

***Zoning Regulation Amendments Adopted December 19,
2018 effective date January 7, 2019***

Article 2 General Provisions Section 2.2 Definitions

Definitions-

FIRE LANE – The aisle immediately adjacent to a building or structure reserved for access by emergency public safety vehicles in which no parking or standing is permitted

Article 3 District Regulations

Section 3.4 Business (B) District

Section 3.4.12 Miscellaneous

Section 3.4.12.2 All Emergency Fire and Safety Access shall comply with the requirements of Article 6 Section 6.10.10

Section 3.5 Industrial – Manufacturing 1 (IND-1) District

Section 3.5.12 Miscellaneous

3.5.12.3 All Emergency Fire and Safety Access shall comply with the requirements of Article 6 Section 6.10.10

Section 3.6 Industrial –Manufacturing 2 (IND-2) District

Section 3.6.12 Miscellaneous

Section 3.6.12.5 All Emergency Fire and Safety Access shall comply with the requirements of Article 6 Section 6.10.10

Article 4 Supplementary Regulations

Section 4.14. Erosion & Sedimentation Control

Purpose: This Section is intended to prevent accelerated erosion and sedimentation of land during and after Development; reduce the danger from storm-water runoff; minimize sediment pollution from land being developed; and prevent detrimental impacts to soil and water resources.

Section 4.14.2 Activities Requiring a Certified Erosion and Sedimentation Control Plan

An Erosion and Sediment Control Plan shall be submitted with any application for Development when the Disturbed Area of such Development is cumulatively more than one-half (1/2) acre.

A Single Family Dwelling Unit that is not part of a subdivision of land shall be exempt from these Erosion and Sedimentation Control Regulations

SECTION 4.22 STORM-WATER MANAGEMENT STANDARDS

A. Storm-water Management Policy and Principles

1. Policy

- a. The Town of Prospect seeks to maintain the natural environment of its watercourses and water bodies, to control pollution caused by Storm-water Runoff, and to control flooding caused by development.**
- b. The Town encourages innovative solutions and Low Impact Development techniques.**

2. Principles

These Storm-water Management Standards intend to emulate the following goals as espoused in the 2004 Connecticut Storm-water Quality Manual, as amended:

- a. Preserve pre-development site hydrology (including runoff, infiltration, interception, evapotranspiration, Groundwater Recharge, and stream base flow) to the extent possible.**
- b. After construction has been completed and the site is permanently stabilized, reduce the average annual total suspended solids loadings in the post-development runoff by 80 percent. For high quality receiving waters and sites with the highest potential for significant pollutant loadings, reduce post-development pollutant loadings so that average annual post-development loadings do not exceed pre-development loadings (i.e., no net increase).**
- c. Preserve and protect wetlands, stream buffers, natural drainage systems, and other natural features that provide water quality and quantity benefits.**
- d. Manage runoff velocity and volume in a manner that maintains or improves the physical and biological character of existing drainage**

systems and prevents increases in downstream flooding/stream bank erosion.

e. Prevent pollutants from entering receiving waters and wetlands in amounts that exceed the systems' natural ability to assimilate the pollutants and provide the desired functions.

f. Seek multi-objective benefits (i.e., flood control, water quality, recreation, aesthetics, and habitat) from Storm-water control measures.

B. Definitions

For this Section 4.22 only, these terms shall be defined as follows:

Aquifer – A porous water-bearing formation of permeable rock, sand or gravel capable of yielding economically significant quantities of groundwater.

Best Management Practice (BMP) – A BMP is a technique, process, activity, or structure used to reduce the pollutant content of a storm water discharge. BMPs include simple nonstructural methods, such as good housekeeping and preventive maintenance. BMPs may also include structural modifications, such as the installation of Bioretention measures. BMPs are most effective when used in combination with each other, customized to meet the specific needs (drainage, materials, activities, etc.) of a given operation.

Bio-retention – A practice to manage and treat Storm-water Runoff by using a specially designed planting soil bed and planting materials to filter runoff stored in a shallow depression. The areas consist of a mix of elements each designed to perform different functions in the removal of pollutants and attenuation of Storm-water Runoff.

Catch Basin Inserts – A structure, such as a tray, basket, or bag that typically contains a pollutant removal medium (i.e., filter media) and a method for suspending the structure in the catch basin. They are placed directly inside of existing catch basins where Storm-water flows into the catch basin and is treated as it passes through the structure.

Catch Basin – A structure placed below grade to conduct water from a street or other paved surface to the storm sewer.

Cisterns – Containers that store larger quantities of rooftop Storm-water Runoff and may be located above or below ground. Cisterns can also be used on residential, commercial, and industrial sites. See also Rain Barrel.

Disturbance – Any clearing, grubbing, filling, grading, excavating, constructing, depositing, or removing material that could leave the ground surface subject to the potential for accelerated erosion or an increase in the rate of runoff.

Deep Sump Catch Basins – Storm drain inlets that typically include a grate or curb inlet and a sump to capture trash, debris and some sediment and oil and grease. Also known as an oil and grease Catch Basin.

Dry Detention Pond – Storm-water basin designed to capture, temporarily hold, and gradually release a volume of Storm-water Runoff to attenuate and delay Storm-water Runoff peaks. Dry Detention Ponds provide water quantity control (peak flow control and stream channel protection) as opposed to water quality control. Also known as "dry ponds" or "detention basins".

Filter Strip – A strip or area of vegetation for removing sediment, organic material, nutrients and chemicals from runoff or wastewater. They are typically located down gradient of Storm-water outfalls and level spreaders to reduce flow velocities and promote infiltration and filtration.

Grass Drainage Channels – Traditional vegetated open channels, typically trapezoidal, triangular, or parabolic in shape, whose primary function is to provide non-erosive conveyance, typically up to the ten (10) year frequency design flow. They provide limited pollutant removal through filtration by grass or other vegetation, sedimentation, biological activity in the grass/soil media, as well as limited infiltration if underlying soils are pervious.

Groundwater Recharge – The process by which water that seeps into the ground, eventually replenishing groundwater Aquifers and surface waters such as lakes, streams, and the oceans. This process helps maintain water flow in streams and wetlands and preserves water table levels that support drinking water supplies.

Hydrodynamic Separators – A group of Storm-water treatment technologies designed to remove large particle total suspended solids and large oil droplets, consisting primarily of cylindrical-shaped devices that are designed to fit in or adjacent to existing Storm-water drainage systems. The most common mechanism used in these devices is vortex-enhanced sedimentation, where Storm-water enters as tangential inlet flow into the side of the cylindrical structure. As the Storm-water spirals through the chamber, the swirling motion causes the sediments to settle by gravity, removing them from the Storm-water.

Infiltration Practices – Storm-water Treatment Practices designed to capture Storm-water Runoff and infiltrate it into the ground over a period of days, including infiltration trenches and infiltration basins.

Low Impact Development (LID) – Low Impact Development is a site design strategy intended to maintain or replicate predevelopment hydrology through the use of small-scale controls integrated throughout the site to manage runoff as close to its source as possible.

Non-Routine Maintenance – Corrective measures taken to repair or rehabilitate Storm-water controls to proper working condition. Non-Routine Maintenance is performed as needed, typically in response to problems detected during routine maintenance and inspections.

Oil/Particle Separators – Consist of a subsurface structure with one (1) or more chambers designed to remove trash and debris and to promote sedimentation of coarse materials and separation of free oil (as opposed to emulsified or dissolved oil) from Storm-water Runoff. Oil/Particle Separators are typically designed as off-line systems for pre-treatment of runoff from small impervious areas, and therefore provide minimal attenuation of flow. Also called oil/grit separators, water quality inlets, and oil/water separators.

Permeable Paving Materials – Materials that are alternatives to conventional pavement surfaces and that are designed to increase infiltration and reduce Storm-water Runoff and pollutant loads. Alternative materials include modular concrete paving blocks, modular concrete or plastic lattice, cast-in-place concrete grids, and soil enhancement technologies. Stone, gravel, and other low-tech materials can also be used as alternative for low traffic application such as driveways, haul roads, and access roads.

Porous Pavement – Porous Pavement is similar to conventional asphalt or concrete but is formulated to have more void space for greater water passage through the material.

Pretreatment – Techniques used in Storm-water management to provide storage and removal of coarse materials, floatables, or other pollutants before the Primary Storm-water Treatment Practice.

Primary Storm-water Treatment Practices – Storm-water Treatment Practices that are capable of providing high levels of water quality treatment as stand-alone devices: can be grouped into five (5) major categories – Storm-water Ponds, Storm-water Wetlands, Infiltration Practices, filtering practices, and Water Quality Swales.

Rain Barrels – Barrels designed to retain small volumes of runoff for reuse for gardening and landscaping. They are applicable to residential, commercial, and industrial sites and can be incorporated into a site's landscaping plan. The size of the Rain Barrel is a function of rooftop surface area and the design storm to be stored. Rain Barrels capture runoff that would otherwise be lost to storm drains, divert water to the landscape, and conserve tap water. For large Rain Barrels, see “Cistern.”

Rain Garden – Functional landscape elements that combine plantings and a specially designed planting soil bed in depressions that allow water to pool for only a few days after a rainfall then be filtered by and slowly absorbed by the soil and plantings. Rain Gardens improve water quality by reducing the sediment, nutrients, bacteria, and chemicals from flowing into water bodies.

Responsible Party – The person or organization responsible for construction and/or maintenance of a Storm-water Facility.

Routine Maintenance – Maintenance performed on a regular basis to maintain proper operation and aesthetics.

Secondary Storm-water Treatment Practices – Storm-water treatment practices that may not be suitable as stand-alone treatment because they are either not capable of meeting the water quality treatment performance criteria or have not yet received the thorough evaluation needed to demonstrate the capabilities for meeting the performance criteria.

Site Storm-water Management Plan – A Plan in accordance with Section C below describing the potential water quality and quantity impacts associated with a development project both during and after construction. It also identifies selected source controls and treatment practices to address those potential impacts, the engineering design of the treatment practices, and maintenance requirements for proper performance of the selected practices.

Storm-water – Water consisting of precipitation runoff or snowmelt.

Storm-water Runoff – Above ground water flow resulting from precipitation or snow melt.

Storm-water Facility – Any device, structure, system, or practice used to improve Storm-water quality, promote infiltration, provide peak flow control, or to provide peak runoff attenuation.

Storm-water Ponds – Vegetated ponds that retain a permanent pool of water and are constructed to provide both treatment and attenuation of Storm-water flows.

Storm-water Treatment Practices – Devices constructed for Primary Storm-water Treatment, Pretreatment or Secondary Storm-water Treatment of Storm-water.

Storm-water Treatment Train – Storm-water Treatment Practices, as well as site planning techniques and source controls, combined in series to enhance pollutant removal or achieve multiple Stormwater objectives.

Storm-water Wetlands – Shallow, constructed pools that capture Storm-water and allow for the growth of characteristic wetland vegetation. These facilities provide enhanced treatment of Storm-water and peak flow attenuation.

Underground Detention Facilities – Vaults, pipes, tanks, and other subsurface structures designed to temporarily store Storm-water Runoff for water quantity control and to drain completely between runoff events. They are intended to control peak flows, limit downstream flooding, and provide some channel protection.

Underground Infiltration Systems – Structures designed to capture, temporarily store, and infiltrate the Water Quality Volume over several days, including pre-manufactured pipes, vaults, and modular structures. These are used as alternatives to infiltration trenches and basins for space-limited sites and Storm-water retrofit applications.

Vegetated Buffer – An area or strip of land in permanent undisturbed vegetation adjacent to a water body or other resource that is designed to protect resources from adjacent development during construction and after development by filtering pollutants in runoff, protecting water quality and temperature, providing wildlife habitat, screening structures and enhancing aesthetics, and providing access for recreations.

Vegetated Roof Covers – Multilayered, constructed roof systems consisting of a vegetative layer, media, a geotextile layer, and a synthetic drain layer installed on building rooftops. Rainwater is either intercepted by vegetation and evaporated to the atmosphere or retained in the substrate before being returned to the atmosphere through transpiration and evaporation. Also referred to as green roofs.

Water Quality Flow (WQF) – The peak flow associated with the Water Quality Volume calculated using the NRCS Graphical Peak Discharge Method, as defined in the 2004 Stormwater Quality Manual, as amended.

Water Quality Swales – Vegetated open channels designed to treat and attenuate the Water Quality Volume and convey excess Storm-water Runoff. Dry swales are primarily designed to receive drainage from small impervious areas and rural roads. Wet swales are primarily used for highway runoff, small parking lots, rooftops, and pervious areas.

Water Quality Volume (WQV) – The volume of runoff generated by one (1) inch of rainfall on a site, as defined in the 2004 Storm-water Quality Manual, as amended.

C. Site Stormwater Management Plan and Report

1. Plan Required

a. Where a Site Storm-water Management Plan is required, it shall be prepared by a State of Connecticut Licensed Professional Engineer or Landscape Architect where the design is allowed by their education, training, and provisions of state law. A Site Storm-water Management Plan shall be prepared for every application for subdivision, site plan approval, and special permit, where such application results in any one (1) or more of the following:

- i. One (1) or more acres of land Disturbance.**
- ii. One (1) or more acres of impervious surface upon project completion. (Existing impervious surface shall be counted towards this requirement).**
- iii. Any commercial or industrial activity.**
- iv. Any application with three (3) or more dwelling units.**
- v. Any project involving a new road, Private Road, or Share Driveway serving three (3) or more lots.**
- vi. Any project where the impervious surface area after construction exceeds thirty percent (30%) of the total site area (existing impervious surface shall be counted towards this requirement).**

b. The following activities are exempt from these standards:

- i. Except in the R-A-1 and RA-2 District, development of a single family home and/or accessory uses on a lot of record. A lot of record is a lot that existed as of the effective date of these standards.**
- ii. Farming, a Farm Building, Farmers Market, or Farm Stand**
- iii. When the Commission determines that the application relates to modifications of a previous approval or to new work on existing sites, where such modification or new work does not alter the storm-water runoff characteristics of the site.**

2. Plan Contents

The plan shall contain an executive summary, drainage area maps, calculations, descriptions, and other data sufficient to demonstrate compliance with these standards. Such plan shall provide, at a minimum, the following information:

- a. Soil characteristics of the site.
- b. Location of the closest surface water bodies and wetlands to the site, and the depth to any ground water or Aquifer areas on or adjacent to the site in those areas where storm-water facilities are proposed.
- c. Location and description of all proposed Storm-water control Best Management Practices (BMPs) for both construction activities and post-construction long-term Storm-water control.
- d. Proposed maintenance and operation manual or schedule for any trash hoods, Catch Basins, or other BMP devices used to prevent runoff, encourage sheet flow or infiltration, or treat Storm-water.
- e. Calculations of Storm-water Runoff rates, suspended solids removal rates, and soil infiltration rates before and after completion of the activity proposed in the application.
- f. A hydrologic study of pre-development site conditions. Hydrologic studies shall be prepared to a level of detail commensurate with the probable impact of the proposed activity and should extend downstream to the point where the proposed activity causes less than a five (5) percent change in the peak flow rates after peak flow attenuation.
- g. Calculations for sizing of pipes, swales, or other conveyance devices.
- h. Calculations for sizing riprap aprons, plunge pools, or other energy dissipation devices.
- i. Identification of the party responsible for maintenance of Storm-water BMP's.

3. Redevelopment Projects

Projects that redevelop an existing site will be exempt from meeting the requirements of these standards if they meet all of the following conditions:

- a. The total site impervious surface is reduced by at least twenty-five (25%).
- b. All existing Storm-water management controls are maintained.
- c. Runoff is managed in a way that does not cause erosion or concentration of flow.

4. Plan Note

The following note shall be placed on the design plans for each project requiring Storm-water treatment or storm water detention facilities. In cases of a subdivision, the note shall refer to individual lots that have such facilities. The design plans and/or subdivision plans containing the following note shall be filed in the town land records.

"This property contains a storm-water treatment facility that is a condition of approval to develop the property and it shall be maintained by the property owner for the entire life of the project. The facility shall not be altered, except for maintenance as described in the facility's maintenance plan, without the approval of the regulatory agency granting the project approval."

5. Waiver of Requirements

- a. The Commission may waive or alter any portion of these standards when the applicant demonstrates, by written request, that such standard is unnecessary or counter productive toward meeting the policies and principles.**
- b. The Commission may waive or alter any portion of these standards on a redevelopment project when the applicant demonstrates, by written request, that achieving such standard(s) is not feasible.**

6. Aquifer Protection Area

Projects that fall within the Town's Aquifer Protection Area are required to comply with the Aquifer Protection Regulations in addition to these standards.

D. Design Standards

1. General Standards

- a. All Storm-water Facilities and conveyance facilities shall be constructed on property owned by the applicant or within suitable easements.**
- b. All Storm-water discharges shall be designed and constructed in a manner that prevents erosion.**
- c. Storm-water treatment shall be designed in accordance with the DEEP 2004 Connecticut Storm-water Quality Manual, as amended.**
- d. All Storm-water facilities shall be designed in a manner that minimizes the need for complicated or overly frequent maintenance.**

e. All Storm-water facilities shall be designed with adequate access for maintenance.

f. Storm-water Facilities may include, but are not limited to, one (1) or more of the following:

- | | |
|--|--|
| <input type="checkbox"/> Bio retention | <input type="checkbox"/> Oil/Particle Separators |
| <input type="checkbox"/> Catch Basins | <input type="checkbox"/> Permeable Paving Materials |
| <input type="checkbox"/> Catch Basin Inserts | <input type="checkbox"/> Porous Pavement |
| <input type="checkbox"/> Cisterns | <input type="checkbox"/> Pretreatment |
| <input type="checkbox"/> Deep Sump Catch Basins | <input type="checkbox"/> Rain Barrels |
| <input type="checkbox"/> Dry Detention Ponds | <input type="checkbox"/> Rain Gardens |
| <input type="checkbox"/> Filter Strip | <input type="checkbox"/> Storm-water Ponds |
| <input type="checkbox"/> Grass Drainage Channels | <input type="checkbox"/> Underground Detention |
| <input type="checkbox"/> Horizontal Gravel Wetlands | <input type="checkbox"/> Underground Infiltration |
| <input type="checkbox"/> Hydrodynamic Separators | <input type="checkbox"/> Vegetated Buffers |
| <input type="checkbox"/> Infiltration Practices | <input type="checkbox"/> Vegetated Roof Covers |

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Article 6 Off Street Parking and Loading Regulations

Section 6.10 General Layout and Design

Section 6.10.10 Emergency Fire and Safety Access

a. All buildings, structures and property shall be provided with unobstructed access for firefighting and emergency service personnel, apparatus and equipment. Premises which are not readily accessible from public roads and which the fire department or an emergency service may be called upon to protect in case of fire shall be provided with access roads or fire lanes so that all buildings on the premises are accessible to the fire department and emergency service apparatus.

b. The determination of adequate emergency fire access shall be made by the Commission during review for new construction and additions to existing buildings before the issuance of a Zoning Permit. The Commission and Zoning Enforcement Officer shall seek the recommendations of appropriate fire officials before determining adequate emergency fire access.

c. Designated access roads and fire lanes shall be adequately signed, painted and maintained and kept free and clear of obstructions at all times by the property owner.***

Section 6.11 Access Drives

Section 6.11.1.4 No Driveway access onto a lot shall exceed 750 feet in length from street line **to the primary structure in a residential, business or industrial zone. If there is a hydrant onsite in a residential, business or industrial zone the 750, (feet) driveway access will be measured from the hydrant to the primary structure and not the street line.**

Section 6.11.1.4 a) Driveway-If a driveway in a residential, business or industrial zone exceeds 750' (feet) in length then the following will apply

1. Driveways exceeding 750 (feet) in length shall include, within 75' (feet) from interior end, adequate space or area for turning around of Emergency Medical/Safety vehicles. The layout of all driveways exceeding 750' (feet) in length shall be reviewed and any changes

recommended by the Town Consultant Engineer and Fire Chief or his designee shall be incorporated into the design.

All driveways and their shoulders shall be constructed with a base and surface adequate to support a 70,000-pound (GVW) fire fighting apparatus. All unpaved driveways and aprons shall have, at a minimum, a gravel base of four (4") inches of bank run gravel containing stone no larger than three and one-half (3 ½") inches; plus four (4") inches of process gravel, each layer compacted separately.

All paved driveways shall have the preceding gravel base and process gravel plus, in addition, three (3") inches of Class II compacted bituminous concrete or a suitable alternate material, approved by the Town Consultant Engineer. The layout of all driveways exceeding 750' (feet) in length shall be reviewed and any changes requested by Town Consultant Engineer and the Fire Chief or his designee shall be incorporated into the design.