CHAPTER 156

STORM WATER MANAGEMENT

156.01  GOAL. The goal 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.

156.02  DEFINITIONS. Unless specifically defined below, words or phrases used in this chapter shall be defined in accordance with the definitions in Section 176.39 (Flood Plain Regulations) and of Chapter 175 (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 its most reasonable application.

1. “BMP” or “best management practice” means a practice or combination of practices that are the most effective and practicable (including technological, economic and institutional considerations) means of controlling point or nonpoint source pollutants at levels compatible with environmental quality goals.

2. “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.

3. “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.

4. “City Engineer” means the City Engineer of the City or his/her designated representative.

5. “Civil engineer” means a professional engineer licensed in the State of Iowa to practice in the field of civil works.

6. “Comprehensive Plan” means the plan or series of plans prepared by the City or by the Corridor Metropolitan Planning Organization 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 Development.

7. “Control structure” means part of a storm water management facility designed to regulate the storm water runoff release rate.

(Ord. 15-24 – Feb. 16 Supp.)

9. “Detention basin” means a storm water management facility designed, constructed or modified to provide short term storage of storm water runoff, which reduces the peak overflow to a rate less than the peak inflow.

10. “Development” means the improvement of land from its existing state or significant alteration.

11. “Drainage area” means an area of land contributing to storm water runoff.

12. “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.).

13. “First flush” means an initial rain event up to one inch (1") of accumulation that carries soil particles and pollutants from streets and parking lots into the storm sewer system and eventually depositing the pollutants into the streams or lakes.

14. “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.

15. “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.

16. “Hydrograph” means a graph showing, for a given point on a stream or conduit, the storm water runoff flow rate with respect to time.

17. “Infiltration” means the downward movement of water from the land surfaces into the soil profile.

18. “Infiltration basin” means a type of best management practice (BMP) that is used to manage storm water runoff, prevent flooding and downstream erosion, and improve water quality in an adjacent river, stream, lake or bay. It is essentially a shallow artificial pond that is designed to infiltrate storm water through permeable soils into the groundwater aquifer. Infiltration basins do not discharge to a surface water body under most storm conditions, but are designed with overflow structures (pipes, weirs, etc.) that operate during flood conditions.

19. “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.

20. “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.
21. “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.

22. “Retention basin” means a storm water management facility designed, constructed or modified to provide long-term storage of storm water runoff, which reduces the peak outflow during a specific rainfall event. This facility is typically designed to maintain a specific water elevation (privately owned).

23. “Riparian area” means a vegetated ecosystem along a water body through which energy, materials and water pass. Riparian areas characteristically have a high water table and are subject to periodic flooding.

24. “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.

25. “Storm sewer system” means facilities for the conveyance of storm water runoff, typically a series of conduits and appurtenances, to accommodate frequent storms, not generating large peak discharges. These facilities usually include conduits, street gutters and small swales.

26. “Storm water drainage system” means all manmade facilities and structures and all natural watercourses that are owned by the City, or that are within a drainage easement owned by the City, and that are used for collection, storage, treatment, and conveyances of storm water from any area, through any area. This includes without limitation all storm water facilities, canals, creeks, curb and gutter, dams, ditches, floodwalls, flumes, gulches, gullies, levees, ravines, siphons, streams and swales. For the purpose of illicit discharge regulation, any discharge to an area tributary to the storm water drainage system shall be treated as a discharge to the storm water drainage system.

27. “Storm water facilities” means anything built or used for the control of storm water, including without limitation catch basins, channels, culverts, detention basins, energy dissipation structures, inlets, manholes, outlets, pipes and other conduits, retention basins, and roadways and gutters.

28. “Storm Water Management Plan” or “SWMP” means a site plan, certified by a Civil Engineer, Landscape Architect, or Certified Inspector of Sediment and Erosion Control, including 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 Pollution Prevention Plan” means a document conforming to the requirements therefore contained in General Permit No. 2 and this chapter, prepared and certified by a design professional as defined herein.

30. “SWPPP” means Storm Water Pollution Prevention Plan.

31. “Storm water runoff” means the flow of water resulting from precipitation upon a surface area, not absorbed by the soil or plant material.

32. “Storm water runoff release rate” means the amount of storm water runoff discharged from dominant to subservient land.
33. “Storm water storage area” means an area designated to store excess storm water.

34. “Watercourse” means any stream, creek, reservoir, lake, pond, or natural or artificial drainage way.

35. “Wetlands” means lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. For purposes of this classification wetlands must have one or more of the following three attributes: (i) at least periodically, the land supports predominately hydrophytes; (ii) the substrate is predominately undrained hydric soil; and (iii) the substrate is non-soil and is saturated with water or covered by shallow water at some time during the growing season of the year. The Corp of Engineers have jurisdiction over wetlands determined to be of importance.

36. “Open loop geothermal heating/cooling system” means a heating/cooling system where water is extracted from a pond, lake, or well, circulated through a heat pump unit where the heat is extracted, then the water is discharged to a storm sewer or surface water drainage system. For the purpose of this chapter open loop geothermal heating/cooling systems using well re-injection do not apply.

156.03 RELATED ORDINANCES.

1. Supplemented Ordinances. The following chapters of this Code of Ordinances are hereby supplemented:
   
   A. Chapter 175 - Subdivision Ordinance.
   B. Chapter 176 - Zoning Ordinance
   C. Chapter 160 - Building Code.

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.

156.04 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. Land within flood plain areas as designated in the Federal Emergency Management Agency maps in effect at the time of development, except when associated with discharge sites related to open loop geothermal heating/cooling systems.

4. Areas deemed appropriate by the City Engineer.

156.05 APPLICATION.

1. The requirements of this chapter apply to all development within the City.
2. Storm water detention basins intended to serve single-family residential development shall be publicly owned and maintained (see Resolution 15436 and Resolution 17525), unless approved otherwise by the City Engineer.

3. Lots (other than single-family lots) with an overall area of one acre or more shall provide on-site storm water detention. Such lots with an overall area less than one acre and an impervious surface greater than 11,000 square feet (approximately ¼ acre) shall comply with one of the following, as approved by the City Engineer:
   A. Privately owned, on-site detention basin.
   B. Tributary to privately or publicly owned detention basin.

In some watersheds, on-site storm water detention may be required, at the discretion of the City Engineer, for said lots.

4. At the discretion of the City Engineer, if a detention basin serves other than single-family zoning districts and can provide storm water attenuation for a substantial drainage area, the facilities may be publicly owned and maintained.

156.06 SITE PLAN SUBMITTAL. A site plan containing information regarding storm water drainage facilities set forth in this chapter must be submitted and approved by the City Engineer before any person may:

1. Receive a building permit for new construction or relocation of a principal or accessory use or enlargement or extension of an existing use.
2. Reroute, deepen, narrow, enlarge, fill or in any way alter an existing storm water drainage system.
3. Pave a parking lot containing four or more parking spaces with hot mix asphalt (HMA) or portland cement concrete (PCC).
4. Install an open loop geothermal heating/cooling system.

156.07 STORM WATER MANAGEMENT REQUIREMENTS.

1. For purposes of obtaining approval of a Storm Water Management Plan, an Iowa Licensed Professional Engineer, certified Inspector of Sediment and Erosion Control, or Landscape Architect shall design storm water drainage facilities in conformance with SUDAS. Storm water drainage facilities shall be designed with appropriate BMP's such as detention and retention basins, grass swales, buffer strips, bio-retention and other similar types of infiltration basins and riparian areas, that will convey drainage through the property to one or more treatment areas such that no development shall cause downstream property owners, water courses, channels or conduits to receive storm water runoff from the proposed development site at a peak flow greater than that allowed by the standards in effect at the time of approval of the development.

(Ord. 15-24 – Feb. 16 Supp.)

2. In order to ensure that the storm water drainage facilities are constructed in accordance with the approved design, the property owner or applicant shall 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 shall be
completed by an Iowa licensed Professional Engineer, Surveyor, or Landscape Architect and submitted to the City prior to the acceptance of any improvements or issuance of a Certificate of Occupancy. At the discretion of the City, a property owner or applicant may satisfy the SWMP requirements by ensuring the conveyance of storm water discharge from the property to a regional public detention facility.

3. The Storm Water Management Plan, including on-site storm water detention facilities, shall be reviewed for the purpose of completing review of plans by the City Engineer prior to issuance of foundation permits, or building permits for the site. The improvements 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. For sites on which privately owned and maintained storm water detention and/or conveyance facilities are located, the property owner shall be responsible for the following:
   A. All future grading, repairs, and maintenance.
   B. Maintenance of the minimum storm water detention volume, as approved by the City Engineer.
   C. Maintenance of the detention basin control structure(s) and discharge pipe(s) to insure the maximum theoretical storm water release rate, as reviewed by the City Engineer, is not increased.

5. The property owner shall place no fill material, or erect any buildings, obstructions, or other improvements on the area reserved for storm water detention purposes, unless otherwise approved by the City Engineer.

6. The property owner shall, when required by the City Engineer, dedicate to the City, by instrument or final platting, any property on which public storm water detention basins will be located. Ingress-egress easements for maintenance of public facilities shall be provided prior to final site approval. Paved surface to basin is required if basin is not located adjacent to a public road.

7. All public storm sewers shall be dedicated to the City.

8. Upon determination that a site is not in compliance with the SWMP and/or DNR 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.

9. Except as provided in this chapter, no person shall engage in construction of storm water management facilities, unless a Storm Water Management Plan has been reviewed and approved by the City Engineer.

10. Compliance with this chapter is achieved when:
    A. The site plan has been approved.
    B. The approved storm water drainage facilities have been implemented and are demonstrably in conformance with the approved site plan and Design Manual.

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

12. 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.

13. At the direction of the City Council, during times of flooding or excessive storm water run-off, open loop geothermal heating/cooling system discharge may be required to be diverted or discontinued from storm sewer or surface water drainage systems.

14. At the direction of the City Council, open loop geothermal heating/cooling systems may be required to be modified to include a well re-injection system.

156.08 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 goal and general objectives of this chapter and will not adversely affect the public health, safety, and welfare.

2. Waiver to City Engineer. An applicant may request a waiver from the requirements of this chapter and/or the Design Manual by submitting an application in writing 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 may grant a waiver if he/she determines 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 goal 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.
3. Appeals to Building Board of 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 hearing on the matter before the Building Board of Appeals. All requests for such hearing 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 Building Board of Appeals. In addition, the Building Board of Appeals may request other information that is reasonably necessary to evaluate the request for appeal.

A. The Building Board of Appeals 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 Building Board of Appeals 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 Building Board of Appeals shall govern the conduct of the meeting.

156.09 EROSION CONTROL. Storm water drainage facilities may not outlet onto adjacent property unless downstream land has adequate means to convey runoff and 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 State law.

156.10 INSPECTION OF STORM WATER MANAGEMENT FEATURES.

1. The City Engineer, or his authorized representatives, shall establish and maintain a storm water inspection schedule that includes but is not limited to:

A. Routine inspections.

B. Random inspections.

C. Inspections based upon public complaint.

D. Inspections based upon notice of possible violations.

E. Inspection of areas identified as having a higher than typical detention requirement for sediment or pollutant exposure, such as construction sites, detention and retention basins.

F. Inspections of businesses or industries of a type associated with discharges that begin to discharge above acceptable tolerance limits set by local, state or federal water or sediment quality standards, or the National Pollutant Discharge Elimination System (NPDES) Phase II storm water permit and the Clean Air Act.

G. Joint inspections with other agencies inspecting per environmental or safety regulations as deemed necessary.
2. Inspections may include, but are not limited to the following:
   A. Evaluating the condition and current need for maintenance of storm water control features such as inlets, manholes, piping, detention and retention basins.
   B. Sampling discharges, surface water, ground water, sediment material or standing water in drainage control facilities as deemed necessary.
   C. Reviewing maintenance and repair records of storm water facilities.
   D. Verification that storm water facilities approved during construction plan review, such as detention basins, retention basins, piping and inlets are present and in good condition.

156.11 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. The City may provide maintenance for storm water storage areas serving more than one lot which have not been dedicated to the City. Such maintenance shall be subject to negotiation with the owner.

156.12 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 pipe 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. Acquisition of all applicable permits and submittal of said permits to the City for review.

G. Reconstruction of all downstream storm water drainage facilities determined to have inadequate capacity as affected by increased water flow due to open loop geothermal heating/cooling systems discharge.

H. Payment of application review fees set by City Council resolution at time of open loop geothermal heating/cooling system project site plan submittal.

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

A. Payment to the owner or developer of the difference in actual purchase price between all pipes larger than 36 inches in size to be installed in a development and the cost of a 36-inch pipe of the same material. The cost of installing the pipe is exclusively the responsibility of the owner or developer. Notwithstanding subsection 5 of this section, the owner shall be completely responsible for materials and construction of bridges and culverts on streets not designated in the transportation plan, unless the Council directly requires the extension on a non-major street across a drainage way necessitating the installation of a bridge or culvert, in which case the City financial responsibility shall be for the additional costs associated with the bridge or culvert but only to the extent that the costs exceed the costs of normal construction that would normally be borne by the owner.

B. 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) Be dedicated to the City.
(d) Not be hard-surfaced.
(e) Meet the design standards of the City.
(f) Be inspected by the City.

4. Drainage Fee. The owner of all new subdivision final plats and all new planned development final development plans shall 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.

B. Single-family residential subdivisions containing two lots or less are exempt from the 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 Transportation Plan. 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 designated in the Transportation Plan.

B. 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.

6. (Repealed by Ord. 11-04 – May 13 Supp.)

156.13 SUMP PUMP CONNECTIONS.

1. New Construction. All new construction of a principal use on a lot shall provide for connection of sump water discharge to a dedicated City drain tile or storm sewer whenever such drain tile or storm sewer is located immediately adjacent to such lot or located within twenty-five (25) feet thereof in the public right-of-way or a drainage easement.

2. Existing Development. Upon determination that a nuisance exists, the City Engineer is authorized to require a property owner to connect a sump water discharge hose or other device for storm water runoff to a dedicated City drain tile or storm sewer system, or surface drainage way or slope, provided such drain tile or storm sewer is located immediately adjacent to or located within twenty-five (25) thereof, in the public right-of-way or a drainage easement, of the property causing the nuisance.

156.14 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.

3. Responsibility. The failure of City officials to observe or foresee hazardous or unsightly conditions, or impose other or additional conditions or requirements, or to deny
or revoke permits or approvals, or to stop work in violation of this chapter shall not relieve
the property owners of the consequences of their actions or inactions or result in the City,
its officers or agents being liable therefore or on account thereof. Notwithstanding any
provisions of this chapter, every applicant bears final and complete responsibility for
compliance with the NPDES General Permit #2 and any other requirements of state or
federal law or administrative rule.

156.15 PENALTIES. 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. The standard penalty as provided in Section 1.06 of this Code of Ordinances or may
be cited for a municipal infraction under Chapter 4 of this Code of Ordinances or may be
subject to any other remedy allowed by law.

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.

4. 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.

A. Whenever the City Engineer finds such a nuisance exists, the City Engineer
shall cause notice to be served on the owner of the property causing the nuisance in
the same manner as provided in Chapter 50 of this Code of Ordinances.

B. In the event the person neglects or fails to abate the nuisance as directed by
the City Engineer, the City may cause the nuisance to be abated as provided in
Chapter 50. The City Engineer may also choose to institute proceedings under civil
enforcement as provided in this Code of Ordinances or municipal infractions as
provided in Chapter 4 of this Code of Ordinances.

C. Any person ordered to abate a nuisance may have a hearing and appeal as
provided under Chapter 50 of this Code of Ordinances.

(Ch. 156 - Ord. 10-30 – Nov. 10 Supp.)