

ENROLLED ORDINANCE 170-79

AMEND THE WAUKESHA COUNTY STORMWATER MANAGEMENT
AND EROSION CONTROL ORDINANCE

WHEREAS, on March 31, 1992, to help control nonpoint source water pollution in Waukesha County, the County Board adopted Enrolled Ordinance #146-171, establishing regulatory requirements to control sediment discharges from construction sites, and

WHEREAS, on March 24, 1998, upon the recommendations of the Waukesha County Stormwater Advisory Committee (SAC), the County Board adopted Enrolled Ordinance #152-147, which added post-construction storm water management requirements to the county's construction site erosion control ordinance, and

WHEREAS, on March 22, 2005, upon the unanimous recommendation of the SAC, the County Board adopted Enrolled Ordinance #159-120, which repealed and recreated the Waukesha County Stormwater Management and Erosion Control Ordinance to meet revised state water pollution control requirements and to improve County ordinance administration, and

WHEREAS, effective January 1, 2011, the Wisconsin Department of Natural Resources (DNR) approved Waukesha County as the first Authorized Local Program (ALP) in the state, which streamlined state and local stormwater permitting processes into a single County permit, and

WHEREAS, the municipal stormwater discharge permit reissued by DNR on April 29, 2014 under Chapter NR 216 Wisconsin Administrative Code requires thirty-one (31) local municipalities and the County to update their stormwater and erosion control ordinances by March 30, 2016 to meet recently revised state urban nonpoint source water pollution performance standards, and

WHEREAS, in the fall of 2015, the Department of Parks and Land Use worked closely with the SAC to draft revisions to the 2005 County Stormwater and Erosion Control Ordinance that comply with the new state requirements and further improve the administration of the County ordinance. The SAC unanimously recommended adoption of the proposed ordinance revisions on November 3, 2015.

THE COUNTY BOARD OF SUPERVISORS OF WAUKESHA COUNTY HEREBY ORDAINS that the Stormwater Management and Erosion Control Ordinance, found in Chapter 14, Article VIII of the Waukesha County Code of Ordinances) shall be amended as follows:

SECTION 1. Repeal and Recreate Section 14-326. Authority for Ordinance. *(Note: Add state statute reference for local ordinance authority and state code pre-emption language.)*

- (a) This ordinance is adopted by the County Board under the authority granted by sections 59.693, 92.07(15), and 281.33, and Chapter 236 Wisconsin Statutes.
- (b) 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:

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

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

SECTION 2. Create Sec. 14-331(c). County-owned Lands. *(Required to meet DNR municipal stormwater discharge permit requirements on all county-owned lands.)*

(c) **County-owned lands.** Unless exempted under section 14-333(c)B. this ordinance applies to all County-owned lands regardless of the municipality in which the land is located, or what entity is assigned land management duties, including highway right-of-way.

SECTION 3. Create the following under Sec. 14-332. Definitions. *(Required for clarification of ordinance requirements and to be consistent with Chapter NR 151 Wis. Admin. Code.)*

1. **“Basement”** means an enclosed space of any height below existing grade for a residential or commercial building, including crawlspaces, but not including spaces below buildings supported by pillars or stilts (e.g. for flood control purposes).
2. **“Connected impervious surface”** means an impervious surface connected to the waters of the state via a separate storm sewer, an impervious flow path, or a minimally pervious flow path.
3. **“Construction site”** means an area where one or more land disturbing activities occur, including areas that may be part of a larger common plan of development.
4. **“Cropland”** means land cultivated in annual agricultural crops such as corn and soybeans or small grain such as wheat or oats.
5. **“Grassland/Meadow”** means lands on which grass, alfalfa, hay, prairie or a similar ground cover has been growing for at least five (5) consecutive years prior to land disturbing activity.
6. **“Highest Groundwater Table”** means the upper limit of the zone of soil saturation caused by underlying groundwater at its highest level based on soil and site evaluations in accordance with technical standards prescribed in this ordinance.

Note: The above definition recognizes that the elevation of the groundwater table will fluctuate by season and from year-to-year depending on weather patterns, topography and other site conditions, and that soils and site evaluations are the best indicator of the Highest Groundwater Table.
7. **“Landowner”** (or **“Owner”**) means any person or entity holding fee title to the property. Utility companies shall be deemed as landowner for the subject property if they hold the appropriate easement or have established prescriptive rights under s. 893.28(2) Wisconsin Statutes.
8. **“Permit holder”** means any person or entity issued a Storm Water Permit under this ordinance or their successors in interest with respect to the property to which the permit applies. (See also definition of “Applicant”)
9. **“Pervious surface”** means an area that releases as runoff a small portion of the precipitation that falls on it. Lawns, gardens, parks, forests and similar vegetated areas

are examples of surfaces that typically are pervious.

10. **“Qualified professional”** means a Professional Landscape Architect, Professional Hydrologist, or Professional Engineer licensed in Wisconsin, or a person certified in erosion control planning, implementation or inspection.

11. **“Sediment”** means settleable solid material that is transported by runoff, suspended within runoff, or deposited by runoff away from its original source.

SECTION 4. Repeal and Recreate the following under Section 14-332. Definitions.

(Required for clarification of ordinance requirements and to be consistent with Chapter NR 151 Wis. Admin. Code.)

1. **“Applicant”** means any person or entity applying for a Storm Water Permit. Under this ordinance, the applicant shall be the landowner as herein defined. The applicant shall become the “permit holder” once a permit is issued. The applicant shall sign the initial permit application form in accordance with subs. A through E below, after which the applicant may provide the LRD written authorization for others to serve as the applicant’s representative:

A. In the case of a corporation, by a principal executive officer of at least the level of vice president or by the officer’s authorized representative having overall responsibility for the operation of the site for which a permit is sought.

B. In the case of a limited liability company, by a member or manager.

C. In the case of a partnership, by the general partner.

D. In the case of a sole proprietorship, by the proprietor.

E. For a unit of government, by a principal executive officer, ranking elected official or other duly authorized representative.

2. **“Best management practice” (or “BMP”)** means structural and non-structural measures, practices, techniques or devices employed to avoid or minimize sediment or other pollutants carried in runoff, or to reduce runoff volumes or peak flows.

3. **“County mapping standards”** means that the maps are drawn to national map accuracy standards using the Wisconsin State Plane Coordinate System, Wisconsin South Zone, and the most recent horizontal and vertical datums adopted by the Waukesha County Board.

4. **“Impervious surface” (or “imperviousness”)** means an area that releases all or a large portion of the precipitation that falls on it, except for frozen soil. Conventional rooftops and asphalt or concrete sidewalks, driveways, parking lots and streets are typical examples of impervious surfaces. For purposes of this ordinance, all existing and proposed driveways, parking lots, streets and roofs shall be considered impervious at the time of application. If these surfaces are specifically designed, built and maintained to encourage infiltration or storage of runoff, and the LRD determines they meet applicable requirements of section 14-341, they shall subsequently be designated by the LRD as a

pervious surface.

5. **“Infiltration system(s)”** means a device or practice such as a basin, trench, rain garden, pervious pavement 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.

6. **“Land disturbing activity” (or “disturbance”)** means any man-made alteration of the land surface that may result in a change in the topography or existing vegetative or non-vegetative soil cover, or may expose soil and lead to an increase in soil erosion and movement of sediment. Land disturbing activity includes clearing and grubbing for future land development, excavating, filling, grading, building construction or demolition, dewatering, or dredging related to stormwater BMP maintenance. Repaving is considered a land disturbing activity only if the subgrade material below the pavement is removed, replaced or significantly regraded.

7. **“Publicly funded”** means a land disturbing or land development activity, such as a public road or municipal building that is being funded solely by a Town, City, Village, County, State or Federal government. It does not include new roads or other structures built with private funds, or a combination of public and private funds, and subsequently dedicated to a unit of government.

8. **“Responsible party”** means the landowner or any person or entity acting as the owners representative, including any person, firm, corporation or other entity performing services, contracted, subcontracted or obligated by other agreement to design, implement, inspect, verify or maintain the BMPs and other approved elements of erosion control and storm water plans and permits under this ordinance.

9. **“Site”** means the entire area included in the legal description of the subject property.

10. **“Utility”** means a wire, pipe, tube or other conduit designed to distribute or collect a product or service, including but not limited to electricity, natural gas, oil, telecommunications, drinking water, storm water, sewage, groundwater, or any combination of these items.

SECTION 5. Repeal and Recreate Section 14-333. Applicability and Exemptions. *(Clarify permit applicability relating to BMP maintenance, new impervious surfaces, county highway projects, and 1-2 family home construction. Authorize a broader range of permit exemptions.)*

(a) Construction Site Erosion Control. Unless otherwise exempted under sub. (c) below, a stormwater permit under sec. 14-334 shall be required and all erosion control and other provisions of this ordinance shall apply to all proposed land disturbing activity that meets any of the following:

1. Disturbs a total land surface area of 3,000 square feet or more; or

2. Involves excavation or filling, or a combination of excavation and filling, in excess of 400 cubic yards of material; or

3. Involves the laying, repairing, replacing, or enlarging of an underground utility, pipe or other facility, or the disturbance of road ditch, grass swale or other open channel for a distance of 300 feet or more; or

4. Involves the maintenance of an existing stormwater BMP; or

5. Is a land disturbing activity, regardless of size, that the LRD determines is likely to cause an adverse impact to an environmentally sensitive area or other property, or may violate any other erosion control standard set forth in this ordinance.

(b) Stormwater Management. Unless otherwise exempted in this ordinance, a stormwater permit under sec. 14-334 shall be required and all stormwater management and other provisions of this ordinance shall apply to all proposed land development activity that meet any of the following:

1. Is a subdivision plat; or

2. Is a certified survey map or any other land development activity that may ultimately result in the addition of 0.5 acres or greater of impervious surfaces that did not exist prior to May 28, 1998, including smaller individual sites that are part of a common plan of development that may be constructed at different times; or

3. Involves the construction of any new public or private road; or

4. Is a land development activity, regardless of size, that the LRD determines is likely to cause an adverse impact to an environmentally sensitive area or other property. For purposes of this section, adverse impacts shall include causing chronic wetness on other property due to reoccurring discharges of stormwater, or violating any other stormwater management standard set forth in this ordinance.

Note: The County Park and Planning Commission, County Zoning Administrator or Town Planning Commission may require a review and determination of sub. (a)4. or (b)4. above by the LRD as a condition of other zoning approvals.

(c) Applicability Exemptions.

1. Exempt From All Requirements. The following activities shall be exempt from all of the requirements of this ordinance:

A. Land disturbing activities directly involved in the planting, growing and harvesting of any plant grown for human or livestock consumption and pasturing or yarding of livestock, including sod farms and tree nurseries.

B. Land development and land disturbing activities exempted by state or federal law, including highway construction and other projects conducted by a state agency, as defined under s. 227.01 (1), Wisconsin Statutes, or under a memorandum of understanding entered into under s. 281.33 (2), Wisconsin Statutes. This includes County highway right-of-ways where the State has assumed all stormwater related responsibilities during the planning or construction phases through a written agreement. To recognize an exemption under this paragraph, the LRD may require documentation of the person(s) and regulatory agency charged with enforcing erosion control and

stormwater management for the project, and verification of compliance with applicable stormwater regulations, including the County MS4 permit.

C. Land disturbing activity directly involved in the installation and maintenance of private on-site waste disposal systems, as regulated under this Chapter.

D. If another regulatory agency is enforcing erosion control and stormwater management provisions that the LRD determines are at least as restrictive as those contained in this ordinance, the applicant may request an exemption from any or all provisions of this ordinance. An applicant must apply for this exemption on a form provided by the LRD for that purpose. There will be a fee associated with reviewing the request in accordance with sec. 14-334(e). Based upon the scope of the requested exemption, the LRD may require the applicant to submit documentation relating to the project, including any or all of the following:

(i) A copy of the proposed plans certified as approved by a regulatory agency. Said plans shall also be stamped by a professional engineer licensed in Wisconsin, stating that the design of all best management practices comply with this ordinance and all applicable technical standards.

(ii) Contact information for the applicant or for person(s) representing the applicant and charged with overseeing the implementation of the approved plans, including certifying construction.

(iii) A copy of the permit issued by the regulatory agency and contact information for the person(s) charged with permit enforcement duties.

(iv) A copy of design summaries, as-built documents and construction certification pursuant to sec. 14-335(d) for all stormwater BMPs constructed as part of the project.

(v) A copy of a recorded maintenance agreement in accordance with sec. 14-343 for all stormwater management facilities constructed as part of the project.

(vi) Other items that the LRD determines are necessary to ensure compliance equal to the requirements of this ordinance.

Note: Cooperative working agreements may be used to implement the provisions of this subsection.

2. Exempt From Erosion Control Requirements Only. The following land disturbing activities shall be exempt from the erosion control provisions of sub. (a) above:

A. Those activities the LRD determines are required for the construction of individual one and two family residential buildings under SPS 321 Wis. Admin. Code, unless the proposed or actual land disturbance is one (1) acre or greater.

B. Nonmetallic mining activities that are covered under a nonmetallic mining reclamation permit under NR 135 Wis. Admin. Code.

C. Placement of underground pipe or other utility that is plowed or bored into the

ground outside areas of channelized runoff.

Note: The Wisconsin Uniform Dwelling Code (SPS 321) includes erosion control requirements that apply statewide. The County Zoning Administrator or any Town may request a determination from the LRD under sub. A above as a condition of issuing a local building or zoning permit.

3. **Other Exemptions.** The LRD may exempt a site or a portion of a site from meeting any or all of the requirements of this ordinance in accordance with sec. 14-341(e)2.

Note: Cooperative working agreements may be used to administer this section for routine road maintenance and emergency utility work.

SECTION 6. Repeat and Recreate Section 14-334(d). Certification of Compliance for Final Plat or CSM. (Clarify submittal process and review items.)

(d) Certification of Compliance for Final Plat or CSM. 1. Applicability. The LRD shall certify compliance with this section prior to the County Zoning Administrator approving any final plat, and prior to the recording of any certified survey map with the Waukesha County Register of Deeds that meets one of the following:

A. The site plan may ultimately result in the addition of .5 acres or greater of impervious surfaces, including smaller individual sites that are part of a common plan of development;

B. Includes the construction of any new public or private road; or

C. Other land development activities as determined by the LRD under sub. (b)2.B. above.

Note: The County Park and Planning Commission, County Zoning Administrator or a town plan commission may require certification of compliance under this subsection as a condition of other zoning approvals.

2. Review Items. To obtain certification of compliance, the applicant shall submit a final plat or CSM to the LRD for review, which shall be the same version of the land division document submitted to the applicable review authorities under Chapter 236 Wis. Stats. or local ordinance. The LRD shall review submittals for compliance with all of the following items based on preliminary or final site plans and stormwater management plans:

A. Location and size of drainage easements and other areas set aside for stormwater management, and the associated language describing use restrictions;

B. Setback requirements from wells, structures, steep slopes, road right-of-ways and other items related to the location of stormwater management facilities;

C. Location of access drives and associated easements and use restrictions to ensure adequate access to stormwater management facilities for future maintenance;

D. Utility easements as they may affect the grading and erosion control plans;

E. The final maintenance agreement in accordance with sec. 14-343 for all stormwater BMP's;

F. Site drainage requirements under sec. 14-341(d)6.

G. Other items that the LRD determines are necessary to achieve compliance with this ordinance.

3. Review Process. Review procedures for certification of compliance for final plat or CSM shall be as described in sub. (f)1. below.

Note: To avoid disapproval of the final plat, it is recommended that a final stormwater management plan be approved by the LRD prior to submittal of the final plat.

SECTION 7. Repeal and Recreate Section 14-334(f). Application Review Processes.
(Clarify that the County's 10 working day review period also apply to proposed land divisions.)

(f) Application Review Processes.

1. Preliminary Stormwater Review Letter and Certification of Compliance. Upon submittal of a complete application under sub. (b) above or a final plat or CSM under sub. (d) above, the applicant is authorizing the LRD to enter upon the subject site to obtain information needed to administer this ordinance and the following procedures shall apply:

A. The LRD shall have 10 working days from the date the LRD receives the application or proposed land division to issue a review letter to the applicable review authorities and the applicant based on the requirements of this ordinance.

B. If within the 10 working days, the LRD determines that the application is not complete or requests additional information from the applicant or another source (such as another regulatory agency), the LRD shall have 10 working days from the date additional information is received to issue a review letter. The LRD shall inform the applicant and the applicable review authorities when additional information is requested from another source.

C. If the LRD does not notify the applicant of missing information or issue a review letter within the 10 working days, the applicant may continue pursuing other applicable approvals or deed recording without the preliminary stormwater review letter or certification of compliance.

D. If within the 10 working days, the LRD notifies the applicable review authorities that the application under sub. (b)3. above is not complete, information has been requested from another source, or recommended changes or objections to the application need to be addressed before other approvals can proceed, then the applicable review authorities may:

(i) At the request of the applicant, grant an extension to the review period, if needed, to allow more time for the LRD review process to be completed or to address LRD recommendations, requirements or objections to the application; or

(ii) Disapprove the application, plat or CSM.

2. Stormwater Permit < 1 acre Land Disturbance and Applicability Exemptions. Upon submittal of a complete permit application under sub. (c) above or applicability exemption application under sec. 14-333(c), the applicant is authorizing the LRD to enter upon the subject site to obtain information needed to administer this ordinance and the

following procedures shall apply:

A. Within 10 working days from the date the LRD receives the application or proposed land division, the LRD shall inform the applicant whether the application materials are approved or disapproved based on the requirements of this ordinance.

B. If all requirements of this ordinance have been met through the application, the LRD shall approve the application and issue a permit or exemption. If all requirements of this ordinance have not been met, the LRD shall state in writing the reasons for disapproval.

C. If within the 10 working days, the LRD determines that the application is not complete or requests additional information from the applicant or another source (such as another regulatory agency), the LRD shall have 10 working days from the date the additional information is received to review and act on the application. The LRD shall inform the applicant when additional information is requested from another source.

D. Failure of the LRD to inform the applicant of missing information or of a decision within 10 working days shall be deemed to mean approval of the application and the applicant may proceed as if a permit had been issued.

3. Stormwater Permit > 1 Acre Land Disturbance and Technical Exemptions. Upon submittal of a complete application under sub. (c) above or a technical exemption application under sec. 14-341(e), the applicant is authorizing the LRD to enter upon the subject site to obtain information needed to administer this ordinance and the following procedures shall apply:

A. Within 20 working days from the date the LRD receives the application, the LRD shall inform the applicant whether the application materials are approved or disapproved based on the requirements of this ordinance.

B. If all requirements of this ordinance have been met through the application, the LRD shall approve the application and issue a permit. If all requirements of this ordinance have not been met, the LRD shall state in writing the reasons for disapproval.

C. If within the 20 working days, the LRD determines that the application is not complete or requests additional information from the applicant or another source (such as another regulatory agency), the LRD shall have 20 working days from the date the additional information is received to review and act on the application. The LRD shall inform the applicant when additional information is requested.

D. Failure of the LRD to inform the applicant of missing information or of a decision within the 20 working days shall be deemed to mean approval of the application and the applicant may proceed as if a permit had been issued.

SECTION 8. Repeal and Recreate Sec. 14-335. Stormwater Permit Requirements. *(Clarify the role of the Project Engineer in the construction phase, clarify inspection log and permit termination requirements, add phased permits and involuntary permit transfers.)*

(a) General Permit Requirements. Stormwater permits shall be subject to all of the requirements of this section. Violation of any permit requirement shall cause the permit

holder and any other responsible party to be subject to enforcement action under sec. 14-345. Upon issuance of a stormwater permit, the permit holder and any other responsible party shall be deemed to have accepted these requirements. General requirements include all of the following:

1. Other Permits. Compliance with a stormwater permit does not relieve the permit holder or other responsible party of the responsibility to comply with other applicable federal, state, and local laws, rules, deed restrictions and other regulations. The LRD may require the applicant to obtain other permits or plan approvals prior to issuing a stormwater permit.
2. Approved Plans. All best management practices shall be installed and maintained in accordance with approved plans and construction schedules. A copy of the approved plans shall be kept at the construction site at all times during normal business hours.
3. Plan Modifications. The LRD shall be notified of any significant modifications proposed to be made to the approved plans. The LRD may require proposed changes to be submitted for review prior to incorporation into the approved plans or implementation. Any modifications made during plan implementation without prior approval by the project engineer under sub. 6 below and the LRD are subject to enforcement action.
4. Notification. The LRD shall be notified at least 2 working days before commencing any work in conjunction with approved plans. The LRD shall also be notified of proposed plan modifications under sub. 3 above, and within 1 working day of completing construction of a stormwater BMP. The LRD may require additional notification according to a schedule established by the LRD so that practice installations can be inspected during construction.
5. LRD Access. The LRD or its designee shall be permitted access to the site for the purpose of inspecting the property for compliance with the approved plans and other permit requirements.
6. Project Engineer/Landscape Architect. The permit holder shall provide an engineer licensed in the state of Wisconsin to oversee and verify compliance with approved construction plans, including the erosion control plan, stormwater management plan, the inspection log requirements under sub. 7 below, implementation of the approved stormwater BMP construction inspection plan under 14-341(g)10. below, and verification of construction in accordance with sub. (d) below. The LRD may exempt sites from this requirement in whole or in part if the LRD determines the environmental risks are limited, and engineering oversight is not necessary during construction to ensure compliance with this ordinance. If *warm season or wetland plantings* are involved, the permit holder shall also provide a landscape architect or other applicable native vegetation specialist to oversee and verify the planting process and its successful establishment.
7. Inspection Log. All best management practices shall be inspected within 24 hours after each rain event of 0.5 inch or more that results in runoff, or at least once each week. Where land disturbing activity is one (1) acre or greater, or approved plans involve the installation of a stormwater BMP, the permit holder shall provide a qualified professional to conduct inspections and maintain an inspection log for the site. The inspector shall not be the same person charged with installing the required BMPs. The inspection log shall include the name of the inspector, the date and time of inspection, a description of the

present phase of construction, the findings of the inspection, including an assessment of the condition of erosion and sediment control measures and the installation of stormwater management BMPs, and any action needed or taken to comply with this ordinance. The inspection log shall also include a record of BMP maintenance and repairs conducted under subs. 8 and 9 below.

The permit holder shall maintain a copy of the inspection log at the construction site or via the Internet, and shall notify the LRD of the method of availability upon permit issuance. If the inspection log is maintained on site, the LRD may view or obtain a copy at any time during normal business hours until permit termination under sub. (b) below. If the inspection log is made available via the Internet, the permit holder shall notify the LRD of the appropriate Internet address and any applicable access codes, and shall maintain the availability of the log until permit termination under sub. (b) below.

8. BMP Maintenance. The permit holder shall maintain and repair all best management practices within 24 hours of inspection, or upon notification by the LRD, unless the LRD approves a longer period due to weather conditions. All BMP maintenance shall be in accordance with approved plans and applicable technical standards until the site is stabilized and a permit termination letter is issued under sub. (b) below. The permit holder, upon approval by the LRD, shall remove all temporary erosion control practices such as silt fence. The permit holder, in accordance with approved plans and applicable technical standards, shall maintain permanent stormwater management practices until maintenance responsibility is transferred to another party or unit of government pursuant to the recorded maintenance agreement.

9. Other Repairs. The permit holder shall be responsible for any damage to adjoining properties, municipal facilities or drainage ways caused by erosion, siltation, runoff, or equipment tracking. The LRD may order immediate repairs or clean-up within road right-of-ways or other public lands if the LRD determines that such damage is caused by activities regulated by a permit under this ordinance. With the approval of the landowner, the LRD may also order repairs or clean-up on other affected property.

10. Emergency Work. The permit holder authorizes the LRD, in accordance with the enforcement procedures under sec. 14-345, to perform any work or operations necessary to bring erosion control or stormwater management practices into conformance with the approved plans and consents to charging such costs against the financial assurance pursuant to sub. (c) below or to a special assessment or charge against the property as authorized under subch. VII of ch. 66, Wisconsin Statutes

11. Permit Display. The permit holder shall display the stormwater permit in a manner that can be seen from the nearest public road and shall protect it from damage from weather and construction activities until permit termination under sub. (b) below.

12. Other Requirements. The LRD may include other permit requirements that the LRD determines are necessary to ensure compliance with this ordinance, such as a preconstruction or plan implementation meeting prior to issuance of a Stormwater Permit.

(b) Stormwater Permit Issuance, Duration, Amendments, Transfer and Termination.

1. Permit issuance. The LRD shall issue a permit to the applicant after verifying that all applicable conditions of this ordinance and any other related permits have been met,

including the submittal of contact information for all responsible parties and the submittal of the financial assurance under sub. (c) below. The LRD may delay issuance of a stormwater permit if the LRD determines that the proposed construction timelines and best management practices will not comply with the erosion control plan requirements under sec. 14-340 or the purposes of the ordinance under sec. 14-328, including proposed late season new road construction with grass swales. Where needed to ensure timely compliance with construction site stabilization requirements, the LRD may issue multiple or phased Stormwater Permits, such as one for land disturbing activities in accordance with an approved Erosion Control Plan under Sec.14-340 of this ordinance, followed by one for land development activities in accordance with an approved Stormwater Management Plan under Section 14-341 of this ordinance.

Note: The LRD has determined that it is difficult and/or costly to avoid adverse impacts to other property and the environment to construct new roads with grass swales after standard seeding deadlines for cool season grasses.

2. Permit duration. The LRD shall establish an expiration date for all stormwater permits based on the construction schedules in the approved erosion control and stormwater management plans. The applicant shall notify the LRD of any changes to the proposed schedule prior to permit issuance.

3. Permit amendments. The LRD may amend any terms of a stormwater permit, including extending the permit expiration date, if the LRD determines it is necessary to ensure compliance with this ordinance. The applicant shall request an amendment to a stormwater permit at least 2 weeks before permit expiration on a form provided by the LRD for that purpose and shall pay the corresponding fee. The LRD may require additional erosion control or stormwater management measures as a condition of granting a permit amendment.

4. Permit transfer.

A. Voluntary. The LRD may transfer a stormwater permit issued under this ordinance to a new applicant upon a written request from the applicant and payment of the corresponding fee. The permit transfer shall not take effect until the LRD verifies in writing that the new applicant has satisfied all conditions of this ordinance, including an updated list of responsible parties and the submittal of a new financial assurance under sub. (c) below.

B. Involuntary. Upon the death or dissolution of a permit holder, foreclosure or other involuntary transfer of ownership of property subject to a permit, the stormwater permit and all associated rights and obligations shall automatically transfer to the new landowner. The LRD may retain and utilize the financial assurances of the former owner for the purposes set forth in sub. (c) below, and may require additional financial assurances from the new owner.

5. Permit termination. The LRD shall issue a permit termination letter to the permit holder upon releasing the financial assurance under sub. (c) below, which shall serve as documentation that all conditions of this ordinance have been satisfied and the permit has been terminated. A copy of this letter shall also be sent to the Wisconsin Department of Natural Resources and shall serve as the “Notice of Termination” under s.s. NR 216.55 Wis. Admin. Code.

- (c) **Financial Assurance.** 1. Purpose. The LRD may require the applicant to submit a financial assurance to ensure compliance with the approved erosion control and stormwater management plans and other stormwater permit requirements.
2. Type and Authority. The LRD shall determine the acceptable type and form of financial assurance, which may include cash, a bond, an escrow account or irrevocable letter of credit. The LRD shall, upon written notice to the permit holder, be authorized to use the funds to complete activities required in the approved plans or this ordinance if the permit holder or other responsible party defaults or does not properly implement the requirements.
3. Amount. The amount of the financial assurance shall be determined by the LRD and shall not exceed the estimated cost of completing the approved erosion control and stormwater management plans.
4. Exemption. Publicly funded land disturbing or land development activities shall be exempt from providing a financial assurance.
5. Security. The LRD shall provide the permit holder or other responsible party a written statement outlining the purpose of the financial assurance, the applicable amount and type received and all of the conditions for release.
6. Conditions for Release. The LRD shall release the financial assurance, and issue a termination letter in accordance with sub. (b)5. above, only after determining full compliance with the permit and this ordinance, including the following:
- A. Accepting an “as-built” survey certified pursuant to sub. (d)1. below,
 - B. Accepting verification of construction and plantings (if applicable) pursuant to sub. (d)2. below;
 - C. Completing a satisfactory final inspection pursuant to sub (e) below;
 - D. Receiving a copy of the recorded maintenance agreement and any applicable addenda pursuant to sec. 14-343 of this ordinance.
7. Partial Releases. The permit holder may apply for a partial release of the financial assurance based on the completion or partial completion of various construction components or satisfaction of individual requirements noted above.
8. Amounts Withheld. The LRD shall withhold from the financial assurance amount released to the permit holder any costs incurred by the LRD to complete installation or maintenance of best management practices through enforcement action or prior to the transfer of maintenance responsibilities through an approved maintenance agreement, or other unpaid fees or costs incurred by the LRD associated with the enforcement of this ordinance.
9. Other Financial Assurances. The financial assurance provisions of this ordinance shall be in addition to any other financial assurance requirements of the local community for other site improvements. Any arrangements made to share financial assurances with the

local community shall be made at the discretion of the LRD and shall be at least as restrictive the requirements in this ordinance.

(d) Construction and Planting Verification. 1. As-built Survey. To ensure compliance with this ordinance and to serve as a basis for the engineering verification under sub. 2 below, an as-built survey shall be completed in accordance with LRD standards and certified as accurate by a registered land surveyor or an engineer licensed in the State of Wisconsin. As-built plans shall be submitted to the LRD for all stormwater management BMPs, bridges and culverts pursuant to sec. 14-341(d).6.D. below, and other permanent best management practices or practice components as deemed necessary by the LRD to ensure its long-term maintenance. The LRD may require a digital submittal of the as-built survey, in accordance with LRD standards.

2. Verification. A professional engineer licensed in the State of Wisconsin shall verify, in accordance with LRD standards, that the engineer has successfully completed all site inspections outlined in the approved plans and that the construction of all stormwater management BMPs, as determined by the LRD, comply with the approved plans and applicable technical standards or otherwise satisfy all the requirements of this ordinance. If warm season or wetland plantings are involved, a landscape architect or other native plant specialist shall verify the planting process and its successful establishment, in accordance with LRD standards.

3. Design Summaries. Any changes noted in the as-built survey or final design data compared to the design summaries approved with the final stormwater management plans shall be documented and resubmitted to the LRD as part of the verification under sub. 2 above.

(e) Final Inspection. After completion of construction, the LRD shall conduct a final inspection of all permitted sites to determine compliance with the approved plans and other applicable ordinance requirements, including ensuring the site is stabilized. If, upon inspection, the LRD determines that any of the applicable requirements have not been met, the LRD shall notify the permit holder what changes would be necessary to meet the requirements. At the request of the permit holder, the LRD shall provide a notification of noncompliance or a report of final inspection in written or electronic form.

SECTION 9. Repeal and Recreate Sec. 14-340. Erosion Control Plan Requirements.

(Update to meet state erosion control standards, clarify channel stabilization requirements, add BMP design data and spill prevention and response to plan requirements.)

(a) General Erosion Control Plan Requirements and Performance Standards. An erosion control plan shall describe how the permit holder and other responsible party will minimize, to the maximum extent practicable, soil erosion and the transport of sediment from land disturbing activities to waters of the state or other property. To meet this requirement, the following performance standards shall apply:

1. All erosion control plans and associated BMPs shall comply with the planning, design, implementation and maintenance requirements of this ordinance.

2. All erosion control plans shall by design, achieve to the maximum extent practicable, a runoff discharge of no more than 5 tons of sediment per acre per year from sheet and rill

erosion during land disturbing activities, as compared with no sediment or erosion controls, until the site is stabilized.

3. Erosion and sediment control BMPs may be used alone or in combination to meet the above noted performance standard. The requirements of this Section 14-340 are designed to meet this standard.

Note: Soil loss prediction tools are available that can estimate the sediment load leaving the construction site under varying land and management conditions and the application of erosion control BMPs. An example of such a tool is the Universal Soil Loss Equation (USLE), published by the USDA-Natural Resources Conservation Service. The Wisconsin Department of Natural Resources has prepared a model based on the USLE, which may be used to demonstrate compliance with the above noted performance standard.

(b) Guiding Principles for Erosion Control. To satisfy the requirements of this section, an erosion control plan shall, to the maximum extent practicable, adhere to the following guiding principles:

1. Propose grading that best fits the terrain of the site, avoiding steep slopes, wetlands, floodplains, environmental corridors, and any applicable regulatory setbacks from these areas;
2. Minimize, through project phasing and construction sequencing, the time the disturbed soil surface is exposed to erosive forces;
3. Minimize soil compaction, the loss of trees and other natural vegetation and the size of the disturbed area at any one time;
4. Locate erosion control BMPs upstream from where runoff leaves the site or enters waters of the state and outside of wetlands, floodplains, primary or secondary environmental corridors or isolated natural areas; and
5. Emphasize the use of BMPs that prevent soil detachment and transport over those aimed to reduce soil deposition (sedimentation) or repair erosion damage.

(c) Specific Erosion Control Plan Requirements. The following applicable minimum requirements shall be addressed in erosion control plans to the maximum extent practicable. The LRD may establish more stringent erosion and sediment control requirements than the minimums set forth in this section if the LRD determines that an added level of protection is needed to protect an environmentally sensitive area or other property, or to address a change made during plan implementation.

1. Access Drives and Tracking. Provide access drive(s) for construction vehicles that minimize tracking of soil off site using BMPs such as stone tracking pads, tire washing or grates. Minimize runoff and sediment from adjacent areas from flowing down or eroding the access drive.
2. Diversion of Upslope Runoff. Divert excess runoff from upslope land, rooftops or other surfaces, if practicable, using BMPs such as earthen diversion berms, silt fence and downspout extenders. Prevent erosion of the flow path and the outlet.

3. Inlet Protection. Protect inlets to storm drains, culverts and other stormwater conveyance systems from siltation until the site is stabilized.
4. Soil Stockpiles. Locate soil stockpiles away from channelized flow and no closer than 25 feet from roads, ditches, lakes, streams, ponds, wetlands or environmental corridors, unless otherwise approved by the LRD. Control sediment from soil stockpiles. Any soil stockpile that remains for more than 30 days shall be stabilized.
5. Cut and Fill Slopes. Minimize the length and steepness of proposed cut and fill slopes and stabilize them as soon as practicable.
6. Channel Flow. During construction, trap sediment in channelized flow before discharge from the site using BMPs such as sediment traps and sediment basins. Complete final grading and stabilize open channels in accordance with LRD standards as soon as practicable, but in no event later than the first ground freeze or snow cover in the fall.
7. Outlet Protection. Protect outlets from erosion during site dewatering and stormwater conveyance, including velocity dissipation at pipe outfalls or open channels entering or leaving a stormwater management facility.
8. Overland Flow. Trap sediment in overland flow before discharge from the site using BMPs such as silt fence and vegetative filter strips.
9. Site Dewatering. Treat pumped water to remove sediment prior to discharge from the site, using BMPs such as sediment basins and portable sediment tanks.
10. Dust Control. Prevent excessive dust from leaving the construction site through construction phasing and timely stabilization or the use of BMPs such as site watering and mulch – especially with very dry or fine sandy soils.
11. Topsoil Application. Save existing topsoil and reapply a minimum of 4 inches to all disturbed areas for final stabilization, unless otherwise approved by the LRD, such as for temporary seeding or stormwater infiltration BMPs. If adequate topsoil does not exist on the site to meet this requirement, it shall be imported or a topsoil substitute such as compost may be used, upon approval by the LRD.
12. Waste Material. Recycle or properly dispose all waste and unused building materials in a timely manner. Control runoff from waste materials until they are removed or reused.
13. Sediment Cleanup. By the end of each workday, clean up all off-site sediment deposits or tracked soil that originated from the permitted site. Flushing shall not be allowed unless runoff is treated before discharge from the site.
14. Final Site Stabilization. All previous cropland areas where land disturbing activities will not be occurring under the proposed grading plans, shall be stabilized within 30 days of permit issuance. Stabilize all other disturbed areas within 7 days of final grading and topsoil application. Large sites shall be treated in stages as final grading is completed in each stage. Any soil erosion that occurs after final grading or the application of stabilization measures must be repaired and the stabilization work redone.

15. Temporary Site Stabilization. Any disturbed site that remains inactive for greater than 7 days shall be stabilized with temporary stabilization measures such as soil treatment, temporary seeding or mulching. For purposes of this subsection, “inactive” means that no site grading, landscaping or utility work is occurring on the site and that precipitation events are not limiting these activities. Frozen soils do not exclude the site from this requirement.

16. Removal of Practices. Remove all temporary BMPs such as silt fences, ditch checks and sediment traps as soon as all disturbed areas have been stabilized.

17. Site Drainage. Site drainage plans shall comply with the provisions of sec. 14-341(d)6. below.

18. Stormwater BMP Data. When a Stormwater Permit involves the maintenance of an existing stormwater BMP, including the removal of accumulated sediment, the LRD may require additional support data such as before/after surveys, design and construction details, and oversight by a professional engineer licensed in Wisconsin.

(d) Preliminary Erosion Control Plan Contents. Preliminary erosion and sediment control plans shall contain the following items:

1. A site map in accordance with sec. 14-341 (c) below;
2. A brief narrative describing the proposed land disturbing activity, construction timeline and sequencing, and a general review of the major erosion and sediment control BMPs proposed to be used to minimize off-site impacts during the construction phase and to stabilize the site following construction.
3. Delineation of the following items on the map under par. 1 above:
 - A. The area and size (in acres) of the proposed land disturbance;
 - B. The woodland and wetland areas, and the size (in acres) of each that is proposed to be lost during construction and a general description of the current vegetation types and tree sizes;
 - C. The general location of major BMPs described in sub. 1 above.

(e) Final Erosion Control Plan Contents. The following shall be the minimum requirements for items to be included in a final erosion and sediment control plan:

1. Sites Less than One Acre of Total Land Disturbance.

A. A narrative describing the proposed land disturbing activity, construction timeline and sequencing, temporary BMPs to be used to minimize off-site impacts during the construction phase, and proposed methods to stabilize the site following construction in accordance with the requirements of this ordinance;

B. A survey map or scaled site plan drawing of sufficient clarity showing a north arrow, the location of proposed land disturbance, direction of flow for runoff entering and leaving the disturbed area, upslope drainage area (if known), proposed BMPs, existing and

proposed slopes, ground cover, buildings, roads, access drives, property boundaries, drainage ways, water bodies, trees, culverts, utilities and other structures within 50 feet of the proposed land disturbance;

C. The name, address and daytime phone number of the person(s) charged with installing and maintaining all best management practices;

D. For underground utility installations, the plans must delineate where utilities will be installed, show the location of the open cut and the topography in the area, and list the total lineal feet to be installed and the lineal feet that will be done by open cut; and

E. Other information determined to be necessary by the LRD to ensure compliance with the requirements of this chapter.

2. Sites One Acre or Greater in Total Land Disturbance.

A. A site map in accordance with sec. 14-341 (c) below;

B. A map at a scale of 1 inch equals no more than 100 feet (unless otherwise noted), delineating and labeling the following applicable items:

(i) North arrow, graphic scale, draft date, name and contact information for project engineer or planner and designation of source documents for all map features.

(ii) Proposed site topography at contour intervals not to exceed two feet, proposed percent slope for all open channels and side slopes and all proposed runoff discharge points from the site;

(iii) Proposed building envelopes and other land area to be disturbed and size in acres;

(iv) All woodland areas, those proposed to be lost or transplanted during construction and acres or numbers of each. For woodlands proposed to be lost, show individual trees larger than eight (8) inches in diameter that are located within twenty (20) feet of proposed grading boundaries;

(v) Temporary access drive and specified surface material and minimum depth;

(vi) Temporary flow diversion devices for upslope or roof runoff until site is stabilized;

(vii) Temporary sediment trapping devices for site perimeter and inlets to culverts and storm drains;

(viii) Temporary settling basin or other BMP to be used for site dewatering during utility or other subsurface work;

(ix) Temporary soil stockpile sites indicating setbacks from nearby water resources or environmental corridors and the proposed erosion protection methods;

(x) Detailed drawings and cross-sections for any sediment traps, basins or other major cut or fill areas requested by the LRD, showing side slopes and elevations;

(xi) Final stabilization measures for open channels and erosion protection for pipe and channel inlets, outlets and emergency spillways;

(xii) Location of proposed utilities, including: standard cross-section for buried utilities, associated easements, labeling the type of utility and notes on erosion control and restoration plans;

(xiii) Final site stabilization instructions for all other disturbed areas, showing areas to be stabilized in acres, depth of applied topsoil, seed types, rates and methodology, fertilizer, sod or erosion matting specifications, maintenance requirements until plants are well established, and other BMPs used to stabilize the site;

(xiv) Detailed construction notes clearly explaining all necessary procedures to be followed to properly implement the plan, including estimated starting date of grading, timing and sequence of construction or demolition, any construction stages or phases, utility installation, dewatering plans, refuse disposal, inspection requirements, and the installation, use, and maintenance of best management practices proposed in the plan;

(xv) Location of soil evaluations with surface elevations and unique references to supplemental soil evaluations report forms in accordance with sec. 14-342(e) below. Also show estimated highest groundwater table depths and soil textures down to planned excavation depths, which may be on a separate map with sufficient references to the proposed site plan.

Note: Water table depths are needed to plan for dewatering activities for excavations and utility installations and to document compliance with water table separation requirements under sub. 14-341(e) below. The separate map may be at a different scale if needed. Soil textures help the project engineer and grading contractor plan for excavation, soil stockpiles, earthen berm compaction, pond lining, dust control, site stabilization and other grading related activities.

(xvi) Spill prevention and response procedures.

(xvii) Other items specified by the LRD as necessary to ensure compliance with this ordinance.

C. Supporting information for the plan reviewer only:

(i) A narrative summary of the erosion control plan, briefly explaining the overall plan and, any unique information that led to the selection of BMPs and how the plan meets the guiding principles under sub. (b) above and the specific requirements under sub. (c) above;

Note: This information may be combined with a narrative for the stormwater management plan under sec. 14-341(g)12. The information may also be useful to the grading contractor and could be included in the construction notes on the plan map under sub. B(xiv) above.

(ii) Summary of design data for any structural BMP such as sediment basins or sediment traps. A professional engineer, licensed in the State of Wisconsin, shall stamp and sign a statement approving all designs and certifying that they have read the

requirements of this ordinance and that, to the best of their knowledge, the submitted plans comply with the requirements;

(iii) Open channel design and stabilization data to support the selected BMPs for stabilization;

(iv) Soil evaluation reports, in accordance with the standards in Sec. 14-342(e), with unique references and elevations that match the map under sub. B(xv) above.

(v) Estimated time soil stockpiles will exist to support the selected BMPs for erosion control;

(vi) Documentation that proposed utility locations and installation scheduling has been coordinated with the affected utility companies.

(vii) Documentation of any other calculations used to demonstrate compliance with the performance standards in this section.

SECTION 10. Repeal and Recreate Section 14-341. Stormwater Management Plan Requirements. *(Modify stormwater performance standards to meet state codes, including: peak flow, total suspended solids, infiltration, and protective areas. Update site drainage standards for basements partially in groundwater per MBA request, and expand permit technical exemption criteria.)*

(a) General Stormwater Management Plan Requirements. A stormwater management plan shall describe how the permit holder and other responsible party will meet the stormwater management requirements of this section and other related requirements in this ordinance. All stormwater management plans and associated BMPs shall comply with the planning, design, implementation and maintenance requirements described in this ordinance.

(b) Guiding Principles for Stormwater Management. To satisfy the requirements of this section, a stormwater management plan shall, to the maximum extent practicable, adhere to the following guiding principles:

1. Preserve natural watershed boundaries and drainage patterns;
2. Reserve adequately sized areas for stormwater infiltration, detention and treatment early in the site planning process;
3. Locate stormwater BMPs prior to runoff leaving the site or entering waters of the state, and outside of wetlands, floodplains, primary or secondary environmental corridors or isolated natural areas;
4. Minimize soil compaction and maintain pre-development groundwater recharge areas;
5. Minimize impervious surfaces and have them drain to vegetated areas for pollutant filtering and infiltration;
6. Emphasize vegetated swales, warm season and wetland plantings, and low flow velocities for stormwater conveyance, treatment and infiltration, especially for transportation related projects;

Note: Tall, dense, deep-rooted vegetation and low flow velocities in open channels encourages infiltration and increases their effectiveness for runoff pollutant removal. Check dams may also be included in the swale design to slow runoff flows and improve pollutant removal. Soil amendments such as compost can help reduce soil compaction and increase infiltration.

7. Allow for different stormwater management strategies for cleaner runoff (i.e. roofs) versus more polluted runoff (i.e. heavily used streets and parking lots);
8. Provide for emergency overflow in all stormwater BMP designs;
9. Distribute stormwater bioretention and infiltration BMPs throughout the site plan for large land developments;

(c) **Site Plan Map Requirements.** A site plan map and supporting data of site conditions at a scale of 1 inch equals no more than 100 feet (unless otherwise noted) shall delineate or display all the following applicable items:

1. Development title, graphic scale and north arrow;
2. Property location description by public land survey system (1/4 section, section, township, range, county);
3. Location map (smaller scale) showing the site location within a public land survey section or subdivision, oriented the same as par. 4 below;
4. Ownership boundaries, bearings, lengths and other survey references that will accurately identify the sites location, in accordance with s. 236 Wisconsin Statutes and county mapping standards for all land divisions;
5. Lot numbers and dimensions, including outlots for all land divisions;
6. Name and complete contact information for the applicant, landowner, developer and project engineer;
7. Surveyor's certificate, signed, dated and sealed for all land divisions;
8. Sheet numbers and revision dates on every page;
9. Existing site topography at a contour interval not to exceed 2 feet, including spot elevations for physical features such as culvert (invert elevations), retaining walls, road and ditch centerlines and topographic high and low points;
10. Location and name, if applicable, of all lakes, streams, channels, ditches, and other water bodies or areas of channelized flow on or adjacent to the site;
11. Location and name, if applicable, of all wetlands and identification of source of delineation. These boundaries shall be field verified prior to approval of final land divisions, erosion control plans or stormwater management plans;

12. Boundaries of shoreland zones and the ordinary high water mark (OHWM) for any navigable water body as defined by the Waukesha County Shoreland and Floodland Protection ordinance. For final land divisions, the OHWM boundaries shall be field verified;
13. Boundaries and elevation of the 100-year floodplains, flood fringes and floodways, as defined by the Waukesha County Shoreland and Floodland Protection ordinance. For final land divisions, these boundaries and elevations shall be field verified;
14. Boundaries and soil symbol for each soil mapping unit and the identification of all hydric soils as defined by the USDA-Natural Resources Conservation Service;
15. Locations of all available soil borings or soil profile evaluations with unique references to supplemental data report forms;
16. Location of primary and secondary environmental corridors, as defined by the Southeastern Wisconsin Regional Planning Commission. For final land divisions, these boundaries shall be field verified;
17. Location and description of isolated natural area boundaries as defined by the Southeastern Wisconsin Regional Planning Commission, woodland areas and other vegetative cover types;
18. Location and descriptive notes for existing and proposed structures within 50 feet of the property boundaries and their proposed use, including, but not limited to buildings and foundations, roads, parking areas, fence lines, access lanes, culverts (include size and type), above ground utilities and retaining walls;
19. Location and descriptive notes for other known existing site features including, but not limited to rock outcrops or other karst features, tile drains, buried utilities, dumps, landfills, manure or other waste storage facilities;
20. Boundaries and descriptive notes for all applicable setbacks and for “protective areas”, as specified in sec.14-341(d)4. of this ordinance;
21. Location and descriptive notes for any existing or proposed easements, right-of-ways, vision corners or other known site restrictions. Road right-of ways and building setbacks shall be in compliance with all applicable administrative codes, adopted plans and ordinances;
22. Location and descriptive notes for existing and proposed public dedications of parcels or right-of-ways;
23. Location and descriptive notes for preplanned building or waste disposal sites, when limited by site features;
24. Location and documentation of any existing well and delineation of any applicable regulatory setbacks, in accordance with ch. NR 811 and 812 Wis. Admin. Code;

25. Notes describing source documents, date and measure of accuracy for all applicable mapping features noted above;

26. Other site information that the LRD determines is necessary to administer this ordinance.

Note: The LRD will provide the applicant with a written checklist of the above items, including guidance on which items are applicable to the proposed project. Items may need to be displayed on more than one map for purposes of clarity.

(d) Specific Stormwater Management Plan Requirements and Performance Standards.

All stormwater management plans and associated BMPs shall meet the following minimum requirements to the maximum extent practicable. All requirements apply to each subwatershed or stormwater discharge point independently and cannot be averaged for the site. Runoff draining to a stormwater BMP from off-site must be accounted for hydraulically in any BMP design. It is highly recommended that the applicant meet with the LRD prior to preparing a stormwater management plan to determine the applicability of these requirements early in the site planning process.

Note: The “maximum extent practicable” (MEP) standard applies to each of the seven (7) sections of plan requirements and performance standards described below.

1. Peak Discharge. A. Minimum requirement. To minimize downstream bank erosion and the failure of downstream conveyance systems, the calculated post-development peak stormwater discharge rate shall not exceed the calculated pre-development discharge rates for the 1-year, 2-year, 10-year, and 100-year, 24-hour design storms. Modeling requirements for this provision are further described in sec. 14-342 below.

B. Release Rate per Acre. The LRD may establish a maximum allowable release rate on a per acre basis that would supersede the requirements of sub. A. above for certain watersheds after the necessary hydrologic modeling is completed and the maximum release rate is approved by the Stormwater Advisory Committee.

Note: A detailed watershed-based hydrologic analysis can generate a more accurate peak discharge rate for the protection of downstream properties from increased flooding due to the addition of impervious surfaces. This method has been used very effectively in the Milwaukee area and other parts of the country and may be used in Waukesha County in the future.

2. Total Suspended Solids. By design, each stormwater management plan shall meet the following post-development total suspended solids reduction targets, based on average annual rainfalls, as compared to no runoff management controls:

A. For new land development and in-fill development, 80% reduction in total suspended solids load;

B. For redevelopment, 40% reduction of total suspended solids load from parking areas and roads;

Note: The first flush of stormwater runoff from an urban landscape contains the vast majority of pollutants, which tend to be associated with suspended solids. 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 under sub. A above.

3. Infiltration. A. BMPs shall be designed, installed, and maintained to infiltrate runoff in accordance with the performance standards in Table 1, except as provided in subs. D. through H. below.

Table 1
Post-development Infiltration Performance Standards

Percent Connected Impervious Surface	Description/Example land uses	Post-development Infiltration Volume ^a	Maximum Effective Infiltration Area
Up to 40%	Description: Low imperviousness Example land uses: low density residential, parks, cemeteries	90% of pre-development ^b	1% of site
>40% up to 80%	Description: Medium imperviousness Example land uses: medium and high density residential, multi-family residential, industrial, institutional, office park	75% of pre-development	2% of site
>80%	Description: High imperviousness Example land uses: commercial strip malls, shopping centers, commercial downtowns	60% of pre-development	2% of site

^a All percentages are based on average annual rainfall.

^b To avoid downstream flooding and chronic wetness issues from stormwater discharges, the post-development infiltration volume for low density residential developments shall not be less than 25% of the 2-year, 24-hour storm, in accordance with subsection 7. below.

B. Modeling. Refer to sec. 14-342(a) for details on calculating runoff volumes and pre-development conditions.

C. Pretreatment. Pretreatment shall be required before infiltrating parking lot and road runoff from commercial, industrial and institutional areas. The pretreatment shall be designed to protect the infiltration system from clogging prior to scheduled maintenance and to protect groundwater quality in accordance with sub. H below. Pretreatment options may include, but are not limited to, oil/grease separators, sedimentation or bioretention basins, and filtration swales or filter strips. All designs shall comply with the technical standards in sec. 14-342(b).

Note: 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.

D. Infiltration Prohibitions. Due to potential for groundwater contamination, runoff shall not be infiltrated and will not be credited toward meeting the requirements of this subsection for the following:

(i) Runoff from outdoor material storage and loading docks for tier 1 and tier 2 industrial facilities, as identified in NR 216(2) Wis. Admin. Code. Parking lot runoff from tier 1 industrial facilities is prohibited. Parking lot runoff from tier 2 facilities may be infiltrated, but may require pretreatment.

(ii) Runoff from fueling and vehicle maintenance areas, not including rooftops and canopies.

(iii) Infiltration of runoff within 1000 feet up-gradient or within 100 feet down-gradient of karst features.

(iv) 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, not including rooftop runoff.

(v) 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.

E. Separation Distances. Infiltration BMPs shall be located so the characteristics of the soil and the separation distance between the bottom of the infiltration BMP and the elevation of the highest groundwater table or the top of bedrock are in accordance with Table 2.

Table 2

Infiltration BMP Separation Distances and Soil Characteristics

Source Area	Groundwater or Bedrock Separation Distance	Soil Characteristics
Industrial, commercial, and institutional parking lots and roads	5 feet or more	Filtering layer
Residential arterial roads	5 feet or more	Filtering layer
Roofs draining to <i>subsurface</i> infiltration practices	1 foot or more	Native or engineered soil with particles finer than coarse sand
Roofs draining to <i>surface</i> infiltration practices	Not applicable	Not applicable
All other impervious source areas	3 feet or more	Filtering layer

F. Infiltration Exemptions. The infiltration requirements of this subsection may be exempted by the LRD where:

(i) the soils at the proposed bottom of an infiltration system have a measured infiltration rate of less than 0.6 inches per hour using a scientifically credible field test method; and

(ii) the LRD determines it would be impracticable to modify existing soil conditions based on soil profile evaluations extending five (5) feet below the proposed bottom of the infiltration system.

Note: USDA soil textures of sandy clay loam, clay loam, silty clay loam, sandy clay, silty clay, or clay are generally considered unsuitable for infiltration and would require replacement or modification.

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

H. Groundwater protection.

(i) Infiltration systems designed in accordance with this subsection shall, to the extent technically and economically feasible, minimize the level of pollutants infiltrating to groundwater and shall maintain compliance with the preventive action limit at a point of standards application in accordance with Chapter NR 140 Wis. Adm. Code. However, if site-specific information indicates that compliance with a preventive action limit is not achievable, the infiltration BMP may not be installed or shall be modified to prevent infiltration to the maximum extent practicable.

(ii) Notwithstanding (i) above, the discharge from BMPs shall remain below the enforcement standard at the point of standards application.

(iii) All stormwater BMPs shall comply with the applicable provisions of Chapter NR 815 Wis. Admin. Code relating to injection wells.

(iv) All stormwater BMPs shall comply with the provisions of any applicable wellhead protection plan for a community water supply under Chapter NR 811 Wis. Admin. Code.

4. Protective Areas.

A. Definitions. “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 section, “protective area” does not include any area of land adjacent to any stream enclosed within a pipe or culvert, such that runoff cannot enter the enclosure at this location.

(i) For outstanding resource waters and exceptional resource waters, 75 feet.

(ii) For perennial and intermittent streams identified on the Waukesha County GIS system, 50 feet. If there is a discrepancy between the Waukesha County GIS system and the applicable United States Geological Survey 7.5-minute series topographic map, the more stringent stream identification shall apply.

(iii) For lakes, 50 feet.

(iv) For wetlands not subject to (v.), 50 feet.

(v) For highly susceptible wetlands, as determined by the LRD, 75 feet. Highly susceptible wetlands include the following types: calcareous fens, sedge meadows, bogs, low prairies, conifer swamps, lowland hardwood swamps, and ephemeral ponds.

(vi) Wetland boundary delineations shall be made in accordance with Chapter NR 103 Wis. Admin. Code. 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.

(vii) For less susceptible wetlands, 10 percent of the average wetland width, but no less than 10 feet nor more than 30 feet, unless otherwise required by another applicable regulation. Less susceptible wetlands include degraded wetlands dominated by invasive species such as reed canary grass.

(viii) In subsections (i), (iv) and (v) above, 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 Chapter NR 103 Wis. Admin. Code.

(ix) For concentrated flow channels with drainage areas greater than 130 acres, 10 feet.

B. Requirements. The following requirements shall be met for all land development activity located within a protective area:

(i) Impervious surfaces shall be kept out of the protective area, except for structures, as authorized and defined under shoreland and floodland zoning. The erosion control plan shall contain a written site-specific explanation for any parts of the protective area that are disturbed during construction. If there is no practical alternative to locating an impervious surface in the protective area, the stormwater management plan shall contain a written, site specific explanation, and a technical exemption may applied for under sub. (e) below.

(ii) Where land disturbing 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: 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".

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

protective area, but shall not encroach into wetlands, floodplains or primary or secondary environmental corridors.

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

C. **Protective Area Exemptions.** The protective area requirements of this subsection may be exempted in accordance with sub. (e). below and do not apply to the following:

(i) Structures that cross or access surface waters such as boat landings, bridges and culverts;

(ii) Structures constructed in accordance with s. 59.692(1v), Wisconsin Statutes; and

(iii) Sites where runoff does not enter the surface water, including wetlands, without first being treated by a BMP to meet the total suspended solids requirements under sub. 2. above and peak discharge requirements under sub. 1. above, except to the extent that vegetative ground cover is necessary to maintain bank stability.

Note: A vegetated protective area to filter runoff pollutants from post-construction sites described in sub. 4.C above 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.

5. **Fueling and Vehicle Maintenance Areas.** Fueling and vehicle maintenance areas shall 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: 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.

6. **Site Drainage.** Measures shall be implemented to ensure proper site drainage, prevent property damage and protect public health and safety, including the following minimum requirements:

A. **Drainage easement.** Perpetual drainage easements or other deed restrictions shall be recorded on the property to preserve major stormwater flow paths and permanent stormwater BMP locations. Covenants in these areas shall not allow buildings or other structures and shall prevent any grading, filling or other activities that interrupt or obstruct flows in any way. Covenants shall also specify maintenance responsibilities and authorities in accordance with sec. 14-343.

B. **Site grading.** Site grading shall ensure positive flows away from all buildings, roads, driveways and septic systems, be coordinated with the general stormwater drainage patterns for the area, and minimize adverse impacts on adjacent properties.

C. **Street drainage.** All street drainage shall be designed to prevent concentrated flows from crossing the traffic lanes to the maximum extent practicable. Design flow depths at the road centerline for on-street drainage, shall not exceed six (6) inches during the peak flows generated by the 100-year, 24 hour design storm, using planned land use conditions for the entire contributing watershed area.

D. **Bridges and cross-culverts.** All new or modified bridges and cross-culverts shall comply with applicable design standards and regulations, facilitate fish passage and prevent

increased flooding or channel erosion upstream or downstream from the structure. Design flow depths at the road centerline for all crossings shall not exceed six (6) inches during the peak flows generated by the 100-year, 24-hour design storm, using planned land use conditions for the entire contributing watershed area. All predevelopment runoff storage areas within the flow path upstream of bridges and cross-culverts shall be preserved and designated as drainage easements, unless compensatory storage is provided and accounted for in modeling. As-built documentation shall be submitted in accordance with sec.14-335 for all new or modified structures that are located within a mapped floodplain or that the LRD determines to be necessary to maintain floodplain modeling for the applicable watershed.

E. Subsurface drainage. To avoid property and other damages from groundwater, all buildings planned for human occupation on a regular basis shall meet all of the following:

(i) Basement floor surfaces shall be built one (1) foot above the highest groundwater table elevation, as documented in the submitted soil evaluations in accordance with LRD standards. On sloped sites, basements may be allowed partially below the highest groundwater table only on the upslope side if they meet LRD drainage system standards for design, discharge, engineering oversight, and long-term maintenance. For these sites, the 1-foot groundwater separation will be enforced at the further downslope point of the basement.

(ii) Avoid hydric soils as much as possible.

(iii) The LRD shall be notified of any drain tiles that are uncovered during construction, which the LRD may require to be restored or connected to other drainage systems.

(iv) No discharge of groundwater from tile lines, sump pumps or other means shall be allowed onto another person's land or any public space without the written approval of the owner or unit of government.

Note: The LRD has published technical standards to implement the above noted basement/groundwater separation requirements. Refer to a separate document titled "Basement Wetness and Flooding Prevention Standards" on the Waukesha County web site (www.waukeshacounty.gov).

F. Open channels. All open channel drainage systems shall at a minimum be designed to carry the peak flows from a 10-year, 24-hour design storm using planned land use for the entire contributing watershed area. Side slopes shall be no steeper than 3h:1v unless otherwise approved by the LRD for unique site conditions. Open channels that carry runoff from more than 130 acres shall at a minimum be designed to carry the peak flows from a 25-year, 24-hour design storm.

G. Storm sewers. All storm sewers shall be designed in accordance with applicable community technical standards and specifications.

H. Changes to stormwater discharges. For sites where the LRD determines the post-development stormwater discharge flow paths will be significantly different than pre-development conditions, or where proposed stormwater discharges may otherwise have a significant negative impact on downstream property owner(s), the LRD may require the applicant to submit written authorization, record a drainage easement, or complete other legal arrangements with the affected property owner(s) prior to permit issuance.

I. Structure protection and safety. Flows generated by the 100-year, 24-hour design storm under planned land use conditions may exceed the design capacity of conveyance

systems, but shall not come in contact with any buildings. For buildings designed for human occupation on a regular basis, the following additional requirements shall apply:

(i) The lowest elevation of the structure that is exposed to the ground surface shall be a minimum of two (2) feet above the maximum water surface elevation produced by the 100-year, 24 hour design storm, including flows through any stormwater BMP that may temporarily or permanently store water at a depth of greater than one (1) foot; and

(ii) The structure shall be setback at least 50 feet from any stormwater BMP that may temporarily or permanently store water at a depth of greater than one (1) foot, including any internally drained area with a significant contributing watershed and/or limited runoff storage capacity, as determined by the LRD. Setback distance shall be measured from the closest edge of water at the elevation produced by the 100-year, 24-hour design storm. The LRD may exempt existing structures and structures with no basement from this requirement if the LRD determines other site risks are minimal based on soil and site conditions.

Note: The LRD has published technical standards to implement the above noted vertical and horizontal separation requirements for internally drained areas. Refer to a separate document titled "Basement Wetness and Flooding Prevention Standards" on the Waukesha County web site (www.waukeshacounty.gov).

7. Additional Requirements. The LRD may establish more stringent requirements than the minimums set forth in this section, such as addressing thermal impacts of stormwater, downstream flooding, a total maximum daily load (TMDL) standard for a watershed, other applicable state or federal laws, an order of any court of competent jurisdiction, or chronic wetness conditions, if the LRD determines that an added level of protection is needed to protect:

A. A cold water stream, outstanding water resource* or exceptional water resource**, as listed below:

- (i) Brandy Brook
- (ii) Coco Creek
- (iii) Genesee Creek**
- (iv) Jericho Creek
- (v) Mason Creek
- (vi) McKeawn Spring Creek
- (vii) Mill Brook
- (viii) Mukwonago River**
- (ix) Oconomowoc River (between North Lake and Okauchee Lake)**
- (x) Paradise Springs Creek
- (xi) Pebble Creek
- (xii) Rosenow Creek
- (xiii) Scuppernong River
- (xiv) South Branch Scuppernong River
- (xv) Spring Brook
- (xvi) Spring Lake*

B. An environmentally sensitive area;

C. A downstream property;

D. Public health or safety.

(e) Technical Exemptions.

1. Exemption Criteria. Following the provisions of this subsection, the LRD may exempt a site or a portion of a site from meeting certain technical requirements of this section if the LRD determines that exemption criteria under sub. (d) above or one or more of the following applies:

A. Off-Site BMP(s). The requirement has been satisfied through the use of off-site BMP(s). Off-site BMPs could be installed beyond the boundaries of the property covered by the application as part of a regional stormwater management plan or through other legal arrangements. However, to be eligible for this exemption, the off-site BMP(s) must treat runoff from the site covered by the application;

B. No Significant Off-site Impacts. The proposed land disturbing or land development activity is less than one acre in size and the LRD has determined the activity will have no significant impact on another property or an environmentally sensitive area due to internal drainage or other site conditions that limit the potential impacts of runoff from the proposed activity.

Note: Only ordinance requirements that address potential impacts from a proposed stormwater discharge would be eligible for this exemption. Examples of requirements that may still apply to a newly constructed building include drainage easements, setbacks, basement/groundwater separation, and other site drainage or flood prevention standards.

C. Site Conditions. It is impracticable to meet the requirement due to site conditions such as slopes, soils, proximity to existing structures or desirable trees, limited site dimensions, surrounding land uses, the potential for groundwater contamination, public health or safety problems, or other factors beyond the control of the applicant. No site shall be entitled to an exemption under this paragraph due solely to the size of the proposed land development activity in relation to the parcel size. However, the LRD shall provide special consideration in granting exemptions under this paragraph for the following sites:

(i) Redevelopment sites.

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

(iii) Highway projects where limited public right-of-way land is available for the installation of stormwater BMPs.

Note: The LRD may use cooperative working agreements to administer exemptions for municipal road construction or reconstruction projects.

(iv) Land developments with less than 10% of the proposed disturbed area planned to be connected impervious surfaces and the total cumulative area of all impervious areas is less than 1 acre using the final build-out condition.

2. Application for Exemption. An exemption under sub. 1. above may only be granted by the LRD upon the applicant submitting the following items to the LRD, which shall constitute a completed application:

A. A written request describing the provisions of this subsection for which an exception is being requested and an explanation of why;

B. A site plan in accordance with sub. (c) above, including the delineation of the area and size (in acres) to which the exemption would apply and any other stormwater BMPs required to meet this ordinance or as recommended in a regional stormwater management plan;

C. The necessary technical documentation to demonstrate that the site meets one or more of the criteria for which an exemption is being applied, including documentation of the applicable provisions of any regional stormwater management plan that may be involved;

D. For off-site BMP(s) under sub. 1.A. above:

(i) Documentation that the necessary BMP(s) have been properly installed, including as-built plans, construction certification and design summaries in accordance with sec. 14-335(d);

(ii) A copy of the recorded maintenance agreement in accordance with sec. 14-343, and any other easements or legal arrangement that may be involved to ensure the long-term maintenance of the off-site BMP(s).

(iii) Documentation of payment of any applicable fees that may be required by a unit of governmental charged with implementing a regional stormwater management plan.

Note: Fees may be through a stormwater utility district or other unit of government and would usually be based on an equitable distribution of costs for land acquisition, engineering design, construction, certification and maintenance of stormwater BMPs implemented through the regional stormwater management plan.

E. Other materials that the LRD determines to be necessary to make a determination under this subsection or to comply with this ordinance.

3. Review Procedure. The LRD shall review all exemption application materials submitted under sub. 2 above, determine compliance with this section and notify the applicant of a decision within 20 working days of the submittal date, in accordance with the procedures under sec. 14-334(f) above. The LRD Manager shall approve all exemptions under sub. 1.C. above. In consideration of all exemption requests, the LRD shall ensure that the applicant meets the requirements of this section to the maximum extent practicable.

4. Exemption Fee. For those sites that are exempted under this subsection, and are not publicly funded, the applicant shall contribute funds to the LRD to be used exclusively for stormwater BMP implementation or stream restoration expenses within the same watershed, community or county. The amount of the payment shall be based on the average costs for the typical BMP(s) that would have been required on-site to comply with the requirements of this section had an exemption not been granted. The LRD shall publish a fee schedule for this purpose, to be updated as needed to reflect current BMP costs.

5. Appeal. If the applicant does not agree with any determination of the LRD under this subsection, the applicant may appeal the decision pursuant to the procedures in sec. 14-345(c).

(f) **Preliminary Stormwater Management Plan Requirements.** Preliminary stormwater management plans shall contain the following applicable items:

1. Drafting date and contact information for the project engineer with all other mapping elements and scale consistent with the site plan map;
2. Delineation of existing and proposed watersheds, subwatersheds and major flow paths within the site and draining into the site from adjacent properties;
3. Location, type and preliminary design of proposed stormwater BMPs needed to comply with this ordinance;
4. Location and type of major stormwater conveyance systems proposed for the site;
5. Existing and proposed stormwater discharge points;
6. Location and preliminary dimensions of proposed drainage easements;
7. Location of soil borings and soil profile evaluations with surface elevations and unique references to supplemental data sheets, as needed to determine feasibility of any proposed stormwater BMP and to comply with applicable BMP technical standards;

Note: The required location, depth and type of soil evaluations will depend on the stormwater BMPs proposed for the site. In general, soil profile evaluations usually need to extend to a depth of 3-10 feet below the proposed bottom elevation of stormwater BMPs. Refer to BMP technical standards for details.

8. Preliminary location of access lanes for maintenance of stormwater BMPs;
9. Support documentation for the plan reviewer, including:
 - A. A preliminary plan narrative describing site drainage, ultimate receiving water body for off-site discharges, major site restrictions, and how the preliminary stormwater management plan will meet the requirements of this ordinance and other objectives identified by the project engineer;
 - B. Summary of watershed, subwatershed and land use data in acres and the preliminary results of any hydrology calculations;
 - C. Soil profile evaluation data in accordance with BMP technical standards;
 - D. Proposed ownership and maintenance responsibilities for all proposed stormwater BMPs.

Note: Mapping elements may be included in the site plan map.

(g) **Final Stormwater Management Plan Requirements.** Final stormwater management plans shall contain the following applicable items:

1. Drafting date and contact information for the project engineer, with all other mapping elements and scale consistent with the site plan map;

2. Location of existing and proposed stormwater discharge points;
 3. Delineation and labeling of all proposed impervious areas and accompanying area computations;
 4. Final design drawings of all proposed stormwater BMPs with unique references to support documentation, prepared in accordance with minimum LRD standards and of sufficient clarity for those responsible for site grading, including:
 - A. Plan views showing the location of proposed BMPs in combination with the site plan map at a scale of 1 inch equals no more than 100 feet;
 - B. Additional detail plan view drawings at a scale of 1 inch equals no more than 40 lineal feet, showing proposed 2 foot contours and all critical design features and elevations;
 - C. Detailed cross-sections and profiles of each BMP showing all critical design features, side slopes, structures, soil profiles and applicable elevations, including highest groundwater table;
 - D. Detailed drawings or material specifications for inlets or outlets.
 5. Type, size, location and cross-sections of all pipes, open channels, grade stabilization structures and other proposed stormwater conveyance systems, with unique references to support documentation;
 6. Location and dimensions of proposed drainage easements;
 7. Location, dimensions and surfacing material or soils data of proposed access lanes and delineation of easements needed to allow future maintenance of all stormwater BMPs in accordance with sec. 14-343(b) below. The minimum width of any access easement shall be 15 feet;
 8. Location of soil borings and soil profile evaluations with surface elevations and unique references to supplemental data sheets, as needed to determine feasibility of any proposed stormwater BMP and to comply with applicable technical standards;
 9. Detailed construction notes explaining all necessary procedures to be followed to properly implement the plan, including planting and landscaping specifications, timing and sequencing of construction and any temporary measures needed to protect BMPs during the construction phase;
- Note: Some BMPs, such as infiltration and bioretention practices, are susceptible to sedimentation and may need to be protected during construction or planned for construction later in the project sequence.*
10. A detailed stormwater BMP construction inspection plan, outlining the critical elements in the plan that need to be surveyed or inspected by a representative of the project engineer, the LRD or the municipality, and the timing and notification requirements involved.

Note: Examples of critical elements for a construction inspection plan include, but are not limited to: checking subgrade elevations or the placement of footings, pipes or other structures prior to covering, soil testing, material inspections and final grade checks before seeding. Any inspections conducted by the LRD or the municipality does not waive the permit holder's responsibility for construction oversight and verification.

11. A final stormwater BMP maintenance agreement in accordance with sec. 14-343;
12. Support documentation summarized in accordance with LRD standards, including but not limited to:

- A. A narrative summary of the stormwater management plan, briefly explaining any unique information that led to the selection of BMPs, how the proposed plan meets the guiding principles under sub. (b) above, and the specific stormwater planning requirements under sub. (d) above.

Note: The narrative can be combined with the narrative for erosion control planning under sec. 14-340 above. Some provisions may also be included in the construction notes under sub. 9. above.

- B. Maps of existing and proposed watersheds, subwatersheds, Tc/Tt flow paths, soil types, hydrologic soil groups, land uses/cover type and accompanying runoff curve numbers within the site and draining into the site from adjacent properties, with unique references to hydrology data summaries and a description of the ultimate receiving water body(s) for off-site discharges;

- C. Pre-development and post-development hydrology and pollutant loading (if applicable) data for each watershed, such as peak flows and runoff volumes, as needed to meet the requirements of this ordinance. All major assumptions used in developing input parameters shall be clearly stated and cross-referenced to the maps under par. B. above;

- D. Impervious surface maps and calculations of runoff volumes and effective infiltration areas, in accordance with sub. (d).3. above.

- E. Hydraulic and hydrologic data summaries for all existing and proposed pipes, open channels, grade stabilization structures and other stormwater conveyance systems, and the necessary documentation to demonstrate compliance with the site drainage requirements under sub. (d).6. above.

- F. BMP design data for each proposed BMP, showing how it complies with applicable technical standards and the requirements of this ordinance;

- G. Soil evaluation reports, following the standards in sec. 14-342(e), with matching references to map features showing their location and elevations;

- H. A cover sheet stamped and signed by a professional engineer registered in the State of Wisconsin indicating that all plans and supporting documentation have been reviewed and approved by the engineer and certifying that they have read the requirements of this ordinance and that, to the best of their knowledge, the submitted plans comply with the requirements

- I. Cost estimates for the installation of proposed stormwater BMPs, which shall serve as a basis for the financial assurance under sec. 14-335(c) above. The applicant may use average costs for BMP installations in the county rather than specific estimates, upon approval by the LRD.

- J. For sites where changes are proposed in stormwater flow paths, or where proposed

stormwater discharges may otherwise have a significant negative impact on downstream property owner(s), the LRD may require the applicant to submit written authorization or complete other legal arrangements with the affected property owner(s); and

13. Other items deemed necessary by the LRD to ensure compliance with the requirements of this ordinance.

SECTION 11. Repeal and Recreate Section 14-342. Technical Standards and Specifications. *(Added state model references; updated rainfall depths per National Weather Service; updated runoff curve numbers per NR 151; updated rainfall distribution per NRCS (TR-55); updated state agency references for soil evaluations (SPS).)*

(a) **Hydrologic and Hydraulic Computations.** 1. Models. All computations of runoff volumes and peak flow rates used in the development of erosion control and stormwater management plans in accordance with this ordinance shall be based on United States Department of Agriculture - Natural Resources Conservation Service (NRCS) methodology. Models such as SLAMM, P8 or other LRD approved models may be used to evaluate the efficiency of the design in reducing total suspended solids to meet this ordinance. Models such as SLAMM, RECARGA or other LRD approved models may be used to evaluate the efficiency of the design in meeting the infiltration requirements of this ordinance. Models distributed and supported by the Wisconsin Department of Natural Resources may be used to determine compliance with calculating soil loss on construction sites.

2. Rainfall depths. To determine compliance with this ordinance, the following design storm rainfall depths shall be used, which are derived from NRCS publications and extrapolated for Waukesha County:

**Table 3
Rainfall Depths per Design Storm: Waukesha County**

Design Storm	1-year 24-hour	2-year 24-hour	10-year 24-hour	100-year 24-hour
Rainfall Depth	2.4 inches	2.7 inches	3.81 inches	6.18 inches

Note: The above noted rainfall depths are used in NRCS runoff modeling methodology and are based on Volume 8 of Atlas 14, published by the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service, 2013.

3. Runoff curve numbers. All computations of pre-development conditions as specified in this ordinance shall use those NRCS runoff curve numbers assigned for a “good” hydrologic condition for each land cover type. For lands where the pre-development land use was woodland, grassland/meadow, or cropland, the following NRCS curve number values shall be used as maximums:

**Table 4
Maximum Runoff Curve Numbers for Certain Predevelopment Land Uses**

Predevelopment Land Use	Hydrologic Soil Group (letter) / Maximum Runoff Curve Number (#)			
	A	B	C	D

Woodland	30	55	70	77
Grassland/meadow	39	61	71	78
Cropland	55	69	78	83

Note: Soil hydrologic groups are available from the LRD and can be found on the county GIS System.

4. Average annual rainfalls. All modeling involving average annual rainfall or runoff volumes shall use rainfall data from the Milwaukee area between March 28 and December 6, 1969 as the typical annual rainfall pattern for Waukesha County, unless otherwise prescribed in BMP design standards.

Note: A copy of the rainfall data noted above is available from the LRD.

5. Rainfall distribution. All peak flow calculations shall use MSE3 rainfall distribution patterns, as defined in NRCS methodologies.

6. Other methods. All velocity and peak flow computations for open channels and storm sewer pipe flows shall be based on Manning’s Formula. Flow routing, culvert design, weir and orifice flow and other related hydraulic computations used to design stormwater management facilities shall be based on standard applicable engineering formulas. Any design data or methodology proposed to be used for hydrologic or hydraulic computations other than those prescribed in this ordinance shall be approved by the LRD. Revisions or updates to the rainfall depths and distribution prescribed above may be allowed upon approval by the applicable regulatory agencies, the Stormwater Advisory Committee and the LRD.

(b) **Best Management Practice (BMP) Design Standards.** 1. The design, installation and maintenance of all BMPs used to meet the requirements of this ordinance shall comply with the technical standards identified, developed or disseminated by the Wisconsin Department of Natural Resources under subchapter V of ch. NR 151, Wis. Adm. Code.

2. Where BMP standards have not been identified or developed under sub. 1 above, the LRD may approve the use of other available standards, such as those from other states or the USDA-Natural Resources Conservation Service.

(c) **Technical Guidelines.** The LRD may adopt technical guidelines to facilitate the consistent administration of certain provisions of this ordinance. The LRD shall seek the expertise and input from the Stormwater Advisory Committee and other agencies in the development and maintenance of technical guidelines under this subsection.

Note: Examples of technical guidelines that the LRD has published in the past include sample stormwater BMP maintenance agreements, channel & slope stabilization design charts, hydrology and BMP design data summary tables, as-built survey specifications, outlet design guidance, sample cross-sections and sample stormwater management plan documents.

(d) **Construction Specifications.** The construction or installation of all BMPs and BMP components shall comply with all applicable manufacturers and industry standards and

specifications, including but not limited to those published by ASTM and the USDA - Natural Resources Conservation Service (NRCS).

- (e) **Soil Evaluations.** All soil profile evaluations and forms submitted for review by the LRD under the provisions of this ordinance shall be completed in accordance with Chapter SPS 385 Wis. Admin. Code and any applicable state or LRD standards. Where there are no specific standards for the number, location or depth of soil profile evaluations for a proposed BMP, the LRD shall determine the minimum requirements based on the design of the BMP and the likely variability of the on-site soils.

Note: For details on adopted LRD soil investigation procedures and forms to determine compliance with basement/groundwater separation requirements, see separate document titled "Basement Wetness and Flooding Prevention Standards".

- (f) **Availability.** Copies of all technical references made in this section shall be available for review and distribution through the LRD office during normal business hours, or over the Internet. Fees may be charged for hard copies of these items.
- (g) **Future Revisions or Updates.** The technical references in this section are made a part of this ordinance and shall be updated periodically in order to keep current with field experiences, research, technological advances and the development of related technical standards by other agencies and units of government. Any future revisions of the documents incorporated herein are also made part of this ordinance unless otherwise acted upon by the LRD.

SECTION 12. Repeal and Recreate Subsections 14-343(a) and (b). Maintenance of Stormwater BMPs. *(Added language for sites that meet ordinance requirements under existing drainage; clarified applicability to new land divisions; added review process for BMPs that use groundwater pumping; corrected statutory reference for special changes.)*

- (a) **Maintenance Agreement Required.** A maintenance agreement shall be required for all permanent stormwater BMPs installed to comply with the requirements of this ordinance. The maintenance agreement shall be independent of all other restrictions or covenants and shall comply with all provisions of this section. For sites where the existing drainage system meets the requirements of this ordinance, the LRD may require a maintenance agreement on pre-existing BMPs or internally drained areas to ensure the preservation and maintenance of the existing drainage system.
- (b) **Agreement Provisions.** The maintenance agreement shall, at a minimum, contain the following information and provisions:
 1. **Ownership.** Identification of the owner(s) of the land parcel(s) where the stormwater BMP(s) is located. Ownership shall be the same as those assigned maintenance responsibilities under sub. 6. below, unless otherwise designated in a regional stormwater management plan and approved by the applicable unit(s) of government. For new land divisions, plats and certified survey maps, all stormwater BMPs that collect runoff from more than one lot shall be located on outlots. For all privately owned outlots, ownership shall be by proportional undividable interest for all properties that are within the control of the applicant and drain to the BMP. However, the applicant may combine ownership of more than one BMP within the site;

2. Location. A legal description and survey map of the stormwater BMP location(s), showing associated drainage or access easements required to maintain the BMP;

3. Design. Detailed drawings of each stormwater BMP and a general description of its purpose and design, including but not limited to BMP dimensions and elevations, inlet and outlet designs and elevations and the drainage area served by the BMP. If possible, use as-built survey information.

Note: As-built information may not yet be available for new land divisions, depending on the timing of recording. In this case, use design information. See sub. (c)3. below for details on recording procedures.

4. Maintenance plan. A description of all long term maintenance activities that will likely be required for each BMP included in the agreement, and an estimated time interval between each activity. No maintenance plan may include provisions for pumping groundwater from a well to maintain proposed pond water levels, unless approved by the LRD to ensure compliance with this ordinance.

5. Access. Authorization for vehicle access, including a minimum 15-foot wide access easement dedicated to the local municipality and connecting to a public road right-of-way, to allow for future BMP maintenance work. The access easement shall be of adequate soil conditions or surfacing to withstand loads produced by standard construction equipment, and shall not include any area where channelized flow of runoff occurs or where stormwater may pond to a depth greater than six (6) inches during a 100-year, 24-hour design storm.

6. Maintenance responsibility. Identification of the person(s), organization, municipality or other entity responsible for long-term maintenance of the stormwater BMP. The assignment of maintenance responsibilities for a privately owned stormwater BMP shall, at a minimum, include all properties that are within the control of the applicant and drain to the BMP. However, the applicant may combine the maintenance responsibilities of more than one BMP within the site;

7. Inspections. Authorization for access to the property by representatives of the local municipality or their designee and Waukesha County to conduct inspections of the BMP, monitor its performance and maintenance, and notify the designated entity when maintenance or repair activities are necessary. A statement shall also be included that says, upon written notification by the local municipality or their designee, that the entity under sub. 6. above shall, at their own cost and within a reasonable time period, have a BMP inspection conducted by a qualified professional, file a report and complete any maintenance or repair work recommended in the report;

8. Municipal maintenance. Authorization for the local municipality or their designee to carry out any maintenance activities and associated inspections if the entity identified under par. 6 above does not perform the required activity within the specified time period in the notification or if the local municipality does not accept the work conducted by the designated entity;

9. Special assessment. A statement that the applicable local unit of government may exercise their statutory authority to levy and collect a special assessment or charge pursuant

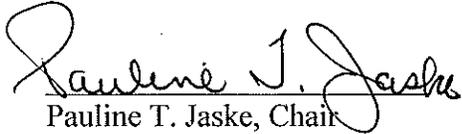
to subch. VII of ch. 66 Wisconsin Statutes, or s. 66.0627, Wisconsin Statutes for towns, for any services carried out relating to sub. 7 or 8 above;

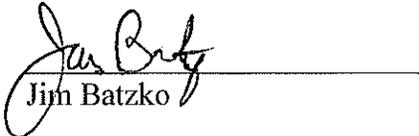
10. Binding agreement. A statement confirming that the entire agreement shall remain binding on all subsequent owners of the property upon which the stormwater BMP is located and that the restrictions shall run with the land and on any other property which is subject to maintenance responsibility in the agreement.
11. Agreement modifications. Sole authorization for the unit of government named under sub. 9. above to modify the provisions of the agreement upon 30-day notice to the current owner(s) and other parties responsible for maintenance of the stormwater BMP. Any changes made to the agreement shall maintain the minimum items listed in this subsection and ensure the long term maintenance of the BMP;
12. Other. Other information as determined to be necessary by the LRD to ensure compliance with this ordinance.

Note: Many of the above noted activities may be carried out in accordance with an intergovernmental working agreement under s. 66.30 Wisconsin Statutes.

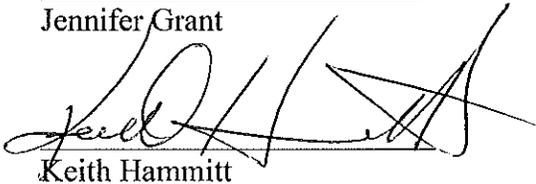
AMEND THE WAUKESHA COUNTY STORMWATER MANAGEMENT
AND EROSION CONTROL ORDINANCE

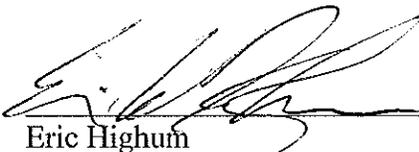
Presented by:
Land Use, Parks, and Environment Committee

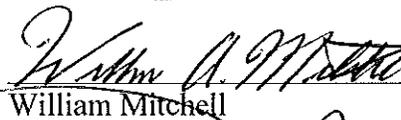

Pauline T. Jaske, Chair


Jim Batzko

Absent
Jennifer Grant


Keith Hammitt


Eric Highum


William Mitchell


Thomas J. Schellinger

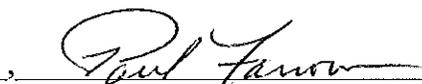
The foregoing legislation adopted by the County Board of Supervisors of Waukesha County, Wisconsin, was presented to the County Executive on:

Date: 1/26/16, 
Kathleen Novack, County Clerk

The foregoing legislation adopted by the County Board of Supervisors of Waukesha County, Wisconsin, is hereby:

Approved: X

Vetoed: _____

Date: 1/27/16, 
Paul Farrow, County Executive

WAUKESHA COUNTY BOARD OF SUPERVISORS

V

DATE-01/26/16 (ORD) NUMBER-1700082

1 R. KOLB.....AYE
 3 R. MORRIS.....AYE
 5 J. BRANDTJEN.....AYE
 7 J. GRANT.....AYE
 9 J. HEINRICH.....AYE
 11 C. HOWARD.....AYE
 13 P. DECKER.....AYE
 15 B. MITCHELL.....AYE
 17 D. PAULSON.....AYE
 19 K. CUMMINGS.....AYE
 21 W. ZABOROWSKI.....AYE
 23 K. HAMMITT.....AYE
 25 G. YERKE.....AYE

2 D. Zimmermann.....AYE
 4 J. BATZKO.....AYE
 6 J. WALZ.....AYE
 8 E. HIGHUM.....AYE
 10 D. SWAN.....AYE
 12 P. WOLFF.....AYE
 14 C. PETTIS.....AYE
 16 M. CROWLEY.....AYE
 18 L. NELSON.....AYE
 20 T. SCHELLINGER.....AYE
 22 P. JASKE.....AYE
 24 S. WHITTOW.....AYE

TOTAL AYES-25

TOTAL NAYS-00

CARRIED _____

DEFEATED _____

UNANIMOUS X

TOTAL VOTES-25