

# TOWN OF OXFORD

## CONSTRUCTION SITE STORMWATER RUNOFF CONTROL PROGRAM

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**TOWN OF OXFORD**  
**DPW**  
DEPARTMENT OF PUBLIC WORKS

# Construction Site Stormwater Runoff Control Program

## 1. INTRODUCTION

This document presents the Town of Oxford's general procedures for review, inspection, and enforcement of construction site stormwater runoff (e.g., erosion and sediment control, construction of structural stormwater best management practices<sup>1</sup>, etc.) for new and redevelopment projects. The intent of this document is to promote consistency among Town staff's internal review procedures, site inspections, and enforcement measures.

This program has been prepared by the Town of Oxford to address the Minimum Control Measure (MCM) 4, Construction Site Stormwater Runoff Control, and consider MCM 5, Post-Construction Stormwater Management, requirements of the United States Environmental Protection Agency's (USEPA's) 2016 National Pollutant Discharge Elimination System (NPDES) General Permits for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4) in Massachusetts. These procedures reflect the permit modifications finalized on December 7, 2020, and may be updated from time to time.

This Construction Site Stormwater Runoff Control Program addresses the following requirements of Section 2.3.5.c of the MS4 Permit:

- An ordinance or regulatory mechanism requiring the use of sediment and erosion control practices at construction sites.
- Written procedures for site plan review, site inspections and enforcement of sediment and erosion control measures:
  - The site plan review procedure must include:
    - a pre-construction review by the permittee of the site design, the planned operations at the construction site, planned BMPs during the construction phase, and the planned BMPs to be used to manage runoff created after development;

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<sup>1</sup> Defined as an activity, procedure, restraint, or structure improvement that helps to reduce the quantity or improve the quality of stormwater runoff.

- consideration of potential water quality impacts;
- procedures for the receipt and consideration of information submitted by the public; and
- evaluating the incorporation of Low Impact Development (LID) site planning and design strategies, unless such practices are infeasible.
- The site inspection and enforcement procedure must include:
  - who is responsible for site inspection and the necessary qualifications for performing inspections, as well as who has authority to implement enforcement procedures;
  - the requirements that inspections of BMPs occur during construction of BMPs as well as after construction of BMPs to ensure they are working as described in the approved plans;
  - the use of mandated inspection forms, if appropriate; and
  - procedure for tracking the number of site reviews, inspections, and enforcement actions. This tracking information must be included as part of each annual report.
- Requirements for construction site operators performing land disturbance activities within the MS4 jurisdiction that result in stormwater discharges to the MS4 to implement a sediment and erosion control program that includes BMPs appropriate for the conditions at the construction site:
  - Minimize the amount of disturbed area and protect natural resources;
  - Stabilize sites when projects are complete or operations have temporarily ceased;
  - Protect slopes on the construction site;
  - Protect all storm drain inlets and armor all newly constructed outlets;
  - Use perimeter controls at the site;
  - Stabilize construction site entrances and exits to prevent off-site tracking;
  - Control wastes that may be discharged, including, but not limited to, discarded building materials, concrete truck wash out, chemicals, litter, and sanitary wastes (these wastes may not be discharged to the MS4); and
  - Inspect stormwater controls at consistent intervals.

To support the site plan review, site inspections, and enforcement, this Program also considers the requirements of MCM 5, Post Construction Stormwater Management, because sites undergoing

construction will be installing structural retention and/or treatment measures aimed to reduce the discharge of pollutants on the long term (i.e., structural BMPs).

## 2. LOCAL AUTHORITY

There are two local by-laws that relate to construction site stormwater runoff control, as well as construction of BMPs that will ultimately manage stormwater runoff on the long-term (post-construction stormwater management). The following sections describe local authority in more detail.

The Town of Oxford enacted the **Stormwater Management and Land Disturbance By-law** in 2005 as Chapter 66 of the Town of Oxford General By-laws. The purpose of the by-law is:

- To protect water resources.
- To require practices that eliminate soil erosion and sedimentation and control the volume and rate of stormwater runoff resulting from land disturbance activities.
- To promote infiltration and the recharge of groundwater.
- To ensure that soil erosion and sedimentation control measures and stormwater runoff control practices are incorporated into the site planning and design process and are implemented and maintained.
- To require practices to control waste such as discarded building materials, concrete truck washout, chemicals, litter and sanitary waster at construction sites.
- To comply with state and federal statutes and regulations relating to stormwater discharges.
- To establish the town's legal authority to ensure compliance with the provisions of the by-law through inspection, monitoring and enforcement.

The Stormwater Management and Land Disturbance By-law requires that any activity that results in the disturbance<sup>2</sup> of 10,000 square feet or more of land that drains to the municipal separate storm sewer system must submit an Erosion and Sediment Control Plan and obtain a Land Disturbance Permit.<sup>3</sup> The Planning Board acts as the Granting Authority. The DPW acts as the Enforcement Authority.

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<sup>2</sup> Any activity that causes a change in the position or location of soil, sand, rock, gravel, or similar earth material.

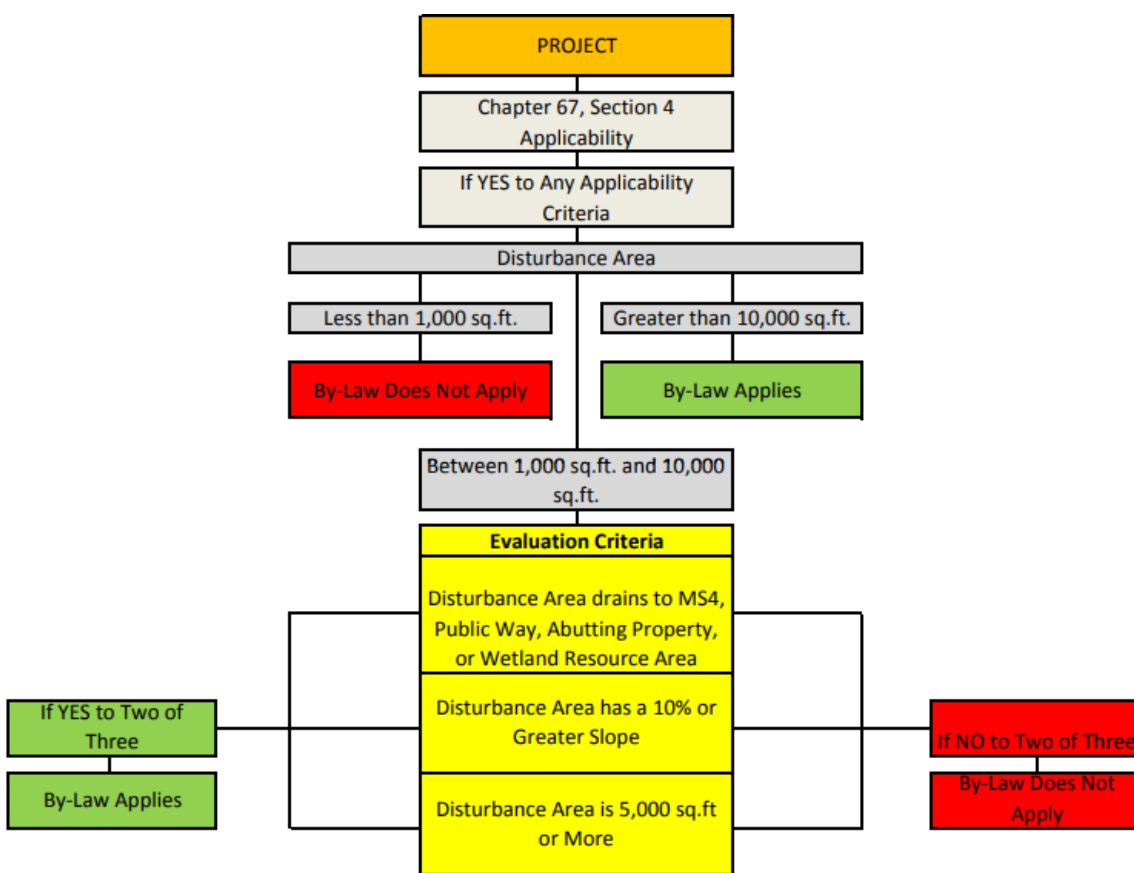
<sup>3</sup> Note that this By-law does not apply to normal maintenance or improvement of agricultural or aquacultural land as defined by the Wetlands Protection Act regulation 310 CMR 10.04. Note that any activity that requires site plan review under the Oxford Zoning By-Law, regardless of the area of land disturbance, must submit an Erosion and Sediment Plan.

The Town of Oxford enacted the **Stormwater Management Requirements By-law** in 2005 as Chapter 67 of the Town of Oxford General By-laws. The purpose of the by-law is:

- To require practices to control the flow of stormwater from new and redeveloped sites into the town storm drainage system in order to prevent flooding and erosion;
- To protect groundwater and surface water from degradation;
- To promote groundwater recharge;
- To prevent pollutants from entering the town's MS4 and to minimize discharge of pollutants from the MS4;
- To ensure adequate long-term operation and maintenance of structural stormwater best management so that they work as designed;
- To comply with state and federal statutes and regulations relating to stormwater discharges; and
- To establish the town's legal authority to ensure compliance with the provisions of this by-law through inspection, monitoring, and enforcement.

As Figure 1 below shows, no person shall perform any activity that results in the disturbance of 10,000 square feet or more of land that drains to the municipal separate storm sewer system. No person shall, by development or redevelopment activity, alter the drainage characteristics of land without an approved Stormwater Management Plan. Projects regulated under this by-law include without limitation:

1. Land disturbance associated with construction or reconstruction of structures.
2. Development or redevelopment involving multiple separate activities in discontinuous locations or on different schedules if the activities are part of a larger common plan of development that all together disturbs one or more acres.
3. Paving or other change in surface material causing a significant reduction of permeability or increase in runoff.
4. Construction of a new drainage system or alteration of an existing drainage system or conveyance serving a drainage area of more than 10,000 square feet.
5. Any activity that will, or may, result in increased stormwater runoff flowing from the property into a public way or the MS4.
6. Construction or reconstruction of structures where more than 10,000 square feet of roof drainage is altered.



**Figure 1:** Town of Oxford Chapter 67 – Stormwater Management Requirements Applicability Rule, February 1, 2016

In addition, the Town of Oxford locally administers the Commonwealth’s Wetlands Protection Act and associated Regulations (310 CMR 10.00). There is no town-specific wetlands by-law or regulations.

**Together, these by-laws along with this written program addresses each of the MS4 requirements listed in the Introduction section.**

The Town of Oxford’s program also recognizes the NPDES General Permit for Discharges from Construction Activities (i.e., Construction General Permit). Construction projects that disturb<sup>4</sup> one acre or more of land, as well as discharges from smaller sites that are part of a larger Common Plan

<sup>4</sup> Disturb is defined as an action to alter the existing vegetation and/or underlying soil of a site, such as clearing, grading, site preparation (e.g., excavating, cutting, and filling), soil compaction, and movement and stockpiling of topsoil.



of Development or Sale<sup>5</sup> that will ultimately disturb one or more acres of land are required to obtain coverage under from EPA and comply with various design and inspection requirements of the Construction General Permit, as well as local code. Town staff confirm applicability of Construction General Permit as part of local review under Chapter 67 and wetlands.

### **3. REQUIREMENTS FOR CONSTRUCTION SITE OPERATORS TO IMPLEMENT A SEDIMENT AND EROSION CONTROL PROGRAM**

The MS<sub>4</sub> Permit requires construction site operators to implement a sediment and erosion control program that includes BMPs appropriate for the conditions as the construction site:

- Minimize the amount of disturbed area and protect natural resources;
- Stabilize sites when projects are complete, or operations have temporarily ceased;
- Protect slopes on the construction site;
- Protect all storm drain inlets and armor all newly constructed outlets;
- Use perimeter controls at the site;
- Stabilize construction site entrances and exits to prevent off-site tracking;
- Control wastes that may be discharged, including, but not limited to, discarded building materials, concrete truck wash out, chemicals, litter, and sanitary wastes (these wastes may not be discharged to the MS<sub>4</sub>); and
- Inspect stormwater controls at consistent intervals.

Section 7 of the Stormwater Management and Land Disturbance By-law (Chapter 66) defines the requirements for an Erosion and Sediment Control Plan, and Section 8 describes inspection and site supervision controls. These sections address all of EPA's requirements listed above. In addition, projects permitted through the Stormwater Managements Requirements By-law (Chapter 67) and the Wetlands Protection Act are requirements to meet the Massachusetts Stormwater Management Standards and Handbook, and therefore must meet Standard 8 of the handbook, thus also complying with EPA's requirements listed above. More detail can be found in the Town of Oxford General By-laws.

### **4. PRE-CONSTRUCTION ("SITE PLAN REVIEW") PROCEDURES**

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<sup>5</sup> A contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under one common plan. The "common plan" of development or sale is broadly defined as any announcement or piece of documentation (including a sign, public notice or hearing, sales pitch, advertisement, drawing, permit application, zoning request, computer design, etc.) or physical demarcation (including boundary signs, lot stakes, surveyor markings, etc.) indicating construction activities may occur on a specific plot.

Prior to construction, Town staff must review:

- the site design,
- the planned operations at the construction site,
- planned BMPs to be used during the construction phase, and
- the planned BMPs to be used to manage runoff created after development.

Additionally, it is required that the Town consider potential water quality impacts and opportunities for use of low impact design and green infrastructure. When the opportunity exists, it is encouraged that project proponents incorporate these practices into the site design.

The following describes the Town's process to review a project that triggers applicability under the Stormwater Management and Land Disturbance By-law (Chapter 66):

- The applicant will submit site plans with a LDP application to the Planning Board or Conservation Commission for pre-construction review. Review will be conducted by DPW. The Planning Board or Conservation Commission will make the final decision to approve, reject, or request modifications to the site plan.
- Site plan review will be completed taking into consideration the following standards with regard to water quality protection and stormwater management:
  - General site design will include appropriate stormwater drainage system details and calculations.
  - Planned construction operations will include adequate Best Management Practices (BMPs) and Sediment and Erosion Control Measures to reduce water quality impacts.
  - Planned BMPs must be designed to the standards found in the Massachusetts Stormwater Handbook. When possible BMPs should promote on-site infiltration of stormwater runoff from impervious surfaces.
  - For sites located in areas subject to Total Maximum Daily Load (TMDL) requirements, BMPs will be selected and prioritized to address the pollutant identified as the cause of the impairment.
  - When possible, low impact designs (LID) and/or Green Infrastructure (GI) should be included in site design. If LID/GI are not included in the site plan, the Planning Board or Conservation Commission will require that the applicant review opportunities for the use of LID/GI.
- Upon receipt of a complete LDP application, the Planning Board or Conservation Commission will hold a public hearing within 21 days to allow comment from abutters, other boards and commission and staff. Final action on the application will be taken



within 65 days of receipt of the complete application unless the time for action is extended by mutual consent of the applicant and the board.

- The Planning Board or Conservation Commission may require the applicant to revise the plans as necessary before issuing or denying a permit.

Other guidelines for the project proponent, designer, and/or reviewer are included in Appendix A. These were developed by the Central Massachusetts Regional Stormwater Coalition.

## 5. SITE INSPECTION PROCEDURES

All inspections should be completed by a qualified person with sufficient training, experience, and/or education to be able to adequately read site plans and assess the installation, operation and maintenance of BMPs in accordance with approved plans. Note that EPA's Construction General Permit defines a qualified person as follows:

*A "qualified person" is a person knowledgeable in the principles and practice of erosion and sediment controls and pollution prevention, who possesses the appropriate skills and training to assess conditions at the construction site that could impact stormwater quality, and the appropriate skills and training to assess the effectiveness of any stormwater controls selected and installed to meet the requirements of the [Construction General Permit].*

### Inspection Requirements Per Local Code

Section 8 of the Stormwater Management and Land Disturbance By-law (Chapter 66) defines the requirements for inspections and site supervision as follows:

1. Prior to starting excavation or construction, the applicant, the applicant's technical representative, the general contractor and/or any other person with authority to make changes to the project, shall meet with the assigned agent for the Board to review the permitted plans and their implementation.
2. The assigned agent for the Board shall make inspections as hereinafter required and shall either approve that portion of the work completed or shall notify the permittee wherein the work fails to comply with the LDP as approved. The LDP and associated plans for grading, stripping, excavating, and filling work, bearing the approval of the Board, shall be maintained at the site during the progress of the work. In order to obtain inspections, the permittee shall notify the assigned agent for the Board by delivery of a written request hand delivered to the Town Hall Office of the Board at least two (2) working days before each of the following:
  - a. Erosion and sediment control measures are in place and stabilized.
  - b. Site clearing has been substantially completed.
  - c. Rough grading has been substantially completed.

- d. Final grading has been substantially completed.
  - e. Close of the construction season.
  - f. Final landscaping (permanent) and project final completion.
3. The permittee or his agent shall conduct and document inspections of all control measures no less than weekly or as specified in the LDP, and prior to and following storm events. The purpose of such inspection will be to determine the overall effectiveness of the control plan, and the need for maintenance or additional control measures. The permittee or his agent shall submit monthly reports to the Board or their assigned agent in an approved form.

Section 10 of the Stormwater Management Requirements By-law (Chapter 67) defines the requirements for inspections and site supervision as follows:

1. Prior to starting excavation or construction, the permittee, the permittee's technical representative, the general contractor and/or any other person with authority to make changes to the project, shall meet with the assigned agent for the Board to review the permitted plans and their implementation.
2. The assigned agent for the Board shall make inspections as hereinafter required and shall either approve that portion of the work completed or shall notify the permittee wherein the work fails to comply with the approved permit. The permit and associated plans for grading, stripping, excavating, and filling work, bearing the approval of the Board, shall be maintained at the site during the progress of the work. In order to obtain inspections, the permittee shall notify the assigned agent for the Board by delivery of a written request hand delivered to the Town Hall Office of the Board at least two (2) working days before each of the following:
  - a. Erosion and sediment control measures are in place and stabilized.
  - b. Bury inspection prior to backfilling of any underground drainage or storm water conveyance structures.
  - c. Final inspection after the stormwater management system has been constructed and before the security has been released and after an "as-built" record plan has been submitted to the Board. This inspection shall be made to confirm the "asbuilt" features and to evaluate the effectiveness of the system in an actual storm. If the inspector finds the system to be adequate he shall so report to the Board which will issue a Certificate of Completion and release the project security.

### **Inspections by Municipal Staff**

Section 8 of the Stormwater Management and Land Disturbance By-law (Chapter 66) also provides authority for municipal staff to complete inspections as follows:

*To the extent permitted by state law, or if authorized by the owner or other party in control of the property, the Board, its agents, officers, and employees may enter upon privately owned property*

*for the purpose of performing their duties under this By-law and may make or cause to be made such examinations, surveys or sampling as is deemed necessary to determine compliance with the LDP.*

This paragraph gives the Planning Board authority to inspect sites. The Department of Public Works (DPW) and the Conservation Commission also have authority to perform routine inspections of sediment and erosion control measures for construction activities. Under requirements of the Stormwater Management and Land Disturbance By-law, DPW and the Conservation Commission have the authority to enforce sediment and erosion control procedures and/or impose sanctions to ensure compliance when necessary.

Inspections conducted by the DPW or Conservation Commission may include, but are not limited to:

- Inspection during or immediately following initial installation of sediment controls.
- Inspection following severe rainstorms to check for damage to controls.
- Inspection prior to seeding deadlines, particularly in fall.
- Final inspection of projects nearing completion to ensure that temporary controls have been removed, stabilization is complete, drainage ways are in proper condition, and the final contours agree with the proposed contours on the approved plan.

A Sediment and Erosion Control Inspection form, included in the attachments, may be used by municipal staff to document each inspection. All completed inspection forms will be maintained on file by in the DPW office.

**The following provides further recommendations for the inspection process and guidelines for inspection by municipal staff:**

### **Inspection Process**

1. Pre-inspection review
  - Obtain and review permits, site plans, previous inspection reports, and any other applicable information.<sup>6</sup>

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<sup>6</sup> **Consistency with Federal Requirements:** Prior to planning a site visit, the inspector should determine if the project is subject to USEPA's Construction General Permit. If the site requires this coverage, the inspector should visit the USEPA Region 1 eNOI website to determine if the contractor filed for coverage under the Construction General Permit. Print a copy of the project's NOI. If the project disturbs one or more acres and is under construction but does not show up in the database, the project is in violation of the Construction General Permit. Call the contractor to determine if the NOI process has been started. If not, notify the contractor verbally of his requirement and the violation. Work cannot proceed on the site until a NOI for coverage under the Permit has been approved by the USEPA. The inspector may choose to print

- If applicable, print the approved NOI from the USEPA 2017 Construction General Permit website.
- Inform the contractor of the planned site visit.
- 2. Meet with site contractor
  - Review the Erosion and Sediment Control Plan, and, if applicable, the construction Stormwater Pollution Prevention Plan (SWPPP) (if the site includes over one acre of disturbance). Compare BMPs in the approved site plans with those shown in these documents.
  - If applicable, review the project's approved NOI and confirm that information shown continues to be accurate.
  - Get a general overview of the project from the contractor.
  - Review inspections done by the contractor.
  - Review the status of any issues or corrective actions noted in previous inspection reports.
  - Discuss any complaints or incidents since the last meeting.
- 3. Inspect perimeter controls
  - Examine perimeter controls to determine if they are adequate, properly installed, and properly maintained.
  - For each structural BMP, check structural integrity to determine if any portion of the BMP needs to be replaced or requires maintenance.
- 4. Inspect slopes and temporary stockpiles
  - Determine if sediment and erosion controls are effective.
  - Look for slumps, rills, and tracking of stockpiled materials around the site.
- 5. Compare BMPs in the site plan with the construction site conditions
  - Determine whether BMPs are in place as specified in the site plan, and if the BMPs have been adequately installed and maintained.
  - Note any areas where additional BMPs may be needed that are not specified in the site plans.
  - Inspect BMPs prior to and after construction.
- 6. Inspect site entrances/exits
  - Determine if there has been excessive tracking of sediment from the site.
  - Look for evidence of additional entrances/exits which are not on the site plan and are not properly stabilized.

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instructions on how to file an NOI and meet with the contractor to review these. Issue a written Stop Work Order until the NOI has been approved by the USEPA.

7. Inspect sediment basins
  - Look for signs that sediment has accumulated beyond 50% of the original capacity of the basin.
8. Inspect pollution prevention and good housekeeping practices
  - Inspect trash areas and material storage/staging areas to ensure that materials are properly maintained and that pollutant sources are not exposed to rainfall or runoff.
  - Inspect vehicles/equipment fueling and maintenance areas for the presence of spill control measure sand for evidence of leaks or spills.
9. Inspect discharge points and downstream, off-site areas
  - Walk down the street and/or in other directions of-site to determine if erosion and sedimentation control measures are effective in preventing off-site impacts.
  - Inspect down-slope catch basins to determine if they are protected, and identify whether sediment buildup has occurred.
10. Meet with the contractor again prior to leaving
  - Discuss the effectiveness of current controls and whether modifications are needed.
  - Discuss possible violations or concerns noted during the site inspection, including discrepancies between approved site plans, the SWPPP, and/or the implementation of stormwater controls.
  - Agree on a schedule for addressing all discrepancies and schedule a follow-up inspection.
11. Provide a written copy of the inspection report to the contractor.
12. Follow up, as determined, and provide copies of subsequent inspections to the contractor.
13. Use enforcement if needed.

### **Inspection Guidelines**

- The inspection should begin at a low point and work uphill, observing all discharge points and any off-site support activities.
- Written and photographic records should be maintained for each site visit.
- During the inspection, the inspector should ask questions to the contractor. Understanding the selection, implementation, and maintenance of BMPs is an important goal of the inspection process and require site-specific input.
- The inspector should not recommend or endorse solutions or products. The inspector may offer appropriate advice but all decisions must be made by the contractor.
- The inspector should always wear personal protective equipment (PPE) appropriate for the site.

- The inspector should abide by the contractor's site-specific safety requirements.
- The inspector has legal authority to enter the site. However, if denied permission to enter the site, the inspector should never force entry.

Other guidelines for the project proponent, designer, and/or reviewer are included in Appendix A. These were developed by the Central Massachusetts Regional Stormwater Coalition.

## 6. ENFORCEMENT PROCEDURES

**Section 11 of the Stormwater Management and Land Disturbance By-law and Section 12 of the Stormwater Management Requirements By-law both define enforcement.** The DPW acting through its Director can enforce this By-law, regulations, orders, violation notices, and enforcement orders, and may pursue all civil and criminal remedies for such violations.

## 7. TRACKING & REPORTING

The number of site reviews, inspections and enforcement actions will be tracked in the DPW office. Records will be maintained and included in the annual report.

The following information will be included in each annual report:

- Number of site reviews conducted
- Number of site inspections conducted
- Record of enforcement actions

## 8. ATTACHMENTS

Attachment A: Best Practices for Erosion and Sediment Control on Construction Sites

Attachment B: Construction Site Stormwater and Erosion and Sedimentation Control Inspection Report

Attachment C: Construction General Permit Inspection Report Template (2017)