

The background of the slide is a high-speed photograph of water splashing, creating a dynamic and textured blue surface with many small droplets and bubbles.

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WATER
PREDICTION

Flood Inundation Mapping Utility:

*The Benefit of Flood Mapping for Decision
Makers During Significant Flood Operations*

*Derek Giardino - Flood Inundation Mapping Project Lead
Geo-Intelligence Division, National Water Center*





4. Bridging The Chasm

Future Developments
Designed to Directly
Increase Utility



3. Tip of the Iceberg

Other Opportunities for
Flood Maps to Benefit
Decision Makers



1. Utility

Making the Leap
from Research to
Operations



2. Bosque County

Example of Utility
from Publicly
Available Flood
Mapping in 2023

Agenda





Utility

Making the Leap from Research to Operations

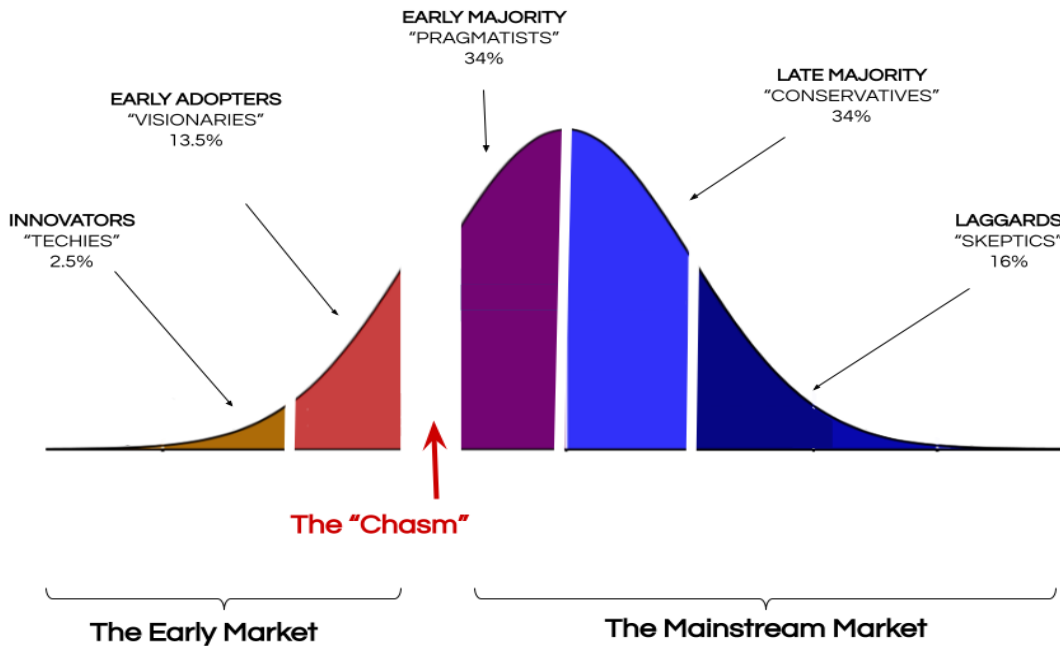
Diffusion of Innovation

E. M. Rogers 1962.

Basic principle is the tiered **level of adoption** of a new idea, behavior, or **product for people to accept the innovation**

The **chasm concept** was added in 1991 by Geoffrey Moore discussing the adoption difficulty of new technology reaching the market and becoming “**a complete solution for one intractable problem to the mainstream market**”

Technology Adoption Lifecycle





Utility

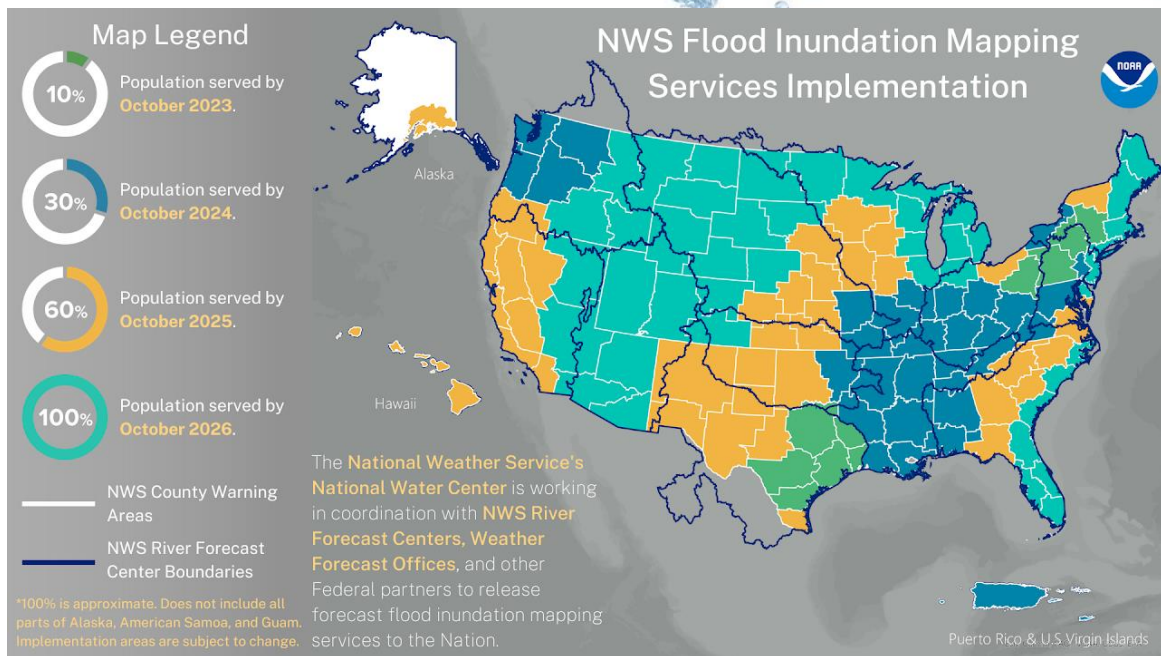
Making the Leap from Research to Operations

Diffusion of Innovation for Flood Mapping

Currently flood mapping is **between the innovators and the early adopters**

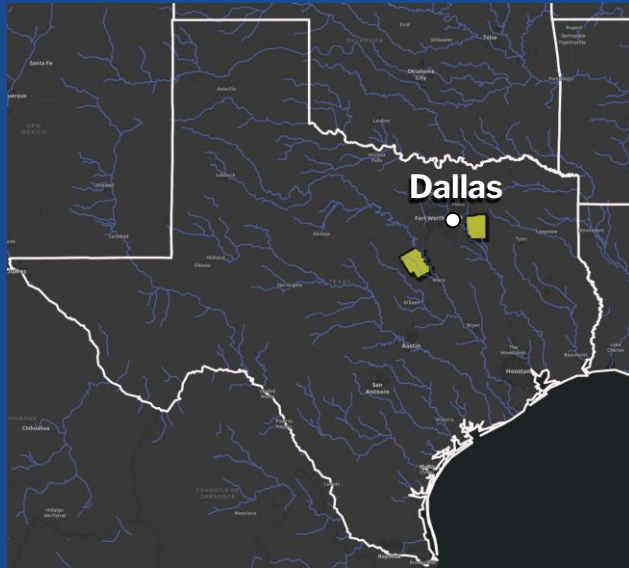
Approaching the chasm for adoption as the revolutionary solution to flood hazards

A flood map on its own will not save any lives or protect anyone **property**, its adoption by critical decision makers and the general public is required



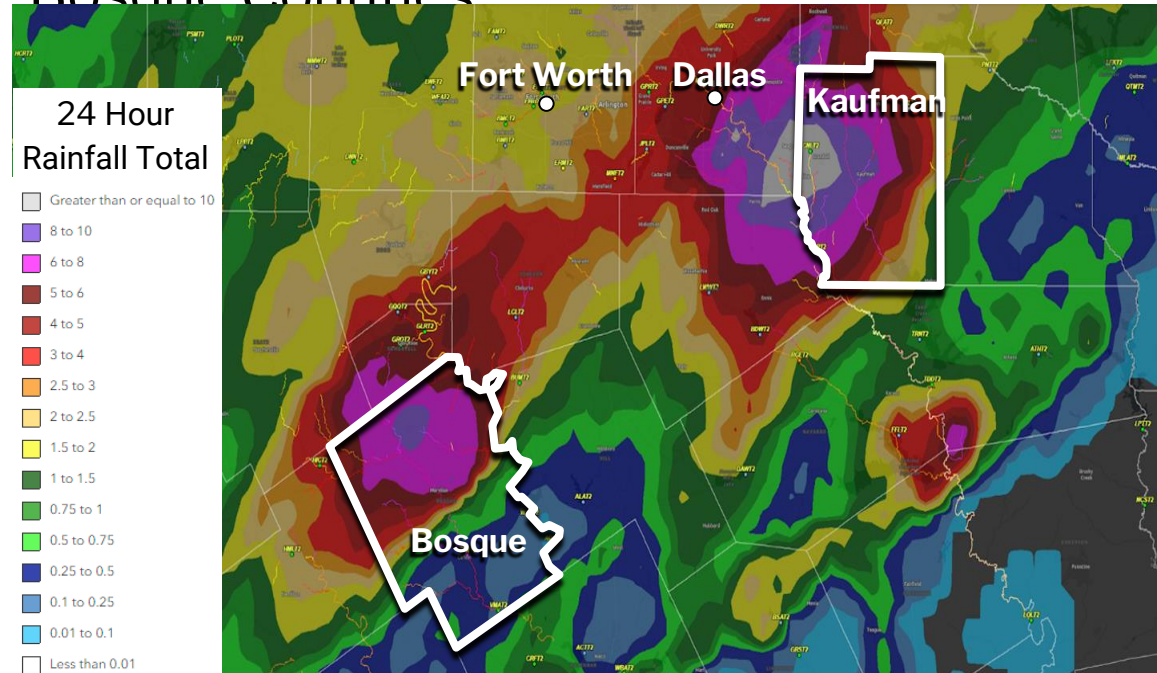
Bosque County:

Example of Utility from
Publicly Available Flood
Mapping in 2023



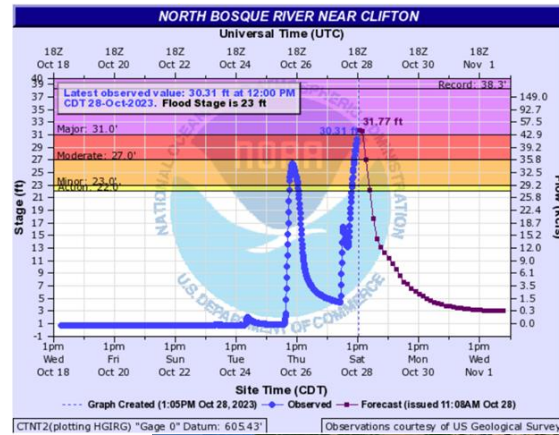
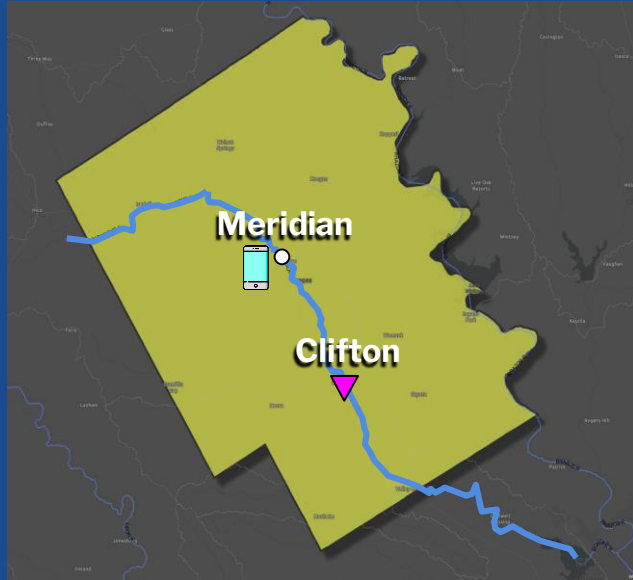
Evening of October 27th 2023 a **second wave of locally heavy rainfall** impacts North Texas

The overnight rainfall led to **significant rises on local rivers** in both Kaufmann and Bosque Counties



Bosque County:

Example of Utility from
Publicly Available Flood
Mapping in 2023



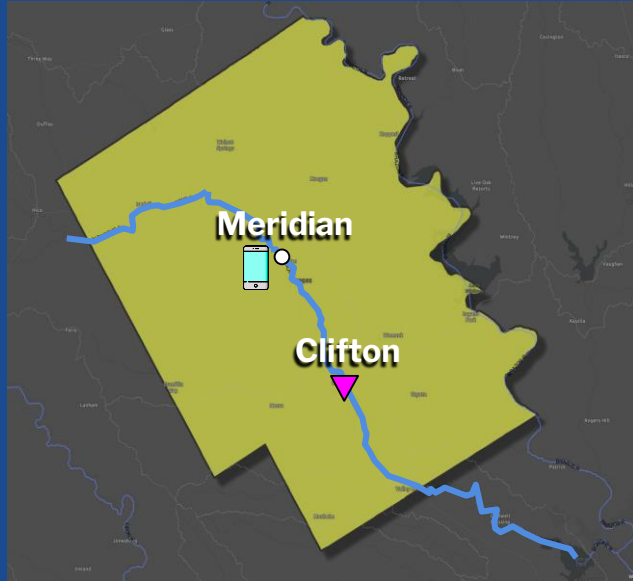
Emergency Manager
in Meridian calls about
potential flooding
impacts

However, only
forecast available is
downstream at Clifton



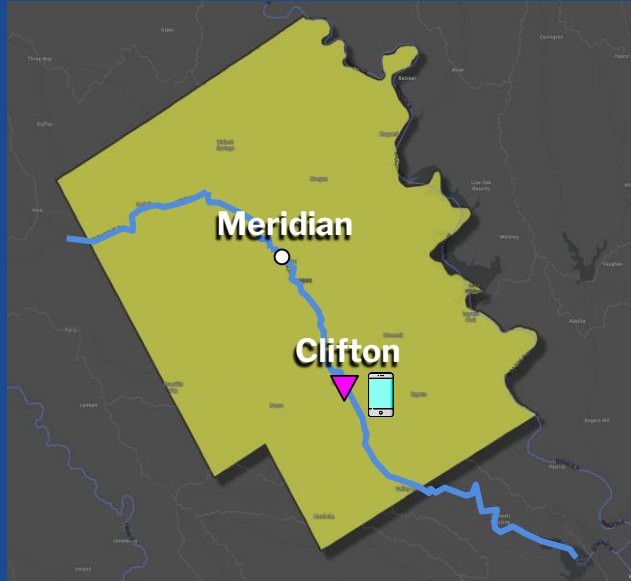
Bosque County:

Example of Utility from Publicly Available Flood Mapping in 2023



Bosque County:

Example of Utility from
Publicly Available Flood
Mapping in 2023



Kaufman County:

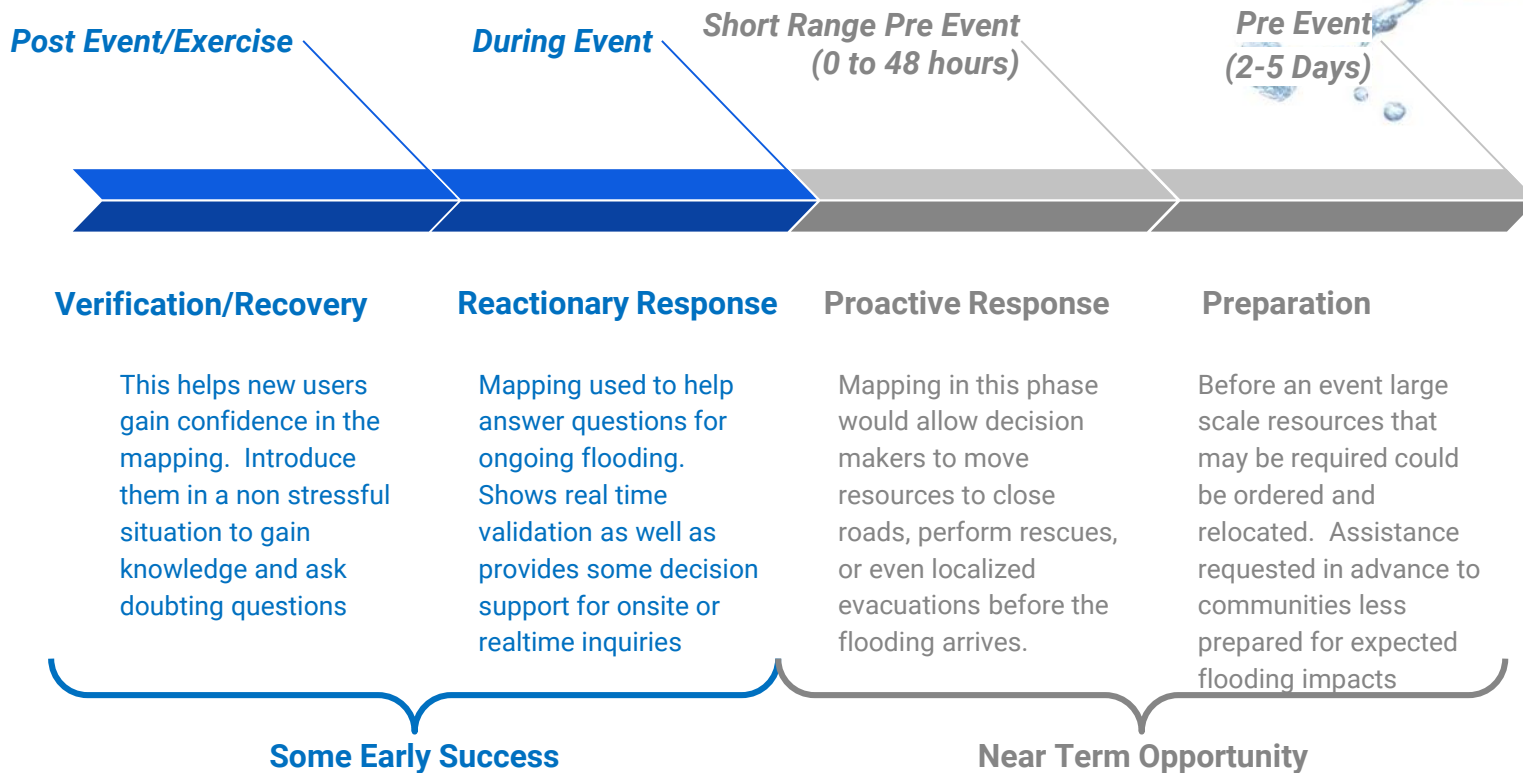
Example of the Challenge with Publicly Available Flood Mapping





Tip of the Iceberg

Other Opportunities for Flood Maps to Benefit Decision Makers



Bridging the Chasm

Future Developments
Designed to Directly
Increase Utility



1. Impacts to Structures

- Message decision makers impacts from the provided mapping
- Available internally to NWS

2. Incorporating Bridges and Roads

- Display flooding impacts to the #1 source of deaths due to flooding
- Current development project - Internal Prototype in Conjunction with CIROH Research to Operations Summer 2024

3. Better Modeling

- Improving the accuracy by using the better modeling where available
- HEC-RAS modeling prototype released, version 2 Fall 2024

4. Accessibility

- Make the mapping accessible next to the hydrograph
- NWPS Addition for 10% of Population Spring 2024



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Thank You!



Derek Giardino



derek.giardino@noaa.gov



<https://water.noaa.gov>