

Chapter 7 3/4 - Post Construction - Storm Water Control Ordinance

ARTICLE I

Section 1. Purpose

Unmitigated storm water from areas altered by development may pose public health and safety threats. Potential contaminants in storm water runoff to the City's storm water system may include suspended solids, nitrogen, phosphorus, hydrocarbons, heavy metals, pathogenic organisms (bacteria and viruses), and road salts.

This ordinance establishes the administrative mechanisms necessary for Woonsocket to ensure proper storm water management. The ordinance is written to work in conjunction with current state regulations.

This ordinance is meant to coincide with the City of Woonsocket Erosion and Sediment Control Ordinance Chapter 7 1/2.

Section 2. Applicability

This ordinance shall apply to all development occurring within Woonsocket. No person shall engage in land development activities without receiving approval from the Woonsocket Planning Board and/or permitted through the Department of Public Works, Engineering Division and/or the Building Inspection Office, unless specifically exempted by Article I Section 3 of this ordinance.

Section 3. Exemptions

The following activities do not require written approval pursuant to this ordinance:

- A. Construction, alteration or use of any additions to existing single family or duplex homes or related structures, provided the grounds coverage of such addition is less than one thousand (1,000) square feet.
- B. Grading, as a maintenance measure of for landscaping, on contiguous areas of developed land, parcels and lots, which in aggregate do not exceed one thousand (1,000) square feet.

Section 4. Variance

The Director of Public Works or the City Engineer reviewing an application under this ordinance may:

- A. Vary requirements of this ordinance when strict implementation of the requirements of this ordinance create an unnecessary hardship or are not feasible.
- B. Allow use of an innovative management practice where strict adherence to existing criteria would be costly or of negligible environmental benefit.

Section 5. Submissions and Approvals

In accordance with this ordinance, all persons must obtain approval from the Woonsocket Planning Board and/or permitted through the Department of Public Works, Engineering Division and/or the Building Inspection Office, prior to engaging in any land development activities, unless exempted by Article 1 Section 3 of this ordinance. To obtain approval applicants must demonstrate compliance with all policy, standards and requirements of this ordinance to the satisfaction of the Director of Public Works or the City Engineer. Applicants may demonstrate compliance via submission of materials and documentation including but not limited to a Storm Water Management Plan, site plan, maintenance agreement, and Permit Bond in accordance with this Ordinance. Plans will be reviewed in conjunction with site plan review by the Engineering Division.

ARTICLE II

Section 1. Technical Standards

All applicants are required to develop and submit a Storm Water Management Plan. All Storm Water Management Plans must address storm water management on a site-by-site basis and all requirements of this ordinance. All storm water management practices shall be consistent with the *Rhode Island Design and Installation Standards Manual* and the *Rhode Island Soil Erosion and Sediment Control Handbook*, as amended.

A. Performance Standards

Storm Water Management Plans shall incorporate best management practices for water quality control, which in combination are demonstrated to reduce the average annual total suspended solids in post development runoff by eighty percent (80%). Development in drinking water supply watersheds may be held to higher standards.

B. Disallowed Storm Water Best Management Practices

The placement of detention basins and other storm water structures within a floodplain shall be avoided. If there is no alternative, the applicant must show what effects, if any, the tailwaters created by the floodplain will have on the outflow and effective storage capacity of the detention facility.

C. Facilitation of Maintenance

Facilities that require maintenance shall be designed to minimize the need for regular maintenance, facilitate required maintenance, and ensure accessibility of components that require maintenance. At a minimum, all Storm Water Management Plans must incorporate best management practices with appropriate maintenance design in accordance with the *Rhode Island Stormwater Design and Installation Standards Manual*, as amended; or the *Rhode Island Soil Erosion and Sediment Control Handbook*, as amended.

D. Flood Protection

Storm Water Management Plans shall demonstrate that a proposed project provides for protection of life and property from flooding and flood flows. Water quantities must be controlled in accordance with the *Rhode Island Stormwater Design and Installation Standards Manual*, as amended, or a municipally approved regional Storm Water Management Plan for the watershed in which the development site is located. Storm Water Management Plans shall demonstrate incorporation of the following standards into the proposed project:

1. Control and maintenance of post developmental peak discharge rates from the 2-year, 10-year, 25-year, and 100-year storm events and predevelopment levels.
2. Downstream analysis of the 100-year storm event and control of the peak discharge rate for the 100-year storm to mitigate significant downstream impacts.
3. Discharge from any storm water facility must be conveyed through properly constructed conveyance system to provide for nonerosive flows during all storm events. The proposed storm water conveyance system consisting of open channels, pipes, and other conveyance devices shall at a minimum accommodate the runoff from a 25-year storm event. The storm water conveyance system must provide for nonerosive flows to receiving waters.

E. Surface Water and Groundwater

Storm Water Management Plans shall demonstrate that during develop and postdevelopment, all receiving waters will be recharged in a manner closely resembling predevelopment conditions and that the development site will retain hydrological conditions that closely resemble of those prior to disturbance.

ARTICLE III

Section 1. Maintenance Requirements for Best Management Practices

A. Routine Maintenance and Repair Procedures

Preventative maintenance procedures are required to maintain the intended operation and safe condition of the storm water management facility by greatly reducing the occurrence of problems and malfunctions. To be effective, preventative maintenance shall be performed on a regular basis and include such routine procedures as training of staff, periodic inspections, grass cutting elimination of mosquito breeding habitats, and pond maintenance. Disposal of sediment and debris must occur on a regular basis (unless otherwise specified within an approved plan), at suitable disposal sites or recycling sites and comply with applicable local, state and federal regulations.

Corrective maintenance procedures are required to correct a problem or malfunction at a storm water management facility and to restore the facility's intended operation and safe condition. Based upon the severity of the problem, corrective maintenance must be performed on an as needed or emergency basis and include such procedures as structural repairs, removal of debris, sediment and trash removal which threaten discharge capacity, erosion repair, snow and ice removal, fence repair, mosquito extermination, and restoration of vegetated and nonvegetated linings.

B. General Maintenance Standards for Storm Water Best Management Practices.

Maintenance design and maintenance procedures for all storm water best management practices shall be in accordance *Rhode Island Stormwater Design and Installation Standards Manual*, as amended; or the *Rhode Island Soil Erosion and Sediment Control Handbook*, as amended. Storm Water Management Plans shall demonstrate appropriate maintenance design and procedures for each proposed best management practice. The following policies and standards for maintenance must be incorporated into Storm Water Management Plans, as applicable.

1. A maintenance schedule for each type of BMP must be included in the Storm Water Management Plan. These schedules shall list the frequency and type of maintenance operations necessary along with the legally responsible party's name, address, and telephone number. The Engineering Division shall be notified if the property changes ownership along with the new responsible party's name, address, and telephone number. If the storm water drainage system is to be deeded to the local municipality the applicant must obtain a letter from the municipality acknowledging maintenance responsibility and intent of ownership after approval from the City Council.

ARTICLE IV

Section 1. Storm Water Management Plans

A. Calculations

In addition to the information required for Storm Water Management Plans the following information must also be included with the application, where applicable.

1. The area of each subbasin as identified on final site plans.
2. The area of pervious and impervious surfaces (including all roads, driveways, rooftops, sidewalks, etc.) for each subbasin as identified in the *Rhode Island Stormwater Design and Installation Standards Manual*, as amended.
3. Weighted curve numbers, (CN) as determined by the SCS TR55 method, for each subbasin as identified in the *Rhode Island Stormwater Design and Installation Standards Manual*, as amended.
4. Invert elevations for all applicable BMPs. In addition, the elevations for permanent and/or flood pool stages, including peak discharge rates for each stage, within all basins are required.
5. The total volume capacity for all flood control and water quality BMPs (e.g., infiltration basin, detention basins, wet ponds, etc.). Volumes must be segregated into permanent and flood pool stage volumes where applicable. Furthermore, the volumes of all sediment storage (basins, forebays, etc.) areas must also be shown.
6. Predevelopment and postdevelopment peak discharge rates and runoff volumes for the 2-year, 10-year, 25-year, and 100-year frequency storm events for each subwatershed. The water quality volume must also be calculated for each subwatershed. All relevant variables such as curve numbers and time of concentration, along with the supporting computations and worksheets must be included.

B. Narrative Description

As part of the Storm Water Management Plan, the applicant shall include a discussion of the protection of environmental resource functions and values. The following outline is provided as guidance for preparing a narrative description for the Storm Water Management Plan. Depending on the size and scope of the proposed project, the amount of information required by the Engineering Division may vary, therefore, it is advised to consult the appropriate permitting agency for specific requirements.

1. Site description – general topography, soil types, current vegetative composition and relative abundance, existing infrastructure, and/or adjacent properties, identification of major resources (e.g., wetlands, groundwater, surface waters, etc.), name of receiving water(s), potential water quality and/or hydrologic impacts on resources.
2. Site input data – watershed characteristics, area of all pervious and impervious surfaces, total area of site, annual mean rainfall, runoff coefficients, curve numbers for various land uses, peak discharge rates.

3. Land use planning and source control plan.
4. Best Management Practices ¶ identify the type of BMP(s) employed both during and post construction and justification for selection, including any deviation from the *Rhode Island Stormwater Design and Installation Standards Manual*, as amended, and the potential effect on pollutant removal efficiency.
5. Technical feasibility ¶ of BMPs including sizing, location, hydraulic and environmental impacts. Alternatives, which were considered but determined not to be feasible, should also be discussed.
6. Maintenance schedule ¶ of BMPs to be used, both during and post construction including frequency of inspection and maintenance.

Section 2. Maintenance Agreements

Maintenance agreements shall provide written, contractual documentation, which demonstrates compliance with this ordinance and legal arrangements for the upkeep of storm water facilities to assure their functionality and safety in accordance with this ordinance.

Maintenance agreements, which describe all maintenance schedules and requirements, must be developed for each storm water management facility unless the facility is dedicated to and accepted by the City of Woonsocket.

A. Recognition of Municipal Inspection Requirements

Maintenance agreements shall include a reasonable and regular schedule for the City of Woonsocket, or designee, to conduct on-site inspection of the functionality and safety of storm water management facilities. Inspection schedules shall be based on the complexity and frequency of maintenance needs and shall be subject to the approval of City of Woonsocket. At a minimum, maintenance frequency should be in accordance with the *Rhode Island Stormwater Design and Installation Standards Manual*, as amended.

B. Record Keeping for Maintenance Activities

Maintenance agreements shall include provisions for maintenance record keeping. All activities conducted in accordance with a maintenance agreement must be recorded in a work order and inspection log. Timely updates of the log shall be the responsibility of the storm water management facility owner or other responsible party pursuant to this ordinance. Review of the maintenance and inspection log shall be completed by the City of Woonsocket, or designee, to determine the effectiveness of operation, maintenance and safety activities. Reviews shall occur as part of each on-site inspection. Additional reviews may be made as deemed appropriate by the City of Woonsocket or designee.

C. Responsibility for Maintenance to Assure Functionality and Safety

Appropriate maintenance to assure functionality and safety of storm water management facilities shall be the responsibility the owner or may be assumed by another party via a written contractual arrangement in accordance with this ordinance,

D. Alterations to Maintenance Agreements

Any alterations in maintenance responsibility or alterations to maintenance agreements must be reviewed and approved by the Director of Public Works and or the City Engineer. If portions of the land serviced by a storm water management facility are to be sold, written contractual arrangements shall be made to pass all responsibility of the maintenance agreement to the purchaser and shall be subject to review and approval of the Director of Public Works and or the City Engineer. All alterations to maintenance agreements shall be recorded in accordance with this ordinance.

E. Recordation of Maintenance Agreements

All maintenance agreements and alterations to maintenance agreements shall be recorded in the land evidence records of the City of Woonsocket. Copies of all maintenance agreements and alterations to maintenance agreements shall be included in Storm Water Management Plans. Recordation of maintenance agreements in accordance with this ordinance shall be the responsibility of the owner.

Section 3. Application Fees

The City of Woonsocket shall be empowered to collect fees from permit applicants, which are commensurate with the cost of administering this ordinance.

ARTICLE V

Section 1. Enforcement

The City of Woonsocket shall have the authority and discretion to invoke penalties and/or impose a lien, whenever a storm water management facility is not implemented, operated, and/or maintained in accordance with its approval and this ordinance. Any penalty invoked shall be in accordance with this Section.

A. Notification of Violation

In the event that the storm water management facility becomes a danger to public safety or public health, in need of maintenance, or otherwise fails to comply with the provisions of this ordinance, the City of Woonsocket shall so notify the property owner in writing by certified mail. Upon receipt of that notice, the property owner

shall have five (5) calendar days to temporarily correct the violation and thirty (30) calendar days from the receipt of notice to permanently correct the violation. If the property owner fails or refuses to perform such maintenance and repair, the municipality may immediately proceed to do so and shall bill the cost thereof to the property owner or proceed with redeeming the Permit Bond. If the storm water management facility is of imminent danger to public safety, the City shall have the right to correct the problem without delay and shall bill the cost thereof to the property owner or proceed with redeeming the Permit Bond.

B. Enforcement of Penalties and Liens

Should the applicant/owner fail to take the corrective actions, the City of Woonsocket shall then have the right to take whatever actions it deems necessary to correct the violations including fining the owner seventy-five (Z75) per calendar day that the violation goes unrepaired and to assert a Hen on the subject property in an amount equal to the costs of remedial actions. The lien shall be enforced in the manner provided or authorized by law for the enforcement of common law liens on personal property. The lien shall be recorded in the land evidence records of the City of Woonsocket, and shall incur legal interest from the date of recording. The imposition of any penalty shall not exempt the offender from compliance with the provisions of this ordinance, including assessment of alien on the property.

C. Hearing

Any owner or responsible party, receiving a written notice of violation, shall be given an opportunity, within a reasonable time frame, for a hearing before the Municipal Court to state their case. If evidence indicates that a violation has not occurred, the Municipal Court shall revoke the notice of violation.

ARTICLE VI

Section 1. Implementation

This ordinance shall take effect upon final passage and approval by the City Council as appropriate.