

NEWSC MODEL POST-CONSTRUCTION STORM WATER MANAGEMENT ZONING ORDINANCE

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MODEL POST-CONSTRUCTION STORM WATER MANAGEMENT ZONING ORDINANCE

Note to users: *This model ordinance includes the use of brackets [] around phrases that are to be filled in by the municipality. For example, the phrase [administering authority] is frequently used. Where the municipality chooses to have the ordinance administered by the City Engineer, the phrase [administering authority] should be replaced by "City Engineer". In a few places, the model ordinance includes phrases in brackets that are underlined [_____]. In these cases, one of the underlined phrases should be selected verbatim. For example, if the phrase includes statutory citations, several underlined choices may be given such as [59.693, 60.627, 61.354, or 62.234]. A county would replace the phrase in brackets with "59.693", since that is the appropriate citation for the county to use.*

AN ORDINANCE TO CREATE CHAPTER [NUMBER] OF THE [CODE OR ORDINANCE] OF THE [NAME OF MUNICIPALITY] RELATING TO THE CONTROL OF POST-CONSTRUCTION RUNOFF

FOREWORD.

The intent of this ordinance is to reduce the amount of post-construction storm water and associated pollutants reaching waters of the state. Use of this ordinance by municipalities will foster the consistent statewide application of post-construction performance standards for new development and redevelopment contained in subchapters III and IV of chapter NR 151, Wis. Adm. Code.

The [governing body] of the [name of municipality] does hereby ordain that Chapter [number] of the [code or ordinance] of the [name of municipality] is created to read as follows:

[CHAPTER]

POST-CONSTRUCTION STORM WATER MANAGEMENT

S.01 AUTHORITY.

- (1) This ordinance is adopted by the [governing body] under the authority granted by s. [59.693, for counties; 60.627, for towns; 61.354, for villages; or 62.234, for cities], Wis. Stats. This ordinance supersedes all provisions of an ordinance previously enacted under s. [59.69, 60.62, 61.35, or 62.23], Wis. Stats., that relate to storm water management regulations. Except as otherwise specified in s. [59.693, 60.627, 61.354, or 62.234], Wis. Stats., s. [59.69, 60.62, 61.35, or 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 [governing body] hereby designates the [administering authority] to administer and enforce the provisions of this ordinance.
- (4) The requirements of this ordinance do not pre-empt 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 performance standards promulgated in rules by the Wisconsin Department of Natural Resources under s. NR 151.004, Wis. Adm. Code.

S.02 FINDINGS OF FACT.

The [governing body] 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.
- (7) Undermine floodplain management efforts by increasing the incidence and levels of flooding.

S.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 [governing body] 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 [governing body] 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 [governing body], it is the intent of this ordinance that the approved plan be used to identify post-construction management measures acceptable for the community.

S.04 APPLICABILITY AND JURISDICTION.

(1) **APPLICABILITY.**

- (a) Where not otherwise limited by law, this ordinance applies to all post-construction sites, unless the site is otherwise exempt under S.04(1)(b).
- (b) A post-construction site that meets any of the following criteria is exempt from the requirements of this ordinance.
 - 1. 1- and 2-family residential dwellings that are not part of a larger common plan of development or sale and that result in less than 1 acre of disturbance.
 - 2. Non-point discharges from agricultural activity areas.
 - 3. Non-point discharges from silviculture activities.
 - 4. Mill and crush operations.
- (c) Notwithstanding the applicability requirements in S.04(1)(a), this ordinance applies to post-construction sites of any size that, in the opinion of the [administering authority], is likely to result in runoff that exceeds the safe capacity of the existing drainage facilities or receiving body of water, that causes undue channel erosion, that increases water pollution by scouring or the transportation of particulate matter or that endangers property or public safety.

(2) **JURISDICTION.**

This ordinance applies to post-construction sites within the boundaries and jurisdiction of the [name of municipality].

or

[post-construction sites within the boundaries and jurisdiction of the [name of municipality]], as well as the extraterritorial division of land subject to an ordinance enacted pursuant to s. 236.45(2) and (3) Wis. Stats.]

or

[post-construction sites within the boundaries and jurisdiction of the [name of municipality]], as well as all lands located within the extraterritorial plat approval jurisdiction of the [name of municipality], even if plat approval is not involved.]

Note to users: These options differ in the amount of land area covered by this ordinance and may have ramifications for enforcement authority. For counties, the first option will be the only option since counties do not have extraterritorial authority. Under s. 59.693(10), Wis. Stats., if a county storm water management ordinance exists at the time of annexation, then the municipal ordinance must be at least as restrictive as the county ordinance.

(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.

Note to users: The Wisconsin Department of Transportation (WisDOT) has entered into a memorandum of understanding with the Wisconsin Department of Natural Resources that satisfies s. 281.33 (2), Wis. Stats., such that activities directed and supervised by WisDOT are exempt from this model ordinance.

S.05 DEFINITIONS.

- (1) "Adequate sod, or self-sustaining vegetative cover" means maintenance of sufficient vegetation types and densities such that the physical integrity of the streambank or lakeshore is preserved. Self-sustaining vegetative cover includes grasses, forbs, sedges and duff layers of fallen leaves and woody debris.
- (2) "Administering authority" means a governmental employee, or a regional planning commission empowered under s. [59.693; 60.627; 61.354; 62.234], Wis. Stats., that is designated by the [governing body] to administer this ordinance.
- (3) "Agricultural activity area" means the part of the farm where there is planting, growing, cultivating and harvesting of crops for human or livestock consumption and pasturing or outside yarding of livestock, including sod farms and silviculture. Practices in this area may include waterways, drainage ditches, diversions, terraces, farm lanes, excavation, filling and similar practices. The agricultural activity area does not include the agricultural production area.
- (4) "Agricultural production area" means the part of the farm where there is concentrated production activity or impervious surfaces. Agricultural production areas include buildings, driveways, parking areas, feed storage structures, manure storage structures, and other impervious surfaces. The agricultural production area does not include the agricultural activity area.
- (5) "Average annual rainfall" means a calendar year of precipitation, excluding snow, which is considered typical. For purposes of this ordinance, average annual rainfall means measured precipitation in [Green Bay], Wisconsin between [March 29 and November 25, 1969].

- (6) "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.
- (7) "Business day" means a day the office of the [administering authority] is routinely and customarily open for business.
- (8) "Cease and desist order" means a court-issued order to halt land disturbing construction activity that is being conducted without the required permit.
- (9) "Combined sewer system" means a system for conveying both sanitary sewage and storm water runoff.
- (10) "Common plan of development or sale" means a development or sale where multiple separate and distinct land disturbing construction activities may be taking place at different times on different schedules but under one plan. A common plan of development or sale includes, but is not limited to, subdivision plats, certified survey maps, and other developments.
- (11) "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.
- (12) "Construction site" means an area upon which one or more land disturbing construction activities occur, including areas that are part of a larger common plan of development or sale.
- (13) "Design storm" means a hypothetical discrete rainstorm characterized by a specific duration, temporal distribution, rainfall intensity, return frequency, and total depth of rainfall. The ~~TR-55, Type~~ Atlas 14 MSE4 24-hour design storms for [name of municipality] are: 1-year, [2.2] inches; 2-year, [2.5] inches; 5-year, [3.3] inches; 10-year, [3.8] inches; 25-year, [4.4] inches; and 100-year, [5.3] inches.
- (14) "Development" means residential, commercial, industrial, institutional, or other land uses and associated roads.
- (15) "Direct conduits to groundwater" means wells, sinkholes, swallets, fractured bedrock at the surface, sand or gravel surficial deposits, mine shafts, nonmetallic mines, tile inlets discharging to groundwater, quarries or depressional groundwater recharge areas over shallow fractured bedrock.
- (16) "Division of land" means the creation from one or more parcels or building sites of additional parcels or building sites where such creation occurs at one time or through the successive partition within a 5 year period.
- (17) "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.
- (18) "Erosion" means the process by which the land's surface is worn away by the action of wind, water, ice or gravity.
- (19) "Exceptional resource waters" means waters listed in s. NR 102.11, Wis. Adm. Code.
- (20) "Existing development" means development in existence on October 1, 2004 or development for which a storm water permit in accordance with subch. III of Ch. NR 216, Wis. Adm. Code, was received on or before October 1, 2004.
- (21) "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.
- (22) "Filtering layer" means soil that has at least a 3-foot deep layer with at least 20 percent fines; or at least a 5-foot deep layer with at least 10 percent fines; or an engineered soil with an equivalent level of protection as determined by the [administering authority] for the site.
- (23) "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

Commented [1]: Do we elaborate with our cumulative area threshold in this definition?

Commented [2]: NRCS Atlas 14 MSE4 will be the distribution for all NEWSC communities but, specific rainfall depth will still be slightly different.

Commented [3]: Update with correct distribution tool when decision is made by DNR. May need to add a definition of ATLAS 14

Commented [4]: Added to be consistent with GCSM

a density of at least 70% of the cover, for the unpaved areas and areas not covered by permanent structures, or that employ equivalent permanent stabilization measures.

- (24) "Financial guarantee" means a performance bond, maintenance bond, surety bond, irrevocable letter of credit, or similar guarantees submitted to the [administering authority] by the responsible party to assure that requirements of the ordinance are carried out in compliance with the storm water management plan.
- (25) "Governing body" means town board of supervisors, county board of supervisors, city council, village board of trustees or village council.
- (26) "Groundwater" means any of the waters of the state, as defined in s.281.01 (18), stats. occurring in a saturated subsurface geological formation of rock or soil.
- (27) "High Groundwater Level" or "Subsurface Saturation" means the higher of either the elevation to which the soil is saturated as observed as a free water surface in an unlined hole, or the elevation to which the soil has been seasonally or periodically saturated as indicated by soil color patterns throughout the soil profile. As defined in Technical Standard 1002, Site Evaluation for Stormwater Infiltration.
- (28) "Highway" has the meaning given in s. 340.01 (22), Wis. Stats.
- (29) "Highway reconditioning" has the meaning given in s. 84.013 (1)(b), Wis. Stats.
- (30) "Highway reconstruction" has the meaning given in s. 84.013(1)(c), Wis. Stats.
- (31) "Highway resurfacing" has the meaning given in s. 84.013(1)(d), Wis. Stats.
- (32) "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. Rooftops, sidewalks, driveways, parking lots and streets are examples of surfaces that typically are impervious. Gravel surfaces are considered impervious, unless specifically designed to encourage infiltration.
- (33) "Impervious surface disturbance" means any land disturbing construction activity in which any new impervious surfaces are created or existing impervious surfaces are redeveloped.
- (34) "In-fill" means an undeveloped area of land or new development area 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 storm water permit in accordance with subch. III of ch. NR 216, Wis. Adm. Code, was required to be submitted after October 1, 2004 to the Wisconsin Department of Natural Resources or Wisconsin Department of Safety and Professional Services (formerly Department of Commerce).
- (35) "Infiltration" means the entry and movement of precipitation or runoff into or through soil.
- (36) "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.
- (37) "Land disturbing construction activity" or "disturbance" 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 pollutants into the municipal separate storm sewer or waters of the state. Land disturbing construction activity includes clearing and grubbing, demolition, excavating, pit trench dewatering, filling and grading activities, and soil stockpiling.
- (38) "Maintenance agreement" means a legal document that provides for long-term maintenance of storm water management and best management practices.
- (39) "MEP" or "maximum extent practicable" means the highest level of performance that is achievable but is not equivalent to a performance standard identified within this ordinance. Maximum extent

Commented [5]: High GRoundwater definition was updated. Further details - provided by Pat K. will be added to the reference guide.

practicable applies when the permit applicant demonstrates to the [administering authority]'s satisfaction that a performance standard is not achievable and that a lower level of performance is appropriate. In making the assertion that a performance standard is not achievable and that a level of performance different from the performance standard is the maximum extent practicable, the permit applicant shall take into account the best available technology, cost effectiveness, geographic features, and other competing interests such as protection of public safety and welfare, protection of endangered and threatened resources, and preservation of historic properties.

- (37) "Minor reconstruction of a highway" means reconstruction of a highway that is limited to 1.5 miles in continuous or aggregate total length of realignment and that does not exceed 100 feet in width of roadbed widening, and that does not include replacement of a vegetated drainage system with a non-vegetated drainage system except where necessary to convey runoff under a highway or private road or driveway.
- (38) "Navigable waters" and "navigable waterway" has the meaning given in s. 30.01(4m), Wis. Stats.
- (39) "New development" means that portion of a post-construction site where impervious surfaces are being created or expanded. Any disturbance where the amount of impervious area for the post-development condition is greater than the pre-development condition is classified as new development. For purposes of this ordinance, a post-construction site is classified as new development, redevelopment, routine maintenance, or some combination of these three classifications as appropriate.
- (40) "Off-site" means located outside the property boundary described in the permit application.
- (41) "On-site" means located within the property boundary described in the permit application.
- (42) "Ordinary high-water mark" has the meaning given in s. NR 115.03(6), Wis. Adm. Code.
- (43) "Outstanding resource waters" means waters listed in s. NR 102.10, Wis. Adm. Code.
- (44) "Percent fines" means the percentage of a given sample of soil, which passes through a # 200 sieve.

Note to users: Percent fines can be determined using the "American Society for Testing and Materials", volume 04.02, "Test Method C117-95 Standard Test Method for Materials Finer than 75- μ m (No. 200) Sieve in Material Aggregates by Washing". Copies can be obtained by contacting the American society for testing and materials, 100 Barr Harbor Drive, Conshohocken, PA 19428-2959, or phone 610-832-9585, or online at: "<http://www.astm.org/>".

- (45) "Performance standard" means a narrative or measurable number specifying the minimum acceptable outcome for a facility or practice.
- (46) "Permit" means a written authorization made by the [administering authority] to the applicant to conduct land disturbing construction activity or to discharge post-construction runoff to waters of the state.
- (47) "Permit administration fee" means a sum of money paid to the [administering authority] by the permit applicant for the purpose of recouping the expenses incurred by the authority in administering the permit.
- (48) "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.
- (49) "Pollutant" has the meaning given in s. 283.01(13), Wis. Stats.
- (50) "Pollution" has the meaning given in s. 281.01(10), Wis. Stats.

- (51) "Post-construction site" means a construction site following the completion of land disturbing construction activity and final site stabilization.
- (52) "Post-development" means the extent and distribution of land cover types present after the completion of land disturbing construction activity and final site stabilization.
- (53) "Pre-development" 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.
- (54) "Preventive action limit" has the meaning given in s. NR 140.05(17), Wis. Adm. Code.
- (55) "Redevelopment" means that portion of a post-construction site where impervious surfaces are being reconstructed, replaced, or reconfigured. Any disturbance where the amount of impervious area for the post-development condition is equal to or less than the pre-development condition is classified as redevelopment. For purposes of this ordinance, a post-construction site is classified as new development, redevelopment, routine maintenance, or some combination of these three classifications as appropriate.
- (56) "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.
- (57) "Routine maintenance" means that portion of a post-construction site where pre-development impervious surfaces are being maintained to preserve the original line and grade, hydraulic capacity, drainage pattern, configuration, or purpose of the facility. Remodeling of buildings and resurfacing of parking lots, streets, driveways, and sidewalks are examples of routine maintenance, provided the lower ½ of the impervious surface's granular base is not disturbed. The disturbance shall be classified as redevelopment if the lower ½ of the granular base associated with the pre-development impervious surface is disturbed or if the soil located beneath the impervious surface is exposed. For purposes of this ordinance, a post-construction site is classified as new development, redevelopment, routine maintenance, or some combination of these three classifications as appropriate.
- (58) "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.
- (59) "Sediment" means settleable solid material that is transported by runoff, suspended within runoff or deposited by runoff away from its original location.
- (60) "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 part of a publicly owned wastewater treatment works that provides secondary or more stringent treatment.
 - (d) Discharges directly or indirectly to waters of the state.
- (61) "Silviculture activities" means activities including tree nursery operations, tree harvesting operations, reforestation, tree thinning, prescribed burning, and pest and fire control. Clearing and grubbing of an area of a construction site is not a silviculture activity.
- (62) "Site" means the entire area included in the legal description of the land on which the land disturbing construction activity occurred.
- (63) "Stop work order" means an order issued by the [administering authority] which requires that all construction activity on the site be stopped.

- (64) "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.
- (65) "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.
- (66) "Targeted performance standard" means a performance standard that will apply in a specific area, where additional practices beyond those contained in this ordinance, are necessary to meet water quality standards. A total maximum daily load is an example of a targeted performance standard.
- (67) "Technical standard" means a document that specifies design, predicted performance and operation and maintenance specifications for a material, device or method.
- (68) "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.
- (69) "Total maximum daily load" or "TMDL" means the amount of pollutants specified as a function of one or more water quality parameters, that can be discharged per day into a water quality limited segment and still ensure attainment of the applicable water quality standard.
- (70) "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, which is incorporated by reference for this ordinance.
- (71) "Transportation facility" means a public street, a public road, a public highway, a railroad, a public mass transit facility, a public-use airport, a public trail, or any other public work for transportation purposes such as harbor improvements under s. 85.095(1)(b), Wis. Stats. "Transportation facility" does not include building sites for the construction of public buildings and buildings that are places of employment that are regulated by the Wisconsin Department of Natural Resources pursuant to s. 281.33, Wis. Stats.
- (72) "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", which is incorporated by reference for this ordinance. The Type II curve is applicable to all of Wisconsin and represents the most intense storm pattern.
- (73) "Waters of the state" has the meaning given in s. 283.01 (20), Wis. Stats.

S.06 TECHNICAL STANDARDS.

The following methods shall be used in designing and maintaining the water quality, peak discharge, infiltration, protective area, fueling / vehicle maintenance, and swale treatment 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) Technical standards and guidance identified within the [name of municipality] Storm Water Reference Guide.
- (3) 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 [administering authority].
- (4) In this ordinance, the following year(s) and location(s) [has or have] been selected as average annual rainfall(s): Green Bay, 1969 (Mar. 29-Nov. 25).

S. 07 PERFORMANCE STANDARDS.

- (1) RESPONSIBLE PARTY. The responsible party shall develop and implement a post-construction stormwater management plan that incorporates the requirements of this section.
- (2) PLAN. A written stormwater management plan shall be developed and implemented by the responsible party in accordance with S.09. The stormwater management plan shall meet all of the applicable requirements contained in this ordinance.
- (3) REQUIREMENTS. The stormwater management plan shall meet the following minimum requirements to the maximum extent practicable:
 - (a) WATER QUALITY. BMPs shall be designed, installed and maintained to control pollutants carried in runoff from the post-construction site. The design shall be based on the average annual rainfall, as compared to no runoff management controls.
 - 1. For post-construction sites with 1 acre[or more of land disturbance, an L the following is required:
 - a. Except as provided in S.07(3)(a)1.b., a pollutant reduction is required as follows:

Watershed	Total Suspended Solids (TSS) & Total Phosphorus (TP) Reduction					
	New Development		Redevelopment		Routine Maintenance	
	TSS	TP	TSS	TP	TSS	TP
[watershed name]	80%	[60%]	40%	[30%]	40%	[30%]
[watershed name TMDL]	[80%]	[60%]	[40%]	[30%]	[40%]	[30%]

Note to users: The above table allows the municipal entity to specify a unique TSS and TP reduction for each watershed located within its jurisdiction. If your municipality is not located within a TMDL watershed, the above table can be simplified by deleting the first column, bottom row, and TP percent reductions as appropriate.

- b. A pollutant reduction is not required for routine maintenance areas that are part of a post-construction site with less than 5 acres of disturbance..
- 2. For post-construction sites with less than 1 acre of disturbance, not in a TMDL watershed, reduce the pollutant load using BMPs from the [name of municipality] Storm Water Reference Guide or other practices approved by [administering authority].
- 3. Sites, including common plan of development sites, with accumulative addition of 20,000 square feet or greater of impervious surfaces after [Insert original ordinance adoption date] are required to satisfy the performance standards within **S.07(3)(a)1.a. and b.**
- 4. The amount of pollutant control previously required for the site shall not be reduced as a result of the proposed development or disturbance.
- 5. When designing BMPs, runoff draining to the BMP from offsite areas shall be taken into account in determining the treatment efficiency of the practice. Any impact on the BMP efficiency shall be compensated for by increasing the size of

the BMP accordingly. The pollutant load reduction provided by the BMP for an offsite area shall not be used to satisfy the required onsite pollutant load reduction, unless otherwise approved by the [administering authority] in accordance with S.07(5).

6. If the design cannot meet the water quality performance standards of S.07(3)(a)1. through 5., the storm water management plan shall include a written, site specific explanation of why the water quality performance standard cannot be met and why the pollutant load will be reduced only to the maximum extent practicable. Except as provided in S.07(6), the [administering authority] may not require any person to exceed the applicable water quality performance standard to meet the requirements of maximum extent practicable.
7. *Exemptions.* The water quality performance standards do not apply to the following:
 - a. For municipalities that are regulated under subch. I of NR 216, Wis. Adm. Code, the water quality performance standard for a highway reconstruction project first applies January 1, 2017.

Note to users: Pollutant loading models such as SLAMM, P8 or equivalent methodology may be used to evaluate the efficiency of the design in reducing pollutant loads.

(b) **PEAK DISCHARGE.** BMPs shall be designed, installed and maintained to control peak discharges from the post-construction site.

1. For post-construction sites with one or more of the following:
 - 20,000 square feet or more of impervious surface disturbance and/or creation
 - post construction sites with 1 acre or more of land disturbance
 the following is required:
 - a. The peak post-development discharge rate shall not exceed the peak pre-development discharge rate for the 1-year, 2-year, 10-year, and 100-year, 24-hour design storms. These peak discharge requirements apply to new development and redevelopment areas. No peak discharge control is required for routine maintenance areas, unless runoff from the routine maintenance area discharges into a proposed peak flow control facility.
 - b. TR-55 methodology shall be used for peak discharge calculations, unless the administering authority approves an equivalent methodology. The meaning of "hydrologic soil group" and "runoff curve number" are as determined in TR-55. Unless the site is currently woodland, peak pre-development discharge rates shall be determined using the following runoff curve numbers for a "meadow" vegetative cover:

Commented [6]: May want to define in the reference guide to use current or 2014

Commented [7]: Definition is added into the definition section - Brent will finalize definition

Maximum Pre-Development Runoff Curve Numbers				
Vegetative Cover	Hydrologic Soil Group			
	A	B	C	D
Meadow	30	58	71	78
Woodland	30	55	70	77

2. For post-construction sites with less than 20,000 square feet of impervious surface disturbance, prepare a plan that shows how the peak post-development discharge rates are reduced using BMPs from the [name of municipality] Storm Water Reference Guide. If 90% of the proposed impervious discharges to BMPs; these sites are not required to satisfy a numeric performance standard.
3. Sites with a cumulative addition of 20,000 square feet or greater of impervious surfaces after [Insert original ordinance adoption date] are required to satisfy the performance standards within S.07(3)(b)1.a. and b.
4. The amount of peak discharge control previously required for the site shall not be reduced as a result of the proposed development or disturbance.
5. When designing BMPs, runoff draining to the BMP from offsite areas shall be taken into account in determining the performance of the practice. Any impact on the BMP performance shall be compensated for by increasing the size of the BMP accordingly. The peak discharge reduction provided by the BMP for an offsite area shall not be used to satisfy the required onsite peak discharge reduction, unless otherwise approved by the [administering authority] in accordance with S.07(5).
6. An adequate outfall shall be provided for each point of concentrated discharge from the post-construction site and shall:
 - a. Consist of non-erosive discharge velocities and reasonable downstream conveyance.
 - b. Discharge to the municipal separate storm sewer system, waters of the state, or appropriate drainage easement. For sites not able to meet this requirement, see the [name of municipality] Stormwater Reference Guide for how to diffuse the outfall within the site boundary.

Commented [8]: Jeremy will explore putting this content into a table and a map.

Commented [9]: Suggestions of BMPs may be needed for reference guide

Note to users: The following sections, 7-10 were created to address concerns of some NEWSC municipalities and are not required to meet state uniform standards.

7. All new development sites shall have a minimum 1 foot of vertical separation between the lowest floor surface and the high ground water level and/or bedrock as defined in S.05 and described in the Stormwater Reference Guide.
 Sites not able to meet this separation shall quantify the anticipated amount of groundwater that will be discharged to the surface. System-wide management of the proposed groundwater discharge shall be required. All management practices shall be approved by the [administering authority] and indicated on the drainage plan.
 A post-construction site that is near an area indicated on the Regional bedrock map] as having a depth to carbonate bedrock of 50 feet or less is required to perform field verification as outlined in Wisconsin Department of Natural Resources (WDNR) Technical Standard 1002. The stormwater plan shall discuss the risk to BMP failure, etc. Remediation or mitigation strategies shall be presented as part of the stormwater plan.
8. Direct conduits to groundwater, as defined in S.05, shall be identified. Direct conduits to groundwater requires a unique approach to stormwater design. If the

Commented [10]: The map could be included in the reference guide.

Commented [11]: Could a checklist be developed for DNR 1002 to ensure completion of Step A AND Step B?
 Everyone is required to complete step A & B but this is not always done.
 Jeremy & Brent will relook at this section. Caution on using water quality as a reason – without a TMDL not all communities can be above state standards. Ground water contamination may be a reason – infiltration reduction may be another way

proposed site is located within the watershed of a direct conduit to groundwater, an analysis of practical measures to avoid direct discharge shall be provided. Additional guidance may be found within the [Name of Municipality] Stormwater Reference Guide.

Commented [12]: Review language

9. Any site subject to [Name of Municipality]'s flood prone area map or within a TMDL watershed shall meet the peak discharge requirements established in the [Name of Municipality]'s Reference Guide.

10. Agricultural Production Areas shall meet the intent of this Ordinance by following the BMPs listed in the [Name of Municipality] reference guide.

Commented [13]: Question for DNR – are agricultural production areas exempt? Brent will follow up.

11. *Exemptions.* The peak discharge performance standards do not apply to the following:

- a. A transportation facility where the discharge is directly into a lake over 5,000 acres or a stream or river segment draining more than 500 square miles.
- b. Except as provided under S.07(3)(b)4. to 6., a highway reconstruction site.
- c. Except as provided under S.07(3)(b)4. to 6., a transportation facility that is part of a redevelopment project

(c) **INFILTRATION.** BMPs shall be designed, installed, and maintained to infiltrate runoff from the post-construction site, except as provided in S.07(3)(c)9. through 13.

1. For post-construction sites with 20,000 square feet or more of impervious surface disturbance and post-construction sites with 1 acre or more of land disturbance, the following is required:

- a. *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.
- b. *Moderate imperviousness.* For development with more than 40 percent and 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 shall be at least 75 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 2 percent of the post-construction site is required as an effective infiltration area.
- c. *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 shall be at least 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 2 percent of the post-construction site is required as an effective infiltration area.

2. Pre-development condition shall assume "good hydrologic conditions" for appropriate land covers as identified in TR-55 or an equivalent methodology

approved by the administering authority. The meaning of "hydrologic soil group" and "runoff curve number" are as determined in TR-55. The actual pre-development vegetative cover and the following pre-development runoff curve numbers shall be used:

Maximum Pre-Development Runoff Curve Numbers				
Vegetative Cover	Hydrologic Soil Group			
	A	B	C	D
Woodland	30	55	70	77
Grassland	39	61	71	78
Cropland	55	69	78	83

Note to users: A model that calculates runoff volume, such as SLAMM, P8, or an equivalent methodology may be used.

3. For post-construction sites with less than 20,000 square feet of new impervious surfaces, infiltrate runoff volume using BMPs from the [Name of Municipality] Storm Water Reference Guide. These sites are not required to satisfy a numeric performance standard.
4. Sites with a cumulative addition of 20,000 square feet or greater of impervious surfaces after [Insert original ordinance adoption date] are required to satisfy the performance standards within S.07(3)(c)1. and 2.
5. The amount of infiltration previously required for the site shall not be reduced as a result of the proposed development or disturbance.
6. Agricultural production areas shall infiltrate runoff volume using BMPs from the [Name of Municipality] Storm Water Reference guide
7. When designing BMPs, runoff draining to the BMP from offsite areas shall be taken into account in determining the performance of the practice. Any impact on the BMP performance shall be compensated for by increasing the size of the BMP accordingly. The runoff volume reduction provided by the BMP for an offsite area shall not be used to satisfy the required onsite runoff volume reduction, unless otherwise approved by the [administering authority] in accordance with S.07(5).
8. *Pretreatment.* Before infiltrating runoff, pretreatment shall be required for parking lot runoff and for runoff from 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 S.07(3)(c)15. Pretreatment options may include, but are not limited to, oil/grease separation, sedimentation, biofiltration, filtration, swales or filter strips.
9. *Source area prohibitions.* Runoff from the following areas may not be infiltrated and may not qualify as contributing to meeting the requirements of S.07(3)(c) unless demonstrated to meet the conditions of S.07(3)(c)15.
 - a. Areas associated with a tier 1 industrial facility identified in s. NR 216.21(2)(a), Wis. Adm. Code, including storage, loading, and parking.

Rooftops may be infiltrated with the concurrence of the [administering authority].

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

Note to users: Runoff from the employee and guest parking and rooftop areas of a tier 2 facility may be infiltrated but runoff from the parking area may require pretreatment.

- c. Fueling and vehicle maintenance areas. Rooftops of fueling and vehicle maintenance areas may be infiltrated with the concurrence of the [administering authority].
- d. Agricultural production areas that contain livestock, animal waste, or feed storage.

- 10. *Source area exemptions.* Runoff from the following areas may be credited toward meeting the requirement when infiltrated, but the decision to infiltrate runoff from these sources is optional:

- a. Parking areas and access roads less than 5,000 square feet for commercial development.
- b. Parking areas and access roads less than 5,000 square feet for industrial development not subject to the prohibitions under S.07(3)(c)9.
- c. Except as provided under S.07(3)(c)5., redevelopment and routine maintenance areas.
- d. In-fill development areas less than 5 acres.
- e. Roads in commercial, industrial and institutional land uses, and arterial residential roads.
- f. Except as provided under S.07(3)(c)5., transportation facility highway reconstruction and new highways.

- 11. *Prohibitions.* Infiltration practices may not be located in the following areas:

- a. Areas within 1,000 feet upgradient or within 100 feet downgradient of direct conduits to groundwater.
- b. Areas within 400 feet of a community water system well as specified in s. NR 811.16(4), Wis. Adm. Code, or within the separation distances listed in s. NR 812.08, Wis. Adm. Code, 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.
- c. 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.

- 12. *Separation distances.* 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 the following:

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

Notwithstanding S.07(3)(c)12., applicable requirements for injection wells classified under ch. NR 815, Wis. Adm. Code, shall be followed.

Note to users: The following exemptions based on rate of infiltration have been removed from the model ordinance to encourage infiltration practices on as many sites as practical.

13. *Infiltration rate exemptions.* Infiltration practices located in the following areas may be credited toward meeting the requirement under the following conditions, but the decision to infiltrate under these conditions is optional:
 - a. Where the infiltration rate of the soil measured at the proposed bottom of the infiltration system is less than 0.6 inches per hour using a scientifically credible field test method.
 - b. 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 of soils analysis is one of the following: sandy clay loam, clay loam, silty clay loam, sandy clay, silty clay, or clay.]
14. *Alternate uses.* 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 S.07(3)(c).
15. *Groundwater standards.*
 - a. Infiltration systems designed in accordance with this S.07(3)(c) 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 ch. 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.

Commented [14]: The committee's recommendation would be to edit the exemptions.

Commented [15]: renumber the sections & remove the discharge volume section

- b. Notwithstanding S.07(3)(c)15.a., the discharge from BMPs shall remain below the enforcement standard at the point of standards application.
16. Where the conditions of S.07(3)(c)9. through 13. limit or restrict the use of infiltration practices, the performance standard of S.07(3)(c) shall be met to the maximum extent practicable.

(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 S.07(3)(d), "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, 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 S.07(3)(d)1.e. or f., 50 feet.
 - e. For highly susceptible wetlands, 75 feet. Highly susceptible wetlands include the following types: calcareous fens, sedge meadows, open and coniferous bogs, low prairies, coniferous swamps, lowland hardwood swamps, and ephemeral ponds.
 - f. For moderately susceptible wetlands, 50 feet. Moderately susceptible wetlands include, but are not limited to: shrub wetlands, floodplain forests, fresh wet meadows, deep/shallow marshes, and forested wetlands. perennial and intermittent streams also fit in this protective area designation.

Note to users: Information on wetland types can be found at: <http://dnr.wi.gov/wetlands/types.html>. Additional information on wetland types including ephemeral ponds is given under wetland community at: <http://dnr.wi.gov/org/land/er/communities/>

- g. 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; cultivated hydric soils; and any gravel pits, or dredged material or fill material disposal sites that take on the attributes of a wetland.
- h. In S.07(3)(d)1.d. to f., 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, Wis. Adm. Code.
- i. Wetlands shall be delineated. Wetland boundary delineations shall be made in accordance with s. NR 103.08(1m), Wis. Adm. Code. S.07(3)(d) does not apply to wetlands that have been completely filled in

Commented [16]: added to reflect final protective area guidance.

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.

- j. For concentrated flow channels with drainage areas greater than 130 acres, 10 feet.
- k. Notwithstanding S.07(3)(d)1.a. to i., the greatest protective area width shall apply where rivers, streams, lakes, and wetlands are contiguous.

Note to users: A stream or lake is not eligible for a lower protective area width even if contiguous to a less susceptible wetland.

- 2. S.07(3)(d) applies to all post-construction sites located within a protective area, except those areas exempted pursuant to S.07(3)(d)5.
- 3. The following requirements shall be met:
 - a. Impervious surfaces shall be kept out of the protective area entirely or to the maximum extent practicable. If there is no practical alternative to locating an impervious surface in the protective area, the storm water management plan shall contain a written, site-specific explanation.
 - b. Where land disturbing construction activity occurs within a protective area, adequate sod or self-sustaining vegetative cover of 70 percent or greater shall be established and maintained where no impervious surface is present. 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.

Note to users: It is recommended that seeding of non-invasive vegetative cover be used in the protective areas. Some invasive plants are listed in ch. NR 40, Wis. Adm. Code. Vegetation that is flood and drought tolerant and can provide long-term bank stability because of an extensive root system is preferable. Vegetative cover can be measured using the line transect method described in the University of Wisconsin Extension publication number A3533, titled "Estimating Residue Using the Line Transect Method".

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

Note to users: Other regulations, such as ch. 30, Wis. Stats., and chs. NR 103, 115, 116 and 117, Wis. Adm. Code, and their associated review and approval process may apply in the protective area.

4. A protective area established or created after [Insert original ordinance adoption date] shall not be eliminated or reduced, except as allowed in S.07(3)(d)5.b., c., or d.
5. *Exemptions.* The following areas are not required to meet the protective area requirements of S.07(3)(d):
 - a. Redevelopment and routine maintenance areas provided the minimum requirements within S.07(3)(d)4. are satisfied.
 - b. Structures that cross or access surface waters such as boat landings, bridges and culverts.
 - c. Structures constructed in accordance with s. 59.692(1v), Wis. Stats.
 - d. Areas of post-construction sites from which the runoff does not enter the surface water, including wetlands, without first being treated by a BMP to meet the requirements of S.07(3)(a) and (b), except to the extent that vegetative ground cover is necessary to maintain bank stability.

Note to users: A vegetated protective area to filter runoff pollutants from post-construction sites described in S.07(3)(d)5.d. is not necessary since the runoff at that location is treated prior to entering the surface water. Other practices necessary to meet the requirements of this section, such as a swale or pond, will need to be designed and implemented to reduce runoff pollutants prior to runoff entering a surface water of the state. The requirements of ch. NR 103, Wis. Adm. Code, still apply and should be considered before runoff is diverted to or from a wetland.

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

Note to users: A combination of the following BMPs may be used: oil and grease separators, canopies, petroleum spill cleanup materials, or any other structural or non-structural method of preventing or treating petroleum in runoff.

- (f) **SWALE TREATMENT FOR TRANSPORTATION FACILITIES.** This S.07(3)(f) is not applicable to transportation facilities that are part of a larger common plan of development or sale.
 1. *Requirement.* Except as provided in S.07(3)(f)2., transportation facilities that use swales for runoff conveyance and pollutant removal are exempt from the requirements of S.07(3)(a), (b), and (c), if the swales are designed to do all of the following or to the maximum extent practicable:
 - a. Swales shall be vegetated. However, where appropriate, non-vegetative measures may be employed to prevent erosion or provide for runoff treatment, such as rock riprap stabilization or check dams.

Note to users: It is preferred that tall and dense vegetation be maintained within the swale due to its greater effectiveness at enhancing runoff pollutant removal.

- b. Swales shall comply with the Wisconsin Department of Natural Resources Technical Standard 1005, "Vegetated Infiltration Swale", except as otherwise authorized in writing by the Wisconsin Department of Natural Resources.
- 2. *Other Requirements.* Notwithstanding S.07(3)(f)1., the [administering authority] may, consistent with water quality standards, require that other requirements, in addition to swale treatment, be met on a transportation facility with an average daily traffic rate greater than 2,500 and where the initial surface water of the state that the runoff directly enters is any of the following:
 - a. An outstanding resource water.
 - b. An exceptional resource water.
 - c. Waters listed in section 303(d) of the federal clean water act that are identified as impaired in whole or in part, due to nonpoint source impacts.
 - d. Waters where targeted performance standards are developed pursuant to s. NR 151.004, Wis. Adm. Code.

Note to users: The transportation facility authority shall contact the Wisconsin Department of Natural Resource's regional storm water staff or the Wisconsin Department of Natural Resource's liaison to the Wisconsin Department of Transportation to determine if additional BMPs beyond a water quality swale are needed under this subsection.

- (g) **EXEMPTIONS.** The following areas are not required to meet the performance standards within S.07(3):
 - 1. Underground utility construction such as water, sewer, gas, electric, telephone, cable television, and fiber optic lines. This exemption does not apply to the construction of any above ground structures associated with utility construction.
 - 2. The following transportation facilities are exempt, provided the transportation facility is not part of a larger common plan of development or sale.
 - a. A transportation facility post-construction site with less than 10 percent connected imperviousness, based on the area of land disturbance, provided the cumulative area of all impervious surfaces is less than one acre. Notwithstanding this exemption, the protective area requirements of S.07(3)(d) still apply.
 - b. Reconditioning or resurfacing of a highway.
 - c. Minor reconstruction of a highway. Notwithstanding this exemption, the protective area requirements of S.07(3)(d) apply to minor reconstruction of a highway.
 - d. Routine maintenance for transportation facilities that have less than 5 acres of land disturbance if performed to maintain the original line and grade, hydraulic capacity or original purpose of the facility.
 - e. Routine maintenance if performed for storm water conveyance system cleaning.

- (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 prevent endangerment of downstream property or public safety.
- (5) BMP LOCATION AND CREDIT.
- (a) GENERAL. To comply with S.07(3) performance standards, the BMPs may be located on-site or off-site as part of a regional storm water device, practice or system.
 - (b) OFFSITE OR REGIONAL BMP.
 - 1. The amount of credit that the [administering authority] may give an offsite or regional BMP for purposes of determining compliance with the performance standards of S.07(3) is limited to the treatment capability or performance of the BMP.
 - 2. The [administering authority] may authorize credit for an off-site or regional BMP provided all of the following conditions are satisfied:
 - a. The BMP received all applicable permits.
 - b. The BMP shall be installed and operational before the construction site has undergone final stabilization.
 - c. The BMP shall be 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 BMPs meeting the S.07(3) performance standards.
 - d. The owner of the BMP has entered into a S.10 maintenance agreement with the [name of municipality], or another municipal entity, such that the BMP has a legally obligated entity responsible for its long-term operation and maintenance. Legal authority exists if a municipality owns, operates and maintains the BMP.
 - e. The owner of the BMP has provided written authorization which indicates the permit applicant may use the BMP for S.07(3) performance standard compliance.
 - f. Where an off-site or regional BMP option exists such that the [administering authority] 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 [administering authority]. In determining the fee for post-construction runoff, the [administering authority] shall consider an equitable distribution of the cost for land, engineering design, construction, and maintenance of the off-site or regional BMP.
 - (c) BMP IN NON-NAVIGABLE WATERS. For purposes of determining compliance with the performance standards of S.07(3), the [administering authority] may give credit for BMPs that function to provide treatment for runoff from existing development and post-construction runoff from new development, redevelopment, and routine maintenance areas and that are located within non-navigable waters.
 - (d) BMP IN NAVIGABLE WATERS.
 - 1. *New Development Runoff.* Except as allowed under S.07(5)(d)2., BMPs

designed to treat post-construction runoff from new development areas may not be located in navigable waters and, for purposes of determining compliance with the performance standards of S.07(3), the [administering authority] may not give credit for such BMPs.

2. *New Development Runoff Exemption.* BMPs to treat post-construction runoff from new development areas may be located within navigable waters and may be creditable by the [administering authority] under S.07(3), if all the following are met:
 - a. The BMP was constructed prior to October 1, 2002 and received all applicable permits.
 - b. The BMP functions or will function to provide runoff treatment for the new development area.
3. *Existing Development & Post-Construction Runoff From Redevelopment, Routine Maintenance, & Infill Development Areas.* Except as provided in S.07(5)(d)4., BMPs designed to treat post-construction runoff for existing development and post-construction runoff from redevelopment, routine maintenance and infill development areas may not be located in navigable waters and, for purposes of determining compliance with the performance standards of S.07(3), the [administering authority] may not give credit for such BMPs.
4. *Existing Development & Post-Construction Runoff From Redevelopment, Routine Maintenance, & Infill Development Areas Exemption.* BMPs that function to provide treatment of runoff from existing development and post-construction runoff from redevelopment, routine maintenance and infill development areas may be located within navigable waters and, for purposes of determining compliance with the performance standards of S.07(3), the [administering authority] may give credit for such BMPs, if any of the following are met:
 - a. The BMP was constructed, contracts were signed or bids advertised and all applicable permits were received prior to January 1, 2011.
 - b. The BMP is on an intermittent waterway and all applicable permits are received.

Note to Users: An intermittent waterway may be identified on a United States geological survey 7.5-minute series topographic map, a county soil survey map, the Surface Water Data Viewer Map, 24K hydro layer on the Wisconsin Department of Natural Resources website, or determined by the Wisconsin Department of Natural Resources through a site evaluation, whichever is more current. The Surface Water Data Viewer Map, 24K hydro layer is available at http://dnr.wi.gov/org/water/data_viewer.htm.

Note to users: This section does not supersede any other applicable federal, state or local regulation such as ch. NR 103, Wis. Adm. Code and ch. 30, Wis. Stats. Federal, state, and local permits or approvals may be required to excavate, dredge, fill, or construct BMPs in or near wetlands, non-navigable or navigable waters. Other permits and approvals may not be authorized where the BMP construction will result in adverse environmental impacts to the waterway or wetland.

- (e) **WATER QUALITY TRADING.** To comply with S.07(3)(a) performance standards, the [administering authority] may authorize credit for water quality trading provided all of the

following conditions are satisfied:

1. The treatment practices associated with a water quality trade shall be in place, effective and operational before credit can be authorized.
 2. The water quality trade shall comply with applicable trading ratios established by the Wisconsin Department of Natural Resources or the [name of municipality].
 3. The water quality trade shall comply with applicable regulations, standards, and guidance developed by the Wisconsin Department of Natural Resources or the [name of municipality].
 4. The responsible party shall furnish a copy of executed water quality trading agreements or other related information deemed necessary by the [administering authority] in order to authorize credit.
- (6) TARGETED PERFORMANCE STANDARDS. The [administering authority] may establish numeric water quality requirements that are more stringent than those set forth in S.07(3) in order to meet targeted performance standards, total maximum daily loads, and/or water quality standards for a specific water body or area. The numeric water quality requirements may be applicable to any permitted site, regardless of the size of land disturbing construction activity.
- (7) ALTERNATE REQUIREMENTS. The [administering authority] may establish storm water management requirements more stringent than those set forth in this section if the [administering authority] determines that an added level of protection is needed to protect sensitive resources. Also, the [administering authority] may establish storm water management requirements less stringent than those set forth in this section if the [administering authority] determines that less protection is needed to protect sensitive resources and provide reasonable flood protection. However, the alternative requirements shall not be less stringent than those requirements promulgated in rules by Wisconsin Department of Natural Resources under NR 151 Wisconsin Administrative Code.

S.08 PERMITTING REQUIREMENTS, PROCEDURES AND FEES.

- (1) PERMIT REQUIRED. No responsible party may undertake a land disturbing construction activity without receiving a post-construction runoff permit from the [administering authority] prior to commencing the proposed activity.
- (2) PERMIT APPLICATION AND FEES. Unless specifically excluded by this ordinance, any responsible party desiring a permit shall submit to the [administering authority] a permit application made on a form provided by the [administering authority] for that purpose.
- (a) Unless otherwise accepted by this ordinance, a permit application must be accompanied by a storm water management plan, a maintenance agreement and a non-refundable permit administration fee.
 - (b) The storm water management plan shall be prepared to meet the requirements of S.07 and S.09, the maintenance agreement shall be prepared to meet the requirements of S.10, the financial guarantee shall meet the requirements of S.11, and fees shall be those established by the [governing body] as set forth in S.12.
- (3) REVIEW AND APPROVAL OF PERMIT APPLICATION. The [administering authority] shall review any permit application that is submitted with a storm water management plan, maintenance agreement, and the required fee. The following approval procedure shall be used:
- (a) Within [20] business days of the receipt of a complete permit application, including all items as required by S.08(2), the [administering authority] shall inform the applicant whether the application, plan and maintenance agreement are approved or disapproved based on the requirements of this ordinance.

- (b) If the storm water permit application, plan and maintenance agreement are approved, or if an agreed upon payment of fees in lieu of storm water management practices is made pursuant to S.07(5), the [administering authority] shall issue the permit.
 - (c) If the storm water permit application, plan or maintenance agreement is disapproved, the [administering authority] shall detail in writing the reasons for disapproval.
 - (d) The [administering authority] may request additional information from the applicant. If additional information is submitted, the [administering authority] shall have [20] 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.
 - (e) Failure by the [administering authority] to inform the permit applicant of a decision within [20] business days of a required submittal shall be deemed to mean approval of the submittal and the applicant may proceed as if a permit had been issued.
- (4) PERMIT REQUIREMENTS. All permits issued under this ordinance shall be subject to the following conditions, and holders of permits issued under this ordinance shall be deemed to have accepted these conditions. The [administering authority] may suspend or revoke a permit for violation of a permit condition, following written notification of the responsible party. An action by the [administering authority] to suspend or revoke this permit may be appealed in accordance with S.14.
- (a) Compliance with this permit does not relieve the responsible party of the responsibility to comply with other applicable federal, state, and local laws and regulations.
 - (b) The responsible party shall design and install all structural and non-structural storm water management measures in accordance with the approved storm water management plan and this permit.
 - (c) The responsible party shall notify the [administering authority] at least [10] business days before commencing any work in conjunction with the storm water management plan, and within [10] business days upon completion of the storm water management practices. If required as a special condition under S.08(5), the responsible party shall make additional notification according to a schedule set forth by the [administering authority] so that practice installations can be inspected during construction.
 - (d) Practice installations required as part of this ordinance shall be certified "as built" by a licensed professional engineer. Completed storm water management practices must pass a final inspection by the [administering authority] or its designee to determine if they are in accordance with the approved storm water management plan and ordinance. The [administering authority] 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.
 - (e) The responsible party shall notify the [administering authority] of any significant modifications it intends to make to an approved storm water management plan. The [administering authority] may require that the proposed modifications be submitted to it for approval prior to incorporation into the storm water management plan and execution by the responsible party.
 - (f) The responsible party shall inspect BMPs annually and after runoff events in accordance with stormwater management plan reference in section S.09(1). The responsible party shall have a licensed professional submit a stamped written inspection report to [administering authority] for review and approval every [five years]. All reports shall accompany the stamped report.
 - (g) The responsible party shall maintain all storm water management practices in accordance with the storm water management plan until the practices either become the responsibility of the [name of municipality], or are transferred to subsequent private owners as specified in the approved maintenance agreement.

- (h) The responsible party authorizes the [administering authority] to perform any work or operations necessary to bring storm water management measures into conformance with the approved storm water management plan, and consents to a special assessment or charge against the property as authorized under subch. VII of ch. 66, Wis. Stats., or to charging such costs against the financial guarantee posted under S.11.
 - (i) If so directed by the [administering authority], the responsible party shall repair at the responsible party's own expense all damage to adjoining municipal facilities and drainage ways caused by runoff, where such damage is caused by activities that are not in compliance with the approved storm water management plan.
 - (j) The responsible party shall permit property access to the [administering authority] or its designee for the purpose of inspecting the property for compliance with the approved storm water management plan and this permit.
 - (k) Where site development or redevelopment involves changes in direction, increases in peak rate and/or total volume of runoff from a site, the [administering authority] may require the responsible party to make appropriate legal arrangements with affected property owners concerning the prevention of endangerment to property or public safety.
 - (l) The responsible party is subject to the enforcement actions and penalties detailed in S.13, if the responsible party fails to comply with the terms of this permit.
 - (m) The permit applicant shall post the "Certificate of Permit Coverage" in a conspicuous location at the construction site.
- (5) PERMIT CONDITIONS. Permits issued under this subsection may include conditions established by [administering authority] in addition to the requirements needed to meet the performance standards in S.07 or a financial guarantee as provided for in S.11.
 - (6) PERMIT DURATION. Permits issued under this section shall be valid from the date of issuance through the date the [administering authority] notifies the responsible party that all storm water management practices have passed the final inspection required under S.08(4)(d).
 - (7) ALTERNATE REQUIREMENTS. The [administering authority] may prescribe alternative requirements for applicants seeking an exemption to on-site storm water management performance standards under S.07(5) or for applicants seeking a permit for a post-construction site with less than 20,000 square feet of impervious surface disturbance.

S.09 STORM WATER MANAGEMENT PLAN.

- (1) PLAN REQUIREMENTS. The storm water management plan required under S.07(2) and S.08(2) shall comply with the [name of municipality] Storm Water Reference Guide and contain at a minimum the following information:
 - (a) Name, address, and telephone number of the landowner and responsible parties.
 - (b) A legal description of the property proposed to be developed.
 - (c) Pre-development site map with property lines, disturbed limits, and drainage patterns.
 - (d) Post-development site map with property lines, disturbed limits, and drainage patterns.
 - 1. Total area of disturbed impervious surfaces within the site.
 - 2. Total area of new impervious surfaces within the site.
 - 3. Performance standards applicable to site.
 - 4. Proposed best management practices.
 - 5. Groundwater, bedrock, and soil limitations.

6. Separation distances. Storm water management practices shall be adequately separated from wells to prevent contamination of drinking water.

(e) Inspection and maintenance schedules of stormwater BMPs.

(2) ALTERNATE REQUIREMENTS. The [administering authority] may prescribe alternative submittal requirements for applicants seeking an exemption to on-site storm water management performance standards under S.07(5) or for applicants seeking a permit for a post-construction site with less than 20,000 square feet of impervious surface disturbance.

S.10 MAINTENANCE AGREEMENT.

(1) MAINTENANCE AGREEMENT REQUIRED. The maintenance agreement required under S.08(2) for storm water management practices shall be an agreement between the [name of municipality] 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 plan required by S.08(2):

(a) Identification of the storm water facilities and designation of the drainage area served by the facilities.

(b) A schedule for regular inspection and 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 S.10(2)(b).

(e) Authorization for the [administering authority] 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 [administering authority] 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 S.10(2)(c), as responsible for long term maintenance of the storm water management practices, shall be notified by the [administering authority] of maintenance problems which require correction. The

specified corrective actions shall be undertaken within a reasonable time frame as set by the [administering authority].

(h) Authorization of the [administering authority] to perform the corrected actions identified in the inspection report if the responsible party designated under S.10(2)(c) does not make the required corrections in the specified time period. The [administering authority] 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.

(3) ALTERNATE REQUIREMENTS. The [administering authority] may prescribe alternative requirements for applicants seeking an exemption to on-site storm water management performance standards under S.07(5) or for applicants seeking a permit for a post-construction site with less than 20,000 square feet of impervious surface disturbance.

S.11 FINANCIAL GUARANTEE.

(1) ESTABLISHMENT OF THE GUARANTEE. The [administering authority] may require the submittal of a financial guarantee, the form and type of which shall be acceptable to the [administering authority]. The financial guarantee shall be in an amount determined by the [administering authority] 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 [administering authority] 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 [administering authority] shall release the portion of the financial guarantee established under this section, less any costs incurred by the [administering authority] to complete installation of practices, upon submission of "as built plans" by a licensed professional engineer. The [administering authority] may make provisions for a partial pro-rata release of the financial guarantee based on the completion of various development stages.

(b) The [administering authority] 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 [administering authority], at such time that the responsibility for practice maintenance is passed on to another entity via an approved maintenance agreement.

- (3) ALTERNATE REQUIREMENTS. The [administering authority] may prescribe alternative requirements for applicants seeking an exemption to on-site storm water management performance standards under S.07(5) or for applicants seeking a permit for a post-construction site with less than 20,000 square feet of impervious surface disturbance.

S.12 FEE SCHEDULE.

The fees referred to in other sections of this ordinance shall be established by the [administering authority] and may from time to time be modified by resolution. A schedule of the fees established by the [administering authority] shall be available for review in [location].

S.13 ENFORCEMENT.

- (1) Any land disturbing construction activity or post-construction runoff initiated after the effective date of this ordinance by any person, firm, association, or corporation subject to the ordinance provisions shall be deemed a violation unless conducted in accordance with the requirements of this ordinance.
- (2) The [administering authority] shall notify the responsible party by certified mail of any non-complying 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, and additional enforcement action which may be taken.
- (3) Upon receipt of written notification from the [administering authority] under sub. (2), the responsible party shall correct work that does not comply with the storm water management plan or other provisions of this permit. The responsible party shall make corrections as necessary to meet the specifications and schedule set forth by the [administering authority] in the notice.
- (4) If the violations to a permit issued pursuant to this ordinance are likely to result in damage to properties, public facilities, or waters of the state, the [administering authority] may enter the land and take emergency actions necessary to prevent such damage. The costs incurred by the [administering authority] plus interest and legal costs shall be billed to the responsible party.
- (5) The [administering authority] is authorized to post a stop work order on all land disturbing construction activity that is in violation of this ordinance, or to request the [municipal attorney, corporation counsel] to obtain a cease and desist order in any court with jurisdiction.
- (6) The [administering authority] may revoke a permit issued under this ordinance for non-compliance with ordinance provisions.
- (7) Any permit revocation, stop work order, or cease and desist order shall remain in effect unless retracted by the [administering authority] or by a court with jurisdiction.
- (8) The [administering authority] 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 [municipal

attorney, corporation counsel] for the commencement of further legal proceedings in any court with jurisdiction.

- (9) Any person, firm, association, or corporation who does not comply with the provisions of this ordinance shall be subject to a forfeiture of not less than [number] dollars or more than [number] dollars per offense, together with the costs of prosecution. Each day that the violation exists shall constitute a separate offense.
- (10) Compliance with the provisions of this ordinance may also be enforced by injunction in any court with jurisdiction. It shall not be necessary to prosecute for forfeiture or a cease and desist order before resorting to injunctive proceedings.

Note to users: Injunctive orders are authorized pursuant to s. 59.69(11), 61.35, or 62.23(8), Wis. Stats., for counties, villages and towns with village powers, and cities respectively.

- (11) When the [administering authority] determines that the holder of a permit issued pursuant to this ordinance has failed to follow practices set forth in the storm water management plan, or has failed to comply with schedules set forth in said storm water management plan, the [administering authority] or a party designated by the [administering authority] may enter upon the land and perform the work or other operations necessary to bring the condition of said lands into conformance with requirements of the approved plan. The [administering authority] 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 S.11 of this ordinance. 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.

S.14 APPEALS.

- (1) BOARD OF [APPEALS or ADJUSTMENT]. The board of [appeals or adjustment], created pursuant to section [number] of the [name of municipality] ordinances pursuant to s. [59.694, or 60.65 or 61.354(4)(b) or 62.23(7)(e)], Wis. Stats, shall hear and decide appeals where it is alleged that there is error in any order, decision or determination made by the [administering authority] in administering this ordinance. The board shall also use the rules, procedures, duties, and powers authorized by statute in hearing and deciding appeals. Upon appeal, the board may authorize variances from the provisions of this ordinance that are not contrary to the public interest, and where owing to special conditions a literal enforcement of the ordinance will result in unnecessary hardship.

(2) WHO MAY APPEAL. Appeals to the board of [appeals or adjustments] may be taken by any aggrieved person or by an officer, department, board, or bureau of the [name of municipality] affected by any decision of the [administering authority].

S.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.

S.16 EFFECTIVE DATE.

This ordinance shall be in force and effect from and after its adoption and publication. The above and foregoing ordinance was duly adopted by the [governing body] of the [name of municipality] on the [number] day of [month], [year].

Approved: _____

Attested _____

Published on [day, month, year].