

Municipality/Organization: Town of Chelmsford

EPA NPDES Permit Number: MAR041185

MaDEP Transmittal Number: W-039848

Annual Report Number

& Reporting Period: No. 11: March 2013-March 2014

NPDES PII Small MS4 General Permit Annual Report

Part I. General Information

Contact Person: Stephen Jahnle

Title: Town Engineer

Telephone #: 978-250-5228

Email: sjahnle@townofchelmsford.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:



Printed Name:

STEPHEN E. JAHNLE

Title:

Town Engineer

Date:

4/27/14

Part II. Self-Assessment

The Town of Chelmsford has completed year 11 of the Stormwater Phase 2 program. This year, we are one of 9 communities to be involved in a Stormwater Collaborative. The Northern Middlesex Council of Governments (NMCOG) was awarded a Community Innovation Challenge (CIC) Grant to implement a Stormwater Collaborative throughout the Northern Middlesex Region. The primary goal is to establish and implement a regional Stormwater collaborative to address stormwater issues using an innovative approach that reduces municipal costs and fosters regional cooperation and coordination. The total budget is \$98,000. The tasks include developing and implementing a unified mapping system for the 9 communities, developing a website, FB page and Twitter acct, developing and printing education and informational materials, conducting meetings and workshops with resident groups business owners, civic organizations and non-profit organizations, organizing, scheduling and conducting community-based programs and activities (eg stream cleanups, regional household hazardous waste collection days, rain barrel distributions, etc.) developing and conducting training session for municipal staff and officials, procurements and assisting communities with grant writing.

In our required self-assessment study, we have determined that the Town of Chelmsford is in full compliance with all permit conditions, except for the following:

BMP # 1-2: Stormwater lesson plan for 5th grade students. The package received from the Suasco Watershed Council has been received and rewritten to be more appropriate for grades 2-6. The Girl Scouts have made arrangements to go to the DPW in April, 2014, for Stormwater lessons. The Assistant Town Engineer has requested to be a guest speaker in the 5th grade classrooms.

BMP # 2-2: Stormwater poster contest for 5th grade students. The school department has decided not to use the supplied materials. We are exploring other options at this time.

BMP # 2-3: Stormwater photo contest for high school students. The Suasco Watershed Council has decided to abandon this contest and replace it with a different activity. We will be attempting to hold a photo contest on our own next year.

BMP # 2-7: Develop a catch basin stenciling program. The Engineering Division attended the annual Volunteer Fair and promoted the catch basin stenciling program. 7 adults and 4 teenagers were interested in the program. An ongoing advertisement on local cable television announces that the DPW is looking for volunteers to stencil the storm drains.

BMP # 3-1: Create a stormwater system map. With help from a grant from Massachusetts Interlocal Insurance Association (MIIA) the mapping is nearly complete in both CAD and GIS. A contract has been made with CGIS, Inc. to complete our GIS map of all drain features by July, 2014. See table below for summary.

Item	Mapped in CAD	Mapped in GIS	Numbered	What was added in Yr. 11
Outfalls	98%	10%	Yes	Outfalls numbered and catalogued & mapped in GIS w/inverts
Catch Basins	97%	10%	No	GIS w/inverts
Drain Manholes	97%	10%	No	GIS w/inverts
Drain Pipes	90%	10%	No	GIS w/size and material
Culverts	100%	10%	No	GIS w/inverts
Headwalls	100%	10%	No	GIS w/inverts
Watersheds	100%	100%	Named	All mapping
Detention Basins	23%	23%	No	All mapping

BMP # 4-1: Development of an erosion and sediment control by-law for construction projects. Currently the Town has authority through the site plan process to regulate erosion and sediment control based upon approvals for a specific project. A stand-alone bylaw is not necessary at this time.

BMP # 5-1: Development of a by-law to require certain construction sites to follow MADEP Stormwater Standards 2, 3, 4 and 7. The Town has authority currently to find property owners in violation for not up keeping stormwater facilities based upon approved operation and maintenance manuals included with site plan or subdivision approvals. Our site plan stormwater by-law was re-written to clarify the language so that it specifically states compliance with MassDEP Stormwater Standards. A stand-alone bylaw is not necessary at this time.

Part III. Summary of Minimum Control Measures

1. Public Education and Outreach

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year
1-1 Revised	Stormwater flyer/survey distributed to residents	DPW/Suasco	Distribute flyers to a minimum of 75% of the residents	Complete. Flyers have been distributed to residents and copies are available with the traveling display and online via the town web site.	Continued distribution of flyers and displaying material to help awareness.
1-2 Revised	Stormwater lesson plan for 5 th grade students	DPW/Suasco	Develop and distribute lesson plan to 5 th grade	Lesson plan has been modified and is more suitable for grades 2-6.	School department has decided not to use the supplied package. We are exploring other options.
1-6 Revised	Stormwater web page	DPW	Creation of a stormwater web page	Complete. A stormwater web page has been completely rewritten http://www.townofchelmsford.us/index.aspx?NID=375	Maintain website
1-7 Revised	Provide brochures on recycling, composting and water conservation	DPW/Recycling	Maintain a supply of brochures	Complete. Currently have a supply of brochures from the SuAsCo Watershed, EPA, Mass DEP and other organizations available	Continuation of current supply
1-3 Revised	Stormwater flyer to business community	DPW/Suasco	Flyer distributed to a minimum of 50% of businesses and a logo to be displayed for compliance	Complete. New flyer was published in the CBA Winter Newsletter (Jan, Feb, March 2014) which went to all the business in the Chelmsford Business Association. 250+/- members	Update and republish
1-4 Revised	Stormwater media campaign	DPW/Suasco	Develop a media information packet to be distributed	Complete. We received a press release from the Suasco Watershed and we plan on adding in local information to it.	Update and republish ad campaign

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year
1-5	Stormwater video	DPW/Suasco	Show a stormwater video at one public meeting and re-air video on local cable	Complete. We received the video package from the SuAsCo Watershed. Video runs twice a year on local cable.	Run ad campaign twice a year on local cable focusing on gardening in the spring and good housekeeping in the fall.
Revised					

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year
2-1 Revised	Stormwater traveling display	DPW/SuAsCo	Display and circulate traveling display at various buildings and events	Complete. Since receiving the display, it has been set up at various town buildings with supplies of brochures.	Continued rotation throughout town buildings and events. The Library will have a special display for the month of May 2014 showcasing various ways to help prevent stormwater pollution.
2-6 Revised	Provide support for clean up and collection days	DPW/Recycling	Provide support at least twice per year	Complete. Support has been provided for brush drop off, haz mat, town clean up.	Continued support for these days. The recycling office has entered into an agreement with other towns to provide homeowners a program for white goods and electronics.
2-7 Revised	Develop a catch basin stenciling program	DPW	Develop a program to stencil catch basins in priority areas	The Engineering Division advertised their program at the Volunteer Fair and got 7 adults and 4 teenagers who are interested.	As stated in the self-assessment, we are currently coordinating with groups to stencil.
2-2 Revised	Stormwater poster contest for 5 th grade students	DPW/SuAsCo	Hold a stormwater awareness poster contest, judge and display it.	School department decided not to run this contest.	School department has decided not to use the supplied package. We are exploring other options.
2-3 Revised	Stormwater photo contest for high school students	DPW/SuAsCo	A stormwater photo contest is held, judged, and displayed	SuAsCo has decided to abandon the contest.	We are exploring other options.
2-4 Revised	Stormwater Summit event	DPW/SuAsCo	Hold a local Stormwater event	Information has been gathered to support a public event.	Currently on hold until the issuance of the next permit.

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year
3-1 Revised	Create a stormwater system map	DPW	Develop a stormwater system map, maintain and update as needed	Approximately 97% of the town drainage system mapped and all new construction added. See self-assessment for more detailed info. NMCOG has created a map showing all the drainage structures in our region.	Continued mapping and updating of existing information. See self-assessment.
3-4 Revised	Increase number of Haz Mat days	Recycling/DPW	Make disposal easier of hazardous materials	Complete. The recycling office has entered into an agreement with other towns to provide homeowners more opportunities to dispose of their haz. Waste. There are also bins available in Town Hall for recycling of light bulbs, batteries, cardboard, etc all the time.	Continued support for these days. Northern Middlesex County of Governments (NMCOG) will help with Haz. Days in April, 2014.
3-2 Revised	Create an illicit discharge inspection/elimination plan	DPW	Develop a plan to locate and eliminate illicit and illegal connections	Target areas and map system for connections. No illicit discharges found.	We have inspected multiple areas for connections and plan on continued inspections in targeted areas as well as roadway construction projects.
3-3 Revised	Develop and implement an ordinance that prohibits illicit and illegal connections	DPW	An ordinance is developed to prevent illicit and illegal stormwater and non-stormwater connections to the system	Complete. Implementing bylaw.	Continue to implement bylaw and review for any potential improvements.
Revised					

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year
4-1 Revised	Development of an erosion and sediment control by-law for all construction projects	DPW/Community Development	Develop and implement a by-law	See self assessment.	Review current requirements and revise as necessary.
4-2 Revised	Plan reviews	DPW	All plans reviewed for water quality issues and concerns	Complete. Currently reviewing plans for standard erosion and sedimentation protection and making contractors aware of the Phase 2 program and it's requirements	Continued review of plans for revised current stormwater regulations. Develop a plan review checklist.
4-3 Revised	Site inspections of construction projects	DPW/Community Development	Periodic inspection of ongoing sites	Complete. Have worked with contractors on installation of hay bales/straw wattles and silt fencing, construction entrances and protective measures	Continued inspections and enforcement of the proposed erosion and sediment control plans presented by the developers. Develop an inspection form.
4-4 Revised	All work within the public right of way inspected to prevent erosion and sediment build up	DPW	Minimize and/or prevent sediment from entering the public right of way	Complete. Have instructed all contractors to have gravel construction entrances, periodically sweep streets and all silt sack protection to existing basins where necessary	Continued inspections and enforcement.
Revised					
Revised					
Revised					

5. Post-Construction Stormwater Management in New Development and Redevelopment

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year
5-1 Revised	Develop a by-law to require certain construction sites to follow MADEP stormwater standards 2.3.4, and 7	DPW/ Community Development	All regulated projects required to follow same standards	See self assessment.	Review current requirements and revise as necessary.
5-3 Revised	Post construction inspection of regulated projects	DPW	Inspections are performed to ensure proper construction and that facilities are working as they where proposed	Design engineers are required to submit as-builts and letters certifying construction in accordance with the plans and follow up inspections by DPW to ensure the facilities are working as proposed	Continued inspection and recommend to private system owners maintain their systems in accordance with the design or proposed post construction plan along with the approved operations and maintenance manual.
5-2 Revised	Develop a list of BMP's for the post construction maintenance schedule	DPW	Develop a list as a guideline for post construction maintenance	We have worked with the local engineers and developers to have parameters for post construction maintenance of facilities.	Continued work on a finalized list to be added into our regulations. Also have worked with private property owners on maintenance of systems.
Revised					
Revised					
Revised					
Revised					

6. Pollution Prevention and Good Housekeeping in Municipal Operations

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year
6-1 Revised	Catch Basin cleaning	DPW	Continuation of current catch basin cleaning schedule	Complete. Every catch basin was cleaned last year.	Catch basin cleaning is currently scheduled for the upcoming season and additional funding opportunities are being explored to ensure that all catch basins are cleaned.
6-2 Revised	Street Sweeping	DPW	Continuation of the current street sweeping program	Complete. All public streets, sidewalks and municipal parking lots are swept utilizing the town owned and operated sweepers	Continued spring sweeping schedule
6-3 Revised	Stormwater pollution plan in place and in effect for DPW facility	DPW	Maintain the current plan and update as needed	Continued maintenance of oil separators, traps and containment systems. Wash bay installed in garage in February 2014.	Ongoing operation and maintenance
6-6 Revised	Identify catch basins in poor condition and repair or replace those structures	DPW	Utilize mapping to identify facilities in poor condition and repair or replace a minimum of 5 per year	Complete. Repaired or replaced approximately 74 drainage structures.	Ongoing maintenance
6-7 Revised	DPW drainage maintenance permit	DPW	Renew drainage facility maintenance permit	Complete. Town wide permit was renewed in December 2007. Several areas were dredged or cleaned over the past winter.	Continued drainage area maintenance and renewal of our permit. Our permit has been extended through Ma. Permit extension acts.
6-4 Revised	Develop a training program for DPW employees	DPW	Employee training program established	Complete. NMCOG developed a training program for DPW employees.	All essential DPW employees trained in the spring of 2014 in Illicit Discharge Detection and Good Housekeeping practices. Continued training to all new staff.

7. BMPs for Meeting Total Maximum Daily Load (TMDL) Waste Load Allocations (WLA) <<if applicable>>

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year
	Not applicable				
Revised					
Revised					
Revised					
Revised					
Revised					
Revised					
Revised					

Assessment of the appropriateness of the selected BMPs.

The Best Management Practices (BMPs) selected for the stormwater program appear to be appropriate. 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. Additional GIS mapping of the drainage system has added a significant amount of information to our drain map. Furthermore, the decision to join the Northern Middlesex County of Governments Stormwater Coalition allows the Town the opportunity to further improve our stormwater program while at the same time save money by sharing resources.

Reference any reliance on another entity for achieving any measurable goals:

SUASCO – educational material and displays

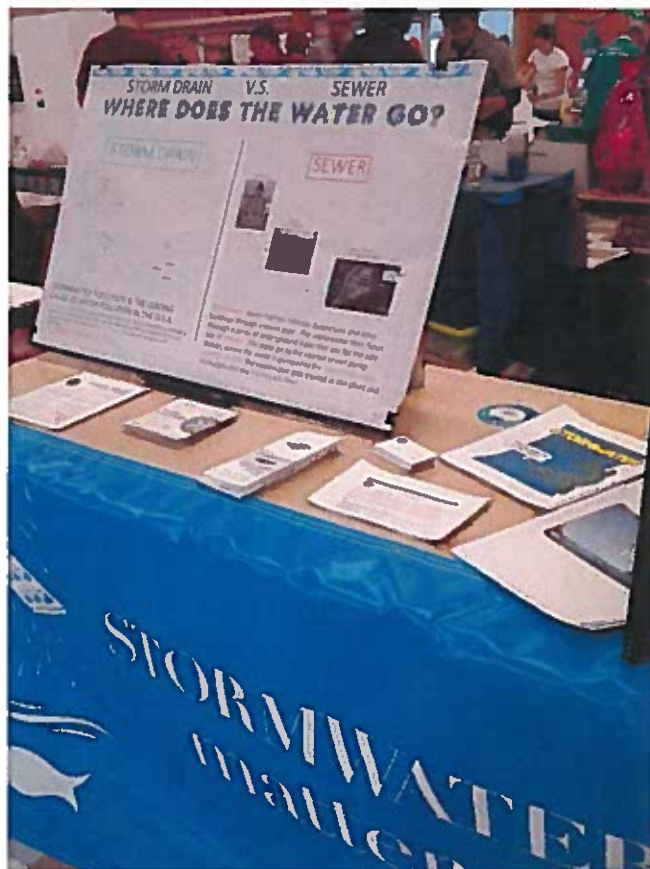
Northern Middlesex County of Governments (NMCOG) – Hazardous Waste days support, Stormwater Coalition purchased Enviroscope for educational use, created a map of all drainage structures in our region for all the local towns to use. Regional Stormwater Collaborative.

Massachusetts Interlocal Insurance Association MIIA- \$13,000 grant for improvements to our GIS mapping of Stormwater infrastructure

CGIS, Inc. – Consultant who is performing the updates to our GIS mapping of Stormwater infrastructure with the \$13,000 grant.

**APPENDIX TO
CHELMSFORD, MASSACHUSETTS
ANNUAL STORMWATER REPORT
YR- 11
MARCH 2013 TO MARCH 2014**

CHELMSFORD VOLUNTEER FAIR – MARCH 15, 2014



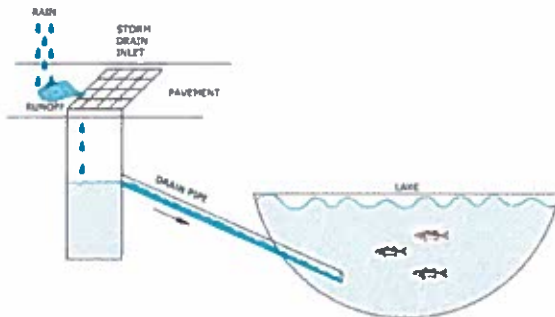
CHELMSFORD STORMWATER WEB PAGE



PUBLIC EDUCATIONAL DISPLAY

STORM DRAIN V.S. SEWER WHERE DOES THE WATER GO?

STORM DRAIN



STORMWATER POLLUTION IS THE LEADING CAUSE OF WATER POLLUTION IN THE U.S.A.

Stormwater runs off the pavement and into storm drains, then it flows through a series of underground pipes that are for the sole use of stormwater, the water then discharges into the woods or **waterbodies** like ponds, streams, and wetlands.

THE STORMWATER DOES NOT GET TREATED.

SEWER



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

EDUCATIONAL FLYER IN CHELMSFORD BUSINESS ASSOCIATION WINTER NEWSLETTER



CHELMSFORD BUSINESSES CAN HELP KEEP STORMWATER CLEAN



Every type of business – whether commercial, industrial, construction, or retail – has a role to play in following environmentally sound practices for everyday activities.

STORMWATER matters.

Stormwater pollution is an important quality-of-life issue in Massachusetts. It can affect all of a community's water resources such as drinking water wells, rivers, ponds, and wetlands. Local businesses can help keep stormwater clean by following the pollution prevention guidelines outlined below and by encouraging employees and customers to become partners in water resource protection. Keeping stormwater clean makes good sense. Stormwater becomes polluted with litter, sand, bacteria and chemicals (such as automobile fluids and deicing salts) as it flows over parking lots and streets and down into the storm drains.

Many people are surprised to learn that storm drains are not connected to a sewer, but discharge **DIRECTLY INTO A NEARBY WATER BODY**, such as a wetland or stream without any treatment.

Cleaner stormwater means cleaner water for drinking, swimming, fishing, boating and for protecting wildlife.

How Can Businesses Help?

- Sweep sidewalks, loading docks and parking lots regularly to collect sand, debris and litter and dispose of it in the trash.
- Maintain your vehicles regularly to prevent fluid leaks. Wash your car at a commercial carwash that recycles wash water. Do not wash it on the pavement.
- Reduce the use of fertilizers, herbicides and pesticides; ask your landscaper to avoid applying lawn chemicals right before a heavy rain storm. Do not over-water your lawn. Never rake leaves and grass clippings into the street, storm drain or to a wetland.
- Never put leaking containers into your dumpster.
- Make sure that all floor drains, sinks and toilets are connected to the sanitary sewer.
- Clean grease traps often and never dump cooking grease or oil into a floor drain, toilet, sink or storm drain.
- Never discharge mop water or other wash water to a parking lot or storm drain.
- Provide a secure, covered storage for all materials, whether inside or outside.
- Never hose down a chemical or petroleum spill into the street or storm drain.
- Your on-site stormwater facilities may include a detention basin, storm drains, and perhaps even a stormwater treatment unit. You are required to maintain these facilities as part of your Site Plan Approval. That includes maintaining the detention basin and cleaning out the storm drains every year. Not doing so can lead to the system failing to function properly and possible flooding.

Come by the Chelmsford DPW at 9 Alpha Rd to get your own Stormwater Matters window decal to let your customers know that you care about clean water! For more information contact: Christina Papadopoulos, Assistant Town Engineer, at 978-856-6701.

INFORMATION ON HAZARDOUS WASTE DAYS

Household Hazardous Waste



Household Hazardous Waste day: Saturday April 26, 2014, 9:00 a.m. to 1:00 p.m.
Lower Lot, Town Offices, 50 Billerica Road. Fees charged for some items—call **978-250-5241**.

Bring proof of residency and:

drain openers, oven cleaners, hobby/photography chemicals, metal or furniture polish, lithium batteries, Nickel/Cadmium batteries, lithium ion batteries, antifreeze, car/boat batteries, brake fluid, degreasers, driveway sealers, polishes and waxes, transmission fluid, fertilizers, fungicides, herbicides, pesticides, pool chemicals, rodent poisons, weed killers, epoxies, adhesives, oil paint, paint thinner, solvents, stains, varnishes, wood strippers & preservatives, motor oil (**note state law requires MA retailers that sell motor oil to accept used oil for recycling with receipt**), etc.

Do NOT bring:

infectious or biologic materials, radioactive materials, Silvex, T-Herbicides/ 2-3-4 Herbicides, unidentified materials, water reactive materials (contact Board of Health 978-250-5241 for disposal suggestions), ammunition, fireworks or explosives, latex paint (p. 7), propane tanks (p. 7), electronics (p. 1 and below).

Missed Chelmsford's Household Hazardous Waste day?

- **Minuteman Regional Hazardous Products Facility**, Lexington. Open July 20, Aug. 17, Sept. 17, Oct. 19, & Nov. 9, 2013. Call Recycling Office 978-250-5203 at least 1 week in advance to **pre-register** & avoid fees;
- **Clean Harbors**, Braintree, MA. Fees charged—call 781-380-7177 or go to www.cleanharbors.com.

ABC of Hazardous Waste

STORM DRAIN STENCILING CABLE ADVERTISEMENT



Town of Chelmsford

Volunteers Needed!

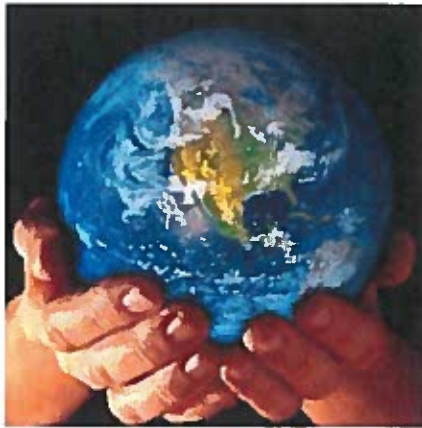
The Chelmsford D.P.W is looking for volunteers to help stencil the storm drains in Chelmsford.



Please contact Asst.
Town Engineer Christina
Papadopoulos to
volunteer.

978-856-6701

cpapadopoulos@townofchelmsford.us



Chelmsford Town-Wide Cleanup Saturday, April 28th, 2013

It's in your hands. The snow has melted to reveal the roadside waste that accumulated over the winter.

Join us in cleaning up our town!

Sponsored by: Allied Waste

Date: Saturday, April 28, 2013

Time: Throughout the day

Where: All roads and parks

What: Town Litter Cleanup 

Pick up bags+gloves from the
office of Recycling and Solid
Waste Mon-Fri 9am-noon

For more information:
nparlee@TownofChelmsford.us

 or 978-250-5203

REGIONAL STORMWATER MAP
CREATED BY: NMCOG
AVAILABLE ON-LINE

