

TOWN OF CANTON GENERAL BY-LAWS ARTICLE XXI

STORMWATER MANAGEMENT

STORMWATER MANAGEMENT RULES AND REGULATIONS

APPROVED APRIL 13, 2016

1.0 PURPOSE

The purpose of these Stormwater 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 increased post-development stormwater runoff, decreased groundwater recharge, and non-point source pollution associated with new development and redevelopment, as more specifically addressed in Article XXI, Stormwater Management By-law of the Town of Canton.

2.0 DEFINITIONS

The definitions contained herein apply to issuance of a Stormwater Management Permit (SMP) established by the Town of Canton, Article XXI, Stormwater Management By-law and implemented through these Stormwater Regulations. Terms not defined in this section or in the By-law shall be construed according to their customary and usual meaning unless the context indicates a special or technical meaning. See Appendix A for all definitions.

3.0 AUTHORITY

- A) These Regulations have been adopted by the Canton Conservation Commission in accordance with Article XXI, the Town of Canton Stormwater Management By-law (the By-law).
- B) Nothing in these Rules and Regulations is intended to replace or be in derogation of the requirements of the Town of Canton Wetlands Protection By-law, Erosion and Sediment Control By-law or Floodplain Zoning By-law or any Rules and Regulations adopted thereunder.
- C) These Stormwater Regulations may be periodically amended by the Conservation Commission in accordance with the procedures outlined in Section 5.0 of the By-law.
- D) The Commission may review and revise the fee schedule periodically as it sees fit.
 - 1) A public hearing shall precede amendments to the fee schedule.
 - 2) A copy of the written decision will be filed with the Town Clerk within 10 days after final action is taken.
 - 3) Changes to the fee schedule shall take effect a minimum of thirty (30) days after the close of the required public hearing.

E) Waivers

The Commission may waive strict compliance with any requirement of the Town of Canton

Stormwater By-law or the Rules and Regulations promulgated hereunder, where:

1. federal, state and local statutes and/or regulations allow such action,
2. is in the public interest, and
3. is not inconsistent with the purpose and intent of the Town of Canton Stormwater By-law.
 - a) Any applicant may submit a written request to be granted such a waiver. Such a request shall be accompanied by an explanation or documentation supporting the waiver request and demonstrating that strict application of the By-law does not further the purposes or objectives of this By-law.
 - b) All waiver requests shall be acted on within *30 calendar days* and the Commission will provide written findings.
 - c) If, in the Commission's opinion, additional time or information is required for review of a waiver request, the Commission may request an extension of the review period. In the event the applicant objects to an extension, or fails to provide requested information, the waiver request may be denied, "without prejudice" by the Commission.

4.0 APPLICABILITY

These Stormwater Regulations apply to all activities in accordance with the applicable section of the Town of Canton Stormwater By-law and further described in these regulations.

5.0 PERMIT PROCEDURES AND REQUIREMENTS

A. No Permit Required for:

1. Any activity that will disturb an area of land less than 5,000 square feet or less than 25% of a contiguous property, whichever is less, so long as the area being disturbed is not defined as a Hotspot under Section 6.0.D of the By-law. This exception may not be applied for contiguous properties held in common ownership at the time of adoption of this By-law that may have been previously subdivided and/or are attributed to multiple separate owners.
2. Normal maintenance and improvement of land in agricultural use as defined by the Wetlands Protection Act regulation 310 CMR 10.04 and MGL Chapter 40A § 3.
3. Maintenance of existing landscaping, gardens or lawn areas associated with a single-family dwelling.
4. Repair or replacement of an existing roof of a single-family dwelling.

5. The construction of any fence that will not alter existing terrain or drainage patterns.
6. Construction of utilities (gas, water, electric, telephone, etc.) other than drainage, which will not alter terrain, ground cover or drainage patterns.
7. Emergency repairs to a stormwater management facility or practice that poses a threat to public health or safety, or as deemed necessary by the Conservation Commission
8. Any work or projects for which all necessary approvals and permits have been issued before the effective date of this By-law.

B. Administrative Approval is allowed for:

1. single-family residential projects disturbing between 5,000 and 10,000 S.F. of area.
2. a proposed use of any kind, less than 5,000 square feet in area on any property defined as or being converted to use as a Hotspot under the Town of Canton Stormwater by-law or a land use of higher potential pollutant load as defined in the 2008 Massachusetts Department of Environmental Protection Stormwater Handbook.
3. disturbance of any amount of area that has caused or can reasonably be expected to cause a violation of a Massachusetts Water Quality Standard.

Applicants shall submit an application for Administrative Stormwater Review in accordance with the requirements outlined in the application. No public hearing is required for Administrative Approval.

C. Permit Required

1. Permit issuance is required prior to any site altering activity that may result in the disturbance of 5,000 square feet or more of land area, except as noted in Sections 5.0 A and B above.
2. No land owner or land operator shall commence any building, grading or other land disturbance activities without first meeting the requirements of the Stormwater By-law and obtaining a Stormwater Permit as required.
3. Should a land-disturbing activity associated with an approved plan in accordance with this section not begin during the 180 day period following permit issuance, the Conservation Commission may review the existing stormwater management plan to determine whether the plan still satisfies local program requirements and to verify that all design factors are still valid. If

the Commission finds the previously filed plan to be inadequate, a modified plan shall be submitted and approved prior to the commencement of land-disturbing activities.

4. Filing Application

a. The applicant shall file with the Conservation Commission a completed application package for a Stormwater Management Permit (SMP). While the applicant is not required to be the property owner, the owner must be a signatory on the application. The Commission or its agent shall make a determination as to the completeness and adequacy of the materials submitted. No review shall take place until the application has been found to be complete.

b. The SMP Application package shall include:

1) A completed SMP Notice of Intent with original signatures of all owners:

2) A list of abutters within three hundred (300) feet, certified by the Assessor's Office; as shown on the most recent applicable tax list. This list shall include owners of land directly opposite on any public or private street or way, and abutters to the abutters within 300 feet of the property line of the applicant, including any in another municipality or across a body of water).

3) Abutter notification letter. It is the responsibility of the applicant to notify all abutters shown on the Certified Abutters List that the application has been submitted to the Commission. Proof of notification, in the form of certified mail return receipts or certificates of mailing, shall be required prior to the opening of the public hearing.

4) A Stormwater Management Plan and project description (see Section 7);

5) An Operation and Maintenance Plan (see Section 8);

6) Payment of the application and review fees and a separate check for \$25 payable to "Canton Citizen" for a legal notice;

7) An inspection and Maintenance Agreement;

D. Entry

The filing of an application for a permit grants the Commission or its agent permission to enter the site in order to verify the information in the application and to inspect the site for compliance with the resulting permit.

E. Fees

Each submission shall include an Application Fee established by the Commission to cover expenses connected with the review of the Stormwater Management Permit, in accordance with the most recent fee schedule. Should the Commission decide that a technical review is, it is authorized to retain a Registered Professional Engineer or other professional consultant to review and advise the Commission on any or all aspects of the application. Applicants must pay review fees before the review process may begin.

1. Application Fees

- a. Application fees are payable at the time of application and are non-refundable.
- b. Application fees shall be calculated by the Commission in accordance with the latest fee schedule.
- c. These fees are in addition to any other local or state fees that may be charged under any other law, By-law, or local ordinance.

2. Engineering and Consultant Review Fees

- a. The Commission is authorized to require an applicant to pay a fee for the reasonable costs and expenses associated with consultant services deemed necessary by the Commission to come to a final decision on the application.
- b. Consultant fees shall be determined at the time of the initial public hearing based on a specific scope of work, and shall be calculated at a rate determined by the Commission. Project review by outside consultants will be authorized once the review fee has been received by the Commission. Additional fees may be required for time spent on the review of multiple plan revisions as necessary.
- c. The services for which a fee may be utilized include, but are not limited to, wetland survey and delineation, hydrologic and drainage analysis, wildlife habitat evaluation, stormwater management analysis, site inspections, as-built plan review, and analysis of legal issues.
- d. Subject to applicable law, any unused portion of the Engineering and Consultant Review fees collected shall be returned to the applicant within forty-five calendar days of the issuance of a Certificate of Compliance, unless the Commission decides in a public meeting that other action is necessary.
- e. The Engineering and Consultant Review fees collected under this section shall be deposited in a revolving account. The Commission shall include a full accounting of the revolving account as part of its annual report to the Town.

F. Public Hearings

The Commission shall hold a public hearing within twenty-one (21) days of the receipt of a complete application, unless such time is extended by agreement between the applicant and the Commission. Final action shall be taken within sixty (60) days from the time of the closing of the public hearing. Notice of this public hearing shall be given by publication and posting at least seven (7) days prior to the date of the hearing. Notification to abutters shall be given by the applicant at least 7 days prior to the date of the hearing. The commission shall make the application available for inspection by the public during the business hours at the Conservation Office, Pequitside Farm, 79 Pleasant Street, Canton, MA.

G. Actions by Conservation Commission

The Commission's action, rendered in writing, shall consist of either:

1. Approval of the Stormwater Management Permit Application based upon determination that the proposed plan meets the Standards in Section 6 of the Regulations and will adequately protect the water resources of the community and is in compliance with the requirements set forth in the By-law,
2. Approval of the Stormwater Management Permit Application subject to any conditions, modifications or restrictions that the Commission determines are required to ensure that the project meets the Standards in Section 6 of the Regulations and adequately protects water resources, set forth in the By-law,
3. Disapproval of the Stormwater Management Permit Application based upon a determination that the proposed plan, as submitted, does not meet the Standards in Section or adequately protect water resources, as set forth in the By-law.
4. The Commission may disapprove an application "without prejudice" where an applicant fails to provide requested additional information that in the Commission's opinion is needed to adequately describe the proposed project. Information shall generally be limited to those items listed in Section 7 of these Regulations.

H. Final Action

Failure of the Commission to take final action upon an Application within sixty (60) calendar days of the date of the close of the public hearing **shall not** be deemed to be approval of said Application. Commission shall issue its decision within sixty (60) calendar days after the closing of the Public Hearing.

I. Plan Changes

The permittee must notify the Commission, in writing, of any design change or alteration in the system authorized by the Stormwater Management Permit before any change or alteration is made. If the Commission determines that the change or alteration is significant, based on the Stormwater Management Standards in Section 6 and accepted construction practices, the Commission may require that an amended application be filed.

J. Appeals of Actions of the Conservation Commission

A decision of the Commission shall be final. Further relief of a decision by the Commission made under these Regulations shall be reviewable in the Superior Court in an action filed within 60 days thereof, in accordance with M.G.L. C. 249. § 4.

6.0 POST-DEVELOPMENT STORMWATER MANAGEMENT CRITERIA

At a minimum, all projects subject to a Stormwater Management Permit shall comply with the criteria, specifications, and performance standards of the most recent version of Massachusetts Stormwater Management Standards and accompanying Stormwater Management Handbook, as well as the criteria contained herein. The following general performance criteria shall be applicable to all stormwater management plans, unless otherwise provided for in these Regulations.

A. Low Impact Design (LID)

- 1) The design of the project shall, to the maximum extent feasible, employ environmentally sensitive site design as outlined in the MA Stormwater Management Handbook, as amended, and shall attempt to reproduce natural hydrologic conditions with respect to ground and surface waters.
- 2) Evaluation of Low Impact Development practices is required and implementation of such practices to the maximum extent practicable is encouraged. If the proposed stormwater management system design does not fully utilize Low Impact Development techniques, written documentation of Low Impact Development Best Management Practices that were evaluated for the proposed project and the reasons such practices were found to be infeasible shall be provided. Guidance on these practices is provided in the 2008 Massachusetts Department of Environmental Protection Stormwater Management Handbook.
- 3) In order to conserve potable water supplies and maximize recharge, it may be appropriate on some sites to store clean runoff (e.g. from roofs) for reuse on the site for irrigation or other gray water 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.

B. Hydrologic and Hydraulic Criteria

- 1) Hydrologic analyses using TR-55/TR-20 methodology shall be performed on the entire project site and include any off site areas that drain to or through the project site.

- 2) The analyses shall be performed for the 2, 10, and 100-year design storms under pre-development and post-development conditions. The specified design storms shall be defined as a 24-hour storm using the most recent rainfall distribution recommended by the Northeast Regional Climate Center (www.precip.net)
- 3) The post-development peak discharge rate shall be equal to or less than the pre-development peak discharge rate (based on a 2-year, 10-year, and 100-year, 24-hour storm.
- 4) Hydrologic analyses are to be performed on a pre and post sub-watershed basis with designated control points at each location where runoff leaves the site or enters a water body.
- 5) The same land area shall be used in the analysis to facilitate comparison of existing and proposed conditions.
- 6) The total volume of discharge as well as peak rate shall be evaluated at each control point.
- 7) The site shall be designed to ensure that all runoff from the site up to the 100 year storm enters the control structure. For example, the drainage system may only be sized to handle a 25-year storm, with larger storms flooding the distribution system and traveling overland. This overland flow, or overflow, must be directed into the peak control structure or otherwise managed to attenuate flow.
- 8) For purposes of computing runoff, all pervious lands on the site shall be assumed, prior to development, to be in good condition regardless of conditions existing at the time of computation.
- 9) Off-site areas should be modeled as their present land use condition in good hydrologic condition.
- 10) The length of overland sheet flow used in time of concentration (tc) calculations shall be limited to no more than 50 feet for pre- and post-development conditions.
- 11) Stormwater Management systems shall be designed to retain and/or treat the first one inch (1") of runoff from all impervious surfaces on the site. That portion of the first one inch (1") which cannot be feasibly retained and/or infiltrated shall be treated using treatment methods consistent with any Total Maximum Daily Loads for affected receiving waters and any additional treatment requirements in the Town of Canton's Municipal Separate Storm Sewer System Permit. Pre-treatment of runoff from paved surfaces is required to remove 44% of the Total

Suspended Solids prior to infiltration.. Driveways associated with applications for single-family dwellings are exempt from this requirement as per the 2008 Massachusetts Department of Environmental Protection Stormwater Handbook, but to the extent practicable, runoff from such driveways shall be directed to adjacent pervious surfaces.

12) Stormwater outlets shall be designed to prevent erosion.

13) For other structural stormwater controls not included in the Massachusetts Stormwater Management Handbook, or for which pollutant removal rates have not been provided, the effectiveness and pollutant removal of the structural control must be documented through third party studies and receive approval from the Commission before being included in the design of a stormwater management system.

C. Proposed residential, commercial, or industrial subdivisions shall apply these stormwater management criteria to the land development as a whole. Individual lots in new subdivisions shall not be considered separate land development projects, but rather the entire subdivision shall be considered a single land development project. Hydrologic parameters shall reflect the ultimate land development and shall be used in all engineering calculations.

D. Sensitive Areas

Stormwater discharges to critical areas with sensitive resources (i.e., cold water fisheries, shellfish beds, swimming beaches, aquifer recharge areas, water supply reservoirs) may be subject to additional criteria, or may need to utilize or restrict certain stormwater management practices at the discretion of the Commission. The Commission may designate sensitive areas and specific criteria for these areas after conducting a public hearing in accordance with the provisions of Section 4.0 of the Town of Canton Stormwater By-law.

7.0 STORMWATER MANAGEMENT PLAN CONTENTS

A. The application for a Stormwater Management Permit shall include the submittal of a Stormwater Management Plan. This plan shall contain sufficient information for the Commission to evaluate the environmental impact, effectiveness, and acceptability of the measures proposed by the applicant for reducing adverse impacts from stormwater runoff and shall be signed and stamped by a Professional Engineer registered in the Commonwealth of Massachusetts.

B. The Plan shall be designed to meet the Massachusetts Stormwater Management Standards as further defined in the 2008 version of the Massachusetts Stormwater Handbook issued by the Massachusetts Department of Environmental Protection and any

additional standards required by this By-law or regulations adopted hereunder.

C. To the extent that any project within the jurisdiction of this By-law is located in an area subject to one or more pollutant-specific Total Maximum Daily Loads (TMDLs), such project is required to implement structural and non-structural stormwater Best Management Practices (BMPs) that are consistent with each such TMDL and its associated Waste Load Allocation (for point sources) and Load Allocation (for nonpoint sources). Furthermore, projects discharging to waters designated as impaired in the Massachusetts Integrated List of Waters or the Town of Canton Municipal Separate Storm Sewer System permit, shall incorporate BMP's that are consistent with the causes of such impairment. The Conservation Commission may develop, publish and periodically revise one or more pollutant-specific guidance documents describing the geographic applicability of each TMDL and identifying BMPs that individually or in combination are considered to be consistent with the TMDL(s). The majority of the land area of the Town of Canton is within the watershed of the Neponset River, which is subject to a TMDL.

D. The Stormwater Management Plan shall include:

- 1) Contact Information. The name, address, and telephone number of all persons having a legal interest in the property and the tax reference number and parcel number of the property or properties affected;
- 2) A brief narrative description of the project, including how and where stormwater is to be controlled;
- 3) A locus map;
- 4) The size of the entire parcel, and the delineation and number of square feet of the land area to be disturbed;
- 5) The existing zoning and land use at the site and on abutting properties;
- 6) The proposed land use;
- 7) Property lines showing distances and monument locations, all existing and proposed easements, rights-of-way, utilities and other encumbrances;
- 8) Lines of existing abutting streets showing drainage, driveway locations and curb cuts;
- 9) Existing and proposed topography on the site, at two foot (2') intervals, with areas of steep slopes over 15%-25%, and over 25% specifically delineated, and with spot elevations provided when needed. Existing topography fifty feet (50') beyond the perimeter of the parcel as it appears on the most current Mass GIS layer for the Town of Canton.
- 10) Location, delineation and description (including pertinent hydrology and water quality) of all existing and proposed watercourses, water bodies, and Wetland Resource Areas on

or entering the site, or adjacent to the site, or into which stormwater from the site flows, collects or percolates. Wetland Resource Areas shall include those protected under the Massachusetts Wetlands Protection Act (MGL CH 131, Sec 40) and/or the Town of Canton Wetlands By-law (Article XV)

- 11) The location of the 100-year flood boundary on or within one hundred feet (100') of the project site, based upon the most recent Flood Insurance Rate Map (FIRM) or as calculated by a professional engineer for areas not assessed on these maps;
- 12) Location, delineation and description of habitats from the most recent mapping by the Massachusetts Natural Heritage & Endangered Species Program as Endangered, Threatened or of Special Concern, Estimated Habitats of Rare Wildlife and Certified Vernal Pools, Potential Vernal Pools, and Priority Habitats of Rare Species within five hundred feet (500') of any proposed area of disturbance.
- 13) The general outline of existing vegetation, wooded areas, significant mature trees, unique species and tree clusters and the extent of all vegetation, wooded areas, significant mature trees, unique species and/or tree clusters proposed to be removed;
- 14) Locations of existing and proposed wells and septic systems on or within 50 feet of the site;
- 15) A drainage area map showing pre and post construction watersheds, sub-watersheds and stormwater flow paths, including municipal drainage system flows;
- 16) A description of existing soils on the site (type, hydrologic soil group, erodibility), and the volume and nature of any imported soil materials from the most recent NRCS atlas;
- 17) Soils logs from test pits performed at the location of proposed infiltration and storage basins, including but not limited to soil descriptions, depth to seasonal high groundwater and depth to bedrock. Test pits shall be performed by a Massachusetts Registered Soil Evaluator, or a Soil Scientist.
- 18) Proposed improvements, including locations of buildings or other structures, impervious surfaces, and drainage facilities;
- 19) Descriptions and drawings of all components of the proposed stormwater management system including:
 - i. Locations, cross sections, and profiles of all brooks, streams, drainage swales and their method of stabilization;
 - ii. All measures for the detention, retention or infiltration of water;
 - iii. All measures for the protection of water quality;

- iv. The structural details for all components of the proposed drainage systems and stormwater management facilities;
 - v. Notes on drawings specifying materials to be used, construction specifications, and typical details.
- 20) Hydrologic and hydraulic design calculations for the pre-development and post-development conditions for the design storms specified in this Regulation. Such calculations be conducted in accordance with the most recent version of the Massachusetts Stormwater Handbook, the most recent rainfall data from the Northeast Regional Climate Center (precip.eas.cornell.edu), and the criteria set forth in Section 6 and shall include:
- i. Description of the design storm frequency, intensity and duration;
 - ii. Time of concentration;
 - iii. Soil Runoff Curve Number (RCN) based on land use and soil hydrologic group;
 - iv. Peak runoff rates and total runoff volumes for each watershed and sub-watershed area under existing and proposed conditions;
 - v. Infiltration rates, where applicable;
 - vi. Culvert capacities of downgradient culverts;
 - vii. Design calculations for closed drainage systems being used to convey stormwater to flow attenuation BMPs;
 - viii. Flow velocities at outlets to BMPs?
 - ix. Documentation of sources for all computation methods and field test results;
- 21) Post-Development downstream analysis, if deemed necessary by the Conservation Commission;
- 22) Information on construction measures used to maintain the infiltration capacity of the soil where any kind of infiltration is proposed, as well as erosion and sedimentation control measures;
- 23) Landscaping plan describing the woody and herbaceous vegetative stabilization and management techniques to be used within the site and adjacent to the stormwater practice.
- 24) Any other information requested by the Commission.

- 25) Site plans included with the Stormwater Management Plan shall be prepared on 24 x 36 inch sheets and shall include a title, date, north arrow, names of abutters, scale, legend, and locus map (1"=800'). Revised plans shall contain a notation listing and describing all revisions, additions, and deletions made to the originally submitted plans and the complete date of each.

8.0 OPERATION AND MAINTENANCE PLAN

An Operation and Maintenance plan (O&M Plan) is required at the time of application for all projects. The maintenance plan shall be designed to ensure compliance with the Permit, 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 Operation and Maintenance Plan shall remain on file with the Commission and shall be an ongoing requirement.

The O&M Plan shall include:

- A. The name(s) of the owner(s) and contractors for all components of the system;
- B. A map showing the location of the systems and facilities, including catch basins, manholes, access lids, main drainage lines and stormwater devices;
- C. Maintenance agreements that specify:
 - 1) The names, addresses and phone numbers of the person(s) responsible for operation and maintenance;
 - 2) The person(s) responsible for financing maintenance and emergency repairs;
 - 3) An Inspection and Maintenance Schedule for all stormwater management facilities including routine and non-routine maintenance tasks to be performed;
 - 4) A list of easements with the purpose and location of each;
 - 5) The signature(s) of the owners(s).
- D. Stormwater Management Easement(s)
 - 1) Stormwater Management Easements shall be provided (to responsible party) by the property owner(s) as necessary for:
 - a) Access for facility inspections and maintenance;
 - b) Preservation of stormwater runoff conveyance, infiltration, and detention areas and facilities, including flood routes for

the 100-year storm event

- c) Direct maintenance access by heavy equipment to structures requiring regular maintenance.

2) The purpose of each easement shall be specified in the maintenance agreement signed by the property owner.

3) Stormwater Management Easements are required for all areas used for off-site stormwater control, unless a waiver is granted by the Commission.

4) Easements shall be recorded with the Norfolk County Registry of Deeds prior to issuance of a Certificate of Compliance by the Commission.

E. Changes to Operation and Maintenance Plans

- 1) The owner(s) of the stormwater management system must notify the Commission of changes in ownership or assignment of financial responsibility.
- 2) The maintenance schedule in the Maintenance Agreement may be amended to achieve the purposes of this Regulation by mutual agreement of the Commission and the Responsible Parties. Amendments must be in writing and signed by all Responsible Parties. Responsible Parties shall include owner(s), persons with financial responsibility, and persons with operational responsibility.

F. Recording of Operations and Maintenance Plan

The approved Operations and Maintenance plan shall be attached to the Stormwater Management Permit as an appendix and shall be recorded at the Norfolk County Registry of Deeds.

9.0 SURETY

The Commission may require the permittee to post a surety bond, irrevocable letter of credit, cash, or other acceptable security before the start of land disturbance or construction activity. The form of the bond shall be approved by Town Counsel, and be in an amount deemed sufficient by the Commission to ensure that the work will be completed in accordance with the permit. If the project is phased, the Commission may release part of the bond as each phase is completed in compliance with the permit but the bond may not be fully released until the Commission has received the final inspection report as required by Section 10 of these Regulations and issued a Certificate of Compliance.

10.0 CONSTRUCTION INSPECTIONS

- A. Notice of Construction Commencement. The applicant must notify the Commission a minimum of 10 days in advance of the commencement of construction. In all cases, a pre-construction meeting with the applicant and contractor must be held prior to the commencement of construction to review the details of the Stormwater Management Permit. In addition, the applicant must notify the Commission in advance of the construction schedule of critical components of the stormwater management system.

- B. The Commission or its designee shall inspect the project site at the following stages, at a minimum:
 - 1. Initial Site Inspection: prior to approval of any plan;

 - 2. Erosion Control Inspection: to ensure erosion control practices are in accord with the approved plan,

 - 3. Stormwater Management System
 - a. Sub-surface infiltration systems
 - 1) Excavation of area for system

 - 2) Placement of stone below system and installation of filter fabric

 - 3) Backfilling and inspection port

 - 4. Final inspection

11.0 PROJECT COMPLETION

- A. Within one year of the completion of the project, after the stormwater management system has been constructed and before the surety has been released, all applicants are required to submit actual "as built" plans for any stormwater management facilities or practices. The "as-built" plan shall be accompanied by an Engineer's Certification, stamped and signed by a Professional Engineer registered in the Commonwealth of Massachusetts, stating that the stormwater management system has been inspected during a storm event, is functioning as designed and that the completed project complies with all aspects of the SMP. Any discrepancies between the approved plan and the "as-built" plan must be described in the Engineer's Certification.

- B. "As-built" plans shall be full size plans which reflect the "as-built" conditions, including all final grades and pipe inverts. All work deleted, corrections in elevations, and changes in materials, shall be shown on the as-built drawings.

C. Inadequacy of System

1. 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 Plan, it shall be corrected by the applicant before the Certificate of Compliance is released. If the applicant fails to act the Commission **may** use the surety bond to complete the work.
2. If the Commission determines that there is a failure to comply with the plan, the property owner shall be notified in writing of the nature of the violation and the required corrective actions. An Enforcement Order (Stop Work Order) shall be issued until any violations are corrected and all work previously completed has received approval by the Commission.

12.0 CERTIFICATE OF COMPLIANCE

Prior to the request for a partial or total Certificate of Compliance, the applicant shall provide to the Canton Conservation Commission for their review and written approval, a revised Operations and Maintenance Plan of all “as-built” structural BMP systems, as well as anticipated non-structural BMPs such as sweeping, and applications of winter de-icing agents. The Plan, at a scale of 1" = 20', or as approved of in advance by the Commission, shall include a depiction of each structural BMP element. The Plan shall also indicate those areas within which applications of fertilizers, herbicides and pesticides are anticipated, and those areas to be designated as chemical and/or fertilizer free. Materials, application rates and total amounts to be used of each material shall be provided. The applicant shall also provide some documentation to the Commission of adequate funding for the required maintenance.

13.0 PERPETUAL INSPECTION AND MAINTENANCE

A. Maintenance Responsibility

1. Stormwater management facilities and practices included in a Stormwater Management Plan with an inspection and maintenance agreement in accordance with Section 6. M of these Regulations must undergo ongoing inspections to document maintenance and repair needs and ensure compliance with the requirements of the agreement, the plan and this Regulation.
2. The owner of the property on which work has been done pursuant to these Rules and Regulations for private stormwater management facilities, or any other person or agent in control of such property, shall maintain in good condition and promptly repair and restore all grade surfaces, walls, drains, dams and structures, vegetation, erosion and sedimentation controls, and other protective devices. Such repairs or restoration and maintenance shall be in accordance with approved plans.

B. Maintenance Inspections

1. All stormwater management facilities must undergo inspections to document maintenance and repair needs and ensure compliance with the requirements of this By-law and accomplishment of its purposes as specified in the Operation and Maintenance Plan and Maintenance Agreement described under Section 8 of these regulations.

2. At a minimum, inspections shall occur during the first year of operation and at least once every year thereafter. In addition, a maintenance agreement as specified under Section 8 of these Regulations between the owner and the Commission shall be executed for privately owned stormwater management systems that specify the Responsible Party for conducting long term inspections and repairs.

3. Inspection reports shall be submitted to the Commission for all stormwater management systems. Inspection reports for stormwater management systems shall include:

a) The date of inspection;

b) Name of inspector;

c) The condition of:

i. Pretreatment devices;

ii. Vegetation or filter media;

iii. Fences or other safety devices;

iv. Spillways, valves, or other control structures;

v. Embankments, slopes and safety benches;

vi. Reservoir or treatment areas;

vii. Inlet and outlet channels and structures;

viii. Underground drainage;

ix. Sediment and debris accumulation in storage and forebay areas (including catch basins);

x. Any nonstructural practices;

xi. Any other item that could affect the proper function of the stormwater management system;

xii. Description of the need for maintenance or repair;

C. Right-of-Entry for Inspection

The terms of the inspection and maintenance agreement as specified in Section 8 of these regulations shall provide for the Commission or its designee to enter the property at reasonable times and in a reasonable manner for the purpose of inspection. The Commission, its agents, officers, and employees shall have authority to enter upon privately owned land for the purpose of performing their duties under this Regulation and may make or cause to be made such examinations, surveys, or sampling as the Commission deems necessary, subject to the constitutions and laws of the United States and the Commonwealth of Massachusetts.

D. Records of Maintenance and Repair Activities

Parties responsible for the operation and maintenance of a stormwater management facility shall provide records of all maintenance and repairs to the Commission upon request. Parties responsible for the operation and maintenance of a storm water management facility shall make records of the installation and of all maintenance and repairs, and shall retain the records for at least 5 years. These records shall be made available to the Commission during inspection of the facility and at other reasonable times upon request.

E. Failure to Maintain

1. If a responsible person fails or refuses to meet the requirements of the inspection and maintenance agreement, the Commission after thirty (30) days written notice (except, that in the event the violation constitutes an immediate danger to public health or public safety, 24 hour notice shall be sufficient), may correct a violation of the design standards or maintenance requirements by performing the necessary work to place the facility or practice in proper working condition. The Town of Canton may assess the owner(s) of the facility for the cost of repair work that shall be a lien on the property.

2. After notification is provided to the person responsible for carrying out the maintenance plan of any deficiencies discovered from an inspection of a stormwater management system, the person responsible for carrying out the maintenance plan shall have thirty (30) days (or other time frame mutually agreed to between the Commission and the person responsible for carrying out the maintenance plan) to correct the deficiencies. The Commission shall then conduct a subsequent inspection to ensure completion of maintenance or repairs.

14.0 ENFORCEMENT

A) The Commission or an authorized agent of the Commission shall enforce this By-law, regulations, orders, violation notices, and enforcement orders, and may pursue all civil, criminal and non-criminal remedies for such violations.

B) Notices and Orders

1. The Commission or an authorized agent of the Commission may issue a written notice of violation or enforcement order to enforce the provisions of this By-law or the regulations there under, which may include requirements to:

a) Cease and desist from construction or land disturbing activity until there is compliance with the By-law and the stormwater management permit;

b) Repair, maintain or replace the stormwater management system or portions thereof in accordance with the operation and maintenance plan;

c) Perform monitoring, analyses, and reporting;

d) Repair adverse impacts resulting directly or indirectly from malfunction of the stormwater management system.

2. If the enforcing person determines that abatement or remediation of adverse impacts is required, the order may set forth a deadline by which such abatement or remediation must be completed. Said order may further advise that, should the violator or property owner fail to abate or perform remediation within the specified deadline, the Town of Canton may, at its option, undertake such work, and the property owner shall reimburse the Town of Canton for expenses incurred.

3. Within thirty (30) days of completing all measures necessary to abate the violation or to perform remediation, the violator and the property owner shall be notified of the costs incurred by the Town of Canton, including administrative costs. The violator or property owner may file a written protest objecting to the amount or basis of costs with the 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 Town of Canton affirming or reducing the costs, or from a final decision of a court of competent jurisdiction, the costs shall become a special assessment against the property owner and shall constitute a lien on the owner's property for the amount of said costs. Interest shall begin to accrue on any unpaid costs at the statutory rate provided in G.L. Ch. 59, § 57, after the thirty-first day at which the costs first become due.

C) Any person who violates any provision of the Town of Canton Stormwater By-law, or regulation, order or permit issued thereunder may be ordered to correct the violation and/or shall be punished by a fine of not more than \$300.00. Each day or part thereof that such violation occurs or continues shall constitute a separate offense.

D) Non-Criminal Disposition. As an alternative to criminal prosecution or civil action, the Town of Canton may elect to utilize the non-criminal disposition procedure set forth in G.L. Ch. 40, §21D and Article 1 of the General By-laws of the Town of Canton in which case the agent of the Town of Canton Conservation Commission with a vote of the Commission shall be the enforcing person.

E) Appeals. The decisions or orders of the Commission shall be final. Further relief shall be reviewable in the Superior Court in an action filed within sixty (60) days thereof, in accordance with MGL Ch. 249 § 4.

F) Remedies Not Exclusive. The remedies listed in this By-law are not exclusive of any other remedies available under any applicable federal, state or local law.

15.0 SEVERABILITY

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

APPENDIX A – DEFINITIONS

Definitions in bold are included in Article XXI, the Stormwater Management By-law.

ADMINISTRATIVE APPROVAL: The process by which the stormwater management design of a proposed single-family dwelling may be reviewed and approved by the Commission’s agent and does not require a public hearing.

ALTER: Any activity, which will measurably change the ability of a ground surface area to absorb water or will change existing surface drainage patterns. Alter may be similarly represented as “alteration of drainage characteristics,” and “conducting land disturbance activities.”

APPLICANT: A property owner or agent of a property owner who has filed an application for a stormwater management permit.

BEST MANAGEMENT PRACTICE (BMP): Structural, non-structural and managerial techniques that are recognized to be the most effective and practical means to prevent and/or reduce increases in stormwater volumes and flows, reduce point source and nonpoint source pollution, and promote stormwater quality and protection of the environment. “Structural” BMPs are devices that are engineered and constructed to provide temporary storage and treatment of stormwater runoff. “Nonstructural” BMPs use natural measures to reduce pollution levels, do not require extensive construction efforts, and/or promote pollutant reduction by eliminating the pollutant source.

BETTER SITE DESIGN: Site design approaches and techniques that can reduce a site’s impact on the watershed through the use of nonstructural stormwater management practices. Better site design includes conserving and protecting natural areas and greenspace, reducing impervious cover, and using natural features for stormwater management.

CERTIFICATE OF COMPLIANCE (COC): A document issued by the Conservation Commission after all construction activities have been completed which states that a project has been completed in compliance with the conditions set forth in a Stormwater Management Permit (SMP).

COMMISSION: means the Town of Canton Conservation Commission.

CONVEYANCE: 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 storm water runoff or existing water flow.

DEVELOPER: A person who undertakes or proposes to undertake land disturbance activities.

DEVELOPMENT: The modification of land to accommodate a new use or expansion of use, usually involving construction.

DISTURBANCE OF LAND: Any action that causes a change in the position, location, or arrangement of soil, sand, rock, gravel or similar earth material, including demolition and excavation of existing structures or impervious surfaces.

DRAINAGE EASEMENT: A legal right granted by a landowner to a grantee allowing the

use of private land for stormwater management purposes.

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

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.

FLOOD CONTROL: The prevention or reduction of flooding and flood damage.

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.

GENERAL STORMWATER MANAGEMENT PERMIT (GSMP): A permit issued for an application that meets a set of pre-determined standards outlined in the Regulations to be adopted by the Stormwater Authority under Section 4 of this By-law. By meeting these pre-determined standards, the proposed project will be presumed to meet the requirements and intent of this By-law.

GRADING: Changing the level or shape of the ground surface.

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

HOTSPOT: Land uses or activities with higher potential pollutant loadings, such as auto salvage yards, auto fueling facilities, fleet storage yards, commercial parking lots with high intensity use, road salt storage areas, commercial nurseries and landscaping, outdoor storage and loading areas of hazardous substances, or marinas.

IMPERVIOUS SURFACE: Any material or structure on or above the ground that prevents water from infiltrating through the underlying soil. Impervious surface is defined to include, without limitation: paved parking lots, sidewalks, rooftops, driveways, patios, and paved, gravel and compacted dirt surfaced roads.

INFILTRATION: The act of conveying surface water into the ground to permit groundwater recharge and the reduction of stormwater runoff from a project site.

LAND-DISTURBING ACTIVITY: Any activity that causes a change in the position or location of soil, sand, rock, gravel, or similar earth material; results in an increased amount of runoff or pollutants; measurably changes the ability of a ground surface to absorb waters, involves clearing and grading, or results in an alteration of drainage characteristics.

MASSACHUSETTS STORMWATER MANAGEMENT POLICY: The Policy issued by the Department of Environmental Protection, and as amended, that coordinates the requirements prescribed by state regulations promulgated under the authority of the Massachusetts Wetlands Protection Act G.L. c. 131 § 40 and Massachusetts Clean Waters Act G.L. c. 21, §. 23-56. The Policy addresses stormwater impacts through implementation of performance standards to reduce

or prevent pollutants from reaching water bodies and control the quantity of runoff from a site.

MASSACHUSETTS STORMWATER MANAGEMENT STANDARDS: the Standards as further defined by the Massachusetts Stormwater Handbook, issued by the Department of Environmental Protection, and as amended, that coordinates the requirements prescribed by state regulations promulgated under the authority of the Massachusetts Wetland Protection Act (MGL c. 131 § 40) and Massachusetts Clean Waters Act, (MGL c. 21, § 23-56). The Policy addresses stormwater impacts through implementation of performance standards to reduce or prevent pollutants from reaching water bodies and to control the quantity of run-off from a site.

MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) or MUNICIPAL STORM DRAIN SYSTEM: The system of conveyances designed or used for collecting or conveying stormwater, including any road with a drainage system, street, gutter, curb, inlet, piped storm drain, pumping facility, retention or detention basin, natural or man-made or altered drainage channel, reservoir, and other drainage structure that together comprise the storm drainage system owned or operated by the Town of Canton.

NEW DEVELOPMENT: Any construction or land disturbance of a parcel of land that is currently in a natural vegetated state and does not contain alteration by man-made activities.

NONPOINT SOURCE POLLUTION: Pollution from many diffuse sources caused by rainfall or snowmelt moving over and through the ground. As the runoff moves, it picks up and carries away natural and human-made pollutants, finally depositing them into water resource areas.

OPERATION AND MAINTENANCE PLAN: A plan that defines the functional, financial and organizational mechanisms for the ongoing operation and maintenance of a stormwater management system to ensure that it continues to function as designed.

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

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 By-laws, administrative agency, public or quasi-public corporation or body, the Town of Canton and any other legal entity, its legal representatives, agents, or assigns.

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.

PRE-DEVELOPMENT: The conditions that exist at the time that plans for the land development of a tract of land are submitted to the Canton Conservation Commission. Where phased development or plan approval occurs (preliminary grading, roads and utilities, etc.), the existing conditions at the time prior to the first plan submission shall establish pre-development conditions.

POST-DEVELOPMENT: The conditions that reasonably may be expected or anticipated to exist after completion of the land development activity on a specific site or tract of land. Post-development refers to the phase of a new development or redevelopment project after completion, and does not refer to the construction phase of a project.

RECHARGE: The replenishment of underground water reserves.

REDEVELOPMENT: Any construction, alteration, improvement exceeding land disturbance of 5,000 square feet, where the existing land use is commercial, industrial, institutional, or multifamily residential.

RESOURCE AREA: Any area protected under including without limitation: the Massachusetts Wetlands Protection Act, as amended, or Town of Canton Wetlands Protection By-law (Art. XV).

RUNOFF: Rainfall, snowmelt, or irrigation water flowing over the ground surface.

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

SITE: The parcel of land being developed, or a designated planning area in which the land development project is located.

STOP WORK ORDER: An Enforcement Order issued, which requires that all construction activity on a site be stopped.

STORMWATER AUTHORITY: The Town of Canton Conservation Commission or its authorized agent(s). The Conservation Commission is responsible for coordinating the review, approval and permit process as defined in this By-law. Other Boards and/or departments participate in the review process as defined in the Stormwater Regulations adopted by the Conservation Commission.

STORMWATER CREDITS: A form of incentive for developers to promote conservation of natural and open space areas. Projects that comply with prescribed requirements are allowed reductions in stormwater management requirements when they use techniques to reduce stormwater runoff at the site.

STORMWATER MANAGEMENT: The use of structural or non-structural practices that are designed to reduce stormwater runoff pollutant loads, discharge volumes, and/or peak flow discharge rates.

STORMWATER MANAGEMENT PERMIT (SMP): A permit issued by the Conservation Commission after review of an application, plans, calculations, and other supporting documents, which is designed to protect the environment of the Town from the deleterious effects of uncontrolled and untreated stormwater runoff.

STORMWATER UTILITY: A special assessment district set up to generate funding specifically for stormwater management. Users within the district pay a stormwater fee, and the revenue thus generated directly supports maintenance and upgrade of existing storm drain systems; development of drainage plans, flood control measures, and water-quality programs; administrative costs; and sometimes construction of major capital improvements.

TSS: Total Suspended Solids.

WATER QUALITY VOLUME (WQV): The volume of run-off that must be used to determine the design of a Best Management Practice (or series of practices) to achieve a specified level of treatment (in this case, 80% removal of total suspended solids – TSS) under the Massachusetts DEP Stormwater Management Policy.