

City of
River Falls, Wisconsin

CHAPTER 12.16
STORM WATER
MANAGEMENT
ORDINANCE

AS APPROVED BY
CITY COUNCIL ON
MARCH 22, 2016

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12.16.010 PURPOSE

A. AUTHORITY

1. This ordinance is adopted by the City of River Falls (hereinafter referred to as the City) under the authority granted by Wis. Stats. §62.234 and §62.11(5). This ordinance supersedes all conflicting and contradictory storm water management regulations previously enacted under Wis. Stats. §62.23. Except as specifically provided for in Wis. Stats. §62.234, Wis. Stats. §62.23 apply to this ordinance and to any amendments to this ordinance.
2. The provisions of this ordinance are deemed not to limit any other lawful regulatory powers of the City.
3. In instances where the provisions of this ordinance conflict with provisions of other City ordinances, zoning regulations, or the provisions of State agencies including, but not limited to, the WPDES Storm Water Discharge Permits issued by the Department of Natural Resources under Wis. Stats. §281.31, the more stringent provisions shall apply.
4. The City hereby designates the City Engineer as the person responsible to administer and enforce the provisions of this ordinance.
5. The requirements of this ordinance do not pre-empt more stringent storm water management requirements that may be imposed by WPDES Storm Water Discharge Permits issued by the Department of Natural Resources under Wis. Stats. §283.31.

B. FINDINGS OF FACT. The City and adjacent townships are growing at a rapid rate. The Kinnickinnic River and its tributaries are valuable trout waters of regional significance, representing a major natural amenity of the community. The effect of storm water from the City and the surrounding towns has the potential to degrade the physical and biological characteristics of the Kinnickinnic River and its tributaries. The increase in urban and rural runoff, as well as the associated thermal and sediment related pollution from present and future land uses will continue to have a detrimental effect on the cold-water fishery of the Kinnickinnic River and its major tributaries without proper management of surface and ground water.

The protection of the water quality of the Kinnickinnic is critical to the environmental and economic future of the community. Development in the Kinnickinnic River Watershed needs to be carefully planned to protect the existing resources. The City has an existing storm water system, much of which discharges directly into the River. Trout are considered an indicator species of environmental quality. Therefore, trout habitat is a major issue in this urbanizing area. A strategy to protect and enhance this resource must be developed, locally supported, adopted and implemented.

With an increase in development pressure, there is less opportunity for groundwater to infiltrate and recharge groundwater and cold-water feeder streams. Uncontrolled storm water runoff will result in increased water temperatures that threaten high quality trout waters. In addition, uncontrolled rates and volumes of storm water runoff can:

1. Degrade physical stream habitat by increasing stream bank erosion, increasing stream bed scour, diminishing groundwater recharge, diminishing stream base flows and increasing water temperatures;
2. Diminish the capacity of lakes and streams to support fish, aquatic life, recreational and water supply uses by increasing loadings of nutrients 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.

Beginning in 1991, the City, in cooperation with the Towns of River Falls, Kinnickinnic, Troy and Clifton, the Department of Natural Resources (DNR), Trout Unlimited, and the University of Wisconsin - River Falls, prepared a water management plan entitled Water Management Plan for the Kinnickinnic River and its Tributaries herein after referred to as the Water Management Plan. The Water Management Plan was completed in 1995 and may be amended from time to time. The Water Management Plan was designed to “deliver good quality storm water runoff to the Kinnickinnic River at acceptable rates and volumes to reduce pollutant loading and stream bed/stream bank degradation, and maintain a river temperature suitable to support a cold water fishery.”

The City was included in the Kinnickinnic Priority Watershed established by St. Croix and Pierce County with the Department of Natural Resources (DNR) to address watershed management at the basin level The Priority Watershed Plan, Non-Point Source Control Plan for the Kinnickinnic River Priority Watershed Project, was adopted by St. Croix and Pierce Counties in March 1999, and approved by the DNR on April 13, 1999

- C. PURPOSE.** The general purpose of this ordinance is to accommodate anticipated community development and land use practices by controlling the quality and quantity of storm water runoff and properly managing and protecting ground water resources and the physical habitat of the Kinnickinnic River and its tributaries. It sets forth storm water management and erosion control performance standards that apply to all land development and land disturbing activities.

Specific purposes are to:

1. To the maximum extent practical, mimic existing hydrology including the existing base flow, infiltration, storm flow and thermal regime of the Kinnickinnic River and its tributaries;
2. Prevent and control the adverse effects of storm water, soil erosion, and water pollution;
3. Protect spawning grounds, fish and aquatic life;
4. Maintain 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;
5. Further the maintenance of safe and healthful conditions; and
6. Control building sites, placement of structures, extent of impervious surfaces, and promote sound economic growth.

12.16.020 APPLICABILITY AND JURISDICTION

- A. APPLICABILITY.** This ordinance applies to land development or land disturbing activity of any size, which changes the pre-development hydrology, thermal loading, chemical loading, sediment loading or increases the rate or volume of runoff leaving the site, as compared to the conditions that existed prior to any planned land development or land disturbing activity.
- B. JURISDICTION.** This ordinance applies to all land development or land disturbing activities within the boundaries of the City. No land owner or land operator may undertake a land development or land disturbing activity subject to this ordinance without having met the performance standards set forth in the Water Management Plan and without having received a permit from the City Engineer prior to commencing the proposed activity.
- C. EXCEPTIONS.** The following exceptions apply to the provisions of this ordinance:
1. If the conditions in subparagraph (a), (b), or (c) are met, owners, builders and developers of single family and duplex homes shall be exempt from the provisions of this ordinance, with the exception that all provisions related to construction site erosion control shall be met.

- a. For initial construction on a lot that is less than one acre in area and that was part of an approved Preliminary Plat or CSM prior to April 1, 2002.
 - b. For initial construction on a lot that is part of a Preliminary Plat or CSM approved after April 1, 2002, the following conditions are met:
 - (i) The sub-divider of the lot has obtained a permit in accordance with this ordinance.
 - (ii) The lot is developed in accordance with the permit that was issued to the sub-divider.
 - c. For subsequent changes to a currently developed lot, the following conditions are met:
 - (i) Activity is disturbing less than 2000 square feet of land; and
 - (ii) Activity involves the addition of less than 1000 square feet of impervious surface.
2. If the conditions in subparagraph (a) are met, owners, builders and developers of structures other than single family and duplex homes shall be exempt from the provisions of this ordinance with the exception that all provisions related to construction site erosion control shall be met.
 - a. For initial construction on a lot that was part of an approved Preliminary Plat or CSM prior to April 1, 2002, the following conditions are met:
 - (i) The sub-divider of the lot has provided storm water management facilities in accordance with a storm water management plan previously approved by the City.
 - (ii) The lot is developed in accordance with that previously approved storm water management plan.
3. Any commercial, industrial, or multi-family residential site that is adding less than 1000 square feet of impervious, and disturbing less than 2000 square feet shall be exempted if they re-direct the storm water runoff from the additional impervious to a green area which is twice the size of the impervious area.
4. For projects where the entire site is located within the 400' well head protection area, rate control and infiltration performance standards do not need to be fully met. However, best management practices that reduce peak rate and volume of stormwater discharge from the site shall be incorporated to the maximum extent practicable into the site plan. Specific BMPs to be considered include disconnection of impervious surfaces, maximizing sheet flow over pervious areas, utilization of grass swales and rainwater storage and re-use on site.

5. For sites where infiltration is prohibited by the exclusions set out in §12.16.070.C.4, rate control requirements and TSS removal requirements shall still be met. However, infiltration shall be provided wherever it is permissible, even if it doesn't meet the entire volume requirement for the site. In addition, best management practices that reduce the volume of stormwater discharge, such as disconnection of impervious surfaces, maximizing sheet flow over pervious surfaces and rainwater storage and re-use, shall be utilized to the maximum extent practicable.
6. The City Engineer may establish on-site storm water management requirements less stringent than those set forth herein provided that provisions are made to manage storm water by an off-site facility, this assumes that all of the following conditions for the off-site facility are met:
 - a. The off-site facility is operational prior to commencing the proposed land development or land disturbing activity.
 - b. The off-site facility is designed and adequately sized to provide a level of storm water control equal to or greater than that, which would be afforded by on-site practices meeting the requirements of this ordinance.
 - c. The off-site facility has a legally obligated entity responsible for its long-term operation and maintenance.

D. EXCLUSIONS. The following are excluded from the provisions of this ordinance:

1. This ordinance is not applicable to activities conducted by a state agency, as defined under s. 227.01 (1), Wis. Stats., but also including the office of district attorney, which is subject to the state plan promulgated or a memorandum of understanding entered into under s. 281.33 (2), Wis. Stats.

12.16.030 DEFINITIONS

For the purpose of this Ordinance, the following definitions shall apply:

- A. "Agricultural activity" means the planting, growing, cultivating and harvesting of crops; growing and tending of gardens and trees; harvesting of trees.
- B. "Agricultural Land Uses" means alterations or disturbances of land for the production of food and fiber including, but not limited to, general farming, livestock and poultry enterprises, grazing, nurseries, horticulture, viticulture, truck farming, forestry, sod production, cranberry production and wild crop harvesting and including on site structures necessary to carry out such activities.
- C. "Base flow" means normal flow conditions for a stream or river.

- D.** “Best Management Practices” or “BMP’s” means practices, techniques or measures that are effective in reducing flooding, removing pollutants, providing thermal mitigation, enhancing infiltration and/or providing other benefits related to storm water management set forth in the Wisconsin Construction Site Best Management Practice Handbook, WDNR Pub. 24 WR-222 November 1993 Revision.
- E.** “Business day” means a day that both the offices of the City of River Falls and the permit holder are routinely and customarily open for business.
- F.** “Cease and desist order” means a court issued order to halt land development or land disturbing activity that is being conducted in violation of the ordinance.
- G.** “City” means the City of River Falls and its representatives.
- H.** “City Engineer” means the governmental employee designated by the Council to administer this chapter and includes any other governmental employees designated by the City Engineer or the Council in the absence of the City Engineer.
- I.** “Detention” means the temporary detaining or storage of storm water in reservoirs, on rooftops, in streets, parking lots or other areas under predetermined and controlled conditions, with the rate of discharge regulated by appropriately installed devices.
- J.** “Erosion or Soil Erosion” means the detachment and movement of soil or rock fragments by water, wind, ice, or gravity.
- K.** “Excavation” means any act by which organic matter, earth, sand, gravel, rock, or any other similar material is cut into, dug, quarried, uncovered, removed, displaced, relocated or bulldozed, and shall include the conditions resulting from the activity.
- L.** “Fill” means any act, by which earth, sand, gravel, rock or any other material is deposited, placed, replaced, pushed, dumped, pulled, transported or moved by man to a new location and shall include the conditions resulting there from.
- M.** “Financial Guarantee” means a performance bond, maintenance bond, surety bond, irrevocable letter of credit, or similar guarantees submitted to the City of River Falls by the permit holder to assure that requirements of the ordinance are carried out in compliance with the Water Management Plan.
- N.** “Grading” means altering the elevation of the land surface by stripping, excavating, filling, stockpiling of soil materials or any combination thereof and shall include the land from which the material was taken or upon which it was placed.
- O.** “Impervious Surface” means a surface that releases the rainfall as surface runoff during a large portion of the design rainfall event. Rooftops, sidewalks, parking lots, and street surfaces are examples of impervious surfaces. For purposes of this ordinance, typical gravel driveways shall be considered impervious (CN=98) unless specifically designed to encourage infiltration or storage of runoff.

- P.** “Infiltration” means the process by which rainfall or surface runoff percolates or penetrates into the underlying soil.
- Q.** “Karst feature” means an area or 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, or seeps.
- R.** “Land Development Activity” means any construction of buildings, roads, parking lots, paved and unpaved storage areas and similar facilities, but not including agricultural activity.
- S.** “Land Disturbing Activity” means any man-made land change to the surface of private or public lands which may result in soil erosion, sedimentation or the increase in runoff, including but not limited to tilling, removal of vegetative cover, stockpiling of soil, grading, excavating and filling of land, except that the term shall not include such minor land disturbing activities as home gardens and normal repair and maintenance of private roads. This term does not include agricultural land uses.
- T.** “Land Occupier” means any person who holds title to land either as sole owner, a tenant in common or a joint tenant or has title as a trustee, assignee, or has a land contract vendor’s interest.
- U.** “Land Cover” means the various cover types found on a specific parcel including impervious surface, green space, wooded area, parking lot, etc.
- V.** “Maintenance And Monitoring 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.
- W.** “NRCS or Natural Resources Conservation Service” means the United States Agency responsible for establishing standards for and design of many water quality structures and practices. The NRCS was formerly the Soil Conservation Service or SCS.
- X.** “New Development” means development resulting from the conversion of previously undeveloped land or agricultural land uses. See “re-development” for more information.
- Y.** “Off-Site” means located outside the property boundary described in the permit application for land development activity or land disturbing activity.
- Z.** “On-Site” means located within the property boundary described in the permit application for land development activity or land disturbing activity.
- AA.** “P8 - Urban Catchment Model” means a program for predicting polluting particle passage thru pits, puddles, & ponds; prepared for IEP, Inc. & Narragansett Bay Project USEPA/RIDEM by William W. Walker, Jr.
- BB.** “Parcel” means all contiguous lands under the ownership or control of a landowner, land occupier or land user.

- CC.** “Peak Runoff Rate” means the maximum rate at which storm water is discharged from a site as expressed in cubic feet per second.
- DD.** “Permit” means a written authorization made to an applicant to conduct land development or land disturbing activities.
- EE.** “Permittee” means any person to whom a permit is issued.
- FF.** “Permit Administration Fee” means a sum of money paid by the permit applicant for the purpose of recouping the expenses incurred by the City in administering the permit.
- GG.** “Person” means any individual, corporation, partnership, joint venture, agency, unincorporated association, municipal corporation, county or state agency within Wisconsin, the Federal government or any combination thereof.
- HH.** “Plan Commission” means the body established under §62. 23 (1), Wis. Stats.
- II.** “Priority Watershed” means the Kinnickinnic Priority Watershed of Pierce and St. Croix Counties.
- JJ.** “Public Lands” means all publicly owned lands which are subject to regulation by the City including, but not limited to:
1. All lands owned by the City.
 2. All lands which are owned by another unit of government if that unit of government or the development project is legally subject to erosion and storm water runoff control by the City under this chapter or by reference under other ordinances.
- KK.** “Re-development” means areas where development is replacing older development. Re-development includes, but is not limited to: the expansion of a building footprint; addition or replacement of a structure; replacement of impervious surface area that is not part of a routine maintenance activity; and land disturbing activities related to structural or impervious surfaces.
- The following guidelines further define new development and re-development:
1. Commercial/Industrial lot being converted to a new commercial/industrial practice shall be re-development if the proposed impervious footprint is no more than 50% greater than the existing impervious footprint. If it is greater than 50% of the existing impervious footprint it shall be considered new development.
 2. A commercial/industrial expansion shall be re-development if the expansion is contained on the same lot as the existing building and if the expansion is less than 50% of the existing impervious on the property.

3. Any commercial/industrial expansion that is occurring by means of acquiring property shall be considered new development.
 4. Commercial/industrial property being converted into a residential land use shall be re-development.
 5. Residential property being converted into a commercial/industrial property shall be considered new development.
 6. Residential being converted to a new residential site shall be re-development as long as the proposed impervious footprint is no more than 50% greater than the existing impervious footprint. If it is greater than 50% of the existing footprint it shall be considered new development.
- LL.** “Regional Pond” means a storm water pond intended to serve multiple parcels and or developments, thus eliminating the need for individual on-site facilities.
- MM.** “Removal” means cutting vegetation to the ground or stumps, complete extraction or killing by spraying.
- NN.** “Retention” means the permanent storage of storm water without discharge.
- OO.** “Runoff” means the same as the definition for “storm water runoff.”
- PP.** “Safe Capacity” means the rate of flow that can be handled by the receiving waterway without causing flooding or erosion damage.
- QQ.** “Sediment” means solid material, both mineral and organic, that has been deposited by water, is in suspension in water, is being transported or has been removed from its site of origin by the processes of soil erosion or is discharged into surface waters from other sources.
- RR.** “Sedimentation” means settling or deposition of sediment.
- SS.** “Sensitive Resources” means natural resources that are sensitive to the impacts of urbanization, specifically including ground water, cold-water springs, wetlands with diverse functions and values and other unique resources.
- TT.** “Site Restriction” means any physical characteristic which limits the use of storm water best management practices as prescribed in the Wisconsin Storm Water Manual published by the Wisconsin Department of Natural Resources.
- UU.** “Stop Work Order” means a method of giving notice to the permittee that one or more provisions of this ordinance have been violated. Notice is given both by posting one or more copies of a poster, stating the violation, upon the lands where the disturbing activity occurs, and by mailing a copy of this poster by certified mail to the permittee at the address shown on the permit.

- VV.** “Storm Sewer” means a closed conduit for conducting collected storm water.
- WW.** “Storm Water Drainage System or Drainage System” means all facilities used for conducting runoff to, through or from a drainage area to the point of final outlet including, but not limited to, any of the following: conduits and appurtenant features, canals, channels, ditches, streams, culverts, reservoirs, detention basins, storm sewers, streets and pumping stations.
- XX.** “Storm Water Plan” means a document that identifies what actions will be taken to reduce storm water quantity, volume, pollutant loads, thermal increases to the receiving stream and/or erosion resulting from land development activity to levels meeting the purpose and intent of this ordinance and the Water Management Plan.
- YY.** “Storm Water Runoff” means that portion of the precipitation falling during a rainfall event, or that portion of snowmelt, that runs off the surface of the land and into the natural or artificial conveyance or drainage network.
- ZZ.** “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.
- AAA.** “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.
- BBB.** “Water Management Plan” means the Water Management Plan for the Kinnickinnic River and its Tributaries, dated April 20, 1995, adopted by reference and made a part hereof as if fully set forth herein.
- CCC.** “Waters of the State” means all lakes, bays, rivers, streams, springs, ponds, wells, impounding reservoirs, marshes, watercourses, drainage systems and other surface water or groundwater, natural or artificial, public or private, within the state or its jurisdiction. See Wisconsin Statutes § 281.01 (18).
- DDD.** “Wetlands” means an area where water is at, near or above the land surface long enough to be capable of supporting aquatic or hydrophilic vegetation and which has soils indicative of wet conditions. These wetlands include natural, mitigated and restored wetlands.
- EEE.** “WPDES Storm Water Discharge Permit” means a permit issued by the Wisconsin Department of Natural Resources under §283.31 Wis. Stats. which authorizes the discharge of storm water from construction sites, industrial facilities, and selected municipalities to waters of the state.

12.16.040 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 the following:

Note: If technical standards contained in the following documents conflict, the governing document shall be determined based on the order presented. Those technical standards with the highest priority shall prevail. In determining priorities, Section 4.1.a. shall be deemed to have top priority followed by Section 4.1.b, with Section 4.1.c. having the lowest priority.

- 1.** Applicable design criteria, standards and specifications identified in the City of River Falls Storm Water Management Standards dated March 8, 2016 and on file in the City Engineering Office.
 - 2.** Applicable design criteria, standards and specifications identified in the WDNR Construction Site Erosion and Sediment Control Technical Standards and the Post Construction Storm Water Management Technical Standards. These standards were developed to implement the performance standards in subchapter III and IV of chapter NR 151, Wis. Adm. Code.
 - 3.** Other design guidance and technical standards identified or developed by the Wisconsin Department of Natural Resources under subchapter V of chapter NR 151, Wis. Adm. Code.
- B. OTHER STANDARDS.** Other technical standards not identified or developed in sub. (1), but equivalent thereto, may be used provided that the methods have been approved by the City Engineer.

12.16.050 PERMITTING REQUIREMENTS, PROCEDURES AND FEES

- A. PERMIT APPLICATION AND FEE.** Unless specifically excluded by this ordinance, any land owner or operator required to obtain a permit under this ordinance shall submit to the City Engineer a permit application made on a form provided by the City for that purpose.
- 1.** Unless specifically excluded by this ordinance, the following items must accompany a permit application before the permit application will be reviewed by the City Engineer:
 - a. A storm water plan
 - b. A non-refundable permit administration fee
 - 2.** The fees referred to in this ordinance shall be established by the City Council and may from time to time be modified by resolution. A schedule of the fees shall be available for review in the office of the City Clerk.

- B. STORM WATER PLAN REQUIREMENTS.** The storm water plan shall contain any information the City Engineer may need to evaluate the environmental characteristics of the area affected by land development or land disturbing activity, the pre- and post-development hydrology, the potential impacts of the proposed activity upon the quality (including thermal) and quantity of storm water discharges, the potential impacts upon water resources and drainage utilities, and the effectiveness and acceptability of proposed storm water management measures in meeting the technical and performance standards and other requirements of this ordinance. All site investigations, plans, designs, computations, and drawings shall be certified by a licensed professional engineer and be prepared in accordance with accepted engineering practice as well as the requirements of this ordinance. The only exception to this shall be any pre-approved standard designs available from the City.
- C. CONTENTS OF THE STORM WATER PLAN.** The storm water plan shall contain, at a minimum, the information required by the submittal checklist set forth in the Storm Water Management Standards. In addition, the following requirements apply as they further define the submittal requirements of the storm water plan:
- 1.** A map or maps of existing site conditions at a scale not smaller than 1 inch equals 100 feet showing:
 - a. Property lines and easements.
 - b. Existing structures, roads, other paving or impervious cover, and vegetative cover.
 - c. Location of predominant soil types.
 - d. Existing topography of the site and sufficient adjacent lands to indicate site location, as well as existing drainage patterns, water courses, drainage pipes or structures that may affect or be affected by the proposed land development or land disturbing activity. This information shall be presented on a topographic map having a contour interval not to exceed 2 feet.
 - e. Limits of any natural wetland and/or the floodplain based on a 100-year flood.
 - 2.** A map or maps of final site conditions after completion of the land development or land disturbing activity at a scale not less than 1 inch equals 100 feet showing:
 - a. Erosion and Sediment Control
 - (i) Location and dimensions of all proposed land development and land disturbing activities, including excavation and fill areas, areas where existing soil and/or vegetative cover is to be disturbed or removed and areas where existing soil and/or vegetative cover is to be left undisturbed.

- (ii) Location and dimensions of all temporary stockpile areas for excavated or fill materials or topsoil.
 - (iii) Areas to be sodded or seeded and mulched or otherwise stabilized with vegetation or other permeable/protective cover. Describe type of final vegetative cover, including type and quantity of mulch or cover material, the method of anchoring, as well as seeding mixtures and rates of lime and fertilizer application..
 - (iv) Location of all proposed best management practices, including but not limited to silt fence, construction site entrances, temporary sediment traps, bale checks, rip-rap, special restoration, shading elements, infiltration basins, detention ponds, and retention ponds.
 - (v) Location of areas where stabilization practices will be employed.
 - (vi) Description of interim and permanent stabilization practices, including an implementation schedule. Site plans shall ensure that existing vegetation is preserved where attainable and that disturbed portions of the site are stabilized.
 - (vii) Stabilization of drainage ways.
 - (viii) 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.
 - (ix) Control of soil erosion from dirt stockpiles.
 - (x) Installation of permanent stabilization practices as soon as possible after final grading.
 - (xi) Minimization of dust to the maximum extent practicable.
 - (xii) Placement of velocity dissipation devices at discharge locations and along the length of any outfall channel, as necessary, to provide a non-erosive flow from the structure to a watercourse so that the natural physical and biological characteristics and functions are maintained and protected.
- b. Post-Construction Storm Water Management
- (i) Flow path and direction for all storm water conveyance sections.
 - (ii) Post-construction drainage network including enough of the contiguous properties to show runoff patterns onto, through, and from the site. This shall include the locations and dimensions of drainage easements.

- (iii) Watershed boundaries used in hydrology and pollutant loading calculations and any changes to lakes, streams, wetlands, channels, ditches, and other watercourses on and immediately adjacent to the site.
- (iv) Estimated peak runoff rate(s) and normal 100-year water levels at each point where surface runoff leaves the site, including applicable assumptions and computations, consistent with Section 7 of this ordinance (Performance Standards).
- (v) Location, dimensions and description (including capacity) of all channels, pipes, structures, basins or reservoirs or other conveyances proposed to carry runoff to the nearest adequate outlet. This includes applicable design assumptions and computations. The applicable design discharge rate, in cubic feet per second, for each structure, pipe, channel or conveyance and design flow velocity for all channels and outlets shall be indicated.
- (vi) Management of overland flow at all sites, unless otherwise controlled by outfall controls.

c. Post-Construction Topography

- (i) Post-construction pervious areas including vegetative cover type and condition.
 - (ii) Locations of maintenance easements specified in the maintenance agreement.
 - (iii) Final proposed topography of the site at a contour interval not to exceed 2 feet.
 - (iv) Limits of any natural wetland and/or the floodplain based on a 100-year flood.
 - (v) Finished grade of excavation and fill slopes.
 - (vi) Location, elevations and dimensions of proposed structures and paved areas.
 - (vii) Location and types of utilities to be installed.
3. Completed forms for erosion control, hydrology, hydraulics, water quality, thermal management, and pond maintenance per the Storm Water Management Performance Standards.
4. 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. 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.
6. Explanation of any restrictions on storm water management measures in the development area imposed by wellhead protection plans and ordinances.
7. A description and schedule of planned land disturbing activities and corrective measures, including:
 - a. The name, address and telephone number of the land occupier and of the party responsible for maintaining erosion and runoff control structures.
 - b. A schedule indicating anticipated starting and completion dates of each sequence of land disturbing activities and the anticipated date of completion of erosion and runoff control measures and establishment of final cover for each sequence or area.
 - c. Provisions for monitoring and short/long term maintenance of erosion and runoff control measures and facilities, including easements.
 - d. Methods to prevent tracking of soil off the site and cleanup of adjacent streets and roads.

D. REVIEW AND APPROVAL OF PERMIT APPLICATION. The City Engineer shall review any permit application that is submitted with a storm water plan and the required fee. The following approval procedure shall be used:

1. Accept all pre-application requests and all permit applications that are accompanied by the storm water plan and the required fee.
2. Review all plans and permit applications received when accompanied with the necessary information and the required fee in accordance with the following:
 - a. Within 30 business days of the receipt of a complete permit application, including all items as required by the submittal checklist, the City Engineer shall inform the applicant in writing whether the application, storm water plan, erosion checklist and maintenance and monitoring agreement are approved or disapproved. The City Engineer shall base the decision on requirements set forth in this ordinance including the technical standards set forth herein.

3. The permit holder shall notify the City Engineer at least 5 business days before commencing any work in conjunction with the storm water plan and within 5 business days after completion of the storm water practices. If required as a special condition, the permit holder shall make additional notifications according to a schedule set forth by the City Engineer so that storm water management facility installations can be inspected during construction.
4. Infrastructure required as part of this ordinance shall be certified “as built” by a licensed professional engineer other than the City Engineer. Completed storm water management practices shall pass a final inspection by the City Engineer to determine if they are in accordance with the approved storm water plan and this ordinance. The City Engineer shall notify the permit holder in writing if any changes are required in such practices to bring them into compliance with the conditions of this permit. The City Engineer shall notify the permit holder when storm water management practices have passed final inspection.
5. The permit holder shall notify the City Engineer of any significant modifications it intends to make to an approved storm water plan. The City may require that the proposed modifications be submitted for approval prior to incorporation into the storm water plan and execution.
6. The permit holder shall maintain all storm water practices in accordance with the storm water plan until the practices either become the responsibility of the City, or are transferred to subsequent private owners as specified in the approved short-term and long-term maintenance and monitoring agreements.
7. The permit holder shall authorize the City Engineer to perform any work or operations necessary to bring storm water measures into conformance with the approved storm water plan, and shall consent to a special assessment or charge against the property as provided under § 66. 0627 or 66. 0703 Wis. Stats. , to cover the cost of such work or operations. The permit holder shall waive notice and hearing as provided by § 66. 0703 (7) (b) Wis. Stats.
8. The permittee shall be responsible for maintaining all roads, road right-of-ways, streets, runoff and drainage facilities and drainage ways as specified in the approved storm water plan until they are accepted and become the responsibility of a governmental entity.
9. The permittee shall provide and install, at its expense, all drainage, runoff control and erosion control improvements as required by this chapter and the approved storm water plan, and also shall bear its proportionate share of the total cost of off site improvements to drainage systems based upon the existing developed drainage area or planned development of the drainage area, as determined by the City Engineer.

10. A copy of the storm water plan shall be available at the job site when land development or land disturbing activities are in progress.
 11. The permittee shall inspect, or cause to be inspected, 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. The permittee shall 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.
 12. That permittee shall comply with the floodplain zoning standards in Ch. 22 of the Municipal Code if the land development or land disturbing activity is in an identified flood hazard area on the Official Map.
 13. If so directed by the City Engineer, the permit holder shall repair, at the permit holder's own expense, all damage to adjoining properties, municipal facilities and storm water drainage systems caused by storm water runoff. This shall occur where such damage is caused by activities not in compliance with the approved storm water plan.
 14. The permit holder shall allow the City Engineer access to the property for the purpose of inspecting the property for compliance with the approved storm water plan and this permit.
 15. If an approved storm water plan involves changes in direction of runoff, changes the post-development hydrology, increases the peak rate and/or total volume of runoff, the sediment loading and/or thermal pollution from a site, the City Engineer may require the permittee to make appropriate legal arrangements with adjacent property owners concerning the prevention of endangerment to property or public safety.
 16. The permit holder is subject to the enforceable actions of this ordinance if the permit holder fails to comply with the terms of this permit.
- F. PERMIT DURATION.** Permits issued under this section shall be valid for 180 days from the date of issuance, except as provided in Items (1) and (2).
1. If the City Engineer has notified the permit holder that all storm water practices have passed the final inspection as required under this ordinance, then the permit expires upon notification by the City Engineer.
 2. The City Engineer may extend an existing permit if continuous progress is being made by the applicant towards completion of storm water practices.
- G. APPEALS.** Appeals shall be made in the form of a written document to the Board of Appeals. Upon receipt of the appeal, the Board of Appeals shall:

1. Hear and decide appeals where it is alleged that there is error in any order, requirement, decision or determination made by the City Engineer in administering this chapter.
2. In the appeal of specific cases, the board may authorize variances from the terms of this chapter, remaining within the public interest, where owing to special conditions a literal enforcement of the provisions of this chapter will result in practical difficulty or unnecessary hardship. This shall be done in a manner such that the spirit of this chapter shall be observed, public safety and welfare secured and substantial justice done.
3. The rules, procedures, duties and powers of the Board of Appeals shall apply to this chapter.

12.16.060 MAINTENANCE AND MONITORING AGREEMENTS

- A. MAINTENANCE AND MONITORING AGREEMENT REQUIRED.** The maintenance and monitoring agreement required for storm water management practices under this ordinance shall be an agreement between the City and the permittee to provide for both short term and long term maintenance and monitoring of storm water management practices. These documents will be drafted by the City and must be signed by the owner of the property.
1. The Short-Term Maintenance and Monitoring Agreement shall provide for maintenance and monitoring of storm water management practices necessary to maintain temporary drainage and erosion control measures and to establish permanent drainage and erosion control measures. Short-term maintenance provisions are generally those activities that occur during the construction phase and do not continue in perpetuity. This agreement shall be signed prior to approval of the storm water management permit.
 2. The Long-Term Maintenance and Monitoring Agreement may provide for maintenance and monitoring of storm water practices that continue in perpetuity. Such long-term maintenance will be required where the storm water practice serves an individual landowner or organized group of landowners. Agreements with long-term maintenance provisions shall be recorded with the County Registrar of Deeds so that they are binding upon all subsequent owners of land served by the storm water management practices. This agreement is typically for private storm water facilities and must be completed, signed (by the owner), and notarized before an occupancy permit will be granted.

- B. MONITORING REQUIREMENTS.** Storm water facilities shall be monitored in accordance with the storm water plan, the conditions of the permit and the Maintenance and Monitoring Agreements. Monitoring shall verify whether or not the practice is functioning as designed. Monitoring may include, but is not limited to, quality, temperature and quantity of runoff. See Section 5, Part 5, Permit Conditions, for specific maintenance and monitoring requirements.
- C. AGREEMENT PROVISIONS.** The Maintenance and Monitoring Agreements (both long-term and short-term) shall contain, but are not limited to, the following information and provisions:
1. Identification of the storm water facilities.
 2. A schedule for regular maintenance and monitoring of each aspect of the storm water management system that is consistent with the storm water plan.
 3. Identification of the landowner(s), organization, or municipality responsible for short-term or long-term, as applicable, maintenance and monitoring of the storm water practices.
 4. Commit the landowner(s), organization, or municipality to maintain and monitor storm water practices in accordance with the schedule included in the agreement.
- D. ADMINISTRATION.** The City Engineer is authorized to enforce the maintenance and monitoring agreements.
1. The City Engineer is authorized to access the property to conduct inspections and monitor the storm water practices as necessary to ascertain that the practices are being maintained and operated in accordance with the agreement.
 2. The City Engineer shall maintain public records of the results of the site inspections, inform the landowner responsible for maintenance of the inspection results, and specifically indicate any corrective actions required to bring the storm water management practice(s) into proper working condition.
 3. If the City Engineer notifies the party designated under the Maintenance and Monitoring Agreement of maintenance or monitoring problems that require correction, the City Engineer shall take the specific actions to correct the problem within a reasonable time frame.
 4. The City Engineer is authorized to perform the corrective actions identified in the inspection report if the landowner does not make the required corrections in the specified time period. The City Engineer shall initiate proceedings to impose the cost as a special assessment or charge against the property pursuant to §66.0627 or §66.0703 Wis. Stats. or to charge the cost against the financial guarantee posed under this ordinance.

12.16.070 PERFORMANCE STANDARDS

Unless the City Engineer gives prior written authorization, the methods in conformance with the Technical Standards shall be followed.

A. GENERAL REQUIREMENTS FOR STORM WATER MANAGEMENT MEASURES.
The following shall be observed in managing storm water runoff:

1. The applicant may attend a pre-application meeting with the City before any data will be accepted. The purpose of the meeting is to specifically address required approvals and permits, and applicable technical standards.
2. 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 ordinance.
3. Emergency overland flow for all storm water facilities shall be provided during and after construction to prevent exceeding the safe capacity of downstream drainage facilities and to prevent endangerment of downstream property or public safety.
4. Water quality facilities are required for all developments unless a development is part of a City-approved regional pond drainage area.
5. All hydrologic data shall be submitted to the City Engineer. Data shall be obtained using NRCS methodology including, but not limited to, HydroCAD or TR20/TR55 as defined by the NRCS.
6. Hydrologic analysis shall be based on NRCS methods using a Type II storm distribution, 24-hour duration, and average soil moisture conditions (AMC-2), as defined by the NRCS.
7. Hydraulic calculations will be accepted in the Rational Method format or in commonly used software packages such as FHWA HV-8, Eagle Point or XP-SWMM.
8. When runoff from an upstream property passes through a downstream property, and it is desirable in the opinion of the City Engineer to oversize a pond or conveyance system to serve increased runoff from predicted development of adjacent properties, the cost of over sizing the facility shall be determined by the City Engineer, and assessed in accordance with State Law and the Municipal Code.
9. 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 storm drain inlet structures from receiving sediment.

10. 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.

B. PEAK DISCHARGE RATE AND VOLUME. By design, BMPs shall be employed to meet the following performance standards.

- 1.** For a 1.5-inch rainfall event, the proposed post-development runoff volume must not exceed the runoff volume for pre-development land use conditions.
- 2.** For the 1-year, 2-year, 10-year and 100-year rainfall events: the post-development peak flow rate shall not exceed the peak flow rate for pre-development land use conditions. Rate control shall be provided at each location water is leaving the site.
- 3.** Pre-development conditions shall assume “good hydrologic conditions” for appropriate land covers as identified in TR-55 or an equivalent methodology. The meanings of “hydrologic soil group” and “runoff curve number” are as determined in TR-55. However, when pre-development land cover is cropland, grassland or woodland, rather than using TR-55 values, the runoff curve numbers in Table 1 shall be used.

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

C. INFILTRATION PRACTICES. BMPs shall be designed, installed, and maintained to infiltrate runoff to meet the runoff rate and volume requirements where Hydrologic Group A or B soils exist.

- 1.** Where infiltration practices will be used, the location, surface area, depth, soil types (hydrologic group) and infiltration rate and volume computations shall be submitted to the City Engineer.

2. Pre-development conditions shall be the same as in par. B.(3) above.
3. Before infiltrating runoff, pretreatment shall be required for parking lot runoff and for runoff from new road construction in commercial, industrial and institutional areas that will enter an infiltration system. The pretreatment shall be designed to protect the infiltration system from clogging prior to scheduled maintenance and to protect groundwater quality. Pretreatment options may include, but are not limited to, oil/grease separation, sedimentation, biofiltration, filtration, swales or filter strips.
4. Exclusions. The runoff from the following areas are prohibited from meeting the requirements of this paragraph:
 - a. Areas associated with tier 1 industrial facilities identified in s. NR 216.21(2)(a), Wis. Adm. Code, including storage, loading, rooftop and parking.
 - b. Storage and loading areas of tier 2 industrial facilities identified in s. NR 216.21(2)(b), Wis. Adm. Code.
 - c. Fueling and vehicle maintenance areas.
 - d. Areas within 1000 feet up gradient or within 100 feet down gradient of karst features.
 - e. 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. This subd 4.e. does not prohibit surface infiltration of roof runoff and subsurface infiltration shall only be required to maintain a minimum of 1 foot separation.
 - f. Areas with runoff from industrial, commercial and institutional parking lots and roads as well as 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.
 - g. Areas within 400 feet of a community water system well as specified in s. NR 811.16(4), Wis. Adm. Code, or within 100 feet of a private well as specified in s. NR 812.08(4), Wis. Adm. Code, for runoff infiltrated from commercial, industrial and institutional land uses or regional devices for residential development.
 - h. Areas where contaminants of concern, as defined in s. NR 720.03(2), Wis. Adm. Code is present in the soil through which infiltration will occur.

12.16.080 FINANCIAL GUARANTEE

A. ESTABLISHMENT OF THE GUARANTEE. The City Engineer shall require the submittal of a financial guarantee, the form and type of which shall be acceptable to the City Engineer. The purpose of the financial guarantee is to ensure compliance with this ordinance, including proper “closure” on the project.

1. The amount of the financial guarantee shall be as follows:
Site disturbed area = 0-5 acres: \$5,000
Site disturbed area = 5.1-15 acres: \$10,000
Site disturbed area > 15 acres: amount set by City Engineer

City Engineer has the option to waive the Financial Guarantee for sites adding less than 2000 square feet of impervious.

2. The financial guarantee shall give the City Engineer the authorization to use the funds to complete the project, install erosion control practices or complete the engineer certification and as-built drawings.
3. A financial guarantee will not be required for projects with public improvements, where a letter of credit is required for 125% of the public improvements.
4. A financial guarantee will not be required for projects that are only required to comply with the erosion control portions of this ordinance.

B. CONDITIONS FOR RELEASE. Conditions for the release of the financial guarantee are as follows:

1. *Engineer Certification.* To ensure proper installation of storm water management practices in accordance with approved plans and calculations, the City requires that a professional engineer, licensed in Wisconsin, oversees and certifies construction. The engineer shall submit a signed and stamped certification that he/she has successfully completed site inspections and that construction of all storm water management practices was according to the approved plans and these practices are functioning as intended.

2. *Submission of record plans.* These plans shall show actual surveyed locations and elevations of key features of the storm water facility, such as pipe size, material and invert elevations, berms, spillways, pond elevations (bottom, safety shelf, high water level, and overflow), emergency overflow elevations, and any other items deemed necessary by the City to determine compliance. For privately maintained facilities these plans shall be provided in CAD and PDF format. For publically maintained facilities, these plans shall be provided in CAD, PDF and on Mylar. Additional information about record plans can be found in section A7.1 of the City's Storm Water Management Standards. Record plans shall be stamped and signed by a registered land surveyor or an engineer licensed in the State of Wisconsin and must contain the following statement: "I hereby certify that, to the best of my knowledge and in accordance with applicable standards, the surveying data presented in this document reflects as-built locations and elevations for the storm water management facilities shown."
3. *Maintenance Agreement.* For privately maintained facilities, a long term maintenance and monitoring agreement, as described in section 12.16.060(2), shall be submitted and recorded with the Register of Deeds.
4. *Stabilization of the site.* The site shall be vegetated and stabilized and erosion control devices shall be removed. If final stabilization cannot occur until the following growing season, the financial guarantee will be held until that time.

12.16.090 COMPLIANCE ENFORCEMENT

- A. Any land development or land disturbing activity 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 said provisions.
- B. The City Engineer shall investigate and take action on all complaints made in regard to the application of this chapter. The City Engineer is authorized to enter upon any public or private lands affected by this chapter to inspect the land both prior to permit issuance for the purpose of determining whether to approve the plan and also after permit issuance to determine compliance with this chapter. If permission to enter is denied prior to permit issuance the land development or land-disturbing activity that is the subject of the permit shall not occur. Following permit issuance, if permission cannot be received from the land occupier or land user, entry by the City Engineer shall be according to §66.0119, Wis. Stats.
- C. The City Engineer shall notify the responsible owner or operator by personal service or certified mail of any non-complying land development or land disturbing 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.

- D.** Upon receipt of written notification from the City Engineer, the permit holder shall correct work that does not comply with the storm water plan or other provisions of the permit. The permit holder shall make corrections as necessary to meet the specifications and schedule set forth by the City Engineer in the notice. This provision also applies to land development or land disturbing activities that commenced under the approval process provided herein without obtaining a permit.
- E.** The City Engineer may revoke a permit issued under this ordinance for non-compliance with ordinance provisions. Any such revocation shall be subject to the provisions of Chapter 68, Wis. Stats. Any permit granted under this chapter may be revoked if the holder of the permit has misrepresented any material fact in the permit application or plan; or has failed to comply with the plan as originally approved or as modified in writing subsequently by the City Engineer; has violated any provision of this chapter; or has violated any of the other conditions of the permit as issued to the applicant.
- F.** Any permit revocation, stop work order, or cease and desist order shall remain in effect unless retracted by the Board of Appeals, the City Engineer or by a court of competent jurisdiction.
- G.** The City Engineer is authorized to post a stop-work order upon any land development or land disturbing activity in violation of this ordinance. The City Engineer shall supply a copy of each stop-work order to the City Attorney. In lieu of the stop-work order, the City Engineer may issue a written cease and desist order to any land occupier or land user whose activity is in violation of this ordinance. These orders shall specify that the activity must be ceased or brought into compliance with the ordinance within 48 hours. Any such stop-work order or cease and desist order shall be subject to Chapter 68, Wis. Stats.
- H.** Any person, firm, association or corporation who does not comply with the provisions of this ordinance shall be subject to a forfeiture of not less than \$10 dollars or more than \$200 dollars per offense, based on the severity of the violation and/or the potential impact to the receiving water. These forfeitures are in addition to the costs of prosecution. Each day that the violation exists shall constitute a separate offense.
- I.** Every violation of this ordinance is a public nuisance. To the extent permitted by law, compliance with this ordinance may be enforced by injunction pursuant to Wis. Stats. §62.23(8) in so far as the same are applicable.

- J.** When the City Engineer determines that the holder of a permit issued pursuant to this ordinance has failed to follow practices set forth in the technical standards or has failed to comply with schedules set forth in said storm water plan, the City Engineer, or a party designated by the City Engineer may enter upon the land and perform the work or other operations necessary to bring the condition of said lands into conformance with requirements of the approved plan. The City Engineer shall keep a detailed accounting of all costs and expenses of performing such work. These costs and expenses shall be deducted from the financial guarantee posted with 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 imposed as a special assessment or charge pursuant to §66.0627 or §66.0703, Wis. Stats., as set forth in Section 4.5.g.

12.16.100 SEVERABILITY

If a court of competent jurisdiction judges 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.

12.16.110 EFFECTIVE DATE

This ordinance shall be in force and effect from and after its adoption and publication. The above and foregoing ordinance was duly adopted by the City Council of the City of River Falls on the _____ day of _____, 2016.

Approved: _____
Attested: _____
Published: _____