

## ADMINISTRATIVE RULE 02-01

### REGULATION OF STORM WATER RUNOFF

THE CITY COUNCIL OF THE CITY OF LAKE MILLS, JEFFERSON COUNTY, WISCONSIN, IN SEPARATE ACTION BY ADOPTING ORDINANCES 897 AND 898, UNDER THE AUTHORITY OF §66.23 AND 66.234, WIS. STATS., INCORPORATED THIS RULE IN ITS ENTIRETY INTO TITLES 10, ZONING REGULATIONS AND TITLE 11, SUBDIVISION REGULATIONS, AS THOUGH FULLY SET FORTH THEREIN.

THIS RULE IS APPLICABLE TO ALL SUBDIVISION APPROVALS, ALL CONDITIONAL USE PERMITS AND ALL BUILDING PERMITS SOUGHT AFTER THE EFFECTIVE DATES OF ORDINANCES 897 AND 898.

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I. **AUTHORITY.** This Rule is adopted by the City Council under the authority granted by § 62.234 and 62.23, Wis. Stats.

A. The provisions of this Rule are deemed not to limit any other lawful regulatory powers of the City.

B. The City Council hereby designates the City Manager to administer and enforce the provisions of this Rule.

C. The requirements of this Rule do not pre-empt more stringent storm water management requirements that may be imposed by any of the following:

1. Department of Natural Resources administrative rules, permits or approvals including, but not limited to, those authorized under §283.33 and 281.16, Wis. Stats.
2. Targeted non-agricultural performance standards promulgated in rules by the Department of Natural Resources under NR 151.004, Wis. Admin. Code.
3. Technical standards for implementing non-agricultural performance standards developed by the Department of Natural Resources under subchapter III of NR 151, Wis. Admin. Code.

II. **FINDINGS OF FACT:** The City Council finds that uncontrolled storm water runoff from land development and land redevelopment activity 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 storm water runoff can:

- A. Degrade physical stream habitat by increasing stream bank erosion, increasing stream bed scour, diminishing groundwater recharge, diminishing stream base flows and increasing stream temperature;
- B. Diminish the capacity of lakes and streams to support fish, aquatic life, recreational, and water supply uses by increasing loadings of sediment, suspended solids, nutrients, heavy metals, bacteria, pathogens and other urban pollutants;
- C. Alter wetland communities by changing wetland hydrology and by increasing pollutant loads;
- D. Reduce the quality of groundwater by increasing pollutant loading;
- E. Threaten public health, safety, property, and general welfare by overtaxing storm sewers, drainage ways, and other minor drainage facilities;
- F. Threaten public health, safety, property, and general welfare by increasing major flood peaks and volumes;
- G. Undermine floodplain management efforts by increasing the incidence and levels of flooding.

III. **PURPOSE AND INTENT:**

A. Purpose. The general purpose of this Rule is to set forth long-term, post-construction storm water requirements and criteria which will diminish the threats to

public health, safety, welfare, and the aquatic environment due to runoff of storm water from land development and land redevelopment activity. Specific purposes are to:

1. Further the maintenance of safe and healthful conditions;
2. Minimize and control the adverse effects of storm water, minimize and control soil erosion, minimize and control water pollution, increase protection of spawning grounds, fish, and aquatic life;
3. Minimize the probability of exceeding the safe capacity of existing drainage facilities and receiving water bodies; minimize undue channel erosion; control increases in the scouring and transportation of particulate matter; minimize conditions that may endanger downstream property;
4. Control building sites, placement of structures, and land uses, and promote sound economic growth.

B. Intent. It is the intent of the City that this Rule manages the long-term, post-construction storm water discharges from land development and land redevelopment activities by achieving a specific set of performance standards at locations where it applies. This Rule can be applied on a site-by-site basis. The City recognizes, however, that the preferred method of achieving the storm water performance standards set forth in this Rule is through the preparation and implementation of comprehensive, systems-level storm water management plans that cover hydrologic units, such as watersheds, on a municipal and regional scale. Such plans may prescribe alternative applicability and performance standards for specific sites when the overall performance standards can be met in more cost-effective approach. Where such plans have been developed and approved by the City, it is the intent of this Rule that land development and redevelopment activity will be required to meet the storm water management measures set forth in the approved plan.

IV. **DEFINITIONS:** For the purposes of this Rule, the following definitions are adopted:

- A. "Administrator" means the City Manager or other person specifically designated by the City Council to enforce the provisions of this Rule.
- B. "Best management practice" or "BMP" means a practice, technique or measure which is determined to be an effective means of preventing or reducing runoff pollutants to waters of the state, to a level compatible with the performance standards in sec. VII. of this Rule.
- C. "City Council" means the City Council for the City of Lake Mills.
- D. "Capacity of a Stormwater Drainage Facility" means the maximum flow at atmospheric pressure that can be conveyed by the facility without causing damage to the public or encroachment upon private property. The capacity of a stormwater drainage facility is determined utilizing "Mannings Equation" or similar approved formula.

- E. "Capacity of a Stormwater Detention Facility" means the maximum volume that can be stored by a stormwater detention facility without causing damage to the public or encroachment upon private property. The capacity of a stormwater detention facility is generally determined utilizing average end area or similar volume calculation methods.
- F. "Channel" means a natural or artificial watercourse of perceptible extent which periodically or continuously contains moving water, or which forms a connecting line between two bodies of water. It has a definite bed and banks that serve to confine the water.
- G. "Control Structure" means a facility constructed to regulate the volume and rate of stormwater that is released during a specific length of time.
- H. "Culvert" means a closed conduit for the passage of surface drainage water under a roadway, railroad, or other surface impediment.
- I. "Detention Storage" means the temporary detention or storage of stormwater in storage basins, on rooftops, in parking lots, school yards, parks, open space, lakes, ponds, or other areas under predetermined and controlled conditions, with the rate of drainage therefrom regulated by appropriately installed devices.
- J. "Development" means any man-made change to improved or unimproved real estate, including, but not limited to, construction of or substantial improvements to buildings or other structures, the placement of mobile homes, paving, mining, filling, or other similar activities.
- K. "Discharge" means the rate of outflow of water from a stormwater drainage or stormwater detention facility.
- L. "Drainage Area" means the area from which water is carried off by a drainage system; a watershed or catchment area above a given point.
- M. "Drainage Easement" means authorization by a property owner allowing use of a designated portion of his/her property by others for drainage purposes.
- N. "Dry Bottom Stormwater Detention Basin" means a facility that is designed to be normally dry and which accumulates stormwater runoff only during periods when the restricted stormwater runoff release rate is less than the stormwater inflow rate.
- O. "Dry Weather Water Outlet" means a dry weather water outlet is an outlet from a sump pump, footing tile, field tile, or other source that may discharge at times other than during periods of rainfall and pursuant direct surface runoff.
- P. "Excess Stormwater Runoff" means the portion of stormwater runoff that exceeds the transportation capacity of storm sewers, swales, ditches, or natural drainage channels serving a specific watershed.

- Q. "Excess Stormwater Passageway" means a channel formed on the surface of the soil to carry excess stormwater runoff through a specific area from dominant to servient land areas.
- R. "Financial guaranty" means a performance bond, maintenance bond, surety bond, irrevocable letter of credit, or similar guarantees submitted to the Administrator by the permit holder to assure that requirements of the Rule are carried out in compliance with the storm water management plan.
- S. "Flood Elevation" means the elevation of all locations delineating the maximum level of high waters for a flood of a given return period.
- T. "Floodplain" means the special flood hazard lands adjoining a watercourse, the surface elevation of which is lower than the flood elevation and which are subject to periodic inundation during floods.
- U. "Floodway" means a channel of a watercourse and those portions of the adjoining floodplain that are reasonably required to carry and discharge the design flood.
- V. "Grade" means the inclination or slope of a channel, canal, conduit, etc., or natural ground surface, usually expressed in terms of percentage the vertical rise (or fall) bears to the corresponding horizontal distance.
- W. "Impervious" means a term applied to material through which water cannot pass, or through which water passes with great difficulty or at a very slow rate.
- X. "Impermeable" means a material through which water cannot pass.
- Y. "Inlet" means an opening into a storm sewer system for the entrance of surface storm runoff, more completely described as a storm sewer inlet.
- Z. "Maintenance agreement" means a legal document that is filed with the County Register of Deeds as a property deed restriction, and which provides for long-term maintenance of storm water management practices.
- AA. "Natural Drainage" means the water flow by gravity in channels formed by the true surface topography of the earth prior to changes made by the efforts of man.
- BB. "Natural Drainage Condition" means the situation whereby water flows by gravity in channels formed by the true surface topography of the earth prior to changes made by the efforts of man.
- CC. "Natural Safe Stormwater Drainage Capacity" means the quantity of stormwater runoff that can be transported by means of a channel, passage, conduit, tube, duct, or combination thereof, in such a manner that the elevation of the water does not rise significantly above the level of the adjacent soil surface, and cause damage or encroachment upon public or private property. For the purposes of this Rule, it is presumed that the maximum natural safe stormwater drainage capacity for downstream stormwater drainage systems is the capacity required to carry the rate of stormwater

runoff from a FIVE (5)-YEAR return period storm prior to the date of adoption of this Rule.

DD. "Owner" means the record title holder or a beneficiary of a land trust which is the record title holder, and includes singular or plural; if the Owner is other than an individual, the term includes beneficiaries, agents, shareholders, officers, and directors, partnerships, associations, firms, trusts, clubs, companies, or corporations.

EE. "Peak Flow" means the maximum rate of flow of water at a given point in a channel or conduit resulting from a predetermined storm or flood.

FF. "Permit" means a written authorization made by the Administrator to the applicant to conduct land development or land redevelopment activities.

GG. "Permit administration fee" means a sum of money paid to the City by the permit applicant for the purpose of recouping the expenses incurred by the authority in administering the permit.

HH. "Person" means an individual, public or private or private corporation, government, partnership, or unincorporated association.

II. "Positive Gravity Outlet" means a term used to describe the drainage of an area in a manner that will ensure complete removal of all surface water by means of gravity.

JJ. "Pre-treatment" means the treatment of storm water prior to its discharge to the primary storm water treatment practice in order to reduce pollutant loads to a level compatible with the capability of the primary practice.

KK. "Recognized Agency" means a governmental unit or agency that has statistically and consistently examined local, climatic, and geologic conditions and maintained records as they apply to stormwater runoff, e.g. National Weather Service.

LL. "Retention Basin" means a structure or feature designed to retain stormwater over a period of time, with its release being positively controlled over a longer period of time than a typical stormwater "detention" storage facility.

MM. "Return Period" means the average interval of time within which a given rainfall event will be equaled or exceeded once. A flood having a return period of 50 years has a two (2) percent probability of being equaled or exceeded in any one year.

NN. "Runoff Coefficient" means a decimal fraction relating the amount of rain which appears as runoff and reaches the storm sewer system to the total amount of rain falling. For example, a coefficient of 0.50 implies that 50 percent of the rain falling on a given surface appears as stormwater runoff.

OO. "Storm Sewer" means a closed conduit for conveying collected stormwater.

PP. "Stormwater Drainage System" means all means, natural or man-made, used for conducting stormwater to, through or from a drainage area to the point of final outlet,

including but not limited to any of the following: conduits, storm sewers, swales, canals, channels, ditches, streams, culverts, streets and pumping stations.

QQ. "Stormwater Runoff" means the water that results from precipitation that is not absorbed by soil or plant material, which does not evaporate and which flows over the surface of the ground or is collected in channels, conduits or ponds.

RR. "Stormwater Runoff Release Rate" means the rate at which stormwater runoff is released from dominant to servient land.

SS. "Stormwater Storage Area" means an area designated to temporarily accumulate excess stormwater.

TT. "Structure" means anything that is constructed or erected with a fixed location on the ground or attached to something having a fixed location on the ground. Among other things, structures include buildings, fences, signs, mobile homes, swimming pools, and walls.

UU. "Time of Concentration" means the time required for stormwater runoff from the remotest part of the drainage basin to reach the point being considered. Minimum time of concentration required for design of drainage facilities shall be 15 minutes.

VV. "Traditional Agricultural Uses" means uses commonly classed as agricultural or horticultural, including forestry, crop farming, truck gardening, wholesale nursery operations, animal husbandry, the operation of any machinery or vehicles incidental to said uses, and the construction of a single-family dwelling and other farm structures incidental to and typically associated with said uses. The term does not include commercial feedlots, commercial grain storage/processing facilities or other similar agriculturally related commercial and industrial land uses.

WW. "Tributary Watershed" means the entire catchment area that contributes stormwater runoff to a given point.

XX. "City" means this is the City of Lake Mills, Jefferson County, Wisconsin.

YY. "Watercourse" means any stream, creek, brook, branch, natural or artificial depression, slough, gulch, reservoir, lake, pond or natural or man-made drainageway in or into which stormwater runoff and flood water flow either regularly or intermittently.

ZZ. "Wet Bottom Stormwater Storage Area" means a facility that contains a body of water and which accumulates excess stormwater during periods when the restricted stormwater runoff release rate is less than the stormwater inflow rate.

**V. APPLICABILITY, JURISDICTION AND EXEMPTIONS:**

A. Applicability. Unless expressly exempted, this Rule applies to construction sites and to post-development construction sites, including land development and

redevelopment, upon which land disturbing construction activity affects any of the following:

1. All new or expanded subdivisions that require the approval of the City of Lake Mills pursuant to the provisions of the City of Lake Mills Subdivision Ordinance, Title 11, as amended, shall be subject to the requirements of this Rule.
2. Generally, any new construction within the jurisdiction of this Title, if that new construction that increases the amount of impervious area of the lot or parcel of land upon which it is constructed shall be subject to the requirements of this Rule.
3. Except as may otherwise be provided herein, all structures erected hereafter, all uses of land or structures established hereafter, all improvements to water courses, all structural alterations or relocation of existing structures occurring hereafter, and all enlargements of, or additions to, existing uses which increase the amount of impervious area, occurring hereafter, shall be subject to the provisions of this Rule.
4. Except as provided herein, no building permit may be issued; no subdivision or plat of land may be approved or recorded; no mobile home park or recreational travel trailer park permit may be issued; no planned unit development may be approved; no watercourse, stormwater drainage system, storm sewer, or stormwater control structure may be constructed; and no paved or compacted area designed to be used for loading, open storage, or the parking or movement of vehicles may be constructed without first having complied with the applicable provisions of this Rule.
5. Any property or development falling within the scope of the provisions of this Rule shall be subject to review by the Administrator in order to establish and determine, in the opinion of the Administrator, that no adverse consequences will arise downstream as a result of construction of improvements under the sought-after permit. Any property located within floodplain areas, as defined in the Floodplain Zoning Ordinance of the City of Lake Mills shall be governed by such Ordinance in the event of and to the extent of conflict with the provisions of this Stormwater Management Ordinance.
6. All applications for building permits shall contain a statement that such buildings or structures and appurtenances connected therewith include facilities for the orderly runoff or detention of rain and melting snow, as required herein. Plans submitted with said application shall include a signed statement issued by the Owner and by a Wisconsin Professional Engineer that the plans include facilities adequate to prevent uncontrolled runoff, as required herein. For single-family dwellings to be located in a subdivision meeting the requirement of this Rule, the signed statement may, in lieu of the above procedure, be placed on the face of the final plat or upon the required subsidiary drainage plat for the entire subdivision.



B. Jurisdiction. This Rule applies to land development and land redevelopment activities within the boundaries of the City of Lake Mills. This Rule applies to the division of land within the boundaries of the City of Lake Mills and within its extraterritorial plat approval jurisdiction under Chapter 236 Wis. Stats.

C. Exemptions. The provisions of this Rule shall not apply to the following developments:

1. Any development constructed totally upon a lot or parcel of land, which was recorded prior to the effective date of this Rule that contains less than 20,000 square feet of land area, provided the development has less than 33 percent impervious surface area; or

2. Any single-family residential or two-family residential development on any lot or parcel of land, which was recorded prior to the effective date of this Rule.

3. Modification of single-family residential or two-family residential structures which will continue to be used as single-family or two-family dwellings; or

4. Modification of existing structures or appurtenances, other than a single-family dwelling or two-family dwelling, which do not increase the amount of impervious area of the lot or parcel upon which it is constructed; or

5. Traditional agricultural land uses; or

6. Improvement of existing roadways which do not increase the number of traffic lanes in the typical cross-section of the roadway; or

7. New development in which the total impervious area, including the area of the existing, adjacent public or private streets, is less than twenty (20) percent of the total area or 10,000 square feet, whichever is less.

## VI. DRAINAGE SYSTEM COMPONENTS:

A. Minor. The Minor drainage system components shall consist of storm sewers, street gutters, small open channels, and swales designed to store and convey the peak rate of runoff from the FIVE (5)-YEAR return period precipitation event.

B. Major. The Major drainage components, such as open ditches and large surface swales draining 40 acres or more in the area, shall be designed to store and convey stormwater flows beyond the capacity of the minor drainage components. They shall be designed to convey the peak rate of runoff from the TWENTY-FIVE (25) YEAR return period precipitation event.

C. Excess Stormwater Passageways. An excess stormwater passageway shall be provided for the floodplain of all natural water courses and such manmade water

courses and storm drainage systems as the Administrator may direct, which shall have adequate capacity to convey the excess stormwater runoff from the tributary watershed. The capacity of this excess stormwater passageway shall be adequate to transport the peak rate of runoff from the **100-YEAR** return period storm, assuming all upstream areas are fully developed for uses specifically permitted by existing zoning, and antecedent rainfall in the tributary watershed is average (e.g., Antecedent Moisture Condition II).

No building structures shall be constructed within this passageway; however, streets, parking lots, playgrounds, park areas, pedestrian walkways, open green space, and utility and sewer easements may be considered compatible uses.

VII. **TECHNICAL STANDARDS:** The following requirements shall be applicable and shall be satisfied prior to the construction, improvement or development of any structure, project or land which is subject to the provisions of this Rule.

A. Calculation of Drainage Capacity. The Rational Method or other similar recognized method may be used to size the minor components for any development.

B. Precipitation Data. Rainfall Frequency Atlas of the Midwest (Bulletin 71) or other most recently available data acceptable to the Administrator shall be utilized to determine precipitation.

C. Design Procedures. General design procedures and methods for all drainage system components shall comply with the provisions of the Wisconsin Department of Transportation Facilities Development Manual (WDOT FDM), latest edition, where not in conflict with this Rule.

D. Storm Sewer Systems:

1. Capacity. All storm sewer systems shall be designed for the peak rate of runoff from a minimum of a 5-YEAR return period storm under nonpressurized gravity flow conditions. Low pressure systems may be allowed by the Administrator under site-specific conditions when outlet conditions preclude nonpressurized flow. In general, low pressure conditions will be tolerated only in the first segment of storm sewer upstream from the outlet. All design calculations must be submitted to the Administrator for approval.

2. Outlet Conditions. The minimum pipe diameter shall be 12 inches. The system shall have a free outlet and shall be designed for gravity flow conditions. Low pressure outlets may be allowed by the Administrator if physical conditions preclude nonpressurized flow.

3. Grade. Sewer grades shall be such that, in general, a minimum of 2-foot cover is maintained over the top of the pipe. Pipe cover less than the minimum may be used upon site-specific approval by the Administrator. Uniform slopes shall be maintained between inlets, manholes and inlet to manhole. Minimum and maximum allowable slopes shall be those capable of producing velocities between two and 12 feet per second, respectively, when the sewer is flowing full.

Velocities lower than the minimum or higher than the maximum may be used upon site-specific approval by the Administrator.

4. Overland Flow. The maximum distance for overland flow of stormwater runoff to an underground storm sewer system shall be 600 feet, unless a longer distance is approved by the Administrator.

5. Alignment. Storm sewers shall be constructed in a straight line between manholes insofar as possible. Where long radius curves are necessary to conform to street layout, the minimum radius of curvature shall be no less than 300 feet. Deflection of pipe sections shall not exceed the maximum deflection recommended by the pipe manufacturer. The deflection shall be uniform and the finished installation shall follow a smooth curve.

6. Manholes. Manholes shall be installed to provide access to continuous underground storm sewers for the purpose of inspection and maintenance. Manholes shall be provided at the following locations:

- a. Where two or more storm sewers converge.
- b. At the point of beginning or at the end of a curve (P.C. or P.T.) and at the point of reverse curvature (PRC) of a storm sewer.
- c. Where pipe size changes.
- d. Where an abrupt change in alignment occurs.
- e. Where a change in pipe slope occurs.
- f. At suitable intervals in straight sections of sewers. The maximum distance between manholes shall be as follows:

12-inch to 24-inch Diameter Pipe	350 Feet
Over 24-inch Diameter Pipe	500 Feet

- g. All manholes shall be constructed in accordance with the standard details in the Wisconsin DOT-FDM.

7. Hydraulic Grade Line. The crowns or 0.8 diameter point of pipes of unequal diameter shall be matched at manholes wherever possible so as to promote continuous hydraulic grade lines.

8. Inlets and Catch Basins. Inlets and catch basins on drainage structures shall be utilized to collect surface water through grated openings and convey it to storm sewers or culverts. Inlet spacings in streets shall comply with the design provisions of the WDOT FDM, latest edition. All inlets and catch basins shall be constructed in accordance with the standard details and as approved by the Administrator.

9. Materials. The type of sewer pipe shall be:
  - a. Concrete and/or reinforced concrete pipe (must be used under all paved surfaces).
  - b. Precoated, fully lined galvanized corrugated steel pipe;
  - c. Extra strength vitrified clay pipe.

E. Surface Drainage Systems. Surface drainage will be permitted for stormwater where cost estimates show that storm sewers are not economically feasible (including all life-cycle costs and the value of the land consumed), where land use conditions indicate this method is feasible, and where topographic conditions indicate there will be no difficulty from this method of disposal of storm waters. Such economic and feasibility studies shall be reviewed and approved by the Administrator.

1. Capacity. All surface drainage systems of stormwater shall be designed for the peak rate of runoff from a minimum of a 5-YEAR return period storm when the upstream watershed has an area of less than 40 acres. Surface drainage systems shall be designed for the peak rate of runoff from a minimum of the 25-YEAR return period storm when the upstream watershed has an area larger than 40 acres. All design calculations must be submitted to the Administrator for approval.
2. Hydraulic Grade Line. The surface drainage system shall have a free outlet and shall be designed for gravity flow conditions. The effects of backwater due to culverts or other obstructions shall be accounted for in the design.
3. Grade. Stormwater surface drains shall be constructed with uniform bottom slopes the entire length of the drains. Minimum and maximum allowable grade shall be those capable of producing velocities between 0.5 and 5.0 feet per second. Stormwater velocity shall be controlled to eliminate problems of soil erosion or other damage that could detract from the primary use of the area.
4. Side Slopes and Bottom Widths. Surface drains shall be constructed having side slopes of not less than four (4) feet horizontal to one (1) foot vertical, or flatter. Side slopes steeper than four (4) feet horizontal to one (1) foot vertical shall not be used without site-specific approval by the Administrator. A channel bottom width of not less than one (1) foot shall be provided.
5. Erosion. Design of surface drains shall include control of soil erosion. Temporary seeding, straw bale dikes, silt fencing, or other soil stabilization measures shall be utilized during construction to control erosion. Permanent erosion control measures such as mulching, hydroseeding, nurse crops, conventional seeding, or other similar measures shall be utilized upon completion of construction. These measures shall meet the standards established within "Procedures and Standards for Urban Soil Erosion and Sediment Control."

6. Culverts. Culverts and similar structures shall have a capacity that meets or exceeds the capacity of the surface drain, but shall be a minimum of 12 inches in diameter. The flowline of a culvert shall match the flowline of the surface drain.

a. Culvert pipe materials shall be the same as pipe materials for storm sewers.

b. Culverts shall create not more than one (1) foot of backwater upstream from the structure.

c. End sections shall be provided for all culverts.

F. Tile Drains. All major stormwater surface drains as designated by the Administrator and all dry bottom stormwater detention basins shall also be constructed in a subsurface drainage tile system as shown on the attached standard details.

1. Minimum pipe size shall be 6-inch diameter. Minimum capacity shall be the rate of discharge necessary for a drainage coefficient of 0.35 inches per acre per day for the tributary watershed.

2. The type of pipe material allowable shall be:

a. Extra-strength clay pipe drain tile.

b. Heavy duty concrete drain tile.

c. Perforated corrugated and noncorrugated polyvinyl chloride pipe with a smooth interior.

d. Perforated corrugated high-density polyethylene pipe with a smooth interior.

3. Subsurface drainage tile systems shall be provided adjacent to new residential lots to allow for connection of sump pump outlets, downspouts and other dry weather water outlets to the tile drainage system.

4. Tile drains shall be provided with inlets or cleanouts to allow for inspection and maintenance of the tile system.

5. Existing agricultural tile drains serving upstream, off-site areas shall be intercepted at the edge of the development site and shall be redirected into the storm sewer or tile drainage system provided within the development.

6. Existing easements for any agricultural drainage tile located within development sites shall be preserved. If no easement exists, an easement shall be granted for access and maintenance of the tile drain. Such easements shall be of sufficient width and located to provide for continued functioning and necessary maintenance of drainage facilities. No buildings or permanent

structures, including paved areas, but excluding streets, sidewalks, or driveways, which cross the easement by the shortest possible route may be located within the easement without the consent and approval of the public body to which the easement is granted.

7. Agricultural drainage tile which, due to development, will be located underneath roadways, drives, or parking areas shall be replaced with storm sewer quality pipe materials.

**VIII. STORM WATER DETENTION PERFORMANCE STANDARDS:**

A. General Requirements. When the maximum controlled stormwater runoff rate would be exceeded upon the development, redevelopment, or new construction on the Owner's land, stormwater storage methods shall be provided and constructed by the Owner. See Section 5 for a complete determination of applicability and exemptions. Any one or all of the stormwater storage methods listed shall be provided and constructed.

B. Release Rate for Design Event. The maximum controlled release rate for the 24-hour duration storm, 50-YEAR precipitation event for each independent watershed area within the Owner's land as stormwater exits the Owner's land shall be equal to the peak rate of discharge from the development area, assuming row crop agricultural land cover and a FIVE (5)-YEAR, 24-hour duration storm return frequency precipitation event. The release rate shall be as determined by the Rational Method, TR-55 Method, or other method acceptable to the Administrator. The following assumptions shall be utilized:

1. Predevelopment conditions for land developing activities shall assume a "good" level of land management. When the Soil Conservation Service TR-55 Method is used to calculate peak flow discharge rates and runoff volumes for the predevelopment condition, NRCS curve numbers shall not exceed the following for the given soil hydrologic groups. When other methods for computing runoff are used, they shall assume a comparable predevelopment condition.

<b>Soil Hydrologic Group:</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>
NRCS Curve Number for Meadow:	30	58	71	78
NRCS Curve Number for Woodland:	30	55	70	77
NRCS Curve Number for Grain:	55	68	77	80
NRCS Curve Number for Pasture:	39	61	74	80
NRCS Curve Number for Paved Roadways with Open Ditches*	83	89	92	93
NRCS Curve Number for Commercial/Business Districts*	89	92	94	95
NRCS Curve Number for Industrial Districts*	81	88	91	93

\* For use with re-development projects only.

2. Time of concentration shall be calculated using SCS TR-55 methods with a new roughness coefficient of 0.17 for cultivated soils.

C. Maximum Release Rate for Pass Through Situations. Whenever possible, stormwater runoff from upstream off-site areas shall be directed around the stormwater storage area. However, when pass-through conditions are deemed necessary, the maximum controlled release rate for each independent watershed area within the Owner's land shall be determined in the following manner:

1. For that portion of the watershed outside of an Owner's land, the peak rate of runoff which would have occurred for a TEN (10)-YEAR return period storm under the state of development existing just prior to application for development of an Owner's land shall be calculated and determined.

2. For that portion of the watershed within the lands of the Owner, the peak rate of runoff which would have occurred for a FIVE (5)-YEAR return period storm under a state of traditional agricultural usage shall be calculated and determined.

3. The maximum controlled release rate for each independent watershed area within the Owner's land as it exits the Owner's land for storms up to and including the 50-YEAR return period storm shall be the sum of items 1 and 2 above. The principal spillway shall be designed to provide this maximum release rate during storm events up to and including the TWENTY-FIVE (25)-YEAR return period storm event. The emergency spillway or a secondary spillway may provide additional release of stormwater for storm events larger than the TWENTY-FIVE (25)-YEAR return period storm event for stormwater flows from that portion of the watershed outside of the Owner's land.

D. Maximum Release Rate for Small Developments. The maximum controlled release rate for small developments with a total watershed area of five (5) acres or less may be assumed to be 0.50 cubic feet per second (cfs) per acre if the Owner chooses to utilize the Direct Method of Calculating Required Storage for Small Developments, as outlined elsewhere herein.

E. Reduced Release. The City may consider or require reduced release rates under certain circumstances.

1. In the event that the downstream stormwater runoff drainage system is inadequate to accommodate the maximum release rate provided above, then the City, at its option, may reduce the allowable release rate to that rate permitted by the capacity of the receiving stormwater runoff drainage system and additional storage as determined by the Administrator may be required to store that portion of the runoff exceeding the capacity of the receiving stormwater runoff drainage system. When the City exercises this option, the Owner and the City shall pay a proportional share of the costs of the storage, as mutually determined by the City and the Owner.

2. In the event that stormwater runoff control can be provided exceeding the requirements of this Rule and the benefit of this additional control would accrue to the City at large, the City may participate in the increased cost of the control of stormwater runoff in proportion to the additional benefits derived therefrom.

F. Calculation of Required Storage. The volume of required stormwater storage shall be calculated on the basis of the maximum value achieved from the runoff of a design event less the volume of water released through the outlet structure. The following standards shall apply to watersheds of various sizes:

1. Standard Methods. Standard reservoir routing methods shall be utilized to determine the required storage volume. Soil Conservation Service TR-55, or TR-20 methodologies shall be utilized to develop hydrographs of the stormwater runoff for the site. Stage/storage/discharge relationships shall be developed for the detention basin utilizing standard engineering methods and utilized to route the hydrographs through the stormwater detention storage facility.

2. TR-55 Methods. Soil Conservation Service TR-55 Methods may be utilized to calculate the required storage volume for developments with watershed areas of less than 25 acres and which do not involve significant off-site drainage that must be passed through the detention basin. Soil Conservation Service Type II rainfall shall be utilized to estimate storage volume and peak inflow requirements.

3. Modified Rational Methods. The Modified Rational Method may be utilized to calculate required storage volume for developments with watershed areas of less than 25 acres and which do not involve significant off-site drainage that must pass through the detention basin.

Time of concentration shall be estimated utilizing SCS TR-55 Methods for developed conditions. "c" values utilized shall be set at 125 percent of "normal" 5-YEAR storm values to account for reduced soil infiltration capabilities during large storm events, up to a maximum "c" value of 1.0. In determining the volume of storage required when using the Modified Rational Method, the release rate of the outlet structure can be assumed constant only if the release rate utilized in the calculations is equal to the release rate through the outlet structure when one half of the storage volume is filled.

When using the Modified Rational Method the critical storm duration (that requiring the largest detention volume) for any design event shall be identified and used in determining storage volume.

4. Direct Method for Small Developments. For small developments with a total watershed area of less than five (5) acres, the total volume of stormwater storage required may be determined by the Direct Method, which does not require hydrologic analyses. When the Direct Method is utilized, the total storage volume provided shall be equal to 2.5 inches of water over the watershed area.



G. Effective Discharge for Frequent Storm Events. The outlet structure maximum discharge for each of the TWO (2)-YEAR and FIVE (5)-YEAR precipitation events shall be no greater than the rate of discharge from the development area assuming row crop agricultural land cover with the required assumptions described in Paragraph B above.

H. Emergency Overflow. Each stormwater storage facility shall be provided with a means of emergency overflow. This emergency overflow structure shall be constructed to function without special maintenance attention and can become a part of the excess stormwater passageway for the entire development. The emergency overflow structure shall be capable of passing the 100-YEAR return period storm event flow. Stormwater detention basins shall be provided with a berm of not less than 0.5 FEET above the surface elevation that is anticipated to occur during the 100-YEAR return period storm event.

I. Flood Elevations. The entire stormwater storage facility shall be designed and constructed to fully protect the public health, safety, and welfare. The minimum building site elevation adjacent to stormwater detention basins shall be set at a minimum of ONE (1)-FOOT above the maximum created head during the 100-YEAR return period storm event. The maximum created head will include the energy head at the emergency overflow structure.

J. Off-Site Tributary Areas. Stormwater storage facilities shall not receive runoff from tributary areas outside the development site unless the Administrator determines that runoff from such areas can be accommodated in the storage area in a manner that will protect immediate downstream properties. In making this determination, the Administrator may require the Owner to provide additional data or calculations. When stormwater runoff from tributary areas outside of the development cannot reasonably be directed around the stormwater storage area, the Administrator may allow use of staged release outlet structures, which allow stormwater runoff from off-site areas to pass through the stormwater storage area undetained, while simultaneously detaining and providing controlled release for the volume of excess stormwater runoff from the site.

K. Sediment Traps. Stormwater storage facilities that receive runoff from tributary areas outside of the development site that are utilized primarily for row crop agricultural purposes shall be provided with permanent sediment trapping basins upstream from the stormwater storage area. Minimum storage volume shall be 150 cubic yards per acre of upstream watershed. Minimum discharge capacity from the main spillway shall be not less than 0.2 cfs per acre of upstream watershed. The basin shall have a length-to-width ratio of at least 2.0 at the spillway crest elevation.

L. Compensatory Storage. Where portions of the Owner's land are tributary to the same drain for an outlet, but which are within two or more tributary areas to that drain, the Owner may construct, upon site-specific approval by the Administrator, compensatory stormwater detention facilities within one tributary area which offset the lack of construction of stormwater detention facilities in another tributary area. Such compensatory storage shall be designed and constructed such that the net effect into the drain to that rate which would have occurred had stormwater detention facilities been constructed for all the tributary area.

M. Storage Duration. The storage of excess stormwater runoff from a 50-YEAR return period storm having a duration of 24 hours, released at the allowable rate shall generally not result in a storage duration in excess of 24 hours for a dry detention basin. Storage duration may be as long as 30 hours due to unique site conditions, upon site-specific approval of the Administrator.

N. Protection of Public Health, Safety, and Welfare. The entire stormwater storage area shall be designed and constructed to fully protect the public health, safety, and welfare. If a condition occurs in the stormwater storage area which is hazardous to the public health, safety, or welfare, the person responsible for the condition will be required to provide approved corrective measures. In the event these corrective measures are not provided, the City may eliminate the hazard at the expense of the person responsible.

O. Joint Construction. Stormwater storage areas may be planned and constructed jointly by two or more landowners provided the provisions of this Rule are met. Adequate easements and provisions for future maintenance by the landowners must be provided.

P. Early Completion. Where stormwater detention, retention, or depressional storage areas are to be used as part of the drainage system for a property, they shall be constructed as the FIRST element of the initial earthwork for the development. Any eroded sediment captured in these facilities shall be removed by the applicant before project completion in order to maintain the design volume of the facilities.

Q. Minimize to the extent practical increases or decreases in the hydrology of wetlands. Where such changes are proposed, the impact of the proposal on wetland functional values shall be assessed using a methodology acceptable to the City. Significant degradation of wetland functional values shall be avoided.

## IX. DRY BOTTOM STORMWATER STORAGE DESIGN STANDARDS

A. Dry bottom stormwater storage facilities should be designed where possible to serve a secondary purpose for recreation, open space, or similar types of uses that will not be adversely affected by occasional intermittent flooding and will not interfere with stormwater management.

B. Minimum grades for turf areas within the basin shall be two (2) percent (50 units horizontal to one unit vertical), except that the minimum grade shall be one-half (1/2) percent (200 units horizontal to one unit vertical) if tile underdrains are adequately installed underneath the turf areas. Storage facility side slopes shall not be steeper than 4 to 1 (four units horizontal to one unit vertical), and shall provide for the reasonably safe approach of persons and reasonably safe maintenance practices. Side slopes steeper than 4 to 1, may be allowed upon a determination by the Administrator that adequate precautions are taken to avoid unreasonable hazard. Storage basin excavations shall follow the natural land contours as closely as practicable. The geometry of dry bottom stormwater storage basins shall be approved by the Administrator.

C. The outlet control structure shall be provided with an interceptor for trash and debris, and it shall be designed and constructed to minimize soil erosion and not to require manual adjustments for its proper operation. The control structure shall be designed to operate properly with minimal maintenance or attention. The control structure shall be provided with safety screens for any pipe or opening, other than a weir, to prevent children or large animals from crawling into structures. The control structure shall be constructed to allow access to it at all times, including times of flood flow.

D. Subsurface low flow conduits shall be provided in dry bottom stormwater storage basins. These conduits shall be constructed so that they will not unnecessarily interfere with any secondary use of the storage area and will reduce the frequency of time that storage area will be covered with water. The low flow conduits shall facilitate dewatering of the soils in the stormwater storage area to avoid saturated soil conditions. Low flow conduits shall facilitate complete interior drainage of the stormwater storage area and shall be designed to intercept trickle flows from storm sewers and other drainage facilities which outlet into the basin. Low flow conduits shall be not less than eight (8) inches in diameter. Tile underdrain systems may be combined with the low flow conduits.

E. Pipe outlets of less than eight (8) inches in diameter shall not be allowed unless specifically approved by the Administrator. Multiple outlet pipes from a stormwater storage area shall be avoided if they are designed to be less than twelve (12) inches in diameter.

F. Temporary seeding, silt fencing, straw bale dikes or other soil stabilization measures, shall be established in the stormwater storage area immediately following construction. During construction of the overall development, it is recognized that a limited amount of sediment buildup may occur in the stormwater storage area due to erosion. In no case shall the volume of the storage area be reduced to less than 90 percent of the required volume during the construction phase of the development. All sediment shall be removed before construction is completed.

G. Permanent erosion control measures such as mulching, hydroseeding, conventional seeding, nurse crops, fertilizing, or sod installation shall be utilized to control soil movement and erosion within the storage area. These measures shall meet the standards established in "Wisconsin Construction Site Best Management Practices Handbook (WCSH)." The installation of these permanent measures shall take place only after the majority of construction and other silt and sediment-producing activities have been completed. Prior to the establishment of the permanent erosion control measures, the required capacity of the stormwater storage area and the excess stormwater passageway shall be restored by removal of any deposited sediment.

H. Adequate impact stilling basins shall be provided at the downstream side of any outlet structure to ensure that downstream soil erosion is mitigated as much as practical and the regime of the downstream drainage facility is not disturbed.

I. The maximum planned depth of stormwater stored shall not exceed four (4) feet.

J. Tile underdrains shall be provided for all detention basins serving a watershed area of more than five (5) acres, and for all detention basins located in soils with typical groundwater elevations of less than three (3) feet below ground surface. Tile underdrains shall be constructed such that they will not interfere with any secondary usage of the storage area. Tile underdrains shall be constructed so that they shall facilitate dewatering of the soils in the stormwater storage area to avoid marshy or saturated soil conditions. Tile underdrain systems may be combined with the low flow conduits.

K. Warning signs shall be placed at appropriate locations to warn of deep water, possible flood conditions during storm periods, and of other dangers that exist to pedestrian and vehicular traffic.

L. Backyard storage areas in residential developments will generally not be allowed unless extraordinary lot depth and area is provided, along with appropriate easements.

**X. WET BOTTOM STORMWATER STORAGE DESIGN STANDARDS**

A. Wet bottom stormwater storage facilities shall be designed in compliance with all applicable regulations that govern the construction of dry bottom stormwater storage facilities. The following additional regulations shall apply to wet bottom stormwater storage facilities.

B. The water surface area of the permanent pool shall not exceed one-fifth of the area of the tributary watershed, or as approved by the Administrator.

C. Minimum normal water depth (excluding safety ledges and side slopes) shall be four (4) feet, provided however, that if fish are to be maintained in the pool, at least one-quarter of the pond area shall be a minimum of ten (10) feet deep.

D. Measures shall be included in the design to minimize pond stagnation and to help ensure adequate aerobic pond conditions.

E. Storage facility side slopes shall provide a maximum side slope below the normal water elevation that shall not be steeper than a slope of 3:1 (3 horizontal units to one vertical unit) to a point at which the normal water depth is no less than four (4) feet. A ten (10) foot wide flat safety ledge shall be provided at a point four (4) feet below the normal pool water surface. Below a normal depth of five (5) feet, side slopes shall not be steeper than the stable angle of repose under saturated conditions of the soil material of the basin. Side slopes steeper than those set forth herein may be approved by the Administrator on a case-by-case basis due to unusual or unique circumstances.

F. Facilities shall be provided to lower the pond elevation at least three (3) feet for cleaning purposes and shoreline maintenance, unless the Administrator determines that construction of such facilities is not practical.

G. Warning signs shall be placed at appropriate locations to warn of deep water, possible flood conditions during storm periods, and of other dangers that exist to pedestrian and vehicular traffic.

H. Protection of the shoreline shall be provided to alleviate soil erosion due to wave action.

I. The volume of the water permanently stored shall not be considered to be a part of the required excess stormwater storage.

## **XI. ALTERNATIVE STORMWATER STORAGE DESIGN STANDARDS**

A. The use of stormwater storage facilities, as described in Section 8 and 9, are the preferred means of stormwater storage. The following alternative means of stormwater storage may be used on development sites under two (2) acres in area or where practical necessity makes the use of stormwater storage facilities infeasible. The use of such alternative stormwater storage areas is only permitted upon the approval of the Administrator.

1. **Paved/Structured Stormwater Storage.** Design and construction of the pavement and structural elements must assure that there is minimal damage due to flooding. Control structures must be readily accessible for maintenance and cleaning. Flow control devices will be required unless otherwise approved by the Administrator.

2. **Street Pavement Surface Ponding.** No stormwater detention shall be located upon street pavements. Street pavement surface ponding shall not exceed nine (9) inches in depth in the gutter line nor over the roadway crown if no gutter is present under all rainfall conditions up to and including the 50-YEAR storm event. Open waterways such as surface overflow swales shall be designed into the grading plan to receive all excess stormwater runoff. Depressing sidewalks across such overflow swales to meet this requirement shall be acceptable. Street ponding shall be allowed only for the conveyance of excess stormwater runoff and will be subject to approval by the public body accepting dedication of the street.

3. **Rooftop Stormwater Storage.** Rooftop storage of excess stormwater shall be designed and constructed to provide permanent control inlets and parapet walls to contain excess stormwater. Adequate structural roof design must be provided to ensure that roof deflection does not occur which could cause the roofing material to fail and result in leakage. Overflow areas must be provided to ensure that the weight of stormwater will never exceed the structural capacity of the roof. Any rooftop storage of excess stormwater shall be approved only upon submission of building plans signed and sealed by a licensed structural engineer or architect attesting to the structural adequacy of the design.

4. **Automobile Parking Lot Storage Areas.** Automobile parking lots may be designed to provide temporary detention storage on a portion of their surfaces.

Automobile parking facilities used to store excess stormwater may be constructed having a maximum depth of stored stormwater of 0.6 feet; and these areas shall be located in the most remote, least used areas of the parking facility. Design and construction of automobile parking in stormwater areas must ensure that there is minimal damage to the parking facility due to flooding, including minimal damage to the subbase. Warning signs shall be mounted at appropriate locations to warn of possible flood conditions during storm periods.

5. **Underground Stormwater Storage.** Underground stormwater storage facilities must be designed for easy access in order to remove accumulated sediment and debris. These facilities must be provided with a positive gravity outlet unless otherwise approved by the Administrator.

XII. **STORM WATER DISCHARGE QUALITY:** Unless otherwise provided for in this Rule, all land development and land redevelopment activities subject to this Rule shall establish on-site management practices to control the discharge of storm water pollutants. The BMPs shall be designed, installed or applied and maintained, in accordance with a storm water management plan for the long-term control of postconstruction storm water discharges, to control total suspended solids and other pollutants carried in runoff to the maximum extent practicable. All of the following apply:

A. By design, reduce the annual average total suspended solids load in runoff by 80% as compared to no controls for the site.

B. If 80% of the total suspended solids load will not be controlled from the site by design, then the storm water management plan shall include a reasonable justification for not controlling 80% of the total suspended solids load from the site as compared to no sediment controls.

C. Petroleum products in runoff from gas station pump areas and vehicle maintenance areas shall be controlled with a properly designed and maintained oil and grease separator or other equivalent practice, and shall remove all visible sheen from the runoff prior to discharge to waters of the state. A gas station pump area which has a properly designed canopy that catches and directs storm water away from the potential spill areas beneath them and the availability and use of petroleum absorbent pads to immediately clean up spills shall as an equivalent practice to meet this paragraph.

D. Sufficient permanent vegetative cover shall be provided in riparian areas to provide for bank stability, maintenance of fish habitat and filtering of pollutants from upslope overland flow areas. The minimum width of the riparian area is the width calculated using the procedures in NRCS standard 393, dated January 1995, or 35 feet, whichever is greater. Riparian area widths are measured from the ordinary high water mark of lakes, streams and wetlands. This paragraph is not applicable to redevelopment sites or to structures that cross or access surface waters such as boat landings, bridges and culverts.

E. Discharge of urban storm water pollutants to wetlands from land development and land redevelopment sites shall be minimized to the extent practical. Where such

discharges are proposed, the impact of the proposed discharge on wetland functional values shall be assessed using a method acceptable to the City. At a minimum, storm water discharges shall be pretreated prior to discharge to wetlands. Significant degradation of wetland functional values due to storm water pollutant loads shall be avoided.

F. Storm water shall not be injected underground through excavations or openings in a manner that would violate NR 812.05, Wis. Admin. Code.

G. Storm water ponds and infiltration devices shall not be located closer to water supply wells than as indicated below without first notifying and obtaining approval from the City:

1. 100 feet from a well serving a private water system or a transient, noncommunity public water system;
2. 1,200 feet from a well serving a municipal public water system, an other than municipal public water system, or a nontransient, noncommunity public water system;
3. Within the boundary of a recharge area to a wellhead identified in a wellhead.

XIII. **DRAINAGE PLAN SUBMITTAL REQUIREMENTS:** Once it is determined that a development is subject to the provisions of this Rule, the Owner shall submit a Drainage Plan containing the following information, to ensure that the provisions of this Rule are met. The submittal shall include sufficient information to evaluate the environmental characteristics of the property, the potential adverse impacts of the development on water resources both on-site and downstream, and the effectiveness of the proposed Drainage Plan in managing stormwater runoff. The applicant shall certify on the drawings that all clearing, grading, drainage, and construction shall be accomplished in strict conformance with the Drainage Plan. The materials submitted shall be as follows:

A. Topographic Map. A topographic survey of the property with one-foot contour interval meeting National Map Accuracy Standards under existing and proposed conditions, and areas upstream and downstream, as necessary, in the opinion of the Administrator to determine off-site impacts of the proposed Drainage Plan. Proposed spot elevations at lot corners, at building sites, along pavement centerlines, along drainage swales and at other relevant locations may be provided in lieu of proposed contours. The map shall be keyed to a consistent datum specified by the Administrator (normally the North American Vertical Datum of 1929).

B. Drainage System. Mapping and descriptions, where relevant, of existing and proposed drainage system features of the property and immediate vicinity including:

1. The banks and centerline of streams and channels;

2. Shoreline of lakes, ponds, and existing or proposed stormwater detention basins;
3. Farm drains and field tiles;
4. Sub-watershed boundaries within the property controlled by the Owner;
5. Watershed soils classifications;
6. The property's location within the larger watershed and the area of all upstream watersheds;
7. Location, size, cross-sectional shape, and slope of stormwater conduits, storm sewers and drainage swales;
8. Direction and velocity of stormwater flows;
9. Delineation of upstream and downstream drainage features and watersheds that might be affected by the development;
10. Locations, size, and shape of stormwater detention and retention facilities;
11. Roads, streets, other paved areas and associated stormwater inlets;
12. Base Flood Elevation, and regulatory floodway where identified for the property;
13. Basis of design for the final drainage network components, including design calculations and a summary of design assumptions utilized.
14. Results of investigations of soils and groundwater required for the placement and design of storm water management measures.
15. A description and installation schedule for the storm water management practices needed to meet the performance standards in sec. VII.
16. A maintenance plan developed for the life of each storm water management practice including the required maintenance activities and maintenance activity schedule.
17. Cost estimates for the construction, operation, and maintenance of each storm water management practice.

C. Environmental Features. A depiction of environmental features of the property and immediate vicinity including the following:

1. The limits of wetland areas, as depicted on the National Wetland Inventory Maps;



2. Any designated natural areas, such as, but not limited to a public park, wildlife management area, or conservation area; and

3. Any proposed environmental mitigation features, including permanent and temporary soil erosion control features.

D. Engineer's Certificate. All design work must be signed and sealed by a Wisconsin Professional Engineer.

#### XIV. **MAINTENANCE RESPONSIBILITY:**

A. Maintenance of stormwater drainage facilities located on private property shall be the responsibility of the Owner of that property. Before a permit is obtained from the City, the applicant shall ensure that covenants are placed upon the property, guaranteeing that the applicant and all future owners of the property have sufficient funds to maintain and will maintain its stormwater drainage system. The covenants shall specifically authorize representatives of the City to enter onto the property for the purpose of inspection and maintenance of the drainage system. The covenants shall also include a schedule for regular maintenance of each aspect of the property's stormwater drainage system and shall provide for access to the system for inspection by authorized personnel of the City.

B. The private property owner may, after approval by the Administrator assign the Owner's maintenance responsibilities and duties under the terms of the covenants to a third party, such as a property owner's association, or other competent agency. When such an assignment is made, the entity undertaking the maintenance responsibility shall show evidence of financial ability to provide any maintenance required.

In the event that an inspection by the City reveals that the private stormwater drainage facilities are not properly maintained, the City may require that proper maintenance be performed. The Administrator shall notify the property owner to begin any necessary corrections within 30 (thirty) calendar days of such notification and complete the corrections within 90 (ninety) calendar days. If the corrections are not made within this time period, the City may have the necessary work completed and assess all the costs to the property owner, in a manner approved by the City Attorney.

#### XV. **INSPECTIONS:**

A. Inspections During Construction. Construction of impervious surfaces shall not begin until the developer's engineer has certified in writing to the Administrator that any necessary detention facilities are in place and are operational. The Administrator, or his representatives, may conduct periodic inspections of the work in progress to be certain that the drainage system is being built as designed. If any violations of the provisions or requirements of this Rule are noted during such inspections, the Administrator shall notify the property owner in writing of the items needing correction.

The property owner shall have thirty (30) calendar days to make such corrections unless given a specific extension of time in writing by the Administrator. Failure to complete such corrections within the specified time period shall constitute a violation of this Rule.

B. As Built Drawings. As-Built drawings must be prepared and submitted by a Wisconsin Professional Engineer stating conformance with the design plans before final approval of the constructed improvements by the Administrator.

C. Final Inspection. Upon notification by the Owner that the drainage system is completed and upon receipt of As-Built plans, the Administrator or his representative shall make a final inspection and notify the property owner of any necessary corrections. The property owner shall correct any such deficiencies within thirty (30) calendar days unless given a specific extension of time in writing by the Administrator. Failure to make necessary corrections within the specified time period shall constitute a violation of this Rule. Upon finding that the drainage system meets the provisions and requirements of this Rule, the Administrator shall issue a written notice to the property owner stating that the drainage system is complete.

D. Routine Inspections. All privately owned drainage systems may be inspected by representatives of the Administrator at any reasonable time.

XVI. **PERFORMANCE GUARANTY:**

A. A performance guaranty shall be provided to the City before the construction of all stormwater detention basins. The amount of the performance guaranty shall be not less than 110 percent of the estimated cost to construct the improvements. The form of the performance guaranty shall be as approved by the City Attorney, and shall be similar to that utilized for subdivisions under the requirements of the Subdivision Ordinance.

B. Upon completion of the stormwater facility construction, final inspection of improvements, and issuance of notice by the Administrator that the drainage system is complete, the performance guarantee shall be returned to the Owner.

XVII. **APPLICATION FEE:** An application for the construction of a stormwater drainage system and stormwater detention facility shall be made on forms provided by the Administrator, and submitted along with a Stormwater Detention Plan at the same time as approval is requested for a Final Plat of Subdivision, Conditional Use Permit, or Building Permit of any kind is requested, and be accompanied by an application fee. The amount of the application fee shall be as determined from time to time by Resolution of the City Council. No application shall be considered, or construction permit request approved, without prior payment of the application fee.

**XVIII. DRY WEATHER WATER OUTLETS:**

A. Dry weather water outlets are prohibited from discharging directly onto any public property, public right-of-way, public street, or public sidewalk if such discharge creates or contributes to a public hazard or public nuisance. No person shall hereafter construct, build, establish, replace or maintain any dry weather water outlet which discharges onto a public right-of-way, public street, public sidewalk, roadside ditch, or other public property maintained by the City without first obtaining a permit to do so from the Administrator.

Failure to obtain a permit from the Administrator for a dry weather water outlet discharge onto a public street, public sidewalk, or other public property shall be deemed a violation of this Rule.

B. Sump Pumps. Sump pumps installed to receive or discharge groundwaters or stormwater runoff shall be connected to the storm sewer where possible or discharged into a designated stormwater runoff drainage facility. No sump pump shall discharge directly onto a street surface or public sidewalk. Sump pumps are prohibited from discharging in any way that would cause water to flow onto any public sidewalks, streets, or driveways within the public right-of-way.

C. Footing Drains. Footing drains and drainage tile shall discharge into a storm sewer or other storm drainage facility. No footing drains or drainage tile shall be connected to a sanitary sewer or be discharged directly onto a street surface or public sidewalk.

D. Downspouts. Downspouts and roof drains shall discharge onto the ground or be connected to a storm drain. No downspouts or roof drains shall be connected to a sanitary sewer or be discharged directly onto a street surface or public sidewalk.

**XIX. VARIANCES:**

A. Standards. In order to promote that best possible development and use of land, the Administrator shall interpret the standards, provisions, and specifications contained in this Rule liberally and in favor of the public interest. Variations from these standards, provisions, and specifications may be granted when it is demonstrated to the satisfaction of the Zoning Board of Appeals that, owing to special conditions, a strict adherence to the provisions of this Rule will result in unnecessary hardship and that the spirit and intent of the Rule will be observed.

B. Procedure. A request for variance shall be filled by the Owner with the Administrator, who shall refer it, together with his recommendation, to the Zoning Board of Appeals for decision. The request for variance shall be written and shall state specifically what variation is sought and the public's interest in granting the variation. The Zoning Board of Appeals shall meet within a responsible time thereafter to consider the request.

**XX. ENFORCEMENT AND PENALTIES:**

- A. Any land development and land redevelopment activity initiated after the effective date of this Rule by any person, firm, association, or corporation subject to the Rule provisions shall be deemed a violation unless conducted in accordance with the requirements of this Rule.
- B. The City shall notify the responsible owner or operator by certified mail of any non-complying land development and land redevelopment activity. The notice shall describe the nature of the violation, remedial actions needed, a schedule for remedial action, and additional enforcement action that may be taken.
- C. Upon receipt of written notification from the City under subsection (2), the permit holder shall correct work that does not comply with the storm water management plan or other provisions of this permit. The permit holder shall make corrections as necessary to meet the specifications and schedule set forth by the City in the notice.
- D. If the violations to this Rule are likely to result in damage to properties, public facilities, or waters of the state, the City may enter the land and take emergency actions necessary to prevent such damage. The costs incurred by the City plus interest and legal costs shall be billed to the owner of title of the property.
- E. The City is authorized to post a stop work order on all land development and land redevelopment activity in violation of this Rule, or to request the city attorney to obtain a cease and desist order in any court with jurisdiction.
- F. The City may revoke a permit issued under this Rule for non-compliance with Rule provisions.
- G. Any permit revocation, stop work order, or cease and desist order shall remain in effect unless retracted by the City or by a court with jurisdiction.
- H. The City is authorized to refer any violation of this Rule, or of a stop work order or cease and desist order issued pursuant to this Rule, to the City Attorney for the commencement of further legal proceedings in any court with jurisdiction.
- I. Any person, firm, association, or corporation who does not comply with the provisions of this Rule shall be subject to a forfeiture of not less than one hundred dollars (\$100.00) nor more than two hundred fifty dollars (\$250.00) per offense, together with the costs of prosecution. Each day that the violation exists shall constitute a separate offense.
- J. Every violation of this Rule is a public nuisance. Compliance with this Rule may be enforced by injunction. It shall not be necessary to prosecute for forfeiture or a cease and desist order before resorting to injunctive proceedings.
- K. When the City determines that the holder of a permit issued pursuant to this Rule has failed to follow practices set forth in the storm water management plan, or has failed to comply with schedules set forth in said storm water management plan, the City or a

party designated by the City may enter upon the land and perform the work or other operations necessary to bring the condition of said lands into conformance with requirements of the approved plan. The City 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 sec. XVI. of this Rule. 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.

**XXI. APPEALS:**

A. The Zoning Board of Appeals shall hear and decide appeals where it is alleged that there is error in any order, decision or determination made by the City in administering this Rule. The Zoning Board of Appeals shall use the rules, procedures, duties, and powers authorized by statute in hearing and deciding appeals. Upon appeal, the Board may affirm the decision of the Administrator or it may affirm in part and modify in part, or it may modify the Administrator's decision or authorize variances from the provisions of this Rule which are not contrary to the public interest, and where owing to special conditions a literal enforcement of the Rule will result in unnecessary hardship.

B. Who May Appeal. Appeals to the Zoning Board of Appeals may be taken by any aggrieved person or by an officer, department, board, or bureau of the City of Lake Mills affected by any decision of the Administrator.

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