

LESSONS LEARNED FROM THE TEXAS RESPONSE TO HURRICANE HARVEY

EYE OF THE STORM

Report of the Governor's Commission to Rebuild Texas



Crystal Inn

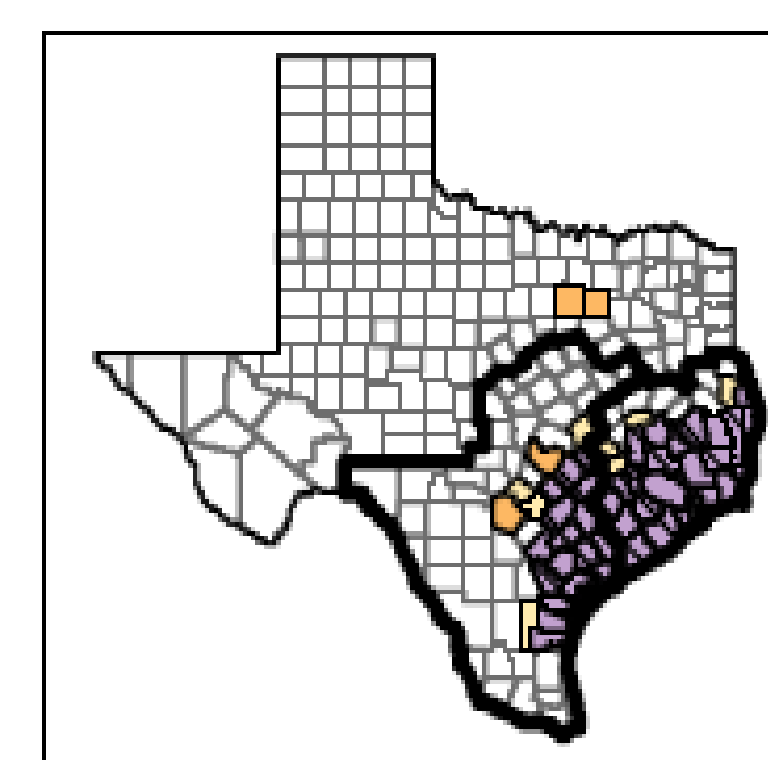
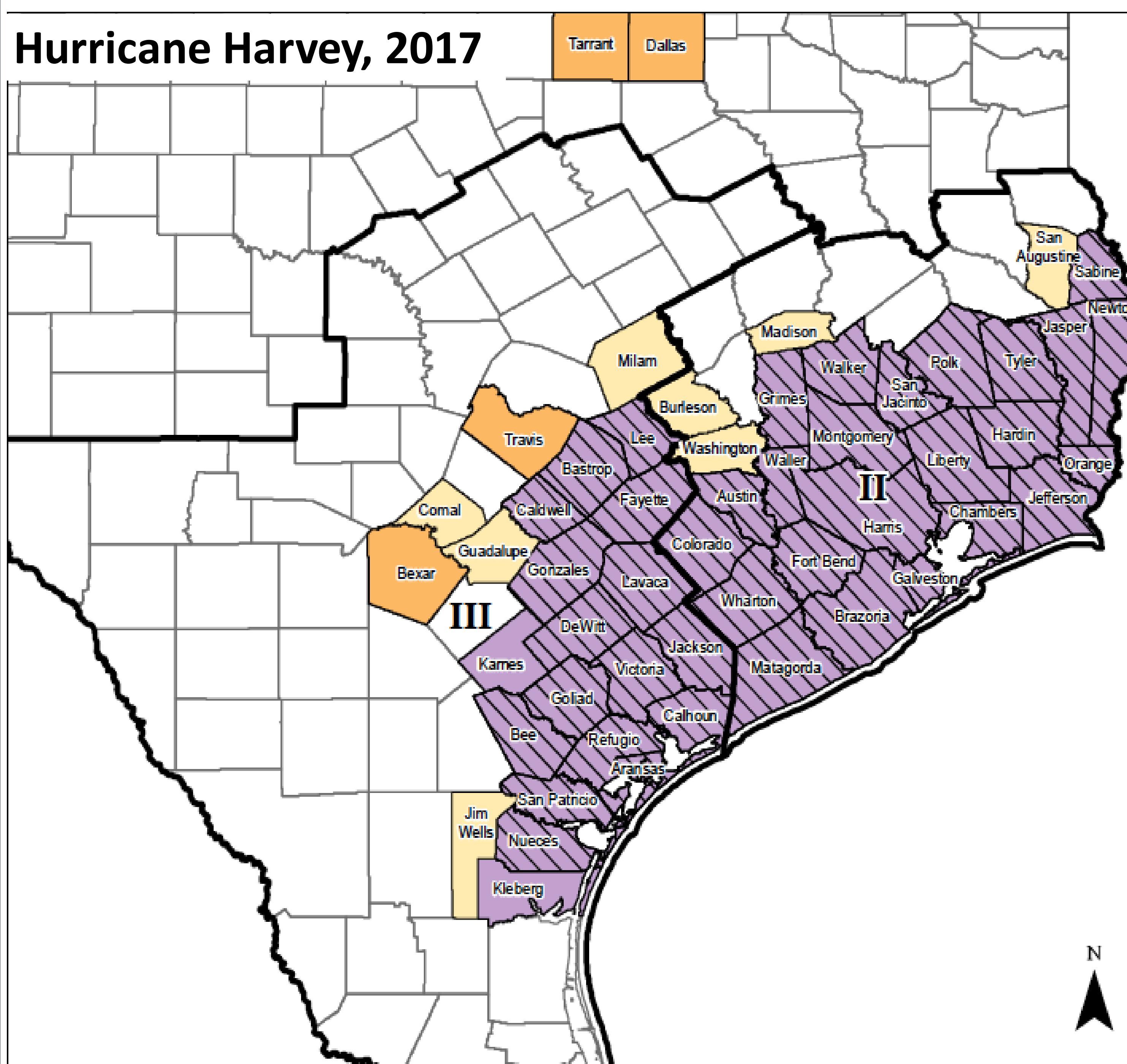
VALERO
2.19
2.25
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DOWELL LAKES

ch
DOWELL LAKES
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DOWN PAYMENT ASSISTANCE
PROGRAM & MORE!
NO LEASE WHEN YOU RENT!
ALL CREDIT DATA REVIEWED
CALL-57-HOUSE

SPEED
LIMIT
35

Hurricane Harvey, 2017



Description

This map shows designated counties for Hurricane Harvey as of 11/1/2017.

Legend

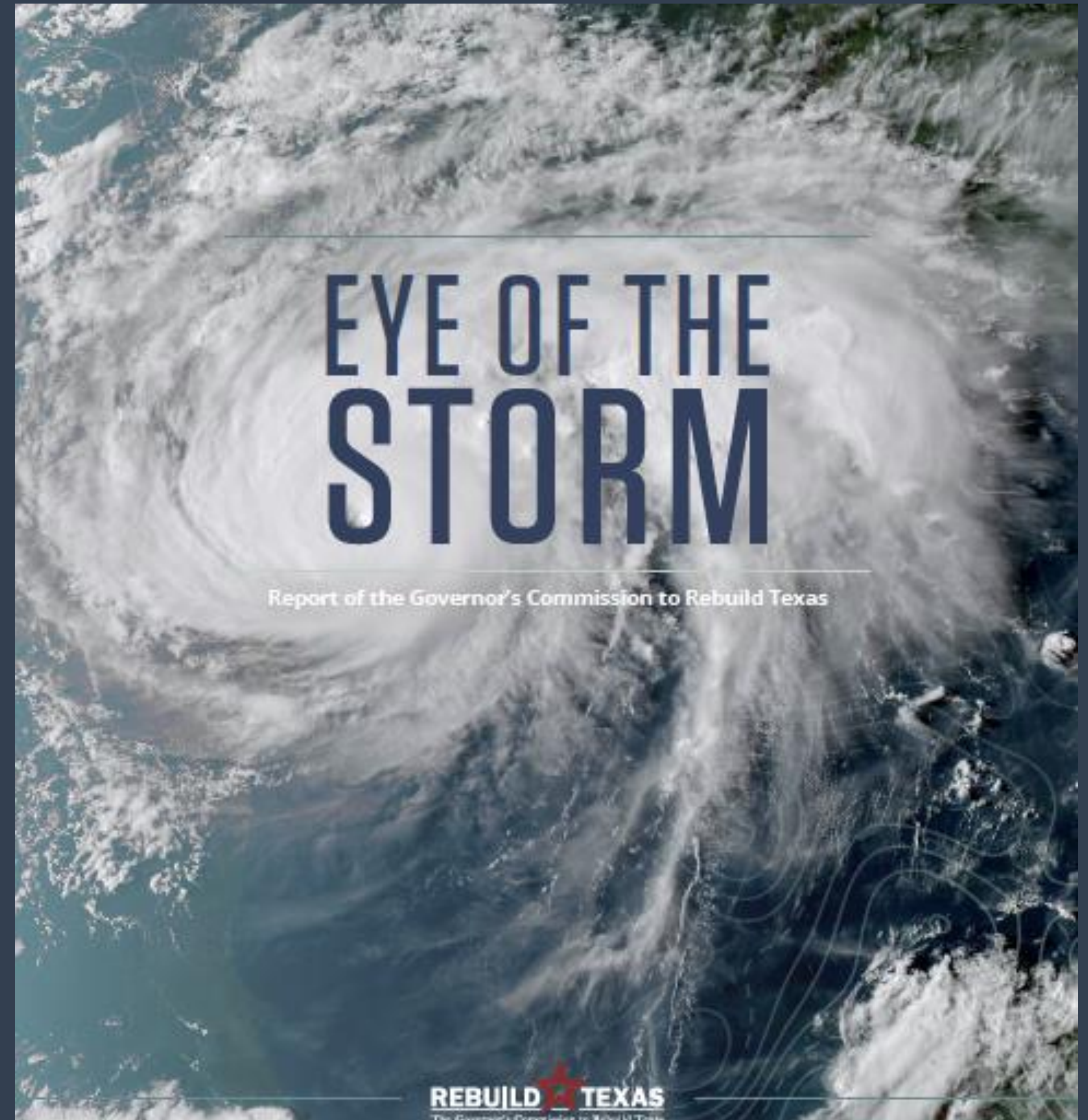
- Branch Boundary
- County Boundary

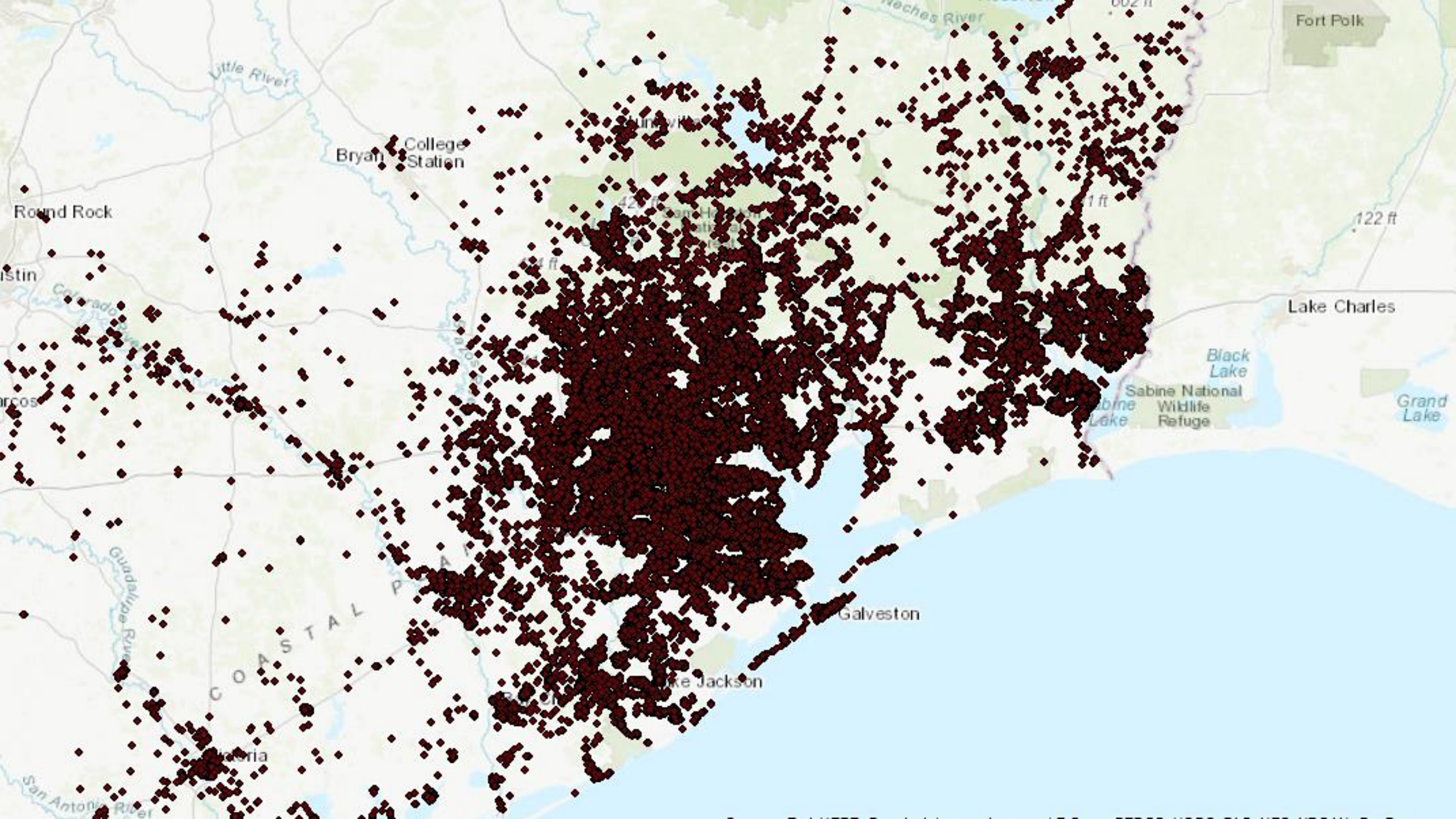
Designated

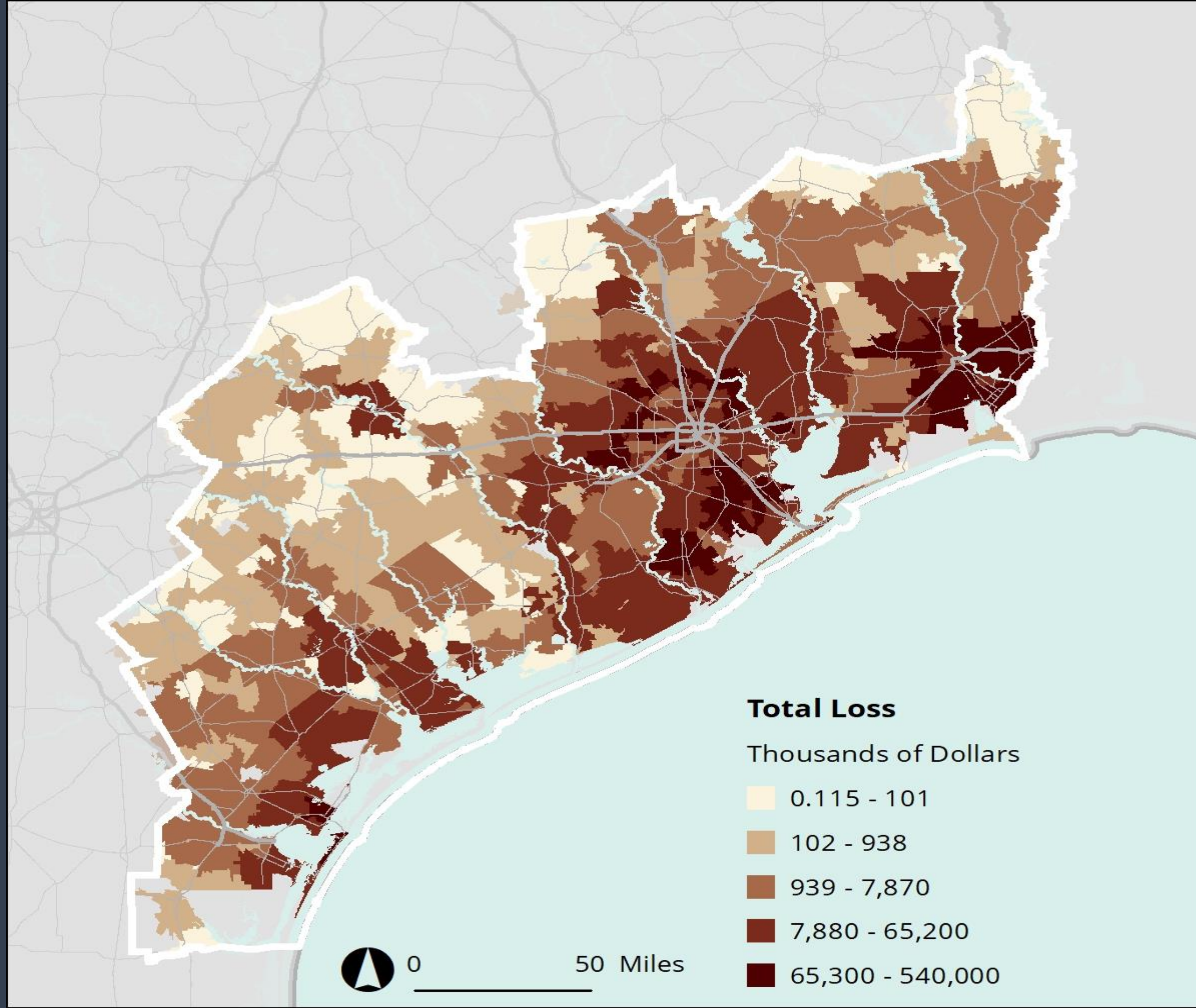
- IA & PA Cat: A-G (39)
- IA & PA Cat: A-B (2)
- PA Cat: B (4)
- PA Cat: A-G (8)



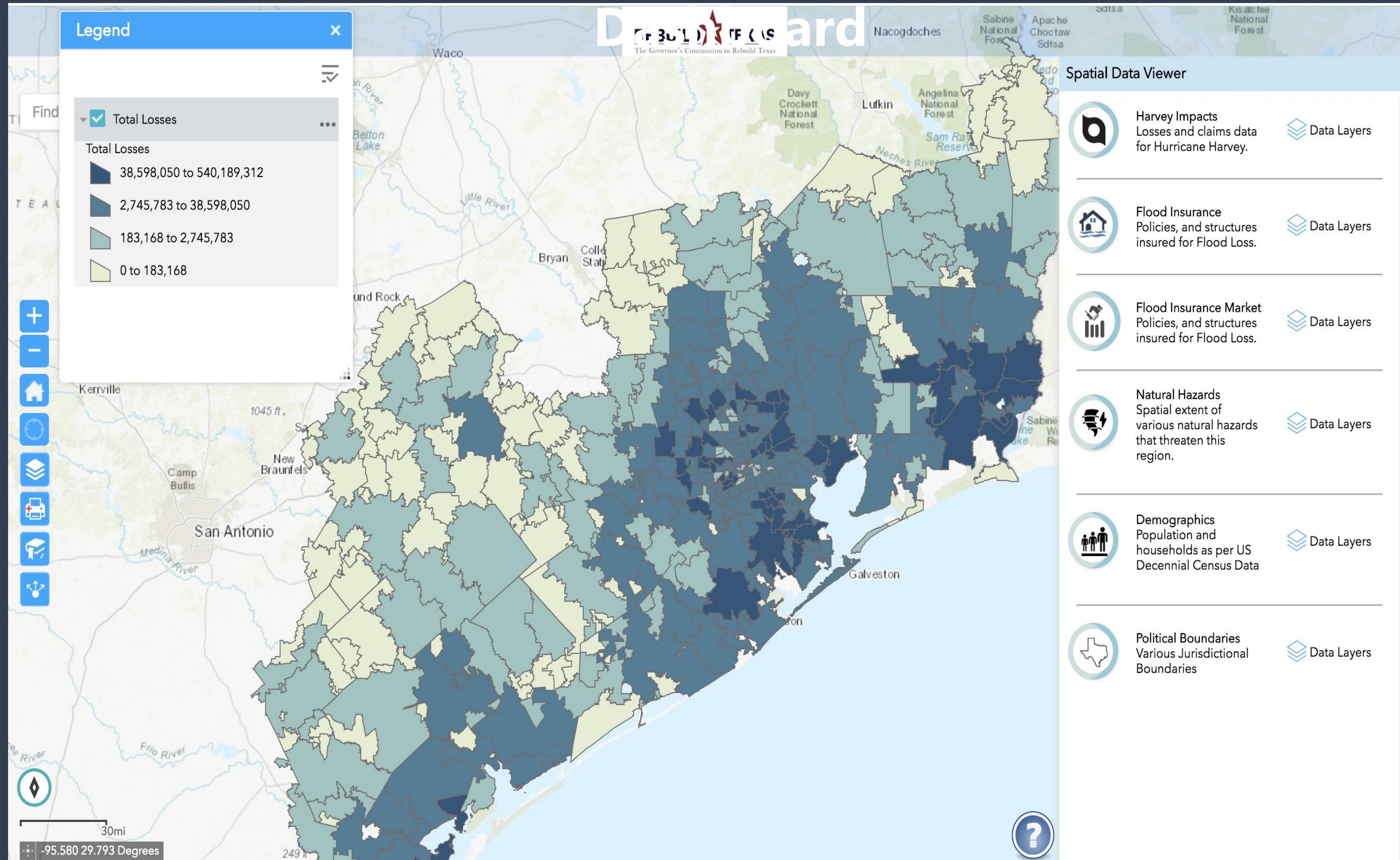
0 25 50 100 Miles





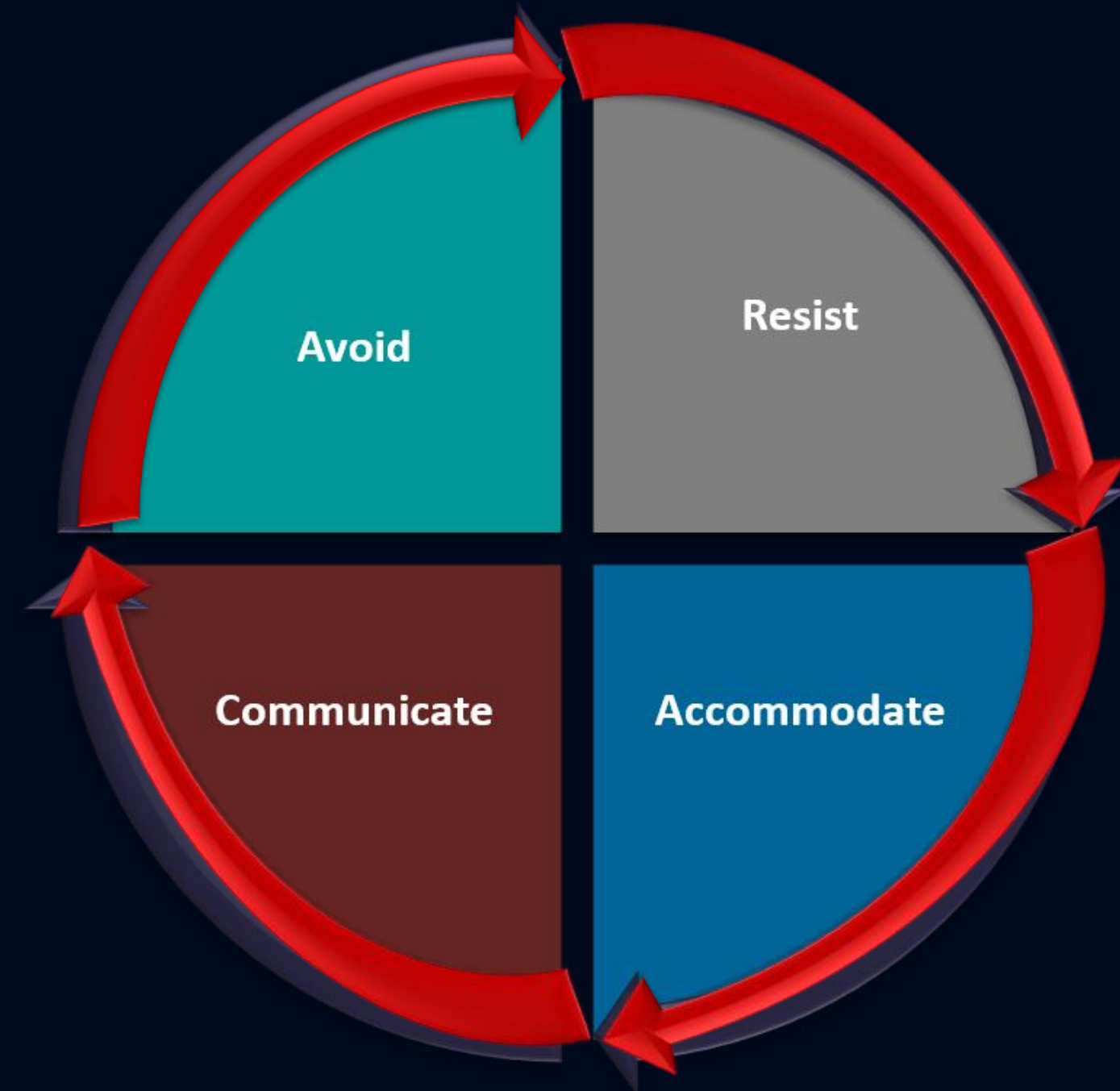


Hurricane Harvey



Flood Mitigation Framework

- Avoid:
 - *Get Out of the Way*
- Accommodate:
 - *Let It Flood*
- Resist:
 - *Stand and Fight*
- Communicate:
 - *Tell the Story of Risk*



AVOIDANCE

VERTICAL AVOIDANCE, ELEVATED STRUCTURES











AVOIDANCE

HORIZONTAL AVOIDANCE, OPEN SPACE PROTECTION





ACCOMMODATE











RESIST







DUNE PROTECTION



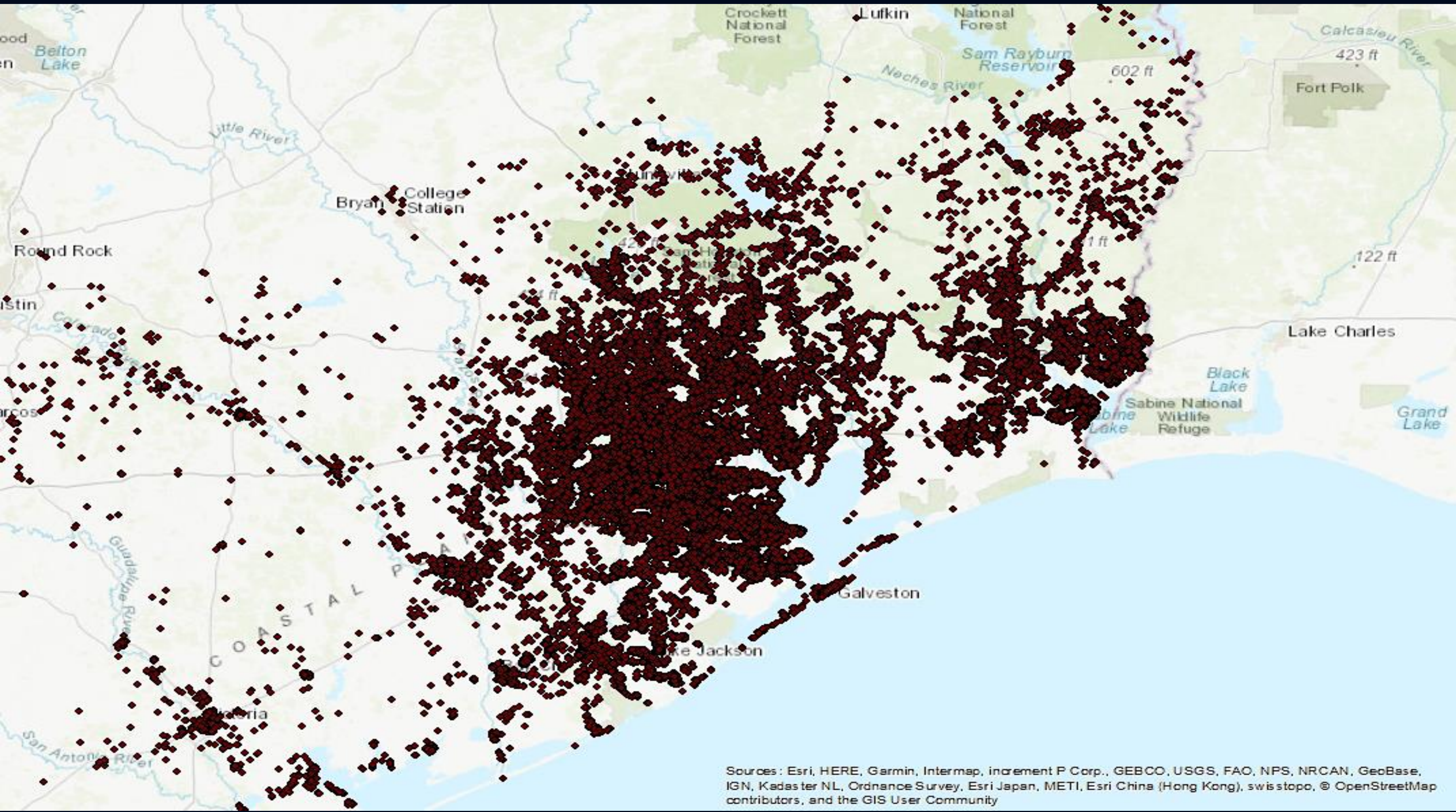
RESISTANCE

MULTI-FUNCTIONAL BARRIERS



COMMUNICATE





Measuring, Mapping and Managing Flood Risk in Texas

Interactive Map Catalog



- Introduction
- Damage Plain Continuous
- Damage Plain Flood Scale
- Damage Plain
- Flood Hazard Comparison

<http://www.texascoastalatlascatalog.com/FloodHazardMapCatalog>

IDRT Damage Plain

i

Legend

Damage plain

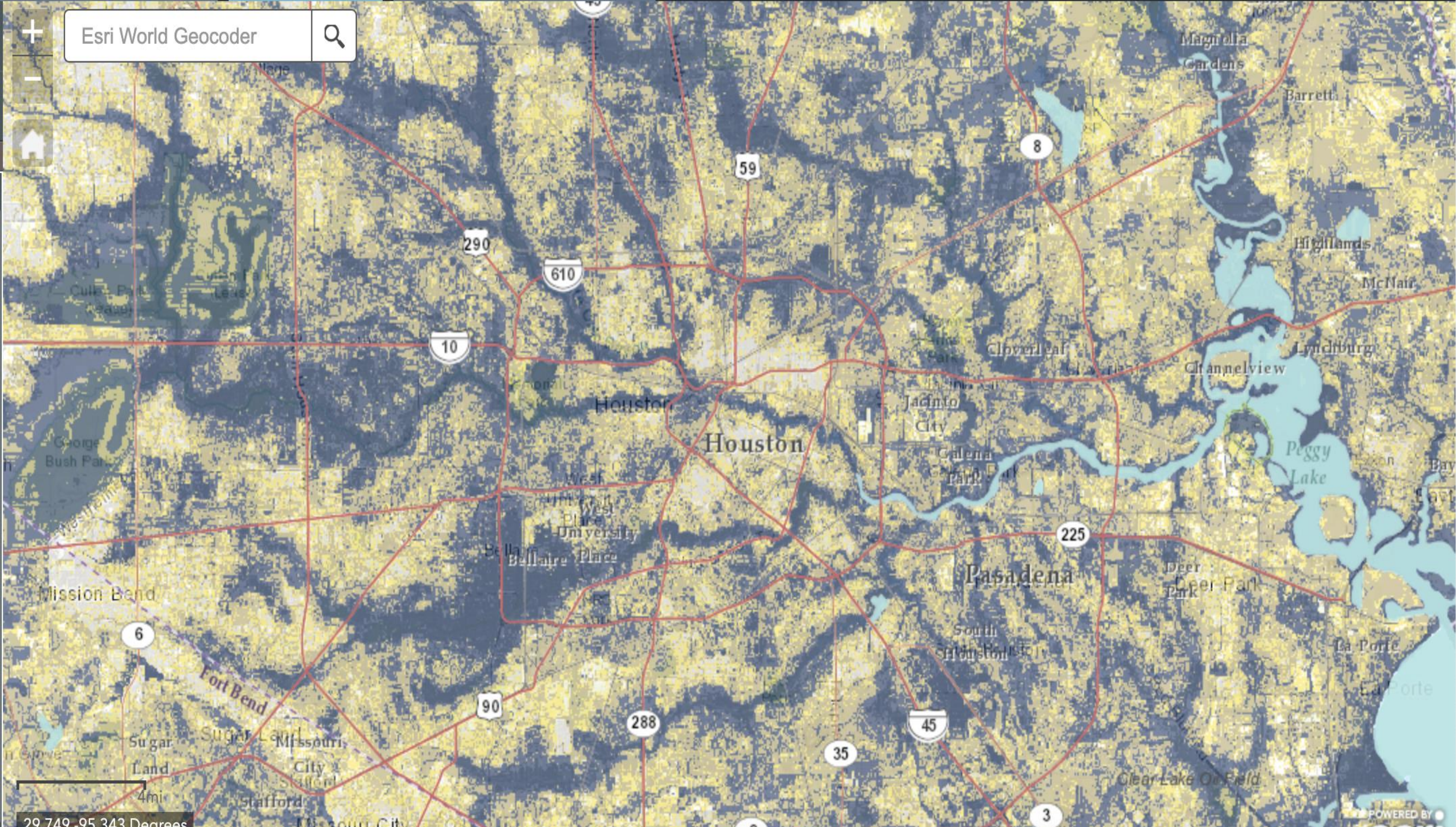
Return Period

500-year

250-Year

100-Year

50-Year





The Damage Plain vs. The Floodplain

A comparison of the FEMA 100-year and 500-year floodplains (right) and the equivalent areas of the Damage Plain (left).

500 - year
100 - year

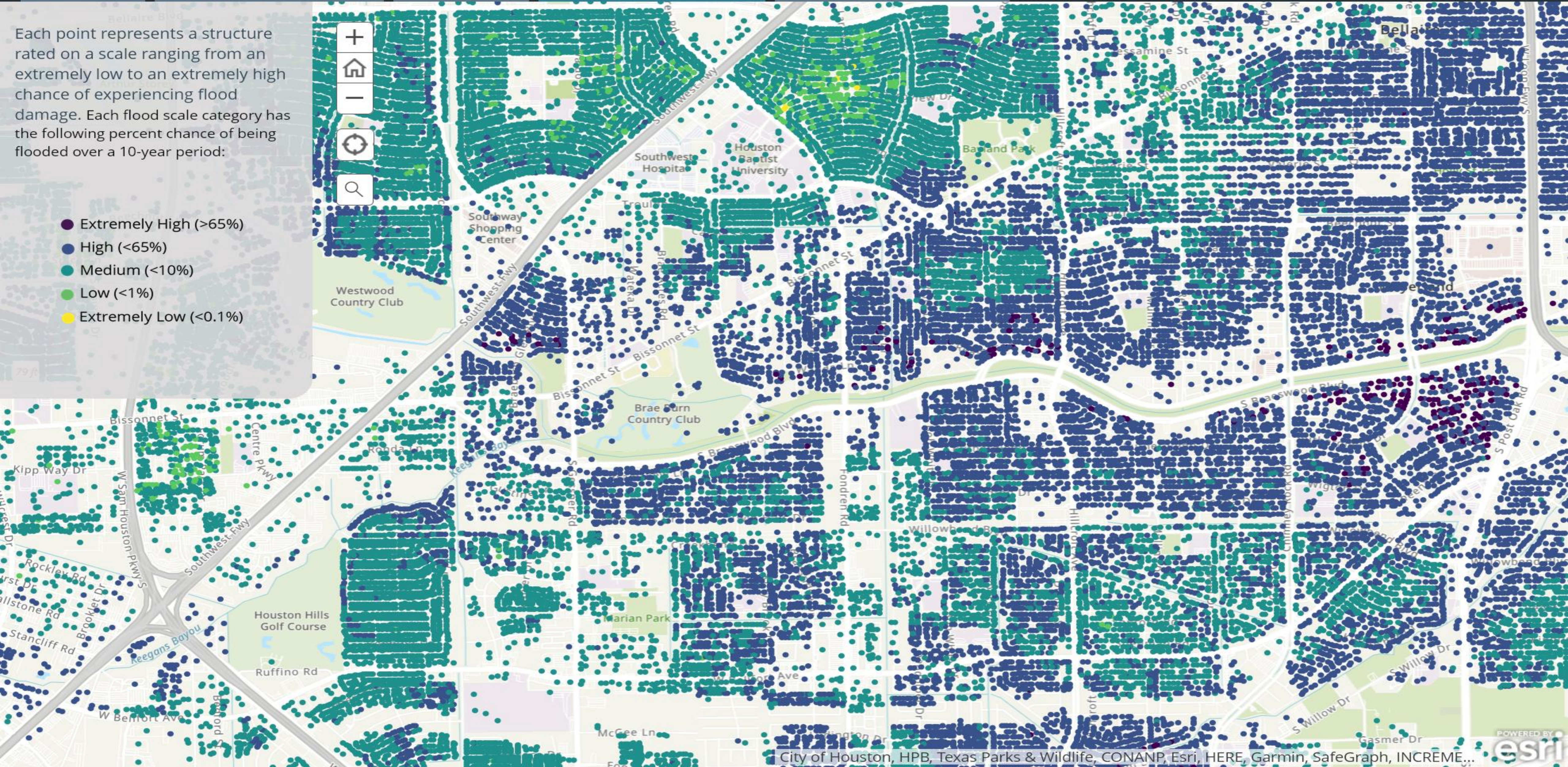


Measuring, Mapping, and Managing Flood Risk in Texas

- Introduction
- Damage Plain Continuous
- Damage Plain
- Damage Plain Flood Scale
- Damage Plain Comparison

Each point represents a structure rated on a scale ranging from an extremely low to an extremely high chance of experiencing flood damage. Each flood scale category has the following percent chance of being flooded over a 10-year period:

- Extremely High (>65%)
- High (<65%)
- Medium (<10%)
- Low (<1%)
- Extremely Low (<0.1%)





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DIDN'T
FLOOD



Buyers Be-Where

[ABOUT US](#)

[METHODOLOGY](#)

[MITIGATION](#)

Understand your flood and fire risk and take action

Buyer's Be-Where is a free tool to assess the flood and fire risk to individual residential structures in Hurricane Harvey impacted areas in Texas. Created for public use by the Institute for a Disaster Resilient Texas.



Buyers Be-Where

Your risk results for 109 Harold St, Houston, TX 77006

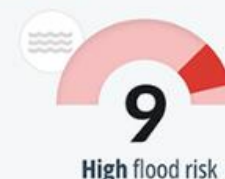


This property has a **high flood risk** and **moderate fire risk**. View the tabs below for details and mitigation tactics.

Flood Risk
High

Fire Risk
Moderate

Flood Risk Profile



FEMA Flood Zone ⓘ
Special Flood Hazard Area ⓘ
Insurance Required

Our risk assessment indicates that this property is **highly vulnerable to flooding**. If you own this property, we recommend taking immediate action to protect against potential damage.

This property is in the FEMA Special Flood Hazard Area (SFHA). Properties in the SFHA **require flood insurance** if you have a federally-backed mortgage.

[Download full report](#)



[Learn](#) how your risk is calculated



[Download](#) a detailed report



[Explore](#) mitigation strategies

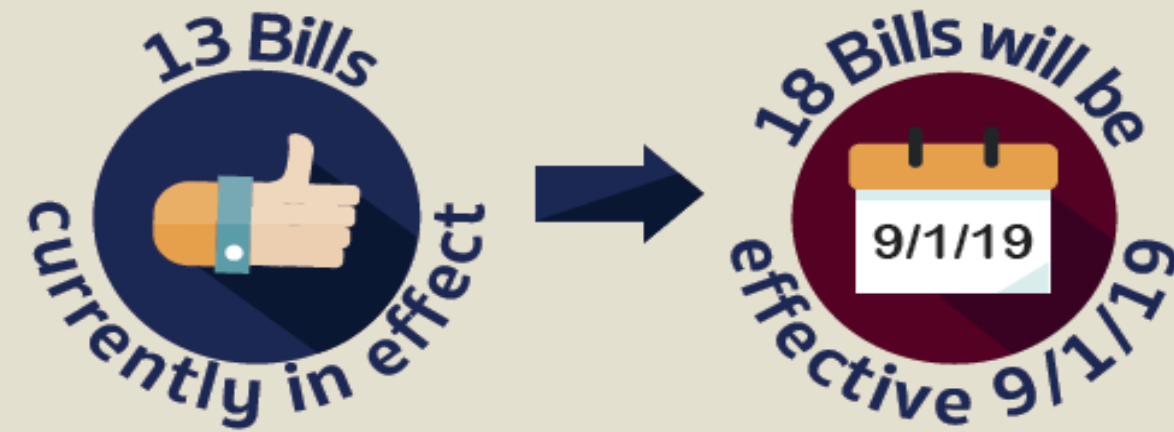
In addition
to Local Jurisdictions and
Other Institutions of Higher Education,

23 State and Federal Agencies
were included in legislation

Eye of the Storm

44 Recommendations by the #’s

10 FEMA Bills requiring
federal involvement

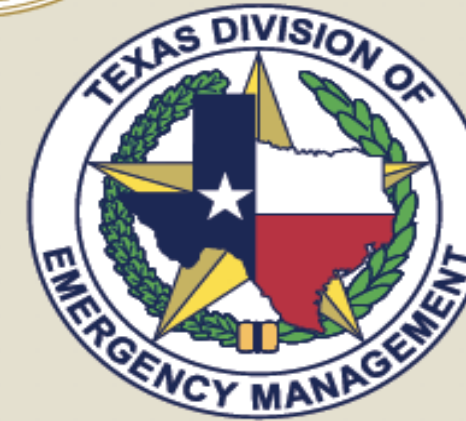


Bills signed by the Governor
that address the
44 Recommendations

6
Legislatively Mandated
Task forces/
Study groups

9
TEMAC Committees
created by TDEM

30
Reports/Plans/Actions
are required



43/44
Recommendations
Addressed by Legislation

17/31 Bills
Affect TDEM Directly

2 Recommendations
Addressed Outside Legislation
Rec. 2 - GA Executive order 5
Rec. 4 - TDEM Funding

WHAT AREAS DO THE BILLS AFFECT?



LEGISLATIVE HIGHLIGHTS

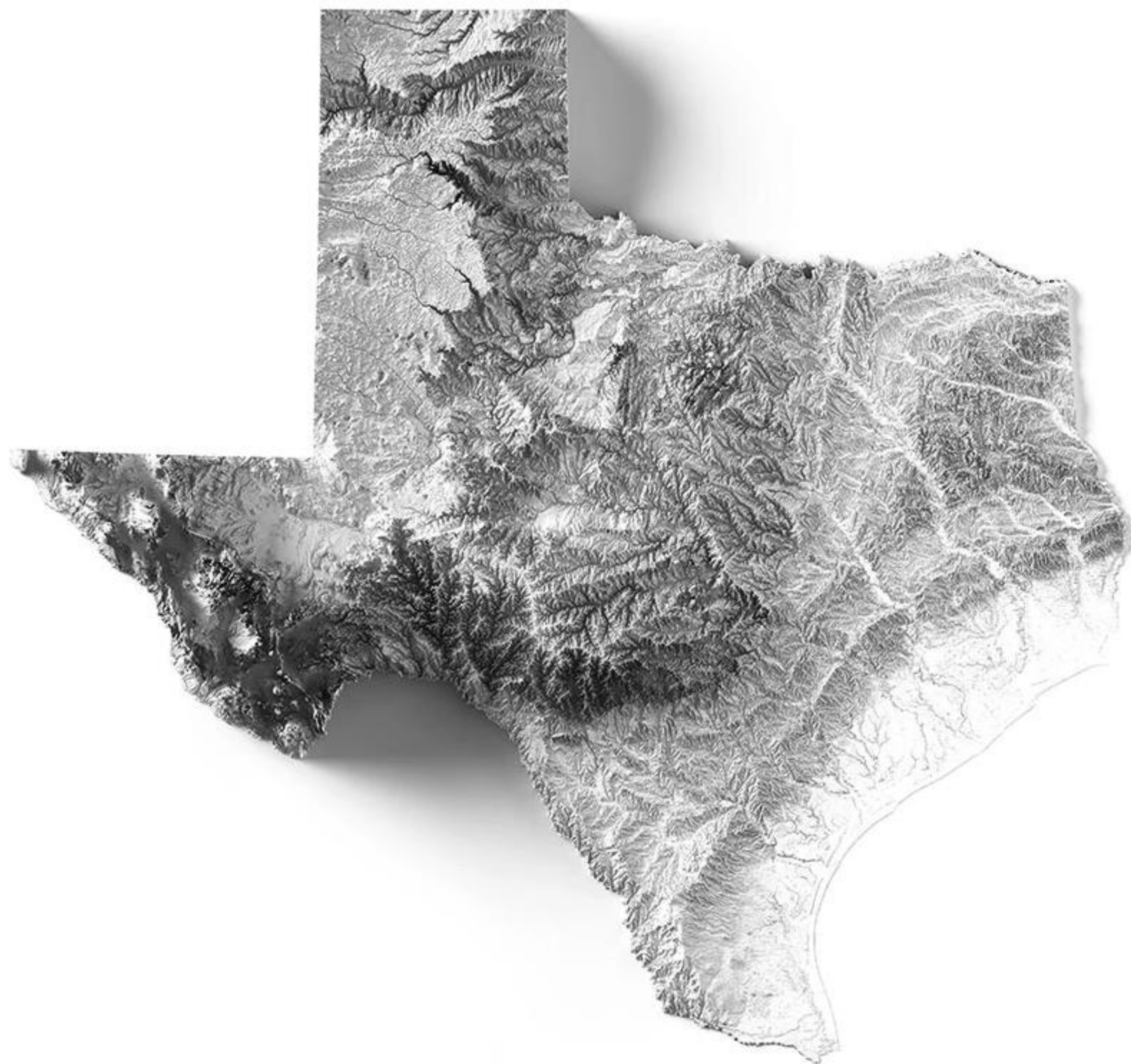
- Evaluate and propose options for a state-local partnership to help future-proof Texas against flood events on a watershed basis – stat. directive.
- Requiring seller's disclosure notice for residential property regarding floodplains, flood pools, or reservoirs.
- Flood control planning and the funding of flood planning, mitigation, and infrastructure projects.
- Local enhanced freeboard requirements



LEGISLATIVE HIGHLIGHTS

- **State and regional flood planning requirements.**
 - Prepare and adopt a comprehensive state flood plan that incorporates the regional flood plans
- **Institutionalize the use of extension agents from the Texas A&M AgriLife Extension Service as a “force extender” in support of the Texas Division of Emergency Management**
- **Establish and fund a new Institute for a Disaster Resilient Texas to be established within Texas A&M University**





Our mission is to enhance
disaster resilience by
bridging the gap between
research and decision
making.



IDRT

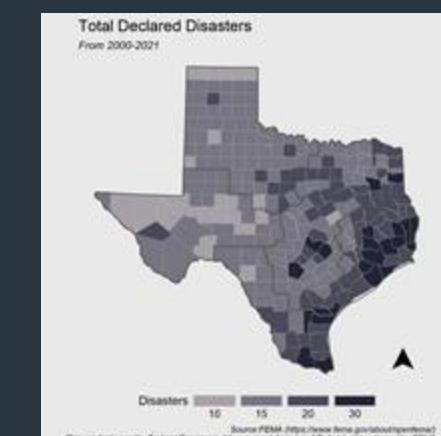
MAJOR INSTITUTE STATE-LEVEL PROJECTS



Risk Communication Platform for Residents



Texas Disaster Information System



State Hazard Mitigation Plan

CHALLENGES AND MISSED OPPORTUNITIES

CHALLENGES

- Coordinating across multiple agencies and levels of government
- Planning for the future in the face of unprecedented response
- Converting data to decision support and communicating to diverse stakeholders
- Prioritizing policies for legislative session
- Implementing policies and programs
- Local level buy-in

MISSED OPPORTUNITIES

- Statewide flood resilient building code
- State level acquisition program for flood vulnerable properties
- Longer term presence of the Rebuild TX Commission
- Prioritize protection over recovery



Thank You



Learn more at idrt.tamug.edu

