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| **Municipality/Organization:** | Town of Leicester, MA |
| **EPA NPDES Permit Number:** | MAR041202 |
| **MassDEP Transmittal Number:** | X260861 |
| **Annual Report Number & Reporting Period:** | **Year 11**<br>**April 1, 2013 – March 31, 2014** |

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

**Part I. General Information**

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Certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: 

Printed Name: Kevin Mizikar

Title: Town Administrator

Date: April 28 2014

**Part II. Self-Assessment**

The Town of Leicester's Highway Department continues to take the lead on compliance with the Town's MS4 Permit.

The Town of Leicester is pleased to be one of 30 MS4 municipalities participating in the Central Massachusetts Regional Stormwater Coalition ("the Coalition"), funded by the Community Innovation Challenge Grant (administered by the Massachusetts Executive Office of Administration and Finance). The Town of Spencer serves as the lead community for the Project. Leicester Stormwater Committee member Mike Knox serves on the Coalition Steering Committee, so the town plays a lead role in the development of many tasks.

The work completed under the grant, which was fully funded in the amount of $310,000 for FY2012, began on May 1, 2012, and included eighteen tasks, each of which was facilitated by Tata & Howard, Inc., the consulting firm that is also providing stormwater services to the Town of Leicester. The eighteen tasks completed under this project include:

1. Develop a Methodology to Reach a Common Benchmark
2. Develop Training DVD/CD
3. Develop Educational Website
4. Develop Online Database for Data Management
5. Develop Stormwater System Mapping Integration
6. Develop a Sump Pump Discharge Policy
7. Develop a Stormwater Pollution Prevention Plan (SWPPP) Template
8. Develop a Salt/Sand Application Decision Tree
9. Develop a Stormwater BMP Toolbox
10. Develop a Request for Proposals for General Consulting Services
11. Administrative Support
12. Cost/Benefit Analysis of a Regional Stormwater Laboratory
13. Drainage Extension Approach that Mirrors Inflow Data and Priorities
14. Produce Twenty Facility Specific Figures for Incorporation into the Stormwater Pollution Prevention (SWPPP) Template
15. Illicit Discharge Detection and Elimination (IDDE) Documentation Packet
16. Purchase of Second Leica Surveying Device
17. Ongoing Website Maintenance and Development
18. Field Training with Tablets

A detailed narrative on the Coalition tasks has been provided at the end of the Part II Self-Assessment.

The Coalition received another $115,000 in additional funding from the CIC Grant program to continue the regional stormwater program in Fiscal Year 2013 and an additional $85,000 from member Communities for a total budget of $200,000. During this year of the project 17 additional communities joined the Coalition bringing the number to 30.

In Permit Year 11, the Coalition has accomplished the following tasks:

1. Incorporate Expansion Community Data into Integrated Mapping
2. Implement FY2012 Tasks 1-7 for Expansion Communities
3. Implement FY2012 Addendum Tasks for Expansion Communities
4. Purchase Tablet Computer Devices for Expansion Communities
5. Provide PeopleGIS Training to Expansion Communities
6. FY2012 Support for Expansion Communities
7. Expand FY2012 Integrated Mapping for 13 Original Communities
8. Expand and Enhance the CMRSWC Website
9. Complete Field Work Using the Draft FY2012 Stormwater Field Services RFP
10. Purchase a Storage and Transport Equipment Trailer
11. Training on Water Quality Sampling
12. An Inventory of industrial facilities in each Coalition community that should have applied for coverage under the USEPA MSGP (Industrial Stormwater) Permit.
13. Facilitation and Coordination

The Town of Leicester was able to team with Massachusetts DEP and Worcester Polytechnic Institute, as part of the CMRSWC, to work with students on their Interactive Qualifying Project (IQP), which involved catch basin mapping. Students worked directly with Highway Department staff using the Leica GPS device to help the Town continue mapping its system.

Leicester has made strides in its illicit discharge program in Year 11. Key Town personnel attended a training session on IDDE Education and Communication. Personnel from the Police, Fire, Sewer Districts, Highway Department, School Department, Code Enforcement, Planning Department and the Town Administrator attended the training session. To follow up the session, a Statement of IDDE Responsibilities was created in which a hierarchy within Town Department's is identified and roles are defined.

Operations and Maintenance activities completed by the Town's Highway Department continue to reduce potential for pollution from stormwater. During this period, all catch basins on 131 streets in Town were cleaned, and 198 Town streets were swept. The Town uses catch basin cleaning activities as an opportunity to identify potential illicit discharges. The Highway Department also cleaned 14 miles of sidewalks in the Town, including those along Route 9, which is a State Highway.

**Central Massachusetts Regional Stormwater Coalition**

In the following sections, descriptions of the technical tasks and purchases made possible by the CIC grant funding have been separated into sections that mirror the six Minimum Control Measures (MCM's) in the 2003 Massachusetts Small MS4 Permit. Other specific tasks have been incorporated into the tables in Part III of this Annual Report (beginning on Page 11). These tasks have been developed and utilized starting in Permit Year 10 and have been built upon in Permit Year 11.

One of the more innovative tools developed by the Coalition in Permit Year 10, and continued in Year 11, supports many MCM's and has been noted separately: an integrated online mapping and inspection database. The database is cloud-based, and can be accessed by all 30 member communities through a desktop or tablet computer. Existing mapping completed by the 30 member communities was converted to a project standard format and uploaded to a single online map, so that the communities can see each other's system. This tool represents the essence of the Coalition project's message, which is that stormwater is regional- it doesn't stop at a community boundary. All mapped infrastructure is connected to inspection reports that mirror hard-copy forms developed in the 15 Standard Operating Procedures discussed under MCM 1, below: for example, outfall and catch basin inspections. The developed integrated mapping and inspection system is so comprehensive and flexible that does not fit into just one of the MCM's. It aids communities with public education and outreach (MCM 1), as surveying is a highly-visible activity that will generate questions, and would make an engaging demonstration to school groups). The integrated mapping and inspection database documents evidence of potential illicit discharges or the absence thereof (MCM 3), aids construction site stormwater control (MCM 4) by allowing for data evaluation of how much sediment is contained in a sump, and makes good housekeeping (MCM 6) easier by collecting data on how often catch basins are cleaned. Other tasks and tools of the project connect to the integrated mapping and inspection database, which was designed to serve the needs of the Coalition communities well beyond the 2003 Massachusetts Small MS4 Permit.

***Minimum Control Measure 1: Public Education and Outreach***

The Coalition developed a DVD to be distributed to each member community. The DVD contained a number of materials appropriate for public education and outreach, with materials on a variety of topics. The topics included illicit discharge detection and elimination, management of pet wastes, and appropriate use of fertilizer, among others. The benefit of this delivery format is that the group members can print materials on demand. The Coalition also developed a presentation on stormwater management, with content focused on educating the general public and volunteer groups.

The Coalition purchased 13 copies of the Pennsylvania State University documentary "Liquid Assets", and distributed a copy to each original member community. Leicester has played the documentary on its local television station and plans to continue to do so in coming Permit Years.

The Coalition purchased 100 water quality monitoring kits from the World Water Monitoring Challenge program (www.worldwatermonitoringday.org), which "builds public awareness and involvement in protecting water resources around the world by engaging citizens to conduct basic monitoring of their local water bodies". Several communities have already worked with teachers in their local school department or district to do outreach to elementary and middle-school aged students. The kits are being stored in Spencer and Shrewsbury for distribution to the Coalition members.

The Coalition purchased an Enviroscape table focused on non-point source pollution education (http://www.enviroscapes.com/nonpoint-source.html). This tool is a hands-on, visual trainer to demonstrate the importance of good housekeeping and low-impact development for pollution prevention, with the objective of maintaining water quality in our communities. Two communities have done demonstrations for local schools using this tool, and many additional communities plan to use it at local Earth Day or other community fairs.

The Coalition developed an educational website, www.CentralMAStormwater.org, focused on providing information about the project to a number of audiences, including the general public, educators, and kids. Five members of the Coalition Steering Committee received training on how to update the website's content. The website has been an important tool in Permit Year 11 as it provides links to each individual Communities website, has been updated with public outreach examples, and has a message board that provides news updates.

***Minimum Control Measure 2: Public Involvement and Participation***

The Coalition developed a presentation on stormwater management, with content focused on educating elected officials and municipal department heads about the requirements of the 2003 Small MS4 Program, changes likely in the anticipated new Small MS4 Permit,

and the financial impact these potential changes may have on Massachusetts communities.

***Minimum Control Measure 3: Illicit Discharge Detection and Elimination***

The Coalition developed SOP 10, "Locating Illicit Discharges", intended to define the types of illicit discharges that may be observed in the Coalition communities and provide guidance on tools that can be used to identify each. SOP 10 includes an Illicit Discharge Incident Tracking Sheet.

The Coalition also developed the Illicit Discharge Detection and Elimination (IDDE) Documentation Packet, which specifies how illicit discharges are detected and what department or person is responsible for ensuring elimination remains a substantial challenge to many MS4 communities. Without documentation of the entity responsible for this task for a variety of types of illicit discharge, communities may not satisfy the requirements of the 2003 Massachusetts Small MS4 Permit and may be unprepared for increased IDDE compliance in the new Small MS4 Permit. This deliverable clarified USEPA's minimum IDDE requirements and incorporated appropriate existing IDDE Plans and materials by reference. More importantly, the task provides a framework for people in multiple departments to understand each person's responsibilities, encourage cooperation and communication toward a single objective, and provide templates for documenting observations, actions, and compliance.

The Coalition purchased two Leica GPS survey devices that can be used to map new structures with very high accuracy, using connection to a military-grade RTK satellite network. The Coalition also purchased 30 tablet computers, one for each member community. Both of these tools can be used to directly access the online mapping and inspection system: the Leica will be most valuable for mapping outfalls, catch basins, pipe, drain manholes, BMPs, and other components of the MS4, while the tablet computers will be most valuable for ongoing inspection of the structures. These two activities serve as the foundation of IDDE investigation. The Coalition purchased portable wireless devices (MiFi) for each of the 30 member communities so that both Leica and tablet computers can be used in the field. Members of all Coalition communities received training on both the Leica devices and the tablet computers during Permit Years 10 and 11. Leicester has effectively used the Leica device to map its storm drain system.

The Coalition purchased several water quality field kits and meters, most of which are focused on identifying illicit discharges and aligned with the field screening parameters expected to be listed in the pending Massachusetts Small MS4 permit. These tools are available to all 30 member communities. Training has been provided by the Coalition consultants on how to use the water quality field kits.

The Coalition developed a Request for Proposals (RFP) for a third-party firm to perform many of the field or inspection services defined in the 15 SOP's, including outfall inspection (dry weather and/or wet weather), water quality monitoring, catch basin inspection, and other related tasks. These services are all vital to the effort to identify illicit discharges in the Coalition communities.

The scope of the RFP will be reviewed and compared to the requirements of the proposed or final Massachusetts Small MS4 Permit in effect at that time.

***Minimum Control Measure 4: Construction Site Stormwater Runoff Control***

The Coalition developed SOP 6, "Erosion and Sedimentation Control", intended to help communities minimize discharges from land-disturbing activities. The SOP addresses design, planning, construction, and inspection tools and activities that can serve as BMPs. The SOP also outlines inspection requirements for a variety constructed BMPs that need to serve a long-term purpose for protecting surface waters from discharge of sediments. Training on all SOPs developed in Year 10 was conducted during Year 11.

***Minimum Control Measure 5: Post-Construction Stormwater Management in New Development and Redevelopment***

The Coalition developed a Stormwater Best Management Practices (BMP) Toolbox, compiling the stormwater post-development tools currently permitted and encouraged for small development or redevelopment, specifically single-family homes and limited commercial renovations that have a small development footprint. The Stormwater BMP Toolbox provides technical data, design factors, and construction limitations with these BMPs in non-technical language. The objective was to provide the average property owner with easy-to-understand information that encourages them to select low-impact stormwater management tools for their properties, construct them safely, and maintain them for long-term benefit. The BMPs in the Toolbox are consistent with the requirements of the current Small MS4 Permit, the Massachusetts Stormwater Handbook (February 2008), and other current guidance documents. Training on all SOPs developed in Year 10 was conducted during Year 11.

***Minimum Control Measure 6: Pollution Prevention and Good Housekeeping in Municipal Operations***

The Coalition developed a Stormwater Pollution Prevention Plan (SWPPP) template in the form of a word processing document. The template addresses elements common to all SWPPPs, including storage of materials, site inspection practices, water sampling, training, spill prevention and cleanup, Standard Operating Procedures for a number of activities, and other sections. SWPPP template covers many types of municipal properties. This includes highway department garages and public works yards, where salt is stored and vehicle maintenance or storage is completed, as well as parks, golf courses, and cemeteries, where fertilizers and pesticides may be applied and lawn mowing activities may result in small spills. The SWPPP template includes built-in instructions to make it as simple as possible for each community to develop a SWPPP for a property, simply by deleting text that doesn't apply.

The Coalition developed 15 Standard Operating Procedures (SOP's) intended to provide guidance on activities required or encouraged by the 2003 Massachusetts Small MS4 Permit. These SOPs addressed such diverse activities or needs as outfall inspection (both dry weather and wet weather), catch basin cleaning, erosion and sedimentation control, oil/water separator maintenance, use and storage of pesticides and fertilizers, and many more. The group developed standard forms and methodologies for these procedures, many of

which were incorporated into the Integrated Online Mapping and Inspection System, described in following paragraphs.

The Coalition developed two presentations on pollution prevention in stormwater management, with content focused on educating employees of public works, engineering, conservation, planning, highway, and other similar municipal departments on the requirements of the 2003 Small MS4 Program. This includes a training presentation on the SWPPP Template and the responsibilities of municipal personnel to implement requirements of the SWPPP. A second training presentation provides explanation and insight on the 15 SOP's described previously.

The Coalition developed a Sump Pump Discharge Policy that provides a framework for the member communities to respond to needs to remove sump pumps from the sanitary sewer system without causing property damage or creating a hazardous condition for the public. The Policy discusses considerations related to potential contamination and reduction in capacity of the storm drain system when sump pumps are permitted to connect to the drainage system, and lays out a situational approach to provide flexibility in administrating a policy. The Policy includes guidance for when such a connection should be considered, what information the municipality can request from a residential or commercial property to guide in its decision, and outlines the responsibilities of the property owner.

The Coalition developed a Salt/Sand Benchmarking tool to guide member communities in determining the present loading rate of chloride (per lane-mile) presently applied by its salt trucks and other municipal vehicles, regardless of the compound (e.g.: sodium chloride, green salt, calcium chloride) or form (e.g., solid or liquid, mixed with sand), and in evaluating alternative application methods and materials to current practices. The deliverable guides communities through an equipment calibration process and suggests a target reduction rate that is coupled to and appropriate for the benchmarked loading rate. The objective of this task is to reduce the overall loading of chlorides to surface waters in the region while maintaining safe conditions on roadways. Training sessions were held in Permit Year 11 for all Pollution Prevention and Good Housekeeping in Municipal Operations tasks mentioned above, and these training sessions were all attended by a representative from the Town of Leicester.

In FY2014, the CMRSWC was awarded another $80,000 in funding from the CIC Grant program. The tasks for the 2014 project were estimated at $200,000. Currently, funding requests are being made for all 30 Communities to make up the funding gap and to make sure all tasks are fully funded. Leicester will continue to commit to the Coalition moving forward. A list of the proposed 2014 tasks is as follows:

1. Maintain Tools Coalition has already invested in:
   a. Install updated Firmware for Leica devices to improve performance;
   b. Purchase Additional Batteries for Leica devices;
   c. Replenish consumable components of water quality kits;
   d. Calibrate water quality meters to ensure long-term performance.

2. Update and Prepare tools to support additional requirements of 2014 (estimated) Massachusetts MS4 Permit:
   a. Purchase new GIS software for Leica #1 and Leica #2 to enable enhanced data collection using existing devices;
   b. Purchase new ammonia field screening kits that are consistent with pending new MS4 Permit;
   c. Purchase ammonia test strips recommended by USEPA and recently approved for field use.
3. Performance Management: build on the work of Compliance Needs Assessments started by WPI students in FY2013. Use these Needs Assessments to develop future budgetary needs for each community to comply with 2014 (estimated) Massachusetts MS4 Permit.
4. Coordinate with MassDEP and WPI to develop program.
5. One-on-one support: invest in individual consultant time with each community to encourage use of tools developed in FY2012 and FY2013.
6. Two four-hour refresher training sessions, hosted by PeopleGIS.
7. Purchase third Leica device (including GIS Collection software): enable Coalition Towns to use devices for longer periods; reflect the larger geographic area of project; enable WPI students to spend additional time in Coalition communities with the devices as part of their IQP project.
8. Collaborate with other Regional Groups.
9. Host four workshops on sustainable financing. Assist Towns in funding and outreach/education parts of developing a sustainable mechanism.
10. PeopleGIS:
    a. Purchase support to develop pipe layer for 17 Expansion communities, 10 additional forms and support;
    b. Purchase hosting and support for Years 4 & 5.
11. Increase member access to www.CentralMAStormwater.com website:
    a. Purchase hosting and support for Years 4 & 5 from Virtual Town Hall;
    b. Provide additional training on using VTH;
    c. Purchase five additional administrative logins.

## 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 |
|---|---|---|---|---|---|
| 1 | Create a stormwater program | Highway Department; Planning Board; Conservation Commission; Board of Health; Board of Selectmen | Leicester will present its Comprehensive Stormwater Management Program to the public at a public meeting. | This goal was completed in previous Permit years. | Continue to educate the public about the Stormwater Management Program. The Town continues to await the finalization of the new Massachusetts MS4 Permit. |
| Revised | | | | | |
| 2 | Create a stormwater program | Highway Department | Leicester will identify appropriate sources of funding assistance (SRF, 319 Grant Program, Lakes & Ponds Grant Program, Source Water Protection Grant Program, Recycling Grant Program) and apply for assistance in implementing portions of Leicester's Comprehensive Stormwater Management Program, including public education and outreach. | Funding options continue to be explored.<br><br>Leicester was an active participant in the Coalition project. | Leicester will consider applying for Section 319 grant funding to support implementation of nonpoint source pollution projects.<br><br>Leicester will continue to participate in the Coalition project. |
| Revised | | | | | |
| 3 | Address specific groups | Highway Department | Distribute EPA and other relevant educational brochures to targeted audiences. Distribution points include Town Hall, Library, and Transfer Station. | Leicester continued involvement in local community events. Outreach | Continue to implement and evaluate outreach programs to educate the specific groups of the public, particularly materials |

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| Revised | | | | materials continue to be available on the Town's website.<br><br>Leicester's Stormwater Committee provides information at Founder's Day activities, which were held on June 15, 2013 in Year 11. | developed by the Coalition project.<br><br>Information will be provided at the Founder's Day event in June 2014.<br><br>Leicester will link its Town website to the Coalition website. |
| 4 | Target groups likely to impact stormwater | Highway Department | Brochures targeting specific audiences and activities will be available. These target groups include homeowner and lawn maintenance activities, disposal of household waste, and pet maintenance. | Reviewed educational materials provided by Coalition on specific activities. | Create and send out an educational brochure to homeowners. |
| 5 | Identify alternative information sources | Board of Selectmen; MIS Department | Leicester will post links to stormwater BMPs and other water quality education resources, including EPA and DEP, on its website. http://www.ci.leicester.ma.us/ | Outreach materials continue to be available on the Town's website.<br><br>The Town streamed the Pennsylvania State University documentary "Liquid Assets" on the Leicester local cable access channel. | Continue to identify and implement alternative information sources for public outreach and evaluate the program.<br><br>Continue to stream the Pennsylvania State University documentary "Liquid Assets" on the Leicester local cable access channel. |
| Revised | | | | | |
| 6 | Identify alternative information sources | Highway Department | Leicester will also post links on its website to the Blackstone River Watershed Association at www.thebrwa.org, the Blackstone River Watershed Council at www.BVTourism.com, the Nashua River Watershed Association at http://www.nashuariverwatershed.org, the French River Watershed Basin Team at http://www.state.ma/us/envir/water/frenchquinebaug/frenchquinebaug.htm and the Chicopee River Watershed at www.chicopeeriver.org. | Leicester continues to maintain these links on its website. | Continue to identify and implement alternative information sources for public outreach and evaluate the program.<br><br>Promote Coalition developed educational website, www.CentralMAStormwater.org. |
| Revised | | | | | |

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| 7<br>Revised | Utilize local website | Highway Department | Public meeting notice and the meeting reviewing Leicester's Comprehensive Stormwater Management Program will be posted on Leicester's local access channel. | Leicester held several meetings of the Stormwater Committee in Year 11.<br><br>All meetings are published in advance on the Town website and open to the public. | Continue to utilize the local website for public outreach and evaluate its use.<br><br>Upload Coalition developed public education and outreach materials on topics including illicit discharge detection and elimination, appropriate fertilizer use and pet waste management. |
| 8<br>Revised | Develop, conduct and document educational programs. | Highway Department Liaison | The Town of Leicester will appoint a liaison to the Blackstone River Watershed Association and the Nashua River Watershed Association to disseminate information to the Town on programs and activities. | Leicester's participation in the Coalition project included substantial communication with multiple watershed groups. | Continue to evaluate connections with watershed groups. |
| 9<br>Revised | Promote Household Waste Recycling | Highway Department; Board of Health | The Town of Leicester will work with the Town's contracted waste hauler and the Board of Health to continue to sponsor Hazardous Waste Collection Days. | Leicester uses its Town website to host a "FAQ" on hazardous waste disposal, to promote and evaluate household waste recycling programs and encourage residents to utilize services available at the Recycling Center. | Continue to promote and evaluate Household Waste Recycling programs. A HHHW Collection Event is scheduled every 2 years, next is scheduled for October 3, 2015.<br><br>Leicester will continue to participate in Drug Take-Back events. |

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| | | | | The Highway Department recycles its used oil and serves as a drop-off location for used oil from residents, with all materials collected and processed regularly by the Recycling Center.<br><br>Leicester participates in all DrugTake-Back programs sponsored nationally by the federal government, and provides notice of these events locally.<br><br>Continue to promote and evaluate Household Waste Recycling programs. A HHHW Collection Event was held in Year 11 on October 19, 2013. | |

## 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 |
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| 10 | Storm drain stenciling | Highway Department | Leicester will work with local Scout groups to develop a stenciling program. Stenciling will target Leicester's sub-watersheds. | Leicester continues to maintain catch basin stencils, but does not involve the public in this activity for safety reasons. | Continue to maintain catch basin stencils, as needed. |
| Revised | | | | | |
| 11 | Community clean-ups | Highway Department; Leicester Conservation Commission | Town of Leicester will encourage local stream team cleanups with local residents and area Scout groups. Town will provide solicitation of sponsors and notice of events on local access channel and website. | As it does each year, Leicester Highway Department provided transportation and coordination of trash collected during Earth Day | Continue to hold community clean-ups in the Town, including Earth Day events in Year 12, |

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| Revised | | | | cleanup events in April 2013. | and evaluate the program. |
| 12 | Community clean-ups | Highway Department | Town will provide trucks and other material to support cleanup efforts and disposal of materials. | The Highway Department continues to support local cleanup efforts with staff and equipment. | Continue to hold community clean-ups in the Town and evaluate the program. |
| Revised | | | | | |

## 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 |
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| 13 | Inventory and mapping of storm drain system | Highway Department | Leicester will identify appropriate sources of funding assistance (SRF, 319 Grant Program, Lakes & Ponds Grant Program, Source Water Protection Grant Program, Recycling Grant Program) and apply for assistance in implementing portions of Leicester's Comprehensive Stormwater Management Program, including public education and outreach. | In Year 11, members of Leicester's Highway Department received additional training on the integrated mapping and inspection database, which will serve as a major tool to map structures and components of the storm drain system and monitor | Continue to inspect mapped outfalls, and update mapping as new outfalls are added.<br><br>Utilize the Coalition purchased tablet computer |

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| Revised | | | | discharges.<br><br>The Town received follow-up training on using both the Leica GPS devices and the tablet computer, both of which were purchased as part of the Coalition project.<br><br>The Town utilized the Coalition purchased Lecia GPS device to map catch basins in permit year 11. All catch basins in Urbanized Area have been mapped.<br><br>Utilized help from WPI students doing their IQP for the Coalition. Students assisted in catch basin mapping. | to complete outfall and catch basin inspections.<br><br>Continue to utilize the Coalition Leica GPS devices to map all catch basins in Town as well as storm drain manholes and structural BMPs. |
| 14<br><br>Revised | Mapping and identification of outfalls and receiving waters. | Highway Department | Leicester will develop and implement a plan to map all outfalls and receiving bodies of water, contingent on Town Meeting approval of funding. | Leicester has mapped all known outfalls in the Urbanized Area to date. | The Town will continue to locate new outfalls that are added and to screen high priority outfalls.<br><br>Utilize the Coalition purchased water quality field test kits to test and monitor priority outfalls. |
| 15 | Identification/description of problem areas | Highway Department | Leicester will develop and implement an Illicit Discharge Detection and Elimination (IDDE) plan, contingent on Town Meeting approval of funding. | The Leicester Water Supply Board designed new sewer infrastructure at the intersection | Continue to implement and be proactive with the IDDE plan from data from the consultant and |

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| Revised | | | | of Franklin Street and Grove Street to eliminate an illicit discharge located previously. The construction contract was completed during a previous reporting year, permanently eliminating this illicit discharge.<br><br>Several Department Heads attended a training session on Illicit Discharge Education and Communication.<br><br>The Town has prepared a Statement of IDDE Program Responsibilities which establishes a chain of command in regards to reporting illicit discharges and responsibilities for important positions in Town. | evaluate the progress.<br><br>Review and evaluate the Coalition developed standard operating procedure (SOP) for locating and identifying illicit discharges.<br><br>Keep documents and presentation on file for interested parties to review. |
| 16<br><br>Revised | Enforcement procedures addressing illicit discharges. | Planning Board<br>Town Counsel<br>Board of Health | Leicester will review whether local authority is appropriate and able to respond to potential illicit discharges. New by-laws, if necessary, will be proposed to Town Meeting. | The Town received training on the IDDE Documentation Packet materials, developed as part of the Coalition project. The objective of this task was to educate people in multiple Town departments on illicit discharges and define how these people (and departments) will work together to eliminate them.<br><br>A draft IDDE bylaw has been created and will be presented at Town meeting. | Continue to implement and evaluate the current policy.<br><br>Review and evaluate the Coalition developed IDDE Documentation Packet.<br><br>Implement IDDE bylaw contingent on it passing through Town Meeting. |
| 17 | Public information program regarding hazardous wastes and dumping. | Highway Department;<br>Board of Health | Leicester will provide educational brochures to residents promoting proper disposal of household hazardous wastes. | Leicester has continued to prioritize education about hazardous wastes and appropriate | Continue to implement and evaluate the current policy. |

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| Revised | | | | material disposal. Its website continues to be a powerful tool for residents. | |
| 18<br><br>Revised | Initiation of recycling programs | Planning Board<br>Board of Health | Leicester will apply for funding assistance from DEP's Recycling Grant Program for assistance in public education and the purchase of recycling materials. | Leicester continues to actively seek recycling grants, most recently to implement a program to provide low-cost composting containers to residents and another program to serve as a drop-off location for unused herbicides and pesticides.<br><br>The Recycling Center website maintains a large amount of information for residents to guide and encourage recycling and proper disposal of wastes. | Continue to implement and evaluate the current policy.<br><br>Continue to see grants that encourage residents to drop off materials that otherwise may result in pollution. |
| 19<br><br>Revised | Watershed assessments and studies | Highway Department;<br>Conservation Commission;<br>Board of Health | Leicester will identify opportunities for funding assistance from DEP's 604(b) and 319 grant programs and the Department of Environmental Management's Lakes and Ponds Grant Program to support watershed assessment and implementation activities. Tasks can include design and installation of stormwater BMPs and public outreach including storm drain stenciling. Emphasis will be on assessments and remediation of stormwater related problems impacting water quality in Smiths Pond, Southwick Meadow, Bouchard Pond, Greenville Pond West, Rochdale Pond, and Greenville Pond. These water bodies have been identified as impaired and are on DEP's 303d list. | Leicester received great benefit in Year 11 from the Coalition project. Most of the Coalition tasks were developed with a "regionalization" focus, and address multiple watersheds. | Continue to implement and evaluate the current policy with the Stormwater Committee in place.<br><br>Maintain active participation in the Coalition in Year 12. |

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| 20 | Watershed assessments and studies | Highway Department Leicester Water Supply Districts | The Town of Leicester will encourage cooperation with Leicester's Public Drinking Water Supply Districts to apply for funding assistance from DEP's Source Water Protection Program for grant assistance to develop wellhead protection plans and stormwater management plans within Leicester's Zones II in Leicester. | Leicester's Stormwater Committee continues to have a strong relationship with local public drinking water districts. | Continue to implement and evaluate the current policy. |
| Revised | | | | | |

## 4. Construction Site Stormwater Runoff Control

| BMP ID # | BMP Description | Responsible Dept./Person Name | Measurable Goal(s) | Progress on Goal(s) – Permit Year 10 (Reliance on non-municipal partners indicated, if any) | Planned Activities |
|---|---|---|---|---|---|
| 21<br>Revised | Bylaw: Stormwater management regulations for construction sites 1 acre or larger | Planning Board; Conservation Commission; Town Counsel; Board of Health; Zoning Board of Appeals | Leicester will review model by-law developed by DEP in consultation with the Attorney General's Office. | Stormwater by-law was developed in previous permit years.<br><br>The Town received construction inspection SOPs developed as part of the Coalition project in Year 10.<br><br>The Town has reviewed and evaluated Coalition developed SOP for erosion and sedimentation control. | Continue to implement and evaluate the current policy with the stormwater committee in place.<br><br>Continue to use tools created from the Coalition regarding Construction Site Stormwater Runoff Control. |

## 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 |
|---|---|---|---|---|---|
| 22 | Bylaw: Require post-construction runoff controls | Planning Board; Conservation Commission; Town Counsel; Board of Health; Zoning Board of Appeals | Leicester will review model by-law developed by DEP in consultation with the Attorney General's Office. | Stormwater by-law was developed in previous permit years.<br><br>The Town received structural Best Management Practice (BMP) inspection SOPs developed as part of the Coalition in previous Permit years. | Continue to implement and evaluate the current policy with the stormwater committee in place.<br><br>Review and evaluate for potential implementation or incorporation into existing policy the Coalition |

| | | | | | |
|---|---|---|---|---|---|
| Revised | | | | | developed Stormwater Best Management Practices (BMP) Toolbox, which was developed to provide property owners with information about low impact stormwater management tools.<br><br>The Town will consider using porous pavers in a project being considered in the Town Common area, if that project moves forward. |

## 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 |
|---|---|---|---|---|---|
| 23 | Develop a municipal Operations and Maintenance Plan | Highway Department | Using regulations and recommendations from DEP and EPA, Leicester will develop and update an operations and maintenance plan to include proper disposal of street sweepings, catch basin cleanout, snow disposal, roadway deicing procedures, vehicle washing, and outside storage of materials. | The Town continues to maintain compliance at facilities it owns and operates. A Highway Department SWPPP was developed in previous years.<br><br>Catch basin screening forms and a maintenance schedule were implemented prior to Year 11. All basins were cleaned at least once in | Review and evaluate the Coalition developed Stormwater Pollution Prevention Plan (SWPPP) template. The template may be customized to produce a fully developed SWPPP for individual properties.<br><br>Review and evaluate the Coalition developed Sump Pump Discharge |

| | | | | | |
|---|---|---|---|---|---|
| Revised | | | | Year 11, with approximately 100 basins cleaned a second time.<br><br>The Town received SOPs on wet and dry weather outfall inspection, IDDE, and other actions that were developed as part of the Coalition project prior to Year 11. These forms and inspections were incorporated in the integrated mapping and inspection database, on which several Highway Department staff members received training.<br><br>Fire stations and police headquarters were evaluated for the need of SWPPPs. Documents not needed at this time. | Policy, which may be used to provide guidance on the removal of sump pumps from the sanitary sewer system and subsequent incorporation into the drainage system. |
| 24 | Develop a municipal Operations and Maintenance Plan | Highway Department | Leicester will implement a formal inspection program, including maintenance logs and scheduling, for catch basin cleaning, repairs, and new installation. | Catch basin screening forms and a maintenance schedule were implemented prior to Year 11.<br><br>The Town received SOPs on wet and dry weather outfall inspection, IDDE, and other actions that were developed as part of the Coalition project in previous Permit years. These forms and inspections were incorporated in the integrated mapping and inspection database, on which several Highway Department staff members received training.<br><br>Catch basin screening forms were implemented prior to Year 11. | Continue to implement this project and evaluate the progress.<br><br>Review, evaluate and implement the Coalition developed 15 SOP's, which provide guidance on activities including but not limited to outfall inspection (both dry and wet weather), catch basin cleaning, erosion and sedimentation control, oil/water separator maintenance and use and storage of pesticides and fertilizers.<br><br>Evaluate hiring an intern to perform catch basin inspections during spring cleaning operations. |
| Revised | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| 25<br>Revised | Develop and implement training programs for municipal employees. | Highway Department | Leicester will send a minimum of 3 public works employees annually to training seminars sponsored by MassHighway, BayState Roads, and other relevant agencies or vendors. | Training in Year 11 included several events provided by the Coalition, including training on how to use the Leica GPS unit and training on how to use the tablet computer, SWPPP template, BMP toolbox, and use of water quality kits.<br><br>Highway Department employee Derek Keats is licensed in Massachusetts for gas dispensing. The training required for this certification involves efforts toward spill prevention and cleanup and pollution prevention, both of which benefit the Highway Department facility and are consistent with goals in its SWPPP.<br><br>Training session was conducted for Municipal Department heads on IDDE responsibilities.<br><br>Municipal employees received OSHA 10 hour training. | Continue to implement this project and evaluate the progress.<br><br>Continue to provide Coalition-developed education and training to municipal employees. |
| 26<br>Revised | Review storm drainage infrastructure needs. | Highway Department | Leicester will incorporate storm drain infrastructure review in Leicester's Chapter 90 project utilizations. | This storm drain evaluation is incorporated into project reviews. | Continue to implement this project and evaluate the progress. |

## 6a. Additions

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|---|---|---|---|---|---|
| | | | | | |
| | | | | | |

## 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 |
|---|---|---|---|---|---|
| Revised | Not Applicable | Not Applicable | Not Applicable | The following Leicester water bodies are considered impaired per the current Integrated List of Waters. Several water bodies are currently Category 2 (being assessed for one or more designated uses) which may require TMDLs in the future. Other water bodies have never been assessed (Category 3), but may require TMDLs in the future. Leicester will continue to watch for these TMDLs to be published and will evaluate published Waste Load Allocations, accordingly. | Evaluate any TMDLs developed for Leicester impaired waters. |
| | | | | TMDLs have been developed for several water bodies (Category 4a), including: Cedar Meadow Pond (aquatic plants); Smiths Pond, Southwick Pond (aquatic plants); Waite Pond (mercury in fish tissue); Dutton Pond (total phosphorus and "Nutrient/ Eutrophication Biological Indicators"), Greenville Pond (turbidity), and Rochdale Pond ("Nutrient/ Eutrophication Biological Indicators"). Most of these impairments do not require actions under the MS4.<br><br>TMDLs for Burncoat Brook (*E. coli* and aquatic macroinvertebrate), Grindstone Brook (*E. coli*), and French River (total phosphorus, mercury in fish tissue, turbidity, and aquatic plants) will be developed in the future. | |

**7a. Additions**

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**7b. WLA Assessment**

**Part IV. Summary of Information Collected and Analyzed**

Other than the information presented in Part III, above, no information was collected or analyzed. The Town of Leicester maintains that it continues to be in compliance with the 2003 Massachusetts Small MS4 Permit.

**Part V. Program Outputs & Accomplishments (OPTIONAL)**
(Since beginning of permit coverage unless specified otherwise by a **, which indicates response is for period covering April 1, 2013 through March 31, 2014)

**Programmatic**

| | (Preferred Units) | Response |
|---|---|---|
| Stormwater management position created/staffed | (y/n) | |
| Annual program budget/expenditures ** | ($) | $20,000 |
| Total program expenditures since beginning of permit coverage | ($) | |
| Funding mechanism(s) (General Fund, Enterprise, Utility, etc) | | |
| | | |

**Education, Involvement, and Training**

| | | |
|---|---|---|
| Estimated number of property owners reached by education program(s) | (# or %) | |
| Stormwater management committee established | (y/n) | y |
| Stream teams established or supported | (# or y/n) | |
| Shoreline clean-up participation or quantity of shoreline miles cleaned ** | (y/n or mi.) | |
| Shoreline cleaned since beginning of permit coverage | (mi.) | |
| Household Hazardous Waste Collection Days | | |
| ▪ days sponsored ** | (#) | |
| ▪ community participation ** | (# or %) | |
| ▪ material collected ** | (tons or gal) | |
| School curricula implemented | (y/n) | |
| | | |

**Legal/Regulatory**

| | In Place Prior to Phase II | Reviewing Existing Authorities | Drafted | Draft in Review | Adopted |
|---|---|---|---|---|---|
| Regulatory Mechanism Status (indicate with "X") | | | | | |
| ▪ Illicit Discharge Detection & Elimination | | | | X | |
| ▪ Erosion & Sediment Control | X | | | | |
| ▪ Post-Development Stormwater Management | X | | | | |
| Accompanying Regulation Status (indicate with "X") | | | | | |
| ▪ Illicit Discharge Detection & Elimination | | | | X | |
| ▪ Erosion & Sediment Control | | | | | X |
| ▪ Post-Development Stormwater Management | | | | | X |

**Mapping and Illicit Discharges**

| | (Preferred Units) | Response |
|---|---|---|
| Outfall mapping complete | (%) | 100% |
| Estimated or actual number of outfalls | (#) | 89 |
| System-Wide mapping complete (complete storm sewer infrastructure) | (%) | |
| Mapping method(s) | | |
| ▪ Paper/Mylar | (%) | |
| ▪ CADD | (%) | |
| ▪ GIS | (%) | 100 |
| Outfalls inspected/screened ** | (# or %) | 89 |
| Outfalls inspected/screened (Since beginning of permit coverage) | (# or %) | |
| Illicit discharges identified ** | (#) | 0 |
| Illicit discharges identified (Since beginning of permit coverage) | (#) | 1 |
| Illicit connections removed ** | (# ); and (est. gpd) | |
| Illicit connections removed (Since beginning of permit coverage) | (#); and (est. gpd) | 1 |
| % of population on sewer | (%) | |
| % of population on septic systems | (%) | |

**Construction**

| | (Preferred Units) | Response |
|---|---|---|
| Number of construction starts (>1-acre) ** | (#) | |
| Estimated percentage of construction starts adequately regulated for erosion and sediment control ** | (%) | |
| Site inspections completed ** | (# or %) | |
| Tickets/Stop work orders issued ** | (# or %) | |
| Fines collected ** | (# and $) | |
| Complaints/concerns received from public ** | (#) | 0 |
| | | |
| | | |

**Post-Development Stormwater Management**

| | | |
|---|---|---|
| Estimated percentage of development/redevelopment projects adequately regulated for post-construction stormwater control | (%) | |
| Site inspections (for proper BMP installation & operation) completed ** | (# or %) | |
| BMP maintenance required through covenants, escrow, deed restrictions, etc. | (y/n) | |
| Low-impact development (LID) practices permitted and encouraged | (y/n) | |
| | | |
| | | |

**Operations and Maintenance**

| | | |
|---|---|---|
| Average frequency of catch basin cleaning (non-commercial/non-arterial streets) ** | (times/yr) | 1 |
| Average frequency of catch basin cleaning (commercial/arterial or other critical streets) ** | (times/yr) | 2 |
| Qty of structures cleaned ** | (#) | 131 streets with catch basins |
| Qty. of storm drain cleaned ** | (%, LF or mi.) | |
| Qty. of screenings/debris removed from storm sewer infrastructure ** | (lbs. or tons) | |
| Disposal or use of screenings (landfill, POTW, compost, beneficial use, etc.) ** | (location) | |

| | | |
|---|---|---|
| Basin Cleaning Costs | | |
| • Annual budget/expenditure (labor & equipment)** | ($) | |
| • Hourly or per basin contract rate ** | ($/hr or $ per basin) | |
| • Disposal cost** | ($) | |
| Cleaning Equipment | | |
| • Clam shell truck(s) owned/leased | (#) | |
| • Vacuum truck(s) owned/leased | (#) | |
| • Vacuum trucks specified in contracts | (y/n) | |
| • % Structures cleaned with clam shells ** | (%) | |
| • % Structures cleaned with vactor ** | (%) | |

| | (Preferred Units) | Response |
|---|---|---|
| Average frequency of street sweeping (non-commercial/non-arterial streets) ** | (times/yr) | 1 |
| Average frequency of street sweeping (commercial/arterial or other critical streets) ** | (times/yr) | 1 |
| Qty. of sand/debris collected by sweeping ** | (lbs. or tons) | |
| Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.) ** | (location) | |
| Annual Sweeping Costs | | |
| • Annual budget/expenditure (labor & equipment)** | ($) | |
| • Hourly or lane mile contract rate ** | ($/hr. or ln mi.) | |
| • Disposal cost** | ($) | |
| Sweeping Equipment | | |
| • Rotary brush street sweepers owned/leased | (#) | |
| • Vacuum street sweepers owned/leased | (#) | |
| • Vacuum street sweepers specified in contracts | (y/n) | |
| • % Roads swept with rotary brush sweepers ** | % | |
| • % Roads swept with vacuum sweepers ** | % | |

| Reduction (since beginning of permit coverage) in application on public land of: ("N/A" = never used; "100%" = elimination) | | |
|---|---|---|
| ▪ Fertilizers | (lbs. or %) | |
| ▪ Herbicides | (lbs. or %) | |
| ▪ Pesticides | (lbs. or %) | |

| | | |
|---|---|---|
| Integrated Pest Management (IPM) Practices Implemented | (y/n) | |
| | | |

| | (Preferred Units) | Response |
|---|---|---|
| Average Ratio of Anti-/De-Icing products used **<br><br>(also identify chemicals and ratios used in specific areas, e.g., water supply protection areas) | % NaCl<br>% $CaCl_2$<br>% $MgCl_2$<br>% CMA<br>% Kac<br>% KCl<br>% Sand<br>Treated salt (NaCl/ $MgCl_2$ mix) | 300 tons<br><br>1,400 tons |
| Pre-wetting techniques utilized ** | (y/n or %) | No |
| Manual control spreaders used ** | (y/n or %) | |
| Zero-velocity spreaders used ** | (y/n or %) | |
| Estimated net reduction or increase in typical year salt/chemical application rate | (±lbs/ln mi. or %) | |
| Estimated net reduction or increase in typical year sand application rate ** | (±lbs/ln mi. or %) | |
| % of salt/chemical pile(s) covered in storage shed(s) | (%) | |
| Storage shed(s) in design or under construction | (y/n or #) | |
| 100% of salt/chemical pile(s) covered in storage shed(s) by May 2008 | (y/n) | |
| | | |
| | | |

**Water Supply Protection**

| | | |
|---|---|---|
| Storm water outfalls to public water supplies eliminated or relocated | # or y/n | |
| Installed or planned treatment BMPs for public drinking water supplies and their protection areas | # or y/n | |
| • Treatment units induce infiltration within 500-feet of a wellhead protection area | # or y/n | |