

## ARTICLE 7

### STORMWATER

#### SECTION 7.1 PURPOSE

The purpose of this By-Law is:

- (a) To prevent pollution of Needham's wetlands and surface waters from uncontrolled stormwater runoff and illicit discharges.
- (b) To prevent pollutants from entering the Town of Needham's Municipal Separate Storm Sewer System (MS4).
- (c) To prohibit illicit connections and unauthorized discharges to the MS4 and to require the removal of all such illicit connections.
- (d) To comply with state and federal statutes and regulations relating to stormwater discharges, including the NPDES MS4 Permit issued by the U.S. Environmental Protection Agency (EPA), the Massachusetts Stormwater Standards, regardless of the location of the subject property relative to wetlands or other resource areas, and the Memorandum of Understanding (MOU) issued to the Town of Needham by the EPA in 1996.
- (e) To establish the legal authority to ensure compliance with the provisions of this By-Law through permitting, inspection, monitoring, and enforcement.
- (f) To control runoff and prevent soil erosion and sedimentation resulting from construction site stormwater runoff.
- (g) To promote infiltration and the recharge of groundwater.
- (h) To protect, maintain and enhance the public safety, environment, health, and general welfare by establishing minimum requirements and procedures to manage stormwater runoff.
- (i) To ensure that soil erosion and sedimentation control measures and stormwater runoff control practices are incorporated into the site planning and design process and are implemented and maintained.

#### SECTION 7.2 DEFINITIONS

For the purposes of this By-Law, the following definitions shall apply:

Alteration Any activity that will change the ability of a ground surface area to absorb water or will change existing surface drainage patterns. Examples include, but are not limited to, construction of new structures, excavation, earthmoving, or paving.

Best Management Practices (BMPs) Structural, non-structural, and managerial techniques that are recognized to be the most effective and practical means to prevent or minimize increases in stormwater volumes and flows, reduce point source and non-point source pollution, and promote stormwater quality and protection of the environment.

Clean Water Act The Federal *Water Pollution Control Act* (33 U.S.C. §§ 1251 *et seq.*) as it may hereafter be amended, and the Massachusetts Clean Water Act and Regulations.

Commercial The term commercial shall include municipal, industrial, and multi-family projects.

Construction Site Any site where activity is proposed or occurs that involves the alteration of land and involves a permit required by the Town.

Development The alteration of land requiring an application for a building permit; or for a permit from the Planning Board, Zoning Board of Appeals (ZBA), or Conservation Commission.

Erosion Control The prevention or reduction of the movement of soil particles or rock fragments due to stormwater runoff. Erosion control is typically achieved through the installation of straw bales, silt fence, silt socks, or by surface coverings such as jute mesh, erosion control blankets, or by the establishment of surface vegetation.

Dry Well A subsurface structure that infiltrates stormwater runoff.

Green Citizen Certificate A certificate issued by the Board of Selectmen conferring recognition to environmentally conscious citizens who install infiltration/recharge systems, rain gardens, or similar stormwater quality improvements that are not required by the Stormwater By-Law or these promulgated regulations.

Illicit Connection A surface or subsurface drain or conveyance that allows a discharge into the MS4 that is not entirely composed of stormwater or clean groundwater, including any connection from an indoor drain, sink, toilet, or laundry facility.

Illicit Discharge Any direct or indirect discharge to the MS4 or the Waters of the Commonwealth that is not composed entirely of stormwater or clean groundwater, including, without limitation, any discharge of a pollutant, sewage, process wastewater, or wash water, except as exempted. The term does not include a discharge in compliance with a NPDES Stormwater Discharge Permit or a Surface Water Discharge Permit.

Impervious Surface Any material or structure on, above or below the ground that prevents water from infiltrating through to the underlying soil. Impervious surfaces may include, without limitation: paved surfaces, parking lots, sidewalks, driveways, rooftops and swimming pools.

Large Residential Project A residential project (new construction or reconstruction) of a residential building with larger than 4,000 square feet (s.f) of ground coverage.

Low Impact Development (LID) Stormwater management systems and practices that mimic natural hydrologic processes resulting in infiltration, evapotranspiration or use of stormwater. LID techniques manage stormwater as close to the source as possible. LID practices frequently use cost-effective landscape features located at the lot level.

Massachusetts Stormwater Handbook (MSH) A document published in 1997 and revised and updated in 2008 by MassDEP as guidance on the 1996 Stormwater Policy.

MS4 (Municipal Separate Storm Sewer System) The system of conveyances, owned or operated by the Town of Needham, that is 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, swale, culvert, channel, catch basin, outfall, outlet, reservoir, or other drainage structure.

National Pollutant Discharge Elimination System (NPDES) Stormwater Discharge Permit

A permit issued by the United States Environmental Protection Agency or jointly with the state that authorizes the discharge of stormwater containing pollutants into waters of the United States.

New Construction Construction or replacement of a structure, house or building which requires a Building Permit or construction/reconstruction of a parking lot, or construction of a subdivision roadway requiring Planning Board or Board of Appeals approval.

Non-point Source Pollution Rainfall or snowmelt that picks up pollutants as it moves across the ground.

Non-stormwater Discharge A discharge that is not composed entirely of stormwater, such as sanitary waste or process water.

Operation and Maintenance (O&M) Plan A plan setting 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.

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

Plot Plan The plan that accompanies an application for a Building Permit.

Point Source Any discernible, confined and discrete conveyance, including, without limitation, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. The term does not include agricultural stormwater discharges and return flows from irrigated agriculture.

Pollutant Any element or characteristic of 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 Needham's MS4 or waters of the Commonwealth. Pollutants shall include, but are not limited to:

- (a) Paints, varnishes, and solvents;
- (b) Oil and other automotive fluids;
- (c) Non-hazardous liquid and solid wastes and yard wastes;

- (d) Refuse, rubbish, garbage, litter, or other discarded or abandoned objects, ordinances, accumulations and floatables;
- (e) Excess pesticides, herbicides, and fertilizers;
- (f) Hazardous materials and wastes;
- (g) Sewage, fecal coliform and pathogens;
- (h) Dissolved and particulate metals or nonmetals, including phosphorus;
- (i) Animal wastes;
- (j) Rock, sand, salt, silt, soils;
- (k) Construction wastes and residues; and
- (l) Noxious or offensive matter of any kind.

Permitting Authority The municipal board, committee or department with authority for issuing permits for construction. These include the Planning Board, Conservation Commission, Department of Public Works, Building Department, and Zoning Board of Appeals.

Recharge The process by which groundwater and the underlying aquifer is replenished by the absorption of water.

Redevelopment Replacement, rehabilitation, or expansion of existing structures, improvement of existing roads or reuse of degraded or previously developed areas. Redevelopment is defined to include the following projects:

- (a) Maintenance and improvement of existing roadways including widening less than a single lane, adding shoulders, correcting substandard intersections, improving existing drainage systems and repaving; and
- (b) Development, rehabilitation, expansion and phased projects on previously developed sites provided the redevelopment results in no net increase in impervious area.

Runoff The water from rain, snowmelt or irrigation that flows over the land surface and is not absorbed into the ground, instead flowing into the MS4 or streams or other surface waters or land depressions.

Sanitary Sewer System A separate underground conveyance system specifically for transporting sanitary waste operated separately and independently from the MS4, to which storm, surface, and ground waters are not lawfully admitted.

Small Diameter Drain Program A Town of Needham Program allowing the extension of the Town's drainage system (MS4) by a series of 6-inch, 8-inch and 10-inch drain pipes used to collect roof drains and clean sump pump discharges.

Stormwater Water originating from rainfall and snow/ice melt.

Stormwater Management The use of structural or non-structural practices that are designed to reduce and control stormwater runoff pollutant loads, discharge volumes or peak flow discharge rates. Stormwater Management includes the use of Low-Impact Development (LID) management practices.

Vegetation Trees, shrubs, bushes and ground cover, including grass.

Watershed Management Plan The plan developed for the Town of Needham subdividing watershed areas within the Town and depicting drainable soil areas appropriate for infiltration/recharge.

Waters of the Commonwealth All waters within the jurisdiction of the Commonwealth of Massachusetts under the Wetlands Protection Act (M.G.L ch. 131 section 40 and regulations at 310 CMR 10.00) and regulations at 314 CMR 9.00, Water Quality Certification, including, without limitation, rivers, streams, lakes, ponds, springs, impoundments, wetlands, and vernal pools.

Waters of Needham All waters within the jurisdiction of the Town of Needham under the Wetlands Protection Bylaw (Article 6) and implementing regulations, including rivers, streams, lakes, ponds, springs, impoundments, wetlands and vernal pools.

### **SECTION 7.3 ADMINISTRATION**

- 7.3.1 The Board of Selectmen shall adopt, and may periodically amend, Stormwater Regulations to effectuate the purposes of this By-law, after conducting a public hearing to receive Public comment.
- 7.3.2 The Director of Public Works shall be responsible for the day-to-day administration of this By-Law and its Regulations except as provided in Section 7.3.3 below. The Director may designate a person or persons to carry out any of his/her duties under this Stormwater By-Law.
- 7.3.3 The issuing authorities for permits (Building Department, Planning Board, Zoning Board of Appeals, and Conservation Commission) are responsible for determining compliance with this By-law for any application to these authorities. The Director of Public Works/designee shall review permit applications and provide an advisory opinion to the issuing authorities.
- 7.3.4 The Director of Public Works/designee shall have the authority to investigate suspected illicit discharges and to require the elimination of illicit discharges.

### **SECTION 7.4 APPLICABILITY**

#### **7.4.1 Permits and Approvals**

All persons required to obtain a Building Permit for new construction and/or additions greater than 25% of the existing building footprint shall be subject to the requirements of this By-Law.

All persons also required to obtain Planning Board Site Plan approval pursuant to the Zoning By-Law, Planning Board approval for a Subdivision, and/or a Board of Appeals Decision (for new construction and/or additions greater than 25% of the existing building footprint) are subject to the requirements of this By-Law.

#### 7.4.2 Stormwater Management and Erosion Control

Except as listed below, all applications for new construction or redevelopment subject to the provisions of this By-law, whether or not the issuance of a Building Permit is required, shall include Stormwater Management and Erosion Control provisions.

The relevant permitting authority (Building Department, Planning Board, Zoning Board of Appeals, or Conservation Commission) shall review and approve the Stormwater Management and Erosion Control Plan prior to the issuance of a permit.

The Director of Public Works/designee shall participate in the review process and make recommendations to the permitting authority as needed. Applications involving facade treatments, interior renovations, and/or changes in use are exempt from the requirement for a Stormwater Management and Erosion Control Plan.

The following applications do not require a Stormwater Management and Erosion Control Plan when proposed in an area not subject to jurisdiction of the Conservation Commission:

- Applications for addition to a commercial structure, parking lot, or roadway that is less than 1,500 square feet.

#### 7.4.3 Modification of Building Permits

The applicant, or an agent thereof, shall obtain the approval of the Director of Public Works prior to any change or modification of an activity associated with the Stormwater Management and Erosion Control provisions of the Building Permit. The Director of Public Works shall approve or reject the change or modification in writing on the plot plan submitted within two (2) weeks of the receipt of such change or modification. If no action is taken within the said two-week period, the change or modification shall be deemed to have been approved.

#### 7.4.4 Modification Requiring Planning Board, Zoning Board of Appeals, and/or Conservation Commission Approval

In circumstances where Planning Board, Zoning Board of Appeals, and/or Conservation Commission approval is required prior to the issuance of a Building Permit, approval by the respective board or commission is required prior to any significant change or modification of an activity associated with an approved Stormwater Management and Erosion Control Plan. Additional stormwater runoff and erosion control measures may be required prior to approval of the change or modification.

## **SECTION 7.5            ILLICIT DISCHARGE, DETECTION & ELIMINATION (IDDE)**

### **7.5.1    Prohibited Activities**

7.5.1.1 **Illicit Discharges** No person shall cause or allow an illicit discharge into the MS4 or into the Waters of the Commonwealth. This By-Law shall not exempt stormwater discharges from regulations under the National Pollutant Discharge Elimination System (NPDES) stormwater program where applicable.

7.5.1.2 **Illicit Connections** No person shall construct, use, allow, maintain or continue any Illicit Connection, regardless of whether the connection was permissible under applicable law, regulation or custom at the time of connection.

7.5.1.3 **Obstruction of Municipal Storm Drain System** No person shall obstruct or interfere with the normal flow of stormwater into or out of the MS4 without prior written approval from the Director of Public Works.

### **7.5.2    Regulated Activities**

7.5.2.1 No person shall connect a pipe or other appurtenance to the Town of Needham Sanitary Sewer System or the MS4, or otherwise perform any modification, repair, rehabilitation, or replacement work on either system, without receiving an approved Sewer Connection Permit or Drainage Connection Permit from the Department of Public Works.

7.5.2.2 No person shall allow a pipe, swale or other point source to discharge onto a Public Way.

### **7.5.3    Exemptions**

The following are exempt from the requirements of this By-Law:

- (a) Water line flushing;
- (b) Landscape irrigation;
- (c) Diverted stream flows;
- (d) Rising ground waters,
- (e) Uncontaminated ground water (groundwater that is free of pollutants);
- (f) Discharges from potable water sources;
- (g) Air conditioning condensation;
- (h) Lawn watering;
- (i) Flows from wetland resource areas;
- (j) Discharges or flows from firefighting activities; and
- (k) Discharges necessary to protect public health, safety, welfare or the environment.

## **SECTION 7.6            EMERGENCY SUSPENSION OF STORM DRAIN SYSTEM ACCESS**

The Director of Public Works/designee may suspend MS4 access to any person or property without prior written notice when such suspension is determined to be necessary to prevent or terminate a threatened or actual discharge of pollutants that presents imminent risk of harm to the public health, safety, welfare or the environment. In the event that any person fails to comply with an emergency suspension order issued pursuant to this section, the Director of Public Works/designee may take all reasonable steps to prevent or minimize harm to the public health, safety, welfare or the environment.

## **SECTION 7.7            STORMWATER MANAGEMENT AND EROSION CONTROL**

### **7.7.1    Regulated Activities**

A Stormwater Management and Erosion Control plan shall be required for any construction activity as set forth under Section 7.4 of this By-Law.

### **7.7.2    Exempt Activities**

The following activities shall be exempt from this By-Law:

- (a) Any work or projects for which all necessary approvals and permits have been issued before the effective date of this By-Law;
- (b) Use of land for the primary purpose of agriculture, horticulture, floriculture, or viticulture, or the use, expansion, or reconstruction of existing structures for the primary purpose of agriculture, horticulture, floriculture, or viticulture, to the extent protected under the *Zoning Act, M.G.L. c. 40A, § 3*;
- (c) Customary cemetery management;
- (d) Normal maintenance of Town-owned public land, ways, public utilities and appurtenances; and
- (e) Emergency activities necessary to protect public health or safety.

### **7.7.3    General Requirements**

#### **7.7.3.1 Pre-Construction**

A Stormwater Management and Erosion Control plan shall be submitted as part of a Building Plot Plan or independently with an application for a Building Permit, Planning Board application, Zoning Board of Appeals application, Conservation Commission application, and/or prior to any development activity.

### **7.7.3.2 Construction**

The Stormwater Management and Erosion Control plan shall include construction period measures to prevent the discharge of silt or sediment to the MS4 and/or abutting properties.

### **7.7.3.3 Post-Construction**

For both commercial and residential projects, the Stormwater Management and Erosion Control Plan shall include provisions for post-construction measures to provide a minimum combined volumetric capacity to recharge a minimum of one (1) inch of rainfall depth over the total impervious area of the property (buildings and impervious surfaces). For commercial projects, the Stormwater Management and Erosion Control Plan shall include stormwater runoff quality controls and other structural and non-structural Best Management Practices (BMPs) to remove pollutants from stormwater prior to recharge to the groundwater in accordance with the Massachusetts Stormwater Handbook. The purpose of this plan is to prevent or minimize increases in stormwater volumes and flows to the MS4 and to reduce pollutant loading to the MS4 and receiving waters.

### **7.7.3.4 Standard Infiltration Method**

As one option to satisfy Sections 7.7.3.1 and 7.7.3.2 and 7.7.3.3, for residential and commercial development subject to this By-Law with 4,000 square feet of impervious surface or less on the property, a Standard Infiltration Method (SIM) may be utilized consisting of the installation of drywells at one or more corners of the main dwelling/building to collect the roof runoff from the structure. Building projects involving additions greater than 25% of the existing building footprint but less than 50% of the existing building footprint shall collect the entire runoff from the roof of the addition plus runoff from the roof on the side of the existing structure that contains the addition. Building projects involving additions that are 50% or greater than the existing building footprint shall capture the stormwater runoff from the entire roof. The as-built (certified) Plot Plan showing the improvements to the property shall be stamped by a Massachusetts Registered Land Surveyor.

### **7.7.3.5 Poor Soils**

Properties located within an area of poor soils as identified on the Town's Watershed Management Plan or due to shallow depth to groundwater or other reason as determined by the Director of Public Works/designee, a small diameter drain shall be extended from the Town's stormwater drainage system (MS4) down gradient of the property to the property to collect the roof runoff from the main dwelling. If there is no portion of a drainage system within 100 feet of the property, the property owner shall contribute to a fund for the Town to construct a communal infiltration system on Town property. The contribution shall be an

amount as determined by the Board of Selectmen per cubic foot of stormwater required to be recharged as described above.

#### **7.7.3.6 Operation and Maintenance Plan**

An Operation and Maintenance Plan (O&M Plan) shall be submitted with the application for a Building Permit, Planning Board application, Board of Appeals application, or Conservation Commission application pursuant to this By-Law. The Operation and Maintenance Plan shall be designed to ensure compliance with this By-Law in all seasons and throughout the life of the system. The O&M Plan shall be signed by the property owner. For residential and commercial development with 4,000 square feet of impervious area or less, the O&M Plan shall consist of an annual inspection of the drywells, and removal of sediment, leaves or debris as needed.

#### **7.7.3.7 As-Built Drawing**

Except as provided for in Section 7.7.3.4, as-built drawings stamped by a Massachusetts Registered Professional Engineer showing all stormwater management systems shall accompany the as-built Plot Plan at the completion of a project.

### **7.7.4 Design Criteria**

7.7.4.1 Residential development and commercial development with 4,000 square feet or less of impervious area constructed using the Standard Infiltration Method (SIM) will be deemed compliant with the design criteria of this By-law.

7.7.4.2 All developments subject to this By-Law shall satisfy the following design criteria:

- (a) Stormwater Management and Erosion Control measures must, in the opinion of the Building Department, Planning Board, Zoning Board of Appeals, or Conservation Commission, as the case may be, be in compliance with all applicable provisions of the Massachusetts Stormwater Standards issued in 1996 as amended, regardless of the proximity of the development to resource areas or their buffer zones, as defined by the *Wetlands Protection Act, M.G.L. c. 131, § 40* and its implementing regulations.
- (b) Erosion and sediment controls must be implemented to prevent adverse impacts caused by the discharge of silt or sediment to municipal and/or abutting properties during and after land disturbance and construction activities.
- (c) There shall be no change to the existing conditions of abutting properties from any increase in volume or peak rate of stormwater runoff or from erosion,

silting, flooding, sedimentation or impacts to wetlands and other resource areas as defined in the Massachusetts Wetlands Protection Act and/or Needham Wetlands Protection Bylaw.

- (d) When any proposed discharge may have an impact upon streams, wetlands and/or the MS4 or its conveyance system (storm sewers), the Director of Public Works/designee may require minimization or elimination of this impact based on site conditions and existing stormwater system capacity.

## **SECTION 7.8 MAINTENANCE OF STORMWATER FACILITIES**

[Reserved]

## **SECTION 7.9 SEVERABILITY**

If any provision of this Article shall be found invalid for any reason in a court of competent jurisdiction, such invalidity shall be construed as narrowly as possible, and the balance of the Article shall be deemed to be amended to the minimum extent necessary, so as to secure the purposes thereof.

## **SECTION 7.10 ENFORCEMENT**

The Director of Public Works/designee shall enforce this By-Law, and any regulations, orders, violation notices, and enforcement orders made pursuant to this By-Law as follows:

7.10.1 The Director of Public Works may issue a written order to enforce the provisions of this By-Law or the regulations thereunder, which may include (but are not limited to) an order to:

- (a) eliminate illicit connections or discharges to the MS4;
- (b) perform monitoring, analyses, and reporting;
- (c) cease and desist unlawful discharges, practices, or operations; and
- (d) remediate contamination in connection therewith.

7.10.2 If the Director of Public Works/designee determines that abatement or remediation of contamination 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, it shall be a violation of this By-Law and the Director of Public Works/designee may, at his or her option, authorize such work.

7.10.3 Any person or entity aggrieved by a decision of the Director of Public Works/designee under this provision of this Stormwater By-Law may submit a letter of appeal to the Board of Selectmen who may affirm, amend, or overrule that decision after a public meeting held not more than 45 days after the submission of a letter of appeal.

7.10.4 If a person violates the provisions of this By-Law, or any regulation, permit, notice, or order issued thereunder, the Director of Public Works/designee, with the approval of the Board of Selectmen, may seek injunctive relief in a court of competent jurisdiction to restrain such person from activities that would create further violations or to compel the person to perform abatement or remediation of the violation.

7.10.5 The remedies set forth in this Section are not intended to be exclusive of any other remedies available under applicable federal, state, or local law.

## **SECTION 7.11      WAIVER**

The permit granting authority may waive strict compliance with any requirement of this By-Law when (a) such action would serve a substantial public interest, (b) such action is required for compliance with the Massachusetts Contingency Plan (MCP), or (c) strict compliance would result in severe economic hardship greater in magnitude than the public interest to be served.