



CITY OF MCKINNEY, TEXAS

Legislation Text

File #: 17-303, **Version:** 1

Review and Discuss Draft Revisions to the Stormwater Management Ordinance

COUNCIL GOAL: Operational Excellence

MEETING DATE: March 20, 2017

DEPARTMENT: Development Services / Engineering

CONTACT: Mark Hines, PE, Director of Engineering

RECOMMENDED CITY COUNCIL ACTION:

- Review and Discuss Draft Revisions to the Stormwater Management Ordinance.

ITEM SUMMARY:

- City staff has several recommended changes to the Stormwater Management Ordinance to better address the stormwater management needs of the City.
- One significant change is rounding all floodplain elevations to the nearest 0.1 feet (just over an inch).
- Another significant change is requiring detention ponds in new developments to limit post-project peak discharge to the pre-project level for both the 5-year storm and the 100-year storm.

BACKGROUND INFORMATION:

- Regarding the rounding of all floodplain elevations to the nearest 0.1 feet:
 - Hydrology, by its very nature, involves a high degree of uncertainty.
 - Assumptions are used in hydrology calculations for rainfall amounts, rainfall distributions, times of concentration, impervious cover percentages, topography, Manning's n values, and so on. Because they are based on assumptions, it must be acknowledged that results obtained from hydrology calculations are not extremely precise.
 - Because of all that, it is suggested that all floodplain elevations be rounded to the nearest 0.1 feet.
- Regarding detention of the 5-year storm event:
 - From 2006 to 2014, new detention ponds in McKinney were required to limit both the 10-year and 100-year peak discharges to pre-project levels and release the 1-year storm over a 24-hour period.
 - With the intention of simplifying requirements and making the development process more predictable, the 2014 revision to the ordinance required that detention ponds only need to

limit the 100-year peak discharge to pre-project levels.

- o City staff now recommends that detention ponds in new developments must also limit the 5-year peak discharge to the pre-project levels.
- o This change is recommended only to reduce the risk of minor flooding that may occur by the free release of smaller storms.
- o This change is not anticipated to create an undue amount of additional work for developers.

FINANCIAL SUMMARY:

- N/A

BOARD OR COMMISSION RECOMMENDATION:

- N/A