

BOYLSTON CONSERVATION COMMISSION RULES & REGULATIONS FOR STORMWATER

UNDER THE BOYLSTON GENERAL BY-LAWS, ARTICLE VI, SECTION 9 – STORMWATER CONTROL BY-LAW

1.0 PURPOSE

The purpose of these Regulations is to protect, maintain and enhance the public health, safety, environment and general welfare by establishing minimum requirements and procedures to control the adverse effects of increased construction site and post-development stormwater runoff, decreased groundwater recharge, erosion and sedimentation, and nonpoint source pollution associated with new development and redevelopment, pursuant to the Stormwater Control By-law of the Town of Boylston.

2.0 DEFINITIONS

The definitions contained herein apply to issuance of a Stormwater Control Permit established by the Town of Boylston Stormwater Control By-law and implemented through these Regulations. Terms not defined in this section shall be construed according to their customary and usual meaning unless the context indicates a special or technical meaning.

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

APPROVAL NOT REQUIRED (ANR): A plan of land that does not require approval under the Subdivision Control Law of Massachusetts (M.G.L. - Chapter 41, Sections 81K through 81GG).

APPLICANT: A property owner or agent of a property owner who has filed an application for a Stormwater Control Permit.

BEST MANAGEMENT PRACTICE (BMP): A structural or nonstructural technique for managing stormwater to prevent or reduce non-point source pollutants from entering surface waters or ground waters. A structural stormwater best management practice includes a basin, discharge outlet, swale, rain garden, biofilter or other stormwater treatment practice or measure either alone or in combination including without limitation any discharge pipe, overflow pipe, conduit, weir control structure that: (a) is not naturally occurring; (b) is not designed as a wetland replication area; and (c) has been designed, constructed, and installed for the purpose of conveying, collecting, storing, discharging, recharging or treating stormwater. Nonstructural stormwater best management practices include managerial techniques that focus on source control and pollution prevention measures.

CEASE AND DESIST ORDER: An order issued by the Conservation Commission or an authorized agent of the Conservation Commission which requires that all construction activity on a site be stopped.

CERTIFICATE OF COMPLETION (COC): A document issued by the Conservation Commission after all construction activities have been completed which states that all conditions of an issued Stormwater Control Permit have been met and that a project has been completed in compliance with the conditions set forth in the Stormwater Control By-law.

COMMON PLAN: Any announcement or piece of documentation (including a sign, public notice or hearing, advertisement, drawing, ANR plan, or permit application, etc.) or physical demarcation (including boundary signs, lot stakes, surveyor marking, etc.) indicating imminent or future construction activities.

CONSERVATION COMMISSION: Conservation Commission or authorized agent(s). The Conservation Commission or his/her authorized agent(s) 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 Control Regulations promulgated under this By-law.

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

CRITICAL ROOT ZONE (CRZ): The minimum area beneath the canopy of a tree which must be left undisturbed in order to preserve a sufficient root mass to give a tree a reasonable chance of survival. The CRZ is represented by a concentric circle centering on the tree's trunk and extending outward towards the tree's drip-line. The minimum area of the CRZ shall be dependent on the required minimum radius of the CRZ; the required minimum radius of the CRZ shall be determined by multiplying a tree's diameter at breast height (in inches) by eighteen (18) inches, with the resulting product constituting the minimum radius of the CRZ.

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.

DRAINAGE EASEMENT: A legal right granted by a landowner to a grantee allowing the use of private land for Stormwater Management purposes.

DRIP-LINE: The area surrounding the tree from the trunk to the outermost branches. This area is distinguished from, and not to be confused with Critical Root Zone.

EROSION CONTROL: The prevention or reduction of the movement of soil particles or rock fragments due to stormwater runoff.

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 during and after construction.

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.

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.

ILLCIT DISCHARGE: Direct or indirect discharge to the municipal storm drain system that is not composed entirely of stormwater, as defined in the Stormwater Control By-law of the Town of Boylston. The term does not include a discharge in compliance with a NPDES stormwater discharge permit or a surface water discharge permit, or resulting from fire-fighting activities.

IMPERVIOUS SURFACE: Any surface that prevents or significantly impedes water from infiltrating through the underlying soil. Impervious surface is defined to include, without limitation: roads, paved surfaces (parking lots, sidewalks, driveways), and other areas created using nonporous material: buildings, roof tops, swimming pools, patios, artificial turf, and compacted gravel or soil.

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 DISTURBANCE: Any action that causes a change in the position, location, or arrangement of soil, sand, rock, gravel or similar earth material.

LAND USES WITH HIGHER POTENTIAL POLLUTANT LOADS or LUHPPL: Land uses or activities with higher potential pollutant loadings, such as areas within an industrial site that are the location of activities subject to an individual National Pollutant Discharge Elimination System (NPDES) permit or the NPDES Multi-Sector General Permit, vehicle salvage yards, vehicle fueling facilities, exterior fleet storage areas, 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. Refer to Massachusetts Stormwater Management Standard 5 for higher potential pollutant loads, or the most current Massachusetts *Stormwater Management Handbooks*.

LOW IMPACT DEVELOPMENT TECHNIQUES or LID: Site planning and design strategies that use or mimic natural processes that result in the infiltration, evapotranspiration, or use of stormwater in order to protect water quality and associated habitat. Low impact development techniques employ principles such as preserving and recreating natural landscape features, minimizing effective imperviousness to create functional and appealing site drainage that treats stormwater as a resource rather than a waste product. Low impact development techniques include, but are not limited to, bioretention facilities, rain gardens, vegetated rooftops, rain barrels, and permeable pavement.

MASSACHUSETTS STORMWATER MANAGEMENT HANDBOOKS (HANDBOOKS): The Stormwater Management Handbooks, and as amended from time to time, that were produced by the Massachusetts Department of Environmental Protection (MassDEP) and the Massachusetts Office of Coastal Zone Management to be used as guidance for controlling stormwater. The Handbooks consist of two volumes: *Volume One: Stormwater Policy Handbook* and *Volume Two: Stormwater Technical Handbook*.

MASSACHUSETTS STORMWATER MANAGEMENT POLICY: The Policy issued by the Massachusetts Department of Environmental Protection (MassDEP), and as amended from time to time, 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.

MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) or MUNICIPAL STORM DRAIN SYSTEM or MUNICIPAL STORM SEWER SYSTEM: A conveyance or system of conveyances designed or used for collecting or conveying stormwater, which is not a combined sewer, including any road with a drainage system, municipal street, catch basins, gutter, curb, inlet, piped storm drain, pumping facility, retention or detention basin, natural or man-made or altered drainage channel, ditch, reservoir, and other drainage structure that together comprise the storm drainage system owned or operated by the Town of Boylston.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) STORMWATER DISCHARGE PERMIT: A permit issued by the EPA that authorized the discharge of pollutants to Waters of the United States.

NEW DEVELOPMENT: Any construction or Land Disturbance on 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/or 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.

OUTSTANDING RESOURCE WATER: Waters designated in the Massachusetts Surface Water Quality Standards, 314 CMR 4.00, which includes surface Public Drinking Water Supplies and their tributaries and bordering vegetated wetlands (Wachusett Reservoir, its tributaries and wetlands); specified Areas of Critical Environmental Concern (ACECs); and certified vernal pools.

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

PRE-DEVELOPMENT: The conditions that exist at the time that plans for the land development of a tract of land are submitted to the 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.

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.

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: Development, replacement, rehabilitation, expansion, demolition or phased projects that disturb the ground surface on previously developed sites. Standards for Redevelopment only apply to those portions of the parcel that currently contain alteration by human activities. Redevelopment is further defined in the Massachusetts Stormwater Management Policy and Handbooks, Standard No. 7 or current applicable standard.

RESOURCE AREA: Any area protected under, including without limitation: the Massachusetts Wetlands Protection Act, Massachusetts Rivers Act, or Town of Boylston Wetlands Protection By-law.

RUNOFF: Rainfall or snowmelt 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.

STANDARD SPECIFICATIONS: Commonwealth of Massachusetts, Department of Public Works Standard Specifications for Bridges & Highways, as amended.

STORMWATER AUTHORITY: Town of Boylston Conservation Commission or its authorized agent(s).

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 includes the use of LID management practices.

STORMWATER MANAGEMENT SYSTEM: A system for conveying, collecting, storing, discharging, recharging or treating stormwater onsite including stormwater best management practices and any pipes and outlets intended to transport and discharge stormwater to the ground water, a surface water or a municipal storm sewer.

STORMWATER CONTROL PERMIT: 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 impacts of uncontrolled and untreated stormwater runoff.

SUBDIVISION: Defined in the Subdivision Control Law of Massachusetts (M.G.L. – Chapter 41, Section 81L Definitions).

SURFACE WATERS: All waters other than ground water within the jurisdiction of the Town of Boylston including, without limitation, rivers, streams, lakes, ponds, springs, impoundments, estuaries, wetlands, and coastal waters.

TOTAL MAXIMUM DAILY LOAD or TMDL: Section 303(d) of the Clean Water Act authorizes the EPA to assist states, territories, and authorized tribes in listing impaired waters and developing Total Maximum Daily Loads (TMDLs) for these waterbodies. A TMDL establishes the maximum amount of a pollutant that a water body can accept and still meet water quality standards for protecting public health and maintaining the designated beneficial uses of those waters for drinking, swimming, recreation, and fishing. A TMDL includes Waste Load Allocations for point source discharges, Load Allocations for nonpoint sources and/or natural background, and must include a margin of safety and account for seasonal variations.

TSS: Total Suspended Solids, undissolved organic or inorganic particles in water.

UNSTABLE AREAS: Area subject to excessive erosion, further described in Section 6.M.4.

WATER QUALITY VOLUME (WQ_v): The storage volume needed to capture a specified average annual stormwater runoff volume. Numerically (WQ_v) will vary as a function of drainage area or impervious area.

3.0 AUTHORITY

- A) The Rules and Regulations contained herein have been adopted by the Conservation Commission in accordance with the Town of Boylston Stormwater Control By-law.
- B) Nothing in these Rules and Regulations is intended to replace or be in derogation of the requirements of the Town of Boylston Zoning By-law, Subdivision Control Law, or any Rules and Regulations adopted there under.
- C) These Stormwater Regulations may be periodically amended by the Conservation Commission in accordance with the procedures outlined in Section 9.05.02 of the Town of Boylston Stormwater Control By-law.

4.0 ADMINISTRATION

The Conservation Commission is designated as the Stormwater Authority under the Stormwater Control By-law. The Conservation Commission shall administer, implement and enforce these Regulations. The Conservation Commission may, with the concurrence of the Applicant, designate another Town board, commission, or department, including but not limited to the Building Inspector, Planning Board, Conservation Commission, Board of Health, as its authorized agent for the purposes of reviewing all stormwater submittals, conducting inspections described in Section 11.0, and enforcing the Stormwater Control By-law and these Regulations per Section 9.0.

5.0 APPLICABILITY

- A) These Stormwater Control Regulations apply to all activities in accordance with the Scope and Applicability section of the Stormwater Control By-law as described in this section.
- B) If a portion of a project or activity meets the Scope and Applicability of Section 9.04 of the Stormwater

Control By-law and it is within the specific jurisdiction of the Planning Board or another Town board, then the Conservation Commission will remain the Stormwater Authority, responsible for facilitating stormwater review and approval of the Stormwater Control Permit. The specific application submission requirements, public notices, and fee requirements of the applicable board, commission, and/or department shall remain in effect in addition to the requirements of the Stormwater Control By-law. The Conservation Commission and other Town boards shall coordinate any necessary expert engineering and other consultant services and resulting Technical Review Fees. The Conservation Commission and other Town boards may, at the request of the Applicant, coordinate the public hearing process. Conservation Commission will make every effort to review the Stormwater Control Permit application in a timely manner, as not to unnecessarily delay permit approval process of other Town Boards. No work may commence without a Stormwater Control Permit from the Conservation Commission.

6.0 PERMIT PROCEDURES AND REQUIREMENTS

A) Projects requiring a Stormwater Control Permit per Section 9.04 of the Stormwater Control By-law shall be required to submit the materials as specified in this Section, and are required to meet the Performance Standards: Stormwater Control Criteria as specified in Section 7.0 of these Regulations.

B) Filing Application

1. The applicant shall file with the Conservation Commission, seven (7) copies of a completed application package for a Stormwater Control Permit. A Stormwater Control Permit must be obtained prior to the commencement of any construction activity, tree clearing (unless in accordance with a Forest Cutting Plan approved by the Massachusetts Department of Conservation and Recreation), or land alteration. While the applicant can be a representative, the permittee must be the owner of the site or holder of an easement. The Stormwater Control application package shall include:

- a) A completed Application Form with original signatures of all owners;
- b) A list of abutters, certified by the Assessors Office; (abutters at their mailing addresses shown on the most recent applicable tax list of the assessors, including 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);
- c) Stormwater Management Plan and project description;
- d) Operation and Maintenance Plan;
- e) Payment of the application;
- f) Inspection and Maintenance agreement;
- g) Erosion and Sediment Control Plan;
- h) Surety bond (if required).

2. No work proposed shall be undertaken until the final Stormwater Control Permit with respect to such work has been recorded by the applicant in the Worcester County Registry of Deeds. The applicant shall furnish proof of such recording.

C) Fees

1. General

The Conservation Commission shall obtain with each submission an Application Fee established by the Conservation Commission to cover expenses connected with the review of the Stormwater Control Permit and a Technical Review Fee sufficient to cover professional review services for the project. The Conservation Commission is authorized to retain a Registered Professional Engineer or other professional consultant to advise the Conservation Commission and Review Board on any or all aspects of these plans at the applicant's expense. Applicants must pay review fees before the review process may begin.

2. Rules

- a) Application Fees are payable at the time of application and are non-refundable.
- b) All fees shall be calculated by the Conservation Commission in accordance with the fee schedule below.
- c) These fees are in addition to any other local or state fees that may be charged under any other law, regulation, or local By-law.
- d) Municipal projects shall be exempt from Application Fees associated with a Stormwater Control Permit.

3. Application Fees

- a) A non-refundable Application Fee of \$100.00 for up to two (2) acres and \$200 for two (2) acres or greater of land area that will be disturbed by activities authorized by the Stormwater Control Permit shall be due and payable to the Town of Boylston at the time an application is filed. The Application Fee will be used for processing of the application, coordination of Town staff, posting hearings, and other clerical work by Town staff.

4. Technical Review Fees

- a) The Conservation Commission is authorized to require an applicant to pay a fee for the reasonable costs and expenses for specific expert engineering and other consultant services deemed necessary by the Conservation Commission to come to a final decision on the application. This fee is called the "Technical Review Fee" and may include the following:
 - i. Services by an expert engineer or other consultant that include, but are not limited to, resource area survey and delineation, analysis of resource area values, hydrogeologic and drainage analysis, wildlife evaluation, impacts on municipal conservation lands, stormwater quality analysis, site inspections, as-built plan review, and analysis of legal issues. The consultant shall be chosen by, and report only to, the Conservation Commission or its staff.
 - ii. Activities which utilize the services of Town Staff. This includes such activities as inquiries concerning potential projects as well as site inspections not associated with a pending permit application.
 - iii. Additional fee of \$50.00 per hour for review, inspection, and monitoring services for any project filing that requires an excess of two (2) hours of review, inspection, and monitoring time by a Town Staff member.
- b) Technical Review Fees shall be determined at the time of project review based on a specific scope of work. The Conservation Commission shall determine a rate (\$/hour) using reasonable and customary fees associated with its selected consultant and/or engineer. The Conservation Commission shall give written notice to the applicant of the selection of an outside consultant, which notice shall state the identity of the consultant, the amount of the fee to be charged to the applicant, and a request for payment of said fee in its entirety. No such costs or expenses shall be incurred by the applicant if the application or is withdrawn within five (5) days of the date notice is mailed or delivered. The fee must be received in its entirety prior to the initiation of the technical review, otherwise the application will be considered administratively incomplete.
- c) The Commission may request additional consultant fees if necessary review requires a larger expenditure than originally anticipated or new information requires additional consultant services. Failure by the applicant to pay the consultant fee specified by the Commission within ten (10) business days of the request for payment shall be cause for the Commission to determine that the application is administratively incomplete. The Commission shall state such in a letter to the applicant. No additional review or action shall be taken on the permit application until the applicant has paid the request fee.
- d) The applicant may appeal the selection of the outside consultant to the select board, who may

disqualify the outside consultant selected only on the grounds that the consultant has a conflict of interest or does not possess the minimum required qualifications. The minimum qualifications shall consist of either an educational degree or three or more years of practice in the field at issue or a related field. Such an appeal must be in writing and received by the select board and a copy received by the Conservation Commission, so as to be received within ten (10) days of the date consultant fees were requested by the Conservation Commission. The required time limits for action upon the application shall be extended by the duration of the administrative appeal.

- e) The Technical Review Fees collected under this section shall be deposited with the Boylston Treasurer who shall establish a special account for this purpose. Expenditures from this special account may be made at the direction of the Conservation Commission without further appropriation as provided in GL Ch. 44 § 53G. Expenditures from this account shall be made only in connection with the review of a specific project of projects for which a Technical Review Fee has been collected from the applicant.
- f) Subject to applicable laws, any unused portion of any Technical Review fees collected shall be returned by the Conservation Commission to the applicant along with any interest accrued within forty-five calendar days of a written request by the applicant, unless the Conservation Commission decides in a public meeting that other action is necessary. The Commission must make a report of the account available to the Applicant.

5. Revision of Fee Schedules and Regulations Governing Fees

- a) The Conservation Commission may review and revise its Regulations and fee schedules periodically as it sees fit.
- b) Amendments shall be preceded by a posted public hearing of the Conservation Commission not less than 15 days prior to the date upon which the change is to be effective.
- c) A copy of the written decision will be filed with the Town Clerk within 10 business days after final action is taken.

D) Public Hearings

The Conservation Commission shall hold a public hearing within twenty-one (21) days of the receipt of a complete application and shall take final action within twenty-one (21) days from the close of the hearing unless such time is extended by agreement between the applicant and the Conservation Commission. Notice of the public hearing shall be given at the applicants expense by a publication in a local newspaper of general circulation, by posting, and by hand delivery or a certified mailing, return receipt requested, to abutters at least seven (7) days prior to the hearing.

E) Actions

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

1. Approval of the Stormwater Control Permit Application based upon determination that the proposed plan will adequately protect the water resources of the community and is in compliance with the requirements set forth in these Regulations;
2. Approval of the Stormwater Control Permit Application subject to any conditions, modifications or restrictions required by the Conservation Commission which will ensure that the project will adequately protect the water resources of the community and is in compliance with the requirements set forth in these Regulations; or
3. Disapproval of the Stormwater Control Permit Application based upon a determination that the proposed plan, as submitted, does not adequately protect water resources, as set forth in these

Regulations, or the application is deemed incomplete.

Failure of the Conservation Commission to take final action upon an Application within the time specified above shall be deemed to be approval of said Application. Upon certification by the Town Clerk that the allowed time has passed without Conservation Commission action, the Conservation Commission must issue a Stormwater Control Permit.

F) Appeals of Actions of the Conservation Commission

A decision of the Conservation Commission shall be final. Further relief of a decision by the Conservation 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. Ch 249. § 4. An appeal of an action by a board, commission or department that has current regulatory authority for a project and/or activity shall be conducted under the applicable appeal provisions of said board, commission and/or department of the Town of Boylston. Such an appeal shall result in revocation of the written approval as described under Section 6.E of these Regulations, until such time as the appeal process of the applicable board, commission and/or department has been resolved.

G) Plan Changes

The permittee must notify the Conservation Commission in writing of any drainage change or alteration in the system authorized in a Stormwater Control Permit before any change or alteration is made. If the Conservation Commission determines that the change or alteration is significant, based on the MA Stormwater Management Standards, Performance Standards in Section 7.0, and accepted construction practices, the Conservation Commission may require that an amended application be filed.

H) Entry

Filing an application for a permit grants the Conservation Commission, or its agent, permission to enter the site to verify the information in the application and to inspect for compliance after issuance of the Stormwater Control Permit.

I) Project Completion

At completion of the project, but no later than two (2) years after the completion of construction projects, the permittee shall submit an updated Maintenance Agreement noting any changes, including designation of new responsible parties, and a final report (including stamped and signed as-built construction plans) from a registered Professional Engineer (PE) or surveyor, certifying that all erosion and sediment control devices, and approved changes and modification, have been completed in accordance with the conditions of the approved permit. The as-built drawings must depict all on-site controls, both structural and non-structural, designed to manage the stormwater associated with the completed site (post construction stormwater management). The as-built drawings shall be full size plans at a scale approved by the Conservation Commission that reflect the "as built" conditions, including all final grades, developed by a Registered Professional Engineer. All changes to project design shall be recorded in red ink on plans to define changes made or otherwise noted as changes. All work deleted, corrections in elevations, and changes in materials, shall be shown on the as-built drawings. Deviations from the Approved Plans, if any, shall be certified in writing by a Registered Professional Engineer and any discrepancies should be noted in the cover letter with evidence that these deviations do not materially impact the approved project.

J) Permit Expiration

Should a land-disturbing activity permitted in accordance with these Regulations not begin during a 180-day period following permit issuance, or if work has not been completed within three (3) years, the Applicant shall notify the Conservation Commission. The Commission may re-evaluate the originally approved Stormwater Management Plan to determine whether the plan still satisfies local program requirements. Permits may be renewed without Hearings at the discretion of the Commission. If the

Conservation 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 per the procedure in Section 6.0 of these Regulations.

K) Stormwater Management Plan Contents

1. The application for a Stormwater Control Permit shall include the submittal of a Stormwater Management Plan to the Conservation Commission. This Stormwater Management Plan shall contain sufficient information for the Conservation Commission to evaluate the environmental impact, effectiveness, and acceptability of the site planning process and the measures proposed by the applicant for reducing adverse impacts from stormwater runoff. This plan shall be in accordance with the criteria established in these Regulations. The Stormwater Management Plan shall remain on file with the Conservation Commission.
2. The Stormwater Management Plan shall fully describe the project in drawings, narrative, and calculations. It shall include, at a minimum:
 - a) 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;
 - b) Narrative describing:
 - i. Purpose;
 - ii. Methodologies and assumptions;
 - iii. Existing and proposed uses and conditions;
 - iv. Project impacts and mitigation techniques including:
 1. Summary of proposed land area to be cleared, existing and proposed impervious area, work within proximity of regulated wetland resources, aquifer protection zones, earthwork within four (4) feet of seasonal high groundwater elevations, and other sensitive environmental areas;
 2. LID techniques considered for this project and an explanation as to why they were included or excluded from the project;
 3. Proposed best management practices;
 4. Identifying the watershed basin that the project is located in and the immediate down gradient waterbody(s) that stormwater runoff from the project site discharges to, EPA's watershed and waterbody assessment and TMDL and/or impairment status of the watershed and waterbody(s), and the LIDs and BMPs included in the project to address the pollutant(s) of concern;
 - v. Summary of pre- and post-development peak rates and volumes of stormwater runoff demonstrating no adverse impacts to down-gradient properties, stormwater management systems and wetland resources; and
 - vi. Summary of how project meets stormwater management criteria.
 - c) Plans
 - i. Portion of the USGS Map indicating the site locus and properties within a minimum of 500 feet of project property line;
 - ii. Existing conditions and proposed design plans showing:
 1. Buildings and/or structures including materials, approximate height;
 2. Utilities including size, material and invert data; and

3. Regulated wetland resource areas within proximity of the site
- iii. Stormwater management design plan(s) and details showing:
 1. Location, size, material, inverts data and details for all existing and proposed stormwater management system components including structures, pipes, swales, detention, retention, and infiltration systems and any other LID techniques or BMPs;
 2. Profiles of drainage trunk lines; and
 3. The location(s) of existing and proposed drainage easements.
- iv. Separate Pre- and Post- Condition Watershed Plans indicating:
 1. Structures, pavements, surface vegetation and other ground cover materials;
 2. Topography sufficient to delineate watershed areas;
 3. Point(s) of analysis;
 4. Watershed areas including upgradient areas that contribute stormwater flow onto the project site, labeled to be easily identified in calculations. Total pre and post watershed areas should be equivalent;
 5. Breakdown summary of various surface conditions by soil hydrologic group rating; and
 6. Flow path for time of concentration (Tc) calculation.
- d) Calculations
 - i. Hydrologic calculation to determine pre and post peak rates and volumes of stormwater runoff for 2-, 10-, 25- and 100-year 24-hour storm events;
 - ii. Groundwater recharge calculations and BMP drawdown (time to empty);
 - iii. Water quality calculations including (if applicable):
 1. TSS removal calculation for each watershed;
 2. Specific BMPs utilized in critical areas;
 3. Specific BMPs utilized for land uses with higher potential pollutant loads (LUHPPL); and
 4. Specific treatment for pollutant causing impairment of down-gradient waterbody identified by U.S. Environmental Protection Agency and Massachusetts Department of Environmental Protection.
 - iv. Hydraulic calculations to size drainage pipes, swales and culverts; and
 - v. Supplemental calculations for sizing LID and BMPs and addressing impairments to water bodies.
- e) Soil mapping and test data;
- f) Massachusetts Department of Environmental Protection Checklist for Stormwater Report completed, stamped and signed by a registered Professional Engineer (PE) licensed in the Commonwealth of Massachusetts to certify that the Stormwater Management Plan is in accordance with the criteria established in the Massachusetts Stormwater Management Standards, Town of Boylston Stormwater Control By-Law and these regulations; and
- g) Any other information requested by the Conservation Commission.

L) Operation and Maintenance Plan Contents

An Operation and Maintenance Plan (O&M Plan) is required at the time of application for all projects with constructed stormwater BMPs and stormwater management practices. The O&M Plan shall be

designed to ensure compliance with the Permit and these Regulations and ensure 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 Conservation Commission and shall be an ongoing requirement. The Applicant shall provide copies of the Operation and Maintenance Plan to all persons responsible for maintenance and repairs. The O&M Plan shall include:

1. The name(s) of the owner(s) for all components of the system;
2. A map showing the location of the systems and facilities including all structural and nonstructural stormwater best management practices (BMPs), catch basins, manholes/access lids, pipes, and other stormwater devices. The plan showing such systems and facilities to be privately maintained, including associated easements shall be recorded with the Worcester County Registry of Deeds prior to issuance of a Certificate of Completion by the Conservation Commission.
3. Maintenance Agreement that specifies:
 - a) The names and addresses of the person(s) responsible for operation and maintenance;
 - b) The person(s) responsible for financing maintenance and emergency repairs;
 - c) An Inspection and Maintenance Schedule for all stormwater management facilities including routine and non-routine maintenance tasks to be performed. Where applicable, this schedule shall refer to the Maintenance Criteria provided in the Massachusetts Stormwater Handbook or the EPA *National Menu of Stormwater Best Management Practices*. All stormwater BMPs are to follow the minimum requirements for inspection and maintenance in accordance with the latest edition of the Massachusetts Stormwater Handbook.;
 - d) Instructions for routine and long-term operation and maintenance shall have sufficient detail for responsible parties to perform necessary maintenance activities and prevent actions that may adversely affect the performance of each structural and/or nonstructural stormwater BMP.
 - e) A list of easements with the purpose and location of each; and
 - f) The signature(s) of the owner(s) and all persons responsible for operation and maintenance, financing, and emergency repairs, as defined in the Maintenance Agreement, if maintenance is to be performed by an entity other than the owner.
4. Stormwater Management Easement(s)
 - a) Stormwater Management easements shall be provided by the property owner(s) as necessary for:
 - i. Access for facility inspections and maintenance;
 - ii. Preservation of stormwater runoff conveyance, infiltration, and detention areas and facilities, including flood routes for the 100-year storm event;
 - b) Direct maintenance access by heavy equipment to structures requiring maintenance.
 - c) The purpose of each easement shall be specified in the Maintenance Agreement signed by the property owner.
 - d) Stormwater Management easements are required for all areas used for off-site stormwater control, unless a waiver is granted by the Conservation Commission.
 - e) Easements shall be recorded with the Worcester County Registry of Deeds prior to issuance of a Certificate of Completion by the Conservation Commission.
5. Changes to Operation and Maintenance Plans
 - a) The owner(s) of the Stormwater Management system must notify the Conservation Commission of changes in ownership or assignment of financial responsibility within 30 days of the change in ownership. The present owner shall be responsible until they furnish a copy of the most current Operation and Maintenance Plan to the Conservation Commission signed by the new owner or any new responsible person.

- b) The maintenance schedule in the Maintenance Agreement may be amended to achieve the purposes of this By-law by mutual agreement of the Conservation 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 and/or maintenance responsibility.
6. Enforcement
- a) To ensure adequate long-term operation and maintenance of stormwater management practices, applicants are required to implement one or more of the following procedures, as directed by the Conservation Commission:
 - i. Filing by the applicant of an annual Operation and Maintenance Report with the Conservation Commission on a form specified by the Conservation Commission, accompanied by an annual filing fee established by the Conservation Commission for administration and enforcement of the Operation and Maintenance plan;
 - ii. Establishment by the applicant of a dedicated fund or escrow account in the form of a Bond, Insurance Policy or similar instrumentality, to be maintained for a number of years and for an amount specified by the Conservation Commission. Such fund or account may be used by the applicant to perform its operation and maintenance responsibilities or, if the Conservation Commission finds that the applicant has failed to comply with the Plan, by the Conservation Commission to perform or cause to be performed the required operation and maintenance tasks;
 - iii. Payment by the applicant to the Conservation Commission of an amount specified by that Authority in compensation for its acceptance of ownership of all privately constructed BMPs;
 - iv. A maintenance contract between the applicant and the Conservation Commission in an amount specified by the Conservation Commission whereby the Conservation Commission will perform or cause to be performed the required operation and maintenance tasks;
 - v. Submission by the applicant of an annual certification documenting the work that has been done over the last 12 months to properly operate and maintain the stormwater control measures. The certification shall be signed by the person(s) or authorized agent of the person(s) named in the permit as being responsible for ongoing operation and management;
 - vi. Recording of Operation and Maintenance Plans at the appropriate Registry of Deeds or Land Court.

M) Erosion and Sediment Control Plan Contents

1. 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 permittee 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 Section 3 of the General Permit, it will be considered equivalent to the Erosion and Sediment Control Plan described in this section and required in the Stormwater Control Permit application package.
2. The Erosion & Sediment Control Plan shall be designed to ensure compliance with these Regulations 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. The Erosion and Sediment Control Plan shall remain on file with the Conservation Commission. Refer to the latest version of the Massachusetts Erosion & Sediment Control Guidelines for Urban & Suburban Areas, for detailed guidance.
3. The Erosion & Sediment Control Plan shall be submitted in writing, and contain an accurate description of the topography, geology, soils, hydrology, and vegetation of the portion of land to be altered. It shall state fully the purpose for the land disturbance, and shall contain detailed Site Specification Plans, schedules and descriptions of methods proposed to control erosion and

sediment. The following items shall be included in, or with an Erosion & Sediment Control Plan:

- a) Names, addresses, and telephone numbers of the owner, applicant, and person(s) or firm(s) preparing the plan;
- b) Title, date, north arrow, names of abutters, scale, legend, and locus map;
- c) Location and description of natural features including:
 - i. 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 registered Professional Engineer (PE) for areas not assessed on these maps;
 - ii. 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
 - iii. 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.
- d) Lines of existing abutting streets showing drainage and driveway locations and curb cuts;
- e) Existing soils, volume and nature of imported soil materials;
- f) Topographical features including existing and proposed contours at intervals no greater than two (2) feet with spot elevations provided when needed;
- g) 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;
- h) Drainage patterns and approximate slopes anticipated after major grading activities (Construction Phase Grading Plans);
- i) 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;
- j) Path and mechanism to divert uncontaminated water around disturbed areas, 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).;
- k) Location and description of industrial discharges, including stormwater discharges from dedicated asphalt plants and dedicated concrete plants, which are covered by this permit;
- l) Stormwater runoff calculations in accordance with the Massachusetts Department of Environmental Protection's Stormwater Management Handbook and Stormwater Standards;
- m) Location and description of and implementation schedule for temporary and permanent seeding, vegetative controls, and other stabilization measures;
- n) 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;
- o) A description of provisions for phasing the project where one acre of area or greater is to be altered or disturbed;
- p) Plans must be stamped and certified by a qualified Professional Engineer registered in

Massachusetts or a Certified Professional in Erosion and Sediment Control; and

- q) Such other information as is required by the Conservation Commission.
- 4. The Sediment and Erosion Control Plan shall be developed to comply with the Small MS4 General Permit and shall meet the following Erosion Control Design Standards:
 - a) Minimize total area of disturbance;
 - b) Sequence activities to minimize simultaneous areas of disturbance;
 - c) Minimize peak rate of runoff in accordance with the Massachusetts Department of Environmental Protection Stormwater Standards;
 - d) Minimize soil erosion and control sedimentation during construction;
 - e) Divert uncontaminated water around disturbed areas;
 - f) Maximize groundwater recharge;
 - g) 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;
 - h) Prevent off-site transport of sediment;
 - i) 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);
 - j) 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;
 - k) 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;
 - l) 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;
 - m) Properly manage on-site construction and waste materials, including truck washing and cement concrete washout facilities;
 - n) Inspect stormwater controls at consistent intervals.
 - o) Prevent off-site vehicle tracking of sediments; and
 - p) Incorporate appropriate BMPs designed to comply with the Massachusetts Stormwater Handbook.

N) Compliance with Federal and State Permits

- 1. Coordinated filing for other stormwater-related permits is required under Federal and State regulations for specific activities and areas. Such permits include, but are not limited to:
 - a) NPDES General Permit for Stormwater Discharges from Construction Activities - The EPA, through federal regulations under the Clean Water Act, Phase II Stormwater Regs (64 FR 68722) requires that any construction activity that disturbs one or more acres of land, either by itself or as part of a “common plan” of development or sale, and has the potential to have a discharge of storm water to a water of the United States, must either have a permit OR have qualified for a waiver.
 - b) The MassDEP Notice of Intent (DEP Form BRP WM 08B) - The MassDEP Division of

Watershed Management, requires that applicants filing with EPA for coverage under the NPDES General Permit for Stormwater Discharges from Construction Activities for construction projects altering one acre or greater, and that have the potential to discharge to an Outstanding Resource Water (e.g., Wachusett Reservoir), must have the project reviewed and approved by MassDEP before construction commences. Statutory and regulatory authority for the review can be found through the Federal CWA Section 401 certification process, the Massachusetts Clean Waters Act (MGL Chapter 21, s. 26-53), the Surface Waters Discharge Permit Regulations (314 CMR 3.00), the Surface Water Quality Regulations (314 CMR 4.00).

7.0 PERFORMANCE STANDARDS: STORMWATER AND LID CRITERIA

A) At a minimum Stormwater management shall be designed in accordance with the requirements of the NPDES Small MS4 General Permit for Massachusetts and the standards described in the Massachusetts Department of Environmental Protection's Stormwater Management Policy and Handbooks using current Best Management Practices (BMP). In case of conflicting requirements with applicable federal and state statutes and regulations, the more restrictive or more protective of human health and the environment shall take precedence. The applicant may propose alternative BMPs not listed in the Handbooks, subject to a full technical review and approval by the Conservation Commission. The performance of specific proprietary commercial devices and systems must be provided by the manufacturer and should be verified by independent third-party sources and data, such as through Massachusetts Stormwater Technology Evaluation Project (MASTEP).

B) Increases in stormwater runoff resulting from development shall be minimized and retained or detained within the development, rather than being piped to existing surface waters. The order of preference by the Board for handling stormwater runoff is as follows:

1. Infiltration
2. Retention
3. Detention

C) All stormwater from public rights of way, land uses with higher potential pollutant loads, impervious areas within Industrial, Industrial Park, Commercial, and Highway Business Zoning Districts, and where a potential pollution problem exists, as deemed by the Conservation Commission, shall pass through a pre-treatment device to reduce oil, sediment, and trash loadings. All stormwater treatment devices shall have a convenient vehicular access and if necessary a twenty foot (20') wide easement. All stormwater shall be conveyed in ditches or storm drain lines to stormwater BMPs for water quality treatment, infiltration, and/or flow attenuation. Permanent easements and provisions for vehicular access shall be provided along the entire length of ditches and storm drain lines.

D) Lot Drainage

Lots shall be prepared and graded in such a manner that development of one shall not cause detrimental drainage on another; if provision is necessary to carry drainage to or across a lot, an easement or drainage right-of-way of a minimum width of twenty feet (20') and proper side slope shall be provided.

The Applicant shall furnish evidence that adequate provision has been made for the proper drainage of surface and underground waters from any lot or lots. Use of on-lot drywells for disposal of roof runoff is encouraged. Stormwater shall not discharge overland across lot lines. Drainage conveyances and easements shall be provided to convey stormwater to the nearest permanent stream or municipal drainage system.

E) General Criteria

All projects and activities that meet the Scope and Applicability of Section 9.04 of the Stormwater Control By-law must meet the following general performance criteria unless otherwise provided for in these Regulations:

1. LID site planning and design strategies must be utilized 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.
3. Tree Protection and Preservation. Trees can be an important tool for retention and detention of stormwater runoff. Trees provide additional benefits, including cleaner air, reduction of heat island effects, carbon sequestration, reduced noise pollution, reduced pavement maintenance needs, and cooler cars in shaded parking lots. The Town of Boylston therefore deems that the preservation and protection of certain trees on public and private property and the requirement to replant trees to replace those removed are public purposes that protect the public health, welfare, environment, and aesthetics. At the discretion of the Conservation Commission, existing trees on private property with a diameter at breast height of 10 inches or greater and existing trees within the right-of-way or on Town property may be considered protected trees to be retained on the property. Such trees shall be protected and delineated within the submitted Erosion and Sedimentation Plan and described in the Stormwater Control Permit. The area surrounding a tree which includes at a minimum the Critical Root Zone (“CRZ”) and Drip-Line of all Protected Trees must be enclosed within a fence prior to land disturbing activity and remain undisturbed until work is completed on the property so as to prevent damage to the tree. The Conservation Commission may require tree replanting either on the applicant’s land or on land abutting the applicant’s land, with the express written approval of the owner of such abutting land, where protected trees cannot be saved.
4. Protection of Riparian Buffers. Riparian buffers, also known as a vegetated buffer or forest buffers, are vegetated areas along a stream, usually forested, which helps shade and partially protect a stream from the impact of adjacent land uses. Where possible, establish and protect a naturally vegetated buffer system along all perennial streams and other water features that encompass critical environmental features such as the 100-year floodplain, steep slopes (in excess of 15%), lake shorelands, and wetlands. Riparian stream buffers should be preserved or restored with native vegetation. Buffers are most effective when maintained in an undisturbed condition, mowing and brush hogging should not take place within a buffer.
5. Mitigation of Thermal Impacts of Stormwater Runoff. Stormwater BMPs must mitigate potential temperature impacts of development and land use conversions to Cold Water Fisheries. Elevated temperatures are caused by reduced shading in developed riparian areas, warming of stormwater as it runs over hot roofs and pavement, and heating of water stored in stormwater management ponds. Traditional peak reduction outlet structures and simple spillway outlets do nothing to cool the water before discharge. Cold Water Fisheries located in the Town of Boylston include, but are not limited to, Rawson Hill Brook, Sewall Brook, Unnamed Tributary to Sewall Pond, and Wrack Meadow Brook. MassGIS OLIVER has current maps of the Town of Boylston’s watersheds and the locations of Cold Water Fisheries. Stormwater Control Permit sites located near Cold Water Fisheries shall address the following additional design considerations.
 - a) To mitigate thermal impacts to Cold Water Fisheries from stormwater, alternative BMPs to stormwater ponds, such as buffers, infiltration or under-drained filters should be used, or, if ponds are required, under-drained outlet structures can provide effective cooling.
 - b) Equally important to maintaining cool stream temperature is preservation and/or restoration of riparian trees and shrubs to provide shade. To the maximum extent feasible, trees and other existing vegetation shall be conserved. To the extent that existing vegetation cannot be conserved, new natural areas shall be established by planting additional vegetation, establishing no-mow zones, clustering tree areas, and using native plants in revegetation.

F) Performance Standards for New Development.

1. Stormwater management systems on new development shall be designed to meet an average annual pollutant removal equivalent to 90% of the average annual load of Total Suspended Solids (TSS) related to the total post-construction impervious area on the site AND 60% of the average annual load of Total Phosphorus (TP) related to the total postconstruction impervious surface area on the site. Average annual pollutant removal requirements shall be achieved through one of the following methods:
 - a) installing stormwater BMPs that meet the pollutant removal percentages required in 9.D.(1) based on calculations developed consistent with EPA Region 1's BMP Accounting and Tracking Tool (2016) or other BMP performance evaluation tool provided by EPA Region 1, where available. If EPA Region 1 tools do not address the planned or installed BMP performance, then any federally or State-approved BMP design guidance or performance standards (e.g., State stormwater handbooks and design guidance manuals) may be used to calculate BMP performance; or
 - b) retaining the volume of runoff equivalent to, or greater than, one (1.0) inch multiplied by the total post-construction impervious surface area on the new development site; or
 - c) meeting a combination of retention and treatment that achieves the above standards.

G) Performance Standards for Redevelopment Sites.

1. Stormwater management systems on redevelopment sites shall be designed to meet an average annual pollutant removal equivalent to 80% of the average annual postconstruction load of Total Suspended Solids (TSS) related to the total post-construction impervious area on the site AND 50% of the average annual load of Total Phosphorus (TP) related to the total post-construction impervious surface area on the site. Average annual pollutant removal requirements shall be achieved through one of the following methods:
 - a) installing BMPs that meet the pollutant removal percentages based on calculations developed consistent with EPA Region 1's BMP Accounting and Tracking Tool (2016) or other BMP performance evaluation tool provided by EPA Region 1, where available. If EPA Region 1 tools do not address the planned or installed BMP performance, then any federally or State-approved BMP design guidance or performance standards (e.g., State stormwater handbooks and design guidance manuals) may be used to calculate BMP performance; or
 - b) retaining the volume of runoff equivalent to, or greater than, 0.8 inch multiplied by the total post-construction impervious surface area on the redeveloped site; or
 - c) meeting a combination of retention and treatment that achieves the above standards.

H) 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, the Small MS4 General Permit, recognized engineering methodologies and these regulations with an emphasis on including LID techniques in the design. In case of conflicting requirements with applicable Federal, State, and local regulations, the more restrictive or more protective of human health and the environment shall take precedence.
2. To the extent that the project will discharge, directly or indirectly, to a water body subject to one or more pollutant-specific Total Maximum Daily Loads (TMDLs), implement structural and non-structural stormwater best management practices (BMPs) that are consistent with each such TMDL.

3. To the extent the project will discharge, directly or indirectly, to an impaired water body not subject to a TMDL, implement structural and non-structural BMPs optimized to remove the pollutant or pollutants responsible for the impairment. The Conservation Commission may require additional controls to address specific pollutants of concern in accordance with the Small MS4 General Permit.
4. Projects must manage surface runoff so that no proposed flows are conducted over public ways, nor over land not owned or controlled by the Applicant unless a drainage easement in proper form is obtained permitting such discharge.
5. Projects must use LID 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 LID 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 Conservation Commission, take credit for the use of stormwater LID 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.
6. Projects must use TR-55 and TR-20 methodologies to calculate peak rate and volume of runoff from pre-development to post-development conditions.
7. Stormwater management systems shall be designed to avoid disturbance of areas susceptible to erosion and sediment loss to the greatest extent practicable, including: the damaging of large forest stands; building on steep slopes (15% or greater); and disturbing land in wetland buffer zones and floodplains.
8. 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.
9. 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.
10. Length of sheet flow used for times of concentration is to be no more than 50 feet.
11. Utilize the 24-hour rainfall data taken from National Oceanic and Atmospheric Administration Atlas 14, Precipitation-Frequency Atlas of the United States (Vol. 10, Northeastern States, published 2015, revised 2019), as it may be amended.
12. Soils tests to be conducted by a Registered Professional Engineer or Massachusetts Soil Evaluator, performed at the location of all proposed LID techniques and BMPs, to identify soil descriptions, depth to estimated seasonal high groundwater, depth to bedrock, and soil texture.
13. The design infiltration rate shall be determined from the on-site soil texture and Rawls rates as published in the Massachusetts Stormwater Handbook or saturated hydraulic conductivity tests.
14. Size drainage pipes to accommodate the 25-year storm event and maintain velocities between 2.5 and 10 feet per second, and provide calculations using the Mannings Equation.
15. Size drainage swales to accommodate the 25-year storm event and velocities below 4 feet per second.
16. 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.
17. Size stormwater basins to accommodate the 100-year storm event with a minimum of one foot of freeboard.

18. All drainage structures are to be able to accommodate HS-20 loading.
19. Catch basins structures are to be constructed as required by Massachusetts Department of Transportation (MassDOT) standards and spaced a maximum of 350 feet apart in roadways. Catch basins on industrial and commercial sites are required to have hoods.
20. Catch basin to catch basin pipe configuration is prohibited.
21. Catch basins adjacent to curbing are to be built with a granite curb inlet.
22. 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).
23. All drainpipes are to be reinforced concrete pipe or High-Density Polyethylene (HDPE) pipe and have a minimum diameter of 12 inches.
24. 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.
25. Drainage easements are to provide sufficient access for maintenance and repairs of system components and be at least 20 feet wide.
26. 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.

I) Recharge Criteria

1. Annual groundwater recharge rates shall be maintained, by promoting infiltration and recharge through the use of structural and non-structural methods to the maximum extent practicable. At a minimum, annual recharge from the post-development site shall equal the annual recharge from pre-development site conditions.
2. The stormwater runoff volume to be recharged to groundwater shall be determined using the methods prescribed in the latest version of the Massachusetts DEP Stormwater Management Handbooks. The recharge requirements shall apply to all activities within the jurisdiction of this By-law except as noted, and unless specifically waived by the Conservation Commission. There is a risk that infiltrating the required recharge volume may cause or contribute to groundwater contamination. The recharge criterion is not required for any portion of a site designated as a land use with higher potential pollutant loads (see Section 7.K of these Regulations) and refer to the MA Stormwater Handbook, Standard 3 for additional requirements. In addition, the Conservation Commission may relax or eliminate the recharge requirement at its discretion, if the site is situated on unsuitable soils or is in a redevelopment area with documentation of prior contaminated soils.

J) Sensitive Areas

Stormwater discharges to Critical Areas with sensitive resources as defined in the current Massachusetts Stormwater Policy (i.e., Outstanding Resource Waters (ORWs) which includes the Wachusett Reservoir and its tributaries, swimming beaches, cold water fisheries, and recharge areas for public water supplies) are subject to additional criteria, and may need to utilize or restrict certain Stormwater Management practices at the discretion of the Conservation Commission. The Conservation Commission may designate additional Sensitive Areas and specific criteria for these areas by amending these Regulations.

K) Land Uses with Higher Potential Pollutant Loads

Stormwater discharges from land uses or activities with higher potential pollutant loadings require the use of specific Stormwater Management BMPs as specified in the most recent version of the MassDEP Stormwater Management Handbooks. The use of infiltration practices without pretreatment is prohibited.

8.0 WAIVERS

- A) The Conservation Commission may in its discretion and after due consideration decide to waive and exempt strict compliance with any requirement of the Stormwater Control By-law and these Regulations, where it makes a written finding that such action is:
1. Allowed by federal, state and local statutes and/or regulations;
 2. In the public interest; and
 3. Consistent with the purpose and intent of the Town of Boylston Stormwater Control By-law and these Regulations.
- B) Any applicant shall 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 the By-law.
- C) All waivers requested shall be discussed and voted on at the public hearing for the project.
- D) If in the Conservation Commission's opinion, additional time or information is required for review of a waiver request, the Conservation Commission may continue a hearing to a date announced at the meeting. In the event the applicant objects to a continuance, or fails to provide requested information, the waiver request shall be denied.
- E) Waivers described herein shall not constitute an exemption from any applicable Federal or State permitting requirements.

9.0 ENFORCEMENT

- A) Enforcement powers of the Conservation Commission or an authorized agent of the Conservation Commission are granted in the Stormwater Control By-law, Section 9.09.
- B) Notices and Orders
1. The Conservation Commission or an authorized agent of the Conservation Commission may issue a written notice of violation or enforcement order to enforce the provisions of the Stormwater Control By-law and these Regulations, which may include requirements to:
 - a) Suspend or revoke approval of any Stormwater Control Permit;
 - b) Cease and desist from all or a portion of construction or land disturbing activity until there is compliance with the By-law and the Stormwater Control Permit;
 - c) Repair, maintain, or replace the stormwater management system or portions thereof in accordance with the O&M Plan;
 - d) Perform monitoring, analyses, and reporting; and/or
 - e) Fix adverse impact resulting directly or indirectly from malfunction of the stormwater management system.

The suspension or revocation of the Stormwater Control Permit shall not relieve the Applicant of his obligation there under except at the discretion of the Commission.

2. If the Conservation Commission 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 Boylston may, at its option, undertake such work, and the property owner shall reimburse the Town of Boylston for expenses incurred.

3. Within thirty (30) days after 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 Boylston, including administrative costs. The violator or property owner may file a written protest objecting to the amount or basis of costs with the Conservation Commission within thirty (30) days of receipt of the notification of the costs incurred. If the amount due is not received by the expiration of the time in which to file a protest or within thirty (30) days following a decision of the Conservation Commission affirming or reducing the costs, or from a final decision of a court of competent jurisdiction, the 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 purchases, inherits or otherwise acquires real estate upon which work has been done in violation of the provisions of the Stormwater Control Bylaw and these Regulations, or in violation of the approved Plans under this Section shall forthwith comply with any such Order, and restore such real estate to its condition prior to such violation, as the Conservation Commission deems necessary to remedy such violation.
- D) Any person who violates any provision of the Town of Boylston Stormwater Control By-law, these Regulations, or 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, excluding the cost of damages. Each day or part thereof that such violation occurs or continues shall constitute a separate offense.
- E) Non-Criminal Disposition. As an alternative to criminal prosecution or civil action, the Town of Boylston may elect to utilize the non-criminal disposition procedure set forth in G.L. Ch. 40, §21D and the Town of Boylston General By-laws Section 18 in which case the Conservation Commission shall be the enforcing person. The provisions of the General By-laws Section 18 as to the monetary penalties shall prevail. The penalty for the 1st violation shall be \$100.00. The penalty for the 2nd and subsequent violations shall be \$300.00. Each day or part thereof that such violation occurs or continues shall constitute a separate offense.
- F) Appeals. The decisions or orders of the Conservation Commission shall be final. Further relief shall be to a court of competent jurisdiction.
- G) 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.

10.0 SURETY

The Conservation Commission may require as a condition to approving an Erosion and Sediment Control Plan and Stormwater Management Plan that the Applicant shall furnish a Performance Bond of cash, certified check, a Surety Company, or other acceptable security to the Town as obligee in a penal sum to be fixed by said Commission as it shall deem sufficient to cover the cost of the performance of all labor and materials as shall be required to carry out all the conditions, limitations and safeguards as may be imposed by said Commission in connection with the control of erosion and sediment and post-construction stormwater management.

If the project is phased, the Conservation Commission may release part of the bond as each phase is completed in compliance with the Plan but the bond may not be fully released until the Conservation Commission has received the final inspection report as required by Section 11.0 of these Regulations and issued a Certificate of Completion. If the permittee defaults on any obligations imposed by the Stormwater

Management Permit, the Conservation Commission may (after notification of the permittee) inform the holder of the security (and the municipal treasurer if the treasurer is not holding the funds) of the default, in which even the Town shall be entitled to the security funds.

11.0 CONSTRUCTION INSPECTIONS

- A) Notice of Construction Commencement. The applicant must notify the Conservation Commission or its authorized Agent fourteen (14) days prior to the commencement of construction. In addition, the applicant must notify the Conservation Commission fourteen (14) days in advance of construction of any stormwater management facility.
- B) Construction may not commence until the applicant has submitted EPA's approval of the Construction General Permit Notice of Intent to the Conservation Commission and the final SWPPP is posted at the site.
- C) Conservation Commission Inspections. The Conservation Commission or its designated agent shall make inspections as herein required and shall either approve that portion of the work completed or shall notify the applicant wherein the work fails to comply with the Erosion and Sedimentation Control Plan or the Stormwater Management Plan as approved.
 - 1. Inspections will be conducted by a "qualified person" from the Conservation Commission or a third party hired to conduct such inspections. A "qualified person" is a person knowledgeable in the principles and practice of erosion and sediment controls and pollution prevention, who possesses the appropriate skills and training to assess conditions at the construction site that could impact stormwater quality, and the appropriate skills and training to assess the effectiveness of any stormwater controls selected and installed to meet the requirements of these Regulations.
 - 2. The approved Erosion and Sedimentation Control Plan and associated plans for grading, stripping, excavating, and filling work, bearing the signature of approval of the Conservation Commission, shall be maintained at the site during the progress of the work.
 - 3. In order to obtain inspections, the applicant shall notify the Conservation Commission at least two (2) working days before each of the following events:
 - a) Erosion and sedimentation control measures are in place and stabilized;
 - b) Site Clearing has been substantially completed;
 - c) Rough Grading has been substantially completed;
 - d) Final Grading has been substantially completed;
 - e) Close of the Construction Season; and,
 - f) Final Landscaping (permanent stabilization) and project final completion.
- D) Applicant Inspections. The applicant or his/her agent shall conduct and document inspections of all control measures no less than weekly or as specified in the permit, and prior to and following anticipated storm events. The purpose of such inspections will be to determine the overall effectiveness of the Erosion and Sedimentation Control Plan, and the need for maintenance or additional control measures as well as verifying compliance with the Stormwater Management Plan. The applicant or his/her agent shall submit monthly reports to the Conservation Commission or designated agent in a format approved by the Conservation Commission.

12.0 CERTIFICATE OF COMPLETION

- A) Upon completion, the Applicant is responsible for requesting a Certificate of Completion by submitting documentation required in Section 6.I to the Conservation Commission. The Applicant shall also provide regular inspections sufficient to adequately document compliance with ongoing permit conditions.
- B) The Conservation Commission will issue a letter certifying completion upon receipt and approval of the

As-Built Plans, final inspection and reports and/or upon otherwise determining that all work of the permit has been satisfactorily completed in conformance with this By-law.

13.0 PERPETUAL INSPECTION AND MAINTENANCE

A) Maintenance Responsibility

1. The Town of Boylston will not accept ownership of stormwater BMPs located outside of street rights of way, and the maintenance of such facilities shall remain the permanent responsibility of the applicant or his successors and/or assigns. The owner of the property on which work has been done pursuant to these 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. Stormwater management facilities and practices included in an O&M Plan with a Maintenance Agreement in accordance with Section 6.L 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 these Regulations.
2. A Maintenance Agreement as specified under Section 6.L of these Regulations between the owner and the Conservation Commission shall be executed for privately-owned stormwater management systems that specify the Responsible Party for conducting long term inspections.
3. At a minimum, inspections shall occur once during the first year of operation and at least once every three years thereafter. Some BMPs may require more frequent inspection, as specified in the O&M Plan.
4. Inspection reports shall be submitted to the Conservation Commission for all stormwater management systems. Inspection reports for stormwater management systems shall include at a minimum:
 - a) The date of inspection;
 - b) Name and signature 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 fore bay areas (including catch basins)
 - x. Any nonstructural practices
 - xi. Any other item that could affect the proper function of the stormwater management system
 - d) Description of the need for maintenance.

C) Right-of-Entry for Inspection

The terms of the Maintenance Agreement as specified in Section 6.L.3 of these Regulations shall provide for the Conservation Commission or its designee to enter the property at reasonable times and in a reasonable manner for the purpose of inspection. The Conservation Commission, its agents, officers, and employees shall have authority to enter upon privately owned land for the purpose of performing their

duties under these Regulations and may make or cause to be made such examinations, surveys, or sampling as the Conservation Commission deems necessary, subject to the constitutions and laws of the United States and the Commonwealth.

In addition, any action by any person which violates any provision of the Town's Stormwater Control By-law or any application for a permit of a finding or waiver thereunder, shall and does hereby constitute irrevocable authorization by the applicant and any owner or successor in interest to them, for the Conservation Commission of its agents to enter and inspect the premises at any time, and to take action to abate or mitigate any potentially irreparable harm or damage to the public health, safety, environment and general welfare of the Town or the public.

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

E) Failure to Maintain

1. If a Responsible Party fails or refuses to meet the requirements of the Maintenance Agreement, the Conservation Commission, after 30 days written notice (except, that in the event the violation constitutes an immediate danger to public health or public safety, 24 hours 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 Conservation Commission may assess the owner(s) of the facility for the cost of repair work, which 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 30 days or other time frame mutually agreed to between the Conservation Commission and the person responsible for carrying out the maintenance plan to correct the deficiencies. The Conservation Commission shall then conduct a subsequent inspection to ensure completion of repairs.

14.0 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.