

Chapter 16.14

POST-CONSTRUCTION STORMWATER MANAGEMENT

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16.14.010 Authority.

This chapter is adopted by the Town Board under the authority granted by Section 60.627, for towns, Wis. Stats. (Ord. dated 3/24/05 (part))

16.14.020 Findings of fact.

The Town Board 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:

A. Degrade physical stream habitat by increasing stream bank erosion, increasing streambed scour, diminishing groundwater recharge, diminishing stream base flows and increasing stream temperature;

B. 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;

C. Alter wetland communities by changing wetland hydrology and by increasing pollutant loads;

D. Reduce the quality of groundwater by increasing pollutant loading;

E. Threaten public health, safety, property, and general welfare by overtaxing storm sewers, drainage ways, and other minor drainage facilities;

F. Threaten public health, safety, property, and general welfare by increasing major flood peaks and volumes;

G. Undermine floodplain management efforts by increasing the incidence and levels of flooding; and

H. Aggravate excessive infiltration and inflow of water into sanitary sewer connections during peak storm events causing the conveyance system to surcharge, overflow, or backup into basements. (Ord. dated 3/24/05 (part))

16.14.030 Purpose.

This chapter integrates federal and state construction post-construction site stormwater quality standards with duties to reasonably manage the quantity of water runoff for regional flood abatement. (Ord. dated 3/24/05 (part))

16.14.040 Stormwater quality and quantity management applicability.

A. The water quality management duties apply to property development disturbing one or more acres and the water quantity management duties apply to subdivisions, condominium developments, Planned Unit Developments, multifamily housing, commercial developments, and private recreational developments, unless the site is

exempt under subsection B, C, or D of this section.

B. A site meeting any one of the following criteria is exempt from stormwater quality requirements:

1. A redevelopment post-construction site with no increase in exposed parking lots or roads;

2. A post-construction site with less than ten (10) percent connected imperviousness based on complete development of the post-construction site, provided the cumulative area of all parking lots and rooftops is less than one acre;

3. Non-point discharges from agricultural facilities and practices;

4. Non-point discharges from silviculture activities;

5. Routine maintenance for project sites under five acres of land disturbance if performed to maintain the original line and grade, hydraulic capacity or original purpose of the facility;

6. Underground utility construction such as water, sewer, and fiber optic lines. This exemption does not apply to the construction of any aboveground structures associated with utility construction.

C. Water quantity management duties do not apply if:

1. Residential infill where the lot is five acres or less, the development is exclusively residential, the net increase in the area of impervious surface is less than twenty (20) percent of the area of the site; and each boundary of the site is contiguous to: sites that contain earlier development served by sanitary sewers, streets, or public water supply when the governmental unit receives the plans for the new development or parkland; or other public land, a utility right-of-way, or a watercourse;

2. Sites where the area of impervious surface after development will be five percent or less of the total area of the site;

3. Recreational trails if the trail is less than or equal to ten (10) feet in width and has a continuous pervious buffer at least five feet wide on each side, disregarding interruption by streets, driveways, or other impervious surfaces crossing the trail; or

4. Notwithstanding the applicability requirements in subsection (C)(1) of this section, this chapter applies to post-construction sites of any size that, in the opinion of the project administrator, is likely to result in runoff that exceeds the capacity of the existing drainage facilities or the level of flooding protection in a watercourse that causes undue channel erosion, that increases water pollution by scouring or the transportation of particulate matter or that endangers property or public safety.

D. Town Board Exemption. The Town Board may, at its sole discretion, waive the requirements of this chapter for any development or activity.

E. Comity. State agencies should design and incorporate best management practices for surface water quality and stormwater quantity management for new impervious surfaces. The runoff management techniques should be the same as flood abatement plans and techniques utilized by local governments in the watershed. The lead agency preparing an environmental assessment for a federal or state project shall identify the mitigating runoff management techniques to prevent increases in peak flood flows from new impervious areas. (Ord. dated 3/24/05 (part))

16.14.050 Definitions.

As used in this chapter:

“Administering authority” means the Town of Burlington or their designee, municipal employees under Section 60.627, Wis. Stats., as designated by the Town Board to administer this chapter.

“Agricultural facilities and practices” has the meaning given in Section 281.16, Wis. Stats.

“Average annual rainfall” means a calendar year of precipitation, excluding snow, which is considered typical.

“Best management practice” or “BMP” means structural or nonstructural measures, practices, techniques, or devices employed to:

1. Avoid or minimize sediment or pollutants carried in runoff to waters of the state; or
2. Manage the rate or volume of runoff.

“Business day” means a day the office of the project administrator is routinely and customarily open for business.

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

“Combined sewer system” means a system for conveying both sanitary sewage and stormwater runoff.

“Connected imperviousness” means an impervious surface that is directly connected to a separate storm sewer or water of the state via an impervious flow path.

“Critical time” means the period starting at the time of peak rainfall intensity with a duration equal to the time of concentration of the watershed.

“Design storm” means a hypothetical discrete rainstorm characterized by a specific duration, temporal distribution, rainfall intensity, return frequency, and total depth of rainfall.

“Development” means construction of residential, commercial, industrial or institutional land uses and associated roads, including redevelopment.

“Division of land” means the creation from one parcel of two or more parcels or building sites of one and one-half or fewer acres each in area where such creation

occurs at one time or through the successive partition within a five-year period.

“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.

“Erosion” means the process by which the land’s surface is worn away by the action of wind, water, ice or gravity.

“Exceptional resource waters” mean waters listed in Section NR 102.11, Wis. Adm. Code.

“Extraterritorial” means the unincorporated area within three miles of the corporate limits of a first, second, or third class city, or within one and one-half miles of a fourth class city or village.

“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 seventy (70) percent of the cover, for the unpaved areas and areas not covered by permanent structures, or employment of equivalent permanent stabilization measures.

“Financial guarantee” means a performance bond, maintenance bond, surety bond, irrevocable letter of credit, or similar guarantees submitted to the project administrator by the responsible party to assure that requirements of the ordinance are carried out in compliance with the stormwater management plan.

“Governing body” means Town Board of Supervisors.

“Impervious surface” means any pavement or structural element that prevents rain, surface water runoff, or melting snow from infiltrating into the ground below, including, but not limited to, roofs and paved roads, driveways, and parking lots.

“In-fill area” means an undeveloped area of land located within existing development.

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

“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 roadside channels designed for conveyance and pollutant removal only.

“Karst feature” means an area or surficial geologic 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.

“Land-disturbing construction activity” means any man-made alteration of the land surface resulting in a change in the topography or existing vegetative or nonvegetative 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 dewatering, filling and grading activities.

“Maintenance agreement” means a legal document that provides for long-term maintenance of stormwater management practices.

“MEP” or “maximum extent practicable” means a level of implementing best management practices in order to achieve a performance standard specified in this chapter which takes into account the best available technology, cost effectiveness and other competing issues such as human safety and welfare, endangered and threatened resources, historic properties and geographic features. MEP allows flexibility in the way to meet the performance standards and may

vary based on the performance standard and site conditions.

“New development” means development resulting from the conversion of previously undeveloped land or agricultural land uses.

“Off-site” means located outside the property boundary described in the permit application.

“On-site” means located within the property boundary described in the permit application.

“Ordinary high water mark” has the meaning given in Section NR 115.03(6), Wis. Adm. Code.

“Outstanding resource waters” mean waters listed in Section NR 102.10, Wis. Adm. Code.

“Percent fines” means the percentage of a given sample of soil, which passes through a No. 200 sieve.

“Performance standard” means a narrative or measurable number specifying the minimum acceptable outcome for a facility or practice.

“Permit” means a written authorization made by the project administrator to the applicant to conduct land-disturbing construction activity or to discharge post-construction runoff to waters of the state.

“Permit administration fee” means a sum of money paid to the project administrator by the permit applicant for the purpose of recouping the expenses incurred by the authority in administering the permit.

“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.

“Pollutant” has the meaning given in Section 283.01(13), Wis. Stats.

“Pollution” has the meaning given in Section 281.01(10), Wis. Stats.

“Post-construction site” means a construction site following the completion

of land-disturbing construction activity and final site stabilization.

“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.

“Preventive action limit” has the meaning given in Section NR 140.05(17), Wis. Adm. Code.

“Project administrator” means the Town of Burlington or their designee.

“Public right-of-way” means any road, alley, street, parking lot, sidewalk, plaza, mall, or pathway owned by or dedicated to a governmental unit.

“Recreational trail” means a path that is:

1. Distinctly set apart from a roadway, street, or sidewalk;
2. Designed for activities such as jogging, walking, hiking, bird-watching, bicycle riding, roller skating, or similar recreational activities not involving the use of motorized vehicles; and
3. Not a sidewalk according to Section 340.01(58), Wis. Stats.

“Redevelopment” means new construction, modification or replacement of older development.

“Regional flood” means the peak flow and peak elevation of water with a one percent probability of occurring during any one year, considering rainfall time and intensity patterns, rainfall duration, area distribution, antecedent moisture, and snow melt. The common misnomer, “one hundred (100) year flood or floodplain” implies a temporal element rather than a one in one hundred (100) random probability of the event.

“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 stormwater BMPs.

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

“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:

1. Is designed or used for collecting water or conveying runoff;
2. Is not part of a combined sewer system;
3. Is not draining to a stormwater treatment device or system; and
4. Discharges directly or indirectly to waters of the state.

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

“Stop work order” means an order issued by the project administrator, which requires that all construction activity on the site be stopped.

“Stormwater management plan” means a comprehensive plan designed to reduce the discharge of pollutants from stormwater after the site has undergone final stabilization following completion of the construction activity.

“Stormwater 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.

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

“Time of concentration” means the time period for the furthest runoff from the outlet

of a watershed to contribute to flow at the watershed outlet.

“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 twelve (12) percent continually for at least fifty (50) feet. If the slope of the land is twelve (12) percent or less continually for the initial fifty (50) feet, landward from the ordinary high water mark, the top of the channel is the ordinary high water mark.

“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.

“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.

“Water quality management” means the stormwater standards and duties established under the Clean Water Act, 33 U.S.C. 1251 et seq., parallel state law regulating the discharge of pollutants, and implementing regulations.

“Waters of the state” has the meaning given in Section 281.01(18), Wis. Stats. (Ord. dated 3/24/05 (part))

16.14.060 Technical standards.

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

A. Technical standards identified, developed, or disseminated by the Wisconsin Department of Natural Resources

under Subchapter V of Chapter NR 151, Wis. Adm. Code.

B. 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 project administrator.

C. The most recent rainfall data available from the Southeastern Wisconsin Regional Planning Commission or more protective data shall be the basis for the analyses required by this chapter. (Ord. dated 3/24/05 (part))

16.14.070 Performance standards.

A. Responsible Party. The responsible party shall implement a post-construction stormwater management plan that incorporates the requirements of this section.

B. Plan. A written stormwater quality and quantity management plan in accordance with Section 16.14.090 of this chapter shall be developed and implemented for each post-construction site.

C. Requirements. The water quality plan required under subsection B of this section shall include the following:

1. Total Suspended Solids. BMPs shall be designed, installed, and maintained to control total suspended solids carried in runoff from the post-construction site as follows:

a. For new development, by design, reduce to the maximum extent practicable, the total suspended solids load by eighty (80) percent, based on the average annual rainfall, as compared to no runoff management controls. No person shall be required to exceed an eighty (80) percent total suspended solids reduction to meet the requirements of this subsection.

b. For redevelopment, by design, reduce to the maximum extent practicable, the total suspended solids load by forty (40) percent, based on the average annual rainfall, as

compared to no runoff management controls. No person shall be required to exceed a forty (40) percent total suspended solids reduction to meet the requirements of this subsection.

c. For in-fill development under five acres that occurs within ten (10) years after the effective date of this rule February 2005, by design, reduce to the maximum extent practicable, the total suspended solids load by forty (40) percent, based on an average annual rainfall, as compared to no runoff management controls. No person shall be required to exceed a forty (40) percent total suspended solids reduction to meet the requirements of this subsection.

d. For in-fill development that occurs ten (10) or more years after the effective date of this rule February 2005, by design, reduce to the maximum extent practicable, the total suspended solids load by eighty (80) percent, based on an average annual rainfall, as compared to no runoff management controls. No person shall be required to exceed an eighty (80) percent total suspended solids reduction to meet the requirements of this subsection.

e. Notwithstanding subsections (C)(1)(a) through (C)(1)(d) of this section, if the design cannot achieve the applicable total suspended solids reduction specified, the stormwater management plan shall include a written and site-specific explanation why that level of reduction is not attained and the total suspended solids load shall be reduced to the maximum extent practicable.

2. Water Quantity and Management of Peak Runoff.

a. BMPs shall manage the volume, timing, and peak flow rate of runoff to prevent increases in the regional flood and stream bank erosion rates.

b. These BMPs may be implemented on either a watershed basis or an individual site basis.

c. When implemented on a watershed basis, the BMPs implemented at a particular site shall comply with the findings of the relevant local or regional stormwater management plan, rather than subsection (C)(2)(d) of this section.

d. i. Stormwater Discharge Quantity. Unless otherwise provided for in this chapter, all land development activities subject to this chapter shall establish on-site management resources to control the peak flow rates of stormwater discharge from the site. Infiltration of stormwater runoff from driveways, sidewalks, rooftops, and landscaped areas shall be incorporated to the maximum extent technically and financially practical to provide volume control in addition to control peak flows.

ii. On-site management measures shall be used to meet the following minimum performance standards:

(A) The peak flow rates of stormwater runoff from the development shall not exceed those calculated for the series of design storms specified in subsection (C)(2)(d)(ii)(B) of this section, occurring under pre-development conditions specified in subsection (C)(2)(d)(ii)(C) of this section. Discharge velocities must be nonerosive to discharge locations, outfall channels, and receiving streams.

(B) At a minimum, post-development peak flow rates for the two-year and the ten (10) year rainfall events shall be controlled either at or below pre-development discharge rates and post-development peak flow rates for the one hundred (100) year rainfall events shall be controlled either at or below the twenty-five (25) year rainfall event pre-development discharge rates.

(C) When the natural resource conservation service TR-55 method is used to calculate peak flow discharge rates and runoff volumes for the pre-development condition, NRCS curve number shall not exceed the following for the given soil

hydrologic groups. When other methods for computing runoff are used, they shall assume a comparable pre-development condition.

Table 1 B Maximum Pre-Development Runoff Curve Numbers for Cropland Areas

| | | | | |
|-----------------------|----|----|----|----|
| Hydrologic soil group | A | B | C | D |
| Runoff curve number | 56 | 70 | 79 | 83 |

(D) Stormwater discharges to wetlands may be appropriate when the increase or decrease in runoff volumes do not negatively change the wetland functional values. Where such changes are proposed, the impact of the proposal on wetland functional values shall be assessed using a methodology acceptable to the Wisconsin Department of Natural Resources. Significant degradation to wetland functional values shall be avoided.

3. 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 subsections (C)(3)(e) through (C)(3)(g) of this section.

a. For residential developments, one of the following shall be met:

i. Infiltrate sufficient runoff volume so that the post-development infiltration volume shall be at least 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 project site is required as an effective infiltration area.

ii. Infiltrate twenty-five (25) percent of the post-development runoff from the two-year, twenty-four (24) hour design storm with a Type II distribution. Separate curve numbers for pervious and impervious surfaces shall be used to calculate runoff

volumes and not composite curve numbers as defined in TR-55. However, when designing appropriate infiltration systems to meet this requirement, no more than one percent of the project site is required as an effective infiltration area.

b. For nonresidential development, including commercial, industrial, and institutional development, one of the following shall be met:

i. Infiltrate sufficient runoff volume so that the post-development infiltration volume shall be at least sixty (60) 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 two percent of the project site is required as an effective infiltration area.

ii. Infiltrate ten (10) percent of the runoff from the two-year, twenty-four (24) hour design storm with a Type II distribution. Separate curve numbers for pervious and impervious surfaces shall be used to calculate runoff volumes, and not composite curve numbers as defined in TR-55. However, when designing appropriate infiltration systems to meet this requirement, no more than two percent of the project site is required as an effective infiltration area.

c. Pre-development condition shall be the same as in subsection (C)(3)(b)(ii) of this section.

d. Before infiltrating runoff, pretreatment shall be required for parking lot runoff and for runoff from new road construction in commercial, industrial and institutional areas that will enter an infiltration system. The pretreatment shall be designed to protect the infiltration system from clogging prior to scheduled maintenance and to protect groundwater quality in accordance with subsection (C)(3)(g) of this section. Pretreatment options may include, but are not limited to,

oil/grease separation, sedimentation, biofiltration, filtration, swales or filter strips.

e. Infiltration Exclusions. The runoff from the following areas are prohibited from meeting the requirements of this subsection:

i. Areas associated with tier 1 industrial facilities identified in Section NR 216.21(2)(a), Wis. Adm. Code, including storage, loading, rooftop and parking;

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

iii. Fueling and vehicle maintenance areas;

iv. Areas within one thousand (1,000) feet upgradient or within one hundred (100) feet downgradient of karst features;

v. Areas with less than three feet separation distance from the bottom of the infiltration system to the elevation of seasonal high groundwater or the top of bedrock, except this subsection does not prohibit infiltration of roof runoff;

vi. Areas with runoff from industrial, commercial and institutional parking lots and roads and residential arterial roads with less than five feet separation distance from the bottom of the infiltration system to the elevation of seasonal high groundwater or the top of bedrock;

vii. Areas within four hundred (400) feet of a community water system well as specified in Section NR 811.16(4), Wis. Adm. Code, or within one hundred (100) feet of a private well as specified in Section NR 812.08(4), Wis. Adm. Code, for runoff infiltrated from commercial, industrial and institutional land uses or regional devices for residential development;

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

ix. Any area where the soil does not exhibit one of the following soil

characteristics between the bottom of the infiltration system and the seasonal high groundwater and top of bedrock: at least a three-foot soil layer with twenty (20) percent fines or greater; or at least a five-foot soil layer with ten (10) percent fines or greater. This does not apply where the soil medium within the infiltration system provides an equivalent level of protection. This subsection does not prohibit infiltration of roof runoff.

f. Infiltration Exemptions. The following are not required to meet the requirements of this subsection:

i. Areas where the infiltration rate of the soil is less than 0.6 inches/hour measured at the site;

ii. Parking areas and access roads less than five thousand (5,000) square feet for commercial and industrial development;

iii. Redevelopment post-construction sites;

iv. In-fill development areas less than five acres;

v. Infiltration areas during periods when the soil on the site is frozen;

vi. Roads in commercial, industrial, and institutional land uses, and arterial residential roads.

g. i. Infiltration systems designed in accordance with this subsection 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 with Chapter NR 140, Wis. Adm. Code. However, if site-specific information indicates that compliance with a preventive action limit is not achievable, the infiltration BMP may not be installed or shall be modified to prevent infiltration to the maximum extent practicable.

ii. Notwithstanding subsection (C)(3)(g)(i) of this section, the discharge

from BMPs shall remain below the enforcement standard at the point of standards application.

4. Protective Areas.

a. 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 subsection, 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.

i. For outstanding resource waters and exceptional resource waters, and for wetlands in areas of special natural resource interest as specified in Section NR 103.04, seventy-five (75) feet.

ii. 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, fifty (50) feet.

iii. For lakes, fifty (50) feet.

iv. For highly susceptible wetlands, fifty (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 Section NR 103.08(1m). This subsection 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.

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

vi. In subsections (C)(4)(a)(i), (iv) and (v) of this section, 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 Section NR 103.03.

vii. For concentrated flow channels with drainage areas greater than one hundred thirty (130) acres, ten (10) feet.

b. This subsection applies to post-construction sites located within a protective area, except those areas exempted pursuant to subsection (C)(4)(d) of this section.

c. The following requirements shall be met:

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

ii. 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 seventy (70) percent 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. Nonvegetative 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.

iii. 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.

d. This subsection does not apply to:

i. Redevelopment post-construction sites;

ii. In-fill development areas less than five acres;

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

iv. Structures constructed in accordance with Section 59.692(1v), Wis. Stats.;

v. Post-construction sites from which runoff does not enter the surface water, except to the extent that vegetative groundcover is necessary to maintain bank stability.

5. 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 waters of the state contains no visible petroleum sheen.

6. Swale Treatment for Transportation Facilities.

a. Applicability. Except as provided in subsection (C)(6)(b) of this section, transportation facilities that use swales for runoff conveyance and pollutant removal meet all of the requirements of this section, if the swales are designed to the maximum extent practicable to do all of the following:

i. Be vegetated. However, where appropriate, nonvegetative measures may be employed to prevent erosion or provide for runoff treatment, such as rock riprap stabilization or check dams.

ii. Carry runoff through a swale for two hundred (200) feet or more in length that is designed with a flow velocity no greater than one and one-half feet per second based

on a two-year, twenty-four (24) hour design storm. If a swale of two hundred (200) feet in length cannot be designed with a flow velocity of one and one-half feet per second or less, then the flow velocity shall be reduced to the maximum extent practicable.

b. Exemptions. The project administrator may, consistent with water quality standards, require other provisions of this section be met on a transportation facility with an average daily travel of vehicles greater than two thousand five hundred (2,500) and where the initial surface water of the state that the runoff directly enters is any of the following:

i. An outstanding resource water;

ii. An exceptional resource water;

iii. Waters listed in Section 303(d) of the Federal Clean Water Act that are identified as impaired in whole or in part, due to non-point source impacts;

iv. Waters where targeted performance standards are developed under Section NR 151.004, Wis. Adm. Code, to meet water quality standards.

D. General Considerations for On-Site and Off-Site Stormwater Management Measures. The following considerations shall be observed in managing runoff:

1. 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.

2. Emergency overland flow for all stormwater facilities shall be provided to prevent exceeding the safe capacity of downstream drainage facilities and prevent endangerment of downstream property or public safety.

3. BMPs for water quantity management shall utilize the following techniques, in order of preference:

- a. Preservation of the natural features of development sites, including natural storage and infiltration characteristics;
- b. Preservation of existing natural streams, channels, and drainageways;
- c. Minimization of new impervious surfaces;
- d. Conveyance of stormwater in open vegetated channels;
- e. Construction of structures that provide both quantity and quality control, with structures serving multiple sites being preferable to structures serving individual sites; and
- f. Construction of structures that provide only quantity control, with structures serving multiple sites being preferable to structures serving individual sites.

E. Location and Regional Treatment Option.

1. The BMPs may be located on-site or off-site as part of a regional stormwater device, practice, or system within the same watershed.

2. Runoff within a nonnavigable drainageway that flows into a BMP, such as a wet pond, is not required to meet water quality performance standards unless designed to provide treatment.

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

4. The project administrator may approve off-site management measures provided that all of the following conditions are met:

- a. The project administrator determines that the post-construction runoff is covered by a stormwater management system plan that is approved by the Town of Burlington and that contains management requirements consistent with the purpose and intent of this chapter.

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

- i. The facility is in place;
- ii. The facility is designed and adequately sized to provide a level of stormwater control equal to or greater than that, which would be afforded by on-site practices meeting the performance standards of this chapter;
- iii. The facility has a legally obligated entity responsible for its long-term operation and maintenance.

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

F. Alternate Requirements. The project administrator may establish stormwater management requirements more stringent than those set forth in this section if the project administrator determines that an added level of protection is needed to protect sensitive resources. (Ord. dated 3/24/05 (part))

16.14.080 Approval requirements, procedures, and fees.

A. Approval Required. No responsible party may undertake a land-disturbing construction activity subject to this chapter without receiving a post-construction runoff approval letter from the project administrator prior to commencing the proposed activity.

B. Any responsible party desiring a post construction storm water management approval shall submit to the project administrator a storm water management

submittal according to the requirements of this chapter..

1. Unless specifically excepted, a storm water management submittal must contain a stormwater management plan and a maintenance agreement.

2. The stormwater management plan shall be prepared to meet the requirements of Sections 16.14.070 and 16.14.090, the maintenance agreement shall be prepared to meet the requirements of Section 16.14.100, the financial guarantee shall meet the requirements of Section 16.14.110.

C. Review and Approval of Storm water runoff management plan. The project administrator shall review any stormwater management plan submittal, as follows:

1. Within twenty (20) business days of the receipt of a complete submittal, including all items as required by subsection B of this section, the project administrator shall inform the applicant whether the plan and maintenance agreement are approved or disapproved based on the requirements of this chapter.

2. If the stormwater plan and maintenance agreement are approved, the project administrator shall issue a storm water runoff management approval letter.

3. If the stormwater plan or maintenance agreement is disapproved, the project administrator shall detail in writing the reasons for disapproval.

4. The project administrator may request additional information from the applicant. If additional information is submitted, the project administrator shall have fifteen (15) business days from the date the additional information is received to inform the applicant that the plan and maintenance agreement are either approved or disapproved.

D. Storm Water Approvals. All approvals issued under this chapter shall be subject to the following conditions, and holders of approvals issued under this

chapter shall be deemed to have accepted these conditions. The project administrator may suspend or revoke an approval for violation of an approval condition, following written notification of the responsible party. An action by the project administrator to suspend or revoke this approval may be appealed in accordance with Section 16.14.140 of this chapter.

1. The responsible party shall design and install all structural or identify nonstructural stormwater management measures, or both, in accordance with the approved stormwater management plan and this approval.

2. The responsible party shall notify the project administrator at least three business days before commencing any work in conjunction with the stormwater management plan, and within three business days upon completion of the stormwater management practices. If required as a special condition under subsection E of this section, the responsible party shall make additional notification according to a schedule set forth by the project administrator so that practice installations can be inspected during construction.

3. Practice installations required as part of this chapter shall be certified "as built." Completed stormwater management practices must pass a final inspection by the project administrator or its designee to determine if they are in accordance with the approved stormwater management plan and ordinance. The project administrator or its designee shall notify the responsible party in writing of any changes required in such practices to bring them into compliance with the conditions of this permit.

4. The responsible party shall maintain all stormwater management practices until the responsibility is transferred to the Town Board, or subsequent private owners as specified in the approved maintenance agreement.

5. The responsible party authorizes the project administrator to perform any work or operations necessary to bring stormwater management measures into conformance with the approved stormwater management plan, and consents to a special assessment or charge against the property as authorized under Subchapter VII of Chapter 66, Wis. Stats., or to charging such costs against the financial guarantee posted under Section 16.14.110 of this chapter.

6. If so directed by the project administrator, the responsible party shall repair at the responsible party's own expense all damage to adjoining municipal facilities and drainageways caused by runoff, where such damage is caused by activities that are not in compliance with the approved stormwater management plan.

7. The responsible party shall permit property access to the project administrator or its designee for the purpose of inspecting the property for compliance with the approved stormwater management plan and this approval.

8. Where site development or redevelopment involves changes in direction, increases in the peak rate or the total volume of runoff, the project administrator may require the responsible party to make appropriate legal arrangements with affected property owners concerning the prevention of endangerment to property or public safety.

E. Approval Conditions. Approvals issued under this subsection may include reasonable and necessary conditions established by project administrator in addition to the requirements needed to meet the performance standards in Section 16.14.070 or a financial guarantee as provided for in Section 16.14.110 of this chapter.

F. Approval Duration. Approvals issued under this section shall be valid from the date of issuance through the date the project

administrator notifies the responsible party that all stormwater management practices have passed the final inspection required under subsection (D)(3) of this section. (Ord. dated 3/24/05 (part))

16.14.090 Stormwater management plan.

A. Plan Requirements. The stormwater management plan required under Section 16.14.080(B) of this chapter shall contain at a minimum the following information:

1. 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 stormwater management practices; and person(s) responsible for maintenance of stormwater management practices prior to the transfer, if any, of maintenance responsibility to another party.

2. 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.

3. Pre-development site conditions, including:

a. One or more site maps at a scale of not less than one inch equals one hundred (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 two 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 stormwater 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 regional flood (the one percent probability storm event) floodplain; location of wells and wellhead protection areas covering the project area and delineated pursuant to Section NR 811.16, Wis. Adm. Code.

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

4. Post-development site conditions, including:

a. 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.

b. Explanation of any restrictions on stormwater management measures in the development area imposed by wellhead protection plans and ordinances.

c. One or more site maps at a scale of not less than one inch equals one hundred (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 two 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 stormwater conveyance sections; location and type of all stormwater 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 drainageway; 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.

d. 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 geographic areas used in making the calculations shall be clearly cross-referenced to the required map(s).

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

5. A description and installation schedule for the stormwater management practices needed to meet the performance standards in Section 16.14.070 of this chapter.

6. A maintenance plan developed for the life of each stormwater management practice including the required maintenance activities and maintenance activity schedule.

7. Cost estimates for the construction, operation, and maintenance of each stormwater management practice.

8. Other information requested in writing by the project administrator to determine compliance of the proposed stormwater management measures with the provisions of this chapter.

9. 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 chapter.

B. Alternate Requirements. The project administrator may prescribe alternative submittal requirements for applicants seeking an exemption to on-site stormwater management performance standards under Section 16.14.070(E) of this chapter. (Ord. dated 3/24/05 (part))

16.14.100 Maintenance agreement.

A. Maintenance Agreement Required. The maintenance agreement required under Section 16.14.080(B) of this chapter for stormwater management practices shall be an agreement between the town of Burlington and the responsible party to provide for maintenance of stormwater 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 stormwater management practices.

B. Agreement Provisions. The maintenance agreement shall contain the following information and provisions and be consistent with the maintenance plan required by Section 16.14.090(A)(6) of this chapter:

1. Identification of the stormwater facilities and designation of the drainage area served by the facilities;

2. A schedule for regular maintenance of each aspect of the stormwater management system consistent with the stormwater management plan required under Section 16.14.080(B) of this chapter;

3. Identification of the responsible party(s), organization, or city, county, town or village responsible for long-term maintenance of the stormwater management practices identified in the stormwater

management plan required under Section 16.14.080(B) of this chapter;

4. Requirement that the responsible party(s), organization, or city, county, town or village shall maintain stormwater management practices in accordance with the schedule included in subsection (B)(2) of this section;

5. Authorization for the project administrator, its designee and Racine County to access the property to conduct inspections of stormwater management practices as necessary to ascertain that the practices are being maintained and operated in accordance with the agreement;

6. Agreement that the party designated under subsection (B)(3) of this section, as responsible for long-term maintenance of the stormwater management practices, shall be notified by the project administrator of maintenance problems which require correction. The specified corrective actions shall be undertaken within a reasonable time frame as set by the project administrator;

7. Authorization of the project administrator to perform the corrected actions identified in the inspection report if the responsible party designated under subsection (B)(3) of this section does not make the required corrections in the specified time period. The project administrator shall enter the amount due on the tax rolls and collect the money as a special charge against the property pursuant to Subchapter VII of Chapter 66, Wis. Stats. (Ord. dated 3/24/05 (part))

16.14.110 Financial guarantee.

A. Establishment of the Guarantee. The project administrator may require the submittal of a financial guarantee, the form and type of which shall be acceptable to the project administrator. The financial guarantee shall be in an amount determined by the project administrator to be the estimated cost of construction and the

estimated cost of maintenance of the stormwater management practices during the period which the designated party in the maintenance agreement has maintenance responsibility. The financial guarantee shall give the project administrator the authorization to use the funds to complete the stormwater management practices if the responsible party defaults or does not properly implement the approved stormwater management plan, upon written notice to the responsible party by the project administrator that the requirements of this chapter have not been met.

B. Conditions for Release. Conditions for the release of the financial guarantee are as follows:

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

2. The project administrator shall release the portion of the financial guarantee established under this section to assure maintenance of stormwater practices, less any costs incurred by the town of Burlington, at such time that the responsibility for practice maintenance is passed on to another entity via an approved maintenance agreement. (Ord. dated 3/24/05 (part))

16.14.120 Reserved

16.14.130 Enforcement.

A. Any land-disturbing construction activity or post-construction runoff initiated after the effective date of the ordinance codified in this chapter by any person

subject to the ordinance provisions shall be deemed a violation unless conducted in accordance with the requirements of this chapter.

B. The project administrator shall notify the responsible party of any noncomplying land-disturbing construction activity or post-construction runoff. The notice shall describe the nature of the violation, remedial actions needed, a schedule for remedial action, or additional enforcement action which may be taken. Any technique that effectively provides actual and verifiable notice may be used.

C. If the violations are likely to result in damage to properties, public facilities, or waters of the state, the project administrator may enter the land and take corrective actions necessary to prevent such damage. The costs incurred by the project administrator plus interest and legal costs shall be paid by the responsible party.

D. If the project administrator determines that any person is in violation of this chapter or a stormwater permit, the authority may issue a notice of violation, a stop work order, a cease and desist order, or revoke the permit, or refer the noncompliance to the Town Attorney for civil enforcement, penalties, injunctive orders or other appropriate relief.

E. Every violation of this chapter is a public nuisance. Any person who violates this chapter shall be subject to a forfeiture of not less than one hundred dollars (\$100.00) or more than one thousand dollars (\$1,000.00) per offense, together with the costs of prosecution. Each day each violation continues shall constitute a separate offense.

F. When the project administrator determines that the holder of a permit issued pursuant to this chapter has failed to follow practices, or has failed to comply with schedules in a stormwater management plan, the project administrator or a party

designated by the project administrator may enter upon the land and perform the work or other operations necessary to bring the condition of such lands into conformance with requirements of the approved plan. The project administrator shall keep a detailed accounting of the costs and expenses of performing this work. These costs and expenses shall be deducted from any financial security posted pursuant to Section 16.14.110 of this chapter. Where such a security has not been established, or where such a security is insufficient to cover these costs, the costs and expenses shall be entered on the tax roll as a special charge against the property and collected with any other taxes levied thereon for the year in which the work is completed. (Ord. dated 3/24/05 (part))

16.14.140 Appeals.

A. Town Board. The Town Board shall hear and decide appeals where it is alleged that there is error in any order, decision or determination made by the project administrator in administering stormwater quality or quantity duties arising from development. The board may authorize variances that are not contrary to the public interest, and where owing to special conditions unique to the property, a literal enforcement would be an unnecessary hardship.

B. Who May Appeal. Appeals to the Town Board may be taken by any aggrieved person or by an officer, department, board, or bureau of the town of Burlington affected by any decision of the project administrator. (Ord. dated 3/24/05 (part))