

TITLE 14
Subdivision Regulations

Chapter 2
Stormwater Management

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Article A
Preface and Administration

SEC. 14-2-1 FOREWORD

The Village Board (hereinafter “Board”) of Howards Grove does hereby ordain that **Title 14 Chapter 2** of the Village Code of Ordinances is created to read as follows:

SEC. 14-2-2 PURPOSE; INTENT

a) **Purpose**

1. It is the purpose of this ordinance to further the maintenance of safe and healthful conditions; prevent and control water pollution; 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, by minimizing the amount of sediment and other pollutants carried by runoff or discharged from **land disturbing construction activity** to waters of the state within Howards Grove.
2. 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 stormwater; 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; control increases in the scouring and transportation of particulate matter; and prevent conditions that endanger downstream property.

b) **Intent.** It is the intent of the Board that this ordinance regulates **post-construction stormwater** discharges to waters of the state. This ordinance may be applied on a site-by-site basis. The Board recognizes, however, that the preferred method of achieving the stormwater performance standards set forth in this ordinance is through the preparation and implementation of comprehensive, systems-level stormwater management plans that cover hydrologic units, such as watersheds, on a municipal and regional scale. Such plans may prescribe regional stormwater 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. Stat. § 281.16**, for regional stormwater management measures and have been approved by the Director and / or the Public Works Committee, it is the intent of this ordinance that the approved plan be used to identify post-construction management measures acceptable for the community.

SEC. 14-2-3 STATUTORY REFERENCES

All statutory and regulatory references are to the **2003-04 Wisconsin Statutes** and to the **2004 Wisconsin Administrative Code**, as they may be amended from time to time.

SEC. 14-2-4 AUTHORITY

- a) **General.**
1. This ordinance is adopted under the authority granted by **Wis. Stats. §§ Chapter 61, 62 and 66**, including but not limited to the following specific statutory sections: **61.354, 62.2345, 66.0621, 66.0809, 66.0811 and 66.0821**.
 2. The provisions of this ordinance shall not be deemed to limit any other lawful powers of the Board.
 3. **Designees.** The Board hereby designates the 1) Public Works Committee (hereinafter “Public Works Committee”) to administer and enforce the provisions of this ordinance and 2) the Director of Public Works (hereinafter “Director”) with authority for general and regular administration.
 4. 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:
 - a. Department 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 Department under **Administrative Code s. NR 151.004**.
- b) **Title 14 Chapter 2** is adopted by the Board under the authority granted by **Wis. Stat. § 61.354**. This ordinance supersedes all provisions of an ordinance previously enacted under **Wis. Stat. § 61.35** that **relate to construction site erosion control and post construction stormwater management**. Except as otherwise specified in **Wis. Stat. § 61.354, Wis. Stat. § 61.35**, applies to this ordinance and to any amendments to this ordinance.

SEC. 14-2-5 DISCLAIMER

Nothing contained in this Chapter is intended to be a guaranty against flooding or other damage to property or persons. The adoption of this Chapter shall not be construed as a waiver of the Village's statutory and common law rights of immunity against claims. All rights are reserved. Furthermore, in carrying out the provisions of this Chapter there shall be no personal liability against any Village elected official, officer, employee or agent.

SEC. 14-2-6 FINDINGS OF FACT

- a) **Article B:** The Board finds that runoff from **land disturbing construction activity** carries a significant amount of sediment and other pollutants to the waters of the state within Howards Grove.
- b) **Article C:** The Board finds 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.
6. Threaten public health, safety, property and general welfare by increasing major flood peaks and volumes.
7. Undermine floodplain management efforts by increasing the incidence and levels of flooding.

SEC. 14-2-7 JURISDICTION AND EXCLUSIONS/EXEMPTIONS

a) Jurisdiction

1. **Articles B and C shall apply to the following sites:**
 - a. **Village Corporate Limits: Land disturbing construction activities and post construction stormwater management improvements** on construction sites located within the boundaries and jurisdiction of Howards Grove,
 - i. **Ownership.** The Village reserves the right to require conformance with this code for all lands that are owned by a party that intends to develop lands (either in entirety or through subsequent phases), **and**
 - ii. The Code specifically applies to all land within approved developments (residential and non-residential). Individual lots and tracts must comply with the approved site development and stormwater management plans and this Chapter.
 - b. **Extraterritorial Jurisdiction: Land disturbing construction activities and post construction stormwater management improvements** on lands within the extraterritorial plat review jurisdiction subject to **Village Ordinance Title 14 Chapter 1** enacted pursuant to **Wis. Stat. § 236.45(2)** and **(3)** even if plat approval is not involved.

b) Exclusions / Exemptions

1. **Articles B and C:** This ordinance is **not applicable to**
 - a. Activities conducted by a state agency, as defined under **Wis. Stat. § 227.01 (1)**, but also including the office of district attorney, which is subject to the state plan promulgated or a memorandum of understanding entered into under **Wis. Stat. § 281.33 (2)**.
 - b. **Individual residential lot construction** that is otherwise regulated by the **Wisconsin Uniform Dwelling Code** or **Village Building Code**. This exclusion / exemption does NOT apply to lots within lands otherwise regulated by 14-2-7 (a).

SEC. 14-2-8 INTERPRETATION

Liberal Interpretation. This ordinance shall be interpreted liberally to secure the ends sought hereby. In their interpretation and application, the provisions of this ordinance shall be liberally construed in favor of the Village and shall not be deemed a limitation or repeal of any other power granted by the **Wisconsin Statutes**.

SEC. 14-2-9 ABROGATION AND GREATER RESTRICTIONS

- a) This ordinance is not intended to repeal, abrogate, annul, impair, or interfere with any existing easement, covenants, deed restrictions, agreements, rules, regulations, ordinances or permits previously adopted or issued pursuant to law.
- b) The provisions of this ordinance shall be minimum requirements. Where the provisions of this ordinance conflict with the provisions of any applicable Village, County, State or

Federal ordinance, statute, rule or regulation, the provisions of the more restrictive law shall control where relevant.

SEC. 14-2-10 SEVERABILITY

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

SEC. 14-2-11 DEFINITIONS

- (a1) **“Administering Authority”** means a governmental employee, or a regional planning commission empowered under **Wis. Stat. § 61.354**, that is designated by the Board to administer this ordinance.
- (a2) **“Administrative Code”** means the **State of Wisconsin Administrative Code**.
- (a3) **“Agricultural Facilities and Practices”** has the meaning in **Wis. Stat. § 281.16(1)**.
- (a4) **“Applicant”** means any landowner, land user(s), their agent, or contractor responsible for submitting and carrying out the requirements of this ordinance. Applicant shall also mean any subsequent landowner to whom this ordinance applies.
- (a5) **“Average Annual Rainfall”** means a calendar year of precipitation, excluding snow, which is considered typical. An average annual rainfall using either 1) Green Bay, 1969 (March 29-November 25) or 2) Milwaukee, 1969 (March 28 – December 6) is applicable for the Village.
- (a6) **“BMP”** or **“Best Management Practice”** 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.
- (a7) **“BMPH”** or **“Best Management Practice Handbook”** means the Department of Natural Resources “Wisconsin Construction Site Best Management Practice Handbook”, wisDNR publication WR-222, November 1993 Revision.
- (a8) **“Board”** means the Howards Grove “Village Board”
- (a9) **“Board of Appeals”** means the Howards Grove “Board of Zoning Appeals”
- (a10) **“Business Day”** means a day the office of the Department of Public Works is routinely and customarily open for business.
- (a11) **“Cease and Desist Order”** means a court-issued order to halt land disturbing construction activity that is being conducted without the required permit.
- (a12) **“City”** means an incorporated Wisconsin community.
- (a13) **“Clerk”** means the Village Clerk.
- (a14) **“Combined Sewer System”** means a system for conveying both sanitary sewage and stormwater runoff.
- (a15) **“Committee”** or **“Public Works Committee”** means the Howards Grove “Public Works Committee”
- (a16) **“Common Plan of Development or Sale”** means all lands included within the boundary of a certified survey or subdivision plat created for the purpose of development or sale of property where multiple separate and distinct land development activity may take place at different times and on different schedules.
- (a17) **“Connected Imperviousness”** means an impervious surface that is directly connected to a separate storm sewer or water of the state via an impervious flow path.
- (a18) **“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.

- (a19) **“Customer”** means any person, owner or occupant, firm, partnership, corporation, municipality, cooperative organization, Governmental agency or political entity provided with stormwater management services by the Village Stormwater Utility.
- (a20) **“Debt Service”** means, with respect to any particular fiscal year and any particular bond series, an amount equal to the sum of (a) all interest payable on such bonds during such fiscal year, plus (b) any principal installments of such bonds during such fiscal year.
- (a21) **“Department”** means the Wisconsin Department of Natural Resources.
- (a22) **“Design Storm / Rainfall Event”** means a hypothetical discrete rainstorm characterized by a specific duration, temporal distribution, rainfall intensity, return frequency, and total depth of rainfall. The storm duration shall be 24 hours. Twenty-four hour rainfall amounts for the Village are as follows:

(1) TR55

Frequency / Year	Total Rainfall (inches)
1	2.0
2	2.5
5	3.3
10	3.8
25	4.4
50	4.8
100	5.3

(2) or as from **“The Rainfall Frequency Atlas of the Midwest” (Floyd A. Huff and James R. Angel) Bulletin 71 of the Midwestern Climate Center (1992).**

- (a23) **“Developer”** (reference **Title 14 Chapter 1**)
- (a24) **“Development”** means residential, commercial, industrial or institutional land uses and associated roads that have impervious area.
- (a25) **“Director”** means the Village Director of Public Works or their designee.
- (a26) **“Discharge Volume”** means the quantity of runoff discharged from land surface as the result of a rainfall event.
- (a27) **“Division of Land”**. Reference **Title 14 Chapter 1**.
- (a28) **“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.
- (a29) **“Equivalent Runoff Unit (ERU)”** means the impervious area of a property relative to the statistical average impervious area of a “single family residential home” within the Village. One ERU is equal to **3,780** square feet of impervious surface.
- (a30) **“Erosion”** means the process by which the land’s surface is worn away by the action of wind, water, ice or gravity.
- (a31) **“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.
- (a32) **“Exceptional Resource Waters”** means waters listed in **Administrative Code s. NR 102.11**.

- (a33) **“Existing Land Use Condition”** means the condition of the adjacent properties that are present at the time of the stormwater permit application. This term applies only for the purpose of properly sizing stormwater BMP’s and stormwater conveyance systems per the requirements of this ordinance.
- (a34) **“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.
- (a35) **“Fee in Lieu”** means a payment of money to the Village in place of meeting all or part of the stormwater performance standards required by this Ordinance.
- (a36) **“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.
- (a37) **“Financial Security / Guarantee”** means a performance bond, maintenance bond, surety bond, irrevocable letter of credit, or similar guarantees submitted to the Village by the responsible party to assure that requirements of the ordinance are carried out in compliance with the stormwater management plan.
- (a38) **“Fiscal Year”** means a consecutive twelve (12) month period commencing on the first day of January of any year.
- (a39) **“Governing Body”** means town board of supervisors, county board of supervisors, city council, and village board of trustees or village Board.
- (a40) **“Gross Aggregate Area”** means the total area, in acres, of all land located within the property boundary containing the land development activity.
- (a41) **“Groundwater Enforcement Standard”** means a numerical value expressing the concentration of a substance in groundwater, which is adopted under [Wis. Stat. § 160.07](#) and [Administrative Code NR 140.10](#), or [Wis. Stat. § 160.09](#) and [Administrative Code NR140.12](#).
- (a42) **“Groundwater Preventative Action Limit”** means a numerical value expressing the concentration of a substance in groundwater, which is adopted under [Wis. Stat. § 160.15](#) and [Administrative Code NR 140.12](#), or [Administrative Code NR140.20](#).
- (a43) **“Impervious Surface”** means a surface as measured on a horizontal plane which has been compacted or covered with a layer of material or improvements that reduce natural infiltration into the soil from rain water or snow melt. Impervious surfaces release as runoff all or a large portion of the precipitation that falls on it, except for frozen soil.
- (1) **Impervious Surfaces include but are not limited to** all areas covered by structures, roof extensions and overhangs, patios, porches, driveways, loading docks, pools, sidewalks, sports courts and driveways or parking lots. Impervious area **shall include** driveway / access improvements that both serve a parcel leading to a public street and are not located on the subject parcel. Rooftops, sidewalks, driveways, parking lots and streets are examples of areas that typically are impervious.
- (2) **Pervious surfaces include but are not limited to** elevated decks that uniformly distribute drainage to underlying soil, areas of public streets or public sidewalks adjacent to a parcel **with the exception of** where a public sidewalk crosses a driveway.
- (a44) **“In-fill and In-fill Development Area”** means an undeveloped area of land located within or surrounded by existing development, or existing development and natural or

- man-made features. These areas may be served by storm sewer drainage improvements. The Village may develop a map identifying parcels of land that constitute infill. The map shall be updated annually. As lands designated as infill are developed, the land shall no longer be classified as infill - even though the map has not yet been updated. Map updates shall not require Public Works Committee or Board approval.
- (a45) “**Infiltration**” means the entry of precipitation or runoff into or through the soil.
- (a46) “**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.
- (a47) “**Karst Feature**” means an area or surficial geologic feature subject to bedrock dissolution so that it is likely to provide a conduit to groundwater, and may include caves, enlarged fractures, mine features, exposed bedrock surfaces, sinkholes, springs, seeps or swallets.
- (a48) “**Land Development Activity** (and **land redevelopment activity**)” means any activity that changes the volume or peak flow discharge rate of rainfall runoff or nutrient / sediment load from the land surface. This term does not include agricultural land use activities.
- (a49) “**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. Land disturbing construction activity exclude agricultural facilities and practices, silviculture activities, or routine maintenance for project sites that involve under 5-acres of land disturbance that are performed to maintain the original line and grade, hydraulic capacity, or original function of the facility.
- (a50) “**Land Owner**” means any person holding title to or having an interest in land.
- (a51) “**Land User**” means any person operating, leasing, renting, or having made other arrangements with the landowner by which the landowner authorizes use of their land.
- (a52) “**Maintenance Agreement**” means a legal document that provides for long-term maintenance of stormwater management practices.
- (a53) “**MEP**” or “**Maximum Extent Practicable**” means a level of implementing best management practices in order to achieve a performance standard specified in this chapter which takes into account the best available technology, cost effectiveness and other competing issues such as human safety and welfare, endangered and threatened resources, historic properties and geographic features. MEP allows flexibility in the way to meet the performance standards and may vary based on the performance standard and site conditions.
- (a54) “**Natural Wetlands**” means an area where a) water is at, near, or above the land surface long enough to be capable of supporting b) aquatic or hydrophytic vegetation and c) which has soils indicative of perennial wet conditions.
- (a55) “**New Development**” means development resulting from the conversion of previously undeveloped land or agricultural land uses.
- (a56) “**Non-developed**” means properties that have no improvements or impervious surface that contributes additional runoff.
- (a57) “**Non-stormwater Discharge**” means a discharge to the storm sewer / drainage system created by some process other than the runoff from precipitation.

- (a58) **“Non-residential”** means any developed property not used, primarily, as a permanent residence, such as a commercial, industrial or municipal / institutional property.
- (a59) **“Non-stormwater discharge”** means a discharge to the storm sewer system created by some process other than the runoff from precipitation.
- (a60) **“Non-structural Measure”** means a practice, technique, or measure to reduce the volume, peak flow rate, or pollutants in stormwater that does not require the design or installation of fixed stormwater management facilities.
- (a61) **“Notice of Intent”** means a notice required by [Administrative Code NR 151.11](#), [Commerce 61.115\(1\)](#), or [NR 216](#).
- (a62) **“NRCS”** means the Natural Resources Conservation Service of the U.S. Department of Agriculture (USDA) formerly known as the SCS (Soil Conservation Service of the USDA).
- (a63) **“Off-site”** means located outside the property boundary described in the permit application.
- (a64) **“On-site”** means located within the property boundary described in the permit application.
- (a65) **“On-site Stormwater Management System”** means a system designed to both mitigate flood impacts and provide adequate treatment of pollutants in stormwater runoff. Systems are defined as being constructed on a particular parcel for which a customer is billed. Systems include but are not limited to rain gardens, cisterns, infiltration trenches, pre-treatment systems, detention and wet detention / retention basins.
- (a66) **“Operation and Maintenance”** means the current expenses, paid or accrued, of operation, maintenance and current repair of the system. The value shall be calculated using standard accounting practice and includes, without limitation, insurance premiums, administrative expenses, labor, executive compensation, regulatory compliance, materials and supplies used for current operations, and charges for accumulating reserves for current expenses not annually incurred, but which may be reasonably be expected to be incurred using standard accounting practices.
- (a67) **“Ordinary High-Water Mark”** has the meaning given in [Administrative Code s. NR 115.03\(6\)](#).
- (a68) **“Other than Residential Development”** means development of land uses including but not limited to: business park, commercial, industrial, government and institutional, recreation, transportation, communication and utilities.
- (a69) **“Outstanding Resource Waters”** means waters listed in [Administrative Code s. NR 102.10](#).
- (a70) **“Parcel”** means the legal unit of land division as recorded by the County Register of Deeds.
- (a71) **“Peak Flow or Peak Flow Discharge Rate”** means the maximum rate at which a unit volume of stormwater is discharged. This is commonly expressed in terms of cubic feet per second (cfs).
- (a72) **“Percent Fines”** means the percentage of a given sample of soil, which passes through a number 200 sieve in accordance with the [“American Society for Testing and Materials”](#), volume 04.02, [“Test Method C117-95 Standard Test Method for Materials Finer than 75-um \(no. 200\) Sieve in Material Aggregates by Washing”](#).
- (a73) **“Performance Standard”** means a narrative or measurable number specifying the minimum acceptable outcome for a facility or practice.

- (a74) **“Permit”** means a written authorization made by the Director to the applicant to conduct land disturbing construction activity or to discharge post-construction runoff to waters of the state.
- (a75) **“Permit Administration Fee”** means a sum of money paid to the Village by the permit applicant for the purpose of recovering the expenses incurred by the authority in administering the permit.
- (a76) **“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.
- (a77) **“Pollutant”** has the meaning given in [Wis. Stat. § 283.01 \(13\)](#).
- (a78) **“Pollution”** has the meaning given in [Wis. Stat. § 281.01 \(10\)](#).
- (a79) **“Population”** has the meaning given in [Wis. Stat. § 281.66 \(1\) \(c\)](#).
- (a80) **“Post-construction Site”** means a construction site following the completion of land disturbing construction activity and final site stabilization.
- (a81) **“Post-construction Site Stormwater Discharge”** means any stormwater discharged from a site following the completion of land disturbing construction activity and final site stabilization.
- (a82) **“Post-development Land Use Condition”** means the extent and distribution of land cover types, anticipated to occur under conditions of full development that will influence precipitation runoff and infiltration (also reference “proposed land use condition”).
- (a83) **“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. [Section 14-2-33 \(c\) 3 e](#) identifies the respective curve runoff numbers to be used. This term has the purpose of comparing pre- and post-development stormwater peak flows as required by this ordinance.
- (a84) **“Pre-treatment”** means the treatment of stormwater prior to discharge to wetlands, infiltration practices or the primary stormwater treatment practice. The goal of pretreatment is to reduce pollutant loads to a level compatible with the capability of the primary practice.
- (a85) **“Preventive Action Limit”** has the meaning given in [Administrative Code s. NR 140.05\(17\)](#).
- (a86) **“Proposed Land Use or Post-Development Conditions”** means the extent and distribution of land cover types, anticipated to occur under conditions of full development that will influence precipitation runoff and infiltration.
- (a87) **“Public Drainage System”** means all facilities owned and operated by the Village, County or Wisconsin Department of Transportation for the purpose of collecting, conveying, storing, treating, and disposing of stormwater.
- (a88) **“Qualifying Receiving Water”** means a receiving body of water within the Village’s corporate boundaries for which the Village has, or is expected to have, little or no debt service and / or capital improvement costs. Those portions of Pigeon River (and it’s tributaries) located within the Village corporate limits are qualifying receiving waters.
- (a89) **“Redevelopment”** means areas where development is replacing older development.
- (a90) **“Residential Land Development”** means development that creates structures to house people. This includes residential dwelling units and surrounding property including but not limited to lawns, driveways, sidewalks, garages, and access streets. This type of development includes single family, multi-family and apartments.

- (a91) “**Regional Stormwater Management**” means the consideration, evaluation and improvement of both significant natural and man-made drainage areas. Individual project sites typically are included in “regional management areas”.
- (a92) “**Responsible Party**” means any entity holding fee title to the property or performing services to meet the performance standards of this ordinance through a contract or other agreement.
- (a93) “**Revenue**” means all rates, charges, assessments, rentals, fines or other charges or other income received by the Village related to the management and operation of the system, including amounts received from the investment or deposit of monies in any fund or account and any amounts contributed by the Village, all as calculated using standard accounting principles.
- (a94) “**Runoff**” means stormwater or precipitation including rain, snow or ice melt or similar water that moves on the land surface via sheet or channelized flow. Impervious surfaces result in runoff from naturally infiltrating into soil.
- (a95) “**Runoff Curve Number or RCN**” means an index that represents the combination of a hydrologic soil group, land use, land cover, impervious area, interception storage, surface storage, and antecedent moisture conditions. RCN’s convert mass rainfall into mass runoff. The NRCS identifies RCN’s in TR-55.
- (a96) “**Sediment**” means settleable solid material that is transported by runoff, suspended within runoff or deposited by runoff away from its original location.
- (a97) “**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 draining to a stormwater treatment device or system.
 - (4) Discharges directly or indirectly to waters of the state.
- (a98) “**Site**” means the entire area included in the legal description of the land owned on which the land disturbing construction activity is proposed in the permit application.
- (1) The site’s entire area shall include all lands within the subject property including public road rights of way and easements and the land area within the individual lot(s).
 - (2) The site shall include all areas to be developed whether constructed in phases or in entirety. The Village has a right to reasonably presume there is an overall intent to develop an entire parcel or adjoining parcels of land over a period of time when the lands are owned by the same party or parties. This includes land adjacent to the Village Corporate Limits within the 1 ½ mile extraterritorial jurisdiction.
 - (3) Lands within the site may not be defined by smaller areas to avoid compliance with this Code.
- (a99) “**Site Restriction**” means any physical characteristic that limits the use of a stormwater best management practice (BMP).
- (a100) “**SLAMM**” means the Source Loading and Management Model.
- (a101) “**Stop Work Order**” means an order issued by the Director which requires that all construction activity on the site be stopped.
- (a102) “**Stormwater Conveyance System**” means any method employed to direct stormwater runoff within and from land development or redevelopment activities to

waters of the state. Examples include but are not limited to swales, channels and storm sewers.

- (a103) **“Stormwater Management Measure”** means structural or non-structural practices that are designed to reduce stormwater runoff pollutant loads, discharge volumes, and / or peak flow discharge rates.
- (a104) **“Stormwater Management Plan”** means a comprehensive plan prepared by the land developer, land owner, or permit holder that is designed to reduce stormwater quantity and rates and pollutants from the post-development land use condition to levels that meet the requirements of this ordinance. The plan applies to conditions after the site has under gone final stabilization following completion of the construction activity.
- (a105) **“Stormwater Runoff”** means that portion of precipitation that does not infiltrate into the soil and flows from the land surface into natural or man-made conveyances.
- (a106) **“Stormwater Management Services”** means the tasks required to control stormwater runoff to protect the health, safety, and welfare of the public, and comply with the State and Federal regulations. They include but are not limited to street sweeping, erosion control, stormwater basin improvements and maintenance, culvert and storm sewer maintenance, stormwater testing, stormwater management planning and related public education.
- (a107) **“Stormwater Management System”** means all public storm sewers, drainage conduits and conveyances, roadside ditches, curb and gutter, and public greenways, and all improvements that are the property and responsibility of the Village and / or Stormwater Utility. These systems are operated to perform the following (without limitation) conserve water, control discharges from rainfall events, incorporate methods to collect, convey, store, absorb, inhibit, treat, use or reuse water to prevent or reduce flooding, environmental degradation and water pollution or otherwise affect the quality and quantity of discharge from such system.
- (a108) **“Stormwater 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.
- (a109) **“Stormwater Utility”** means the utility established under this Chapter for the purpose of managing stormwater and imposing charges to recover costs associated with stormwater management services.
- (a110) **“Targeted Performance Standard”** means a performance standard that will apply to a specific area that will require additional practices to meet water quality standards.
- (a111) **“Technical Standard”** means a document that specifies design, predicted performance and operation and maintenance specifications for a material, device or method.

The following methods shall be used to design the water quality, peak flow reduction and infiltration components of stormwater practices to meet the water quality standards of this ordinance.

- (1) Technical standards identified, developed or disseminated by the Department through [Administrative Code NR151 subchapter V](#).
 - (2) Where technical standards have not been identified or developed by the Department, other technical standards may be used provided that the methods have been approved by the Village.
- (a112) **“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.

- (a113) **“Transportation Facility”** means a highway, railroad, public mass transit facility, public-use airport, public trail and also includes any other public work for transportation purposes under **Wis. Stat. § 85.095 (1) (b)**. A 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 of Commerce pursuant to **Wis. Stat. § 101.1205**.
- (a114) **“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**.
- (a115) **“Type II Distribution”** means a rainfall type curve as established in the **“United States Department of Agriculture, Soil Conservation Service, Technical Paper 149, published 1973”**. The Type II curve is applicable to all of Wisconsin and represents the most intense storm pattern.
- (a116) **“Undeveloped”** means a real property parcel with no impervious area.
- (a117) **“User Charge”** means the charge established by the Public Works Committee and Board on developed property within the corporate limits allocated for operations, maintenance and administration; capital improvements; and debt service.
- (a118) **“Velocity Dissipation Devices”** have the meaning as defined in the Best Management Practices Handbook.
- (a119) **“Waters of the State”** has the meaning given in **Wis. Stat. § 281.01 (18)**.
- (a120) **“Wetland Functional Value”** means the type, quality, and significance of the ecological and cultural benefits provided by wetland resources, such as: flood storage, water quality protection, groundwater recharge and discharge, shoreline protection, fish and wildlife habitat, floral diversity, aesthetics, recreation, and education.
- (a121) **“Working Day”** shall mean one full day of time being between Monday and Friday (inclusive) and not including recognized holidays.
- (a122) **“WPDES”** means Wisconsin Pollutant Discharge Elimination System.
- (a123) **“WPDES Stormwater Permit”** means a permit issued by the Department that authorizes the point source discharge of stormwater to waters of the State. It is issued under **Wis. Stat. § 283** and is regulated by **Administrative Code NR 216**.

SEC. 14-2-12 FEES

The fees referred to in other sections of this ordinance shall be established by the Village and may from time to time be modified by resolution. A schedule of the fees (**Rate Schedule**) established by the Board and Public Works Committee shall be available for review in the Clerk’s and Director’s Office.

a) **Article B Activity:**

- (1) Unless otherwise excepted by this ordinance, a permit application must be accompanied by a non-refundable permit **administration fee**.

b) **Article C Activity:**

- (1) Unless otherwise excepted by this ordinance, a permit application must be accompanied by a non-refundable permit **administration fee**.

SEC. 14-2-13 FINANCIAL SECURITY REQUIRED

The applicant shall deposit a surety bond, irrevocable letter of credit or three (3)-party cash escrow to guarantee a good faith execution of the approved erosion control and / or stormwater management plan and any permit conditions to the Village as a condition of approval and issuance of the permit.

- a) **Establishing Security.** The applicant shall provide a financial guarantee, the form and type of which shall be acceptable to the Director and Village Attorney. The financial guarantee shall be in an amount determined by the Board and Director to be the estimated cost of construction and the estimated cost of maintenance of the stormwater management practices during the period which the designated party in the maintenance agreement has maintenance responsibility. The required security shall also be sufficient to reimburse the Village for its reasonable professional engineering and legal expenses incurred in the review, administration and enforcement of the permit. The financial guarantee shall give the Board and Director the authorization to use the funds to complete the stormwater management practices if the responsible party defaults or does not properly implement the approved stormwater management plan, upon written notice to the responsible party by the Director that the requirements of this ordinance have not been met.
- b) **Conditions for Release.** Conditions for the release of the financial guarantee are as follows:
 1. The Village shall release the portion of the financial guarantee established under this section, less any costs incurred by the Village to complete installation of practices, upon submission of "record drawing plans" (i.e. "as built") by a licensed Professional Engineer. The Village may make provisions for a partial pro-rata release of the financial guarantee based on the completion of various development stages.
 2. The Village shall release the portion of the financial guarantee established under this section to assure maintenance of stormwater practices, less any costs incurred by the Village, at such time that the responsibility for practice maintenance is passed on to another entity via an approved maintenance agreement.
 3. The release of the financial guarantee required by this ordinance is not subject to the retainage provisions of [Wis. Stat. § 66.0901\(9\)](#).

SEC. 14-2-14 ENFORCEMENT

- a) **Article B Activity**
 1. The Director may post a **stop-work order** if any of the following occurs:
 - a. Any land disturbing construction activity regulated under this ordinance is being undertaken without a permit.
 - b. The erosion and sediment control plan is not being implemented in a good faith manner.
 - c. The conditions of the permit are not being met.
 2. 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 Director may **revoke** the permit.
 3. If the responsible party, where no permit has been issued, does not cease the activity after being notified by the Director, or if a responsible party violates a stop-work order posted under [\(a\) \(1\)](#), the Director may request the District Attorney or Village Attorney to obtain a cease and desist order in any court with jurisdiction.
 4. The Public Works Committee may retract the stop-work order issued under [\(a\) \(1\)](#) or the permit revocation under [\(a\) \(2\)](#).
 - a. After posting a stop-work order under [\(a\) \(1\)](#), the Director may issue a formal "notice" to the responsible party of the Village's intent to perform work necessary

to comply with this ordinance. The Director may enter the property and commence the work after issuing the notice. The costs of the work performed under this subsection by the Director, plus interest at the rate authorized by either the Public Works Committee and / or Board 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 charge / assessment against the property pursuant to **Wis. Stats. §§ chapter 66 subchapter VII.**

5. 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 injunction proceedings.

b) **Article C Activity**

1. **General**

- a. 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.
- b. The Director 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.
- c. Upon receipt of written notification from the Director under **(1) b)**, the responsible party shall correct work that does not comply with the stormwater 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 Director in the notice.
- d. 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 Director may enter the land and take emergency actions necessary to prevent such damage. The costs incurred by the Village plus interest and legal costs shall be billed to the responsible party.
- e. The Director 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 Village Attorney to obtain a cease and desist order in any court with jurisdiction.
- f. The Director may revoke a permit issued under this ordinance for non-compliance with ordinance provisions.
 - i. Any permit revocation, stop work order, or cease and desist order shall remain in effect unless retracted by the Director or by a court with jurisdiction.
- g. The Director 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 Village Attorney for the commencement of further legal proceedings in any court with jurisdiction.
- h. 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 injunction proceedings.
- i. When the Director determines that the holder of a permit issued pursuant to this ordinance has failed to follow practices set forth in the stormwater management plan, or has failed to comply with schedules set forth in said stormwater management plan, the Director or a party designated by the Director 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 Director 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 14-2-13 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.

- c) **Article B and C Activities.** Compliance with Article B and C activities may also be enforced by injunction.
- d) **Penalties.** Any person, firm, association, or corporation who does not comply with the provisions of this ordinance shall be subject to a per offense forfeiture of not less than, nor more the values identified in the Village Rate Schedule and the costs of prosecution for each violation. Each day that the violation exists shall constitute a separate offense.

14-2-2 SEC. 14-2-15 APPEALS

- a) **Who May Appeal.** Appeals to the Public Works Committee may be taken by any aggrieved person or by any office, department, board, or bureau of Village affected by any decision of the Director.
- b) **Procedures:** The Public Works Committee (created pursuant to Village Code of Ordinances Title 1):
 1. Shall hear and decide appeals where it is alleged that there is error in any order, decision or determination made by the Director in administering this ordinance except for stop work orders obtained under 14-2-14. The Public Works Committee shall also use the rules, procedures, duties, and powers authorized by statute in hearing and deciding appeals.
 2. Upon appeal, 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 provisions of the ordinance would be unreasonable; and
 3. Shall use the rules, procedures, duties and powers authorized by statute in hearing and deciding appeals and authorizing variances.
 4. The Decision of the Public Works Committee is final. Appeals of the Public Works Committee decision shall be taken to circuit court within 30 days of the filing of the decision in the Village Clerk's office.

SEC. 14-2-16 EFFECTIVE DATE

This Chapter shall take effect upon its passage (Tuesday, October 20, 2009) and publication as provided by law.

SEC. 14-2-17 THROUGH 14-2-19 RESERVED FOR FUTURE USE

Article B

Construction Site Erosion Control and Site Stabilization

SEC. 14-2-20 FOREWORD:

The intent of this section is to require use of best management practices to reduce the amount of sediment and other pollutants resulting from land disturbing construction activities on sites that do not include the construction of a building that are otherwise regulated by the Wisconsin Department of Commerce in [Administrative Code s. COMM 21.125](#) or [COMM 50.115](#). Use of this ordinance will foster consistent, statewide application of the construction site performance standards for new development and redevelopment contained in [Administrative Code NR 151 subchapters III and IV](#).

SEC. 14-2-21 APPLICABILITY

- a) This ordinance **applies to** the following **land disturbing construction activities** except as provided under (b):
1. A **construction site**, which has one-half (1/2) or more acres of land disturbing construction activity after March 10, 2003.
 2. A site defined by [14-2-7 \(a\)](#) and [14-2-11 \(a98\)](#).
 3. A project that both requires a **building permit** per [Village Ordinance Title 15](#) and will involve land disturbing activities.
 - a. **Construction of Single Family Residences** shall conform to accepted site development plans, master site grading and drainage plans; Village Building Codes; and the [Wisconsin Uniform Dwelling Code](#).
 4. Land disturbing construction activity that includes the construction of a building and is otherwise regulated by the Wisconsin Department of Commerce under [Administrative Code s. COMM 50.115 \(Commercial Buildings\)](#).
- b) This ordinance **does not apply to** the following:
1. 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.
 2. Nonpoint discharges from agricultural facilities and practices.
 3. Nonpoint discharges from silviculture activities.
 4. Routine maintenance for project sites under one-half (1/2) acre of land disturbance if performed to maintain the original line and grade, hydraulic capacity or original purpose of the facility.
 5. Land disturbing construction activity that includes the construction of a building and is otherwise regulated by the Wisconsin Department of Commerce under [Administrative Code s. COMM 21.125 \(Uniform Dwelling Code\)](#).
- c) Notwithstanding the applicability requirements in (a), **this ordinance applies to construction sites of any size** that, in the opinion of the Director, 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.

SEC. 14-2-22 TECHNICAL STANDARDS

- 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. Applicable design criteria, standards and specifications identified in the BMPH.
 2. Other design guidance and technical standards identified or developed by the Department under **Administrative Code subchapter V of chapter NR 151**.
 3. For this ordinance, average annual basis is calculated using the appropriate annual rainfall or runoff factor, also referred to as the R factor, or an equivalent design storm using a type II distribution, with consideration given to the geographic location of the site and the period of disturbance.
- b) **Other Standards.** Other technical standards not identified or developed in (a), may be used provided that the methods have been approved by the Director.

SEC. 14-2-23 PERFORMANCE STANDARDS

- a) **Responsible Party.** The responsible party shall implement an erosion and sediment control plan, developed in accordance with **14-2-25** that incorporates the requirements of this section.
- b) **Plan:** A written plan shall be developed in accordance with **14-2-25** and implemented for each construction site.
- c) **Erosion and Other Pollutant Control Requirements.** The plan required under (b) shall include the following:
 1. BMPs that, by design, achieve to the maximum extent practicable, a reduction of 80% of the sediment load carried in runoff, on an average annual basis, as compared with no sediment or erosion controls until the construction site has undergone final stabilization. No person shall be required to exceed an 80% sediment reduction to meet the requirements of this paragraph. Erosion and sediment control BMPs may be used alone or in combination to meet the requirements of this paragraph. Credit toward meeting the sediment reduction shall be given for limiting the duration or area, or both, of land disturbing construction activity, or other appropriate mechanism.
 2. Notwithstanding (c) (1), if BMPs cannot be designed and implemented to reduce the sediment load by 80%, on an average annual basis, the plan shall include a written and site-specific explanation as to why the 80% reduction goal is not attainable and the sediment load shall be reduced to the maximum extent practicable.
 3. Where appropriate, the plan shall include sediment controls to do all of the following to the maximum extent practicable:
 - a. Prevent tracking of sediment from the construction site onto roads and other paved surfaces.
 - b. Prevent the discharge of sediment as part of site de-watering.
 - c. Protect the separate storm drain inlet structure from receiving sediment.
 4. The use, storage and disposal of chemicals, cement and other compounds and materials used on the construction site shall be managed during the construction period, to prevent their entrance into waters of the state. 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 paragraph.
- d) **Location:** The BMPs used to comply with this section shall be located prior to runoff entering waters of the state.
- e) **Alternate Requirements.** The Director or the Public Works Committee may establish stormwater management requirements more stringent than those set forth in this section

if the Director or the Public Works Committee determines that an added level of protection is needed for sensitive resources.

SEC. 14-2-24 PERMITTING REQUIREMENTS, PROCEDURES AND FEES

- a) **Permit Required.** No responsible party may commence a land disturbing construction activity subject to this ordinance without receiving prior approval of an erosion and sediment control plan for the site and a permit from the Director.
- b) **Permit Application and Fees.**
 1. At least one responsible party desiring to 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 14-2-23 and shall pay an application fee to the Village. By submitting an application, the applicant is authorizing the Director to enter the site to obtain information required for the review of the erosion and sediment control plan.
 2. **Combined and Complete Submittal.** Applicants shall address the requirements of both Articles B and C in one complete submittal.
- c) **Review and Approval of Permit Application.** The Director shall review any permit application that is submitted with an erosion and sediment control plan, and the required fee. The following approval procedure shall be used:
 1. Within 20 business days of the receipt of a complete permit application, as required by (b), the Director shall inform the applicant whether the application and plan are approved or disapproved based on the requirements of this ordinance. The review period may be extended by a defined period based on mutual agreement between the Director and Applicant.
 2. If the permit application and plan are approved, the Director shall issue the permit.
 3. If the permit application or plan is disapproved, the Director shall state in writing the reasons for disapproval.
 4. The Director may request additional information from the applicant. If additional information is submitted, the Director shall have 20 business days from the date the additional information is received to inform the applicant that the plan is either approved or disapproved.
 5. Failure by the Director to inform the permit applicant of a decision within 20 business days of a required complete submittal shall be deemed to mean approval of the submittal and the applicant may proceed as if a permit had been issued.
- d) **Permit Requirements.** All permits shall require the responsible party to:
 1. Notify the Director within 2 working days of commencing any land disturbing construction activity.
 2. Notify the Director of completion of any BMPs within 14 days after their installation.
 3. Obtain permission in writing from the Director prior to any modification pursuant to 14-2-25 (c) of the erosion and sediment control plan.
 4. Install all BMPs as identified in the approved erosion and sediment control plan.
 5. Maintain all road drainage systems, stormwater drainage systems, BMPs and other facilities identified in the erosion and sediment control plan.
 6. Repair any siltation or erosion damage to adjoining surfaces and drainage ways resulting from land disturbing construction activities and document repairs in a site erosion control log.
 7. 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 and document the findings of the inspections in a site erosion control

- log with 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.
8. **Entrance.** Allow the Director 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 control plan.
 9. Keep a copy of the erosion and sediment control plan at the construction site.
- e) **Permit Conditions.** Permits issued under this section may include conditions established by the Director in addition to the requirements set forth in (d), where needed to assure compliance with the performance standards in 14-2-23. All approvals under this Section shall be issued subject to the following conditions and requirements:
1. All land disturbances will be done pursuant to the approved control plan and the requirements of this Section and Title 15 Chapter 2.
 2. Notify the Director a minimum of two (2) working days' in advance of the start of any activity.
 3. The developer shall file a notice with the Director within ten (10) days after completing land disturbing activities.
 4. Approval in writing shall be obtained prior to any **modifications** to the approved control plan.
 5. The Applicant / Developer shall be responsible for **maintaining** all proposed public roads, road right-of-ways, streets, runoff and drainage facilities and drainageways as specified in the approved plan until they are accepted and become the responsibility of the Village.
 6. The Applicant / Developer shall **construct at their expense** all drainage, runoff control and erosion control improvements as required by this Article and the approved control plan and shall provide for the perpetual maintenance of all private control facilities or through dedication to, and acceptance by, the Village.
 7. **Prohibition of Vehicle Debris on Public Ways.** No person, firm or corporation engaging in activity at a construction site, or operation area in conjunction with the construction activity, shall allow erosion to adjacent land, public streets or bodies of water or the tracking or dropping of dirt or other material by vehicles from the site onto any public street or allow either condition to remain. All persons, firms or corporations engaged in construction or maintenance activity shall be held responsible for any violations of this Section by himself, his agents, employees, subcontractors or haulers of materials or supplies.
 8. **Observe** the site and erosion control measures per **Administrative Code NR 151 and 216**; after each rain of 0.5 inches or more; and at least once each week.
 9. The Applicant / Developer **shall be responsible at their own expense** for **repairing any damage** to all adjoining surfaces and drainageways caused by runoff and / or sedimentation resulting from the permittee's activities.
 10. No portion of the land which is disturbed will be allowed to remain uncovered for greater than two (2) weeks after the work activity is completed if the Village determines there exists a potential for erosion to leave the site of the work or the boundaries of the development.
 11. **Entrance.** The Applicant / Developer agrees to permit the Village or their designee to enter onto the land regulated under this Section for the purpose of observing for compliance with the approved control plan.
 12. **Corrective Actions.** The Applicant / Developer authorizes the Village to cause or perform any work or operations necessary to bring the condition of the lands into conformity with the approved control plan and further consents to the Village collecting the total of the costs and expenses of such work and operating as a special charge against the property for current services rendered as provided by law.

13. **Approved Plans.** Maintain a copy of the approved plans at the Work site.
- f) **Permit Duration.** Permits issued under this section shall be valid for a period of 180 days from the date of issuance. The Director may extend the period one or more times, but not to exceed an additional 180 days in total. The Director may require additional BMPs as a condition of the extension if they are necessary to meet the requirements of this ordinance.
- g) **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.

SEC, 14-2-25 EROSION AND SEDIMENT CONTROL PLAN, STATEMENT AND AMENDMENTS

- a) **Erosion and Sediment Control Plan**
1. An erosion and sediment control plan shall be prepared and submitted to the Director.
 2. The erosion and sediment control plan shall be designed to meet the performance standards in **14-2-23** and other requirements of this ordinance.
 3. 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:**
 - a. **Contacts.** 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.
 - b. **Description** of the site and the nature of the construction activity, including representation of the limits of land disturbance on a United States Geological Service 7.5 minute series topographic map or other Village topographic / contour maps.
 - c. A **sequence of construction of the development 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.
 - d. **Area Estimates.** Estimates of the (i) total area of the site and (ii) the total area of the site that is expected to be disturbed by construction activities.
 - e. **Estimates of Runoff Coefficients.** Estimates including calculations, if any, of the runoff coefficient of the site before and after construction activities are completed.
 - f. **Sediment Load Calculations.** Calculations to show the expected percent reduction in the average annual sediment load carried in runoff as compared to no sediment or erosion controls.
 - g. **Soil Conditions.**
 - i. Existing data describing the surface soil as well as subsoils.
 - ii. A site location map and table that respectively identify the a) location of and b) engineering characteristics of the predominant soil types.
 - h. **Groundwater Conditions.** Depth to groundwater, as indicated by Natural Resources Conservation Service soil information where available.

- iii. Seeding mixtures and rates, lime and fertilizer application rates, and kind and quantity of mulching for both temporary and permanent vegetative control measures.
6. Each erosion and sediment control plan **shall include** a description of appropriate controls and measures that will be performed at the site to prevent pollutants from reaching waters of the state. The plan shall clearly describe the appropriate control measures for each major activity and the timing during the construction process that the measures will be implemented. The description of erosion controls shall include, when appropriate, the following minimum requirements:
 - a. Description of interim and permanent stabilization practices, including a practice implementation schedule. Site plans shall ensure that existing vegetation is preserved where attainable and that disturbed portions of the site are stabilized.
 - b. 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 Director, structural measures shall be installed on upland soils.
 - c. Management of overland flow at all sites, unless otherwise controlled by outfall controls.
 - d. Trapping of sediment in channelized flow.
 - e. Staging construction to limit bare areas subject to erosion.
 - f. Protection of downslope drainage inlets where they occur.
 - g. Methods to 1) prevent and limit tracking of soil off the site from the activity and 2) remove and clean soil that has tracked from the site.
 - h. Clean up of off-site sediment deposits.
 - i. Proper disposal of building and waste materials at all sites.
 - j. Stabilization of drainage ways.
 - k. Control of soil erosion from dirt stockpiles.
 - l. Installation of permanent stabilization practices as soon as possible after final grading.
 - m. Minimization of dust to the maximum extent practicable.
 - n. **Schedule.** A schedule that identifies the proposed phases, anticipated starting and completion dates of the development sequence
 7. 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.
- b) **Erosion and Sediment Control Plan Statement.** An erosion and sediment control plan statement shall be prepared and submitted to the Director for each site identified under **14-2-7 (a) (1)**. The control plan statement shall briefly describe the site, including a site map. Further, it shall also include the best management practices that will be used to meet the requirements of the ordinance, including the site development schedule.
 - c) **Amendments:** The applicant shall amend the plan and obtain approval 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 and which has not otherwise been addressed in the plan.
 2. The actions required by the plan fail to reduce the impacts of pollutants carried by construction site runoff.
 3. The Director notifies the applicant of changes needed in the plan.

SEC. 14-2-26 OBSERVATION

If land disturbing construction activities are being carried out without a permit required by this ordinance, the Director may enter the land pursuant to the provisions of [Wis. Stat. §§ 66.0119 \(1\), \(2\), and \(3\)](#).

SEC. 14-2-27 THROUGH 14-2-29 RESERVED FOR FUTURE USE

Article C
Post-Construction Stormwater Management

SEC. 14-2-30 FOREWORD

The intent of this section is to reduce the amount of post-construction stormwater and associated pollutants reaching waters of the state. Use of this ordinance by municipalities will foster the consistent statewide application of post-construction performance standards for new development and redevelopment contained in [Administrative Code chapter NR 151 subchapters III and IV](#).

SEC. 14-2-31 APPLICABILITY

- a) Where not otherwise limited by law, this ordinance 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 [14-2-6 \(b\)](#):
- (1) A **post-development construction site** that had one-half (1/2) or more acres of land disturbing construction activity after March 10, 2003.
 - (2) A site defined by [14-2-7 \(a\)](#) and [14-2-11 \(a97\)](#).
 - (3) Land disturbing construction activity that includes the construction of a building and is otherwise regulated by the Wisconsin Department of Commerce under [Administrative Code s. COMM 50.115 \(Commercial Buildings\)](#).
- b) **Exemptions.** A site that meets any of the following criteria is exempt from the requirements of this ordinance:
1. A **redevelopment post-construction site** with no increase in exposed parking lots or roads.
 2. A post-construction site with less than 10% connected imperviousness based on complete development of the post-construction site, provided the cumulative area of all parking lots and rooftops is less than one-half (1/2) acre.
 3. Nonpoint discharges from **agricultural** facilities and practices.
 4. Nonpoint discharges from **silviculture** activities.
 5. **Routine maintenance** for project sites under 5 acres of land disturbance if performed to maintain the original line and grade, hydraulic capacity or original purpose of the facility.
 6. **Underground utility construction** such as water, sewer and fiber optic lines. This exemption does not apply to the construction of any above ground structures associated with utility construction (such as buildings, pavement including gravel base course, etc)..
 7. Land disturbing construction activity that includes the construction of a building and is otherwise regulated by the Wisconsin Department of Commerce under [Administrative Code s. COMM 21.125 \(Uniform Dwelling Code\)](#).
- c) Notwithstanding the applicability requirements in [\(a\)](#), **this ordinance applies to post-construction sites of any size** that, in the opinion of the Director, is 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.

SEC. 14-2-32 TECHNICAL STANDARDS

- a) **Water Quality.** The following methods shall be used in designing the water quality, peak flow reduction and infiltration components of stormwater practices needed to meet the **water quality standards** of this ordinance:
 1. **Technical standards** identified, developed or disseminated by the Department under **Administrative Code chapter NR 151 subchapter V**. SLAMM is the recognized method to evaluate stormwater quality.
 2. Where technical standards have not been identified or developed by the Department, other technical standards may be used provided that the methods have been approved by the Director.
 3. **Average annual rainfall(s):** Reference **14-2-11 (a5)**.
- b) **Water Quantity. Stormwater quantity practices** shall use the following methods:
 1. **Hydrology** - TR55 for all sites or the Rational Method for sites less than two (2) acres.
 2. **Design Storm / Rainfall Event:** Reference **14-2-11 (a22)**.
 3. **Drainage Easements.** Reference **Title 14 Chapter 1 (74)**.

SEC. 14-2-33 PERFORMANCE STANDARDS

Unless otherwise identified in this ordinance, all post-construction land development, redevelopment, and infill development activities subject to this ordinance shall establish on-site management practices that address peak flow rate discharges from the site, the quality of the discharged stormwater, and the volume of the discharged stormwater.

- a) **Responsible Party.** The responsible party shall implement a post-construction stormwater management plan that incorporates the requirements of this section.
- b) **Plan:** A written stormwater management plan in accordance with **14-2-35** shall be developed and implemented for each post-construction site.
- c) **Requirements:** The plan required under (b) shall include the following:
 1. **General.**
 - a. As required by **Title 14 Chapter 2** and **Section 14-1-57**, either the Developer or Village shall design and construct drainage improvements for the surface and subsurface water of the development and the drainage area of which it is a part. All related costs shall be paid by the Developer.
 - b. A Final Subdivision Plat, certified survey map or development plan shall not be approved until the developer shall submit plans, profiles and specifications as specified in **Title 14** and **this Section**, which have been prepared by a registered Professional Engineer and approved or modified by the Director, upon the recommendation of the Village Engineer.
 - c. **Lots** shall be designed to provide positive drainage away from all buildings. Individual lot drainage shall be coordinated with the general storm drainage pattern for the area. Drainage shall be designed so as to avoid concentration of storm drainage water from each lot to adjacent lots.
 - d. **Public drainage easements** are required when drainage is conveyed across more than two lots.
 - e. The Board shall not approve any development plan which does not provide adequate means for stormwater or floodwater runoff. Any storm-water drainage system will be separate and independent of any sanitary sewer system.
 - f. **Storm sewers** shall be designed in accordance with all governmental regulations, and a copy of design computations for engineering capacities shall accompany plans submitted by the Developer for the proposed improvements. When calculations indicate that curb capacities are exceeded at a point, basins shall be used to detain flow at that point and no further allowance shall be made

for flow beyond that point.

2. **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. For **new development**, by design, reduce to the maximum extent practicable, the total suspended solids load by 80%, based on the average annual rainfall, as compared to no runoff management controls. No person shall be required to exceed an 80% total suspended solids reduction to meet the requirements of this subdivision.
 - b. For **redevelopment**
 - i. **Sites Less than 5 acres:** by design, reduce to the maximum extent practicable, the total suspended solids load by 40%, based on the average annual rainfall, as compared to no runoff management controls. No person shall be required to exceed a 40% total suspended solids reduction to meet the requirements of this subdivision.
 - ii. **Sites Greater than 5 acres:** by design, reduce to the maximum extent practicable, the total suspended solids load by 80%, based on the average annual rainfall, as compared to no runoff management controls. No person shall be required to exceed a 80% total suspended solids reduction to meet the requirements of this subdivision.
 - c. For **in-fill development that occurs within 10 years** after the effective date of this ordinance
 - i. **Sites Less than 5 acres:** by design, reduce to the maximum extent practicable, the total suspended solids load by 40%, based on the average annual rainfall, as compared to no runoff management controls. No person shall be required to exceed a 40% total suspended solids reduction to meet the requirements of this subdivision.
 - ii. **Sites Greater than 5 acres:** by design, reduce to the maximum extent practicable, the total suspended solids load by 80%, based on the average annual rainfall, as compared to no runoff management controls. No person shall be required to exceed a 80% total suspended solids reduction to meet the requirements of this subdivision.
 - d. For **in-fill development that occurs 10 or more years after** the effective date of this ordinance by design, reduce to the maximum extent practicable, the total suspended solids load by 80%, based on an average annual rainfall, as compared to no runoff management controls. No person shall be required to exceed an 80% total suspended solids reduction to meet the requirements of this subdivision.
 - e. Notwithstanding (a) to (d) above, if the design cannot achieve the applicable total suspended solids reduction specified, the stormwater management plan shall include a written and site-specific explanation why that level of reduction is not attained and the total suspended solids load shall be reduced to the maximum extent practicable. The Committee and Director shall review and approve or reject the explanation.
 - f. **Flow Paths and Outlets:** Water discharging to best management practices shall be directed over permanent vegetative cover unless otherwise approved by the Director. Outlet structures for best management practices shall be located opposite from the inlet.
3. **Peak Discharge**
 - a. **2 and 5-year rainfall events.** By design, BMPs shall be employed to maintain or reduce the post-development peak runoff discharge rates, to the maximum

- extent practicable, as compared to pre-development peak runoff discharge rates respectively for the 2-year and 5-year, 24-hour design storm events applicable to the post-construction site.
- b. **10-year rainfall event.** By design, BMPs shall be employed to maintain or reduce the 10-year post-development peak runoff discharge rates, to the maximum extent practicable, as compared to 2-year pre-development peak runoff discharge rates for the 24-hour design storm events applicable to the post-construction site.
 - c. **100-year rainfall event.** By design, on-site BMPs shall be improved to convey the 100-year rainfall event through the site without damage to persons or property. Outfall structures shall be improved to be stable when conveying drainage from the 100-year rainfall event.
 - d. **Regional / area-wide stormwater management facilities** shall address both peak discharge [14-2-33 (c) (3)] rates and water quality [14-2-33 (c) (2)] improvements.
 - e. **Pre-development conditions** shall assume “good hydrologic conditions” for appropriate land covers as identified in TR-55 or an equivalent methodology. The meaning of “hydrologic soil group” and “runoff curve number” are as determined in TR-55.

Hydrologic parameters shall be selected based on soil groups using the Sheboygan County Soil Survey (United States Soil Conservation Service / Natural Resource Service), field observations and supporting laboratory analysis.

When pre-development land cover is cropland, rather than using TR-55 values for cropland, the runoff curve numbers in **Table 14-2-33 A** shall be used.

Table 14-2-33 A				
Maximum Pre-Development Runoff Curve Numbers				
Hydrologic Soil Group	A	B	C	D
Runoff Curve Number Cropland Areas	66	74	80	82
Runoff Curve Number Meadow / Grass Areas	60 *	60 *	71	78

* 60 is the minimum due to runoff on frozen soils.

The runoff curve numbers for land which was cropland within the last 10 years will be based on a typical dairy farm crop rotation (CCOHHH). Land which has not been used for crops within the last 10 years should use the parameters that describe the actual conditions; however RCN may not be larger than those for cropland.

- f. This ordinance **subsection 14-2-33 (c) (3) does not apply to** any of the following:
 - i. A post-construction site where the change in hydrology due to development does not increase the existing surface water elevation at any point within the downstream receiving water by more than 0.01 of a foot for the 2-year, 24-hour storm event.
 - ii. **Riparian Properties.** Lands immediately adjacent to, and discharging directly to the Pigeon River (and it’s tributaries) without flowing over or through a municipally owned separate storm sewer or stormwater conveyance system.

4. **Conveyance.**

a. **General.**

- i. All stormwater conveyance systems within proposed developments shall be improved to completely contain peak flow rates as described below. Calculations for determining peak flows for conveyance system sizing shall be based on the existing and / or future land use conditions for site areas (whichever result in the highest peak flows), and the future proposed land use conditions for the on-site areas.
- ii. The developer shall construct all the storm drainage facilities identified on the construction documents required in Subsection (a) necessary to serve, and resulting from both the current development phase that is being improved and adjoining properties.

b. **Easements.**

- i. Reference 14-1-74 (f), (g) and (h).
- ii. Where a development is traversed by a watercourse, drainageway, channel or stream:
 - a. A drainage easement shall be **dedicated** that includes the lines and route of such watercourse. The easement width shall accommodate construction, the drainageway and maintenance functions as may be necessary to comply with **this Section** and **Title 14**; or
 - b. The watercourse, drainageway, channel or stream may be **relocated** to provide drainage and accommodate maintenance within existing public rights of ways and easements. A drainage easement shall be **dedicated** to the Village to include the lines and route of such watercourse. The easement width shall accommodate construction, the drainageway and maintenance functions as may be necessary to comply with **this Section** and **Title 14**; or
 - c. Wherever possible, drainage shall be maintained in an easement using an open channel with landscaped banks and capacity to accommodate the flow rates and volumes.
- iii. In all cases, such easements shall be of a minimum width established at the high water mark and include dry land maintenance access, or, in the absence of such specification the minimum easement width is twenty (20) feet.

c. **Roadways.**

- i. **Street and Alley Drainage.** All streets and alleys shall be constructed with a storm drainage system. The street storm system shall serve as the **minor drainage system** and shall be designed to convey drainage from the street, adjacent land and building runoff. Stormwater shall not be permitted to enter the sanitary sewer system.
- ii. **Off-Street Drainage.** The design of the **off-street major drainage system** shall include the entire watershed affecting the development. The system shall extend to a watercourse or drainageway that has capacity to accommodate the storm drainage. When the drainage system is outside of the street right-of-way, the developer shall dedicate an easement to the Village pursuant to Subsection (c) (4) b) to provide for the future system maintenance.
- d. **Stabilization of Drainage Systems.** The Developer shall stabilize and protect all drainageways. Ditches and open channels shall be seeded, sodded or paved depending upon grades and soil types. The conveyance system shall be “stable” during routine and storm flow conditions. Generally ditches or channels with grades:

- i. up to one percent [1%] shall be seeded;
 - ii. those with grades up to four percent [4%] shall be either a) seeded and treated with stabilization fabric or b) sodded and
 - iii. those with grades over four percent [4%] shall be either a) seeded and treated with permanent stabilization fabric or b) be paved.
- e. **Classifications.**
- i. **Minor.** The Developer shall construct all minor drainage system components necessary to reduce inconvenience and damages from frequent storms. Minor drainage components shall include all inlets, piping, gutters, channels, ditching, pumping and other facilities designed to accommodate the post-development runoff resulting from a ten (10) year, twenty-four (24) hour rainfall. Temporary accumulations of storm runoff from ponding or flowing water, in or near minor system components, shall be permitted provided such accumulations do not encroach on any traffic lane of any collector or arterial street, nor on the center twenty-four (24) feet of any local street, except on cul-de-sac or permanently dead-end streets serving less than ten (10) dwelling units, where such accumulations may not overtop the curb. In drainageways and drainage easements, runoff shall be contained within the drainageway or drainage easement. Cross-street drainage channels (valley gutters) shall not be permitted except on cul-de-sac or permanent dead-end streets serving less than ten (10) dwelling units and where the minimum grade in the valley gutter and street gutter between the valley gutter and the next downstream drainage inlet is not less than one percent (1%).
 - ii. **Major.** The Developer shall pay for all major drainage system components necessary to reduce inconvenience and damages from infrequent storms. Major system components shall include large channels and drainageways, streets, easements and other paths and shall be capable of accommodating post-development runoff in excess of that accommodated by minor system components resulting from twenty-four (24) hour rainfall events for storms with return frequencies greater than five (5) years up to and including the one hundred (100) year return event. On local and collector streets, drainageways, and drainage easements, accumulations of water shall not inundate any buildings at the ground line, unless such buildings are flood-proofed. On arterial streets and in non-residential zoning districts, accumulations of water shall not inundate any buildings at the ground line, unless such buildings are flood-proofed and the depth of water at the street crown shall not exceed six (6) inches to permit operation of emergency vehicles
- f. **Open channels.** For publicly owned or maintained open channel conveyance systems, the peak flow rate from the 25-year rainfall event shall be completely contained in the channel banks.
- i. For storm events between the 10-year and 100-year, 24-hour event, ponding may be contained within existing or proposed street right of way as approved by the Director. In no case shall the depth of water exceed 12-inches at the outer edge of pavement or six-inches at the road crown, whichever is less.
 - ii. The 100-year storm runoff flow path outside of the normal conveyance system must not impact structural improvements on property.
 - iii. Where open channels are improved in either the minor or major drainage system, they shall be designed to minimize and accommodate routine maintenance requirements and maximize safety. Drainage easements (in lieu of dedications) shall encompass both the open channels and accommodate

routine maintenance and access. Side slopes shall not exceed a four-to-one (4:1) slope. Drainageways with grades of 0.8% or less (or where subject to high ground water, continuous flows, or other conditions as determined by the Director or Village Engineer that would hamper maintenance operations due to consistently wet conditions) shall have a paved concrete invert of not less than eight (8) feet wide and side slopes to a point one (1) foot above the channel invert.

- iv. Where invert paving is not required, the drainageway bottom shall be grass. If the drainageway has a bare soil bottom or the natural grasses in the drainageway are disturbed the drainageway bottom shall be sodded and securely staked to one (1) foot above the elevation of inundation resulting from a predevelopment five (5) year, twenty-four (24) hour storm event. Other disturbed areas shall be seeded and stabilized to accommodate routine flows and velocities. Grass-lined channels shall be designed and constructed to be stable during routine and high flow conditions.
- v. Stabilization Fabric. Either temporary (biodegradable) or permanent stabilization fabrics may be used to provide stable channels that do not erode.
- g. **Emergency overland flow routes** for all stormwater facilities shall be provided that discharged flows do not exceed the safe capacity of downstream drainage facilities and endanger downstream property or public safety.
- h. **Sewer pipes.**
 - i. **General.**
 - a. Unless otherwise approved by the Village Engineer, all drainage piping **in street rights-of-way** shall be a minimum of fifteen (15) inches diameter and be constructed of materials identified in the **Construction Standards**.
 - b. Piping materials **outside of rights-of-way** shall be a minimum of fifteen (15) inches diameter, be constructed of materials identified in the **Construction Standards** and otherwise subject to approval by the Director and / or Village Engineer.
 - c. Open drainage **inlet pipes or culverts** with any opening dimension in excess of eighteen (18) inches shall be equipped with debris grates having an exposed area at least seven (7) times the pipe opening area to avoid backwater accumulations from trash buildup and unsafe stream velocities and a maximum opening size of six (6) inches.
 - d. Drainage **outfalls** with any opening dimension in excess of thirty-six (36) inches shall be protected from unauthorized entry by fencing, partial or total submergence of the outlet, debris grates or other methods approved by the Director and / or Village Engineer unless in such a location as to render routine maintenance operations impractical. Outfalls and their channels shall be stable and protected from damages due to scour and erosion.
 - e. **Storm Laterals Required** except as provided in (2) a) below.
 - 1. **New Development**
 - a. The developer shall construct storm laterals from the storm sewer main to the property line of each lot for connection to by the property owner.
 - b. Duplex lots shall have two (2) laterals installed.
 - 2. **Existing Development.**
 - a. An existing property owner shall be exempt from the storm lateral requirements set forth in (1) for a lot when the

Village determines that all of the following conditions are met:

1. the lot is a riparian lot, abuts a designated floodplain, or is a currently undeveloped lot with the ability to access the storm sewer system in the future that would not require damage or change to existing infrastructure or roadway pavement;
 2. the proposed or existing use of the property does not unreasonably alter the natural course or amount of storm water draining onto adjacent properties as required by state law; and
 3. storm water draining from the lot is not directed so to enter the Village's municipal separate storm sewer system or other stormwater conveyance system, except stormwater draining by natural overland flow;
- b. Duplex/two family/condominium properties shall have a minimum of one (1) storm lateral.
3. Storm laterals shall comply with the Village Construction Standards.
- f. **Agricultural / other drain tiles** which are encountered during construction shall be restored, reconnected or connected to public storm drainage facilities.
- ii. For **publicly owned or maintained** storm sewer conveyance systems, the peak flow rate from the 10-year rainfall event shall be completely contained within the pipes with no "surcharging" or pressurized flow. The system performance shall be evaluated for the 25-year rainfall event. The Director shall have the authority to require sewer pipes convey greater than the 10-year event without "surcharge" conditions.
 - iii. For **privately owned or maintained** storm sewer conveyance systems, the peak flow rate from the 10-year rainfall event shall be completely contained within the pipes with no "surcharging" or pressurized flow. The system performance shall be evaluated for the 25-year rainfall event.
- i. **Drainage from off-site tributary areas** shall be conveyed in the improvements. The site improvements shall not block or impede drainage from off-site areas.
 - j. **Upstream drainage.** Stormwater runoff from upstream of the development shall be conveyed through or diverted around the subject property to limit erosion and flooding.
 - k. **Discharges.**
 - i. All discharges will be restricted to public drainage systems (including storm sewers and open channels) or to waters of the State.
 - ii. **Redirecting drainage from original location.**
 - a. The applicant is responsible for obtaining all necessary easements, agreements, property interests and approvals from adjacent property owners regarding discharging either drainage improvements or "redirected" drainage discharges onto private lands (when predevelopment drainage had previously not flowed onto the subject property).
 - b. Where site development or redevelopment involves changes in direction, increases in peak rate and/or total volume of runoff from a site (exceeding existing / pre-development 2-year event peak discharges), the Director

may require the responsible party to make appropriate legal arrangements with affected property owners concerning the prevention of endangerment to property or public safety, which shall include an indemnify and hold harmless the Village.

5. **Basins.**

- a. **General Standards for Detention / Retention Storage.** The Developer may employ on-site detention to 1) control erosion and sedimentation, 2) reduce the post-development peak runoff rate or temporarily store stormwater runoff due to limited capacity of downstream drainage facilities and 3) to improve water quality. The facilities shall be subject to the following general standards:
- i. Where on-site basins are **temporarily employed for erosion and sedimentation control**, the facilities shall contain the predevelopment runoff from a twenty-five (25) year storm event of twenty-four (24) hour duration within the limits of the facility.
 - ii. Where on-site basins are **permanently employed to reduce the post-development peak runoff**, the detention facility shall safely contain the post-development runoff from a **twenty-five (25) year storm event** within the facility limits.
 - iii. Detention facility **peak discharge rates** for the maximum storm required to be contained shall not exceed the predevelopment peak discharge rate from a **five (5) year storm event** or the capacity of the downstream drainage facilities, whichever is less.
 - iv. All **temporary basins** shall contain or pass the runoff from any storm of any duration which exceeds the maximum storm required to be contained up to the **one hundred (100) year storm event**.
 - v. All **permanent basins** shall contain the runoff from the **one hundred (100) year storm event** on both public and, if necessary, private properties without inundating any building at the ground elevation, the travel lanes of any arterial street, the center ten (10) feet of any collector street or the top of the curb on any local street.
 - vi. The storage of stormwater runoff **shall not encroach on** any public park (except parks designed with detention facilities) or any private lands outside the development unless an easement providing for such storage has been approved and recorded for said lands.
 - vii. All basins shall be designed with the **safety** of the general public and any considerations for ease of maintenance as top priorities.
 - viii. Any **wet detention facilities** shall include **riprap** to not less than two (2) feet above the normal pool elevation for protection from wave action.
 - ix. The sides of all detention facilities shall have a **maximum slope** ratio of four to one (4:1) (horizontal to vertical), with flatter slopes being required where determined practical by the Village.
 - x. The Board, upon recommendation by the Director and / or Village Engineer, may require the installation of **fencing or other such security measures** in basins that a) are frequently flooded b) have long down times or permanent water features, or c) other features requiring additional security for safety reasons.
- b. **Detention (dry).** Detention basins shall be employed to 1) reduce peak flows and 2) prevent downstream flooding. They may be designed and constructed to improve water quality. They shall be designed and constructed to accommodate routine entry and maintenance. Bottom floors shall be sloped to provide positive drainage (1% minimum slope).

- c. **Retention (wet).** Retention basins shall be employed to 1) reduce peak flows 2) prevent downstream flooding and 3) improve water quality. They shall be designed and constructed to accommodate routine entry and maintenance. Bottom floors and / or accessways shall be sloped to provide positive drainage (1% minimum slope).
6. **Infiltration:** BMPs shall be designed, installed, and maintained to infiltrate runoff to the maximum extent practicable in accordance with the following, except as provided in **14-2-33 (c) (6) f) through i).**
 - a. For **residential developments** one of the following shall be met:
 - i. 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.
 - ii. Infiltrate 25% of the post-development runoff from the 2-year 24 hour design storm with a type II distribution. Separate curve numbers for pervious and impervious surfaces shall be used to calculate runoff volumes and not composite curve numbers as defined in TR-55. However, when designing appropriate infiltration systems to meet this requirement, no more than 1% of the project site is required as an effective infiltration area.
 - b. For **non-residential development**, including but not limited to business park, commercial, industrial and institutional development, one of the following shall be met:
 - i. Infiltrate sufficient runoff volume so that the post-development infiltration volume shall be at least 60% of the pre-development infiltration volume, based on an average annual rainfall. However, when designing appropriate infiltration systems to meet this requirement, no more than 2% of the project site is required as an effective infiltration area.
 - ii. Infiltrate 10% of the runoff from the 2 year - 24 hour design storm with a type II distribution. Separate curve numbers for pervious and impervious surfaces shall be used to calculate runoff volumes, and not composite curve numbers as defined in TR-55. 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.
 - c. **Method:** A model that calculates runoff volume (such as SLAMM, P8 or other equivalent method as approved by the Director) shall be used.
 - d. **Pre-development condition** shall be the same as in **14-2-33 (c) (3)** related to peak discharges.
 - e. Before infiltrating runoff, **pretreatment** shall be required for parking lot runoff and for runoff from new road construction in areas including but not limited to business parks, 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 **14-2-33 (c) 4) h).** Pretreatment options may include, but are not limited to, oil/grease separation, sedimentation, biofiltration, filtration, swales or filter strips.
 - f. **Exclusions.** The following areas are not required to meet the requirements of **Section 14-2-33 (c) (4) et. Seq.**
 - i. Areas associated with tier 1 industrial facilities identified in Administrative Code s. NR 216.21(2)(a), including storage, loading, rooftop and parking.

- ii. Storage and loading areas of tier 2 industrial facilities identified in Administrative Code s. NR 216.21(2)(b).
 - iii. Fueling and vehicle maintenance areas.
 - iv. Areas within 1,000 feet upgradient or within 100 feet downgradient of karst features.
 - v. Areas with less than 3 feet separation distance from the bottom of the infiltration system to the elevation of seasonal high groundwater or the top of bedrock, except this f) 5) does not prohibit infiltration of roof runoff.
 - vi. Areas with runoff from industrial, commercial and institutional parking lots and roads and residential arterial roads with less than 5 feet separation distance from the bottom of the infiltration system to the elevation of seasonal high groundwater or the top of bedrock.
 - vii. Areas within 400 feet of a community water system well as specified in Administrative Code s. NR 811.16(4), or within 100 feet of a private well as specified in Administrative Code s. NR 812.08(4), for runoff infiltrated from commercial, industrial and institutional land uses or regional devices for residential development.
 - viii. Areas where contaminants of concern, as defined in Administrative Code s. NR 720.03(2) are present in the soil through which infiltration will occur.
 - ix. Any area where the soil does not exhibit one of the following soil characteristics between the bottom of the infiltration system and the seasonal high groundwater and top of bedrock: at least a 3-foot soil layer with 20% fines or greater; or at least a 5-foot soil layer with 10% fines or greater. This does not apply where the soil medium within the infiltration system provides an equivalent level of protection. This (c) (4) f) 9) does not prohibit infiltration of roof runoff.
- g. **Exemptions.** The following areas are not required to meet the requirements of **Section 14-2-33 (c) (4) et. Seq.:**
- i. Areas where the infiltration rate of the soil is less than 0.6 inches/hour measured at the site.
 - ii. Parking areas and access roads less than 5,000 square feet for areas including but not limited to business park, commercial and industrial development.
 - iii. Redevelopment post-construction sites.
 - iv. In-fill development areas less than 5 acres.
 - v. Infiltration areas during periods when the soil on the site is frozen.
 - vi. Roads in areas including but not limited to business park, commercial, industrial and institutional land uses and arterial residential roads.
- h. Where **alternate uses of runoff** are employed, such as for toilet flushing, laundry or irrigation, such alternate use shall be given equal credit toward the infiltration volume required by this paragraph.
- i. **Groundwater Protection.**
- i. 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 **Administrative Code Chapter 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.

ii. Notwithstanding 1), the discharge from BMPs shall remain below the enforcement standard at the point of standards application.

7. **Protective Areas**

- a. **“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 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.
 - i. For **outstanding resource waters** and **exceptional resource waters**, and for **wetlands in areas of special natural resource interest** as specified in **Administrative Code s. NR 103.04**, 75 feet.
 - ii. 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.
 - iii. For **lakes**, 50 feet.
 - iv. For **highly susceptible wetlands**, 50 feet. Highly susceptible wetlands include the following types: fens, sedge meadows, bogs, low prairies, conifer swamps, shrub swamps, other forested wetlands, fresh wet meadows, shallow marshes, deep marshes and seasonally flooded basins. Wetland boundary delineations shall be made in accordance with **Administrative Code s. NR 103.08(1m)**. 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.
 - v. 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.
 - vi. In **7) a) 1)**, **7) a) 4)** and **7) 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 **Administrative Code s. NR 103.03**.
 - vii. For **concentrated flow channels** with drainage areas greater than 130 acres, 10 feet.
- b. This paragraph applies to post-construction sites located within a protective area, except those areas exempted pursuant to **14-2-33 (c) 7) d)**.
- c. The following requirements shall be met:
 - i. Impervious surfaces shall be kept out of the protective area to the maximum extent practicable. The stormwater management plan shall contain a written site-specific explanation for any parts of the protective area that are disturbed during construction.
 - ii. 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.

- iii. Best management practices such as filter strips, swales, or wet detention basins that are designed to control pollutants from non-point sources may be located in the protective area.
- d. **Exemptions.** This [section 14-2-33 \(c\) \(7\)](#) relating to protective areas **does not apply to:**
 - i. **Redevelopment** post-construction sites less than 5-acres.
 - ii. **In-fill development** areas less than 5 acres.
 - iii. **Structures** that cross or access surface waters such as boat landings, bridges and culverts.
 - iv. **Structures** constructed in accordance with [Wis. Stat. §59.692 \(1v\)](#).
 - v. Post-construction sites from which runoff does not enter the surface water, except to the extent that vegetative ground cover is necessary to maintain bank stability.
8. **Fueling and 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 enters waters of the state contains no visible petroleum sheen.
9. **Swale Treatment for Transportation Facilities**
 - a. **Applicability.** Except as provided in [14-2-33 \(c\) \(7\) b\)](#), transportation facilities that use swales for runoff conveyance and pollutant removal meet all of the requirements of this section, if the swales are designed to the maximum extent practicable to do all of the following:
 - i. Where appropriate and approved, non-vegetative measures may be employed to prevent erosion or provide for runoff treatment, such as rock riprap stabilization or check dams.
 - ii. Carry runoff through a swale for 200 feet or more in length that is designed with a flow velocity no greater than 1.5 feet per second for the peak flow generated using either a 2-year, 24-hour design storm or a 2-year storm with duration equal to the time of concentration as appropriate. If a swale of 200 feet in length cannot be designed with a flow velocity of 1.5 feet per second or less, then the flow velocity shall be reduced to the maximum extent practicable.
 - b. **Exemptions.** The Director may, consistent with water quality standards, require other provisions of this section be met on a transportation facility with an annual average daily travel (AADT) 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:
 - i. An **outstanding resource water**.
 - ii. An **exceptional resource water**.
 - iii. **Waters listed in [Federal Clean Water Act § 303\(d\)](#)** that are identified as impaired in whole or in part, due to nonpoint source impacts.
 - iv. Waters where targeted performance standards are developed under [Administrative Code s. NR 151.004](#), to meet water quality standards.
- 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 routes for all stormwater facilities shall be provided that discharge flow rates do not exceed the safe capacity of downstream drainage facilities or endanger downstream property or public safety.
 3. **Unique Site Conditions.** The management plan shall consider and accommodate conditions unique to the site that are not otherwise addressed in this ordinance. Unique conditions may including but are not limited to: steep slopes, active and apparent Karst features, elevated groundwater, limited downstream drainage capacity, previously altered conditions, shallow soils, and small sites with limited space. Unique conditions and resulting approaches shall be reviewed and approved by the Director.
- e) **Location and Regional Treatment Alternative**
1. The BMPs may be located on-site or off-site as part of a regional stormwater device, practice or system.
 2. Post-construction runoff within 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 ordinance. Post-construction BMPs may be located in non-navigable surface waters.
 3. Except as allowed under **14-2-33 (e)**, post-construction runoff from **new development** shall meet the post-construction performance standards prior to entering 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 ordinance if:
 - a. The BMP was constructed prior to the effective date of this ordinance and the BMP either received a permit issued under **Wis. Stats. §§ Chapter 30**, or the BMP did not require a **Wis. Stats. §§ Chapter 30** 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 navigable surface water if allowable under all other applicable federal, state and local regulations such as **Administrative Code Chapter NR 103**, and **Wis. Stats. §§ Chapter 30**.
 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 Director may approve **off-site management improvements** provided that all of the following conditions are met:
 - a. The Director determines that the post-construction runoff is covered by a stormwater management system plan that is approved by the Village 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:
 - i. The facility is in place.
 - ii. 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 ordinance.
 - iii. The facility has a legally obligated entity responsible for its long-term operation and maintenance.

8. Where an **area-wide or regional treatment alternative** exists such that the Director exempts the applicant from all or part of the minimum on-site stormwater management requirements, the applicant shall be required to pay a fee (fee in lieu) in an amount determined in negotiation with the Committee. The value of the contributing fee shall be based on prorated benefit. In determining the fee for post-construction runoff, the Committee shall consider an equitable distribution of the cost for land, engineering design, construction, and maintenance of the regional treatment option.
- f) **Additional Requirements.** The Director may establish stormwater management requirements more stringent than those set forth in this section if the Director determines that an added level of protection is needed to protect sensitive resources.

SEC. 14-2-34 PERMIT REQUIRED

No responsible party may undertake a land disturbing construction activity which is not otherwise exempted or excluded from the provisions of this ordinance without receiving a post-construction runoff permit from the Director prior to commencing the proposed activity.

- a) **Permit Application and Fees.** Unless specifically excluded by this ordinance, any responsible party desiring a permit shall submit to the Director a permit application made on a form provided by the Director for that purpose.
 1. Unless otherwise excepted by this ordinance, a permit application must be accompanied by a stormwater management plan, a maintenance agreement and a non-refundable permit administration fee.
 2. The stormwater management plan shall be prepared to meet the requirements of **14-2-31**, **14-2-33** and **14-2-35**. The maintenance agreement shall be prepared to meet the requirements of **14-2-36**. The financial security shall meet the requirements of **14-2-13**, and fees shall be those established by the Board as set forth in **14-2-12**.
 3. **Combined Submittal.** Applicant shall address the requirements of both **Articles B** and **C** in one complete application.
- b) **Review and Approval of Permit Application.** The Director shall review any permit application that is submitted with a stormwater management plan, maintenance agreement, and the required fee. The following approval procedure shall be used:
 1. Within 20 business days of the receipt of a complete permit application, including all items as required by **14-2-34 (a)**, the Director 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 stormwater permit application, plan and maintenance agreement are approved, or if an agreed upon payment of fees in lieu of stormwater management practices is made, the Director shall issue the permit.
 3. If the stormwater permit application, plan or maintenance agreement is disapproved, the Director shall detail in writing the reasons for disapproval.
 4. The Director may request additional information from the applicant. If additional information is submitted, the Director shall have 20 business days from the date the additional information is received to inform the applicant that the plan and maintenance agreement are either approved or disapproved.
 5. Failure by the Director to inform the permit applicant of a decision within 20 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.
- c) **Financial Security Required.** The requirements of **14-2-13** are incorporated by reference.

- 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 Director may suspend or revoke a permit for violation of a permit condition, following written notification of the responsible party. An action by the Director to suspend or revoke this permit may be appealed in accordance with [14-2-15](#).
1. **Other Jurisdictions.** 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.
 2. The responsible party shall design and install all structural and non-structural stormwater management measures in accordance with the approved stormwater management plan and this permit.
 3. **Notification.** The responsible party shall notify the Director at least ten (10) business days before commencing any work in conjunction with the stormwater management plan, and within five (5) business days upon completion of the stormwater management practices. If required as a special condition under [\(5\)](#), the responsible party shall make additional notification according to a schedule set forth by the Director so that BMP installations can be inspected during construction.
 4. **Observation and Documentation.**
 - a. Construction improvements required as part of this ordinance shall be documented through **record drawings** (certified "as built" by a licensed professional engineer). The Developer shall provide the record drawings in an electronic and permanent hard copy format as approved by the Director and identified in [Title 13 Chapter 1](#).
 - b. Completed stormwater management practices must pass a **final observation** by the Director or its designee to determine if they are in accordance with the approved stormwater management plan and ordinance. The Director 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.
 5. The responsible party shall notify the Director of any **significant modifications** it intends to make to an approved stormwater management plan. The Director shall review and approve the proposed modifications prior to incorporation into the stormwater management plan, construction and execution by the responsible party.
 6. **Maintenance.** The responsible party shall maintain all stormwater management practices in accordance with the stormwater management plan until the practices either become the responsibility of the Village, or are transferred to subsequent private owners as specified in the approved maintenance agreement.
 7. **Corrective Actions.** The responsible party authorizes the Director to perform any work or operations necessary to bring stormwater management measures into conformance with the approved stormwater management plan, and consents to a special assessment or charge against the property as authorized under [Wis. Stats. §§ Chapter 66 subchapter VII](#), or to charging such costs against the financial security posted under [14-2-13](#).
 8. If so directed by the Director, 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 stormwater management plan.
 9. **Building Permit.** Issuance of a building permit shall be contingent upon the Applicant providing documents that identify structures that shall be constructed to comply with this ordinance.

10. **Access Permitted.** The responsible party shall permit property access to the Director or its designee for the purpose of inspecting the property for compliance with the approved stormwater management plan and this permit.
 11. The responsible party is subject to the **enforcement actions and penalties** detailed in **14-2-14**, if the responsible party fails to comply with the terms of this permit.
 12. **Occupancy Permitted.** The Village reserves the right not to grant an occupancy permit until stormwater management and site stabilization efforts are completed.
- e) **Permit Conditions.** Permits issued under this subsection may include conditions established by Director in addition to the requirements needed to meet the performance standards in **14-2-33** or financial security as provided for in **14-2-13**.
 - f) **Permit Duration.** Permits issued under this section shall be valid from the date of issuance through the date the Director notifies the responsible party that all stormwater management practices have passed the final observation required under **(d)(4)**.

SEC. 14-2-35 STORMWATER MANAGEMENT PLAN

- a) **General.** The Developer shall submit to the Village at the time of filing either a Preliminary Plat (or development plan) a preliminary drainage plan and / or engineering report on the ability of existing watercourse channels, storm sewers, culverts and other improvements pertaining to drainage or flood control within the development to accommodate the additional runoff which would be generated by the development of the land. Additional information shall be submitted to confirm that drainage discharges do not damage the improved or unimproved land up or downstream from the proposed development.
- b) **Plan Requirements.** The stormwater management plan required under **14-2-35 (a)** shall contain a minimum of the following information:
 1. **Contact Persons.** 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 stormwater management practices; and person(s) responsible for maintenance of stormwater management practices prior to the transfer, if any, of maintenance responsibility to another party.
 2. A **land survey document (legal description and map)** 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. The documents shall be prepared by a Wisconsin Registered Land Surveyor.
 3. **Drainage Easements.**
 - a. **Public** (reference **Title 14 Chapter 1**). Public drainage easements shall be dedicated when drainage from two (2) or more properties are conveyed across an adjoining downstream property.
 - b. **Private.** The Developer / Property Owner may identify private drainage easements on survey documents that are recorded with the County Register of Deeds. The Village has the authority to require proposed private drainage easements be improved and dedicated as public.
 4. **Pre-development site conditions**, including:
 - a. One or more **site maps** at a scale of not less than 1 inch equals 40 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 an interval 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 stormwater 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 [Administrative Code s. NR 811.16](#).

- 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).
5. **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 stormwater 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 40 feet showing the following:
 - i. post-construction **pervious areas** including vegetative cover type and condition;
 - ii. **impervious surfaces** including all buildings, structures, and pavement;
 - iii. post-construction **topographic contours** of the site at an interval not to exceed (two) 2 feet;
 - iv. A **master site grading and drainage plan** for the development (including but not limited to streets, blocks and lots) that identifies existing and proposed grades contours and drainage patterns. The plan shall identify that the proposed development shall accommodate both existing and future off-site drainage.
 - v. 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;
 - vi. locations of **maintenance easements** specified in the maintenance agreement;
 - vii. flow path and direction for all **stormwater conveyance** sections;
 - viii. location and type of all stormwater management **conveyance and treatment practices**, including the on-site and off-site tributary drainage area;
 - ix. 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;
 - x. **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.
 - xi. Estimates of the quantity of drainage entering the development from adjoining upstream lands (post construction condition).
 - xii. Quantities of flow at each inlet or culvert.
 - xiii. Location, sizes and grades of required culverts, storm drainage sewers and other required appurtenances.
 - d. **Construction Documents** (plan drawings and specifications) for all site improvements. Material and construction specifications for all drainage

improvements (i.e., pipe, culverts, seed, sod, etc.) shall comply with the Village **Construction Standards** and **Title 14 Chapter 2**.

- e. **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). The plan shall address drainage that enters the development from adjoining areas outside the development
 - f. **Subsurface Conditions**. Results of investigations of soils and groundwater required for the placement and design of stormwater management measures. Detailed drawings including cross-sections and profiles of all permanent stormwater conveyance and treatment practices.
6. A description and installation **schedule** for the stormwater management practices needed to meet the performance standards in **14-2-33**.
 7. An **operation and maintenance plan** developed for the life of each stormwater management practice including the required maintenance activities and maintenance activity schedule.
 8. **Opinions of Probable Construction Cost** (i.e. estimates) for the construction, operation, and maintenance of each stormwater management practice.
 9. **Other information** requested in writing by the Director to determine compliance of the proposed stormwater management measures with the provisions of this ordinance.
 10. All site investigations, plans, designs, computations, and drawings shall be certified by a Wisconsin licensed Professional Engineer to be prepared in accordance with accepted engineering practice and requirements of this ordinance.
- c) **Alternate Requirements**. The Director may prescribe alternative submittal requirements for applicants seeking an exemption to on-site stormwater management performance standards under **14-2-33 (e)**.

SEC. 14-2-36 OPERATION AND MAINTENANCE

- a) **Maintenance Agreement Required**. The maintenance agreement required under **14-2-34 (a)** for stormwater management practices shall be an agreement between the Village and the responsible party to provide for maintenance of stormwater 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 stormwater management practices.
- b) **Agreement Provisions**. The maintenance agreement shall contain the following information and provisions and be consistent with the operation and maintenance plan required by **14-2-35 (b) (7)**:
 1. **Identify Drainage Improvements**. Identify the stormwater facilities and designation of the drainage area served by the facilities.
 2. **Maintenance Schedule**. A **schedule for regular maintenance** of each aspect of the stormwater management system consistent with the stormwater management plan required under **14-2-34 (a)**. Requirement that the responsible party(s) or organization shall maintain stormwater management practices in accordance with the **schedule** included in **14-2-34 (b) (6)** and **14-2-36 (b) (2)**.
 3. **Parties Responsible for Maintenance**. Identify the responsible party(s), or organization responsible for long term maintenance of the stormwater management practices identified in the stormwater management plan required under **14-2-34 (a)**.

4. **Access Authorization.** Authorization for the Director to access the property to conduct inspections of stormwater management practices as necessary to ascertain that the practices are being maintained and operated in accordance with the agreement.
 5. **Document Site Observations.** A requirement for the Director 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 stormwater management practice into proper working condition.
 6. **Corrective Actions.** Agreement that the party designated under **14-2-36 (b) (3)**, as responsible for long term maintenance of the stormwater management practices, shall be notified by the Director and / or Public Works Committee of maintenance problems which require correction. The specified corrective actions shall be undertaken within a reasonable time frame as set by the Director.
 7. **Authorization to Correct.** Authorization of the Director to perform the corrected actions identified in the inspection report if the responsible party designated under **14-2-36 (b) (3)** does not make the required corrections in the specified time period. The Director shall enter the amount due on the tax rolls and collect the money as a special charge against the property pursuant to **Wis. Stats. §§ Chapter 66 subchapter VII**.
- c) **Termination of Agreement.** The Agreement shall terminate after the subject improvements are constructed, improvements and lands / easements are dedicated to the Village, all administrative and Code requirements are completed, and the Village has observed the Work and identified the project is complete.

SEC. 14-2-37 THROUGH 14-2-39 RESERVED FOR FUTURE USE