

**ORDINANCE NO. 2018-03**

**AN ORDINANCE TO UPDATE AND MODERNIZE THE TOWN OF LODI STORM  
WATER MANAGEMENT ORDINANCE**

The Town Board of the Town of Lodi, Columbia County, Wisconsin do hereby ordain as follows:

1. Section 11.15 of the Lodi Municipal Code is hereby created to read as follows:

**SECTION 11.15      STORM WATER MANAGEMENT**

(a)      **Authority.**

- (1)      This ordinance is adopted by the Town Board under the authority granted by Wis. Stats. §60.627.
- (2)      The provisions of this ordinance are deemed not to limit any other lawful regulatory powers of the same governing body.
- (3)      The Town Board hereby designates the Town Engineer to administer and enforce the provisions of this ordinance.
- (4)      The requirements of this ordinance do not pre-empt more stringent storm water management requirements that may be imposed by any of the following:
  - (A)      Wisconsin Department of Natural Resources administrative rules, permits or approvals including those authorized under Wis. Stats. §§. 281.16 and 283.33.
  - (B)      Targeted non-agricultural performance standards promulgated in rules by the Wisconsin Department of Natural Resources under Wis. Admin. Code § NR 151.004.

(b)      **Findings Of Fact.**

The Town Board acknowledges that uncontrolled, post-construction runoff has a significant impact upon water resources and the health, safety and general welfare of the community and diminishes the public enjoyment and use of natural resources. Specifically, uncontrolled post-construction runoff can:

- (1)      Degrade physical stream habitat by increasing stream bank erosion, increasing streambed scour, diminishing groundwater recharge, diminishing stream base flows and increasing stream temperature.

- (2) Diminish the capacity of lakes and streams to support fish, aquatic life, recreational and water supply uses by increasing pollutant loading of sediment, suspended solids, nutrients, heavy metals, bacteria, pathogens and other urban pollutants.
- (3) Alter wetland communities by changing wetland hydrology and by increasing pollutant loads.
- (4) Reduce the quality of groundwater by increasing pollutant loading.
- (5) Threaten public health, safety, property and general welfare by overtaxing storm sewers, drainage ways, and other minor drainage facilities.

(c) **Purpose And Intent.**

- (1) **Purpose.** The general purpose of this ordinance is to establish long-term, post-construction runoff management requirements that will diminish the threats to public health, safety, welfare and the aquatic environment. Specific purposes are to:
  - (A) Further the maintenance of safe and healthful conditions.
  - (B) Prevent and control the adverse effects of storm water; prevent and control soil erosion; prevent and control water pollution; protect spawning grounds, fish and aquatic life; control building sites, placement of structures and land uses; preserve ground cover and scenic beauty; and promote sound economic growth.
  - (C) Control exceedance of the safe capacity of existing drainage facilities and receiving water bodies; prevent undue channel erosion; and control increases in the scouring and transportation of particulate matter.
  - (D) Minimize the amount of pollutants discharged from the separate storm sewer to protect the waters of the state.
- (2) **Intent.** It is the intent of the Town Board 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 Town Board 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 Wis. Stats. §281.16, for regional storm water management measures and have been approved by the Town Board, it is the intent of this ordinance that the approved storm water management plan be used to identify post-construction management measures acceptable for the community.

(d) **Applicability And Jurisdiction.**

(1) **Applicability.**

(A) **General Requirement.** Any landowner, land user, and/or responsible party who undertakes, begins, commences or performs land-disturbing activities, or who permits another person to do the same, on lands subject to this ordinance, shall be subject to the provisions of this ordinance.

(B) **Activities Subject to Storm Water Management.** Activities on public or private lands shall be subject to this ordinance, if:

(i) The land disturbing activity has gross aggregate area of 43,560 square feet or more with a total planned impervious area in excess of 22,000 square feet; or

(ii) The land disturbing activity has a gross aggregate area of 43,560 square feet or less with thirty percent or more of the area planned as impervious surfaces including roads, buildings, parking facilities or other improvements.

(C) Notwithstanding the applicability requirements in par. (A) and (B), this ordinance applies to post- construction sites of any size that, as determined by the Town, are likely to result in runoff that exceeds the safe capacity of the existing drainage facilities or receiving body of water, causes undue channel erosion, or increases water pollution by scouring or the transportation of particulate matter.

(2) **Jurisdiction.**

This ordinance applies to post construction sites within the boundaries and jurisdiction of the Town.

(3) **Exclusions.**

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

(e) **Definitions.**

(1) **Adequate Sod, or Self-Sustaining Vegetative Cover.** Maintenance of sufficient vegetation types and densities such that the physical integrity of the stream bank or lakeshore is preserved. Self-sustaining vegetative cover includes grasses, forbs, sedges and duff layers of fallen leaves and woody debris.

(2) **Administering Authority.** A governmental employee or consultant that is designated by the Town Board to administer this ordinance.

(3) **Agricultural Facilities and Practices.** Has the meaning given in Wis. Stats. § 281.16 (1).

(4) **Atlas 14.** The National Oceanic and Atmospheric Administration (NOAA) Atlas 14 Precipitation-Frequency Atlas of the United States, Volume 8 (Midwestern States), published in 2013.

(5) **Average Annual Rainfall.** A typical 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 means measured precipitation in Madison, Wisconsin between March 12 and December 2, 1981.

(6) **Best Management Practice or “BMP.”** Structural or non-structural measures, practices, techniques or devices employed to avoid or minimize sediment or pollutants carried in runoff to waters of the state.

(7) **Business Day.** A day the office of the Town is routinely and customarily open for business.

(8) **Cease and Desist Order.** 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 Town.

(9) **Connected Imperviousness.** 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.

- (10) **Design Storm.** A hypothetical discrete rainstorm characterized by a specific duration, temporal distribution, rainfall intensity, return frequency and total depth of rainfall.
- (11) **Development.** Residential, commercial, industrial or institutional land uses and associated roads. “Development” includes, but is not limited to: development, expansion or alteration of a new or existing structure; land disturbing activities; or creation or expansion of impervious surfaces.
- (12) **Direct Conduits to Groundwater.** Wells, sinkholes, swallets, fractured bedrock at the surface, mine shafts, non-metallic mines, tile inlets discharging to groundwater, quarries, or depressional groundwater recharge areas over shallow fractured bedrock.
- (13) **Division of Land.** The creation from one parcel of 2 or more parcels or building sites of 35 or fewer acres each in area where such creation occurs at one time or through the successive partition within a 5-year period.
- (14) **Effective Infiltration Area.** 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.
- (15) **Erosion.** means the process by which the land’s surface is worn away by the action of wind, water, ice or gravity.
- (16) **Exceptional Resource Waters.** Waters listed in Wis. Admin. Code § NR 102.11.
- (17) **Filtering Layer.** Soil that has at least a 3-foot deep layer with at least 20 percent fines; or at least a 5-foot deep layer with at least 10 percent fines; or an engineered soil with an equivalent level of protection as determined by the Town for the site.
- (18) **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.
- (19) **Financial Guarantee.** A performance bond, cash, surety bond, irrevocable letter of credit, or similar guarantees submitted to the Town by the responsible party to assure that requirements of the ordinance are carried out in compliance with the storm water management plan.

- (20) **Governing Body.** The Town Board of Supervisors of the Town.
- (21) **Impervious Surface.** 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.
- (22) **In-fill.** An undeveloped area of land located within an existing urban service area, surrounded by development or development and natural or man-made features where development cannot occur.
- (23) **Infiltration.** The entry of precipitation or runoff into or through the soil.
- (24) **Infiltration System.** 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.
- (25) **Land Disturbing Construction Activity.** 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.
- (26) **Landowner.** Any person holding fee title, an easement or other 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.
- (27) **Maintenance Agreement.** A legal document that provides for long-term maintenance of storm water management practices.
- (28) **Maximum Extent Practicable.** 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 sub. (r)(8) of this ordinance.
- (29) **New Development.** Development resulting from the conversion of previously undeveloped land or agricultural land uses. “New Development” includes, but is not limited to: development, expansion or alteration of a new or existing

structure; land disturbing activities; or creation or expansion of impervious surfaces.

- (30) **NRCS MSE3 or MSE4 Distribution.** A specific precipitation distribution developed by the United States Department of Agriculture, Natural Resources Conservation Service, using precipitation data from Atlas 14.
- (31) **Off-Site.** Located outside the property boundary described in the permit application.
- (32) **On-Site.** Located within the property boundary described in the permit application.
- (33) **Ordinary High-Water Mark.** Has the meaning given in Wis. Admin. Code § NR 115.03 (6).
- (34) **Outstanding Resource Waters.** Waters listed in Wis. Admin. Code § NR 102.10.
- (35) **Peak Flow.** The maximum rate of flow of water at a given point in a channel, watercourse or conduit resulting from the predetermined storm or flood.
- (36) **Percent Fines.** The percentage of a given sample of soil, which passes through a # 200 sieve.
- (37) **Performance Standard.** A narrative or measurable number specifying the minimum acceptable outcome for a facility or practice.
- (38) **Permit.** A written authorization made by the Town to the applicant to conduct land disturbing construction activity or to discharge post-construction runoff to waters of the state.
- (39) **Permit Administration Fee.** A sum of money paid to the Town by the permit applicant for the purpose of recouping the expenses incurred by the authority in administering the permit.
- (40) **Pervious Surface.** 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.
- (41) **Pollutant** has the meaning given in Wis. Stats. §283.01 (13).
- (42) **Pollution** has the meaning given in Wis. Stats. §281.01 (10).

- (43) **Post-Construction Site.** A construction site following the completion of land disturbing construction activity and final site stabilization.
- (44) **Post-Development.** Post-development refers to the extent and distribution of land cover types anticipated to occur under condition of full development under the submitted plan. This term is used to match pre- and post-development storm water peak flows as required by this ordinance.
- (45) **Pre-Development Condition.** 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.
- (46) **Preventive Action Limit.** Has the meaning given in Wis. Admin. Code § NR 140.05 (17).
- (47) **Protective Area.** An area of land that commences at the top of the channel of lakes, streams and rivers, or at the delineated boundary of wetlands, and that is the greatest of the following widths, as measured horizontally from the top of the channel or delineated wetland boundary to the closest impervious surface.
- (48) **Redevelopment.** Areas where new development is replacing older development.
- (49) **Responsible Party.** The landowner or any other entity performing services to meet the requirements of this ordinance through a contract or other agreement.
- (50) **Runoff.** Storm water or precipitation including rain, snow or ice melt or similar water that moves on the land surface via sheet or channelized flow.
- (51) **Safe Capacity.** The rate of flow that can be handled without flooding.
- (52) **Separate Storm Sewer.** A conveyance or system of conveyances including roads with drainage systems, streets, catch basins, curbs, gutters, ditches, constructed channels or storm drains, which meets all of the following criteria:
  - (A) Is designed or used for collecting water or conveying runoff;
  - (B) Is not part of a combined sewer system;
  - (C) Is not part of a publicly owned wastewater treatment works that provides secondary or more stringent treatment; and

- (D) Discharges directly or indirectly to waters of the state.
- (53) **Silviculture Activity**. 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.
- (54) **Site**. The bounded area described in the erosion control or storm water management plan.
- (55) **Slope**. The net vertical rise over horizontal run, expressed as a percentage, which represents a relatively homogeneous surface incline or decline over the disturbed area.
- (56) **Stop Work Order**. An order issued by the Town which requires that all construction activity on the site be stopped.
- (57) **Storm Water Management Plan**. A complete plan designed to reduce the discharge of pollutants from storm water, after the site has undergone final stabilization, following completion of the construction activity.
- (58) **Storm Water Management Structure**. A structural measure or device employed to avoid or minimize sediment or pollutants carried in runoff to waters of the state.
- (59) **Storm Water Management System Plan**. A comprehensive plan designed to reduce the discharge of runoff and pollutants from hydrologic units on a regional or municipal scale.
- (60) **Technical Standard**. A document that specifies design, predicted performance and operation and maintenance specifications for a material, device or method.
- (61) **Top of the Channel**. 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 percent continually for at least 50 feet. If the slope of the land is 12 percent 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.
- (62) **Total maximum daily load or "TMDL."** The amount of pollutants specified as a function of one or more water quality parameters, that can be discharged

per day into a water quality limited segment and still ensure attainment of the applicable water quality standard.

- (63) **TP-40**. Technical Paper No. 40, Rainfall Frequency Atlas of the United States, published in 1961.
  - (64) **TR-55**. 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, which is incorporated by reference for this chapter.
  - (65) **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 Wis. Stats. §85.095 (1)(b). “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 Wis. Stats. §281.33.
  - (66) **TSS**. Total suspended solids.
  - (67) **Type II Distribution**. A rainfall type curve as established in the “United States Department of Agriculture, Soil Conservation Service, Technical Paper 149, published in 1973.”
  - (68) **Unnecessary Hardship**. Circumstances where special conditions, which were not self-created, affect a particular property and make strict conformity with regulations unnecessarily burdensome or unreasonable in light of the purposes of this ordinance.
  - (69) **Waters of the State**. All lakes, bays, rivers, streams, springs, ponds, wells, impounding reservoirs, marshes, watercourses, drainage systems and other surface water or groundwater, natural or artificial, public or private, within the Town.
- (f) **Applicability Of Maximum Extent Practicable (MEP)**.  
Maximum extent practicable applies when a person who is subject to a performance standard of this ordinance demonstrates to the Town’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 protection of public safety and welfare, protection of endangered and threatened resources, and preservation of historic properties.

(g) **Technical Standards.**

The following methods shall be used in designing the water quality, peak discharge, and infiltration components of storm water practices needed to meet the water quality 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 Wis. Admin. Code Chap. NR 151.
- (2) Where technical standards have not been identified or developed by the Wisconsin Department of Natural Resources, other technical standards may be used provided that the methods have been approved by the Town.

(h) **Performance Standards.**

- (1) **Responsible Party.** The responsible party shall comply with this section.
- (2) **Storm Water Management Plan.** A written storm water management plan in accordance with sub. (j) of this Ordinance shall be developed and implemented for each post-construction site.

- (3) **Requirements.** The storm water management plan required under sub. (2) shall include the following:

(A) **Total Suspended Solids (TSS).** BMPs shall be designed, installed and maintained to control total suspended solids carried in runoff from the post-construction site as follows:

(i) BMPs shall be designed to retain soil particles greater than 5 microns on the site (80% reduction) or to the maximum extent practicable as provided in sub. (ii) The design shall be based on an average annual rainfall, as compared to no runoff management controls.

(ii) **Maximum Extent Practicable.** If the design cannot meet the 80% total suspended solids reduction performance standard, 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.

(iii) 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.

(B) **Peak Discharge.**

(i) By design, BMPs shall be designed, installed, and maintained to effectively accomplish the following:

((1)) Maintain pre-development peak runoff rates for the 1-year, 24-hour storm event.

((2)) Maintain pre-development peak run-off rates for the 2-year, 24-hour storm event ;

((3)) Maintain pre-development runoff rates for the 10-year, 24-hour storm event.

The runoff curve numbers in Table 1. shall be used to represent the actual pre-development conditions. Peak discharges shall be calculated using TR-55 runoff curve number methodology, Atlas 14 precipitation depths, and the NRCS Wisconsin MSE4 precipitation distribution. On a case-by-case basis, the Town may allow the use of TP-40 precipitation depths and the Type II distribution.

| Table 1. Maximum Pre-Development Runoff Curve Numbers |                       |    |    |    |
|---|-----------------------|----|----|----|
| Runoff Curve Number                                   | Hydrologic Soil Group |    |    |    |
|   | A                     | B  | C  | D  |
| Woodland  | 30                    | 55 | 70 | 77 |
| Grassland   | 39                    | 61 | 71 | 78 |
| Cropland  | 55                    | 69 | 78 | 83 |

(ii) This subsection of the ordinance does not apply to 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.

(C) **Infiltration.**

- (i) **Best Management Practices.** 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 2 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.

(ii) **Pre-development.** The pre-development condition shall be the same as specified in Table 1 of the Peak Discharge section of this ordinance.

(iii) **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 identified in sub (h)(4)(C):

((A)) Areas associated with a tier 1 industrial facility identified in Wis. Admin. Code § NR216.21 (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 Wis. Admin. Code § NR 216.21(2)(b).

((C)) Fueling and vehicle maintenance areas. Runoff from 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 sub. (iii)(1).

((C)) Except as provided under sub. (h)(3), redevelopment post-construction sites.

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

((E)) Roads on commercial, industrial and institutional land uses, and arterial residential roads.

(iv) **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 Wis. Admin. Code § NR 811.16 (4) or within the separation distances listed in Wis. Admin. Code § 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 Wis. Admin. Code § 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 2:

| <b>Table 2. Separation Distances and Soil Characteristics</b> |                            |                             |
|---|----------------------------|-----------------------------|
| <b>Source Area</b>  | <b>Separation Distance</b> | <b>Soil Characteristics</b> |
| 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 | Not Applicable  |
| All Other Impervious Source Areas                   | 3 feet or more | Filtering Layer   |

((B)) Notwithstanding par. ((A)), applicable requirements for injection wells classified under Wis. Admin. Chap. 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.

(5) **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.

(6) **Groundwater Standards.**

(A) 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 Wis. Admin. Code Chap. 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.

(B) Notwithstanding par. (A), the discharge from BMPs shall remain below the enforcement standard at the point of standards application.

(7) **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. 6. Pretreatment options may include, but are not limited to, oil and grease separation, sedimentation, biofiltration, filtration, swales or filter strips.

(8) **Maximum Extent Practicable**. Where the conditions of sub. (iii) and (iv) limit or restrict the use of infiltration practices, the performance standard of Section (f)(4)(A)(B) and (C) shall be met to the maximum extent practicable.

(d) **Protective Areas**.

(1) **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, so 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 U.S. 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 par. (E) or (F), 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 wetland 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.
  - (G) In pars. (D) to (F), 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 Wis. Admin. Code § NR 103.03.
  - (H) Wetland boundary delineation shall be made in accordance with Wis. Admin. Code § NR 103.08 (1m). 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 a 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 pars. (A) to (I), the greatest protective area width shall apply where rivers, streams, lakes and wetlands are contiguous.
- (2) **Applicability.** This section applies to post-construction sites located within a protective area, except those areas exempted pursuant to sub. (4).
- (3) **Requirements.** 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, adequate sod or self-sustaining vegetative cover of 70 percent 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.
- (C) BMPs 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) **Exemptions.** This section does not apply to any of the following:
  - (A) Except as provided under sub. (h)(3), redevelopment post-construction sites.
  - (B) In-fill development areas less than 5 acres.
  - (C) Structures that cross or access surface water such as boat landings, bridges, and culverts.
  - (D) Structures constructed in accordance with Wis. Stats. §59.692 (1v).
  - (E) Areas of post-construction sites from which the 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.
- (e) **Fueling And Maintenance Areas.**  
Fueling and vehicle maintenance areas shall have BMPs designed, installed, and maintained to reduce petroleum within runoff, so that the runoff that enters waters of the state contains no visible petroleum sheen, or to the maximum extent practicable.
- (f) **General Considerations For Storm Water Management Measures.**  
The following considerations shall be observed in on-site and off-site runoff management:
  - (1) **Requirements.** The following considerations shall be observed in on-site and off-site runoff management:

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

(2) **BMP Location.**

- (A) To comply with the performance standards required under sub. (h) 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 Wis. Admin. Code § NR 151.003.
- (B) The Town may approve off-site management measures provided that all of the following conditions are met:
  - (i) The Town determines that the post-construction runoff is covered by a storm water management system plan that is approved by the Lodi Town Board and that contains management requirements consistent with the purpose and intent of this ordinance.
  - (ii) 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.
- (C) Where a regional treatment option exists such that the Town 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 Town. In determining the fee for post-construction runoff, the Town shall consider an

equitable distribution of the cost for land, engineering design, construction, and maintenance of the regional treatment option.

- (3) **Additional Requirements.** The Town may establish storm water management requirements more stringent than those set forth in this ordinance if the Town determines that the requirements are needed to control storm water quantity or control flooding, comply with federally approved total maximum daily load requirements, or control pollutants associated with existing development or redevelopment.

(g) **Permitting Requirements, Procedures And Fees.**

- (1) **Permit Required.** No responsible party may undertake a land disturbing construction activity without receiving a post-construction runoff permit from the Town prior to commencing the proposed activity.
- (2) **Permit Application And Fees.** Unless specifically excluded by this ordinance, any responsible party desiring a permit shall submit to the Town a permit application on a form provided by the Town for that purpose.
  - (A) Unless otherwise excluded by this ordinance, a permit application must be accompanied by a storm water management plan, a maintenance agreement and a non-refundable permit administration fee.
  - (B) The storm water management plan shall be prepared to meet the requirements of subs. (h) and (j), the maintenance agreement shall be prepared to meet the requirements of sub. (k), the financial guarantee shall meet the requirements of sub. (l), and fees shall be those established by the Town Board as set forth in sub. (m).
- (3) **Permit Application Review and Approval.** The Town shall review any permit application that is submitted with a storm water management plan, maintenance agreement, and the required fee. The following approval procedure shall be used:
  - (A) Within fifteen (15) business days of the receipt of a complete permit application, including all items as required by sub. (2), the Town shall inform the applicant whether the application, storm water management plan and maintenance agreement are approved or disapproved based on the requirements of this ordinance.
  - (B) If the storm water permit application, storm water management plan and maintenance agreement are approved, or if an agreed upon

payment of fees in lieu of storm water management practices is made, the Town shall issue the permit.

- (C) If the storm water permit application, storm water management plan or maintenance agreement is disapproved, the Town shall detail in writing the reasons for disapproval.
  - (D) The Town may request additional information from the applicant. If additional information is submitted, the Town shall have fifteen (15) business days from the date the additional information is received to inform the applicant that the storm water management plan and maintenance agreement are either approved or disapproved.
  - (E) Failure by the Town to inform the permit applicant of a decision within fifteen (15) business days of a required submittal shall be deemed to mean approval of the submittal and the applicant may proceed as if a permit had been issued.
- (4) **Permit Requirements.** All permits issued under this ordinance shall be subject to the following conditions, and holders of permits issued under this ordinance shall be deemed to have accepted these conditions. The Town may suspend or revoke a permit for violation of a permit condition, following written notification of the responsible party. An action by the Town to suspend or revoke this permit may be appealed in accordance with sub. (o).
- (A) Compliance with this permit does not relieve the responsible party of the responsibility to comply with other applicable federal, state, and local laws and regulations.
  - (B) The responsible party shall design and install all structural and non-structural storm water management measures in accordance with the approved storm water management plan and this permit.
  - (C) The responsible party shall notify the Town at least fifteen (15) business days before commencing any work in conjunction with the storm water management plan, and within fifteen (15) business days upon completion of the storm water management practices. If required as a special condition under sub. (5), the responsible party shall make additional notification according to a schedule set forth by the Town so that practice installations can be inspected during construction.
  - (D) Practice installations required as part of this ordinance shall be certified "as built" or "record" drawings by a licensed professional engineer.

Completed storm water management practices must pass a final inspection by the Town or its designee to determine if they are in accordance with the approved storm water management plan and ordinance. The Town or its designee shall notify the responsible party in writing of any changes required in such practices to bring them into compliance with the conditions of this permit.

- (E) The responsible party shall notify the Town of any significant modifications it intends to make to an approved storm water management plan. The Town may require that the proposed modifications be submitted to it for approval prior to incorporation into the storm water management plan and execution by the responsible party.
- (F) The responsible party shall maintain all storm water management practices in accordance with the storm water management plan until the practices either become the responsibility of the Town Board, or are transferred to subsequent private owners as specified in the approved maintenance agreement. Where any storm water management practice is installed in connection with a land division under Chapter 10 of the Code and no earlier than after 80% and no later than after 95% of the lots or units are occupied by a principal structure, the responsible party shall inspect and return to their condition as designed all storm water management structures approved at the site at the responsible party's own cost. The maintenance activities shall return the basins or swales to their original design capacities. The responsible party shall notify the Town prior to the maintenance activities and shall certify that the basins and/or swales are in their original design capacity before the practices become the responsibility of the Town or subsequent property owners.
- (G) The responsible party authorizes the Town to perform any work or operations necessary to bring storm water management measures into conformance with the approved storm water management plan, and consents to a special charge against the property as authorized under Wis. Stats. §66.0627, or to charging such costs against the financial guarantee posted under sub. (j).
- (H) If so directed by the Town, the responsible party shall repair at the responsible party's own expense all damage to adjoining municipal facilities and drainage ways caused by runoff, where such damage is caused by activities that are not in compliance with the approved storm water management plan.

- (I) The responsible party shall permit property access to the Town or its designee for the purpose of inspecting the property for compliance with the approved storm water management plan and this permit.
  - (J) Where site development or redevelopment involves changes in direction, increases in peak rate and/or total volume of runoff from a site, the Town may require the responsible party to make appropriate legal arrangements with affected property owners concerning the prevention of endangerment to property or public safety.
  - (K) The responsible party is subject to the enforcement actions and penalties detailed in sub. (i), if the responsible party fails to comply with the terms of this permit.
- (5) **Permit Conditions.** Permits issued under this subsection may include conditions established by Town in addition to the requirements needed to meet the performance standards in sub. (h) or a financial guarantee as provided for in sub. (j).
- (6) **Permit Duration.** Permits issued under this section shall be valid from the date of issuance through the date the Town notifies the responsible party that all storm water management practices have passed the final inspection required under sub. (g)(4)(D).
- (h) **Storm Water Management Plan.**
- (1) **Storm Water Management Plan Requirements.** The storm water management plan required under sub. (h)(2) shall contain at a minimum the following information:
- (A) Name, address, and telephone number for the following or their designees: landowner; developer; project engineer for practice design and certification; person(s) responsible for installation of storm water management practices; and person(s) responsible for maintenance of storm water management practices prior to the transfer, if any, of maintenance responsibility to another party.
  - (b) A proper legal description of the property proposed to be developed, referenced to the U.S. Public Land Survey system or to block and lot numbers within a recorded land subdivision plat.
  - (C) Pre-development site conditions, including:

- (i) One or more site maps at a scale of not less than 1 inch equals fifty (50) feet. The site maps shall show the following: site location and legal property description; predominant soil types and hydrologic soil groups; existing cover type and condition; topographic contours of the site at a scale not to exceed two (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 Wis. Admin. Code § NR 811.16.
  - (ii) Hydrology and pollutant loading computations as needed to show compliance with performance standards. All major assumptions used in developing input parameters shall be clearly stated. The geographic areas used in making the calculations shall be clearly cross-referenced to the required map(s).
- (D) Post-development site conditions, including:
- (i) 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.
  - (ii) Explanation of any restrictions on storm water management measures in the development area imposed by wellhead protection plans and ordinances.
  - (iii) One or more site maps at a scale of not less than 1 inch equals fifty (50) feet showing the following: post-construction pervious areas including vegetative cover type and condition; impervious surfaces including all buildings, structures, and pavement; post-construction topographic contours of the site at a scale not to exceed two (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.

- (iv) 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).
- (v) Results of investigations of soils and groundwater required for the placement and design of storm water management measures. Detailed drawings including cross-sections and profiles of all permanent storm water conveyance and treatment practices.
- (E) A description and installation schedule for the storm water management practices needed to meet the performance standards in sub. (h) of this ordinance.
- (F) A maintenance plan developed for the life of each storm water management practice including the required maintenance activities and maintenance activity schedule.
- (F) Cost estimates for the construction, operation, and maintenance of each storm water management practice.
- (H) Other information requested in writing by the Town to determine compliance of the proposed storm water management measures with the provisions of this ordinance.
- (I) All site investigations, plans, designs, computations, and drawings shall be certified by a licensed professional engineer to be prepared in

accordance with accepted engineering practice and requirements of this ordinance.

- (2) **Alternate Requirements.** The Town may prescribe alternative submittal requirements for applicants seeking an exemption to on-site storm water management performance standards under sub. (h)(5).
- (i) **Maintenance Agreement.**
  - (1) **Maintenance Agreement Required.** The maintenance agreement required under sub. (i)(2) for storm water management practices shall be an agreement between the Town 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 Columbia County Register of Deeds as a property deed restriction so that it is binding upon all subsequent owners of the land served by the storm water management practices.
  - (2) **Agreement Provisions.** The maintenance agreement shall contain the following information and provisions and be consistent with the maintenance plan required by sub. (j)(1)(F):
    - (A) Identification of the storm water facilities and designation of the drainage area served by the facilities.
    - (B) A schedule for regular maintenance of each aspect of the storm water management system consistent with the storm water management plan required under sub. (i)(2).
    - (C) Identification of the responsible party(s), organization or city, county, town or village responsible for long term maintenance of the storm water management practices identified in the storm water management plan required under sub. (i)(2).
    - (D) Requirement that the responsible party(s) shall maintain storm water management practices in accordance with the schedule included in par. (B).
    - (E) Authorization for the Town 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 Town to maintain public records of the results of the site inspections, to inform the responsible party responsible for maintenance of the inspection results, and to specifically indicate any corrective actions required to bring the storm water management practice into proper working condition.
- (G) Agreement that the party designated under par. (C), as responsible for long term maintenance of the storm water management practices, shall be notified by the Town of maintenance problems which require correction. The specified corrective actions shall be undertaken within a reasonable time frame as set by the Town.
- (H) Authorization of the Town to perform the corrected actions identified in the inspection report if the responsible party designated under par. (C) does not make the required corrections in the specified time period. The Town shall enter the amount due on the tax rolls and collect the money as a special charge against the property pursuant to Wis. Stats. §66.0627.

(j) **Financial Guarantee.**

- (1) **Establishment of the Guarantee.** The Town shall require the submittal of a financial guarantee, the form and type of which shall be acceptable to the Town. The financial guarantee shall be in an amount determined by the Town to be 110% of the estimated cost of construction and the estimated cost of maintenance of the storm water management practices during the period which the designated party in the maintenance agreement has maintenance responsibility. The financial guarantee shall give the Town 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 Town that the requirements of this ordinance have not been met.
- (2) **Conditions for Release.** Conditions for the release of the financial guarantee are as follows:
  - (A) The Town shall release the portion of the financial guarantee established under this section, less any costs incurred by the Town to complete installation of practices, upon submission of as built plans or record drawings by a licensed professional engineer. The Town may make provisions for a partial pro-rata release of the financial guarantee based on the completion of various development stages.

(B) The Town 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 Town, at such time that:

(i) The responsibility for practice maintenance is passed on to another entity via an approved maintenance agreement, and

(ii) For plats or certified survey maps, at least 70% of the development has been developed and assurance has been provided that the storm water management practices still conform to their approved design conditions and do not then require maintenance.

(k) **Fee Schedule.**

The fees referred to in other sections of this ordinance shall be established by the Town and may from time to time be modified by resolution. A schedule of the fees established by the Town shall be available for review in the Town Clerk-Treasurer's office.

(l) **Enforcement.**

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

(2) The Town shall notify the responsible party by certified mail of any non-complying land disturbing construction activity or post-construction runoff. The notice shall describe the nature of the violation, remedial actions needed, a schedule for remedial action, and additional enforcement action which may be taken.

(3) Upon receipt of written notification from the Town under sub. (2), the responsible party shall correct work that does not comply with the storm water management plan or other provisions of this permit. The responsible party shall make corrections as necessary to meet the specifications and schedule set forth by the Town in the notice.

(4) If the violations to a permit issued pursuant to this ordinance are likely to result in damage to properties, public facilities, or waters of the state, the Town may enter the land and take emergency actions necessary to prevent such damage. The costs incurred by the Town plus interest and legal costs shall be billed to the responsible party.

- (5) The Town 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 Town Attorney to obtain a cease and desist order in any court with jurisdiction.
- (6) The Town may revoke a permit issued under this ordinance for non-compliance with ordinance provisions.
- (7) Any permit revocation, stop work order, or cease and desist order shall remain in effect unless retracted by the Town or by a court with jurisdiction.
- (8) The Town is authorized to refer any violation of this ordinance, or a stop work order or cease and desist order issued pursuant to this ordinance, to the Town Attorney for the commencement of further legal proceedings in any court with jurisdiction.
- (9) When the Town 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 Town or a party designated by the Town 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 storm water management plan. The Town 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 sub. (j) 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 pursuant to Wis. Stats. §66.0627 and collected with any other taxes levied thereon for the year in which the work is completed.

(m) **Appeals.**

- (1) **Plan Commission.** The Plan Commission, created pursuant to Section 2.40 of the Lodi Municipal Code, shall hear and decide appeals where it is alleged that there is error in any order, decision or determination made by the Town in administering this ordinance. The board shall also use the rules, procedures, duties, and powers authorized by statute in hearing and deciding appeals. Upon appeal, the board may authorize variances from the provisions of this ordinance that are not contrary to the public interest, and where owing to special conditions a literal enforcement of the ordinance will result in unnecessary hardship.

(2) **Who May Appeal.** Appeals to the [Plan Commission] may be taken by any aggrieved person or by an officer, department, board, or bureau of the Town affected by any decision of the Town Engineer.

(n) **Severability.**

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

The above and foregoing Ordinance was duly adopted at a regular meeting of the Town Board of the Town of Lodi held on the \_\_\_\_\_ day of \_\_\_\_\_, 2018.

**TOWN OF LODI**

\_\_\_\_\_  
Thomas J. Marx, Town Chairperson

\_\_\_\_\_  
James P. Brooks, Supervisor 1

\_\_\_\_\_  
James L. Bechen, Supervisor 2

\_\_\_\_\_  
Robert F. Benson, Supervisor 3

\_\_\_\_\_  
Jon Plumer, Supervisor 4

ATTEST:

\_\_\_\_\_  
April D. Goeske, Town Clerk-Treasurer

VOTE:

AYES: \_\_\_\_\_

NOES: \_\_\_\_\_

ADOPTED: \_\_\_\_\_

PUBLISHED: \_\_\_\_\_