



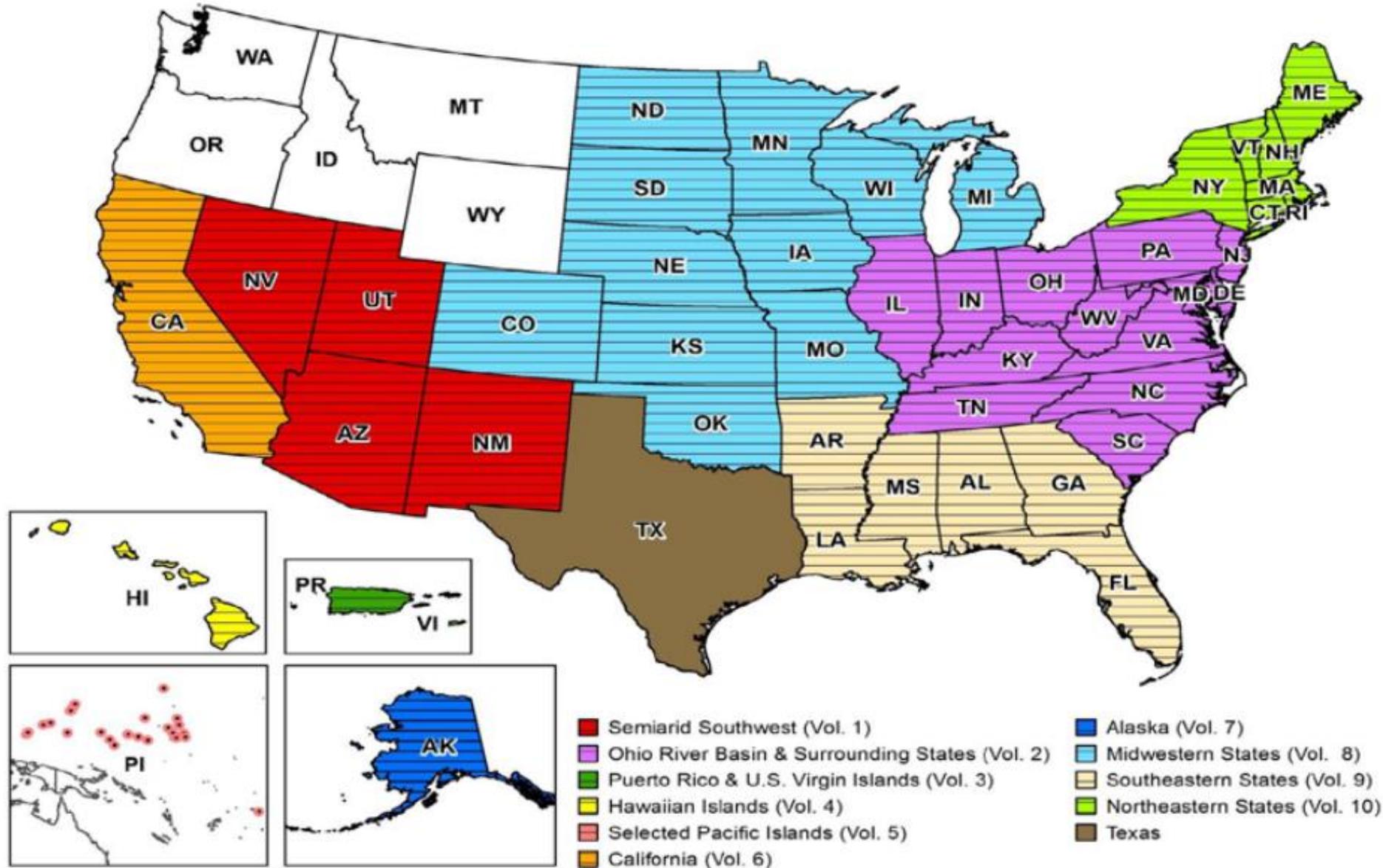
# ATLAS 14: AUSTIN'S NEW UNDERSTANDING OF FLOOD RISK

# Atlas 14 Background

- Nationwide study of rainfall intensities

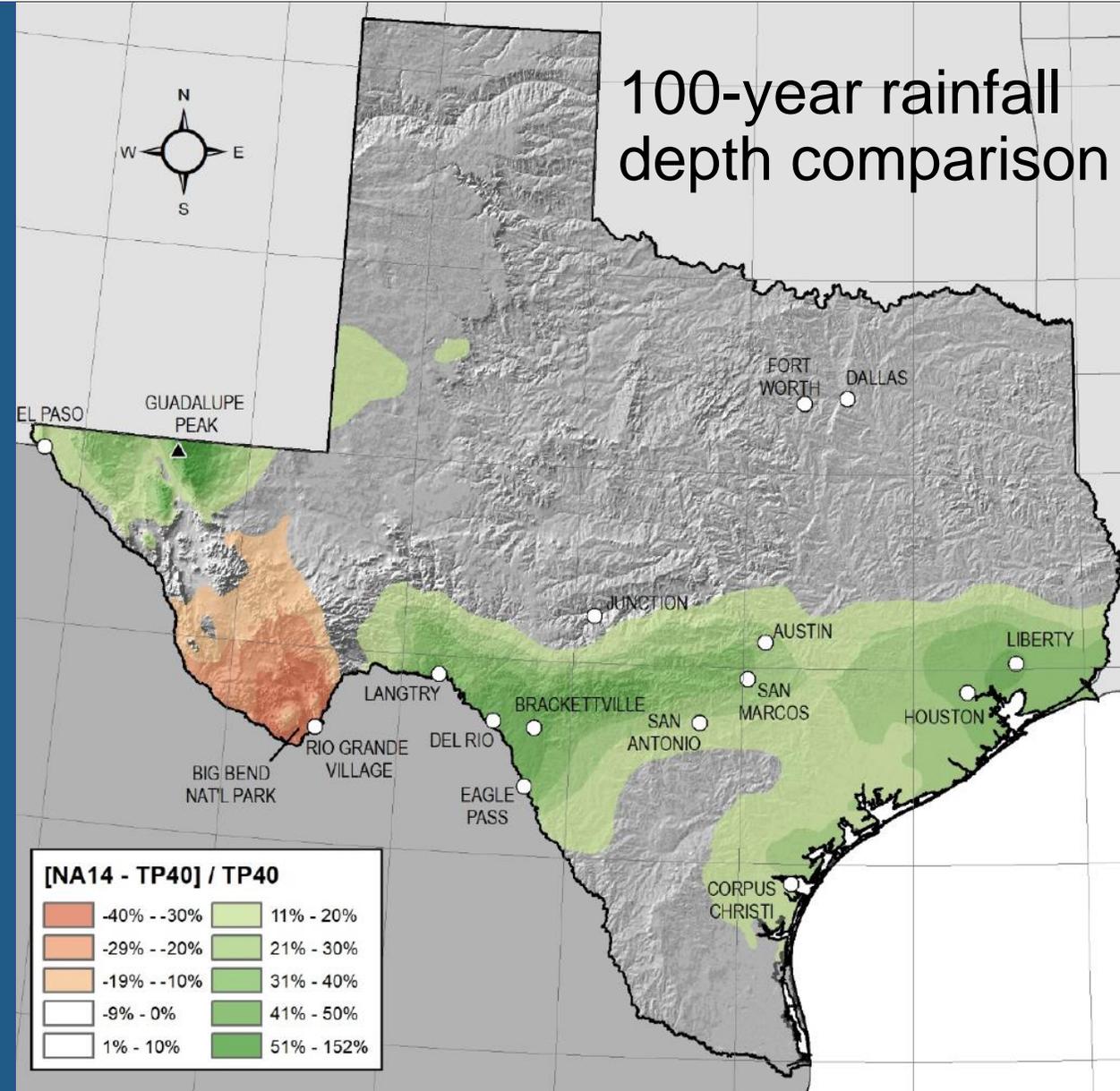
## Partners

- Federal** NOAA, National Weather Service, U.S. Army Corps of Engineers, Federal Highway Administration
- State/Local** TxDOT, Harris County Flood Control District, City of Austin, et al.



# Atlas 14 Rainfall Changes – Statewide

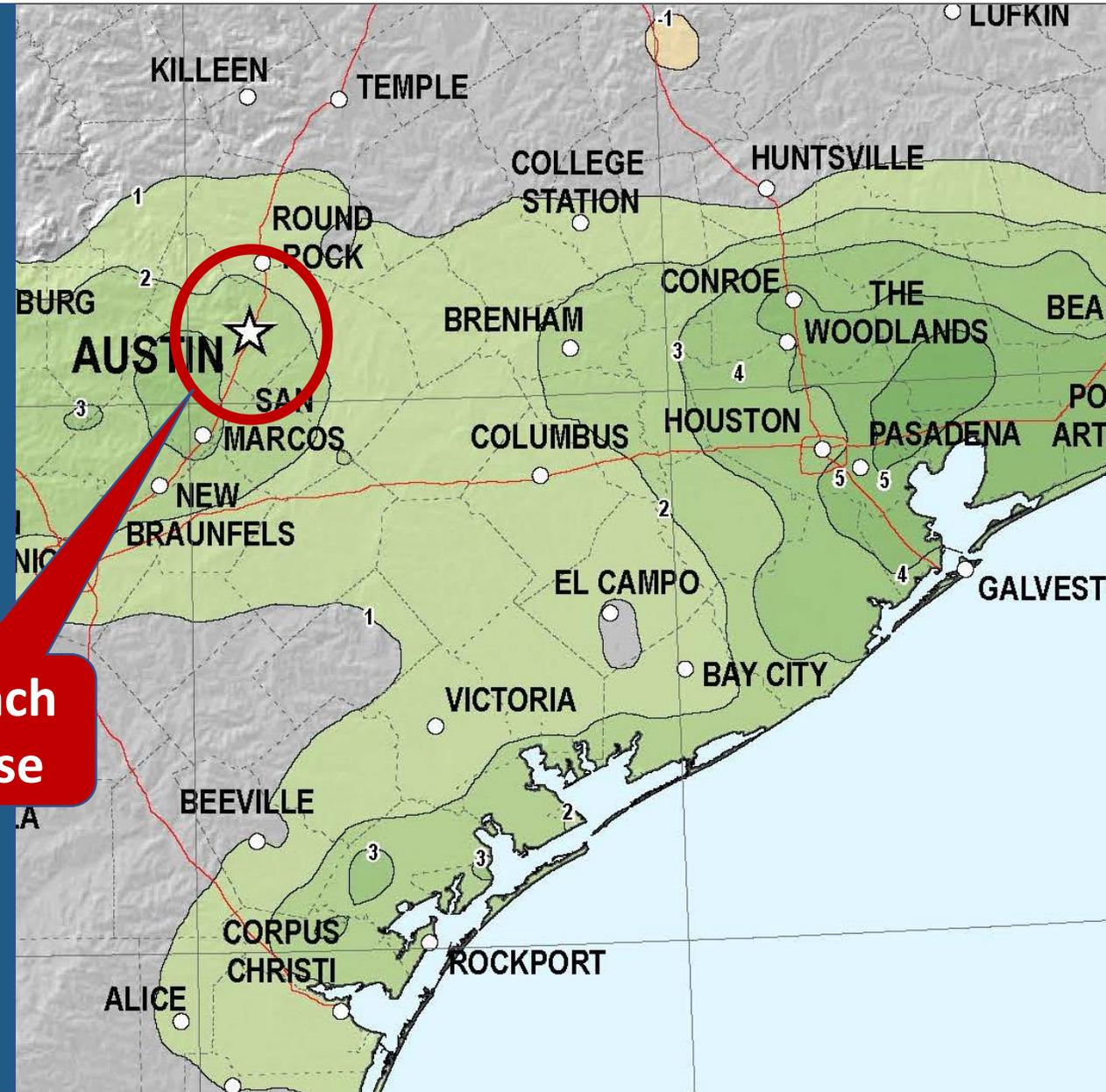
- Nationwide examination of historic rainfall data
- Adds data from 1961 – 2017



# Atlas 14 Rainfall Changes – Austin

- Nationwide examination of historic rainfall data
- Adds data from 1961 – 2017

2 – 3 inch increase



What does the new understanding of

## Flood Risk Mean?

- More buildings in the 100-year floodplain.
- Depth of flooding increases.
- More low water crossings at risk of flooding.
- Depth and velocity of flooding over roadways increase.



Overview of

# Flood Prevention Strategies

How do we ensure that *new* development minimizes its flood risk and the risk to others?

- Floodplain regulations
- Drainage criteria

Address:  **Locate** OR Property ID:  County:  **Locate** **Clear Selection** **Help**

**Reports**

Address:  TaxID:  Date:

FEMA Floodplain		City of Austin Floodplain	
Flood Zone	<input type="text" value="AE"/>	25-year Flood Elevation	<input type="text" value="603.64"/>
Community Number	<input type="text" value="480624"/>	100-year Flood Elevation	<input type="text" value="606.51"/>
Panel Number	<input type="text" value="48453C0585H"/>	Flood Study Reference	<input type="text" value="STUDY6"/>
Effective Date	<input type="text" value="9/26/2008"/>		
Base Flood Elevation	<input type="text" value="606.31"/>		

**Print** **Close**

Select ID Print Report Help Layers

1 Miles

# Recommended Response

## Step 1

Land Development Code amendments

## Step 2

Drainage Criteria Manual revisions

## Step 3

Flood Risk Evaluation





## Step 1

### Land Development Code amendments

- Revise floodplain definitions
- Create a redevelopment exception
- Expand the Colorado River exception
- Increase the freeboard requirement

## Step 2 Drainage Criteria Manual revisions

- Atlas 14 updates rainfall rates that are used to determine:
  - Floodplain location
  - Size of storm drain pipes, inlets, and ditches
  - Detention pond size
- Rules making process
  - Draft DCM released in August
  - Stakeholder input





## Step 3 Flood Risk Evaluation

Update floodplain studies citywide

- Process to take 2 - 3 years
- Once complete, will provide data to FEMA to update flood insurance maps

Evaluate impacts to existing infrastructure

- Floodwalls
- Channels

## Timeline

### Step 1 – LDC

Public Hearings

**September 2019** – Boards and Commissions (EC, ZAP, PC, and BFCBA)

**October 2019** – proposed City Council meeting

### Step 2 – DCM

**August 2019** – Released draft rules

**October 2019 thru January 2020** – Rules change process that includes stakeholder input

### Step 3 – Evaluation

**2019 to 2021** – Re-mapping of Austin floodplains and infrastructure evaluation

**2022** – FEMA map updates

An aerial photograph showing a residential neighborhood with houses and trees partially submerged in floodwater. In the foreground, a river flows rapidly over a rocky bed, creating white water rapids. The floodwater is a muddy brown color. The houses are mostly single-story with various roof colors. Some trees are still above water, while others are partially submerged. Power lines and poles are visible in the flooded area.

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