

## STORMWATER MANAGEMENT § Table of Contents

### CHAPTER 26 STORM WATER MANAGEMENT

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**STORMWATER MANAGEMENT ORDINANCE** (Repealed and recreated, #899, 08/19/2014)

26.01 AUTHORITY.

(1) This ordinance is adopted by the common council under the authority granted by s. 62.23, Wis. Stats. This ordinance supersedes all provisions of an ordinance previously enacted under s. 62.23, Wis. Stats., that relate to storm water management regulations. Except as otherwise specified in s. 62.234, Wis. Stats., s. 62.23, Wis. Stats., applies to this ordinance and to any amendments to this ordinance.

(2) The provisions of this ordinance are deemed not to limit any other lawful regulatory powers of the same governing body.

(3) The common council hereby designates the City Engineer to administer and enforce the provisions of this ordinance.

(4) The requirements of this ordinance do not preempt more stringent storm water management requirements that may be imposed by any of the following:

(a) Wisconsin Department of Natural Resources administrative rules, permits or approvals including those authorized under ss. 281.16 and 283.33, Wis. Stats.

(b) Targeted non-agricultural performance standards promulgated in rules by the Wisconsin Department of Natural Resources under s. NR 151.004, Wis. Adm. Code.

26.02 FINDINGS OF FACT.

The common council finds that uncontrolled, post-construction runoff has a significant impact upon water resources and the health, safety and general welfare of the community and diminishes the public enjoyment and use of natural resources. Specifically, uncontrolled post-construction runoff can:

(1) Degrade physical stream habitat by increasing stream bank erosion, increasing streambed scour, diminishing groundwater recharge, diminishing stream base flows and increasing stream temperature.

(2) Diminish the capacity of lakes and streams to support fish, aquatic life, recreational and water supply uses by increasing pollutant loading of sediment, suspended solids, nutrients, heavy metals, bacteria, pathogens and other urban pollutants.

(3) Alter wetland communities by changing wetland hydrology and by increasing pollutant loads.

(4) Reduce the quality of groundwater by increasing pollutant loading.

(5) Threaten public health, safety, property and general welfare by overtaxing storm sewers, drainage ways, and other minor drainage facilities.

(6) Threaten public health, safety, property and general welfare by increasing major flood peaks and volumes.

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(7) Undermine floodplain management efforts by increasing the incidence and levels of flooding.

### 26.03 PURPOSE AND INTENT.

(1) PURPOSE. The general purpose of this ordinance is to establish long-term, post-construction runoff management requirements that will diminish the threats to public health, safety, welfare and the aquatic environment. Specific purposes are to:

- (a) Further the maintenance of safe and healthful conditions.
- (b) Prevent and control the adverse effects of storm water; prevent and control soil erosion; prevent and control water pollution; protect spawning grounds, fish and aquatic life; control building sites, placement of structures and land uses; preserve ground cover and scenic beauty; and promote sound economic growth.
- (c) Control exceedance of the safe capacity of existing drainage facilities and receiving water bodies; prevent undue channel erosion; control increases in the scouring and transportation of particulate matter; and prevent conditions that endanger downstream property.

(2) INTENT. It is the intent of the common council that this ordinance regulates post-construction storm water discharges to waters of the state. This ordinance may be applied on a site-by-site basis. The common council recognizes, however, that the preferred method of achieving the storm water performance standards set forth in this ordinance is through the preparation and implementation of comprehensive, systems-level storm water management plans that cover hydrologic units, such as watersheds, on a municipal and regional scale.

Such plans may prescribe regional storm water devices, practices or systems, any of which may be designed to treat runoff from more than one site prior to discharge to waters of the state. Where such plans are in conformance with the performance standards developed under s. 281.16, Wis. Stats., for regional storm water management measures and have been approved by the common council, it is the intent of this ordinance that the approved plan be used to identify post-construction management measures acceptable for the community.

### 26.04 APPLICABILITY AND JURISDICTION.

(1) APPLICABILITY.

- (a) Where not otherwise limited by law, this ordinance applies to sites having land disturbing construction activity of one or more acres, unless the site is otherwise exempt under paragraph (b).
- (b) A site that meets any of the criteria in this paragraph is exempt from the requirements of this ordinance.

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1. A post-construction site with less than 10% connected imperviousness based on the area of land disturbance provided the cumulative area of all impervious surfaces is less than one acre.
2. Agricultural facilities and practices.
3. Underground utility construction such as water, sewer and fiber optic lines. This exemption does not apply to the construction of any above ground structures associated with utility construction.

(c) Notwithstanding any other provisions of this Ordinance, it shall be a violation of this Ordinance for any person to create, permit, establish, maintain, or allow to be maintained any condition or activity that causes excessive runoff or erosion to adjacent land, public streets, or water bodies. Penalties and remedies may be sought for such activities. Erosion and runoff is excessive when, in the opinion of the City Engineer or Building Inspector, an unsafe condition results in the streets, sedimentation occurs in lakes and streams, environmentally-sensitive lands are threatened, runoff endangers downstream property, or the public health, safety, or general welfare of the citizens of the City is otherwise threatened or harmed. Compliance with the standards and criteria in this Ordinance shall not bar a nuisance action or other civil action brought by an injured public or private party for damage to property or other rights that were damaged by runoff.

### (2) JURISDICTION.

This ordinance applies to all division of land, land disturbing and land developing activities occurring within the corporate limits of the City; and to the division of land within the City's extraterritorial plat approval jurisdiction.

### (3) EXCLUSIONS.

This ordinance is not applicable to activities conducted by a state agency, as defined under s. 227.01 (1), Wis. Stats., but also including the office of district attorney, which is subject to the state plan promulgated or a memorandum of understanding entered into under S. 281.33 (2), Wis. Stats.

## 26.05 DEFINITIONS.

- (1) "Administering authority" means a governmental employee that is designated by the common council to administer this ordinance. The common council has designated the City Engineer as the Administering Authority.
- (2) "Agricultural facilities and practices" has the meaning given in S. 281.16 (1), Wis. Stats.
- (3) "Average annual rainfall" means a typical calendar year of precipitation as determined by the Department for users of models such as SLAMM, P8, or equivalent methodology. The

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average annual rainfall for the purposes of this Ordinance shall be the rainfall record for Madison, WI from 3/12/81 to 12/2/81.

(4) "Best management practice" or "BMP" means structural or non-structural measures, practices, techniques or devices employed to avoid or minimize soil, sediment or pollutants carried in runoff to waters of the state.

(5) "Business day" means a day the office of the City Engineer is routinely and customarily open for business.

(6) "Cease and desist order" means a court-issued order to halt land disturbing construction activity that is being conducted without the required permit.

(7) "Combined sewer system" means a system for conveying both sanitary sewage and storm water runoff.

(8) "Connected imperviousness" means an impervious surface connected to the waters of the state via a separate storm sewer, an impervious flow path, or a minimally pervious flow path.

(9) "Department" means the Department of Natural Resources.

(10) "Design storm" means a hypothetical discrete rainstorm characterized by a specific duration, temporal distribution, rainfall intensity, return frequency, and total depth of rainfall.

(11) "Development" means residential, commercial, industrial or institutional land uses and associated roads.

(12) "Division of land" shall have the same meaning as "Subdivision" as written in City Ordinance 18.03 (42).

(13) "Effective infiltration area" means the area of the infiltration system that is used to infiltrate runoff and does not include the area used for site access, berms or pretreatment.

(14) "Erosion" means the process by which the land's surface is worn away by the action of wind, water, ice or gravity.

(15) "Exceptional resource waters" means waters listed in s. NR 102.11, Wis. Adm. Code.

(16) "Extraterritorial" means the unincorporated area within 3 miles of the corporate limits of a first, second, or third class city, or within 1.5 miles of a fourth class city or village.

(17) "Final stabilization" means that all land disturbing construction activities at the construction site have been completed and that a uniform, perennial, vegetative cover has been established, with a density of at least 70% of the cover, for the unpaved areas and areas not covered by permanent structures, or employment of equivalent permanent stabilization measures.

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(18) “Financial guarantee” means a performance bond, maintenance bond, surety bond, irrevocable letter of credit, or similar guarantees submitted to the City Engineer by the responsible party to assure that requirements of the ordinance are carried out in compliance with the storm water management plan.

(19) “Governing body” means town board of super-visors, county board of supervisors, city council, village board of trustees or village council.

(20) “Impaired Water” means a water body impaired in whole or in part and listed by the department pursuant to 33 USC 1313 (d) (1) (A) and 40 CFR 130.7, for not meeting a water quality standard, including a water quality standard for a specific substance or the water body’s designated use.

(21) “Impervious surface” means an area that releases as runoff all or a large portion of the precipitation that falls on it, except for frozen soil. Roof-tops, sidewalks, driveways, parking lots and streets are examples of areas that typically are impervious.

(22) “In-fill area” means an undeveloped area of land located within an existing urban sewer service area, surrounded by development or development and natural or man-made features where development cannot occur. “in-fill” does not include any undeveloped area that was part of a larger new development for which a notice of intent to apply for a storm water permit in accordance with Subch. III of Ch. NR 216 was required to be submitted after October 1, 2004, to the Department of Natural Resources or the Department of Commerce.

(23) “Infiltration” means the entry of precipitation or runoff into or through the soil.

(24) “Infiltration system” means a device or practice such as a basin, trench, rain garden or swale designed specifically to encourage infiltration, but does not include natural infiltration in pervious surfaces such as lawns, redirecting of rooftop downspouts onto lawns or minimal infiltration from practices, such as swales or road side channels designed for conveyance and pollutant removal only.

(25) “Karst feature” means an area or surficial geo-logic feature subject to bedrock dissolution so that it is likely to provide a conduit to groundwater, and may include caves, enlarged fractures, mine features, exposed bedrock surfaces, sinkholes, springs, seeps or swallets.

(26) “Land disturbing construction activity” means any man-made alteration of the land surface resulting in a change in the topography or existing vegetative or non-vegetative soil cover , that may result in runoff and lead to an increase in soil erosion and movement of sediment into waters of the state. Land disturbing construction activity includes clearing and grubbing, demolition, excavating, pit trench

(27) “Maintenance agreement” means a legal document that provides for long-term maintenance of storm water management practices.

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(28) "MEP" or "maximum extent practicable" means the highest level of performance that is achievable but is not equivalent to a performance standard identified in Subch. III or IV, as determined in accordance with S. NR 151.006.

(29) "New development" means development resulting from the conversion of previously undeveloped land or agricultural land uses. For the purposes of this Ordinance, redevelopment of sites previously granted coverage by the Department under the WPDES General Statewide Permit after October 1, 2004 as "new development", shall be classified as new development.

(30) "Off-site" means located outside the property boundary described in the permit application.

(31) "On-site" means located within the property boundary described in the permit application.

(32) "Ordinary high-water mark" has the meaning given in s. NR 115.03(6), Wis. Adm. Code.

(33) "Outstanding resource waters" means waters listed in s. NR 102.10, Wis. Adm. Code.

(34) "Percent fines" means the percentage of a given sample of soil, which passes through a # 200 sieve.

(35) "Performance standard" means a narrative or measurable number specifying the minimum accept-able outcome for a facility or practice.

(34) "Permit" means a written authorization made by the City Engineer to the applicant to conduct land disturbing construction activity or to discharge post-construction runoff to waters of the state.

(36) "Permit administration fee" means a sum of money paid to the City Engineer by the permit applicant for the purpose of recouping the expenses incurred by the authority in administering the permit.

(37) "Pervious surface" means an area that releases as runoff a small portion of the precipitation that falls on it. Lawns, gardens, parks, forests or other similar vegetated areas are examples of surfaces that typically are pervious.

(38) "Post-construction site" means a construction site following the completion of land disturbing construction activity and final site stabilization.

(39) "Pre-development condition" means the extent and distribution of land cover types present before the initiation of land disturbing construction activity, assuming that all land uses prior to development activity are managed in an environmentally sound manner.

(40) "Preventive action limit" has the meaning given in S. NR 140.05(17), Wis. Adm. Code.

(41) "Redevelopment" means areas where development is replacing older development.

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(42) “Responsible party” means any entity holding fee title to the property or other person contracted or obligated by other agreement to implement and maintain post-construction storm water BMPs.

(43) “Runoff” means storm water or precipitation including rain, snow or ice melt or similar water that moves on the land surface via sheet or channelized flow.

(44) “Separate storm sewer” means a conveyance or system of conveyances including roads with drainage systems, streets, catch basins, curbs, gutters, ditches, constructed channels or storm drains, which meets all of the following criteria:

- (a) Is designed or used for collecting water or conveying runoff.
- (b) Is not part of a combined sewer system.
- (c) Is not draining to a storm water treatment device or system.
- (d) Discharges directly or indirectly to waters of the state.

(45) “Site” means the entire area included in the legal description of the land on which the land disturbing construction activity occurred.

(46) “Stop work order” means an order issued by the City Engineer which requires that all construction activity on the site be stopped.

(47) “Storm water management plan” means a comprehensive plan designed to reduce the discharge of pollutants from storm water after the site has undergone final stabilization following completion of the construction activity.

(48) “Storm water management system plan” is a comprehensive plan designed to reduce the discharge of runoff and pollutants from hydrologic units on a regional or municipal scale.

(49) “Technical standard” means a document that specifies design, predicted performance and operation and maintenance specifications for a material, device or method.

(50) “Top of the channel” means an edge, or point on the landscape, landward from the ordinary high-water mark of a surface water of the state, where the slope of the land begins to be less than 12% continually for at least 50 feet. If the slope of the land is 12% or less continually for the initial 50 feet, landward from the ordinary high-water mark, the top of the channel is the ordinary high-water mark.

(51) “TR-55” means the United States Department of Agriculture, Natural Resources Conservation Service (previously Soil Conservation Service), Urban Hydrology for Small Watersheds, Second Edition, Technical Release 55, June 1986.

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(52) "Type II distribution" means a rainfall type curve as established in the "United States Department of Agriculture, Soil Conservation Service, Technical Paper 149, published 1973". The Type II curve is applicable to all of Wisconsin and represents the most intense storm pattern.

(53) "Waters of the state" has the meaning given in S. 283.01(20), Wis. Stats.

26.06 TECHNICAL STANDARDS.

The following methods shall be used in designing the water quality, peak flow shaving and infiltration components of storm water practices needed to meet the water quality standards of this ordinance:

(1) Technical standards identified, developed or disseminated by the Wisconsin Department of Natural Resources under subchapter V of chapter NR 151, Wis. Adm. Code.

(2) Where technical standards have not been identified or developed by the Wisconsin Department of Natural Resources, other technical standards may be used provided that the methods have been approved by the City Engineer.

26.07 PERFORMANCE STANDARDS.

(1) RESPONSIBLE PARTY. The responsible party shall implement a post-construction storm water management plan that incorporates the requirements of this section.

(2) PLAN. A written storm water management plan in accordance with S.09 shall be developed and implemented for each post-construction site.

(3) REQUIREMENTS. The plan required under sub. (2) shall include the following:

(a) TOTAL SUSPENDED SOLIDS. BMPs shall be designed, installed and maintained to control total suspended solids carried in runoff from the post-construction site. BMPs shall be designed in accordance with Table 1, or to the maximum extent practicable. The design shall be based on an average annual rainfall, as compared to no runoff management controls.

**Table 1: TSS Reduction Standards**

Development Type	TSS Reduction
New Development (including in-fill)	80 percent
Redevelopment	40 percent of load from parking areas and roads

1. Off-site drainage. When designing BMPs, runoff draining to the BMP from off-site shall be taken into account in determining the treatment efficiency of the practice. Any impact on the efficiency shall be compensated for by increasing the size of the BMP accordingly.

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### (b) PEAK DISCHARGE.

1. By design, BMPs shall be employed to maintain or reduce the peak runoff discharge rates from the post-construction site, to the maximum extent practicable, as compared to pre-development conditions for the 1-, 2-, and 10-year, 24-hour design storm. For the purposes of this Ordinance, the design Storm depths for the 1-, 2-, and 10 year events shall be 2.5 inches, 2.9 inches, and 4.2 inches, respectively.
2. By design, BMPs shall be employed to reduce the peak runoff discharge rates from the post-construction site for the 100-year, 24-hour design storm such that the site BMPs and conveyance systems (including all public or private engineered systems and all natural drainage courses) both upstream and downstream of the site can safely pass the design storm discharge from the site and adjoining contributing drainage areas. For the purposes of this Ordinance, the design storm depths for the 100-year events shall be 7.1 inches. For the purposes of this ordinance, “safely pass” shall mean:
  - a. For existing storm water conveyance systems, whether upstream or downstream from the project site, flood elevations shall not be increased. For purposes of this ordinance, unless additional information in the form of a detailed engineering study has been conducted, it may be assumed that flood elevations will not be increased if 100-yr peak discharge rates from the post-construction site are limited to no more than pre-developed conditions.
  - b. For new storm water detention facilities, flow from the facility shall be contained within an engineered conveyance such as a pipe, swale, overflow section, or similar, and shall not overtop perimeter berms.
  - c. For areas adjacent to new conveyance systems (on site, and off site both upstream and downstream of the site), one foot of freeboard to the adjacent ground elevation of any existing building shall be maintained.
  - d. For new public roads, no overtopping shall occur. For new driveways and other minor vehicular ways, overtopping depths shall be limited to six inches.
3. Pre-development conditions shall assume “good hydrologic conditions” for appropriate land covers as identified in TR-55 or an equivalent methodology. The meaning of “hydrologic soil group” and “runoff curve number” are as determined in TR-55. The runoff curve numbers in Table 2. Shall be used to represent the actual pre-development condition where the pre-development condition is a combination of land uses, the runoff curve number shall be prorated by area.
4. This subsection of the ordinance does not apply to a redevelopment site or an in-fill development area less than 5 acres.

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**Table 2 ± Maximum Pre-Development Runoff Curve Numbers for Cropland Areas**

Hydrologic Soil Group	A	B	C	D
Woodland	30	55	70	77
Grassland	39	61	71	78
Cropland	55	69	78	83

(c) INFILTRATION. BMPs shall be designed, installed, and maintained to infiltrate runoff to the maximum extent practicable in accordance with the following, except as provided in Subds. 5. through 8.

1. Low imperviousness. For development up to 40 percent connected imperviousness, such as parks, cemeteries, and low density residential development, infiltrate sufficient runoff volume so that the post-development infiltration volume shall be at least 90 percent of the pre-development infiltration volume, based on an average annual rainfall. However, when designing appropriate infiltration systems to meet this requirement, no more than one percent of the post-construction site is required as an effective infiltration area.

2. Moderate imperviousness. For development with more than 40 percent at up to 80 percent connected imperviousness, such as medium and high density residential, multi-family development, industrial and institutional development, and office parks, infiltrate sufficient runoff volume so that the post-development infiltration volume, based on an average annual rainfall. However, when designing appropriate infiltration systems to meet this requirement, no more than 2 percent of the post-construction site is required as an effective infiltration area.

3. High imperviousness. For development with more than 80 percent connected imperviousness, such as commercial strip malls, shopping centers, and commercial downtowns, infiltrate sufficient runoff volume so that the post-development infiltration volume, based on an average rainfall. However, when designing appropriate infiltration systems to meet this requirement, no more than 2 percent of the post-construction site is required as an effective infiltration area.

4. Pre-development condition shall be the same as in Table 2.

5. Source Areas

a. Prohibitions. Runoff from the following areas may not be infiltrated and may not qualify as contributing to meeting the requirements of this section unless demonstrated to meet the conditions of sub. (6):

(i) Areas associated with tier 1 industrial facilities identified in s. NR 216.21(2)(a), Wis. Adm. Code, including storage, loading, rooftop and parking. Rooftops may be infiltrated with the concurrence of the regulatory authority.

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(ii) Storage and loading areas of tier 2 industrial facilities identified in s. NR 216.21(2)(b), Wis. Adm. Code.

(iii) Fueling and vehicle maintenance areas.

b. Exemptions. Runoff from the following areas may be credited toward meeting the requirement when infiltrated, but the decision to infiltrate runoff from these source areas is optional:

(i) Parking areas and access roads within 5,000 square feet for commercial development

(ii) Parking areas and access roads less than 5,000 square feet for industrial development not subject to par. (a).

(iii) Redevelopment sites.

(iv) In-fill development areas less than 5 acres.

(v) Roads in commercial, industrial, and institutional land uses, and arterial residential roads.

### 6. Locations of Practices

a. Prohibitions. Infiltration practices may not be located in the following areas.

(i) Areas within 1000 feet upgradient or within 100 feet downgradient of direct conduits to groundwater

(ii) Areas within 400 feet of a community water system well as specified in s. NR 811.16 (4) or within the separation distances listed in s. NR 812.08 for any private well or non-community well for runoff infiltrated from commercial, including multi-family, residential, industrial, and institutional land uses or regional devices for one- and two-family residential development.

(iii) Areas where contaminants of concern, as defined in s. NR 720.03(2), Wis. Adm. Code are present in the soil through which infiltration will occur.

b. Separation distances.

(i) Infiltration practices shall be located so that the characteristics of the soil and the separation distance between the bottom of the infiltration system and the elevation of seasonal high groundwater or the top of bedrock are in accordance with Table 3.

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**Table 3: Separation Distances and Soil Characteristics**

Source Area	Separation Distance	Soil Characteristics
Industrial, Commercial, Institutional Parking Lots and Roads	5 feet or more	Filtering Layer
Residential Arterial Roads	5 feet or more	Filtering Layer
Roofs draining to subsurface infiltration practices	1 foot or more	Native or Engineered Soil with Particles Finer than Coarse Sand
Roofs Draining to Surface Infiltration Practices	Not Applicable	
All Other Impervious Source Areas	3 feet or more	Filtering Layer

(ii) Notwithstanding par. (b), applicable requirements for injection wells classified under Ch. NR 815 shall be followed.

c. Infiltration Rate Exemptions. Infiltration practices located in the following areas may be credited toward the requirement under the following conditions, but the decision to infiltrate under these conditions is optional:

(i) Where the infiltration rate of the soil is less than 0.6 inches/hour measured at the site using a scientifically credible field test method

(ii) Where the least permeable soil horizon to 5 feet below the proposed bottom of the infiltration system using the U.S. department of agriculture method soils is one of the following: sandy clay loam, clay loam, silty clay loam, sandy clay, silty clay, or clay.

7. Alternate Use. Where alternate uses of runoff are employed, such as for toilet flushing, laundry, or irrigation or storage on green roofs where an equivalent portion of the runoff is captured permanently by rooftop vegetation, such alternate use shall be given equal credit toward the infiltration volume required by this section.

8. Groundwater Standards.

a. Infiltration systems designed in accordance with this section shall, to the extent technically and economically feasible, minimize the level of pollutants infiltrating to groundwater and shall maintain compliance with the preventive action limit at a point of standards application in accordance

b. Notwithstanding par. (a), the discharge from BMPs shall remain below the enforcement standard at the point of standard application.

9. Pretreatment. Before infiltrating runoff, pretreatment shall be required for parking lot runoff and for runoff from new road construction in commercial,

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industrial, and institutional areas that will enter an infiltration system. The pretreatment shall be designed to protect the infiltration system from clogging prior to schedule maintenance and to protect groundwater quality in accordance with sub. (7). Pretreatment options may include, but are not limited to, oil and grease separation, sedimentation, biofiltration, filtration, swales, or filter strips.

### (d) PROTECTIVE AREAS.

1. "Protective area" means an area of land that commences at the top of the channel of lakes, streams and rivers, or at the delineated boundary of wetlands, and that is the greatest of the following widths, as measured horizontally from the top of the channel or delineated wetland boundary to the closest impervious surface. However, in this paragraph, "protective area" does not include any area of land adjacent to any stream enclosed within a pipe or culvert, such that runoff cannot enter the enclosure at this location.

a. For outstanding resource waters and exceptional resource waters, and for wetlands in areas of special natural resource interest as specified in s. NR 103.04, 75 feet.

b. For perennial and intermittent streams identified on a United States geological survey 7.5-minute series topographic map, or a county soil survey map, whichever is more current, 50 feet.

c. For lakes, 50 feet.

d. For wetlands not subject to Par. (e) or (f), 50 feet.

e. For highly susceptible wetlands, 50 feet. Highly susceptible wetlands include the following types: fens, sedge meadows, bogs, low prairies, conifer swamps, shrub swamps, other forested wetlands, fresh wet meadows, shallow marshes, deep marshes and seasonally flooded basins. Wetland boundary delineations shall be made in accordance with S. NR 103.08(1m). This paragraph does not apply to wetlands that have been completely filled in accordance with all applicable state and federal regulations. The protective area for wetlands that have been partially filled in accordance with all applicable state and federal regulations shall be measured from the wetland boundary delineation after fill has been placed.

f. For less susceptible wetlands, 10 percent of the average wetland width, but no less than 10 feet nor more than 30 feet. Less susceptible wetlands include degraded wetlands dominated by invasive species such as reed canary grass.

g. In Subd. 1.a., d. and e., determinations of the extent of the protective area adjacent to wetlands shall be made on the basis of the sensitivity and runoff susceptibility of the wetland in accordance with the standards and criteria in s. NR 103.03.

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h. Wetland boundary delineation shall be made in accordance with s. NR 103.08 (1m). This paragraph does not apply to wetlands that have been completely filled in compliance with all applicable state and federal regulations. The protective area for wetlands that have been partially filled in compliance with all applicable state and federal regulations shall be measured from the wetland boundary delineation after fill has been placed. Where there is a legally authorized wetland fill, the protective area standard need not be met in that location.

i. For concentrated flow channels with drainage areas greater than 130 acres, 10 feet.

j. Notwithstanding pars. (a) to (i), the greatest protective area width shall apply where rivers, streams, lakes, and wetlands are contiguous.

2. This paragraph applies to post-construction sites located within a protective area, except those areas exempted pursuant to Subd. 4.

3. The following requirements shall be met:

a. Impervious surfaces shall be kept out of the protective area to the maximum extent practicable. The storm water management plan shall contain a written site-specific explanation for any parts of the protective area that are disturbed during construction.

b. Where land disturbing construction activity occurs within a protective area, and where no impervious surface is present, adequate sod or self-sustaining vegetative cover of 70% or greater shall be established and maintained. The adequate sod or self-sustaining vegetative cover shall be sufficient to provide for bank stability, maintenance of fish habitat and filtering of pollutants from upslope overland flow areas under sheet flow conditions. Non-vegetative materials, such as rock riprap, may be employed on the bank as necessary to prevent erosion, such as on steep slopes or where high velocity flows occur.

c. Best management practices such as filter strips, swales, or wet detention basins that are designed to control pollutants from non-point sources may be located in the protective area.

4. This paragraph does not apply to:

a. Redevelopment sites.

b. In-fill development areas less than 5 acres.

c. Structures that cross or access surface waters such as boat landings, bridges and culverts.

d. Structures constructed in accordance with s. 59.692(1v), Wis. Stats.

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e. Post-construction sites from which runoff does not enter the surface water, including wetlands, without first being treated by a BMP to meet the requirements of this Ordinance, except to the extent that vegetative ground cover is necessary to maintain bank stability.

(e) FUELING AND VEHICLE MAINTENANCE AREAS. Fueling and vehicle maintenance areas shall, to the maximum extent practicable, have BMPs designed, installed and maintained to reduce petroleum within runoff, such that the runoff that enters water of the state contains no visible petroleum sheen.

(f) TIMING. The BMPs that are required in this ordinance shall be installed before the construction site has undergone final stabilization.

(4) GENERAL CONSIDERATIONS FOR ON-SITE AND OFF-SITE STORM WATER MANAGEMENT MEASURES. The following considerations shall be observed in managing runoff:

(a) Natural topography and land cover features such as natural swales, natural depressions, native soil infiltrating capacity, and natural groundwater recharge areas shall be preserved and used, to the extent possible, to meet the requirements of this section.

(b) Emergency overland flow for all storm water facilities shall be provided to prevent exceeding the safe capacity of downstream drainage facilities and pre-vent endangerment of downstream property or public safety.

(5) LOCATION AND REGIONAL TREATMENT OPTION.

(a) The BMPs may be located on-site or off-site as part of a regional storm water device, practice or system.

(b) Post-construction runoff within a non-navigable surface water that flows into a BMP, such as a wet detention pond, is not required to meet the performance standards of this ordinance. Post-construction BMPs may be located in non-navigable surface waters.

(c) Except as allowed under par. (d), post-construction runoff from new development shall meet the post-construction performance standards prior to entering a navigable surface water.

(d) Post-construction runoff from any development within a navigable surface water that flows into a BMP is not required to meet the performance standards of this ordinance if:

1. The BMP was constructed prior to the effective date of this ordinance and the BMP either received a permit issued under Ch. 30, Stats., or the BMP did not require a Ch. 30, Wis. Stats., permit; and

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2. The BMP is designed to provide runoff treatment from future upland development.

(e) Runoff from existing development, redevelopment and in-fill areas shall meet the post-construction performance standards in accordance with this paragraph.

1. To the maximum extent practicable, BMPs shall be located to treat runoff prior to discharge to navigable surface waters.

2. Post-construction BMPs for such runoff may be located in a navigable surface water if allowable under all other applicable federal, state and local regulations such as Ch. NR 103, Wis. Adm. Code and Ch. 30, Wis. Stats.

(f) The discharge of runoff from a BMP, such as a wet detention pond, or after a series of such BMPs is subject to this chapter.

(g) The City Engineer may approve off-site management measures provided that all of the following conditions are met:

1. The City Engineer determines that the post-construction runoff is covered by a storm water management system plan that is approved by the City of Sparta and that contains management requirements consistent with the purpose and intent of this ordinance.

2. The off-site facility meets all of the following conditions:

a. The facility is in place.

b. The facility is designed and adequately sized to provide a level of storm water control equal to or greater than that which would be afforded by on-site practices meeting the performance standards of this ordinance.

c. The facility has a legally obligated entity responsible for its long-term operation and maintenance.

(h) Where a regional treatment option exists such that the City Engineer exempts the applicant from all or part of the minimum on-site storm water management requirements, the applicant shall be required to pay a fee in an amount determined in negotiation with the City Engineer. In determining the fee for post-construction runoff, the City Engineer shall consider an equitable distribution of the cost for land, engineering design, construction, and maintenance of the regional treatment option.

(6) ALTERNATE REQUIREMENTS. The City Engineer may establish storm water management requirements more stringent than those set forth in this section if the City Engineer determines that an added level of protection is needed to protect sensitive resources.

## STORM WATER MANAGEMENT 26.08

### 26.08 PERMITTING REQUIREMENTS, PROCEDURES AND FEES.

(1) **PERMIT REQUIRED:** Unless specifically excluded by this Ordinance, no land occupier or land user may undertake a land disturbing activity subject to this Ordinance without receiving a permit from the City Engineer prior to commencing the proposed activity. The Building Inspector shall determine whether a permit is required under this Ordinance, and if necessary, shall not issue a building permit or construction site permit until the storm water permit is issued. The developer shall submit a permit application with the appropriate fee as adopted by the Common Council of the City of Sparta.

(2) **CONTROL PLAN REQUIRED.** Unless specifically exempted by this Ordinance, every applicant for a storm water permit shall develop and submit a plan to control runoff that would result from the proposed activity. If the development is required to receive coverage from the Department under the statewide WPDES permitting program and has received said coverage, the submitted control plan and evidence of DNR approval shall accompany the permit application.

(3) **REVIEW OF APPLICATION:** The City Engineer shall receive and review all permit applications that are accompanied by the appropriate fee and control plan if required. The City Engineer shall determine whether measures included in the plan to control erosion, sedimentation and runoff during and after the land disturbing activities are adequate to meet all applicable standards. The City Engineer shall, within 30 calendar days from the receipt of the permit application, control plan and appropriate fee, inform the applicant in writing whether the plan is approved, disapproved, or approved conditionally. Should the applicant modify a conditionally approved plan, there shall be no additional permit fee. The City Engineer has 30 days to review the modified plan and issue a decision. Failure to render a written decision within 30 days shall be deemed to mean approval of the plan as submitted, and the applicant may proceed as if a permit has been issued. If a plan is disapproved, the applicant may resubmit a new control plan or may appeal the City Engineer's decision to the Public Works Board.

(4) **CONSULTANT SERVICES:** If the City retains the services of professional consultants to assist the City in its review of a proposed permit application and/or control plan, the applicant may be required to reimburse the City for the costs incurred by the City to retain such services. Such reimbursement shall be in addition to the permit fees and other fees paid by the applicant. Such consultants may include, but are not limited to, planners, engineers, architects, attorneys, and/or environmental specialists. The City may require the applicant to enter into an agreement providing for the reimbursement to the City of said costs, which may be required to include an irrevocable letter of credit or other appropriate sureties equal to the cost of said services.

(5) **PERMIT CONDITIONS:** All permits issued under this Ordinance shall be subject to the following conditions and requirements. Any permittee shall be deemed to accept all of these conditions.

(a) That all disturbances, construction, and development shall be done pursuant to the control plan as approved by the City Engineer.

## STORM WATER MANAGEMENT 26.08(5)(b)

(b) That the permittee shall give at least two working days' notice to the City Engineer in advance of the start of any land disturbing activity.

(c) That the permittee shall file a notice of completion of all land disturbing activities and/or the completion of installation of all on-site detention facilities within 10 days after completion.

(d) That approval in writing must be obtained prior to any modifications to the approved control plan.

(e) That the permittee shall be responsible for maintaining all roads, rights of way, runoff and drainage facilities and drainageways as specified in the approved plan until they are accepted and become the responsibility of the City.

(f) That the permittee will be responsible for repairing any damage at his or her expense to all adjoining surfaces and drainageways caused by runoff and/or sedimentation resulting from activities not in compliance with the permit.

(g) That the permittee must provide and install at his or her expense all drainage and runoff control improvements as required by this Ordinance and the approved control plan. The permittee must also bear his or her proportionate cost of off-site improvements to drainageways based upon the existing developed drainage area or planned development of the drainage area.

(h) That no portion of the land which undergoes the land disturbing activity will be allowed to remain uncovered for more than two weeks after notice is given to the City Engineer that the land disturbing activity is completed.

(i) That the permittee agrees to allow the City Engineer to enter onto the land regulated under this Ordinance for the purposes of inspecting for compliance with the approved control plan and permit.

(j) That the permittee authorizes the City Engineer to perform any work or operations necessary to bring the condition of the lands into conformity with the approved control plan and further consents to the City billing the permittee the total costs and expenses of such work and operations.

(6) PERMIT DURATION: Permits issued under this Ordinance shall be valid for a period of one year from the date of issuance, and all work must be completed prior to the expiration date. However, the City Engineer is authorized to extend the expiration date of the permit if the extension is justified by the large scope of the project or situations beyond the permittee's control, and if he or she finds that such an extension will not cause an increase in runoff. The City Engineer is further authorized to modify the plans if necessary to prevent any increase in runoff resulting from any extension.

(7) PERMIT FEE: All permit applications filed under this Ordinance shall be accompanied by a \$50 payment for any development listed under section S.04(1)(a) of this Ordinance. This fee may be waived at the discretion of the city engineer for

## STORM WATER MANAGEMENT 26.08(7)(a)

- (a) Projects for which the permittee has received DNR coverage under the WPDES permit program.
- (b) Projects on public lands or by public entities.
- (c) Other projects in the opinion of the City Engineer which require only minimal review.

### 26.09 STORM WATER MANAGEMENT PLAN.

(1) PLAN REQUIREMENTS. The storm water management plan required under S.08 (2) shall contain at a minimum the following information:

(a) Name, address, and telephone number for the following or their designees: landowner; developer; project engineer for practice design and certification; person(s) responsible for installation of storm water management practices; and person(s) responsible for maintenance of storm water management practices prior to the transfer, if any, of maintenance responsibility to another party.

(b) A proper legal description of the property proposed to be developed, referenced to the U.S. Public Land Survey system or to block and lot numbers within a recorded land subdivision plat.

(c) Pre-development site conditions, including:

1. One or more site maps at a scale of not less than 1 inch equals 100 feet. The site maps shall show the following: site location and legal property description; predominant soil types and hydrologic soil groups; existing cover type and condition; topographic contours of the site at a scale not to exceed 100 feet; topography and drainage network including enough of the contiguous properties to show runoff patterns onto, through, and from the site; watercourses that may affect or be affected by runoff from the site; flow path and direction for all storm water conveyance sections; watershed boundaries used in hydrology determinations to show compliance with performance standards; lakes, streams, wetlands, channels, ditches, and other watercourses on and immediately adjacent to the site; limits of the 100 year floodplain; location of wells and wellhead protection areas covering the project area and delineated pursuant to S. NR 811.16, Wis. Adm. Code.

2. Hydrology and pollutant loading computations as needed to show compliance with performance standards. All major assumptions used in developing input parameters shall be clearly stated. The geo-graphic areas used in making the calculations shall be clearly cross-referenced to the required map(s).

(d) Post-development site conditions, including:

1. Explanation of the provisions to preserve and use natural topography and land cover features to minimize changes in peak flow runoff rates and volumes to surface waters and wetlands.

## STORM WATER MANAGEMENT 26.09(1)(d)2

2. Explanation of any restrictions on storm water management measures in the development area imposed by wellhead protection plans and ordinances.

3. One or more site maps at a scale of not less than 1 inch equals 100 feet showing the following: post-construction pervious areas including vegetative cover type and condition; impervious surfaces including all buildings, structures, and pavement; post-construction topographic contours of the site at a scale not to exceed [number] feet; post-construction drainage network including enough of the contiguous properties to show runoff patterns onto, through, and from the site; locations and dimensions of drainage easements; locations of maintenance easements specified in the maintenance agreement; flow path and direction for all storm water conveyance sections; location and type of all storm water management conveyance and treatment practices, including the on-site and off-site tributary drainage area; location and type of conveyance system that will carry runoff from the drainage and treatment practices to the nearest adequate outlet such as a curbed street, storm drain, or natural drainage way; watershed boundaries used in hydrology and pollutant loading calculations and any changes to lakes, streams, wetlands, channels, ditches, and other watercourses on and immediately adjacent to the site.

4. Hydrology and pollutant loading computations as needed to show compliance with performance standards. The computations shall be made for each discharge point in the development, and the geo-graphic areas used in making the calculations shall be clearly cross-referenced to the required map(s).

5. Results of investigations of soils and groundwater required for the placement and design of storm water management measures. Detailed drawings including cross-sections and profiles of all permanent storm water conveyance and treatment practices.

(e) A description and installation schedule for the storm water management practices needed to meet the performance standards in S.07.

(f) A maintenance plan developed for the life of each storm water management practice including the required maintenance activities and maintenance activity schedule.

(g) Other information requested in writing by the City Engineer to determine compliance of the proposed storm water management measures with the provisions of this ordinance.

(h) All site investigations, plans, designs, computations, and drawings shall be certified by a licensed professional engineer to be prepared in accordance with accepted engineering practice and requirements of this ordinance.

(2) ALTERNATE REQUIREMENTS. The City Engineer may prescribe alternative submittal requirements for applicants seeking an exemption to on-site storm water management performance standards under S.07 (5).

## STORM WATER MANAGEMENT 26.10

### 26.10 MAINTENANCE AGREEMENT.

(1) **MAINTENANCE AGREEMENT REQUIRED.** The maintenance agreement required under S.09 (1) (f) for storm water management practices shall be an agreement between the City Engineer and the responsible party to provide for maintenance of storm water practices beyond the duration period of this permit. The maintenance agreement shall be filed with the County Register of Deeds as a property deed restriction so that it is binding upon all subsequent owners of the land served by the storm water management practices.

(2) **AGREEMENT PROVISIONS.** The maintenance agreement shall contain the following information and provisions and be consistent with the maintenance plan required by S.09(1)(f):

- (a) Identification of the storm water facilities and designation of the drainage area served by the facilities.
- (b) A schedule for regular maintenance of each aspect of the storm water management system consistent with the storm water management plan required under S.08 (2).
- (c) Identification of the responsible party(s), organization or city, county, town or village responsible for long term maintenance of the storm water management practices identified in the storm water management plan required under S.08 (2).
- (d) Requirement that the responsible party(s), organization, or city, county, town or village shall maintain storm water management practices in accordance with the schedule included in par. (b).
- (e) Authorization for the City Engineer to access the property to conduct inspections of storm water management practices as necessary to ascertain that the practices are being maintained and operated in accordance with the agreement.
- (f) A requirement on the City Engineer to maintain public records of the results of the site inspections, to inform the responsible party responsible for maintenance of the inspection results, and to specifically indicate any corrective actions required to bring the storm water management practice into proper working condition.
- (g) Agreement that the party designated under par. (c), as responsible for long term maintenance of the storm water management practices, shall be notified by the City Engineer of maintenance problems which require correction. The specified corrective actions shall be undertaken within a reasonable time frame as set by the City Engineer.
- (h) Authorization of the City Engineer to perform the corrected actions identified in the inspection report if the responsible party designated under Par. (c) does not make the required corrections in the specified time period. The City Engineer shall enter the amount due on the tax rolls and collect the money as a special charge against the property pursuant to Subch. VII of Ch. 66, Wis. Stats.

**26.11 FINANCIAL GUARANTEE.**

(1) **ESTABLISHMENT OF THE GUARANTEE.** The City Engineer may require the submittal of a financial guarantee, the form and type of which shall be acceptable to the City Engineer. The financial guarantee shall be in an amount determined by the City Engineer to be the estimated cost of construction and the estimated cost of maintenance of the storm water management practices during the period which the designated party in the maintenance agreement has maintenance responsibility. The financial guarantee shall give the City Engineer the authorization to use the funds to complete the storm water management practices if the responsible party defaults or does not properly implement the approved storm water management plan, upon written notice to the responsible party by the administering authority that the requirements of this ordinance have not been met.

(2) **CONDITIONS FOR RELEASE.** Conditions for the release of the financial guarantee are as follows:

(a) The City Engineer shall release the portion of the financial guarantee established under this section, less any costs incurred by the City Engineer to complete installation of practices, upon submission of "as built plans" by a licensed professional engineer. The City Engineer may make provisions for a partial pro-rata release of the financial guarantee based on the completion of various development stages.

(b) The City Engineer shall release the portion of the financial guarantee established under this section to assure maintenance of storm water practices, less any costs incurred by the City Engineer, at such time that the responsibility for practice maintenance is passed on to another entity via an approved maintenance agreement.

**26.12 EROSION CONTROL ELEMENTS OF PLAN.**

The following general principles shall be incorporated during the construction phase of the development:

- (1) The smallest practical area of land shall be exposed at any given time.
- (2) Such minimum area exposure shall be kept to as short a duration of time as possible.
- (3) If at all practicable, temporary vegetation, mulching, or other cover shall be used to protect areas during development.
- (4) Provisions shall be made to effectively accommodate the increased runoff caused by changed soil and surface conditions during and after development according to the standards contained in this Ordinance.
- (5) Permanent, final plant covering or structures shall be installed as soon as possible.
- (6) Natural plant covering shall be retained and protected and shall be deemed a dominating factor in developing the site.

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- (7) Water pumped from the site shall be treated by temporary sedimentation basins or other appropriate control measures. Water may not be discharged in a manner that causes erosion of the site, a neighboring site, or the bed or banks of the receiving water.
- (8) Dewatering or other pumping activities shall not discharge directly into a storm sewer system.
- (9) All waste and unused building materials and construction debris shall be properly disposed of and not allowed to be carried off site by wind and/or runoff into a receiving channel or storm sewer system.
- (10) Each site shall have a graveled entrance pad of sufficient width and length to prevent sediment from being tracked onto public or private roadways. Sediment reaching a public or private road shall be removed by street cleaning (not hydraulic flushing) before the end of each workday.
- (11) Channelized runoff from adjacent areas passing through the site shall be diverted around disturbed areas, if determined practical by the City Engineer.
- (12) All activities on the site shall be conducted in such a sequence as to minimize the area of bare soil exposed at any one time and the amount of soil leaving the site.
- (13) All disturbed ground and soil or dirt storage piles shall be contained on the site by filter barriers or other suitable means. The containment measures shall be installed as soon as the disturbance takes place. The containment measures shall remain in place until the site is adequately stabilized as determined by the City Engineer.
- (14) Filter fences, straw bales, or equivalent control measures shall be placed continuously along all side slope and downslope sides of the site. If a channel or area of concentrated runoff passes through the site, filter barriers shall be placed continuously along the channel edges to reduce sediment reaching the channel.
- (15) Affected storm drain inlets shall be protected with a straw bale, filter fabric, or equivalent barrier as approved by the City Engineer.

### 26.13 ENFORCEMENT.

The City Engineer is authorized to post a stop work order upon land which has had a permit revoked or to post a stop work order upon land which is currently undergoing any land disturbing activity in violation of this Ordinance. The City Engineer shall supply a copy of each stop work order to the City Attorney. In lieu of the stop work order, the City Engineer may issue a written cease and desist order to any land occupier or land user whose activity is in violation of this Ordinance. These orders shall specify that the activity must be ceased or brought into compliance with the Ordinance within seven days. Any revocation, stop work order or cease and desist order shall remain in effect unless retracted by the Public Works Board, the City Engineer, or by a court of general jurisdiction; or until the land disturbing activity is brought into compliance with the Ordinance. The City Engineer is authorized to refer any violation of this Ordinance or of a stop work order or cease and desist order issued pursuant to this Ordinance to the City Attorney for the commencement of legal proceedings.

26.14 APPEALS.

The Public Works Board shall hear and decide appeals when it is alleged that there is an error in any order, requirement, decision, or determination made by the City Engineer in administering this Ordinance. The Board may authorize upon appeal in specific cases such variances from the terms of this Ordinance as will not be contrary to public interest, where owing to special conditions a literal enforcement of this Ordinance will result in unnecessary hardship, so that the spirit of this Ordinance shall be observed, public safety and welfare secured, and substantial justice done. The rules, procedures, duties, and powers established by the City for the Board of Zoning Appeals shall apply to appeals to the Public Works Board under this Ordinance. Appeals may be made by any person aggrieved or by any officer, department, board or bureau of the City affected by the order, requirement, decision or determination made by the City Engineer. For the purpose of this Ordinance, an aggrieved person may include a permit applicant and property owners of land subject to this Ordinance.

26.15 SEVERABILITY.

If any section, clause, provision or portion of this ordinance is judged unconstitutional or invalid by a court of competent jurisdiction, the remainder of the ordinance shall remain in force and not be affected by such judgment.