

North Central Texas Collaborates on Flood Warning: A Cooperative Success Story

ASFPM Conference

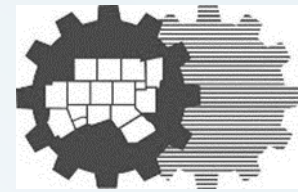
Cleveland, OH

May 22, 2019

Presented By:

Mia Brown, CFM

What is NCTCOG?

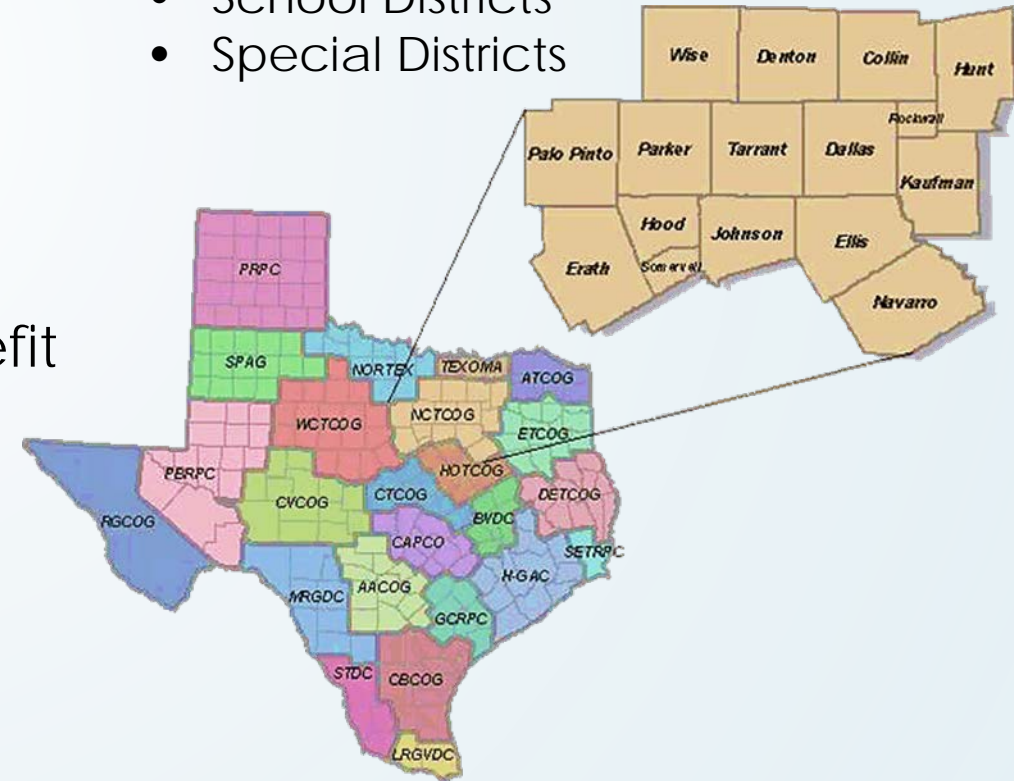


Voluntary association of, by, and for local governments, established in 1966, to help them:

- Plan for common needs
- Strengthen their individual and collective power
- Recognize regional opportunities
- Resolve regional problems
- Make joint decisions/cooperate for mutual benefit

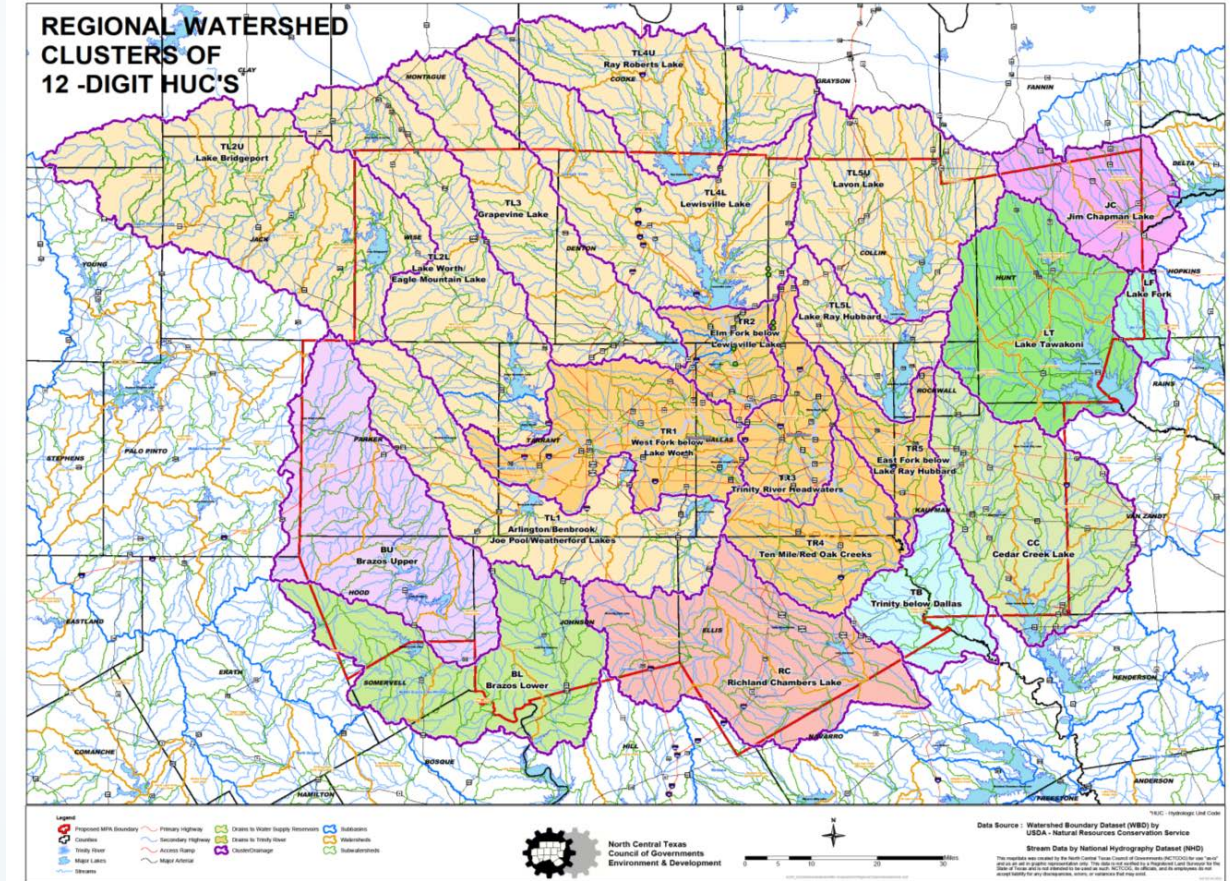
230+ Member Governments

- Cities
- Counties
- School Districts
- Special Districts

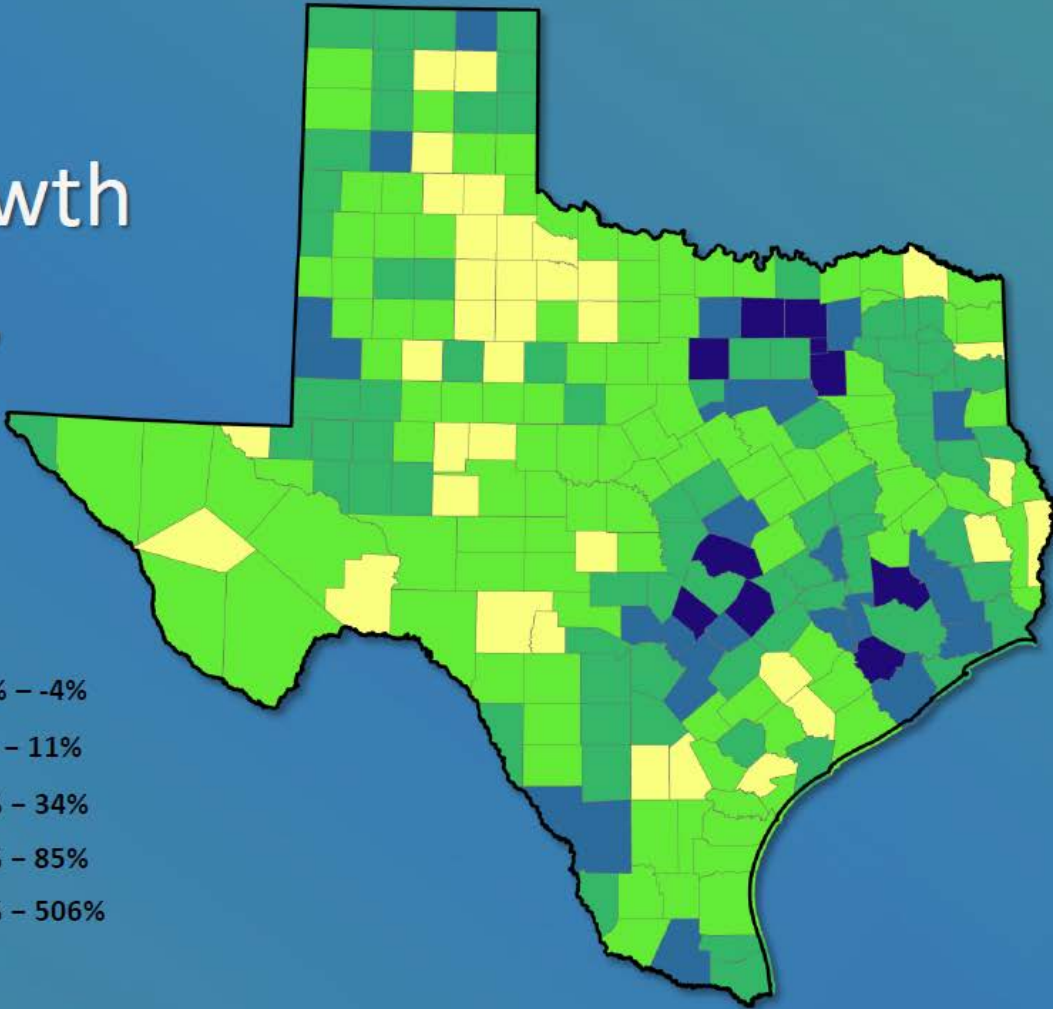
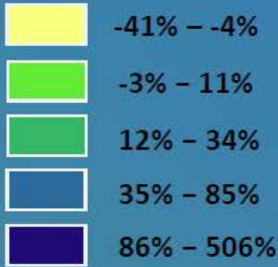


NCTCOG Environment and Development Watershed Management Program

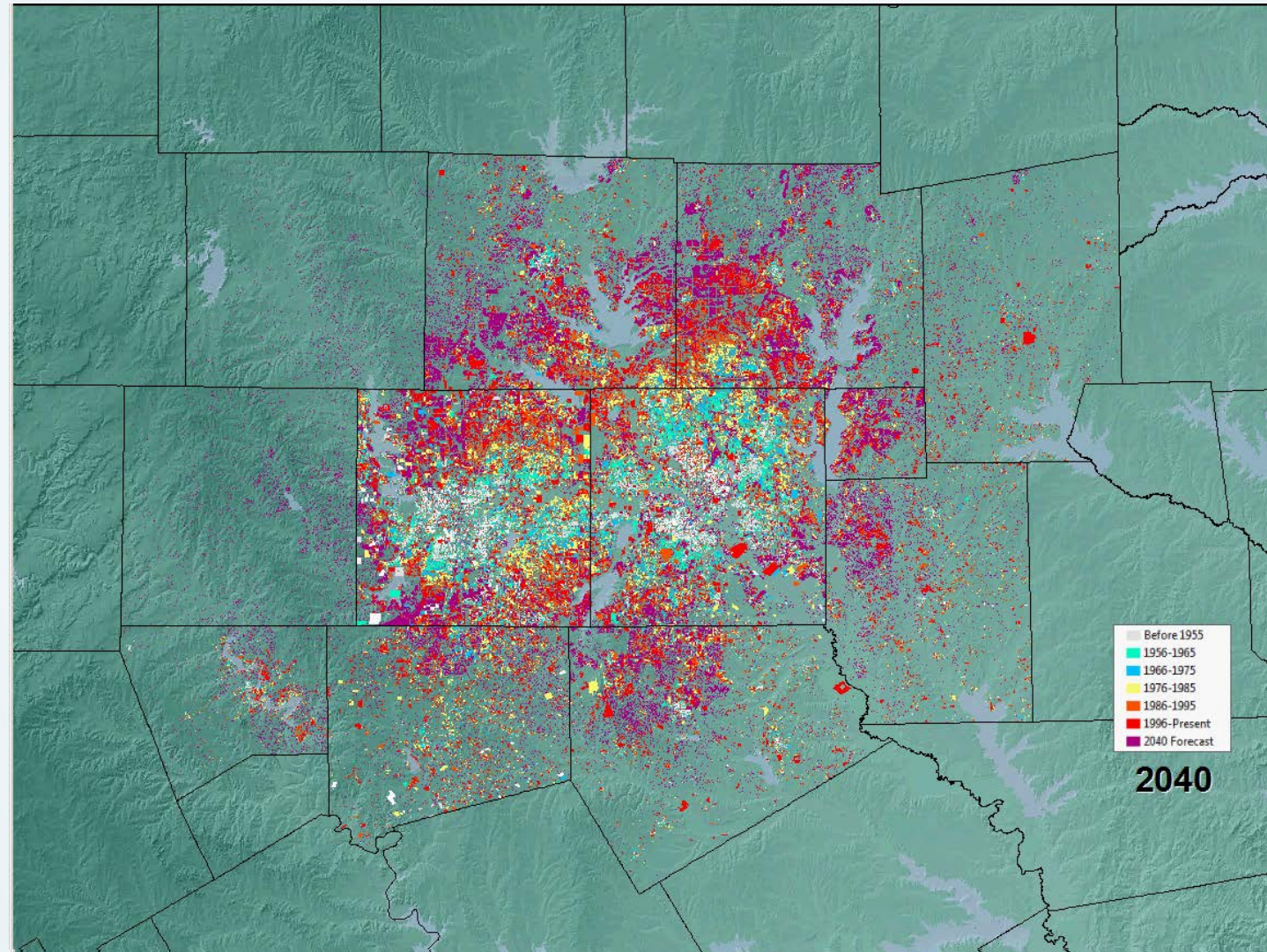
- Focus on water quality, stormwater, and floodplain topics/issues.
- Floodplain
 - NCT region does not have a flood control district. Lots of local/regional entities working in their own jurisdictions.
 - NCTCOG will never replace a flood control district, but as an agency, we work toward regional cooperation on flooding issues to help everyone accomplish common goals together.



Projected Population Growth Rate by County, 2010-2050



North Central Texas 1950-2040 Growth



Trinity Common Vision

Trinity River Corridor Interlocal Agreement - 1989

NINE CITIES

Arlington	Farmers Branch
Carrollton	Fort Worth
Coppell	Grand Prairie
Dallas	Irving
	Lewisville

PROGRAMMATIC PARTNERS

NCTCOG Environment & Development
U.S. Army Corps of Engineers
Federal Emergency Management Agency
Texas Water Development Board



THREE COUNTIES

Dallas County
Denton County
Tarrant County

TWO SPECIAL DISTRICTS

Tarrant Regional Water District
Trinity River Authority

Trinity River Common Vision Program

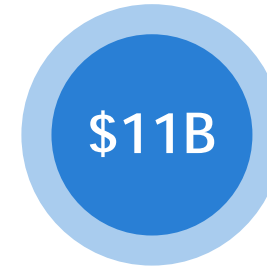
Timeline & Background

1990 Upper Trinity River Basin Reconnaissance Report

Interlocal Agreements signed by member cities & Congress authorizes the Upper Trinity River Feasibility Study (UTRFS). These studies by the Corps of Engineers simulated the cumulative impacts of flooding in the Dallas-Fort Worth area based on different levels of floodplain development.

1990 Flood Management Task Force

Flood Management Task Force formed and CDC criteria developed based on ROD

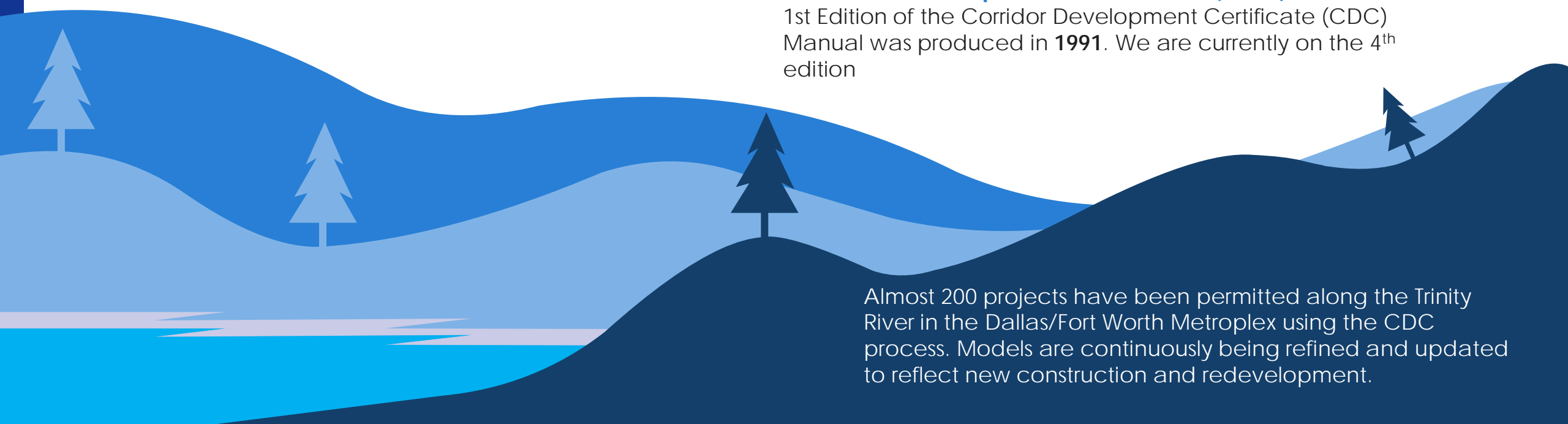


Record of Decision

Results suggest that damages from a major flood could total more than \$11 billion if floodplain development is unregulated. A comprehensive floodplain management program could cut losses to \$4 billion.

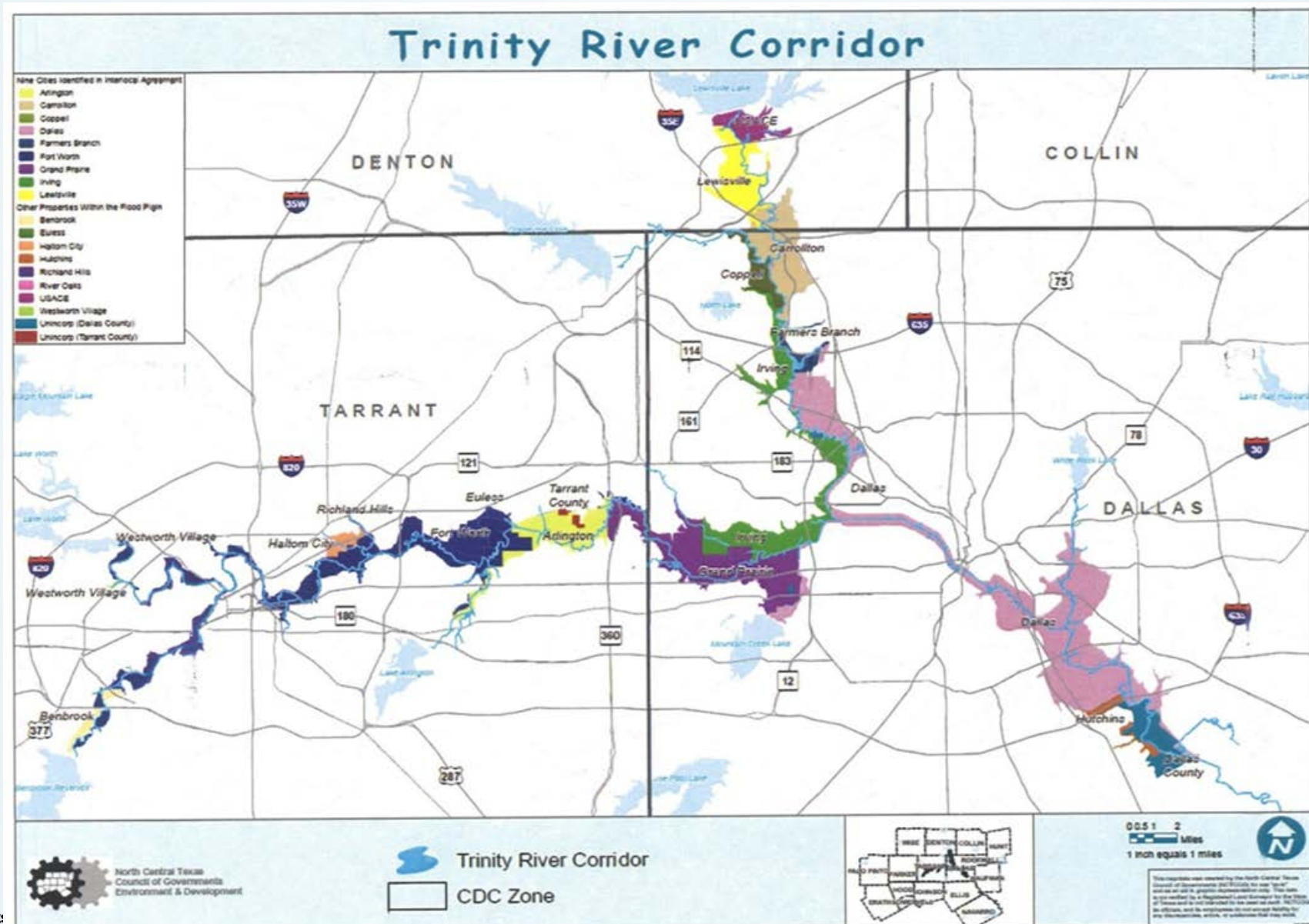
Corridor Development Certificate (CDC) Manual

1st Edition of the Corridor Development Certificate (CDC) Manual was produced in **1991**. We are currently on the 4th edition



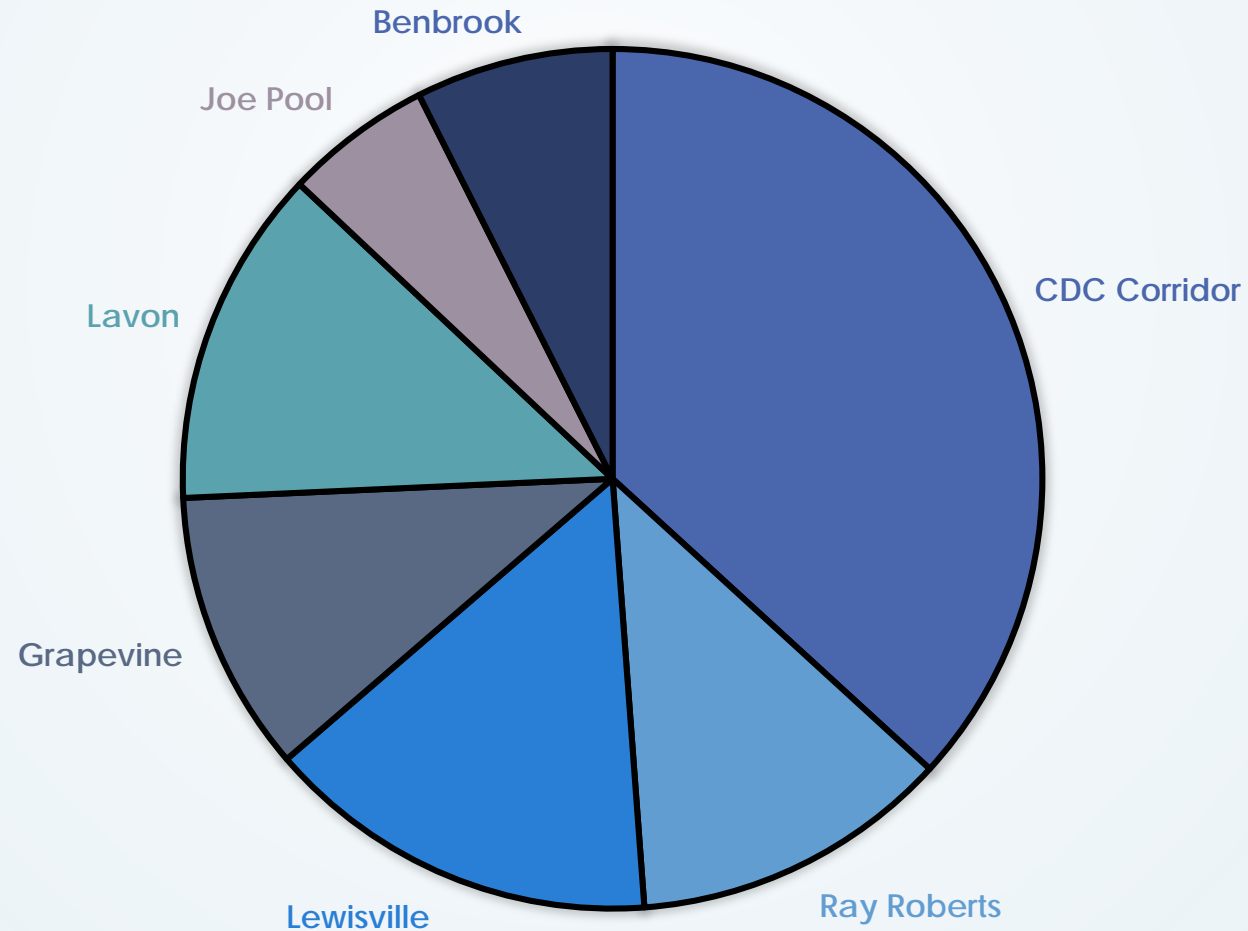
Almost 200 projects have been permitted along the Trinity River in the Dallas/Fort Worth Metroplex using the CDC process. Models are continuously being refined and updated to reflect new construction and redevelopment.

Trinity Common Vision Program Area



The Trinity River Corridor Is Important to Flood Prevention

ACTIVE FLOOD STORAGE



So Now to the Situation...

- No unified flood control district to set up a region-wide flood warning system.
- Some communities individually operate flood warning systems; many others have none.
- Communities/entities want to see storms tracking across the region, and how they are affecting others.
- Communities with existing systems were frustrated with their current software services and wanted to see what else was out there.

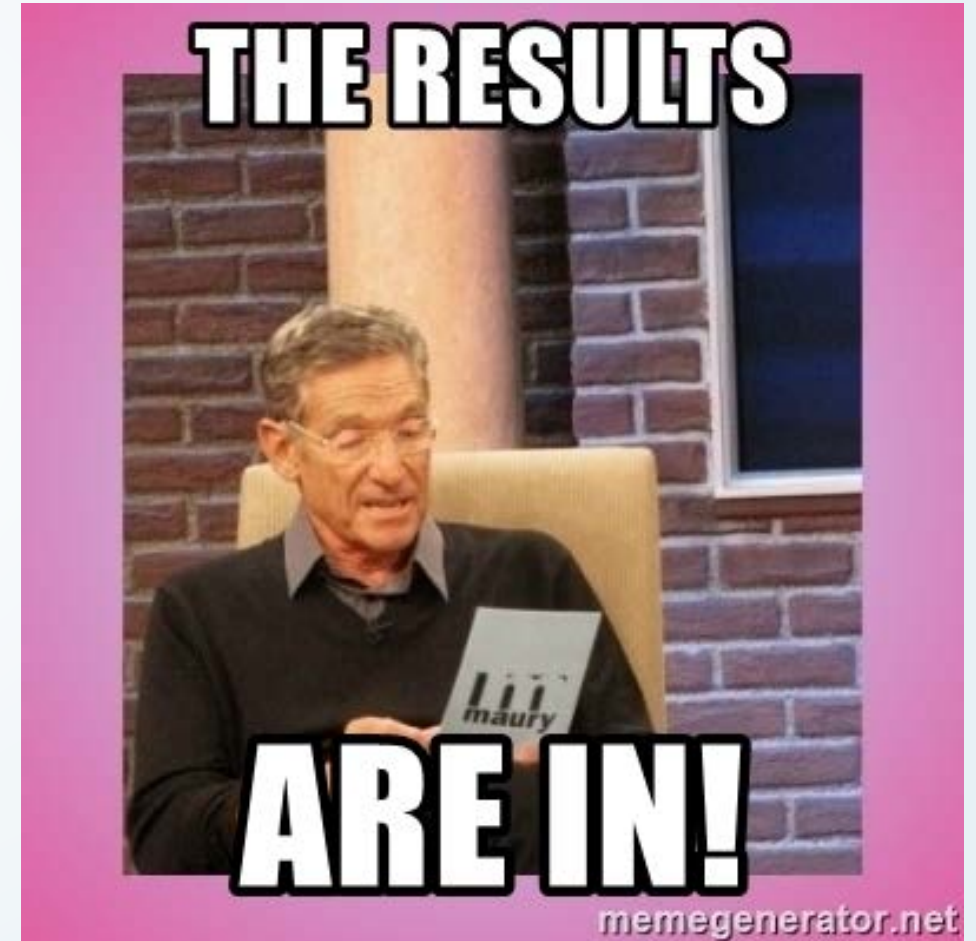
Time To Find Out What's Out There

- ▶ The Flood Management Task Force (FMTF) requested that NCTCOG release a Request for Proposals for a regional flood warning software solution.
 - ▶ This included a Request for Information prior to releasing the RFP.
- ▶ The FMTF created a list of 26 items that the software must be able to fulfill, based on needs and previous experiences.



The Results!

- ▶ The scoring committee, made up of FMTF members, recommended award of a contract to OneRain, Inc. for their Contrail software. This was approved by the NCTCOG Executive Board.
- ▶ This is a North Texas SHARE cooperative contract.
- ▶ The contract has been in effect for almost one year now.



How It's Set Up

- Contrail Server is hosted in the cloud, with the main server in Colorado and a back up server elsewhere.
- Each participating community signs up through North Texas SHARE and has a custom dashboard, and can have a public facing page set up.
- NCTCOG has a public facing page showing the whole region, which also has a portal for communities to log in.



Flood Data

North Texas

The Regional Flood Warning Software Platform provides a comprehensive look at rainfall and water levels across the North Texas region through a connected network of flood gauges made possible through partnerships with local municipalities and agencies.



Rainfall Map

View live data of rainfall across the region.



Current Stage Level Map



How to Join

Communities of North Texas can join the program for a cost savings on flood warning.



North Central Texas
Council of Governments

Home

Map

Sites

Bookmarks



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Rain Increment - 24 Hour

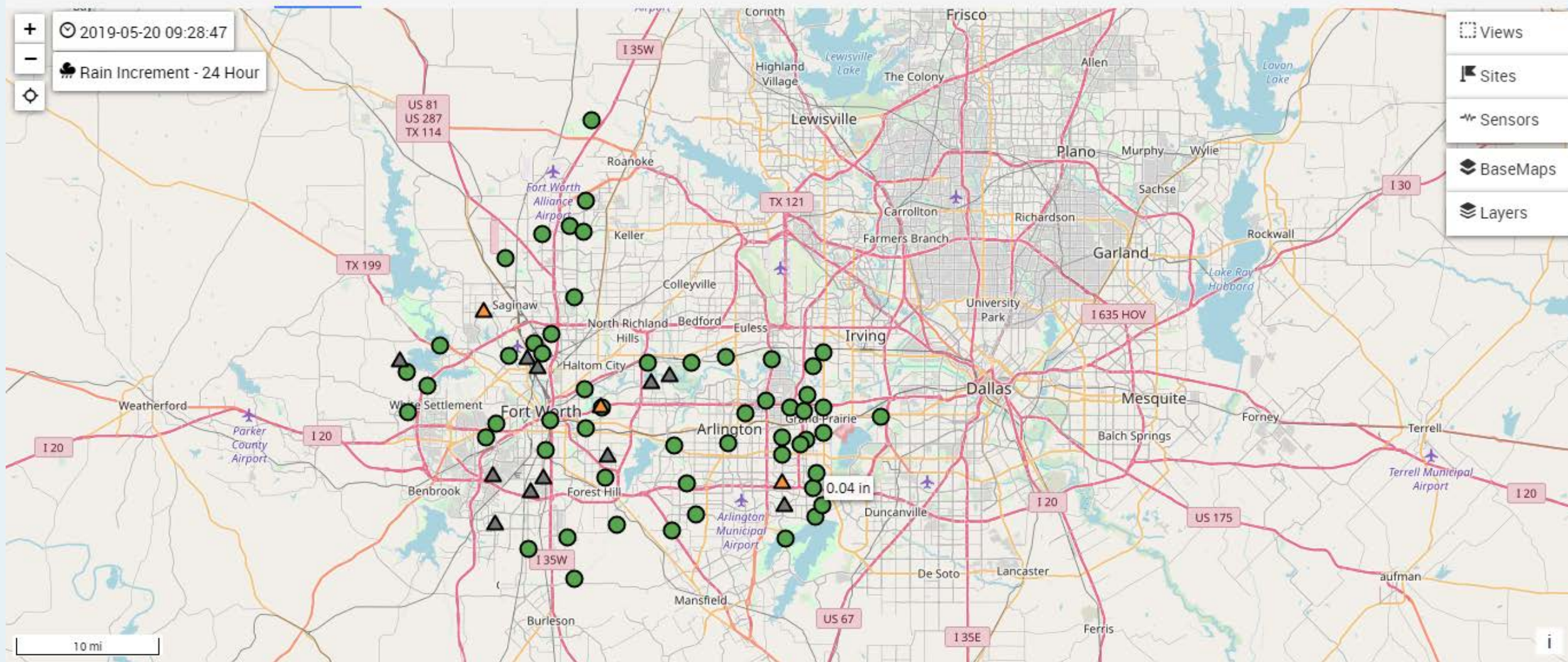
Views

Sites

Sensors

BaseMaps

Layers



North Central Texas
Council of Governments
Environment & Development

Challenges and Lessons Learned

- Only two responses to the RFP were received.
- The contract is limited to entities with 100 sensors. In the future, we will likely request proposals with some kind of tiered participation so that all cities can participate.
 - The good news is that larger cities with independent contracts with the same company can tie in to the regional system.
- Knowledge gaps
- Smaller communities, who this contract really benefits, may be nervous to jump in until a major entity joins.
 - Two entities in the process of joining: City of McKinney and the Tarrant Regional Water District

The Future

- ▶ As the contract becomes better established, NCTCOG hopes that the map fills out for the region, and that all communities that want flood warning have access to it.



SO...ANY QUESTIONS?



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