

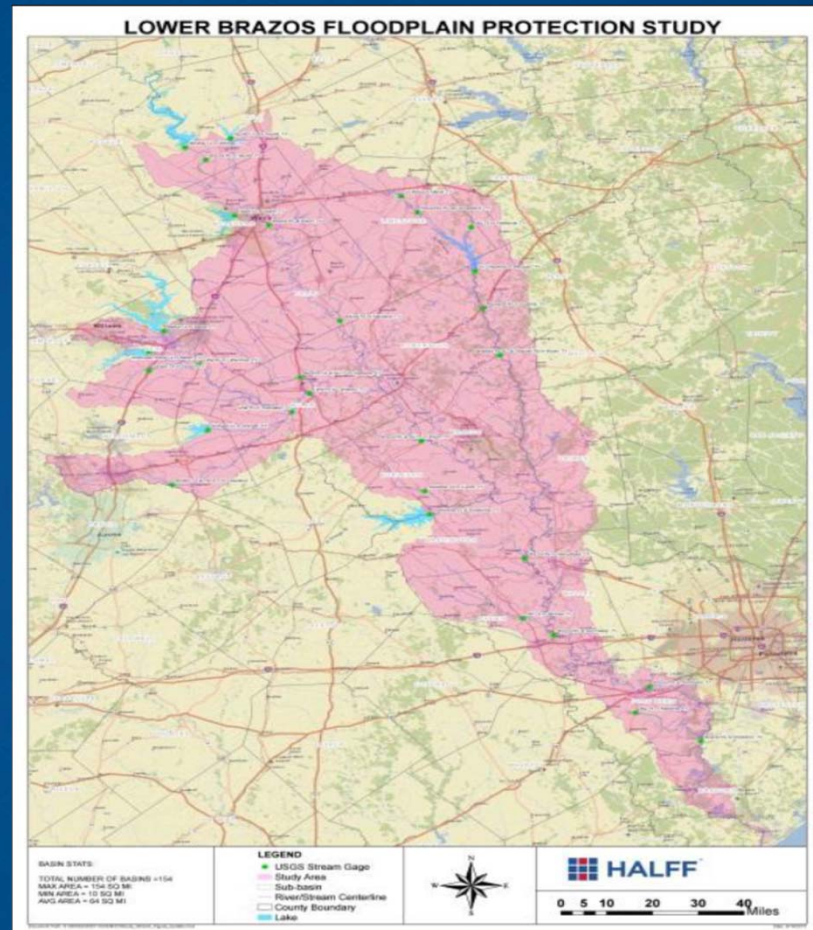
## PROJECT BACKGROUND

- Communities on the Lower Brazos River have suffered multiple floods over the last century.
- Flood control reservoirs have been constructed in the upstream basin during that time
- However, approximately 10,000 square miles of uncontrolled drainage area are downstream of these projects.
- In 2015, 2016 and 2017 significant rainfall across the Brazos River Basin resulted in major flooding along the Lower Brazos River watershed included areas of Sugar Land.

## PROJECT BACKGROUND (cont.)

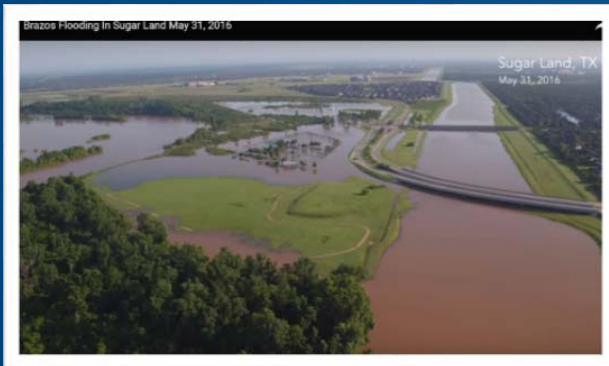
- The Brazos River Authority identified that,
  - Hydrologic and hydraulic models are dated (except for Fort Bend County)
  - It is necessary to establish a consistent modeling methodology across county boundaries.

# AREA OF STUDY



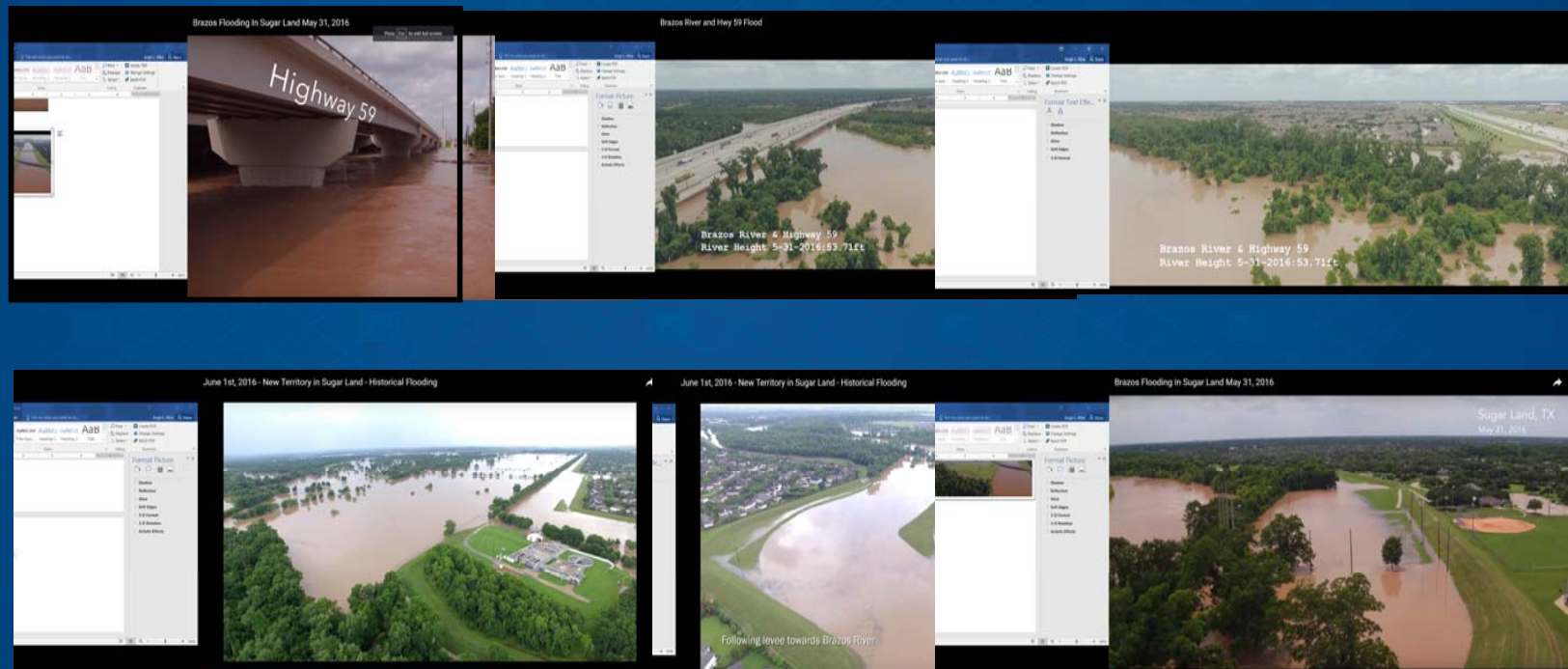
## WHY IS THIS PROJECT NECESSARY FOR COSL

- During the 2015, 2016 and 2017 storms, several areas in Sugar Land received major impact from the Lower Brazos flooding.
- Ditch H, Memorial Park, the US 59 crossing over Brazos River and some unprotected areas (outside levees) next to New Territory experienced flood damage.





# AREAS FLOODED DURING 2016 FLOODS



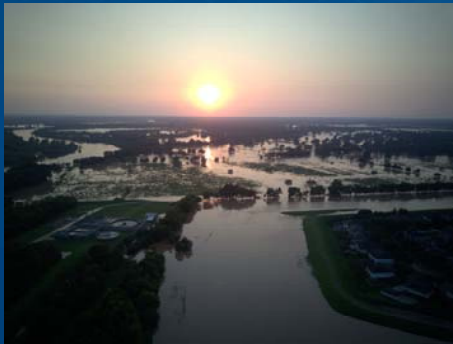
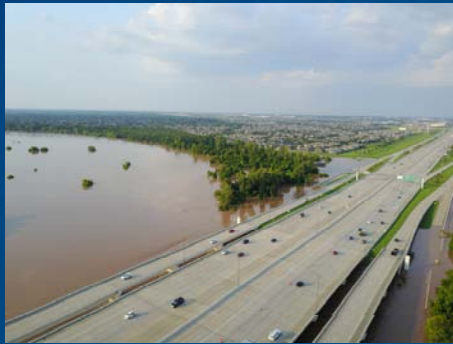
CITY OF SUGAR LAND

# WHY IS THIS PROJECT NECESSARY FOR COSL

- Additionally, these flooding events produced significant erosion to the Grand Parkway bridge and could impact the levees that protects areas soon to be annexed to the City of Sugar Land such as Greatwood and New Territory.



# AREAS FLOODED DURING 2017 FLOODS



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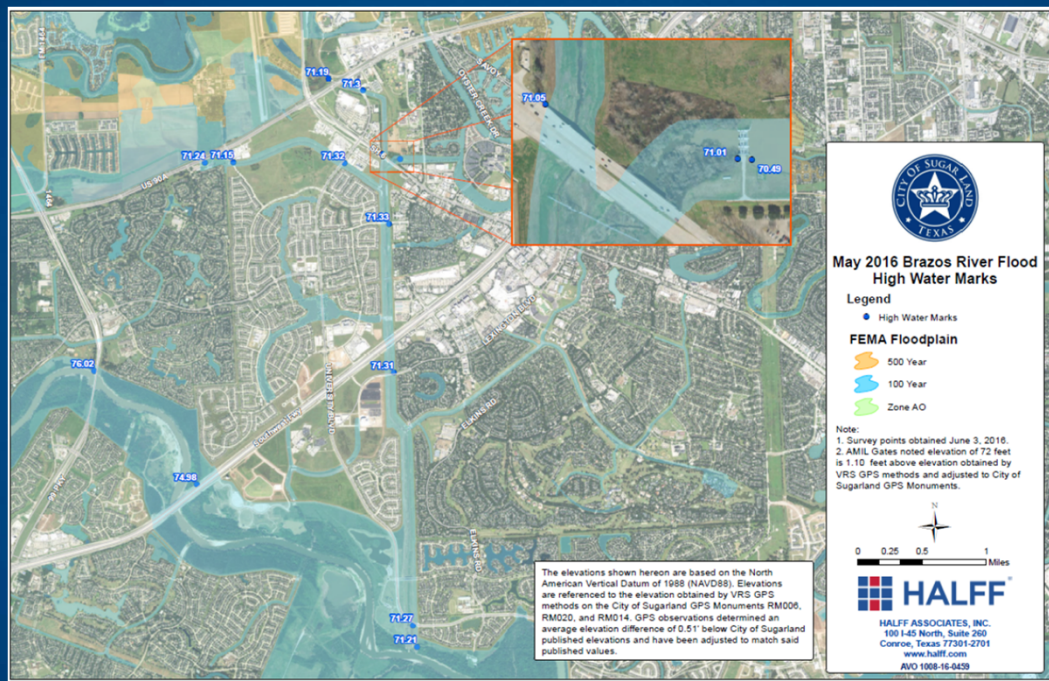


# AREAS FLOODED DURING 2017 FLOODS



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## WHY IS THIS PROJECT NECESSARY FOR COSL

- Identify the risk to the areas that could be impacted by flooding from the Brazos River for
  - land use planning,
  - emergency response and
  - sound floodplain management.

## PROJECT SCOPE ITEMS

- The BRA, on behalf of the City of Sugar Land and other participants applied to TWDB for a planning grant to develop a flood protection plan for the lower Brazos River:
  - Assess the Lower Brazos watershed conditions from a comprehensive basin wide perspective (existing conditions and flood mitigation alternatives).
  - Update hydrologic and hydraulic data, modeling and detailed flood elevations along for the lower Brazos River from Hempstead to Gulf of Mexico.
  - Calibrate new models to historical events and provide flood volumes, flood depths, and flood durations.

## PROJECT SCOPE ITEMS

- Quantify existing flooding issues, create flood inundation mapping and flood reduction alternative recommendations for all the communities along the lower Brazos River.
- Improve NWS flood forecast and develop tools to facilitate land use planning, emergency response and sound floodplain management.



## PROJECT BUDGET AND SCHEDULE

The Grant permits the Participants, including COSL, a non-exclusive, unrestricted, unlimited, irrevocable, world-wide, royalty-free license to access and use the Contractor and Subcontractor Works as defined in the TWDB Agreement.

## **Project Budget & Schedule**

**The Grant requires the commitment of matching funds to pay for the local share of the total costs of the study. City of Sugar Land's share of matching funds under the Grant shall not exceed a total of thirty thousand dollars \$30,000.**

**The Engineering Department has requested to use \$15,000 from the Contingency Funding to cover half of the \$30,000 total commitment.**

**The remaining \$15,000 will be cover in FY18.**

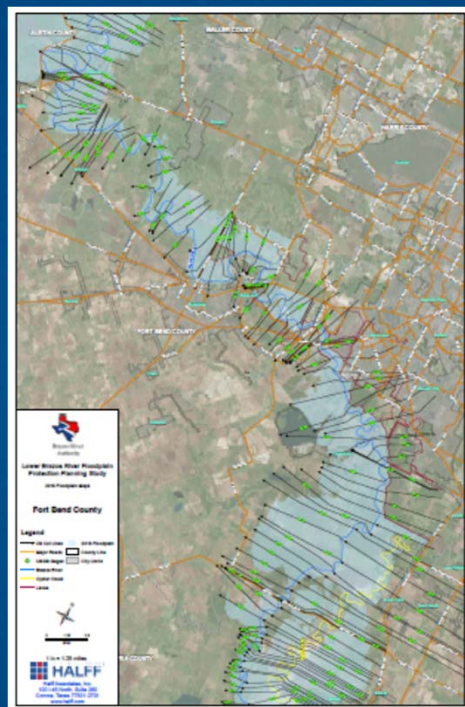
## **REQUEST FOR APPROVAL**

**Consideration of and action on authorizing execution of an Interlocal Agreement by and between The Brazos River Authority and the City of Sugar Land, Texas, and authorizing matching funds up to the not to exceed total of \$30,000.00 for the Lower Brazos River Flood Protection Plan Study.**

## Questions

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