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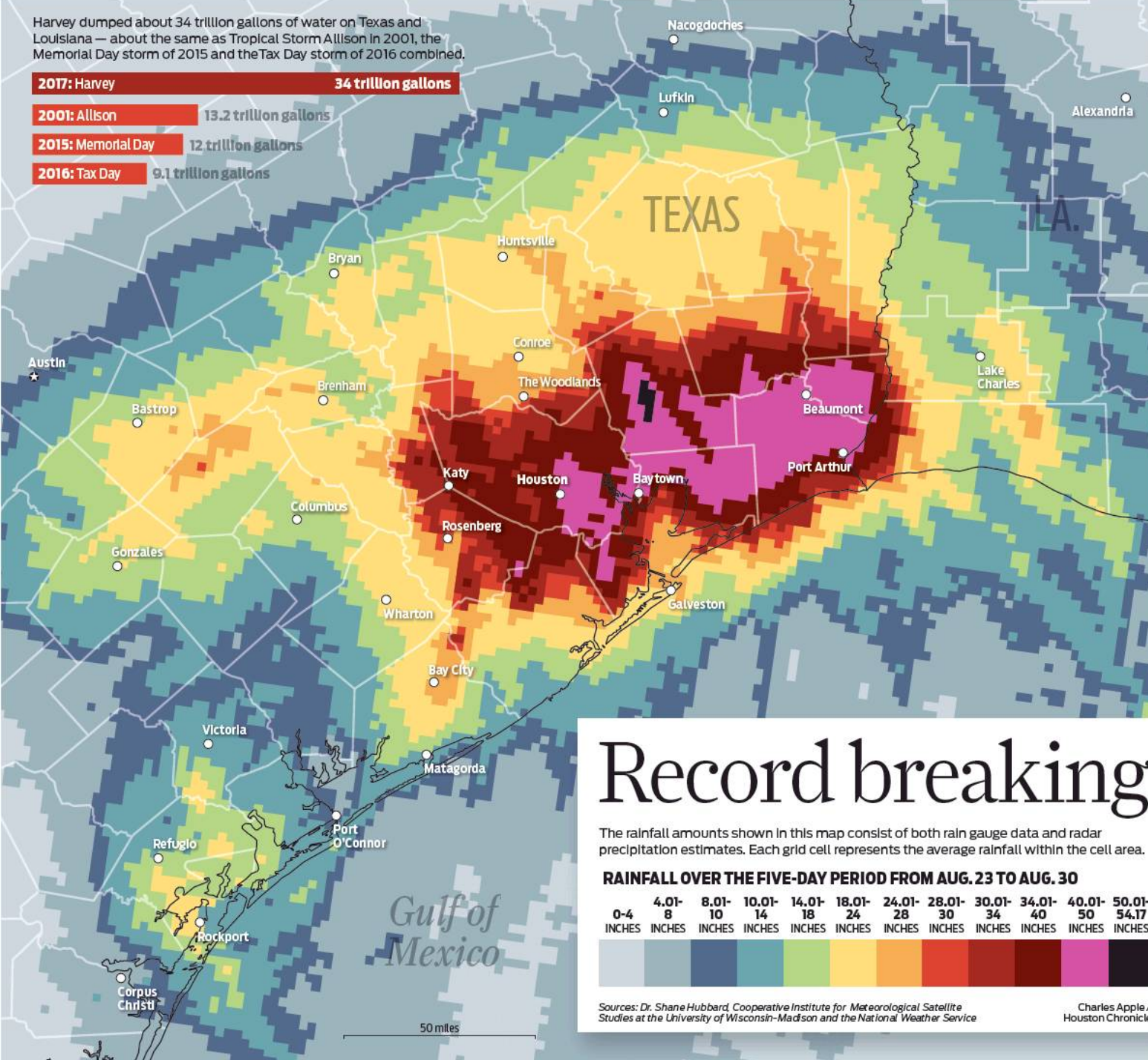


# **Let's Talk About Flooding In the Bay Area**

**By Jim Blackburn  
November 28, 2017**

Harvey dumped about 34 trillion gallons of water on Texas and Louisiana — about the same as Tropical Storm Allison in 2001, the Memorial Day storm of 2015 and the Tax Day storm of 2016 combined.

- 2017: Harvey** 34 trillion gallons
- 2001: Allison** 13.2 trillion gallons
- 2015: Memorial Day** 12 trillion gallons
- 2016: Tax Day** 9.1 trillion gallons



# Record breaking

The rainfall amounts shown in this map consist of both rain gauge data and radar precipitation estimates. Each grid cell represents the average rainfall within the cell area.

## RAINFALL OVER THE FIVE-DAY PERIOD FROM AUG. 23 TO AUG. 30



Sources: Dr. Shane Hubbard, Cooperative Institute for Meteorological Satellite Studies at the University of Wisconsin-Madison and the National Weather Service  
 Charles Apple / Houston Chronicle

# Harvey Record-Breaking Storm

## \$80 - \$200 billion

# New Non-Profit Formed Dedicated to Designing a Flood-Resilient Houston



# A Plan of Action

RICE UNIVERSITY'S  
**BAKER INSTITUTE**  
FOR PUBLIC POLICY



## HURRICANE/TROPICAL STORM HARVEY: POLICY PERSPECTIVES

**Jim Blackburn, J.D.**

Professor in the Practice of Environmental Law, Department of Civil and Environmental Engineering, Rice University; Co-director, Severe Storm Prediction, Education and Evacuation from Disaster (SSPEED) Center; Faculty Scholar, Baker Institute

September 2017

RICE UNIVERSITY'S  
**BAKER INSTITUTE**  
FOR PUBLIC POLICY



## THE ROLE OF PUBLIC AND PRIVATE STAKEHOLDERS IN "SOLVING" HOUSTON'S FLOODING PROBLEM

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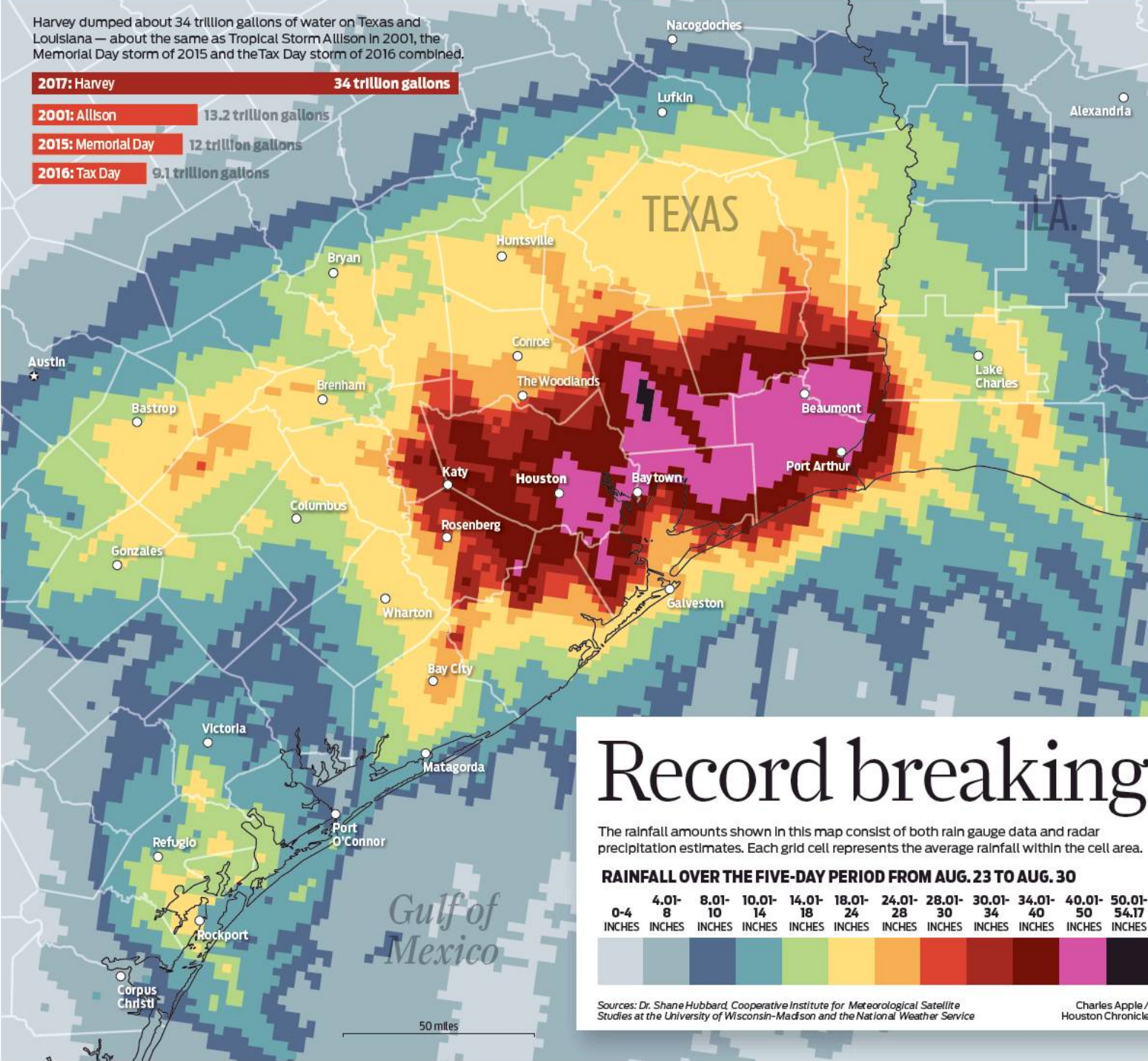
October 2017

# Vision for the Future

- **Flood-smart Citizens Who Participate**
- **Make Room For The Bayous and Creeks**
- **Buy-Outs Preferred Method of Solution**
- **Structural Where Needed and Cost-Effective**
- **Flood-Literate Politicians**
- **Focus on Those Who Are Here Now**
- **Transparency**

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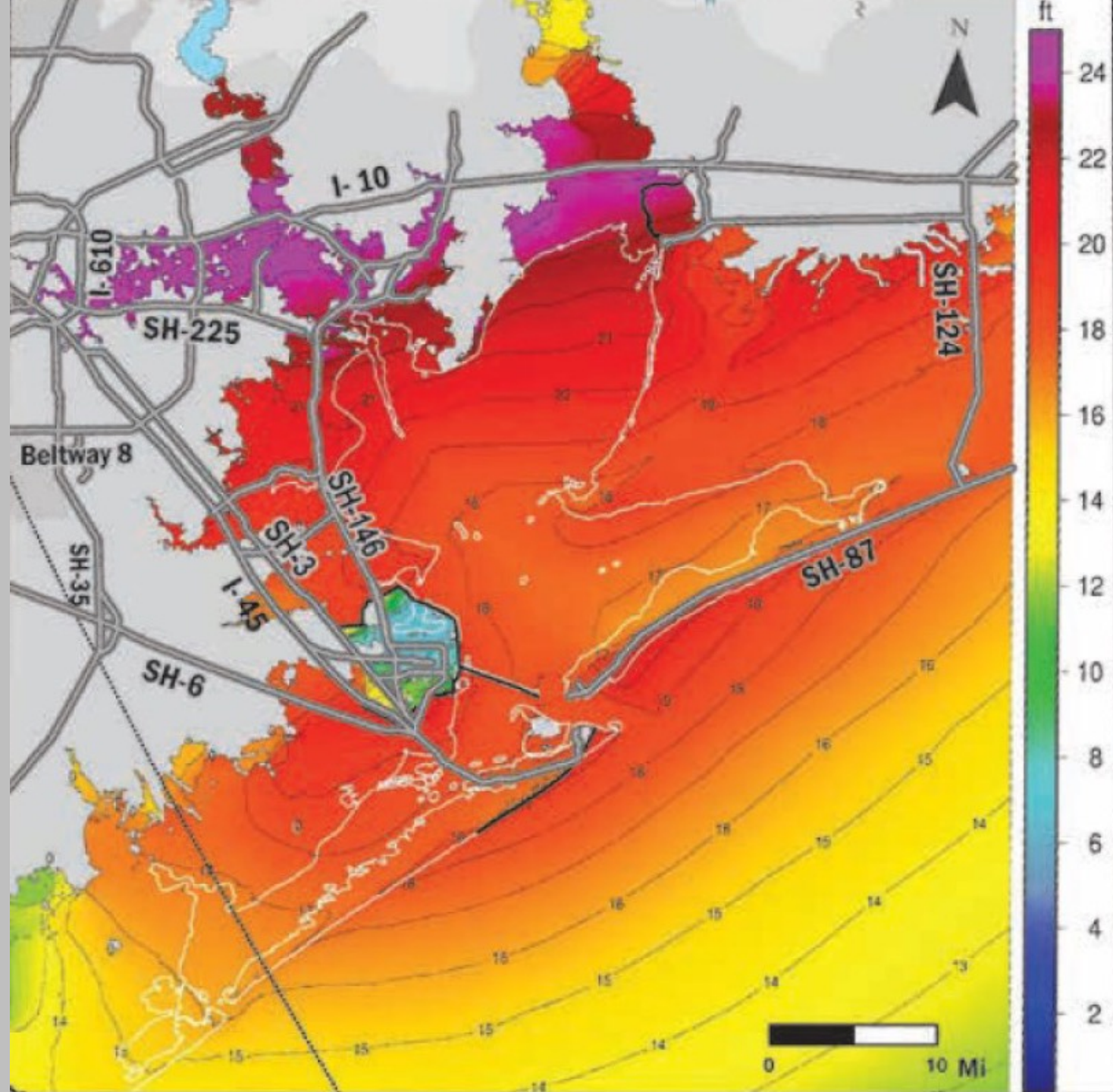
**RAINFALL OVER THE FIVE-DAY PERIOD FROM AUG. 23 TO AUG. 30**

0-4	4.01-8	8.01-10	10.01-14	14.01-18	18.01-24	24.01-28	28.01-30	30.01-34	34.01-40	40.01-50	50.01-54.77
INCHES	INCHES	INCHES	INCHES	INCHES	INCHES	INCHES	INCHES	INCHES	INCHES	INCHES	INCHES

Sources: Dr. Shane Hubbard, Cooperative Institute for Meteorological Satellite Studies at the University of Wisconsin-Madison and the National Weather Service  
 Charles Apple / Houston Chronicle

# Record-Breaking Ask For Funding For Texas Post Harvey

## Governor's Office - \$60 Billion







**GALVESTON BAY**

**MID-BAY BARRIER**

**ELEVATED HWY 87**

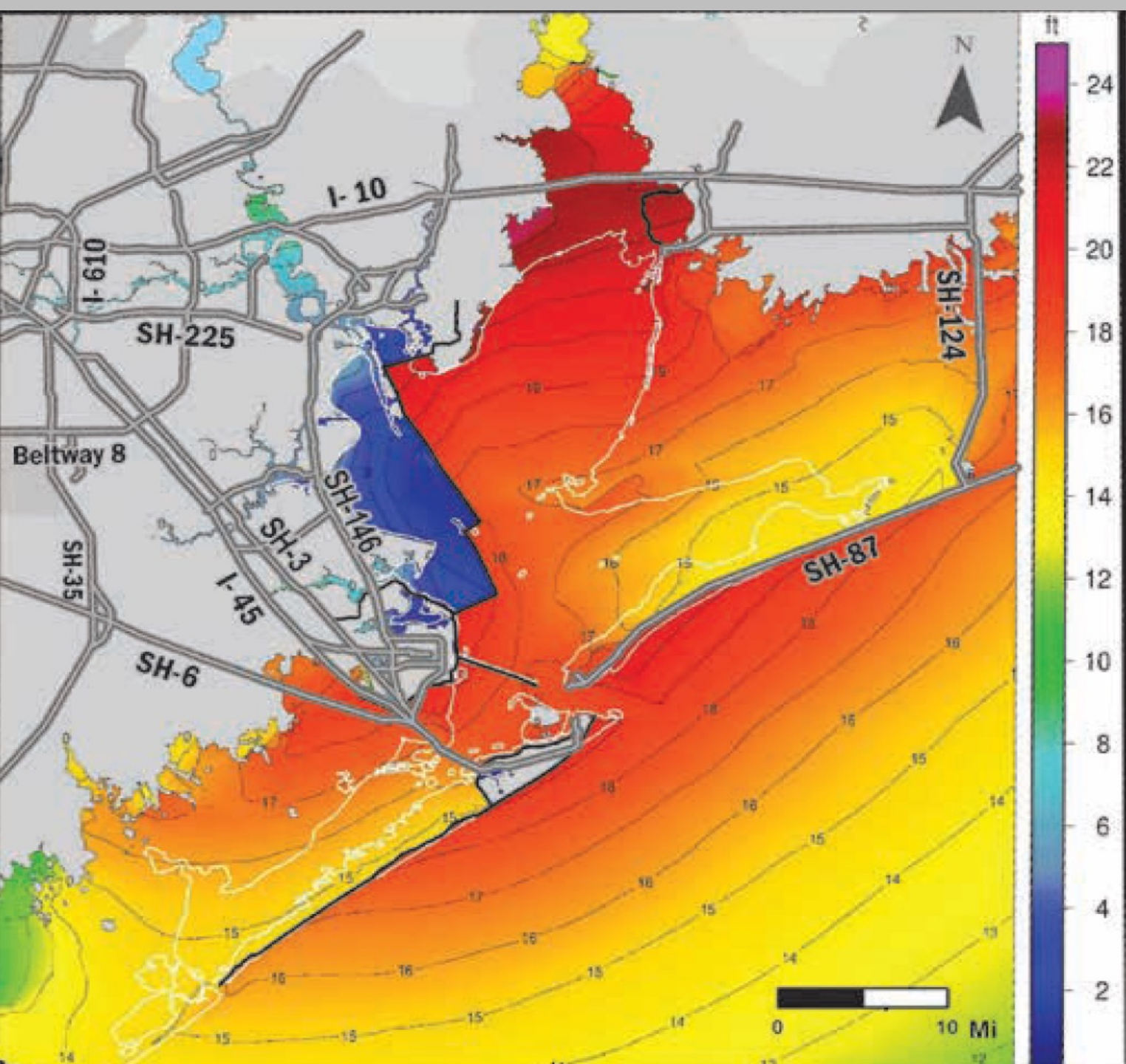
**TEXAS CITY LEVEE**

**GALVESTON BACKSIDE LEVEE**

**GALVESTON SEAWALL**

**GALVESTON**

**ELEVATED FM 3005**



**Prepare and Submit  
Permit Application to  
Build Mid-Bay  
Alternative**

**Affordable by local  
funds - \$3 billion**

**Can be processed  
pending other asks  
being evaluated**

**Can be dropped at any  
time**

