

Impacts of Floodplain Updates/Revisions

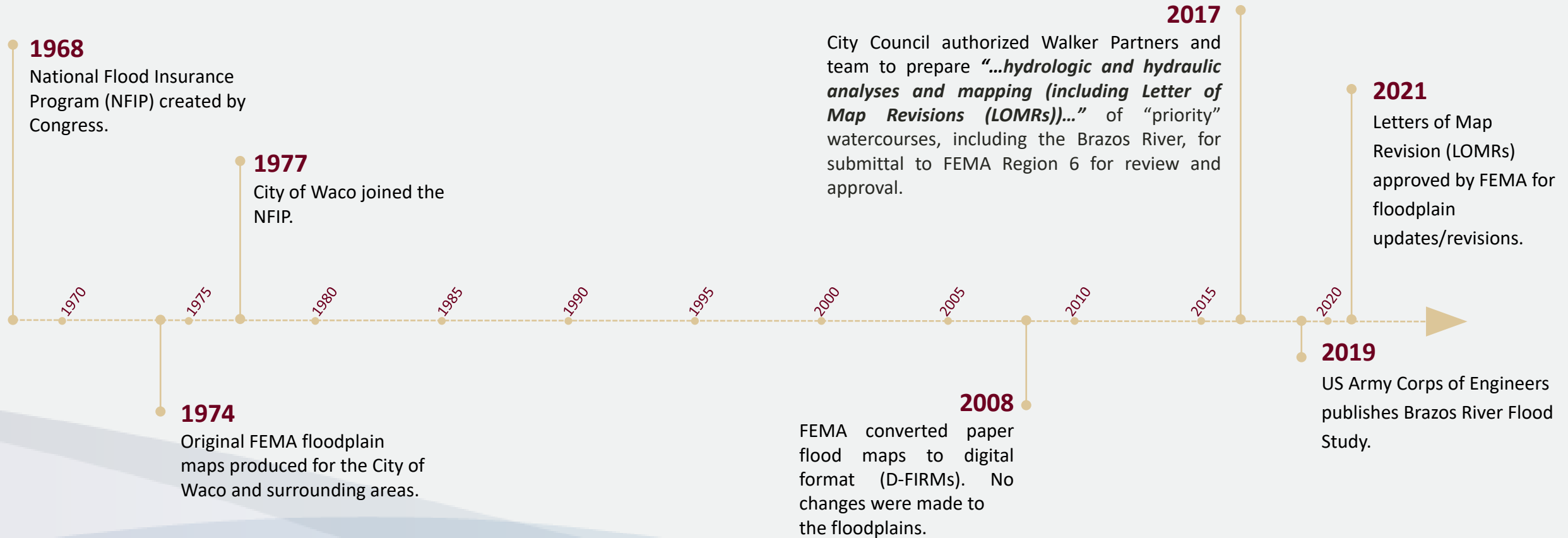
CITY COUNCIL MEETING

JULY 6, 2021

PURPOSE

- Present the results of the City's recent Flood Studies and the corresponding floodplain boundary updates/revisions.
 - Identify the impacts of these floodplain updates to property owners within the City of Waco.
- Recommend actions to communicate and manage these floodplain updates/revisions.

CHRONOLOGY OF EVENTS



Why Update Flood Maps?

WHY DID THE FLOOD MAPS CHANGE?

- New, accurate topographic mapping of the watercourses and floodplains.
- Updated stormwater flowrates based upon new land development, and its associated increase in impervious cover.
- New, modern computer methods used to determine stormwater runoff in watersheds and the resulting flood elevations in the watercourses.
- Lake Aquilla's dam was constructed in a different location than what was assumed in FEMA's mid-seventies study.

DEFINITIONS

SPECIAL FLOOD HAZARD AREA - land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year.

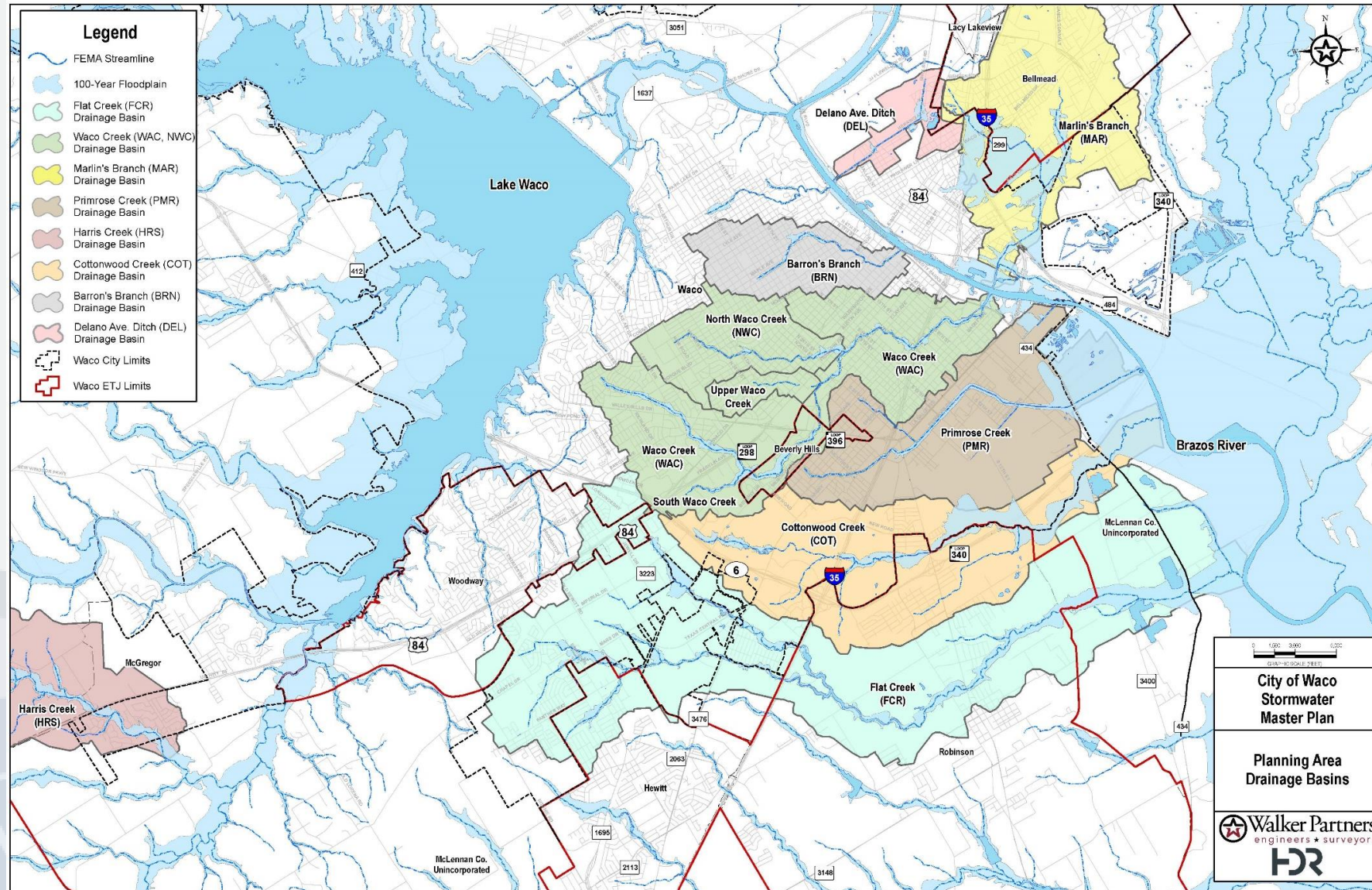
100-YEAR FLOODPLAIN - the water surface elevation resulting from the flood that has a one percent chance of equaling or exceeding that level in any given year. Also referred to as the 100-year floodplain elevation.

LOCAL FLOODPLAIN - any flood-prone area with a contributing drainage area greater than 160 acres and not depicted on a Flood Insurance Rate Map (FIRM).

LOCALIZED FLOODING – properties flooding due to local conditions such as clogged or inadequate inlets or storm drains, etc. These are not part of the Flood Insurance Rate Maps (FIRMs).

How Flood Map Updates Impact Property Owners

STUDIED PRIORITY STREAMS



SUMMARY OF RESULTS

4,540

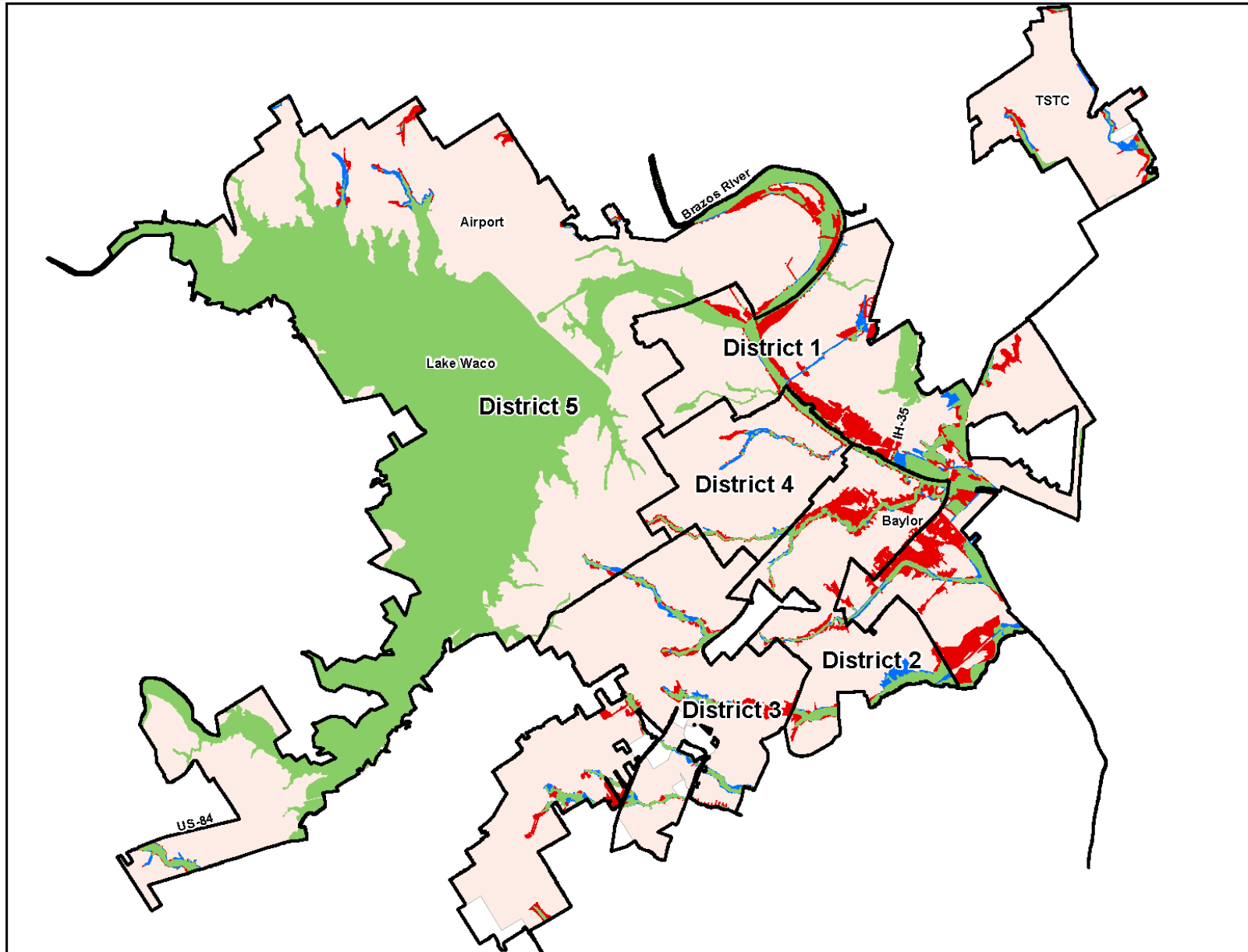
ACRES
(2008)

+2,290

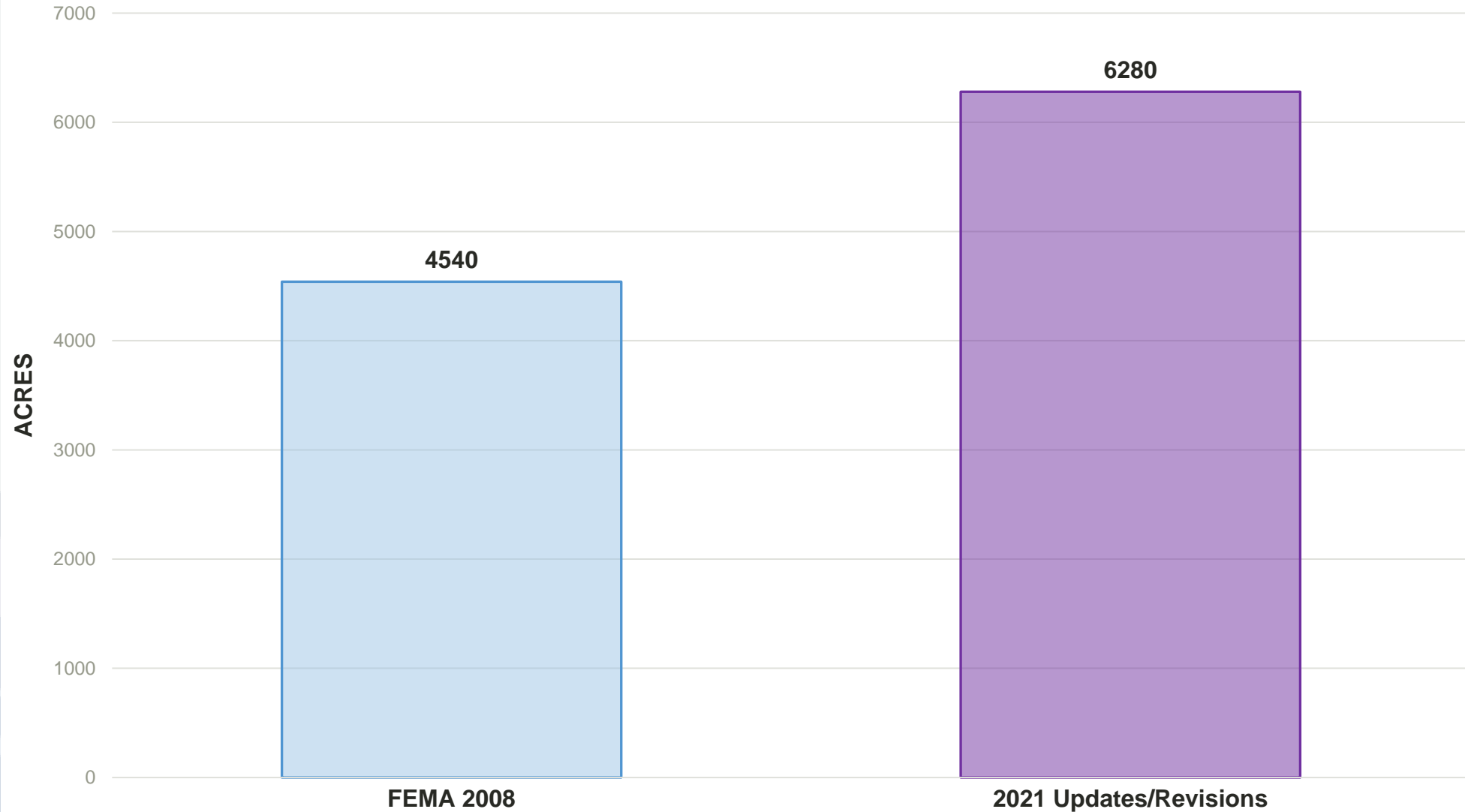
ACRES
(2021)

-550

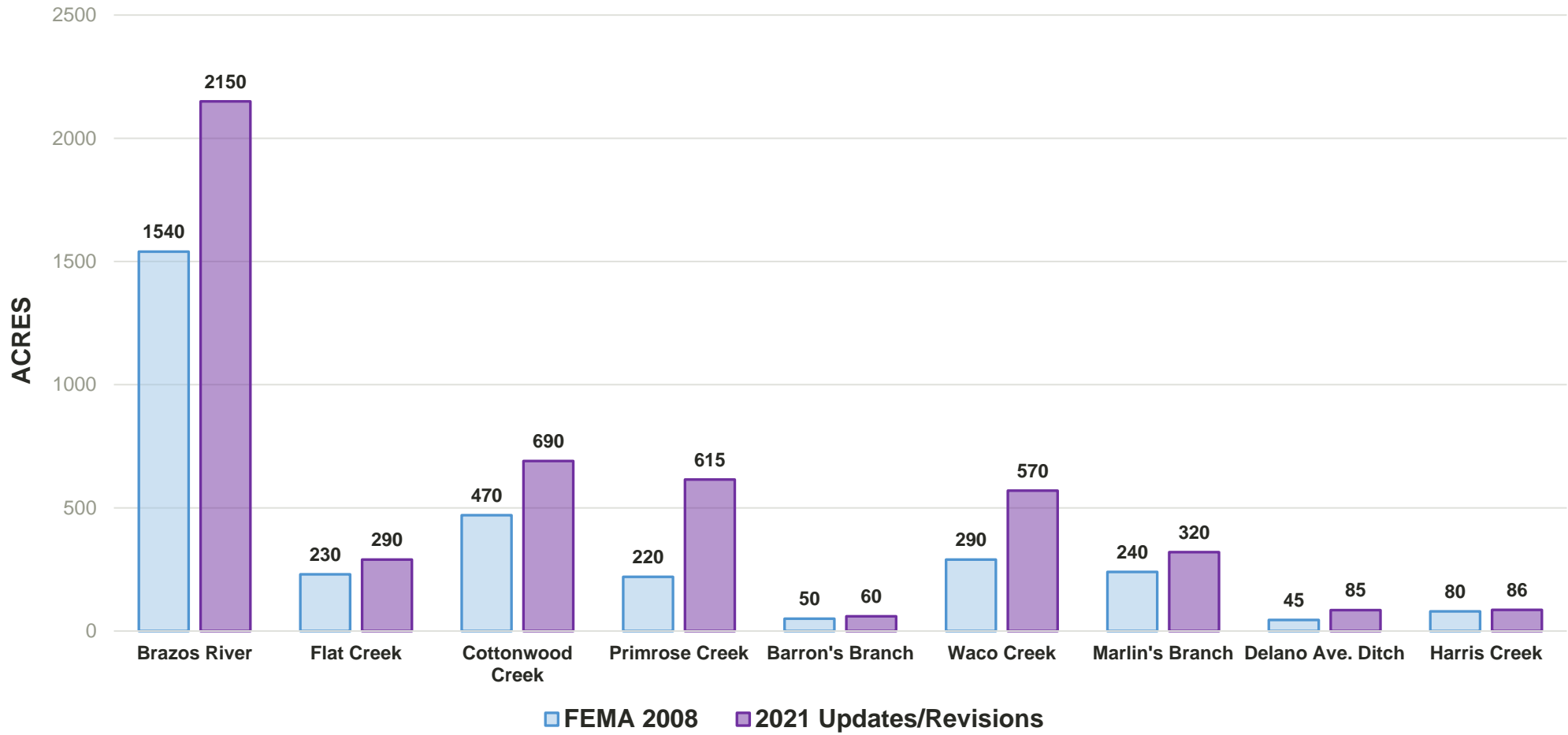
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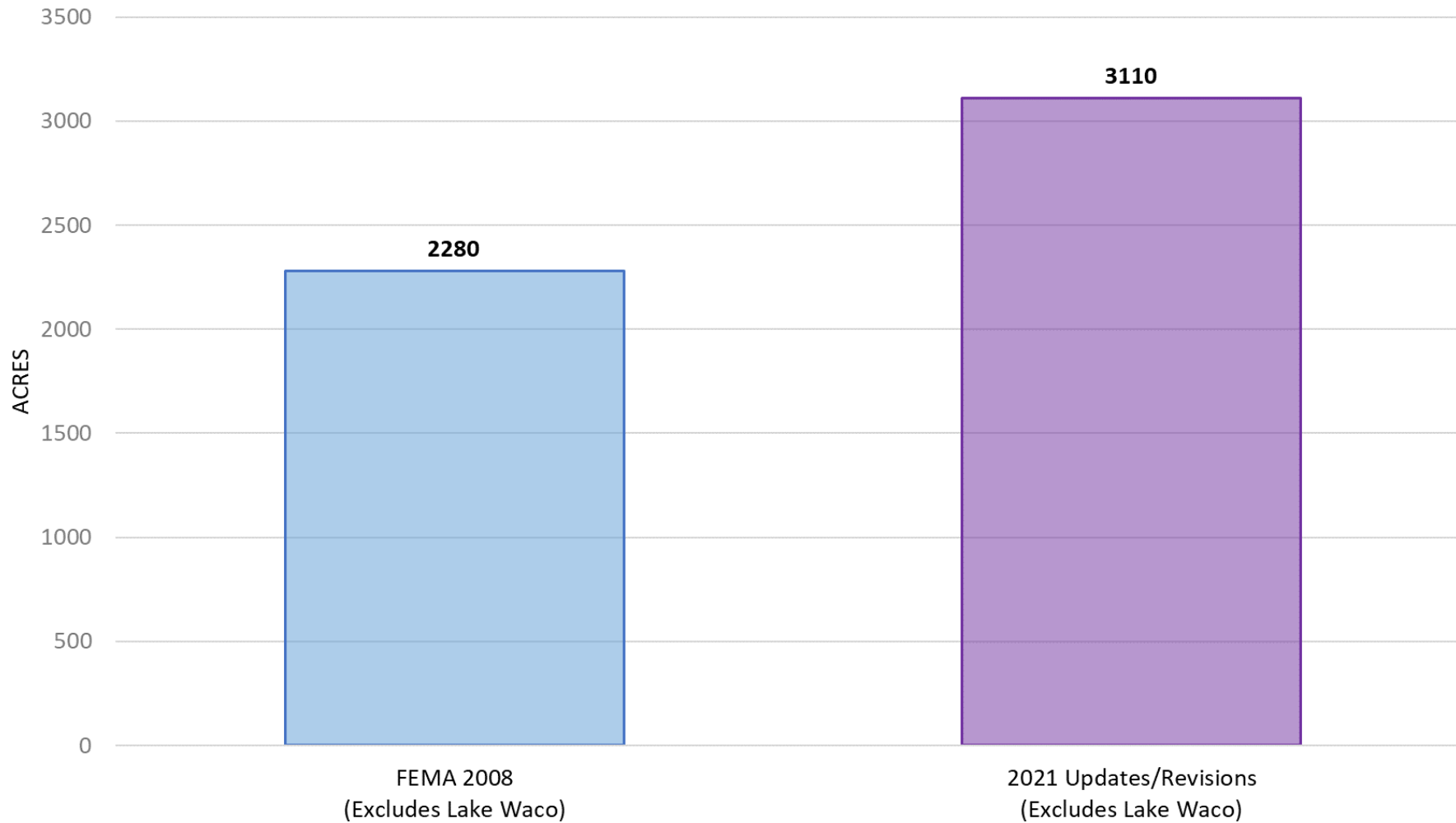
WACO CITY LIMIT 100-YEAR FLOODPLAIN UPDATES/REVISIONS (TOTAL ACRES IN CITY) (EXCLUDES LAKE WACO)



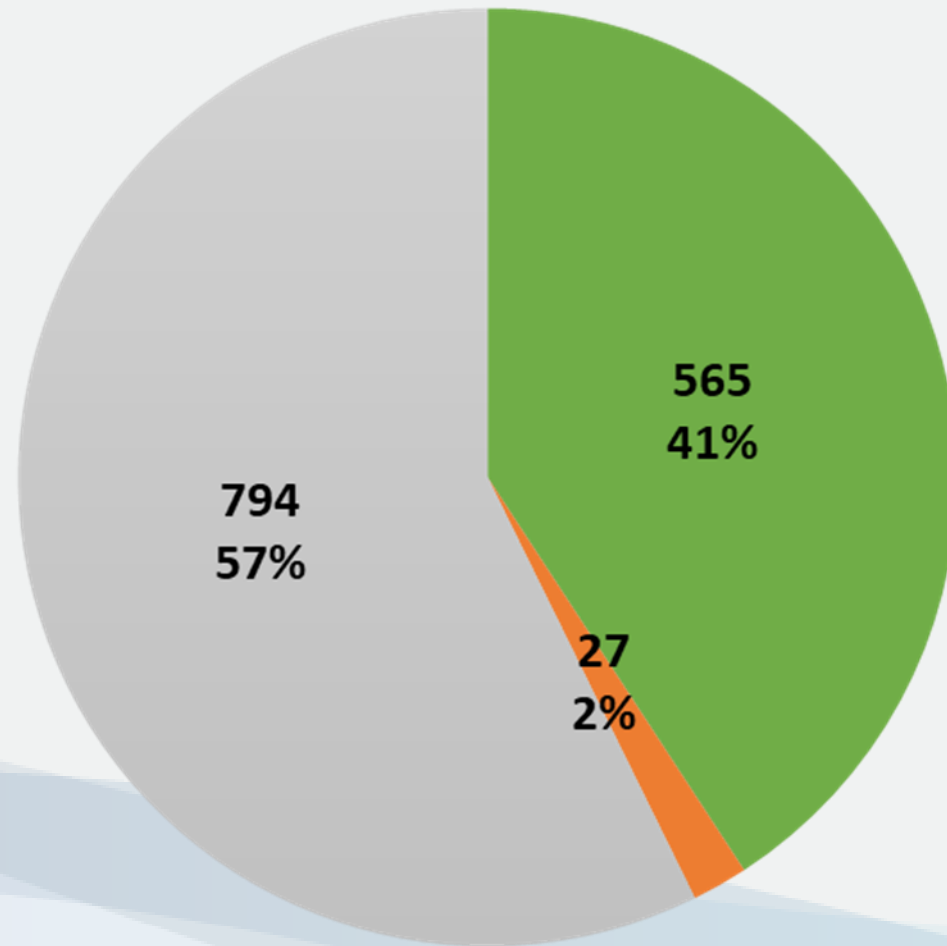
WACO CITY LIMIT 100-YEAR FLOODPLAIN UPDATES/REVISIONS (ACRES BY PRIORITY STREAMS)



Waco City Limit - Undeveloped Land Impacted by Updates/Revisions (Total Acres in City Excluding Lake Waco)

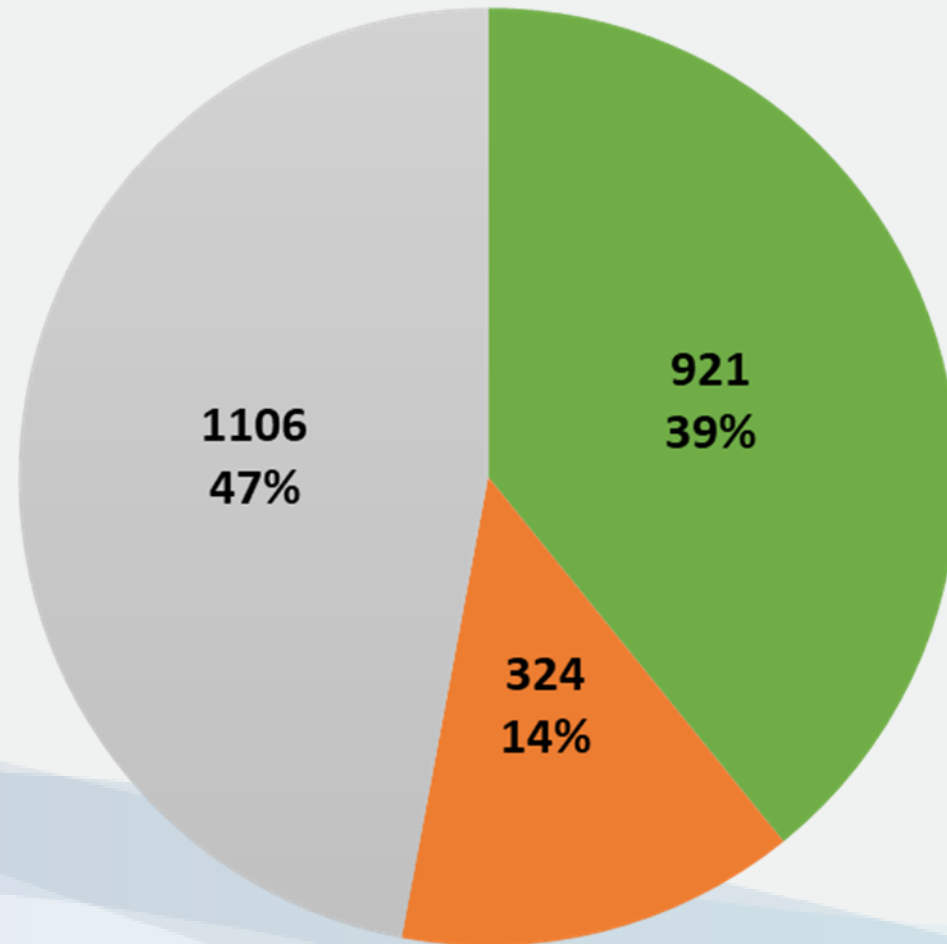


Waco City Limit - Net 100-Year Floodplain Acreage Change by Land Use



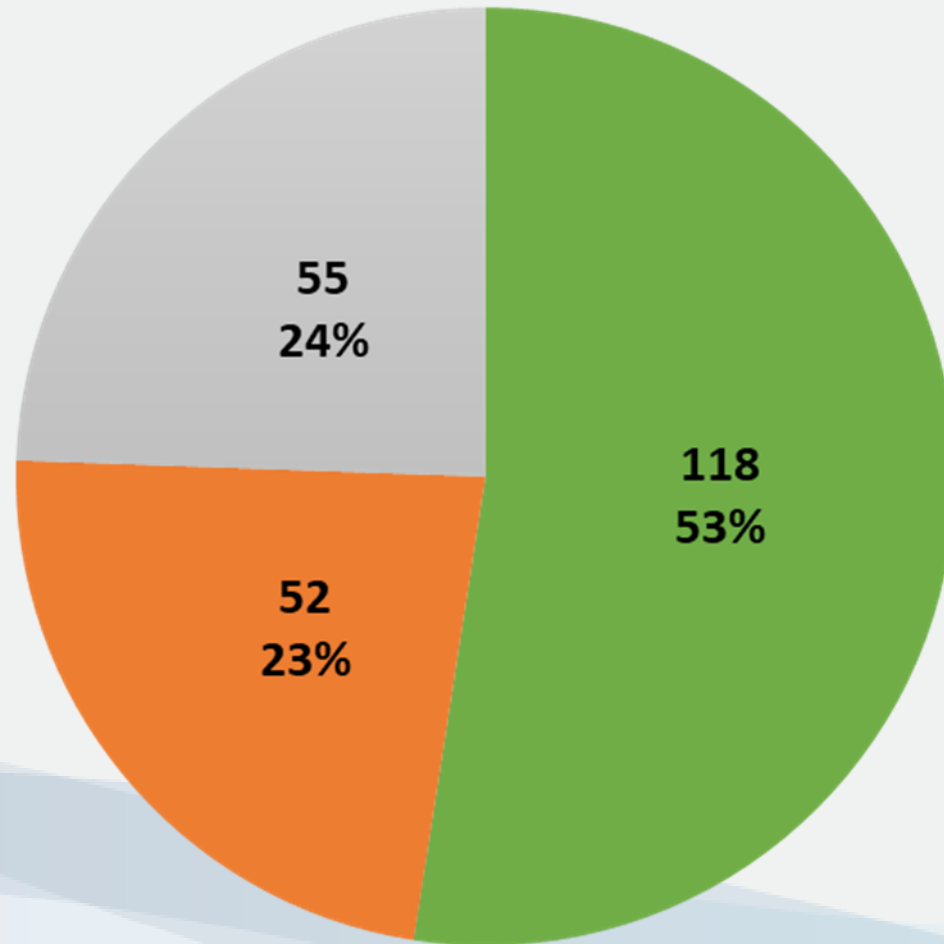
■ Single Family ■ Multi-Family ■ Non-Residential

Waco City Limit - Additional Lots Impacted by Updates/Revisions



■ Single Family ■ Multi-Family ■ Non-Residential

Waco City Limit - Lots Removed by Updates/Revisions



■ Single Family ■ Multi-Family ■ Non-Residential



City's Responsibilities

FLOODPLAIN ADMINISTRATOR

- Role, duties, and responsibilities of Waco's Floodplain Administrator



FLOODPLAIN TERMS

- **Letter of Map Revision, LOMR** – Request to FEMA to revise the floodplain map.
- **Conditional Letter of Map Revision, CLOMR** – Request to FEMA to approve proposed changes to the floodplain and revise map after changes are completed. Requires a follow-up LOMR.
- **LOMR-F/CLOMR-F** – Request to change map based on fill only.
- **Letter of Map Amendment, LOMA** – Request for a minor amendment to the map based on survey data.
- **Base Flood Elevation, BFE** – Elevation of the 100-yr floodplain.
- **Finished Floor Elevation, FFE** – Elevation of the lowest floor in a structure.
- **Elevation Certificate** – document prepared by a surveyor or engineer certifying the BFE and FFE, used for insurance or a LOMA.

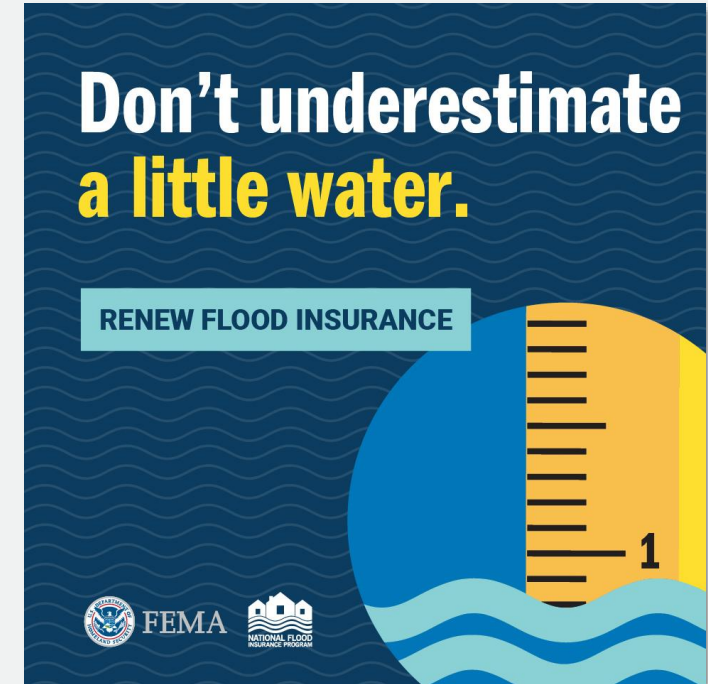
PARTICIPATION IN THE NFIP

- What is the National Flood Insurance Program (NFIP)?
- How do cities participate in the NFIP?
- 100-Year Flood
- What are the benefits of the NFIP?
- What is the NFIP's "Community Rating System?"



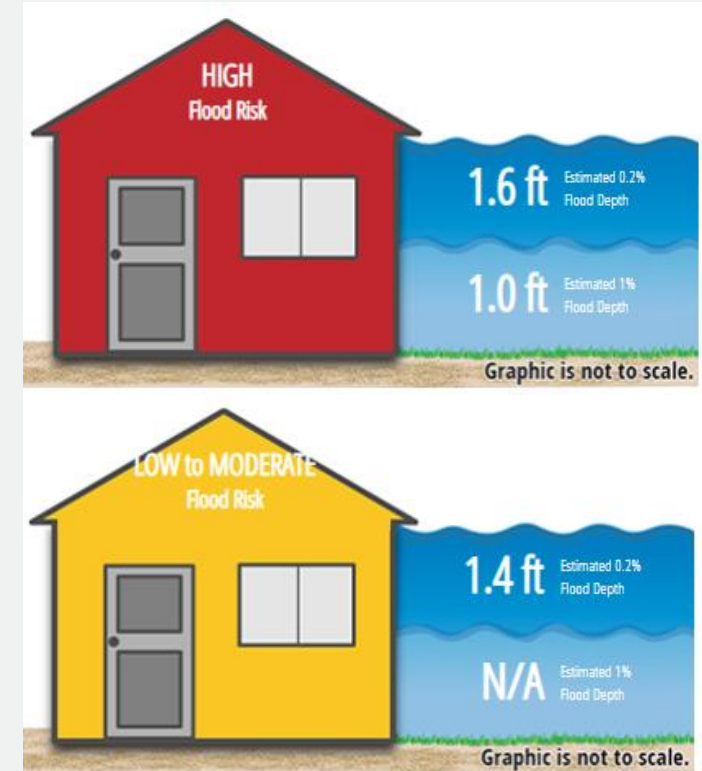
INSURANCE REQUIREMENTS

- Who is eligible?
- Where and how can a homeowner obtain insurance?
- How much does it cost?
- What is an Elevation Certificate?
- How much does an Elevation Certificate cost?
- Is there any exemption due to historic designation?



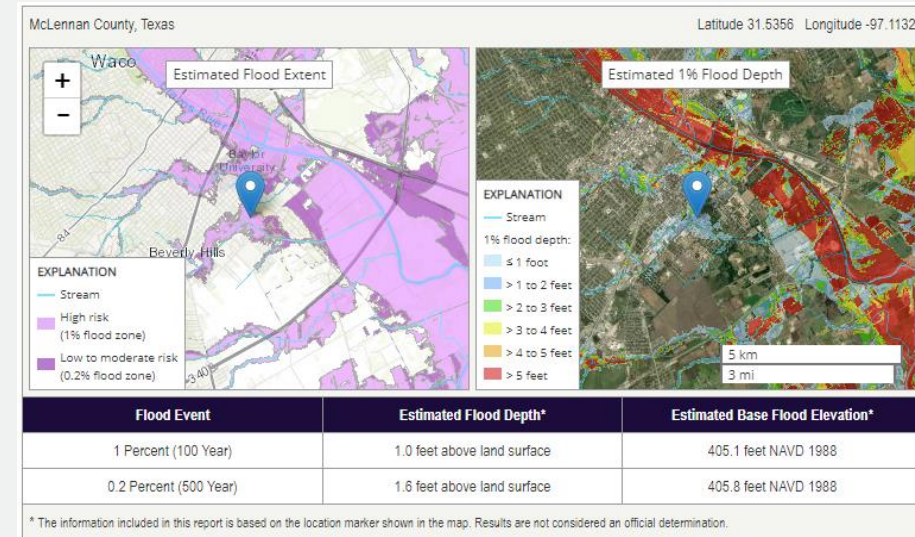
HOW ARE PROPERTIES IMPACTED – EXISTING STRUCTURES?

- Existing structures
 - Flood Insurance
 - Cost varies based on depth of floodplain and elevation of building (\$500-\$5000+ per year).
 - Restrictions on Renovation
 - Significant improvement (>50% increase in value of structure) may requires complying with Flood Protection Ordinance, Elevate Structure
 - Significant damage requires complying with Flood Protection Ordinance.
 - Health and safety modifications are exempt.
 - Listed Historic Structures are exempt.
 - May file a LOMA if the Elevation Certificate indicates the property should not be in the floodplain.



HOW ARE PROPERTIES IMPACTED – NEW DEVELOPMENT?

- New Construction
 - FFE must be 1' above BFE. The 1' is called freeboard and is a factor of safety. It may be raised by a slab foundation or piers. Fill will require a CLOMR-F.
 - No adverse impact upstream or downstream.
 - Non-residential structures may flood-proof in lieu of elevating finished floor.
 - No development in the floodway.
 - May file a LOMA to remove property from floodplain.
 - Property owner may wish to engineer solutions that remove property from floodplain (CLOMR/LOMR).
- Subdivisions
 - Requires (CLOMR/LOMR) to modify floodplain.



Next Steps

NEXT STEPS

- FEMA Adopts Updated/Revised Flood Maps
- City Creates/Implements Communication Plan
- City Creates/Implements Management Plan(s)

CITY CREATES/IMPLEMENTS COMMUNICATION PLAN

- Required FEMA/Public Notifications
- Watershed Area Meetings
- Website (Waco-Texas.com/WTXFlood)
- Social Media
- Newsletter
- Developer's Meeting
- HOT Homebuilder Association
- City Staff Communications (floodplain@wacotx.gov)

UPDATED FLOODPLAIN MAPS MAY AFFECT YOU



The Flood Insurance Rate Map (FIRM) for a community depicts the floodplain, the area which has been determined to be subject to a 1% (100-year) or greater chance of flooding in any given year. The City of Waco initiated a Storm Water Master Plan that includes updated floodplain modeling and mapping.
Visit waco-texas.com/WTXFlood or call 254-750-5440

El Mapa de Inundación de FEMA conocido como (FIRM) para una comunidad demuestra el plano de inundación. Esta es el área en la cual se ha determinado como sujeta a la probabilidad de inundación del 1% (o equivalente a 100 años) o mayor oportunidad de inundación en cualquier año. La Ciudad de Waco inicio un Plan Mayor de Agua Pluvial que abarca toda la ciudad y actualiza los modelos y planos de inundación.
Visite waco-texas.com/WTXFlood o llame al 254-750-5440

PROTECT YOURSELF FROM FLOODING

- » Learn about the improved floodplain maps for your area.
- » Learn about the flood risk to your property.

PROTÉGETE DE LA INUNDACION

- » Aprende de los nuevos y actuales mapas de inundación en tu área.
- » Aprende del riesgo de inundación a tu propiedad.

CITY CREATES/IMPLEMENTS MANAGEMENT PLAN

- City Updates to Flood Protection Ordinance
 - Incorporating recommendations from Community Assistance Visit
 - New Freeboard Requirements
 - New development – increase freeboard to 2', reduces flood insurance costs and chances of being included in future floodplain updates.
 - Re-development – reviewing options to balance costs to property owners and maintain NFIP participation.
- Capital Improvement Programs
 - Master Plan List includes 17 (and growing)
 - \$122,000,000 cost and growing
- FEMA Assistance to help mitigate losses due to flooding.
- Consideration of a 'to-be-developed' targeted (jobs, investment, ownership) assistance fund to mitigate economic impact in core of the city.

Questions