

ORDER OF THE STATE OF WISCONSIN NATURAL RESOURCES BOARD  
CREATING RULES

The Natural Resources Board proposes an order to create ch. NR 152 relating to model ordinances for construction site erosion control and post-construction storm water management.

WT-9-00

Analysis Prepared by Department of Natural Resources

Statutory authority: ss. 227.11 and 281.33(4), Stats.

Statutes interpreted: s. 281.33 and 281.16 Stats.

Creation of this rule is an integral part of promulgating a series of inter-related administrative rules to implement a re-design of Wisconsin's nonpoint source programs as set forth in 1997 Wisconsin Act 27 and 1999 Wisconsin Act 9. The rule actions included in the re-design effort are: repeal and recreation of chapter NR 120, Priority Watershed and Priority Lake Program; creation of chapter NR 151, Runoff Management; creation of chapter NR 152, Model Ordinances for Construction Site Erosion Control and Post-Construction Storm Water Management; creation of chapter NR 153, Targeted Runoff Management Grant Program; creation of chapter NR 154, Best Management Practices and Cost-share Conditions; creation of chapter NR 155, Urban Nonpoint Source Water Pollution Abatement and Storm Water Management Grant Program; revision of chapter NR 216, Storm Water Discharge Permits and repeal and recreation of chapter NR 243, Animal Feeding Operations. The department of agriculture, trade and consumer protection is revising ATCP 50, Soil and Water Resource Management, to incorporate changes in its programs.

Pursuant to s. 281.33 (4), Stats., the department has developed model ordinances for construction site erosion control and post-construction runoff and is submitting these ordinances for legislative review. Following legislative review, the department is required to make these ordinances available to local units of government for voluntary adoption.

The purpose of chapter NR 152 is to submit these ordinances to the legislature for required review and to enable the department to distribute them upon request. The ordinances are included as attachments to the rule. The performance standards contained in subchapters III and IV of chapter NR 151 for construction site erosion control and post-construction control of runoff have been incorporated into the model ordinances.

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SECTION 1: Chapter NR 152 is created to read:

**Chapter NR 152**

**MODEL ORDINANCES FOR CONSTRUCTION SITE EROSION CONTROL AND POST-  
CONSTRUCTION STORM WATER MANAGEMENT**

**NR 152.01 Purpose.** (1) This chapter includes 2 model ordinances that the department is required to prepare under s. 281.33 (4), Stats. One is a model ordinance for construction site erosion control at sites where construction activities do not include the construction of a building. The other is a model ordinance for post-construction storm water management. The purpose of making these model ordinances available to local units of government is to secure so far as practicable the voluntary

uniformity of local regulations regarding construction site erosion control and storm water management, to further the purpose of s. 281.33(1), Stats., and to promote consistency with state non-agricultural performance standards authorized under s. 281.16(2)(a), Stats. Appendix A contains the state model construction site erosion control zoning ordinance and Appendix B contains the state model post-construction storm water management zoning ordinance.

(2) The department shall distribute a copy of the model construction site erosion control zoning ordinance or a copy of the model post-construction storm water management zoning ordinance, or both to any city, village, county or town that submits a request for the document, as required by s. 281.33 (4), Stats.

Note: Adoption by a city, county, village or town of either model ordinance in its entirety is voluntary. However, there are other administrative rules, such as chs. NR 120, 153 and 216, which require consistency of local regulations with the performance standards of ch. NR 151. These performance standards are incorporated in the model ordinances. Requests for printed or electronic copies of the model ordinances may be submitted to the Wisconsin Department of Natural Resources, Runoff Management Section, Box 7921, Madison, WI 53707-7921.

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## MODEL CONSTRUCTION SITE EROSION CONTROL 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 CONSTRUCTION SITE EROSION RESULTING FROM LAND DISTURBING CONSTRUCTION ACTIVITIES

#### FOREWORD.

The intent of this ordinance is to require use of best management practices to reduce the amount of sediment and other pollutants resulting from land disturbing construction activities on sites that do not include the construction of a building and is otherwise regulated by the Wisconsin Department of Commerce in ss. COMM 21.125 or COMM 50.115, Wis. Adm. Code. Use of this ordinance will foster consistent, statewide application of the construction site performance standards for new development and redevelopment contained in subchapters III and IV of ch. 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]**  
**CONSTRUCTION SITE EROSION**

**S.01 AUTHORITY.**

- (1) This ordinance is adopted under the authority granted by [s. 59.693, Wis. Stats., for counties; s. 60.627, Wis. Stats., for towns; s. 61.354, Wis. Stats., for villages; s. 62.234, Wis. Stats., for cities]. 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 construction site erosion control. 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 erosion and sediment control requirements that may be imposed by any of the following:
  - (a) Wisconsin Department of Natural Resources administrative rules, permits or approvals including those authorized under ss. 281.16 and 283.33, Wis. Stats.
  - (b) Targeted non-agricultural performance standards promulgated in rules by the Wisconsin Department of Natural Resources under s. NR 151.004, Wis. Adm. Code.

**S.02 FINDINGS OF FACT.**

The [governing body] finds that runoff from land disturbing construction activity carries a significant amount of sediment and other pollutants to the waters of the state in [name of municipality].

**S.03 PURPOSE.**

It is the purpose of this ordinance to further the maintenance of safe and healthful conditions; prevent and control water pollution; prevent and control soil erosion; 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, by minimizing the amount of sediment and other pollutants carried

by runoff or discharged from land disturbing construction activity to waters of the state in the [name of municipality].

#### **S.04 APPLICABILITY AND JURISDICTION.**

(1) APPLICABILITY.

(a) This ordinance applies to the following land disturbing construction activities except as provided under sub. (b):

1. A construction site, which has 5 or more acres of land disturbing construction activity.
2. A construction site, which has one or more acres of land disturbing construction activity after March 10, 2003.

**Note to Users:** The 5- and 1-acre land disturbance thresholds are consistent with state and federal laws regarding applicability of construction site erosion control permits.

(b) This ordinance does not apply to the following:

1. Land disturbing construction activity that includes the construction of a building and is otherwise regulated by the Wisconsin Department of Commerce under ss. COMM 21.125 or COMM 50.115, Wis. Adm. Code.
2. A construction project that is exempted by federal statutes or regulations from the requirement to have a national pollutant discharge elimination system permit issued under chapter 40, Code of Federal Regulations, part 122, for land disturbing construction activity.
3. Nonpoint discharges from agricultural facilities and practices.
4. Nonpoint discharges from silviculture activities.
5. Routine maintenance for project sites under 5 acres of land disturbance if performed to maintain the original line and grade, hydraulic capacity or original purpose of the facility.

(c) Notwithstanding the applicability requirements in paragraph (a), this ordinance applies to construction sites of any size that, in the opinion of the [administering authority], are 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.

**Note to Users:** The municipality may want to consider separate legal authority to address situations where persons other than the responsible party destroy or render ineffective BMPs constructed to meet the performance standards of this ordinance.

(2) JURISDICTION.

This ordinance applies to [land disturbing construction activity on construction sites located within the boundaries and jurisdiction of the [name of municipality]].

or

[land disturbing construction activities on lands 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

[land disturbing construction activities on lands within the boundaries and jurisdiction of the [name of municipality], as well as all lands located within the extraterritorial plat approval jurisdiction of [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 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) "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.

- (2) "Agricultural facilities and practices " has the meaning in s. 281.16(1), Wis. Stats.
- (3) "Average annual rainfall" means a calendar year of precipitation, excluding snow, which is considered typical.
- (4) "Best management practice" or "BMP" means structural or non-structural measures, practices, techniques or devices employed to avoid or minimize soil, sediment or pollutants carried in runoff to waters of the state.
- (5) "Business day" means a day the office of the [administering authority] is routinely and customarily open for business.
- (6) "Cease and desist order" means a court-issued order to halt land disturbing construction activity that is being conducted without the required permit.
- (7) "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 where multiple separate and distinct land disturbing construction activities may be taking place at different times on different schedules but under one plan.
- (8) "Division of land" means the creation from one parcel of [number] or more parcels or building sites of [number] or fewer acres each in area where such creation occurs at one time or through the successive partition within a 5 year period.
- (9) "Erosion" means the process by which the land's surface is worn away by the action of wind, water, ice or gravity.
- (10) "Erosion and sediment control plan" means a comprehensive plan developed to address pollution caused by erosion and sedimentation of soil particles or rock fragments during construction.
- (11) "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.
- (12) "Final stabilization" means that all land disturbing construction activities at the construction site have been completed and that a uniform perennial vegetative cover has been established, with a density of at least 70 percent of the cover, for the unpaved areas and areas not covered by permanent structures, or that employ equivalent permanent stabilization measures.
- (13) "Governing body" means town board of supervisors, county board of supervisors, city council, village board of trustees or village council.
- (14) "Land disturbing construction activity" means any man-made alteration of the land surface resulting in a change in the topography or existing vegetative or non-vegetative soil cover, that may result in runoff and lead to an increase in soil erosion and movement of sediment into waters of the state. Land disturbing construction activity includes clearing and grubbing, demolition, excavating, pit trench dewatering, filling and grading activities.
- (15) "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.

- (16) "Performance standard" means a narrative or measurable number specifying the minimum acceptable outcome for a facility or practice.
- (17) "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.
- (18) "Pollutant" has the meaning given in s. 283.01 (13), Wis. Stats.
- (19) "Pollution" has the meaning given in s. 281.01 (10), Wis. Stats.
- (20) "Responsible party" means any entity holding fee title to the property or performing services to meet the performance standards of this ordinance through a contract or other agreement.
- (21) "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.
- (22) "Sediment" means settleable solid material that is transported by runoff, suspended within runoff or deposited by runoff away from its original location.
- (23) "Separate storm sewer" means a conveyance or system of conveyances including roads with drainage systems, streets, catch basins, curbs, gutters, ditches, constructed channels or storm drains, which meets all of the following criteria:
  - (a) Is designed or used for collecting water or conveying runoff.
  - (b) Is not part of a combined sewer system.
  - (c) Is not draining to a storm water treatment device or system.
  - (d) Discharges directly or indirectly to waters of the state.
- (24) "Site" means the entire area included in the legal description of the land on which the land disturbing construction activity is proposed in the permit application.
- (25) "Stop work order" means an order issued by the [administering authority] which requires that all construction activity on the site be stopped.
- (26) "Technical standard" means a document that specifies design, predicted performance and operation and maintenance specifications for a material, device or method.
- (27) "Waters of the state" has the meaning given in s. 281.01 (18), Wis. Stats.

## **S.06 TECHNICAL STANDARDS.**

- (1) DESIGN CRITERIA, STANDARDS AND SPECIFICATIONS. All BMPs required to comply with this ordinance shall meet the design criteria, standards and specifications based on any of the following:
  - (a) Applicable design criteria, standards and specifications identified in the *Wisconsin Construction Site Best Management Practice Handbook*, WDNR Pub. WR-222 November 1993 Revision.
  - (b) Other design guidance and technical standards identified or developed by the Wisconsin Department of Natural Resources under subchapter V of chapter NR 151, Wis. Adm. Code.
  - (c) For this ordinance, average annual basis is calculated using the appropriate annual rainfall or runoff factor, also referred to as the R factor, or an equivalent design storm using a type II distribution, with consideration given to the geographic location of the site and the period of disturbance.

**Note to Users :** The USLE and its successors RUSLE and RUSLE2, utilize an R factor which has been developed to estimate annual soil erosion, averaged over extended time periods. The R factor can be modified to estimate monthly and single-storm erosion. A design storm can be statistically calculated to provide an equivalent R factor as an average annual calculation.

- (2) OTHER STANDARDS. Other technical standards not identified or developed in sub. (1), may be used provided that the methods have been approved by the [administering authority].

## **S.07 PERFORMANCE STANDARDS**

- (1) RESPONSIBLE PARTY. The responsible party shall implement an erosion and sediment control plan, developed in accordance with S. 09, that incorporates the requirements of this section.
- (2) PLAN. A written plan shall be developed in accordance with S. 09 and implemented for each construction site.

**Note to Users:** The written plan may be that specified within s. NR 216.46, the erosion control portion of a construction plan or other plan.

- (3) EROSION AND OTHER POLLUTANT CONTROL REQUIREMENTS. The plan required under sub. (2) shall include the following:
  - (a) BMPs that, by design, achieve to the maximum extent practicable, a reduction of 80% of the sediment load carried in runoff, on an average annual basis, as compared with no

sediment or erosion controls until the construction site has undergone final stabilization. No person shall be required to exceed an 80% sediment reduction to meet the requirements of this paragraph. Erosion and sediment control BMPs may be used alone or in combination to meet the requirements of this paragraph. Credit toward meeting the sediment reduction shall be given for limiting the duration or area, or both, of land disturbing construction activity, or other appropriate mechanism.

**Note to Users:** Soil loss prediction tools that estimate the sediment load leaving the construction site under varying land and management conditions, or methodology identified in subch. V. of ch. NR 151, Wis. Adm. Code, may be used to calculate sediment reduction.

- (b) Notwithstanding par. (a), if BMPs cannot be designed and implemented to reduce the sediment load by 80%, on an average annual basis, the plan shall include a written and site-specific explanation as to why the 80% reduction goal is not attainable and the sediment load shall be reduced to the maximum extent practicable.
- (c) Where appropriate, the plan shall include sediment controls to do all of the following to the maximum extent practicable:
  - 1. Prevent tracking of sediment from the construction site onto roads and other paved surfaces.
  - 2. Prevent the discharge of sediment as part of site de-watering.
  - 3. Protect the separate storm drain inlet structure from receiving sediment.
- (d) The use, storage and disposal of chemicals, cement and other compounds and materials used on the construction site shall be managed during the construction period, to prevent their entrance into waters of the state. However, projects that require the placement of these materials in waters of the state, such as constructing bridge footings or BMP installations, are not prohibited by this paragraph.

- (4) LOCATION. The BMPs used to comply with this section shall be located prior to runoff entering waters of the state.

**Note to Users:** While regional treatment facilities are appropriate for control of post-construction pollutants, they should not be used for construction site sediment removal.

- (5) 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 for sensitive resources.

**S.08 PERMITTING REQUIREMENTS, PROCEDURES AND FEES.**

- (1) PERMIT REQUIRED. No responsible party may commence a land disturbing construction activity subject to this ordinance without receiving prior approval of an erosion and sediment control plan for the site and a permit from the [administering authority].
- (2) PERMIT APPLICATION AND FEES. At least one responsible party desiring to undertake a land disturbing construction activity subject to this ordinance shall submit an application for a permit and an erosion and sediment control plan that meets the requirements of S.09 and shall pay an application fee of [amount] to the [administering authority]. By submitting an application, the applicant is authorizing the [administering authority] to enter the site to obtain information required for the review of the erosion and sediment control plan.
- (3) REVIEW AND APPROVAL OF PERMIT APPLICATION. The [administering authority] shall review any permit application that is submitted with an erosion and sediment control plan, and the required fee. The following approval procedure shall be used:
  - (a) Within [number] business days of the receipt of a complete permit application, as required by sub. (2), the [administering authority] shall inform the applicant whether the application and plan are approved or disapproved based on the requirements of this ordinance.
  - (b) If the permit application and plan are approved, the [administering authority] shall issue the permit.
  - (c) If the permit application or plan is disapproved, the [administering authority] shall state 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 [number] business days from the date the additional information is received to inform the applicant that the plan is either approved or disapproved.
  - (e) Failure by the [administering authority] to inform the permit applicant of a decision within [number] 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) SURETY BOND. As a condition of approval and issuance of the permit, the [administering authority] may require the applicant to deposit a surety bond or irrevocable letter of credit to guarantee a good faith execution of the approved erosion control plan and any permit conditions.

- (5) PERMIT REQUIREMENTS. All permits shall require the responsible party to:
- (a) Notify the [administering authority] within 48 hours of commencing any land disturbing construction activity.
  - (b) Notify the [administering authority] of completion of any BMPs within 14 days after their installation.
  - (c) Obtain permission in writing from the [administering authority] prior to any modification pursuant to S.09(3) of the erosion and sediment control plan.
  - (d) Install all BMPs as identified in the approved erosion and sediment control plan.
  - (e) Maintain all road drainage systems, stormwater drainage systems, BMPs and other facilities identified in the erosion and sediment control plan.
  - (f) Repair any siltation or erosion damage to adjoining surfaces and drainage ways resulting from land disturbing construction activities and document repairs in a site erosion control log.
  - (g) Inspect the BMPs within 24 hours after each rain of 0.5 inches or more which results in runoff during active construction periods, and at least once each week, make needed repairs and document the findings of the inspections in a site erosion control log with the date of inspection, the name of the person conducting the inspection, and a description of the present phase of the construction at the site.
  - (h) Allow the [administering authority] to enter the site for the purpose of inspecting compliance with the erosion and sediment control plan or for performing any work necessary to bring the site into compliance with the control plan. Keep a copy of the erosion and sediment control plan at the construction site.
- (6) PERMIT CONDITIONS. Permits issued under this section may include conditions established by [administering authority] in addition to the requirements set forth in sub. (5), where needed to assure compliance with the performance standards in S.07.
- (7) PERMIT DURATION. Permits issued under this section shall be valid for a period of 180 days, or the length of the building permit or other construction authorizations, whichever is longer, from the date of issuance. The [administering authority] may extend the period one or more times for up to an additional 180 days. The [administering authority] may require additional BMPs as a condition of the extension if they are necessary to meet the requirements of this ordinance.
- (8) MAINTENANCE. The responsible party throughout the duration of the construction activities shall maintain all BMPs necessary to meet the requirements of this ordinance until the site has undergone final stabilization.

**S.09 EROSION AND SEDIMENT CONTROL PLAN, STATEMENT, AND AMENDMENTS.**

(1) EROSION AND SEDIMENT CONTROL PLAN.

- (a) An erosion and sediment control plan shall be prepared and submitted to the [administering authority].
- (b) The erosion and sediment control plan shall be designed to meet the performance standards in S.07 and other requirements of this ordinance.
- (c) The erosion and sediment control plan shall address pollution caused by soil erosion and sedimentation during construction and up to final stabilization of the site. The erosion and sediment control plan shall include, at a minimum, the following items:
  - 1. The name(s) and address(es) of the owner or developer of the site, and of any consulting firm retained by the applicant, together with the name of the applicant's principal contact at such firm. The application shall also include start and end dates for construction.
  - 2. Description of the site and the nature of the construction activity, including representation of the limits of land disturbance on a United States Geological Service 7.5 minute series topographic map.
  - 3. A sequence of construction of the development site, including stripping and clearing; rough grading; construction of utilities, infrastructure, and buildings; and final grading and landscaping. Sequencing shall identify the expected date on which clearing will begin, the estimated duration of exposure of cleared areas, areas of clearing, installation of temporary erosion and sediment control measures, and establishment of permanent vegetation.
  - 4. Estimates of the total area of the site and the total area of the site that is expected to be disturbed by construction activities.
  - 5. Estimates, including calculations, if any, of the runoff coefficient of the site before and after construction activities are completed.
  - 6. Calculations to show the expected percent reduction in the average annual sediment load carried in runoff as compared to no sediment or erosion controls.
  - 7. Existing data describing the surface soil as well as subsoils.
  - 8. Depth to groundwater, as indicated by Natural Resources Conservation Service soil information where available.
  - 9. Name of the immediate named receiving water from the United States Geological Service 7.5 minute series topographic maps.
- (d) The erosion and sediment control plan shall include a site map. The site map shall include the following items and shall be at a scale not greater than 100 feet per inch and at a contour interval not to exceed five feet.

1. Existing topography, vegetative cover, natural and engineered drainage systems, roads and surface waters. Lakes, streams, wetlands, channels, ditches and other watercourses on and immediately adjacent to the site shall be shown. Any identified 100-year flood plains, flood fringes and floodways shall also be shown.
  2. Boundaries of the construction site.
  3. Drainage patterns and approximate slopes anticipated after major grading activities.
  4. Areas of soil disturbance.
  5. Location of major structural and non-structural controls identified in the plan.
  6. Location of areas where stabilization practices will be employed.
  7. Areas which will be vegetated following construction.
  8. Areal extent of wetland acreage on the site and locations where storm water is discharged to a surface water or wetland.
  9. Locations of all surface waters and wetlands within one mile of the construction site.
  10. An alphanumeric or equivalent grid overlying the entire construction site map.
- (e) Each erosion and sediment control plan shall include a description of appropriate controls and measures that will be performed at the site to prevent pollutants from reaching waters of the state. The plan shall clearly describe the appropriate control measures for each major activity and the timing during the construction process that the measures will be implemented. The description of erosion controls shall include, when appropriate, the following minimum requirements:
1. Description of interim and permanent stabilization practices, including a practice implementation schedule. Site plans shall ensure that existing vegetation is preserved where attainable and that disturbed portions of the site are stabilized.
  2. Description of structural practices to divert flow away from exposed soils, store flows or otherwise limit runoff and the discharge of pollutants from the site. Unless otherwise specifically approved in writing by the [administering authority], structural measures shall be installed on upland soils.
  3. Management of overland flow at all sites, unless otherwise controlled by outfall controls.
  4. Trapping of sediment in channelized flow.
  5. Staging construction to limit bare areas subject to erosion.
  6. Protection of downslope drainage inlets where they occur.
  7. Minimization of tracking at all sites.
  8. Clean up of off-site sediment deposits.
  9. Proper disposal of building and waste materials at all sites.



10. Stabilization of drainage ways.
  11. Control of soil erosion from dirt stockpiles.
  12. Installation of permanent stabilization practices as soon as possible after final grading.
  13. Minimization of dust to the maximum extent practicable.
- (f) The erosion and sediment control plan shall require that velocity dissipation devices be placed at discharge locations and along the length of any outfall channel, as necessary, to provide a non-erosive flow from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected.

**Note to Users:** The plan requirements of this subsection will meet the erosion control plan requirements of s. NR 216.46, Wis. Adm. Code, when prepared in accordance with good engineering practices and the design criteria, standards and specifications outlined in the *Wisconsin Construction Site Best Management Practice Handbook* (WDNR Pub. WR-222 November 1993 Revision).

- (2) **EROSION AND SEDIMENT CONTROL PLAN STATEMENT.** For each construction site identified under S.04 (1)(c), an erosion and sediment control plan statement shall be prepared. This statement shall be submitted to the [administering authority]. The control plan statement shall briefly describe the site, including a site map. Further, it shall also include the best management practices that will be used to meet the requirements of the ordinance, including the site development schedule.
- (3) **AMENDMENTS.** The applicant shall amend the plan if any of the following occur:
- (a) There is a change in design, construction, operation or maintenance at the site which has the reasonable potential for the discharge of pollutants to waters of the state and which has not otherwise been addressed in the plan.
  - (b) The actions required by the plan fail to reduce the impacts of pollutants carried by construction site runoff.
  - (c) The [administering authority] notifies the applicant of changes needed in the plan.

## **S.10 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.11 INSPECTION.

If land disturbing construction activities are being carried out without a permit required by this ordinance, the [administering authority] may enter the land pursuant to the provisions of ss. 66.0119(1), (2), and (3), Wis. Stats.

## S.12 ENFORCEMENT.

- (1) The [administering authority] may post a stop-work order if any of the following occurs:
  - (a) Any land disturbing construction activity regulated under this ordinance is being undertaken without a permit.
  - (b) The erosion and sediment control plan is not being implemented in a good faith manner.
  - (c) The conditions of the permit are not being met.

**Note to Users:** The [administering authority] should inspect any construction site that holds a permit under this chapter at least once a month during the period starting March 1 and ending October 31 and at least 2 times during the period starting November 1 and ending February 28 to ensure compliance with the approved sediment and erosion control plan.

- (2) If the responsible party does not cease activity as required in a stop-work order posted under this section or fails to comply with the erosion and sediment control plan or permit conditions, the [administering authority] may revoke the permit.
- (3) If the responsible party, where no permit has been issued, does not cease the activity after being notified by the [administering authority], or if a responsible party violates a stop-work order posted under sub. (1), the [administering authority] may request the [district attorney, city attorney, town attorney, village attorney or county corporation counsel] to obtain a cease and desist order in any court with jurisdiction.
- (4) The [administering authority, or the board of appeals or adjustment] may retract the stop-work order issued under sub. (1) or the permit revocation under sub. (2).
- (5) After posting a stop-work order under sub. (1), the [administering authority] may issue a notice of intent to the responsible party of its intent to perform work necessary to comply with this ordinance. The [administering authority] may go on the land and commence the work after issuing the notice of intent. The costs of the work performed under this subsection by the [administering authority], plus interest at the rate authorized by [administrative authority] shall be

billed to the responsible party. In the event a responsible party fails to pay the amount due, the clerk shall enter the amount due on the tax rolls and collect as a special assessment against the property pursuant to subch. VII of ch. 66, Wis. Stats.

- (6) Any person violating any of the provisions of this ordinance shall be subject to a forfeiture of not less than [amount] nor more than [amount] and the costs of prosecution for each violation. Each day a violation exists shall constitute a separate offense.
- (7) 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.

#### **S.13 APPEALS.**

- (1) BOARD OF [APPEALS or ADJUSTMENT]. The board of [appeals or adjustment] created pursuant to section [number] of the [county's, town's, city's or village's] ordinance pursuant to [s.59.69(4), 60.65, 61.35(4)(b) or 62.23(7)(e)], Wis. Stats.:
  - (a) 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 except for cease and desist orders obtained under S.12 (3).
  - (b) Upon appeal, may authorize variances from the provisions of this ordinance which are not contrary to the public interest and where owing to special conditions a literal enforcement of the provisions of the ordinance will result in unnecessary hardship; and
  - (c) Shall use the rules, procedures, duties and powers authorized by statute in hearing and deciding appeals and authorizing variances.
- (2) WHO MAY APPEAL. Appeals to the board of [appeals or adjustment] may be taken by any aggrieved person or by any office, department, board, or bureau of the [name of municipality] affected by any decision of the [administering authority].

#### **S.14 SEVERABILITY.**

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

**S.15 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, and year].

**APPENDIX B: 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 non-agricultural 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 after final stabilization to a site of land disturbing construction activity meeting any of the criteria in this paragraph, unless the site is otherwise exempt under paragraph (b).

1.            A post construction site that had 5 or more acres of land disturbing construction activity.
2.            A post-development construction site that had one or more acres of land disturbing construction activity after March 10, 2003.

**Note to Users:** The 5- and 1-acre land disturbance thresholds are consistent with state and federal laws regarding applicability of construction site erosion control permits.

(b)            A site that meets any of the criteria in this paragraph is exempt from the requirements of this ordinance.

1.            A redevelopment post-construction site with no increase in exposed parking lots or roads.
2.            A post-construction site with less than 10% 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.            Nonpoint discharges from agricultural facilities and practices.
4.            Nonpoint discharges from silviculture activities.
5.            Routine maintenance for project sites under 5 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 fiberoptic lines. This exemption does not apply to the construction of any above ground structures associated with utility construction.

(c)            Notwithstanding the applicability requirements in paragraph (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 the 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 the 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) "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.

- (2) "Agricultural facilities and practices " has the meaning given in s. 281.16, Wis. Stats.
- (3) "Average annual rainfall" means a calendar year of precipitation, excluding snow, which is considered typical.
- (4) "Best management practice" or "BMP" means structural or non-structural measures, practices, techniques or devices employed to avoid or minimize sediment or pollutants carried in runoff to waters of the state.
- (5) "Business day" means a day the office of the [administering authority] is routinely and customarily open for business.
- (6) "Cease and desist order" means a court-issued order to halt land disturbing construction activity that is being conducted without the required permit.
- (7) "Combined sewer system" means a system for conveying both sanitary sewage and storm water runoff.
- (8) "Connected imperviousness" means an impervious surface that is directly connected to a separate storm sewer or water of the state via an impervious flow path.
- (9) "Design storm" means a hypothetical discrete rainstorm characterized by a specific duration, temporal distribution, rainfall intensity, return frequency, and total depth of rainfall.
- (10) "Development" means residential, commercial, industrial or institutional land uses and associated roads.
- (11) "Division of land" means the creation from one parcel of [number] or more parcels or building sites of [number] or fewer acres each in area where such creation occurs at one time or through the successive partition within a 5 year period.
- (12) "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.
- (13) "Erosion" means the process by which the land's surface is worn away by the action of wind, water, ice or gravity.
- (14) "Exceptional resource waters" means waters listed in s. NR 102.11, Wis. Adm. Code.
- (15) "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.
- (16) "Final stabilization" means that all land disturbing construction activities at the construction site have been completed and that a uniform, perennial, vegetative cover has been established, with a density of at least 70% of the cover, for the unpaved areas and areas not covered by permanent structures, or employment of equivalent permanent stabilization measures.
- (17) "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.

- (18) "Governing body" means town board of supervisors, county board of supervisors, city council, village board of trustees or village council.
- (19) "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 areas that typically are impervious.
- (20) "In-fill area" means an undeveloped area of land located within existing development.
- (21) "Infiltration" means the entry of precipitation or runoff into or through the soil.
- (22) "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.
- (23) "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.
- (24) "Land disturbing construction activity" means any man-made alteration of the land surface resulting in a change in the topography or existing vegetative or non-vegetative soil cover, that may result in runoff and lead to an increase in soil erosion and movement of sediment into waters of the state. Land disturbing construction activity includes clearing and grubbing, demolition, excavating, pit trench dewatering, filling and grading activities.
- (25) "Maintenance agreement" means a legal document that provides for long-term maintenance of storm water management practices.
- (26) "MEP" or "maximum extent practicable" means a level of implementing best management practices in order to achieve a performance standard specified in this ordinance 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.
- (27) "New development" means development resulting from the conversion of previously undeveloped land or agricultural land uses.
- (28) "Off-site" means located outside the property boundary described in the permit application.
- (29) "On-site" means located within the property boundary described in the permit application.
- (30) "Ordinary high-water mark" has the meaning given in s. NR 115.03(6), Wis. Adm. Code.
- (31) "Outstanding resource waters" means waters listed in s. NR 102.10, Wis. Adm. Code.
- (32) "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- $\mu$ 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 on line at: “<http://www.astm.org/>”.

- (33) “Performance standard” means a narrative or measurable number specifying the minimum acceptable outcome for a facility or practice.
- (34) “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.
- (35) “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.
- (36) “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.
- (37) “Pollutant” has the meaning given in s. 283.01(13), Wis. Stats.
- (38) “Pollution” has the meaning given in s. 281.01(10), Wis. Stats.
- (39) “Post-construction site” means a construction site following the completion of land disturbing construction activity and final site stabilization.
- (40) “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.
- (41) “Preventive action limit” has the meaning given in s. NR 140.05(17), Wis. Adm. Code.
- (42) “Redevelopment ” means areas where development is replacing older development.
- (43) “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.
- (44) “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.
- (45) “Separate storm sewer” means a conveyance or system of conveyances including roads with drainage systems, streets, catch basins, curbs, gutters, ditches, constructed channels or storm drains, which meets all of the following criteria:
  - (a) Is designed or used for collecting water or conveying runoff.
  - (b) Is not part of a combined sewer system.
  - (c) Is not draining to a storm water treatment device or system.
  - (d) Discharges directly or indirectly to waters of the state.

- (46) "Site" means the entire area included in the legal description of the land on which the land disturbing construction activity occurred.
- (47) "Stop work order" means an order issued by the [administering authority] which requires that all construction activity on the site be stopped.
- (48) "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.
- (49) "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.
- (50) "Technical standard" means a document that specifies design, predicted performance and operation and maintenance specifications for a material, device or method.
- (51) "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.
- (52) "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.
- (53) "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.
- (54) "Waters of the state" has the meaning given in s. 281.01 (18), Wis. Stats.

**S.06 TECHNICAL STANDARDS.**

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

- (1) Technical standards identified, developed or disseminated by the Wisconsin Department of Natural Resources under subchapter V of chapter NR 151, Wis. Adm. Code.
- (2) Where technical standards have not been identified or developed by the Wisconsin Department of Natural Resources, other technical standards may be used provided that the methods have been approved by the [administering authority].
- (3) In this ordinance, the following year(s) and location(s) [has or have] been selected as average annual rainfall(s): [Madison, 1981 (Mar.12-Dec.2); Green Bay, 1969 (Mar.29-Nov. 25);

Milwaukee, 1969 (Mar.28-Dec. 6); Minneapolis, 1959 (Mar.13-Nov. 4 ); Duluth, 1975 (Mar.24 – Nov. 19)]

**Note to Users:** Of the five locations listed, the location closest to a project site best represents the average annual rainfall for that site.

## **S.07 PERFORMANCE STANDARDS.**

- (1) **RESPONSIBLE PARTY.** The responsible party shall implement a post-construction storm water management plan that incorporates the requirements of this section.
- (2) **PLAN.** A written storm water management plan in accordance with S.09 shall be developed and implemented for each post-construction site.
- (3) **REQUIREMENTS.** The plan required under sub. (2) shall include the following:
  - (a) **TOTAL SUSPENDED SOLIDS.** BMPs shall be designed, installed and maintained to control total suspended solids carried in runoff from the post-construction site as follows:
    1. For new development, by design, reduce to the maximum extent practicable, the total suspended solids load by 80%, based on the average annual rainfall, as compared to no runoff management controls. No person shall be required to exceed an 80% total suspended solids reduction to meet the requirements of this subdivision.
    2. For redevelopment, by design, reduce to the maximum extent practicable, the total suspended solids load by 40%, based on the average annual rainfall, as compared to no runoff management controls. No person shall be required to exceed a 40% total suspended solids reduction to meet the requirements of this subdivision
    3. For in-fill development under 5 acres that occurs within 10 years after the effective date of this rule ...[revisor insert date], by design, reduce to the maximum extent practicable, the total suspended solids load by 40%, based on an average annual rainfall, as compared to no runoff management controls. No person shall be required to exceed a 40% total suspended solids reduction to meet the requirements of this subdivision.
    4. For in-fill development that occurs 10 or more years after the effective date of this rule...[revisor insert date], by design, reduce to the maximum extent practicable, the total suspended solids load by 80%, based on an average annual rainfall, as compared to no runoff management controls. No person shall be required to



exceed an 80% total suspended solids reduction to meet the requirements of this subdivision

5. Notwithstanding subds. 1. to 4., if the design cannot achieve the applicable total suspended solids reduction specified, the storm water 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.

**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 total suspended solids.

(b) PEAK DISCHARGE.

1. By design, BMPs shall be employed to maintain or reduce the peak runoff discharge rates, to the maximum extent practicable, as compared to pre-development conditions for the 2-year, 24-hour design storm applicable to the post-construction site. Pre-development conditions shall assume “good hydrologic conditions” for appropriate land covers as identified in TR-55 or an equivalent methodology. The meaning of “hydrologic soil group” and “runoff curve number” are as determined in TR-55. However, when pre-development land cover is cropland, rather than using TR-55 values for cropland, the runoff curve numbers in Table 1 shall be used.

Table 1 – Maximum Pre-Development Runoff Curve Numbers for Cropland Areas				
Hydrologic Soil Group	A	B	C	D
Runoff Curve Number	56	70	79	83

**Note to Users:** The curve numbers in Table 1 represent mid-range values for soils under a good hydrologic condition where conservation practices are used and are selected to be protective of the resource waters.

2. This subsection of the ordinance does not apply to any of the following:
  - a. A post-construction site where the change in hydrology due to development does not increase the existing surface water elevation at any point within the downstream receiving water by more than 0.01 of a foot for the 2-year, 24-hour storm event.

**Note to Users:** Hydraulic models such as HEC-RAS or another methodology may be used to determine the change in surface water elevations.

- b. A redevelopment post-construction site.
- c. An in-fill development area less than 5 acres.

**Note to Users:** The intent of the peak discharge standard is to minimize streambank erosion, under bank-full conditions. For water quantity concerns, the post-development peak flow rate for the 10, 25, 50 and 100 year – 24 hour storm events should also be controlled either at or below pre-development discharge rates. This has not been addressed in this model ordinance but may need to be included in the local ordinance to address flood control issues.

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

1. For residential developments one of the following shall be met:
  - a. Infiltrate sufficient runoff volume so that the post-development infiltration volume shall be at least 90% 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 1% of the project site is required as an effective infiltration area.
  - b. Infiltrate 25% of the post-development runoff from the 2 year -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 1% of the project site is required as an effective infiltration area.
2. For non-residential development, including commercial, industrial and institutional development, one of the following shall be met:
  - a. Infiltrate sufficient runoff volume so that the post-development infiltration volume shall be at least 60% 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% of the project site is required as an effective infiltration area.

- b. Infiltrate 10% of the runoff from the 2 year - 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 2% of the project site is required as an effective infiltration area.
3. Pre-development condition shall be the same as in par. (b).

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

4. 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 subd. 8. Pretreatment options may include, but are not limited to, oil/grease separation, sedimentation, biofiltration, filtration, swales or filter strips.

**Note to Users:** To achieve the infiltration requirement for the parking lots or roads, maximum extent practicable should not be interpreted to require significant topography changes that create an excessive financial burden. To minimize potential groundwater impacts, it is desirable to infiltrate the cleanest runoff. To achieve this, a design may propose greater infiltration of runoff from low pollutant sources such as roofs, and less from higher pollutant source areas such as parking lots.

5. Exclusions. The runoff from the following areas are prohibited from meeting the requirements of this paragraph:
  - a. Areas associated with tier 1 industrial facilities identified in s. NR 216.21(2)(a), Wis. Adm. Code, including storage, loading, rooftop and parking.
  - b. Storage and loading areas of tier 2 industrial facilities identified in s. NR 216.21(2)(b), Wis. Adm. Code.

**Note to Users:** Runoff from tier 2 parking and rooftop areas may be infiltrated but may require pretreatment.

- c. Fueling and vehicle maintenance areas.
- d. Areas within 1000 feet upgradient or within 100 feet downgradient of karst features.
- e. Areas with less than 3 feet separation distance from the bottom of the infiltration system to the elevation of seasonal high groundwater or the top of bedrock, except this subd. 5.e. does not prohibit infiltration of roof runoff.
- f. Areas with runoff from industrial, commercial and institutional parking lots and roads and residential arterial roads with less than 5 feet separation distance from the bottom of the infiltration system to the elevation of seasonal high groundwater or the top of bedrock.
- g. Areas within 400 feet of a community water system well as specified in s. NR 811.16(4), Wis. Adm. Code, or within 100 feet of a private well as specified in s. NR 812.08(4), Wis. Adm. Code, for runoff infiltrated from commercial, industrial and institutional land uses or regional devices for residential development.
- h. 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.
- i. 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 3-foot soil layer with 20% fines or greater; or at least a 5-foot soil layer with 10 percent fines or greater. This does not apply where the soil medium within the infiltration system provides an equivalent level of protection. This subd. 5.i. does not prohibit infiltration of roof runoff.

**Note to Users:** The areas listed in subd. 5 are prohibited from infiltrating runoff due to the potential for groundwater contamination.

- 6. Exemptions. The following are not required to meet the requirements of this paragraph:
  - a. Areas where the infiltration rate of the soil is less than 0.6 inches/hour measured at the site.
  - b. Parking areas and access roads less than 5,000 square feet for commercial and industrial development.
  - c. Redevelopment post-construction sites.

- d. In-fill development areas less than 5 acres.
  - e. Infiltration areas during periods when the soil on the site is frozen.
  - f. Roads in commercial, industrial and institutional land uses, and arterial residential roads.
7. Where alternate uses of runoff are employed, such as for toilet flushing, laundry or irrigation, such alternate use shall be given equal credit toward the infiltration volume required by this paragraph.
8. a. Infiltration systems designed in accordance with this paragraph 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.
- b. Notwithstanding subd. par. a., the discharge from BMPs shall remain below the enforcement standard at the point of standards application.

(d) PROTECTIVE AREAS.

1. "Protective area" means an area of land that commences at the top of the channel of lakes, streams and rivers, or at the delineated boundary of wetlands, and that is the greatest of the following widths, as measured horizontally from the top of the channel or delineated wetland boundary to the closest impervious surface. However, in this paragraph, "protective area" does not include any area of land adjacent to any stream enclosed within a pipe or culvert, such that runoff cannot enter the enclosure at this location.
- a. For outstanding resource waters and exceptional resource waters, and for wetlands in areas of special natural resource interest as specified in s. NR 103.04, 75 feet.
  - b. For perennial and intermittent streams identified on a United States geological survey 7.5-minute series topographic map, or a county soil survey map, whichever is more current, 50 feet.
  - c. For lakes, 50 feet.
  - d. For highly susceptible wetlands, 50 feet. Highly susceptible wetlands include the following types: fens, sedge meadows, bogs, low prairies, conifer swamps, shrub swamps, other forested wetlands, fresh wet meadows, shallow marshes, deep marshes and seasonally flooded

basins. Wetland boundary delineations shall be made in accordance with s. NR 103.08(1m). This paragraph does not apply to wetlands that have been completely filled in accordance with all applicable state and federal regulations. The protective area for wetlands that have been partially filled in accordance with all applicable state and federal regulations shall be measured from the wetland boundary delineation after fill has been placed.

- e. 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.
  - f. In subd. 1.a., d. and e., determinations of the extent of the protective area adjacent to wetlands shall be made on the basis of the sensitivity and runoff susceptibility of the wetland in accordance with the standards and criteria in s. NR 103.03.
  - g. For concentrated flow channels with drainage areas greater than 130 acres, 10 feet.
2. This paragraph applies to post-construction sites located within a protective area, except those areas exempted pursuant to subd. 4.
3. The following requirements shall be met:
- a. Impervious surfaces shall be kept out of the protective area to the maximum extent practicable. The storm water management plan shall contain a written site-specific explanation for any parts of the protective area that are disturbed during construction.
  - b. Where land disturbing construction activity occurs within a protective area, and where no impervious surface is present, adequate sod or self-sustaining vegetative cover of 70% or greater shall be established and maintained. The adequate sod or self-sustaining vegetative cover shall be sufficient to provide for bank stability, maintenance of fish habitat and filtering of pollutants from upslope overland flow areas under sheet flow conditions. Non-vegetative materials, such as rock riprap, may be employed on the bank as necessary to prevent erosion, such as on steep slopes or where high velocity flows occur.

**Note to Users:** It is recommended that seeding of non-aggressive vegetative cover be used in the protective areas. 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 basins, 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. This paragraph does not apply to:
  - a. Redevelopment post-construction sites.
  - b. In-fill development areas less than 5 acres.
  - c. Structures that cross or access surface waters such as boat landings, bridges and culverts.
  - d. Structures constructed in accordance with s. 59.692(1v), Wis. Stats.
  - e. Post-construction sites from which runoff does not enter the surface water, 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 subd. 4.e. is not necessary since runoff is not entering the surface water at that location. Other practices, necessary to meet the requirements of this section, such as a swale or basin, will need to be designed and implemented to reduce runoff pollutants before the runoff enters a surface water of the state.

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

**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. [OPTIONAL]

1. Applicability. Except as provided in subd. 2., 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:
  - a. 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. Carry runoff through a swale for 200 feet or more in length that is designed with a flow velocity no greater than 1.5 feet per second for the peak flow generated using either a 2-year, 24-hour design storm or a 2-year storm with a duration equal to the time of concentration as appropriate. If a swale of 200 feet in length cannot be designed with a flow velocity of 1.5 feet per second or less, then the flow velocity shall be reduced to the maximum extent practicable.

**Note to Users:** Check dams may be included in the swale design to slow runoff flows and improve pollutant removal. Transportation facilities with continuous features such as curb and gutter, sidewalks or parking lanes do not comply with the design requirements of this paragraph. However, a limited amount of structural measures such as curb and gutter may be allowed as necessary to account for other concerns such as human safety or resource protection.

2. Exemptions. The [administering authority] 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 2500 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 s. 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 under s. NR 151.004, Wis. Adm. Code, to meet water quality standards.

**Note to Users:** The Department of Natural Resource's regional storm water staff can determine if additional BMPs, beyond a water quality swale, are needed under this paragraph.

(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) LOCATION AND REGIONAL TREATMENT OPTION.

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

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

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

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

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

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

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

1. To the maximum extent practicable, BMPs shall be located to treat runoff prior to discharge to navigable surface waters.
2. Post-construction BMPs for such runoff may be located in a navigable surface water if allowable under all other applicable federal, state and local regulations such as ch. NR 103, Wis. Adm. Code and ch. 30, Stats.

**Note to Users:** This allows the location of BMPs in navigable surface waters where necessary to augment management practices upstream of the navigable surface water to meet the performance standards.

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

**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, Stats.

- (g) The [administering authority] may approve off-site management measures provided that all of the following conditions are met:
1. The [administrating authority] determines that the post-construction runoff is covered by a storm water management system plan that is approved by the [name of municipality] and that contains management requirements consistent with the purpose and intent of this ordinance.
  2. The off-site facility meets all of the following conditions:
    - a. The facility is in place.
    - b. The facility is designed and adequately sized to provide a level of storm water control equal to or greater than that which would be afforded by on-site practices meeting the performance standards of this ordinance.
    - c. The facility has a legally obligated entity responsible for its long-term operation and maintenance.
- (h) Where a regional treatment option exists such that the [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 regional treatment option.

- (6) 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.

**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 excepted 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 SS.07 and 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 [number] business days of the receipt of a complete permit application, including all items as required by sub. (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, 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

[number] 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 [number] 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 [number] business days before commencing any work in conjunction with the storm water management plan, and within [number] business days upon completion of the storm water management practices. If required as a special condition under sub. (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 maintain all storm water management practices in accordance with the storm water management plan until the practices either become the responsibility of the [governing body], or are transferred to subsequent private owners as specified in the approved maintenance agreement.
- (g) 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.
- (h) 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.
- (i) 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.
- (j) 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.
- (k) 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.

(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 sub. (4)(d).

**S.09 STORM WATER MANAGEMENT PLAN.**

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

- (a) Name, address, and telephone number for the following or their designees: landowner; developer; project engineer for practice design and certification; person(s)

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

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

(c) Pre-development site conditions, including:

1. One or more site maps at a scale of not less than 1 inch equals [number] 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 [number] feet; topography and drainage network including enough of the contiguous properties to show runoff patterns onto, through, and from the site; watercourses that may affect or be affected by runoff from the site; flow path and direction for all storm water conveyance sections; watershed boundaries used in hydrology determinations to show compliance with performance standards; lakes, streams, wetlands, channels, ditches, and other watercourses on and immediately adjacent to the site; limits of the 100 year floodplain; location of wells and wellhead protection areas covering the project area and delineated pursuant to s. NR 811.16, Wis. Adm. Code.

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

(d) Post-development site conditions, including:

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

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

3. One or more site maps at a scale of not less than 1 inch equals [number] feet showing the following: post-construction pervious areas including vegetative cover type and condition; impervious surfaces including all buildings, structures, and pavement; post-construction topographic contours of the site at a scale not to exceed [number] feet; post-construction drainage network including enough of the contiguous properties to show runoff patterns onto, through, and from the

site; locations and dimensions of drainage easements; locations of maintenance easements specified in the maintenance agreement; flow path and direction for all storm water conveyance sections; location and type of all storm water management conveyance and treatment practices, including the on-site and off-site tributary drainage area; location and type of conveyance system that will carry runoff from the drainage and treatment practices to the nearest adequate outlet such as a curbed street, storm drain, or natural drainage way; watershed boundaries used in hydrology and pollutant loading calculations and any changes to lakes, streams, wetlands, channels, ditches, and other watercourses on and immediately adjacent to the site.

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

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

- (e) A description and installation schedule for the storm water management practices needed to meet the performance standards in S.07.
- (f) A maintenance plan developed for the life of each storm water management practice including the required maintenance activities and maintenance activity schedule.
- (g) Cost estimates for the construction, operation, and maintenance of each storm water management practice.
- (h) Other information requested in writing by the [administering authority] to determine compliance of the proposed storm water management measures with the provisions of this ordinance.
- (i) All site investigations, plans, designs, computations, and drawings shall be certified by a [licensed professional engineer] to be prepared in accordance with accepted engineering practice and requirements of this ordinance.

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

## **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 [administering authority] and the responsible party to provide for maintenance of storm water practices beyond the duration period of this permit. The maintenance agreement shall be filed with the County Register of Deeds as a property deed restriction so that it is binding upon all subsequent owners of the land served by the storm water management practices.
- (2) AGREEMENT PROVISIONS. The maintenance agreement shall contain the following information and provisions and be consistent with the maintenance plan required by S.09(1)(f):
  - (a) Identification of the storm water facilities and designation of the drainage area served by the facilities.
  - (b) A schedule for regular maintenance of each aspect of the storm water management system consistent with the storm water management plan required under S.08 (2).
  - (c) Identification of the responsible party(s), organization or city, county, town or village responsible for long term maintenance of the storm water management practices identified in the storm water management plan required under S.08 (2).
  - (d) Requirement that the responsible party(s), organization, or city, county, town or village shall maintain storm water management practices in accordance with the schedule included in par. (b).
  - (e) Authorization for the [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 par. (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 par. (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.



**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.

**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 for the year in which the work is completed.

#### **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].

The foregoing rules were approved and adopted by the State of Wisconsin Natural Resources Board on January 22, 2002 and May 22, 2002.

The rules shall take effect on the first day of the month following publication in the Wisconsin administrative register as provided in s. 227.22(2)(intro.), Stats.

Dated at Madison, Wisconsin \_\_\_\_\_

STATE OF WISCONSIN  
DEPARTMENT OF NATURAL RESOURCES

By \_\_\_\_\_  
Darrell Bazzell, Secretary

(SEAL)