

CHAPTER 425: STORMWATER AND EROSION CONTROL

SECTION 425.010: INTENT AND PURPOSE

This Chapter seeks to provide those standards, criteria, procedures and controls necessary to minimize the harmful physical and economic effects of erosion and flooding from stormwater within or directed toward the City of De Soto. This is to be accomplished through the requirement of special measures to mitigate erosion both during and after development and the retention and controlled discharge of the differential runoff from any property whereon any grading, excavation, filling, or other disturbance of the natural vegetation or any construction, erection or alteration of a building or structure is to be undertaken. (CC 1988 §24-65; Ord. No. 3457 §1, 5-21-01)

SECTION 425.020: DEFINITIONS

As used in this Chapter, the following terms shall have these prescribed meanings:

DEVELOPED PROPERTY: Any tract of land in the City of De Soto whereon any grading, excavation, filling, or other disturbance of the natural vegetation or any construction, erection or alteration of a building or structure has been undertaken.

PROPERTY: Any tract of land in the City of De Soto.

UNDEVELOPED PROPERTY: Any tract of land in the City of De Soto whereon neither grading, excavation, filling, or other disturbance of the natural vegetation nor any construction, erection or alteration of a building or structure has been undertaken. (CC 1988 §24-66; Ord. No. 3457 §1, 5-21-01)

SECTION 425.030: APPLICABILITY

A. *General*. An approved stormwater runoff control plan is required for all land development, subdivision and construction of buildings. Except as provided in Subsection (D) of this Section, it shall be unlawful for any person to develop or improve on any property within the City unless there is in force an approved stormwater runoff control plan issued as required under the provisions of this Chapter. The term "*property*", as used in this Section, shall be defined as any tract of land in the City of De Soto.

B. *Construction Or Alteration Of Buildings*. Except as provided below, it shall be unlawful for any person to construct any new building or structure or to enlarge or otherwise alter any existing building or structure on any property within the City in such manner as to change the land area covered by the building or structure unless there is in force an approved stormwater runoff control plan issued as required under the provisions herein.

Change Or Disturbance Of Terrain. Except as provided in Subsection (D) of this Section, it shall be unlawful for any person to clear, grade, excavate, fill, remove topsoil from or change the contour of any land in the City unless there is in force an approved stormwater runoff control plan issued under the provisions of this Chapter.

D. *Exceptions*. The provisions of this Section shall not apply to:

1. Any reconstruction, repair or alteration of any existing building or structure when no land, trees, shrubs, grass or other vegetation is to be disturbed, destroyed or removed.
2. Any undeveloped property of less than one (1) acre zoned in an "A-1", "R-1", "R-2" or single-family residential district.
3. Any already developed property zoned "A-1", "R-1", "R-2" or remaining in a single-family residential use.
4. The clearing, grading, excavation, filling, removing topsoil from or changing the contour of less than two thousand five hundred (2,500) square feet of land.
5. The planting, trimming, pruning or removal of trees, shrubs, grass, weeds, vegetation, ground cover or other plant material when such actions are incidental to and part of the normal maintenance of land and property in the City of De Soto.
6. In considering the applicability of these exceptions, the effective acreage for a project, development or subdivision not limited to a fractional part of the total concept. Rather, if a project is developed in phases or small plats, the total acreage of the project, development or subdivision will be considered. Furthermore, projects of less acreage than provided for in this Chapter shall also provide retention if, in the judgment of the City Engineer, conditions in the receiving system are inadequate, or harmful effects can be anticipated if retention is not implemented. (CC 1988 §24-67; Ord. No. 3457 §1, 5-21-01; Ord. No. 3551 §1, 1-22-04)

SECTION 425.040: DESIGN STANDARDS FOR STORMWATER AND EROSION CONTROL PROJECTS

A. General Standards.

1. Zoning classification and permitted land use determine the stormwater retention requirements for any given property. Minimum lot size and percent imperviousness are major factors in determining the future runoff from a property. An additional volume of stormwater will be caused to leave a property due to development thereon. The volume of stormwater which must be retained in accordance with the provisions of this Chapter is the difference between the volume of water expected to leave the property in an undeveloped condition (roughly five percent (5%) impervious) and the volume of water which will be caused to leave the property due to all development (existing and proposed) thereon.
2. Runoff rates for all categories of projects shall be evaluated by the rational formula. The runoff coefficients in the following table for a storm event with a twenty-five (25) year (frequency) and an assumed twenty (20) minute inlet time shall be used to calculate runoff volumes.

As determined on a site-by-site basis.
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NOTES:		1 The percent impervious (% Imp.) values were based upon the minimum lot size requirements for each use.	2 The C.I. factors were derived from the U.S. Weather Bureau Technical Paper No. 40: "Rainfall Frequency Atlas of the United States for durations from thirty (30) minutes to twenty-four (24) hours and return periods from one (1) to one hundred (100) years."	B. <i>Retention Facilities</i> . In general, retention facilities shall be provided with obvious and effective control strategies. The following shall be considered in determining the effectiveness and safety of these facilities in relation to the intent and purpose of this Section.			
2. (Volume of runoff from the property in undeveloped condition) = 2.00 cfs/acre x area of property (in acres) x 30 minutes x 60 seconds/minute.	3. Volume of retention for the developed property = (Volume of runoff from developed property) - (Volume of runoff from the property in an undeveloped condition).	4. Tributary (Q) peak runoff to basin.	5. Balanced maximum outflow rate from the low-flow structure.	6. Ratios of inflow to outflow rates.	7. Sizing of the overflow facilities.	8. Stability of retention dikes.	