

Legislation Text

File #: 21-463, **Version:** 1

Presenter/Contact

Presenter: Melissa Reynolds, First Assistant City Engineer
(830) 221-4020 - mreynolds@nbtexas.org

SUBJECT:

Presentation and discussion regarding proposed City of New Braunfels drainage policy changes.

BACKGROUND / RATIONALE:

City staff is proposing amendments to the Drainage and Erosion Control Design Manual and the Code of Ordinances, Chapter 58 - Floods. The proposed amendments are based on recommendations from the Drainage Area Master Plan (DAMP) development and the Community Rating System (CRS) Improvement Report. These items were previously presented in fall of 2020 and have been posted on the Engineering webpage for comment since late 2020. Staff has received minor comments and questions primarily regarding one element, to which more detail is presented below.

The DAMP, initiated in 2019, is currently finalizing Phase 1 which includes updates to regulations to align with State standards. These updates are important for Phase 2 - remapping of floodplains based on new hydrology. Phase 1 also provided recommendations for improvements to the floodplain ordinance to improve CRS rating enhancements. This DAMP is intended to function as a comprehensive and holistic watershed program that is sustainable.

The CRS is the National Flood Insurance Program's (NFIP) voluntary incentive program that recognizes and encourages community floodplain management activities that exceed the minimum NFIP requirements. The CRS Improvement Report was intended to investigate the City's potential to achieve improved CRS rating, creating better benefits for residents.

Drainage and Erosion Control Design Manual

The following amendments are proposed to the Drainage and Erosion Control Design Manual:

Chapter 2 - Drainage Policy and Criteria are proposed and include a new section, Floodplain Development Requirements. This section will include floodplain development requirements, establishing floodplain regulation to the 1% annual chance ultimate development (AC UD) flood, establishing requirements for compensatory excavation in the floodplain to offset lost floodplain volume in the 1% AC UD.

Section 2.9 is proposed to be revised to incorporate stream buffers (previously termed erosion hazard setbacks) regulated by contributing drainage areas. Stream buffers are important for preserving rivers and creeks, protecting water quality, and provide aquatic habitats for endangered species. Feedback received to date has produced the need for more staff efforts to create a GIS map supporting this implementation and clarifying intent. Due to the additional efforts, we are proposing delaying this element to a later date at which time we will take this item, stand-alone, through the approval process.

Chapter 3 - Design Rainfall was revised ahead of the full policy changes and updates the City's Design Rainfall to align with the new NOAA Atlas 14, Volume 11 Texas. Note that this change went into effect January 2021 and is simply included to illustrate the holistic changes.

Chapter 4 - Determination of Design Discharge are proposed in order to update references to design rainfall criteria. Additionally, proposed changes include adding mitigation for the 50-year design storm to the already required 2, 10, 25, and 100-year storms.

Chapter 7 - Storm Drain Systems include updates proposed to incorporate changes based on stakeholder input clarifying hydraulic grade line (HGL) criteria and cover over pipe requirements.

Chapter 10 - Detention and Retention Facilities include updates for clarification for maximum water depths and incorporating the 50-year storm frequency to the design criteria for mitigation ponds.

Other updates include updates to Appendixes for Definitions of Terms, incorporating new terminology and removing the Stream Bank Erosion Hazard Setback Exhibit.

Code of Ordinances, Chapter 58 - Floods

The following amendments are proposed to the City of New Braunfels Code of Ordinances, Chapter 58, Floods:

Sec. 58-27 - Definitions is proposed to be revised to include new terms and clarification for existing terms.

Sec. 58-28.2 - General Provisions for establishment of the one percent annual chance ultimate development with Atlas 14 as the regulatory floodplain, which is critical to ensure accurate analysis prior to actual map revisions are adopted.

Sec. 58-29 - Administration include designating the floodplain administrator as the City Engineer, updates to reference the current Fee Schedule, and updating the variance procedures to remove the Construction Board of Appeals and insert City Council.

Sec. 58-30 - Provisions for flood hazard reduction is proposed to be amended to include a language not permitting recreational vehicles in the floodway. Further updates include a new section, 58-30.5 Floodplain to include the detailed requirements for development in the floodplain and reference to new hydrology requirements. Additionally, clarifications and reference updates were provided for Sec. 58-30.7 - "No-rise/no-impact certification" in order to clarify the modelling needs for review analysis.

Review Process

This item was initially presented to the Watershed Advisory Committee, Planning Commission, and City Council for information and initial feedback in fall of 2020. The changes have been posted online for stakeholder and public input since December 2020. Engineering hosted 2 virtual stakeholder presentations on April 1, 2021 along with an engineering workshop on April 8, 2021.

The feedback received and proposed text was discussed at a follow-up meeting for the Watershed Advisory Committee on April 22, 2021 receiving approval.

ADDRESSES A NEED/ISSUE IN A CITY PLAN OR COUNCIL PRIORITY:

Envision New Braunfels:

ACTION 4.28 [PROGRAM] Acquire and set aside as much land as possible along the Comal and Guadalupe Rivers and their tributaries within the floodplain for greenspace and/or additional river access.

ACTION 5.2 [POLICY] Discourage development in Edwards Aquifer Recharge and contributing zones, stream zones, flood-prone areas, steep slopes, or other ecologically constrained areas. Where development in these areas must occur, require that it be environmentally sound using tools such as but not limited to low impact development (LID).

ACTION 5.6 [POLICY] Implement measures to achieve and maintain a high National Flood Insurance Program CRS rating to ensure the safety of all residents and to reduce property owner flood insurance rates.

ACTION 5.15 [POLICY] Ensure that developers adequately address drainage in their projects and developments.

Municipal Separate Storm Sewer System (MS4) Stormwater Management Program: Minimum Control Measure 4: Post-Construction stormwater management in new development and re-development. Encouraging low impact development designs and establishing riparian zones and vegetative areas.

Stormwater Management Strategy Report (2013):

Open Space Conservation - Set aside lands and preserve open space that have high infiltration rates which would contribute to reduced peak flow levels and increased infiltration.

Floodway Hazard Mitigation - to Further limit or restrict new construction in the 100-year floodplain and floodway beyond existing ordinance.

Stream Bank Setback - Establish setbacks from streams for new development.

FISCAL IMPACT:

N/A

COMMITTEE RECOMMENDATION:

This item will be presented for discussion and recommendation to City Council at the next Planning Commission meeting.

STAFF RECOMMENDATION:

N/A