

STORMWATER MANAGEMENT RULES & REGULATIONS
ADOPTED BY THE DEDHAM CONSERVATION COMMISSION May 23, 2002
First Revision May 15, 2003
Second Revision October 2, 2008
Third Revision November 15, 2018
Fourth Revision August 6, 2020
Fifth Revision May 31, 2021

SECTION 1: AUTHORITY

- A. The Rules and Regulations contained herein have been adopted by the Dedham Conservation Commission in accordance with Section 246-4 of the Town of Dedham Stormwater Management By-Law.
- B. Nothing in these Rules and Regulations is intended to replace or be in derogation of the requirements of the Town of Dedham General Wetlands Protection By-Law, the Town of Dedham Floodplain Zoning By-Law, or any other By-Law adopted by the Town of Dedham or any Rules and Regulations adopted thereunder. Any project or activity subject to the provisions of the above-cited By-Laws or Rules and Regulations must comply with the specifications of each. In case of conflict, the more stringent provisions shall apply.
- C. These Rules and Regulations may be periodically amended by the Conservation Commission in accordance with the procedures outlined in accordance with Section 246-4 of the Town of Dedham Stormwater Management By-Law.
- D. The Conservation Commission may make revisions to the fee schedule periodically as it sees fit, by vote of the Commission after public notice and opportunity for comment.
- E. Waivers. The Conservation Commission may waive strict compliance with any of the requirements of the Town of Dedham Stormwater Management By-Law or the Rules and Regulations promulgated hereunder, if it finds that:
 - 1. Strict application of some of the requirements is unnecessary or impracticable because of the size or character of the development project or because of the natural conditions at the site;
 - 2. The Project is consistent with the purposes and intent of the Town of Dedham Stormwater Management By-Law, and;
 - 3. The Project provides substantially the same level of protection to the public health, safety, environment and general welfare of the Town as required by the Town of Dedham Stormwater Management By-Law without strict application of the Rules and Regulations.

Any Applicant requiring a waiver must submit a written request for such a waiver. Such a request shall be accompanied by an explanation or documentation supporting the waiver request.

All waiver requests shall be discussed and voted on at the Public Hearing for the project.

If, in the Conservation Commission's opinion, additional time or information is required for review of a waiver request, the Conservation Commission may request to continue a hearing to a date announced at the meeting. In the event the Applicant objects to a continuance or postponement, or fails to provide requested information, the waiver request shall be denied.

SECTION 2: PURPOSE

- A.** The purpose of these regulations is to protect, maintain and enhance the public health, safety, environment, and general welfare by establishing minimum requirements and procedures to control the adverse effects of soil erosion and sedimentation, construction and post-development stormwater runoff, decreased groundwater recharge, and nonpoint source pollution associated with new development, redevelopment and other land alterations, as more specifically addressed in the Town of Dedham Stormwater Management By-Law.

SECTION 3: DEFINITIONS

- A.** The definitions contained herein apply to the Town of Dedham Stormwater Management By-Law and the Rules and Regulations adopted thereunder. Terms not defined in this section shall be construed according to their customary and usual meaning unless the context indicates a special or technical meaning.
- B.** All definitions are provided in the Town of Dedham Stormwater Management By-Law or Appendix A of the Town of Dedham Stormwater Management Rules and Regulations.

SECTION 4: APPLICABILITY

These Rules and Regulations apply to all projects or activities subject to the Applicability Section of the Town of Dedham Stormwater Management By-Law. Projects and/or activities within the jurisdiction of the Town of Dedham Stormwater Management By-Law must obtain a Stormwater Management Permit (SMP) from the Conservation Commission or its designee in accordance with the permit procedures and requirements defined in Sections 5 through 9 and Appendix B of these Rules and Regulations.

No work on a project within the jurisdiction of the Town of Dedham Stormwater Management By-Law may commence without written approval of the Conservation Commission or its designee, confirming that the project or activity is in compliance with the Design Standards of these Regulations. If work commences without approval, enforcement action and/or fines may be pursued.

A. No Permit Required

1. Notwithstanding Section 4.B, no permit shall be required by the Conservation Commission or its designee for:
 - a) Normal maintenance and improvement of land in agricultural use as defined by the Wetlands Protection Act regulation 310 CMR 10.04 and G.L.C. 40A, § 3.
 - b) Any work or projects for which all necessary approvals and permits, including building permits, have been issued before the effective date of the Town of Dedham Stormwater Management By-Law.
 - c) Projects disturbing less than 500 square feet of ground surface, except for driveways.
 - d) Repair, repaving, replacement or expansion of a residential driveway with a total paved area (including any existing pavement) of less than 1,000 square feet.

- e) Repair or replacement of an existing roof.
 - f) Normal maintenance of existing lawn, landscaping, or garden areas.
 - g) Construction of any fence that will not alter existing terrain or drainage patterns.
 - h) Construction of utilities (gas, water, sanitary sewer, electric, telephone, cable television, etc.) other than drainage that will not alter the site.
 - i) The maintenance or resurfacing (excluding reconstruction) of any public or private way.
 - j) Emergency repairs to any existing utilities (gas, water, sanitary sewer, electric, telephone, cable television, etc.) or emergency repairs to any stormwater management facility that poses a threat to public health or safety, as determined by the Conservation Commission. Where such project or activity is subject to the jurisdiction of the Conservation Commission, the work shall not proceed without the issuance of an Emergency Stormwater Permit (ESP) by the Conservation Commission.
 - k) Such other projects as the Conservation Commission or its designee may find, in its discretion, to have less impact on the interests protected by the Stormwater Management By-Law, as defined in Section 246-1 of the Stormwater Management By-Law, than those projects eligible for a Minor Stormwater Management Permit, provided that erosion control measures such as those listed in the most recent versions of the Massachusetts Stormwater Standards and accompanying Stormwater Management Handbook (Handbook)¹ and the Massachusetts Erosion and Sediment Control Guidelines for Urban and Suburban Areas² are used and the project or activity will not result in an increased amount of stormwater runoff or pollutants flowing from a parcel of land and entering a traveled way or adjacent properties.
- B.** All projects or activities not falling under an exception listed in Section 4.A shall require a Stormwater Management Permit in accordance with Section 5 of the Stormwater Management By-Law.
- C.** Projects or activities eligible for a Minor Stormwater Management Permit:
1. Any residential alteration, disturbance, development or redevelopment of 500 square feet to 2,000 square feet, except for construction of a new dwelling.
 2. The repair, repaving, replacement, or expansion of a residential driveway with a total paved area (including any existing pavement) of 1,000 to 2,000 square feet.
 3. Any commercial, industrial, institutional, or municipal alteration, disturbance, development or redevelopment of 500 square feet to 1,000 square feet (except for such activities within the Aquifer Protection Overlay District, which shall require a Major Stormwater Management Permit).
- D.** Any project or activity effectuating an alteration, disturbance, development or redevelopment of land and ineligible for a Minor Stormwater Management Permit requires a Major Stormwater Management Permit.
- E.** An Emergency Stormwater Permit (ESP) may be issued in cases where a delay or failure to perform work poses an imminent danger to public health or safety. The Stormwater Officer or any member of the Conservation Commission may, in such individual's discretion, issue an ESP. Any person to whom an ESP is issued shall, prior to the next scheduled meeting of the Conservation Commission

¹ Massachusetts Stormwater Handbook, as most recently updated.
<http://www.mass.gov/eea/agencies/massdep/water/regulations/massachusetts-stormwater-handbook.html>

(or, in the Stormwater Officer's discretion, as soon as reasonably practical thereafter), submit the materials described in Sections 5 through 9 and Appendix B of these Rules and Regulations with respect to any work permitted by such ESP. Each ESP shall be presented to the Conservation Commission for ratification.

SECTION 5: DESIGN STANDARDS

A. Major Stormwater Management Permits (MSMPs)

1. At a minimum all projects subject to a Major Stormwater Management Permit shall comply with the performance standards of the most recent version of Massachusetts Stormwater Standards and accompanying Stormwater Management Handbook (Handbook)², and the Town of Dedham Drainage and Stormwater Design Standards, with the following differences from the Handbook:
 - a) The Stormwater Management Standards shall apply to single family houses, as well as housing development and redevelopment projects comprised of detached single-family dwellings on four or fewer lots and multi-family housing development and redevelopment projects with four or fewer units, including condominiums, cooperatives, apartment buildings and townhouses.
2. Drainage Design: Drainage calculations shall be performed for existing site conditions (pre-development) and proposed site conditions (post-development) based on proposed site plans. Storms of 2, 10, 25, and 100 year frequency events shall be analyzed. The rainfall amounts used shall be based on the 1998 Cornell University Study, NOAA Atlas 14 Volume 10 Point Precipitation Frequency Estimates for Dedham, or other studies approved by the Massachusetts Department of Environmental Protection.
3. For purposes of choosing a Runoff Curve Number, all pervious lands in the Site shall be assumed prior to development to be in "good" hydrologic condition regardless of conditions existing at the time of computation.
4. Stormwater management systems on new development sites shall be designed to:
 - a) Retain the volume of runoff equivalent to, or greater than, two (2) inches multiplied by the total post-construction impervious surface area on the site; and
 - b) Remove 90% of the average annual load of Total Suspended Solids generated from the total post-construction impervious area on the site; and
 - c) Remove 60% of the average annual load of Total Phosphorus (TP) generated from the total post-construction impervious surface area on the site; and
 - d) Optimize phosphorus removal³. Infiltration BMPs, bioretention areas, constructed stormwater wetlands, and filter systems are recommended tools for reducing the concentration of nutrients in stormwater discharges.

² Massachusetts Stormwater Handbook, as most recently updated.
<http://www.mass.gov/eea/agencies/massdep/water/regulations/massachusetts-stormwater-handbook.html>

³ The required removal percentages are not required for each storm, it is the average removal over a year that is required. Pollutant removal shall be calculated consistent with EPA Region 1's BMP Performance Extrapolation Tool or other BMP performance evaluation tool provided by EPA Region 1, where available.

5. Stormwater management systems on redevelopment sites shall be designed to:
 - a) Retain the volume of runoff equivalent to, or greater than, two (2) inches multiplied by the total post-construction impervious surface area on the site; and
 - b) Remove 80% of the average annual load of Total Suspended Solids generated from the total post-construction impervious area on the site; and
 - c) Remove 50% of the average annual load of Total Phosphorus (TP) generated from the total post-construction impervious surface area on the site; and
 - d) Optimize phosphorus removal⁴. Infiltration BMPs, bioretention areas, constructed stormwater wetlands, and filter systems are recommended tools for reducing the concentration of nutrients in stormwater discharges.
6. To support compliance with the Town's MS4 Permit, all new development and redevelopment stormwater management BMPs located on commercial or industrial land must incorporate designs that allow for shutdown and containment to isolate the drainage system in the event of an emergency spill or other unexpected event.

On redevelopment sites, stormwater management systems may utilize offsite mitigation within the same USGS HUC12 as the redevelopment site to meet the equivalent retention or pollutant removal requirements indicated in part 3 above. Stormwater management systems on redevelopment sites shall also improve existing conditions.

7. All projects must consider and, unless impracticable, propose and implement Low Impact Development (LID) Best Management Practices (BMPs, See Appendix C). If impracticable, Applicants shall demonstrate reasons why LID BMPs are impracticable and demonstrative compliance with design standards through generally accepted methods.

B. Minor Stormwater Management Permits (mSMPs)

1. At a minimum all projects subject to a Minor Stormwater Management Permit shall be designed to the following standards:
 - a) Stormwater management systems on new development and redevelopment sites shall be designed to retain the volume of runoff equivalent to, or greater than, two (2) inches multiplied by the new post-construction impervious surface area on the site.
2. All projects must consider and, unless impracticable, propose and implement Low Impact Development (LID) BMPs. Applicants shall demonstrate compliance with design standards for LID BMPs through generally accepted methods.

If EPA Region 1 tools do not address the planned or installed BMP performance any federally or State approved BMP design guidance or performance standards (e.g. State stormwater handbooks and design guidance manuals) may be used to calculate BMP performance.

⁴ The required removal percentages are not required for each storm, it is the average removal over a year that is required. Pollutant removal shall be calculated consistent with EPA Region 1's BMP Performance Extrapolation Tool or other BMP performance evaluation tool provided by EPA Region 1, where available. If EPA Region 1 tools do not address the planned or installed BMP performance any federally or State approved BMP design guidance or performance standards (e.g. State stormwater handbooks and design guidance manuals) may be used to calculate BMP performance.

SECTION 6: ADMINISTRATION

A. Administration of Rules and Regulations

1. The Conservation Commission shall administer, implement and enforce these Rules and Regulations. The Conservation Commission may designate in writing any authorized Town employee, board or agent for the purposes of reviewing stormwater submittals and issuing stormwater management permits. Any Town employee, board or agent so designated by the Conservation Commission shall be defined as the "Stormwater Officer." The Conservation Commission may always exercise any authority delegated to a Stormwater Officer under these regulations.
2. The Applicant shall submit all Stormwater Management Permit Application submittals in compliance with these Rules and Regulations to a Stormwater Officer. The Conservation Commission may designate a Stormwater Officer in both the Building Department and the Conservation Department. Stormwater Management Permit Applications shall be submitted as follows:
 - a) Minor Stormwater Management Permit Applications also subject to Building Department review (*e.g.*, additions, sheds, etc.) shall be submitted to the Building Department.
 - b) Minor Stormwater Management Permit Applications not associated with a Building Permit (*e.g.*, driveways and re-grading without construction) shall be submitted to the Conservation Department.
 - c) Major Stormwater Management Permit Applications shall be submitted to the Conservation Commission.
3. The Stormwater Officer will review the submittal for administrative completeness and compliance with the requirements and standards of Sections 5 through 9 and Appendix B of these Rules and Regulations. If the proposed project is administratively complete and complies with these Rules and Regulations, the Stormwater Officer may grant a Minor Stormwater Management Permit, in addition to any other approval or permit. The Conservation Commission, its designees, and the Stormwater Officer shall have authority to enforce the Stormwater Management By-Law and these Rules and Regulations. The Stormwater Officer may reject an Application if it is not administratively complete.
4. Minor Stormwater Management Permits require review and approval by the Stormwater Officer, as follows:
 - a) Minor Stormwater Management Permits also requiring Building Permits may be issued by the Building Department.
 - b) Minor Stormwater Management Permits not associated with a Building Permit (*e.g.*, clearing and grubbing of vegetation and/or re-grading without construction of more than ten (10) percent of the total area of the parcel; and driveways) shall be issued by the Conservation Department.
5. Major Stormwater Management Permits require review and approval by the Conservation Commission after Public Hearing.

B. Abutter Notification

1. Concurrent with the filing of the Major Stormwater Management Permit and for Minor Stormwater Management Permit Applications where Design Standards cannot be met, the Applicant shall

provide notification to all abutters to the property or properties on which work is planned by Certified Mail, Return Receipt Requested or Certificate of Mailing. The notification shall state where within the municipality copies of the Stormwater Management Permit may be examined or obtained and where information on the date, time, and location of the Public Hearing may be obtained. The Applicant shall provide notification at the mailing addresses shown on the most recent applicable tax list from the municipal assessor. Mailing at least seven days prior to the Public Hearing shall constitute timely notice. The Applicant shall submit the return receipts from the Certified Letters or Certificates of Mailing to the Conservation Commission as proof of notification.

2. The Conservation Commission will place a legal notification of the Public Hearing in the local newspaper of general circulation. The Applicant shall be billed directly for the cost of the legal notice.
3. Re-notification of abutters and re-advertisement in the newspaper will not be required for cases where a Public Hearing is opened and continued to a later meeting date. Re-notification will also not be required in cases where a meeting is postponed due to a lack of a voting quorum or inclement weather.

C. Entry. Filing an Application for a permit grants the Conservation Commission, its Stormwater Officer, or designee as specified in these Rules and Regulations, permission to enter the site until a Stormwater Certificate of Compliance is issued to verify the information in the Application and to inspect for compliance with the resulting permit.

D. Minor Stormwater Management Permit Approval Process

1. Action by Stormwater Officer

- a) Determination of Completeness: The Stormwater Officer shall review the Stormwater Management Permit Application for completeness within ten (10) business days of receipt.
- b) Incomplete Applications: If the Stormwater Officer determines the Application is incomplete, including insufficient information to describe the site, the work, or the effect of the work on water quality and volume, the Stormwater Officer may require the submission of additional information and/or disapprove the Application and deny the Permit.
- c) Complete Applications. Each Application for a Minor Stormwater Management Permit Application that is determined to be a complete shall be reviewed by the Stormwater Officer. The Application shall be acted upon within ten (10) business days of the date that the Stormwater Officer determines that the Application is complete, unless such Application has been withdrawn from consideration. The Stormwater Officer may:
 - (1) Approve the Permit Application upon finding that the proposed plan will protect water resources and meets the objectives and requirements of the Stormwater Management By-Law;
 - (2) Approve the Permit Application with conditions, modifications and/or restrictions that are required to ensure that the project will protect water resources and meets the objectives and requirements of the Stormwater Management By-Law;
 - (3) Deny the Permit Application due to non-compliance with Design Standards or insufficient information to make a determination; or.
 - (4) Determine that a Minor Stormwater Management Permit is inappropriate and require the submission of a Major Stormwater Management Permit.

- d) Applications not in compliance with Design Standards.
 - (1) For Minor Stormwater Management Permit Applications for which the Stormwater Officer has determined that the Design Standards are not met, the Applicant may appeal the determination and request a Public Hearing with the Conservation Commission to consider the Application or resubmit the Application demonstrating compliance.
 - (2) For Minor Stormwater Management Permit Applications for which Applications Design Standards cannot be met due to site conditions or the Applicant wishes to propose an alternative design not consistent with the Design Standards, the Applicant may request a Public Hearing with the Conservation Commission.

E. Major Stormwater Management Permit Approval Process

1. Action by Conservation Commission

- a) Determination of Completeness: The Conservation Commission or its designee shall review the Application submission within fifteen (15) business days of receipt.
- b) Incomplete Applications: If the Conservation Commission or its designee determines the Application is incomplete, including insufficient information to describe the site, the work, or the effect of the work on water quality and runoff volume, within fifteen (15) business days of receipt of the Application, the Conservation Commission shall state the Application is incomplete and may request the submission of additional information and/or disapprove the Application and deny the Permit.
- c) Complete Applications. Each Application for a Major Stormwater Management Permit Application that is determined to be a complete Application shall be reviewed by the Conservation Commission. The Application shall be acted upon within thirty (30) business days of the date that the Conservation Commission has determined that the filing is complete, unless such Application has been withdrawn from consideration or continued to a future meeting date with the consent of the Applicant.⁵ The Conservation Commission may:
 - (1) Approve the Permit Application upon finding that the proposed project will protect water resources and meets the objectives and requirements of the Stormwater Management By-Law;
 - (2) Approve the Permit Application with conditions (See Standard Conditions, Appendix D), modifications or restrictions that are required to ensure that the project will protect water resources and meets the objectives and requirements of the Stormwater Management By-Law; or
 - (3) Deny the Permit Application due to non-compliance with Design Standards.

F. Public Hearing Process

- 1. A Public Hearing is required for Major Stormwater Management Permit Applications and for Minor Stormwater Management Permit Applications where Design Standards cannot be met. Minor Permit Applications that meet design standards shall not require a Public Hearing.
- 2. Applicants requesting a Public Hearing shall submit a written request for a Public Hearing with the Conservation Commission. Applications for a Public Hearing shall include the materials as

⁵ See Town of Dedham Conservation Commission "Continuance of Public Meetings and Hearings Policy," Adopted by the Commission on October 5, 2016.

specified in Sections 5 through 9 and Appendix B of these Rules and Regulations. The Applicant shall file with the Conservation Commission one (1) original executed Stormwater Management Permit (SMP) Application, two (2) full size plan sets, eight (8) copies of the Application with 11-inch by 17-inch copies of the plans, and one (1) electronic copy of the Application package in PDF format emailed to conservation@dedham-ma.gov.

3. Notice of Public Hearings shall be published in a newspaper of general circulation. The first publication date shall be published not less than five (5) days before the day of the hearing. A copy of the hearing notice shall be posted in the Office of the Town Clerk for a period of not less than forty-eight (48) hours before the date of the hearing.
4. During the Public Hearing, the Conservation Commission may request additional information to be submitted by the Applicant. This may include, but is not limited to:
 - a) Landscaping plans;
 - b) Snow storage and removal plans;
 - c) Spot grades confirming existing drainage patterns; and
 - d) Additional information concerning operations and maintenance.

G. Deadline for Action

1. Failure of the Conservation Commission, Stormwater Officer, or its designee to take final action upon a Stormwater Management Permit within thirty (30) business days of receipt of a complete Major Stormwater Management Application and within ten (10) business days of receipt of a complete Minor Stormwater Management Application shall be deemed to be approval of said Application, unless extension of the deadline date is mutually agreed upon, in person at a Public Hearing or in writing, by the Conservation Commission (in the case of a Major Stormwater Management Permit) or Stormwater Officer (in the case of a Minor Stormwater Management Permit) and the Applicant:
2. For Minor Stormwater Management Permit Applications that have been denied and all Major Stormwater Management Permit Applications, a Public Hearing shall be held within forty-five (45) calendar days of the date of submission of the Stormwater Management Permit Application. The Conservation Commission shall issue a decision within sixty (60) calendar days of the Public Hearing, unless a continuance has been mutually agreed upon, in person at a Public Hearing or in writing, by the Applicant and the Conservation Commission.
3. Upon certification by the Town Clerk that the allowed time has passed without Conservation Commission or Stormwater Officer action, the Conservation Commission or Stormwater Officer must issue a Stormwater Management Permit.

H. Plan Changes. The Applicant or their legal designee must notify the Stormwater Officer for a Minor Stormwater Management Permit or the Conservation Commission for a Major Stormwater Management Permit, in writing, of any drainage change or alteration in the system authorized in a Stormwater Management Permit before any change or alteration is made. If the Stormwater Officer or Conservation Commission determines that the change or alteration is significant, based on the Design Standards in Section 5 of these Rules and Regulations and accepted construction practices, the Stormwater Officer or Conservation Commission may require that an amended Application be filed.

I. Appeals of Actions of the Conservation Commission. A decision of the Conservation Commission to grant or deny a permit shall be final. A final decision by the Conservation Commission made under

these Rules and Regulations shall be reviewable in a court of competent jurisdiction by an action filed within sixty (60) days thereof, in accordance with M.G.L. Ch. 249. § 4. An appeal of an action by a board, commission or department that has concurrent regulatory authority for a project and/or activity shall be conducted under the applicable appeal provisions of said board, commission and/or department of the Town of Dedham. An appeal shall result in suspension of any Permit so appealed as described in these Regulations, until such time as the appeal process of the applicable board, commission and/or department has been resolved.

J. Project Delay

1. Should a land-disturbing project or activity associated with an approved plan in accordance with this Section not begin within eighteen (18) months following permit issuance, the permit shall lapse and should the Applicant wish to continue with the previously approved plan, the Applicant must re-apply for a new permit.
2. If the project associated with an approved Stormwater Management Permit granted under the By-Law has not been substantially completed within three (3) years of permit issuance, a new permit or a permit extension will be required by the Conservation Commission (in the case of a Major Stormwater Management Permit) or the Stormwater Officer (in the case of a Minor Stormwater Management Permit). The Conservation Commission (in the case of a Major Stormwater Management Permit) or the Stormwater Officer (in the case of a Minor Stormwater Management Permit) may require updates to the project to comply with current regulations and standards as a condition of the permit extension.

- K. Project Completion.** A Stormwater Management Certificate of Compliance (SMCC) is required for completion of all Major Stormwater Management Permits and for Minor Stormwater Management Permits if required as a permit condition. The Applicant or their legal designee must submit a written request for a Stormwater Management Compliance Certificate from the Conservation Commission at the completion of the project. The Conservation Commission will issue a Stormwater Management Certificate of Compliance upon review and approval of the final inspection reports and/or upon otherwise determining that all work of the permit has been satisfactorily completed in conformance with the Stormwater Management By-Law.

SECTION 7: INSPECTIONS

A. Construction Commencement

1. Pre-Construction Meeting: The Conservation Commission or Stormwater Officer may require a pre-construction meeting prior to starting clearing, excavation, construction or land-disturbing activity by the Applicant. The Applicant's technical representative, the general contractor or any other person with authority to make changes to the project, shall meet with the Conservation Commission or its representative to review construction sequencing and the permitted plans and their implementation.
2. Notice of Construction Commencement: The Applicant must notify the Conservation Commission or Stormwater Officer two (2) days prior to the commencement of construction. In addition, the Applicant must notify the Stormwater Officer two (2) days prior to construction of critical components of any stormwater management structural Best Management Practices (BMPs).
3. A copy of the approved and signed plans and permits shall be kept on the construction site at all times.

B. Construction Inspections

1. Upon issuance of any Stormwater Management Permit, and until issuance of a SMCC, the Conservation Commission and Stormwater Officer shall be granted the right to enter the property at reasonable times and in a reasonable manner for the purpose of inspection.
2. The Conservation Commission or Stormwater Officer may inspect the project site at the following stages, at a minimum:
 - a) Initial Site Inspection: An inspection may be made of erosion and sedimentation controls and signage prior to any land-disturbance to assess overall effectiveness and functioning to protect resources
 - b) Stormwater Management System Excavation Inspection: An inspection may be made of the excavation for the stormwater management system to ensure adequate separation of the stormwater system from ground water and presence of approved soil type.
 - c) Stormwater Management System Inspection: An inspection may be made of the completed stormwater management system, prior to backfilling of any underground drainage or stormwater conveyance structures.
 - d) The Conservation Commission or Stormwater Officer may require the submission of periodic inspections and reporting by the Applicant as dictated by site conditions. Inspections must be completed by qualified persons as approved by either the Conservation Commission or Stormwater Officer.
 - e) Final Inspection: After the stormwater management system has been constructed, all Applicants are required to submit actual "as built" plans for any stormwater management facilities or practices. The Conservation Commission or Stormwater Officer shall inspect the system to confirm its "as-built" features and other permit conditions, including final site stabilization.

C. Notes indicating the required inspections are to be added to the Site Plan(s).

SECTION 8: RECORDKEEPING AND REPORTING REQUIREMENTS

- A.** Where required by any Permit issued under these regulations, the owner of the property shall maintain a log of all operation and maintenance activities, including without limitation, site reviews, inspections, repairs, replacement, disposal (for disposal, the log shall indicate the type of material and the disposal location), and enforcement actions. This log shall be made available to the Massachusetts Department of Environmental Protection and the Conservation Commission upon request.
- B.** When annual inspection reports are required by the Conservation Commission, stormwater management systems inspection reports shall be submitted to the Conservation Commission by January 15th of the following year. Inspection reports for stormwater management systems shall include:
 1. The date of inspection.
 2. Name of inspector.
 3. The condition of each BMP, including components such as:

- a) Pretreatment devices.
 - b) Vegetation or filter media.
 - c) Spillways, valves, or other control structures.
 - d) Embankments and slopes.
 - e) Inlet and outlet channels and structures.
 - f) Underground drainage.
 - g) Sediment and debris accumulation in storage and forebay areas (including catch basins).
 - h) Any nonstructural practices.
 - i) Any other item that could affect the proper function of the stormwater management system.
4. Description of the need for maintenance.
 5. Observations of any physical changes to system in comparison with the approved as-built plan.
- C.** The owner(s) of the stormwater management systems, except for those associated with single family dwellings, shall notify the Conservation Commission of changes in ownership or assignment of financial responsibility.

SECTION 9. ENGINEERING AND CONSULTANT REVIEW FEES

- A.** In addition to the filing fee, the Conservation Commission is authorized to require an Applicant to pay reasonable costs and expenses borne by the Conservation Commission for specific expert engineering and consultant services deemed necessary by the Commission to review a Stormwater Management Permit Application. Payment may be required at any point in the deliberations prior to a final decision.
- B.** Any Application filed with the Conservation Commission must be accompanied by a completed Engineering Consultant Fee Acknowledgement form. This is to acknowledge that the Applicant is aware that the Application may be subject to Engineering and Consultant Review including, but not limited to wetland survey and delineation, hydrologic and drainage analysis, wildlife evaluation, stormwater quality analysis, and analysis of legal issues. This fee shall be calculated at a rate of \$125.00 per hour (or at such other rate as the Conservation Commission may determine based on reasonable and actual rates for professional reviewers).
- C.** Subject to applicable law, any unused portion of Engineering and Consultant Review Fees collected will be returned by the Conservation Commission to the Applicant within forty-five (45) calendar days of a final invoice by the third party reviewer.
- D.** The Engineering and Consultant Review fees collected under this Section will be deposited in the revolving account authorized under Chapter 398 of the Acts of 1996.

SECTION 10: STORMWATER MANAGEMENT CERTIFICATE OF COMPLIANCE (SMCC)

- A.** No SMCC is required for work approved under a Minor Stormwater Management Permit.
- B.** After the stormwater management system has been constructed and before a Major SMCC is issued, the permittee shall submit as-built plans detailing the actual stormwater management systems, structures and devices as installed. With the exception of single family dwellings, as-built plans shall be stamped by a Registered Professional Engineer indicating that the constructed facility(s) have been constructed in accordance with, and meet the requirements of, the Stormwater Management Permit, including compliance with performance standards and Best Management Practices (BMPs).
- C.** After receipt of the as-built plans and prior to the issuance of a Major Stormwater Management Compliance Certificate, the Stormwater Officer or other designee of the Conservation Commission shall inspect the stormwater management system to confirm its "as-built" features. A system will be deemed inadequate if errors in the infiltrative capability, the maximum groundwater elevation, failure to properly define or construct flow paths, or erosive discharges are found. If the system is found to be inadequate by virtue of physical evidence of operational failure, even though it was built as called for in the Stormwater Management Permit, the Conservation Commission shall have the right to require corrections or improvements to the "as-built" system before issuing a Stormwater Management Compliance Certificate.
- D.** It is the responsibility of the permittee to request, in writing, the issuance of a Stormwater Management Compliance Certificate from the Conservation Commission upon completion of the work approved under a Major Stormwater Management Permit.
- E.** The Conservation Commission shall issue a Stormwater Management Compliance Certificate upon written request of the permittee and upon finding that the permit has been complied with permit conditions.

SECTION 11: SECURITY

- A.** As part of any Minor or Major Stormwater Management Permit issued, in addition to any security required by another municipal or state board, agency or official, the Conservation Commission may require that the performance and observance of the conditions imposed hereunder be secured wholly or in part by a proper bond or deposit of money or negotiable securities or the undertaking of financial responsibility sufficient in the opinion of the Conservation Commission, to be released in whole or in part upon issuance of a SMCC for work performed pursuant to the Permit.

SECTION 12: ENFORCEMENT

The Conservation Commission, Stormwater Officer or its designee may enforce the Stormwater Management By-Law, Rules and Regulations, orders, permits, violation notices, and enforcement orders, and may pursue all civil and criminal remedies for such violations.

- A.** Civil relief. If a person violates the provisions of the Stormwater Management By-Law, these Rules and Regulations or any associated rules and regulations, permit, notice, or order issued thereunder, the Conservation Commission may seek injunctive relief in a court of competent jurisdiction restraining the person.
- B.** Orders. If the Conservation Commission determines that a person has failed to follow the requirements of the Stormwater Management By-law, these Rules or Regulations or any other

regulatory provision issued hereunder, or any authorization issued pursuant to the By-Law or Rules and Regulations then the Conservation Commission may issue a written order to the person to remediate the adverse impact, which may include requirements to:

1. Cease and desist from land-disturbing activity until there is compliance with the By-Law or provisions of an approved Stormwater Management Permit;
 2. Maintain, install or perform additional erosion and sedimentation control measures;
 3. Perform monitoring, analyses, and reporting;
 4. Remediate erosion and sedimentation resulting directly or indirectly from land-disturbing activity;
 5. Comply with requirements of the Stormwater Management Permit for operation and maintenance of stormwater management systems;
 6. Remediate adverse impacts resulting directly or indirectly from malfunction of the stormwater management systems; and/or
 7. Eliminate discharges, directly or indirectly, into a watercourse or into the waters of the Commonwealth.
- C.** If the Conservation Commission determines that abatement or remediation of pollutants is required, it may issue an order shall setting forth a deadline for completion of the abatement or remediation. Said order shall further advise that, should the violator or property owner fail to abate or perform remediation within the specified deadline, the Town may, at its option, undertake such work, and expenses thereof shall be charged to the violator or property owner. Within thirty (30) days after completing all measures necessary to abate the violation or to perform remediation, the violator and the property owner will be notified of the costs incurred by the Town, including administrative costs. The violator or property owner may file a written protest objecting to the amount or basis of costs with the Conservation Commission within thirty (30) days of receipt of the notification of the costs incurred. If the amount due is not received by the expiration of the time in which to file a protest or within thirty (30) days following a decision of the Conservation Commission affirming or reducing the costs, or from a final decision of a court of competent jurisdiction, the cost shall become a special assessment against the property owner of said costs. Interest shall begin to accrue on any unpaid costs at the statutory rate provided in G.L. c.59, § 57 after the 30th day at which the costs first become due.
- D.** Criminal and Civil Penalties. Any person who violates any provision of the Stormwater Management By-Law, these Rules and Regulations, or the terms or conditions in any permit or order prescribed or issued there under, may be subject to a fine not to exceed \$300 for each day such violation occurs or continues or subject to a civil penalty, which may be assessed in an action brought on behalf of the Town in any court of competent jurisdiction.
- E.** Noncriminal Disposition. As an alternative to criminal prosecution or civil action, the Town may elect to utilize the noncriminal disposition procedure set forth in M.G.L. c.40, § 21D and § 1-6B of the Town of Dedham General By-Laws, in which case any police officer of the Town of Dedham, the Conservation Agent, and such other persons as are authorized by the Conservation Commission shall be the enforcing person. The penalty for the first violation shall be a warning. The penalty for the second violation shall be \$100. The penalty for the third and subsequent violations shall be \$300. Each day or part thereof that such violation occurs or continues shall constitute a separate offense.
- F.** Entry To Perform Duties Under This By-Law. To the extent permitted by state law, or if authorized by the owner or other party in control of the property, the Conservation Commission, its agents, officers, and employees may enter upon privately owned property for the purpose of performing their duties under the Stormwater Management By-Law and these Rules and Regulations and may make or

cause to be made such examinations, surveys or sampling as the Commission deems reasonably necessary.

- G.** Appeals. The decisions or orders of the Conservation Commission shall be final. Further relief shall be available only in a court of competent jurisdiction.
- H.** Remedies Not Exclusive: The remedies listed in the Stormwater Management By-Law and these Rules and Regulations are not exclusive of any other remedies available under any applicable federal, state, or local law.

SECTION 13: SEVERABILITY

The invalidity of any section, provision, paragraph, sentence, or clause of these Rules and Regulations shall not invalidate any other section, provision, paragraph, sentence, or clause thereof, nor shall it invalidate any permit or determination that previously has been issued.

END OF DEDHAM STORMWATER MANAGEMENT BY-LAW RULES AND REGULATIONS

APPENDIX A: DEFINITIONS

The following definitions supplement those included in the Town of Dedham Stormwater Management By-Law (Chapter 246).

1. ABUTTER

For the purpose of the Dedham Stormwater Management By-Law and these Rules and Regulations, an abutter is any property owner whose property directly abuts the property upon which work is being proposed.

2. APPLICANT

A property owner or agent of a property owner who has filed an Application for a Stormwater Management Permit.

3. CONVEYANCE

A. Any structure or device, including pipes, drains, culverts, curb breaks, paved swales or man-made swales of all types designed or utilized to move or direct stormwater runoff or existing water flow.

B. Any impervious surface, including pavement, where surface/sheet flow is utilized to remove rainfall.

4. DEDHAM DRAINAGE AND STORMWATER DESIGN STANDARDS

The Drainage and Stormwater Design Standards promulgated by the Department of Public Works of the Town of Dedham.

5. EMERGENCY STORMWATER PERMIT (ESP)

An Emergency Stormwater Permit issued in cases where a delay or failure to perform work poses an imminent danger to public health or safety.

6. EROSION CONTROL

The prevention or reduction of the movement of soil particles or rock fragments.

7. EROSION CONTROL PLAN

A plan that shows the location and construction detail(s) of the erosion and sediment reduction controls to be utilized for a construction site.

8. EXISTING LAWN

Grass area which has been maintained and mowed in the previous two years.

9. FILL

The placement or deposit of any material that raises, either temporarily or permanently, the elevation of any area subject to the By-Law.

10. FLOODING

A local and temporary inundation or a rise in the surface of a body of water, such that it covers land not usually under water.

11. GRADING

Changing the level or shape of the ground surface.

12. GROUNDWATER

All water beneath any land surface including water in the soil and bedrock beneath water bodies.

13. HOODED CATCH BASIN

A catch basin that is fitted with an inverted elbow over its outlet pipe or similar structure that is designed to retain oils and other floatables within the catch basin sump and prevent them from flowing into the drainage system.

14. IMPERVIOUS SURFACE

Any material or structure on, above or below the ground that prevents water from infiltrating through the underlying soil. Impervious surface is defined to include, without limitation: paved surfaces (parking lots, sidewalks, driveways), roof tops, swimming pool decks, patios, and paved, gravel and compacted dirt surfaced roads.

15. NEW DEVELOPMENT

Any construction or disturbance of land that is currently in a natural vegetated state. New development also includes any disturbance beyond existing impervious and disturbed areas that is contiguous to redevelopment projects.

16. OWNER

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

17. PERSON

Any individual, group of individuals, association, partnership, corporation, company, business organization, trust, estate, the Commonwealth or political subdivision thereof to the extent subject to Town Bylaws, administrative agency, public or quasi-public corporation or body, the Town of Dedham, and any other legal entity, its legal representatives, agents, or assigns.

18. PERVIOUS MATERIAL

Soil Types that are listed as Class I, II and III soils as defined in 310 CMR 15.243 and 15.244 based upon the general soil classification used by the U.S. Department of Agriculture and depicted in the Soil Textural Triangle

19. POINT SOURCE

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

20. REDEVELOPMENT

Any construction, land alteration, or improvement of impervious surfaces that does not meet the definition of new development, above. The following activities are excluded from this definition:

1. Maintenance and improvement of existing roadways, including widening less than a single lane, adding shoulders, and correcting substandard intersections and drainage, and repaving.
2. Development, rehabilitation, expansion, and phased projects on previously developed sites, provided the redevelopment results in no net increase in impervious area.

21. RESOURCE AREA

Any area protected under including without limitation: the Massachusetts Wetlands Protection Act, Massachusetts Rivers Act, or Town of Dedham General Wetlands Protection By-Law.

22. SEDIMENTATION

A process of depositing material that has been suspended and transported in water.

23. SLOPE

The incline of a ground surface expressed as a ratio of horizontal distance to vertical distance (e.g. a 4:1 slope). It can also be expressed as a percentage of the vertical rise divided by the horizontal distance (e.g. a twenty-five (25) percent slope).

24. STORMWATER MANAGEMENT CERTIFICATE OF COMPLIANCE (SMCC)

A document issued by the Conservation Commission after all construction activities have been completed which states that all conditions of an issued Stormwater Management Permit (SMP) have been met and that a project has been completed in compliance with the conditions set forth in a SMP.

APPENDIX B: APPLICATION PROCEDURES FOR STORMWATER MANAGEMENT PERMITS

Applications for a Stormwater Management Permit (SMP) shall include the materials as specified in this section.

- A. Fees:** The Conservation Commission, Stormwater Officer or its designee shall obtain with each submission an Application fee to be collected at the time of Application according to the Fee Schedule below. After-the-fact Applications shall submit fees at triple the rate set in the Fee Schedule.
1. Minor Stormwater Management Permit: \$100
 2. Major Stormwater Management Permit:
 - a) New Single Family Homes and Residential Additions more than 2,000 sf: \$300
 - b) Multi Family Development: \$300/residential unit
 - c) Commercial, Institutional, Manufacturing <5,000 sf of Disturbance: \$500
 - d) Commercial, Institutional, Manufacturing >5,000 sf of Disturbance but <1 acre: \$1,000
 - e) Commercial, Institutional, Manufacturing > 1acre of Disturbance: \$1,000/acre plus an additional \$1,000 for any additional portion
 3. Request for Certificate of Compliance:
 - a) New Single Family Homes and Residential Additions >2,000 sf: \$50
 - b) Multi-Family Development:
 - i. Partial: \$50/residential unit
 - ii. Final: \$100
 - c) Commercial, Institutional, Manufacturing <5,000 sf of Disturbance: \$100
 - d) Commercial, Institutional, Manufacturing >5,000 sf of Disturbance but <1 acre: \$250
 - e) Commercial, Institutional, Manufacturing > 1acre of Disturbance: \$500
 4. Permit Extension Request:
 - a) New Single Family Homes and Residential Additions > 2,000 sf: \$50
 - b) Multi-family Residential: \$100
 - c) Commercial, Institutional, Manufacturing <1 acre: \$100
 - d) Commercial, Institutional, Manufacturing >1 acre: \$300
- B. Signature:** The Applicant must sign the Application.
- C. Minor Permit Submission Requirements**
1. One (1) completed Minor Stormwater Management Permit Application Form with the following:
 - a) Name, contact information, and original signatures of owner(s), Applicant(s), and, if applicable, representative.
 - b) Address of property as well as assessor map and parcel ID.
 - c) Registry of Deeds recording information (book and page) or Land Court Certificate number for parcel(s) on which work is to be conducted.
 - d) Project description.
 - e) Type of Minor Stormwater Management Permit being requested.
 - f) Site plan reference(s).
 2. Payment of the Application and review fees.
 3. A Stormwater Management Site Plan that may be prepared by drafting or hand sketching. Required elements, depending on site-specific conditions, might at the discretion of the Stormwater Officer, include:

a) General Information

- (1) Title.
- (2) Date.
- (3) Name and address of record owner and if applicable the name, address, and telephone number of the engineer or surveyor.
- (4) When prepared by a professional, plans shall be stamped by a Registered Professional Engineer, Professional Land Surveyor, or other recognized professional acceptable to the Conservation Commission.

b) Existing Conditions

- (1) The site's existing topography with approximate contours at 2 foot intervals for the work area.
- (2) Locations of bodies of water, including wetlands, streams, ponds, etc.
- (3) Location of existing septic systems and private wells, if present.
- (4) Locations of existing buildings, driveways, walls, etc.
- (5) Existing trees in the work area over 6 inches in diameter at breast height (dbh) with each designated to remain or to be removed
- (6) Locations of soil tests including test pits, borings, groundwater determinations, and percolation tests with the soil logs and percolation testing results, and/or other soil testing procedures, when available

c) Proposed Conditions

- (1) Proposed grading plan for work area.
- (2) Proposed improvements including location of buildings or other structures, impervious surfaces, utilities, and easements, if applicable. For projects related to single family homes this shall include, at a minimum, house footprint, decks, garages, sheds, sewage disposal systems, roof drainage and storm drainage structures, as applicable, and all areas of existing and proposed impervious areas including tennis courts, swimming pool decks, patios, and driveways, etc. in the work area.
- (3) Locations of all erosion and sedimentation control measures and BMPs.
- (4) Construction details for all erosion and sedimentation controls proposed to be utilized.
- (5) For engineered systems designed to provide drainage or stormwater management including, but not limited to, culverts, drainage outfalls, catch basins and pervious pavement provide an appropriate plan detail, along with an Operation and Maintenance plan required to maintain the design element.

4. Any other information requested by the Stormwater Officer.

The original Minor Stormwater Management Permit Application, including Stormwater Management Site Plan at a legible scale and Operations and Maintenance (O&M) Plan, shall be submitted to the Building

Department if being submitted in conjunction with other building permits or Conservation Department if not associated with any other building permits (e.g., driveways, grading only). One (1) electronic copy (pdf) of all Minor Stormwater Management Permits, including Stormwater Management Site Plan and O&M Plan submitted to the Conservation Department shall also be sent to conservation@dedham-ma.gov.

D. Major Permit Submission Requirements

1. One (1) completed Major Stormwater Management Permit Application Form with the following:
 - a) Name and contact information, of owner(s), Applicant(s), and, if applicable, representative.
 - b) Address of property as well as assessor map and parcel ID.
 - c) Registry of Deeds recording information (book and page) or Land Court Certificate number.
 - d) A brief project description.
 - e) Type of Major Stormwater Management Permit being requested.
 - f) Site plan reference(s).
 - g) Fee information including payer name on check, Applicant name, check number, check amount, and check date.
 - h) Signature of Applicant, property owner (if different), and representative, if applicable.
 - i) An Engineering Consultant Fee Acknowledgement signed by the Applicant.
 - j) A Site Inspection Authorization signed by the property owner.
 - k) A locus map.
2. Payment of the Application and review fees.
3. A Project Narrative that includes a description of the proposed project and a description of how and where stormwater will be controlled and erosion and sedimentation controls implemented, and an explanation of why the Applicant believes the plans
 - a) Meet the Design Standards enumerated in Section 5;
 - b) Employ, to the maximum extent practicable, environmentally sensitive site design as outlined in the Massachusetts Stormwater Handbook⁶; \
 - c) Attempt to reproduce natural hydrologic conditions with respect to groundwater and surface water.⁷

⁶ Massachusetts Stormwater Handbook, as most recently updated.
<http://www.mass.gov/eea/agencies/massdep/water/regulations/massachusetts-stormwater-handbook.html>

⁷ Guidance on these practices is provided in Appendix C of these Regulations and the MA Stormwater Management Handbook.

- d) Include square footage summaries indicating square footage of work area as well as existing, proposed and net changes in impervious surface areas.
4. A Stormwater Management Site Plan prepared as follows:
- a) General Information:
 - (1) Sheet size: Sheets shall have a maximum dimension of 24" x 36". Large plans should be rolled rather than folded. If more than one sheet is needed to describe the proposed work, a key sheet is required showing a general composite of all work proposed.
 - (2) Scale: Not more than 1" = 50' (the Conservation Commission routinely accepts plans at 1"=20' or 1"=40'). If project sites are large, an overall site plan at 1" = 100' is acceptable, but detail detailed plans must be at or less than 1" = 50'. Include graphical scales on all plans. Coordinate system shall be 1983 North American Datum, Massachusetts State Plane, feet, and North American Vertical Datum (NAVD) of 1988.
 - (3) Title Block: A title block shall be included on all plans, located at the lower right hand corner, oriented to be read from the bottom when bound at the left margin. Include:
 - (a) Plan title.
 - (b) Original date plus additional space to reference the title and dates of all plan revisions.
 - (c) Name and address of record owner and engineer and/or surveyor.
 - (d) Address of property, Assessor Map and Parcel ID.
 - (4) Legend: Include legend identifying line types and symbols used in plan set
 - (5) Locus Map.
 - b) An Existing Conditions Plan containing the following:
 - (1) Property lines.
 - (2) The existing zoning, and land use at the site and abutting properties.
 - (3) The location(s) of existing easements.
 - (4) The location of existing utilities.
 - (5) Existing contours at 2-foot minimum vertical increments. Spot grades for proposed conditions are required when 2-foot contour intervals do not provide sufficient detail to show stormwater flow path and /or more specific detail is needed to demonstrate stormwater flow path.
 - (6) Existing landscaping and vegetation including all existing trees within 25 feet of the work area that are over 6 inches in diameter breast height (dbh) and major vegetative cover types, including wooded areas defined by tree line drip line, shrub communities, limits of lawn, and edge of tree canopy.
 - (7) Locations of existing structures, pipes, swales and detention ponds.
 - (8) Locations of bodies of water, including wetlands.

- (9) A delineation of FEMA Special Flood Hazard areas and calculation of FEMA flood elevation, if applicable. Floodplain elevation data shall be based on 1988 NAVD (North American Vertical Datum) and reference the appropriate National Flood Insurance Rate Map and/or Flood Study.
 - (10) Location of existing septic systems and private wells, if present.
 - (11) The location(s) of soil tests and description of soil from test pits performed at the location of proposed stormwater management facilities, including but not limited to soil description, depth to seasonal high groundwater, depth to bedrock, and percolation rates. Soils information shall be based on site test pits logged by a Massachusetts Registered Soil Evaluator.
 - (12) The existing vegetation and ground surfaces with runoff coefficients for each.
 - (13) Stamp and signature of a Professional Engineer (PE) licensed in the Commonwealth of Massachusetts or Professional Land Surveyor (PLS).
- c) A Proposed Conditions Plan containing the following:
- (1) Property lines, building envelope restrictions and/or easement areas, including areas affected by conservation restrictions, if applicable.
 - (2) Proposed improvements including location of buildings or other structures, utilities, easements, etc., if applicable, and impervious surfaces. For single family homes plans shall show, at a minimum, house footprint, decks, garages, sheds, sewage disposal systems, , roof drainage and stormwater drainage structures, as applicable), and all areas of existing and proposed impervious areas including tennis courts, , patios, and driveways, etc.
 - (3) FEMA Special Flood Hazard areas, if applicable.
 - (4) Limit of work.
 - (5) Proposed grading for work area. Proposed contours at 2-foot minimum vertical increments. Spot grades for proposed conditions are required when 2-foot contour intervals do not provide sufficient detail to show stormwater flow path and /or more specific detail is needed to demonstrate stormwater flow path.
 - (6) Locations for storage of materials, equipment, soil, snow and other potential pollutants.
 - (7) Location(s) and description of existing stormwater conveyances, impoundments, wetlands, drinking water resource areas, or other critical environmental resource areas on or adjacent to the site or into which stormwater flows.
 - (8) Proposed drainage facilities (plan view and details) including drawings of all components of the proposed stormwater management system including:
 - 1. Locations, cross sections, and profiles of all brooks, streams, drainage swales and their method of stabilization.
 - 2. All measures for the detention, retention or infiltration of water.
 - 3. All measures for the protection of water quality.

4. For engineered systems designed to provide drainage or stormwater management including, but not limited to, culverts, drainage outfalls, catch basins and pervious pavement 'systems'; provide an appropriate plan detail with notes on drawings specifying materials to be used, and construction specifications.
 5. Notes indicating the required inspections for the site and the stormwater drainage facilities during construction.
- (9) Proposed landscaping, vegetation, and ground surfaces with runoff coefficients for each. When proposing mitigation areas, a table on the plan shall indicate plant types and quantities. At least 2:1 tree planting of (minimum 1-inch caliper) native trees shall be required for mitigation of each of the trees removed greater than 6 inches dbh. If it is not feasible to plant at least twice the number of trees removed, with the approval of the Conservation Commission, an applicant may substitute at least a 4:1 shrub replacement for trees removed.
 - (10) Locations where stormwater discharges to surface water (include all roads, drains and other structures that could carry stormwater to a wetland or other water body, on or offsite).
 - (11) A general construction note that states the Conservation Commission shall be notified prior to work in accordance with project permits.
 - (12) Stamp and signature of a Professional Engineer (PE) licensed in the Commonwealth of Massachusetts to certify that the Stormwater Management Plan is in accordance with the criteria established in the Stormwater Regulations; a stamp and signature of a Professional Land Surveyor (PLS) is acceptable if no drainage facilities are proposed and they have the experience and capability to prepare the required Site Plan and to provide the required existing and proposed grading and erosion control provisions.
5. An Erosion and Sediment Control Plan showing the following:
 - c) Proposed erosion controls and materials to be used (i.e. straw bales, silt fence and straw wattles, compost filter mitts, etc.) must be indicated on the plan. In projects anticipated to encounter or manage groundwater, provide dewatering contingency plans, details, and location(s). Hay bales may not be used as these have been found to introduce invasive species.
 6. A Stormwater Management Plan Report shall be prepared in conformance with the Design Standards contained in Section 5 and contain the following elements:
 - c) The existing site hydrology.
 - d) A drainage area map showing pre- and post-construction watershed boundaries, drainage area and stormwater time of concentration (Tc) flow paths, including 42 drainage system flows.
 - e) Hydrologic and hydraulic design calculations for the pre-development and post-development conditions for the design storms specified in this Regulation. Such calculations shall include:
 - (10) Description of the design storm frequency, intensity and duration.
 - (11) Time of concentration.
 - (12) Soil Runoff Curve Number (CN) based on land use and soil hydrologic group.

- (13) Peak runoff rates and total runoff volumes for each watershed area.
 - (14) Information on construction measures used to maintain the infiltration capacity of the soil where any kind of infiltration is proposed.
 - (15) Infiltration rates, where applicable.
 - (16) Culvert capacities.
 - (17) Flow velocities.
 - (18) Data on the increase in rate and volume of runoff for the specified design storms.
 - (19) Documentation of sources for all computation methods and field test results.
- f) If a project requires a Stormwater Pollution Prevention Plan (SWPPP) per the NPDES General Permit for Storm Water Discharges from Construction Activities (applicable to construction sites that disturb one or more acres of land), then the Applicant is required to submit a complete copy of the SWPPP (including the signed Notice of Intent and approval letter) as part of its Application for a SMP.
7. An Erosion and Sedimentation Control Report shall be prepared in accordance with Section 14 of the Town of Dedham Drainage & Design Standards and contain the following elements:
- c) Estimates of the total area expected to be disturbed by excavation, grading, or other construction activities, including dedicated off-site borrow and fill areas.
 - d) All pollution control measures (structural and non-structural BMPs) that will be implemented as part of the construction activity to control pollutants in storm water discharges. Appropriate control measures must be identified for each major construction activity and the operator responsible for the implementation of each control measure must also be identified.
 - e) The intended sequence and timing of activities that disturb soils at the site and the general sequence during the construction process in which the erosion and sediment control measures will be implemented.
 - f) Structural practices to divert flows from exposed soils, retain/detain flows or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Placement of structural practices in floodplains must be avoided to the degree practicable.
 - g) Interim and permanent stabilization practices for the site, including a schedule of when the practices will be implemented. Site plans should ensure that existing vegetation is preserved where possible and that disturbed portions of the site are stabilized. Use of impervious surfaces for stabilization should be avoided.
 - h) Construction and waste materials expected to be stored on-site with updates as appropriate, including descriptions of controls, and storage practices to minimize exposure of the materials to stormwater, and spill prevention and response practices.
 - i) Measures to minimize, to the extent practicable, off-site vehicle tracking of sediments onto paved surfaces and the generation of dust.
 - j) Measures to prevent the discharge of solid materials, including building materials, to water of the United States, except as authorized by a permit issued under Section 404 of the CWA.

- k) Pollutant sources from areas other than construction and a description of controls and measures that will be implemented at those sites to minimize pollutant discharges.
- l) Proposed dewatering operations including proposed locations of discharge.
- m) An Operation and Maintenance Schedule for structural and non-structural measures, interim grading, and material stockpiling areas.

8. Post Construction Operation and Maintenance Plan (O&M)

- c) The Post-Construction O&M Plan shall be included that shall be designed to ensure compliance with the Permit, the Stormwater Management By-Law and these Rules and Regulations and that the Massachusetts Surface Water Quality Standards, 314, CMR 4.00 are met in all seasons and throughout the life of the system. The O&M Plan shall be a stand-alone document, and shall remain on file with the Conservation Commission and shall be an ongoing requirement. The O&M Plan shall apply to the entire project site, not just the disturbance area.
- d) The Post-Construction O&M Plan shall include, at a minimum:
 - (10)The name(s) of the owner(s) for all components of the system and emergency contact information.
 - (11)The signature(s) of the owner(s).
 - (12)The names and addresses of the person(s) currently responsible for O&M. If O&M responsibility is contracted to a third party; a copy of the maintenance agreement(s) must be provided. If the responsible party is not the owner of the property where the BMP is located then a copy of the legal instrument that establishes the terms of and legal responsibility for the O&M of the project site BMPs as well as a plan and easement deed that allows site access for the legal entity to operate and maintain BMP functions must be included.
 - (13)An Inspection and Maintenance Schedule for all stormwater management facilities including routine and non-routine maintenance tasks to be performed.
 - (14)A reduced size plan or map clearly showing the location of the systems and facilities including easements, catch basins, manholes/access lids, main, and stormwater devices.
 - (15)If applicable, a list of easements necessary for the construction and O&M of the stormwater system, with the purpose and location of each. Easements shall be recorded with the Norfolk County Registry of Deeds prior to issuance of a Stormwater Management Certificate of Compliance by the Conservation Commission.
 - (16)Estimated annual O&M budget.
 - (17)O&M inspection schedule and log form.
 - (18)The final O&M Plan shall be signed by the property owner and recorded at the Norfolk County Registry of Deeds to provide assurance that the transfer of responsibilities is understood by future owners.
 - (19)Provisions for the Conservation Commission, Stormwater Officer or its designee to enter the property at reasonable times and in a reasonable manner for the purpose of inspection.

9. In addition to the original, the Applicant shall provide the following copies:

- c) One (1) copy of the complete Major Stormwater Management Permit Application package with full size plans.
- d) Eight (8) copies of the Major Stormwater Management Permit Application Form with copies of the Existing Conditions Plan (reduced to 11" x 17"), Proposed Conditions Plan (reduced to 11" x 17"), Erosion and Sedimentation Controls Plan (reduced to 11" x 17"), Post-Construction O&M Plan shall be submitted.
- e) An electronic (pdf) version of the complete Major Stormwater Management Permit Application package sent to conservation@dedham-ma.gov.
- f) Additional copies may be requested by the Conservation Commission.

APPENDIX C: LOW IMPACT DEVELOPMENT PRACTICES

Low Impact Development (LID) strategies use careful site design and decentralized stormwater management to reduce the environmental footprint of new growth and redevelopment. This approach improves water quality, minimizes the need for expensive pipe and pond stormwater systems, and creates more attractive developments. The following are LID strategies and various benefits of implementation.

1. Bioretention cells, commonly known as rain gardens, are relatively small-scale, landscaped depressions containing plants and a soil mixture that absorbs and filters runoff.

Management Objectives:

- Provide quality treatment.
- Remove suspended solids, metals, nutrients.
- Increase groundwater recharge through infiltration.
- Reduce peak discharge rates and total runoff volume.

2. Permeable and porous pavements allow water to soak through the paved surface into the ground beneath. Permeable pavement encompasses a variety of mediums including: porous concrete and asphalt, plastic grid systems and interlocking paving bricks.

Management Objectives:

- Reduce stormwater runoff volume from paved surfaces.
- Reduce peak discharge through infiltration.
- Reduce pollutant transport through direct infiltration.
- Improve site landscaping benefits (grass pavers).

3. Grass swales are broad, open channels sown with erosion resistant and flood tolerant grasses.

Management Objectives:

- Provide water quality treatment; remove suspended solids; heavy metals, trash.
- Reduce peak discharge rate and total runoff volume.
- Infiltrate water into the ground.
- Provide a location for snow storage.

4. Infiltration Trenches and Dry Wells These are standard stormwater management structures that store water in the void space between crushed stone or gravel; the water slowly percolates downward into the subsoil.

Management Objectives:

- Remove suspended solids, heavy metals trash, oil, and grease.
- Reduce peak discharge rate and total runoff volume.
- Provide modest infiltration and recharge.
- Provide snow storage areas.

5. Grass Filter Strips are low-angle vegetated slopes designed to treat sheet flow runoff from adjacent impervious areas.

Management Objectives:

- Remove suspended solids, heavy metals, trash, oil and grease.

- Reduce peak discharge rate and total runoff volume.
- Provide modest infiltration and recharge.
- Provide snow storage areas.

6. Roadway and Parking Lot Design:

Management Objectives:

- Reduce total impervious surface.
- Reduce road/parking construction costs.
- Provide safe access and adequate parking.
- Minimize disturbance to natural site hydrology.
- Create opportunities for stormwater treatment and infiltration.
- Improve site appearance.

7. Cisterns and rain barrels harvest and store rainwater collected from roofs [Note: not to be used as part of measures to meet minimum recharge volumes]

Management Objectives:

- Storing and diverting runoff.
- Reduce flooding and erosion caused by stormwater runoff.
- They contain no salts or sediment which provides "soft" chemical-free water for garden or lawn irrigation, reducing water bills and conserving municipal water supplies.

8. Other LID Implementations

- Shared Driveways.
- Green Roofs.
- Eliminating curbs and gutters, or minimizing in new construction.
- Roughening surfaces.
- Creating long flow paths over landscaped areas.
-
- Creating terraces and check dams.
- Pervious pavers.
- Infiltration, Filtration
 - Rain gardens.
 - Disconnected downspouts (not on hills).
 - Filter Mitts.

9. Maintenance of Paved Surfaces

- No coal-tar pavement sealants.
- No sodium deicers.

10. Low Impact Landscaping

- Native, drought tolerant species.
- Turf area conversion (shrubs, etc.).
- Encouraging longer grass length.
- Planting wildflower meadows rather than turf along medians.

Conservation Development

Like LID, Conservation Development tries to mitigate the effects of urbanization, but it places additional emphasis on protecting aquatic habitat and other natural resources. Conservation Development subdivisions are characterized by compact clustered lots surrounding a common open space. Conservation Development's goal is to disturb as little land area as possible while simultaneously allowing for the maximum number of residences permitted under zoning laws.

Prior to new construction, conservation developers evaluate natural topography, natural drainage patterns, soils and vegetation. They deploy stormwater Best Management Practices to help prevent flooding and protect natural hydrology. By maintaining natural hydrological processes, Conservation Development creates conditions that slow, absorb, and filter stormwater runoff onsite.

Because future development threatens valuable natural features, Conservation Development provides specific provisions for long-term and permanent resource protection. Conservation easements, transfer of development rights, and other "in perpetuity" mechanisms ensure that protective measures are more than just temporary.

Better Site Design

The goals of Better Site Design are to reduce impervious cover, preserve natural lands, and capture stormwater onsite. To meet these goals, designers employ a variety of methods. To reduce impervious cover, they narrow streets and sidewalks, minimize cul-de-sacs, tighten parking spaces, and reduce the size of driveways and housing lots.

To reduce stormwater runoff, designers preserve natural lands, using them as buffer zones along streams, wetlands and steep slopes. They employ landscaping techniques that flatten slopes and preserve native vegetation and clusters of trees. They create bio-retention areas - open channels, filter strips and vegetated swales - to increase stormwater infiltration, helping to protect streams, lakes, and wetlands.

Water Reuse/Water Conservation

In order to conserve potable water supplies and maximize recharge, it may be appropriate on some sites to store and reuse clean runoff (*e.g.* from roofs) for reuse on the site for irrigation or other greywater purposes. This can be accomplished through the use of cisterns and rain barrels. Where appropriate, a water budget may be required to be prepared to determine applicability.

APPENDIX D: STANDARD CONDITIONS FOR STORMWATER MANAGEMENT PERMITS

Failure to comply with all conditions stated herein, and with all related statutes and other regulatory measures, shall be deemed cause to revoke or modify this Permit.

1. This Permit does not grant any property rights or any exclusive privileges; it does not authorize any injury to private property or invasion of private rights.
2. This Permit does not relieve the permittee or any other person of the necessity of complying with all other applicable federal, state, or local statutes, ordinances, by-laws, or regulations.
3. The work authorized hereunder shall be completed within three years from the date of this Permit unless the time for completion has been extended to a specified date more than three years, but less than five years, from the date of issuance and both that date and the special circumstances warranting the extended time period are set forth in this Permit.
4. This Permit may be extended by the issuing authority for one or more periods of up to three years each upon Application to the issuing authority at least 30 days prior to the expiration date of the Order.
5. Prior to commencement of any work on-site, this Permit and a copy of the Post-Development Operations and Maintenance Plan, signed by the property owner(s), shall be recorded against the deed of the property, and evidence of recording of both shall be provided to the Dedham Conservation Commission.
6. A copy of the Registry recorded Permit shall be kept on-site at all times during construction. All contractors and subcontractors engaged during construction shall be provided with a copy of this Permit and all supporting documents before commencing work.
7. Prior to the Pre-Construction Meeting and commencement of any activity on this site, the Applicant shall provide surety to the Town of Dedham in an amount and form satisfactory to the Conservation Commission, pursuant to Section 11 of the Dedham Stormwater Management Rules and Regulations, providing for the completion of the work authorized under this Permit in accordance with the submitted Application/plans, this Permit, and all applicable regulations, including the Stormwater Management By-Law and the Conservation Commission's Stormwater Management Rules and Regulations. Provision shall be made as necessary for performance of any conditions which are of a continuing nature. The Applicant may propose a bond or deposit release schedule.⁸
8. The Applicant shall provide the Conservation Commission a forty-eight (48) hour notice, in writing, before starting any work authorized or required by this Permit.
9. Prior to the start of work, the Applicant shall provide a sign, which shall be posted on the premises at a location visible from the street. The sign shall be not less than two square feet and nor more than three square feet in size bearing the words,

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10. Prior to the start of work, the Applicant shall install erosion and sedimentation controls in accordance with approved design.
11. After installation of erosion and sedimentation controls and installation of the sign required by Standard Conditions 9, but prior to the conduct of any other site work authorized or required by this Permit, a pre-construction meeting must be held with the Conservation Commission's Agent, the Applicant, and the person and/or contractor engaged to install the stormwater management system.

⁸ This requirement may be waived for owner occupied single family dwelling development.

This is to ensure that all aspects of the Permit are fully understood, particularly the necessity to install the system in accordance with the approved design details.

12. The Applicant shall provide, at its own expense, on-site construction supervisor(s), and shall notify the Dedham Conservation Commission in writing of the identity and 24 hour phone numbers(s) and email address(es) of the on-site construction supervisor(s) whose responsibility shall be to ensure compliance with the Conditions of this Permit. The Dedham Conservation Commission shall be notified should the construction supervisor(s) or hi/her/their contact information change at any point during this project.
13. Accepted engineering and construction industry standards of workmanship, materials, and procedures shall be followed to the completion of the project in a proper, substantial, and workman-like manner. Engineering and construction shall be provided in a manner consistent with the level of care and skill ordinarily exercised by those providing services under similar circumstances, and all work must abide by all current Federal, State, and Local regulations and codes regarding engineering and construction.
14. In the event of any spill of hazardous materials (including gasoline, fuel oils, lubricants and hydraulic fluids), the Dedham Fire Department (781-326-2212), the DEP's Spill Response Unit (617-556-1133), the Dedham Board of Health (781-752-9220), the Dedham Conservation Commission Office (781-751-9210), and the Dedham-Westwood Water District (781-329 or 781-326-1250) shall be contacted immediately.
15. The Contractor shall clean up at least daily, all refuse, rubbish, concrete washout from trucks, scrap and surplus materials, debris, and unneeded construction equipment resulting from the construction operations. The site of the work and the adjacent areas shall be kept in a neat and orderly condition. Sediments that might be deposited on streets adjacent to the site shall be swept up daily.
16. A portable sanitary facility shall be located on site during construction.
17. Any fill used in connection with this project shall be clean fill, containing no trash, refuse, rubbish or debris, including but not limited to lumber, bricks, plaster, wire, lath, paper, cardboard, pipe, tires, ashes, refrigerators, motor vehicles or parts of any of the foregoing.
18. All loam to be used in the landscaped areas of the site shall be from sources certified to be free from weed seeds, especially those of invasive species.
19. All excavated earth material not used during this project and all construction waste and debris shall be removed from the site and disposed of in accordance with applicable regulations.
20. The Applicant shall immediately control any erosion problems that occur on-site and shall notify the Conservation Commission of said problems. If any erosion problems occur it may become necessary to install additional erosion and sedimentation controls in association with this project.
21. Following completion of work, the Applicant shall request, in writing, that a Stormwater Management Certificate of Compliance be issued. The request shall state that stormwater management system has been satisfactorily installed and the site has been adequately stabilized.
22. After completion of construction, fertilizers utilized for landscaping and/or lawn care shall be organic in nature and of the low phosphorus content variety. Fertilizers shall be used in moderation. The use of fertilizers containing ammonium nitrate or ammonium phosphate is prohibited.
23. The owners of the project and their successors in title, in the event they proceed to alter areas subject to the Conservation Commission's jurisdiction under this Permit, agree that the Town of Dedham shall have no responsibility to maintain the proposed drainage system and that said Town shall not be liable for any damages in the event of failure. By acceptance of this Permit, the owners indemnify and hold harmless the Town of Dedham and its residents for any damages attributable to alterations

undertaken on this property pursuant to this Permit. Issuance of this Permit does not in any way imply or certify that the site or downstream areas will not be subject to flooding, storm damage, or any other form of water damage.

24. The work shall also conform to the attached Special Conditions: