

**KENOSHA COUNTY STORMWATER MANAGEMENT,
EROSION CONTROL, AND ILLICIT DISCHARGE
ORDINANCE**

BEING

CHAPTER 17

OF THE MUNICIPAL CODE OF KENOSHA COUNTY



EFFECTIVE DATE

03/05/10

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Kenosha County
Chapter 17

**Stormwater Management, Erosion Control, and Illicit
Discharge Ordinance**

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I. INTRODUCTION

A. Authority for Ordinance

17.01-1 This ordinance is adopted by the County Board under the authority granted by sections 59.693 and 92.07(15) and Chapter 236 Wisconsin Statutes.

B. Findings

17.02-1 The Kenosha County Board finds that uncontrolled stormwater runoff and construction site erosion from land development and land disturbing activity can have significant adverse impacts upon local water resources and the health, safety and general welfare of the community, and diminish the public enjoyment and use of natural resources. Specifically, uncontrolled soil erosion and stormwater runoff can:

- (a) Degrade physical stream habitat by increasing stream bank erosion, increasing stream bed scour, diminishing groundwater recharge, diminishing stream base flows and increasing stream temperatures;
- (b) Diminish the capacity of lakes and streams to support fish, aquatic life, recreational and water supply uses by increasing pollutant loadings of sediment, suspended solids, nutrients, heavy metals, bacteria, pathogens and other urban pollutants;
- (c) Alter wetland communities by changing wetland hydrology and increasing pollutant loads;
- (d) Reduce the quality of groundwater by increasing pollutant loading;
- (e) Threaten public health, safety, property, and general welfare by increasing runoff volumes and peak flood flows and overburdening storm sewers, drainage ways and other storm drainage systems;
- (f) Undermine floodplain management efforts by increasing the incidence and levels of flooding.

C. Purpose and Intent

17.03-1 The general purpose of this ordinance is to establish regulatory requirements for land development and land disturbing activities aimed to minimize the threats to public health, safety, welfare, and the natural resources of Kenosha County from construction site erosion and post-construction stormwater runoff. Specific purposes are to:

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

- 17.03-2 This ordinance is intended to meet the current construction site erosion control and post-construction stormwater management regulatory requirements of Subchapter III of both NR 151 and NR 216 Wis. Admin. Code on the effective date of this ordinance. Nothing in this ordinance prevents the Wisconsin Department of Natural Resources from adopting or enforcing more stringent stormwater management requirements in future revisions of Wis. Admin. Code.
- 17.03-3 Provisions have also been incorporated to coordinate the stormwater permit requirements of this ordinance with other county and town regulations and adopted watershed studies.
- 17.03-4 The County Board recognizes that the preferred method of addressing post-construction stormwater runoff from land development activities is through the preparation and implementation of regional stormwater management plans that cover hydrologic units, such as watersheds or subwatersheds. Accordingly, provisions have been incorporated into this ordinance to allow for the implementation of a regional stormwater management plan in lieu of complying with certain on-site stormwater management requirements.

D. General Administration

- 17.04-1 The Kenosha County Department of Planning and Development (“P&D”) is designated to administer and enforce this ordinance.

E. Jurisdiction

- 17.05-1 Jurisdictional Boundaries
This ordinance applies to all unincorporated lands within the Kenosha County jurisdictional boundaries.

II. STORMWATER MANAGEMENT

A. Applicability and Exemptions

17.06-1 Stormwater Management Applicability

Unless otherwise exempted in this ordinance, a stormwater permit under Sec II. 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:

- (a) Is a subdivision plat
- (b) Any land development activity that may ultimately result in the addition of 0.5 acres or greater of impervious surfaces or that may result in land disturbing activity of one acre or greater.
- (c) Involves the construction of any new public or private road
- (d) Is a land development activity, regardless of size, that P&D 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.

17.06-2 Applicability Exemptions

The following activities shall be exempt from all of the stormwater 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. To recognize an exemption under this paragraph, P&D may require documentation of the person(s) and regulatory agency charged with enforcing stormwater management for the project.
- (c) Land disturbing activity directly involved in the installation and maintenance of private on-site waste treatment systems (POWTS), as regulated under Chapter 15 of the County Code of Ordinances.
- (d) Land disturbing activities conducted for a project designed, funded or implemented under the supervision of the County Land and Water Conservation Division, the USDA Natural Resource Conservation Service, or the Wisconsin Department of Agriculture Trade, and Consumer Protection, if conducted according to County Conservation Standards.
- (e) Land disturbing activities required for the construction of individual one and two family residential buildings under COMM 21.125 Wisconsin Administrative Code or any accessory structures which are not regulated under COMM 21.125 or COMM 20.25 Wisconsin

Administrative Code. This exemption applies to individual buildings only. Larger developments that include one and two family residential buildings such as subdivisions are not exempt from meeting the requirements of this ordinance.

- (f) Nonmetallic mining activities that are covered under a nonmetallic mining reclamation permit under NR 135 Wisconsin Administrative Code and regulated under Chapter 13 of the County Code of Ordinance.
- (g) Placement of underground pipe or other utility that is plowed or bored into the ground outside areas of channelized runoff.
- (h) Other exemptions P&D may exempt a site or portion of a site from meeting certain technical requirements or provisions under unique site conditions.

B. Stormwater Permit Processes

17.07-1 Permit Required

A stormwater permit under Section II.C. shall be obtained pursuant to the applicability and exemption provisions of Section 17.06-2 of this ordinance. Based upon the scope of the project a preliminary stormwater plan approval under Section 17.09-6 may be required and final stormwater plan approval under Section 17.09-7 will be required prior to final plat submittal or before any person commences a land disturbing or land development activity.

17.07-2 Preliminary Stormwater Plan

(a) Purpose and Intent

A preliminary stormwater plan is required by P&D to ensure that early site-planning for any new development accounts for compliance with this ordinance.

(b) Applicability

1. In accordance with the applicability provisions described in Section 17.06-2 of this ordinance.
2. P&D shall on a case by case basis determine whether the preliminary stormwater plan requirement be waived based on the site plan submitted at the initial concept meeting. If it is determined that the requirement is waived, the applicant can directly apply for final stormwater plan approval as described in Section 17.07-3.

(c) Preliminary Stormwater Plan Application.

1. To request preliminary stormwater plan approval, the applicant shall submit a complete application to P&D, which shall include all of the following:
 - a. A completed and signed application on a form provided by P&D for that purpose;
 - b. A complete and signed Stormwater Management Plan Requirements Checklist (preliminary portion only);
 - c. A complete and signed Erosion Control Plan Requirements Checklist (preliminary portion only);

- d. A complete Site Plan Map Requirements Checklist;
 - e. The application fee, unless exempted under Section 17.07-4;
 - f. Preliminary stormwater management plan in accordance with Section 17.09-6;
 - g. Preliminary erosion control plan in accordance with Section 17.15-4;
 - h. A site plan map in accordance with Section 17.09-5;
 - i. Plans in digital format if deemed necessary by P&D as described in Section 17.07-2(c)2.
2. P&D may require that existing site contours, existing site plans, proposed site contours, and proposed site plans be submitted in a digital .dwg format (AutoCAD, v. 2004 or later) including georeferencing map data to the public land survey system in accordance with county mapping standards.
 3. Review procedures for a preliminary stormwater plan application shall be in accordance with Section 17.07-2(d).

Note: Copies of the preliminary stormwater plan documents as listed in Sec. 17.07-2(c) shall be provided to the appropriate Town Administrator upon submission to the County.

(d) Preliminary Stormwater Plan Review and Approval

Upon submittal of a complete application under Section 17.07-2(c), the owner is authorizing P&D to enter upon the subject site to obtain information needed to administer this ordinance and the following procedures shall apply:

1. If all preliminary requirements of this ordinance have been met through the application, P&D shall approve the preliminary stormwater plan and the applicant can apply for a final stormwater plan approval as described in Section 17.07-3(c).
2. If all preliminary requirements of this ordinance have not been met, P&D shall state in writing the reasons for disapproval. In an effort to save the Developer/Owner time and money, the preliminary stormwater plan process is used to verify that the site plan as provided will meet final stormwater requirements prior to the submission of comprehensive design plans. For most sites, P&D intends to review the preliminary plans only once. Any comments generated from the review should be incorporated into the final stormwater management plans.
3. If P&D determines that the application is not complete or requests additional information from the applicant or another source (such as another regulatory agency), P&D shall inform the applicant in writing or may disapprove the preliminary stormwater application.

Note: The Land Use Committee will not consider any action until preliminary stormwater plans are approved by P&D.

17.07-3

Final Stormwater Plan

(a) Purpose and Intent

A final stormwater plan is required by P&D to ensure compliance with this ordinance. A final stormwater plan approval is required prior to final plat submittal and prior to the start of any proposed land disturbing or land development activity.

(b) Applicability

In accordance with the applicability provisions described in Section 17.06-2 of this ordinance.

(c) Final Stormwater Plan Application

1. To request a final stormwater plan approval under this ordinance, the applicant shall submit a complete application, which shall include all of the following:
 - a. A completed and signed application on a form provided by P&D for that purpose;
 - b. A complete and signed Stormwater Management Plan Requirements Checklist;
 - c. A complete and signed Erosion Control Plan Requirements Checklist;
 - d. A complete Site Plan Map Requirements Checklist;
 - e. The applicable fee(s), unless exempted under Section 17.07-4;
 - f. A final stormwater management plan in accordance with Section 17.09-7.
 - g. A final erosion control plan in accordance with Section III.
 - h. A site plan map in accordance with Section 17.09-5.
 - i. Plans in digital format as described in Section 17.07-3(c)2.
2. P&D shall require that existing site contours, existing site plans, proposed site contours, and proposed site plans be submitted in a digital .dwg format (AutoCAD, v. 2004 or later) including georeferencing map data to the public land survey system in accordance with county mapping standards.
3. Review procedures for a final stormwater plan approval shall be in accordance with Section 17.07-3(d).
4. Financial assurance in accordance with Section 17.08-3 shall be in place prior to the start of the preconstruction meeting required as part of Section 17.08-1(d).

Note: A final stormwater plan application form under Section 17.07-3(c)1.a. is not necessary if the applicant has already submitted an application for a preliminary stormwater plan.

Note: Copies of the final stormwater plan documents as listed in Sec. 17.07-3(c) shall be provided to the appropriate Town Administrator upon submission to the County.

(d) Final Stormwater Plan Review and Approval

1. P&D shall review submittals for compliance with all of the items based on final site plans and stormwater

management plans in accordance with Section II.D. of this ordinance.

2. Upon submittal of a complete application under Section 17.07-3(c) or a technical exemption application under Section 17.09-4, the owner is authorizing P&D to enter upon the subject site to obtain information needed to administer this ordinance and the following procedures shall apply:
 - a. If all requirements of this ordinance have been met through the application, P&D shall approve the final application and issue a Stormwater Permit. If all requirements of this ordinance have not been met, P&D shall state in writing the reasons for disapproval.
 - b. If the P&D determines that the application is not complete or requests additional information from the applicant or another source (such as another regulatory agency), P&D shall inform the applicant and may disapprove the final stormwater application

Note: The Owner/Developer and Project Engineer may be required, as deemed necessary, to meet representatives of P&D in person to discuss any outstanding issues or review comments in an effort to avoid an unnecessary number of project reviews and shorten the review process time.

- (e) Stormwater Permit
Upon issuance of a stormwater permit, the permit holder agrees to all conditions in accordance with Section II.C.
- (f) Stormwater Permit Termination
Upon project completion P&D shall issue a notice of termination in accordance with Section 17.08-2(e) confirming that all conditions of the permit have satisfied and all required fees have been paid to Kenosha County.

17.07-4

Fees

All persons, firms, or corporations performing work which by this ordinance requires the issuance of a permit shall pay a fee to the Kenosha County Department of Planning and Development to defray the cost of administration, investigation, and processing of the permit. Application and review fees under this ordinance shall be in accordance with the following:

- (a) All fees shall be established by P&D and approved by the County Land Use Committee.
- (b) A fee schedule shall be available for review and public distribution.
- (c) A fee shall be charged for each individual stormwater, erosion control, or as-built review submittal or re-submittal.
- (d) Kenosha County and any town located within Kenosha County shall be exempt from payment of any of the fees in this Chapter unless a hired consultant as determined by the County is paid to perform the review. Under such circumstances, the applicant shall be required to pay the actual fees of the consultant. If said fees are not paid by the applicant to Kenosha County within forty-five (45) days of a billing sent to the applicant, the application shall

be deemed incomplete and no permits shall be issued until the bill is paid in full and all applicable requirements are met by the applicant.

C. Stormwater Permit

17.08-1 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 Section V. 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:

(a) Other Permits

Compliance with the final stormwater plan does not relieve the applicant or other responsible party of the responsibility to comply with other applicable federal, state, and local laws and regulations. P&D may require the applicant to obtain other permits or plan approvals prior to issuing the stormwater permit.

(b) 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.

(c) Plan Modifications

P&D shall be notified of any modifications (including field changes) proposed to be made to the approved plans. P&D 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 Section 17.08-1(g) and P&D are subject to enforcement action.

(d) Meetings

A minimum of one meeting shall be held prior to beginning construction to discuss the contractor roles and schedule of the project. This meeting shall be referred to as the preconstruction meeting. At a minimum, the Project Engineer, the Contractor, the Owner/Developer, and appropriate Town Representatives shall attend the meeting. P&D shall reserve the right to require additional attendees as necessary. The meeting shall be scheduled with P&D, with no less than a five (5) working day notice. Financial assurance in accordance with Section 17.08-3 shall be in place prior to holding this meeting.

(e) Notification

P&D shall be notified at least 3 working days before beginning any construction work in conjunction with approved plans. P&D shall also be notified of proposed plan modifications under Section 17.08-1(c), and within 1 working day of completing construction of a stormwater BMP. P&D may require additional notification according to a schedule established by P&D as determined at the preconstruction meeting so that practice installations can be

inspected during construction. A minimum of 1 working day notice must be given in these circumstances.

- (f) P&D Access
P&D 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.
- (g) Project Engineer/Landscape Architect
The permit holder shall provide an engineer licensed in the state of Wisconsin to be responsible for achieving compliance with approved construction plans, including the implementation of the approved inspection plan and verification of construction in accordance with Section 17.08-4. If warm season or wetland plantings are involved, the permit holder shall also provide a registered landscape architect or other qualified professional to oversee and verify the planting process and its successful establishment.
- (h) BMP Maintenance
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.
- (i) Emergency Work
The permit holder authorizes P&D, in accordance with the enforcement procedures of Section V, to perform any work or operations necessary to bring stormwater management practices into conformance with the approved plans and authorizes P&D to charge all applicable costs against the financial assurance as in Section 17.08-3.
- (j) Other Requirements
P&D may include other permit requirements that P&D determines are necessary to ensure compliance with this ordinance.

17.08-2

Stormwater Permit Issuance, Duration, Extensions, Transfer and Termination

- (a) Permit issuance
P&D shall issue a permit to the applicant after verifying that all applicable conditions of this ordinance and possibly other related permits have been met, including the submittal of contact information for all responsible parties. P&D may delay issuance of a stormwater permit if P&D determines that the proposed construction timelines and best management practices will not comply with the erosion control plan requirements under Section III. or the purposes of the ordinance under Section II., including proposed late season new road construction with grass swales.
- (b) Permit duration
P&D shall establish an expiration date for all stormwater permits based on the construction schedules agreed upon by the Contractor or Engineer and Owner/ Developer. The applicant shall notify P&D of any changes to the proposed schedule prior to permit issuance. Any stormwater permit that has expired prior to

permit termination is subject to enforcement action in accordance with Section V.

(c) Permit extensions

P&D may amend any terms of a stormwater permit, including extending the permit expiration date, if P&D determines it is necessary to ensure compliance with this ordinance. The applicant shall request an extension to a stormwater permit at least 10 working days before permit expiration on a form provided by P&D for that purpose and shall pay the corresponding fee. P&D may require additional stormwater management measures as a condition of granting a permit amendment. If the start of construction is delayed after permit issuance, P&D can review the terms of the permit and modify as necessary and extend the permit for up to one year from the originally approved construction start date. Any further modifications to the permit duration shall be at the discretion of the Kenosha County Land Use Committee.

(d) Permit transfer

P&D may transfer a stormwater permit issued under this ordinance to a new applicant upon a written request from the applicant. The permit transfer shall not take effect until P&D verifies in writing that the new applicant has satisfied all conditions of this ordinance, including an updated list of responsible parties. Any minor plan revisions, as determined by P&D, requested by the new applicant must be approved prior to construction in accordance with Sec. 17.08-1(c). Any major plan revisions, as determined by P&D, requested by the new applicant will require a new stormwater permit in which case the new applicant shall comply with Sec. 17.07-3.

(e) Permit termination

P&D shall issue a notice of termination to the permit holder which shall serve as documentation that all conditions of this ordinance have been satisfied and the permit has been terminated.

17.08-3 Financial Assurance

(a) Purpose

P&D may require the applicant to submit a financial assurance to ensure compliance with the approved erosion control plans, stormwater management plans, other stormwater permit requirements, and as-built submittals unless the Town in which the subject lands are located has required a financial assurance to ensure compliance with the same requirements.

(b) Type and Authority

P&D shall accept an irrevocable letter of credit only from an approved financial institution with Kenosha County, Wisconsin named as the beneficiary and 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.

(c) Amount

The amount of the financial assurance shall be 125% of the estimated cost of construction, maintenance, and inspection

based upon the approved erosion control and storm water management plans.

(d) Time

The agreement between the owner and financial institution shall be in place prior to the start of the preconstruction meeting required as part of Section 17.08-1(d). P&D shall require an original document sent directly from the financial institution.

(e) Exemption

Publicly funded land disturbing or land development activities shall be exempt from providing a financial assurance.

(f) Security

P&D 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.

(g) Conditions for Release

P&D shall release the financial assurance, and issue a termination letter in accordance with Section 17.08-2(e) only after determining full compliance with the permit and this ordinance, including the following:

1. Accepting an "as-built" survey pursuant to Section 17.08-4(a),
2. Accepting verification of construction and plantings pursuant to Section 17.08-4(b);
3. Completing a satisfactory final inspection pursuant to Section 17.08-5;
4. Receiving an executed copy of the recorded maintenance agreement pursuant to Section II.E. of this ordinance.

(h) 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.

(i) Amounts Withheld

P&D shall withhold or be allowed to draw upon the financial assurance amount for any costs incurred by P&D 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 P&D associated with the enforcement of this ordinance.

(j) Other Financial Assurances

The financial assurance provisions of this ordinance are intended to provide a fund that ensures all approved erosion control and stormwater management requirements are met. Any arrangements made to share financial assurances with the Town, in which the project is located, shall be in an amount equal to 125% of the estimated costs associated with the requirements under this ordinance. As part of the financial arrangement, P&D shall require that it be notified in advance of any release or reduction in the amount of such financial assurances by the Town.

17.08-4

Construction and Planting Verification

(a) As-Built Stormwater Facilities Survey

To ensure compliance with this ordinance and to serve as a basis for the engineering verification under Section 17.08-4(b), an as-built survey shall be completed by a registered land surveyor licensed in the State of Wisconsin and certified as in conformance with the approved construction plans by the Project Engineer. As-built plans shall only be completed once the site is stabilized. As-built plans in accordance with Section 17.09-8 shall be submitted to P&D for all stormwater management BMPs, conveyance systems including storm sewers, bridges, culverts, and other components as deemed necessary by P&D to ensure the long-term maintenance of all site stormwater components. P&D shall require a digital submittal of the as-built survey, in accordance with P&D mapping standards. A complete Stormwater Management Facility Compliance Report form shall accompany all as-built submissions. Zoning permits may, at the discretion of P&D, not be issued until as-built plans are approved unless financial assurance in accordance with Section 17.08-3 has been provided to the County.

(b) Verification

The Project Engineer shall verify, in accordance with P&D standards, that all site inspections outlined in the approved plans have been completed and that the construction of all stormwater management BMPs, as determined by P&D, 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 registered landscape architect or other qualified professional shall verify the planting process and its successful establishment.

(c) 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 P&D as part of the verification under Section 17.08-4(b).

17.08-5

Final Inspection

After completion of construction and all as-built requirements the contractor may remove all remaining construction site erosion control measures. Upon notice from the owner P&D shall conduct a final inspection of all permitted sites to determine compliance with the approved plans and other applicable ordinance requirements. If, upon inspection, P&D determines that any of the applicable requirements have not been met, P&D shall notify the permit holder what changes would be necessary to meet the requirements. A notice of termination shall be issued by P&D in accordance with Section 17.08-2(e) upon acceptance of the Final Inspection at which time the financial assurance will be released.

D. Stormwater Management Plan and As-Built Requirements

17.09-1 General Stormwater Management Plan Requirements

A stormwater management plan shall describe how the permit holder and other responsible parties 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 and the Technical Standards prepared by the Wisconsin Department of Natural Resources (WDNR).

17.09-2 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:

- (a) Preserve natural watershed boundaries and drainage patterns;
- (b) Reserve adequately sized areas for stormwater infiltration, detention and treatment early in the site planning process;
- (c) 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, woodlands, or isolated natural areas;
- (d) Minimize soil compaction and maintain pre-development groundwater recharge areas;
- (e) Minimize impervious surfaces and have them drain to vegetated areas for pollutant filtering and infiltration;
- (f) Emphasize vegetated swales, warm season and wetland plantings, and low flow velocities for stormwater conveyance, treatment and infiltration, especially for transportation related projects;
- (g) Allow for different stormwater management strategies for cleaner runoff (i.e. roofs) versus more polluted runoff (i.e. heavily used streets and parking lots);
- (h) Provide overland flow paths throughout the site to safely convey stormwater around buildings and structures. Additionally, overland flow paths to the receiving watercourse downstream of BMP's shall be analyzed to minimize adverse impacts to neighboring landowners.
- (i) Distribute stormwater bioretention and infiltration BMPs throughout the site plan for large land developments;

17.09-3 Stormwater Management Performance Standards

All stormwater management plans and associated BMPs shall meet the following minimum requirements to the maximum extent practicable. It is highly recommended that the applicant meet with P&D prior to preparing a stormwater management plan to determine the applicability of these requirements early in the site planning process.

(a) Peak Discharge

1. Minimum Requirement

To minimize downstream bank erosion and the failure of downstream conveyance systems, the peak stormwater discharge rate **shall not exceed** the rates as described

below. Modeling requirements for this provision are further described Section II.F.

- a. Reduce the post-development peak rates of runoff during the two-, 10-, and 100-year recurrence interval storms to less than the peak rates of runoff during the same recurrence interval storms occurring under predevelopment conditions for the Towns of Brighton, Paris, Randall, Salem, and Wheatland.
- b. Reduce the post-development peak rates of runoff during the 100-year recurrence interval storm to less than the peak rates of runoff during the 10-year recurrence interval storm occurring under predevelopment conditions, and reduce the post-development peak rates of runoff during the 10- and 2-year recurrence interval storms to less than the peak rates of runoff during the two-year recurrence interval storm occurring under predevelopment conditions for the Town of Bristol.
- c. For the Town of Somers, reduce the post-development peak rate of runoff during the 100-year recurrence interval storm to less than the peak rate of runoff from the 10-year recurrence interval storm occurring under predevelopment conditions. Also, reduce the two- and ten-year post-development peak rates of runoff to less than the peak rates of runoff for the same recurrence interval storms occurring under predevelopment conditions.

Note: If the conveyance system downstream of a BMP is undersized based on the proposed peak discharge rates in accordance with Sec. 17.09-3(f), P&D may require a more stringent release rate than required in Sec 17.09-3(a).

2. Des Plaines River Watershed Release Rate Applicability

P&D shall establish a maximum allowable release rate on a per acre basis that would supercede the requirements of Section 17.09-3(a)1. for new developments located in the Des Plaines River watershed that meet any of the following conditions:

- a. The proposed development will ultimately result in the addition of 0.5 acres or greater of impervious surfaces.
- b. A proposed development site with land disturbing construction activity of one acre or more.
- c. The proposed development will create additional impervious area of greater than, or equal to, 10 percent of the total site area (with wetland and primary environmental corridor areas excluded from the total site area). All new impervious surfaces, including new roads are to be included in this calculation.

3. Des Plaines River Watershed Per Acre Release Rates
Peak rates of runoff within the Des Plaines River watershed from new development shall be controlled as follows:
 - a. 0.04 cfs per acre for 2-year design storm.
 - b. 0.30 cfs per acre for 100-year design storm.
4. Per Acre Release Rate Exemptions
Certain sites may be exempt from the per acre discharge requirements of this subsection as follows:
 - a. Single residential lots that are not part of a larger development.
 - b. Land divisions creating four or fewer residential lots.
 - c. Non-residential development sites with land disturbing construction activity of less than one acre, unless new impervious area of 0.5 acre or more is created.
 - d. Re-development sites.

Note: Sites that are exempt from the Des Plaines River watershed per acre release rates per Sec. 17.09-3(a)4. may still require a stormwater permit based on the minimum peak discharge requirements in accordance with Sec. 17.09-3(a)1.

(b) Total Suspended Solids

1. By design, each stormwater management plan shall to the maximum extent practicable 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, 80% reduction in total suspended solids load;
 - b. For redevelopment, 40% reduction of total suspended solids load;
 - c. For in-fill development under 5 acres that occurs prior to October 1, 2012, 40% reduction total suspended solids load;
 - d. For any in-fill development that occurs after October 1, 2012, 80% reduction of total suspended solids load.

(c) Infiltration

BMPs shall be designed, installed, and maintained to infiltrate runoff in accordance with the following requirements, except as provided in Sections 17.09-3(c)5. through 7.

1. Residential

For residential developments one of the following shall be met:

- a. Infiltrate sufficient runoff volume so that the post-development infiltration volume shall be at least 90% of the pre-development infiltration volume, based on an average annual rainfall. However, when designing appropriate infiltration systems to meet this requirement, no more than 1% of the

project site is required as an effective infiltration area.

- b. Infiltrate 25% of the post-development runoff volume from the 2-year, 24-hour design storm with a type II distribution. However, when designing appropriate infiltration systems to meet this requirement, no more than 1% of the project site is required as an effective infiltration area.

2. Nonresidential

For non-residential development, including commercial, industrial and institutional development, one of the following shall be met:

- a. Infiltrate sufficient runoff volume so that the post-development infiltration volume shall be at least 60% of the pre-development infiltration volume, based on an average annual rainfall. However, when designing appropriate infiltration systems to meet this requirement, no more than 2% of the project site is required as an effective infiltration area.
- b. Infiltrate 10% of the post-development runoff volume from the 2-year, 24-hour design storm. However, when designing appropriate infiltration systems to meet this requirement, no more than 2% of the project site is required as an effective infiltration area.

3. Modeling

Refer to Section II.F. for details on calculating runoff volumes and pre-development conditions.

4. 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 Section 17.09-3(c)7. Pretreatment options may include, but are not limited to, oil/grease separators, sedimentation or bioretention basins, infiltration swales or filter strips. All designs shall comply with the technical standards in Section II.F.

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.

5. Infiltration Exclusions

Infiltration of runoff shall not be credited toward meeting the requirements of this subsection for the following:

- a. 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.
- b. Runoff from fueling and vehicle maintenance areas, not including rooftops and canopies.
- c. Infiltration of runoff within 1000 feet up gradient or within 100 feet down gradient of karst features.
- d. Infiltration of runoff from any area except rooftops with less than 3 feet separation distance from the top of the filtering layer to the elevation of seasonal high groundwater or the top of bedrock.
- e. Infiltration of runoff from industrial, commercial and institutional parking lots and roads and residential arterial roads with less than 5 feet separation distance from top of the filtering layer to the elevation of seasonal high groundwater or the top of bedrock.
- f. Areas within 400 feet of a community water system well as specified in NR 811, Wis. Adm. Code, or within 100 feet of a private well as specified in NR 812, Wis. Adm. Code, for runoff infiltrated from commercial, industrial and institutional land uses or regional devices for residential development, not including rooftop runoff.
- g. Areas where contaminants of concern, as defined in NR 720, Wis. Adm. Code are present in the soil through which infiltration will occur.

6. Infiltration Exemptions

The infiltration requirements of this subsection do not apply to sites that meet the exemption requirements described in DNR Technical Standard 1002 – Site Evaluation for Stormwater Infiltration and P&D determines it would be impracticable to modify existing soil conditions. Other sites may be exempted in accordance with Section 17.09-4.

7. Groundwater protection

- a. 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.
- b. The discharge from BMPs shall remain below the enforcement standard at the point of standards application.

- c. No stormwater BMP shall be installed that meets the definition of an injection well under Chapter NR 815 Wis. Admin. Code.
- d. 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.

(d) Protective Areas

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. The minimum protective area widths are as follows:

1. For outstanding resource waters and exceptional resource waters, and for wetlands in areas of special natural resource interest as specified in Chapter NR 103 Wis. Admin. Code, 75 feet.
2. For perennial and intermittent streams deemed navigable as identified on the Kenosha County Zoning Maps or determined by the Department of Natural Resources, 50 feet.
3. For lakes, 50 feet.
4. For highly susceptible wetlands, as determined by the Department of Natural Resources or the Southeastern Regional Planning Commission, 50 feet. Highly susceptible wetlands include the following types: fens, sedge meadows, bogs, low prairies, conifer swamps, shrub swamps, other forested wetlands, fresh wet meadows, shallow marshes, deep marshes and seasonally flooded basins. Wetland boundary delineations shall be made in accordance with 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.
5. For less susceptible wetlands, 10 percent of the average wetland width, but no less than 10 feet nor more than 30 feet. Less susceptible wetlands include degraded wetlands dominated by invasive species such as reed canary grass.
6. In Sections 17.09-3(d)1., 4., and 5., 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.

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

8. Requirements

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

- a. Impervious surfaces shall be kept out of the protective area, except for boathouses and walkways authorized 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.
- b. 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.

- c. Best management practices such as filter strips, swales, or wet detention basins that are designed to control pollutants from non-point sources may be located in the protective area, but shall not encroach into wetlands, floodplains, woodlands, isolated natural resource areas, or primary or secondary environmental corridors to the maximum extent practicable.

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.

9. Protective Area Exemptions

The protective area requirements of this subsection may be exempted in accordance with Section 17.09-4 and do not apply to the following:

- a. Structures that cross or access surface waters such as boat landings, bridges and culverts;
- b. Structures constructed in accordance with s. 59.692(1v), Wisconsin Statutes; and
- c. Sites where runoff does not enter the surface water, except to the extent that vegetative ground cover is necessary to maintain bank stability.

(e) Fueling and Vehicle Maintenance Areas

Fueling and vehicle maintenance areas shall 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.

(f) 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:

1. Minimum Design Standards

- a. Minor stormwater drainage systems shall be designed for a 10-year recurrence interval storm.
- b. Major stormwater drainage systems shall be designed for a 100-year recurrence interval storm.

2. 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 Section II.E.

3. 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. All drainage facilities shall have an overland flow path which does not impact any structures for storms larger than the design event.

4. 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.

5. Bridges and cross-culverts over or in navigable waterways

A hydrologic and hydraulic analysis shall be required for all projects impacting a navigable waterway. This analysis must demonstrate no adverse impacts, onsite or offsite. 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. For bridges or culverts associated with collector streets, the peak water surface elevation from a 10-year recurrence

interval storm event shall have at least two feet of freeboard to the roadway elevation. For arterial streets and highways, the peak water surface elevation from a 50-year recurrence interval storm event shall have at least two feet of freeboard to the roadway elevation. All predevelopment runoff storage areas within the regulatory floodplain or, in the absence of a regulatory floodplain, the area inundated during a 100-year storm event, upstream of bridges and cross-culverts shall be preserved or shall be designated as drainage easements, unless compensatory storage is provided and accounted for in modeling. As-built documentation shall be submitted in accordance with Section 17.09-8 for all new or modified structures that are located within a mapped floodplain as determined by P&D.

6. Subsurface drainage

Basement floor surfaces shall be built a minimum of one (1) foot above the high ground water elevation, as documented in the submitted soil evaluations, and shall avoid hydric soils as much as possible. The high ground water elevations can be extrapolated based on the site borings conducted as part of the soil evaluation in order to determine the high ground water elevation at each basement location. P&D shall be notified of any drain tiles that are uncovered during construction, which P&D may require to be restored or connected to other drainage systems.

7. 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 P&D for unique site conditions. Water surface elevations for the 100-year, 24-hour design storm shall be calculated for all existing and proposed open channels. All channels shall be designed with a minimum 1.0% gradient and be centered on lot lines wherever possible.

8. Storm sewers

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

9. 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 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.

(g) Additional Requirements

P&D may establish more stringent requirements than the minimums set forth in this section, such as addressing thermal impacts of stormwater or chronic wetness conditions, if P&D determines that an added level of protection is needed to protect:

1. A cold water stream, an outstanding water resource, or an exceptional water resource;
2. Environmentally sensitive area;
3. A downstream property;
4. Public health or safety.

17.09-4 Technical Exemptions

(a) Exemption Criteria

Following the provisions of this subsection, P&D may exempt a site or a portion of a site from meeting certain technical requirements of this section if P&D determines that one or more of the following applies:

1. 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;

2. Internally Drained Sites

The site is internally drained and will not discharge runoff from the site after development occurs; or

Note: Only ordinance requirements designed to address off-site impacts would be eligible for this exemption, not site drainage requirements such as minimum basement separations.

3. Site Conditions

It may be 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, P&D shall provide special consideration in granting exemptions under this paragraph for the following sites:

- a. Redevelopment sites.
- b. In-fill development areas less than 5 acres.
- c. Highway projects where limited public right-of-way land is available for the installation of stormwater BMPs.

Note: P&D may use cooperative working agreements to administer exemptions for municipal road construction or reconstruction projects.

- d. Land development projects with less than 10% of the site planned to be disturbed area and the total cumulative area of all increased impervious surfaces after January 1, 2010 is less than 0.5 acres.

(b) Application for Exemption

An exemption under Section 17.09-4 may only be granted by P&D upon the applicant submitting the following items to P&D, which shall constitute a completed application:

1. A written request describing the provisions of this subsection for which an exception is being requested and an explanation of why;
2. A site plan in accordance with Section 17.09-5, 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;
3. 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;
4. For off-site BMP(s) under Section 17.09-4(a)1.:
 - a. Documentation that the necessary BMP(s) have been properly installed, including as-built plans, construction certification and design summaries in accordance with Section 17.09-3;
 - b. A copy of the recorded maintenance agreement in accordance with Section II.E., and any other easements or legal arrangement that may be involved to ensure the long-term maintenance of the off-site BMP(s).
 - c. Documentation of payment of any applicable fees that may be required by a unit of government 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.

- d. Other materials that P&D determines to be necessary to make a determination under this subsection or to comply with this ordinance.

(c) Review Procedure

P&D shall review all exemption application materials submitted under Section 17.09-4(b), determine compliance with this section and notify the applicant of a decision. In consideration of all exemption requests, P&D shall ensure that the applicant meets

the requirements of this section to the maximum extent practicable.

(d) Appeal

If the applicant does not agree with any determination of P&D under this subsection, the applicant may appeal the decision pursuant to the procedures in Section V.C.

17.09-5 Site Plan Map Requirements

A site plan map and supporting data of existing and proposed 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:

- (a) Development title, graphic scale and north arrow;
- (b) Property location description by public land survey system (1/4 section, section, township, range, county);
- (c) Location map (smaller scale) showing the site location within a public land survey section or subdivision;
- (d) 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;
- (e) Lot numbers and dimensions, including outlots for all land divisions;
- (f) Name and complete contact information for the applicant, landowner, developer and project engineer;
- (g) Surveyor's certificate, signed, dated and sealed for all land divisions;
- (h) Sheet numbers and revision dates on every page;
- (i) 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 extending to a minimum of 200 feet outside of the property boundary. P&D reserves the right to require larger areas if warranted by unique conditions;
- (j) Location, type, condition, protective area category defined by NR 151.12(5)(d) of the Wisconsin Administrative Code, if applicable, of all lakes, streams, channels, ditches, and other water bodies or areas of channelized flow on or adjacent to the site;
- (k) Location and name, if applicable, of all wetlands and identification of source and date of the delineation and susceptibility category. The WDNR and USACE must concur with the delineation and susceptibility category. For final land divisions, these boundaries shall be field verified by the WDNR;
- (l) Boundaries and descriptive notes for all applicable setbacks and for "protective area" consistent with Section 17.09-3(d).
- (m) Boundaries of shoreland zones and the ordinary high water mark (OHWM) for any navigable water body as defined by the Department of Natural Resources and Shoreland Floodland ordinance. For final land divisions, the OHWM boundaries shall be field verified by the WDNR;
- (n) Location of primary and secondary environmental corridors, as defined by the Southeastern Wisconsin Regional Planning

- Commission (SEWRPC). For final land divisions, these boundaries shall be field verified;
- (o) Boundaries and elevation associated with the 100-year floodplains, and boundaries of the floodways, as defined by the Kenosha County General Zoning and Shoreland/Floodplain Zoning Ordinance (include SEWRPC cross sections if available). For final land divisions, these boundaries and elevations shall be field verified;
 - (p) 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;
 - (q) Locations of all available soil borings or soil profile evaluations with unique references to supplemental data report forms;
 - (r) Location and description of isolated natural area boundaries as defined by SEWRPC, woodland areas, and other vegetative cover types;
 - (s) Location and descriptive notes for existing structures within 100 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;
 - (t) 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;
 - (u) 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 Local, County, State, and Federal codes, adopted plans and ordinances;
 - (v) Location and descriptive notes for existing and proposed public dedications of parcels or highways;
 - (w) Location and descriptive notes for POWTS or waste disposal sites, when limited by site features;
 - (x) 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;
 - (y) The shape, dimensions, and location of all proposed buildings and required setbacks;
 - (z) The nature of the proposed use of the building or land, including the extent and location of the use;
 - (aa) The location of all proposed entrances;
 - (bb) The location, dimensions, and number of proposed off-street parking and loading spaces;
 - (cc) The location and description of all proposed impervious surfaces such as parking lots, gravel driveways, roads, patios, etc.;
 - (dd) Notes describing source documents, date and measure of accuracy for all applicable mapping features noted above;
 - (ee) Other site information that P&D determines is necessary to administer this ordinance.

Note: A Site Plan Map Requirements Checklist shall accompany all stormwater management plan submittals. The checklist can be obtained on the Kenosha County website or by contacting P&D.

17.09-6

Preliminary Stormwater Management Plan Requirements

Preliminary stormwater management plans shall contain the following applicable items:

- (a) A site plan map(s) in accordance with Section 17.09-5;
- (b) Drafting date and contact information for the project engineer with all other mapping elements and scale consistent with the site plan map;
- (c) Delineation of existing and proposed watersheds, subwatersheds and major flow paths within the site and draining into the site from adjacent properties;
- (d) Preliminary grading plan sufficient to show the location, type and preliminary design of proposed stormwater BMPs needed to comply with this ordinance;
- (e) Location and type of major stormwater conveyance systems proposed for the site;
- (f) Existing and proposed stormwater discharge points;
- (g) Location and preliminary dimensions of proposed drainage easements;
- (h) 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;
- (i) Preliminary location of access lanes for maintenance of stormwater BMPs;
- (j) Support documentation for the plan reviewer, including:
 - 1. 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;
 - 2. Summary of watershed, subwatershed and land use data in acres and the preliminary results of any hydrology calculations;
 - 3. Soil profile evaluation data in accordance with BMP technical standards;
 - 4. Proposed ownership and maintenance responsibilities for all proposed stormwater BMPs.

Note: A Stormwater Management Plan Requirements Checklist shall accompany all preliminary stormwater management plan submittals. The checklist can be obtained on the Kenosha County website or by contacting P&D.

17.09-7

Final Stormwater Management Plan Requirements

Final stormwater management plans shall contain the following applicable items:

- (a) A site plan map(s) in accordance with Section 17.09-5;
- (b) Drafting date and contact information for the project engineer, with all other mapping elements and scale consistent with the site plan map;
- (c) Location of existing and proposed stormwater discharge points;
- (d) Delineation and labeling of all proposed impervious areas and

- accompanying area computations;
- (e) Final design drawings of all proposed stormwater BMPs with unique references to support documentation, prepared in accordance with minimum P&D standards and of sufficient clarity for those responsible for site grading, including:
 1. 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;
 2. 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;
 3. Detailed cross-sections and profiles of each BMP showing all critical design features, side slopes, structures, soil profiles and applicable elevations, including seasonal high water table;
 4. Detailed drawings or material specifications for inlets or outlets.
 - (f) 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;
 - (g) Location and size of drainage easements and other areas set aside for stormwater management, and the associated language describing use restrictions and dimensions of proposed drainage easements;
 - (h) Location of access drives and associated easements and use restrictions to ensure adequate access to stormwater management facilities for future maintenance;
 - (i) Utility easements as they may affect the grading and erosion control plans;
 - (j) 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 Section II.E. The minimum width of any access easement shall be 15 feet;
 - (k) Location of soil borings and soil profile evaluations with surface elevations and unique references to supplemental data sheets including a minimum of (2) two borings per pond footprint, as needed to determine feasibility of any proposed stormwater BMP and to comply with applicable technical standards;
 - (l) 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.

- (m) A detailed erosion control inspection plan, outlining the critical elements in the plan that need to be surveyed or inspected by a representative of the project engineer, P&D or the municipality,

and the timing and notification requirements involved. A form such as DNR Form 3400-187 or other P&D approved form may be used for each inspection.

Note: Any inspections conducted by P&D or the municipality does not waive the permit holder's responsibility for construction oversight and verification.

- (n) A final stormwater BMP maintenance agreement with a cost estimate for annual maintenance activities in accordance with Section II.E.;
- (o) Support documentation summarized in accordance with P&D standards, including but not limited to:
 1. 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 Section 17.09-2, and the specific stormwater planning requirements under Section 17.09-3.
 2. 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;
 3. 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 Section 17.09-7(e)1.;
 4. Impervious surface maps and calculations of runoff volumes and effective infiltration areas;
 5. 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 Section 17.09-3(f).;
 6. BMP design data for each proposed BMP, showing how it complies with applicable technical standards and the requirements of this ordinance;
 7. Soil evaluation reports, following the standards in Section 17.11-5, with matching references to map features showing their location and elevations;
 8. 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;
 9. For sites where changes are proposed in stormwater flow

paths, flow patterns, drainage basins, or where proposed stormwater discharges may otherwise have a significant negative impact on downstream property owner(s), P&D may require the applicant to submit written authorization or complete other legal arrangements with the affected property owner(s)

- (p) Other items deemed necessary by P&D to ensure compliance with the requirements of this ordinance.

Note: A Stormwater Management Plan Requirements Checklist shall accompany all final stormwater management plan submittals. The checklist can be obtained on the Kenosha County website or by contacting P&D.

17.09-8 As-Built Stormwater Facilities Survey Requirements

A professional engineer or professional land surveyor licensed in the State of Wisconsin shall submit a site map(s) documenting the minimum as-built grading and storm sewer requirements as follows:

(a) Grading Plan

1. Plan clearly labeled as "As-built Record Drawing" showing the location of the proposed BMP's in combination with the site map at a scale of one (1) inch equals no more than 100 feet.
2. Final topographic contours overlaid on the proposed design contours with sufficient survey shots to adequately show constructed site drainage patterns.
3. Spot elevations sufficient to verify overland flood routing.
4. One set of cross-sectional survey points per 100 feet of conveyance system (emergency spillways, rock chutes, grass swales, etc.). Include enough points to verify the proposed design.
5. One set of cross-sectional survey points at all crest and sag locations of a newly constructed roadway (road centerline, edge of pavement, gutter, top of curb, centerline of road swale, right-of-way, etc.).
6. Retaining wall spot elevations (top and bottom) along the entire length of wall at every 100 feet.
7. Spot elevations at all proposed building pads.
8. Spot elevations at all property corners.
9. Type of engineered fill material used, if any, and top and bottom elevations of fill.
10. Description and elevation of all site benchmarks used.
11. Specific survey points to verify the construction of all stormwater BMP's.
 - a. Sufficient spot elevations on the berm to outline the shape of basin (a minimum of one shot per 50 feet). The lowest points of the berm must be represented.
 - b. A minimum of two survey points documenting the elevation of any berm separating the basin forebay from the main pool.
 - c. Spot elevations outlining riprap aprons or emergency spillways.

- d. Invert elevations of the basin outlet(s) (culvert inlet, culvert outlet, dewatering holes in risers, in-line weirs, etc.)
- e. The top elevation of any outlet riser.
- f. Measured internal diameters of risers, orifices, and other flow control devices.
- g. The toe of the berm backslope.
- h. The inside and outside edges of the top of the berm.
- i. The edge of the water.
- j. The inside and outside edges of the safety shelf.
- k. The toe of the slope into the permanent pool as well as additional shots of the pond bottom.
- l. For clay liners, either show bottom elevations before and after liner is installed, or document liner thickness through soil core sampling (resealing sample holes).
- m. Location and type of the synthetic liner used, if any.

(b) Storm Sewer Plan

A complete set of the approved final engineering plans are to be utilized as the base sheets for the as-built record drawings. As-built record drawings are to show actual elevations alongside planned elevations. Planned elevations shall be neatly crossed out so that they are legible to compare to the as-built record elevations. All elevations should be referenced to the same bench mark datum as the original design plans.

1. Plan and profile sheets to be clearly labeled as “As-built Record Drawing” at a scale equal to that of the approved final engineering drawings.
2. Rim elevations on inlets, catch basins, manholes, and other special structures.
3. Invert elevation of all pipes within inlets, catch basins, manholes, end sections, headwalls, culverts and other special structures.
4. Linear distance along sewer from structure to structure, pipe size, and material.
5. Recalculated pipe slopes based on invert to invert elevations along the linear distance between structures.
6. The invert elevations and pipe diameter for all road culverts/channel crossings.
7. Description and elevation of all site benchmarks used.

Note: A Subdivision & Construction Site Stormwater Facility As-built Requirements Checklist as well as a Detention Pond Compliance Report shall accompany all stormwater as-built plan submittals. The checklist can be obtained on the Kenosha County website or by contacting P&D.

E. Maintenance of Stormwater BMPs

17.10-1 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.

Agreement Provisions

The maintenance agreement shall, at a minimum, contain the following information and provisions:

(a) 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 Section 17.10-2(f), unless otherwise designated in a regional stormwater management plan and approved by the applicable unit(s) of government. 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;

(b) Location

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

(c) 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;

(d) 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;

(e) Access

Authorization for vehicle access, including a minimum 15-foot wide access easement granted to the County and/or Town in which the property is located, 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. The access route shall be designed in such a manner that allows standard construction equipment to easily drive on;

(f) Maintenance responsibility

Identification of the person(s), organization, 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. A special assessment in accordance with the Wisconsin State Statutes Section 66.0703 may be charged to the owner(s) to cover the cost

of maintenance of the BMP if necessary to comply with the provisions of the maintenance agreement;

(g) Inspections

Authorization for access to the property by representatives of the local municipality or their designee and Kenosha 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 Section 17.10-2(f) 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;

(h) Municipal maintenance

Authorization for the local municipality or their designee to carry out any maintenance activities and associated inspections if the entity identified under Section 17.10-2(f) 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;

(i) 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.

(j) Cost Estimates

An annual cost estimate for the maintenance of all post-construction BMP's. The applicant may use average costs for BMP installations in the county rather than specific estimates, when available, and upon approval by P&D;

(k) Other

Other information as determined to be necessary by P&D to ensure compliance with this ordinance.

17.10-3

Agreement Form, Approval, and Recording

(a) Form

The applicant shall provide a legal maintenance agreement that complies with the requirements of this section. At the request of the applicant, P&D shall provide a sample maintenance agreement for reference.

(b) Approval

P&D as well as the appropriate Town Engineer shall review and approve the form and content of all maintenance agreements proposed under this ordinance and ensure compliance with all provisions of this section. If the agreement does not comply with this ordinance, the applicant shall be notified of what changes are needed in order to comply, in accordance with the plan review procedures in Section 17.07-3(d).

- (c) Recording
Upon conformance with Sections 17.10-1 and 17.10-2 by P&D, the maintenance agreement shall be recorded at the Kenosha County Register of Deeds referencing any plat, certified survey or other ownership transfer device pertaining to land which contains the subject stormwater BMP or is subject to maintenance responsibility in the approved agreement. For new land divisions, the recording of the maintenance agreement shall occur simultaneously with the recording of the land division. However, no stormwater BMP maintenance agreement shall be recorded prior to P&D and Town approval. P&D may require that the Director of Planning and Development or his/her designee record the agreement.
- (d) Copy
The permit holder shall provide a copy of the recorded agreement, including evidence of the actual recording(s), to P&D as well as to the appropriate Town Clerk as a condition of release of the financial assurance under Section 17.08-3.

17.10-4 Maintenance Responsibilities Prior to a Maintenance Agreement
The permit holder and other responsible party shall be responsible for the maintenance of all stormwater BMPs prior to permit termination under Section 17.08-2(e).

F. Technical Standards and Specifications

17.11-1 Hydrologic and Hydraulic Computations

- (a) Models
All computations of runoff volumes and peak flow rates used in the development of 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 Hydraflow Hydrographs Extension, HydroCAD, PondPack or other P&D approved models may be used to evaluate the efficiency of the design required to meet this ordinance. Models such as RECARGA or other P&D approved models may be used to evaluate the efficiency of the design in meeting the infiltration requirements of this ordinance.
- (b) Rainfall Depths
To determine compliance with this ordinance, the following design storm rainfall depths shall be used, which are derived from Southeastern Wisconsin Regional Planning Commission (SEWRPC) Technical Report No. 40:

Design Storm	1-year 24-hour	2-year 24-hour	10-year 24-hour	100-year 24-hour
Rainfall Depth	2.4 inches	2.57 inches	3.62 inches	5.88 inches

- (c) 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 cropland, the following NRCS curve number values shall be used as maximums:

Soil Hydrologic Group	A	B	C	D
NRCS Runoff Curve Number	56	70	79	83

Note: NRCS SSURGO soil data shall be used to determine hydrologic soil groups Soil hydrologic groups are available from P&D and can be found on the Kenosha County's Interactive Mapping System website.

- (d) 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 Kenosha County.
- (e) Rainfall distribution. All peak flow calculations shall use Type II rainfall distribution patterns, as defined in NRCS methodologies. Pre- and post-development conditions shall be analyzed with recurrence intervals of 2-, 10-, and 100-year design storms. Any hydrologic and hydraulic study required as part of this ordinance involving a floodplain analysis shall use the SEWRPC recommended rainfall distribution and rainfall depths instead of the Type II distribution. It is necessary to perform a critical duration analysis using various storm durations to determine the largest peak flow using the SEWRPC distribution.
- (f) 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 P&D. Revisions or updates to the rainfall depths and distribution prescribed above may be allowed upon approval by the applicable regulatory agencies and P&D.

17.11-2 Best Management Practice (BMP) Design Standards

- (a) 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.
- (b) Where BMP standards have not been identified or developed under Section 17.11-2(a), P&D may approve the use of other available standards, such as those from other states or the USDA-Natural Resources Conservation Service.

17.11-3 Technical Guidelines

The Wisconsin Department of Natural Resources (WDNR) "Construction Site Erosion and Sediment Control" and "Post-construction Stormwater Management" Technical Standards should be applied in project design. These standards can be downloaded from the WDNR website. P&D may adopt additional technical guidelines to facilitate the consistent

administration of certain provisions of this ordinance. P&D shall seek the expertise and input from the Land and Water Conservation Committee and other agencies in the development and maintenance of additional technical guidelines under this subsection.

17.11-4

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 the Wisconsin Department of Transportation (WISDOT), American Society for Testing and Materials (ASTM), and the USDA - Natural Resources Conservation Service (NRCS).

17.11-5

Soil Evaluations

All soil profile evaluations and forms submitted for review by P&D under the provisions of this ordinance shall be completed in accordance with Chapter COMM 85 Wis. Admin. Code and any applicable standards under Section 17.11-2. Where there are no specific standards for the number, location or depth of soil profile evaluations for a proposed BMP, P&D shall determine the minimum requirements based on the design of the BMP and the likely variability of the on-site soils.

17.11-6

Availability

Copies of all technical references made in this section shall be available for review and distribution through P&D office during normal business hours, or over the Internet. Fees may be charged for hard copies of these items.

17.11-7

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 P&D.

III. EROSION CONTROL

A. APPLICABILITY AND EXEMPTIONS

17.12-1 Construction Site Erosion Control

Unless otherwise exempted under Section 17.12-2, an erosion control permit under Section III shall be required and other provisions of this ordinance shall apply to all proposed land disturbing activity that meets any of the following:

- (a) Disturbs a total land surface area of 4,000 square feet or more; or
- (b) Involves excavation or filling, or a combination of excavation and filling, in excess of 400 cubic yards of material; or
- (c) Is required as part of a stormwater management plan as determined by Section II of this ordinance; or
- (d) Is a land disturbing activity, regardless of size, that P&D 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.

17.12-2 Applicability Exemptions

The following activities shall be exempt from all of the erosion control 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. To recognize an exemption under this paragraph, P&D may require documentation of the person(s) and regulatory agency charged with enforcing erosion control and stormwater management for the project.
- (c) Those activities P&D determines are required for the construction of individual one and two family residential buildings under COMM. 21.125 Wis. Admin. Code. The Wisconsin Uniform Dwelling Code (COMM 21) includes erosion control requirements that apply statewide. This exemption applies to individual buildings only. Larger developments that include one and two family residential buildings such as subdivisions are not exempt from meeting the requirements of this ordinance.
- (d) Nonmetallic mining activities that are covered under a nonmetallic mining reclamation permit under NR 135 Wis. Admin. Code. and regulated under Chapter 13 of the County Code of Ordinance.
- (e) Placement of underground pipe or other utility that is plowed or bored into the ground outside areas of channelized runoff.
- (f) Land disturbing activity directly involved in the installation and maintenance of private on-site waste treatment systems (POWTS), as regulated under Chapter 15 of the County Code of Ordinances.

- (g) Land disturbing activities conducted for a project designed, funded or implemented under the supervision of the County Land and Water Conservation Division, the USDA Natural Resource Conservation Service, or the Wisconsin Department of Agriculture Trade, and Consumer Protection, if conducted according to County Conservation Standards.
- (h) Other exemptions P&D may exempt a site or portion of a site from meeting certain technical requirements or provisions under unique site conditions.

B. Erosion Control Permit Processes

17.13-1 Permit Required

An erosion control permit under Section III.C. shall be obtained before any person commences a land disturbing or land development activity, pursuant to the applicability and exemption provisions of Section 17.12-1. The type of erosion control permit and the information required for approval will be based on the total area of land disturbance. A site less than one (1) acre of total land disturbance shall be in accordance with Section 17.13-2 and a site greater than or equal to one (1) acre of total land disturbance shall be in accordance with Section 17.13-3.

17.13-2 Erosion Control Permit < 1 Acre of Total Land Disturbance

(a) Purpose and Intent

An erosion control permit is required by P&D to ensure that small land disturbances comply with this ordinance and don't adversely affect environmentally sensitive areas. A permit is required prior to the start of any proposed land disturbing activity.

(b) Applicability

In accordance with the applicability provisions described in Section 17.12-1 of this ordinance.

(c) Erosion Control Permit Application.

1. To request an erosion control permit, the applicant shall submit a complete application to P&D, which shall include all of the following:
 - a. A completed and signed application on a form provided by P&D for that purpose;
 - b. The application fee, unless exempted under Section 17.07-4;
 - c. An erosion control plan meeting the requirements of Section 17.15-1 and 17.15-2 using practices as described in Section 17.15-3.
2. Review procedures for an erosion control permit shall be in accordance with Section 17.13-2(d).

(d) Erosion Control Permit Review and Approval

Upon submittal of a complete application under Section 17.13-2(c), the owner is authorizing P&D to enter upon the subject site to obtain information needed to administer this ordinance. If all requirements of this ordinance have been met through the application, P&D shall issue an erosion control permit. If all requirements of this ordinance have not been met, P&D shall state in writing the reasons for disapproval.

- (e) Erosion Control Permit
Upon issuance of an erosion control permit, the permit holder agrees to all conditions in accordance with Section III.C.
- (f) Erosion Control Permit Termination
The erosion control permits shall be terminated in accordance with Section 17.14-2(e).

17.13-3 Erosion Control Permit ≥ 1 Acre of Total Land Disturbance
Preliminary Erosion Control Plan

- (a) Purpose and Intent
A preliminary erosion control plan is required by P&D to ensure that early site-planning for any new development accounts for compliance with this ordinance. An approved final erosion control plan is required prior to final plat submittal or to the start of any proposed land disturbing or land development activity.
- (b) Applicability
 1. In accordance with the applicability provisions described in Section 17.12-1 of this ordinance.
 2. P&D shall on a case by case basis determine whether the preliminary erosion control plan requirement be waived based on the site plan submitted at the initial concept meeting. In which case, the applicant can directly apply for an erosion control permit as described in Section 17.13-4.
- (c) Preliminary Erosion Control Plan Application.
 1. To request a preliminary erosion control plan approval, the applicant shall submit a complete application to P&D, as indicated in Section 17.07-2(c).
 2. Review procedures for a preliminary erosion control plan application shall be in accordance with Section 17.13-3(d).
- (d) Preliminary Erosion Control Plan Review and Approval
Upon submittal of a complete application under Section 17.13-3(c), the owner is authorizing P&D to enter upon the subject site to obtain information needed to administer this ordinance and the following procedures shall apply:
 1. If all requirements of this ordinance have been met through the application, P&D shall approve the preliminary erosion control plan and the applicant can apply for an erosion control permit as described in Section 17.13-4. If all requirements of this ordinance have not been met, P&D shall state in writing the reasons for disapproval.
 2. If P&D determines that the application is not complete or requests additional information from the applicant or another source (such as another regulatory agency), P&D shall inform the applicant and may disapprove the application.

17.13-4 Erosion Control Permit ≥ 1 Acre of Total Land Disturbance
Final Erosion Control Plan

- (a) Purpose and Intent
A final erosion control plan is required by P&D to ensure compliance with this ordinance. A final erosion control plan approval is required prior to final plat submittal and to the start of any proposed land disturbing or land development activity.

(b) Applicability

In accordance with the applicability provisions described in Section 17.12-1 of this ordinance.

(c) Final Erosion Control Plan Application

1. To request an erosion control permit in accordance with Section 17.13-3, the applicant shall submit a complete application as indicated in Section 17.07-3(c).
2. Review procedures for a final erosion control plan approval shall be in accordance with Section 17.13-4(d).

Note: A final erosion control plan application form under Section 17.13-4(c)1.a. is not necessary if the applicant has already submitted an application for a preliminary erosion control plan.

(d) Final Erosion Control Plan Review and Approval

1. P&D shall review submittals for compliance with all of the items based on final site plans and erosion control plans in accordance with Section III.D. of this ordinance.
2. Upon submittal of a complete application under Section 17.13-4(c), the owner is authorizing P&D to enter upon the subject site to obtain information needed to administer this ordinance and the following procedures shall apply:
 - a. If all requirements of this ordinance have been met through the application, P&D shall approve the application and issue an Erosion Control Permit. If all requirements of this ordinance have not been met, P&D shall state in writing the reasons for disapproval.
 - b. If P&D determines that the application is not complete or requests additional information from the applicant or another source (such as another regulatory agency), P&D shall inform the applicant and may disapprove the application.

(e) Erosion Control Permit

Upon issuance of an erosion control permit, the permit holder agrees to all conditions in accordance with Section III.C.

(f) Erosion Control Permit Termination

P&D shall issue a notice of termination to the permit holder which shall serve as documentation that all conditions of this ordinance have been satisfied and the permit has been terminated.

17.13-5

Fees

All fees shall be in accordance with Section 17.07-4.

C. Erosion Control Permit Requirements

17.14-1

General Permit Requirements

Erosion control 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 Section V. Upon issuance of an erosion control permit, the permit holder and any other responsible party shall be deemed to have accepted these requirements. In addition, all applicable Town erosion control ordinance

requirements shall apply if more restrictive. General requirements include all of the following:

- (a) Other Permits
Compliance with an erosion control permit does not relieve the applicant or other responsible party of the responsibility to comply with other applicable federal, state, and local laws and regulations. P&D may require the applicant to obtain other permits or plan approvals prior to issuing the erosion control permit.
- (b) 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.
- (c) Plan Modifications
P&D shall be notified of any modifications (including field changes) proposed to be made to the approved plans. P&D 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 P&D are subject to enforcement action.
- (d) Notification
P&D shall be notified at least 3 working days before commencing any work in conjunction with approved plans. P&D shall also be notified of proposed plan modifications under Section 17.14-1(c), and within 1 working day of completing construction of an erosion control BMP.
- (e) P&D Access
P&D 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.
- (f) BMP Maintenance
The permit holder shall maintain and repair all best management practices within 24 hours of inspection, or upon notification by P&D, unless P&D approves a longer period due to weather conditions. The permit holder, in accordance with approved plans and applicable technical standards, shall maintain temporary erosion control practices until the site is 70% stabilized, as approved by P&D, at which time the permit holder shall remove all temporary erosion control practices such as silt fence. The permit holder shall then restore all disturbed areas. After it is determined by P&D that all requirements of this ordinance are met, a notice of termination under Section 17.14.2(e) will be issued.
- (g) 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. P&D may order immediate repairs or clean-up within road right-of-ways or other public lands if P&D determines that such damage is caused by activities regulated by a permit under this ordinance. With the approval of the landowner, P&D may also order repairs or clean-up on other affected property.

- (h) Emergency Work
The permit holder authorizes P&D, in accordance with the enforcement procedures Section V., to perform any work or operations necessary to bring erosion control practices into conformance with the approved plans.
- (i) Other Requirements
P&D may include other permit requirements that P&D determines are necessary to ensure compliance with this ordinance.

17.14-2

Erosion Control Permit Issuance, Duration, Extensions, Transfer and Termination

- (a) Permit issuance
P&D shall issue a permit to the applicant after verifying that all applicable conditions of this ordinance and possibly other related permits have been met, including the submittal of contact information for all responsible parties. P&D may delay issuance of an erosion control permit if P&D determines that the proposed construction timelines and best management practices will not comply with the erosion control plan requirements under Section 17.15-5 or the purposes of the ordinance under Section 17.15-1 and 17.15-2, including proposed late season new road construction with grass swales.
- (b) Permit duration
P&D shall establish an expiration date for all erosion control permits based on the construction schedules agreed upon by the Contractor or Engineer and Owner/ Developer. The applicant shall notify P&D of any changes to the proposed schedule prior to permit issuance. Any erosion control permit that has expired prior to permit termination is subject to enforcement action in accordance with Section V.
- (c) Permit extensions
P&D may amend any terms of an erosion control permit, including extending the permit expiration date, if P&D determines it is necessary to ensure compliance with this ordinance. The applicant shall request an extension to an erosion control permit at least 10 working days before permit expiration. Any extension shall meet the requirements of Section 17.14-2(b). P&D may require additional erosion control measures as a condition of granting a permit amendment.
- (d) Permit transfer
P&D may transfer an erosion control permit issued under this ordinance to a new applicant upon a written request from the applicant. The permit transfer shall not take effect until P&D verifies in writing that the new applicant has satisfied all conditions of this ordinance, including an updated list of responsible parties. Any minor plan revisions, as determined by P&D, requested by the new applicant must be approved prior to construction in accordance with Sec. 17.14-1(c). Any major plan revisions, as determined by P&D, requested by the new applicant will require a new stormwater permit in which case the new applicant shall comply with Sec. III.B.

(e) Permit termination

P&D shall issue a notice of termination to the permit holder which shall serve as documentation that all conditions of this ordinance have been satisfied and the permit has been terminated.

17.14-3 Financial Assurance

Financial assurance shall be in accordance with Section 17.08-3 of this ordinance.

17.14-4 Final Inspection

After completion of construction and all as-built requirements (if necessary) the contractor may remove all remaining construction site erosion control measures. Upon notice from the owner P&D shall conduct a final inspection of all permitted sites to determine compliance with the approved plans and other applicable ordinance requirements. If, upon inspection, P&D determines that any of the applicable requirements have not been met, P&D shall notify the permit holder what changes would be necessary to meet the requirements. A notice of termination shall be issued by P&D in accordance with Section 17.08-2(e) upon acceptance of the Final Inspection at which time the financial assurance will be released.

D. Erosion Control Plan Requirements

17.15-1 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:

- (a) All erosion control plans and associated BMPs shall comply with the planning, design, implementation and maintenance requirements of this ordinance and the Technical Standards prepared by the Wisconsin Department of Natural Resources.
- (b) All erosion control plans shall by design, achieve to the maximum extent practicable, a reduction of 80% of the sediment load carried in runoff, on an average annual basis, as compared with no sediment or erosion controls, until the site is stabilized.
- (c) Erosion and sediment control BMPs may be used alone or in combination to meet the 80% sediment reduction goal. Plans that comply with the guiding principles described in Section 17.15-2 and the specific erosion control plan requirements described in Section 17.15-3 shall be determined by P&D as meeting the 80% sediment reduction goal.
- (d) P&D may recognize other methods for determining compliance with the 80% sediment reduction goals as they are standardized, including any methods that may come from the procedures under subch. V. of ch. NR 151, Wis. Adm. Code.

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 Revised Universal Soil Loss Equation, published by the USDA-Natural Resources Conservation Service.

17.15-2

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:

- (a) Propose grading that best fits the terrain of the site, avoiding steep slopes, wetlands, floodplains and environmental corridors;
- (b) Minimize, through project phasing and construction sequencing, the time the disturbed soil surface is exposed to erosive forces.
- (c) Minimize soil compaction, the loss of trees and other natural vegetation and the size of the disturbed area at any one time;
- (d) Locate erosion control BMPs upstream from where runoff leaves the site or enters waters of the state and outside of wetlands, floodplains, woodlands, isolated natural resource areas, or primary or secondary environmental corridors to the maximum extent practicable.
- (e) Emphasize the use of BMPs that prevent soil detachment and transport over those aimed to reduce soil deposition (sedimentation) or repair erosion damage.

17.15-3

Specific Erosion Control Plan Requirements

The following applicable minimum requirements shall be addressed in erosion control plans to the maximum extent practicable. P&D may establish more stringent erosion and sediment control requirements than the minimums set forth in this section if P&D 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. Additionally, P&D may request both interim and final erosion plans for projects that are phased or complex in nature.

- (a) 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.
- (b) 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.
- (c) Inlet Protection
Protect inlets to storm drains, culverts and other stormwater conveyance systems from siltation until the site is stabilized.
- (d) 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 P&D. Control sediment from soil stockpiles. Any soil stockpile that remains for more than 30 days shall be stabilized.
- (e) Cut and Fill Slopes
Minimize the length and steepness of proposed cut and fill slopes and stabilize them as soon as practicable.

- (f) Channel Flow
Trap sediment in channelized flow before discharge from the site using BMPS such as sediment traps and sediment basins. Stabilize open channels in accordance with P&D standards as soon as practicable.
- (g) 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.
- (h) Overland Flow
Trap sediment in overland flow before discharge from the site using BMPs such as silt fence and vegetative filter strips.
- (i) Site Dewatering
Treat pumped water to remove sediment prior to discharge from the site, using BMPs such as sediment basins and portable sediment tanks.
- (j) 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.
- (k) Topsoil Application
Save existing topsoil and reapply a minimum of 4 inches to all disturbed areas for final stabilization, unless otherwise approved by P&D, 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 P&D.
- (l) 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.
- (m) 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.
- (n) 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.
- (o) Temporary Site Stabilization
Temporary stabilization applies to disturbed areas that will not be brought to final grade or on which land-disturbing activities will not be performed for a period greater than 30 days, and requires vegetative cover for less than one year. For purposes of this

subsection, "land-disturbing activities" mean that no site grading, landscaping or utility work is occurring on that portion of the site and that precipitation events are not limiting these activities. Frozen soils do not exclude the site from this requirement.

(p) 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.

(q) Site Drainage

Site drainage plans shall comply with the provisions of Section 17.09-3(f).

17.15-4

Preliminary Erosion Control Plan Contents

Preliminary erosion control plans shall contain the following items:

- (a) A site map in accordance with Section 17.09-5;
- (b) 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.
- (c) Delineation of the following items on the map under Section 17.15-4(a):
 - 1. The area and size (in acres) of the proposed land disturbance;
 - 2. 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;
 - 3. The general location of major BMPs described in Section 17.15-4(c)1.

Note: An Erosion Control Plan Requirements Checklist shall accompany all preliminary erosion control plan submittals. The checklist can be obtained on the Kenosha County website or by contacting P&D.

17.15-5

Final Erosion Control Plan Contents

- (a) The following shall be the minimum requirements for items to be included in a final erosion control plan:
 - 1. A site map in accordance with Section 17.09-5;
 - 2. North arrow, graphic scale, draft date, name and contact information for project engineer or planner and designation of source documents for all map features.
 - 3. 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;
 - 4. Proposed building envelopes and other land area to be disturbed and size in acres;
 - 5. Temporary access drive and detail consistent with WDNR Technical Standard 1057.
 - 6. Temporary flow diversion devices for upslope or roof runoff until site is stabilized and detail consistent with WDNR Technical Standard 1066;

7. Temporary sediment trapping devices for site perimeter and inlets to culverts and storm drains consistent with WDNR Technical Standard 1063;
8. Temporary settling basin or other BMP to be used for site dewatering during utility or other subsurface work consistent with WDNR Technical Standard 1061;
9. Temporary soil stockpile sites indicating setbacks from channelized flow, nearby water resources or environmental corridors and the proposed erosion protection methods;
10. Detailed drawings and cross-sections for any sediment traps, basins or other major cut/fill area, showing side slopes and elevations;
11. Final stabilization measures for open channels and erosion protection for pipe and channel inlets, outlets and emergency spillways;
12. 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;
13. 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;
14. 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;
15. Location of soil evaluations with surface elevations and unique references to supplemental soil evaluations report forms in accordance with Section 17.16-5. Also show estimated seasonal water 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 Section 17.09-3(f)7. 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.

16. Other items specified by P&D as necessary to ensure compliance with this ordinance.
- (b) Erosion Control Plan Supporting Information:
1. 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 Section 17.15-2 and the specific requirements under Section 17.15-3;
2. Summary of design data for any structural BMP such as sediment basins or sediment traps. Sediment basins shall be sized to hold the 100-yr design storm in the stripped non-vegetated construction condition. 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;
 3. Hydraulic and hydrologic data summaries for interim site conditions in the stripped, non-vegetated conditions. Any stormwater
 4. Open channel design and stabilization data to support the selected BMPs for stabilization;
 5. Soil profile evaluation reports, in accordance with the standards in Section 17.16-5, with unique references and elevations that match the map under Section 17.15-5(a)1.
 6. Estimated time soil stockpiles will exist to support the selected BMPs for erosion control;
 7. Documentation that proposed utility locations and installation scheduling has been coordinated with the affected utility companies.
 8. Documentation of any other calculations used to demonstrate compliance with the performance standards in this section.
 9. Identification of the primary contacts for:
 1. Conducting erosion control inspections and how they will make the inspections available to P&D.
 2. Completing site grading and temporary erosion control practices.
 3. Completing final site restoration and stabilization.

Note: An Erosion Control Plan Requirements Checklist shall accompany all final erosion control plan submittals. The checklist can be obtained on the Kenosha County website or by contacting P&D.

E. Technical Standards and Specifications

17.16-1 Hydrologic and Hydraulic Models

All computations of runoff volumes and peak flow rates used in the development of erosion control plans shall be based on United States Department of Agriculture - Natural Resources Conservation Service (NRCS) methodology. Models such as SLAMM, P8 or other P&D approved models may be used to evaluate the efficiency of the design in reducing total suspended solids to meet this ordinance.

17.16-2 Best Management Practice (BMP) Design Standards

(a) 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.

- (b) Where BMP standards have not been identified or developed under Section 17.16-2, P&D may approve the use of other available standards, such as those from other states or the USDA-Natural Resources Conservation Service.

17.16-3

Technical Guidelines

The Wisconsin Department of Natural Resources (WDNR) Construction Site Erosion and Sediment Control Technical Standards should be applied in project design. These standards can be downloaded from the WDNR website. P&D may adopt additional technical guidelines to facilitate the consistent administration of certain provisions of this ordinance. P&D shall seek the expertise and input from the Land and Water Conservation Committee and other agencies in the development and maintenance of additional technical guidelines under this subsection.

17.16-4

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 the Wisconsin Department of Transportation (WISDOT), American Society for Testing and Materials (ASTM) and the USDA - Natural Resources Conservation Service (NRCS).

17.16-5

Soil Evaluations

All soil profile evaluations and forms submitted for review by P&D under the provisions of this ordinance shall be completed in accordance with Chapter 14 of the Kenosha County Municipal Code, Chapter COMM 85 Wis. Admin. Code, and any applicable standards under Section 17.16-2. Where there are no specific standards for the number, location or depth of soil profile evaluations for a proposed BMP, P&D shall determine the minimum requirements based on the design of the BMP and the likely variability of the on-site soils.

17.16-6

Availability

Copies of all technical references made in this section shall be available for review and distribution through P&D office during normal business hours, or over the Internet. Fees may be charged for hard copies of these items.

17.16-7

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 P&D.

IV. ILLICIT DISCHARGE

A. Prohibitions

17.17-1 Discharges
Except for stormwater and other discharges specifically exempted under Section IV.B., no discharge, spilling or dumping of substances or materials shall be allowed into receiving water bodies or onto driveways, sidewalks, parking lots or other areas that drain into the storm drainage system.

17.17-2 Connections
The construction, use, maintenance or continued existence of illicit connections to the storm drainage system is prohibited. This prohibition expressly includes, without limitation, illicit connections made prior to the adoption of this ordinance, regardless of whether the connection was permissible under law or practice applicable or prevailing at the time of connection.

B. Exemptions

17.18-1 The following activities are exempt from the provisions of this section unless found to have an adverse impact on the stormwater:

- (a) Discharges authorized by a permit issued by the Wisconsin Department of Natural Resources.
- (b) Discharges resulting from fire fighting activities.
- (c) Discharges from uncontaminated ground water, potable water source, roof drains, foundation drain and sump pump, air conditioning condensation, springs, lawn watering, individual residential car washing, water main and hydrant flushing and swimming pools if the water has been dechlorinated.

C. Notice of Violation

17.19-1 Whenever P&D finds a violation of this section, P&D may order compliance by written notice of violation to the responsible party. Such notice may require without limitation:

- (a) The elimination of illicit connections or discharges;
- (b) That violating discharges, practices, or operations shall cease and desist;
- (c) The abatement or remediation of stormwater pollution or contaminated hazards and the restoration of any affected property;
- (d) Any responsible party that fails to comply with a notice of violation under this section shall be subject to further enforcement action under the provisions of Section V.

V. ENFORCEMENT

A. Prohibited Practices

- 17.20-1 Not complying with any requirement of this ordinance shall be deemed a violation, and shall subject the responsible party to enforcement action under this section. Prohibited practices shall include but not limited to the following:
- (a) Commencing any land disturbing or land development activity prior to:
 - 1. Obtaining a stormwater permit;
 - 2. Obtaining an erosion control permit
 - 3. Notifying P&D a minimum of 2 working days in advance for sites that have obtained a stormwater or an erosion control permit; or
 - 4. Installing those BMPs identified in the approved plans to be installed prior to any land disturbing or land developing activity.
 - (b) Failing to comply with all permit conditions, erosion control or stormwater management requirements and approved plans in accordance this ordinance.
 - (c) Failing to maintain BMPs through notice of termination.
 - (d) Failing to maintain BMPs in accordance with recorded maintenance agreement.
 - (e) Failing to comply with any notice of violation.

B. Violations

- 17.21-1 P&D shall notify the permit holder of any violation in writing, and copy any other known responsible party involved in the violation. The written notice shall be hand delivered to the permit holder or sent to the last known address, with a reasonable attempt to verify that the permit holder received it. The notice shall describe the violation, remedial action(s) needed and a schedule for all remedial action to be completed. Any enforcement measures shall continue until compliance is achieved or as ordered by the court. P&D is authorized to use the following methods of enforcement in any combination thereof against any applicant or responsible party that is found to be in violation of any provision of this ordinance:
- (a) Forfeiture
Any violator shall be subject to a forfeiture of not less than \$100 or more than \$1000 plus the cost of prosecution for each violation. Each day that a violation exists shall constitute a separate offense.
 - (b) Stop Work Order
Any violator is subject to an order to stop all work except that which is needed as a corrective action to bring the site into compliance.
 - (c) Permit Revocation
P&D may revoke a permit issued under this ordinance. Upon loss of the permit, all construction shall cease and the site shall be

stabilized, with any costs incurred to be charged against the financial assurance.

(d) Injunction (Corporation Counsel)

The County, or any person affected by activities regulated under this ordinance, may enforce the provisions of this ordinance by a temporary restraining order, injunction and other such relief as a court may order.

(e) Emergency Action

P&D may enter upon the property and take any necessary emergency action if P&D determines that the site in violation is an immediate threat to public health, safety, welfare, the environment or downstream property, or if the permit holder or other violator refuses to take the corrective action as ordered by P&D. Any cost incurred by P&D as a result of this action shall be billed to the permit holder or other responsible party or subtracted from the financial assurance. P&D shall provide reasonable notice to the permit holder and other responsible party after exercising this authority.

(f) Citation

The County elects to also use the citation method of enforcement under Section 66 of the Wisconsin Statutes for violations of this ordinance, including those for which a statutory counterpart exists. The procedures contained in Section 66.0113(3) of the Wisconsin Statutes, relating to the options of an alleged violator and default are adopted and incorporated herein by reference.

1. Authority to issue a citation under this ordinance shall be limited to the Director of P&D, Zoning Administrator, or authorized agent. The authority delegated to such official or employees to issue citations may only be granted or revoked by the County Board. This subsection does not preclude the County or any authorized officer from proceeding under any other ordinance or law or by any other enforcement method to enforce any ordinance regulation or order.
2. The schedule of Cash Deposits for violations charged by a citation under Section 17.21-1(g) of this chapter. The cash deposit for the violation of any section or subsection of this ordinance shall be one thousand dollars (\$1000.00). In addition, upon conviction, any person who has been found to have acted in violation of any of the above sections shall be liable for the costs of prosecution including court costs and reasonable attorney fees; and in default of payment of such forfeiture and costs shall be imprisoned in the county jail until payment thereof, but not exceeding thirty (30) days. Repeat Offenses of a similar nature within a twelve (12) month period shall require a cash deposit of two thousand five hundred dollars (\$2500.00) for a second offense and for a third offense of a similar nature within a twelve (12) month period, the cash deposit shall be five thousand dollars (\$5000.00).

C. Appeals

17.22-1

Authority

The Board of Appeals shall act as the review and appeal authority for any order, requirement, decision or determination by P&D under this ordinance.

17.22-2

Procedure

The rules, procedures, duties and powers of the Board of Appeals shall be as provided in the County Code of Ordinances and the provisions of §59.694, Wisconsin Statutes shall apply to any review or appeal under this ordinance.

17.22-3

Who May Appeal

Appeals to the Board of Appeals may be taken by any aggrieved person or by an officer, department, board, or bureau of the County affected by any decision of P&D.

D. Validity

17.23-1

Repeal of conflicting Ordinances

This ordinance repeals all provisions of an ordinance previously enacted under s. 59.693 relating to construction site erosion control and stormwater management regulations. Wherever there may be a conflict with other county ordinances relating to erosion control, stormwater management or site drainage, the more restrictive provision shall apply, as determined by P&D.

17.23-2

Declaration of severability

The several sections, subsections and paragraphs of this Ordinance are hereby declared to be severable. If any section, subsection, or paragraph or subparagraph of this Ordinance shall be declared by a decision of a court of competent jurisdiction to be invalid, such decision shall not affect the validity of the other provisions of the Ordinance, or of the section of which the invalid portion or paragraph may be a part.

VI. DEFINITIONS

Applicable review authorities The Town Board, the County Department of Planning and Development, the County Land Use Committee, the County Department of Public Works, or the County Highway and Parks Committee, depending on the type of project and its location.

Applicant Any person or entity holding fee title to the property or their representative. 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), after which the applicant may provide P&D 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.

As-builts Revised set of drawings submitted by a licensed land surveyor and/or a licensed professional engineer in the state of Wisconsin upon completion of a construction project. They reflect all of the changes made from the approved drawings during the construction process, and show the exact dimensions, geometry, and location of all elements of the work completed. Also called “*record drawings*”.

Best management practice (or BMP) Structural and non-structural measures, practices, techniques or devices employed to avoid or minimize sediment or other pollutants carried in runoff.

Certified Survey Map (CSM) A map, prepared in accordance with Section 236.34 of the Wisconsin State Statutes, for the purpose of dividing land into not more than four parcels; or used to document for recording purposes, survey and dedication data relating to single parcels.

Clearing The removal and satisfactory disposal of all trees, brush, shrubs, rubbish and any other objectionable material within the designated areas.

Common plan of development All lands included within the boundary of a certified survey map, subdivision plat, or site plan created for the purpose of development or sale of property where integrated, multiple, separate and distinct land developing activity may take place at different times by future owners.

County Land Use Committee The zoning agency of Kenosha County as defined under s. 59.69(2)(a) Wisconsin Statutes

County mapping standards That the maps are drawn to national map accuracy standards using the Wisconsin State Plane Coordinate System, Wisconsin South Zone, North American Datum 1927 (NAD27) and National Geodetic Vertical Datum of 1929 (NGVD-29).

Design storm A hypothetical depth of rainfall that would occur for the stated return frequency (i.e. once every 2 years or 10 years), duration (i.e 24-hours) and timing of distribution (i.e. type II). All values are based on the historical rainfall records for the area. Design storms used in this ordinance are summarized in Section 17.11-1(b).

Dewatering The removal of trapped water from a construction site to allow land development or utility installation activities to occur.

Erosion The process of detachment, transport and deposition of soil, sediment or rock fragments by action of water, wind, ice or gravity.

Effective infiltration area The area of the infiltration system that is used exclusively to infiltrate runoff and does not include the area used for site access, berms or pretreatment.

Environmental corridor (primary and secondary) Those lands containing concentrations of scenic, recreational, and other natural resources as identified and delineated in the comprehensive planning program of the Southeastern Wisconsin Region by the Southeastern Wisconsin Regional Planning Commission (SEWRPC). These natural resources and resource-related elements include the following:

- (a) Lakes, rivers, and streams, together with their natural floodplains
- (b) Wetlands
- (c) Forests and woodlands
- (d) Wildlife habitat areas
- (e) Rough topography
- (f) Significant geological formations
- (g) Wet or poorly drained soils
- (h) Existing outdoor recreation sites
- (i) Potential outdoor recreation and related open space sites
- (j) Historic sites and structures
- (k) Significant scenic areas or vistas.

A description of the process of defining and delineating Environmental Corridors is set forth in the Southeastern Wisconsin Regional Planning Commission's Technical Record, Volume 4, No. 2 and is incorporated herein by reference.

Environmentally sensitive area Any area that, due to the natural resources present or the lack of filtering capacity, is more susceptible to the adverse impacts of sediment and other pollutants associated with erosion and urban runoff. Examples include environmental corridors, direct hydrologic connections to lakes, streams, wetlands, groundwater or other water resources, or very coarse or shallow soils above groundwater or bedrock.

Filtering layer Soil that has at least a 3-foot deep layer with at least 20% that passes through a #200 sieve (fines); or at least a 5-foot deep layer with at least 10% that passes through a #200 sieve (fines); or another medium exists with an equivalent level of protection, as determined by P&D.

Final plat A map of a proposed condominium or subdivision prepared by a registered land surveyor to be recorded with the Kenosha County Register of Deeds pursuant Wisconsin Statutes 236.20.

Groundwater recharge areas Lands identified in a document published by the Southeastern Wisconsin Regional Planning Commission as groundwater recharge areas; or where, prior to any land disturbing or land development activity, precipitation or runoff could only leave the area by infiltrating the ground, thereby recharging the groundwater.

Grubbing The removal and disposal of all stumps and other objectional material to a depth of at least 18 inches below the ground surface.

Illicit connection Any drain or conveyance, whether on the surface or subsurface, which allows an illegal non-stormwater discharge to enter the storm drain system, including but not limited to: sewage, process wastewater and wash water, any connections to the storm drain system from indoor drains and sinks, regardless of whether said drain or connection had been allowed, permitted, or approved by a government agency, prior to the adoption of this ordinance.

Impervious surface 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, typical gravel driveways, parking lots, and other examples listed shall be considered impervious unless specifically designed to encourage infiltration or storage of runoff.

Impracticable That complying with a specific requirement would cause undue economic hardship and that special conditions exist that are beyond the control of the applicant and would prevent compliance.

In-fill development Land development that occurs where there was no previous land development and is surrounded by other existing land development;

Infiltration The entry of precipitation or runoff into or through the soil.

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

Isolated natural resource Areas that contain significant remaining resources apart from primary and secondary environmental corridors, see "Environmental corridor (primary and secondary)", as defined by the Southeastern Regional Planning Commission (SEWRPC). Isolated natural resource areas must be at least five acres in size and at least 200 feet wide.

Karst features An area or surficial geologic feature subject to bedrock dissolution so that it is likely to provide a conduit to groundwater, and may include caves, enlarged fractures, mine features, exposed bedrock surfaces, sinkholes, springs, seeps or swallets.

Land and Water Conservation Committee A committee created for the purpose of advising P&D and the County Board on matters relating to the conservation of soil and

water and the administration of this ordinance. All committee meetings shall be posted in accordance with the Wisconsin Open Meetings Law.

Land development activity or (land development) Any construction related activity that may ultimately result in the addition of impervious surfaces, such as the construction of buildings, roads, parking lots and other structures.

Land disturbing activity (or disturbance) 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, but not limited to clearing, grubbing, excavating, filling, grading, building construction or demolition, and pit trench dewatering.

Major Stormwater Drainage System Major stormwater drainage systems shall be designed for a 100-year recurrence interval storm. Consists of the entire street cross-section and interconnected drainage swales, overland overflow routes, watercourses and stormwater storage facilities.

Maximum Extent Practicable or MEP An acceptable level of implementing best management practices to achieve a performance standard specified in this ordinance, as determined by P&D. In determining MEP, P&D shall take into account the best available technology, cost effectiveness and other competing issues such as human safety and welfare, endangered and threatened resources, historic properties and geographic features. MEP allows flexibility in the way to meet the performance standards and may vary based on the performance standard and site conditions.

Minor Stormwater Drainage System Minor stormwater drainage systems shall be designed for a 10-year recurrence interval storm. Consists of sideyard and backyard drainage swales, roadside swales, storm sewers, and possibly stormwater storage facilities.

Navigable Lake Michigan, all natural inland lakes within Wisconsin and all rivers, streams, ponds, sloughs, flowages and other waters within the territorial limits of the Wisconsin which are navigable under the laws of the state. The Wisconsin Supreme Court has declared navigable all bodies of water that have a bed differentiated from adjacent uplands and levels of flow sufficient to support navigation by a recreational craft of the shallowest draft on an annually recurring basis. The Wisconsin Department of Natural Resources is responsible for determining if a water body or watercourse is navigable.

Nonmetallic mining Defined as given by s. 295.11(3) Wisconsin Statutes:

Operations or activities for the extraction from the earth for sale or use by the operator of mineral aggregates or nonmetallic minerals such as stone, sand, gravel, asbestos, beryl, clay, feldspar, peat, talc and topsoil, including such operations or activities as excavation, grading and dredging. On-site processes that are related to the extraction of mineral aggregates or nonmetallic minerals, such as stockpiling of materials, blending mineral aggregates or nonmetallic minerals with other mineral aggregates or nonmetallic minerals, crushing, screening, scalping and dewatering.

Off-site BMP Best management practice(s) that are located outside of the boundaries of the site covered by a permit application. Off-site BMPs are usually installed as part of a regional stormwater management plan approved by a local government.

Ordinary high water mark (OHWM) The point on the bank or shore up to which the presence and action of surface water is so continuous as to leave a distinct mark such as by erosion, destruction or prevention of terrestrial vegetation, predominance of aquatic vegetation, or other easily recognized characteristic. Where the bank or shore at any particular place is of such character that it is difficult or impossible to ascertain where the point of ordinary high-water mark is, recourse may be had to the opposite bank of a stream or to other places on the shore of a lake or flowage to determine whether a given stage of water is above or below the ordinary high-water mark as defined in s. NR115 Wis. Admin. Code.

Planned land use The land use designated in the latest version of the adopted Kenosha County comprehensive land use plan.

P&D The Kenosha County Department of Planning and Development. P&D Director supervises the daily activities of the department, including the administration of this ordinance.

Plat A map of a proposed condominium or subdivision.

Pollutant Any dredged spoil, solid waste, incinerator residue, sewage, garbage, refuse, oil, sewage sludge, munitions, chemical wastes, biological materials, radioactive substance, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal and agricultural waste discharged into water per Wisconsin Statutes s. 283.01(13).

Pollution Man-made or man-induced alteration of the chemical, physical, biological or radiological integrity of water per Wisconsin Statutes s. 283.01(10).

Pre-Development The extent and distribution of land cover types present before the initiation of a proposed land development activity. This term is used to match pre- and post-development storm water peak flows as required by the chapter.

Preliminary plat A map prepared by a registered land surveyor showing the salient features of a proposed condominium or subdivision submitted to an approving authority for purposes of preliminary consideration.

Preventive action limit A numerical value expressing the concentrations of a substance in groundwater as defined in s. NR 140.05(17), Wis. Admin. Code.

Project Engineer A licensed Civil Engineer in the State of Wisconsin responsible for the accuracy of the approved construction plans, including the erosion control and stormwater management plans. The Project Engineer shall also certify that the as-built plans are in general conformance with the approved construction plans.

Protective area 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.

Publicly funded A land development, such as a public road or municipal building that is being funded solely by a unit of 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.

Record Drawings Revised set of drawings submitted by a licensed land surveyor and/or a licensed professional engineer in the state of Wisconsin upon completion of a construction project. They reflect all of the changes made from the approved drawings during the construction process, and show the exact dimensions, geometry, and location of all elements of the work completed. Also called record drawings. Also called “as-built”.

Re-development Land development that replaces previous land development of similar impervious conditions.

Regional stormwater management plan A planning document, adopted by a local unit of government, that coordinates stormwater management activities for an entire drainage area or watershed, including future land development activities within the watershed. The plan may prescribe the use of BMPs for individual development sites and for selected points within the watershed to meet the goals and objectives of the plan.

Regulatory agency A public agency that P&D recognizes as having the legal authority to review and approve erosion control and stormwater management plans and enforce their implementation, with requirements at least as restrictive as this ordinance.

Responsible party Any person or entity holding fee title to the property or 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 stormwater plans and permits under this ordinance.

Road A public thoroughfare, avenue, street, highway, boulevard, parkway, way, drive, lane, court, private easement, or private road providing, generally, the primary roadway to and egress from the property abutting along its length.

Runoff Water from rain, snow or ice melt, or dewatering that moves over the land surface via sheet or channelized flow. Also, known as stormwater.

Seasonal high water table The upper limit of the zone of soil saturation caused by underlying groundwater at its highest level based on soil and site evaluations.

Shoreland Those lands lying within the following distances: one thousand (1,000) feet from the high water elevation of navigable lakes, ponds, and flowages or three hundred (300) feet from the high water elevation of navigable streams or to the landward side of the floodplain, whichever is greater.

Site Refers to the entire parcel and not just the area of disturbance for the proposed development. For residential development, the area for effective infiltration is up to 1% of the site and for nonresidential development the effective infiltration area is up to 2% of the site.

Site Plan A plan, prepared to scale, showing accurately the boundaries of a site and the location of all building, structures, and principal site development features proposed for a specific parcel of land.

Stabilized That all land disturbing activities are completed and that a uniform, perennial vegetative cover has been established on 100% of the soil surface with a minimum density of 70% or other surfacing material is in place and the risk of further soil erosion is minimal, as determined by P&D.

Storm drainage system A publicly-owned facility by which stormwater is collected and/or conveyed, including but not limited to any roads with drainage systems, municipal streets, gutters, curbs, inlets, piped storm drains, pumping facilities, retention and detention basins, natural and human-made or altered drainage channels, reservoirs, and other drainage structures.

Stormwater Water from rain, snow or ice melt, or dewatering that moves over the land surface via sheet or channelized flow. Also, known as runoff.

Stormwater Management The overall culmination of techniques used to manage pre and post-construction stormwater in an effort to reduce pollution, minimize flooding, and protect natural resources.

Stormwater BMP Any best management practice that is designed to collect or manage the quantity or quality of stormwater runoff for an indefinite time period. This term is a subset of the term "best management practice" and distinct in that they require long-term maintenance. Some examples include, but are not limited to: wet or dry detention basin, infiltration trench or basin, bio-retention basin, stilling basin, green roof, filter strip, artificial wetland, or any combination of these or other permanent stormwater management practices, as determined by P&D.

Stormwater permit A written authorization made by P&D to the applicant to conduct land disturbing or land development activities in accordance with the requirements of this ordinance. A stormwater permit regulates the post-construction stormwater runoff from a site.

Subdivision As defined in Chapter 14 of the Kenosha County Municipal Code.

Technical standard A document that specifies design, predicted performance and operation and maintenance requirements for a material, device or method.

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

Utility 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, stormwater, sewage, or any combination of these items.

Warm season and wetland plantings Seed or plant stock that is native to a prairie or wetland setting. These types of plantings usually take a couple of years to get

established and require diligent removal of invasive species during this time. Upon maturity, warm season plants generally have a deep root system, which enhances infiltration.

Waters of the state Those portions of Lake Michigan and Lake Superior within the boundaries of this state, and all lakes, bays, rivers, streams, springs, ponds, wells, impounding reservoirs, marshes, watercourses, drainage systems and other surface water or groundwater, natural or artificial, public or private, within this state or its jurisdiction as defined in s. 281.01 (18), Wisconsin Statutes

Wetlands An area where water is at, near or above the land surface long enough to be capable of supporting aquatic or hydrophytic vegetation and which has soils indicative of wet conditions.

Woodland An area where a grouping of 17 or more deciduous trees per acre exist that have trunk diameters of at least 4 inches at breast height and having at least a 50 percent canopy cover. The boundaries of a woodland shall be defined by the canopy, commonly referred to as the “drip line”.

Working day Any day the office of P&D is routinely and customarily open for business, and does not include Saturday, Sunday and any official county holidays.