

CHAPTER 6
STORMWATER MANAGEMENT REGULATIONS

SECTION 1 PURPOSE

6.1.001 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, and nonpoint source pollution associated with new development and redevelopment, as more specifically addressed in the Stormwater Management By-law of the Town of Billerica.

SECTION 2 DEFINITIONS

6.2.001 The definitions contained herein apply to issuance of a Stormwater Management Permit established by the Town of Billerica Stormwater Management 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.

6.2.002 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.”

6.2.003 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).

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

6.2.005 BEST MANAGEMENT PRACTICE (BMP): Structural and nonstructural techniques that are recognized to be effective and practical means to prevent and/or reduce increases in stormwater volumes and flows, reduce point source and nonpoint source pollution, and promote good stormwater quality and protection of the environment. “Structural” BMPs are devices that are engineered and constructed to provide permanent or 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. Nonstructural BMPs include managerial techniques that focus on the preservation and protection of natural features.

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

6.2.007 CERTIFICATE OF COMPLIANCE (COC): A document issued by the Board of Health in accordance with Chapter 1 Section 1.2.008 of these regulations. A COC will not be issued until all conditions of an issued Stormwater Management Permit have been met and the project has been completed in compliance with the conditions of the Permit and the Stormwater Management By-law.

6.2.008 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.

6.2.009 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.

6.2.010 CRITICAL AREAS: Outstanding Water Resources (OWRs), shellfish beds, swimming beaches, coldwater fisheries, and recharge areas for public drinking water supplies.

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

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

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

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

6.2.015 EROSION CONTROL PLAN: A plan that shows the location and detail(s) of the erosion and sediment reduction controls to be utilized for a construction site during and after construction.

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

6.2.017 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.

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

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

6.2.020 ILLICIT DISCHARGE: Direct or indirect discharge to the municipal storm drain system that is not composed entirely of stormwater, as defined in the Discharges to the Municipal Storm Sewer System By-law, Article XXVI of the General By-laws of the Town of Billerica. The term does not include a discharge in compliance with an NPDES Storm Water Discharge Permit or a Surface Water Discharge Permit, or resulting from fire fighting activities.

6.2.021 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 surfaces (parking lots, sidewalks, driveways), rooftops, swimming pools, patios, and paved, gravel and compacted dirt surfaced roads.

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

6.2.023 LAND DISTURBANCE: Any action that causes a change in the position, location, or arrangement of soil, ground cover, sand, rock, gravel or similar earth material. See also ALTER.

6.2.024 LOW IMPACT DEVELOPMENT TECHNIQUES: Innovative stormwater management systems that are modeled after natural hydrologic features. Low impact development techniques manage rainfall at the source using uniformly distributed decentralized micro-scale controls. Low impact development techniques use small cost-effective landscape features located at the lot level.

6.2.025 LAND USES WITH HIGHER POTENTIAL POLLUTANT LOADS (LUHPPL): mean the following land uses: land uses identified in 310 CMR 22.20B(2), 310 CMR 22.20C (2)(a) - (k) and (m), 310 CMR 22.21(2)(a) 1 - 8, and 310 CMR 22.21(2)(b) 1 - 6; areas within a site that are the location of activities that are subject to an individual National Pollutant Discharge Elimination System (NPDES) permit or the NPDES Multi-Sector General Permit; auto fueling facilities (gas stations); exterior fleet storage areas; exterior vehicle service and equipment cleaning areas; marinas and boatyards; parking lots with high intensity use; confined disposal facilities and disposal sites. Refer to Massachusetts Stormwater Management Standard 5 for higher potential pollutant loads, or the most current Stormwater Handbook.

6.2.026 MASSACHUSETTS STORMWATER HANDBOOK (STORMWATER HANDBOOK):

The Stormwater Handbook, and as amended from time to time, that were produced by D.E.P. and the Massachusetts Office of Coastal Zone Management to be used as guidance for controlling stormwater. Implementation of the Stormwater Management Standards shall be in accordance with the Stormwater Handbook.

6.2.027 MASSACHUSETTS STORMWATER MANAGEMENT STANDARDS: The requirements described in the Stormwater Handbook, as they may be amended from time to time, that address water quality (pollutants) and water quantity (flooding, low base flow and recharge) by establishing standards that require the implementation of a wide variety of stormwater management strategies. These strategies include environmentally sensitive site design and LID techniques to minimize impervious surface and land disturbance, source control and pollution prevention, structural Best Management Practices, construction period erosion and sedimentation control, and the long-term operation and maintenance of stormwater management systems. The Stormwater Management Standards have been incorporated in the Wetlands Protection Act Regulations, 310 CMR 10.05(6)(k) and the Water Quality Certification Regulations, 314 CMR 9.06(6)(a).

6.2.028 MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4), MUNICIPAL STORM DRAIN SYSTEM, or MUNICIPAL DRAINAGE 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 Billerica.

6.2.029 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 human-made activities.

6.2.030 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.

6.2.031 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 insure that it continues to function as designed.

6.2.032 OUTSTANDING RESOURCE WATER (ORWs): Waters designated by Massachusetts Department of Environmental Protection as ORWs. These waters have exceptional sociologic, recreational, ecological and/or aesthetic values and are subject to more stringent requirements under both the Massachusetts Water Quality Standards (314 CMR 4.00) and the Massachusetts Stormwater Management Standards. ORWs include vernal pools certified by the Natural Heritage Program of the Massachusetts Department of Fisheries and Wildlife and Environmental Law Enforcement, all Class A designated public water supplies with their bordering vegetated wetlands, and other waters specifically designated.

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

6.2.034 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 Billerica, and any other legal entity, its legal representatives, agents, or assigns.

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

6.2.036 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.

6.2.037 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.

6.2.038 RECHARGE: The replenishment of groundwater reserves.

6.2.039 REDEVELOPMENT: Development, rehabilitation, expansion, demolition or phased projects that disturb the ground surface or alter the impervious area on previously developed sites. Standards for Redevelopment only apply to those portions of the parcel that currently contain alteration by human activities.

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

6.2.041 RESPONSIBLE PARTY: Entity, person, or agent identified in an Operation and Maintenance Plan and /or Maintenance Agreement as being responsible for Operation and Management including inspections, of privately owned and managed stormwater control measures.

6.2.042 RUNOFF: Rainfall or snowmelt flowing over the ground surface.

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

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

6.2.045 STORMWATER AUTHORITY: Board of Health or authorized agent(s), as defined in the Stormwater Management By-law. The Board of Health, or its agent(s), is responsible for coordinating the review, approval and permit process as defined in these Regulations authorized by the Stormwater Management By-law. Other Boards and/or departments may participate in the review process as defined in the Stormwater Management By-law.

6.2.046 STORMWATER BEST MANAGEMENT PRACTICE (BMP): See Definition 4. Best Management Practice.

6.2.047 STORMWATER MANAGEMENT: The use of structural or nonstructural practices that are designed to reduce stormwater runoff pollutant loads, discharge volumes, and/or peak flow discharge rates. Stormwater Management includes the use of structural and nonstructural stormwater management practices.

6.2.048 STORMWATER MANAGEMENT PERMIT: A permit issued by the Board of Health, after review of an application, plans, calculations, and other supporting documents, which show that the proposed project is designed to protect the environment of the Town from the deleterious affects of uncontrolled and untreated stormwater runoff.

6.2.049 STORMWATER MANAGEMENT SYSTEM: A system for conveying, collecting, storing, discharging, recharging or treating stormwater on-site 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 separate storm sewer system.

6.2.050 STOP WORK ORDER: An order issued by the Board of Health, or an authorized agent of the Board of Health, which requires that all construction activity on a site be stopped.

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

6.2.052 TSS: Total Suspended Solids.

6.2.053 UNSTABLE AREAS: Area subject to excessive erosion, further described in Section 6.6.013(5).

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

SECTION 3 AUTHORITY

6.3.001 The Rules and Regulations contained herein have been adopted by the Board of Health in accordance with the Town of Billerica Stormwater Management By-law.

6.3.002 Nothing in these Rules and Regulations is intended to replace or be in derogation of the requirements of the Town of Billerica Zoning By-law, Subdivision Control Law, Wetlands Protection By-law, or any Rules and Regulations adopted thereunder.

6.3.003 These Stormwater Regulations may be periodically amended by the Board of Health in accordance with the procedures outlined in Section 3.2 of the Town of Billerica Stormwater Management By-law.

SECTION 4 ADMINISTRATION

6.4.001 The Board of Health is designated as the Stormwater Authority under the Stormwater Management By-law. The Board of Health shall administer, implement and enforce these Regulations. The Board of Health may, with the concurrence of the Applicant, designate another Town board, commission, or department, as its authorized agent for the purposes of reviewing stormwater submittals, conducting inspections described in Section 11.0, and enforcing the Stormwater Management By-law and these Regulations per Section 9.0.

SECTION 5 APPLICABILITY

6.5.001 These Stormwater Management Regulations apply to all activities in accordance with the Scope and Applicability section of the Stormwater Management By-law as described in this section. Projects and/or activities not specifically under the currently regulated jurisdiction of any of the Town of Billerica boards, commissions or departments but still within the jurisdiction of the Town of Billerica Stormwater Management By-law must obtain a Stormwater Management Permit from the Board of Health in accordance with the permit procedures and requirements defined in Section 6.0 of these Regulations.

6.5.002 If any portion of a project or activity meets the Scope and Applicability of Section 2 of the Stormwater Management By-law and it is within the specific jurisdiction of the Planning Board, the Zoning Board of Appeals, or another Town board, commission, or department, the Board of Health will remain the Stormwater Authority, responsible for facilitating stormwater review and approval, and issuance of the Stormwater Management Permit. The specific application submission requirements, public notice, and fee requirements of the applicable board, commission, and/or department shall remain in effect in addition to the requirements of the Stormwater Management By-law. The applicant may submit copies of the plans prepared for and submitted to the Planning Board for subdivision approval, under the condition that the requirements of a Stormwater Management Permit application, as described in Section 6.6.002 are otherwise met. The Board of Health and other Town boards shall coordinate any necessary engineering and other consultant services and resulting Fees as set forth in Chapter 1 Section 4. Board of Health will make every effort to review the Stormwater Management 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 Management Permit from the Board of Health.

SECTION 6 PERMIT PROCEDURES AND REQUIREMENTS

6.6.001 Developers of projects requiring a Stormwater Management Permit per Section 2 of the Stormwater Management By-law shall be required to submit the materials as specified in this Section, and are required to meet the Performance Standards: Stormwater Criteria as specified in Section 7 of this chapter of the Board of Health regulations.

6.6.002 Filing Application.

- (1) The applicant shall file with the Board of Health, two (2) copies of a completed application package for a Stormwater Management Permit. Permit issuance is required prior to any site altering activity. While the applicant can be a representative, the permittee must be the owner of the site or holder of an easement. The Stormwater Management Permit application package shall include:
 - (a) A completed Application Form with original signatures of all owners,
 - (b) Certified Abutters list from the Assessor's Office, as defined in Chapter 1, which must be dated within sixty (60) days of submission,
 - (c) Stormwater Management Plan and project description,
 - (d) Erosion and Sediment Control Plan,
 - (e) Operation and Maintenance Plan,
 - (f) Payment of the application fee and a signed Consultant Agreement form,
 - (g) Inspection and Maintenance agreement, and
 - (h) Surety (if required).
- (2) In lieu of (c), (d), and (e), the applicant may submit a completed Stormwater Report to document compliance with the Massachusetts Stormwater Management Standards, as provided in the Stormwater Handbook, and the Town of Billerica's Performance Standards given in Section 7 of these regulations. The Stormwater Report Certification and Checklist must be stamped and signed by a Registered Professional Engineer.
- (3) No work proposed shall be undertaken until the final Stormwater Management Permit with respect to such work has been recorded by the applicant in the Middlesex Northern Registry of Deeds. The applicant shall furnish certification of such recording.

6.6.003 Fees. The Board of Health shall obtain with each submission an Application Fee as set forth in Chapter 1 Section 7 of these Board of Health Regulations to cover expenses connected with the review of the Stormwater Management Permit application. Consulting Engineer/Consultant Review Fees for the project may also be required to be paid by the applicant in accordance with Section 1.4.001 of these regulations. An Annual Operation and Maintenance Record Processing fee shall be paid and collected to cover expenses related to conducting stormwater management facility operation and maintenance record reviews and to conduct inspections if needed.

- (1) Rules.
 - (a) Application Fees are payable at the time of application and are non-refundable.
 - (b) All fees shall be calculated by the Board of Health in accordance with its fee schedule.

- (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 Management Permit.
- (2) Application Fees.
- (a) A non-refundable Stormwater Management Permit Application Fee, per the Fee Schedule set forth in Chapter 1, Section 7 of these Board of Health Regulations, shall be due and payable to the Town of Billerica 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.
- (3) Consulting Engineer/Consultant Review Fees.
- (a) Consulting Engineer/Consultant Review Fees shall be administered by the Board of Health as set forth in Chapter 1, Section 1.4.001 of these Board of Health Regulations, and as set forth in Town of Billerica General By-laws Article XI.
 - (b) Failure by the applicant to pay the consultant fee associated with the Consultant's Review for a Stormwater Management Permit shall render the application incomplete.
 - (c) Problems or disputes over payment arrangements between the applicant and the consultant shall be settled at a regularly schedule meeting of the Board of Health by a majority vote of a quorum of the Board.
- (4) Annual Operation and Maintenance Record Fees.
- (a) A non-refundable fee, per the Fee Schedule set forth in Chapter 1, Section 7 of these Regulations shall be paid with the annual submission of Operation and Maintenance Records. The fee will be used for ensuring adequate operation and maintenance of the stormwater management facilities.

6.6.004 Public Hearings. The Board of Health shall hold a public hearing after receipt of a complete application according to the timeline set forth in Chapter 1, Section 1.2.009 of these regulations. The Board of Health shall take final action within forty-five (45) days from the close of the hearing unless such time is extended by agreement between the applicant and the Board of Health. Notice of the public hearing shall be given 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 ten (10) days prior to the hearing. Notice of the public hearing is the responsibility of the applicant.

6.6.005 Actions.

- (1) The Board of Health's action, rendered in writing, shall consist of either:
- (a) Approval of the Stormwater Management 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;
 - (b) Approval of the Stormwater Management Permit Application subject to any conditions, modifications or restrictions required by the Board of Health, 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
 - (c) Disapproval of the Stormwater Management 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

- (d) the application is deemed incomplete.
- (2) Failure of the Board of Health to take any of the above actions 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 Board of Health action, the Board of Health must issue a Stormwater Management Permit.

6.6.006 Appeals of Actions of the Board of Health. A decision of the Board of Health shall be final. Further relief of a decision by the Board of Health 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 Billerica. Such an appeal shall result in revocation of the written approval as described under Section 6.6.005 of these Regulations, until such time as the appeal process of the applicable board, commission and/or department has been resolved.

6.6.007 Plan Changes. The permittee must notify the Board of Health in writing of any site or drainage design change or alteration in the system authorized in a Stormwater Management Permit before any change or alteration is made. If the Board of Health determines that the change or alteration is significant, based on the Stormwater Management Standards, Performance Standards in Section 7, and accepted construction practices, the Board of Health may require that an amended application be filed, and shall notify the applicant of their decision within 10 days of being notified of the change.

6.6.008 Entry. To the extent permitted by state law, or if authorized by the owner or other party in control of the property, the Board of Health or its agents, officers, and employees may enter upon privately owned property for the purpose of performing their duties under the Stormwater Management By-law and these Regulations and may make or cause to be made such examinations, surveys or sampling as the Board of Health deems reasonably necessary to determine compliance with the permit.

6.6.009 Project Completion. At completion of the project the permittee shall submit as-built record drawings of all structural and nonstructural stormwater best management practices required in the Stormwater Management Permit and an updated Maintenance Agreement noting any changes, including designation of new responsible parties. As-built Plans shall be developed by a Registered Professional Engineer or Land Surveyor. They shall be full size plans, at a scale approved by the Board of Health, that reflect the “as-built” conditions, including all final grades. All work deleted, corrections in elevations, and changes in materials, shall be shown on the as-built drawings. All changes to project design shall be recorded on plans in red ink, or otherwise noted, to define the changes made. Deviations from the approved plans, if any, shall be certified in writing by a Registered Professional Engineer.

6.6.010 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 is not completed within three (3) years, the Applicant shall notify the Board of Health. The Board of Health may re-evaluate the originally approved Stormwater Management Plan to determine whether the plan satisfies the regulation requirements in effect. If the Board of Health finds the previously filed Plan to be inadequate, a modified plan shall be submitted for review and approval prior to the commencement, or continuation, of land-disturbing activities s.

6.6.011 Stormwater Management Plan Contents.

- (1) The application for a Stormwater Management Permit shall include the submittal of a Stormwater Management Plan to the Board of Health. This Stormwater Management Plan shall contain sufficient information for the Board of Health to evaluate the environmental impact, effectiveness, and acceptability of the site planning process and the measures proposed by the applicant to reduce adverse impacts from stormwater runoff during construction, and on a long-term basis. The plan shall be in accordance with the criteria

established in these Regulations. The Stormwater Management Plan shall remain on file with the Board of Health.

- (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) Stormwater Impact Statement. Brief narrative description of the project and description of how and where stormwater will be controlled;
 - (c) Locus Map indicating assessor's Map and Plate Number;
 - (d) Existing Site Plan;
 - (e) The existing zoning, and land use of the site and abutting properties;
 - (f) The proposed land use;
 - (g) The location(s) of existing and proposed easements;
 - (h) The location(s) of existing and proposed utilities;
 - (i) The site's existing & proposed topography with contours at 2-foot intervals;
 - (j) The existing site hydrology (both groundwater recharge and surface runoff);
 - (k) A description and delineation of existing stormwater conveyances, impoundments, wetlands, drinking water resource areas, swimming beaches or other critical environmental resource areas, on or adjacent to the site or into which stormwater flows;
 - (l) A delineation of 100-year flood plain(s), if applicable, based on FEMA and Green Engineering Flood Plain (GEFP) maps;
 - (m) The existing and proposed vegetation and ground surfaces with runoff coefficients for each; (including all impervious cover – parking, driveways, etc.)
 - (n) A drainage area map showing pre- and post-construction watershed boundaries, drainage areas, time of concentration (tc), and stormwater flow paths, including municipal drainage system flows;
 - (o) A recharge analysis that calculates pre- and post-construction annual groundwater recharge rates on the parcel;
 - (p) A description and drawings of all components of the proposed Stormwater Management system including:
 - i. All measures for the detention, retention or infiltration of water;
 - ii. Description of nonstructural BMPs;
 - 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 expected hydrology with supporting calculations;
 - vi. Proposed site plan including location of buildings or other structures, impervious surfaces, and drainage facilities, if applicable;

- vii. Any other information requested by the Board of Health.
- (q) Hydrologic and hydraulic design calculations for the pre-development and post-development conditions for the design storms specified in these Regulations. Such calculations shall include:
 - i. Description of the design storm frequency, intensity and duration;
 - ii. Time of concentration;
 - iii. Soil Runoff Curve Number (RCN) based on land use and soil hydrologic group;
 - iv. Peak runoff rates and total runoff volumes for each watershed area;
 - v. Provisions for protecting, during construction, the infiltration capacity of the soil where infiltration is proposed;
 - vi. Infiltration rates, where applicable;
 - vii. Culvert capacities;
 - viii. Flow velocities;
 - ix. Data on the change in rate and volume of runoff for the specified design storms, and
 - x. Documentation of sources for all computation methods and field test results.
- (r) Soils information from test pits performed at the location of proposed stormwater retention, detention, or infiltration systems, including but not limited to soil descriptions, depth to estimated seasonal high groundwater, depth to bedrock, soil texture, and percolation rates. Soils information will be based on site test pits logged by a Massachusetts Soil Evaluator;
- (s) Soil tests shall be conducted at the proposed location of each infiltration device by a Registered Professional Engineer or Soil Evaluator at the depth proposed for the infiltration device. The design infiltration rate shall be determined from the on-site soil texture. The Applicant shall submit to the Board of Health the results of the soil test pits and the design of the infiltration devices for review and approval.
- (t) Landscaping plan describing the woody and herbaceous vegetative stabilization and management techniques to be used within and adjacent to the stormwater practice.
- (u) Stamp and signature of a Professional Engineer (PE) licensed in the Commonwealth of Massachusetts to certify that the Stormwater Management Plan is in accordance with the criteria established in the Stormwater Management By-law and these Regulations. A completed, stamped and signed D.E.P. Stormwater Management Form certifying that the proposed development complies with the stormwater management standards.

6.6.012 Operation and Maintenance Plan Contents

- (1) 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 Board of Health 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.

- (2) The O&M Plan shall include:
- (a) The name(s) of the owner(s) for all components of the system;
 - (b) 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 Middlesex Northern Registry of Deeds prior to issuance of a Certificate of Compliance by the Board of Health.
 - (c) Maintenance Agreement with the Board of Health that specifies:
 - i. The names and addresses of the person(s) responsible for operation and maintenance;
 - ii. The person(s) financially responsible for maintenance and emergency repairs;
 - iii. 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 Stormwater Handbook or the E.P.A. National Menu of Stormwater Best Management Practices or equivalent;
 - iv. 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.
 - v. A list of easements with the purpose and location of each; and
 - vi. 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.
 - (d) Stormwater Management Easement(s)
 - i. Stormwater Management easements shall be provided by the property owner(s) as necessary for:
 - Access for facility inspections and maintenance;
 - Preservation of stormwater runoff conveyance, infiltration, and detention areas and facilities, including flood routes for the 100-year storm event; and
 - Direct maintenance access by heavy equipment to structures requiring maintenance.
 - ii. The purpose of each easement shall be specified in the Maintenance Agreement signed by the property owner.
 - iii. Stormwater Management easements are required for all areas used for permanent stormwater control, unless a waiver is granted by the Board of Health.
 - iv. Easements shall be recorded with the Middlesex Northern Registry of Deeds prior to issuance of a Certificate of Compliance by the Board of Health.
 - (e) Changes to Operation and Maintenance Plans
 - i. The owner(s) of record of the Stormwater Management system must notify the Board of Health of changes in ownership, assignment of Operation and Maintenance responsibilities, or assignment of financial responsibility within 30 days of the change in

ownership. The owner of record shall be responsible for Operation and Maintenance activities until a copy of the updated Operation and Maintenance Plan has been furnished to the Board of Health signed by the new owner or any new responsible person.

ii. The maintenance schedule in the Maintenance Agreement may be amended to achieve the purposes of the Stormwater Management By-law by mutual agreement of the Board of Health 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.

6.6.013 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 the General Permit, it will be considered equivalent to the Erosion and Sediment Control Plan described in this section.
- (2) The Erosion and 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 Board of Health. Refer to the latest version of the Massachusetts Erosion and Sediment Control Guidelines for Urban & Suburban Areas for detailed guidance.
- (3) The Erosion and 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 and Sediment Control Plan:
 - (a) existing and proposed topography,
 - (b) locations of existing and proposed drains and culverts, and names of streams, rivers, ponds or reservoirs in the Town of Billerica into which they flow,
 - (c) soil information, and existing and proposed land cover types,
 - (d) Estimation of the total area expected to be cleared or disturbed by excavation, grading, or other construction activities, including dedicated off-site borrow and fill areas, and on-site material storage areas,
 - (e) Schedule, or sequence of operations with starting dates for clearing and/or grading, timing of storm drain and culvert installation, duration of exposure of soils, and timing and methods for Unstable Area stabilization, both temporary and permanent,
 - (f) Description of appropriate erosion control measures, which shall include, without limitation, quick rooting vegetation, expeditious stabilization of disturbed area, hay bales, diversions, and siltation fences, to limit water and wind induced erosion, the general sequence during the construction process in which the measures will be implemented, and which operator is responsible for each control measure's implementation,
 - (g) Description of structural practices (such as diversions, waterways, slope stabilization structures, sediment basins, etc.) to divert flows from exposed soils, retain/detain flows or

otherwise limit runoff and the discharge of pollutants from exposed areas of the site in sufficient detail to implement their installation together with referred standards for soil erosion and sediment control as appropriate. Provide design calculations as required for each structure. (Placement of structural practices in floodplains must be avoided to the degree practicable, and designed to withstand expected inundation if required),

- (h) Instructions for proper operation and maintenance of structural erosion and sediment control structures that are shown on the site plans and/or detail sheets during construction,
 - (i) Description of construction and waste materials expected to be stored onsite with updates as appropriate, and a description of controls, including storage practices, to minimize exposure of the materials to stormwater, and spill prevention and response practices,
 - (j) Description of interim and permanent stabilization practices for the site, including a schedule of when the practices will be implemented. Site plans should ensure that existing vegetation is preserved where possible and that disturbed portions of the site are stabilized as soon as practicable. Use of impervious surfaces for stabilization should be avoided,
 - (k) Description of temporary and permanent seeding or sodding specifications for exposed areas including seedbed preparation, seed mixtures, lime, fertilizer, and mulching requirements with referenced standards,
 - (l) Blank Forms for construction phase record keeping for:
 - i. Dates when major grading activities occur,
 - ii. precipitation events,
 - iii. repairs made to erosion controls,
 - iv. dates when construction activities temporarily or permanently cease on a portion of the site,
 - v. dates when stabilization measures are initiated, and
 - vi. periodic inspections made in accordance with Section 11 of this Chapter of the Board of Health Regulations.
 - (m) Description of measures to prevent the discharge of solid materials, including building materials, to waters of the United States, except as authorized by a permit issued under Section 404 of the Clean Water Act.
 - (n) Description of measures to minimize, to the extent practicable, off-site vehicle tracking of sediments onto paved surfaces and the generation of dust.
 - (o) Description of pollutant sources from areas other than construction and a description of controls and measures that will be implemented at those sites to minimize pollutant discharges.
 - (p) Stamp and signature of a Professional Engineer (PE) licensed in the Commonwealth of Massachusetts to certify that the Erosion and Sediment Control Plan is in accordance with the criteria established in the Stormwater Management By-law and the NPDES program, as required.
- (4) The applicant shall minimize the area of the land disturbance to the maximum extent practicable by exposing the minimum area required for construction activities, using Better Site Design techniques.

- (5) Unstable Areas shall be those areas subject to excessive erosion due to highly erodible soils, slope length, and steepness or water concentrations. Concentrations of run-off water or other reasons may cause this area to be “unstable.” All areas may become “unstable” when vegetation or other soil surface protection is removed as shown on the drawings, or otherwise identified.
- (6) The applicant shall perform all work, furnish all materials, and install all measures required to control soil erosion resulting from the proposed action that are appropriate for the conditions at the construction site, and prevent excessive flow of sediment from the development site. Such work may include the installation of water diversion structures, diversion ditches, and sediment basins, and seeding, mulching or sodding critical areas to provide temporary protection. An applicant shall submit a Plan showing the methods used to control soil erosion during construction along with the schedule of construction operations. When no work will be performed on Unstable Areas for more than thirty (30) days, or less if deemed necessary by the Board of Health, they shall be protected by temporary seeding, mulching, or sodding or the slope lengths shall be reduced by the installation of diversions or other means. When topography permits, sedimentation basins shall be constructed at points of water concentration from critical areas that will remain unprotected longer than thirty (30) days or less, if deemed necessary by the Board of Health. Earth berms or diversions shall be constructed to intercept and divert runoff water away from Unstable Areas. Diversion outlets shall be stable or shall be stabilized by paving or other means acceptable to the Board of Health.
- (7) The permanent restoration of vegetative cover, such as seeding or sodding, on all areas shall be accomplished within ten (10) days after final grading operations have been completed. Time extensions beyond the ten (10) days requirement may be requested in writing prior to completing final grading, and are subject to written approval by the Board of Health.
- (8) Excavated soil material shall not be placed within one hundred (100) feet of rivers, streams, ponds, or reservoirs in a manner that will cause it to be washed away by high water or stormwater runoff.
- (9) Fording of streams with construction equipment will not be permitted; therefore, temporary bridges, culverts, or other structures shall be used whenever stream crossings are necessary. Unless otherwise approved in writing by the Board of Health, mechanized equipment shall not be operated in streams.
- (10) The Applicant shall comply with the applicable State and local requirements relating to the prevention and abatement of pollution. Specifically, projects must meet the Massachusetts Stormwater Management Standards.
- (11) As each construction operation is completed, the Board or its agent shall be notified at least forty-eight (48) hours in advance for inspections by the proper Town authority and/or department prior to starting work on the succeeding operation.

SECTION 7 PERFORMANCE STANDARDS: STORMWATER CRITERIA

6.7.001 At a minimum, stormwater management shall be designed in accordance with the Stormwater Management Standards described in the Stormwater Handbook using current Best Management Practices (BMP). The applicant must submit the computations required to document compliance with the Standards as described in Volume 3, Chapter 1 of the Stormwater Handbook.

6.7.002 The applicant may propose alternative BMPs not listed in the Stormwater Handbook, subject to a full technical review and approval by the Board of Health. 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). The Board of Health will use the process established by the D.E.P. in the Stormwater Handbook to approve or deny the use of proprietary BMPs.

6.7.003 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

6.7.004 All stormwater from public rights of way, LUHPPLs, impervious areas within Industrial, Industrial Park, Commercial, and Highway Business Zoning Districts, and where a potential pollution problem exists, as deemed by the Board of Health, 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 access 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.

6.7.005 Lot Drainage

- (1) 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') with additional allowance as needed for proper side slope shall be provided.
- (2) 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.

6.7.006 General Criteria. All projects and activities that meet the Scope and Applicability of Section 2 of the Stormwater Management By-law must meet the following general performance criteria unless otherwise provided for in these Regulations:

(1) Landscape Design

Site plans and landscape plans for all proposed projects must take appropriate steps to minimize water use for irrigation and to allow for natural recharge of groundwater. Native species and habitat-creating species shall be used in all landscape plans to the maximum extent possible as site conditions allow. Invasive species shall not be planted in the Town of Billerica under any circumstances.

(2) Hydrologic Basis for Design of Structural Management Facilities

For stormwater facility sizing criteria, the basis for hydrologic and hydraulic evaluation of development and redevelopment sites are as follows:

- (a) All hydrological calculations shall be completed and certified to by a Registered Engineer licensed to practice in this field. Typically, the procedures to follow will include Technical Release Number 55 (TR55) and/or TR20 (as amended), with pipe design flows calculated using the Rational Method.

- (b) The rainfall amounts shall be determined using Type III 24-hour storm precipitation as referenced in Technical Release Number 55 and 20. Precipitation amounts shall be defined by the Northeast Regional Climate Center “Atlas of Precipitation Extremes for the Northeastern United States and Southeastern Canada.”
 - (c) The minimum time of concentration for street drainage (Rational Method) shall be five (5) minutes.
 - (d) Impervious cover is measured from the site plan and includes 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 with the exception of Pervious Paving Surfaces, such as porous asphalt, pervious concrete, paving stones, or grass pavers.
 - (e) Off-site areas shall be assessed based on their “pre-developed condition” for computing the water quality volume (i.e., treatment of only onsite areas is required). However, if an offsite area drains to a proposed BMP, flow from that area must be accounted for in the sizing of the BMP.
 - (f) Off-site areas draining to a proposed facility should be modeled as "present condition" for peak-flow attenuation requirements.
 - (g) The length of sheet flow used in time of concentration calculations is limited to no more than 100 feet.
 - (h) Detention time is defined as the time between the center of mass of the inflow hydrograph and the center of mass of the outflow hydrograph.
 - (i) For purposes of choosing a runoff Curve Number, all pervious lands in the site shall be assumed prior to development to be in “good” hydrologic condition regardless of conditions existing at the time of computation.
 - (j) Flooding and channel erosion impacts to receiving streams due to land development projects shall be determined at each point of discharge from the development project and such determination shall include any runoff from the balance of the watershed which also contributes to that point of discharge.
 - (k) Proposed residential, commercial, or industrial subdivisions or ANRs 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.
- (3) Peak Discharge Rates and Design Storms. Calculations performed and stamped by a Massachusetts Registered Professional Engineer shall be submitted and approved by the Board of Health that verify the following conditions have been met:
- (a) Localized flood mitigation and protection of channels from excessive bank and bed erosion and degradation shall be accomplished by providing 24-hour extended detention of runoff from the post-development 1-year, 24-hour return frequency storm. In addition, post-development peak discharge rates may not exceed pre-development peak discharge rates for the 2-year 24-hour return frequency storm as required by the Stormwater Handbook.

- (b) Downstream over bank flood and property protection shall be provided by attenuating the post-development peak discharge rate to the pre-development rate for the 10-year, 24-hour return frequency storm as required by the Stormwater Handbook.
 - (c) Extreme flooding and public safety protection shall be provided by evaluating 100-yr, 24-hour return frequency storm to demonstrate that there will be no increased flooding impacts off-site, as required by the Stormwater Handbook.
- (4) Water Quality Criteria
- (a) All land disturbance, new development or redevelopment activities shall not discharge untreated stormwater runoff directly to a wetland, local water body, municipal storm sewer system, or abutting property, without treatment as stipulated in these Regulations.
 - (b) The prescribed water quality volume required in the sizing of a structural stormwater practice shall be in accordance with the most recent version of the Stormwater Handbook.
- (5) Presumed Compliance with Massachusetts Water Quality Standards
- (a) All structural Stormwater Management facilities shall be selected and designed using the appropriate criteria from the most recent version of the Stormwater Handbook.
 - (b)
 - (c) Structural best management practices (BMPs) must be designed to remove 80% of the average annual post-development total suspended solids (TSS) and 40% of total phosphorus (TP), and 30% of total nitrogen (TN). It is presumed that a BMP complies with this performance goal if it is:
 - i. Sized to capture the prescribed Water Quality Volume;
 - ii. Designed according to the specific design and performance criteria outlined in the Massachusetts Stormwater Handbook;
 - iii. Constructed properly, as approved by the Board of Health; and
 - iv. Maintained in accordance with the O&M Plan approved by the Board of Health.

6.7.007 Recharge Criteria

- (1) Annual groundwater recharge rates shall be maintained, by promoting infiltration and recharge through the use of structural and nonstructural methods to the maximum extent practicable.
- (2) The stormwater runoff volume to be recharged to groundwater shall be determined using the methods prescribed in the latest version of the Massachusetts Stormwater Handbook. The recharge requirements shall apply to all activities within the jurisdiction of the Stormwater Management By-law except as noted, and unless specifically waived by the Board of Health. The recharge criterion is not required for any portion of a site designated as a stormwater LURRP (see Section 7.9 of these Regulations). In addition, the Board of Health 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.

6.7.008 Sensitive Areas. Stormwater discharges to Critical Areas with sensitive resources as defined in the Stormwater Handbook (e.g., Outstanding Resource Waters) are subject to additional criteria, and may need to utilize or restrict certain Stormwater Management practices at the discretion of the Board of Health. The Board of Health may designate additional Sensitive Areas and specific criteria for these areas by amending these Regulations.

6.7.009 LUHPPLs. Stormwater discharges from land uses or activities with higher potential pollutant loadings, sometimes known as “Hotspots”, require the use of specific Stormwater Management BMPs as specified in the most recent version of the Stormwater Handbook. The use of infiltration practices without pretreatment is prohibited.

6.7.010 Illicit Discharges. Illicit discharges and other activities that might interfere with the municipal separate storm sewer system, or impact receiving water quality, are prohibited in the Billerica By-Law Governing Discharges to the Municipal Storm Sewer System, Article XXVI of the General By-laws of the Town of Billerica.

SECTION 8 WAIVERS

6.8.001 The Board of Health may at its discretion, and after due consideration and consultation with the Conservation Commission, Department of Public Works Director, and Planning Board, decide to waive and exempt strict compliance with any requirement of the Stormwater Management 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 Billerica Stormwater Management By-law and these Regulations.

6.8.002 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.

6.8.003 All waivers requested shall be discussed and voted on at the public hearing for the project.

6.8.004 If, in the Board of Health’s opinion, additional time or information is required for review of a waiver request, the Board of Health 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.

6.8.005 Waivers described herein shall not constitute an exemption from any applicable Federal or State permitting requirements.

SECTION 9 ENFORCEMENT

6.9.001 Enforcement powers of the Board of Health or an authorized agent of the Board of Health are granted in the Stormwater Management By-law, Article XXV.

6.9.002 Notices and Orders

- (1) The Board of Health or an authorized agent of the Board of Health may issue a written notice of violation or enforcement order to enforce the provisions of the Stormwater Management By-law and these Regulations, which may include requirements to:
 - (a) Suspend or revoke approval of any Stormwater Management Permit;
 - (b) Cease and desist from or a portion of construction or land disturbing activity until there is compliance with the By-law and the Stormwater Management 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 Management Permit shall not relieve the Applicant of his obligation thereunder except at the discretion of the Board of Health.

- (2) If the Board of Health 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 Billerica may, at its option, undertake such work, and the property owner shall reimburse the Town of Billerica 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 Billerica, including administrative costs. The violator or property owner may file a written protest objecting to the amount or basis of costs with the Board of Health 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 Board of Health 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.

6.9.003 Any person who purchases, inherits or otherwise acquires real estate upon which work has been done in violation of the provisions of the Stormwater Management 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 Board of Health deems necessary to remedy such violation.

6.9.004 Any person who violates any provision of the Town of Billerica Stormwater Management By-law, these Regulations, or order or permit issued thereunder, may be ordered to correct the violation and/or shall be punished by fine in an amount allowable under M.G.L c. 40, § 21, excluding the cost of damages. Each day or part thereof that such violation occurs or continues shall constitute a separate offense.

- (1) Non-Criminal Disposition. As an alternative to criminal prosecution or civil action, the Town of Billerica may elect to utilize the non-criminal disposition procedure set forth in Chapter 1, Section 19 of these Board of Health Regulations, and Town of Billerica General By-laws Article XIV.
- (2) Appeals. The decisions or orders of the Board of Health shall be final. Further relief shall be to a court of competent jurisdiction.
- (3) 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.

SECTION 10 SURETY

6.10.001 As provided in Chapter 1, Section 1.7.002 of these Regulations, the Board of Health may require, as a condition to approving an Erosion and Sediment Control Plan and Stormwater Management Plan pursuant to issuing a Stormwater Management Permit, that the Applicant shall furnish a Performance Bond of cash, , or other acceptable security to the Town as obligee. The penal sum to be fixed by said Board of Health 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 Board of Health in connection with the control of erosion and sediment and pre- and post-construction stormwater management. Such requirements shall be in addition to surety requirements for the project by other boards, commissions, or departments.

If the project is phased, the Board of Health 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 one(1) year after the date of the issuance of a Certificate of Completion. Release of all, or a portion, of the surety by the Board of Health shall not constitute or imply release of sureties required by other boards, commissions, or departments for the project. Nor shall release of sureties by other boards, commissions, or departments constitute or imply release of the surety required by the Board of Health.

SECTION 11 CONSTRUCTION INSPECTIONS

6.11.001 Notice of Construction Commencement. The applicant must notify the Board of Health or its Authorized Agent in writing 14 days prior to the commencement of construction. In addition, the applicant must notify the Board of Health 14 days in advance of construction of critical components of any stormwater management facility.

6.11.002 Pre-Construction Meeting. The applicant and his construction supervisor/contractor and project engineer shall request and attend a preconstruction meeting with the Director of Public Health, the Board of Health's Consulting Engineer and any other interested parties prior to beginning any construction in order to review the construction sequence for the project, establish an inspection schedule and address any other concerns.

6.11.003 At the discretion of the Board of Health, periodic inspections of the stormwater management system construction shall be conducted by qualified personnel (a Town Officer, a professional engineer, a Certified Professional in Erosion and Sediment Control, or their designee who has been approved by the Board of Health). All inspections shall be documented and written reports prepared that contain the following information.

- (1) The date and location of the inspection,
- (2) Names, and titles of personnel making the inspection,
- (3) Whether construction is in compliance with the approved Stormwater Management Plan,
- (4) Variations from the approved construction specifications, and
- (5) Any other variations or violations of the conditions of the approved Stormwater Management Plan.

6.11.004 The applicant, or his agent, shall notify the Board at least forty-eight (48) hours in advance of scheduled inspections, or completion of construction operations requiring inspection, and prior to starting work on the succeeding construction operation.

6.11.005 Erosion Control Inspection

- (1) To ensure erosion control practices are in accordance with the filed Erosion and Sediment Control Plan, Erosion Control Inspections will be conducted by the site owner or an authorized representative at least once every 14 calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater from the start of construction until the site is permanently stabilized. Inspection frequency may be reduced to no less than once a month if the site is determined by the Board of Health to be temporarily stabilized, such as when runoff is unlikely due to winter conditions (e.g., site is covered with snow, ice, or the ground is frozen), or if construction is occurring during seasonal dry periods. The permittee is

required to notify the Board of Health of any change in inspection frequency, including termination of inspections due to site stabilization.

- (2) The inspection form will include,
 - (a) Name, date, and signature of qualified inspector,
 - (b) Weather information for the period since the last inspection (or since commencement of construction activity if the first inspection) including a best estimate of the beginning of each storm event, duration of each storm event, approximate amount of rainfall for each storm event (in inches), and whether any discharges occurred,
 - (c) Location(s) of discharges of sediment or other pollutants from the site,
 - (d) Location(s) of BMPs that failed to operate as designed or proved inadequate for a particular location, and/or location(s) where additional BMPs are needed that did not exist at prior inspection, and
 - (e) Corrective action required including any changes to the Erosion and Sediment Control Plan necessary and implementation dates.

If a project requires a Stormwater Pollution Prevention Plan (SWPPP) per the NPDES General Permit for Storm Water Discharges From Construction Activities (Construction General Permit), then the permittee is required to submit all Inspection Reports to the Board of Health. If the Inspection Reports meet the requirements of the Construction General Permit, they will be considered equivalent to the Erosion Control Inspection as described above.

6.11.006 The Board of Health or its designee shall inspect the project site at the following stages, at a minimum:

- (1) Initial Site Inspection: An inspection will be made prior to approval of any plan.
- (2) Stormwater Management System Inspection: An inspection will be made of the completed stormwater management system, prior to backfilling of any underground drainage or stormwater conveyance structures.
- (3) Final Inspection
 - (a) After the stormwater management system has been constructed and before the surety has been released, all applicants are required to submit to the Board of Health and the Consulting Engineer/Consultant (one copy each) a final inspection report to include "as-built" plans for any stormwater management facilities or practices after final construction is complete. As-built plans must be certified by a Professional Engineer.
 - (b) The Board of Health or an authorized agent shall inspect the system to confirm its "as-built" features. The inspector shall also evaluate the effectiveness of the system in an actual storm. If the inspector finds the system to be adequate he shall so report to the Board of Health before a Certificate of Completion is issued.

6.11.007 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 in accordance with the Stormwater Management Plan, it shall be corrected by the applicant before the Certificate of Completion is released. If the applicant fails to act the Board of Health may use the surety bond to complete the work.
- (2) If the Board of Health 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. A Stop Work Order shall be issued until any violations are corrected and all work previously completed has received approval by the Board of Health.

SECTION 12 CERTIFICATE OF COMPLETION

6.12.001 Upon completion, the Applicant is responsible for certifying that the completed project is in accordance with the approved plans and specifications by submitting As-built Plans to the Board of Health as described in Section 6.6.009 and shall provide regular inspections sufficient to adequately document compliance.

6.12.002 The Board of Health 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 the Stormwater Management By-law and these Regulations.

SECTION 13 PERPETUAL INSPECTION AND MAINTENANCE

6.13.001 Maintenance Responsibility. The Town of Billerica 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 graded 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.

6.13.002 Maintenance Inspections.

- (1) Stormwater management facilities and practices included in an Operation and Maintenance Plan with a Maintenance Agreement in accordance with Section 6.6.012 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 6.6.012 of these Regulations between the owner and the Board of Health 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 annually to the Board of Health 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, and

(d) Description of the required maintenance.

6.13.003 Right-of-Entry for Inspection. The terms of the Maintenance Agreement as specified in Section 6.6.012 of these Regulations shall provide for the Board of Health, or its designee, to enter the property at reasonable times and in a reasonable manner for the purpose of inspection. The Board of Health, 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 Board of Health deems necessary, subject to the constitutions and laws of the United States and the Commonwealth.

6.13.004 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 Board of Health on an annual basis. Submission of the records shall be accompanied by a processing fee as set forth on the current Board of Health Fee Schedule. Parties responsible for the operation and maintenance of a stormwater management facility shall prepare records of the installation of the facilities and of all maintenance and repairs, and shall retain the records on-site for at least five years. These records shall be made available to the Board of Health during inspections of the facility, and at other reasonable times upon request.

6.13.005 Failure to Maintain.

- (1) If a Responsible Party fails or refuses to meet the requirements of the Maintenance Agreement, the Board of Health, after 30 days written notice (except, that in the event the violation constitutes an immediate danger to public health, public safety, or the environment 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 Board of Health may assess the owner(s) of the facility for the cost of repair work, which shall be a lien on the property.
- (2) The person responsible for carrying out the maintenance plan shall have 30 days, or other mutually agreed to time frame, after notification of any deficiencies discovered during an inspection of a stormwater management system, to correct the deficiencies. The Board of Health shall then conduct a subsequent inspection to ensure proper completion of repairs.