

CHAPTER 161

POST-CONSTRUCTION STORM WATER RUNOFF CONTROL

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161.01 PURPOSE. It is the purpose of this chapter to:

1. Protect, maintain, and enhance the environment of the City and the public health, safety, and general welfare of the public by adopting as the City's standards, the guidelines established in the *Iowa Storm Water Management Manual* (hereinafter referred to as the "standards") to manage the storm water runoff to improve water quality and control the maximum rate of flow to prevent downstream flooding; and
2. Enable the City to comply with the National Pollution Discharge Elimination System Permit (NPDES) and applicable statutes and regulations for storm water runoff through the following objectives:
 - A. Minimize increases in storm water runoff from development within the City limits and fringe area in order to reduce flooding, siltation, increases in stream temperature, and stream bank erosion and maintain the integrity of stream channels;
 - B. Minimize increases in nonpoint pollution caused by storm water runoff from development which would otherwise degrade local water quality;
 - C. Minimize the total annual volume of surface water runoff which flows from any specific development project site after completion, to not exceed the pre-development hydrologic regime to the maximum extent practicable; and
 - D. Reduce storm water runoff rates and volumes, soil erosion and nonpoint source pollution, whenever possible, through establishment of appropriate minimum storm water management standards and best management practices (BMPs) and to ensure that BMPs are maintained and pose no threat to public safety.

161.02 FINDINGS OF FACT.

1. The United States Environmental Agency's (EPA) National Pollutant Discharge Elimination System (NPDES) permit program administered by the Iowa Department of Natural Resources (IDNR) requires that cities meeting certain demographic and environmental criteria obtain from the IDNR an NPDES permit for

the discharge of storm water from a Municipal Separate Storm Sewer System (MS4) Permit. The City is subject to the NPDES permit program.

2. Land development and associated increases in impervious cover alter the hydrologic response of local watersheds and increase storm water runoff rates and volumes, flooding, stream channel erosion, and sediment transport and deposition; this storm water runoff contributes to increased quantities of waterborne pollutants, and storm water runoff, soil erosion, and nonpoint source pollution can be controlled and minimized through the regulation of storm water runoff from development sites.

3. Therefore, the City establishes this set of City storm water standards applicable to all surface water to provide for reasonable guidance for the regulation of storm water runoff for the purpose of protecting local water resources from degradation. It is determined that the regulation of storm water runoff discharges from land development and other construction activities in order to control and minimize erosion, and nonpoint source pollution associated with storm water runoff, is in the public interest and will prevent threats to public safety and welfare.

4. The determination of appropriate minimum storm water management standards and the development of effective best management practices to achieve those standards require technical expertise that may not always be readily available with the City's own staff. Moreover, it is important that such standards and BMPs be reasonably consistent across the State so that property owners and developers are not confronted with myriad variations depending upon the location of the development. The *Iowa Storm Water Management Manual*, published collaboratively by the Iowa Department of Natural Resources and the Center for Transportation Research and Education at Iowa State University established guidelines consisting of unified sizing criteria, storm water management designs and specifications, and BMPs. The City hereby finds and declares that the *Iowa Storm Water Management Manual* and future editions thereof, should be and is hereby adopted as the storm water management standards of the City. Any BMP installation that complies with the provisions of the *Iowa Storm Water Management Manual* or future editions thereof, at the time of installation for the BMP will be deemed to have been installed in accordance with this chapter.

161.03 APPLICABILITY.

1. This chapter is applicable to all land-disturbing activities greater than one acre or part of a larger common plan of development. In addition, this chapter also applies to all applications for site plans or subdivisions that are less than one acre, and are commercial, industrial or multi-family residential uses as defined by the Tiffin Zoning Code, unless requirements of this chapter have been met through approved use of an off-site location.

2. Any development within a preliminary or final plat approved prior to the adoption of this chapter will be deemed exempt from the requirements of this chapter. Re-subdivision of lots within an approved platted area and amendments to plats approved prior to the adoption of this chapter must conform to this chapter, unless determined by the City to be minor in nature.

3. For developments where the runoff from up to and including the 100-year storm event can be conveyed directly to local creeks without adverse impact to intervening property, no overbank flood protection control is required. In this case, the developer must show by hydrograph analysis that the runoff from the development

will arrive at local creeks sufficiently ahead of the peak flow of the local creeks so as not to increase the peak flow of said creeks. Water quality volume quality, channel protection volume, and treatment are not exempt.

4. The following activities are exempt from this chapter:
 - A. Any logging or agricultural activity which is consistent with an approved soil conservation plan or a timber management plan approved by an appropriate agency.
 - B. Additions or modifications to single family homes.
 - C. Repairs to any storm water BMPs deemed necessary by the City.

161.04 . DEFINITIONS. The following definitions apply in this chapter. References to "sections" means references to sections in this chapter unless otherwise specified. Defined terms remain the same whether capitalized or not capitalized.

1. "Applicant" means any individual, firm, corporation, association, partnership, limited liability company, or any other business entity or proprietor of land that will perform land-disturbing activity.
2. "Best management practices" (BMPs) means physical, structural, and, or managerial practices that, when used singly or in combination, control activities, including (but not limited to) site runoff, spillage and leaks, and waste disposal, and prevent or reduce the discharge of pollutants directly or indirectly to the waters of the United States. BMPs may include schedules of activities, prohibition of practices, design standards, educational activities, and treatment requirements.
3. "Building" means any structure, either temporary or permanent, having walls and a roof, designed for the shelter of any person, animal, or property occupying over 100 square feet.
4. "Building permit" means a permit issued pursuant to the Code of Ordinances.
5. "Channel protection storage volume" means providing 24-hour extended detention of the one-year 24-hour storm event. If channel protection and water quality volumes share a common extended detention facility and outlet structure, water quality volume may be included in the channel protection volume.
6. "City storm water standards" means the guidelines provided for in the *Iowa Storm Water Management Manual* and this chapter as amended. When conflict occurs between the *Iowa Storm Water Management Manual* and this chapter, requirements of this chapter will apply.
7. "Dedication" means the deliberate appropriation of property by its owner for general public use.
8. "Developer" means a person who undertakes land-disturbing activities.
9. "Development" means either:
 - A. Land-disturbing activity one acre or greater, or which is part of a larger common plan of development; or
 - B. Any land-disturbing activity for any commercial, industrial, or multi-family residential use as defined by the City of Tiffin Zoning Code.

10. "Drainage easement" means a legal right granted by a landowner, to a grantee for the purposes of allowing use of private land for storm water management purposes.
11. "*Iowa Storm Water Management Manual*" means the manual collaboratively developed by the Iowa Department of Natural Resources (IDNR) and the Center for Transportation Research and Education (CTRE) at Iowa State University that contains the sizing criteria, design and specification guidelines, and BMPs that address storm water quality and quality management.
12. "Land-disturbing activity" means any activity that results in a movement of earth or a change in the existing soil cover (both vegetative and non-vegetative) or the existing topography. Land-disturbing activity includes, but is not limited to, clearing, grading, filling, excavation or addition or replacement of impervious surface.
13. "Landowner" means the legal or beneficial owner of land, including those holding the right to purchase or lease the land, or any other person holding proprietary rights in the land.
14. "Maintenance agreement" means a legally recorded document that acts as a property deed restriction, and which provides for the long-term maintenance of BMPs.
15. "Overbank flood protection volume" means providing discharge control such that the post-development 100-year storm event peak discharge does not exceed the five-year pre-development peak discharge. If channel protection, water quality, and overbank flood protection volumes share a common extended detention facility and outlet structure, water quality and channel protection volumes may be included in the overbank flood protection discharge control.
16. "Responsible person" means an individual identified in a permit issued by the City as the principal contact for communications regarding the permit.
17. "Storm water" means any surface flow, runoff, and drainage consisting entirely of water from any form of natural precipitation and resulting from such precipitation.
18. "Storm water management" means the use of BMPs that are designed in accordance with the City storm water standards to reduce storm water runoff pollutant loads, discharge volumes, peak flow discharge rates, and detrimental changes in stream temperature that affect water quality and habitat.
19. "Storm Water Pollution Protection Plan" (SWPPP), means a document which describes the best management practices and activities to be implemented by a person to identify sources of pollution or contamination at a site and the actions to eliminate or reduce pollutant discharges to storm water, storm water conveyance systems, and, or receiving waters of the United States to the maximum extent practicable.
20. "Storm water wet detention pond" means a constructed storm water detention basin that has a permanent pool of water. Minimum pool depth must be ten feet for at least 25% of the permanent pool area. Upon completion of the pond, the owner must stock the pond with appropriate bass, bluegill, and catfish combination. Owner may contact IDNR fisheries for fish stocking.
21. "Water quality volume" means the storage needed to capture and treat the runoff from 90% of the average annual rainfall. For purposes of this chapter, the design rainfall depth for determining water quality volume is 1.25 inches.

161.05 ADMINISTRATION. The City Administrator or designee will administer, implement, and enforce the provisions of this chapter. Any powers granted or duties imposed upon the City may be delegated by the City to persons or entities acting in the beneficial interest of or in the employ of the City.

161.06 CITY NOT LIABLE. Nothing contained in the chapter shall will be construed to create or form the basis of any liability on the part of the City, or its officers, employees, or agents for any injury or damage resulting from the failure of responsible parties to comply with the provisions of this chapter or by reason or in consequence of any inspection, notice, order, certificate, permission, or approval authorized or issued or done in connection with the implementation or enforcement of this chapter, or by reason of any action or inaction on the part of the City related in any manner to the enforcement of this chapter by its officers, employees or agents.

161.07 PERMIT REQUIRED. No landowner or developer will receive any construction runoff permit, building permit, provisional use permit, conditional use permit or special exception permit without first meeting the requirements of this chapter prior to commencing the proposed activity.

161.08 STORM WATER MANAGEMENT PLAN REQUIRED. No application for development subject to the provisions of this chapter will be accepted unless it includes a storm water management plan detailing in concept how runoff and associated water quality impacts resulting from the development will be controlled and managed.

161.09 STORM WATER MANAGEMENT PLAN REQUIREMENTS. The Storm Water Management Plan or each development subject to this chapter must:

1. Be prepared by a licensed professional engineer.
2. Indicate whether storm water will be managed on-site or off-site and, if on-site, the general location and type of BMPs, with clear citation to the *Iowa Storm Water Management Manual*.
3. Include a signed and dated certification under penalty of perjury by the preparer of the storm water management plan that it complies with all of the requirements of this chapter and the *Iowa Storm Water Management Manual*, meets the submittal requirements outlined in the *Iowa Storm Water Management Manual*, is designed to achieve the City storm water standards, and that the City is entitled to rely upon the certification as due diligence on the part of the City.
4. Include a scaled map indicating the location of existing and proposed buildings, roads, parking areas, utilities, structural storm water management and sediment and erosion BMPs.
5. Include a map showing the proposed land use with a tabulation of the percentage of surface areas to be adapted to various uses, drainage patterns, location of utilities, roads, and easements and the limits of clearing and grading.
6. Include a topographic base map, consisting of an appropriately scaled topographic base map of the site which extends an appropriate distance beyond the limits of the proposed development and indicates existing surface water drainage, including (but not limited to) streams, ponds, culverts, ditches and wetlands; current land use including all existing structures; location of utilities, roads and easements and significant natural and manmade features not otherwise shown.

7. Include hydrologic and hydraulic design calculations for the pre-development and post-development conditions for the design storms specified in the *Iowa Storm Water Management Manual*. Such calculations must include:
 - A. Description of the design storm frequency, intensity and duration;
 - B. Time of concentration;
 - C. Data on the increase in rate and volume of runoff for the design storms referenced in the *Iowa Storm Water Management Manual*;
 - D. Soil curve numbers or runoff coefficients;
 - E. Peak runoff rates and total volumes for each watershed area;
 - F. Culvert capacities;
 - G. Flow velocities; and
 - H. Documentation of sources for all computation methods and field test results.
8. Include a soils report, if a storm water BMP depends on the hydrologic properties of the soils. The soils report must be based on on-site boring or soil pit profiles.
9. Include a maintenance and repair plan for all storm water BMPs, including detailed maintenance and repair procedures to ensure their continued efficient function. These plans must identify the parts for components of a storm water BMP that need to be maintained and the equipment and skills or training necessary. Provisions for periodic review and evaluation of the effectiveness of the maintenance program and the need for revisions or additional maintenance procedures must be included in the plan.
10. Include a detailed landscaping plan for management of vegetation at the site after construction is finished, including the person responsible for the maintenance of vegetation at the site and what practices will be employed to ensure that adequate vegetation cover is preserved. The plan must be prepared by a qualified individual approved by the City, such as a registered landscape architect, wetland specialist, licensed engineer, landscape designer or by the soil and water conservation district.
11. Include proof of permanent recorded maintenance easements that will ensure access to all storm water BMPs at the site for the purpose of inspection and repair.
12. Include proof of permanent recorded maintenance agreements binding on all subsequent landowners served by storm water BMPs to ensure maintenance and repair in accordance with the specifications of this chapter.
13. Include copies of all other applicable environmental permits for the site.
14. Include any other information required by the City Engineer to ensure compliance with the requirements of this chapter.

161.10 COMPLIANCE REQUIRED. Each development subject to the requirements of this chapter will comply with the City's mandate to improve storm water quality and manage storm water quantity within the City. The developer is deemed to have complied with the City's mandate to improve storm water quality and manage storm water quantity if the development:

1. Treats the water quality volume resulting from a rainfall depth of 1.25 in accordance with the City storm water standards.
2. Provides channel protection storage volume and extended detention in accordance with the City storm water standards.
3. Provides overbank flood protection in accordance with the City storm water standards.
4. Provides an emergency overflow spillway (including one-foot freeboard) and designated overflow route for extreme rainfall events. The spillway must be designed for the 100-year event and assuming the initial outlet controls are completely blocked.
5. Provides storm water BMP facilities which are constructed and function in accordance with the approved design. The property owner or applicant must provide to the City an as-built plan detailing dimensions and elevations as well as certification that the approved facilities were installed and properly working. The as-built plan must be completed by an Iowa-licensed professional engineer and submitted to the City prior to the acceptance of any improvements or issuance of any certificates of occupancy.
6. Provides for all BMPs selected to be utilized in each development to be designed, constructed, and maintained as required by the City storm water standards.

161.11 MAINTENANCE AND REPAIR OF STORM WATER BMPS.

1. The landowner or developer of every site subject to the provisions of this chapter will be responsible for maintaining as-built storm water BMPs in an effective state as determined in the sole judgment of the City for 25 years after completion of construction.
2. Prior to the issuance of any permit for development involving any storm water BMP, the landowner or developer must execute a storm water management easement for each BMP in a form acceptable to the City. The easement will provide for access to the BMP by the City for periodic inspection. The easement must be recorded at the expense of the landowner or developer.
3. Prior to the issuance of any development permit, the landowner or developer must execute a storm water BMP maintenance agreement in a form acceptable to the City that requires the landowner or developer to inspect and maintain each storm water BMP for a period of 25 years. The Maintenance and Repair Agreement must include but is not limited to the following:
 - A. Sediment Forebay.
 - (1) Install depth marker and monitor sediment build-up. Monitor and remove sediment after accumulation of 33% of original depth.
 - (2) Remove trash and debris as needed.
 - (3) Inspect filter strip and re-seed or sod on a semi-annual basis.
 - (4) Based on inspection, plant an alternative grass species if the original grass cover has not been successfully established.
 - B. Pond.
 - (1) Prune and weed wildflower plantings as need. Inspect vegetation on a semi-annual basis. Corrective measures may include

replanting any bare patches where vegetation has been unsuccessful or removed.

(2) Inspect for damage to the embankment, repair undercut or eroded areas, mow side slopes and remove litter and debris.

(3) Monitor sediment accumulation in the facility and remove sediment when the pond volume has been reduced by 25%.

(4) Examine to ensure that the inlet and outlet devices are free of debris and operational.

C. Overflow Spillway.

(1) Mow grass and maintain a height of 3-4 inches.

(2) Inspect vegetation on a semi-annual basis and remove and replace if found dead or unhealthy.

(3) Inspect and correct grass alongside slopes for erosion and formation of rills, gullies, bank slumping and erosion.

(4) Remove sediment, grass, weeds and debris from erosion stone-rip-rap area on semi-annual basis.

In addition, the storm water BMP maintenance agreement must provide for assessment against all owners of property in the development should the storm water BMP not be maintained. In lieu of the assessment agreement, the landowner or developer may submit a maintenance bond for a period of 25 years.

4. In the event that the responsible party fails to maintain the storm water BMP, the City, upon 30 days written notice, may repair or cause to be repaired the storm water BMP to its proper working condition. After completion of the repair, the City will submit an invoice for the repair to the responsible party, who must pay said invoice within 30 days. In the event that the invoice is not paid, the City will either certify the amount to the County Treasurer for collection as contemplated in the storm water BMP maintenance agreement to be collected in the same manner as ordinary taxes. When applicable, the City may also commence proceedings against the surety for payment of the expenses.

161.12 ISSUANCE OF PERMIT. If the City Engineer or designee deems that the storm water management plan meets the requirements of this chapter, the City Engineer or designee will notify the appropriate City officials that appropriate development permits may be issued. However, this action by the City Engineer does not obviate the developer from any of the additional requirements in this Code of Ordinances for the construction of a development.

161.13 DENIAL OF PERMIT. The City may reject a storm water management plan that the City Engineer believes does not meet the requirements of this chapter. If a permit is denied, the City or designee must state the reason for the denial in writing and return the application to the applicant.

161.14 RIGHT OF ENTRY. The City Engineer or other duly authorized employees or contractors of the City, bearing proper credentials and identification, must be permitted to enter all properties for the purposes of inspection, observation, and monitoring compliance with the provisions of this chapter.

161.15 REQUIRED INSPECTIONS FOR STORM WATER BMPS. The City must, on occasion, as determined by the City Engineer, inspect each storm water BMP to ensure that the storm water BMP is working properly to achieve the goals of this chapter. In the event a storm water BMP is not working correctly, the City must notify the landowner per Section 161.11 of this chapter.

161.16 STOP WORK ORDER. When the City determines that any land-disturbing activity regulated by this chapter is being performed in a manner contrary to the provisions of this chapter, the City Engineer is authorized to issue a stop work order.

1. The stop work order must be in writing and will be served upon the owner of the site, responsible person, or to the person violating the requirements of this chapter. The stop work order must state the reason for the order and the conditions to be corrected prior to the lining of the stop work order.
2. Any person who continues any work after being served a stop work order, except such work as that person is ordered to perform to remove a violation or unsafe condition will be in violation of this chapter.

161.17 FEES.

1. Prior to the approval of the storm water management plan, the applicant must submit an application fee as adopted by resolution of the City Council.
2. The fees for review and inspection will be adopted by resolution of the City Council.

161.18 NOTICE OF VIOLATION; ADMINISTRATIVE PENALTIES. The City is hereby authorized to issue municipal infractions, in accordance with Chapter 364.22 of the *Code of Iowa*, to any person who violates a provision of this chapter; however, if the City determines that immediate enforcement action is necessary to achieve compliance with the requirements of this chapter, then the City may proceed under Section 161.20 below.

161.19 MISDEMEANOR AND MUNICIPAL INFRACTION PENALTIES.

1. Any person who fails to perform an act required by this chapter, or who commits an act prohibited by this chapter, or who resists the enforcement of any section of this chapter, will be guilty of a simple misdemeanor punishable by a fine or imprisonment as provided in the Code of Ordinances and the *Code of Iowa*.
2. Any person who fails to perform an act required by this chapter, or who commits an act prohibited by this chapter, or who resists the enforcement of any section of this chapter will be deemed to have committed a municipal infraction in accordance with Chapter 3 of the Code of Ordinances.

161.20 NUISANCE. Any violation of this chapter will be deemed to be a public nuisance injurious to the public health, safety, and welfare. The City Attorney, in addition to the penalties in Sections 161.18 and 161.19 may correct said violation as a nuisance pursuant to Chapter 50 of this Code of Ordinances.

161.21 REMEDIES NOT EXCLUSIVE. The remedies provided in the chapter and otherwise in the Code of Ordinances are not exclusive, or in lieu of the rights and remedies that the City may have at law or in equity.

161.22 APPEALS. Appeals will be heard by the Planning and Zoning Commission following their procedures.

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