

**To the Mayor and Members of the City Council****June 4, 2024**

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**SUBJECT: STORMWATER CRITERIA MANUAL, FLOODPLAIN ORDINANCE,
AND GRADING PERMIT ORDINANCE UPDATES**

This Informal Report is provided to inform City Council in advance of an upcoming Mayor & Council Communication (M&C) and public hearing requesting adoption of updates to the Floodplain Ordinance, Grading Permit Ordinance, and Stormwater Criteria Manual. This report provides a summary of the updates recommended by City staff. Preparation of these updates included extensive collaboration and coordination with stakeholders and development community representatives. Additionally, this report provides an update on the communication of Non-FEMA Flood Risk Mapping.

Floodplain Ordinance

In 2018, the Stormwater Management Program began an initiative to determine how to communicate non-FEMA flood risk information and how to regulate small sized developments (under 1 acre) in non-FEMA flood prone areas. The initiative was developed due to increasing instances of property owners and developers outside of the FEMA floodplain being surprised by flood events impacting their properties and development plans. In many cases, these impacts could have been minimized and/or prevented had communications and regulations regarding flood risks in these areas been consistent with the means of communication and regulation in FEMA floodplains. The significant, and often undefined and uncommunicated, risk of flooding outside of FEMA floodplains is a nationwide issue.

Since that time, Stormwater staff have held public and community group meetings to discuss and receive feedback on non-FEMA flood risk communications and regulations and worked closely with stakeholder groups, including the Real Estate Guidance Group and stakeholder groups associated with the American Council of Engineering Companies, Floodplain Management Plan, Stormwater Master Plan, and Stormwater Program. The stakeholders consisted of residents, developers, engineers, lenders, appraisers, title lawyers, insurance agents, surveyors, developers, and builders and included the Real Estate Council of Greater Fort Worth, the Greater Fort Worth Association of Realtors, the Fort Worth Builders Association, the Development Advisory Committee (DAC), and the Tarrant Appraisal District.

The goals of the stakeholder engagement efforts were:

1. To ensure full understanding of the pros and cons of communication and regulatory changes;
2. To clarify regulatory standards and processes;
3. To determine the process necessary to administer and communicate the changes; and
4. To gather feedback to shape recommendations and minimize unintended consequences.

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Communicating Non-FEMA Flood Risk Areas provides transparency of the flood risk information the City has so that residents and developers can use the same information to inform their decision making. If the proposed regulations were in place in Fiscal Year 2023, 22 commercial and 28 residential building permits would have had to comply with the proposed City Flood Risk Area (CFRA) regulations ensuring safer development that also minimizes flooding impacts on existing development.

The proposed updates to the Floodplain Ordinance will incorporate regulations for properties in Non-FEMA CFRAs because these areas were identified by drainage basin flood risk mapping that is based on detailed engineering. At this time, all development of any size within FEMA floodplains undergoes detailed review, as well as any development outside of FEMA floodplains with land disturbance of 1 acre or more. The proposed CFRA regulations will affect all development activity on less than 1 acre and located in a CFRA. Such development activity will require:

- Elevation of structures two (2) feet above the 100-year flood elevation, and;
- Submission of a certificate from an engineer to document that the development will not cause increased flood risk to neighboring properties.

CFRAs are typically identified in older parts of the City, such as inside Loop 820, where storm drains were not designed based on current standards and affect both residential neighborhoods and commercial districts. In practice, CFRA regulations will apply to development activity ranging from fences, accessory structures, room additions, and new construction, up to commercial or mixed-use site development projects on less than 1 acre. Approximately 10% of the City within Loop 820 has undergone detailed engineering analysis of urban flooding conditions, which mapped approximately three and a half (3.5) square miles of CFRA.

The proposed regulations may cost property owners/developers more to build in CFRAs since finished floors of structures will be required to be built 2 feet above the 100-year flood risk elevation, the same requirement for building in other areas of flood risk across the city. Based on FEMA research, it will cost an estimated \$28,000 to \$37,000 more to elevate a 2,000 square-foot home 2 feet above a 1 foot deep flood risk. However, building above the 100-year flood risk will eliminate the costs associated with repairing a flooded home. Based on FEMA data, repairing a home that flooded from 12 inches of water can cost an estimated \$57,000.

The City plans to also refine Potential High Water Area (PHWA) flood risk mapping over time to better communicate and regulate non-FEMA flood risks. As PHWAs are evaluated in detail, they will be refined and converted into regulatory CFRAs. Depending on needs and resources, the Stormwater program would like to evaluate one or two PHWA drainage areas per year. Areas for evaluation would be prioritized by flood risk.

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The Non-FEMA CFRA 100-year inundation limits were published near the end of 2022 on the City's Flood Risk Viewer website:

https://gisapps.fortworthtexas.gov/Html5Viewer/?viewer=CFW_Flood_Risk_Viewer

Additionally, citywide Non-FEMA PHWA mapping was added to the City's Flood Risk Viewer website (link above) in March 2024. The updated Flood Risk Viewer and PHWA mapping will be communicated via the website, emails to stakeholders and neighborhood organizations, social media posts, and City News. Additionally, the information will be included in annual flood risk notification letters mailed in September to roughly 19,250 property owners and renters living in FEMA floodplains and roughly 5,150 property owners and renters living in CFRAs. Letters are also mailed to a few other areas where repetitive flood insurance claims have been made.

For reference, Informal Report No. 10236 (February 5, 2019), Informal Report No. 20-10383 (March 27, 2020), Informal Report No. 20-10443 (June 23, 2020) and Informal Report No. 22-120 (August 16, 2022) provide background on the Non-FEMA flood risk mapping, regulation evaluation, and stakeholder engagement.

Grading Permit Ordinance

Coordination and collaboration with development community representatives started 3 years ago on the proposed updates to the Grading Permit Ordinance to make the permitting process more efficient and effective. The most significant improvement is that this update will replace the Final *integrated* Storm Water Management (iSWM) Plan requirement with a grading permit, eliminating one step in the development review process. In addition, the updates will produce the following benefits:

- Clarify submission requirements and apply review requirements uniformly across development projects;
- Better define Early Grading Permits and clarify requirements; and
- Clarify exemptions and simplify processes for public infrastructure.

Stormwater Criteria Manual

In 2019, the Texas State Legislature passed House Bill 3167 which amended Chapter 212 of the Texas Local Government Code. The new law required, in part, for developer construction plans to be approved by the City Plan Commission, to place a "shot clock" on review and approval deadlines for developer construction plans, and for any review comments on construction plans to cite to specific laws, regulations, or design criteria when the construction plans were not approved by the

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City. During the 88th Texas Legislative Session, the state law was amended to remove these requirements. While no longer mandatory, City staff and development representatives have maintained self-imposed review deadlines and clear regulations that can be cited to during construction plan reviews. To that end, City staff have prepared revisions to the Stormwater Criteria Manual to ensure that the City's requirements are clear and can be easily cited in construction plan review comments.

In addition, staff recommends changes to the Stormwater Criteria Manual based on new data and information, lessons learned from how current regulations are implemented, and to integrate the proposed revisions to the Floodplain Ordinance and the Grading Permit Ordinance. The proposed revisions will provide clarity to the development community, and help to ensure development and public infrastructure design contribute to a safe and sustainable Fort Worth.

Throughout the process, staff engaged with external and internal stakeholders to coordinate and receive feedback on document revisions. Draft documents were coordinated with the DAC for review and comment over the past three years.

A summary of the updates to the Stormwater Criteria Manual include:

- CFRA guidance and regulations are incorporated;
- Final iSWM Plans are no longer required;
- Drainage studies are better defined and introduced as a separate submittal to replace iSWM plans;
- Use of specific types of polypropylene pipe in lieu of concrete pipe are allowed;
- Stormwater detention facility maintenance requirements are defined;
- Runoff coefficients for more dense residential developments are updated;
- Easement sizing regulations are revised; and
- Administrative procedures for processing applications and conducting pre-submittal meetings are revised.

Redline and clean formatted versions of the documents can be found at
<https://www.fortworthtexas.gov/departments/tpw/stormwater#regulationupdates>

For additional information, please contact Stephen Nichols, Stormwater Program Manager, at 817-392-7598.

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