

## Legislation Text

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**File #:** 21-769, **Version:** 1

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**PRESENTER:**

Melissa Reynolds, First Assistant City Engineer

**SUBJECT:**

Discuss and consider approval of proposed amendments to the City of New Braunfels Drainage and Erosion Control Manual.

**DEPARTMENT:** Public Works

**COUNCIL DISTRICTS IMPACTED:** Citywide

**BACKGROUND INFORMATION:**

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.

*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.

### **Review Process**

This item was initially presented to the Watershed Advisory Committee, Planning Commission, and City Council for information and 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.

Based on feedback from the Planning Commission, Watershed Advisory Committee, and stakeholders, along with staff research, Engineering has adjusted the recommended changes to remove the previously presented “Stream Buffers” from this update. Staff recognized additional effort is needed and this will follow in a later update after appropriate supporting information is developed. In addition, the proposal to require floodplains be platted as drainage easements has also been removed.

The feedback received at the virtual meetings and proposed text was discussed at a follow-up meeting for the Watershed Advisory Committee on April 22, 2021. The Committee recommended approval of the update. All feedback received was presented to the Planning Commission on May 4, 2021 for discussion and action was taken the following meeting on June 1, 2021 receiving approval with recommendation to not require the floodplain to be platted as a drainage easement, which has been incorporated in this recommendation.

### **ISSUE:**

#### **Envision New Braunfels (2018):**

*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

**RECOMMENDATION:**

Staff recommends approval of this proposed update to the Drainage and Erosion Control Design Manual. Staff proposes these updates to go into effect on October 1, 2021. The new criteria will not be required for projects with approved master plans and/or final plats prior to the effective date. After the effective dates, any projects that were designed using the previous criteria will require an exception issued by the City Engineer (per Section 143-2(c)) prior to permit approval. If an approved master plan requires a major revision as specified in Section 118-22(h), the development shall comply with the most current DCM criteria including water quality requirements.

Section 118-17 specifies that the City Engineer may amend the standards for the design and construction of streets, curbs and drainage facilities, upon the recommendation of the Planning Commission to City Council, and such amendment shall be filed with the City Secretary at least ten days before it becomes effective.