

PVPC Updates – December 27, 2022

RULES AND REGULATIONS GOVERNING STORMWATER MANAGEMENT AND LAND DISTURBANCE PERMITS FOR NEW DEVELOPMENTS & REDEVELOPMENTS

Blue highlights = Sections to be pulled from Bylaw when finalized.

Green highlights = To be resolved by Town

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SECTION 1. PURPOSE

SECTION 2. DEFINITIONS

ABUTTER – The owner(s) of record of abutting lots of the property line of the lot where the project is proposed to be located.

ALTERATION OF DRAINAGE CHARACTERISTICS: Any activity on an area of land that changes the water quality, force, direction, timing or location of runoff flowing from the area. Such changes include: change from distributed runoff to confined, discrete discharge, change in the volume of runoff from the area; change in the peak rate of runoff from the area; and change in the recharge to groundwater on the area.

APPLICANT: A property owner or agent of a property owner who has filed an application for a Stormwater Management and Land Disturbance Permit.

AS-BUILT DRAWINGS: Drawings that record and document aspects and features of a project following construction, using the plans derived from a Stormwater Management and Land Disturbance Permit. These shall include all final grades, inverts, pipe sizes, etc. and clearly depict any approved 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 PRACTICE (BMP): An activity, procedure, restraint, or structural improvement that helps to reduce the quantity or improve the quality of stormwater runoff.

THE DPW – The Town of Longmeadow Department of Public Works (DPW)

THE DPW DIRECTOR: The Town of Longmeadow Director of Public Works appointed pursuant to Section 6-3(c) of the Town Charter.

CLEARING: Any activity that removes the vegetative surface cover.

COMMON PLAN OF DEVELOPMENT OR SALE - A contiguous area, including adjacent lots and/or non adjacent disturbance on one lot, where multiple separate and distinct construction activities may be taking place at different times on different schedules under one plan. This includes, but is not limited to, the following examples:

- If a developer owns two adjacent lots and proposes development of each on the same or different timelines.
- If a developer buys a 20-acre lot and builds roads, installs pipes, and runs electricity with the intention of constructing homes or other structures sometime in the future, this would be considered a larger common plan of development or sale. If the land is parceled off or sold, and construction occurs on plots that are less than one acre by separate, independent builders, this activity still would be subject to stormwater permitting requirements if the smaller plots were included on the original site plan.

CONSTRUCTION ACTIVITY: Disturbance of the ground by removal of vegetative surface cover or topsoil, grading, excavation, clearing or filling.

PROJECT DESIGN ENGINEER: The individual responsible for the analysis, design, and inspection of the stormwater management system required by these Rules and Regulations. The Project Design Engineer shall be a Massachusetts Registered Professional Engineer with experience and qualifications in the area of stormwater management, design, inspection and operations. The Project Design Engineer may be a sole practitioner or a member of a firm.

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

DRAINAGE AREA: That area contributing stormwater runoff to a single point measured in a horizontal plane, which is enclosed by a ridgeline or area of higher elevation.

EASEMENT: A grant or reservation by the owner of land for the use of such land by others for a specific purpose or purposes and which must be included in the conveyance of land affected by such easement.

EROSION: The wearing away of the land surface by natural or artificial forces, such as wind, water, ice, gravity, or vehicle traffic, and 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 (PE) which includes best management practices or equivalent measures designed to control surface runoff, erosion and sedimentation during construction and construction-related land disturbance activities.

FLOODING: A local and temporary inundation or a rise in water, such that it covers land not usually under water.

FLOW ATTENUATION: Prolonging the flow time of runoff to reduce the peak discharge.

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

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

GROUNDWATER: Any water below the earth's surface in the zone of saturation.

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.

INFEASIBLE: Not technologically possible, or not economically practicable and achievable in light of best industry practices.

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

LAND DISTURBANCE AND LAND DISTURBING ACTIVITY: Any activity that causes a change in the position or location of soil, sand, rock, gravel, or similar earth material; results in an increased amount

of runoff or pollutants; measurably changes the ability of a ground surface to absorb waters; involves clearing, grading, or excavating, including grubbing; or results in an alteration of drainage characteristics

LOW IMPACT DEVELOPMENT (LID): A development approach that seeks to mimic (or in the case of redevelopment, restore/recreate) a site's predevelopment hydrology through protection of on-site natural features and environmentally sensitive site design that limits impervious areas, preserves open space, and uses decentralized small scale facilities to capture and manage rainfall (or snowmelt) close to where it falls. These small-scale facilities serve to slow, absorb, and treat flow and include bioretention areas, grassed swales, porous pavements, cisterns, and green roofs and walls.

MASSACHUSETTS STORMWATER HANDBOOK AND STORMWATER STANDARDS: The guidance issued by MassDEP, and as amended, that coordinates the requirements prescribed by state regulations promulgated under the authority of the Massachusetts Wetlands Protection Act G.L. c. 131 § 40 and Massachusetts Clean Waters Act G.L. c. 21, §. 23-56. The Handbook 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 Town of Longmeadow.

NEW DEVELOPMENT: Any construction activities or land alteration resulting in total land disturbance equal to or greater than 1 acre (or activities that are part of a larger common plan of development disturbing equal to or greater than 1 acre) on an area that has not previously been developed to include impervious surface.

NONPOINT SOURCE POLLUTION: Pollution from many diffuse sources caused by rainfall or snowmelt moving over and through the ground. As the runoff moves, it picks up and carries away natural and human-made pollutants, finally depositing them into water resource areas.

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.

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

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

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

PERMEABLE SOILS: are soil materials with a sufficiently rapid infiltration rate so as to greatly reduce or eliminate surface and stormwater runoff. These soils are generally classified as NRCS hydrologic soil types A and B.

PERMITTEE: The owner of the site.

PERSON: An individual, partnership, association, firm, company, trust, corporation, agency, authority, department or political subdivision of the Commonwealth or the federal government, to the extent permitted by law, 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.

POLLUTANT: Any element of property or sewage, agricultural, industrial or commercial waste, runoff, leachate, heated effluent, or other matter whether originating at a point or nonpoint source, that is or may be introduced into any sewage treatment works or waters of the commonwealth. Pollutants shall include:

1. Paints, varnishes and solvents;
2. Oil and other automotive fluids;
3. Nonhazardous liquid and solid wastes and yard wastes;
4. Refuse, rubbish, garbage, litter, or other discarded or abandoned objects, accumulations and floatables;
5. Pesticides, herbicides and fertilizers;
6. Hazardous materials and wastes; sewage, fecal coliform and pathogens;
7. Dissolved and particulate metals;
8. Animal wastes and residues;
9. Rock, sand, salt and soils;
10. Construction wastes and residues;
11. Noxious or offense matter of any kind.

POST-DEVELOPMENT: The conditions that reasonably may be expected or anticipated to exist after completion of the land development activity on a specific site or tract of land. Post-development refers to the phase of a new development or redevelopment project after completion, and does not refer to the construction phase of a project.

PRE-DEVELOPMENT: The conditions that exist at the time that plans for the land development of a tract of land are submitted to the Stormwater Authority. Where phased development or plan approval occurs (preliminary grading, roads and utilities, etc.), the existing conditions at the time prior to the first plan submission, shall establish pre-development conditions.

RECHARGE: The replenishment of underground water reserves.

REDEVELOPMENT: Any construction, land alteration, or improvement of impervious surfaces resulting in total land disturbances equal to or greater than 1 acre (or activities that are part of a larger common plan of development disturbing equal to or greater than 1 acre) that does not meet the definition of "new development."

REGISTRY OF DEEDS: Hampden County Registry of Deeds, the registry in which the land in question is situated, and, when appropriate, shall include the land court.

RESOURCE AREA: Any area protected under including without limitation: the Massachusetts Wetlands Protection Act, Massachusetts Rivers Act, or Town of Longmeadow Wetland Bylaw. Specifically, these areas include: banks, bordering vegetated wetlands, vernal pools, land under waterbodies and waterways, land subject to flooding and riverfront areas.

RETENTION: The holding of runoff in a basin without release except by means of evaporation, infiltration, or emergency bypass.

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

SITE: The area extent of construction activities, including but not limited to the creation of new impervious surface and improvement of existing impervious surface, excluding redevelopment activities that are exclusively limited to maintenance and improvement of existing roadways as described under "Redevelopment" above.

START OF CONSTRUCTION: The first land disturbing activity associated with a development, including land preparation such as clearing, grading and filling; installation of streets and walkways; excavation for basements; footings, piers or foundations; erection of temporary forms; and installation of accessory buildings such as garages.

STOP WORK ORDER: An order issued which requires that all construction activity on a site be stopped.

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 PLAN: A plan required as part of the application for a Stormwater Management and Land Disturbance Permit. See Section 12.

STORMWATER: Storm water runoff, snow melt runoff, and surface water runoff and drainage.

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

TSS: Total Suspended Solids are particles suspended in water or stormwater. Both organic and inorganic particles can contribute to suspended solids concentration. In the field, high concentrations of TSS can make water appear cloudy. In a laboratory, TSS can be measured

when water is filtered. TSS are retained by the filter and dissolved solids pass through.

WATERS OF THE COMMONWEALTH: All waters within the Commonwealth, including without limitation, rivers, streams, lakes, ponds, springs, impoundments, estuaries, wetlands, coastal waters and ground waters. (From 314 CMR, 9.02)

SECTION 3. AUTHORITY

SECTION 4. APPLICABILITY

SECTION 5. EXEMPTIONS

SECTION 6. ADMINISTRATION

SECTION 7. RULES AND REGULATIONS

SECTION 8. WAIVERS

SECTION 9. COORDINATION WITH OTHER REQUIRED PERMITS

SECTION 10. PERMIT APPLICATION REQUIREMENTS AND PROCEDURE

No land owner or land operator shall receive any of the building, grading, or other land development permits required for land disturbance activities, and no land owner shall commence land disturbance activities, without approval of a Stormwater Management and Land Disturbance Permit from the DPW Director and without meeting the requirements of these Rules and Regulations.

Approval must be obtained from the DPW Director before the beginning of land-disturbing activities. Approval to proceed with site changes will be contingent on the application's completeness, demonstration of compliance with design standards and inspections.

A. Pre-application and Concept Plan Meeting

Prior to investing in extensive professional design efforts, it may be beneficial for applicants to attend at least one pre-application meeting with the DPW Director. This meeting is intended to provide the applicant with advice and guidance relative to the approval process; and allow the applicant and DPW Director to have a preliminary conversation about the site, stormwater management and erosion control considerations, and concept plan. The DPW Director may invite to this meeting other town boards and officers at its discretion.

For this pre-application meeting, the Town has a Low Impact Development design checklist to encourage a better site design approach. This checklist identifies several items that will be helpful for this preliminary meeting and may help to streamline the permitting process overall.

This meeting can be combined with any pre-submission review meetings described under the Subdivision Regulations, Zoning Bylaw, or local Wetlands Protection Bylaw.

B. Filing Application

The site owner or his agent shall file with the DPW a completed application package for a Stormwater Management and Land Disturbance Permit. Permit issuance is required prior to any site altering activity. While the applicant can be a representative, the permittee must be the owner of the site. The Application package shall include::

1. A completed Stormwater Management and Land Disturbance Application Form with original signatures of all owners;
2. A list of immediate abutters and addresses, certified by the Assessor's Office;
3. Proof of notification of abutters;
3. Electronic and five (5) paper copies of:
 - the Stormwater Management Plan and project description as specified in Section 12.;
 - the Erosion and Sediment Control Plan as specified in Section 13 of this bylaw;
 - the Draft Operation and Maintenance Plan as required by Section 14 (with final O&M Plan to be submitted as specified in Section 14 of these Rules and Regulations);
4. One (1) copy of the application form, the Stormwater Management Plan, the Operation & Maintenance Plan, the Erosion and Sediment Control Plan, and the list of abutters filed with the Town Clerk; and
5. Payment of the application and review fees.

Note that where plans have been created in AutoCAD, electronic files should also be provided in AutoCAD.

C. Entry

D. Determination of Completeness

The DPW Director shall make a determination as to the completeness of the application and adequacy of the materials submitted. No review shall take place until the application is determined complete. If the DPW Director determines the application to be incomplete, the DPW Director will inform the applicant that the application will be denied based on it being administratively incomplete unless the incomplete items are addressed by a specific date to be determined by the DPW Director. The DPW Director will require that an extension of the review period be granted to allow additional time for the applicant to provide the required information and the DPW Director to review the application once complete information has been submitted.

E. Information requests

The applicant shall submit all additional information requested by DPW Director to issue a decision on the application.

F. Other Boards

The DPW Director shall notify the Town Clerk of receipt of the application, and shall give one electronic copy of the application package to the Director of Planning and Community Development, the Building Commissioner, the Conservation Commission, and/or Planning Board as appropriate.

G. Fees

The DPW shall obtain with each submission an Application and Inspection Fee established by the DPW Director to cover expenses connected with application review of the Stormwater Management and Land Disturbance Permit and a technical Review Fee sufficient to cover professional review.

As authorized by M.G.L. c. 44, § 53G, the DPW Director may impose reasonable fees to retain a Registered Professional Engineer or other professional consultant to advise the DPW Director on any or all aspects of the application and oversight of permit compliance. Applicants must pay Review Fees before the review process may begin.

1. **Special Account.** Funds received pursuant to these rules shall be deposited with the municipal treasurer who shall establish a special account for this purpose. Expenditures from this special account may be made at the direction of the DPW Director without further appropriation as provided in M.G.L. Ch. 44 §53G. Expenditures from this account shall be made only in connection with a specific project or projects for which a consultant fee has been collected from the applicant. Expenditures of accrued interest may also be made for these purposes.
2. **Consultant Services.** Specific consultant services may include but are not limited to technical or legal review of the permit application and associated information, on-site monitoring during construction, or other services related to the project deemed necessary by the DPW Director. The consultant shall be chosen by, and report only to, the DPW Director or their staff.
3. **Notice.** The DPW Director shall give written notice to the applicant of the selection of an outside consultant. Such notice shall state the identity of the consultant, the amount of the fee to be charged to the applicant, and a request for payment of said fee in its entirety. Such notice shall be deemed to have been given on the date it is mailed or delivered. No such costs or expenses shall be incurred by the applicant if the application or request is withdrawn within five days of the date notice is given.
4. **Payment of Fee.** The fee must be received prior to the initiation of consulting services. The DPW Director may request additional consultant fees if necessary, review requires a larger expenditure than originally anticipated or new information requires additional consultant services. Failure by the applicant to pay the specified consultant fee within ten (10) business days of the request for payment, or refusal of payment, shall be cause for the DPW Director to deny the application based on lack of sufficient information to evaluate whether the project meets applicable performance standards. An appeal stops the clock on the above deadline; the countdown resumes on the first business day after the appeal is either denied or upheld.

5. Appeals. The applicant may appeal the selection of the outside consultant to the Select Board, who may only disqualify the outside consultant selected on the grounds that the consultant has a conflict of interest or does not possess the minimum required qualifications. The minimum qualifications shall consist of either an educational degree or three or more years of practice in the field at issue or a related field. Such an appeal must be in writing and received by the Select Board and a copy received by the DPW Director, so as to be received within ten (10) days of the date consultant fees were requested by the DPW Director. The required time limits for action upon the application shall be extended by the duration of the administrative appeal.
6. Return of Unspent Fees. When the DPW Director's review of a permit application and oversight of the permitted project is complete, any balance in the special account attributable to that project shall be returned within 30 days. The excess amount, including interest, shall be repaid to the applicant or the applicant's successor in interest. For the purpose of this regulation, any person or entity claiming to be an applicant's successor in interest shall provide the DPW Director with appropriate documentation. A final report of said account shall be made available to the applicant or applicant's successor in interest.

Applicants must notify abutters prior to submitting an application, The letter notifies abutters about the project and provides information for abutters to contact the Town Clerk for application documents and then comment directly to the DPW Director. This notification shall be made by certified mail with proof of mailing provided to the DPW Director at time of application submission.

The DPW Director is not required to hold a public hearing for projects or activities under the jurisdiction of these Rules and Regulations. For activities also requiring approval of other Town Boards, a public hearing shall be held in accordance with their procedures. The DPW Director or their designee shall work with other permitting boards to consider public comment as part of Stormwater Management and Land Disturbance Permit review.

Where a public hearing is required through another permit process for the same project, the requirements to notify abutters as part of the Stormwater Management and Land Disturbance Permit application shall be waived.

I. Actions

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

1. Approval of the Stormwater Management and Land Disturbance Permit Application based upon determination that the proposed plan meets the Standards in Section 7 and will adequately protect the water resources of the community and is in compliance with the requirements set forth in these Rules and Regulations and associated Bylaw;
2. Approval of the Stormwater Management and Land Disturbance Permit Application subject to any conditions, modifications or restrictions required by the DPW Director which will ensure that the project meets the Standards in Section 7 and adequately protect water resources, set forth in these Rules and Regulations and associated Bylaw;

3. Disapproval of the Stormwater Management and Land Disturbance Permit Application based upon a determination that the proposed plan, as submitted, does not meet the Standards in Section 7 or adequately protect water resources, as set forth in these Rules and Regulations and associated Bylaw.

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

J. Project Changes

The permittee, or their agent, shall notify the DPW Director in writing of any change or alteration of a land-disturbing activity authorized in a Stormwater Management and Land Disturbance Permit before any change or alteration occurs. If the DPW Director determines that the change or alteration is significant, based on the performance standards, design requirements, and accepted construction practices, the DPW Director may require that an amended Stormwater Management and Land Disturbance Permit application be filed with prior notification of abutters required. If any change or deviation from the Stormwater Management and Land Disturbance Permit occurs during a project, the DPW Director may require the installation of interim measures before approving the change.

K. Project start date

The project shall begin within two (2) years after issuance of the Stormwater Management and Land Disturbance Permit. If the project does not begin within two (2) years, and the DPW DIRECTOR finds that the approved Stormwater Management Plan is inconsistent with current site conditions, the applicant shall submit a modified Plan that requires approval prior to commencement of land-disturbing activities. The DPW DIRECTOR may grant an extension, at its discretion, to the two-year statute of limitations on a Stormwater Management and Land Disturbance Permit.

L. As-Built Drawings

Applicants shall submit as-built drawings upon project completion, showing deviations from approved plans, if any. The as-built drawings must depict all on-site controls, both structural and non-structural, designed to manage stormwater associated with the completed site as specified in Section 15 of these Rules and Regulations. The as-built drawings

SECTION 11. PERFORMANCE STANDARDS AND DESIGN REQUIREMENTS

A. Resources and Guidance on Requirements

1. Massachusetts Stormwater Handbook and Stormwater Standards

The *Massachusetts Stormwater Handbook and Stormwater Standards*, as updated or amended, is hereby incorporated by reference as part of these Rules and Regulations, and shall furnish additional policy, criteria and information, including specifications and standards for the proper implementation of the requirements of these Rules and Regulations.

2. Rainfall Data

The recommendation for rainfall data to be used in calculations is currently being updated as associated with the Massachusetts Stormwater Handbook. In the interim, applicants shall calculate stormwater peak runoff rates, using 90% of the upper confidence interval mean of NOAA Atlas 14 data for Longmeadow. MassDEP refers to this as “NOAA plus” and has indicated that it incorporates risk observed in the current data to reflect range of larger storms.

Recommended procedure:

- Navigate to NOAA 14 website: https://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html
- [Click Massachusetts map on the desired location](#)
- [Navigate to “point of interest,” and tabular results will pop up](#)
- [Multiply 0.9 by the NOAA upper confidence interval mean to obtain peak runoff rate for a given design storm](#)

3. Erosion and Sediment Control

For guidance on erosion and sediment control practices, see: *Massachusetts Erosion and Sediment Control Guidelines for Urban and Suburban Areas*, MassDEP, 2003, and as updated or amended.

4. Pollutant Removal

Pollutant removal capabilities for stormwater management facilities, unless otherwise stated, 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.

B. General Performance Standards

When the proposed discharge may have an impact upon a sensitive receptor, including aquifers, streams, wetlands, and/or storm sewers, the DPW Director may require an increase in minimum standards and requirements.

1. Massachusetts Stormwater Management Standards

All projects subject to these Rules and Regulations shall comply with all Massachusetts Stormwater Management Standards (or be more stringent than those standards).

2. 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 or federally approved BMP performance estimates can be used to estimate pollutant removal of the proposed or installed BMP.

3. Phosphorus Optimization

Stormwater BMPs must be optimized for phosphorus removal. Guidance is provided in Attachment 2 and 3 in Appendix F of the Massachusetts MS4 Permit.

4. Low Impact Development

All projects must use Low Impact Development (LID) site planning and design strategies unless infeasible in order to reduce stormwater runoff from both new and redevelopment projects.

If full compliance is not provided, an applicant must document why key steps in the process could not be met and what is proposed for mitigation. Strategies should include:

- a. Identify, map, and preserve the site's natural features and environmentally sensitive areas such as wetlands, aquifers, native vegetation, stands of trees and trees with a trunk diameter at breast height of 8 inches or more, slopes, drainage ways, soils, including especially permeable soils and prime farmland soils, flood plains, and woodlands to the greatest extent possible;
- b. Identify, map, and protect riparian buffers by establishing a naturally vegetated buffer system along all perennial streams and other water features that encompass critical environmental features such as the 100-year floodplain, steep slopes (in excess of 15%), lake shorelands, and wetlands. Also, prohibit any mowing and brush hogging within riparian buffers.
- c. Mitigate potential thermal impacts from the project, including preserving riparian buffers, specifically preservation and/or restoration of riparian trees and shrubs to provide shade, use of BMPs that make use of infiltration, creation of new natural areas with native vegetation and clustering of trees, establishing no-mow zones, and providing shade for impervious surfaces wherever possible.
- d. Prevent adverse impacts of proposed activities on 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;
- e. Minimize grading and clearing;
- f. Delineate potential building envelopes, avoiding environmental resource areas and appropriate buffers by clustering buildings and reducing building footprints;
- g. 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, shared driveways and through the use of shared parking areas where allowed;
- h. Ensure that new fill or soils brought to site do not change the infiltration characteristics of the site;
 - i. Ensure that all work is planned and executed so as to avoid compaction of topsoil and subsoils, including such best practices as reducing the number of trips required over area of disturbance, laying down soil protective mats for trafficked areas, and avoiding work after rain or snowmelt that saturates soils. For construction equipment, best practices should include using vehicles with low axle loads, reduced tire pressures, and use of flotation tires, doubles, radial tires, and/or large-diameter tires. For areas where such practices are not possible and soils are to be compacted by heavy equipment, subsurface restoration must occur prior to final landscaping activities.
 - j. Manage runoff using smaller, decentralized, low-tech stormwater management techniques to treat and recharge stormwater close to the source.
 - k. Lengthen flow paths and maximize sheet flow.
 - l. Use nonstructural, low-tech methods including open drainage systems, disconnection of roof runoff, and street sweeping where possible.
 - m. Use non-invasive, native or appropriate vegetation in buffer strips and in bioretention areas. Appropriate vegetation are species adapted to site conditions, localized climate, and design intent. The following attributes should be considered in determining whether plants are appropriate for the site: cold hardiness, heat tolerance, salt tolerance, soil moisture range, plant water use requirements, soil volume requirements, soil pH requirements, sun and shade requirements, pest susceptibility, and maintenance requirements. Native and non-native plants are appropriate if they meet the above criteria.
 - n. Use drought-resistant vegetation.
 - o. Integrate the following techniques into the site design to create a hydrologically functional lot or development site, including but not limited to the following based on soil, groundwater level, and topographic conditions:
 - i. Reduction of impervious surface
 - ii. On-site 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, and amended soils that will store, filter, and infiltrate runoff;
 - iii. Bioretention (rain gardens);
 - iv. Open vegetated swales and natural depressions;
 - v. Use of permeable pavement;
 - vi. Use of roof gardens where practicable;
 - vii. Re-use of stormwater to replace water used for irrigation, toilet flushing, or industrial processes.

5. Management of Construction Materials and Wastes

Construction materials and all wastes on site will be managed 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.

6. Hazardous Chemicals and Petroleum Products

Projects involving the storage or use of hazardous chemicals or petroleum products shall incorporate handling and storage best management practices that prevent such chemicals from contaminating runoff from the site into infiltration systems, receiving water bodies, or the MS4, and shall include a list of such chemicals in the application.

7. Connection to MS4

If the destination for the outlet of a stormwater management facility is the MS4, the applicant must evaluate the existing capacity and condition of that system. If there are existing deficiencies or extra capacity is not available to accept additional flows from the project site, the applicant will be required to design and construct improvements or reduce the outlet flow rate based on existing capacity.

8. Emergency Overflow

All stormwater management facilities shall be designed to provide an emergency overflow system and incorporate measures to provide a nonerosive velocity to flow along its length and at any outfall.

9. Down-stream Structures

The designed release rate of any stormwater structure shall be modified if any increase in flooding or stream channel erosion would result at a down-stream dam, highway, structure, or normal point of restricted stream flow.

C. Erosion and Sediment Control Design Requirements

Promote erosion and sediment control by using measures that are appropriate to the conditions of the site. Prevention of erosion is preferred over sedimentation control. Note that where requirements here differ from any articulated in the EPA 2022 Construction General Permit, the stricter of the two shall prevail.

During planning:

1. Minimize the amount of disturbed area and protect natural resources.
2. Avoid sensitive areas, steep slopes, and highly erodible soils to the maximum extent possible when developing site plans.
3. Maximize groundwater recharge.
4. Sequence activities to minimize simultaneous areas of disturbance.
5. Identify potential problem areas before the site plan is finalized and approved.
6. Divert uncontaminated water around disturbed areas.

7. Plan to use sediment barriers along contour lines, with a focus on areas where short-circuiting (i.e., flow around the barrier) may occur.
8. Use berms at the top of a steep slopes to divert runoff away from the slope's edge.
9. Design trapezoidal or parabolic vegetated drainage channels, not triangular.
10. Use vegetated channels with rip rap check dams, instead of impervious pavement or concrete, to reduce the water velocity of the conveyance system.
11. Design a check dam or sediment forebay with level spreader at the exit of outfalls to reduce water velocity of the discharge and collect sediment.
12. Use turf reinforcement matting to stabilize vegetated channels, encourage vegetation establishment, and withstand flow velocities without scouring the base of the channel.
13. Plan open channels to follow land contours so natural drainage is not disrupted.
14. Use organic matting for temporary slope stabilization and synthetic matting for permanent stabilization.
15. Provide a stable channel, flume, or slope drain where it is necessary to carry water down slopes.
16. Protect and manage on- and off-site materials 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)

During construction:

1. Institute interim and permanent stabilizations measures, which shall be instituted on a disturbed area as soon as practicable and no more than 7 days after construction activity has temporarily or permanently ceased on that portion of the site.
2. Protect slopes on the construction site.
3. Protect all storm drain inlets and armor all newly constructed outlets.
4. Use perimeter controls that provide protection along the site's edge before sediment reaches roadway, storm drains, or adjacent properties.
5. Stabilize construction site entrances and exits to prevent off-site tracking of sediments.
6. Inspect stormwater controls at regular intervals and especially following any storm.
7. Clean and sweep up any debris accidentally tracked, dumped or spilled off site.

D. Performance Standards for New Development

Stormwater management systems for new development projects shall be designed to meet an average annual pollutant removal equivalent to 90% of the average annual load of Total Suspended Solids (TSS) related to the total post-construction impervious area on the site AND 60% of the average annual load of Total Phosphorus (TP) related to the total post-construction impervious surface area on the site.

Average annual pollutant removal requirements are achieved through one of the following methods:

1. Installing BMPs that meet the pollutant removal percentages based on calculations developed consistent with EPA Region 1's BMP Accounting and Tracking Tool (2016) or other BMP performance evaluation tool provided by EPA Region 1, where available. If EPA Region 1 tools do not address the planned or installed BMP performance, then any federally or State-approved BMP design guidance or performance standards (e.g., State stormwater handbooks and design

guidance manuals) may be used to calculate BMP performance; or

2. Retaining the volume of runoff equivalent to, or greater than, one (1.0) inch multiplied by the total post-construction impervious surface area on the new development site; or
3. Meeting a combination of retention and treatment that achieves the above standards.

E. Performance Standards for Redevelopment

Stormwater management systems on redevelopment sites shall be designed to meet an average annual pollutant removal equivalent to 80% of the average annual post-construction load of Total Suspended Solids (TSS) related to the total post-construction impervious area on the site AND 50% of the average annual load of Total Phosphorus (TP) related to the total post-construction impervious surface area on the site.

Average annual pollutant removal requirements are achieved through one of the following methods:

1. Installing BMPs that meet the pollutant removal percentages based on calculations developed consistent with EPA Region 1's BMP Accounting and Tracking Tool (2016) or other BMP performance evaluation tool provided by EPA Region 1, where available. If EPA Region 1 tools do not address the planned or installed BMP performance, then any federally or State-approved BMP design guidance or performance standards (e.g., State stormwater handbooks and design guidance manuals) may be used to calculate BMP performance; or
2. Retaining the volume of runoff equivalent to, or greater than, 0.8 inch multiplied by the total post-construction impervious surface area on the redeveloped site; or
3. Meeting a combination of retention and treatment that achieves the above standards; or

SECTION 12. STORMWATER MANAGEMENT PLAN

A. Plan Contents

A Stormwater Management Plan submitted with the permit application shall contain sufficient information for the DPW DIRECTOR to evaluate the environmental impact, effectiveness, and acceptability of the site planning process and of the measures proposed by the applicant to reduce adverse impacts from stormwater during construction and post-construction in the long term.

The DPW Director may require and alter as they see fit the components of the Stormwater Management Plan. All components of the Stormwater Management Plan shall be prepared and submitted with the stamp and signature of a Professional Engineer licensed in the Commonwealth of Massachusetts. That engineer shall be available during the construction phase to advise the builder of any alterations required to protect ground and surface waters and adjacent properties as needed from water volume and water quality impacts due to the project.

The Stormwater Management Plan shall be designed to meet the Standards described in Section 11. The minimum information submitted for support of a Stormwater Management Plan shall be as follows:

1. Names, addresses and phone numbers of the applicant, owner and preparer;
2. A locus map, using a portion of the relevant USGS Quadrangle Map;

3. Existing conditions map showing:

- a. Lot lines and lines of existing streets;
- b. The existing zoning and land use at the site;
- c. The existing site hydrology and topography at 2-foot intervals and the location of datum;
- d. A description and delineation of existing stormwater conveyances, impoundments, and wetlands on or adjacent to the site or into which storm water flows;
- e. A delineation of 100 and 500-year flood plains, if applicable;
- f. Estimated seasonal high groundwater elevation (November to April) in areas to be used for storm water retention, detention, or infiltration;
- g. Vegetation including tree lines, canopy layer, shrub layer and ground cover, and trees with a trunk diameter at breast height of 8 inches or more, noting specimen trees and forest communities;
- h. Habitats mapped by the Massachusetts Natural Heritage & Endangered Species Program as Endangered, Threatened, or of Special Concern, Estimated Habitats of Rare Wildlife and Certified Vernal Pools, and Priority Habitats of Rare Species within five hundred (500) feet of any construction activity;

4. Existing conditions and proposed land use map showing:

- a. The location(s) of existing and proposed easements;
- b. The location of existing and proposed buildings and/or structures, including materials and approximate height;
- c. The location of existing and proposed utilities, roadways; driveways, and parking areas;
- d. The proposed limits of land disturbance;
- e. Estimate of the total area expected to be disturbed by excavation, grading, or other construction activities;

5. Stormwater management design plan(s) and details showing:

- a. The site's existing and proposed topography with contours at 2-foot intervals;
- b. The existing and proposed vegetation and ground surfaces with runoff coefficient for each;
- c. Soils information from test pits or borings performed at the location of proposed stormwater management facilities, including soil descriptions, depth to season high groundwater, depth to bedrock, and infiltration rates. Soils information will be based on site test pits logged by a Massachusetts Registered Soil Evaluator, a Massachusetts Registered Sanitarian, or a Massachusetts Registered Professional Engineer;

- d. A drainage area map showing pre- and post-construction watershed boundaries, drainage area and storm water flow paths;
- e. A description and drawings of all components of the proposed drainage system, including:
 - locations, cross sections, and profiles of all brooks, streams, drainage swales and their method of stabilization;
 - drainage patterns and approximate slopes anticipated after major grading activities;
 - all measures for the detention, retention or infiltration of water;
 - all measures for the protection of water quality;
 - the structural details for all components of the proposed drainage systems and storm water management facilities;
 - notes on drawings specifying materials to be used, construction specifications, and typicals;
 - expected hydrology with supporting calculations;
 - proposed improvements including location of buildings, utilities, or other structures, impervious surfaces, and drainage facilities, if applicable;
 - any other information requested by the DPW Director.

6. A 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.

7. Hydrologic and hydraulic design calculations for the *pre-development and post-development conditions*. Calculations shall include:

- a. Hydrologic soils group (HSG) information, soil type, and relevant characteristics for the purpose of modeling the project's runoff, using NRCS soils information
- b. Description of design storm frequency, intensity, and duration;
- c. Time of concentration;
- d. Runoff Curve Number (RCN) based on land use and soil hydrologic group;
- e. Peak runoff rates and total runoff volumes for each watershed area for the 2-year, 10-year and 100-year 24-hour storms;
- f. Information on construction measures used to maintain the infiltration capacity of the soil where any kind of infiltration is proposed;
- g. Infiltration rates where applicable;
- h. Groundwater recharge analysis and BMP drawdown (time to empty)
- i. Culvert capacities;
- j. Flow velocities;
- k. Data on the increase in rate and volume of runoff for the specified design storms;

- l. Data showing how project stormwater BMPs are optimized for Nitrogen removal, using estimated Nitrogen load from the proposed project and the load reduction achieved through proposed BMPs (see Performance Standards in Section 11 above on method).
- m. Data showing how project stormwater BMPs are optimized for Phosphorus removal, using estimated Phosphorus load from the proposed project and the load reduction achieved through proposed BMPs (see Performance Standards in Section 11 above on method).
- n. Data and documentation of sources for all computation methods and field test results showing how the project will meet stormwater runoff water quality and/or retention requirements of New Development or Redevelopment specified in Section 11. This shall include:
 - Water quality design calculations showing the estimated Total Suspended Sediment (TSS) load from the proposed project and the load reduction achieved through proposed BMPs
 - and
 - 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)
 - or
 - Calculations showing runoff volume from the total post-construction impervious surface area and retention of required volume
 - or
 - Calculations showing how will meet required standards through a combination of water quality treatment and retention
- o. Documentation of sources for all computation methods and field test results.
- p. Post-development downstream analysis, if deemed necessary by the DPW Director. 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.

SECTION 13. EROSION AND SEDIMENT CONTROL PLAN

A. Plan Contents

The Erosion and Sediment Control Plan shall contain sufficient information to describe the nature and purpose of the proposed development, pertinent conditions of the site and the adjacent areas, and proposed erosion and sedimentation 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 11 of these Rules and Regulations.

The Plan shall contain the following information indicated below. (As an alternative an applicant may submit the Stormwater Pollution Prevention Plan prepared for EPA under the 2022 Construction General Permit).

1. Names, addresses, and telephone numbers of the owner, applicant, and person(s) or firm(s) preparing the plan;

2. Title, date, north arrow, names of abutters, scale, legend, and locus map;
3. Location and description of natural features including:
 - a. Watercourses and water bodies, wetland resource areas and all floodplain information, including the 100-year flood elevation based upon the most recent Flood Insurance Rate Map, or as calculated by a professional engineer for areas not assessed on these maps;
 - b. Existing vegetation including tree lines, canopy layer, shrub layer and ground cover, and trees with a trunk diameter at breast height of 8 inches or more, noting specimen trees and forest communities;
 - c. Habitats mapped by the Massachusetts Natural Heritage & Endangered Species Program as Endangered, Threatened or of Special Concern, Estimated Habitats of Rare Wildlife and Certified Vernal Pools, and Priority Habitats of Rare Species within five hundred (500) feet of any construction activity.
4. Lines of existing abutting streets showing drainage and driveway locations and curb cuts;
5. Existing soils, volume and nature of imported soil materials
6. Topographical features including existing and proposed contours at intervals no greater than two (2) feet with spot elevations provided when needed;
7. Surveyed property lines showing distances and monument locations, all existing and proposed easements, rights-of-way, and other encumbrances, the size of the entire parcel, and the delineation and number of square feet of the land area to be disturbed;
8. Drainage patterns and approximate slopes anticipated after major grading activities (Construction Phase Grading Plans);
9. Stormwater runoff calculations that show runoff rates for when soils will be exposed, providing a clear understanding of erosion and sediment control measures needed during the construction phase;
10. Location and details of erosion and sediment control measures with a narrative of the construction sequence/phasing of the project, including timing, schedules, and sequence of development including clearing, stripping, rough grading, construction, final grading, and vegetative stabilization

11. An operation and maintenance schedule for structural and non-structural measures, interim grading, and material stockpiling areas for the period of construction;
12. Path and mechanism to divert uncontaminated water around disturbed areas, to the maximum extent practicable;
13. Location and description of and implementation schedule for temporary and permanent seeding, vegetative controls, and other stabilization measures;
14. Description of construction and waste materials expected to be stored on-site. The Plan shall include a description of controls to reduce pollutants from these materials, including storage practices to minimize exposure of the materials to stormwater, and spill prevention and response;
15. A description of provisions for phasing the project where one acre of area or greater is to be altered or disturbed;
16. Plans must be stamped and certified by a qualified Professional Engineer registered in Massachusetts
17. Such other information as is required by the DPW Director.

SECTION 14. OPERATION AND MAINTENANCE PLAN

A. Draft Operation and Maintenance Plan

All stormwater management systems must have an operation and maintenance plan and agreement to ensure that systems function as designed.

A draft Operation and Maintenance plan (O&M Plan) and agreement is required at the time of application for all projects subject to these Rules and Regulations. The O&M Plan shall be designed to ensure compliance with the 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 O&M Plan shall be binding on all subsequent owners of land served by the private stormwater management facility. Such agreement shall provide for access to the facility at reasonable times for regular inspections by the DPW Director or their authorized representative 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 provision established.

The DPW shall make the final decision of what maintenance option is appropriate in a given situation. The DPW Director 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 O&M Plan shall remain on file with the DPW Director and shall be an ongoing requirement.

B. Final Operation and Maintenance Plan

The Applicant or Owner shall submit a final and executed O&M Plan that reflects all changes made to project design from the approved submission, if any. The final O&M Plan shall be recorded by the applicant and/or owner in the land records of the Hampden County Registry of Deeds along with any easements necessary to maintaining stormwater facilities. Proof of such recording shall be filed by the applicant and/or owner with the DPW Director. The required contents of the O&M Plan and Agreement are specified below.

C. Contents of the Operation and Maintenance Plan

The O&M Plan shall include the following:

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 plan drawn to scale showing the location of all stormwater BMPs in each treatment train, including catch basins, manholes/access lids, main, and stormwater devices, along with discharge point;
 - d. A list of easements with the purpose and location of each.
 - e. Records of installation and maintenance;
 - f. A description and delineation of public safety features.
 - g. An estimated operations and management budget.
 - h. An inspection and maintenance schedule for all drainage structures, including swales and ponds, including routine and non-routine maintenance tasks to be performed, the time period for each.
 - i. An operation and maintenance log form
Agreement that the person(s) responsible for operation and maintenance will follow this schedule and maintain an operation and maintenance log to include inspections, repairs, replacement, and disposal (type of material and disposal location);
 - j. Agreement that the person(s) responsible for operation and maintenance, 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.
 - k. Agreement that person(s) responsible for operation and maintenance, shall submit annual certification documenting the work that has been done over the last 12 months to properly operate and maintain the stormwater control measures.
 - l. A map and list of stormwater management easements with purpose and location of each
 - m. Information on how future property owners will be notified of the presence of the stormwater management system and the requirement for proper operation and maintenance

- n. The signature(s) of the owner(s) and person(s) responsible for operation and maintenance.

D. 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.
 - 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 DPW Director.
4. Easements shall be recorded with the Hampden County Registry of Deeds prior to issuance of a Certificate of Completion by the DPW Director.

E. Failure to Maintain.

If, after notice by the DPW Director to correct a violation requiring maintenance work, satisfactory corrections are not made by the owner(s) within 30 days, the DPW Director or its agent may perform all necessary work to place the facility in proper working condition and/or seek a court order requiring the property owner or violator to perform the work.

If the violation is an immediate threat to public health or public safety, 24-hour notice shall be sufficient prior to actions required to return the facility or practice to proper working condition. The owner(s) of the facility shall be assessed the cost of the work and any penalties, and such costs must be paid before the work is done. If costs are not paid in advance by the owner, the Town is authorized to place a lien on the property in the amount of these costs.

F. Changes to Operation and Maintenance Plans

1. The owner(s) of the stormwater management system must notify the DPW Director 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 DPW Director 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, and easement grantors.

SECTION 15. AS-BUILT DRAWINGS

The permittee shall submit as-built drawings of all on-site stormwater controls and treatment practices, both structural and nonstructural, designed to manage the stormwater associated with the completed site. As-built drawings shall be full size plans that include all final grades and clearly depict all changes to project design from the approved plans, if any, and be certified by the Project Design Engineer who must be a Massachusetts Registered Professional Engineer. These drawings shall be submitted upon project completion, unless an extension is granted by the DPW Director. Submission shall include one paper copy and digital in pdf format.

SECTION 16. SITE SUPERVISION AND INSPECTIONS

A. Pre-construction Meeting

Prior to starting any clearing, excavation, and construction, the applicant, the applicant's technical representative, the general contractor or any other person with authority to make changes to the project, may be required to meet with the DPW DIRECTOR or their designated representative to review the approved plans and their proposed implementation. The need for a pre-construction meeting shall be determined by the DPW DIRECTOR.

B. On-site Plan for Reference

A paper copy of the approved plan bearing the signature of approval of the DPW Director shall be maintained at the site during the progress of the work.

C. Inspections

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 DPW Director.

Erosion and sedimentation control inspections described below 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 with quickly with recommendations for remedy as needed. Qualifications should be in keeping with those described in EPA's 2022 Construction General Permit.

All other inspections shall be conducted by the **Project Design Engineer** to verify proper installation and functioning of all installed stormwater features. The **Project Design Engineer** must be a Registered Professional Engineer in the State of Massachusetts. The **Project Design Engineer** shall notify the DPW Director at least 24 hours prior to each inspection.

At a minimum, inspections of the stormwater management system shall be performed at the following intervals during construction:

1. Initial Site Inspection: prior to approval of any plan.
2. Erosion Control Inspection: To ensure erosion control practices are in accord with the filed plan erosion and sedimentation control measures shall be inspected before the start of construction. Additional erosion and sedimentation control inspections shall occur based on the frequencies articulated in Section 4 of EPA's 2022 Construction General Permit.

The DPW DIRECTOR and/or their agents reserves the right to conduct random inspections to ensure effective control of erosion and sedimentation during all phases of construction at the applicant's expense.

3. Pre-bury Inspection: prior to backfilling of any underground drainage or stormwater conveyance or infiltration structures.
4. Walk through inspection: to determine final punch list of items remaining.
5. Final Inspection. When all work, including construction of stormwater management facilities and landscaping, has been completed, a final inspection of the project site shall be performed and shall include a full, dated video inspection of all stormwater pipes installed. The Final Inspection shall also evaluate the effectiveness of the system in an actual storm.

If the Engineer finds the system to be properly installed and functioning, he/she shall provide certification to the DPW Director. Certification to the DPW Director shall consist of an engineering stamp on the final as-built drawing(s) as described in Section 15.

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, the system shall be corrected by the permittee. If the permittee fails to act, the Town of Longmeadow 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.

If the system does not comply with the Plan, the applicant shall be notified in writing of the violation and the required corrective actions. A Stop Work Order shall be issued until any violations are corrected and all work previously completed has received approval by the DPW Director.

Periodic inspections in addition to those described above may be conducted by a designated **representative of the Project Design Engineer**, as approved by the DPW Director, who will be a Professional Engineer licensed by the Commonwealth of Massachusetts. The DPW Director may also be conducting their own inspections.

Written reports shall be submitted to the applicant and the DPW Director after each inspection and shall include:

- The inspection date and location
- Name of inspector and credentials
- Type of inspection
- Date of last inspection
- Weather at time of inspection
- Accumulated precipitation within previous 24 hours

- Evaluation indicating that either work is in compliance with the Stormwater Management and Land Disturbance Permit and approved or that there are violations and failure to comply with requirements of the approved plan
- Steps to be taken to correct violations, if present

The applicant shall promptly correct any portion of the work that does not comply. If in the course of inspections, it is determined that water resources or the MS4 is not being adequately protected, enforcement action will proceed at the discretion of the DPW Director in accordance with the procedures described in Section 19.

SECTION 17. SURETY

A. Form and Amount

Where surety is not required on another permit for the same project, the DPW Director 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 Town Counsel and the Town's Finance Department, and be in an amount deemed sufficient by the DPW Director in consultation with the appropriate Town departments to ensure that the work will be completed in accordance with the Stormwater Management and Land Disturbance Permit. The amount of the security shall not be less than the total estimated construction cost of the stormwater management facility, including state (or, if applicable, federal) prevailing wage rates. The surety so required in this section 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 Rules and Regulations and other applicable laws and regulations, and any time limitations.

B. Release of Bond

If the project is phased, the DPW Director may, at their discretion, 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 DPW Director has received the final inspection report and other submissions as required by Section 18 and issued a Certificate of Completion.

SECTION 18. CERTIFICATE OF COMPLETION

The DPW Director will issue a letter certifying completion upon receipt and approval of final submissions and/or upon otherwise determining that all work of the permit has been satisfactorily completed in conformance with these Rules and Regulations. Final submissions must include the:

Final Operation and Maintenance Plan as specified in Section 14;
 As-Built Drawings as specified in Section 15; and
 Final Inspection Report as specified in Section 16.

SECTION 19. ENFORCEMENT

The DPW DIRECTOR shall enforce this Bylaw, Rules and Regulations, orders, violation notices, and enforcement orders, and may pursue all civil and criminal remedies for such violations.

A. Orders

1. The DPW DIRECTOR may issue a written order to enforce the provisions of this Bylaw or the Rules and Regulations thereunder, which may include requirements to:
 - a. cease and desist from construction or land disturbing activity until there is compliance with this Bylaw, Rules and Regulations promulgated thereunder, and the Stormwater Management and Land Disturbance Permit;
 - b. repair, maintain or replace the stormwater management system or portions thereof in accordance with the operation and maintenance plan.
 - c. perform monitoring, analyses, and reporting;
 - d. remediate adverse impact resulting directly or indirectly from malfunction of the stormwater management system.
2. If the enforcing person determines that abatement or remediation of adverse impacts is required, the order shall set forth a deadline by which such abatement or remediation must be completed. Said order shall further advise that, should the violator or property owner fail to abate or perform remediation within the specified deadline, the Town of Longmeadow may, at its option, undertake such work, and the property owner shall reimburse the Town's expenses.
3. Within thirty (30) days after completing all measures necessary to abate the violation or to perform remediation, the violator and the property owner shall be notified of the costs incurred by the Town, including administrative costs. The violator or property owner may file a written protest objecting to the amount or basis of costs with the DPW DIRECTOR within thirty (30) days of receipt of the notification of the costs incurred. If the amount due is not received by the expiration of the time in which to file a protest or within thirty (30) days following a decision of the DPW DIRECTOR affirming or reducing the costs, or from a final decision of a court of competent jurisdiction, the costs shall become a special assessment against the property owner and shall constitute a lien on the owner's property for the amount of said costs. Interest shall begin to accrue on any unpaid costs at the statutory rate provided in G.L. Ch. 59, § 57, after the thirty-first day at which the costs first become due.

B. Criminal Penalty

Any person who violates any provision of this Bylaw, associated Rules and Regulations, order or the terms of conditions in any permit issued thereunder, shall be punished by a fine of not more than Three Hundred Dollars (\$300.00). Each day or part thereof that such violation occurs or continues shall constitute a separate offense.

C. Non-Criminal Disposition

As an alternative to criminal prosecution or civil action, the Town may elect to utilize the non-criminal disposition procedure set forth in G.L. Ch. 40, §21D and Sections 1-501, 502 and 503 of the general bylaws of the Town in which case the DPW DIRECTOR shall be the enforcing person. The penalty for the 1st violation shall be One Hundred Dollars (\$100.00). The penalty for the 2nd violation and subsequent violations shall be Two Hundred Dollars (\$200.00). Each day or part thereof that such violation occurs or continues shall constitute a separate offense. The penalty for the third and subsequent violations shall be \$300. Each day or part thereof that such violation occurs or continues shall constitute a separate offense.

D. Appeals

The decisions or orders of the DPW Director may be appealed to the Town Manager by the party who is subject of the decision or order. A written notice of the appeal shall be filed with the Town Manager within 30 days or receipt of the order or decision being appealed from. The Town Manager shall hold a hearing within 30 days of receipt of the notice of appeal and shall issue a decision within 30 days of conclusion of the hearing. Further relief from a decision by the Town Manager shall be to a court of competent jurisdiction.

E. Remedies Not Exclusive

The remedies listed in these Rules and Regulations are not exclusive of any other remedies available under any applicable federal, state or local law.

F. Violations

Any development activity that has commenced or is conducted contrary to these Rules and Regulations and associated Bylaw may be restrained by injunction or otherwise abated in a manner provided by law.

G. Notice of Violation

When the DPW Director determines that an activity is not being carried out in accordance with the requirements of these Rules and Regulations and associated Bylaw, they shall issue a written notice of violation to the owner of the property. The notice of violation shall contain:

1. The name and address of the owner applicant.
2. The address when available or the description of the building, structure, or land upon which the violation is occurring.
3. A statement specifying the nature of the violation.
4. A description of the remedial measures necessary to bring the development activity into compliance with these Rules and Regulations and associated Bylaw and a time schedule for the completion of such remedial action.
5. A statement of the penalty or penalties that shall or may be assessed against the person to whom the notice of violation is directed.
6. A statement that the determination of violation may be appealed to the municipality by filing a written notice of appeal within 30 days of service of notice of violation pursuant to MGL c.

40A, § 15.

H. 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 DPW Director confirms that the development activity is in compliance and the violation has been satisfactorily addressed; the DPW Director may utilize the services of a Massachusetts registered engineer to verify compliance. 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 this bylaw.

I. 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 DPW Director may take necessary corrective action, the cost of which shall become a lien upon the property until paid.

J. Holds on Certificate of Completion

Certificates of completion will not be granted until corrections to all stormwater practices have been made and accepted by the DPW Director.

SECTION 20. SEVERABILITY