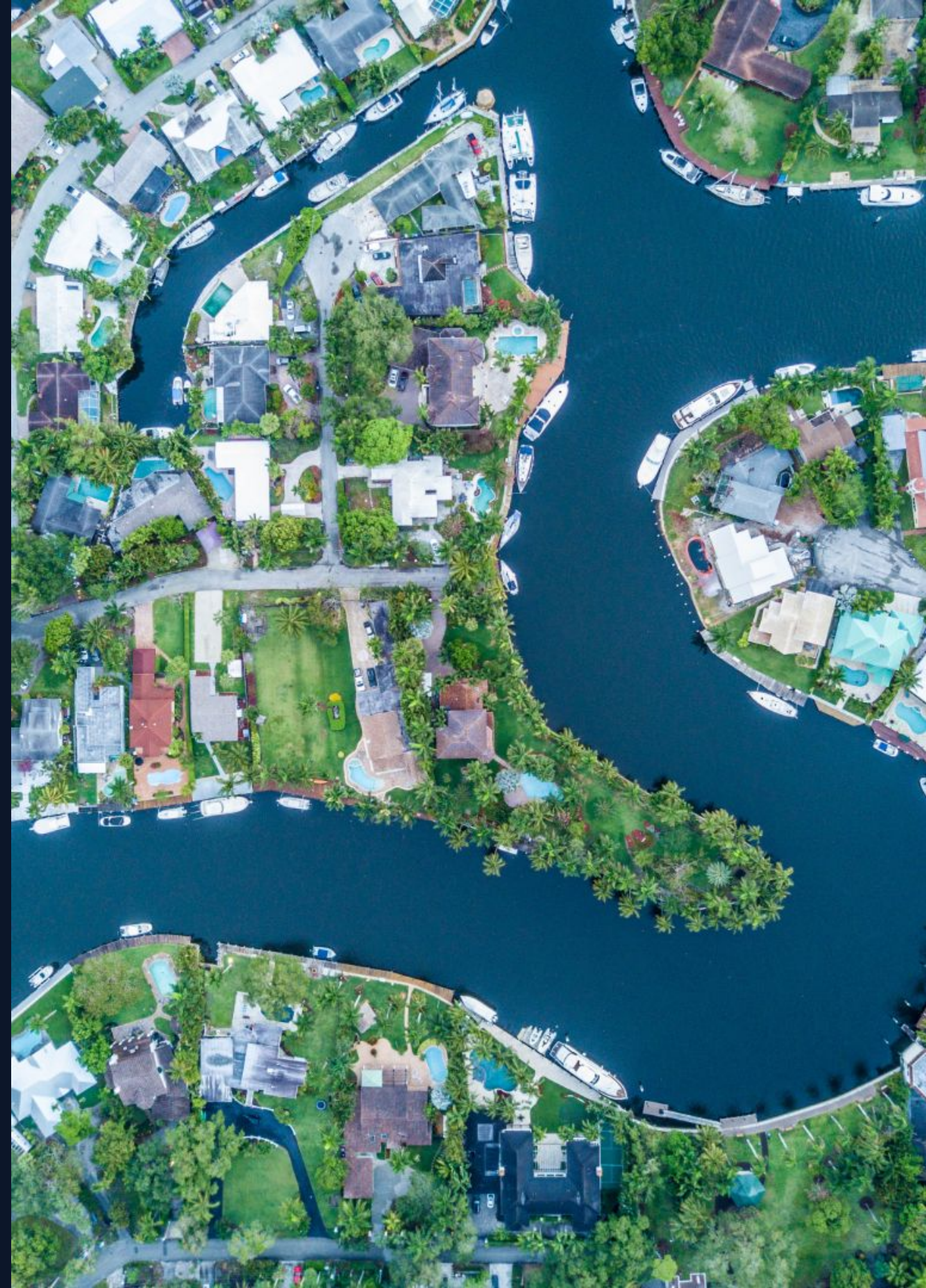




Effective Flood Communication: Simple Strategies for Outreach that Works

November 14, 2024

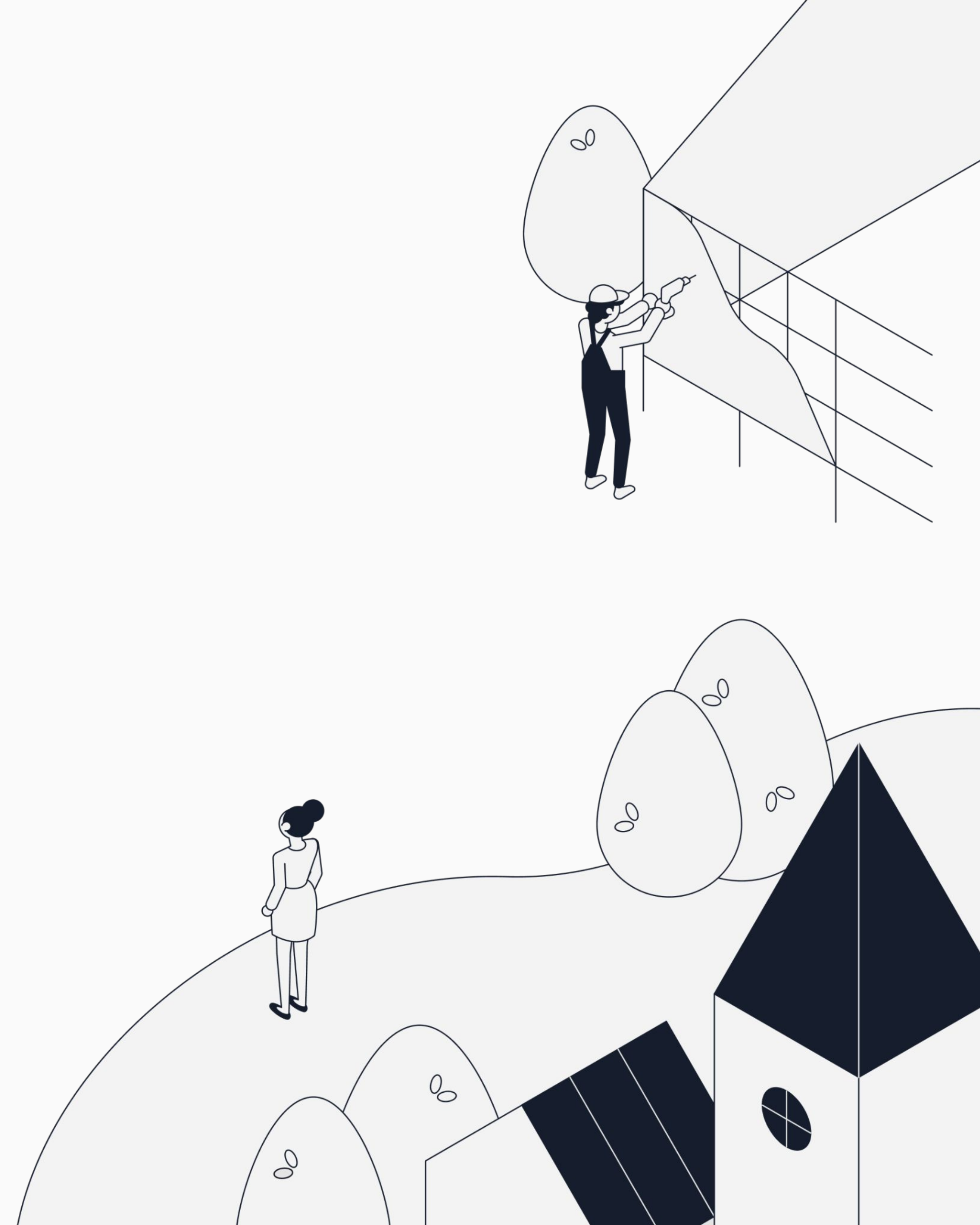
withforerunner.com



WELCOME

Housekeeping

- This presentation is being recorded
- The recording and presentation will be shared via email and posted on our blog
- Use the Q+A or the Chat to ask questions
- CFMs: Complete the post-attendance survey to receive your CEC. The CEC Certificate will be sent via email to you (and the list will be sent to ASFPM) next week



Agenda

- 1 **Introduction**
- 2 **Effective Flood Communication:
Simple Strategies for Outreach that
Works**
- 3 **Q&A**

Agenda

1 Introduction

2 Effective Flood Communication: Simple Strategies for Outreach that Works

3 Q&A

PARTNERS

We work with over
120 of the most at-risk
communities
throughout the U.S.



FDEM
Florida



DWR
California



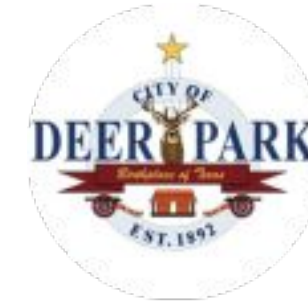
Miami
Florida



Tampa
Florida



Harris County
Texas



Deer Park
Texas



Jefferson Parish
Louisiana



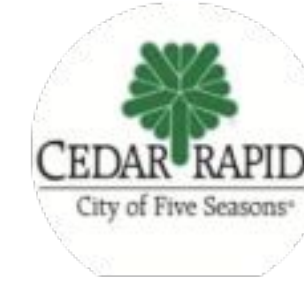
Tangipahoa Parish
Louisiana



Ocean City
New Jersey



Hoboken
New Jersey



Cedar Rapids
Iowa



Las Cruces
New Mexico



Alexandria
Virginia



Norfolk
Virginia



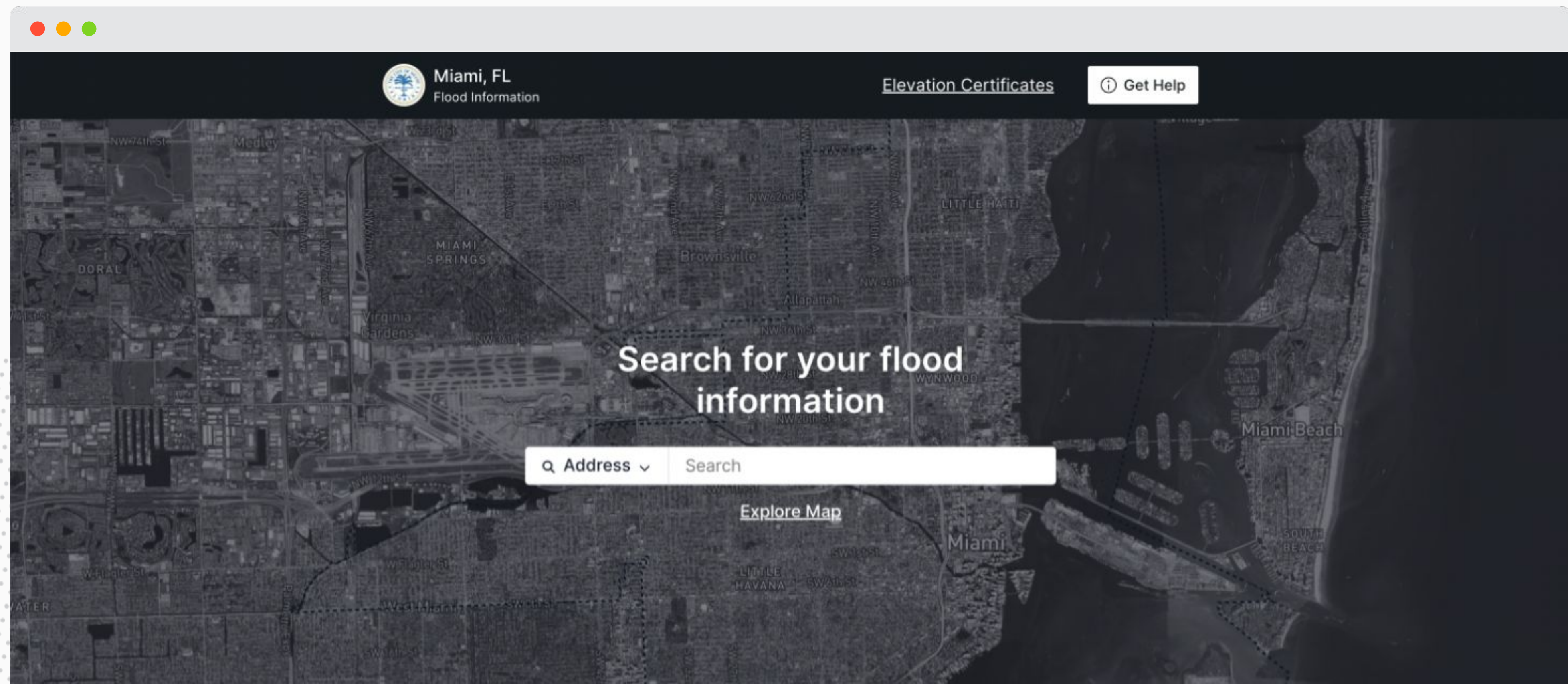
Calvert County
Maryland



Georgetown County
South Carolina

OUR SOLUTION

Forerunner empowers gov. agencies to do more.



Agenda

- 1 Introduction
- 2 Effective Flood Communication:
Simple Strategies for Outreach that
Works**
- 3 Q&A



Keri Stephens, Ph.D.

Professor & Fellow in International Communication Association
Co-Director, Technology & Information Policy Institute
The University of Texas at Austin

NOVEMBER 14, 2024

Effective Flood Communication: Simple Strategies for Outreach that Works

Keri K. Stephens, Ph.D.

Professor & Fellow in International Communication Association

Co-Director, Technology & Information Policy Institute

The University of Texas at Austin

Portions of talk funded by NSF, TWDB, GLO, IC2, and IDRT



TECHNICAL INFORMATION & NONTECHNICAL USERS

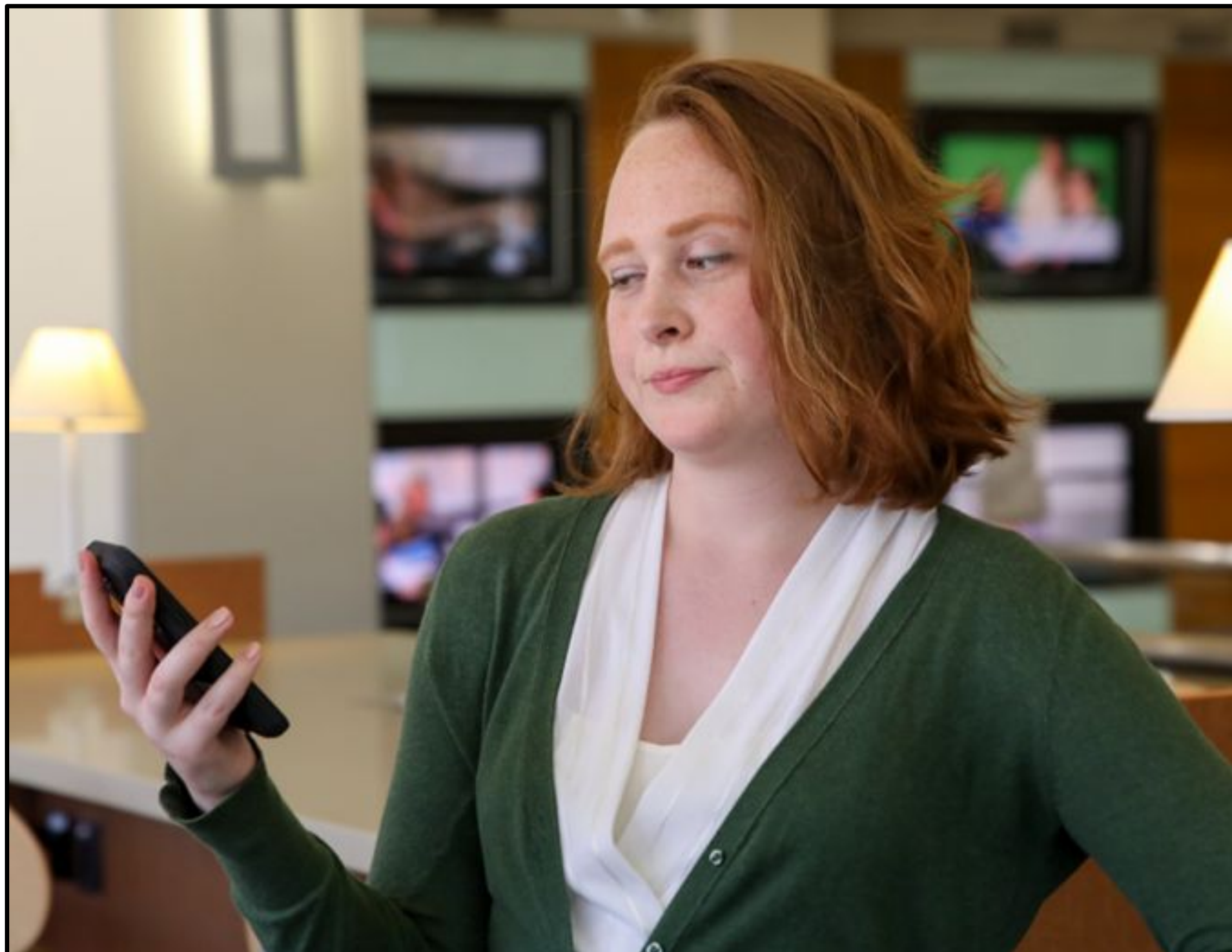


Technical Experts

- We identify good technical solutions and just need others to implement it.
- Human behavior isn't included in our models
 - It's messy
- We treat users as passive recipients



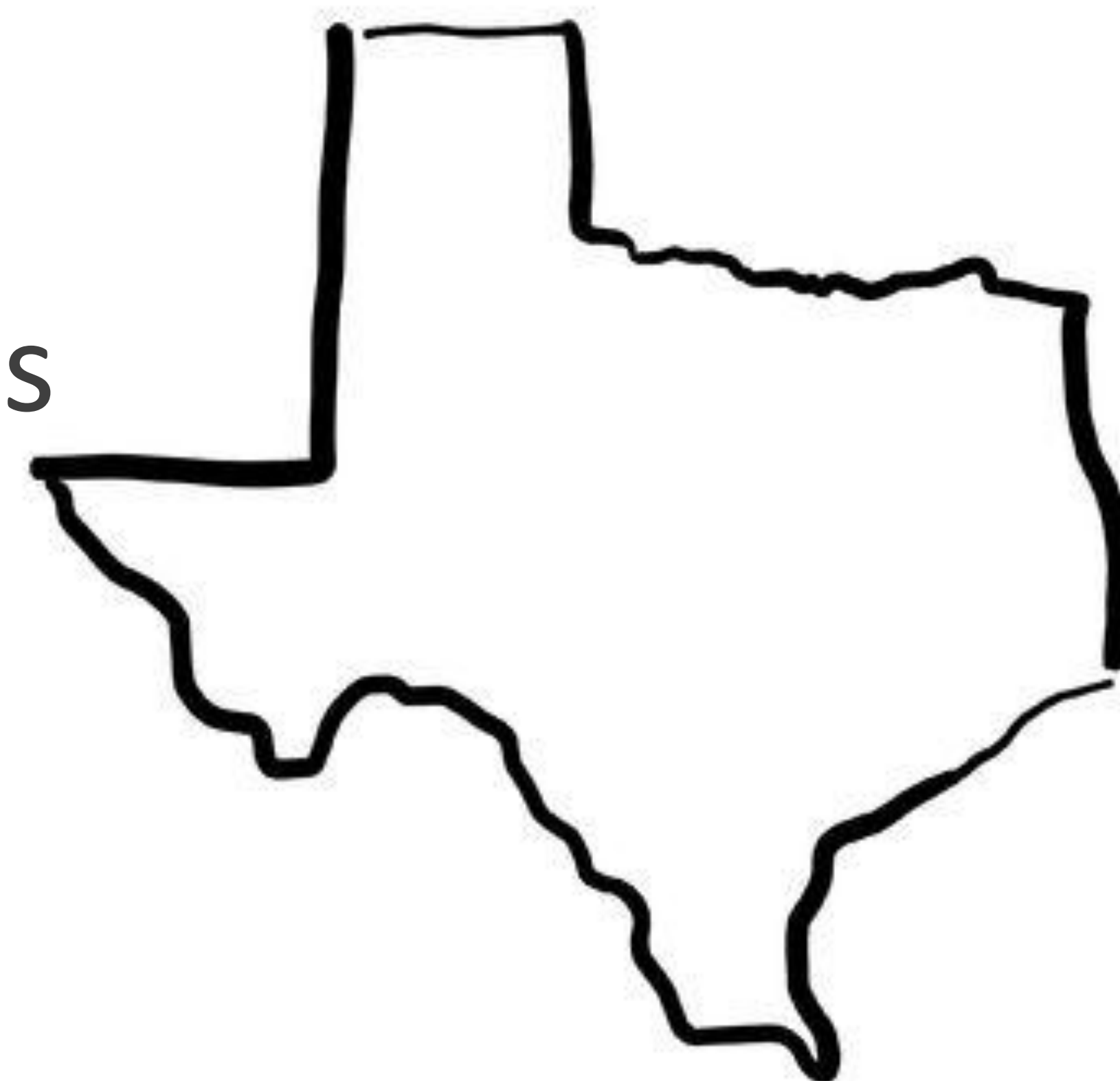
But, people...



- Ignore information too technical or not salient
- Often are influenced by non-experts
- Need to trust the information & source
- Often are not rational decision makers



Transitioning our thinking about the public and other less technical audiences as being passive recipients to **active participants in making systems/processes functional and lives better.**

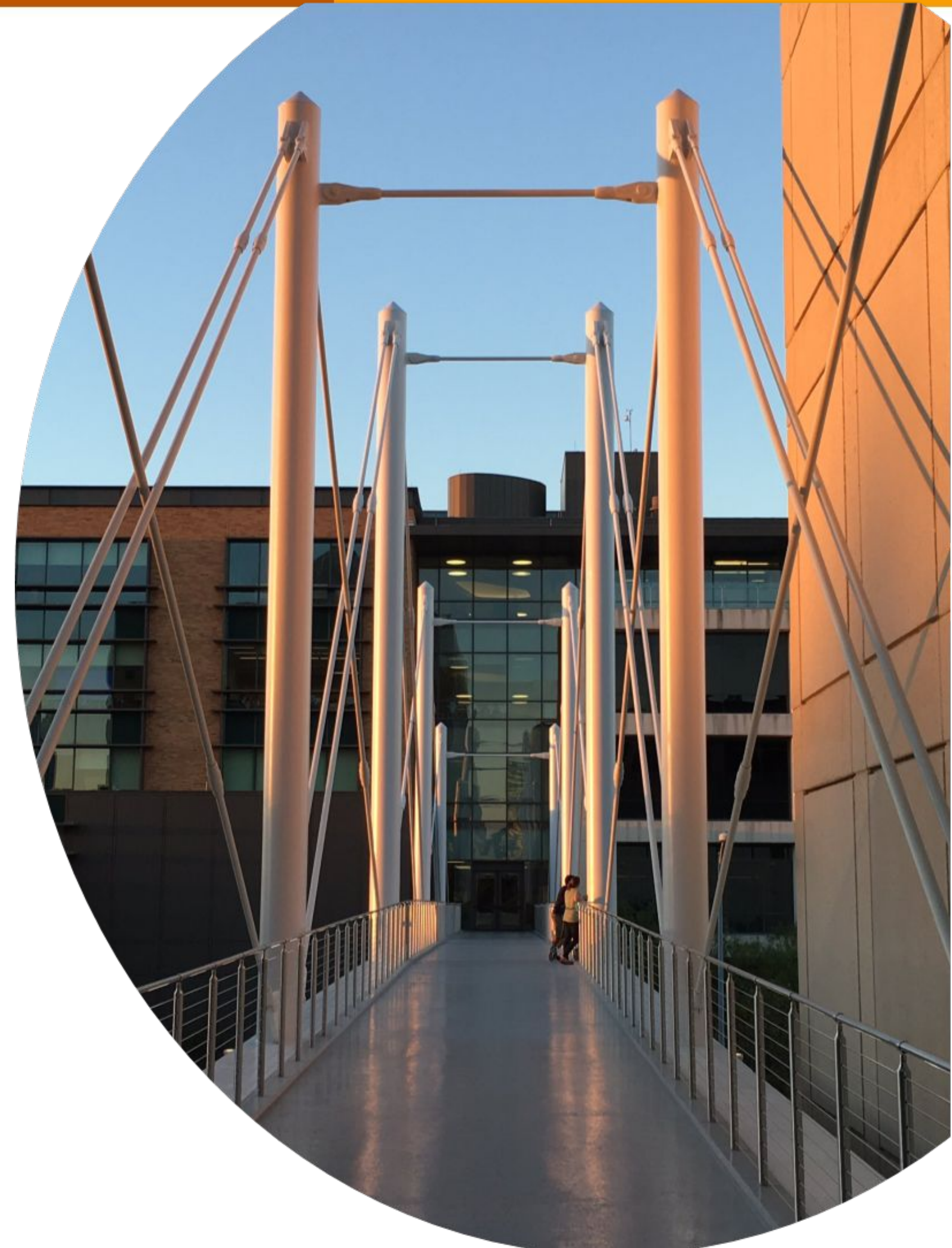


TEXAS

Ideas from the *Handbook of Infrastructure Communication* (in press with Wiley, anticipated 2026) Edited by Keri K. Stephens & Kasey Faust

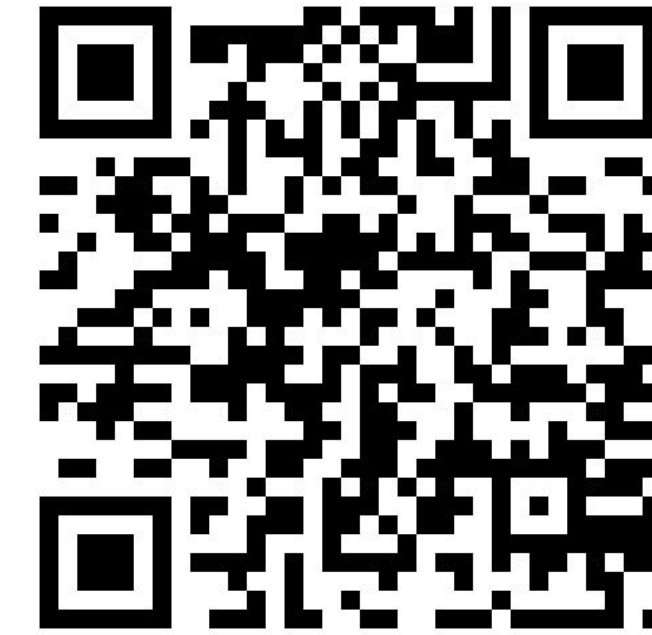


We need tools to
bridge the gap from
technical knowledge
to flood action.





Agenda



- Flood knowledge projects
 - Guide for local officials
 - Flood comm for 4 prioritized groups
- Community involvement to develop flood-related tools to meet needs
 - DRIP
 - Small Businesses





Flood Knowledge Products



- Guide for local officials
- Flood Communication for Texas & 4 Prioritized Groups





Official Flood Resource Guide

Prepared for Texas Flood Officials
Volume 1: August 2021

Created a Flood Resource
Guide for Flood Officials
and Communities | Texas
Water Development Board



Research Process

Behind the Resources Guide

- Systematic literature review
- Interviews with 19 flood officials and experts
- Conducted a Survey of Texans



Best Practices Identified in Interviews

- Talk about flooding throughout the year
- Help public understand hydrology in their specific areas
- Communicate everyone has flood risk (probabilities are too confusing)
- Be transparent about risk, insurance, fees, mitigation, changing floodplains
- Use short and simplified videos to demonstrate complex topics
- Make flood materials accessible on websites and have them appear in search engines
- Focus on community outreach
 - But it takes money and time that many people do not have



In the Guide


2.1.2. Helping Texans Understand the Dangers of Flood Water

Texans also need to understand the **flow of water**, the **damage it can cause** to homes or businesses, and why exposure to **floodwater is dangerous**.

Flood waters or standing flood waters can spread infectious diseases and carry the potential to **cause injury** to community members. Here are some resources to share with your stakeholders and community members about the dangers associated with floodwater.



Below are the **top three most useful resources** about understanding the dangers of floodwater:

- 1 To help the public learn about different types of floodwater dangers and hazards like contamination and diseases, you can share this [informative webpage](#) created by the CDC. This resource addresses the dangers in a format that is clear and easy to understand. *Source: CDC*
- 2 If you have community members with septic systems, you might consider sharing [this webpage](#) created by the United States Environmental Protection Agency (EPA). The webpage contains information for those with a septic system about to do after a flood. *Source: EPA*
- 3 Help your community members understand the [dangers that playing in flood waters](#) can have on their health by sharing this video. The video contains short clips of residents in the Rio Grande Valley coming in contact with floodwaters and warnings about the dangers from Cameron County Health Authorities. *Source: Valleycentral.com* 

Brief
overview

Top 3
resources




Descriptions
and links to
resources

Links to
video
resources



In the Guide

Additional resources on **protecting homes or property:**

- If you need to share information about how to build stronger homes, you can share [these videos](#) provided by the Federal Alliance for Safe Homes. *Source: Federal Alliance for Safe Homes (FLASH)* 
- This is a brief (under 1-minute) video FEMA prepared to tell potential homeowners how they can [tell if a home has flooded before](#). *Source: FEMA*  
- The [TWDB](#) provides a comprehensive explanation of proactive steps to protect communities and homes from potential damage from flooding. *Source: Texas Water Development Board*
- [This guide](#) provides specific actions homeowners can take to prepare their home for a flood. *Source: Direct Energy*

Additional Resources

Spanish Resources

Diverse Types of Resources



Flood Communication for Texas

Goals

1. Identify 4 prioritized groups, needs, & decisions
2. Literature reviews & best practices
3. Extensive focus groups to develop messages
3. TWDB plans to launch these for the state



Developed a General Message that can be Targeted

- Texas culture (Don't Mess With Texas)
- Iterated on messages
 - Feedback from groups
- Included Spanish speakers



**TEXANS FIGHT FLOODS,
TOGETHER**



Research on Young Adult Males

- Why this group? Most likely to drive through flood waters and die
- Their motivations & attitudes: Feel invincible
 - Showed them Turn Around Don't Drown, they responded
 - "I won't die." "My truck is tough." focus groups
 - Very different young female responses
- Pain points: Car is most prized and expensive possession; insurance is expensive



"I sure don't want my car to get hurt in a flood."

Age 23
Job Student
Location McAllen, Texas

ADVENTUROUS

CURIOUS

PROUD

NAIVE

Tyler Rivers

Background

Tyler Rivers is a young adult who was born and raised in a small Texas town and is a proud Texan. Tyler's greatest possession is his car, a truck, because he saved up for three years to be able to afford it. He takes great pride in his vehicle, and so do his friends who have also purchased their own cars.

Tyler is often overconfident in his car's abilities, which means he may underestimate the risks associated with driving through flooded waters. He often believes that his truck can conquer any obstacle, including flooded roads, without considering the potential dangers lurking beneath the surface. Yet, he doesn't want his car harmed because it could cost a lot to repair.

Challenges

- Feels like he is invincible.
- More prone to taking risky actions.
- Car damage due to overconfidence in floodwaters.
- Lack of understanding about weather warnings and flood preparedness.

News and Social Sources

- Weather app
- Instagram
- Twitter
- YouTube
- TikTok

Opportunities

- Remind him that his car can get damaged in floodwater.
- Flood awareness education to understand the risks.
- Training on interpreting weather warnings and taking appropriate action.
- Guidance on flood preparedness and protective measures.

Technology Use



Phone



Laptop



Message for Young Adult Males



**MANTÉN TU CARRO
ELEVADO Y SECO**



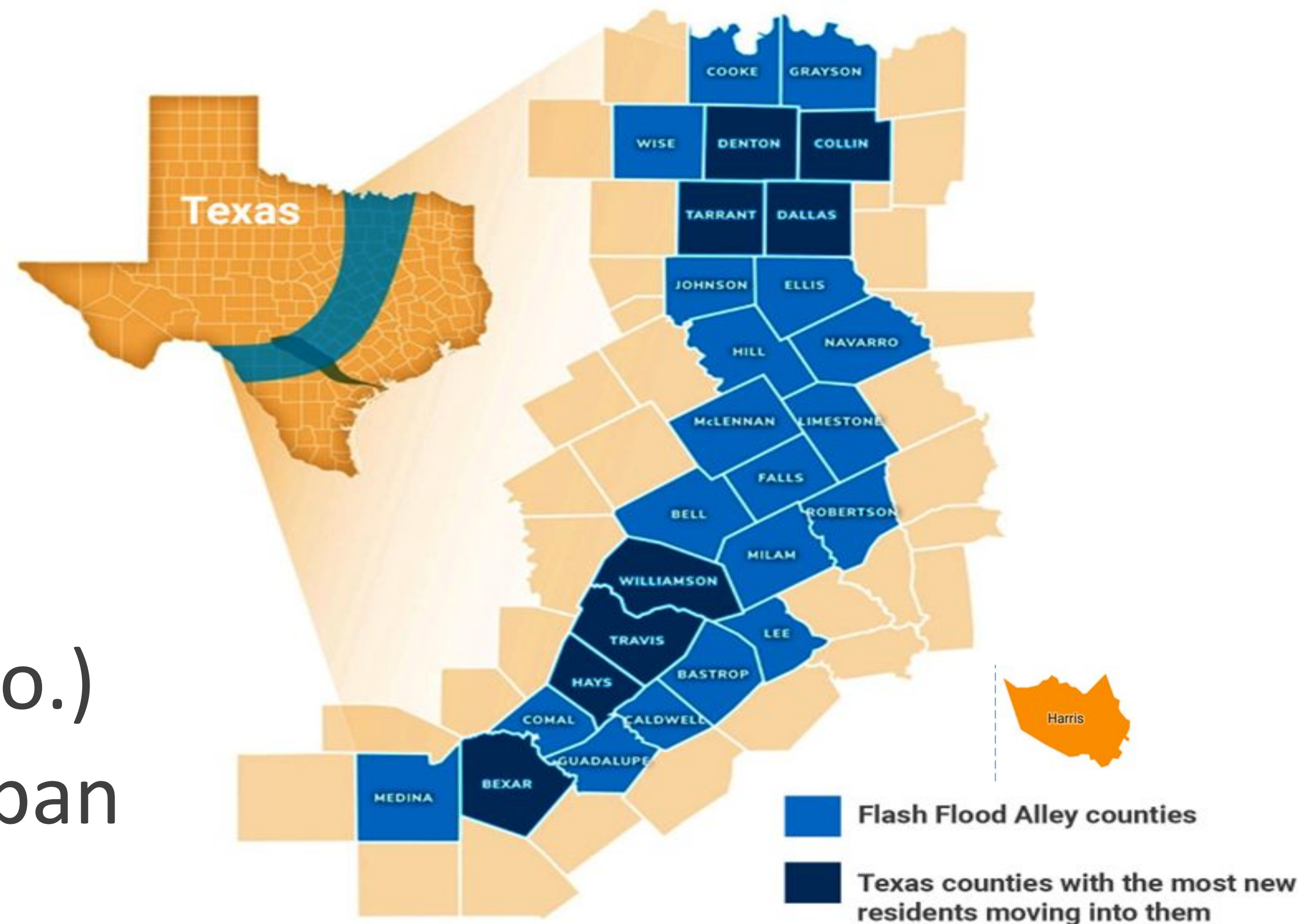
**KEEP YOUR CAR HIGH
AND DRY**

Message has been tested, but the graphics are just mock-ups and will be further developed by TWDB.



New Texans

- Over half a million people moving to Texas each year.
- Most moving into Flash Flood Alley (and Harris Co.)
- Primarily moving into urban areas at a high risk for flash floods





Message Targeted to Newcomers

- Curiosity
- Info-seeking nature
- Include QR Code
- Challenge: no usable tools really exist



CHECK YOUR FLOOD RISK
www.texasflood.org



Message for Older Adults

- FEMA materials are overwhelming
- Help them manage overload
- Encourage talking to others



**TAKE
PREP 5**

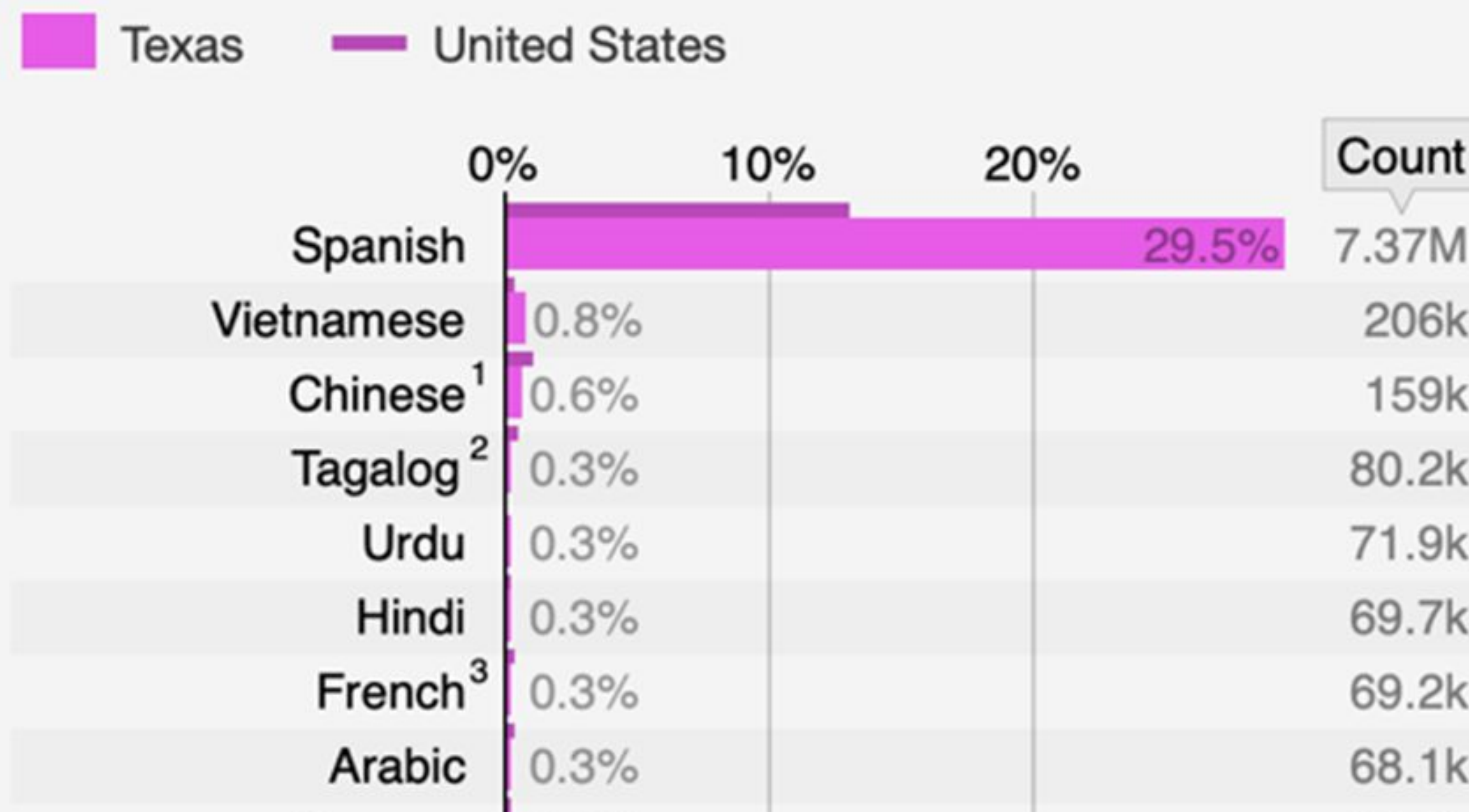


Spanish Speakers

Language Spoken At Home #1

Percentage of the total population living in households in which a given language is spoken at home.

Scope: population of the United States and Texas



Source: <https://statisticalatlas.com/state/Texas/Languages>



See talk given at

AGU23

San Francisco, CA & Online Everywhere
11-15 December 2023



TWDB Flood Awareness Campaign



**General Texas
Audience Toolkit**



**Newcomer to
Texas Toolkit**



**Young-Adult
Males Toolkit**



**Older-Adult
Toolkit**

All toolkits contain English and Spanish versions and editable and customizable graphics. Also included: suggested timelines for distribution, media, social media hashtags, and postcards.

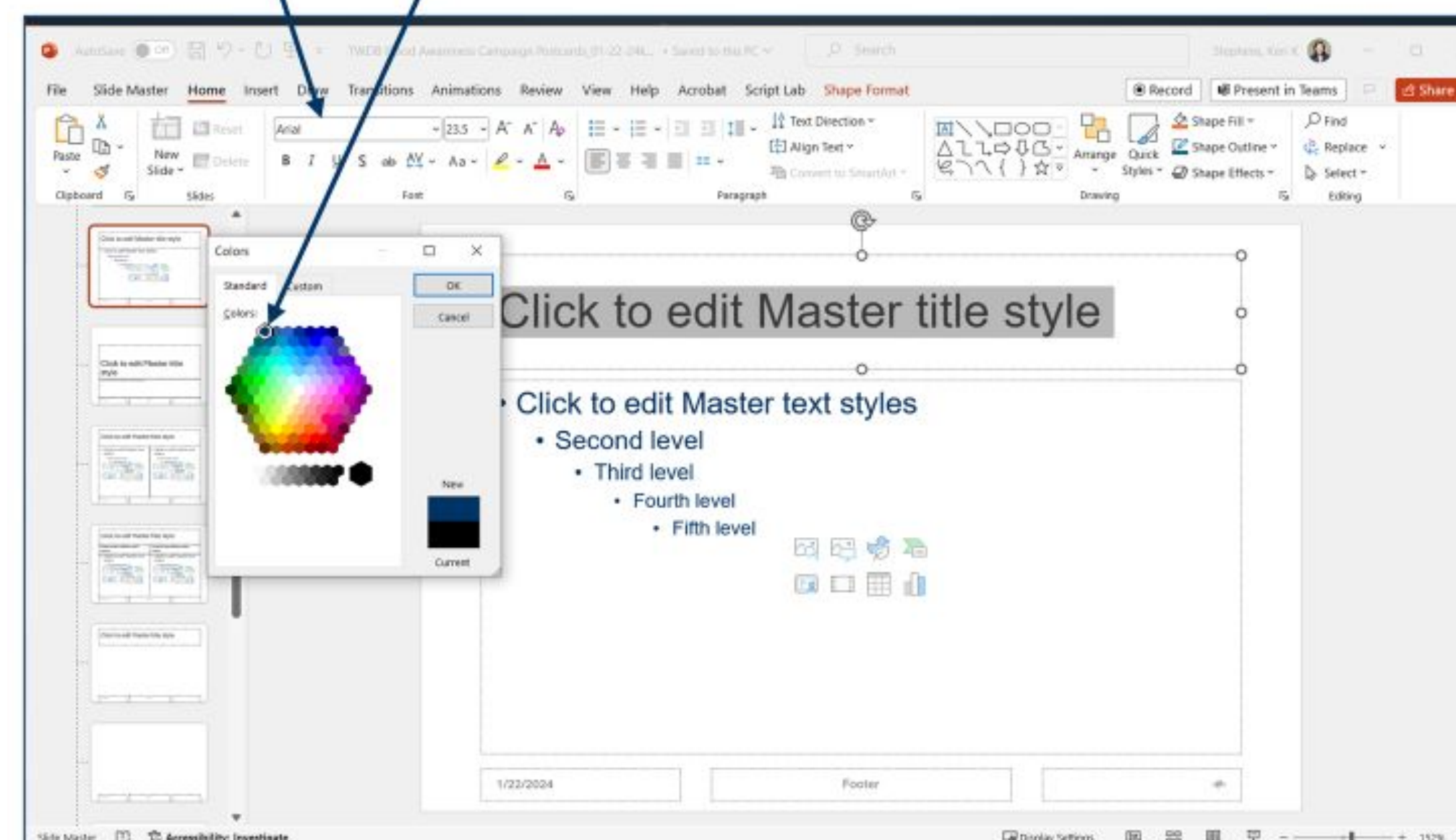


Materials Designed for Counties without Marketing Resources: *PowerPoint is key*

Want to Customize These Flyers?

Choose Arial font

This is the standard blue color of the graphics.
It is Hex #003366 (0 Red, 51 Green, 102 Blue)





Customizable for local messages

Have you tried
Texas BBQ yet?

¿Ya probaste el
BBQ Tejano?

Deep in the heart
of Texas, there is
high water.

Adentro en el
corazón de Tejas
hay fuertes
inundaciones

New to Waco?



CHECK YOUR FLOOD RISK

www.texasflood.org

REVISA TU RIESGO DE INUNDACIÓN



Community-Based Approaches



- DRIP
- LRGV Small Business Disaster Prep





Digital Risk Infrastructure Program



TEXAS A&M
INSTITUTE FOR A DISASTER
RESILIENT TEXAS



Our Mission

DRIP's mission is to empower under-resourced Texas communities with digital tools and training to make informed disaster mitigation decisions, secure funding, and reduce future losses.



Funded by Texas Legislative Funds



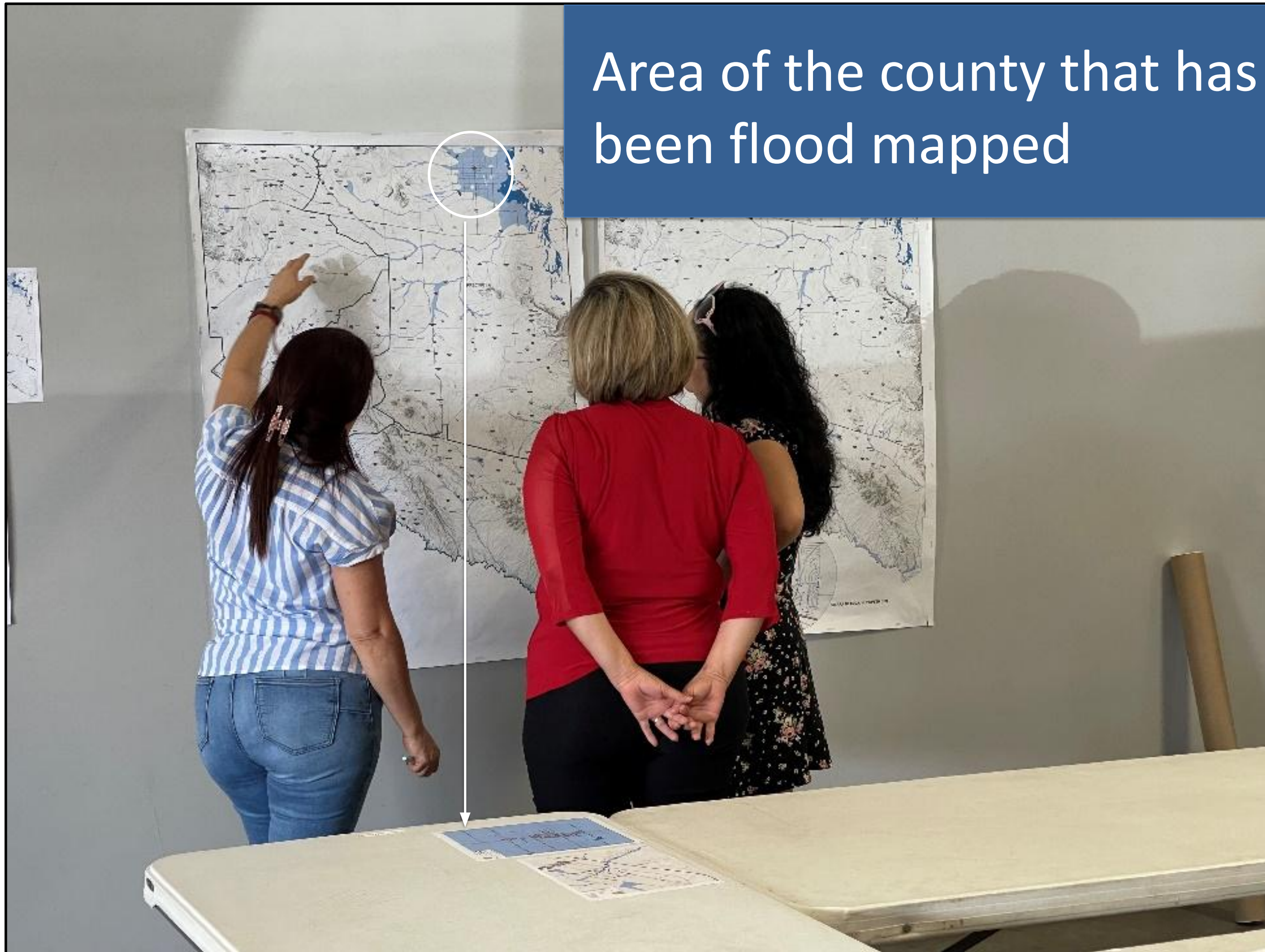
Fort Hancock, TX

- Went in open to possibilities
 - Did not pre-determine digital tool the community might need
- Learned FEMA mapped 1985
- Photos of flooding almost every year, but they are in a desert!
- Helped them collect photographic evidence of flooding





Area of the county that has
been flood mapped



Community
meetings to
help them

“Get on the
Map!”



Amazing partners!
Collected photo
evidence of flooding
from 90% of their
impacted community.





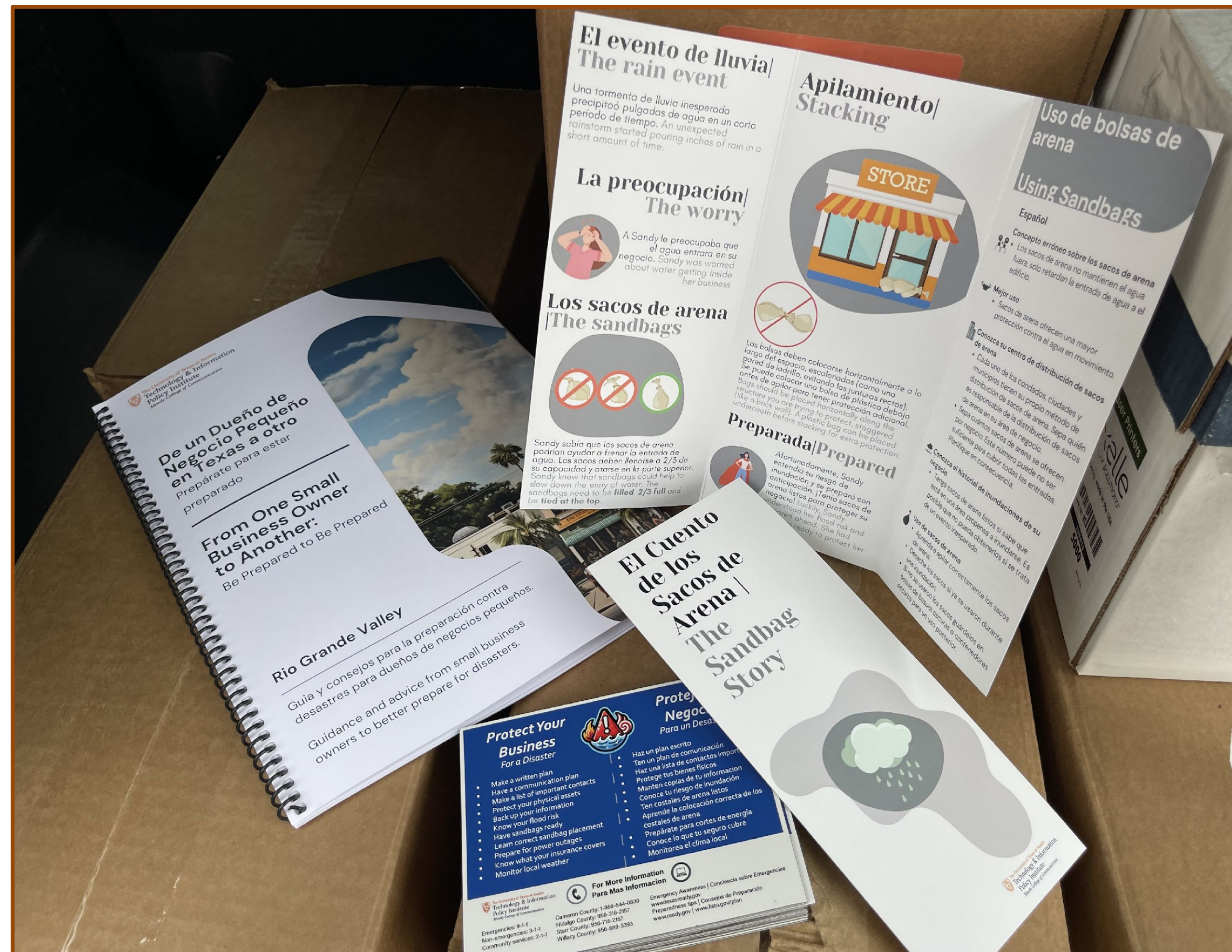
LRGV: Small Businesses

- Research study prioritizing community resource development
- Found disasters are normalized
- Renting impacts how they prepare and respond
- Rely on trusted others for information





Research to Resources



- All materials in Spanish-first format
- Sandbag Story
- Magnets
- From One Small Business Owner to Another Guide



Agenda Recap

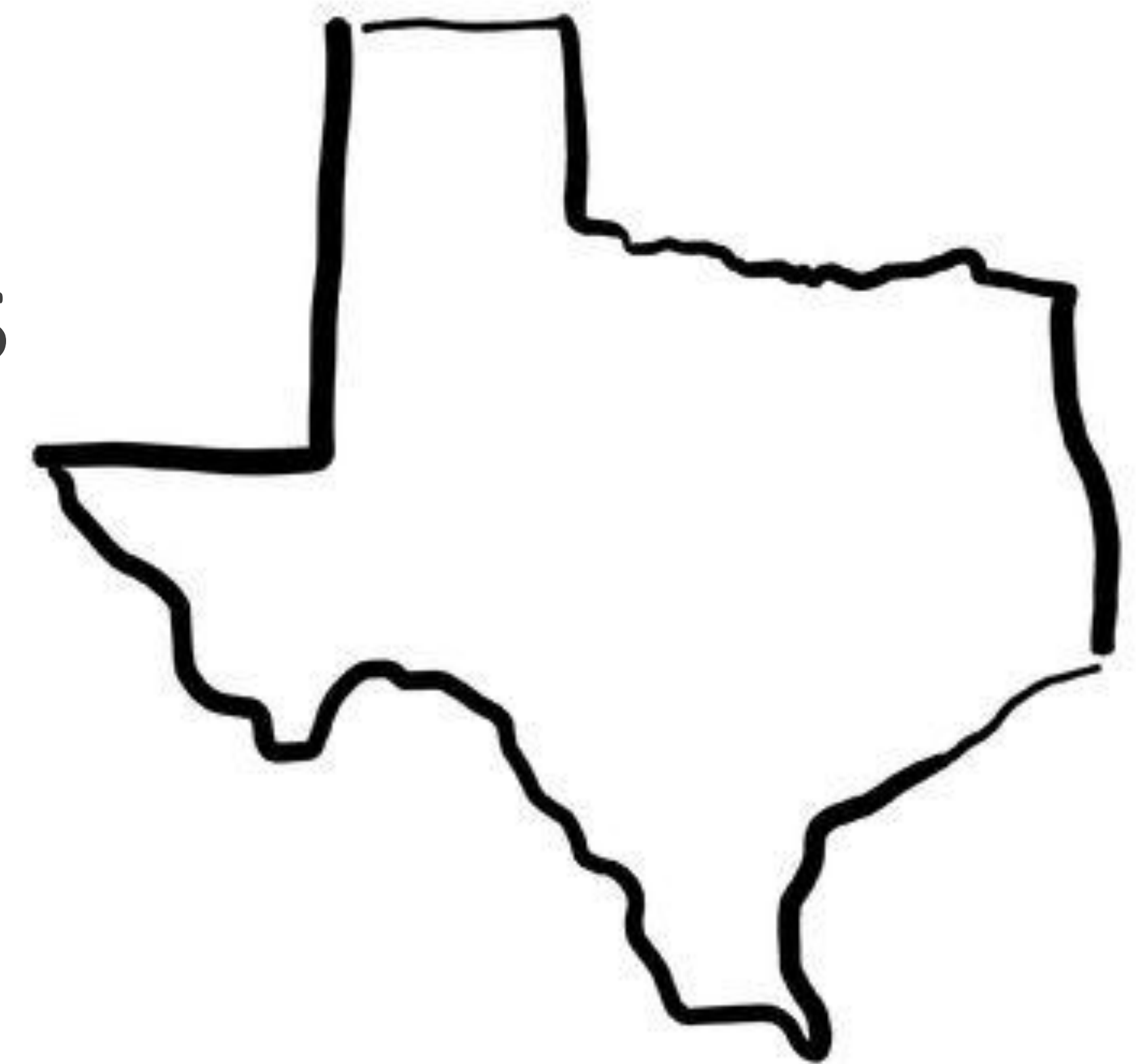


- Flood knowledge projects
 - Guide for local officials
 - Flood comm for 4 prioritized groups
- Community involvement to develop flood-related tools to meet needs
 - DRIP
 - Small Businesses





Transitioning our thinking about the public and other less technical audiences as being passive recipients to **active participants in making systems/processes functional and lives better.**



TEXAS



As we develop tools to help people better understand flood risk, we will think differently to successfully bridge from technical knowledge to flood action!





Emaly Aguilar



Jovana Andelkovic



Maya Blitch



Nancy Carlson



Nikita Chandakar



Meera Hatangadi



Sharon Strover



Ruoxiao Su



Sean Upshaw



Samanta Varela



Keri Stephens

Fantastic Collaborators



Sergio Castellanos



Kasey Faust



Suzanne Pierce



Kim Kyudong

Fantastic Collaborators & Funders



TEXAS A&M
INSTITUTE FOR A DISASTER
RESILIENT TEXAS



Texas Water
Development Board



Matt McGlone



Roselia Mendez Murillo



Mir Rabby





Thank you, Keri Stephens



QR code accesses
all cited materials



Agenda

- 1 Introduction
- 2 Effective Flood Communication:
Simple Strategies for Outreach that
Works
- 3 Q&A

Thank you!

Susanna Pho
susanna@withforerunner.com

Keri Stephens, Ph.D.
keri.stephens@austin.utexas.edu