Writing a full SWPPP with Erosion and Sediment Control Plan
  - Providing Required Recharge volume calculations
  - Providing Water Quality volume calculations
  - TSS removal calculations
  - Sediment forebay sizing
  - Stormwater Management checklist (from DEP)
  - Show calculations for 1" roof runoff recharge
  - Estimated seasonal high ground water elevation and determine the Hydrologic soil group by a soil professional
  - 72 hour drawdown calculations

The Town requires the submittal of as-built plans before occupancy permits are issued. This provides the Town with the ability to assure that the project has been built according to our regulations and that all permit requirements have been fulfilled appropriately.

V.C. Site inspections are conducted on all project sites on a regular basis for assurance that BMP's are in compliance.

III. D. The Westborough Conservation Officer has created a database of 260 private sites that include a mix of industrial, commercial, and high-density residential sites that are yearly inspected for compliance with Town's stormwater maintenance requirements. Additionally, the database indentifies which commercial properties have on-site drainage that discharge directly into the public drain system. All the sites have been broken down into their respective river basins and aquifer zones. This information is valuable and will enhance the Town's GIS mapping system once it is integrated together. An example of the database's capabilities is attached. The Town's conservation officer will continue to send out yearly

letters [see attached] to all 260 sites reminding them of their obligations and to set up yearly visits.

V.E During the review process, a Stormwater Operations and Maintenance document must be prepared by the applicant and is reviewed by the Town. The document must include provisions for all aspects of maintaining the stormwater system with specific inspections and maintenance schedules. The Stormwater Bylaw gives the Town authority to perform corrective actions and recoup the costs from the owner/operator if necessary.

BMP ID#	BMP Category	BMP Description	Responsible Dept. / Person	Measurable Goal (s)
V. Post-Construction Stormwater Management New Development and Re-development				
V.A	Regulatory Mechanism	Bylaw to regulate controls for post construction runoff	DPW/ Planning Dept	Develop and implement a bylaw that regulates the control for post construction runoff and the appropriate BMPs
V.B	Stormwater Management Policy	Implement policy that during and post construction phase projects will be reviewed for continued conformance with the regulations.	DPW/ Planning Dept	Review all projects at various stages of construction for compliance of stormwater policy and appropriateness of installed BMPs on project sites.
V.C	Inspection & Enforcement	Conduct construction site inspections for assurance that BMPs are compliant	DPW/ CON COM Agent	Designate staff and perform inspections for each project
V.D	Inspection & Enforcement	Create database of private sites and over see operations to ensure stormwater compliance	CON COM Agent	**NEW YR12.** Create database and perform inspections
V.E	BMP Operation and Maintenance Procedures	Develop Operation and Maintenance Procedures for structural BMPs.	DPW/ CON COM Agent	Develop procedures and require submission of O&M plans for each project
IIII. Construction Site Storm Water Runoff Control - NEW GOALS for YR13				
	Sampling	perform sampling to verify compliance or non-compliance of stormwater policies		perform sampling on down stream watersheds of projects that have suspected negative impacts to the watershed. Developed enforcement measures and procedures

BMP # V.A

WESTBOROUGH STORMWATER BYLAW

STORMWATER MANAGEMENT AND EROSION CONTROL BYLAW

SECTION 1. PURPOSE

Erosion and sedimentation is a significant environmental concern in Westborough. Inadequate stormwater management systems can result in property damage, flooding, the contamination of drinking water supplies, the loss of recreational opportunities, adverse impacts on fisheries and wildlife, the loss of wetlands, costly maintenance of the Town's stormwater system, and the loss of valuable agricultural soils. The purpose of this bylaw is to prevent or diminish these impacts by controlling runoff and preventing soil erosion and sedimentation resulting from site construction and development.

This bylaw also establishes stormwater management standards for the final conditions that result from development and redevelopment projects to minimize adverse impacts offsite and downstream which would be born by abutters, townspeople and the general public.

SECTION 2. DEFINITIONS

ALTERATION OF DRAINAGE CHARACTERISTICS — Any activity on an area of land that changes the water quality, force, direction, timing or location of runoff flowing from the area. Such changes include: change from distributed runoff to confined, discrete discharge, change in the volume of runoff from the area; change in the peak rate of runoff from the area; and change in the recharge to groundwater on the area.

BEST MANAGEMENT PRACTICE or BMP — A structural, nonstructural, or vegetative measure which reduces erosion, sediment, peak storm discharge, and/or improves the quality of stormwater runoff as described in Stormwater Management or in a publication substantially equivalent.

THE BOARD – Town of Westborough Conservation Commission OR its authorized agent(s).

CLEARING — Any activity that removes the surface cover from land and exposes soil to the potential influence of stormwater.

CRITICAL AREAS —

A. Disturbed areas 2,000 square feet or greater within the watershed of any of the Town's drinking water supplies; or
B. Disturbed areas containing slope lengths exceeding 25 feet on slopes greater than 15%.

DEVELOPMENT — Any construction or grading activities other than for agricultural and silvicultural purposes.

DISTURBED AREA — An area where the natural vegetation has been removed, or is proposed to be removed, in connection with a development resulting in exposing the underlying soil or covering up of vegetation. In addition, it includes moving soil, asphalt, rock, sand and gravel.

ENFORCING AGENT — The Town of Westborough Conservation Commission and its employees or appointed agents shall be in charge of enforcing the requirements of this bylaw as they affect water bodies or wetland issues. The Town of Westborough Department of Public Works (DPW) and its employees or appointed agents shall be in charge of enforcing the requirements of this bylaw as they affect the municipal storm drain system.

EROSION — A condition in which the earth's surface, including soil or rock fragment, is detached and moved away by the action of water, wind, ice, gravity or other means.

GRADING — Changing the level or shape of the ground surface.

GRUBBING — The act of clearing land surface by digging up roots and stumps.

IMPERVIOUS SURFACE — Any material or structure on or above the ground that prevents water infiltrating the underlying soil. Impervious surface includes without limitation roads, paved parking lots, sidewalks, and roof tops.

MASSACHUSETTS STORMWATER MANAGEMENT POLICY — The Policy issued by the Department of Environmental Protection, and as amended, that coordinates the requirements prescribed by state regulations promulgated under the authority of the Massachusetts Wetlands Protection Act G.L. c. 131 § 40 and Massachusetts Clean Waters Act G.L. c. 21, §. 23-56. The Policy addresses stormwater impacts through implementation of performance standards to reduce or prevent pollutants from reaching water bodies and control the quantity of runoff from a site.

MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) or MUNICIPAL STORM DRAIN SYSTEM — The system of conveyances designed or used for collecting or conveying stormwater, including any road with a drainage system, street, gutter, curb, inlet, piped storm drain, pumping facility, retention or detention basin, natural or man-made or altered drainage channel, reservoir, and other drainage structure that together comprise the storm drainage system owned or operated by the Town of Westborough.

NOTICE OF INTENT – The written notice filed by any person intending to remove, fill, dredge or alter an Area Subject to Protection under M.G.L. c. 131 § 40.

OPERATION AND MAINTENANCE PLAN — A plan setting up the functional, financial and organizational mechanisms for the ongoing operation and maintenance of a stormwater management system to insure that it continues to function as designed.

ORDER OF CONDITIONS – The document issued by a conservation commission containing conditions which regulate or prohibit an activity.

OUTFALL — The point at which stormwater flows out from a point source discernible, confined and discrete conveyance into waters of the Commonwealth.

OUTSTANDING RESOURCE WATERS (ORWs) — Waters designated by Massachusetts Department of Environmental Protection as ORWs. These waters have exceptional sociologic, recreational, ecological and/or aesthetic values and are subject to more stringent requirements under both the Massachusetts Water Quality Standards (314 CMR 4.00) and the Massachusetts Stormwater Management Standards. ORWs include vernal pools certified by the Natural Heritage Program of the Massachusetts Department of Fisheries and Wildlife and Environmental Law Enforcement, all Class A designated public water supplies with their bordering vegetated wetlands, and other waters specifically designated.

OWNER — A person with a legal or equitable interest in property.

PERSON — An individual, partnership, association, firm, company, trust, corporation, agency, authority, department or political subdivision of the Commonwealth or the federal government, to the extent permitted by law, and any officer, employee, or agent of such person.

POINT SOURCE — Any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, or container from which pollutants are or may be discharged.

PROJECT AREA — The area within the boundaries of a development and shall include the area within any proposed subdivision or as depicted on a site plan.

REDEVELOPMENT — Development, rehabilitation, expansion, demolition or phased projects that disturb the ground surface or increase the impervious area on previously developed sites.

RUNOFF — Rainfall, snowmelt, or irrigation water flowing over the ground surface.

SEDIMENT — Solid material, whether mineral or organic, that is in suspension, is transported or has been moved from its site of origin by erosion.

STABILIZED — The reduction in the soil erosion rate which results in an erosion rate typical of undisturbed soils. Soils which are disturbed will be considered stabilized when covered with a healthy, mature growth of grass. As a temporary measure only, disturbed soils will be considered stabilized if covered with a sufficient covering of hay or straw mulch, applied in an amount of at least two tons per acre, sufficient to prevent erosion on an interim basis.

STORMWATER MANAGEMENT PLAN — A plan required as part of the application for a Stormwater Management Permit. See Section 4.

STORMWATER MANAGEMENT — As a text, shall mean the Stormwater Management Standards and Handbooks, as revised, prepared by the Massachusetts Department of Environmental Protection and the Massachusetts Office of Coastal Zone Management.

STORMWATER RUNOFF — Water from precipitation which is not absorbed, evaporated or otherwise stored within the contributing drainage area.

TSS: Total Suspended Solids.

WATERSHED — The land area which drains into any number of streams, ponds, and rivers within the Town including Westborough Reservoir and Sandra Pond.

SECTION 3. APPLICABILITY

All projects shall prevent the discharge of polluted stormwater to wetlands, waterbodies, or the Municipal Storm Drain System of the Town of Westborough.

Where a project is subject to Subdivision Approval, Site Plan Review, Special Permit, Wetland Protection Act, Order of Conditions or Comprehensive Permit, the Stormwater Management and Erosion Control Bylaw requirements shall be met during review.

For projects involving:

1. Disturbance of more than 5,000 square feet up to 1 acre (43,560 square feet) of land

OR

2. Stockpiling more than 100 cubic yards of excavate or fill

The applicant shall be required to follow the procedures as outlined below:

(a) Notify DPW in writing of the date and nature (including a sketch) of the proposed project at least 10 days prior to commencement of site clearing or stockpiling activities;

(b) Implement measures to prevent the offsite discharge of sediment;

(c) Construction materials (paints, glue, thinners, etc.) shall be managed so as not to pollute stormwater. Containers/materials shall be stored and disposed of properly;

(d) Implement other stormwater management measures at the direction of the DPW;

(e) The erosion control system shall be inspected by the DPW, Conservation Commission, or its agent prior to disturbing the site. The applicant shall be responsible for maintaining and removing this system at project completion.

(f) Provide additional stormwater-related information at the request of the DPW, Conservation Commission or its agent. This may include providing an engineered plan prepared and stamped by a Massachusetts Registered

Professional Engineer or a Certified Professional In Erosion and Sediment Control evaluating existing drainage systems as required.

For projects involving:

1. Total cumulative disturbed area of more than 1 acre (43,560 square feet)

OR

2. Development which causes alteration of drainage characteristics (see definition in section 2 of alteration of drainage characteristics)

A Stormwater Management Application as described in Section 4 shall be filed with the DPW.

No person shall start any project subject to the provisions of this bylaw without first obtaining the approval of the DPW, Conservation Commission or its agent.

Exemptions:

- Normal maintenance and improvement of land in agricultural use as defined by the Wetlands Protection Act regulation 310 CMR 10.04;
- Maintenance of existing landscaping, gardens or lawn areas (not to exceed 2,000 square feet) associated with a single or two-family dwelling;
- The construction of fencing that will not substantially alter existing terrain or drainage characteristics or patterns;
- Construction of utilities other than drainage (gas, water, electric, telephone, etc.) which will not alter terrain or drainage characteristics or patterns;
- The exemptions applicable to agricultural or forestry operations, contained in the Wetlands Protection Act, MGL c. 131, § 40, shall apply to this chapter.
- The reconstruction or resurfacing of any public way shall be exempt from the provisions of this chapter. The use of Best Management Practices shall be employed.
- Municipal maintenance activities
- Firefighting activities

SECTION 4. APPLICATION REQUIREMENTS

The Plan shall be designed to meet the Massachusetts Stormwater Management Standards, DEP Stormwater Management Handbooks, as revised, and those criteria identified in section 5 of the Bylaw. The plans, documents and calculations submitted must be stamped by a Massachusetts Professional Engineer or a Certified Professional in Erosion and Sediment Control.The applicant shall complete and sign the Stormwater Permit Application and deliver the application, Stormwater Management Plan and drawings to the DPW. The Stormwater Management Plan shall fully describe the project in drawings and narrative. It shall include:

1) Contact information
   a) The location of the Stormwater Management Plan.
   b) The name, address and the beeper or cell phone number, if applicable, of the:

i) owner of the project;
ii) operator of the project;
iii) emergency contact;
iv) person responsible for routine inspections of Best Management Practices;
v) person responsible for maintaining the Best Management Practices;
vi) person responsible for documenting changes to the Stormwater Management Plan;
vii) person responsible for communicating changes in the Stormwater Management Plan to the people working on the site.

2) Site map requirements:
   a) A locus map showing the parcel in relation to the surrounding properties
   b) A North arrow, scale and date
   c) The property lines
   d) Easements and/or legal rights of other persons within the property lines
   e) All structures, utilities, downstream culverts, roads and other paved areas
   f) Topographic contours at two foot intervals
   g) Critical area boundaries at the site
   h) Surface water and wetlands, drainage patterns and watershed boundaries
   i) Existing vegetation at the site
   j) The extent of one-hundred-year floodplain boundaries if identified on the Federal Emergency Management Agency floodplain maps
   k) Soils information for design purposes from the Natural Resources Conservation Services soil survey and available site soil samples
   l) A depiction of areas of soil disturbance
   m) A depiction of areas of cut and fill
   n) A construction details sheet showing notes specifying materials to be used and construction specifications
3) Site and activity description including:
   a) Location
   b) Existing conditions
   c) Proposed conditions
   d) Area to be disturbed in square feet and acres.
   e) Topography
   f) Wetlands and water bodies
   g) Land type
4) Identification of potential pollutant sources such as paint, pesticides, oil, or other toxic chemicals etc.
5) Description of controls to reduce pollutants
   a) List and discuss each Best Management Practice, its purpose, its construction sequence and installation timing as they apply to the site and the project proposed.
   b) Design calculations of all temporary and permanent stormwater management and erosion and sediment control best management practices.
6) Phases as related to soil disturbance.
   a) Tabulated sequence of construction.
   b) The construction schedule.
   c) The earth movement schedule.

7) Maintenance/inspection procedures
   a) Proposed schedule for the inspection and maintenance of all best management practices.
   b) Proposed inspection forms to be filled out by the person responsible for routine inspections of Best Management Practices.

The DPW, Conservation Commission, or its agent may waive all, or some, of the requirements for a stormwater management and erosion control application if it determines that some, or all, of the application requirements are unnecessary because of the size or character of the development project or because of the natural conditions at the site.

The applicant shall make all requests for waivers in writing. The applicant must submit supporting technical information and documentation to demonstrate that, because of minimal environmental impact, some, or all, of the requirements are unnecessary. The Enforcing Agent's decision to grant or deny waiver shall be in writing and shall set forth the reasons for the grant or denial.

SECTION 5. DESIGN STANDARDS

The following standards shall be applied in planning for stormwater management and erosion control:

A. All measures in the plan shall meet, at a minimum, the Best Management Practices as set forth in the Stormwater Management handbook.

B. Whenever practical, natural vegetation shall been retained, protected and/or supplemented. The stripping of vegetation shall be done in a manner that minimizes soil erosion.

C. Temporary erosion and sediment control measures shall be installed before any soil disturbance.

D. The area of disturbance shall be kept to a minimum. Disturbed areas remaining idle for more than 30 days shall be stabilized.

E. Measures shall be taken to control erosion within the project area. Sediment in runoff water shall be trapped and retained within the project area using approved measures. Wetland areas and surface areas shall be protected from sediment.

F. Off-site surface water and runoff from undisturbed areas shall be diverted away from disturbed areas where feasible or carried through the project area without causing erosion. Integrity of downstream drainage systems shall be maintained.

G. Loss of annual recharge to groundwater should be minimized through the use of infiltration measures to the maximum extent practicable. The annual recharge from the post-development site should approximate the annual recharge rate from the pre-development or existing site conditions, based on soil types.

H. Measures shall be taken to control the post-development peak rate of runoff and volume of runoff so that it does not exceed predevelopment runoff for the two-year, ten-year and one-

hundred-year twenty-four-hour storm event as specified in the design criteria of the Stormwater Management handbook. The drainage design may, at the discretion of the enforcing agent, incorporate the use of open space to minimize the change in volume of runoff in post-development.

I. Priority shall be given to preserving natural drainage systems, including perennial and intermittent streams, wetlands, soils and drainage ditches for conveyance of runoff entering and leaving the project area.

J. When one or more of the Standards cannot be met, an applicant may demonstrate that an equivalent level of environmental protection will be provided.

K. All temporary erosion and sedimentation control measures shall be removed after final site stabilization. Stabilization measures such as hydroseeding or application of salt hay/mulch or soil netting shall be applied immediately upon removal of temporary erosion measures and inspected weekly until stabilization is complete. Trapped sediment and other disturbed soil areas resulting from the removal of temporary measures shall be permanently stabilized within thirty days unless adverse weather conditions delay stabilization.

SECTION 6. RESPONSIBILITY FOR INSTALLATION AND CONSTRUCTION.

A. The applicant shall have the responsibility to install, construct, inspect and dispose of all stormwater management and erosion control measures required of this chapter.
B. The DPW, Conservation Commission, or its agent may, in its discretion, require a bond or other security in an amount, and with sureties and conditions, satisfactory to the Commission, to assure the actual construction and installation of measures within the time specified by the Commission and expressed in the bond or other security document.
C. Site development shall not begin until the stormwater management and erosion control plan receives conditional approval. Best management practices shall be installed, as designed and scheduled, as a condition of final approval of the plan.

SECTION 7. PLAN APPROVAL AND REVIEW.

A. The DPW, Conservation Commission, or its agent shall indicate approval of the stormwater management and erosion control plan, as filed, if it complies with requirements and objectives of this chapter. The approval shall be noted on the face of the plan. If disapproved, the DPW, Conservation Commission, or its agent will give the applicant a list of the plan's deficiencies and will describe the substantive and procedural steps required to submit an alternative plan.

B. The DPW, Conservation Commission, or its agent, if it determines such action to be appropriate, may submit the plan for technical review to a qualified professional consultant at the expense of the applicant. The Enforcing Agent may require such fees to be paid as a precondition to its review of the application.

C. The DPW, Conservation Commission, or its agent shall adopt, and from time to time amend

rules and regulations relative to the issuance of stormwater management and erosion control permits. Such rules shall prescribe substantive specifications consistent with this chapter and the procedures for the submission and approval of such permits.

SECTION 8. MAINTENANCE AND INSPECTION.

A. The DPW, Conservation Commission, or its agent's decision shall incorporate the approved application and the plan and shall describe the maintenance requirements for water quality measures required by stormwater management and erosion and sediment control plans.
B. The DPW, Conservation Commission, or its agent may require routine inspections to determine compliance with conditions of the permit and to ascertain if the owner is maintaining water quality protection measures. The DPW, Conservation Commission, or its agent shall notify the landowner before such inspections and shall attempt to arrange for inspections at reasonable times for the landowner. The application for permit and acceptance of the permit shall be deemed to be consent for such inspections.
C. Right of Entry. Filing an application for a Stormwater and Erosion Control Permit grants the DPW, Conservation Commission, or its agent, permission to enter the site to verify the information in the application and to inspect for compliance with permit conditions.
D. If the landowner denies the DPW, Conservation Commission, or its agent access to the property in order to inspect the site, the agent shall seek to obtain an administrative search warrant from the appropriate court.
E. The DPW, Conservation Commission, or its agent may require a fee for routine inspections. It shall be the duty of the owner of the site to pay the fee. The Commission shall establish a fee schedule which will adequately and reasonably reflect the actual cost of performing inspections for various types of water quality measures and for compliance with the conditions of the permit.
F. The DPW, Conservation Commission, or its agent may appoint an inspector, at the owner's expense, to perform inspections during construction. This inspector shall have the authority to shut down the project if, in the inspector's opinion, the owner is not complying with the conditions of the permit during the period of construction.
G. The contractor is responsible to inspect and maintain the Best Management Practices regularly. The contractor shall keep a record of all inspection and follow-up maintenance of Best Management Practices. The DPW, Conservation Commission, or its agent shall be given copies of the inspection reports every 2 weeks or as they see necessary. The contractor is to keep a record of all amendments to the Stormwater Management Plan and inform the DPW, Conservation Commission or its agent of such changes.

SECTION 9. OPERATION AND MAINTENANCE PLANS

An Operation and Maintenance plan (O&M Plan) is required at the time of application for all projects. The maintenance plan shall be designed to ensure compliance with the Permit, this Bylaw and that the Massachusetts Surface Water Quality Standards, 314, CMR 4.00 are met in all seasons and throughout the life of the system. The DPW, Conservation Commission, or its agent shall make the final decision of what maintenance option is appropriate in a given

situation. The DPW, Conservation Commission, or its agent will consider natural features, proximity of site to water bodies and wetlands, extent of impervious surfaces, size of the site, the types of stormwater management structures, and potential need for ongoing maintenance activities when making this decision. The Operation and Maintenance Plan shall remain on file with the DPW, Conservation Commission, or its agent and shall be an ongoing requirement. The O&M Plan shall include:

A. The name(s) of the owner(s) for all components of the system

B. Maintenance agreements that specify:

1. The names and addresses of the person(s) responsible for operation and maintenance
2. The person(s) responsible for financing maintenance and emergency repairs.
3. A Maintenance Schedule for all drainage structures, including swales and ponds.
4. A list of easements with the purpose and location of each.
5. The signature(s) of the owner(s).
6. Record Maintenance agreement.

C. Stormwater Management Easement(s).

1. 1 Stormwater management easements shall be provided by the property owner(s) as necessary for:
    a. access for facility inspections and maintenance,
    b. preservation of stormwater runoff conveyance, infiltration, and detention areas and facilities, including flood routes for the 100-year storm event.
    c. direct maintenance access by heavy equipment to structures requiring regular cleanout.
2. The purpose of each easement shall be specified in the maintenance agreement signed by the property owner.
3. Stormwater management easements are required for all areas used for off-site stormwater control, unless a waiver is granted by the DPW, Conservation Commission, or its agent.
4. Easements shall be recorded with the Worcester County Registry of Deeds prior to issuance of a Certificate of Completion by the DPW, Conservation Commission, or its agent.

D. Changes to Operation and Maintenance Plans

1. The owner(s) of the stormwater management system must notify DPW, Conservation Commission, or its agent of changes in ownership or assignment of financial responsibility.
2. The maintenance schedule in the Maintenance Agreement may be amended to achieve the purposes of this by-law by mutual agreement of the DPW, Conservation Commission,

or its agent and the Responsible Parties. Amendments must be in writing and signed by all Responsible Parties. Responsible Parties shall include owner(s), persons with financial responsibility, and persons with operational responsibility.

SECTION 10. ENFORCEMENT; VIOLATIONS AND PENALTIES.

A. The DPW, Conservation Commission, or its agent shall be responsible for enforcing the provisions of this chapter. To this end, they shall have the authority to seek any or all of the following remedies to enforce this chapter, its regulations and/or the terms and conditions of its permit:
   1. Written notice of violation.
   2. Injunctive relief in a court of appropriate jurisdiction.
   3. Noncriminal disposition. Whoever violates any provision of this chapter or a regulation promulgated by the DPW, Conservation Commission, or its agent, a condition contained in a permit issued by the DPW, Conservation Commission, or its agent, the conditions of a notice of violation or the conditions on the cease and desist order may, in the discretion of the DPW, Conservation Commission, or its agent, be subject to the noncriminal procedure established pursuant to the provisions of MGL c. 40, § 21D. The penalty for the first violation shall be $50. The penalty for the second violation shall be $100. Each day on which a violation occurs shall be considered a separate offense. The owner or their agent may be denied permits/licenses after being cited for the second violation.
   4. Criminal prosecution for violation of any provision of this chapter, the permit and/or regulations promulgated by the DPW, Conservation Commission, or its agent. Any such violation shall be punished by a fine of $300 for each offense. Each day on which such violation continues shall constitute a separate offense.
   5. Issuance of a cease and desist order if the DPW, Conservation Commission, or its agent determines that conditions at the site are in violation of any of the requirements of this chapter, the Stormwater Bylaw or permit and that such violation is either an immediate threat to the environment, the public health or safety; or that the property owner has failed to take the corrective action(s) identified in a written notice of the violation issued under this chapter or has failed to take such corrective action within the time required in the notice of violation.
   6. If the DPW, Conservation Commission, or its agent takes remedial action upon failure of the owner to abate or remediate, notice shall be given to the owner of the costs, including administrative costs, incurred by the Town. Said notice shall be sent within thirty (30) days of completion of all measures necessary to abate the violation or to perform remediation. The violator or owner shall also be notified that they may, within thirty (30) days of receipt of said notice, file an appeal in writing to the Board of Selectmen objecting to either the amount or basis of the costs incurred. If the amount due is not received by the expiration of the time in which to file an appeal or within thirty (30) days following a decision by the board of Selectmen affirming or reducing the costs, or from a final decision of a court of competent jurisdiction, the costs shall become a special assessment against the property owner and shall constitute a lien on the owner's property for the amount of said costs. Interest shall

begin to accrue on any unpaid costs at the statutory rate provided in M.G.L. c. 59, s. 57 after the thirty-first day at which the costs first become due.

B. The DPW, Conservation Commission, or its agent may issue a written notice of violation to any person whom it determined is in violation of any of the requirements of this chapter, the regulations enacted by the Enforcing Agent or a permit and plan approved under this chapter. The notice of violation shall:
   a. Specify the actions, conditions or omissions which create the violation
   b. Identify the necessary corrective actions;
   c. Specify the time within which the violations must be corrected;
   d. Be served by certified mail upon the violator with a copy maintained in the records of the Commission.

SECTION 11. AUTHORITY

This bylaw is adopted under authority granted by the Home Rule Amendment of the Massachusetts Constitution, the Home Rule Procedures Act, and the regulations of the federal Clean Water Act found at 40 CFR 122.34g.

SECTION 12. SEVERABILITY

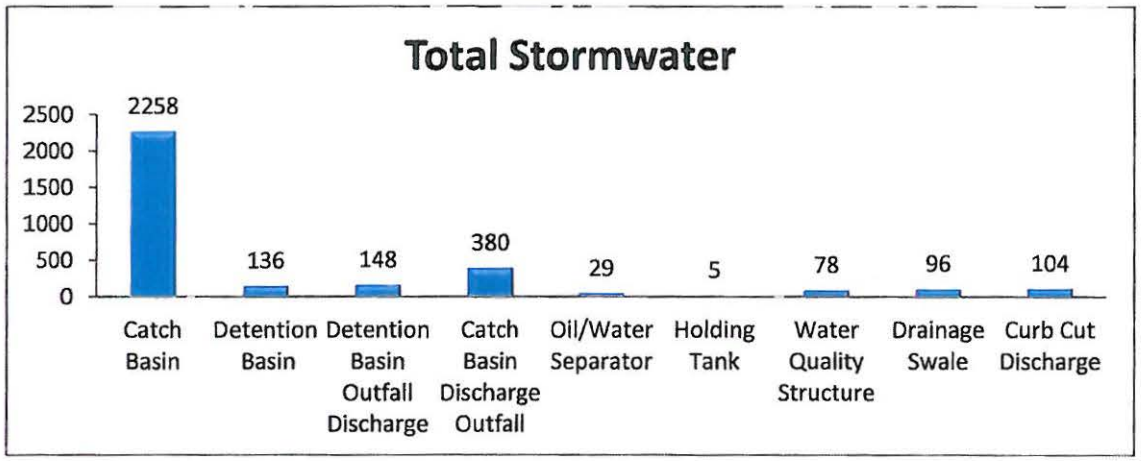
The provisions of this by-law are hereby declared to be severable. If any provision, paragraph, sentence or clause of this by-law, or the application thereof to any person, establishment or circumstances, shall be held invalid, such invalidity shall not affect the other provisions or application of this by-law.

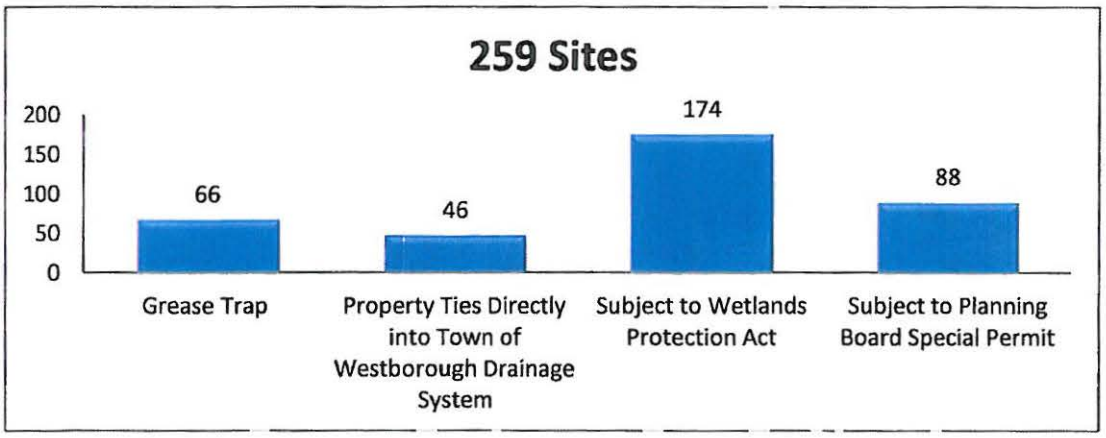
BMP # V. D

DATABASE OF PRIVATE SITES
OVERSEEN BY CONSERVATION COMMISSION OFFICER

A database was created for each of the almost 260 inspected properties. The total numbers are as follows, 2252 catch basins, 136 detention basins, 148 detention basin outfalls, 380 catch basin outfalls, 29 oil/water separators, 5 holding tanks, 78 water quality structures, 95 drainage swales, 104 curb cut discharges, 46 sites tie directly into the Town's drainage system, 174 sites are subject to the Wetlands Protection Act, and 88 are subject to a Special Permit granted by the Planning Board. Lastly, sites with grease traps have been noted. This data will continue to be updated as sites change or are added.

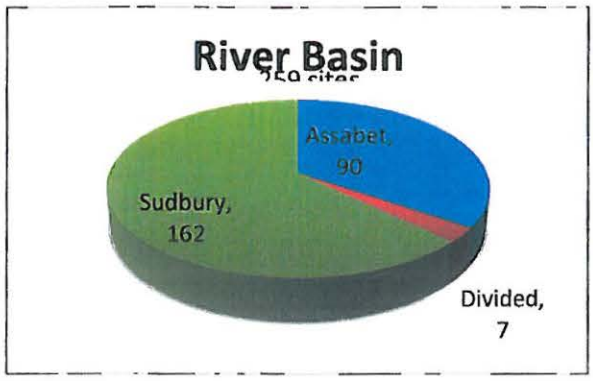
Also, the database contains numerous hyperlinks that organize scanned information pertaining to a specific site, such as, recorded drainage/sewer easements, recorded maintenance obligations, invoices, correspondence, recorded plans, pictures, and other information that the administrative assistant and I find useful to a particular site. Also, those sites that also have to be filed with DEP as a Waste Generator have also been separated within the database as these sites have additional regulations imposed upon them.



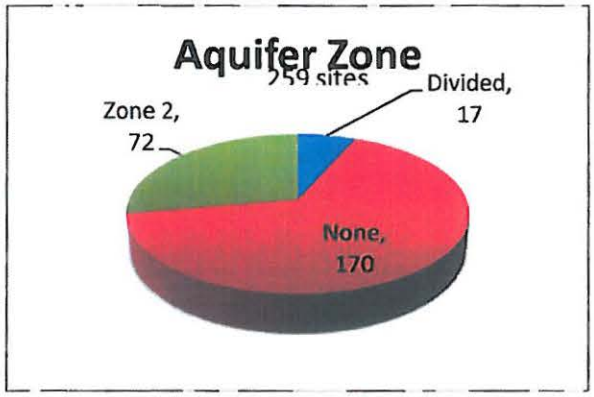


BMP # V. D

DATABASE OF PRIVATE SITES
OVERSEEN BY CONSERVATION COMMISSION OFFICER

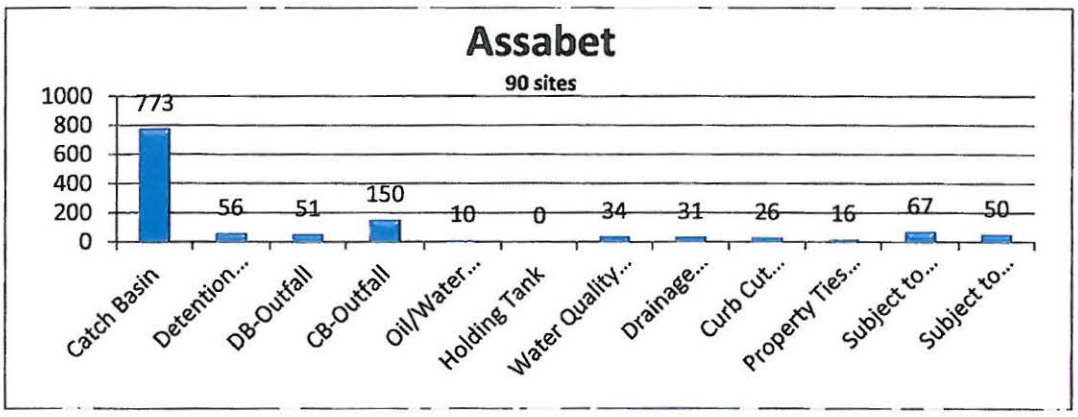


The data for each site was then assigned to the appropriate River Basin and this information has been shared with the several non-profits who monitor the health of both the Sudbury and Assabet Rivers



The data for each site was also listed as to whether or not the site was in a Zone II Aquifer Zone.

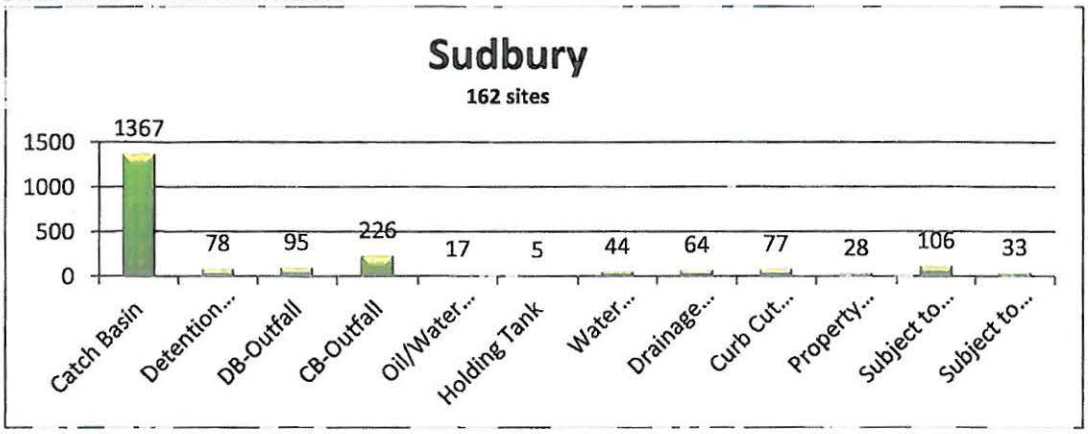
Of the 259 sites, 90 sites are located within the Assabet watershed. The graph represents total stormwater structures in this watershed.



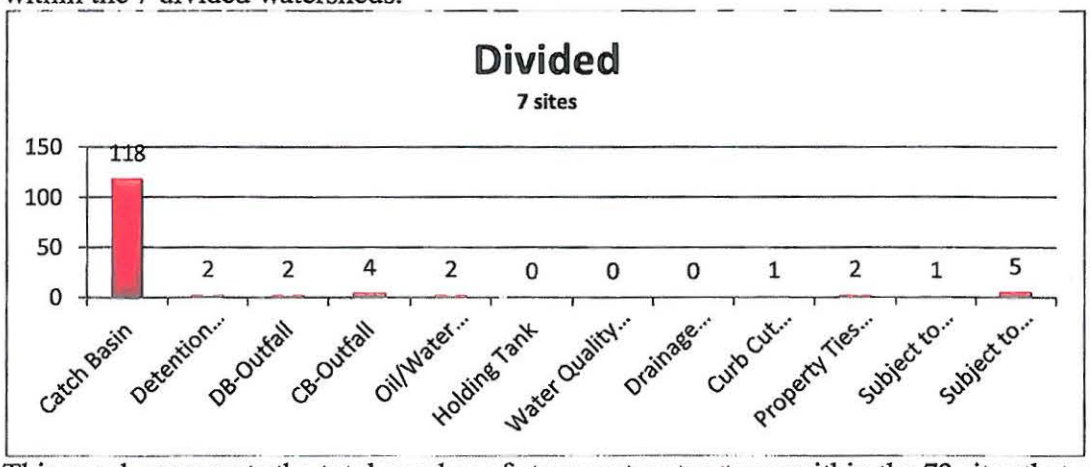
BMP # V. D

DATABASE OF PRIVATE SITES
OVERSEEN BY CONSERVATION COMMISSION OFFICER

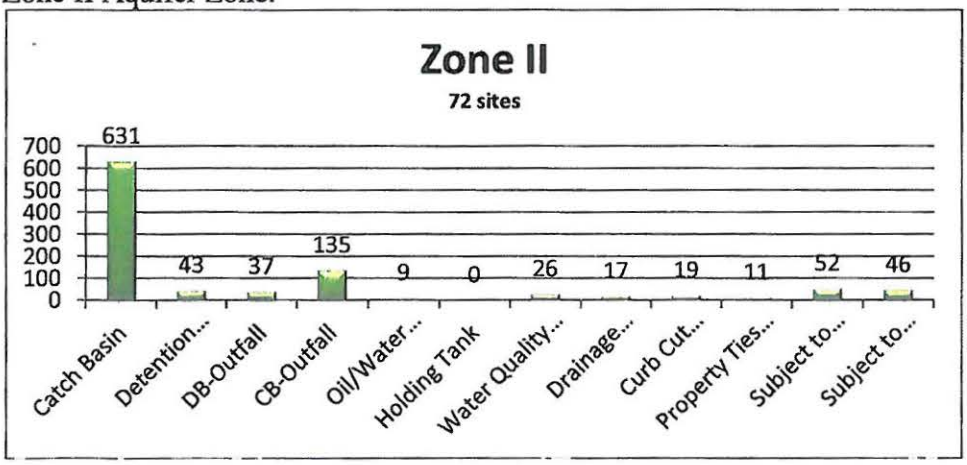
Of the 259 sites, 162 sites are located within the Sudbury watershed. The graph represents total stormwater structures in this watershed.



Of the 259 sites, 7 are divided within both watersheds. The graph represents total stormwater structures in within the 7 divided watersheds.



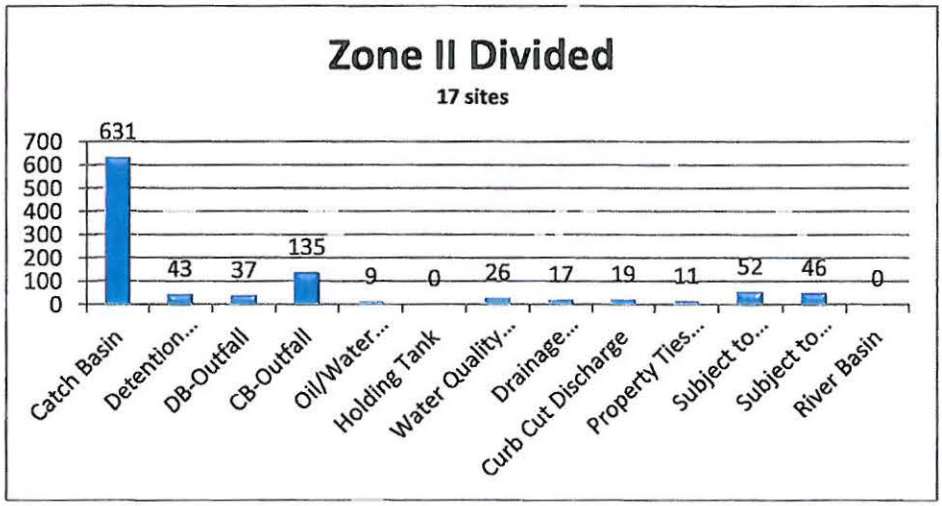
This graph represents the total number of stormwater structures within the 72 sites that are located within a Zone II Aquifer Zone.



BMP # V. D

DATABASE OF PRIVATE SITES
OVERSEEN BY CONSERVATION COMMISSION OFFICER

This graph represents the total number of stormwater structures within the 17 sites that are divided within a Zone II Aquifer Zone.



This graph represents that there are numerous registered Hazardous Waste Generators and that 24 are located within a Zone II Aquifer Zone and require additional inspections during the yearly visit.

VI. Pollution Prevention/ Good Housekeeping

BMP ID#

VI.A Employees have been trained in good housekeeping procedures in municipal operations and will be periodically re-trained.

VI.B The Town continues to seek out opportunities for more employee training. This year three employees attended a stormwater solutions seminar. [see attached documentation]

VI.C The Town's Conservation Commission Officer conducted a presentation to municipal leaders representing about 30 cities or towns on January 28, 2015. The well attended presentation reviewed a 9 year effort in developing and implementing stormwater maintenance requirements on 260 private sites that include a mix of industrial, commercial and high density residential sites in Westborough. [see attached brochure]

VI.D The Westborough DPW Highway has improved their record keeping of catch basin cleaning. Each basin cleaned gets an inspection report written which included condition of the structure, sediment height and any signs of IDDE. A copy of the form is attached. The Town was plagued with equipment failures and not enough qualified personnel to achieve our goal of cleaning 100% of the catch basins in Town. The Town's Conservation Commission Officer continues to oversee the cleaning of the catch basins along East Main Street, Lyman Street and several other main urban corridors that discharge to the Cedar Swamp Area of Critical Environmental Concern.

VI.E The Town's Conservation Commission Officer continues to work with the DPW in maintaining the approximate 50 Town-owned detention basins. The basins are mowed once annually by DPW personnel. [see attached for Parks Department Records] In addition, the Conservation Commission Officer ensures that all the stormwater related maintenance is performed on each of the 6 school campuses. Currently, the School Department contracts annually to have all the stormwater structures professionally maintained.

VI.F Management of pesticides, herbicides and fertilizer application is monitored each year. Herbicide is only applied to control roadside vegetation where it is necessary to reduce the potential for stormwater contamination. [see attached]

VI.G The DPW Maintenance Department has taken a very active role in stormwater pollution prevention. Vehicles are closely monitored and maintained on a regular basis. Repairs are made immediately. Repair Order history print outs assist in determining which vehicles are in need of future maintenance [see attached]. Personnel are trained and utilize spill control devices when needed. All oil and wastes are disposed of in one location and removed/disposed of by an outside party.

VI.H An important component to the Town's program is the street sweeping operation. The program is evaluated on annual basis looking for trends and trouble areas. 100% of the streets were swept in the spring and fall with the downtown area being swept weekly in the summer months.

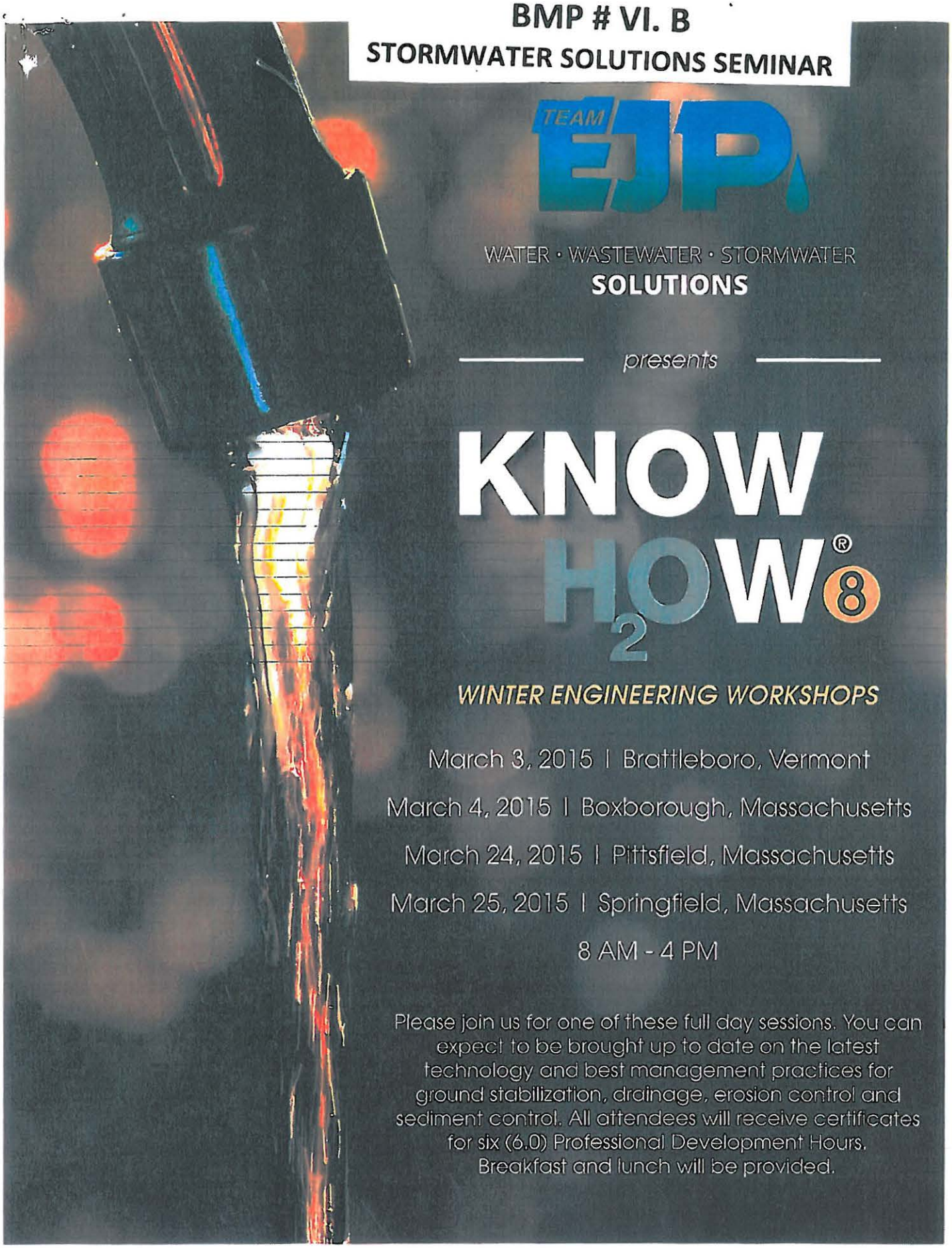
VI.I Salt shed, vehicle maintenance bay and garage are cleaned once a year in February by Clean Harbors. These facilities have closed-system drains with oil/water separators.

VI.J There has been a collection center for oil & grease waste at the DPW for many years. A new collection center has been added and is designed for just anti-freeze products. Both centers are maintained properly and waste is picked up and disposed of by a qualified vendor when the containment system is full.

BMP ID#	BMP Category	BMP Description	Responsible Dept. / Person	Measurable Goal (s)	
VI. Pollution Prevention & Good Housekeeping in Municipal Operations					
VI.A	Employee Training	Implement employee training on good housekeeping procedures	DPW	Developed a training program and have all employees attend	
VI.B		Educate employees in new techniques and trends in the industry	DPW	**NEW YR12.** Attend seminars and classes	S
VI.C		Educate Municipal Employees	Con Com Officer	**NEW YR12.** Develop and conduct training/seminars	
VI.D	Stormwater System O&M	Enhance the existing storm drain system and CB cleaning	DPW	Implement schedule. Strengthen record keeping. Clean all CB's a minimum of twice a year	Complete on all Cl
VI.E		Maintain Town owned stormwater infrastructure	DPW/CON COM Officer	Perform annual maintenance on infrastructure	Compl
VI.F	Pesticide/ Fertilizer Reduction	Develop and implement a management program for fertilizer and pesticide application.	DPW (Highway/Parks)	Annually summarize allocations	Complete
VI.G	Municipal Vehicles Maintenance and Repair	Review maintenance and repair programs for municipal vehicles	DPW	Review and improve efforts of stormwater pollution prevention	Complete utiliz
VI.H	Municipal Roads	Enhance street sweepings operations	DPW	Strengthen record tracking system. Computerize record keeping.	Complete and trou w
VI.I	Hazardous Waste	Collection center for hazardous waste	DPW	Establish a collection site to accept oil & grease waste to be properly disposed of	Complete the DP
VI.J	Hazardous Waste	Collection center for hazardous waste	DPW	**NEW YR12.** Establish a collection site to accept antifreeze waste to be properly disposed of	Comp antifreeze be picked
VI. Pollution Prevention & Good Housekeeping in Municipal Operations - NEW GOALS for YR13					
	Municipal (School) Infrastructure	Inventory School owned infrastructure	Con Com Officer	Inventory municipal infrastructure and set up maintenance program	
	Municipal Infrastructure	Address stormwater issues that affect the Town surface water supply	Con Com Officer	Investigate and create program	
	Municipal Roads	Address stormwater pollution from State layouts on municipal property	Con Com Officer	Investigate and create program	

BMP # VI. B

STORMWATER SOLUTIONS SEMINAR



"My compliments to EJ Prescott for thoroughness (sending the receipt) and for the quality of the presentation material/workshop. I've paid more at some national conferences and gotten far less."
-Landscape Architect, Connecticut

KNOW H2OW®
WINTER ENGINEERING WORKSHOPS

STORMWATER SOLUTIONS WORKSHOPS

March 3, 2015 | Quality Inn 1380 Putney Road | Brattleboro, Vermont
March 4, 2015 | Holiday Inn 242 Adams Place | Boxborough, Massachusetts
March 24, 2015 | Crowne Plaza 1 West Street | Pittsfield, Massachusetts
March 25, 2015 | Mariott 2 Boland Way | Springfield, Massachusetts

These workshops are designed to connect construction professionals with cost effective solutions to challenging design and construction problems. Our speakers will include industry leading technology and solutions providers, including:

Bill Maier, Tensar Corporation — Jack Eaton, Certified Erosion Control
Richie Prejs, Maccafferri — Dan Fick, Profile Products
Joe Koziell, North American Green — Pete Hanrahan, E. J. Prescott

Please enclose payment of $30.00 per person, per session.
Make checks payable to Everett J. Prescott, Inc.

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COMPANY Town of Westborough
MAILING ADDRESS 131 Oak Street
CITY Westborough STATE MA ZIP 01581
PHONE 508-366-3076 EMAIL cbelli@town.westborough.ma.us

Attending (circle your choice): BRATTLEBORO (BOXBOROUGH) PITTSFIELD SPRINGFIELD

o Check Enclosed

o Please charge my EJP Account #_____ Purchase Order #_____

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Card Type : Visa MasterCard American Express Discover

Card Number_____

Billing Zip Code on Card_____

Expiration Date_____ 3-Digit Security Code_____

Please return to Conference Coordinator; E. J. Prescott, Inc. | PO Box 600 Gardiner, ME 04345
PH: (207) 582-1851 | FAX: (207) 582-5637 | E-Mail: shannon.bragg@ejprescott.com

BMP # VI. C

STORMWATER PRESENTATION BY CONSERVATION OFFICER

Massachusetts Society of Municipal Conservation Professionals, Inc.
PO Box 375 Lincoln, MA 01773 massconpros@gmail.com

Brown Bag Lunch Series

Municipal Stormwater Maintenance Programs
Derek Saari, Conservation Officer/Assistant Town Planner
Forbes Municipal Building, 45 West Main Street, Room 23
Wednesday, January 28, 2015
11:00am-1:00pm

The Town of Westborough Conservation Commission has taken a lead on developing a stormwater maintenance program for over 260 private sites in Town that include a mix of industrial, commercial, and high-density residential. The program started in late 2005 and the stormwater database was just completed in 2014. The database contains exactly how many stormwater structures are located on each of the 260 sites. These sites are visited every year to ensure that the structures are being effectively maintained. The presentation will review how the program was developed, maintained, and where the program will be going in the future.

Can you find the culvert?

Photos by DSaari

A board meeting will be held at 10am for anyone interested in attending.
Please RSVP at www.tinyurl.com/MSMCP1-28-15Event
Parking may be limited so please carpool if you can.

year end 2014 CHS

BMP # VI. E
DETENTION MAINTENANCE RECORD

Number of Basins	Road Name		Outfall by James
✓ 1	Janlyn Circle	end on right	Y
✓ 1	Stratton Drive	end center	N
✓ 1	Robin Lane	Horse corral	N
✓ 1	Old Meetinghouse Road	End of cul-de-sac	N
✓ 1	Ruggles Pond Road	on GIS	Y
✓ 1	Rosewood Place	on left infront of house	Y
✓ 1	Heywood Drive	end of cul-de-sac?	Y
✓ 1	Lawtons Way	on left (+right) at Milk	Y
✓ 1	Catie Drive	on right at entrance-stream	Y
✓ 1	Elizabeth Drive	GIS DRAIN POLY	Y
✓ 1	Thomas newton Drive	on L after Jacob Amsden	Y
✓ 1	Jacob Amsden Road	on Thomas Newton -Right	Y
✓ 1	Samual Harrington Rd	N.E. GPS by James	Y
✓ 1	Wachusett View Drive	on GIS	Y
✓ 1	Brickyard Lane	on L near entrance	Y
✓ 1	Benjamin Drive	GIS DRAIN POLY	Y
✓✓ 2	Kendall Drive	GIS DRAIN POLY	Y
✓ 1	Garfield Drive	at end of Sleigh Lane	Y
✓ 1	Edmund Brigham Way	GIS DRAIN POLY	Y
✓ 1	Mathieu Drive	GIS DRAIN POLY	Y
✓ 1	Piccadilly Way	middle	Y
✓ 1	Piccadilly Way	middle	Y
✓ 1	Piccadilly Way	behind 40 Picc	Y
✓ 1	Morse St.	across st from 22 Morse	Y
✓ 1	Long Drive	GIS DRAIN POLY	Y
✓ 1	Cook Street	left of cook before long	Y
✓✓ 2	Butterfield Drive	1/2 GIS DRAIN POLY	Y
1	~~Imperial~~	Pond 299 - on left	N
1	~~Golden Ct~~	Pond 5 - on right	N
1	~~Gilmore Farm Rd~~	Pond 6 at circle	N
1	~~Gilmore Farm Rd~~	Pond 8 after Baldwin on Left	N
✓✓ 2	Primrose Lane	early on R + end culdesac	Y
✓ 1	Appleseed Drive	GIS DRAIN POLY	Y
✓ 1	Frances	GIS DRAIN POLY	Y
✓✓ 2	Nichols Terrace	GIS DRAIN POLY	Y
✓ 1	Arrowhead Lane	in Lot 16	Y
✓ 1	Old Hickory Path (East)	Down Cul-de-sac to the left	Y
✓ 1	Old Hickory Path (West)	at int. of school entrance	Y
✓✓✓✓ 4	Nipmuck Terrace	GIS DRAIN POLY	Y
✓✓ 2	Indian Pond	R-int at Medow +end cul-de-s	1/2 Y
✓ 1	Assabet Dr	GIS DRAIN POLY	Y
~~2~~	~~Wessonville Village~~	Quaker + Sheffield	N (PRIVATE)
✓ 1	Lydia's Path	on left	Y
✓ 1	Bertis Adams Way	on right - Warren St Culvert	Y
✓ 1	Old Connecticut Path	on GIS	N

Golf Course Management, Inc.
P.O. Box 562
Westborough, MA 01581

Date: 06-13-14

Town of Westborough
D.P.W. Parks
131 Oak St.
Westborough, MA 01581

BMP # VI. F
PESTICIDE, HERBCIDE & FERTILIZER RECORD

Westborough Recreation Fields

Prices are for applications to all recreation fields. Applications will be made only after consultation with the D.P.W. representative. Company representatives will be available for consultation on any turf needs during the service period.

- July 2014 – Apply fertilizer + preventative grub control
  -22-3-8 50% slow release fertilizer with Imidacloprid @ 6.4 oz A.I./acre & 0.75 lb N/M
- August 2014 – Apply fertilizer in preparation for heavy fall use
  -24-0-3 50% slow release @ 1 lb./M
- September 2014 – Apply fertilizer for heavy fall use
  -24-0-3 50% slow release @ 1 lb./M
- October 2014 – Apply fertilizer for enhanced root growth
  -24-0-3 50% slow release @ 1 lb./M
- April 2015 – Apply fertilizer + crabgrass preventative for early green-up
  -18-0-9, 40% slow release fertilizer with Dimension (Dithiopyr) @ .19lb.A.I./acre & .65lb.N/M
- May 2015 - Apply fertilizer for recovery from heavy spring use
  -24-0-3 50% slow release @ 1 lb./M

Price of each application:

- **July Grub control + fertilizer application- $5000**
- **August fertilizer application - $3500**
- **September fertilizer application - $3500**
- **October fertilizer application - $3500**
- **April crabgrass preventative + fertilizer - $4000**
- **May fertilizer application - $3500**

$ 23,000

BMP # VI. G

VEHICHLE MAINTENANCE RECORDS

Search and Select:

Units	Unit - Category	64303-5203

Report Parameters:

R/O Work	ALL R/O's (Internal Work, External Work, or Both)
R/O Costs	ALL Costs (Internal and External)
R/O Status	Closed
Date (In) Start	4/1/2014
Date (In) End	3/31/2015
Date (Out) Start	4/1/2014
Date (Out) End	3/31/2015

341 (64303-5203) Main Shop

RO Number	RO Stage	Date	Meter Reading	Mechanic/Vendor
SYS05678		2/26/2015	133,156 Miles	

Vendor (Invoice)	Date	Work Description	Repair Reason	VMRS Code	Parts Amount	Labor Amount	Total Amount
			Breakdown	018-000-000	$60.32	$230.77	$291.09
		REPLACE RIGHT REAR WHEEL STUDS					
				Totals For SYS05678	**$60.32**	**$230.77**	**$291.09**

SYS05674		2/20/2015	132,985 Miles	

Vendor (Invoice)	Date	Work Description	Repair Reason	VMRS Code	Parts Amount	Labor Amount	Total Amount
			Routine Work	021-000-000	$0.00	$129.95	$129.95
			Routine Work	021-001-000	$116.84	$0.00	$116.84
		REPLACE RIGHT FRONT AXLE U-JOINT AND SEALS					
			Routine Work	024-000-000	$0.00	$64.97	$64.97
			Routine Work	024-002-021	$23.70	$0.00	$23.70
			Routine Work	024-002-022	$67.96	$0.00	$67.96
		REPLACE REAR U-JOINT&YOKE ON REAR DRIVESHAFT					
			Routine Work	066-000-000	$0.00	$32.49	$32.49
			Routine Work	066-005-000	$270.00	$0.00	$270.00
		REPLACE JOYSTICK CONTROLLER FOR PLOW					
			PM Services	PMS-000-000	$36.25	$64.97	$101.22
		ROUTINE SERVICE					
				Totals For SYS05674	**$514.75**	**$292.38**	**$807.13**

SYS05645		2/5/2015		

Vendor (Invoice)	Date	Work Description	Repair Reason	VMRS Code	Parts Amount	Labor Amount	Total Amount
			Routine Work	034-000-000	$368.00	$80.77	$448.77
		REPLACE PLOW LIGHTS					
				Totals For SYS05645	**$368.00**	**$80.77**	**$448.77**

341 (64303-5203) Main Shop

RO Number	RO Stage	Date	Meter Reading	Mechanic/Vendor
SYS05588		12/2/2014		
SYS05565		11/21/2014	129,138 Miles	
SYS05526		10/1/2014	128,621 Miles	
SYS05475		8/4/2014	126,927 Miles	
SYS05442		7/1/2014	125,858 Miles	

Vendor (Invoice)	Date	Work Description	Repair Reason	VMRS Code	Parts Amount	Labor Amount	Total Amount
			Breakdown	050-000-000	$37.50	$40.38	$77.88
		REPLACE HYD HOSE TO LEFT ANGLE PISTON					
				Totals For SYS05588	**$37.50**	**$40.38**	**$77.88**
			Routine Work	LIC-000-000	$0.00	$130.00	$130.00
		STATE INSPECTION					
				Totals For SYS05565	**$0.00**	**$130.00**	**$130.00**
			Routine Work	013-000-000	$150.53	$76.26	$226.79
		FRONT BRAKE JOB(NEW ROTORS)					
			Breakdown	016-000-000	$71.53	$85.00	$156.53
		REPLACE RIGHT REAR SPRING SHACKLE					
			Routine Work	017-000-000	$714.96	$80.77	$795.73
		REPLACE TIRES					
			PM Services	PMS-000-000	$31.25	$38.13	$69.38
		ROUTINE SERVICE					
				Totals For SYS05526	**$968.27**	**$280.16**	**$1,248.43**
			Breakdown	044-000-000	$196.75	$121.15	$317.90
		REPLACE FUEL PUMP					
				Totals For SYS05475	**$196.75**	**$121.15**	**$317.90**

341 (64303-5203) Main Shop

RO Number	RO Stage	Date	Meter Reading	Mechanic/Vendor

Vendor (Invoice)	Date	Work Description	Repair Reason	VMRS Code	Parts Amount	Labor Amount	Total Amount
			Routine Work	027-000-000	$17.50	$37.38	$54.88
		REPAIR ROTTED TRANSMISSION COOLER LINE					
			PM Services	PMS-000-000	$36.25	$37.38	$73.63
		ROUTINE SERVICE					
				Totals For SYS05442	**$53.75**	**$74.76**	**$128.51**

SYS05359			4/1/2014	123,482 Miles			
Vendor (Invoice)	**Date**	**Work Description**	**Repair Reason**	**VMRS Code**	**Parts Amount**	**Labor Amount**	**Total Amount**
			Breakdown	016-000-000	$136.41	$167.09	$303.50
		REPLACE FRONT STABILIZER BAR BUSHINGS,RIGHT REAR SPRING HANGER AND SHACKLE					
			Breakdown	024-000-000	$295.00	$39.59	$334.59
		REBUILD FRONT 4X4 DRIVESHAFT					
			Breakdown	027-000-000	$45.81	$39.59	$85.40
		REPLACE NEUTRAL SAFETY SWITCH					
			Breakdown	032-000-000	$222.44	$158.36	$380.80
		REPLACE BATTERY AND STARTER					
				Totals For SYS05359	**$699.66**	**$404.63**	**$1,104.29**
				Totals	**$2,899.00**	**$1,655.00**	**$4,554.00**

345 (64303-5203) Main Shop

RO Number	RO Stage	Date	Meter Reading	Mechanic/Vendor
SYS05639		1/23/2015	3,128 Miles	

Vendor (Invoice)	Date	Work Description	Repair Reason	VMRS Code	Parts Amount	Labor Amount	Total Amount
			PM Services	PMS-000-000	$24.70	$40.38	$65.08
		ROUTINE SERVICE					
				Totals For SYS05639	**$24.70**	**$40.38**	**$65.08**

345 (64303-5203) Main Shop

RO Number	RO Stage	Date	Meter Reading	Mechanic/Vendor
SYS05501		9/9/2014	52 Miles	

Vendor (Invoice)	Date	Work Description	Repair Reason	VMRS Code	Parts Amount	Labor Amount	Total Amount
			Routine Work	052-000-000	$10.00	$80.77	$90.77
		TRANFER FUEL MASTER FUEL MONITORING DEVICE FROM OLD #345					
			Routine Work	LIC-000-000	$0.00	$35.00	$35.00
		STATE INSPECTION					
				Totals For SYS05501	**$10.00**	**$115.77**	**$125.77**
				Totals	**$34.70**	**$156.15**	**$190.85**

348 (64303-5203) Main Shop

RO Number	RO Stage	Date	Meter Reading	Mechanic/Vendor
SYS05695		3/4/2015	15,200 Miles	

Vendor (Invoice)	Date	Work Description	Repair Reason	VMRS Code	Parts Amount	Labor Amount	Total Amount
			PM Services	PMS-000-000	$26.62	$40.38	$67.00
		ROUTINE SERVICE					
				Totals For SYS05695	**$26.62**	**$40.38**	**$67.00**

SYS05454	7/9/2014	9,579 Miles	

Vendor (Invoice)	Date	Work Description	Repair Reason	VMRS Code	Parts Amount	Labor Amount	Total Amount
			PM Services	PMS-000-000	$27.74	$38.13	$65.87
		ROUTINE SERVICE AND ROTATE TIRES					
				Totals For SYS05454	**$27.74**	**$38.13**	**$65.87**

SYS05448	7/7/2014	9,539 Miles	

Vendor (Invoice)	Date	Work Description	Repair Reason	VMRS Code	Parts Amount	Labor Amount	Total Amount
			Routine Work	LIC-000-000	$0.00	$35.00	$35.00
		STATE INSPECTION					
				Totals For SYS05448	**$0.00**	**$35.00**	**$35.00**
				Totals	**$54.36**	**$113.51**	**$167.87**

349 (64303-5203) Main Shop

RO Number	RO Stage	Date	Meter Reading	Mechanic/Vendor
SYS05598		12/9/2014	3,143 Miles	

Vendor (Invoice)	Date	Work Description	Repair Reason	VMRS Code	Parts Amount	Labor Amount	Total Amount
			PM Services	PMS-000-000	$15.01	$38.13	$53.14
		ROUTINE SERVICE					
				Totals For SYS05598	**$15.01**	**$38.13**	**$53.14**
				Totals	**$15.01**	**$38.13**	**$53.14**
				Grand Totals	**$3,003.07**	**$1,962.79**	**$4,965.86**

Repair Order History

3/10/2015 9:19:48 AM

Eastern Standard Time

Search and Select:

Units	Unit - Category	64503-5203

Report Parameters:

R/O Work	ALL R/O's (Internal Work, External Work, or Both)
R/O Costs	ALL Costs (Internal and External)
R/O Status	Closed
Date (In) Start	4/1/2014
Date (In) End	3/31/2015
Date (Out) Start	4/1/2014
Date (Out) End	3/31/2015

103 (64503-5203) Main Shop

RO Number	RO Stage	Date	Meter Reading	Mechanic/Vendor
SYS05399		5/7/2014	148 Hours	

Vendor (Invoice)	Date	Work Description	Repair Reason	VMRS Code	Parts Amount	Labor Amount	Total Amount
			PM Services	PMS-000-000	$127.89	$74.78	$202.67
		ROUTINE SERVICE					
				Totals For SYS05399	**$127.89**	**$74.78**	**$202.67**
				Totals	**$127.89**	**$74.78**	**$202.67**

135 (64503-5203) Main Shop

RO Number	RO Stage	Date	Meter Reading	Mechanic/Vendor
SYS05670		2/19/2015	495 Hours	

Vendor (Invoice)	Date	Work Description	Repair Reason	VMRS Code	Parts Amount	Labor Amount	Total Amount
			Routine Work	002-000-000	$0.00	$121.15	$121.15
			Routine Work	002-024-002	$322.26	$0.00	$322.26
		REPLACE RIGHT SWINGING DOOR WINDOW					
				Totals For SYS05670	**$322.26**	**$121.15**	**$443.41**

SYS05495		9/2/2014	289 Hours	

Vendor (Invoice)	Date	Work Description	Repair Reason	VMRS Code	Parts Amount	Labor Amount	Total Amount
			PM Services	PMS-000-000	$455.91	$162.43	$618.34
		ROUTINE SERVICE					
				Totals For SYS05495	**$455.91**	**$162.43**	**$618.34**
				Totals	**$778.17**	**$283.58**	**$1,061.75**

141 (64503-5203) Main Shop

RO Number	RO Stage	Date	Meter Reading	Mechanic/Vendor
SYS05688		3/3/2015	59,578 Miles	

141 (64503-5203) Main Shop

RO Number	RO Stage	Date	Meter Reading	Mechanic/Vendor

Vendor (Invoice)	Date	Work Description	Repair Reason	VMRS Code	Parts Amount	Labor Amount	Total Amount
			Breakdown	044-000-000	$0.00	$201.92	$201.92
			Breakdown	044-003-001	$158.92	$0.00	$158.92
		REPLACE FUEL PUMP					
			Routine Work	050-000-000	$35.00	$20.20	$55.20
		REPLACE LEFT FRONT STROBE LIGHT BULB					
			PM Services	PMS-000-000	$28.59	$80.77	$109.36
		ROUTINE SERVICE					
				Totals For SYS05688	**$222.51**	**$302.89**	**$525.40**

SYS05622 — 1/7/2015 57,950 Miles

Vendor (Invoice)	Date	Work Description	Repair Reason	VMRS Code	Parts Amount	Labor Amount	Total Amount
			Breakdown	013-000-000	$10.00	$161.54	$171.54
			Breakdown	013-001-103	$4.27	$0.00	$4.27
			Breakdown	013-007-002	$20.00	$0.00	$20.00
			Breakdown	013-007-004	$13.64	$0.00	$13.64
		REPLACE BRAKE LINE FROM MASTER CYLINDER TO ANTI LOCK BRAKE MODULE					
				Totals For SYS05622	**$47.91**	**$161.54**	**$209.45**

SYS05574 — 11/24/2014 56,265 Miles

Vendor (Invoice)	Date	Work Description	Repair Reason	VMRS Code	Parts Amount	Labor Amount	Total Amount
			Routine Work	013-000-000	$0.00	$129.64	$129.64
			Routine Work	013-002-027	$37.95	$0.00	$37.95
			Routine Work	013-002-034	$45.60	$0.00	$45.60
			Routine Work	013-002-119	$72.00	$0.00	$72.00
			Routine Work	013-003-024	$29.99	$0.00	$29.99
		REAR BRAKES(AXLE SEALS LEAKING)					
			PM Services	PMS-000-000	$22.07	$32.49	$54.56
		ROUTINE SERVICE					
				Totals For SYS05574	**$207.61**	**$162.13**	**$369.74**

SYS05533 — 10/7/2014 54,309 Miles

141 (64503-5203) Main Shop

RO Number	RO Stage	Date	Meter Reading	Mechanic/Vendor

Vendor (Invoice)	Date	Work Description	Repair Reason	VMRS Code	Parts Amount	Labor Amount	Total Amount
			Routine Work	LIC-000-000	$0.00	$35.00	$35.00
		STATE INSPECTION					
				Totals For SYS05533	**$0.00**	**$35.00**	**$35.00**

SYS05485 — 8/20/2014 — 52,363 Miles

Vendor (Invoice)	Date	Work Description	Repair Reason	VMRS Code	Parts Amount	Labor Amount	Total Amount
			Routine Work	013-000-000	$97.84	$190.66	$288.50
		REPLACE REAR BRAKE BACKING PLATES,AXLE SEALS AND PARKING BRAKE SHOES					
			PM Services	PMS-000-000	$37.56	$38.13	$75.69
		ROUTINE SERVICE					
				Totals For SYS05485	**$135.40**	**$228.79**	**$364.19**

SYS05391 — 4/29/2014 — 48,398 Miles

Vendor (Invoice)	Date	Work Description	Repair Reason	VMRS Code	Parts Amount	Labor Amount	Total Amount
			PM Services	PMS-000-000	$48.84	$76.97	$125.81
		ROUTINE SERVICE AND SERVICE GENERATOR					
				Totals For SYS05391	**$48.84**	**$76.97**	**$125.81**
				Totals	**$662.27**	**$967.32**	**$1,629.59**

142 (64503-5203) Main Shop

RO Number	RO Stage	Date	Meter Reading	Mechanic/Vendor
SYS05610		12/17/2014		

Vendor (Invoice)	Date	Work Description	Repair Reason	VMRS Code	Parts Amount	Labor Amount	Total Amount
			Routine Work	032-000-000	$0.00	$16.24	$16.24
			Routine Work	032-001-001	$104.95	$0.00	$104.95
		REPLACE BATTERY					
				Totals For SYS05610	**$104.95**	**$16.24**	**$121.19**

142 (64503-5203) Main Shop

RO Number	RO Stage	Date	Meter Reading	Mechanic/Vendor
SYS05564		11/21/2014	58,387 Miles	

Vendor (Invoice)	Date	Work Description	Repair Reason	VMRS Code	Parts Amount	Labor Amount	Total Amount
			Routine Work	013-000-000	$0.00	$64.97	$64.97
			Routine Work	013-002-000	$12.56	$0.00	$12.56
			Routine Work	013-002-027	$41.95	$0.00	$41.95
			Routine Work	013-002-124	$159.74	$0.00	$159.74
		REAR BRAKE JOB					
			Routine Work	015-000-000	$0.00	$32.49	$32.49
			Routine Work	015-004-019	$119.63	$0.00	$119.63
		REPLACE RIGHT LOWER TIE-ROD END					
			Routine Work	LIC-000-000	$0.00	$130.00	$130.00
		STATE INSPECTION					
			PM Services	PMS-000-000	$21.79	$38.13	$59.92
		ROUTINE SERVICE					
				Totals For SYS05564	**$355.67**	**$265.59**	**$621.26**

SYS05433		6/23/2014	55,673 Miles	

Vendor (Invoice)	Date	Work Description	Repair Reason	VMRS Code	Parts Amount	Labor Amount	Total Amount
			Routine Work	001-000-000	$30.50	$39.59	$70.09
		REPLACE TEMPERATURE BLEND DOOR ACTUATOR					
			PM Services	PMS-000-000	$40.31	$74.75	$115.06
		ROUTINE SERVICE					
				Totals For SYS05433	**$70.81**	**$114.34**	**$185.15**
				Totals	**$531.43**	**$396.17**	**$927.60**

144 (64503-5203) Main Shop

RO Number	RO Stage	Date	Meter Reading	Mechanic/Vendor
SYS05633		1/15/2015	73,719 Miles	

144 (64503-5203) Main Shop

RO Number	RO Stage	Date	Meter Reading	Mechanic/Vendor

Vendor (Invoice)	Date	Work Description	Repair Reason	VMRS Code	Parts Amount	Labor Amount	Total Amount
			Routine Work	001-000-000	$0.00	$121.15	$121.15
			Routine Work	001-002-017	$36.58	$0.00	$36.58
			Routine Work	001-002-021	$20.67	$0.00	$20.67
			Routine Work	001-002-023	$23.92	$0.00	$23.92
			Routine Work	001-002-024	$22.52	$0.00	$22.52
		REPLACE HEATER FAN BLOWER MOTOR,RESISTOR AND SWITCH					
			Totals For SYS05633		**$103.69**	**$121.15**	**$224.84**

SYS05609 — 12/17/2014 72,164 Miles

Vendor (Invoice)	Date	Work Description	Repair Reason	VMRS Code	Parts Amount	Labor Amount	Total Amount
			Routine Work	017-000-000	$0.00	$38.13	$38.13
			Routine Work	017-001-002	$231.88	$0.00	$231.88
			Routine Work	017-009-008	$2.90	$0.00	$2.90
		ROTATE FRONT TIRE TO REAR AND MOUNT NEW TIRES ON FRONT					
			Routine Work	LIC-000-000	$0.00	$35.00	$35.00
		STATE INSPECTION					
			PM Services	PMS-000-000	$21.79	$38.13	$59.92
		ROUTINE SERVICE					
			Totals For SYS05609		**$256.57**	**$111.26**	**$367.83**

SYS05531 — 10/6/2014 68,104 Miles

Vendor (Invoice)	Date	Work Description	Repair Reason	VMRS Code	Parts Amount	Labor Amount	Total Amount
			Routine Work	054-000-000	$0.00	$38.13	$38.13
		REMOVE DRIVERS DOOR LOCK AND LUBRICATE					
			Routine Work	PMS-000-000	$31.25	$38.13	$69.38
		ROUTINE SERVICE					
			Totals For SYS05531		**$31.25**	**$76.26**	**$107.51**

SYS05455 — 7/10/2014 64,184 Miles

144 (64503-5203) Main Shop

RO Number	RO Stage	Date	Meter Reading	Mechanic/Vendor

Vendor (Invoice)	Date	Work Description	Repair Reason	VMRS Code	Parts Amount	Labor Amount	Total Amount
			Routine Work	013-000-000	$174.53	$121.15	$295.68
		REAR BRAKE JOB(NEW ROTORS)					
			Routine Work	017-000-000	$231.88	$76.26	$308.14
		ROTATE FRONT TIRES TO REAR AND MOUNT NEW TIRES ON FRONT					
			Routine Work	033-000-000	$35.28	$121.15	$156.43
		REPLACE SPARK PLUGS					
			PM Services	PMS-000-000	$34.00	$38.13	$72.13
		ROUTINE SERVICE					
				Totals For SYS05455	**$475.69**	**$356.69**	**$832.38**

SYS05388 — 4/25/2014 60,449 Miles

Vendor (Invoice)	Date	Work Description	Repair Reason	VMRS Code	Parts Amount	Labor Amount	Total Amount
			Routine Work	016-000-000	$87.90	$74.75	$162.65
		REPLACE FRONT STABILIZER BAR LINKS AND BUSHINGS					
			PM Services	PMS-000-000	$34.00	$37.38	$71.38
		ROUTINE SERVICE					
				Totals For SYS05388	**$121.90**	**$112.13**	**$234.03**
				Totals	**$989.10**	**$777.49**	**$1,766.59**

146 (64503-5203) Main Shop

RO Number	RO Stage	Date	Meter Reading	Mechanic/Vendor
SYS05698		3/6/2015	4,675 Hours	

Vendor (Invoice)	Date	Work Description	Repair Reason	VMRS Code	Parts Amount	Labor Amount	Total Amount
			Routine Work	013-000-000	$8.24	$40.38	$48.62
		REPAIR BROKEN AIR LINE(BEHIND AIR TANKS)					
				Totals For SYS05698	**$8.24**	**$40.38**	**$48.62**

146 (64503-5203) Main Shop

RO Number	RO Stage	Date	Meter Reading	Mechanic/Vendor
SYS05634		1/15/2015	4,193 Hours	

Vendor (Invoice)	Date	Work Description	Repair Reason	VMRS Code	Parts Amount	Labor Amount	Total Amount
			PM Services	PMS-000-000	$132.92	$161.79	$294.71
		ROUTINE SERVICE					
				Totals For SYS05634	**$132.92**	**$161.79**	**$294.71**

SYS05507		9/12/2014	4,193 Hours	

Vendor (Invoice)	Date	Work Description	Repair Reason	VMRS Code	Parts Amount	Labor Amount	Total Amount
			Routine Work	LIC-000-000	$0.00	$130.00	$130.00
		STATE INSPECTION					
				Totals For SYS05507	**$0.00**	**$130.00**	**$130.00**

SYS05457		7/15/2014	4,193 Hours	

Vendor (Invoice)	Date	Work Description	Repair Reason	VMRS Code	Parts Amount	Labor Amount	Total Amount
			PM Services	PMS-000-000	$212.97	$152.52	$365.49
		ROUTINE SERVICE					
				Totals For SYS05457	**$212.97**	**$152.52**	**$365.49**

SYS05377		4/15/2014		

Vendor (Invoice)	Date	Work Description	Repair Reason	VMRS Code	Parts Amount	Labor Amount	Total Amount
			Routine Work	054-000-000	$54.72	$37.38	$92.10
		REPLACE RIGHT MIRROR SUPPORT BRACKET					
				Totals For SYS05377	**$54.72**	**$37.38**	**$92.10**
				Totals	**$408.85**	**$522.07**	**$930.92**

147 (64503-5203) Main Shop

RO Number	RO Stage	Date	Meter Reading	Mechanic/Vendor
SYS05527		10/1/2014	1,779 Hours	

Vendor (Invoice)	Date	Work Description	Repair Reason	VMRS Code	Parts Amount	Labor Amount	Total Amount
			Routine Work	065-000-000	$255.50	$194.92	$450.42
		REPLACE VALVE SECTION TO DUMP BODY					
				Totals For SYS05527	**$255.50**	**$194.92**	**$450.42**

147 (64503-5203) Main Shop

RO Number	RO Stage	Date	Meter Reading	Mechanic/Vendor
SYS05394		5/1/2014	1,631 Hours	

Vendor (Invoice)	Date	Work Description	Repair Reason	VMRS Code	Parts Amount	Labor Amount	Total Amount
			PM Services	PMS-000-000	$120.84	$186.88	$307.72
		ROUTINE SERVICE(AUX ENGINE DUE IN 75HRS)					
				Totals For SYS05394	**$120.84**	**$186.88**	**$307.72**

SYS05392		4/29/2014		

Vendor (Invoice)	Date	Work Description	Repair Reason	VMRS Code	Parts Amount	Labor Amount	Total Amount
			Breakdown	060-000-000	$56.32	$236.00	$292.32
		REPAIR JETTER HOSE					
				Totals For SYS05392	**$56.32**	**$236.00**	**$292.32**
				Totals	**$432.66**	**$617.80**	**$1,050.46**

184 (64503-5203) Main Shop

RO Number	RO Stage	Date	Meter Reading	Mechanic/Vendor
SYS05382		4/16/2014	26,966 Miles	

Vendor (Invoice)	Date	Work Description	Repair Reason	VMRS Code	Parts Amount	Labor Amount	Total Amount
			Routine Work	034-000-000	$5.50	$74.75	$80.25
		REPAIR BROCKEN WIRE FOR LEFT FRONT DIRECTIONAL LIGHTS					
			Routine Work	LIC-000-000	$0.00	$130.00	$130.00
		STATE INSPECTION					
				Totals For SYS05382	**$5.50**	**$204.75**	**$210.25**
				Totals	**$5.50**	**$204.75**	**$210.25**
				Grand Totals	**$3,935.87**	**$3,843.96**	**$7,779.83**

4.0 ASSESSMENT OF THE APPRORIATENESS OF THE SELECT BMPs

The Best Management Practices (BMPs) selected for the stormwater program for the most part appear to be appropriate. Furthermore, in comparison to other communities in the region, the Town of Westborough appears to be well ahead of others in development and execution of the NPDES Phase II Small MS4 General Permit program. This self assessment did however reveal some BMPs that the Town continued that were not as effective as in the past years. Those measures are noted within this report. We have added numerous new goals for the upcoming year 13 which are listed in the tables.

Anticipation of a new NPDES MS4 permit has caused us to improve our current Stormwater Management Program, so that when the revised permit is issued, we will have a head start. The hiring of a summer college intern and utilizing qualified volunteers to aid in mapping the drainage system has added a significant amount of information. Furthermore, the decision to join the CMRSWC allows the Town the opportunity to further improve our stormwater program while at the same time save money by sharing resources.