

# TOWN OF CANTON GENERAL BYLAWS ARTICLE XXI

## STORMWATER MANAGEMENT

### STORMWATER MANAGEMENT RULES AND REGULATIONS

*Revision approved April 28, 2021*

#### 1.0 PURPOSE

The purpose of these Stormwater Rules and Regulations is to protect public health, safety, environment, and general welfare by establishing minimum requirements and procedures to control the adverse effects of increased construction phase and post-development stormwater runoff, decreased groundwater recharge, erosion, and non-point source pollution associated with new development and redevelopment, as identified in Article XXI, Stormwater Management Bylaw (the Bylaw) 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 Bylaw and implemented through these Stormwater Rules and Regulations. Terms not defined in this section or in the Bylaw 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 Rules and Regulations have been adopted by the Canton Conservation Commission (the Commission) in accordance with Article XXI, the Town of Canton Stormwater Management Bylaw (the Bylaw).
- 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 Bylaw, Town of Canton Zoning Bylaw, or Floodplain Overlay District, the Consolidated Drainage Bylaw, or any Rules and Regulations adopted thereunder by the Town of Canton.
- C) These Stormwater Regulations may be periodically amended by the Conservation Commission in accordance with the procedures outlined in Section 4 of the Bylaw.
- 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 Rules and Regulations promulgated hereunder, where:

1. federal, state and local statutes and/or regulations allow such action,
  2. it is in the public interest, and
  3. it is not inconsistent with the purpose and intent of the Town of Canton Stormwater Management Bylaw.
    - 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 Rules and Regulations does not further the purposes or objectives of these Rules and Regulations.
    - 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.
- F) In case of inconsistency between the Stormwater Management Bylaw and these Rules and Regulations, the Bylaw shall Control.

#### **4.0 APPLICABILITY**

These Stormwater Regulations apply to all activities in accordance with the applicable section of the Town of Canton Stormwater Bylaw and further described in these Rules and Regulations. No person shall commence any building, grading or other land disturbance activities without first meeting the requirements of the Stormwater Bylaw and obtaining a Stormwater Management Permit as required.

#### **5.0 STORMWATER MANAGEMENT PERMIT PROCEDURES AND REQUIREMENTS**

A) No Permit Required for:

1. Any activity that will disturb an area of land less than 20,000 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 2(B) in the Bylaw. This exception may not be applied for contiguous properties held in common ownership at the time of adoption of the Bylaw 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 Regulations 310 CMR 10.04.

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 or repair 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 these Rules and Regulations.

B) Permit Required:

1. Stormwater Management Permit issuance is required prior to any construction activity or land disturbance, including clearing, grading, excavation, or redevelopment that may result in the disturbance of 20,000 square feet or more of land area, except as noted in Section 5.0(A).
2. 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 property owner must sign 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 the following:
    - 1) A completed Town of Canton Stormwater Application with original signatures of all owners. If submitting an electronic application and the applicant is not the property owner, then the applicant must submit a letter in hard copy format from the owner(s) authorizing the applicant to submit the application and complete the described work, if permitted, to the Commission. This letter must include all owner's names, address or addresses, and contact information, the project location's address including map and parcel number(s) of the property or properties subject to the application, and must have all original signatures.
    - 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 three hundred (300) feet of the property line of the parcel, 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 an 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 Site Plan (two (2) hard copies, one (1) electronic copy).
- 5) A project narrative/description.
- 6) An Operation and Maintenance Plan (see Section 8).
- 7) An Erosion and Sediment Control plan.
- 8) Payment of fees per the Canton Stormwater Fee Schedule.
- 9) A separate check for \$25 made payable to "Canton Citizen" for a legal notice ad.

C) Entry

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

D) 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 Stormwater Fee Schedule. Should the Commission decide that a technical review is required, 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 due at the time of application and are non-refundable.
- b. Application fees shall be calculated by the Commission in accordance with the latest Canton Stormwater Fee Schedule.
- c. These fees are in addition to any other local or state fees that may be charged under any

other law, Bylaw, 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 hydrologic and drainage analysis, stormwater management analysis, construction-period compliance site inspections, and as-built plan review.
- d. Subject to applicable law, any unused portion of the Engineering and Consultant Review fees collected shall be returned to the applicant within sixty calendar days of the issuance of a Certificate of Compliance.
- e. The Engineering and Consultant Review fees collected under this section shall be deposited in a revolving account. The Commission shall keep a full accounting of the revolving account and all deposits and expenditures made. This accounting will be made available by the Commission to applicants upon request.

## E) Public Hearings

The Commission shall hold a public hearing within thirty (30) calendar days of the receipt of a complete application and shall take final action within thirty (30) calendar days from the time of the hearing, unless such time is extended by agreement between the applicant and the Commission. Notice of this public hearing shall be given by publication and posting by the Commission at the expense of the Applicant at least seven (7) days prior to the date of the hearing. Notification to abutters shall be given by the Applicant at least seven (7) days prior to the date of the hearing. The Commission shall make the application available to the public for inspection during regular business hours of the Conservation Department at the Conservation Office, Pequitside Farm, 79 Pleasant Street, Canton, MA.

## F) Actions by Conservation Commission

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

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

G. Final Action

Failure of the Commission to take final action upon an Application within thirty (30) calendar days of the date of the close of the Public Hearing **shall not** be deemed to be approval of said Application. The Commission shall issue its decision within thirty (30) calendar days after the closing of the Public Hearing. Final approval, if granted, shall be endorsed on the Stormwater Management Permit by the signature of the majority of the Stormwater Authority (or by the signature of the person officially authorized by the Stormwater Authority).

I. Plan Changes

The permittee or their representative must notify the Commission, in writing, of any design change or alteration in the activity 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 requirements in Section 6 and accepted construction practices, the Commission may require that an amended application be filed and a public hearing held.

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.

A. General Performance Standards for All Sites:

- (1) Low Impact Development and Green Infrastructure site design strategies shall be utilized to preserve existing natural features of the site, minimize the creation of impervious surfaces and manage stormwater in a decentralized fashion, to the maximum extent feasible.
- (2) The selection, design and construction of all pre-treatment, treatment and infiltration BMPs shall be in accordance with Massachusetts Stormwater Handbook and shall be consistent with all elements of the Massachusetts Stormwater Standards including but not limited to those regarding new stormwater conveyances, peak runoff rates, recharge, land uses with higher potential pollutant loads, discharges to Zone II or interim wellhead protection areas, sediment and erosion control, and illicit discharges.

B. Performance Standards for New Development Sites:

- (1) The first 1.0 inch of runoff from all post-construction impervious surfaces shall be retained on-site through a combination of infiltration, reuse and/or evaporation, to the maximum extent practicable. When determining whether the requirements have been met, the Conservation Commission shall consider all stormwater management practices available and capable of being implemented after taking into consideration costs, existing technology, proposed use, and logistics in light of overall project purposes. Project purposes shall be defined generally (*e.g.*, single family home or expansion of a commercial development).
- (2) Where it is not technically feasible to retain the first 1.0 inch of runoff from all impervious areas, the Applicant will describe in writing why it is technically infeasible to do so due to physical site constraints, and indicate the volume of runoff to be retained. If different volumes are retained different areas of the site, each area shall be described individually. That portion of the required volume which is not retained on-site shall be treated using stormwater BMPs that are optimized for the removal of TSS, total phosphorus, bacteria and pollutants of concern identified in any applicable TMDL or impaired waters designation.
- (3) All Applicants who do not retain the first 1.0 inch of runoff from all impervious areas shall use the EPA Region 1's BMP Accounting and Tracking Tool (2016) or other BMP performance evaluation tool provided by EPA Region 1, where available to document that the proposed BMPs will remove 90% or more of the annual average load of total suspended solids and 60% or more of the average annual load of total phosphorus for all post-construction impervious areas on-site. If EPA Region 1 tools do not address the planned or installed BMP performance, then any federally or State-approved BMP

design guidance or performance standards (e.g., State stormwater handbooks and design guidance manuals) may be used.

C. Performance Standards for Redevelopment Sites:

- (1) The first 0.8 inches of runoff from all impervious surfaces on site shall be retained on-site through a combination of infiltration, reuse and/or evaporation, to the maximum extent practicable. When determining whether the requirements have been met, the Conservation Commission shall consider all stormwater management practices available and capable of being implemented after taking into consideration costs, existing technology, proposed use, and logistics in light of overall project purposes. Project purposes shall be defined generally (e.g., single family home or expansion of a commercial development).
- (2) Where it is not technically feasible to retain the first 0.8 inch of runoff from all impervious areas, the Applicant will describe in writing why it is technically infeasible to do so due to physical site constraints, and indicate the volume of runoff to be retained. If different volumes are retained different areas of the site, each area shall be described individually. That portion of the required volume which is not retained on-site shall be treated using stormwater BMPs that are optimized for the removal of TSS, total phosphorus, bacteria and pollutants of concern identified in any applicable TMDL or impaired waters designation.
- (3) All Applicants who do not retain the first 0.8 inch of runoff from all impervious areas shall use the EPA Region 1's BMP Accounting and Tracking Tool (2016) or other BMP performance evaluation tool provided by EPA Region 1, where available to document that the proposed BMPs will remove 80% or more of the annual average load of total suspended solids and 50% or more of the average annual load of total phosphorus for all post-construction impervious areas on-site. If EPA Region 1 tools do not address the planned or installed BMP performance, then any federally or State-approved BMP design guidance or performance standards (e.g., State stormwater handbooks and design guidance manuals) may be used.

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. Driveways associated with applications for single family house projects that disturb between 20,000 s.f. but not more than 43,560 s.f. (one acre) are exempt from these requirements but to the maximum extent practicable runoff from such driveways shall be directed to adjacent pervious areas.

#### 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 of the Town of Canton Stormwater Bylaw.

#### E. Stormwater Management Design Standards

- (1) Projects must be designed to collect and dispose of stormwater runoff from the project site in accordance with Massachusetts Stormwater Management Standards, Canton Department of Public Works, Canton Planning Board Subdivisions Rules and Regulations, recognized engineering methodologies, and these Rules and Regulations with an emphasis to include Low Impact Development techniques in the design.
- (2) Projects must manage surface runoff so that no flow is conducted over public ways, nor over land not owned or controlled by the Applicant unless an easement in proper form is obtained permitting such discharge.
- (3) Projects must use Low Impact Development techniques where adequate soil, groundwater and topographic conditions allow. These may include but not be limited to reduction in impervious surfaces, disconnection of impervious surfaces, bioretention (rain gardens) and infiltration systems. The use of one or more Low Impact Development site design measures by the applicant may allow for a reduction in the water quality treatment volume required by these regulations. The applicant may, if approved by the Stormwater Authority, take credit for the use of stormwater Low Impact Development measures to reduce some of the requirements specified in these regulations. The site design practices that qualify for these credits and procedures for applying and calculating credits are identified in the Massachusetts Stormwater Handbook.
- (4) Projects must use TR-55 and TR-20 methodologies to calculate peak rate and volume of runoff from pre-development to post-development conditions.
- (5) Watershed area for hydrologic analysis and BMP sizing calculations must include at a minimum the site area and all upgradient areas from which stormwater runoff flows onto the site.
- (6) For purposes of computing runoff, all pervious lands in the site are assumed prior to Development to be in “good hydrologic condition” regardless of the conditions existing at the time of the computation.

- (7) Length of sheet flow used for times of concentration is to be no more the 50 feet.
- (8) Utilize the 24-hour rainfall data taken from the Atlas of Precipitation Extremes for the Northeastern United States and Southeastern Canada, available at <http://precip.eas.cornell.edu/>.
- (9) Soils Test Pits are to be conducted by a Registered Professional Engineer or Massachusetts Soil Evaluator, performed at the location of all proposed BMPs and Low Impact Development techniques, to identify soil descriptions, depth to estimated seasonal high groundwater, depth to bedrock, and soil texture. The test pits must be done prior to a permit being issued by the Commission.
- (10) The design infiltration rate shall be determined from the on-site soil texture and published Rawls rates or saturated hydraulic conductivity tests.
- (11) Size drainage pipes to accommodate the 25-year storm event and maintain velocities between 2.5 and 10 feet per second using the Rational Method.
- (12) Size drainage swales to accommodate the 25-year storm event and velocities below 4 feet per second.
- (13) Size culverts to accommodate the 50-year storm event and design adequate erosion protection. Design stream crossing culverts in accordance with the latest addition of the Massachusetts Stream Crossing Handbook.
- (14) Size stormwater basins to accommodate the 100-storm event with a minimum of one foot of freeboard.
- (15) All drainage structures are to be able to accommodate HS-20 loading.
- (16) Catch basins structures are to be constructed as required by Canton Department of Public Works and Canton Planning Board and spaced a maximum of 250 feet apart in roadways.
- (17) Catch basins adjacent to curbing are to be built with a granite curb inlet as required by Canton Department of Public Works and Canton Planning Board.
- (18) Catch basins in low points of road and on roads with profile grades greater than 5 percent are to be fitted with double grates (parallel with curb) as required by Canton Department of Public Works and Canton Planning Board.
- (19) All drain pipes are to be reinforced concrete pipe or High-Density Polyethylene pipe and have a minimum diameter of 12 inches
- (20) Outfalls are to be designed to prevent erosion of soils, and pipes 24 inches or larger are to be fitted with grates or bars to prevent ingress.
- (21) Drainage easements are to provide sufficient access for maintenance and repairs of system components and be at least 20 feet wide.

- (22) Minimize permanently dewatering soils by:
- (a) Limiting grading within 4 feet of seasonal high groundwater elevation (SHGWE);
  - (b) Raising roadways to keep roadway section above SHGWE; and
  - (c) Setting bottom floor elevation of building(s) a minimum of 2 feet above SHGWE.

## 7.0 STORMWATER MANAGEMENT PLAN CONTENTS

- A. The application for a Stormwater Management Permit shall include the submittal of a Stormwater Management Site 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. To the extent that any project within the jurisdiction of this Bylaw 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.
- C. The Stormwater Management Site 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 locus map;
  - 3) The size of the entire parcel, and the delineation and number of square feet of the land area to be disturbed;
  - 4) The existing zoning and land use at the site and on abutting properties;

- 5) The proposed land use;
- 6) Property lines showing distances and monument locations, all existing and proposed easements, rights-of-way, utilities and other encumbrances;
- 7) Lines of existing abutting streets showing drainage, driveway locations and curb cuts;
- 8) 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.
- 9) 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 Bylaw (Article XV)
- 10) The location of the 100-year flood zone 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;
- 11) 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.
- 12) 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 existing, to be retained or proposed to be removed;
- 13) Locations of existing and proposed wells and septic systems on or within 50 feet of the site;
- 14) A drainage area map showing pre and post construction watersheds, sub-watersheds and stormwater flow paths, including municipal drainage system flows;
- 15) 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;
- 16) 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.

- 17) Proposed improvements, including locations of buildings or other structures, impervious surfaces, and drainage facilities;
- 18) 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.
- 19) Hydrologic and hydraulic design calculations for the pre-development and post-development conditions for the design storms specified in these Regulations. Such calculations shall 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](http://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 (CN) 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; and,
  - ix. Documentation of sources for all computation methods and field test results;

- 20) Post-Development downstream analysis, if deemed necessary by the Conservation Commission;
- 21) Information on construction measures used to maintain the infiltration capacity of the soil where any kind of infiltration is proposed,
- 22) 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; and,
- 25) Site plans included with the Stormwater Management Plan shall be prepared on 24 x 36 inch sheets at a scale of 1"= 20', or otherwise approved by the Commission, 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 Stormwater Management Permit, these Rules and Regulations and that the Massachusetts Surface Water Quality Standards (314 CMR 4.00) is 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;and,

- 4) A list of easements with the purpose and location of each;

D. Changes to Operation and Maintenance Plans

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.

E. 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 EROSION AND SEDIMENT CONTROL PLAN

- A. The Erosion and Sediment Control Plan shall be designed to ensure compliance with these Rules and Regulations, the MS4, and if applicable, the NPDES General Permit for Storm Water Discharges From Construction Activities. In addition, the plan shall ensure that the Massachusetts Surface Water Quality Standards (314 CMR 4.00) are met in all seasons.
- B. If a project requires a Stormwater Pollution Prevention Plan (SWPPP) per the NPDES General Permit for Storm Water Discharges From Construction Activities (and as amended), then the applicant is required to submit a complete copy of the SWPPP (including the signed Notice of Intent and approval letter). If the SWPPP meets the requirements of the General Permit, it will be considered equivalent to the Erosion and Sediment Control Plan described in this section.
- C. The Erosion and Sediment Control Plan shall remain on file with the Commission. Refer to the latest version of the Massachusetts Erosion and Sediment Control Guidelines for Urban & Suburban Areas for detailed guidance.
- D. Erosion and Sedimentation Control Plan Content. The Plan shall contain the following information:
  - (1) Names, addresses, and telephone numbers of the owner, applicant, and person(s) or firm(s) preparing the plan;
  - (2) Title, date, north arrow, names of abutters, scale, legend, and locus map;
  - (3) Location and description of natural features including:
    - (a) Watercourses and water bodies, wetland resource areas and all floodplain information, including the 100-year flood elevation based

upon the most recent Flood Insurance Rate Map, or as calculated by a professional engineer for areas not assessed on these maps;

- (b) Existing vegetation including tree lines, canopy layer, shrub layer, and ground cover, and trees with a caliper twelve (12) inches or larger, noting specimen trees and forest communities; and
  - (c) Habitats mapped by the Massachusetts Natural Heritage & Endangered Species Program as Endangered, Threatened or of Special Concern, Estimated Habitats of Rare Wildlife and Certified Vernal Pools, and Priority Habitats of Rare Species within five hundred (500) feet of any construction activity.
- (4) Lines of existing abutting streets showing drainage and driveway locations and curb cuts;
  - (5) Existing soils, volume and nature of imported soil materials;
  - (6) Topographical features including existing and proposed contours at intervals no greater than two (2) feet with spot elevations provided when needed;
  - (7) Surveyed property lines showing distances and monument locations, all existing and proposed easements, rights-of-way, and other encumbrances, the size of the entire parcel, and the delineation and number of square feet of the land area to be disturbed;
  - (8) Drainage patterns and approximate slopes anticipated after major grading activities (Construction Phase Grading Plans);
  - (9) Location and details of erosion and sediment control measures with a narrative of the construction sequence/phasing of the project, including both operation and maintenance for structural and non-structural measures, interim grading, and material stockpiling areas;
  - (10) Path and mechanism to divert uncontaminated water around disturbed areas, to the maximum extent practicable. When determining whether the requirements have been met, the Stormwater Authority shall consider all stormwater management practices available and capable of being implemented after taking into consideration costs, existing technology, proposed use, and logistics in light of overall project purposes. Project purposes shall be defined generally (*e.g.*, single family home or expansion of a commercial development).;
  - (11) Location and description of industrial discharges, including stormwater discharges from dedicated asphalt plants and dedicated concrete plants, which are covered by this permit;

- (12) Stormwater runoff calculations in accordance with the Massachusetts Department of Environmental Protection's Stormwater Management Policy;
  - (13) Location and description of and implementation schedule for temporary and permanent seeding, vegetative controls, and other stabilization measures;
  - (14) A description of construction and waste materials expected to be stored on-site. The Plan shall include a description of controls to reduce pollutants from these materials, including storage practices to minimize exposure of the materials to stormwater, and spill prevention and response;
  - (15) A description of provisions for phasing the project where one acre of area or greater is to be altered or disturbed;
  - (16) Plans must be stamped and certified by a qualified Professional Engineer registered in Massachusetts or a Certified Professional in Erosion and Sediment Control; and
  - (17) Such other information as is required by the Stormwater Authority.
- E. Erosion Controls Design Standards. The Sediment and Erosion Control Plan shall be developed to comply with the MS4 and shall meet the following standards:
- (1) Minimize total area of disturbance;
  - (2) Sequence activities to minimize simultaneous areas of disturbance;
  - (3) Minimize peak rate of runoff in accordance with the Massachusetts Department of Environmental Protection Stormwater Standards;
  - (4) Minimize soil erosion and control sedimentation during construction;
  - (5) Divert uncontaminated water around disturbed areas;
  - (6) Maximize groundwater recharge;
  - (7) Install and maintain all Erosion and Sediment Control measures in accordance with the Massachusetts Erosion and Sedimentation Control Guidelines for Urban and Suburban Areas, manufacturers specifications and good engineering practices;
  - (8) Prevent off-site transport of sediment;
  - (9) Protect and manage on and off-site material storage areas (overburden and stockpiles of dirt, borrow areas, or other areas used solely by the permitted project are considered a part of the project);
  - (10) Comply with applicable Federal, State and local laws and regulations including waste disposal, sanitary sewer or septic system regulations, and air quality requirements, including dust control;

- (11) Protect natural resources and prevent significant alteration of habitats mapped by the Massachusetts Natural Heritage & Endangered Species Program as Endangered, Threatened or Of Special Concern, Estimated Habitats of Rare Wildlife and Certified Vernal Pools, and Priority Habitats of Rare Species from the proposed activities;
- (12) Institute interim and permanent stabilization measures, which shall be instituted on a disturbed area as soon as practicable but no more than 14 days after construction activity has temporarily or permanently ceased on that portion of the site;
- (13) Properly manage on-site construction and waste materials, including truck washing and cement concrete washout facilities;
- (14) Prevent off-site vehicle tracking of sediments; and
- (15) Incorporate appropriate BMPs designed to comply with the Massachusetts Stormwater Handbook.

## **10.0 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 Stormwater Management 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 11.0 of these Regulations and issued a Certificate of Compliance.

## **11.0 CONSTRUCTION INSPECTIONS AND SITE SUPERVISION**

- A. Pre-construction Meeting. In all cases, a pre-construction meeting with the Conservation Commission's designated agent, applicant, and contractor must be held prior to the commencement of construction to review the details of the Stormwater Management Permit.
- B. Stormwater Authority Inspection. The Stormwater Authority or its designated agent shall make inspections as hereinafter required and shall either approve that portion of the work completed or shall notify the applicant wherein the work fails to comply with the Stormwater Management Plan or the Erosion and Sediment Control Plan as approved. In order to obtain inspections, the applicant shall notify the Stormwater Authority a minimum of two (2) business days in advance of the required inspection. The Commission or its designee shall inspect the project site at the following stages, at a minimum:
  - 1. Initial Site Inspection: pre-hearing inspection prior to the Commission's approval of any plan;

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

3. Final Compliance Inspection.

## 12.0 PROJECT COMPLETION

- A. Within one (1) 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 and be to the Commission's satisfaction before a Certificate of Compliance can be issued.
- B. "As-Built" site plans shall be full size plans 24 x 36 inch sheets at the same scale as the Final Approved Site Plan/permitted plan. The As-Built plan must accurately 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. Violations: 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 may be issued if deemed necessary for any non-compliance until any violations are corrected and all work previously completed has received approval by the Commission.

## 13.0 CERTIFICATE OF COMPLIANCE

Prior to the request for a partial or full 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.

#### **14.0 ENFORCEMENT**

A) The Commission or an authorized agent of the Commission shall enforce the Stormwater Management Bylaw, these Rules and Regulations, permits, 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 Bylaw or the Rules and Regulations there under, which may include requirements to:

a) Cease and desist from construction or land disturbing activity until there is compliance with the Bylaw, Rules and Regulations, 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; and,

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 Bylaw, or Rules and Regulations, order or permit issued thereunder may be ordered to correct the violation and/or shall be punished by a fine of \$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 Bylaws 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 Bylaw 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 Bylaw.*

**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.

**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.

**DETENTION BASIN:** Detention basins or ponds provide flood control measures and are known as dry ponds. The basin is intended to drain stormwater within a period of time to make the volume of the basin available for stormwater from the next storm event.

**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 AND SEDIMENT CONTROL PLAN:** A document containing narrative, drawings, and details developed by a qualified professional engineer (PE) or a Certified Professional in Erosion and Sediment Control (CPESC) which includes best management practices or equivalent measures designed to control surface runoff, erosion and sedimentation during pre-construction and construction related land disturbing activities in accordance with requirements of this bylaw.

**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.

**GOOD HYDROLOGICAL CONDITION:** Hydrologic condition indicates the effects of cover type and treatment on infiltration and runoff and is generally estimated from density of plant and residue cover on sample areas. Good hydrologic condition indicates that the soil usually has a low runoff potential for that specific hydrologic soil group, cover type and treatment. Some factors to consider in estimating the effect of cover on infiltration and runoff are: (a) canopy or density of lawns, crops, or other vegetative areas; (b) amount of year-round cover; (c) amount of grass or close-seeded legumes in rotations; (d) percent of residue cover; and (e) degree of surface roughness.

**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 (also referred to as LAND DISTURBANCE, DISTURBANCE OF LAND and LAND ALTERATION):** 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 (of soil, trees or vegetation) and grading, and/or results in an alteration of drainage characteristics.

**LOW IMPACT DESIGN (formerly 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. Also known as environmentally sensitive design, low impact design includes conserving and protecting natural areas and greenspace, reducing impervious cover, and using natural features for stormwater management.

**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.

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) STORMWATER DISCHARGE PERMIT:** A permit issued by United States Environmental Protection Agency or jointly with the Commonwealth of Massachusetts that authorizes the discharge of pollutants to waters of the United States.

**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 Bylaws, 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 process by which groundwater is replenished by precipitation through the percolation of runoff and surface into the soil.

**REDEVELOPMENT:** Development, rehabilitation, expansion, demolition, construction, land alteration, or phased projects that disturb the ground surface, including impervious surfaces, on previously developed sites. The creation of new areas of impervious surface or new areas of land disturbance on a site constitutes development, not redevelopment, even where such activities are part of a common plan which also involves redevelopment. Redevelopment includes maintenance and improvement of existing roadways including widening less than a single lane, adding shoulders, correcting substandard intersections, improving existing drainage systems and repaving; and remedial projects specifically designed to provide improved stormwater management such as projects to separate storm drains and sanitary sewers and stormwater retrofit projects.

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

**RETENTION POND:** Unlike dry detention basin, retention ponds hold a permanent pool of water and are referred to as “wet ponds”. The bottom of the pond is excavated below the water table elevation to establish a permanent pool. In general, retention ponds take up a larger area than detention basins.

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

**SEDIMENT:** Mineral or organic soil material that is transported by wind or water, from its original to another location; the product of erosion processes.

**SEDIMENTATION:** The process or act of deposition of sediment.

**SITE:** Any lot or parcel of land or area of property where land-disturbing activities are, were, or will be performed.

**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 Bylaw. 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 specific management structure for the Stormwater Management Fee, in which a municipal utility is established to administer the fee and the Stormwater Management Program similar to a water or sewer utility.

**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, 90% removal of total suspended solids – TSS- for new development) under the 2016 MS4 permit.