

HOLYOKE STORMWATER AUTHORITY

STORMWATER REGULATIONS

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SECTION 1, GENERAL PROVISIONS

1.01 Purpose and Authority

These Regulations are adopted by the Board of Public Works as the Stormwater Authority pursuant to Section 38-76 of the City of Holyoke Code of Ordinances in order to effectuate the purposes and objectives stated therein.

1.02 Definitions

In addition to those terms defined in Section 38-76 of the City of Holyoke Code of Ordinances, as used in this regulation the following terms shall mean:

Adverse impact: Any deleterious effect on waters or wetlands, including their quality, quantity, surface area, species composition, aesthetics or usefulness for human or natural uses which are or may potentially be harmful or injurious to human health, welfare, safety or property, to biological productivity, diversity, or stability or which unreasonably interfere with the enjoyment of life or property, including outdoor recreation.

Agricultural Activity: Producing or raising one or more of the following agricultural commodities:

1. animals, including but not limited to livestock, poultry, and bees;
2. fruits, vegetables, berries, nuts, maple sap, and other foods for human consumption; and
3. feed, seed, forage, tobacco, flowers, sod, nursery or greenhouse products, and ornamental plants or shrubs.

and as further defined by the Massachusetts Wetlands Protection Act and its implementing regulations.

As-built drawings: Drawings that record and document aspects and features of a project following construction using the plans derived from a Stormwater Management Permit. These shall include all final grades, inverts, pipe sizes, etc. and clearly depict all changes to project design from the approved plans. As-built drawings are to be signed, dated and sealed by a Professional Engineer or Licensed Surveyor and certified by the Designer.

Best management practices (BMP): Stormwater management systems and facilities including structural or biological devices, man-made or natural, and nonstructural practices that temporarily store, treat, or convey stormwater runoff to reduce flooding, remove pollutants, recharge groundwater, and provide other amenities. BMPs are further described in the Massachusetts Stormwater Handbook: Volume 2 (February 2008 or as updated).

City Engineer: The City Engineer of the city or his duly authorized representative.

Clean Water Act: The Federal Water Pollution Control Act (33 U.S.C. section 1251 et seq.) as hereinafter amended.

Common Plan of Development: A "larger common plan of development or sale" is a contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under one plan.

Construction activity: Disturbance of a site for the purpose of constructing buildings, structures, other areas of impervious surface, and site alternations for other purposes including the disturbance of the ground by removal or moving of vegetative surface cover or topsoil, grading, excavation, clearing or filling.

Critical areas: Special Resource Waters, Outstanding Resource Waters (as defined in Massachusetts Stormwater Handbook, 2008)

Designer: The individual responsible for the analysis, design and inspection of the stormwater management system required by these Regulations. For large developments, as defined elsewhere in these Regulations, the Designer shall be a Massachusetts Registered Professional Engineer with experience and qualifications in the area of stormwater management, design, inspection and operations. The Designer may be a sole practitioner or a member of a firm.

Design storm: A rainfall event of specified size and return frequency that is used to calculate the runoff volume and peak discharge rate to a control point such as a BMP.

Detention: The temporary storage of storm runoff in a BMP, which is used to control the "peak discharge" rates, and which provides settling of pollutants.

Discharge of pollutants: The addition from any source of any pollutant or combination of pollutants into storm drain systems or into the waters of the United States or Commonwealth from any source.

Drainage area: That area contributing stormwater runoff to a single point measured in a horizontal plane, which is enclosed by a ridgeline or other topographic divide.

Easement: A right of use over the property of another, generally for a specific purpose such as rights of access or rights regarding flowing waters or drainage.

Environmentally Sensitive Site Design: Site planning and layout that seeks to create pockets of development that avoid sensitive natural areas to prevent disruption of the natural hydrology and habitat function of the site.

Erosion: The process by which the ground surface is worn away by action of artificial or natural forces, such as wind, water, ice, gravity, vehicle traffic, or a combination thereof and the subsequent detachment and transportation of soil particles.

Excavation or cut: Any act by which soil or rock is cut into, dug, quarried, uncovered, removed, displaced, or relocated, and also included shall be the conditions resulting there from.

Finding of Impracticability: A finding by the Stormwater Authority or City Engineer that an Applicant cannot meet an applicable performance standard requirement due to physical site constraints encountered. Findings of Impracticability cannot be issued if a finding would result in a project being in noncompliance with federal or state stormwater regulations.

Floodplain (100 Year): That area which would be inundated by storm runoff or flood water equivalent to that which would occur with a rainfall or flood having the probability of occurring once in 100 years.

Flow attenuation: Prolonging the flow time of runoff to reduce the peak discharge.

Grading: Altering the ground surface through stripping, excavation, filling, stockpiling, or any combination thereof; also included shall be the land in its excavated or filled condition.

Groundwater: All water beneath the surface of the ground not contained in a manmade structure.

Grubbing: The act of clearing land surface by digging up roots and stumps.

Hydrology model: One of the following:

- TR-20, a watershed hydrology model developed by the USDA Natural Resources Conservation Service that is used to route a design storm hydrograph through a pond;
- "HydroCAD", a Computer Aided Design tool used for modeling stormwater runoff.
- TR 55, or Technical Release 55, "Urban Hydrology for Small Watersheds" is a publication developed by the Natural Resources Conservation Service to calculate stormwater runoff and an aid in designing detention basins; or,
- Rational Method: Also known as the rational formula. An empirical equation relating the peak discharge from a basin to the product of a dimensionless runoff coefficient that is estimated from basin hydrologic characteristics, the catchment area, and a rainfall intensity.

Illegal or illicit discharge: Any direct or indirect non-stormwater discharge to storm drain systems. The term does not include a discharge in compliance with an NPDES stormwater discharge permit or resulting from fire fighting activities.

Illicit connection: Any surface or subsurface drain or conveyance, which allows an illegal discharge into storm drain systems. Illicit connections include conveyances which allow illegal discharge to storm drain systems including sewage, process wastewater or wash water and any connections from indoor drains, pumps, sinks or toilets, regardless of whether said connection was previously allowed, permitted or approved before the effective date of this ordinance.

Impervious surfaces: Any material, structure, or developed areas which impede or prevent the infiltration of water into the soil, including but not limited to buildings, rooftops, pavement and any other material or structure on or above the ground that reduce or prevent water from infiltrating the underlying soil.

Infill site: A development site comprised of an undeveloped or previously developed, demolished or cleared area of land located within an area of existing development.

Infiltration: The downward movement of water from the surface to the subsoil.

Infiltration system: A stormwater best management practice used to manage stormwater runoff is discharged to an excavation is filled with aggregate and or piping - chambers. Infiltration systems are not intended to trap sediments or pollutants and pretreatment may be required.

Land development: any construction activity or land disturbance of a site that is currently in a natural vegetated state or does not contain alteration by man-made activities.

Land Disturbance: any land clearing or grading by mechanical means including excavation, bulldozing, digging or other similar activities.

Land uses with higher potential pollutant loads: 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.

Low Impact Development (LID): An approach that seeks to mimic and/or restore a site's pre-development hydrology and water quality through: recognition and protection of on-site natural features; design that configures buildings, streets, parking areas, driveways, sidewalks/walkways, and utilities to limit impervious surfaces and preserve open space; and use of facilities to capture and manage rainfall (or snowmelt) close to where it falls. These facilities serve to slow, store, absorb, detain, evaporate, and/or filter and treat flow, and include but are not limited to bio-detention/retention areas, subsurface infiltration systems, grassed swales, porous pavements, cisterns and green roofs and walls.

Massachusetts Stormwater Handbook and Stormwater Standards: Issued by the Massachusetts Department of Environmental Protection, and as amended, that coordinates the requirements prescribed by state regulations promulgated under the authority of the Massachusetts Wetland Protection Act G.L. c. 131, §40 and Massachusetts Clean Waters Act G.L. c. 21, §§23-56. The Handbook addresses stormwater impacts through implementation of performance standards to promote increased stormwater recharge, the treatment of runoff from polluting land uses, low impact development (LID) techniques, pollution prevention, the removal of illicit discharges to stormwater management systems, and improved operation and maintenance of stormwater best management practices (BMPs). The latest version of this Handbook as amended shall apply to these Regulations.

Municipal separate storm sewer system (MS4) or municipal storm drain system: The system of conveyances designed or used for collecting or conveying only stormwater that is owned and operated by the City of Holyoke, including any publicly maintained road with a drainage system, street, gutter, curb, inlet, piped storm drain, pumping facility, retention or detention basin, natural or manmade or

altered drain channel, reservoir, and other drainage structure that together comprise the storm drainage system.

National Pollutant Discharge Elimination System (NPDES) stormwater discharge permit: A permit issued by the United States Environmental Protection Agency or jointly with the Commonwealth that authorizes the discharge of pollutants to waters of the United States.

New development. Any construction activities or land alteration on a site that *has not* been previously altered to include buildings, impervious surfaces, or other uses other than agricultural activities.

Non-stormwater discharges: Any discharge to the storm drain systems not composed entirely of stormwater.

Outfall: The terminus of a storm drain or other stormwater structure where the contents are released.

Owner: Every person or entity who alone, jointly or severally with others: (a) has legal title to any building, structure or parcel of land; or (b) has care, charge or control of any building, structure, or parcel of land in any capacity including but not limited to, an agent, executor, executrix, administrator, administratrix, trustee or guardian of the estate of the holder of legal title; or (c) a lessee under a written lease agreement; or (d) a mortgagee in possession; or (e) an agent, trustee or other person appointed by the courts.

Peak discharge: The maximum instantaneous rate of flow during a storm, usually in reference to a specific design storm event.

Permanent soil erosion control measures: Those control measures which are installed or constructed to control soil erosion and which are maintained after completion of grading activities.

Permeable soils: Soils with a sufficiently rapid infiltration rate so as to reduce or eliminate stormwater runoff. The permeability of soils are generally classified by NRCS hydrologic soil types A, B, C, and D ranging from most permeable to least permeable.

Person: Any individual, association, partnership, corporation, company, business, organization, trust, estate, administrative agency, public or quasi-public corporation or body, the commonwealth or political subdivision thereof or the federal government, to the extent permitted by law and agent of such person.

Pollutant: Any element or property of sewage, agricultural, industrial or commercial waste, runoff, leachate, heated effluent, or other matter whether originating at a point or non-point source, that is or may be introduced into any sewage treatment works or waters of the commonwealth. Pollutants shall include, but not be limited to: paints, varnishes and solvents; oil and other automotive fluids; non-hazardous liquid and solid wastes and yard wastes; refuse, rubbish, garbage, litter, or other discarded or abandoned objects, ordinances, accumulations and floatables; pesticides, herbicides and fertilizers; hazardous materials and wastes; sewage, fecal coliform and pathogens; dissolved and particulate metals; animal wastes and residues; rock, sand, salt and soils; construction wastes and residues; and noxious or offense matter of any kind.

Post-construction: The state of a site after development-related construction activity is complete.

Post-construction impervious surface: Is the final impervious cover on the portion of the property where construction activities have occurred.

Pre-construction: The state of a site prior to development. The pre-development state shall be interpreted as the state of a site at the time of permitting for a redevelopment project.

Process water: Any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any material, intermediate product, finished product or waste product.

Recharge: The process by which groundwater is replenished by precipitation through the percolation of runoff and surface water through the soil.

Redevelopment: Any construction activities, land alteration, or improvement of impervious surfaces on a site that has been previously altered by the addition of buildings, impervious surfaces or site regrading. Redevelopment may include alterations to existing infrastructure, demolition and replacement of existing infrastructure, or addition of new infrastructure.

Note that when a project involves alterations to a previously developed site and includes rehabilitation or modification of an existing building, the limits of the “site” for compliance with the redevelopment peak flow reduction performance standards cited in Section 5 shall include the area of site alterations, plus building footprint, and any areas of historical alteration on the parcel or parcels being redeveloped. Full compliance with this performance standard may be waived for portions of sites not to be altered when the portion of the site to be redeveloped is less than 50% of the total area of the parcel(s) to be redeveloped. For the purposes of this regulation, development of a property that has solely been used for agricultural activities in the past to any other use does not constitute redevelopment, but is instead classified as a new development of a site that has not been previously developed.

Retention: The holding of runoff without release except by means of evaporation, infiltration, overflow, or emergency bypass.

Sensitive receptor: A part of an ecosystem that is of concern to land and wildlife managers. A sensitive receptor might be a particular organism (salamander, lichen, tree species) or it might be an ecosystem compartment (soil, trees, etc.). Sensitive receptors also include: streams, storm drains, combined sewers, roads, and/or buildings.

Site: the parcel(s) of land being developed that comprises the areal extent of construction activities, including but not limited to the creation of new impervious cover, modifications to existing impervious cover, or other site alterations.

Sites with higher potential pollutant loads: Sites in which recharge is proposed at or adjacent to an area classified as contaminated, sites where contamination has been capped in place; sites that have an Activity and Use Limitation (AUL) that precludes inducing runoff to the groundwater, pursuant to MGL Chapter 21E and the Massachusetts Contingency Plan 310 CMR 40.0000; sites that are at the location of

a solid waste landfill as defined in 310 CMR 19.000; and sites where groundwater from the recharge location flows directly toward a solid waste landfill or 21E site. Land uses with higher potential pollutant loads include the industrial sectors regulated by the NPDES Multi-Sector General Permit Program, land uses that are subject to individual effluent limits established by the EPA, and land uses that the EPA has designated as not suitable for Zone IIs and Zone As of public water supplies. Specific land uses with higher potential pollutant loads include: hazardous waste treatment or disposal facilities, solid waste facilities, light industrial activities, storage of hazardous materials, auto shops, fueling stations, cemeteries, car washes, exterior fleet storage areas, exterior vehicle service maintenance and cleaning areas, and parking lots with high-intensity-uses.

Stabilization: The use, singly or in combination, of mechanical, structural, or vegetative methods, to prevent or retard erosion.

Start of construction: The first land-disturbing activity associated with a development, including but not limited to, land preparation such as: clearing and grubbing, grading and filling; installation of streets and walkways; excavation for basements; footings, piers or foundations; and erection of temporary forms.

Stormwater: Runoff from precipitation or snowmelt.

Stormwater Authority: The Stormwater Authority shall be comprised of the members of the Board of Public Works. The Stormwater Authority is responsible for coordinating the review, approval and permit process as defined in Section 38-76 of the City of Holyoke Code of Ordinances. Other Boards and/or department may participate in the review process as defined in these Regulations.

Stormwater Management: The use of structural or non-structural practices that are designed to reduce stormwater runoff pollutant loads, discharge volumes and/or peak flow discharge rates. Stormwater management includes the use of LID development strategies and best management practices.

Stormwater Management Professional: A person of significant demonstrable experience with the design and construction of stormwater systems and erosion and sedimentation control practices, who is acceptable to the City Engineer.

Stormwater Permit (SMP): A permit issued by the Stormwater Authority after review of an application, plans, calculations, and other supporting documents, which is designed to protect the environment of the City for the deleterious effects of stormwater runoff.

Storm drain system: A 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 manmade or altered drainage channel, reservoir, and other drainage structure that together comprise the storm drainage system on public or private ways within the City.

Stripping: Any activity which removes or significantly disturbs the vegetative or surface cover, including clearing and grubbing operations.

Swale: A natural depression or wide shallow ditch used to temporarily store, route, or filter runoff.

Temporary soil erosion control measures: Interim control measures which are installed or constructed for the control of soil erosion until permanent soil erosion control is effective.

To the maximum extent practicable: (a) The Applicant has made all reasonable efforts, as determined by the City Engineer, to meet an applicable standard; (b) The Applicant has made a complete evaluation of all possible measures that apply to the given standard, including Best Management Practices that apply; and (c) If the applicable standard cannot be met, the Applicant has demonstrated that he or she is implementing the highest practicable method for achieving the goals of the applicable standard. The Applicant bears the burden of proof that he or she has made these efforts.

Total Suspended Solids (TSS): Solid materials, including organic and inorganic, that are suspended in stormwater.

Toxic or hazardous material or waste: Any material which, because of its quantity, concentration, chemical, corrosive, flammable, reactive, toxic, infectious or radioactive characteristics, either separately or in combination with any substance or substances, constitutes a present or potential threat to human health, safety, welfare or to the environment. Toxic or hazardous materials include any synthetic organic chemical, petroleum product, heavy metal, radioactive or infectious waste, acid and alkali, and any substance defined as toxic or hazardous under M.G.L.A. c. 21C and c. 21E, and the regulations at 310 CMR 30.000 and 310 CMR 40.000.

Uncontaminated water: Water containing no pollutants.

Watercourses: A natural or manmade channel through which water flows or a stream of water, including a river, brook or underground stream.

Waters of the Commonwealth: All waters within the jurisdiction of the Commonwealth of Massachusetts, including, without limitation, rivers, streams, lakes, ponds, springs, impoundments, estuaries, wetlands, coastal waters and groundwater.

Wastewater: Any sanitary waste, sludge or septic tank or cesspool overflow and water that during manufacturing, cleaning or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct or waste product.

1.03 Applicability

- a. This section shall apply to all stormwater management systems whether or not flows enter the municipally owned storm drainage or combined sewer system.
- b. Prior to the commencement of any of the following activities a Stormwater Management Permit must be issued:
 - i. Large Developments:
 - 1.) Multifamily residential developments involving four or more units;

- 2.) Any new land development which results in the creation of at least 5,000 total square feet of impervious surface on a site;
 - 3.) Any redevelopment or additions to existing uses which will result in the addition, reuse, reconstruction, refurbishing or repaving of at least 5,000 total square feet of impervious surface area on a site.
 - 4.) Any land disturbance or construction activities disturbing greater than or equal to one acre.
 - 5.) Land development or redevelopment involving multiple separate activities in discontinuous locations or on different schedules if the activities are part of a larger common plan of development that together disturbs one or more acres or adds 5,000 total square feet of impervious surface.
- ii. Small Developments
- 1.) Any new commercial or industrial land development which results in the creation of at least 2,000 but less than 5,000 total square feet of impervious surface on a site;
 - 2.) Any redevelopment or additions to existing commercial or industrial uses which will result in the addition, reuse, reconstruction, refurbishing or repaving of at least 2,000 but less than 5,000 total square feet of impervious surface area on site;
 - 3.) Any commercial or industrial land disturbance or construction activities disturbing greater than one-half acre but less than one acre, or adds 2,000 but less than 5,000 total square feet of impervious surface.

1.04 Exemptions

a. The following uses and activities are exempt from the requirements for Stormwater Management Permits:

- i. Any single or multifamily residential development or redevelopment involving three or less units and with less than 1 acre of disturbance;
- ii. Any agricultural activity which is consistent with an approved soil conservation plan prepared or approved by the Natural Resources Conservation Service;
- iii. Any logging which is consistent with a timber management plan approved under the Forest Cutting Practices Act by Massachusetts Department of Conservation and Recreation;

- iv. Repairs to any stormwater treatment system deemed necessary by the Holyoke Department of Public Works;
- v. Municipal activities that are exclusively limited to maintenance and improvement of existing sidewalks and roadways (including widening less than a single lane, adding shoulders, correcting substandard intersections with such elements as turning lanes, improving existing utility systems, and repaving projects). Note that 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 are subject to the requirements of this Bylaw.
- vi. Repaving activities that are limited to pavement overlays or pavement milling and overlays.
- vii. Any emergency activity that is immediately necessary for the protection of life, property or the environment, as determined by the Holyoke Department of Public Works; and
- viii. Any uses and activities not specified in subsection 1.03(b).

SECTION 2, PERMIT APPLICATION REQUIREMENTS

2.01 Large Development

- a. Applications for Large Developments shall be prepared by a Massachusetts licensed professional engineer, in good standing, the stormwater facility Designer, and shall include the following:
 - i. One (1) original completed application form, including any written waiver requests, and written requests for Findings of Impracticability.
 - ii. A Stormwater Management Plan which complies with the requirements of Section 4 of this regulation, and which contains sufficient information to describe the nature and purpose of the proposed development. The plan shall serve as the basis for all subsequent construction.
 - iii. Supporting computations, drawings, and sufficient information describing the manner, location, and type of measures in which stormwater runoff and erosion will be managed for the entire development during and after construction. One (1) full size set of any plans or drawings and one (1) copy of reduced size plans, preferably 11" x 17" shall be submitted. Additional copies are to be provided upon request. In addition, all documents shall be provided in electronic format.
 - iv. Operations and maintenance plan which complies with the requirements of Section 6 of this regulation.

- v. Draft Operation, Inspection and Maintenance Agreement, which complies with the requirements of Section 6 of this regulation. Agreement must be executed by the Applicant and City prior to the start of construction.
- vi. Estimated performance bond value, which complies with the requirements of this section. Performance bond must be issued prior to the start of construction.
- vii. List of property owners and their addresses for all parcels of land within 300 feet of the subject parcel, to be obtained from the most recent property list from the Holyoke Assessors Office. Proof of mailing to the abutters shall be provided by the Applicant to the Authority at the public hearing.
- viii. Nonrefundable fee of \$500.00, payable to the City of Holyoke.

2.02 Small Development

- a. Applications for Small Developments shall be prepared by an experienced Stormwater Professional and shall include:
 - i. One (1) completed application form, including any written waiver requests and written requests for Findings of Impracticability.
 - ii. One (1) copy of a Stormwater Management Plan which complies with the requirements of Section 4 of this regulation, and which contains sufficient information to document that the project meets the criteria of and the objectives of this regulation to the maximum extent practicable.
 - iii. Performance bond, which complies with the requirements of this section of this regulation, if required by the City Engineer.
 - iv. Nonrefundable fee of \$100.00, payable to the City of Holyoke.

2.03 Waivers

The Stormwater Authority and/or the City Engineer may not waive compliance with Section 38-76 of the City of Holyoke Code of Ordinances or these Regulations. The Applicant may request, and the Stormwater Authority and/or the City Engineer may grant, a waiver from any of the filing requirements of these Regulations, which it determines will not materially affect the intent of these Regulations. Any request for a waiver shall be made in writing at the time of the application.

2.04 Performance Bond

- a. *Large Developments.* The Stormwater Authority shall require from the Applicant a surety or cash bond, irrevocable letter of credit, or other means of security acceptable to the Stormwater Authority prior to the issuance of any building permit for the construction of a development requiring a stormwater permit. The amount of the security shall not be less than 150% of the total estimated

construction cost of the stormwater management facility. The bond, so required in this subsection, shall include provisions relative to forfeiture for failure to complete work specified in the approved Stormwater Management Plan, compliance with all of the provisions of these Regulation and other applicable laws and regulations, and any time limitations.

The bond shall not be fully released without a final inspection of the completed work by the City Engineer; submission of "as-built" plans, Designer's inspection reports and certification, and certification of completion by the Stormwater Authority of the stormwater management facilities being in compliance with the approved plan and the provisions of this regulation.

b. *Small Developments.* The City Engineer may require a performance bond meeting the requirements set forth above, based upon the size and scope of the development.

SECTION 3, PROCEDURES FOR REVIEW AND APPROVAL OF STORMWATER MANAGEMENT PERMITS

3.01 Application Submittal and Review

- a. All applications for Stormwater Management Permits shall be submitted to the City Engineer. Upon receipt, the City Engineer shall review the application for completeness. If it is deemed by the City Engineer to be incomplete, the Engineer shall notify the Applicant in writing of the information needed to make the application complete.
- i. If the application is complete, the City Engineer shall transmit it to the Stormwater Authority to schedule a public hearing. Notice of the filing shall also be sent by the City Engineer to the City Clerk.
 - ii. The Stormwater Authority shall hold a public hearing within thirty (30) days of receipt of a completed application.
 - 1.) Notice of the public hearing shall be given by the Applicant's publication in a local newspaper at least seven (7) days prior to the hearing and by confirmation of mailings to abutters within 300 feet of the subject parcel at least seven (7) days prior to the hearing. The cost of publication and notice shall be borne by the Applicant. Proof of mailing to the abutters shall be provided by the Applicant to the Stormwater Authority at the public hearing.
 - 2.) The application shall also be available for inspection by the public during business hours at the Office of the City Engineer.
 - iii. The Stormwater Authority shall issue a written decision on the Stormwater Management Permit Application within thirty (30) days of the close of the public hearing. A copy of the decision shall be transmitted to the City Clerk.
 - iv. Failure of the Stormwater Authority to take final action within 180 days of receipt of a completed Stormwater Management Permit Application shall be deemed to be approval of said application. Upon certification by the City Clerk that the allowed time has passed

without Stormwater Authority action, the Stormwater Authority must issue a Stormwater Management Permit.

- v. The timelines set forth above may be extended upon mutual agreement of the Applicant and Stormwater Authority, as set forth in writing and filed with the Stormwater Authority and the City Clerk.
- b. Small Developments:
- i. The completed application shall be administratively reviewed by the City Engineer.
 - ii. The City Engineer shall issue a written decision on the Stormwater Management Permit within thirty (30) days of the application being deemed complete.
 - iii. Failure of the City Engineer to take final action upon an application within thirty (30) days of the application being deemed complete, shall be deemed to be approval of said application, and the City Engineer shall issue the Stormwater Management Permit.
 - iv. The timelines set forth above may be extended upon mutual agreement of the Applicant and the City Engineer, as set forth in writing, filed with the City Engineer.
- c. *Joint Review.* When a development requires Site Plan Review or Conservation Commission permitting, the Applicant shall include a copy of the Stormwater Management Permit application with their submittals to the Planning Board and/or the Conservation Commission. In such cases, a joint public hearing may be held with the Planning Board and/or Conservation Commission and the advertisement and notice requirements may be made jointly.

3.02 Action on Applications

- a. The Stormwater Authority or the City Engineer may take the following action on a Stormwater Management Permit Application:
- i. Issuance of a Stormwater Management Permit based upon determination that the proposed Stormwater Management Plan meets the purposes, standards and requirements set forth in this regulation; or,
 - ii. Issuance of a Stormwater Management Permit subject to any conditions, modifications or restrictions required by the Stormwater Authority or City Engineer which will ensure that the project meets the purposes, standards and requirements set forth in this regulation; or
 - iii. Denial of the Stormwater Management Permit application based upon a determination that the proposed Stormwater Management Plan, as submitted, does not meet the purposes and performance standards to adequately protect water resources, as set forth in this regulation.

b. *Plan Changes.* The Applicant must notify the City Engineer in writing of any changes in the project authorized in a Stormwater Management Permit before any change or alteration is made. The City Engineer may approve changes, or if the City Engineer determines that the change or alteration is significant, based on the Stormwater Management requirements of this regulation and accepted construction practices, the City Engineer may require that an amended application be filed with the Stormwater Authority and a public hearing held. If any change or alteration from the Stormwater Management Permit occurs during any activities, the City Engineer may require the installation of interim measures before approving the change or alteration.

c. *Extension.* A Stormwater Management Permit shall be valid for three years from the date the permit is issued (except that compliance with the Operation and Maintenance Plan shall be a continuing ongoing requirement). The Authority or the City Engineer for small developments may grant extensions for additional time upon written request submitted no later than 30 days prior to the extension of the permit.

3.03 Certificate of Completion

a. Within ninety (90) days or one growing season of the completion of the activities allowed under a Stormwater Management Permit (not including the continuing and ongoing requirements of compliance with the Operation and Maintenance Plan), the Applicant shall notify the City Engineer and request a final inspection and Certificate of Completion.

- i. For a large development, the Applicant shall submit an as-built plan stamped by a Massachusetts registered land surveyor or Massachusetts Registered Professional Engineer, and certification by the Designer that all construction has been done in accordance with the approved SMP. Copies of the Designer's inspection reports shall be provided with this certification.
- ii. For a small development, the Applicant shall submit an as-built plan and certification from a Stormwater Professional acceptable to the City Engineer that all construction has been done in accordance with the approved SMP.

3.04 Appeals

A decision of the City Engineer may be appealed to the Stormwater Authority by a written request setting forth the reasons for the appeal filed with the Stormwater Authority within fourteen (14) days of the Engineer's decision. A decision of the Stormwater Authority shall be final. Further relief of a decision by the Stormwater Authority made under this Ordinance shall be to a court of competent jurisdiction.

SECTION 4, STORMWATER MANAGEMENT PLAN REQUIREMENTS

4.01 Criteria for review of Stormwater Management Plans

The Stormwater Authority or the City Engineer must find that the Stormwater Management Plan submitted with the Stormwater Management Permit application meets the following criteria:

- i. The Stormwater Management Plan is consistent with the purposes and objectives of these Regulations in Section 1;
- ii. The Stormwater Management Plan meets the performance standards described in this section; and
- iii. The Stormwater Management Plan meets the design requirements in this section.

4.02 Contents of Stormwater Management Plans for Large Developments

a. The Stormwater Management Plan shall comply with the criteria established in the regulation and must be submitted with the original date, stamp and signature of a Professional Engineer licensed in the Commonwealth of Massachusetts. The Stormwater Management Plan for a large development shall fully describe the project in narrative, drawings and calculations and shall include:

- i. A locus map;
- ii. The existing zoning and land use at the site;
- iii. The proposed land use and area of disturbance;
- iv. The location(s) of existing and proposed property lines and easements;
- v. The location of existing and proposed utilities;
- vi. The site's existing and proposed topography with contours at two-foot intervals;
- vii. Description of existing site hydrology and hydraulics;
- viii. A description and location of existing stormwater conveyances, impoundments, and wetlands, buffer zones and resource areas on or adjacent to the site or into which storm water flows;
- ix. A delineation of 100-year and 500-year flood plains, if applicable;
- x. Estimated seasonal high groundwater elevation (November to April) in areas to be used for stormwater retention, detention, or infiltration;
- xi. The existing and proposed vegetation and ground surfaces with runoff coefficient for each;
- xii. A drainage area map showing pre- and post-construction watershed boundaries, drainage area and storm water flow paths;
- xiii. An environmentally sensitive and Low Impact Development (LID) site design based on reduced impervious surface coverage through street design, street width, parking design and sidewalks; retention of open space and mature trees; and incorporation of

decentralized, naturalized LID stormwater management systems to treat and infiltrate stormwater at the source.

- xiv. A description and drawings of all components of the proposed drainage system including:
 - 1.) All measures for the detention, retention or infiltration of water designed in accordance with this regulation and the Massachusetts Stormwater Management Handbook;
 - 2.) Soil investigation, including soil borings or test pits, showing groundwater and seasonal high ground water elevations and infiltration rates for areas where construction of infiltration BMP's will occur.
 - 3.) All measures for the protection of water quality;
 - 4.) The structural details for all components of the proposed drainage systems and storm water management facilities;
 - 5.) Notes on drawings specifying materials to be used, construction specifications, and typical details;
 - 6.) Expected hydrology and hydraulics with supporting calculations;
 - 7.) Proposed improvements including location of buildings or other structures, impervious surfaces, and drainage facilities, if applicable;

- xv. Hydrologic and hydraulic design calculations for the pre-development and post-development conditions. Calculations shall include:
 - 1.) Description of design storm frequency, intensity, and duration;
 - 2.) Time of concentration;
 - 3.) Runoff Curve Number (RCN) based on land use and soil hydrologic group;
 - 4.) Peak runoff rates and total runoff volumes for each watershed area;
 - 5.) Information on construction measures used to maintain the infiltration capacity of the soil where any kind of infiltration is proposed;
 - 6.) Infiltration rates where applicable;
 - 7.) Groundwater recharge analysis and BMP drawdown (time to empty)
 - 8.) Culvert capacities;
 - 9.) Flow velocities;

- 10.) Data on the rate and volume of runoff for the specified design storms;
 - 11.) Data showing how the project will meet stormwater retention and/or water quality requirements of New Development or Redevelopment specified in Section 5. This shall include:
 - Water quality design calculations showing the estimated Nitrogen load from the proposed project and the load reduction achieved through proposed BMPs (calculations should use material provided for in Attachment 1 of Appendix H of the Massachusetts MS4 Permit or as otherwise updated by EPA Region 1);
 - Water quality design calculations showing the estimated Phosphorus load from the proposed project and the load reduction achieved through proposed BMPs (Attachments 2 and 3 in Appendix F of the Massachusetts MS4 Permit or as otherwise updated by EPA Region 1);
 - Water quality design calculations showing the estimate TSS removal;
 - Documentation of sources for all computation methods and field test results.
 - 12.) Data showing BMP performance for land uses of higher potential pollutant loads if applicable.
 - 13.) Documentation of sources for all computation methods and field test results.
 - 14.) Post-development downstream analysis, if deemed necessary by the Stormwater Authority. The downstream analysis will evaluate the hydrologic impacts of the project downstream of the project to a location where the watershed to project size is approximately equal to 10:1;
 - 15.) Landscaping plan, showing and describing existing and proposed vegetation and the woody and herbaceous vegetative stabilization and management techniques to be used within and adjacent to the stormwater practices;
 - 16.) A description of provisions for project phasing with timing, schedules, and sequence of development, including clearing, stripping, rough grading, construction, final grading, and vegetative stabilization.
- xvi. Erosion and sedimentation control plan for construction activities that includes location and annotated description of implementation schedule for temporary and permanent seeding, vegetative controls, and other stabilization measures;
 - xvii. Erosion and sedimentation control narrative that includes:

- 1.) Name and contact information for party responsible for maintaining erosion and sediment control measures.
 - 2.) Description of site conditions and location and details of selected erosion and sediment control measures appropriate to the site. Include a narrative of the construction sequence/phasing of the project, including both operation and maintenance for structural and non-structural measures, interim grading, and material stockpiling areas;
 - 3.) A description of how construction materials will be stored on site, as well as a description of how the following wastes will be managed on site: demolition materials, excess or discarded building or site material, including but not limited to concrete truck washout, chemicals, litter and sanitary wastes. The narrative 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;
 - 4.) Timing, schedules, and sequence of development including clearing, stripping, rough grading, construction, final grading, and vegetative stabilization; and,
 - 5.) A maintenance schedule for the period of construction.
- b. Where a Stormwater Management Plan involves direction of some or all runoff off of the site, it shall be the responsibility of the Applicant to obtain from adjacent property owners any easements, written permission or other necessary property interests concerning flowage of water. Approval of a Stormwater Management Plan does not create or affect any such rights;

4.03 Contents of Stormwater Plans for Small Developments

- a. The Stormwater Management Plan for a small development shall be prepared by a Stormwater Professional and shall fully describe the project in narrative, drawings and calculations. The plan shall include:
- i. Estimate of the total area expected to be disturbed by construction activities;
 - ii. Description of erosion and sediment control measures to be employed during construction;
 - iii. Erosion and Sedimentation Control Map showing:
 - 1.) Proposed limits of site disturbance for construction activities;
 - 2.) Location of erosion and sediment control measures to be employed during construction (i.e., identify where dirt will be stockpiled, how dirt piles will be covered, etc.);

- iv. Description and location of existing stormwater management devices or strategies, and evidence of maintenance of the existing structures, as well as wetlands on or adjacent to the site or into which stormwater flows.
- v. Location, type, and size of stormwater management devices or strategies.
- vi. Location of wetland areas on or adjacent to the site that are receiving or will receive stormwater runoff.
- vii. Description of where the runoff to each existing stormwater management area is coming from.
- viii. A Site Plan that identifies:
 - 1.) Location of Low Impact Development (LID) and other stormwater management measures (i.e., locations of infiltration trenches, rain gardens/bioretention areas, swales, etc.)
 - 2.) Location of downspouts
 - 3.) Types of groundcover, including lawn, impervious surfaces, etc.
 - 4.) Location of storm drain(s)
 - 5.) Identification of where stormwater runoff streams (i.e., from downspouts/roofs and driveways) are leaving the site
- ix. Description of how the site plan maximizes open space, minimizes pavement area, and maximizes pervious / vegetated areas.
- x. Description of proposed stormwater management systems to accommodate runoff from impervious surfaces, including roofs and driveways.
- xi. Description of how the stormwater management systems will be maintained.

SECTION 5, PERFORMANCE STANDARDS AND DESIGN REQUIREMENTS

5.01 Performance Standards for Large Developments

- a. Large developments shall meet the following performance standards:
 - i. No new stormwater conveyances (e.g., outfalls) may discharge untreated stormwater directly to or cause erosion in wetlands or waters of the Commonwealth.

- ii. All stormwater management systems, at a minimum, shall be designed so that post-development peak discharge rates do not exceed pre-development peak discharge rates at all storm recurrence intervals. Calculations are to be provided for the 2-, 10-, 25- and 100-year storms.
- iii. Loss of annual recharge to groundwater shall be eliminated or minimized through the use of infiltration measures including environmentally sensitive site design, Low Impact Development (LID) techniques, stormwater best management practices, and good operation and maintenance. At a minimum, the annual recharge from the post-development site shall approximate the annual recharge from pre-development conditions based on soil type. This Standard is met when the stormwater management system is designed to infiltrate the required recharge volume as determined in accordance with the Massachusetts Stormwater Handbook.
- iv. Stormwater management systems shall be designed to remove 90% of the average annual post-construction load of Total Suspended Solids (TSS) on new development and 80% on redevelopment. In addition, 60% of the average annual load of Total Phosphorus (TP) generated from the total post-construction impervious area of the site on new developments and 50% on redevelopment shall be removed. This Standard is met when:
 - 1) Suitable practices for source control and pollution prevention are identified in a long-term pollution prevention plan, and thereafter are implemented and maintained;
 - 2) Retaining the volume of runoff equivalent to, or greater than, 1.0 inch multiplied by the total post-construction impervious surface area on the new development site; or retaining the volume of runoff equivalent to, or greater than, 0.8 inch multiplied by the total post-construction impervious surface area on the redevelopment site;
 - 3) Structural stormwater best management practices are sized to capture the required water quality volume determined in accordance with the Massachusetts Stormwater Handbook; and
 - 4) Pretreatment is provided in accordance with the Massachusetts Stormwater Handbook.
- v. Nitrogen Optimization. Stormwater BMPs must be optimized for nitrogen removal. Guidance is provided in Attachment 1 to Appendix H of the 2016 MS4 Massachusetts permit. When proposed BMPs are not covered in EPA Region 1's tools, any other state of federally approved BMP performance estimates can be used to estimate pollutant removal of the proposed or installed BMP.
- vi. Pollutant Removal. Unless otherwise stated, pollutant removal capabilities for stormwater management facilities 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., State stormwater handbooks and design guidance manuals) may be used to calculate BMP performance.

- viii. For land uses with higher potential pollutant loads, source control and pollution prevention shall be implemented in accordance with the Massachusetts Stormwater Handbook to eliminate or reduce the discharge of stormwater runoff from such land uses to the maximum extent practicable. If through source control and/or pollution prevention all land uses with higher potential pollutant loads cannot be completely protected from exposure to rain, snow, snow melt, and stormwater runoff, the proponent shall use the specific structural stormwater BMPs determined by the Department to be suitable for such uses as provided in the Massachusetts Stormwater Handbook. Stormwater discharges from land uses with higher potential pollutant loads shall also comply with the requirements of the Massachusetts Clean Waters Act, M.G.L. c. 21, §§ 26-53 and the regulations promulgated there under at 314 CMR 3.00, 314 CMR 4.00 and 314 CMR 5.00.

- viii. Stormwater discharges within the Zone II or Interim Wellhead Protection Area of a public water supply, and stormwater discharges near or to any other critical area, require the use of the specific source control and pollution prevention measures and the specific structural stormwater best management practices determined by the Department to be suitable for managing discharges to such areas, as provided in the Massachusetts Stormwater Handbook. A discharge is near a critical area if there is a strong likelihood of a significant impact occurring to said area, taking into account site-specific factors. Stormwater discharges to Outstanding Resource Waters and Special Resource Waters shall be removed and set back from the receiving water or wetland and receive the highest and best practical method of treatment. A “storm water discharge” as defined in 314 CMR 3.04(2)(a)1 or (b) to an Outstanding Resource Water or Special Resource Water shall comply with 314 CMR 3.00 and 314 CMR 4.00. Stormwater discharges to a Zone I or Zone A are prohibited unless essential to the operation of a public water supply.

- ix. A redevelopment project is required to meet the following stormwater management standards only to the maximum extent practicable: A 25% reduction in peak rate of discharge for the 2, 10 year, 24 hour storms, from the Massachusetts Stormwater Handbook: Standard iii, and the pretreatment and structural best management practice requirements of Standards iv, v, and vi. Existing stormwater discharges shall comply with Standard 1 only to the maximum extent practicable. A redevelopment project shall also comply with all other requirements of the Stormwater Management Standards and improve existing conditions.

- x. A plan to control construction-related impacts including erosion, sedimentation and other pollutant sources during construction and land disturbance activities (construction period erosion, sedimentation, and pollution prevention plan) shall be developed and implemented.
- xi. Manage all construction materials and wastes on site so as to avoid polluted flows. This includes demolition materials, excess or discarded building or site material, including but not limited to concrete truck washout, chemicals, litter and sanitary waste. These wastes may not be discharged into the MS4.
- xii. A long-term operation and maintenance plan shall be developed and implemented to ensure that stormwater management systems function as designed.
- xiii. All illicit discharges to the stormwater management system are prohibited.

b. *Findings of Impracticability.* If the Applicant can demonstrate that any performance standard described in this section cannot be met due to physical site constraints encountered, the Applicant may request a Finding of Impracticability from the Stormwater Authority. A request for a Finding of Impracticability may be made in writing at the time of the application, fully stating the reasons why the project cannot meet the applicable requirement as the result of site constraints. If a Finding of Impracticability is issued, the development must meet an alternative standard deemed practicable by the Stormwater Authority. No waivers of performance standards will be granted if the waiver results in a project that does not meet the EPA Small MS4 requirements.

c. *Conflict with Massachusetts Stormwater Handbook or EPA Small MS4 Regulations.* In the event that a conflict in design requirements or parameters occurs between this regulation and the Massachusetts Stormwater Handbook or EPA's Small MS4 Regulations, the more stringent requirement or parameter will apply, as determined by the City Engineer.

5.02 Stormwater Management Measures Design Requirements for Large Developments

- a. Stormwater management measures shall be required to satisfy the minimum control requirements and shall be implemented in the following order of preference:
 - i. Infiltration, flow attenuation, and pollutant removal of runoff on site to existing areas with grass, trees, and similar vegetation and through the use of open vegetated swales and natural depressions;
 - ii. Stormwater detention structures for the temporary storage of runoff which is designed so as not to create a permanent pool of water; and
 - iii. Stormwater retention structures for the permanent storage of runoff by means of a permanent pool of water; and,
 - iv. Detention and evaporation of stormwater on rooftops or in parking lots.

- b. Infiltration practices shall be utilized to reduce runoff volume increases. A combination of successive practices may be used to achieve the applicable minimum control requirements.
- c. Best management practices shall be employed to minimize pollutants in stormwater runoff prior to discharge into a separate storm drainage system or water body.
- d. All stormwater management facilities shall be designed to provide an emergency overflow system, and incorporate measures to provide a non-erosive velocity of flow along its length and at any outfall.
- e. The designed release rate of any stormwater structure shall be modified if any increase in flooding or stream channel erosion would result at a downstream dam, highway, structure, or normal point of restricted stream flow.
- f. Stormwater best management practices that mimic natural hydrology (i.e., nonstructural and small-scale upland management approaches) should be considered as first-line practices. Given appropriate soils and conditions, all opportunities to use nonstructural and small-scale management techniques must be exhausted prior to exploring end-of-pipe stormwater management approaches.
- g. All projects subject to these Regulations must consider the following environmentally sensitive site design and Low Impact Development (LID) techniques:
 - i. Identify, map and preserve the site's natural features and environmentally sensitive areas such as wetlands, native vegetation, mature trees, slopes, drainage ways, permeable soils, flood plains, woodlands, and prime agricultural soils to the maximum extent practicable;
 - ii. Minimize grading and clearing;
 - iii. Delineate potential building envelopes, avoiding environmental resource areas and appropriate buffers by clustering buildings and reducing building footprints;
 - iv. Develop methods to minimize impervious surfaces and protect and preserve open space. Reduce impervious surfaces wherever possible through alternative street design, such as omission of curbs and use of narrower streets, and through the use of shared parking areas;
 - vi. Manage runoff using smaller, decentralized, low-tech stormwater management techniques to treat and recharge stormwater close to the source;
 - vii. Lengthen flow paths and maximize sheet flow over pervious surfaces;
 - viii. Use nonstructural, low-tech methods including open drainage systems, disconnection of roof runoff and street sweeping where possible;

- ix. Use native, non-invasive plant vegetation in buffer strips and in rain gardens (small planted depressions that can trap and filter runoff);
- x. Use of vegetation that does not require irrigation during periods of drought; and,
- xi. Integrate the following techniques into the site design to create a hydrologically functional site, including but not limited to the following:
 - 1.) Grass swales along roads;
 - 2.) Bioretention areas and rain gardens;
 - 3.) Vegetated buffer strips;
 - 4.) Use of roof gardens where practicable;
 - 5.) Use of amended soils that will store, filter and infiltrate runoff;
 - 6.) Use of cisterns to provide additional stormwater storage; and,
 - 7.) Use of permeable pavement.
 - 8.) Planting of trees and use of stormwater tree wells.

5.03 Performance Standards for Small Developments

- a. Small developments shall meet the following performance standards
 - i. Stormwater runoff from the development shall not discharge sediment to or cause erosion in wetlands or open water;
 - ii. Demonstrate through a stormwater management plan that the Applicant has attempted to implement Stormwater Best Management Practices (BMP's)
 - iii. Where appropriate, integrate the following techniques into the site design to reduce stormwater environmental impacts, including but not limited to the following:
 - 1.) Match pre-development peak discharge rates through the use of Rain gardens and vegetated swales, low impact design or other appropriate means;
 - 2.) Use of amended soils that will store, filter and infiltrate runoff;
 - 3.) Use rain barrels or other cisterns or other methods to provide on site stormwater storage,
 - 4.) Minimize impervious surface area such as through the use of permeable pavements or green roofs or other appropriate means.

- 5.) Retro-fit existing stormwater management structures to reduce stormwater impacts.
- 6.) Direct stormwater away from abutting properties.
- iv. Implement erosion and sediment control measures to prevent stormwater impacts during soil disturbance and construction.
- v. Stormwater management measures should be properly maintained.
- vi. When the proposed discharge may have an impact upon a sensitive receptor, including streams, wetlands, vernal pools, or adjacent property, buildings, storm sewers, and/or combined sewers, the City Engineer may require an increase in these minimum requirements.

SECTION 6, SITE SUPERVISION AND INSPECTIONS, OPERATION AND MAINTENANCE

6.01 Site Supervision and Inspections

a. No permit will be issued without adequate provision for inspection of the property before development activities commence. The Applicant shall be responsible for all inspections and covering the costs of each. The inspections described here are to be done in coordination with the Stormwater Authority. The Stormwater Authority shall be notified at least 24 hours prior to inspection.

b. Large Developments.

- a. At a minimum, inspections of the stormwater management system shall be performed at the following intervals during construction:
 - i. Initial inspection prior to beginning construction;
 - ii. Erosion control inspections during site clearing, rough grading and final grading to ensure erosion control practices are in accord with the plan. For projects subject to an EPA Construction General Permit these inspections shall be conducted at least once every seven (7) calendar days; or once every 14 calendar days and within 24 hours of the occurrence of a storm event of 0.25 inches or greater;
 - iii. Pre-bury inspection prior to backfilling of any underground drainage or stormwater conveyance, storage or infiltration structures; and,
 - iv. Final inspection when all work, including construction of stormwater management facilities and landscaping have been completed, which shall include inspection of all stormwater pipes installed.

For all inspections, written reports shall be submitted to the Applicant and the Stormwater

Authority and include:

- the inspection date and location;
- name of inspector and credentials;
- type of inspection and if erosion and sediment control inspection, whether compliant with regular inspections;
- an evaluation, indicating that either work is in compliance with the stormwater management permit and approved, or that there are violations and failure to comply with the requirements of the approved plan.

Erosion and sedimentation control inspections shall be conducted by a professional knowledgeable in the principles and practice of erosion and sediment controls and pollution prevention, who possess the appropriate skills and training to assess conditions at the construction site and respond quickly with recommendations for remedy as needed.

All other inspections shall be conducted by the Designer to verify proper installation and functioning of all installed stormwater features.

c. The Designer shall notify the City and Applicant in writing in what respects there has been a failure to comply with the requirements of the approved plan. Any portion of the work which does not comply shall be promptly corrected by the Applicant or the Applicant will be subject to the bonding provisions or the penalty provisions of this regulation. The Stormwater Authority or its agent may conduct random inspections to ensure effective control of erosion and sedimentation during all phases of construction.

d. *Small Developments.* The City Engineer shall conduct an initial inspection prior to the issuance of any permit and a final inspection when all work, including the construction of stormwater management facilities and landscaping have been completed. The City Engineer may require, at his discretion, any of the other inspections set forth above for Large Developments.

e. *Right of entry for inspection.* The filing of a Stormwater Management Permit application by the owner or the owner's representative shall be deemed as the property owner's permission to the Stormwater Authority, or its agent(s), for the right to enter the property at reasonable times and in a reasonable manner for the purpose of inspection. This includes the right to enter a property when it is reasonably believed that a violation of these Regulations is occurring or has occurred, and to enter when necessary for abatement of a public nuisance or correction a violation.

f. *Correction of system.* If the system is found to be inadequate due to operational failure, even though built according to the Stormwater Management Plan, the system shall be corrected by the Applicant. If the Applicant fails to act, the Stormwater Authority may use the performance guarantee to complete the work.

6.02 Operation and Maintenance Plan.

- a. The owner of the property on which work has been done pursuant to this regulation for private stormwater management facilities, or any other person or agent in control of such property, shall maintain in good condition and promptly repair and restore all grade surfaces, walls, drains, dams and structures, vegetation, erosion and sediment control measures and other protective devices. Such repairs or restoration and maintenance shall be in accordance with approved plans.
- b. Operation and Maintenance Plan. An Operation and Maintenance plan shall be submitted that demonstrates that:
 - i. All stormwater management systems will continue to meet all standards for which they were designed;
 - ii. All stormwater management components and BMP's will be properly maintained and continued; and
 - iii. The Maintenance Plan shall meet all provisions of this Ordinance and the Massachusetts Stormwater Handbook and shall be incorporated into the Stormwater Agreement.

6.03 Operation, Maintenance and Inspection Agreement for Large Developments

- a. Prior to issuance of any building permit for which stormwater management is required, the Stormwater Authority shall require the Applicant or owner to execute the City's standard operations and maintenance agreement binding on all subsequent owners of land served by the private stormwater management facility. The agreement shall be designed to ensure that water quality standards are met in all seasons and throughout the life of the system. Such agreement shall provide for access to the facility at reasonable times for regular inspections by the City Engineer or authorized representative thereof, and for regular or special assessments of property owners to ensure that the facility is maintained in proper working condition to meet design standards and any provisions established. The agreement shall be recorded by the Applicant and/or owner in the land records of the Hampden County registry of deeds. Proof of recording shall be submitted to the Stormwater Authority prior to the start of construction and issuance of a building permit.
- b. The Operation, Inspection and Maintenance Agreement shall include:
 - i. The names and addresses of the person(s) responsible for operation and maintenance;
 - ii. The person(s) responsible for financing maintenance and emergency repairs.
 - iii. A maintenance schedule for all drainage structures, including swales and ponds, which shall state the maintenance to be completed, the time period for completion, and who shall be legally responsible to perform the maintenance.;
 - iv. A list of stormwater management easements as necessary for the agreement with the purpose and location of each;

- v. Schedules for routine and non routine facility inspections and maintenance, and cleaning per stormwater handbook;
 - vi. Preservation of stormwater runoff conveyance, infiltration, and detention areas and facilities, including flood routes for the 100-year storm event;
 - vii. Direct access by equipment necessary to maintain structures and provide regular cleanout where applicable;
 - viii. Provision that, if after notice by the City Engineer to correct a violation requiring maintenance work, satisfactory corrections are not made by the owner(s) within 30 days, the Department of Public Works may perform all necessary work to place the facility in proper working condition. The owner(s) of the facility shall be assessed the cost of the work and any penalties.
 - ix. Submission of an annual report to the City Engineer by a professional engineer or other stormwater professional acceptable to the City Engineer certifying to the inspection of the stormwater management system and compliance with the specified operations and maintenance requirements, including any remediation activity required.
 - x. The signature(s) of the owner(s).
- c. *Stormwater management easements.* Stormwater management easements are required for all areas used for off-site stormwater control, unless a waiver is granted by the city. Easements shall be recorded with the registry of deeds prior to issuance of a certificate of completion.
- d. *Changes to Operation and Maintenance Plans.* The owner(s) of the stormwater management system must notify the City Engineer of changes in ownership or assignment of financial responsibility. The maintenance schedule in the maintenance agreement may be amended to achieve the purposes of this regulation by mutual agreement of the Stormwater Authority and the responsible parties. Amendments must be in writing and signed by all responsible parties. Responsible parties must include owner(s), persons with financial responsibility, and persons with operational responsibility.
- e. *Recording of Agreement.* The agreement shall be recorded by the Applicant and/or owner in the Hampden County Registry of Deeds. Proof of such recording shall be filed by the Applicant and/or owner with the City Engineer prior to the issuance of a Certificate of Completion.

SECTION 7, ENFORCEMENT AND PENALTIES

7.01 Violation of Approved Plans

- a. Any development activity that has commenced or is conducted contrary to the approved plans may be restrained by injunction or otherwise abated in a manner provided by law.

b. Notice of violation of approved plans. When the Stormwater Authority or its designated agent determines that an activity is not being carried out in accordance with the requirements of the approved plans, it shall issue a written notice of violation to the owner of the property. The notice of violation shall contain:

- i. The name and address of the owner Applicant;
- ii. The address when available or the description of the building, structure, or land upon which the violation is occurring;
- iii. A statement specifying the nature of the violation;
- iv. A description of the remedial measures necessary to bring the development activity into compliance with these Regulations and a time schedule for the completion of such remedial action;
- v. A statement of the penalty or penalties that shall or may be assessed against the person to whom the notice of violation is directed;

7.02 Stop Work Orders

Persons receiving a notice of violations will be required to halt all construction activities. This "stop work order" will be in effect until the Stormwater Authority or its designated agent confirms that the development activity is in compliance and the violation has been satisfactorily addressed. Failure to address a notice of violation in a timely manner can result in civil, criminal, or monetary penalties in accordance with the enforcement measures authorized in these Regulations.

7.03 Criminal and Civil Penalties

Any person who violates any provisions of these Regulations or the terms and conditions in any permit or order issued hereunder, shall, be subject to a fine not to exceed \$300.00 per violation, per site for each day such violations continues or may be subject to a civil penalty, which may be assessed in an action brought on behalf of the City of Holyoke in any court of competent jurisdiction. Each day that such violation continues shall be considered a separate offense.

7.04 Non-Criminal Disposition

As an alternative to criminal prosecution or civil action, the Stormwater Authority may elect to utilize the non-criminal disposition procedure set forth in M.G.L. Ch. 40, Sec. 21D. The penalty for the first violation shall be up to \$100.00. The penalty for the second violation shall be up to \$200.00. The penalty for the third and subsequent violations shall be \$300.00. Each day or part thereof that such violation occurs or continues shall constitute a separate offense.

7.05 Restoration of Lands

Any violator may be required to restore land to its undisturbed condition. In the event that restoration is not undertaken within a reasonable time after notice, the Department of Public Works may take necessary corrective action, the cost of which shall become a lien upon the property until paid.

7.06 Holds on Occupancy Permits

Occupancy permits will not be granted until corrections to all stormwater practices have been made and accepted by the Stormwater Authority.

7.07 Severability

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

Approved by the Holyoke Stormwater Authority

May 17, 2010

Revised July 27, 2021 – effective date September 1, 2021

David Moore, Chairman

Jose Garcia, Commissioner

Patricia Devine, Commissioner