



Stormwater Management Rules and Regulations

GENERAL REFERENCES

See Stormwater Management Ordinance – Chapter 154

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ARTICLE I. GENERAL PROVISIONS AND DEFINITIONS

Section 1. Authority

These Stormwater Regulations are promulgated by the Fitchburg, Massachusetts Commissioner of Public Works under Chapter 154: Stormwater Management, of the City of Fitchburg Code of Ordinances, hereinafter referred to as the Stormwater Ordinance.

Section 2. Applicability

- A. These Regulations apply to all activities in accordance with the applicable sections of the Stormwater Ordinance and further described herein.
- B. Every user of the municipal storm drainage system shall be subject to these regulations, as they apply, and to any charges, rates, fees, and assessments which are or may be established by the City. Every user of the municipal storm drainage systems shall also be subject to applicable federal, state, and local regulations. In instances where various regulations contain different requirements, the most stringent requirements shall apply.
- C. Projects and/or activities not within the jurisdiction of any of the City of Fitchburg Boards, Commissions, or Departments, but still within the jurisdiction of the Stormwater Ordinance must comply with these Regulations and, if applicable, must obtain a Stormwater Management Permit in accordance with the permit procedures outlined herein.

Section 3. Purpose

- A. These regulations aim to mitigate the increase in stormwater runoff, contaminated or otherwise, associated with developed land and the accompanying increase of impervious surface, which has been found to be a major cause of impairment of water quality and increases in flow to lakes, ponds, streams, rivers, wetlands and groundwater.
- B. These Regulations are intended to:
 - 1. protect the public health, safety, welfare, and the environment;
 - 2. ensure proper and safe operation of the municipal storm drainage system;
 - 3. regulate direct and indirect discharge of stormwater to the municipal storm drainage system;
 - 4. prohibit and remove illicit connections and unauthorized discharges to the municipal storm drainage system;
 - 5. establish requirements, procedures, and design standards for activities which result in land disturbance including but not limited to land disturbance from development and redevelopment projects;
 - 6. create uniformity of process and to help clarify the provisions of Chapter 154: Stormwater Management, of the City's Code of Ordinances; and,
 - 7. minimize delay in the permitting process by providing Applicants and their consultants with information which will help them comply with the Stormwater Ordinance.

Section 4. Severability

- A. If any provision, paragraph, sentence, or clause of these Regulations shall be held invalid for any reason, all other provisions shall continue in full force and effect.

Section 5. Administration

- A. The Authorized Enforcement Agency shall administer, implement, and enforce these rules and regulations. Any powers granted to or duties imposed upon the Enforcement Agency may be delegated in writing by the Authorized Enforcement Agency to its employees, agents, or other City Departments.
- B. Waiver. Strict compliance with any requirement of Chapter 154: Stormwater Management or the Regulations may be waived for the reasons given, and in accordance with the procedures set forth in Chapter 154: Stormwater Management.

Section 6. Right to Amend Rules and Regulations

- A. The City reserves the right to amend these Regulations in any manner and to establish more stringent limitations or requirements as are deemed necessary and appropriate.

Section 7. Definitions

The definitions of terms in Chapter 154: Stormwater Management, as well as the following definitions, shall apply to terms used in these Regulations.

ABUTTER – The owner(s) of land, or person(s) having real property interests abutting the activity.

APPLICANT – Any person, individual, partnership, association, firm, company, corporation, trust, authority, agency, department, or political subdivision, of the Commonwealth of Massachusetts or the Federal government to the extent permitted ordinance requesting a Stormwater Permit for proposed land disturbance.

APPLICANT'S TECHNICAL REPRESENTATIVE – A Registered Professional Engineer (P.E.), licensed in the Commonwealth, hired by the Applicant to certify that design and construction are completed in accordance with the applicable local, state, and federal stormwater requirements.

AUTHORIZED ENFORCEMENT AGENCY - The Commissioner of Public Works and/or his/her designees have the authority to enforce Chapter 154: Stormwater Management, and these Rules and Regulations promulgated thereunder.

BEST MANAGEMENT PRACTICE (BMP) – An activity, procedure, restraint, or structural improvement that helps to reduce the quantity or improve the quality of stormwater runoff.

CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC) – A certified specialist in soil erosion and sediment control. This certification program, sponsored by the Soil and Water Conservation Society in cooperation with the American Society of Agronomy, provides the public with evidence of professional qualifications.

CITY – City of Fitchburg, Massachusetts.

CONSTRUCTION AND WASTE MATERIALS – Excess or discarded building or site materials, including but not limited to concrete truck washout, chemicals, litter, sanitary waste at a construction site that may adversely impact water quality, and clearing/grubbing wastes such as stumps and asphalt.

CLEARING – Any activity that removes the vegetative surface cover over the soil.

DEVELOPMENT – The modification of land, vegetation, water courses, or soils to accommodate a new use or expansion of existing use, usually involving construction. Includes mining, forestry, and topsoil removal operations.

EROSION – The wearing away of the land surface by natural or artificial forces such as wind, water, ice, gravity, or vehicle traffic and the subsequent detachment and transportation of soil particles.

EROSION AND SEDIMENT CONTROL PLAN – A document containing narrative, drawings, and details developed by a Registered Professional Engineer (P.E.) or a Certified Professional in Erosion and Sediment Control (CPESC), which includes BMPs, or equivalent measures designed to control surface runoff, erosion and sedimentation during pre-construction and construction related land disturbances. The plan is required as part of the application for a Stormwater Management Permit.

ESTIMATED HABITAT OF RARE WILDLIFE AND CERTIFIED VERNAL POOLS – Habitats delineated for state-protected rare wildlife and certified vernal pools for use with the Wetlands Protection Act Regulations (310 CMR 10.00) and the Forest Cutting Practices Act Regulations (304 CMR 11.00).

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

GREEN INFRASTRUCTURE – practice that uses or replicates natural systems to achieve a desired stormwater quality and/or quantity outcome.

GRUBBING – The act of clearing land surface by digging up roots and stumps.

ILLICIT CONNECTION - A surface or subsurface drain or conveyance, which allows an illicit discharge into the municipal storm drainage system, including without limitation sewage, process wastewater, or wash water and any connections from indoor drains, sinks, or toilets, regardless of whether said connection was previously allowed, permitted, or approved before the effective date of these Rules and Regulations.

ILLICIT DISCHARGE - Direct or indirect discharge to the municipal storm drainage system that is not composed entirely of stormwater, except as exempted in § **154-10** of the Stormwater Ordinance. The term does not include a discharge in compliance with a NPDES Stormwater Discharge Permit or a Surface Water Discharge Permit or resulting from firefighting activities exempted pursuant to § **154-10** of the Stormwater Ordinance.

IMPERVIOUS SURFACE – Any material or structure on or above the ground that prevents water infiltrating the underlying soil. Impervious surface includes without limitation roads, paved parking lots, sidewalks, and roof tops.

LAND DISTURBANCE – Any action that causes a change in the position, location, or arrangement of soil, sand, rock, gravel, or similar earth material, or results in the removal or covering up of natural vegetation.

LOW IMPACT DEVELOPMENT - An approach to environmentally friendly land use development. It includes landscaping and design techniques that attempt to maintain the natural, pre-developed ability of a site to manage rainfall. LID techniques capture water on site, filter it through vegetation, and let it soak into the ground.

MASSACHUSETTS ENDANGERED SPECIES ACT – (MGL c. 131A) and its implementing regulations at (321 CMR 10.00) which prohibit the “taking” of any rare plant or animal species listed as Endangered, Threatened, or of Special Concern.

MASSACHUSETTS STORMWATER MANAGEMENT POLICY – The Policy issued by the Department of Environmental Protection, and as amended, that coordinates the requirements prescribed by state regulations promulgated under the authority of the Massachusetts Wetlands Protection Act MGL c. 131A, § 40 and Massachusetts Clean Waters Act MGL c. 21, § 23-56. The Policy addresses stormwater impacts through implementation of performance standards to reduce or prevent pollutants from reaching water bodies and control the quantity of runoff from a site.

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

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT FOR DISCHARGES FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES – Permit required by the EPA for construction activities that disturb one acre or more of land, either by itself or as part of a larger development. Permit requires a Notice of Intent (NOI) to be submitted to the EPA and the development of a Stormwater Pollution Prevention Plan (SWPPP).

NEW DEVELOPMENT - any construction activities or land alteration on an area that has not previously been developed to include impervious cover.

OPERATION AND MAINTENANCE PLAN – A plan setting up 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.

OUTFALL – The point at which stormwater flows out from a point source discernible, confined, and discrete conveyance into waters of the Commonwealth of Massachusetts.

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

PERMITTEE – The person or party to whom a permit is granted and is held responsible for compliance with the Permit. For the Stormwater Management Permit, the permittee must be the owner of the property.

PERSON – An individual, partnership, association, firm, company, trust, corporation, agency, authority, department or political subdivision of the Commonwealth of Massachusetts or the federal government, to the extent permitted ordinance, and any officer, employee, or agent of such person.

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

PRE-CONSTRUCTION – All activity in preparation for construction.

PRIORITY HABITAT OF RARE SPECIES – Habitats delineated for rare plant and animal populations protected pursuant to the Massachusetts Endangered Species Act and its regulations.

REDEVELOPMENT – Development, rehabilitation, expansion, demolition, or phased projects that disturb the ground surface or increase the impervious area on previously developed sites. This will include paving of parking lots, driveways, and any other areas.

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

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

SEDIMENTATION – The process or act of deposition of sediment.

SEPTAGE – Liquids, solids, and other materials pumped or removed from a septic tank or similar holding tank and transported by vehicle.

SINGLE-FAMILY – A residential building consisting of one dwelling unit.

SITE – Any lot or parcel of land or area of property where land disturbances are, were, or will be performed.

SLOPE – The incline of a ground surface expressed as a ratio of horizontal distance to vertical distance or expressed as a percentage thereof.

SOIL – Any earth, sand, rock, crushed rock, gravel, or similar material.

STABILIZATION – The use, singly or in combination, of mechanical, structural, or vegetative methods, to prevent or inhibit erosion.

STORMWATER – Precipitation runoff, snow melt runoff, surface water runoff, and groundwater runoff and drainage.

STORMWATER MANAGEMENT PLAN – A plan required as part of the application for a Stormwater Management Permit.

STORMWATER POLLUTION PREVENTION PLAN (SWPPP) – A plan required for permit coverage under the NPDES General Permit for Discharges from Large and Small Construction Activities. The SWPPP is a detailed plan describing how erosion and sediment controls and other BMPs will be implemented on a construction site.

STRIP – Any activity which removes the vegetative ground surface cover, including tree removal, clearing, grubbing, and storage or removal of topsoil.

TSS – Total Suspended Solids.

VERNAL POOLS – Temporary bodies of freshwater which provide critical habitat for a number of vertebrate and invertebrate wildlife species.

WATERCOURSE – A natural or man-made channel through which water flows or a stream of water, including a river, brook, or underground stream.

WETLAND RESOURCE AREA – Areas specified in the Massachusetts Wetlands Protection Act MGL c. 131, § 40 and in the City's General Wetland Protection Rules and Regulations.

WETLANDS – Tidal and non-tidal areas characterized by saturated or nearly saturated soils most of the year that are located between terrestrial (land-based) and aquatic (water-based) environments, including freshwater marshes around ponds and channels (rivers and streams), brackish and salt marshes; common names include marshes, swamps and bogs.

ARTICLE II. USE OF STORMWATER DRAINAGE SYSTEMS

Section 8. Municipal Storm Drainage System

The use of all municipal storm drainage systems in the City shall be controlled by the DPW. No person shall, without prior authorization from the DPW, uncover, excavate over, block access to, make any connection with or opening into, alter, or disturb the municipal storm drainage system.

Section 9. Prohibited Connections to Stormwater Drainage Systems

The construction, use, maintenance or continued existence of illicit connections to the storm drain system is prohibited.

Section 10. Wastewater System Connections

Any wastewater system which is or has been connected to the stormwater drainage system, or which is or has been connected to the stormwater drainage system as a result of a false application, misrepresentation, or non-disclosure on a construction permit, or which was connected to the stormwater drainage system by way of obtaining a wastewater system connection and plumbing permits through any means which circumvented the limitations created by this Article, shall be disconnected, from the stormwater drainage system by the Owner or by the City at the Owner's expense.

Section 11. Flow Obstructions Prohibited

- A. No person shall place any dam or other flow restricting structure or device in any drainage facility or watercourse without first having obtained written authorization from the DPW.
- B. No person shall place or deposit into any outfall, drainage facility, stormwater drain or watercourse within the City any garbage, yard waste, soil, rock or similar material, or any other substance which obstructs flow in the stormwater drainage system or damages the system or interferes with the proper operation of the system or which constitutes a nuisance or a hazard to the public. In the event that such an obstruction occurs, the DPW may cause such obstruction to be removed or cause such damage to be repaired and to recover applicable costs pursuant to the provisions of these Regulations.

Section 12. Authorized Discharges to Stormwater Drains

Discharges to stormwater drains which are authorized by these Regulations are as follows:

- A. Discharges composed entirely of stormwater.
- B. Discharges for which the owner has obtained both written authorization from the DPW and an NPDES Permit, coverage under an NPDES General Permit, or an NPDES Permit Exclusion from the EPA.
- C. Discharges from the following sources:
 - 1. Waterline flushing;
 - 2. Flow from potable water sources;
 - 3. Springs;
 - 4. Natural flow from riparian habitats and wetlands;
 - 5. Diverted stream flow;
 - 6. Rising groundwater;

7. Uncontaminated groundwater infiltration as defined in 40 CFR 35.2005(20), or uncontaminated pumped groundwater;
 8. air conditioning condensation;
 9. Discharge from landscape irrigation or lawn watering;
 10. Water from individual residential car washing;
 11. Street wash water by methods approved by City;
 12. Water used for dyed water testing, provided verbal notification is given to the Authorized Enforcement Agency prior to the time of the test;
 13. Non-stormwater discharge permitted under a NPDES permit or a Surface Water Discharge Permit, waiver, or waste discharge order administered under the authority of the United States Environmental Protection Agency or the Department of Environmental Protection, provided that the discharge is in full compliance with the requirements of the permit, waiver, or order and applicable laws and regulations; and
 14. Discharge for which advanced written approval is received from the Authorized Enforcement Agency as necessary to protect public health, safety, welfare or the environment.
- D. Discharges to stormwater drains that require written authorization include, but are not limited to:
1. Dewatering drainage;
 2. Subsurface drainage;
 3. Non-contact cooling water, non-contact industrial process waters, uncontaminated cooling water, uncontaminated industrial process water;
 4. Discharge from dechlorinated swimming pool water (less than one ppm chlorine), provided the water is allowed to stand for one week prior to draining and the pool is drained in such a way as not to cause a nuisance;
 5. Or water associated with:
 - a) excavation of a foundation or trench,
 - b) hydrological testing,
 - c) groundwater treatment/remediation;
 - d) removal or installation of an underground storage tank,
 - e) foundation drains,
 - f) crawl space pumps,
 - g) footing drains, or

Section 13. Authorization to Discharge to Stormwater Drainage Systems

- A. With the exception of discharges authorized under Section 12 above, no person shall cause or allow any non-stormwater discharges to the municipal storm drainage system without having first obtained written authorization from the DPW. The Authorized Enforcement Agency shall have the option to charge an administrative fee for review of requests for written authorization to discharge into the municipal stormwater system.

- B. Persons seeking to discharge stormwater pursuant to activities requiring written authorization shall also obtain an NPDES Permit, coverage under an NPDES General Permit or an NPDES Exclusion for the discharge, where applicable, a copy of which shall be provided to the DPW.
- C. The written authorization issued to the user may stipulate special conditions and terms as deemed necessary or appropriate by the DPW.
- D. The decision to issue written authorization rests entirely with the DPW. Such discharges shall comply with all other applicable requirements.
- E. Written authorization shall be denied, revoked, suspended or reissued if the DPW determines that the discharge, whether singly or in combination with others, is or may cause or contribute to a water quality problem, or may cause or contribute to a violation of the City's NPDES Permit.
- F. In the case of construction site dewatering, the duration of the permit shall not exceed the time period necessary to keep a site dewatered during construction. A permittee may apply to the DPW for an extension of written authorization for construction site dewatering if so approved by the appropriate state or federal agency. Such application shall be submitted to the DPW a minimum of fourteen 14 days prior to the expiration of the existing permit.

Section 14. NPDES Notice of Intent and Permit

Every person who is required to be covered under an NPDES Permit for a Stormwater Discharge associated with Industrial Activity or for construction purposes shall submit to the Authorized Enforcement Agency a copy of the completed Notice of Intent or individual application as submitted to EPA, and the information identified in items A through H below, as applicable:

- A. Address of the building (or premises) where the discharge will take place and the name and address of the building (or premises) owner;
- B. Name of a contact person, title and phone number;
- C. A site plan or sketch which shows the location of the connection of the building stormwater drain or the point(s) of discharge to the municipal storm drainage system, including the street name, size of the stormwater drain to which the stormwater will discharge and the outfall to which the discharge will be conveyed and discharged;
- D. Standard Industrial Code (SIC Code) of the facility;
- E. A description of the product or services provided by the facility;
- F. A description of the nature of the discharge;
- G. Existing NPDES permit, if any;
- H. Facility's City water account number.

Section 15. Dumping to Catch Basins

- A. No person shall directly or indirectly dump, discharge, cause, or allow to be discharged into any catch basin any stormwater pollutant, including but not limited to:
 1. solid waste,
 2. construction waste and materials,
 3. utility access chamber discharges,
 4. paint or painting product,
 5. antifreeze,
 6. hazardous waste,
 7. oil,

8. gasoline,
9. grease and all other automotive and petroleum products,
10. solvents and degreasers,
11. drain cleaners,
12. commercial and household cleaners,
13. soap,
14. detergent,
15. cleaning or wash waters ammonia,
16. food and food waste,
17. fats, wax, oil and grease,
18. grass or yard waste,
19. leaves,
20. animal feces,
21. dirt,
22. sand,
23. gravel or other pollutant.

- B. Tracking or transference of any of the above enumerated pollutants from a site onto the City's roadways will be determined to be a discharge per the intent of these rules and regulations.
- C. Any person determined by the City to be responsible for the direct or indirect discharge of any of the above substances to a catch basin may be responsible for all clean-up costs and for paying any penalties assessed by the City or other federal state or local agencies.

Section 16. Disposal of Septage Prohibited

No person shall discharge or cause or allow to be discharged any septage into a City sanitary sewer, combined sewer, or stormwater drain or into any sewer or stormwater drain tributary thereto.

Section 17. Notification of Spills

Notwithstanding other requirements of federal, state or local laws, rules or regulations, as soon as a person responsible for a facility or operation, or responsible for emergency response for a facility or operation has information of or suspects a release of materials at that facility or operation resulting in or which may result in discharge of pollutants to the City's sanitary sewer, combined sewer, or stormwater drainage system or waters of the Commonwealth, the person shall take all necessary steps to ensure containment, and cleanup of the release. In the event of a release of oil or hazardous waste to the City's sanitary sewer, combined sewer, or stormwater drainage system, the person shall immediately notify the City's fire, police, and public works departments. In the event of a release of a non-hazardous pollutant to the city's sanitary sewer, combined sewer, or stormwater drainage system, the reporting person shall notify the DPW within twenty-four (24) hours. The reporting person shall provide to the DPW written confirmation of all telephone, facsimile or in-person notifications within three business days thereafter. If the discharge of prohibited materials is from a commercial or industrial facility, the facility owner or operator of the facility shall retain on-site a written record of the discharge and the actions taken to prevent its recurrence. Such records shall be retained in accordance with the Massachusetts Public Records Law.

Section 18. Design and Construction Standards

New building stormwater drain laterals, stormwater drains, special stormwater facilities, and appurtenances tributary to the municipal storm drainage system shall be designed and constructed in conformance with current DPW standards and specifications. In the absence of such specifications, the materials and procedures set forth in the ASCE/WEF Manual of Practice - *Design and Construction of Urban Stormwater Management Systems* (M.O.P. No. FD-20 / Practice No. 77) most recent edition shall apply, subject to the prior written approval of the Authorized Enforcement Agency.

ARTICLE III. LAND DISTURBANCE

Section 19. Permits and Procedures

- A. Permit issuance is required prior to any site altering activity that results in:
1. Land Disturbance that exceeds 20,000 square feet
 2. Disturbed areas 2,000 square feet or greater within the watershed of any of the City's drinking water supplies; or
 3. Disturbed areas containing slope lengths exceeding 25 feet on slopes greater than 15%.
- B. Filing Application. The site owner or his/her agent shall file with the Authorized Enforcement Agency five (5) copies and one (1) electronic copy of a completed application package for a Stormwater Management Permit. While the Applicant can be a representative, the permittee must be the owner of the site. The Stormwater Management Permit application package shall include:
2. A completed Application Form with original signatures of all owners;
 3. Five (5) copies and one (1) electronic copy of the Stormwater Management Plan and project description as specified in Section 20;
 4. Five (5) copies and one (1) electronic copy of the Erosion and Sediment Control Plan as specified in Section 21;
 5. Five (5) copies and one (1) electronic copy of the Operation and Maintenance Plan as specified in Section 22;
 6. Five (5) copies and one (1) electronic copy of the NPDES General Permit for Discharges from Large and Small Construction Activities application, including the Notice of Intent and Stormwater Pollution Prevention Plan (SWPPP);
 7. All copies of the application form, the Stormwater Management Plan, the Erosion and Sediment Plan, and the Operation and Maintenance Plan must be filed with the DPW. The date of receipt by the DPW shall be the official filing date; and
 8. Payment of the application and review fee. The Authorized Enforcement Agency shall obtain with each submission an application and review fee. The Authorized Enforcement Agency may require higher fees if deemed necessary as specified below in Section 19.B(7)(a).
 - a) If necessary, the Authorized Enforcement Agency may require additional fees for the following:
 - i. Specific engineering and consultant services. DPW may procure the services of outside consultants for the purposes of reviewing and verifying the application materials, these services may include hydrologic and drainage analysis, stormwater quality analysis, site inspections, as-built plan review, and legal issues. Fees are determined at the time of project review based on a specific scope of work.
 - ii. Inspection services as detailed in Section 25.
- C. Entry. Filing an application for a Stormwater Management Permit grants the Authorized Enforcement Agency, or its agent, permission to enter the site to verify the information in the application and to inspect for compliance with the resulting permit.
- D. Other Boards. The Authorized Enforcement Agency shall notify the City Clerk of receipt of the application and shall give one copy of the application package to the applicable City boards or Departments.
- E. Information requests. The Applicant shall submit all additional information requested by the Authorized Enforcement Agency to issue a decision on the application.

- F. Actions. The Authorized Enforcement Agency's action, rendered in writing, shall consist of either:
1. Approval of the Stormwater Management Permit application based upon determination that the proposed Stormwater Management Plan meets the Standards in Sections 20, 21, and 22 and will adequately protect the water resources of the community and is in compliance with the requirements set forth in these rules and regulations.
 2. Conditional Approval of the Stormwater Management Permit application subject to any conditions, modifications, or restrictions required by the Authorized Enforcement Agency which will ensure that the project meets the Standards in Sections 20, 21, and 22 and adequately protect water resources, set forth in these rules and regulations.
 3. Denial of the Stormwater Management Permit application based upon a determination that the proposed Stormwater Management Plan, as submitted, does not meet the Standards in Sections 20, 21, and 22 or adequately protect water resources, as set forth in these rules and regulations.
- G. Issuance of the Stormwater Management Permit is subject to the following:
1. No Stormwater Management Permit shall be issued until the required Stormwater Management Plan, Erosion and Sediment Control Plan, and Operation and Maintenance Plan are approved.
 2. As a condition of permit issuance, the Applicant shall agree to allow any inspections to be conducted.
 3. Where a bond, letter of credit, or other surety is required, the Stormwater Management Permit shall not be issued until the surety has been obtained and approved.
 4. Permit shall be predominately displayed at the entrance to the site by the applicant. Permit shall be responsible for mounting the permit on a solid post and backing and protecting the permit from the weather.
- H. Failure of the Authorized Enforcement Agency to take final action. Failure of the Authorized Enforcement Agency to take final action upon an application within 60 days shall be deemed to be approval of said application. Upon certification by the City Clerk that the allowed time has passed without the Authorized Enforcement Agency action, the Stormwater Management Permit shall be issued by the Authorized Enforcement Agency.
- I. Plan Changes. The permittee must notify the Authorized Enforcement Agency in writing of any drainage change or alteration in the system authorized in a Stormwater Management Permit before any change or alteration is made. If the Authorized Enforcement Agency determines that the change or alteration is significant, based on the Stormwater Management Standards in Sections 20, 21, and 22 and accepted construction practices, the Authorized Enforcement Agency may require that an amended application be filed, and a public hearing held. If any change or alteration from the Stormwater Management Permit occurs, the Authorized Enforcement Agency may require the installation of interim erosion and sediment control measures before approving the change or alteration.
- J. Project Completion. At completion of the project the permittee shall submit as-built record drawings of all structural stormwater controls and treatment BMPs required for the site. The as-built drawings shall show deviations from the approved plans, if any, and be certified by a Registered Professional Engineer (P.E.).
- K. Intent and Consistency with Other Plans. The intent of this permit is to ensure compliance with the State and City's Stormwater Standards as well as compliance with the NPDES MS4 Permit issued to the City by the EPA. Submittals to other City departments, boards, and commissions, State or Federal Agencies, may be utilized and supplemented to fulfill all requirements of the Stormwater Management Permit.

Section 20. Stormwater Management Plan

- A. To the greatest extents practicable, the City requires development and redevelopment project proponents to attenuate runoff and infiltrate rainfall on the property, to minimize and mitigate against runoff and contaminants leaving private properties, both during construction and once completed.
- B. The application for a Stormwater Management Permit shall include submittal of a Stormwater Management Plan to the Authorized Enforcement Agency. This Stormwater Management Plan shall contain sufficient information for the Authorized Enforcement Agency and relevant City departments to evaluate the environmental impact, effectiveness, and acceptability of the measures proposed by the Applicant for reducing adverse impacts from stormwater. The Plan shall be designed to meet the Massachusetts Stormwater Management Standards and the design standards as set forth in Section 18. The Stormwater Management Plan shall fully describe the project in drawings, and narrative. It shall include:
1. Contact Information. Name, address, and telephone numbers of the owner, Applicant, and person(s) or firm(s) preparing the Plan,
 2. A locus map showing the parcel in relation to the surrounding properties,
 3. A North arrow, scale and date,
 4. The property lines,
 5. The existing zoning, and land use at the site,
 6. Critical area boundaries at the site,
 7. The proposed land use,
 8. The location(s) of existing and proposed easements,
 9. The location(s) of existing and proposed utilities,
 10. The site's existing and proposed topography with contours at two-foot intervals,
 11. The existing site hydrology: the rate of precipitation, quantity of stormwater, rate of surface runoff, and timing of its arrival at a point of interest,
 12. A description and delineation of existing stormwater conveyances, impoundments, and wetlands on or adjacent to the site or into which stormwater flows,
 13. Estimated seasonal high groundwater elevation (November to April) in areas to be used for stormwater retention, detention, or infiltration,
 14. The existing and proposed vegetation and ground surfaces with runoff coefficient for each,
 15. A drainage area map showing pre and post construction watershed boundaries, drainage area and stormwater flow paths,
 16. A description and drawings of all components of the proposed drainage system including:
 - a) Locations, cross sections, and profiles of all brooks, streams, drainage swales and their method of stabilization,
 - b) All measures for the detention, retention, or infiltration of water,
 - c) All measures for the protection of water quality,
 - d) The structural details for all components of the proposed drainage systems and stormwater management facilities,

- e) Notes on drawings specifying materials to be used, construction specifications, and typical details, and
 - f) Expected hydrology with supporting calculations.
17. A description and drawings of all components of the proposed drainage system,
 18. Proposed improvements including location of buildings or other structures, impervious surfaces, and drainage facilities, if applicable,
 19. Timing, schedules, and sequence of development including clearing, stripping, rough grading, construction, final grading, and vegetative stabilization,
 20. The name, address and the beeper or cell phone number, if applicable, of the best management practices manager and a proposed schedule for the inspection and maintenance of all best management practices,
 21. A narrative section which includes a discussion of each measure, its purpose, its construction sequence and installation timing as they apply to the site and the project proposed,
 22. The extent of one-hundred-year floodplain boundaries if identified on the Federal Emergency Management Agency floodplain maps,
 23. Soils information for design purposes from the Soil Survey of Worcester County Massachusetts, Northeastern Part, prepared by the United States Department of Agriculture, Soil Conservation Service,
 24. A depiction or description of areas of soil disturbance,
 25. A depiction or description of areas of cut and fill,
 26. Erosion and Sedimentation Controls to be employed during construction, including driveway stone mats, and temporary BMPs.
 27. Tabulated sequence of construction,
 28. The construction schedule,
 29. The earth movement schedule,
 30. The projects phases as they relate to soil disturbance,
 31. A maintenance schedule for the period of construction, and
 32. Any other information requested by the Authorized Enforcement Agency.
- C. Standards. Projects shall meet the Standards of the City and Massachusetts Stormwater Management Policy, which are as follows:
1. Drainage System calculations based on the following:
 - a) Peak flows and run-off at the boundaries of the project shall be no higher following development than before development, for the 2, 10, 25, and 100-year storm events using either the SCS TR-55 or TR-20 methods.
 - b) Low Impact Development (LID) site planning and design strategies must be used to the maximum extent feasible.
 - c) Applicant must demonstrate that Green Infrastructure stormwater techniques were also considered and utilized to the maximum extent feasible.
 - d) The design of treatment and infiltration practices must follow the guidance in Volume 2 of the Massachusetts Stormwater Handbook, as amended.

- e) Stormwater management systems on new development sites shall be designed to:
- i. Not allow new stormwater conveyances to discharge untreated stormwater in accordance with Massachusetts Stormwater Handbook Standard 1;
 - ii. Control peak runoff rates in accordance with Massachusetts Stormwater Handbook Standard 2;
 - iii. Recharge groundwater in accordance with Massachusetts Stormwater Handbook Standard 3;
 - iv. Eliminate or reduce the discharge of pollutants from land uses with higher pollutant loads as defined in the Massachusetts Stormwater Handbook in accordance with Massachusetts Stormwater Handbook Standard 5;
 - v. Protect Zone II or Interim Wellhead Protection Areas of public water supplies in accordance with Massachusetts Stormwater Handbook Standard 6;
 - vi. Implement long term maintenance practices in accordance with Massachusetts Stormwater Handbook Standard 9; and
 - vii. Require that all stormwater management systems be designed to:
 - (1) Retain the volume of runoff equivalent to, or greater than, one (1.0) inch multiplied by the total post-construction impervious surface area on the site and/or
 - (2) Remove 90% of the average annual load of TSS generated from the total post-construction impervious area on the site and 60% of the average annual load of Total Phosphorus (TP) generated from the total post-construction impervious surface area on the site.
- f) Stormwater management systems on Redevelopment sites shall meet the following Standards to the maximum extent feasible:
- i. Massachusetts Stormwater Standards 1, 2, and 3, the pretreatment and structural best management practices requirements Massachusetts Stormwater Standards 5 and 6.
 - ii. Stormwater management systems on Redevelopment sites shall also improve existing conditions by requiring that stormwater management systems be designed to:
 - (1) Retain the volume of runoff equivalent to, or greater than, 0.80 inch multiplied by the total post-construction impervious surface area on the site and/or
 - (2) Remove 80% of the average annual post-construction load of TSS generated from the total post-construction impervious area on the site and 50% of the average annual load of Total Phosphorus (TP) generated from the total post-construction impervious surface area on the site.
 - iii. Stormwater management systems on redevelopment sites may utilize offsite mitigation within the same USGS HUC10 basin as the redevelopment site to meet the equivalent retention or pollutant removal requirements.
 - iv. Redevelopment activities that are exclusively limited to maintenance and improvement of existing roadways, (including widening less than a single lane, adding shoulders, correcting substandard intersections, improving existing drainage systems, and repaving projects) shall improve existing conditions where feasible and are exempt from part e (i-iii). Roadway widening or improvements that increase the amount of impervious area on the redevelopment site by greater than or equal to a single lane width shall meet the requirements of part e (i-iii).

- f) Pollutant removal shall be calculated consistent with EPA Region 1's BMP Performance Extrapolation Tool or other BMP performance evaluation tool provided by EPA Region 1, where available. If EPA Region 1 tools do not address the planned or installed BMP performance, any federally or State approved BMP design guidance or performance standards (e.g. MA State Stormwater Handbook and design guidance manuals) may be used to calculate BMP performance.
- g) Capacity of drainage systems shall be adequate to carry all stormwater run-off presently flowing through the proposed project area, as well as to dispose of any additional run-off generated by the proposed project up to and including the run-off from a 100-year storm using the following methods:
 - i. The flow from storms of up to a 25-year frequency and 24-hour duration shall be conveyed through the municipal storm drainage system on the developed site. Storm drain piping and grate inlets shall be designed for a 25-year storm event;
 - ii. Detention facilities and culverts shall be provided to accommodate all runoff, up to and including the run-off generated by the 100-year, 24- hour storm. As a minimum, detention basin routing calculations shall be prepared for the 10, 25 and 100-year storm events.
- h) Drainage pipe systems shall be designed to provide self-cleaning flow velocities.
- i) The combination of storage and design release rate shall not result in a storage duration of greater than seventy-two (72) hours.
- j) Maximum total depth of detention/retention area shall be four feet (4') as measured from the lowest outlet point to the lowest point of the emergency overflow.
- k) Outlet control structures shall be designed to minimize required maintenance for proper operation.
- l) Each stormwater detention/retention area shall be provided with a method of emergency overflow in the event of a storm in excess of the 100-year frequency type.
- m) Drainage system may discharge to an existing, adjacent municipal storm drainage system if the Applicant can show that the municipal storm drainage system provides sufficient excess capacity to accommodate both the existing runoff and the proposed additional runoff from the project during the 2-year, 10-year and 100-year 24-hour duration storm event.
- n) Hydraulic calculations, prepared by a Massachusetts licensed Professional Engineer, shall note the specific engineering and/or computer program used. Hydraulic calculations shall be submitted to substantiate all design features of any proposed or existing drainage system utilized by the project. Computations for run-off shall be made in accordance with standard engineering practice and in compliance with D.E.P. standards. Hydraulic calculations shall include the following:
 - i. Runoff area boundaries shown on a plan
 - ii. Methodology used
 - iii. Soil and land use characterization and design storm parameters
 - iv. Soil conditions and ground water
 - v. Pipe size calculation
 - vi. Detention and retention pond and outlet control calculations as applicable
 - vii. TSS removal rates and calculations

- viii. Phosphorus removal rates and calculations
 - ix. Infiltration calculations as applicable
 - x. Culvert analysis and calculation as applicable
- o) A continuous design element (i.e. railing or hedge) shall border any detention/retention basin area with interior side slopes greater than 3:1. Drainage basins shall be designed to facilitate access for maintenance vehicles and personnel.
 - p) If it is necessary to carry drainage across lots within the development, storm drainage easements shall be provided, of such width and construction as will be adequate to accommodate the volume and velocity of the run-off. However, no such easement shall be less than twenty feet (20') in width.
 - q) If a proposed drainage system will carry water across land outside the development boundaries to an approved outfall, the Applicant shall secure appropriate drainage rights, at the Applicant's expense.
 - r) Retention and detention ponds, and methods of overland flow may be used to retain, detain and treat any increased and accelerated runoff which the development may generate.
 - s) There shall be a minimum of two feet (2') of naturally occurring soils between the detention basin bottom and the maximum annual ground water table;
 - t) Intermittent surface water courses and such as swales, forebays, detention/retention basins shall be vegetated and appropriately reinforced along the low flow channel.
 - u) The use of drainage facilities coordinated with landscaped buffers, open space and conservation areas is encouraged.
 - v) Neighboring properties shall not be negatively impacted by flooding due to excessive runoff caused by the development.
3. When one or more of the Standards cannot be met, an Applicant may demonstrate that an equivalent level of environmental protection will be provided. Additional design standards are referenced in Section 23.
4. Landscaping
- a) All open areas, exclusive of areas to remain in an existing natural state shall be landscaped utilizing both natural and man-made materials such as grasses, trees, shrubs, paving materials and outdoor furniture that are appropriate to the local climate and anticipated uses of the project.
 - b) Landscaped buffer shall consist of natural or landscaped area at least ten feet (10') wide. Where natural or existing plantings are not present, new plantings shall provide a visual screen that begins at or near ground level and, when mature, will provide a minimum height of at least eight feet (8'). At least fifty percent of the plantings shall consist of evergreens. Buffers may be interrupted to provide for the entrance and exit of vehicular and pedestrian traffic. New shrub plantings in buffer areas shall be a minimum of four feet (4') in height at time of planting. New evergreen trees shall be a minimum of six feet (6') in height at time of planting.
 - c) All required landscaping shall be maintained in good condition at all times by the Owner and at the Owner's expense.
 - d) Requirements set by the City of Fitchburg, Massachusetts, *Rules and Regulations Governing the Subdivision of Land*, Section 4.011, Trees and Plantings, as updated and revised periodically, must also be met by the Owner and at the Owner's expense.

5. Nonstructural Stormwater Management Strategies.

- a) To the maximum extent practicable, nonstructural stormwater management strategies set forth in Section 20.B.5.b shall be incorporated into the design. The Applicant shall identify the nonstructural measures incorporated into the design of the project. If the Applicant contends that it is not feasible for engineering, environmental, or safety reasons to incorporate any nonstructural stormwater management measures identified in Section 20.B.5.b below into the design of a particular project, the Applicant shall identify the strategy considered and provide a basis for the contention.
- b) Nonstructural stormwater management strategies incorporated into site design shall:
 - i. Protect areas that provide water quality benefits or areas particularly susceptible to erosion and sediment loss,
 - ii. Minimize impervious surfaces and break up or disconnect the flow of runoff over impervious surfaces,
 - iii. Maximize the protection of natural drainage features and vegetation,
 - iv. Minimize the decrease in the "time of concentration" from pre-construction to post construction,
 - v. Minimize land disturbance including clearing and grading,
 - vi. Minimize soil compaction,
 - vii. Provide low-maintenance landscaping that encourages retention and planting of native vegetation and minimizes the use of lawns, fertilizers and pesticides,
 - viii. Provide vegetated open-channel conveyance systems discharging into and through stable vegetated areas, and
 - ix. Provide other source controls to prevent or minimize the use or exposure of pollutants at the site, in order to prevent or minimize the release of those pollutants into stormwater runoff. Such source controls include, but are not limited to:
 - (1) Site design features that help to prevent accumulation of trash and debris in drainage systems,
 - (2) Site design features that help to prevent discharge of trash and debris from drainage systems,
 - (3) Site design features that help to prevent and/or contain spills or other harmful accumulations of pollutants at industrial or commercial developments, and
 - (4) When establishing vegetation after land disturbance, applying fertilizer in accordance with the requirements established under the Massachusetts Stormwater Management Policy Handbook.

Section 21. Erosion and Sediment Control Plan

- A. The application for a Stormwater Management Permit shall include submittal of an Erosion and Sediment Control Plan to describe the nature and purpose of the proposed development, pertinent conditions of the site and the adjacent areas, and proposed erosion and sediment controls. The Applicant shall submit such material as is necessary to show that the proposed development will comply with the design requirements listed in Section 21.B below.
- B. The design requirements of the Erosion and Sediment Control Plan are intended to:

1. Minimize total area of land disturbance,
2. Sequence activities to minimize simultaneous areas of land disturbance,
3. Minimize peak rate of runoff in accordance with the Massachusetts Stormwater Policy,
4. Minimize soil erosion and control sedimentation during construction, provided that prevention of erosion is preferred over sediment control,
5. Divert uncontaminated water around disturbed areas,
6. Maximize groundwater recharge,
7. Install and maintain all Erosion and Sediment Control measures in accordance with manufacturer specifications and good engineering practices,
8. Prevent off-site transport of sediment; depositing or washing soil into a waterbody or the storm drainage system is prohibited,
9. Protect and manage on and off-site construction and waste material storage areas (overburden and stockpiles of dirt, borrow areas, or other areas used solely by the permitted project are considered a part of the project),
10. Comply with applicable Federal, State and local laws and regulations including waste disposal, sanitary sewer or septic system regulations, and air quality requirements, including dust control,
11. Prevent significant alteration of habitats mapped by the Massachusetts Natural Heritage and Endangered Species Program as Endangered, Threatened or of Special Concern, Estimated Habitats of Rare Wildlife and Certified Vernal Pools, and Priority Habitats of Rare Species from the proposed activities,
12. Institute interim and permanent stabilization measures, which shall be instituted on a disturbed area as soon as practicable but no more than 14 days after construction activity has temporarily or permanently ceased on that portion of the site,
13. Properly manage on-site construction and waste materials,
14. Prevent off-site vehicle tracking of sediments. Graveled roads, access drives and parking areas of sufficient width and length are required to prevent sediment from being tracked onto public or private roadways. Any sediment reaching a public or private road shall be removed by street cleaning (not flushing) before the end of each workday,
15. Install measures intended to keep soil on site or out of water bodies, storm drainage systems or the public right-of-way as the first step in any development. These measures shall be made functional prior to any upslope development taking place,
16. Remove any soil that enters the public right-of-way,
17. Protect stormwater inlets that are functioning during the course of the development by approved sediment control measures so that sediment-laden water cannot enter the inlets without first being filtered,
18. Apply permanent or temporary soil stabilization to areas of land disturbance in conformance with the following schedule:
 - a) Between May 1 and September 30, all denuded sites shall immediately be provided with either temporary or permanent soil stabilization.
 - c) Between October 1 and April 30, temporary erosion and sediment control measures to reduce dust and sediment transport shall be applied as soon as practicable, but in no case more than seven days after land disturbing activity occurs.

- d) Ground cover shall be installed on any portion of a site that is denuded for more than six months. Sports fields or playgrounds surrounded by vegetative cover or permanently installed curbing are exempt from this requirement.
- e) Temporary measures shall be maintained until permanent measures are established.
- f) Permanent non-permitted land disturbing activities may achieve compliance with the standards set out in subsections (a) through (d) above, with the installation and maintenance of approved permanent BMPs.
- g) Secure or protect soil stockpiles throughout the project with temporary or permanent soil stabilization measures. The Applicant is accountable for the protection of all stockpiles on the site, and those transported from the site. Depositions of soil may be subject to additional regulations requiring permit, review or erosion and sediment control.
- h) Post signage on the site of the permitted land disturbance activity that identifies the City's Authorized Enforcement Agency and telephone number.

C. Erosion and Sediment Control Plan Content. The Plan shall contain the following information:

- 1. Names, addresses, and telephone numbers of the owner, Applicant, and person(s) or firm(s) preparing the Plan,
- 2. Title, date, north arrow, names of abutters, scale, legend, and locus map,
- 3. Location and description of natural features including:
 - a) Watercourses and water bodies, wetland resource areas and all floodplain information, including the 100-year flood elevation based upon the most recent Flood Insurance Rate Map, or as calculated by a Registered Professional Engineer (P.E.) for areas not assessed on these maps,
 - b) Existing vegetation including tree lines, canopy layer, shrub layer, and ground cover, and trees with a caliper twelve (12) inches or larger, noting specimen trees and forest communities, and
 - c) Habitats mapped by the Massachusetts Natural Heritage and 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 (500') of any construction activity.
- 4. Lines of existing abutting streets showing drainage and driveway locations and curb cuts,
- 5. Existing soils, volume and nature of imported soil materials,
- 6. Topographical features including existing and proposed contours at intervals no greater than two 2 feet (2') with spot elevations provided when needed,
- 7. Surveyed property lines showing distances and monument locations, all existing and proposed easements, rights-of-way, and other encumbrances, the size of the entire parcel, and the delineation and number of square feet of the land area to be disturbed,
- 8. Drainage patterns and approximate slopes anticipated after major grading activities (Construction Phase Grading Plans),
- 9. Location and details of erosion and sediment control measures with a narrative of the construction sequence/phasing of the project, including both operation and maintenance for structural and non-structural measures, interim grading, and construction and waste material stockpiling areas,

10. Path and mechanism to divert uncontaminated water around disturbed areas, to the maximum extent practicable,
 11. Location and description of industrial discharges, including stormwater discharges from dedicated asphalt plants and dedicated concrete plants, which are covered by this permit,
 12. Stormwater runoff calculations in accordance with the Massachusetts Stormwater Management Policy,
 13. Location and description of and implementation schedule for temporary and permanent seeding, vegetative controls, and other stabilization measures,
 14. A description of construction and waste materials expected to be stored on-site and intended disposal methods. The Plan shall include a description of controls to reduce pollutants from these materials, including storage practices to minimize exposure of the materials to stormwater, and spill prevention and response,
 15. A description of provisions for phasing the project where one acre of area or greater is to be altered or disturbed,
 16. Plans must be stamped and certified by a Registered Professional Engineer (P.E.) registered in Massachusetts or a Certified Professional in Erosion and Sediment Control (CPESC), and
 17. Such other information as is required by the Authorized Enforcement Agency.
- D. Project Changes. The permittee, or their agent, shall notify the Authorized Enforcement Agency in writing of any change or alteration of a land disturbance authorized in a Stormwater Management Permit before any change or alteration occurs. If the Authorized Enforcement Agency determines that the change or alteration is significant, based on the design requirements listed in Section 18 and accepted construction practices, the Authorized Enforcement Agency may require that an amended Stormwater Management Permit application be filed and/or a public hearing held. If any change or deviation from the Stormwater Management Permit occurs during a project, the Authorized Enforcement Agency may require the installation of interim measures before approving the change.

Section 22. Operation and Maintenance Plan

- A. Operation and maintenance of private facilities during and after construction are the responsibility of the Owner, and shall be performed at the Owner's expense.
- B. If the Operation and Maintenance Plan identifies a person other than the Owner (for example, a public agency or homeowners' association) as having the responsibility for maintenance, the Plan shall include documentation of such person's agreement to assume this responsibility, or of the developer's obligation to dedicate a stormwater management facility to such person under an applicable ordinance or regulation.
- C. Responsibility for maintenance shall not be assigned or transferred to a tenant of a property.
- D. If the person responsible for maintenance identified under Section 22.B above is not a public agency, the operation and maintenance and any future revisions based on Section 22.G below shall be recorded upon the deed of record for each property on which the maintenance described in the Operation and Maintenance Plan must be undertaken.
- E. Preventative and corrective maintenance shall be performed to maintain the function of the stormwater management measure, including repairs or replacement to the structure; removal of sediment, debris, or trash; restoration of eroded areas; snow and ice removal; fence repair or replacement; restoration of vegetation; and repair or replacement of nonvegetated linings.
- F. The person responsible for maintenance identified under Section 22.B above shall maintain a detailed log as detailed in Section 22.L.

- G. The person responsible for maintenance identified under Section 22.B above shall evaluate the effectiveness of the Operation and Maintenance Plan at least once per year and adjust the Plan and the deed as needed.
- H. The person responsible for maintenance identified under Section 22.B above shall retain and make available, upon request by any public entity with administrative, health, environmental, or safety authority over the site, the Operation and Maintenance Plan and the documentation required by Section 22.L.
- I. The requirements of Sections 22.C and 22.D do not apply to stormwater management facilities that are dedicated to and accepted by the City.
- J. In the event that the stormwater management facility becomes a danger to public safety or public health, or if it is in need of maintenance or repair, the Authorized Enforcement Agency shall so notify the responsible person in writing. Upon receipt of that notice, the responsible person shall have fourteen (14) days to affect maintenance and repair of the facility in a manner that is approved by the Authorized Enforcement Agency or their designee. The Authorized Enforcement Agency, in its discretion, may extend the time allowed for effecting maintenance and repair for good cause. If the responsible person fails or refuses to perform such maintenance and repair, the City may immediately proceed to do so and shall bill the cost thereof to the responsible person.
- K. Nothing in this Section 22 shall preclude the Authorized Enforcement Agency in which the major development is located from requiring the posting of a performance or maintenance guarantee in accordance with the Massachusetts Sedimentation and Erosion Control Guidance Document.
- L. An Operation and Maintenance Plan is required at the time of application for all projects. The Operation and Maintenance Plan shall be designed to ensure compliance with the Stormwater Management Permit, these rules and regulations, and that the Massachusetts Surface Water Quality Standards, 314, CMR 4.00 are met in all seasons and throughout the life of the system. The Authorized Enforcement Agency shall make the final decision of what maintenance option is appropriate in a given situation. The Authorized Enforcement Agency will consider natural features, proximity of site to water bodies and wetlands, extent of impervious surfaces, size of the site, the types of stormwater management structures, and potential need for ongoing maintenance activities when making this decision. The Operation and Maintenance Plan shall remain on file with the Authorized Enforcement Agency and shall be an ongoing requirement. The Operation and Maintenance Plan shall include:
 - 1. The name(s) of the owner(s) for all components of the system.
 - 2. Maintenance agreements that specify:
 - 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) A Maintenance Schedule for all drainage structures, including swales and ponds,
 - d) A list of easements with the purpose and location of each, and
 - e) The signature(s) of the owner(s).
 - 3. Map showing locations of all stormwater facilities including but not limited to catch basins, manholes, drainage piping, and stormwater devices.
 - 4. Detailed log of all preventative and corrective maintenance for the structural stormwater management measures incorporated into the design of the development, including a record of all inspection and copies of all maintenance-related work orders.
 - 5. Record of annual updates.
- M. Stormwater Management Easement(s).

1. Stormwater management easements shall be provided by the property owner(s) as necessary for:
 - a) access for facility inspections and maintenance;
 - b) preservation of stormwater runoff conveyance, infiltration, and detention areas and facilities, including flood routes for the 100-year storm event; and
 - c) direct maintenance access by heavy equipment to structures requiring regular cleanout.
2. The purpose of each easement shall be specified in the maintenance agreement signed by the property owner.
3. Stormwater management easements are required for all areas used for off-site stormwater control unless a waiver is granted by the Authorized Enforcement Agency.
4. Easements shall be recorded with the Worcester County Registry of Deeds prior to issuance of a Certificate of Occupancy by the Authorized Enforcement Agency.

N. Changes to Operation and Maintenance Plan

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

O. The Applicant is required to obtain an annual certification from a Registered Professional Engineer (P.E.) that maintenance is being performed on structural BMPs.

P. Waivers

1. The City shall perform operation and maintenance of structural BMPs for public facilities only.

Section 23. Relevant Reference Materials

In order to complete the Stormwater Management Plan, Erosion and Sediment Plan, and Operation and Maintenance Plan as part of the permit requirements and ensure that developers and landowners meet Massachusetts standards, the Applicant shall use the following (most recent edition) references to aid in structural and non-structural BMP implementation:

- A. Massachusetts Stormwater Management Policy Handbook.
- B. Massachusetts Erosion and Sediment Control Guidelines for Urban and Suburban Areas.
- C. Massachusetts Department of Public Works "Highway Design Manual" Chapter 10, Drainage and Erosion Control.

Section 24. Surety

The Authorized Enforcement Agency may require the permittee to post before the start of land disturbance or construction activity, a surety bond, irrevocable letter of credit, cash, or other acceptable security. The form of the bond shall be approved by the **City Solicitor** and be in an amount deemed sufficient by the Authorized Enforcement Agency to ensure that the work will be completed in accordance with the permit. If the project is phased, the Authorized Enforcement Agency may release part of the bond as each phase is completed in compliance with the permit, but the bond may not be fully released until the Authorized Enforcement Agency has received the final inspection report and the final inspection has been conducted as required by Section 25 and issued a Certificate of Occupancy.

Section 25. Inspection and Site Supervision

- A. Pre-construction Meeting. Prior to starting clearing, excavation, construction, or land disturbance, the Applicant, the Applicant's Technical Representative, the general contractor or any other person with authority to make changes to the project, shall meet with the Authorized Enforcement Agency, to review the permitted plans and their implementation.
- B. The Applicant's Technical Representative shall inspect the project site and provide certification to the City of project completeness at the following stages:
 1. Initial Site Inspection: prior to approval of any plan.
 2. The Applicant's Technical Representative or its designated agent shall make inspections as hereinafter required and shall either approve that portion of the work completed or shall notify the permittee wherein the work fails to comply with the Stormwater Management Permit as approved. The Stormwater Management Permit and associated plans for grading, stripping, excavating, and filling work, bearing the signature of approval of the Authorized Enforcement Agency, shall be maintained at the site during the progress of the work. The permittee shall notify the Authorized Enforcement Agency at least two (2) working days before each of the following events; the Applicant's Technical Representative shall be responsible to observe and assure the project progresses appropriately at the following events:
 - a) Erosion and sediment 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.
- C. Permittee Inspections. The permittee 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 required plans and the need for maintenance or additional control measures. The permittee or his/her agent shall submit monthly reports to the Authorized Enforcement Agency or designated agent in a format approved by the Authorized Enforcement Agency.
- D. Bury Inspection: prior to backfilling of any underground drainage or stormwater conveyance structures.

- E. Final Inspection. After the stormwater management system has been constructed, the Applicant must submit a stamped record plan signed by a Registered Professional Engineer (P.E.) detailing the actual stormwater management system as installed. The record plan will include a statement box on the plan certifying the site review was conducted in accordance with these rules and regulations and all items were constructed according to the approved permit. The permittee or Applicant's Technical Representative shall request a final inspection site meeting with the Authorized Enforcement Agency. The Authorized Enforcement Agency shall visit the site with the Applicant's Technical Representative to confirm its "as-built" features. As-Built drawings of structural BMPs shall be submitted to the Authorized Enforcement Agency. The final inspection shall be completed and the final report (Section 26) shall be submitted to the Authorized Enforcement Agency before the surety has been released and prior to requesting the issuance of Certificate of Occupancy.
- F. Access Permission. To the extent permitted by state law, or if authorized by the owner or other party in control of the property, the Authorized Enforcement Agency its agents, officers, and employees may enter upon privately owned property for the purpose of performing their duties under these rules and regulations and may make or cause to be made such examinations, surveys or sampling as the Authorized Enforcement Agency deems reasonably necessary to determine compliance with the Stormwater Management Permit.
- G. If the system is found to be inadequate by virtue of physical evidence of operational failure, even though it was built as called for in the Stormwater Management Plan, it shall be corrected by the permittee before the performance guarantee is released. If the permittee fails to act the City may use the surety bond to complete the work. Examples of inadequacy shall be limited to: errors in the infiltrative capability, errors in the maximum groundwater elevation, failure to properly define or construct flow paths, or erosive discharges from basins.
- H. Inspection Fees. If necessary, the Authorized Enforcement Agency may require additional fees for site inspections conducted by City Departments. Fees are calculated at a rate of \$ 85 per hour for review, inspection, and monitoring services that require an excess of two (2) hours of review, inspection, and monitoring time by a City department.

Section 26. Final Report

The Applicant's Technical Representative shall evaluate the effectiveness of the stormwater BMPs during an actual storm and document the findings. The final report will include certification from the Applicant's Technical Representative as to the effectiveness of the installed system during storm events.

Upon completion of the work, the permittee shall submit a report to the Authorized Enforcement Agency (including certified as-built construction plans) from a Professional Engineer (P.E.), surveyor, or Certified Professional in Erosion and Sediment Control (CPESC), certifying that all erosion and sediment control devices, and approved changes and modifications, have been completed in accordance with the conditions of the approved Stormwater Management Permit. Any discrepancies should be noted in the cover letter.

Section 27. Waivers

- A. The Authorized Enforcement Agency may waive strict compliance with any requirement of these rules and regulations promulgated hereunder, where:
 - 1. such action is allowed by federal, state and local statutes and/or regulations,
 - 2. is in the public interest, and
 - 3. is not inconsistent with the purpose and intent of these rules and regulations.

- B. Any Applicant seeking a waiver, shall submit a written request. Such a request shall be accompanied by an explanation or documentation supporting the waiver request and demonstrating that strict application of these rules and regulations does not further the purposes or objectives of these rules and regulations. If approved, the waiver shall be memorialized in writing, upon City letterhead, and signed by the Authorized Enforcement Agency.

Section 28. Exemptions

- A. Pursuant to the Stormwater Ordinance, the provisions of this Regulation do not apply to:
1. Construction activities waived from permit coverage under the NPDES General Permit for Stormwater Discharges from Construction Activities.
 2. Routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or the original purpose of the site.
 3. Normal maintenance and improvement of land in agricultural use as defined by the Wetlands Protection Act regulation 310 CMR 10.04;
 4. Maintenance of existing landscaping, gardens or lawn areas associated with a single-family dwelling;
 5. The construction of fencing that will not substantially alter existing terrain or drainage patterns;
 6. Construction of utilities other than drainage (gas, water, electric, telephone, etc.) which will not alter terrain or drainage patterns;
 7. Emergency work to protect life, limb, or property.

Section 29. Certificate of Occupancy

The Authorized Enforcement Agency will issue a letter to the Applicant certifying completion upon receipt and approval of the final inspection reports and/or upon otherwise determining that all work of the Stormwater Management Permit has been satisfactorily completed in conformance with these rules and regulations, which letter shall be submitted by the owner or applicant to the Building Department prior to the issuance of a Certificate of Occupancy, if applicable.

Section 30. Enforcement

- A. The Authorized Enforcement Agency or an authorized agent of the Authorized Enforcement Agency shall enforce these rules and regulations, the Stormwater Management Ordinance, orders, violation notices, and enforcement orders, and may pursue all civil and criminal remedies for such violations. The provisions are detailed in Chapter 154, Stormwater Management Ordinance of the City's Code of Ordinances, § 154-6. Civil and criminal remedies include but are not limited to:
1. Written notice of violation.
 2. Issuance of a cease and desist order if the Authorized Enforcement Agency and/or its agent determines that conditions at the site are in violation of any of the requirements of this chapter, the regulations and/or the permit and that such violation is either an immediate threat to the environment, the public health or safety; or that the property owner has failed to take the corrective action(s) identified in a written notice of the violation issued under this chapter or has failed to take such corrective action within the time required in the notice of violation.
 3. Injunctive relief in a court of appropriate jurisdiction.

4. Correction of violations by the Authorized Enforcement Agency or its agent. The provisions of this chapter impose duties upon persons subject to it and penalties for neglecting those duties. When the Authorized Enforcement Agency or its agent determines that a person, subject to this chapter, has breached one or more of the duties imposed hereunder, the Authorized Enforcement Agency or its agent can perform such duty or duties at the expense of the person having the duty. The expense cannot exceed the penalty imposed by the criminal enforcement sections of this chapter. Pursuant to the MGL c. 40, § 31, expense may be recovered in a contract action. The City hereby expressly declares these expenses to be municipal charges subject to the imposition of a municipal charges lien under the provisions of MGL c. 40, § 58. This lien shall take effect upon the recording of a list of the unpaid charges at the registry of deeds. If this fee or charge remains unpaid when the Assessors set the tax and warrant under MGL c. 59, § 53, this fee or charge shall be added to the tax even if the property is otherwise tax-exempt.
 5. Noncriminal disposition. Whoever violates any provision of this chapter or a regulation promulgated by the Authorized Enforcement Agency, a condition contained in a permit issued by the Authorized Enforcement Agency, the conditions of notice of violation or the conditions on the cease and desist order may, in the discretion of the Authorized Enforcement Agency or its agent, be subject to the noncriminal procedure established pursuant to the provisions of MGL c. 40, § 21D. The penalty for the first violation shall be \$50. The penalty for the second violation shall be \$100. Each day on which a violation occurs shall be considered a separate offense.
 6. Criminal prosecution for violation of any provision of this chapter, the permit and/or regulations promulgated by the Authorized Enforcement Agency. Any such violation shall be punished by a fine of \$300 for each offense. Each day on which such violation continues shall constitute a separate offense.
- B. The Authorized Enforcement Agency or its Agent may issue a written notice of violation to any person whom it determined is in violation of any of the requirements of this chapter, the regulations enacted by the Authorized Enforcement Agency or a permit and plan approved under this chapter. The notice of violation shall:
1. Specify the actions, conditions or omissions which create the violation;
 2. Identify the necessary corrective actions;
 3. Specify the time within which the violations must be corrected;
 4. Be served by certified mail upon the violator with a copy maintained in the records of the Authorized Enforcement Agency.