



Ordinance No. 2016-06

AN ORDINANCE AMENDING CHAPTER 68 OF THE CODE OF ORDINANCES, CITY OF MOSINEE, WISCONSIN PERTAINING TO POST-CONSTRUCTION STORMWATER CONTROL REGULATIONS

Whereas, the City of Mosinee owns and operates a Municipal Separate Storm Sewer System (MS4);
and

Whereas, the State of Wisconsin Department of Natural Resources has issued a General Permit to the City to discharge stormwater to the waters of the State; and

Whereas, the MS4 General Permit requires that the City develop, implement and enforce a comprehensive stormwater management program; and

Whereas, the MS4 General Permit also requires that the City's stormwater management program include requirements to control the quality of stormwater discharges into the City's storm sewer system; and

Whereas, on March 30, 2009 the City Common Council adopted Ordinance No. 2009-05 which established regulations pertaining to the control of the quality of post-construction stormwater discharges into the City's storm sewer system; and

Whereas, the State of Wisconsin Department of Natural Resources has now adopted administrative rules which require the City to amend the current post-construction stormwater discharge control requirements for consistency of local regulations with the performance standards of Wisconsin Department of Natural Resources s. NR 152 Wisconsin Administrative Code; and

Whereas, it is in the public interest to amend the requirements pertaining to controlling the quality of stormwater discharges into the City's stormwater system, in order to comply with the State of Wisconsin Department of Natural Resource requirements.

NOW, THEREFORE, the Common Council of the City of Mosinee, Wisconsin does hereby ordain as follows:

1. That Section 68-505 - Applicability and jurisdiction, Division 1 – Generally, Article IV – Post Construction Control Regulations, Chapter 68 - Stormwater Management Regulations, of the Code of Ordinances for the City of Mosinee is hereby amended by revising subparagraph (a)(1)(a) entitled "Applicability" to read as follows:

(a) *Applicability.*

- (1) Where not otherwise limited by law, this article applies after final stabilization to a site of land disturbing construction activity meeting any of the criteria in this paragraph, unless the site is otherwise exempt under paragraph (2).
 - a. A post construction site that had one or more acres of land disturbing construction activity.

2. That Section 68-506 of Division 1 – Generally, Article IV – Post Construction Control Regulations, Chapter 68 - Stormwater Management Regulations, of the Code of Ordinances for the City of Mosinee entitled “Definitions” is hereby amended to revise the following definitions to read as follows:

Average annual rainfall means a typical calendar year of precipitation, as determined by the Wisconsin Department of Natural Resources for users of models such as SLAMM, P8, or equivalent methodology. The average annual rainfall is chosen from a department publication for the location closest to the municipality.

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.

“MEP” or maximum extent practicable means a level of implementing best management practices in order to achieve a performance standard specified in this article which takes into account the best available technology, cost effectiveness, geographic features, and other competing issues such as public safety and welfare, protection of endangered and threatened resources, and preservation of 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.

Separate storm sewer means a conveyance or system of conveyances including roads with drainage systems, streets, catch basins, curbs, gutters, ditches, constructed channels or storm drains, which meets all of the following criteria:

- (1) Is designed or used for collecting water or conveying runoff.
- (2) Is not part of a combined sewer system.
- (3) Is not part of a publicly owned wastewater treatment works that provides secondary or more stringent treatment.
- (4) Discharges directly or indirectly to waters of the state.

3. That Section 68-701 of Division 2 – Standards, Article IV – Post Construction Control Regulations, Chapter 68 - Stormwater Management Regulations, of the Code of Ordinances for the City of Mosinee entitled “Technical Standards” is hereby amended by deleting subparagraph (4) in its entirety.
4. That Section 68-702 of Division 2 – Standards, Article IV – Post Construction Control Regulations, Chapter 68 - Stormwater Management Regulations, of the Code of Ordinances for the City of Mosinee entitled “Performance Standards” is hereby deleted in its entirety and recreated to read as follows:
 - (a) *Responsible party*. The landowner of the post-construction site or other person contracted or obligated by other agreement with the landowner to implement and maintain post-construction storm water BMPs is the responsible party and shall comply with the requirements of this Article.

(b) *Plan.* A written stormwater management plan in accordance with Section 68-1011 shall be developed and implemented for each post-construction site.

(c) *Requirements.* The plan required under subparagraph (b) shall include the following:

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

Development Type	TSS Reduction
New Development	80 percent
In-fill development	80 percent
Redevelopment	40 percent of load from parking areas and roads

- b. *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 total suspended solids reduction performance standard cannot be met and why the total suspended solids load will be reduced only to the maximum extent practicable. No person shall be required to exceed the applicable total suspended solids reduction performance standard to meet the requirements of maximum extent practicable.
- c. *Off-site drainage.* When designing BMPs, runoff draining to the BMP from off-site 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.

(2) *Peak discharge.*

- a. By design, BMPs shall be employed to maintain or reduce the 1-year, 24-hour and the 2-year, 24-hour post-construction peak runoff discharge rates to the 1-year, 24-hour and the 2-year, 24-hour pre-development peak runoff discharge rates respectively, or to the maximum extent practicable. The runoff curve numbers in Table 2 shall be used to represent the actual pre-development conditions:

Pre-development condition	Hydrologic Soil Group			
	A	B	C	D
Woodland	30	55	70	77
Grassland	39	61	71	78
Cropland	55	69	78	83

- b. This subsection of the article does not apply to any of the following:
 - 1. A post-construction site where the discharge is directly into a lake over 5,000 acres or a stream or river segment draining more than 500 square miles.
 - 2. A redevelopment post-construction site.
 - 3. An in-fill development area less than 5 acres.

(3) *Infiltration.*

- a. 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 up to 40 percent connected imperviousness, such as parks, cemeteries, and low density residential development, infiltrate sufficient runoff volume so that the post-development infiltration volume shall be at least 90 percent of the pre-development infiltration volume, based on an average annual rainfall. However, when designing appropriate infiltration systems to meet this requirement, no more than one percent of the post-construction site is required as an effective infiltration area.
 - 2. *Moderate imperviousness.* For development with more than 40 percent and up to 80 percent connected imperviousness, such as medium and high density residential, multi-family development, industrial and institutional development, and office parks, infiltrate sufficient runoff volume so that the post-development infiltration volume shall be at least 75 percent of the pre-development infiltration volume, based on an average annual rainfall. However, when designing appropriate infiltration systems to meet this requirement, no more than 1 percent of the post-construction site is required as an effective infiltration area.
 - 3. *High imperviousness.* For development with more than 80 percent connected imperviousness, such as commercial strip malls, shopping centers, and commercial downtowns, infiltrate sufficient runoff volume so that the post-development infiltration volume shall be at least 60 percent of the pre-development infiltration volume, based on an average annual rainfall. However, when designing appropriate infiltration systems to meet this requirement, no more than 2 percent of the post-construction site is required as an effective infiltration area.
- b. *Pre-development.* Pre-development condition shall be the same as specified in Table 2 of the Peak Discharge section of this article.
- c. *Source areas.*
 - 1. *Prohibitions.* 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 Wisconsin Department of Natural Resources groundwater standards in NR151.124(6):
 - a. Areas associated with a tier 1 industrial facility identified in s. NR 216.21(2)(a), including storage, loading and parking. Rooftops may be infiltrated with the concurrence of the regulatory authority.

- b. Storage and loading areas of a tier 2 industrial facility identified in s. NR 215.21(2)(b).
 - c. Fueling and vehicle maintenance areas. Rooftops of fueling and vehicle maintenance areas may be infiltrated with the concurrence of the regulatory authority.
2. 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:
- a. Parking areas and access roads less than 5,000 square feet for commercial development.
 - b. Parking areas and access roads less than 5,000 square feet for industrial development not subject to the Prohibitions under subparagraph 1 of this article.
 - c. In-fill development areas less than 5 acres.
 - d. Roads on commercial, industrial and institutional land uses, and arterial residential roads.
- d. *Location of Practices.*
- 1. Prohibitions. Infiltration practices may not be located in the following areas:
 - a. Areas within 1000 feet upgradient or within 100 feet downgradient of direct conduits to groundwater.
 - b. Areas within 400 feet of a community water system well as specified in s. NR 811.16(4) or within the separation distances listed in s. NR 812.08 for any private well or non-community well for runoff infiltrated from commercial, including multi-family residential, industrial and institutional land uses or regional devices for one- and two-family residential development.
 - c. Areas where contaminants of concern, as defined in s. NR 720.03(2), are present in the soil through which infiltration will occur.
 - 2. Separation distances.
 - a. Infiltration practices shall be located so that the characteristics of the soil and the separation distance between the bottom of the infiltration system and the elevation of seasonal high groundwater or the top of bedrock are in accordance with Table 3:

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

- b. Notwithstanding par. 2., applicable requirements for injection wells classified under ch. NR 815 shall be followed.
- 3. 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.
- e. *Alternate Use.* Where alternate uses of runoff are employed, such as for toilet flushing, laundry, or irrigation or storage on green roofs where an equivalent portion of the runoff is captured permanently by rooftop vegetation, such alternate use shall be given equal credit toward the infiltration volume required by this section.
- f. *Groundwater Standards.*
 - 1. Infiltration systems designed in accordance with this section shall, to the extent technically and economically feasible, minimize the level of pollutants infiltrating to groundwater and shall maintain compliance with the preventive action limit at a point of standards application in accordance with ch NR 140. 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.
 - 2. Notwithstanding par. a., the discharge from BMPs shall remain below the enforcement standard at the point of standards application.
- g. *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 an infiltration system. The pretreatment shall be designed to protect the infiltration system from clogging prior to scheduled maintenance and to protect groundwater quality in accordance with sub. f. Pretreatment options may include, but are not limited to, oil and grease separation, sedimentation, biofiltration, filtration, swales or filter strips.
- h. *Maximum Extent Practicable.* Where the conditions of subs. c. and d. limit or restrict the use of infiltration practices, the performance standard of s. NR 151.124 shall be met to the maximum extent practicable.

(4) *Protective Areas.*

- a. Definition. In this section, “protective area” means an area of land that commences at the top of the channel of lakes, streams and rivers, or at the delineated boundary of wetlands, and that is the greatest of the following widths, as measured horizontally from the top of the channel or delineated wetland boundary to the closest impervious surface. However, in this section, “protective area” does not include any area of land adjacent to any stream enclosed within a pipe or culvert, such that runoff cannot enter the enclosure at this location.
 1. For outstanding resource waters and exceptional resource waters, 75 feet.
 2. 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.
 3. For lakes, 50 feet.
 4. For wetlands not subject to par. 5 or 6, 50 feet.
 5. 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.
 6. For less susceptible wetlands, 10 percent of the average wetland width, but no less than 10 feet nor more than 30 feet. Less susceptible wetlands include: degraded wetlands dominated by invasive species such as reed canary grass; cultivated hydric soils; and any gravel pits, or dredged material or fill material disposal sites that take on the attributes of a wetland.
 7. In subsection a.4 and a.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 s. NR 103.03.
 8. Wetland boundary delineations shall be made in accordance with current Wisconsin Department of Natural Resources procedures. 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. When there is a legally authorized wetland fill, the protective area standard need not be met in that location.
 9. For concentrated flow channels with drainage areas greater than 130 acres, 10 feet.
 10. Notwithstanding subsections a.1 to a.9, the greatest protective area width shall apply where rivers, streams, lakes and wetlands are contiguous.
- b. Applicability. This section applies to post–construction sites located within a protective area, except those areas exempted pursuant to subsection d below.
- c. Requirements. The following requirements shall be met:
 1. Impervious surfaces shall be kept out of the protective area entirely or to the maximum extent practicable. If there is not practical alternative to locating an impervious surface in the protective area, the stormwater management plan shall contain a written, site–specific explanation.

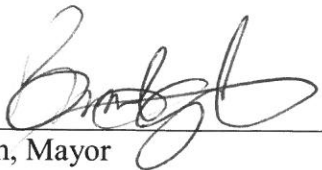
2. Where land disturbing construction activity occurs within a protective area, adequate sod or self-sustaining vegetative cover of 70% or greater shall be established and maintained where no impervious surface is present. The adequate sod or self-sustaining vegetative cover shall be sufficient to provide for bank stability, maintenance of fish habitat and filtering of pollutants from upslope overland flow areas under sheet flow conditions. Non-vegetative materials, such as rock riprap, may be employed on the bank as necessary to prevent erosion, such as on steep slopes or where high velocity flows occur.
 3. 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.
 - d. Exemptions. This paragraph does not apply to:
 1. In-fill development areas less than 5 acres.
 2. Structures that cross or access surface waters such as boat landings, bridges and culverts.
 3. Structures constructed in accordance with s. 59.692(1v), Wis. Stats.
 4. 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 total suspended solids and peak flow reduction, except to the extent that vegetative ground cover is necessary to maintain bank stability.
- (5) *Fueling and vehicle maintenance areas.* Fueling and vehicle maintenance areas shall have BMPs designed, installed and maintained to reduce petroleum within runoff, such that the runoff that enters waters of the state contains no visible petroleum sheen.
- (6) *Swale treatment for transportation facilities.*
- a. Requirement. Except as provided in subsection (b) below, transportation facilities that use swales for runoff conveyance and pollutant removal are exempt from the requirements of 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:
 1. Swales shall be vegetated. However, where appropriate, non-vegetative measures may be employed to prevent erosion or provide for runoff treatment, such as rock riprap stabilization or check dams.
 2. Swales shall comply with the Wisconsin Department of Natural Resources technical standard 1005 "Vegetated Infiltration Swales" dated May 2007, or a superseding document.
 - b. Other requirements. Notwithstanding sub. a, the Zoning Administrator may, consistent with water quality standards, require that other requirements, in addition to swale treatment, be met on a transportation facility with an average daily travel of vehicles greater than 2,500 and where the initial surface water of the state that the runoff directly enters is any of the following:
 1. An outstanding resource water.
 2. An exceptional resource water.
 3. Waters listed in section 303(d) of the Federal Clean Water Act that are identified as impaired in whole or in part, due to nonpoint source impacts.
 4. Waters where targeted performance standards are developed pursuant to s. NR 151.004.

- c. The transportation facility authority shall contact the Zoning Administrator to determine if additional BMPs beyond a water quality swale are needed under this subsection.
- (d) *General considerations for on-site and off-site stormwater management measures.* The following considerations shall be observed in managing runoff:
 - (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 stormwater facilities shall be provided to prevent exceeding the safe capacity of downstream drainage facilities and prevent endangerment of downstream property or public safety.
- (e) *Location and regional treatment option.*
 - (1) The BMPs may be located on-site or off-site as part of a regional storm water device, practice or system.
 - (2) Post-construction runoff within a non-navigable surface water that flows into a BMP, such as a wet detention pond, is not required to meet the performance standards of this article. Post-construction BMPs may be located in non-navigable surface waters.
 - (3) Except as allowed under subparagraph (4), post-construction runoff from new development shall meet the post-construction performance standards prior to entering a navigable surface water.
 - (4) Post-construction runoff from any development within a navigable surface water that flows into a BMP is not required to meet the performance standards of this article if:
 - a. The BMP was constructed prior to the effective date of this article and the BMP either received a permit issued under ch. 30, Stats., or the BMP did not require a ch. 30, Wis. Stats., permit; and
 - b. The BMP is designed to provide runoff treatment from future upland development.
 - (5) Runoff from existing development, redevelopment and in-fill areas shall meet the post-construction performance standards in accordance with this paragraph.
 - a. To the maximum extent practicable, BMPs shall be located to treat runoff prior to discharge to navigable surface waters.
 - b. Post-construction BMPs for such runoff may be located in a navigable surface water if allowable under all other applicable federal, state and local regulations such as ch. NR 103, Wis. Adm. Code and ch. 30, Wis. Stats.
 - (6) The discharge of runoff from a BMP, such as a wet detention pond, or after a series of such BMPs is subject to this chapter.
 - (7) The Zoning Administrator may approve off-site management measures provided that all of the following conditions are met:
 - a. The Zoning Administrator determines that the post-construction runoff is covered by a stormwater management system plan that is approved by the City of Mosinee and that contains management requirements consistent with the purpose and intent of this article.
 - 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 stormwater control equal to or greater than that which would be afforded by on-site practices meeting the performance standards of this article.

3. The facility has a legally obligated entity responsible for its long-term operation and maintenance.
- (8) Where a regional treatment option exists such that the Zoning Administrator exempts the applicant from all or part of the minimum on-site stormwater management requirements, the applicant shall be required to pay a fee in an amount determined in negotiation with the Zoning Administrator. In determining the fee for post-construction runoff, the Zoning Administrator shall consider an equitable distribution of the cost for land, engineering design, construction, and maintenance of the regional treatment option.
- (f) *Alternate Requirements.* The Zoning Administrator may establish stormwater management requirements more stringent than those set forth in this section if the Zoning Administrator determines that an added level of protection is needed to protect sensitive resources.
- (g) *Maintenance of Effort.* For redevelopment sites where the redevelopment will be replacing older development that was subject to post-construction performance standards of NR 151 in effect on or after October 1, 2004, the responsible party shall maintain the existing level of control for TSS, infiltration and peak flow reduction, or meet the redevelopment standards of ss. NR 151.122 to 151.125, whichever is more stringent.
5. That Section 68-901 – Permitting requirements, procedures and fees, Division 3 – Administration, Article IV – Post Construction Control Regulations, Chapter 68 - Stormwater Management Regulations, of the Code of Ordinances for the City of Mosinee is hereby amended by revising subparagraph (d)(3) entitled “Permit requirements” to read as follows:
 - (3) The responsible party shall notify the zoning administrator at least seven business days before commencing any work in conjunction with the storm water management plan, and within seven business days upon completion of the storm water management practices. If required as a special condition under subsection (e), the responsible party shall make additional notification according to a schedule set forth by the zoning administrator so that practice installations can be inspected during construction.
6. That this ordinance shall be in full force and effect upon its adoption and publication in accordance with applicable state statutes.
7. That all prior ordinances and parts of ordinances in conflict with this ordinance are hereby repealed.

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Adopted and approved by the Common Council of the City of Mosinee on this 13th day of June, 2016.



Brent Jacobson, Mayor



Attest _____
Bruce R. Jamroz, City Clerk/Treasurer

