

## CHAPTER 157

### STORM WATER MANAGEMENT

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**157.01 PURPOSE.** The purpose of this chapter is to provide comprehensive management and control of storm water runoff in an environmentally sound, safe and economical manner such that only minor inconvenience is experienced by the people and property within the City and its two-mile extraterritorial jurisdiction.

**157.02 DEFINITIONS.** Unless specifically defined below, words or phrases used in this chapter shall be defined in accordance with the definitions in Chapter 160 (Flood Plain Regulations) and of Chapter 166 (Subdivision Regulations). Words or phrases not defined below or in said chapters shall be interpreted so as to give them the meaning they have in common usage and to give this chapter it's most reasonable application.

1. "Capacity" (of a storm water facility) means the maximum volume or rate of conveyance available in a storm water management facility, including freeboard, to store or convey storm water without damage to public or private property.
2. "Channel" means a natural or manmade open watercourse with definite bed and banks which periodically or continuously contains moving water; or which forms a link between two bodies of water.
3. "City Engineer" means the City Engineer of the City or his/her designated representative.
4. "Civil Engineer" means a professional engineer licensed in the State of Iowa to practice in the field of civil works.
5. "Comprehensive Plan" means the plan or series of plans prepared by the City or by the Linn County Regional Planning Commission to guide the development and redevelopment of the City and the surrounding area. Such a comprehensive plan may include a Major Street Plan, Land Use Policy Plan, Open Space Plan, and other applicable plans available through the Department of Planning and Zoning Commission.

6. "Compensatory storage" means an artificially excavated volume of storage within a floodplain used to balance the loss of natural flood storage capacity when artificial fill or structures are placed within the floodplain.
7. "Conduit" means any channel, pipe, sewer, or culvert used for the conveyance or movement of water, whether open or closed.
8. "Control structure" means part of a storm water management facility designed to regulate the storm water runoff release rate.
9. "Design Standards Manual" means the latest edition of the Metropolitan Area Engineering Design Standards as approved by the Council.
10. "Detention basin" means a storm water management facility designed, constructed or modified to restrict the flow of storm water to a prescribed maximum rate, and to concurrently detain the excess waters that accumulate behind the outlet.
11. "Detention storage" means the temporary detaining or storage of storm water in storage basin, on rooftops, in streets, parking lots, school yards, parks, open space, or other areas under predetermined and controlled conditions, with the rate of drainage there from regulated by appropriately installed devices.
12. "Development" means the change or improvement of any parcel of land for residential, commercial, industrial, institutional, recreational, or public utility purpose, said change or improvement to include but not be limited to erection of a new structure; expansion of an existing structure; construction of a new parking area; expansion of an existing parking area; or construction of a new access drive.
13. "Discharge" means the rate of outflow of water from any source.
14. "Drainage area" means an area of land contributing to storm water runoff.
15. "Drainage system" means the surface and sub-surface system for the removal of water from land, including both natural elements (streams, ponds, etc.) and manmade elements (ditches, channels, storm sewers, etc.).
16. "Dry bottom detention basin" means a basin designed to be completely drained after having provided its planned detention of runoff during a storm event.
17. "Five-year storm" means a rainfall of given intensity and duration having a twenty percent (20%) chance of occurring in any one year. This does not imply that it will occur only once in five (5) years, or having occurred, will not happen again for five (5) years.

18. "Hundred-year storm" means a rainfall of given intensity and duration having a one percent (1%) chance of occurring in any one year. This does not imply that it will occur only once in 100 years, or having occurred, will not happen again for 100 years.
19. "Hydrograph" means a graph showing, for a given point on a stream or conduit, the storm water runoff flow rate with respect to time.
20. "Overflow system" means the path taken by storm water runoff as a result of flows which exceed the capacity of the underground drainage system. This path may include streets, channels, drainage ways, or areas of sheet flows, and be located on public property or private property with an easement.
21. "Peak flow" means the maximum rate of flow of storm water at a given point in a channel or conduit resulting from a predetermined storm or flood.
22. "Pre-development runoff" means the volume and rate of flow of storm water discharged from a drainage area prior to a proposed development or other manmade action involving construction, excavation or fill that alters land or vegetation.
23. "Post-development runoff" means the volume and rate of flow of storm water discharged from a drainage area after a proposed development or other manmade action involving construction, excavation, or fill that alters land or vegetation is completed.
24. "Regional detention basin" means a retention basin shared by more than one development in order to improve the efficiency and effectiveness of storm water detention facilities throughout the City.
25. "Retention basin" means a structure or feature designed to retain storm water over a period of time, with its release being positively controlled over a longer period of time than in a detention basin
26. "Site" means a lot, parcel, or tract of land, or portion thereof, where development is occurring, or has occurred, and may, or may not, require additional permits.
27. "Storm sewer drainage system" means all natural or manmade facilities used in the conveyance of storm water runoff resulting from frequent storms within a drainage area to the final outlet. These facilities include, but are not limited to any of the following: open and closed conduits and appurtenant features, canals, channels, ditches, streams, swales, culverts, street gutters, and pumping stations.
28. "Storm water management plan" means computations, specifications and a site plan, certified by a Civil Engineer registered in the State of Iowa.

The storm water management plan includes materials, construction phasing, grading activities, and methods used for mitigation of increased storm water runoff from the site under the requirements set forth in the Design Standards Manual.

29. "Storm water runoff" means the waters derived from precipitation within a tributary drainage area that is not absorbed into the ground, but flows over the surface of the ground or collects in channels or conduits.

30. "Storm water runoff release rate" means the amount of storm water runoff discharged from dominant to subservient land.

31. "Storm water storage area" means an area designated to store excess storm water.

32. "Watercourse" means any natural or artificial stream, river, creek, channel, ditch, canal, conduit, culvert, drain, waterway, gully, ravine, street, roadway, swale, or wash in which water flows in a definite direction, either continuously or intermittently, and which has a definite channel, bed, or banks.

33. "Wetland" means any area where the soil is normally saturated with water and all lands identified as wetland on the National Wetlands Inventory published by the U.S. Fish and Wildlife Service.

34. "Wet bottom detention basin" means a basin designed to retain a permanent pool of storm water after having provided its planned detention of runoff during a storm event.

### **157.03 RELATED ORDINANCES.**

1. Supplemented Ordinances. The provisions of this chapter further supplement:

- A. Chapter 155 - Building Code.
- B. Chapter 160 – Flood Plain Regulations.
- C. Chapter 165 - Zoning Ordinance.
- D. Chapter 166 - Subdivision Ordinance.

2. Greater Restrictions. Where conditions imposed by any provision of this chapter are either more restrictive or less restrictive than comparable conditions imposed by any other provision of this chapter or any other law, ordinance, resolution, rule or regulation of any kind, the regulations which are more restrictive or which impose higher standards shall govern.

**157.04 EXEMPTIONS.** The following are exempt from the requirements of this chapter:

1. Agricultural use of land.
2. Emergencies posing an immediate danger to life or property, or substantial flood or fire hazards.
3. Areas within the public right-of-way
4. Areas deemed appropriate by the City Engineer.
5. Single family or two-family residential building permits.

**157.05 APPLICATION.** This chapter applies to any new single or two-family residential development having a gross aggregate area, including roads, utility rights-of-way, and any other dedicated lands of five or more acres; multiple-family residential developments of two or more acres; and commercial/ industrial developments of any size, subject to the following conditions:

1. Detention Storage Required. The City retains the right to require detention storage in all cases in which the proposed development will generate sufficient excess runoff from the design storm to adversely affect the carrying capacity of the receiving drainage system, detention basin, or watercourse.
2. Minimum Runoff Impact. New developments causing less than a ten (10) percent increase in runoff or generating less than 1 cubic foot per second (CFS)/acre runoff for the design storm shall not be required to provide detention storage, unless condition in subsection 1 is applicable.
3. Detention Basin Ownership. It is not the intent or the desire of the City to acquire ownership of land set aside for a storm water detention basin. At the discretion of the City, where a detention basin provides storm water attenuation for a substantial drainage area or in combination with surrounding area provides a recreational benefit to the community, the facilities may be deeded to the City and thereafter be publicly owned and maintained.

**157.06 PLAN SUBMITTAL.** A storm water management plan containing information regarding storm water drainage facilities set forth in this chapter must be submitted and approved by the City Engineer before:

1. Approvals of final plats.
2. Approval of Construction Drawings for public improvements.
3. Issuance of a building permits for new construction or relocation of a principal or accessory use or enlargement or extension of an existing use.
4. Approvals of any improvement that may reroute, deepen, narrow, enlarge, fill or in any way alter an existing storm water drainage system.

5. Issuance of a building permits for surfacing a parking lot containing four or more parking spaces.

It is the intent of this section is that the review of the storm water drainage be carried out simultaneously with the review of the request for a building permit or approval of construction drawings for public improvements. The site plan required under this chapter may be submitted in a form which will satisfy the site plan or platting requirements set forth in the Building Code and/or Zoning Ordinance.

#### **157.07 PLAN REQUIREMENTS.**

1. For purposes of obtaining approval of a Storm Water Management Plan, a plan for the site meeting the requirements established in the Design Standards Manual shall be submitted to the City Engineer for review and approval. All design criteria and plan details shall be in conformance with the Design Standards Manual.
2. Construction of storm water management facilities shall be in conformance with the approved Storm Water Management Plan for the site. As-built drawings of permanent detention facilities prepared by a professional engineer and showing substantial conformance to the approved Storm Water Management Plan, shall be submitted to the City with any request for approval of final plat or certificate of occupancy. Before starting on construction regulated by this chapter, the applicant shall comply with the requirements set forth in other applicable ordinances with respect to submission and approval of subdivision plats, plans of improvements, building permits, inspections, appeals and similar matters, as well as requirements of State statutes and the regulations of any Department of the State of Iowa.
3. The Storm Water Management Plan, including on-site storm water detention facilities, shall be reviewed and approved by the City Engineer prior to issuance of foundation permits, or building permits for the site. The improvements identified within the plan shall be constructed prior to the issuance of final certificates of occupancy. The requirements of this subsection may be deferred at the discretion of the City Engineer.
4. Storm water control measures shall be installed as soon as possible during the course of site development. A schedule of construction shall be submitted by the owner(s)/developer(s) prior to initiation of construction to the City.
5. All storm water drainage facilities which are not dedicated to the City shall have storm water detention and ingress/egress easements established. Such easements shall grant the City the authority to inspect

the facilities and, if needed, to bring the property into conformance to design requirements. The cost of bringing the facilities into conformance may be billed to the party responsible for maintaining the storm water facilities.

6. For privately owned and maintained storm water detention and/or conveyance facilities, the property owner shall be responsible for the following:
  - A. All future grading, repairs, and maintenance. Maintenance of the minimum storm water detention volume, as approved by the City Engineer.
  - B. Maintenance of the detention basin control structure(s) and discharge pipe(s) to insure the maximum theoretical storm water release rate, as approved by the City Engineer, is not increased.
  - C. Mowing and weed control requirements.
  - D. If the storm water drainage facilities serve more than one lot, a developer's agreement addressing the responsibility for maintenance of storm water detention areas and/or conveyance facilities shall be provided to the City for approval. For residential subdivisions, the preferred method for assigning this responsibility is through the creation of a homeowner's association with mandatory membership for all property owners. The developer's agreement shall be recorded after approval of the City Council.
7. No fill material, construction or alteration of buildings, obstructions, or other improvements on any area reserved for storm water detention purposes, shall be permitted unless approved by the City Council.
8. Any designs for any rooftop detention storage, parking lot storage, and detention storage in underground tanks, surface swales, oversized storm sewers, or other facilities shall be submitted to the City Engineer for approval.
9. Designs of detention facilities shall incorporate safety features; particularly at inlets, outlets, on steep slopes, and at any attractive wet bottom detention basins. These features shall include, but not limited to, fencing, hand rails, lighting, steps, grills, signs, and other protective or warning devices.
10. Upon determination that the storm water drainage facility improvements are not in compliance with these regulations, the City Engineer may issue an order to comply. The order shall describe the problem and specify a date whereby the work must be completed, and indicate the penalties to be assessed for further noncompliance.

11. Compliance with this chapter is achieved when the storm water drainage facilities have been implemented and certified by a professional engineer to be in substantial conformance with the approved Storm Water Management Plan, and as-built drawings of the storm water facilities have been approved by the City Engineer.

**157.08 WAIVER AND APPEAL.**

1. Higher Release Rate. The City Engineer may permit a higher storm water runoff release rate from a development than set forth in the Master Drainage Plan and/or Design Manual, provided the City Engineer determines that the proposed storm water runoff release rate:

- A. Will not adversely affect properties in the downstream portion of the drainage system.
- B. Will not adversely affect the drainage system or any watercourse.
- C. Will not adversely affect the environment.
- D. Will not be contrary to the purpose and general objectives of this chapter and will not adversely affect the public health, safety, and welfare.

The party requesting the higher release rate will be responsible to provide the City Engineer with all necessary information to demonstrate that the above is true.

2. Waiver to Requirements. An applicant may request a waiver from the requirements of this chapter and/or the Design Manual by submitting a written application to the City Engineer. This application shall identify the name of the developer and/or owner of the property, a description and drawing of the proposed development, the location of the proposed development and any other information requested by the City Engineer that is reasonably necessary to evaluate the proposed development. The City Engineer shall review the request and make a recommendation to the Planning and Zoning Commission. The Planning and Zoning Commission may grant a waiver if it is determined that as a result of the waiver of the development:

- A. It is not likely to adversely affect other properties.
- B. It is not likely to adversely affect the drainage system or any watercourse.
- C. It is not likely to adversely affect the environment.
- D. It is not likely to be contrary to the purpose and general objectives of this chapter and the public health, safety and welfare.



E. There are practical difficulties or unnecessary hardships in carrying out the strict letter of this chapter.

F. The effect of the application of this chapter would be arbitrary and unreasonable in this specific case.

This application with approval/denial and all stipulations will be retained at City Hall with other documents pertaining to the development as appropriate.

3. Appeals. Any person affected by a decision of the City Engineer given in connection with the administration or enforcement of this chapter may request and shall be granted a public meeting on the matter before the City Council. All requests for such public meeting shall be made in writing and shall contain the information set forth in subsection 2 of this section, plus such other information as may be required by the City Council. In addition, the City Council may request other information that is reasonably necessary to evaluate the request for appeal.

A. The City Council shall use the standards set forth in paragraphs A through F of subsection 2 of this section as criteria for evaluating appeals.

B. The applicant shall be notified in writing of the time and place of the meeting at least four (4) days prior to the meeting. At the meeting, the applicant and the City Engineer shall be given an opportunity to be heard and to show cause why any decision should be sustained, modified, withdrawn, or variance granted.

C. The City Council by a majority vote may sustain, modify, withdraw, or grant a waiver or variance on any decision of the City Engineer that is appealed.

D. The rules of procedure of the City Council shall govern the conduct of the meeting.

**157.09 EROSION CONTROL.** Storm water drainage facilities may not outlet onto undeveloped property unless adequate erosion control measures are taken to assure compliance with City and State erosion control regulations. Erosion resulting from such outlet may not exceed soil erosion limits established by law.

**157.10 MAINTENANCE.**

1. Owner Responsibility. The owner shall be responsible for all storm water drainage facilities not officially dedicated and accepted by the City.

A. The City shall notify the owner of a storm water drainage facility of the existence of a maintenance problem when the City has received a verified complaint or a field inspection report.

B. If after notice and a reasonable time, the owner fails to properly maintain the storm water drainage facility, the City may institute legal action to abate or enjoin the violation. The City may also authorize City employees to enter the storm water drainage facility to make it fully operative pursuant to City and State statute. The property owner may bear the costs of such action.

2. City Responsibility. The City shall be responsible for maintenance of land and storm water drainage facilities dedicated to the City.

### **157.11 FINANCING.**

1. Intent. It is the intent of this section to achieve the objectives of this chapter by:

A. Assuring compliance with the Master Drainage Plan and Design Manual in terms of storm water runoff flow rates, thereby protecting downstream properties.

B. Promoting equity in terms of the financial responsibility of owners developing either upstream or downstream properties.

2. Owner's Responsibilities. The owner and/or developer shall be responsible for:

A. Installation of all storm water drainage facilities.

B. Purchase of all storm sewer pipes and their construction materials.

C. Design of all storm water drainage facilities in accordance with the Master Drainage Plan and Design Manual.

D. Construction of all storm water storage areas, channels, swales, culverts, ditches, streets, and pumping stations and similar facilities.

E. Payment of drainage fee at time of final plat.

F. Certification that all drainage facilities are constructed in accordance with the approved Storm Water Management Plan.

3. City's Responsibilities. The City shall be responsible for:

A. Purchase of land designated for approved City-owned storm water storage areas. The land purchase price shall be established by independent appraisal of the fair market value of the subject parcel. The appraisal shall be obtained by the City and the cost of this appraisal shall be borne by the City.

(1) In the event of a dispute between the owner and the City as to the value of the property, a second independent appraisal shall be obtained. Both the owner and the City shall

have the opportunity to present evidence of this appraisal. The decision of this appraiser shall be considered the final administrative act within the City. The cost of this appraisal shall be borne equally by the owner and the City.

(2) To qualify for City acquisition, storm water storage areas shall:

- (a) Be part of an approved subdivision plat inside the corporate limits of the City.
- (b) Serve more than one lot.
- (c) Not be hard-surfaced.
- (d) Meet the design standards of the City.
- (e) Be inspected by the City.

4. Drainage Fee. The owner of all new subdivision final plats and all new planned development final development plans may be required to pay a storm water management fee prior to Council consideration of such final plat or final development plan. Such fee shall be established by resolution of the Council.

A. Such money shall be placed in a special fund to be used for the purpose of financing the City's responsibilities set forth in subsection 3 of this section. Such funds shall be segregated by the drainage basin in which subdivision or development is located.

B. Single-family residential subdivisions containing two lots or less are exempt from drainage fee provided the lots created by such subdivision are one acre or more in size.

5. Shared Responsibilities. The owner and the City shall share financial responsibility in the following instances:

A. Bridges and Culverts. The City shall be responsible for purchasing the materials for bridges and culverts needed as part of major streets as designated in the Comprehensive Plan when the design flow of the traversed waterway exceeds 50 cubic feet per second. The owner shall be responsible for construction and installation of bridges and culverts. The owner shall be completely responsible for bridges and culverts on streets not designed in the Comprehensive Plan except where the City enters into an agreement with the owner to construct such facilities. In such instances the costs shall be shared by the City and owner as mutually agreed by the two parties.

B. Over-Sized Storm Sewers. The owner shall be responsible for all cost to construct storm sewer adequate to convey storm water runoff from the proposed site and all existing off site tributary runoff. The City may request that proposed storm sewers be oversized to provide additional conveyance for future development of upstream offsite tributary areas. In such cases the City shall be responsible for all additional costs to increase the pipe size.

C. Channels. The use of open channels with or without improvements is available to developers. Cost participation by the City is subject to negotiation between the developer and the City at the time of platting.

### **157.12 SAVINGS CLAUSE.**

1. This chapter does not imply that site development will be free from storm water damage, nor shall it create liability on the part of the City for damages caused by unanticipated storms or storm sequences.
2. It is not intended that this chapter repeal, abrogate, or impair any statutory provision, administrative regulation, common law right, existing easement, express or implied, covenant or deed restriction controlling storm water. When this chapter imposes greater restrictions, however, the provisions of this chapter shall prevail.

**157.13 PENALTIES.** In the interpretation and application of this chapter, the provisions expressed herein shall be held to be the minimum requirements and shall be liberally constructed in favor of the City consistent with the purposes and guiding principles of this chapter. Any person who engages in development of a site within the area of jurisdiction of this chapter before meeting the requirements of this chapter shall be subject to one or more of the following:

1. A municipal infraction of this Code of Ordinances.
2. No foundation permits or building permits shall be issued for the property in question until the violations are corrected.
3. No permanent certificates of occupancy shall be issued for property in question until the violations are corrected. Any existing certificate of occupancy may be rescinded.