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**Municipality/Organization:** Town of Sudbury MA

**EPA NPDES Permit Number:** MAR04-1224

**MassDEP Transmittal Number:** W-

*Annual Report Number*  
**& Reporting Period:** April 1, 2010 – March 31, 2011

# NPDES PII Small MS4 General Permit Annual Report (Due: May 2, 2011)

## Part I. General Information

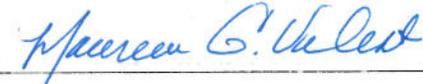
**Contact Person:** Deborah Dineen **Title:** Conservation Coordinator  
I. William Place DPW Director

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### Certification:

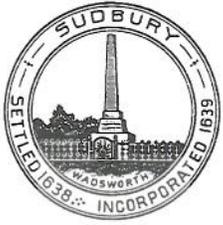
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage 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:** Maureen G. Valente

**Title:** Town Manager

**Date:** September 7, 2011



**TOWN OF SUDBURY**  
*Office of the Town Manager*  
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September 7, 2011

Glenda Velez - CIP  
U.S. Environmental Protection Agency - Region 1  
5 Post Office Square – OEP06-01  
Boston, MA 02109-3912

Fred Civian  
Massachusetts Department of Environmental Protection  
One Winter Street - 5th Floor  
Boston, MA 02108

Re: NPDES DEP & EPA Permit #MAR041224  
Year 8 Report

Dear DEP and EPA:

In accordance with our 2003 NPDES permit, please accept this document as our eighth annual report required under our MS4 Phase II Storm water Permit covering April 1, 2010 to March 31, 2011. The Town of Sudbury continues our comprehensive efforts to protect our water quality through appropriate use of storm water best management practices, controlling erosion, public education, enhanced illicit discharge detection and elimination, water quality monitoring of stormwater discharges; encouragement of low impact development; and green infrastructure techniques. This report is prepared for me for my signature by the Town's Conservation Coordinator, who is qualified to gather and evaluate the information provided. Further, it appears that this report may have been filed in draft form rather than submitted to the EPA. The document has been officially prepared and we submit the following:

**Assessment of Compliance with Permit**

Sudbury continues to make regular progress in continued compliance with the requirements of our 2003 permit. The passage of an Illicit Discharge and Connection (IDC) Bylaw at the April 2010 Town Meeting was a significant step forward in our ability to enforce illicit discharge requirements.

A Stormwater Drain Tie-In Permit Application has been developed to provide a mechanism to report, review, and track all tie-ins to the MS4. Types of permitted tie-ins are listed in the exemption section of the Bylaw. These tie-ins include:

- a) Springs
- b) Waterline flushing
- c) Discharge or flow resulting from firefighting activities
- d) Flow from potable water sources
- e) Natural flow from riparian habitats and wetlands

- f) Diverted stream flow and
- g) Rising groundwater

This ensures that any flows coming into the system are from non-polluting sources and that the capacity of the system can handle the additional flows.

Sudbury Dept. of Public Works has been designated in this new Bylaw as the enforcement authority.

### **Appropriateness of Selected BMP's**

For the past two years, Sudbury's 2009 Stormwater Management Bylaw and regulations have been in effect. The SWMB is a two-tier approach based on scope of work, area disturbed, steepness of grade, and soil type. Thresholds are established which trigger either a General Stormwater Permit or a Stormwater Management Permit with requirements specific to the site conditions. The permit requires best management practices as developed in the MA Stormwater Handbook and the local regulations in SWMB. The bylaw authorizes the Town to enforce the effectiveness of the bmps on individual sites and fine or take other action necessary for compliance with the bylaw.

During Year 8 Sudbury acted on over a dozen permits under the SWMP for projects ranging from commercial parking lot repaving to residential house lot reconstruction. As a result of the SWMB, parking lots were retrofitted with suitable bmps (Stormceptors and water quality swales), and residential construction on steep slopes were required to utilize and maintain silt fencing, hay bales, and temporary sediment basins. On one project, phasing of site disturbance was required. Some of the projects permitted under the SWMB in Year 8 would not have been required to obtain any other local permits. Therefore, the SWMB allowed the Town to capture and regulate projects to further improve water quality in Town.

### **PROGRESS TOWARDS ACHIEVING MEASURABLE GOALS**

Year 8 Measurable Goals:

#### **Public Education and Outreach:**

Sudbury handled the public education and outreach component for Year 8 in conjunction with the passage of the Illicit Discharge and Connection Bylaw. Two public hearings were held to introduce the public to the purpose of the IDC and how its passage would be positive for residents and businesses alike. The Town's website was updated to include IDC information along with a power point presentation and information on reporting any known or suspected connections to the MS4 system.

#### **Public Participation and Involvement**

The Ponds & Waterways Committee (PWC) was established in 2005 as an advisory board to review water quality and best management practices for stormwater sustainability. During 2011, the PWC again provided lawn signs indicating lawns that were eco-friendly to protect the Town waterways. The purpose is to show residents that nice lawns are possible without the need for chemicals. Many Town buildings adopted and displayed this sign in 2010 and 2011. The PWC and the Hop Brook Protection Association (HBPA, a private citizen organization) continues to monitor the Marlborough Easterly Wastewater Treatment Plan to ensure they abide by their permit limitations for the discharge of nitrogen and phosphorous to the downstream ponds and waterways in Sudbury.

#### **Illicit Discharge Detection and Elimination**

The following Illicit Detection procedure has been established. Funding for the purchase of two portable Chem-Metrics field test kits was approved in early 2011. Prioritization of outfalls for testing has been completed and training in the use of these kits and testing is scheduled to begin in September 2011.

All inspections begin with storm drain outfalls (SDOs), and proceed upstream in the system. Outfall inspections are conducted during dry weather, when there has been less than 0.10 inches of precipitation within the preceding 48 hours. If the outfall is not accessible or is submerged, the nearest upstream manhole not susceptible to tidal influence or backwater is inspected.

If dry weather flow is present at the outfall/manhole, the physical characteristics of the flow (e.g. approximate rate and depth of flow, color, visible sheen, turbidity, floatables, and odor) are recorded and any indications of sewage flow flagged for further investigation. If there is no visible evidence of sewage, a sample of the flow is tested on-site for ammonia and surfactants using a portable Chem-Metrics field test kit and the results of the measurements recorded. In order to save time and resources, the test kit is not used where there is already visible evidence of sewage contamination.

All outfalls with evidence of contamination (either visual or chemical) are recorded, and the investigation proceeds upstream in the drainage system tributary to that outfall to isolate the source of illegal flow. The procedure is repeated for each influent pipe at the next upstream branching manhole. At manhole locations where illicit flow is suspected but there is no flow at the time of inspection, sandbags are placed in the influent pipes for 24 to 48 hours of dry weather. If there is accumulated flow behind the sandbags upon re-inspection, it is field-checked using the Chem-Metrics kit for contamination. Once a stretch of pipe has been isolated as receiving the illicit flow, buildings in the vicinity are typically inspected and plumbing fixtures dye-tested to determine the source of contamination. Smoke testing can also be used, but typically works best where there is a sewer line for smoke introduction. Often times, the visual (and olfactory) inspection can provide a good indication of whether the source of flow is sewage, laundry discharge, or groundwater (e.g. from sump pumps).

#### **Pollution Prevention/Good Housekeeping**

- The Noyes School septic system was flagged as a pollutant generator due to the design and location of the septic system leach field in the water table and in close proximity to a pond. As a result, the pond and groundwater is degraded in this area. This continues to be an area for the Town and schools to work on during 2011.
- Over 500 catch basins (25% of total) were cleaned during 2011. This is an ongoing process with the goal of over 25% of catch basins cleaned annually. We have over 2,000 structures to inspect routinely and clean as needed. During 2011, we have needed to continually update the stormwater structure database. Due to the stormwater upgrades required in the SWMB, structures are added regardless of whether or not new development occurs.
- 2011 drainage upgrades by private developers or the Town, under the direction of the DPW Department, is in process on Paddock Way, Boston Post Road, Landham Road, Hudson Road, Richard Ave., and Concord Road.
- Major drainage structure repairs were performed on Hudson Rd., Old Sudbury Rd., Peakham Rd., King Philip Rd., and Goodman Hill Rd. with minor repairs at over 18 other locations.
- Culvert upgrades were installed on Moore Rd. and Hudson Road; North Rd, (3 areas), Powers Rd., and Cedar Creek Roads.
- Street sweeping was completed by the middle of June 2011.
- An active beaver management project was employed in the fall of 2010 to prevent the failure of stormwater BMPs from the effects of the beavers.
- New drainage easements were signed in at least four of the priority areas of Town to allow the DPW to install BMPs as dictated by this MS4 permit.
- Approximately ½ to ¾ mile of Cape Cod berm was installed in areas as necessary to channel runoff into catch basins.
- Drainage layouts were engineered and/or installed for Drum Lane, Landham Road, Meadow Rd., and the Town Center area.

- “Country” drainage ditches were cleaned along Concord Rd. and Wilshire Road.
- The DPW maintains a Stormwater Management Account, funded through new subdivision approvals, which is used to offset the increased street maintenance burden on the DPW. This fund is used to purchase new equipment and roadway repair costs, including stormwater upgrades.
- During 2011, these funds were used to hire a private contractor to repair and clean a detention basin on Goodman’s Hill Road.

### **Construction Site and Post-Construction Runoff Control**

- The Town’s 2009 Stormwater Management Bylaw has been a very productive regulatory tool to ensure runoff and erosion control are included in most construction and reconstruction projects. Low thresholds trigger either a General Permit or a SWM Permit to ensure most projects are reviewed, conditioned, and monitored to eliminate runoff and erosion problems. Grading change thresholds as small as a 2’ elevation change over 500 feet for septic leach fields and the clearing of over 5,000 sq. ft. of vegetation will trigger a Stormwater General Permit at a minimum. A full Stormwater management permit is required for projects with a larger scope of disturbance or projects on slopes. The issuing authority is the Planning Board; however, the Planning Board can also designate the Conservation Commission as the issuing authority. This designation flexibility results in combining the SWMB hearings under wetlands, subdivision, or site plan reviews. This reduces the time and expense of both the applicant and the Town staff and avoids duplication of effort in many cases.

Please see appropriateness of BMPs above for details.

### **Activities for Next Reporting Cycle**

- Continued sampling of catch basins as prioritized by the DPW, Conservation Commission and Board of Health;
- Continued operation and maintenance of drainage structures in accordance with the increasing database schedule;
- Funding sources for the continued success of the Program will be sought;
- Earth Removal and Erosion Control Bylaws will be presented to Town Meeting;
- Work closely with the new Ponds & Waterways Committee to identify areas where joint water quality goals can be achieved.
- The Planning Board continues to work on new regulations for Water Resource Protection District Bylaw during 2011.
- The Planning Board continues to work on revisions to subdivision Rules and Regulations, which will include requiring the use of the most advanced stormwater management practices, for any given situation, and a requirement for Stormwater Pollution Prevention plans for all wastewater treatment facilities, industrial areas, commercial areas, and business zoned areas that are not currently in compliance with the Stormwater Management Guidelines.

We once again appreciate this opportunity to provide a status report on Sudbury’s progress toward our Stormwater Management Goals.

Sincerely,

Maureen G. Valente  
Town Manager