AMENDED
O-18-015

ORDINANCE

AMENDING THE CITY'S STORMWATER MANAGEMENT ORDINANCES

CITY OF NASHUA

In the Year Two Thousand and Eighteen

The City of Nashua ordains that Part II "General Legislation", Chapter 190 "Land Use", Article XXXI "Stormwater Management", Section 190-215 "Stormwater management standards" and Section 190-217 "Operation and maintenance plans" of the Nashua Revised Ordinances, as amended, be hereby further amended by deleting the struck-through language and adding the new underlined language as follows:

"§ 190-215. Stormwater management standards.

The following stormwater management standards shall be applied to all subdivision and site plans.

A. Untreated stormwater.

(1) No new stormwater conveyances may discharge untreated stormwater directly to or cause erosion into wetlands or water bodies.

(2) Rooftop runoff is considered uncontaminated for the purposes of these standards and therefore does not require treatment.

B. Postdevelopment peak discharge rates.

(1) Stormwater management systems must be designed so that the ten-year twenty-four-hour postdevelopment peak discharge rate does not exceed the ten-year twenty-four-hour predevelopment peak discharge rates.

(2) In order to meet this standard, controls must be developed for the two-year, ~~five-year, and the~~ ten-year, and fifty-year twenty-four-hour storm events. The hundred-year twenty-four-hour storm event must be evaluated to demonstrate that there will not be increased flooding impacts off site.

(3) Measurement of peak discharge rates shall be calculated using point of discharge or the downgradient property boundary. The topography of the site may require evaluation at more than one location if flow leaves the property in more than one direction. An applicant may demonstrate that a feature beyond the property boundary is more appropriate as a design point.

C. Recharge to groundwater. Annual groundwater recharge rates shall be maintained by providing infiltration by the use of structural and nonstructural methods. The annual recharge from post development site conditions shall mimic the annual recharge from predevelopment site conditions. Best management practice (BMP) techniques to achieve recharge requirements include infiltration, bioretention, dry swale, and nonstructural techniques. Alternative techniques may be used if they meet the performance criteria stated herein and are approved by the Planning Board.

D. Water quality.

(1) For discharges to the Conservation Zone within the Water Supply protection District as defined in § 190-24, the runoff volume to be treated for water quality if calculated as 1.0 inch of runoff multiplied by the total impervious area of the post development project site.

(2) For all other discharges, the runoff volume to be treated for water quality if calculated as 0.5 inch of runoff multiplied by the total impervious area of the postdevelopment project site.

(3) Removal of 80% of the suspended solids (TSS), floatables, greases, and oils. For new developments, stormwater management systems shall be designed to remove 80% of the average annual load of total suspended solids (TSS), floatables, greases, and oils after the site is developed. This standard is met when:

(a) The Planning Board determines that suitable nonstructural practices for source control and pollution prevention are implemented;

(b) Stormwater management best management practices (BMPs) capture the prescribed runoff volume; and

(c) Stormwater management BMPs are maintained as designed.

E. Critical areas land uses with higher potential pollutant loads~~. Stormwater discharges from areas with high potential pollutant loads~~ require the use of specific stormwater management BMPs, as detailed in this section. The use of infiltration practices without pretreatment is prohibited.

(1) The following uses are considered to create high potential pollutant loads:

(a) Any use requiring a National Pollutant Discharge Elimination System (NPDES) stormwater discharge permit associated with industrial activity;

(b) Auto salvage yards/auto recycler facilities;

(c) Auto fueling facilities/gas stations;

(d) Fleet storage areas (cars, buses, trucks, public works);

(e) Vehicle service, maintenance and equipment cleaning areas;

(f) Retail parking lots;

(g) Road salt storage or loading areas if exposed to rainfall;

(h) Commercial nurseries;

(i) Metal rooftops, including roofs made from aluminum, tin, galvanized steel, copper, or rooftops which contribute significant pollutant loads;

(j) Outdoor storage and loading/unloading areas of hazardous substances;

(k) SARA 312 generators if materials or containers are exposed to rainfall; and

(l) The service, repainting, and hull maintenance areas of marinas.

(2) The following measures are required in addition to BMPs described in Subsection E(1) above, within areas with high potential pollutant loads:

(a) Source reduction; and

(b) Pretreatment.

(3) The following are prohibited within areas with high potential pollutant loads located in a Conservation Zone:

(a) Infiltration trenches;

(b) Infiltration basins; or

(c) Dry wells.

(4) The following restrictions apply to certain BMPs within areas of high potential pollutant loads: Sand or organic filters, detention basins, wet ponds or constructed wetlands may be used only if sealed or lined.

F. Wetland or water bodies.

(1) BMPs approved for use within 300 feet of a wetland or water body unless otherwise prohibited by § 190-24 are limited to:

(a) Extended detention basins;

(b) Wet ponds;

(c) Constructed wetlands;

(d) Water quality swales;

(e) Sand filters;

(f) Organic filters;

(g) Infiltration basins;

(h) Infiltration trenches; and

(i) Deep sump hooded catch basins (used with other BMPs).

(2) Stormwater management systems should incorporate designs which allow for shutdown and containment in the event of an emergency spill or other unexpected contamination event.

G. Redevelopment. Redevelopment of previously developed sites must meet the stormwater management standards to the maximum extent possible ~~as determined by the Planning Board~~ to be determined by the Planning Board. The goal is to reduce impervious area by a minimum of 20% or meet the open space requirement in that zoning district. The application shall include a certification by a registered professional engineer as to compliance with this standard.

H. Erosion and sedimentation ~~controls~~ plans.

(1) Erosion and sedimentation controls must be implemented to prevent impacts during construction or post-construction or land disturbance activities, and shall be properly installed prior to soil disturbance in the contributing drainage area and a plan shall contain the following:

(a) A project narrative including a description of the development.

(b) Locus map showing property boundaries.

(c) North arrow, scale, date.

(d) Property lines.

(e) Structures, roads, and utilities.

(f) Topographic contours at two-foot (2') intervals.

(g) Critical areas.

(h) Within the project area and within 50 feet of project boundary based on Nashua GIS surface waters, wetlands, and drainage patterns and watershed boundaries.

(i) Vegetation.

(j) Extent of 100-year floodplain boundaries if published or determined.

(k) Easements.

(l) Areas of soil disturbance.

(m) Areas of cut and fill.

(n) Locations of equipment storage and staging.

(o) Highlighted areas of poorly and very poorly drained soils.

(p) Highlighted areas of poorly and/or very poorly drained soils proposed to be filled.

(q) Location, descriptions, details, and design criteria and calculations for all structural, non-structural, permanent, and temporary erosion and sedimentation control measures and BMP's.

(r) Identification of all permanent control measures.

(s) Identification of permanent snow storage areas.

(t) Identification of snow management measures during construction.

(u) Description of the combination of sediment and erosion control measures which are required to achieve maximum pollutant removal such as:

i. Sediment Basins: For common drainage that serves an area with 10 or more acres disturbed at one time, a temporary (or permanent) sediment basin must provide storage for a calculated volume of

runoff from a drainage area from a two-year, twenty-four hour storm, or equivalent control measures, must be provided, where attainable, until final stabilization of the site. Where no such calculation has been performed, a temporary (or permanent) sediment basin providing 3,600 cubic feet of storage per acre drained, or equivalent control measures, must be provided where attainable until final stabilization of the site. When computing the number of acres draining to a common location, it is not necessary to include flows from off-site areas and flows from on-site areas that are either undisturbed or have undergone final stabilization where such flows are diverted around both the disturbed areas and the sediment basin. In determining whether a sediment basin is attainable, the operators may consider such factors as site soils, slope, available area on-site, etc. In any event, the operator must consider public safety, especially as it relates to children, as a design factor for the sediment basin and alternative sediment controls must be used where site limitations would preclude a safe design.

ii. Drainage locations which serve 10 or more disturbed acres at one time and where temporary sediment basins or equivalent controls are not attainable, smaller sediment basins and/or sediment traps should be used. At a minimum, silt fence, vegetative buffer strips, or equivalent sediment controls are required for all downslope boundaries (and for those side slope boundaries deemed appropriate as dictated by individual site conditions).

iii. Drainage locations serving less than 10 acres may utilize smaller sediment basins and/or sediment traps. At a minimum, silt fence, vegetative buffer strips, or equivalent sediment controls are required for all downslope boundaries (and for those side slope boundaries deemed appropriate as dictated by individual site conditions) of the construction area unless a sediment basin providing storage for a calculate volume of runoff from a 2-year, 24-hour storm or 3,600 cubic feet of storage per acre drained is provided.

(2) Whenever practical, natural vegetation shall be retained, protected or supplemented. Priority shall be given to preserving natural drainage systems including perennial and intermittent streams, wetlands, swales, and drainage ditches for conveyance of runoff leaving the project area.

(3) Examples of BMPs for erosion and sedimentation control are staked ~~hay~~ straw bales, filter fences, hydroseeding, and phased development. Many stormwater BMP technologies (e.g., infiltration technologies) are not designed to handle high concentrations of sediments typically found in construction runoff and must be

protected from construction-related sediment loadings. Construction BMPs must be maintained while construction or land disturbance activities continue.

(4) Measures shall meet as a minimum the Best Management Practices set forth in the ~~"Stormwater Management and Erosion and Sediment Control Handbook for Urban and Developing Areas in New Hampshire," Rockingham County Conservation District, NH Department of Environmental Services (DES), Soil Conservation Service (now the Natural Resources Conservation Service), August 1992, as amended,~~ "New Hampshire Stormwater Manual, Volumes 1-3" and any published DES regulations.

(5) Off-site surface water and runoff from undisturbed areas shall be diverted away from disturbed areas where feasible or carried nonerosively through the project area. Integrity of downstream drainage systems shall be maintained.

(6) All temporary erosion and sediment control measures shall be removed after final site stabilization. Trapped sediment and other disturbed soil areas resulting from the removal of temporary measures shall be permanently stabilized within 30 days.

I. Stormwater management measures.

(1) Structural stormwater management measures to achieve recharge, water quality, and peak discharge control shall be structural BMP's designed in accordance with the requirements of the following:

(a) ~~"Stormwater Management and Erosion and Sediment Control Handbook for Urban and Developing Areas in New Hampshire," Rockingham County Conservation District, New Hampshire Department of Environmental Services, Soil Conservation Service (now the Natural Resources Conservation Service), August 1992, as amended~~ New Hampshire Stormwater Manual, Volumes 1-3.

(b) Best Management Practices for Urban Stormwater Runoff, published by NH DES, 1996, as amended.

(c) Innovative Stormwater Treatment Technologies Best Management Practices Manual, published by NH DES, May 2002, as amended [Reference: http://www.des.state.nh.us/wmb/was/manual/]

(2) The performance criteria specified in the Design Manual with regard to general feasibility, conveyance, pretreatment, environment and landscaping, and maintenance shall be considered in the selection of a structural BMP.

(3) Structural stormwater management practices shall be selected to accommodate the unique hydrologic and geologic conditions of the site. Design computations must document these conditions.

(4) Nonstructural management measures may reduce or eliminate the need for structural BMPs to meet recharge, water quality, and peak discharge control requirements. These techniques, shall include Runoff Prevention Methods (RPMs), are encouraged and shall be designed in accordance with the guidelines in the documents listed in Subsection I(1) above. These techniques may include disconnection of rooftop and nonrooftop runoff, vegetated bio-cells and bio-islands, infiltration edges, dividers, or islands, planters, and raingardens.

J. Allowable Non-Stormwater Discharges.

The following non-stormwater discharges are authorized provided it has been determined that they are not significant contributors of pollutants to the MS4. If these discharges are identified as significant contributors to the MS4, they must be addressed in the Illicit Discharge Detection and Elimination minimum control measure described.

(1) Water line flushing;

(2) Landscape irrigation;

(3) Diverted stream flows;

(4) Rising ground waters;

(5) Uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20));

(6) Uncontaminated pumped ground water;

(7) Discharge from potable water sources;

(8) Foundation drains;

(9) Air conditioning condensation;

(10) Irrigation water, springs;

(11) Water from crawl space pumps;

(12) Foot drains;

(13) Lawn watering;

(14) Individual resident car washing;

(15) Flows from riparian habitats and wetlands;

(16) Dechlorinated swimming pool discharges;

(17) Street wash water;

(18) Residential building wash waters, without detergents; and

(19) Discharges or flows from firefighting activities that occur during emergency situations. The permittee is not expected to evaluate firefighting discharges with regard to pollutant contributions. Therefore, these discharges are authorized as allowable non-stormwater discharges, unless identified, by EPA as significant sources of pollutants to waters of the United States.

K. Litter, debris, yard waste, and all other non-stormwater discharges except for those listed in subsection J above are prohibited.

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§ 190-217. Operation and maintenance plans.

A. Applicability. All stormwater management systems shall have an operation and maintenance plan (O&M plan) to ensure that systems function as designed. This plan shall be reviewed and approved as a part of the site plan or subdivision plan. If the system is not dedicated to the City pursuant to a perpetual offer of dedication, the Planning Board may require an applicant to establish a homeowners association ~~or similar entity~~ for residential projects or private entity to maintain the stormwater management system.

B. Minimum requirements. The operation and maintenance plan shall, at a minimum, identify:

(1) Stormwater management system(s) owner(s);

(2) The party or parties responsible for operation and maintenance;

(3) A schedule for inspection and maintenance;

(4) The routine and nonroutine maintenance tasks to be undertaken; and

(5) A certification signed by the owner(s) attesting to their commitment to comply with the O&M plan.

C. Establishment of O&M plan. The stormwater management system owner is generally considered to be the landowner of the property, unless other legally binding agreements

are established. Execution of the operation and maintenance plan shall be considered a condition of approval of any subdivision plan or site plan.

D. Recording.

(1) The owner shall provide covenants for filing with the registry of deeds, in a form satisfactory to the Planning ~~Board~~ Department, which provide that the obligations of the maintenance plan run with the land.

(2) The owner shall file with the registry of deeds such legal instruments as are necessary to allow the City or its designee to inspect or maintain the stormwater management systems for compliance with the O&M plan.

E. Modifications.

~~(1) The owner shall keep the O&M plan current, including making modifications to the O&M plan as necessary to ensure that BMPs continue to operate as designed and approved.~~

~~(2) Proposed modifications of O&M plans shall be submitted to the Planning Board for review and approval. Also, the owner must notify the Planning Board within 30 days of a change in owner or party responsible for implementing the plan. Proposed changes in inspection frequency, maintenance schedule, or maintenance activity shall also be submitted, along with appropriate documentation, for review and approval.~~

~~(3) The Planning Board may, in its discretion, approve a reduction in the frequency of inspection or maintenance or a change in maintenance activity, provided that the owner has demonstrated that such changes will not compromise the long-term function of the stormwater system.~~

~~(4) The Administrative Officer shall notify the owner of acceptance of the plan modification, or request additional information, within 60 days. No response from the Planning Board at the end of 60 days shall constitute acceptance of the plan modification. The currently approved plan shall remain in effect until notification of approval has been issued, or the sixty-day period has lapsed.~~

The owner shall keep the O&M plan current, including making modifications to the O&M plan as necessary to ensure that best management practices (BMPs) continue to operate as designed and approved. Proposed modifications of O&M plans shall be submitted to the Planning Department for review and approval. Also, the owner must notify the Planning Department within 30 days of a change in owner or party responsible for implementing the plan. Proposed changes in inspection frequency, maintenance schedule, or maintenance activity shall also be submitted, along with appropriate documentation, for review and approval. As part of the Planning Board review, the Division of Public Works may, in its discretion, approve a reduction in the frequency of inspection or maintenance or a change in maintenance activity, provided that

the owner has demonstrated that such changes will not compromise the long-term function of the stormwater system. Division of Public Works shall notify the owner of acceptance of the plan modification, or request additional information, within 60 days. No response from Division of Public Works at the end of the 60 days shall constitute acceptance of the plan modification. The currently approved plan shall remain in effect until notification of approval has been issued, or the sixty-day period has lapsed. The owner shall provide covenants for filing with the registry of deeds, in a form satisfactory to the Planning Department, any changes and or modifications to the plan.

F. Recordkeeping.

(1) The owner shall retain records (such as maintenance logs and contractor receipts) demonstrating compliance with the scheduled maintenance activities for a period of not less than three years. The City may request copies of such records, or may request inspection of such records on the property. Failure to produce such records or copies of such records within 14 days of such a request shall constitute a condition of noncompliance with the site plan approval, subject to enforcement as outlined under § 190-157.

(2) The owner shall ensure that an annual report is provided to the ~~Planning Director~~ Planning Department on or before the first day of January of each year. Such reports shall, at a minimum, include:

(a) The location of the property;

(b) The name, address, and phone number of the owner;

(c) The name, address, and phone number of the party responsible for maintenance if other than the owner;

(d) A brief description of the site uses and stormwater management system;

(e) A summary of inspections completed and the results of such inspections; and

(f) A summary of any maintenance activities or corrective actions undertaken.

(3) Annual reports shall be signed by the owner or other legally responsible party, and shall attest to the accuracy of information provided in the report. Failure to submit annual reports shall constitute a condition of non-compliance with site plan approval subject to enforcement as outlined under § 190-157."

All other ordinances or parts of ordinances inconsistent herewith are hereby repealed.

This ordinance shall become effective immediately upon passage.

PASSED BY THE BOARD OF ALDERMEN – JUNE 26, 2018
APPROVED BY THE MAYOR – JUNE 27, 2018
ATTEST: PATRICIA D. PIECUCH, CITY CLERK