



## **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.

## **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 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 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. Constructive feedback was offered and discussion on additional changes to Chapter 7 of the DCM was recommended by the stakeholders and has been incorporated in these updates.

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.

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.

**ISSUE:**

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

**RECOMMENDATION:**

This item will be presented for discussion and action at the next City Council meeting. Staff recommends approval of the recommended updates.