

CHAPTER 19
CONSTRUCTION SITE EROSION CONTROL, POST-CONSTRUCTION
STORM WATER MANAGEMENT AND ILLICIT DISCHARGE

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19.01 AUTHORITY. (Rep & Rec 16-13)

This ordinance is adopted under the authority granted by § 62.234, Wis. Stats. This ordinance supersedes all provisions of an ordinance previously enacted under § 62.23, Wis. Stats., that relate to site erosion control, storm water management and illicit discharge. Except as otherwise specified in § 62.234 Wis. Stats., § 62.23, Wis. Stats., applies to this ordinance and to any amendments to this ordinance.

- a. The provisions of this ordinance are deemed not to limit any other lawful regulatory powers of the City of Pewaukee Common Council.
- b. The Common Council hereby designates the City Engineer or designee authority to administer and enforce the provisions of this ordinance.
- c. The requirements of this ordinance do not pre-empt more stringent erosion and sediment control requirements that may be imposed by any of the following:
 - (1) Wisconsin Department of Natural Resources administrative rules, permits or approvals including those authorized under §§ 281.16 and 283.33, Wis. Stats.
 - (2) Targeted non-agricultural performance standards promulgated in rules by the Wisconsin Department of Natural Resources under s. NR 151.004, Wis. Adm. Code.

19.02 PURPOSE AND INTENT. (Rep & Rec 16-13)

It is the purpose of this ordinance to establish requirements for both land disturbing construction activity and post-construction runoff that will minimize the amount of sediment and other pollutants carried by runoff or discharged from land disturbing construction activity to waters of the state and that will diminish the threats to public health, safety, welfare and the aquatic environment. Specific purposes are to:

- Further the maintenance of safe and healthful conditions.
- Prevent and control water pollution; prevent and control the adverse effects of storm water; prevent and control soil erosion; protect spawning grounds, fish and aquatic life; control building sites, placement of structures and land uses; preserve ground cover and scenic beauty; and promote sound economic growth.
- 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; minimize the amount of pollutants discharged from the separate storm sewer to protect waters of the state; and prevent conditions that endanger downstream property.

It is the intent of the Common Council that this ordinance regulates post-construction storm water discharges to waters of the state. This ordinance may be applied on a site-by-site basis. The Common Council recognizes, however, that the preferred method of achieving the storm water performance standards set forth in this ordinance is through the preparation and implementation of comprehensive, systems-level storm water management plans that cover hydrologic units, such as watersheds, on a municipal and regional scale. Such plans may prescribe regional storm water devices, practices or systems, any of which may be designed to treat runoff from more than one site prior to discharge to waters of the state. Where such plans are in conformance with the performance standards developed under § 281.16, Wis. Stats., for regional storm water management measures and have been approved by the Common Council, it is the intent of this ordinance that the approved plan be used to identify post-construction management measures acceptable for the community.

19.03 APPLICABILITY. (Rep & Rec 16-13)

- a. In regard to land disturbing construction activities, this ordinance applies to any construction site as defined under Subsection 19.05 m. that has one or more acres of land disturbing construction activity. In regard to post construction sites, where not otherwise limited by law, this ordinance applies after final stabilization of a site that had one or more acres of land disturbing construction activity.

- b. In regard to land disturbing construction activity, this ordinance does not apply to the following:
 - (1) Transportation facilities, except transportation facility construction projects that are part of a larger common plan of development such as local roads within a residential or industrial development.
 - (2) A construction project that is exempted by federal statutes or regulations from the requirement to have a national pollutant discharge elimination system permit issued under Chapter 40, Code of Federal Regulations, part 122, for land disturbing construction activity.
 - (3) Nonpoint discharges from agricultural facilities and practices.
 - (4) Nonpoint discharges from silviculture activities.
 - (5) Routine maintenance for project sites with less than 5 acres of land disturbance if performed to maintain the original line and grade, hydraulic capacity or original purpose of the facility.

- c. In regard to post-construction sites, a site that meets any of the criteria in this paragraph is exempt from the post-construction site storm water management requirements of this ordinance.
 - (1) A post-construction site with less than 10% connected imperviousness based on the area of land disturbance, provided the cumulative area of all impervious surfaces is less than one acre. However, the exemption in this paragraph does not include an exemption from the protective area standard in s. NR 151.125 Wis. Adm. Code and this ordinance.
 - (2) Agricultural facilities and practices.
 - (3) Underground utility construction but not including the construction of any above ground structures associated with utility construction.

- d. Notwithstanding the applicability requirements in subsects. a. and b. above, this ordinance applies to construction sites and post-construction sites of any size that, in the opinion of the City Engineer or designee, are likely to result in runoff that exceeds the safe capacity of the existing drainage facilities or receiving body of water, that causes undue channel erosion, that increases water pollution by scouring or the transportation of particulate matter or that endangers property or public safety.

19.04 JURISDICTION. (Rep & Rec 16-13)

This ordinance applies to land disturbing construction activities on lands within the boundaries and jurisdiction of the City of Pewaukee, as well as the extraterritorial division of land subject to an

ordinance enacted pursuant to §§ 236.45(2) and (3), Wis. Stats.

- a. Exclusions. This ordinance is not applicable to activities conducted by a state agency, as defined under § 227.01(1), Wis. Stats.

19.05 DEFINITIONS. (Rep & Rec 16-13)

The following definitions are set forth herein for the purpose of interpreting Section 19.00 et seq. To the extent that these definitions may vary from the meaning of words as used or defined in other sections of the City of Pewaukee Municipal Code, they are limited to this section of the Code and do not modify the meaning of words as used in other Code sections.

- a. “Adequate sod, or self-sustaining vegetative cover” means maintenance of sufficient vegetative types and densities such that the physical integrity of the streambank or lakeshore is preserved. Self-sustaining vegetative cover includes grasses, forbs, sedges and duff layers of fallen leaves and woody debris.
- b. “Administering authority” means a governmental employee, or a regional planning commission empowered under § 62.234, Wis. Stats., that is designated by the City of Pewaukee to administer this ordinance.
- c. “Agricultural facilities and practices” has the meaning in § 281.16(1), Wis. Stats.
- d. “Alternate use” means the prevention of storm water discharges from a site to an MS4, water of the state, or a parcel under different ownership through the capture, storage and re-use of storm water runoff. Alternate uses of storm water runoff include but are not limited to toilette flushing, laundry, irrigation or storage on green roofs where an equivalent portion of the runoff is captured permanently by rooftop vegetation.
- e. “Atlas 14” means the National Oceanic and Atmospheric Administration (NOAA) Atlas 14 Precipitation Frequency Atlas of the United States, Volume 8 (Midwestern States) published in 2013.
- f. “Average annual rainfall” means a calendar year of precipitation as determined by the Wisconsin Department of Natural Resources for users of models such as WinSLAMM, P8 or equivalent methodology. The average annual rainfall is chosen from a Department publication for the location closest to the City of Pewaukee.
- g. “Best Management Practice” or “BMP” means structural or non-structural measures, practices, techniques or devices employed to avoid or minimize soil, sediment or pollutants carried in runoff to waters of the state.
- h. “Business day” means a day the office of the City Engineer is routinely and customarily open for business.
- i. “Cease and desist order” means a court-issued order to halt land disturbing construction activity that is being conducted without the required permit or in violation of a permit issued by the City Engineer or designee.
- j. “City of Pewaukee Technical Standards” means a document identifying minimum technical standards, requirements, specifications and/or guidance for development and redevelopment within the City of Pewaukee.
- k. “Combined sewer system” means a system for conveying both sanitary sewage and storm water runoff.

- l. “Connected imperviousness” means an impervious surface connected to the waters of the state via a separate storm sewer, an impervious flow path or a minimally pervious flow path.
- m. “Construction site” means an area upon which one or more land disturbing construction activities occur, including areas that are part of a larger common plan of development or sale where multiple separate and distinct land disturbing construction activities may be taking place at different times on different schedules but under one plan. A long range planning document that describes separate construction projects, such as a 20-year transportation improvement plan, is not a common plan of development.
- n. “Design storm” means a hypothetical discrete rainstorm characterized by a specific duration, temporal distribution, rainfall intensity, return frequency, and total depth of rainfall.
- o. “Development” means residential, commercial, industrial or institutional land uses and associated roads.
- p. “Direct conduits to ground water” means wells, sink holes, swallets, fractured bedrock at the surface, mine shafts, non-metallic mines, tile inlets discharging to ground water, quarries or depression ground water recharge areas over shallow fractured rock.
- q. “Division of land” means the creation from one parcel of 2 or more parcels or building sites of one or more acres each in area where such creation occurs at one time or through the successive partition within a 5 year period.
- r. “Effective infiltration area” means the area of the infiltration system that is used to infiltrate runoff and does not include the area used for site access, berms or pretreatment.
- s. “Erosion” means the process by which the land’s surface is worn away by the action of wind, water, ice or gravity.
- t. “Erosion and sediment control plan” means a comprehensive plan developed to address pollution caused by erosion and sedimentation of soil particles or rock fragments during construction.
- u. “Exceptional resource waters” means waters listed in s. NR 102.11, Wis. Adm. Code.
- v. “Extraterritorial” means the unincorporated area within 3 miles of the corporate limits of a first, second, or third class city, or within 1.5 miles of a fourth class city or village.
- w. “Filtering layer” means soil that has at least a 3-foot deep layer with at least 20-percent fines; or an engineered soil with an equivalent level of protection as determined by the regulatory authority for the site.
- x. “Final stabilization” means that all land disturbing construction activities at the construction site have been completed and that a uniform perennial vegetative cover has been established, with a density of at least 70 percent of the cover for the unpaved areas and areas not covered by permanent structures, or that employ equivalent permanent stabilization measures.
- y. “Financial guarantee” means cash deposit, irrevocable letter of credit, or similar guarantees submitted to the City Engineer or designee by the responsible party to assure that requirements of the ordinance are carried out in compliance with the storm water management plan.
- z. “Governing body” means town board of supervisors, county board of supervisors, city council, village board of trustees, or village council.

- aa. “Impervious surface” means an area that releases as runoff all or a large portion of the precipitation that falls on it, except for frozen soil. Rooftops, sidewalks, driveways, gravel or paved parking lots and streets are examples of areas that typically are impervious.
- bb. “In-fill area” means an undeveloped area of land located within an existing urban sewer service area, surrounded by development or development and natural or man-made features where development cannot occur.
- cc. “Infiltration” means the entry of precipitation or runoff into or through the soil.
- dd. “Infiltration system” means a device or practice such as a basin, trench, rain garden or swale designed specifically to encourage infiltration, but does not include natural infiltration in pervious surfaces such as lawns, redirecting of rooftop downspouts onto lawns or minimal infiltration from practices, such as swales or road side channels designed for conveyance and pollutant removal only.
- ee. “Land disturbing construction activity” means any man-made alteration of the land surface resulting in a change in the topography or existing vegetative or non-vegetative soil cover, that may result in runoff and lead to an increase in soil erosion and movement of sediment into waters of the state. Land disturbing construction activity includes clearing and grubbing, demolition, excavating, pit trench dewatering, filling and grading activities.
- ff. “Landowner” means any person holding fee title, an easement or interest in property, which allows the person to undertake cropping, livestock management, land disturbing construction activity or maintenance of storm water BMPs on the property.
- gg. “Maintenance agreement” means a legal document that provides for long-term maintenance of storm water management practices.
- hh. MEP” or “Maximum Extent Practicable” means the highest level of performance that is achievable but is not equivalent to a performance standard identified in this ordinance as determined in accordance with Section 19.055 of this ordinance
- ii. “New development” means development resulting from the conversion of previously undeveloped land or agricultural land uses.
- jj. “NRCS, MSE3 or MSE4 distribution” means a specific precipitation distribution developed by the United States Department of Agriculture, Natural Resources Conservation Service, using precipitation data from Atlas 14.
- kk. “Off-site” means located outside the property boundary described in the permit application.
- ll. “On-site” means located within the property boundary described in the permit application.
- mm. “Ordinary high-water mark” has the meaning given in s. NR 115.03(6), Wis. Adm. Code.
- nn. “Outstanding resource waters” means waters listed in s. NR 102.10, Wis. Adm. Code.
- oo. “Percent fines” means the percentage of a given sample of soil, which passes through a # 200 sieve.
- pp. “Performance standard” means a narrative or measurable number specifying the minimum acceptable outcome for a facility or practice.
- qq. “Permit” means a written authorization made by the City Engineer or designee to the applicant to conduct land disturbing construction activity or to discharge post-construction runoff to waters of the state.

- rr. "Permit administration fee" means a sum of money paid to the City by the permit applicant for the purpose of recouping the expenses incurred by the authority in administering the permit.
- ss. "Pervious surface" means an area that releases as runoff a small portion of the precipitation that falls on it. Lawns, gardens, parks, forests or other similar vegetated areas are examples of surfaces that typically are pervious.
- tt. "Pollutant" has the meaning given in § 283.01(13), Wis. Stats.
- uu. "Pollution" has the meaning given in § 281.01(10), Wis. Stats.
- vv. "Post-construction site" means a construction site following the completion of land disturbing construction activity and final site stabilization.
- ww. "Pre-development condition" means the extent and distribution of land cover types present before the initiation of land disturbing construction activity, assuming that all land uses prior to development activity are managed in an environmentally sound manner.
- xx. "Preventive action limit" has the meaning given in s. NR 140.05(17), Wis. Adm. Code.
- yy. "Protective area" means an area of land that commences at the top of the channel of lakes, streams and rivers, or at the delineated boundary of wetlands, and that is the greatest of the widths listed in Subsection 19.09 d. of this ordinance, as measured horizontally from the top of the channel or delineated wetland boundary to the closest impervious surface.
- zz. "Redevelopment" means areas where development is replacing older development. For the purposes of this ordinance a site is considered a redevelopment site when all of the following are met: the site has an existing building; the site is in a zoning other than agricultural or residential; the site is less than 1 (one) acre; and the existing building has a plan of operation on file at the City of Pewaukee.
- aaa. "Responsible party" means the landowner or any other entity performing services to meet the requirements of this ordinance through a contract or other agreement.
- bbb. "Runoff" means storm water or precipitation including rain, snow or ice melt or similar water that moves on the land surface via sheet or channelized flow.
- ccc. "Sediment" means settleable solid material that is transported by runoff, suspended within runoff or deposited by runoff away from its original location.
- ddd. "Separate storm sewer" means a conveyance or system of conveyances including roads with drainage systems, streets, catch basins, inlets, curbs, gutters, ditches, constructed channels or storm drains, which meets all of the following criteria:
- (1) Is designed or used for collecting water or conveying runoff.
 - (2) Is not part of a combined sewer system.
 - (3) Is not of a publically owned wastewater treatment works that provides secondary or more stringent treatment.
 - (4) Discharges directly or indirectly to waters of the state.
- eee. "Silviculture" means activities including tree nursery operations, tree harvesting operations, reforestation, tree thinning, prescribed burning and pest and fire control. Clearing and grubbing of an area of a construction site is not a silviculture activity.
- fff. "Site" means the entire area included in the legal description of the land on which the land disturbing construction activity is proposed in the permit application or in which land disturbing has occurred.

- ggg. “Stop work order” means an order issued by the City Engineer or designee which requires that all construction activity on the site be stopped.
- hhh. “Storm water management plan” means a comprehensive plan designed to reduce the discharge of pollutants and the peak rate of runoff from storm water, after the site has undergone final stabilization, following completion of the construction activity.
- iii. “Storm water management system plan” is a comprehensive plan designed to reduce the discharge of runoff and pollutants from hydrologic units on a regional or municipal scale.
- jjj. “Technical standard” means a document that specifies design, predicted performance and operation and maintenance specifications for a material, device or method.
- kkk. “Top of the channel” means an edge, or point on the landscape landward from the ordinary high-water mark of a surface water of the state, where the slope of the land begins to be less than 12% continually for at least 50 feet. If the slope of the land is 12% or less continually for the initial 50 feet landward from the ordinary high-water mark, the top of the channel is the ordinary high-water mark.
- lll. “Total maximum daily load” or “TMDL” means the amount of pollutants specified as a function of one or more quality parameters that can be discharged per day into a water quality limited segment and still ensure attainment of the applicable water quality standard.
- mmm. “TP-40” means Technical Paper No. 40, Rainfall Frequency Atlas of the United States, published in 1961.
- nnn. “TR-55” means the United States Department of Agriculture, Natural Resources Conservation Service (previously Soil Conservation Service), Urban Hydrology for Small Watersheds, Second Edition, Technical Release 55, June 1986.
- ooo. “Transportation facility” means a highway, a railroad, a public mass transit facility, a public use airport, a public trail or any other public work for transportation purposes such as harbor improvements under § 85.095(1)(b), Wis. Stats. Transportation facility does not include building sites for the construction of public buildings and buildings that are places of employment that are regulated by the Department pursuant to § 281.33, Wis. Stats.
- ppp. “TSS” means Total Suspended Solids. Total suspended solids are a measure of the suspended material in water.
- qqq. “Type II distribution” means a rainfall type curve as established in the “United States Department of Agriculture, Natural Resources Conservation Service (previously Soil Conservation Service), Technical Paper 149, published 1973” which is incorporated by reference into this chapter.
- rrr. “Waters of the state” has the meaning given in § 281.01(18), Wis. Stats.

19.055 APPLICABILITY OF MAXIMUM EXTENT PRACTICABLE. (Created 16-13)

Maximum extent practicable applies when a person or entity who is subject to a performance standard of this ordinance demonstrates to the City Engineer or designee’s satisfaction that a performance standard is not achievable and that a lower level of performance is appropriate. In making the assertion that a performance standard is not achievable and that a level of performance different from the performance standard is the maximum extent practicable, the responsible party shall take into account the best available technology, cost effectiveness, geographic features and other competing interests such as public safety and welfare, protection of endangered and threatened resources, and preservation of historic properties.

19.06 TECHNICAL STANDARDS FOR CONSTRUCTION SITE EROSION CONTROL.
(Rep & Rec 16-13)

- a. Design Criteria, Standards and Specifications. All BMPs required to comply with this ordinance shall meet the design criteria, standards and specifications based on any of the following:
- (1) Design guidance and technical standards identified or developed by the Wisconsin Department of Natural Resources under subchapter V of chapter NR 151, Wis. Adm. Code.
 - (2) Soil loss prediction tools (such as the Universal Soil Loss Equation (USLE)) when using an appropriate rainfall or runoff factor (also referred to as the R factor) or an appropriate design storm and precipitation distribution, and when considering the geographic location of the site and the period of disturbance.
 - (3) City of Pewaukee Technical Standards.
- b. Other Standards. Other technical standards not identified or developed in subsect. a., may be used provided that the methods have been approved by the City Engineer or designee.

19.07 TECHNICAL STANDARDS FOR POST-CONSTRUCTION STORM WATER MANAGEMENT. (Rep & Rec 16-13)

- a. The following criteria, standards and specifications shall be used in designing the water quality, peak discharge and infiltration components of storm water practices needed to meet the water quality and quantity standards of this ordinance:
- (1) Consistent with the technical standards identified, developed or disseminated by the Wisconsin Department of Natural Resources under subchapter V of chapter NR 151, Wis. Adm. Code.
 - (2) Where technical standards have not been identified or developed by the Wisconsin Department of Natural Resources, other technical standards may be used provided the standards have been approved by the City Engineer or designee.
 - (3) City of Pewaukee Technical Standards.

19.08 PERFORMANCE STANDARDS FOR CONSTRUCTION SITE EROSION CONTROL. (Rep & Rec 16-13)

The responsible party shall develop and implement a written, site-specific erosion and sediment control plan for each construction site, developed in accordance with Section 19.11 that incorporates the requirements of this section.

- a. Erosion and other Pollutant Control Requirements. The erosion and sediment control plan required above shall include the following:
- (1) Erosion and Sediment Control Practices. Erosion and sediment control practices at each site where land disturbing construction activity is to occur shall be used to prevent or reduce the following:
 - (a) The deposition of soil being tracked onto streets by vehicles.
 - (b) The discharge of sediment from disturbed areas into on-site storm water inlets.

- (c) The discharge of sediment from disturbed areas into adjacent waters of the state.
 - (d) The discharge of sediment from drainage ways that flow off the site.
 - (e) The discharge of sediment from dewatering activities.
 - (f) The discharge of sediment eroding from soil stockpiles existing for more than 7 days.
 - (g) The discharge of sediment from erosive flows at outlets and in downstream channels.
 - (h) The transport by runoff into waters of the state or offsite of chemicals, cement and other building compounds and materials on the construction site during the construction period. However, projects that require the placement of these materials in waters of the state, such as constructing bridge footings or BMP installations, are not prohibited by this subdivision.
 - (i) The transport by runoff into waters of the state or offsite of untreated water from vehicle and wheel washing.
- (2) Sediment Performance Standards. In addition to the erosion and sediment control practice requirements identified under par. (1) above, the following erosion and sediment control practices shall be employed:
- (a) BMPs that, by design, discharge no more than 5 tons per acre per year, or to the maximum extent practicable, of the sediment load carried in runoff from initial grading to final stabilization.
 - (b) No person shall be required to employ more BMPs than are necessary to meet a performance standard in order to comply with maximum extent practicable. Erosion and sediment control BMPs may be combined to meet the requirements of this paragraph. Credit may be given toward meeting the sediment performance standard of this paragraph for limiting the duration or area, or both, of land disturbing construction activity, or for other appropriate mechanisms.
 - (c) Notwithstanding subd. (a), if BMPs cannot be designed and implemented to meet the sediment performance standard, the erosion and sediment control plan shall include a written, site-specific explanation of why the sediment performance standard cannot be met and how the sediment load will be reduced to the maximum extent practicable.
- (3) Preventative Measures. The erosion and sediment control plan shall incorporate all of the following:
- (a) Maintenance of existing vegetation, especially adjacent to surface waters whenever possible.
 - (b) Minimization of soil compaction and preservation of topsoil.
 - (c) Minimization of land disturbing construction activity on slopes of 20 percent or more.
 - (d) Development of spill prevention response procedures.
- (4) Location. The BMPs used to comply with this section shall be located so that treatment occurs prior to runoff entering waters of the state.

- b. Implementation. The BMPs used to comply with this section shall be implemented as follows:
- (1) Erosion and sediment control practices shall be constructed or installed before land disturbing activities begin in accordance with the erosion and sediment control plan developed under Section 19.11 of this ordinance.
 - (2) Erosion and sediment control practices shall be maintained until final stabilization.
 - (3) Final stabilization activity shall commence when land disturbing activities cease and final grade has been reached on any portion of the site.
 - (4) Temporary stabilization activity shall commence when land disturbing activities have temporarily ceased and will not resume for a period exceeding 14 days.
 - (5) BMPs that are no longer necessary for erosion and sediment control shall be removed by the responsible party.

19.09 PERFORMANCE STANDARDS FOR POST-CONSTRUCTION STORM WATER MANAGEMENT. (Rep & Rec 16-13)

The responsible party shall comply with this section and develop and implement a written post-construction storm water management plan for each post-construction site, in accordance with Section 19.12, which incorporates the requirements of this section. For redevelopment sites where the redevelopment will be replacing older development that was subject to post-construction performance standards of chapter NR 151, Wis. Adm. Code, in effect on or after October 1, 2004, the responsible party shall meet the total solids reduction, peak flow control, infiltration and protective area standards applicable to the older development or meet the redevelopment standards of this ordinance, whichever is more stringent. The storm water management plan required under this section shall include the following:

a. Total Suspended Solids

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

- (1) BMPs shall be designed in accordance with Table 1 or to the maximum extent practicable as provided in par. (2) below. The design shall be based on an average annual rainfall, as compared to no runoff management controls.

Table 1 – TSS Reduction Standards	
Development Type	TSS Reduction
New Development	80 percent
Infill Development	80 percent
Redevelopment	40 percent of the parking areas and roads

- (2) **Maximum Extent Practicable.** If the design cannot meet a total suspended solids reduction performance standard of Table 1, the storm water management plan shall include a written, site-specific explanation of why the TSS reduction performance standard cannot be met and why the TSS load will be reduced only to the maximum extent practicable.
- (3) **Offsite Drainage.** When designing BMPs, runoff draining to the BMP from offsite shall be taken into account in determining the treatment efficiency of the practice.

Any impact on the efficiency shall be compensated for by increasing the size of the BMP accordingly.

b. Peak Discharge.

By design, BMPs shall be employed to maintain or reduce the peak runoff discharge rates from the post-developed site according to the City of Pewaukee Technical Standards, to the maximum extent practicable, as compared to pre-development conditions for the: 1-year 24 hour; the 2-year 24-hour; the 10-year 24-hour; and the 100-year 24 hour design storm events. Pre-development conditions shall assume pre-settlement conditions and the runoff curve numbers in Table 2 shall be used. Peak discharges shall be calculated using TR-55 runoff curve number methodology, Atlas 14 precipitation depths and NRCS Wisconsin MSE3 precipitation distribution. On a case by case basis, the City Engineer or designee may allow the use of TP-40 precipitation depths and the Type II distribution.

Table 2– Maximum Pre-Development Runoff Curve Numbers				
Hydrologic Soil Group	A	B	C	D
Runoff Curve Number	30	55	70	77

- (1) The pre-development runoff curve numbers in Table 2 do not apply to any of the following:
- (a) A post-construction site where the discharge is directly into a lake over 5000 acres in area or a stream or river segment draining more than 500 square miles.
 - (b) Except as provided under the first paragraph of Section 19.09 of this ordinance, a redevelopment post-construction site.
 - (c) For subds. (a) and (b) above, the pre-development curve number shall be the existing use of the land. If it is cropland, the maximum pre-development runoff curve numbers is as shown in Table 3.

Table 3 – Maximum Pre-Development Runoff Curve Numbers for Cropland Areas				
Hydrologic Soil Group	A	B	C	D
Runoff Curve Number	55	69	78	83

c. Infiltration.

BMPs shall be designed, installed, and maintained to infiltrate runoff in accordance with the following or to the maximum extent practicable.

- (1) **Low Imperviousness.** For development with up to 40% connected imperviousness, such as parks, cemeteries and low density residential development, infiltrate sufficient runoff volume so that the post-development infiltration volume shall be at least 90% 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.
- (2) **Moderate Imperviousness.** For development with more than 40% and up to 80% connected imperviousness, such as medium and high density residential, multi-family development, industrial and institutional development and office parks, infiltrate sufficient runoff volume so that the post-development infiltration volume

shall be at least 75% 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.

- (3) High Imperviousness. For development with more than 80% connected imperviousness, such as commercial strip malls, shopping centers, and commercial downtowns, infiltrate sufficient 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 percent of the post-construction site is required as an effective infiltration area.
- (4) Pre-development condition shall be the same as in Subsection 19.09 b. above.
- (5) Source Areas.
 - (a) Prohibitions. The runoff from the following areas may not be infiltrated and may not qualify as contributing to meeting the requirements of this section unless demonstrated to meet the conditions of the ground water standards in par. (9) below.
 - i. Areas associated with tier 1 industrial facilities identified in s. NR 216.21(2)(a), Wis. Adm. Code, including storage, loading, and parking. Rooftops may be infiltrated with the concurrence of the regulatory authority.
 - ii. Storage and loading areas of tier 2 industrial facilities identified in s. NR 216.21(2)(b), Wis. Adm. Code.
 - iii. Fueling and vehicle maintenance areas. Runoff from rooftops of fueling and vehicle maintenance areas may be infiltrated with the concurrence of the regulatory authority.
 - (b) Exemptions. Runoff from the following areas may be credited toward meeting the requirement when infiltrated, but the decision to infiltrate runoff from these source areas is optional:
 - i. Parking areas and access roads less than 5000 square feet for commercial development.
 - ii. Parking areas and access roads less than 5000 square feet for industrial development not subject to the prohibition under subd. (a) above.
 - iii. Except as provided under the first paragraph of Section 19.09 of this ordinance, redevelopment post-construction sites.
 - iv. Infill development less than 5 acres.
 - v. Roads in commercial, industrial and institutional land uses and arterial roads.
- (6) Location of Practices.
 - (a) Prohibitions. Infiltration practices may not be located in the following areas:
 - i. Areas within 1000 feet up gradient or within 100 feet down gradient of direct conduits to groundwater.
 - ii. Areas within 400 feet of a community water system well as specified in s. NR 811.16(4), Wis. Adm. Code, or within the separation distances listed in s. NR 812.08, Wis. Adm. Code, for

any private well or non-community well for runoff infiltrated from commercial, including multi-family residential, industrial and institutional land uses or regional devices for one- and two-family residential development.

- iii. Areas where contaminants of concern, as defined in s. NR 720.03(2), Wis. Adm. Code, are present in the soil through which infiltration will occur.
- (b) Separation distances.
 - i. Infiltration practices shall be located so that the characteristics of the soil and the separation distance between the bottom of the infiltration system and the elevation of the seasonal high groundwater or the top of bedrock are in accordance with Table 4:

Table 4 – Separation Distances and Soil Characteristics		
Source Area	Separation Distance	Soil Characteristic
Industrial, Commercial, Industrial, Parking Lots and Roads	5 feet or more	Filtering Layer
Residential Arterial Roads	5 feet or more	Filtering Layer
Roofs Draining to Subsurface Infiltration Practices	1 foot or more	Native or Engineered Soil with Particles Finer Than Coarse Sand
Roof Draining to Surface Infiltration Practices	Not Applicable	Not Applicable
All Other Impervious Source Areas	3 feet or more	Filtering Layer

- ii. Notwithstanding subd. (b) above, applicable requirements for injection wells classified under chapter NR 815, Wis. Adm. Code, shall be followed.
- (7) Infiltration Rate Exemptions. Infiltration practices located in the following areas may be credited toward meeting the requirements under the following conditions, but the decision to infiltrate under these conditions is optional:
 - (a) Where the infiltration rate of the soil measured at the proposed bottom of the infiltration system is less than 0.6 inches per hour using a scientifically credible field test method.
 - (b) Where the least permeable soil horizon to 5 feet below the proposed bottom of the infiltration system using the U.S. Department of Agriculture method of soils analysis is one of the following: sandy clay loam, clay loam, silty clay loam, sandy clay, silty clay, or clay.
 - (8) Alternate Use. Where alternate uses of runoff are employed, such alternate use shall be given equal credit toward the infiltration volume required by this paragraph.
 - (9) Groundwater Standards
 - (a) Infiltration systems designed in accordance with this paragraph shall, to the extent technically and economically feasible, minimize the level of pollutants infiltrating to groundwater and shall maintain compliance with the preventive action limit at a point of standards application in accordance with 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) Notwithstanding subd. (9)(a), the discharge from BMPs shall remain below the enforcement standard at the point of standards application.
 - (10) Pretreatment. Before infiltrating runoff, pretreatment shall be required for parking lot runoff and for runoff from new road construction in commercial, industrial and institutional areas that will enter the infiltration system. The pretreatment shall be designed to protect the infiltration system from clogging prior to scheduled maintenance and to protect groundwater quality in accordance with par. (9), above. Pretreatment options may include, but are not limited to: oil and grease separators; sedimentation; biofiltration; filtration; swales; or filter strips.
 - (11) Maximum Extent Practicable. Where conditions of par. (5) and (6) limit or restrict the use of infiltration practices, the performance standard of Paragraphs 19.09 c.(1)-(3) of this ordinance, shall be met to the maximum extent practicable.
- d. Protective Areas
- (1) The protective area shall have the greatest of the following widths, as measured horizontally from the top of the channel or delineated wetland boundary to the closest impervious surface. However, in this paragraph, “protective area” does not include any area of land adjacent to any stream enclosed within a pipe or culvert, such that runoff cannot enter the enclosure at this location.
 - (a) For outstanding resource waters and exceptional resource waters, 75 feet.
 - (b) For perennial and intermittent streams identified on a United States geological survey 7.5-minute series topographic map, or a county soil survey map, whichever is more current, 50 feet.
 - (c) For lakes, 50 feet.
 - (d) For wetlands not subject to subds. (e) or (f) below, 50 feet.
 - (e) For highly susceptible wetlands, 75 feet. Highly susceptible wetlands include the following types: calcareous fens, sedge meadows, open and coniferous bogs, low prairies, coniferous swamps, lowland hardwood swamps and ephemeral ponds.
 - (f) For less susceptible wetlands, 10 percent of the average wetland width, but no less than 10 feet nor more than 30 feet. Less susceptible wetlands include degraded wetlands dominated by invasive species such as reed canary grass; cultivated hydric soils; and any gravel pits or dredged material or fill disposal sites that take on the attributes of a wetland.
 - (g) In subds. (d) to (f) above, determinations of the extent of the protective area adjacent to wetlands shall be made on the basis of the sensitivity and runoff susceptibility of the wetland in accordance with the standards and criteria in s. NR 103.03, Wis. Adm. Code.
 - (h) Wetland boundary delineations shall be made in accordance with s. NR 103.08(1m), Wis. Adm. Code. This paragraph does not apply to wetlands that have been completely filled in compliance with all applicable state and federal regulations. The protective area for wetlands that have been partially filled in compliance with all applicable state and federal regulations shall be measured from the wetland boundary delineation after the fill has been placed. Where there is a legally authorized wetland fill, the protective area standard need not be met in that location.
 - (i) For concentrated flow channels with drainage areas greater than 130 acres, 10 feet.
 - (j) Notwithstanding subds. (a) thru (i) above, the greatest protective area width shall apply where rivers, streams, lakes and wetlands are contiguous.

- (2) Applicability. This paragraph applies to post-construction sites located within a protective area, except those areas exempted pursuant to par. (4) below.
- (3) The following requirements shall be met:
 - (a) Impervious surfaces shall be kept out of the protective area entirely or to the maximum extent practicable. If there is no practical alternative to locating an impervious surface in the protective area, the storm water management plan shall contain a written, site-specific explanation.
 - (b) Where land disturbing construction activity occurs within a protective area, 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.
 - (c) Best management practices such as filter strips, swales, or wet detention ponds that are designed to control pollutants from non-point sources may be located in the protective area.
- (4) This paragraph does not apply to:
 - (a) Except as provided in the first paragraph of Section 19.09 of this ordinance, redevelopment post-construction sites.
 - (b) In-fill development areas less than 5 acres.
 - (c) Structures that cross or access surface waters such as boat landings, bridges and culverts.
 - (d) Structures constructed in accordance with § 59.692(1v), Wis. Stats.
 - (e) Areas of post-construction sites from which runoff does not enter the surface water, including wetlands, without first being treated by a BMP to meet the local ordinance requirements for TSS and peak flow reduction, 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, to the maximum extent practicable, have BMPs designed, installed and maintained to reduce petroleum within runoff, such that the runoff that travels offsite or enters waters of the state contains no visible petroleum sheen.
- f. Swale Treatment for Transportation Facilities.
 - (1) Requirement. Except as provided in par. (2), below, transportation facilities that use swales for runoff conveyance and pollutant removal are exempt from the local ordinance requirements for peak flow control, total suspended solids control and infiltration, if the swales are designed to do all of the following or to the maximum extent practicable:
 - (a) Be vegetated. However, where appropriate, non-vegetative measures may be employed to prevent erosion or provide for runoff treatment, such as rock riprap stabilization or check dams.
 - (b) Swales shall comply with sections V.F. (Velocity and Depth Criteria) and V.G. (Swale Geometry Criteria) with a swale treatment length as long as that specified in section V.C. (Pre-treatment) of the Wisconsin Department of Natural Resources Conservation Practice Standard 1005, "Vegetated

Infiltration Swale”, dated May 2007, or a superseding document. Transportation facility swale treatment does not have to comply with other sections of Conservation Practice Standard 1005.

(2) Other Requirements.

- (a) Notwithstanding par. (1) above, the City Engineer or designee may, consistent with water quality standards, require other provisions, in addition to swale treatment, be met on a transportation facility with an average daily travel of vehicles greater than 2500 and where the initial surface water of the state that the runoff directly enters is any of the following:
 - i. An outstanding resource water.
 - ii. An exceptional resource water.
 - iii. Waters listed in s. 303(d) of the Federal Clean Water Act that are identified as impaired in whole or in part, due to nonpoint source impacts.
 - iv. Waters where targeted performance standards are developed under s. NR 151.004, Wis. Adm. Code.
- (b) The transportation facility authority shall contact the City Engineer or designee to determine if additional BMPs beyond a water quality swale are needed under this section.

g. General Considerations for On-site and Off-site Storm Water Management Measures.

The following considerations shall be observed in on-site and off-site runoff management:

- (1) Natural topography and land cover features such as natural swales, natural depressions, native soil infiltrating capacity, and natural groundwater recharge areas shall be preserved and used, to the extent possible, to meet the requirements of this section.
- (2) Emergency overland flow for all storm water facilities shall be provided to prevent exceeding the safe capacity of downstream drainage facilities and prevent endangerment of downstream property or public safety.

h. Location and Regional Treatment Option.

- (1) To comply with the performance standards required under Section 19.09 of this ordinance, BMPs may be located on-site or off-site as part of a regional storm water device, practice or system but shall be installed in accordance with s. NR 151.003, Wis. Adm. Code.
- (2) The City Engineer or designee may approve off-site management measures provided that all of the following conditions are met:
 - (a) The City Engineer or designee determines that the post-construction runoff is covered by a storm water management system plan that is approved by the City of Pewaukee and that contains management requirements consistent with the purpose and intent of this ordinance.
 - (b) The off-site facility meets all of the following conditions:
 - 1. The facility is in place.
 - 2. The facility is designed and adequately sized to provide a level of storm water control equal to or greater than that which would be afforded by on-site practices meeting the performance standards of this ordinance.
 - 3. The facility has a legally obligated entity responsible for its long-term operation and maintenance.

- (3) Where a regional treatment option exists such that the City Engineer or designee exempts the applicant from all or part of the minimum on-site storm water management requirements, the applicant shall be required to pay a fee in an amount determined in negotiation with the City Engineer or designee. In determining the fee for post-construction runoff, the City Engineer or designee shall consider an equitable distribution of the cost for land, engineering design, construction, and maintenance of the regional treatment option.
- i. Additional Requirements. The City Engineer or designee may establish storm water management requirements more stringent than those set forth in this ordinance if he or she determines that the requirements are needed to control storm water quantity or control flooding, comply with a federally approved total maximum daily load requirement, or control pollutants associated with existing development or re-development.

19.10 PERMITTING AND FEE REQUIREMENTS. (Rep & Rec 16-13)

Permit Required.

No responsible party may undertake a land disturbing construction activity subject to this ordinance without receiving prior approval of an erosion and sediment control plan for the site and permit or a post-construction runoff permit, as applicable from the City Engineer or designee, prior to commencing the proposed activity.

a. Permit Application and Fees for Erosion Control.

The responsible party that will undertake a land disturbing construction activity subject to this ordinance shall submit an application for a permit and an erosion and sediment control plan that meets the requirements of Section 19.11 of this ordinance and shall pay an application fee as established by the Common Council as set forth in Section 19.15 of this ordinance. By submitting an application, the applicant is authorizing the City Engineer or designee to enter the site to obtain information required for the review of the erosion and sediment control plan.

b. Permit Application and Fees for Storm Water Management.

Unless specifically excluded by this ordinance, any responsible party desiring a permit shall submit to the City Engineer or designee a permit application made on a form provided by the City Engineer or designee for that purpose.

- (1) Unless otherwise exempted by this ordinance, a permit application must be accompanied by a storm water management plan, a maintenance agreement and a non-refundable permit administration fee.
- (2) The storm water management plan shall be prepared to meet the requirements of Sections 19.09 and 19.12. The maintenance agreement shall be prepared to meet the requirements of Section 19.13. The financial guarantee shall meet the requirements of Section 19.14, and the fees shall be those established by the Common Council as set forth in Section 19.15.

c. Review and Approval of Permit Application.

The City Engineer or designee shall review any permit application that is submitted with an erosion and sediment control plan or a storm water management plan and maintenance agreement and the required fee. The following approval procedure shall be used:

- (1) After the receipt of a complete permit application, as required by subds. a. and b., the City Engineer or designee shall inform the applicant whether the application, plan

and maintenance agreement are approved or disapproved based on the requirements of this ordinance.

- (2) If the permit application, plan and maintenance agreement are approved, the City Engineer or designee shall issue the permit. In the alternative, if an agreed upon payment of fees in lieu of storm water management practices is made, the City Engineer or designee shall issue the permit.
- (3) If the permit application, plan or maintenance agreement is disapproved, the City Engineer or designee shall state in writing the reasons for disapproval.
- (4) The City Engineer or designee may request additional information from the applicant. If additional information is submitted, the City Engineer or designee shall inform the applicant that the plan is either approved or disapproved.
- (5) As a condition of approval and issuance of an erosion control plan and permit, the City Engineer or designee may require the applicant to deposit a surety bond or irrevocable letter of credit to guarantee a good faith execution of the approved erosion control plan and any permit conditions.

d. Permit Requirements.

All permits issued under this ordinance shall be subject to the following conditions, and holders of permits issued under this ordinance shall be deemed to have accepted these conditions. The City Engineer or designee may suspend or revoke a permit for violation of a permit condition, following written notification to the responsible party. Compliance with any permit does not relieve the responsible party of the responsibility to comply with other applicable federal, state and local laws and regulations. An action by the City Engineer or designee to suspend or revoke this permit may be appealed in accordance with Section 19.19.

- (1) All erosion control permits shall require the responsible party to:
 - (a) Notify the City Engineer or designee within 48 hours of commencing any land disturbing construction activity.
 - (b) Notify the City Engineer or designee of completion of any BMPs within 14 days after their installation.
 - (c) Obtain permission in writing from the City Engineer or designee prior to any modification pursuant to Subsection 19.11 f. of the erosion and sediment control plan.
 - (d) Install all BMPs as identified in the approved erosion and sediment control plan.
 - (e) Maintain all road drainage systems, storm water drainage systems, BMPs and other facilities identified in the erosion and sediment control plan.
 - (f) Repair any siltation or erosion damage to adjoining surfaces and drainage ways resulting from land disturbing construction activities and document repairs in a site inspection log.
 - (g) Inspect the BMPs within 24 hours after each rain of 0.5 inches or more which results in runoff during active construction periods, and at least once each week. Make needed repairs, install additional BMPs as necessary, and document these activities in an inspection log that also includes the

date of inspection, the name of the person conducting the inspection, and a description of the present phase of the construction at the site. Reports must be submitted on a weekly basis to the City Engineer or designee upon request.

- (h) Allow the City Engineer or designee to enter the site for the purpose of inspecting compliance with the erosion and sediment control plan or for performing any work necessary to bring the site into compliance with the erosion and sediment control plan. Keep a copy of the erosion and sediment control plan at the construction site.
 - (i) The responsible party is subject to the enforcement actions and penalties detailed in Section 19.17, if the responsible party fails to comply with the terms of this permit.
- (2) All permits relating to storm water management shall require the responsible party to:
- (a) Design and install all structural and non-structural storm water management measures in accordance with the approved storm water management plan and this permit.
 - (b) Notify the City Engineer or designee at least 3 business days before commencing any work in conjunction with the storm water management plan, and within 7 business days upon completion of the storm water management practices. If required as a special condition under subd. (e) below, the responsible party shall make additional notification according to a schedule set forth by the City Engineer or designee so that the storm water management practice installations can be inspected during construction.
 - (c) Complete the storm water management practice installations required as part of this ordinance. Completed installations shall be certified “as built” by a licensed professional engineer. Completed storm water management practices must pass a final inspection by the City Engineer or designee to determine if they are in accordance with the approved storm water management plan and ordinance. The City Engineer or designee shall notify the responsible party in writing of any changes required in such practices to bring them into compliance with the conditions of this permit.
 - (d) Notify the City Engineer or designee of any significant modifications it intends to make to an approved storm water management plan. The City Engineer or designee may require that the proposed modifications be submitted for approval prior to incorporation into the storm water management plan and execution by the responsible party.
 - (e) Maintain all storm water management practices in accordance with the storm water management plan until the practices either become the responsibility of the City, or are transferred to subsequent private owners as specified in the approved maintenance agreement.
 - (f) Authorize the City Engineer or designee to perform any work or operations necessary to bring the storm water management measures into conformance with the approved storm water management plan, and consents to a special assessment or charge against the property as authorized under subch. VII of § 66, Wis. Stats., or to charging such costs against the financial guarantee posted under Section 19.14.

- (g) Repair at the responsible party's own expense, if so directed by the City Engineer or designee, all damage to adjoining municipal facilities and drainage ways caused by runoff, where such damage is caused by activities that are not in compliance with the approved storm water management plan.
- (h) Permit property access to the City Engineer or designee for the purpose of inspecting the property for compliance with the approved storm water management plan and this permit.
- (i) Make appropriate legal arrangements with affected property owners concerning the prevention of endangerment to property or public safety, as may be required by the City Engineer or designee, where site development or redevelopment involves changes in direction, increases in peak rate and/or total volume of runoff from a site.
- (j) The responsible party is subject to the enforcement actions and penalties detailed in Section 19.18, if the responsible party fails to comply with the terms of this permit.

d. Permit Conditions.

Permits issued under this section may include conditions established by the City Engineer or designee in addition to the requirements needed to meet the performance standards in Sections 19.08 or 19.09 or a financial guarantee as provided for in Section 19.14.

e. Permit Duration.

Permits issued under this section shall have the following duration:

- (1) Permits for construction site erosion control shall be valid for a period of 1-year, or the length of the building permit or other construction authorizations, whichever is longer, from the date of issuance. The City Engineer or designee may grant one or more extensions not to exceed an additional 1-year cumulatively. The City Engineer or designee may require additional BMPs as a condition of the extension if they are necessary to meet the requirements of this ordinance. The maximum period of permit coverage for any project is limited to 2 years.
- (2) Permits for post-construction site storm water management shall be valid from the date of issuance through the date the City Engineer or designee notifies the responsible party that all storm water management practices have passed the final inspection required under subd. d.(2)(c) above.
- (3) Projects requiring permit coverage beyond the termination date of a permit shall be required to submit another permit application and fee in accordance with Section 19.10 to retain coverage under the existing permit or reissued version of the permit.

f. Maintenance.

The responsible party throughout the duration of the construction activities shall maintain all BMPs necessary to meet the requirements of this ordinance until the site has undergone final stabilization.

**19.11 EROSION AND SEDIMENT CONTROL PLAN, STATEMENT, AND
AMENDMENTS. (Rep & Rec 16-13)**

EROSION AND SEDIMENT CONTROL PLAN.

An erosion and sediment control plan shall be prepared and submitted to the City Engineer or designee and shall be designed to meet the performance standards in Section 19.08 and other requirements of this ordinance.

a. Pollution.

The erosion and sediment control plan shall address pollution caused by soil erosion and sedimentation during construction and up to final stabilization of the site. The erosion and sediment control plan shall include, at a minimum, the following items:

- (1) The name(s) and address(es) of the owner or developer of the site, and of any consulting firm retained by the applicant, together with the name of the applicant's principal contact at such firm. The application shall also include start and end dates for construction.
- (2) Description of the construction site and the nature of the land disturbing construction activity, including representation of the limits of land disturbance on a United States Geological Service 7.5 minute series topographic map.
- (3) A description of the intended sequence of the major land disturbing construction activities for major portions of the construction site, including stripping and clearing; rough grading; construction of utilities, infrastructure, and buildings; and final grading and landscaping. Sequencing shall identify the expected date on which clearing will begin, the estimated duration of exposure of cleared areas, areas of clearing, installation of temporary erosion and sediment control measures, and establishment of permanent vegetation.
- (4) Estimates of the total area of the site and the total area of the site that is expected to be disturbed by land disturbing construction activities.
- (5) Calculations to show compliance with the performance standards in Subdivision 19.08 a.(2)(a).
- (6) Existing data describing the surface soil as well as subsoils.
- (7) Depth to groundwater, as indicated by Natural Resources Conservation Service soil information where available.
- (8) Name of the immediate named receiving water from the United States Geological Service 7.5 minute series topographic maps.

b. Site Map.

The erosion and sediment control plan shall include a site map. The site map shall include the following items and shall be at a scale not greater than 100 feet per inch and at a contour interval not to exceed five feet.

- (1) Existing topography, vegetative cover, natural and engineered drainage systems, roads and surface waters. Lakes, streams, wetlands, channels, ditches and other watercourses on and immediately adjacent to the site shall be shown. Any identified 100-year flood plains, flood fringes and floodways shall also be shown.

- (2) Boundaries of the construction site.
- (3) Drainage patterns and approximate slopes anticipated after major grading activities.
- (4) Areas of soil disturbance.
- (5) Location of major structural and non-structural controls identified in the erosion and sediment control plan.
- (6) Location of areas where stabilization BMPs will be employed.
- (7) Areas which will be vegetated following land disturbing construction activities.
- (8) Areal extent of wetland acreage on the construction site and locations where storm water is discharged to a surface water or wetland within one-quarter mile downstream of the construction site.
- (9) An alphanumeric or equivalent grid overlying the entire construction site map.
- (10) Areas used for infiltration of post-construction storm water runoff.

c. Controls.

Each erosion and sediment control plan shall include a description of appropriate BMPs that will be installed and maintained at the construction site to prevent pollutants from reaching waters of the state or offsite areas. The erosion and sediment control plan shall clearly describe the appropriate erosion and sediment control BMPs for each major land disturbing construction activity and the timing during the period of land disturbing construction activity that the erosion and sediment control BMPs will be implemented. The description of erosion controls shall include, when appropriate, the following minimum requirements:

- (1) Description of interim and permanent stabilization practices, including a BMP implementation schedule. The erosion and sediment control plan shall ensure that existing vegetation is preserved where attainable and that disturbed portions of the site are stabilized.
- (2) Description of structural practices to divert flow away from exposed soils, store flows or otherwise limit runoff and the discharge of pollutants from the site. Unless otherwise specifically approved in writing by the City Engineer or designee, structural measures shall be installed on upland soils.
- (3) Management of overland flow at all areas of the construction site, unless otherwise controlled by outfall controls.
- (4) Trapping of sediment in channelized flow.
- (5) Staging land disturbing construction activities to limit exposed soil areas subject to erosion.
- (6) Protection of downslope drainage inlets where they occur.
- (7) Minimization of tracking at all vehicle and equipment entry and exit locations of the construction site.
- (8) Clean up of off-site sediment deposits.
- (9) Proper disposal of building and waste materials at all sites.

- (10) Stabilization of drainage ways.
- (11) Control of soil erosion from dirt stockpiles.
- (12) Installation of permanent stabilization practices as soon as possible after final grading.
- (13) Minimization of dust to the maximum extent practicable.

d. Velocity Dissipation.

The erosion and sediment control plan shall require that velocity dissipation devices be placed at discharge locations and along the length of any outfall channel, as necessary, to provide a non-erosive flow from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected.

e. Erosion and Sediment Control Plan Statement.

For each construction site identified under Subsection 19.03 d., an erosion and sediment control plan statement shall be prepared. This statement shall be submitted to the City Engineer or designee. The erosion and sediment control plan statement shall briefly describe the site, the development schedule and the BMPs that will be used to meet the requirements of this ordinance. A site map shall also accompany the erosion and sediment control plan statement.

f. Erosion and Sediment Control Plan Amendments.

The applicant shall amend the erosion and sediment control plan if any of the following occur:

- (1) There is a change in design, construction, operation or maintenance at the site which has the reasonable potential for the discharge of pollutants to waters of the state or offsite and which has not otherwise been addressed in the erosion and sediment control plan.
- (2) The actions required by the erosion and sediment control plan fail to reduce the impacts of pollutants carried by construction site runoff.
- (3) The City Engineer or designee notifies the applicant of changes needed in the erosion and sediment control plan.

19.12 STORM WATER MANAGEMENT PLAN. (Rep & Rec 16-13)

a. Plan Requirements.

The storm water management plan required under Subsection 19.10 b. shall contain at a minimum the following information:

- (1) Name, address, and telephone number for the following or their designees: landowner; developer; project engineer for practice design and certification; person(s) responsible for installation of storm water management practices; and person(s) responsible for maintenance of storm water management practices prior to the transfer, if any, of maintenance responsibility to another party.
- (2) A proper legal description of the property proposed to be developed, referenced to the U.S. Public Land survey system or to block and lot numbers within a recorded land subdivision plat.
- (3) Pre-development site conditions, including:

- (a) One or more site maps at a scale of not less than 1 inch equals 100 feet or less. The site maps shall show the following: site location and legal property description; predominant soil types and hydrologic soil groups; existing cover type and condition; topographic contours of the site at a scale not to exceed 2 feet; topography and drainage network including enough of the contiguous properties to show runoff patterns onto, through, and from the site; watercourses that may affect or be affected by runoff from the site; flow path and direction for all storm water conveyance sections; watershed boundaries used in hydrology determinations to show compliance with performance standards; lakes, streams, wetlands, channels, ditches, and other watercourses on and immediately adjacent to the site; limits of the 100 year floodplain; location of wells and wellhead protection areas covering the project area and delineated pursuant to s. NR 811.16, Wis. Adm. Code.
 - (b) Hydrology and pollutant loading computations as needed to show compliance with performance standards. All major assumptions used in developing input parameters shall be clearly stated. The geographic areas used in making the calculations shall be clearly cross-referenced to the required map(s).
- (4) Post-development site conditions, including:
- (a) Explanation of the provisions to preserve and use natural topography and land cover features to minimize changes in peak flow runoff rates and volumes to surface waters and wetlands.
 - (b) Explanation of any restrictions on storm water management measures in the development area imposed by wellhead protection plans and ordinances.
 - (c) One or more site maps at a scale of not less than 1 inch equals 100 feet or less showing the following: post-construction pervious areas including vegetative cover type and condition; impervious surfaces including all buildings, structures, and pavement; post-construction topographic contours of the site at a scale not to exceed 2 feet; post-construction drainage network including enough of the contiguous properties to show runoff patterns onto, through, and from the site; locations and dimensions of drainage easements; locations of maintenance easements specified in the maintenance agreement; flow path and direction for all storm water conveyance sections; location and type of all storm water management conveyance and treatment practices, including the on-site and off-site tributary drainage area; location and type of conveyance system that will carry runoff from the drainage and treatment practices to the nearest adequate outlet such as a curbed street, storm drain, or natural drainage way; watershed boundaries used in hydrology and pollutant loading calculations and any changes to lakes, streams, wetlands, channels, ditches, and other watercourses on and immediately adjacent to the site.
 - (d) Hydrology and pollutant loading computations as needed to show compliance with performance standards. The computations shall be made for each discharge point in the development, and the geographic areas used in making the calculations shall be clearly cross-referenced to the required map(s).
 - (e) Results of investigations of soils and groundwater required for the placement and design of storm water management measures.
 - (f) Detailed drawings including cross-sections and profiles of all permanent storm water conveyance and treatment practices.

- (5) A description and installation schedule for the storm water management practices needed to meet the performance standards in Section 19.09.
- (6) A maintenance plan developed for the life of each storm water management practice including the required maintenance activities and maintenance activity schedule.
- (7) Other information requested in writing by the City Engineer or designee to determine compliance of the proposed storm water management measures with the provisions of this ordinance.
- (8) All site investigations, plans, designs, computations, and drawings shall be certified by a licensed professional engineer to be prepared in accordance with accepted engineering practice and requirements of this ordinance.

b. Alternate Requirements.

The City Engineer or designee may prescribe alternative submittal requirements for applicants seeking an exemption to on-site storm water management performance standards under Subsection 19.09 h.

19.13 MAINTENANCE AGREEMENT. (Rep & Rec 16-13)

The maintenance agreement required under Subsection 19.10 b. for storm water management practices shall be an agreement between the City and the responsible party to provide for maintenance of storm water practices beyond the duration period of this permit. The maintenance agreement shall be filed with the County Register of Deeds as a property deed restriction so that it is binding upon all subsequent owners of the land served by the storm water management practices. The maintenance agreement shall contain the following information and provisions and be consistent with the maintenance plan required by Paragraph 19.12 a.(6).

- a. Identification of the storm water facilities and designation of the drainage area served by the facilities.
- b. A schedule for regular maintenance of each aspect of the storm water management system consistent with the storm water management plan required under Subsection 19.10 b.
- c. Identification of the responsible party(s), organization, or city, county, town or village responsible for long term maintenance of the storm water management practices identified in the storm water management plan required under Subsection 19.10 b.
- d. Requirement that the responsible party(s), organization, or city, county, town or village shall maintain storm water management practices in accordance with the schedule included in subject. b., above.
- e. Authorization for the City Engineer or designee to access the property to conduct inspections of storm water management practices as necessary to ascertain that the practices are being maintained and operated in accordance with the agreement.
- f. A requirement on the City Engineer or designee to maintain public records of the results of the site inspections, to inform the responsible party for maintenance of the inspection results, and to specifically indicate any corrective actions required to bring the storm water management practice into proper working condition.
- g. Agreement that the party designated under subject. c., as responsible for long term maintenance of the storm water management practices, shall be notified by the City Engineer or designee of maintenance problems which require correction. The specified corrective

actions shall be undertaken within a reasonable time frame as set by the City Engineer or designee.

- h. Authorization of the City Engineer or designee to perform the corrected actions identified in the inspection report if the responsible party designated under subsect. c. does not make the required corrections in the specified time period. The City Engineer or designee shall enter the amount due on the tax rolls and collect the money as a special charge against the property pursuant to subch. VII of § 66, Wis. Stats.

19.14 FINANCIAL GUARANTEE. (Rep & Rec 16-13)

The City Engineer or designee may require the submittal of a financial guarantee, the form and type of which shall be acceptable to the City Engineer or designee.

- a. The financial guarantee shall be in an amount determined by the City Engineer or designee to be the estimated cost of construction and the estimated cost of maintenance of the storm water management practices during the period which the designated party in the maintenance agreement has maintenance responsibility.
- b. The financial guarantee shall give the City Engineer or designee the authorization to use the funds to complete the storm water management practices if the responsible party defaults or does not properly implement the approved storm water management plan, upon written notice to the responsible party by the City Engineer or designee that the requirements of this ordinance have not been met.
- c. Conditions for Release.

Conditions for the release of the financial guarantee are as follows:

- (1) The City Engineer or designee shall release the portion of the financial guarantee established under this section, less any costs incurred by the City Engineer or designee to complete installation of practices, upon submission of "as built plans" or "record" drawings by a licensed professional engineer. The City Engineer or designee may make provisions for a partial pro-rata release of the financial guarantee based on the completion of various development stages.
- (2) The City Engineer or designee shall release the portion of the financial guarantee established under this section to assure maintenance of storm water practices, less any costs incurred by the City Engineer or designee, at such time that the responsibility for practice maintenance is passed on to another entity via an approved maintenance agreement.

19.15 FEE SCHEDULE. (Rep & Rec 16-13)

The fees referred to in other sections of this ordinance shall be established by the City Engineer or designee and may from time to time be modified by resolution. A schedule of the fees established shall be available for review at City Hall.

19.16 INSPECTION. (Rep & Rec 16-13)

If land disturbing construction activities are being carried out without a permit required by this ordinance, the City Engineer or designee may enter the land pursuant to the provisions of § 66.0119(1), (2), and (3), Wis. Stats.

19.17 ENFORCEMENT OF EROSION CONTROL. (Rep & Rec 16-13)

- a. The City Engineer or designee may post a stop-work order if any of the following occurs:
 - (1) Any land disturbing construction activity regulated under this ordinance is being undertaken without a permit.
 - (2) The erosion and sediment control plan is not being implemented in a good faith manner.
 - (3) The conditions of the permit are not being met.
- b. If the responsible party does not cease activity as required in a stop-work order posted under this section or fails to comply with the erosion and sediment control plan or permit conditions, the City Engineer or designee may revoke the permit.
- c. If the responsible party, where no permit has been issued or the permit has been revoked, does not cease the activity after being notified by the City Engineer or designee, or if a responsible party violates a stop-work order posted under subsect. a., the City Engineer or designee may request the city attorney to obtain a cease and desist order in any court with jurisdiction.
- d. The Common Council may retract the stop-work order issued under subsect. a. or the permit revocation under subsect. b.
- e. After posting a stop-work order under subsect. a., the City Engineer or designee may issue a notice of intent to the responsible party of its intent to perform work necessary to comply with this ordinance. The City Engineer or designee may go on the land and commence the work after issuing the notice of intent. The costs of the work performed under this subsection by the City Engineer or designee, plus interest at the rate authorized by the City Engineer or designee shall be billed to the responsible party. In the event a responsible party fails to pay the amount due, the clerk shall enter the amount due on the tax rolls and collect as a special assessment against the property pursuant to subch. VII of § 66, Wis. Stats.
- f. Any person violating any of the provisions of this ordinance shall be subject to penalties and forfeitures of not less than \$50 nor more than \$500 together with the costs of prosecution for each violation. Each day a violation exists shall constitute a separate offense.
- g. Compliance with the provisions of this ordinance may also be enforced by injunction in any court with jurisdiction. It shall not be necessary to prosecute for forfeiture or a cease and desist order before resorting to injunctive proceedings.

19.18 ENFORCEMENT OF STORM WATER MANAGEMENT. (Rep & Rec 16-13)

Any land disturbing construction activity or post-construction runoff initiated after the effective date of this ordinance by any person, firm, association, or corporation subject to the ordinance provisions shall be deemed a violation unless conducted in accordance with the requirements of this ordinance.

- a. The City Engineer or designee shall notify the responsible party by certified mail of any non-complying land disturbing construction activity or post-construction runoff. The notice shall describe the nature of the violation, remedial actions needed, a schedule for remedial action, and additional enforcement action which may be taken.
- b. Upon receipt of written notification from the City Engineer or designee under subsect. a., the responsible party shall correct work that does not comply with the storm water management plan or other provisions of this permit. The responsible party shall make corrections as

necessary to meet the specifications and schedule set forth by the City Engineer or designee in the notice.

- c. If the violations to a permit issued pursuant to this ordinance are likely to result in damage to properties, public facilities, or waters of the state, the City Engineer or designee may enter the land and take emergency actions necessary to prevent such damage. The costs incurred by the City Engineer or designee plus interest and legal costs shall be billed to the responsible party.
- d. The City Engineer or designee is authorized to post a stop work order on all land disturbing construction activity that is in violation of this ordinance, or to request the City Attorney to obtain a cease and desist order in any court with jurisdiction.
- e. The City Engineer or designee may revoke a permit issued under this ordinance for non-compliance with ordinance provisions.
- f. Any permit revocation, stop work order, or cease and desist order shall remain in effect unless retracted by the City Engineer or designee or by a court with jurisdiction.
- g. The City Engineer or designee is authorized to refer any violation of this ordinance, or of a stop work order or cease and desist order issued pursuant to this ordinance, to the City Attorney for the commencement of further legal proceedings in any court with jurisdiction.
- h. Any person, firm, association, or corporation who does not comply with the provisions of this ordinance shall be subject to penalties and forfeitures of not less than \$500 nor more than \$2,500 together with the costs of prosecution for each violation. Each day that the violation exists shall constitute a separate offense.
- i. Compliance with the provisions of this ordinance may also be enforced by injunction in any court with jurisdiction. It shall not be necessary to prosecute for forfeiture or a cease and desist order before resorting to injunctive proceedings.
- j. When the City Engineer or designee determines that the holder of a permit issued pursuant to this ordinance has failed to follow practices set forth in the storm water management plan, or has failed to comply with schedules set forth in said storm water management plan, the City Engineer or a party designated by him or her may enter upon the land and perform the work or other operations necessary to bring the condition of said lands into conformance with requirements of the approved plan. The City Engineer or designee shall keep a detailed accounting of the costs and expenses of performing this work. These costs and expenses shall be deducted from any financial security posted pursuant to Section 19.14 of this ordinance. Where such a security has not been established, or where such a security is insufficient to cover these costs, the costs and expenses shall be entered on the tax roll as a special charge against the property and collected with any other taxes levied thereon for the year in which the work is completed.

19.19 APPEALS. (Rep & Rec 16-13)

The Common Council:

- a. Shall hear and decide appeals where it is alleged that there is error in any order, decision or determination made by the City Engineer or designee in administering this ordinance except for cease and desist orders obtained under Subsection 19.17 c. and Subsection 19.18 d.
- b. Shall use the rules, procedures, duties and powers authorized by statute in hearing and deciding appeals and authorizing variances; and

- c. Upon appeal, may authorize variances from the provisions of this ordinance which are not contrary to the public interest and where owing to special conditions a literal enforcement of the provisions of the ordinance will result in unnecessary hardship.

- d. Who May Appeal.

Appeals to the Common Council may be taken by any aggrieved person or by any office, department, board, or bureau of the City of Pewaukee affected by any decision of the City Engineer or designee.

19.20 ILLICIT DISCHARGES AND CONNECTIONS. (Rep & Rec 16-13) (Rep & Rec 16-13)

- a. Definitions.

The following definitions shall be applicable in this section:

- (1) "Illicit Connection" means any drain or conveyance, whether on the surface or subsurface, which allows an illegal discharge to enter the storm drain system including, but not limited to any conveyances which allow any non-storm water discharge including sewage, process wastewater, and wash water to enter the storm drain system and 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.
- (2) "Person" means any individual, association, organization, partnership, firm, corporation or other entity recognized by law and acting as either the owner or as the owner's agent.
- (3) "Storm Drain System" means publicly-owned facilities by which storm water 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.

- b. Discharges Prohibited.

No person shall discharge, spill or dump substances or materials which are not entirely composed of storm water into receiving bodies of water or onto driveways, sidewalks, parking lots or other areas that drain into the storm drainage system.

- c. Connections Prohibited.

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 connections was permissible under law or practice applicable or prevailing at the time of connection.

- d. Exemptions.

The following activities are exempt from the provisions of this section unless found to have an adverse impact on the storm water:

- (1) Discharges authorized by a permit issued by the Wisconsin Department of Natural Resources.

- (2) Discharges resulting from firefighting activities.
- (3) 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.

e. Enforcement.

Whenever the City of Pewaukee finds a person has violated a prohibition or failed to meet a requirement of this section, the City of Pewaukee may order compliance by written notice of violation to the responsible person. Such notice may require without limitation:

- (1) The elimination of illicit connections or discharges;
- (2) That violating discharges, practices, or operations shall cease and desist within 72 hours of discovering violation;
- (3) The abatement or remediation of storm water pollution or contaminated hazards and the restoration of any affected property;
- (4) In the event the person fails to eliminate the illicit connects or discharge, fails to cease and desist in discharge, practices or operations in violation of this Section or fails to abate or remediate the storm water pollution or contamination hazards, that person may be subject to a forfeiture of not less than \$50.00 nor more than \$500.00 for each offense, together with the costs of prosecution. Each day that the violation exists shall constitute a separate offense.

19.21 SEVERABILITY. (Rep & Rec 16-13)

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