

Floodplain Management in Bellaire

OVERVIEW

History of Recent Flood Events in Bellaire

2001 – Tropical Storm Allison over 1400 structures flooded

2015 – Memorial Day Storm over 200 structures flooded

2017 – Hurricane Harvey over 2000 structures flooded

2016 Drainage Study Findings

Recommends 100-year storm sewer design for underground detention and conveyance of flood water on strategic streets, and improvements to north-south arterials

Identifies adverse impacts of flood waters when Brays Bayou overflows

Illustrates inadequate capacity of north-south drainage systems in Bellaire including TXDot West Loop drainage system

Emphasizes that Bellaire alone cannot control flood waters: it's a regional effort

What is being done: Regulatory

Bellaire requires new construction to be at least 1 foot above base flood elevation

98% of Bellaire structures flooded in Harvey were not built to the current elevation standard

Floodplain regulations strictly enforced

Structures determined to be substantially damaged in Harvey required to be brought into compliance

What is being done: Regional

The City and TXDot partnered on over \$3 million of storm sewer upgrades to the 610 system north of Glenmont: City contribution \$1 million

Brays Bayou improvements will remove almost all of Bellaire from the 100-year floodplain

Harris County Flood Control is working with Bellaire on the assessment of how tunnel systems may prevent sheet flow

Flood control projects are being identified that may be eligible for funding through the \$2.5 billion Harris County bond program

Flood Facts

75% of Bellaire is in the 100-year floodplain; Brays Bayou improvements will remove almost all of Bellaire from the 100-year floodplain, as defined today

2000, 2004, and 2016 - Bond funding for street and drainage improvements approved by voters

City Engineer estimates \$350 million in street and drainage improvements is required

Flood waters know no boundaries

2017 Flood Hazard Mitigation Task Force

Established in August 2017 to review Flood Hazard Mitigation Plan as required by National Flood Insurance Program

Included 10 Bellaire residents (6 of whom flooded in Harvey)

Guided by City Engineer's 2016 Drainage Study

Recommended aggressive approach to partnering with federal, state, and county entities on flood control efforts

Recommended aggressive approach to local and regional drainage improvements

What is being done: Local

\$5.7 million in street and drainage improvements are currently underway in Bellaire

In 2019 the City plans to spend \$12 million on street, drainage, and flap gate improvement projects

City Council approved a capital plan providing \$37 million in new street and drainage projects, subject to future bond elections

What is being done: Operational

Storm sewer inspections

Enhanced rescue training and equipment

Enhanced public communication