



# City of San Antonio

## Agenda Memorandum

**File Number:**19-1593

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**Agenda Item Number:** 4

**Agenda Date:** 1/24/2019

**In Control:** Community Health and Equity Committee

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**DEPARTMENT:** Transportation & Capital Improvements Department (TCI)

**DEPARTMENT HEAD:** Razi Hosseini, P.E.

**COUNCIL DISTRICT(S) IMPACTED:** Citywide

**SUBJECT:** Atlas 14 Update and Unified Development Code Revision

### SUMMARY:

Atlas 14, Volume 11 is the most recent study of rainfall intensities across Texas. The study shows rainfall depths for a 1% annual chance (100-year) storm are 1"-3", or 10-30%, greater than identified in previously accepted studies. Transportation & Capital Improvements (TCI) has worked with agency and land development community stakeholders to assess the impacts of implementing this study. TCI will brief the Community Health and Equity Committee on its recommendation to amend the Unified Development Code (UDC) to incorporate Atlas 14 rainfall values for the San Antonio area as part of storm water and floodplain design standards.

### BACKGROUND INFORMATION:

Atlas 14 is a study of rainfall frequency and intensity. This most recent study, which includes Texas, is referred to as Atlas, Volume 11. Volume 11 was published by the National Oceanic and Atmospheric Administration (NOAA) in September 2018. The UDC requires the use of best available data for drainage and floodplain design, so TCI proposes to implement the Atlas 14 rainfall data through a UDC Amendment in the spring of 2019. The last time rainfall data for San Antonio was updated was in 2009, and was based on a 2004 study (USGS, TxDOT). The proposed amendment includes increasing design rainfall depths by 10-30% when compared to the 2004 study.

The implementation of Atlas 14 has impacts for City of San Antonio flood risk reduction policies and programs, capital project development and delivery, and implications for the community as a whole. Issues of concern include:

- **Floodplain Maps-** Redefinition of the extent and possible widening of the 100-year floodplain, which

affects the City's overall floodplain management program and regulatory policies. Redefining floodplains will likely result in more structures within the effective FEMA floodplains, which means more residents and business will likely be required to purchase flood insurance.

- **Drainage Project Design-** An increase in design rainfall depths will likely impact design of drainage systems for subdivisions and for flood risk reduction.
- **Increased Perception of Risk-** An increase in the perceived risk to our community in areas with flooding and drainage issues occur.
- **Funding Needs-** Potential cost implications for costs related to capital projects and the floodplain program.

TCI has worked with the Bexar Regional Watershed Management (BRWM) partners, including Bexar County and the San Antonio River Authority (SARA), to perform technical analysis, study floodplain impacts, and devise proposed UDC amendments. TCI has also worked with private sector stakeholders such as Professional Engineers in Private Practice (PEPP) and Real Estate Council of San Antonio and other City departments to study how the proposed changes will impact the development community. Stakeholder engagement has been continuous since the summer of 2018 and continues as we progress with the implantation of Atlas 14.

The Community Health and Equity Committee will be briefed on TCI's recommendation to amend the Unified Development Code (UDC) to incorporate Atlas 14 rainfall values for the San Antonio, the impacts and next steps.

## **RECOMMENDATION:**

TCI recommends amending the UDC to incorporate Atlas 14 as best available rainfall data for the City of San Antonio. The recommended revisions include the following sections:

- Chapter 5, Section 5.3- Rational Method
- Chapter 5, Section 5.5- Rainfall Data
- Other associated changes to Table of Contents, Lists of Figures and Tables, and other references to the above-mentioned sections.