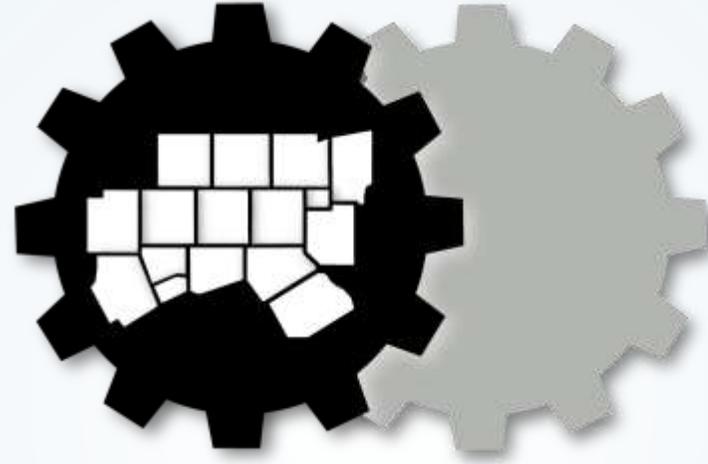


Trinity Common Vision Steering Committee

September 14, 2017





WELCOME & INTRODUCTIONS



Trinity Common Vision

Trinity River Corridor Interlocal Agreement - 1989

NINE CITIES

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



THREE COUNTIES

Dallas County
Denton County
Tarrant County

PROGRAMMATIC PARTNERS

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

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

\$11B

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.

CDC Program Goals

Corridor Development Certificate Program



Limits Impact

Limits (but does not eliminate) the impact of floodplain encroachments for regulated streams on downstream areas



Review Process

Establishes a consistent regional criteria and review process



Funding Stream

Provides a funding stream for updates and state-of-the-art models and modeling tools

CDC Program Goals

Corridor Development Certificate Program



Provides Oversight

Provides oversight for projects constructed in the 100 year floodplain



Allows Development

Allows development in the floodplain



Project Review

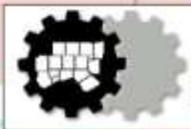
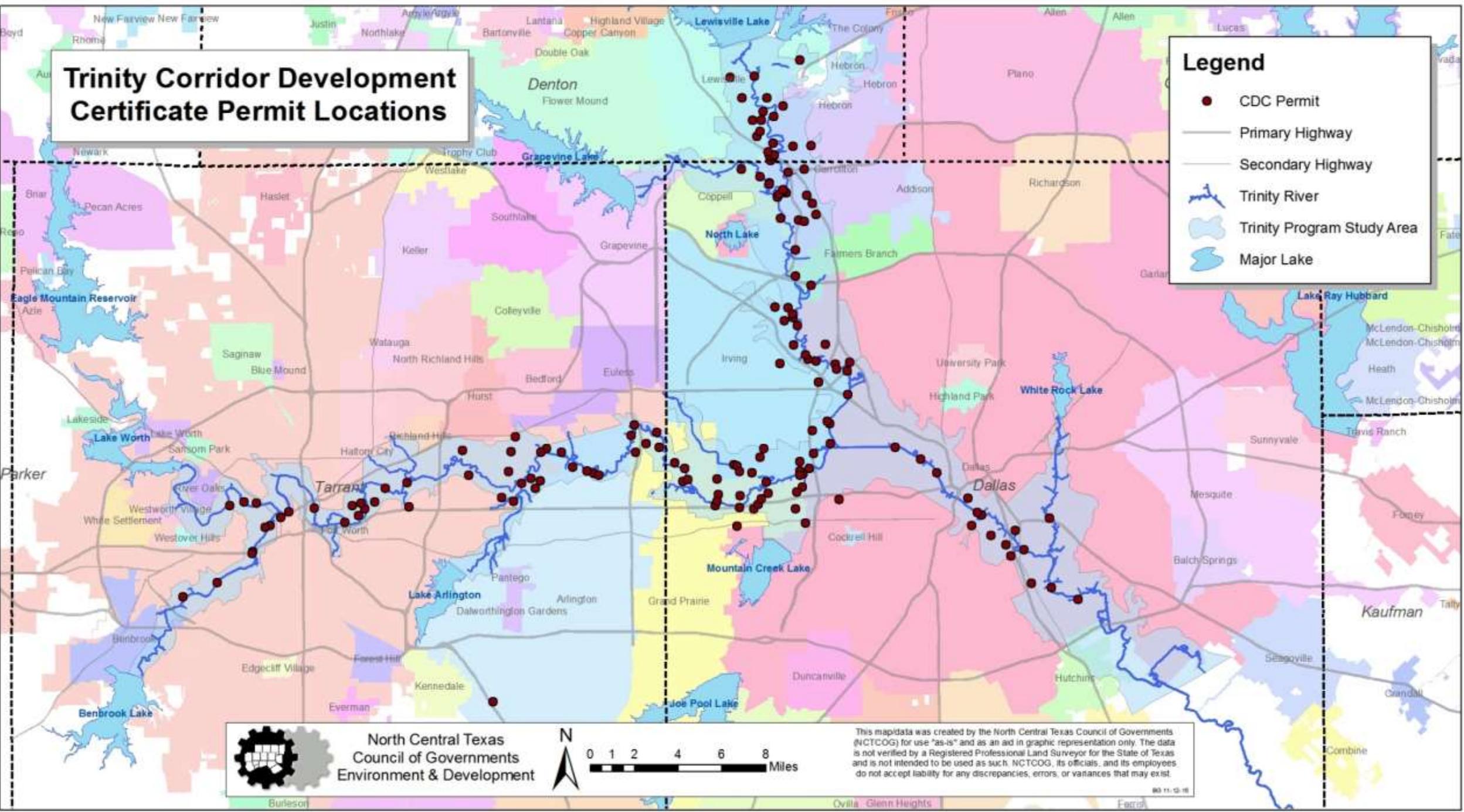
Allows all Flood Management Task Force (FMTF) members to review projects for the entire regulatory footprint



Trinity Corridor Development Certificate Permit Locations

Legend

- CDC Permit
- Primary Highway
- Secondary Highway
- Trinity River
- Trinity Program Study Area
- Major Lake



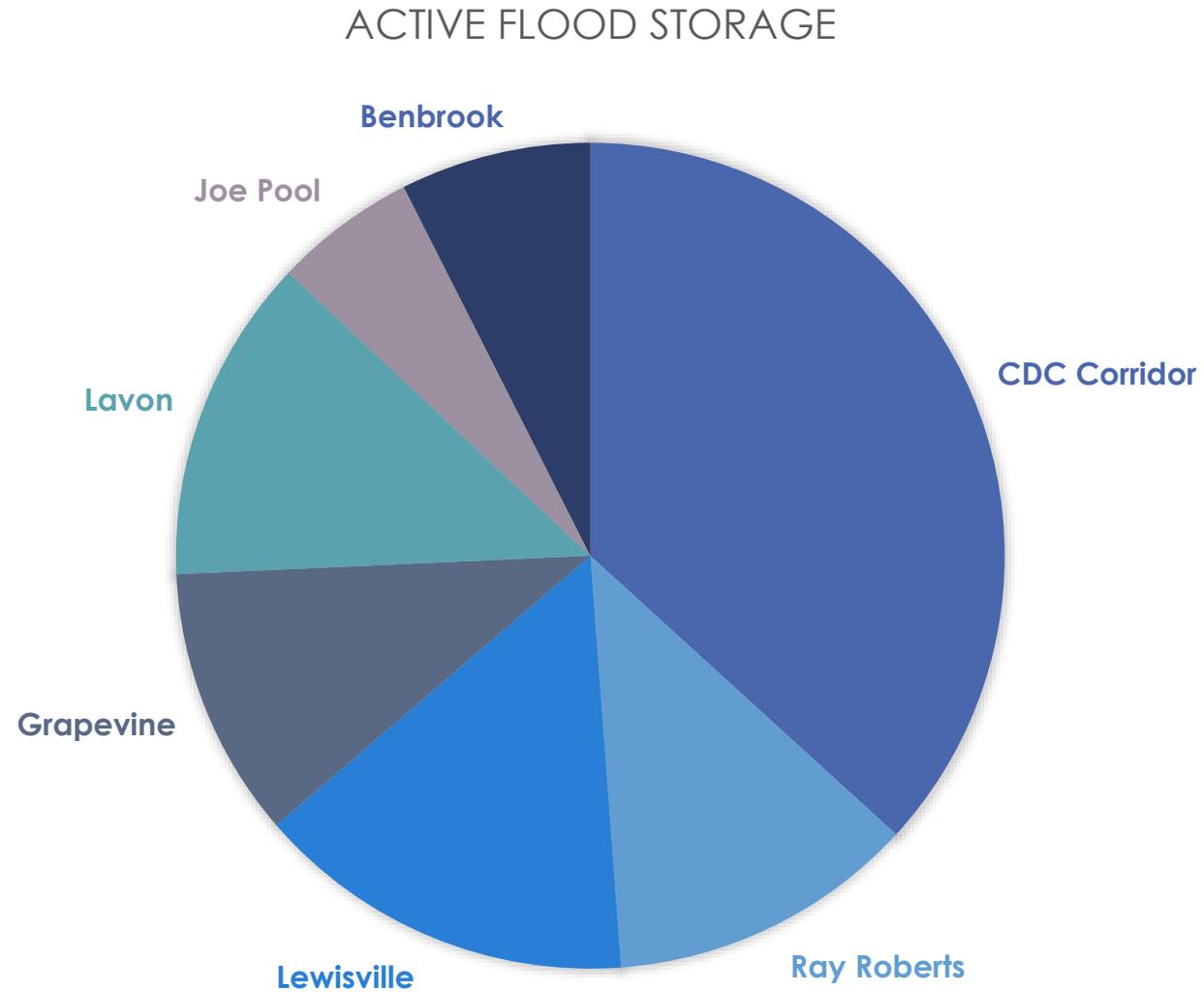
North Central Texas
Council of Governments
Environment & Development



0 1 2 4 6 8 Miles

This map data was created by the North Central Texas Council of Governments (NCTCOG) for use "as-is" and as an aid in graphic representation only. The data is not verified by a Registered Professional Land Surveyor for the State of Texas and is not intended to be used as such. NCTCOG, its officials, and its employees do not accept liability for any discrepancies, errors, or variances that may exist.

Why is the Trinity River Corridor So Important to Flood Prevention?

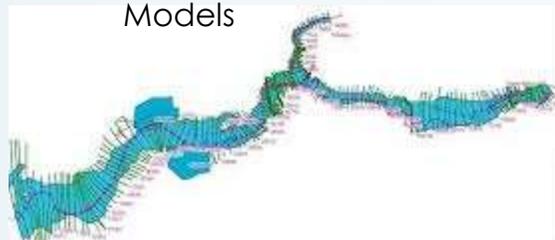


Model Consolidation

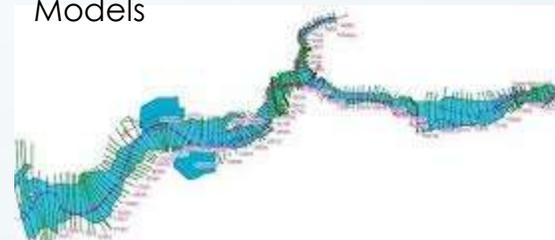
Trinity River Corridor



FEMA Effective Models

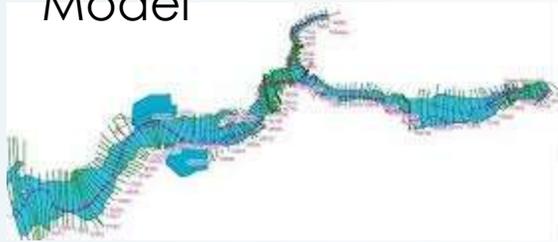


Trinity Common Vision CDC Models



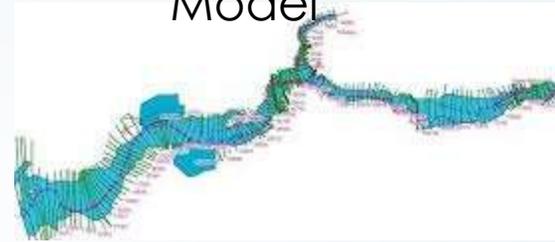
Model Consolidation

FEMA Effective Model



- ▶ FEMA
- ▶ NFIP - CLOMR/LOMR applications & review process
- ▶ Reviewed by FEMA (contractors)
- ▶ Manages WS elevations and floodways
- ▶ 100-year
- ▶ Existing conditions

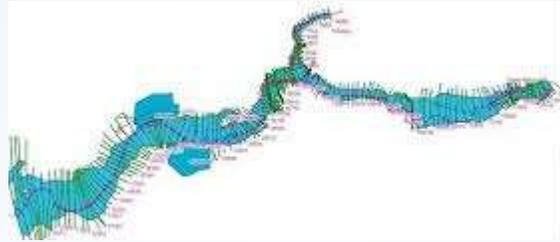
CDC Model



- ▶ Trinity Common Vision
- ▶ CDC permit applications & review process
- ▶ Reviews by USACE
- ▶ Manages storage and WS elevations
- ▶ SPF & 100-year
- ▶ Future projects
- ▶ Future conditions

Model Consolidation

Consolidated Model



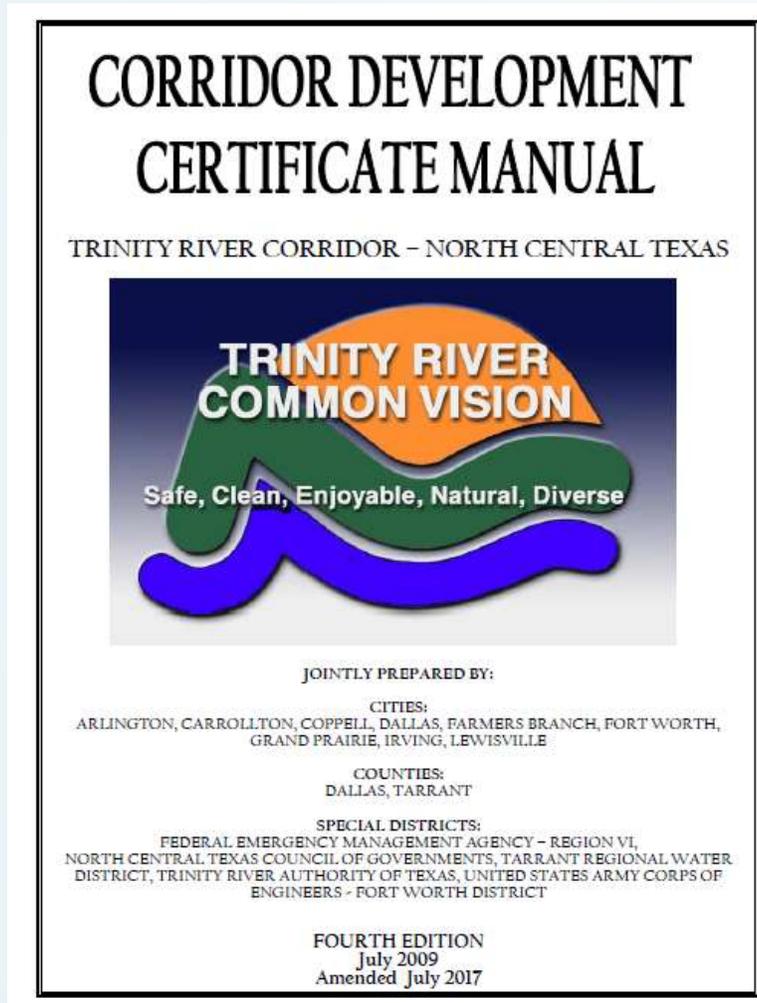
One Model – Two Purposes

- ▶ Georeferencing and merging by FEMA
- ▶ Watershed/floodplain changes from both programs reflected
- ▶ Consolidated review process
 - ▶ Simplify, streamline and transparency
- ▶ Manage WS elevations
- ▶ Manage floodways (FEMA)
- ▶ Manage storage volumes (CDC)
- ▶ Existing conditions
- ▶ Future conditions
- ▶ Future projects

Consolidated Model Team

- ▶ One set of models and processes to serve both programs
 - ▶ Interwoven and more efficient review processes
 - ▶ Improved workflow
 - ▶ Transparency between programs
 - ▶ Define update responsibility
 - ▶ Tracking system
 - ▶ Consultant access to models
 - ▶ Model archive
 - ▶ Schedule impacts
 - ▶ Cost impacts
- ▶ **Stephanie Griffin – Chair – City of Grand Prairie**
 - ▶ Alan Johnson - FEMA
 - ▶ Craig Ottman - TRWD
 - ▶ Chris Moss – City of Fort Worth
 - ▶ Mike Danella and Landon Erickson – USACE
 - ▶ Jim Leach – WPM
 - ▶ Kristine Blickenstaff – USGS
 - ▶ James Pittman – AECOM
 - ▶ ? – City of Dallas
 - ▶ Gary Brunner – USACE HEC

CDC Permits in Fiscal Year 2017



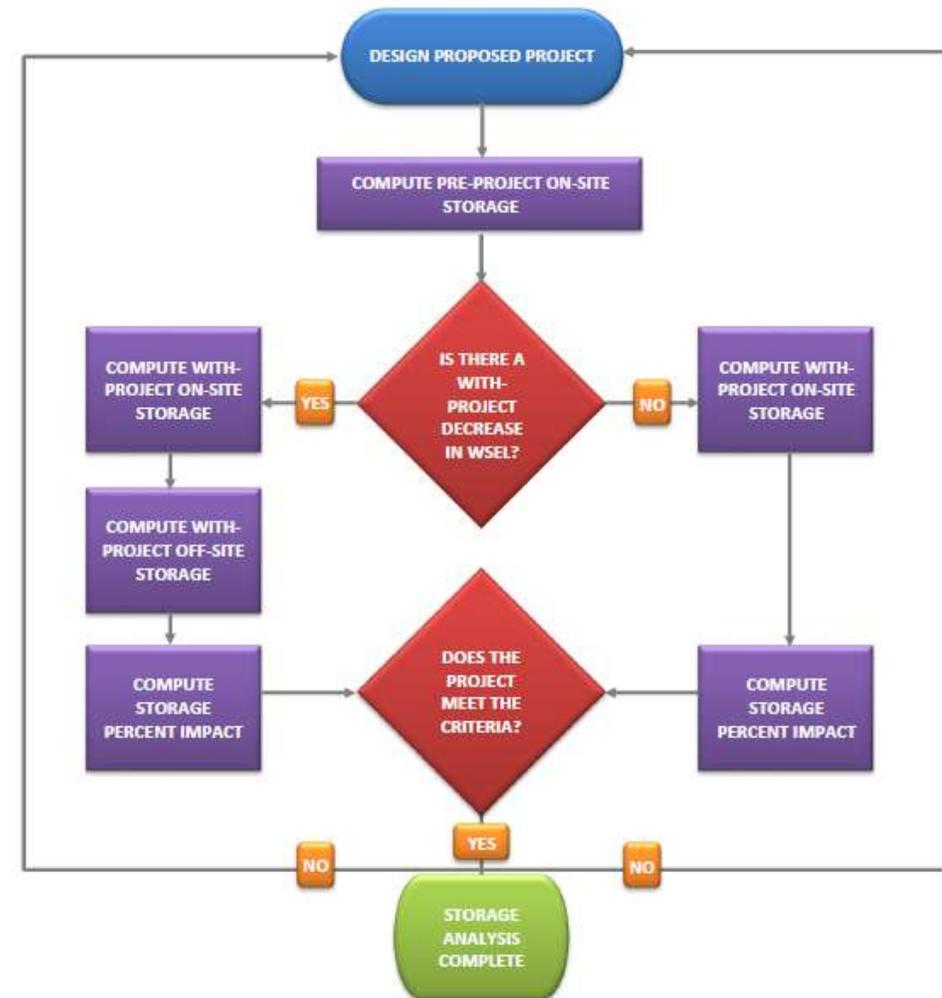
- ▶ 15 Applications Received This Fiscal Year
 - ▶ More than twice as many as FY 2016!
- ▶ 195 Total Applications Since CDC Inception

Additions to the 4th Edition CDC Manual

To eliminate confusion regarding calculation of valley storage, Michael Danella, USACE, clarified language in Section 2.1 and added charts and graphics to the 4th Edition Manual.

No changes were made to the CDC criteria or application process.

FIGURE 2-2
FLOW CHART - CDC VALLEY STORAGE COMPUTATION PROCESS



Floodplain Management through the NFIP

21st annual Class held November 2016 – Class was full with a wait list!

22nd Annual Class to be held November 27-30th.
Registration opened this week.

Annual Combined Elected Officials Seminar/CRS Users Group

Held August 23, 2017.

“What is NCTCOG Doing to Help Your Communities with Floodplain Issues?” and “TWDB Resources for Communities.”

FY 17 Work Additional Work Program Items

Common Flood Warning Software

- Communities can see each other's gauge readings and better prepare for storms
- Anticipated vendor contract award in October

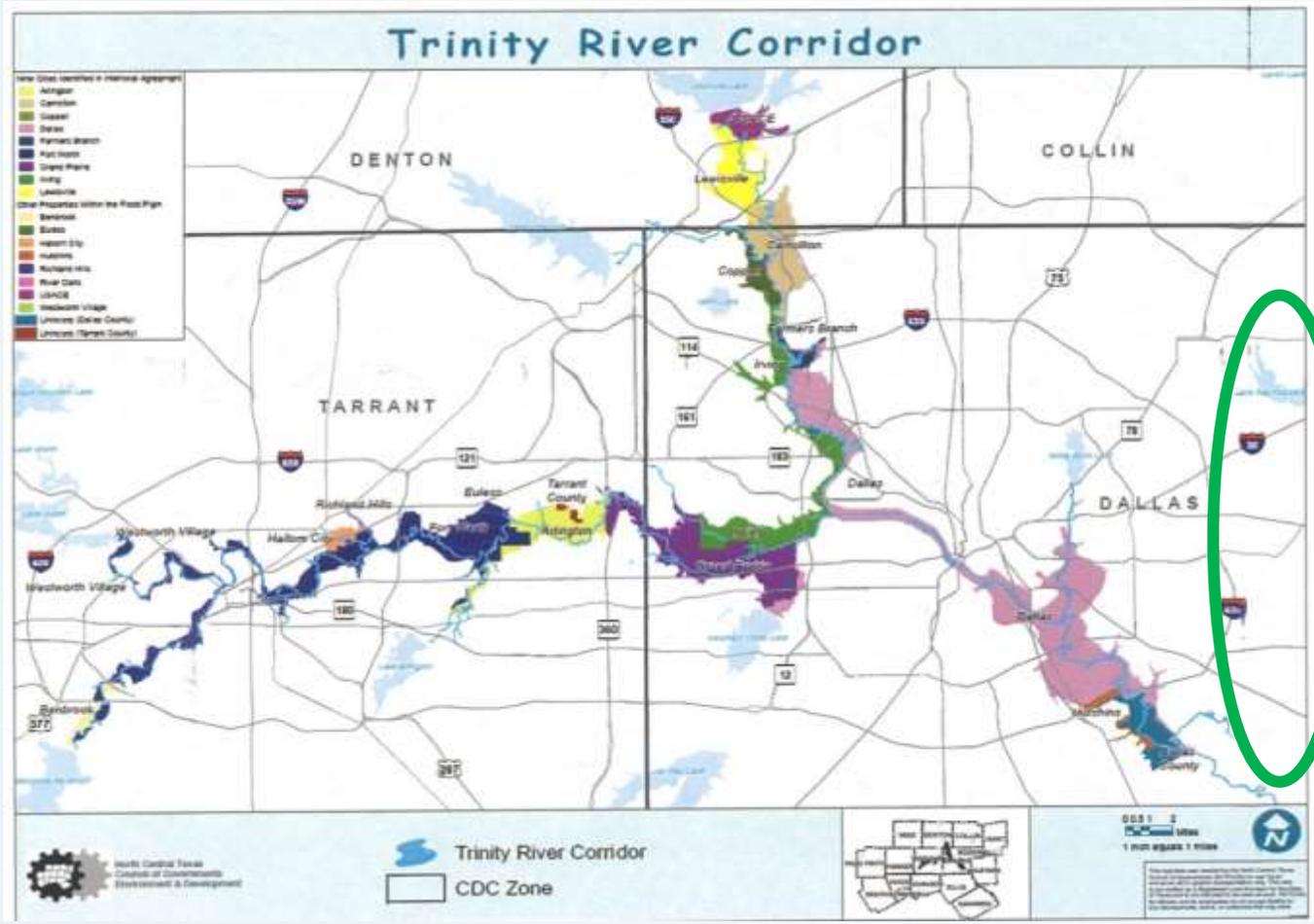
Additional Training

- Floodproofing Mitigation Techniques
- Substantial Damage Issues and Concerns

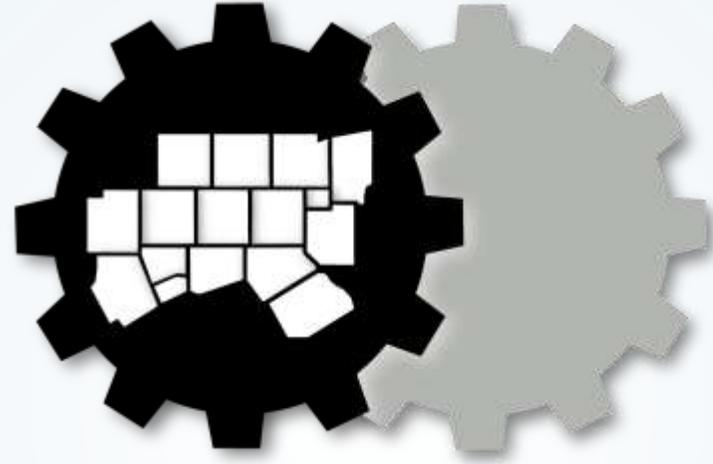
Proposal for NCTCOG to Become a FEMA LOMR Review Partner

- ▶ FEMA has a pilot program with a few agencies across the U.S. for local review/processing of LOMRs. Grand Prairie heard about this program and shared the information with the FMTF.
- ▶ FMTF has received presentations on the San Antonio River Authority's experience as a Review Partner, as well as a presentation from FEMA about the way LOMRs are processed within Region 6.
 - ▶ LOMRs are currently processed locally.
- ▶ A decision will be made by FEMA HQ in 2018 whether to continue this program permanently, or end it.
- ▶ In the meantime, we are currently trying to identify any concerns with the LOMR process that can be addressed.

Proposed Addition of East Fork Communities to the Trinity Common Vision Program



- Mesquite
- Sunnyvale
- Crandall
- Combine
- Forney
- Seagoville
- Balch Springs
- Kaufman County
- Ellis County



Action Items

2016 Trinity Common Vision Steering Committee Meeting Summary

- ▶ NCTCOG staff are seeking approval of the 2016 Trinity Common Vision Steering Committee Meeting Summary.



North Central Texas Council of Governments

SUMMARY

Trinity River COMMON VISION Steering Committee
Thursday, September 15, 2016
9:30 AM, Metroplex Conference Room
NCTCOG Offices, CPII
616 Six Flags Drive, Arlington, TX 76011

- 1. Welcome and introductions (Mia Brown)**

The meeting began at 9:30 a.m. with introductions of all present. Mia informed the Steering Committee of the passing of committee member Michael Cronin, representing the Trinity River Authority, and thanked Christina Crain, Vice President of the TRA Board of Directors, for filling his vacancy.
- DISCUSSION/PRESENTATION/ACTION ITEMS**
- 2. Summary of 2015 Common Vision Steering Committee Meeting (Mia Brown)**

Mia Brown gave a brief description of the 2015 Steering Committee meeting. A motion to approve the draft summary was carried.
- 3. Presentation on COMMON VISION**
 - a. Overview of COMMON VISION (Kenny Haferkamp)**

Kenny Haferkamp presented an overview of the Trinity COMMON VISION program history and the goals of the program.
 - b. Corridor Development Certificate (CDC) Program (Jerry Cotter, USACE)**

Jerry Cotter presented an overview of the importance and successes of the CDC program and an outline of the process.
 - c. FEMA/USACE Consolidated Regulatory Model Update (Jerry Cotter, USACE)**

Jerry Cotter gave an overview of the partnership with FEMA to produce a consolidated model, and an explanation of the process to build the model as well as the advantages a consolidated model would provide.

616 Six Flags Drive, Centerpoint Two
P.O. Box 5888, Arlington, Texas 76005-5888
(817) 640-3300 FAX: 817-608-2372
www.nctcog.org

NCTCOG Staff Pursuing Addition of East Fork Communities to the Common Vision/CDC Program

- ▶ **NCTCOG staff are seeking a vote to approve activities to bring in East Fork Trinity communities to voluntarily participate in the Common Vision/CDC Program, including seeking resolutions from each community.**
- ▶ FMTF took a formal vote to recommend approval of these activities to the Steering Committee on August 11th.

- ▶ Mesquite
- ▶ Sunnyvale
- ▶ Crandall
- ▶ Combine
- ▶ Forney
- ▶ Seagoville
- ▶ Balch Springs
- ▶ Kaufman County
- ▶ Ellis County (Discussion pending)

FY 2018 Trinity Common Vision Work Program

- ▶ **NCTCOG staff are seeking approval of the FY 2018 Trinity Common Vision Work Program.**
- ▶ Additional Technical Activities for 2018 (page 2):
 - ▶ Participation in the Model Consolidation Committee
 - ▶ East Fork Integration
 - ▶ Process Improvements for LOMR Submissions
 - ▶ Administrative Coordination
- ▶ No change to the cost shares.

Fiscal Year 2018
NCTCOG REGIONAL WORK PROGRAM
The Trinity River COMMON VISION Program

INTRODUCTION: The Trinity River COMMON VISION Program continues to focus on the goals outlined in the Regional Policy Position on Trinity River Corridor – 1989 and the commitment expressed in Interlocal Agreements among the participating communities. Toward the continued goal of maintaining this important cooperative program among the COMMON VISION communities, NCTCOG is proposing a work program of the following ongoing support and technical components.

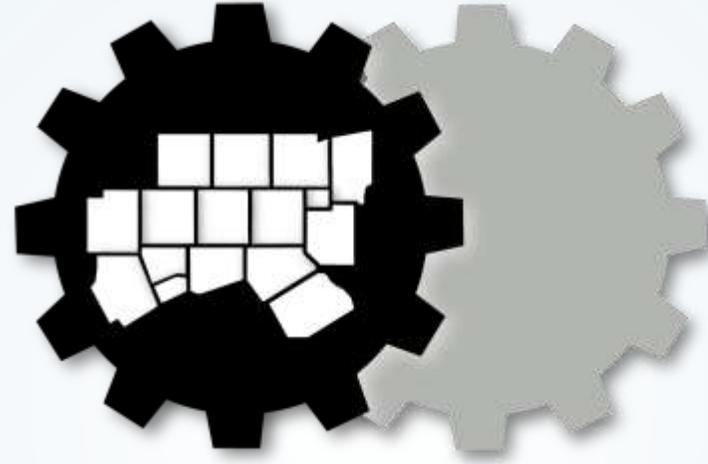
We propose to maintain the program at a \$100,000 level of support, continuing the cost breakout among the participants as per the previous traditional method based on SPFF 1995 Baseline.

SUMMARY OF FY 2018 PROGRAM ELEMENTS

Ongoing support activities:

- **Ongoing Trinity River COMMON VISION Information and Task Force Committee Support:** Continued service and support of the Trinity River Program committees (Common Vision Steering Committee and Flood Management Task Force), as well as distribution of important general Corridor information to the public and to regional delegates at the State and Federal levels.
- **Ongoing Corridor Development Certificate (CDC) Process and mapping support:** Administrative support of the CDC process, technical/procedural assistance to local government participants, coordination with US Army Corps of Engineers (USACE) staff and addressing inquiries from interested individuals.
- **Continued sponsorship of FEMA's NFIP training courses:** Continuation of the long-running partnership with the Federal Emergency Management Agency (FEMA) Region 6 for important training opportunities to be offered in the region for the benefit of the FMTF and other floodplain management officials. The very popular "Managing Floodplain Development through the National Flood Insurance Program (NFIP)" course will be offered, marking the 22nd year that this week long class will be offered at NCTCOG. The class is offered in partnership with the Texas Floodplain Manager's Association (TFMA) who will offer testing for students to become Certified Floodplain Managers (CFMs). NCTCOG will also continue partnering with TFMA to host CFM Exams 4-5 times per year.
- **Continued effort toward a Consolidated CDC Model:** Continued collaboration and support activities associated with the georeferencing, creation, and maintenance of a FEMA/USACE Consolidated H&H Model.
- **Ongoing effort to explore partnership and outreach opportunities:** Continued efforts to partner with agencies including the US Army Corps of Engineers Fort Worth District (USACE-FWD), FEMA, TWDB, TCEQ, USGS, NRCS, and TFMA for traditional projects or educational opportunities.
- **Continued exploration of regional cooperative detention/retention strategies:** Discussion and investigation of potential strategies will continue on key critical watersheds and segments throughout the Trinity Basin. Continue to research and collect information on existing management approaches in those areas.





Related Activities Update

16-County Watershed Management Effort

- ▶ This Menu of Regionally Recommended Standards in Watershed Management for New Development Within County Regulated Areas was developed by the North Central Texas 16-County Watershed Management Roundtable held on March 14, 2017.
- ▶ Presented to the 16-County Watershed Management Forum on July 12, 2017.
- ▶ NCTCOG will seek endorsement from the Executive Board this fall.



Menu of Regionally Recommended Standards in Watershed Management For New Development Within County Regulated Areas

1. Design infrastructure to fully developed conditions with approved land-use maps if data is available
2. Begin protection at the most upstream end of the watershed above Federal Emergency Management Agency Limit of Detail Study
3. Maintain unfilled valley storage areas
4. Protect against and reduce erosive velocities
5. Match pre-developed site runoffs
6. Verify/require adequate downstream conveyance
7. Require freeboard from fully developed (if data is available) and changing watershed conditions
8. Define written operation and maintenance responsibilities
9. Size conveyance of street and storm systems adequately to safely convey traffic
10. Create stream buffers and preserve open space; limit clearing and grading
11. Consider regional (on or off stream) detention incentives
12. Implement Conservation and/or Cluster Development incentives
13. Encouraging low impact development techniques and/or green infrastructure

These Regionally Recommended Standards in Watershed Management were developed by the North Central Texas Countywide Watershed Management Roundtable held on March 14, 2017

Cooperating Technical Partners Grant

Federal Emergency Management Agency

2004

- Joined CTP
- Created Master Plan

2009

- NCTCOG Participates in Map Mod

2012

- West Fork Trinity and Elm Fork Trinity Discovery

2013

- Village Creek Flood Risk Project

2014

- Bear Creek Flood Risk Project

2015

- Cedar and Denton Watershed Discovery
- Lynchburg and Irving Creek Flood Risk Studies

2016

- East Fork Trinity Discovery
- Silver Creek and McAnear Creek Flood Risk Studies

2017

- Richland-Chambers Watershed Discovery
- Town Creek and Clear Fork Tributary Flood Risk Studies

Integrated Stormwater Management - iSWM



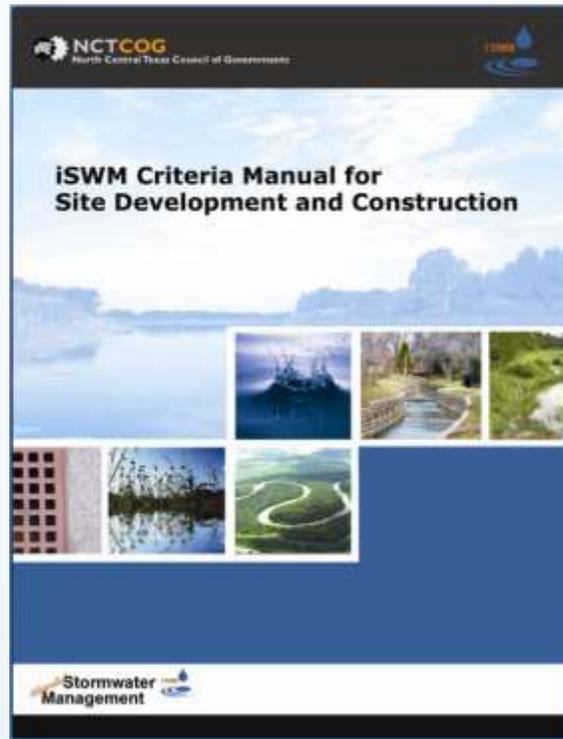
Why iSWM?

- Flooding and streambank erosion due to increased runoff
- Water quality concerns / stormwater regulations
- Loss of natural features
- Interest in green infrastructure
- Comprehensive approach needed
- Regional consistency and equity



iSWM Resources

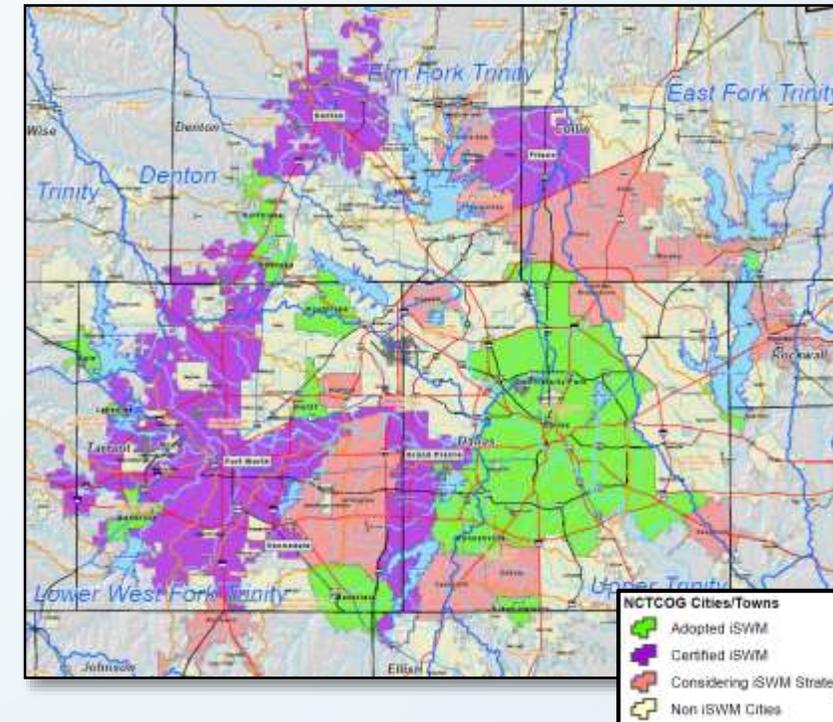
- Technical Manual
- Criteria Manual



Certified Communities:

- Denton (Silver)
- Grand Prairie (Silver)
- Kennedale (Silver)
- Frisco (Silver)
- Fort Worth (Silver)

Founding Communities:



Flood Protection Planning Grant

- ▶ Texas Water Development Board Grant 2016
- ▶ Fort Worth Project
 - ▶ purchased warning poles
- ▶ NCTCOG Pilot Project
 - ▶ Warning poles & software
 - ▶ 911 Dispatch Centers receive a data feed and is displayed on dispatch maps



Related Items Update

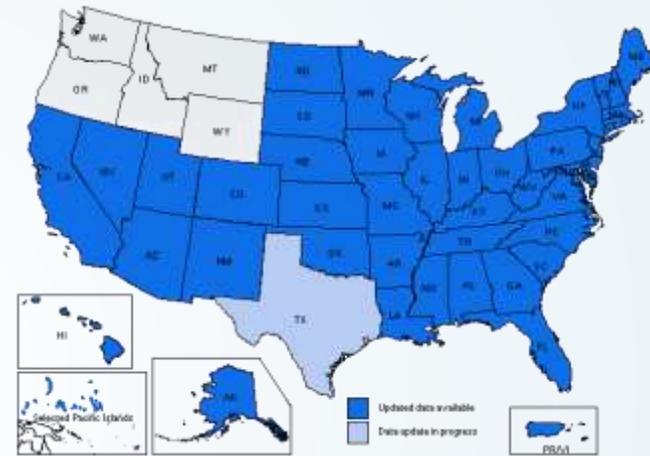
Agenda Items

7 E : Edith Marvin

7 F: Jessica Baker

NOAA Atlas 14 Volume for Texas

- What it is:
 - Precipitation Frequency Estimates

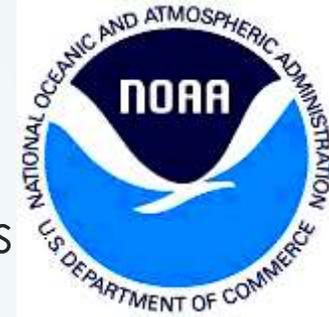


- Used for:
- Engineering and Design:
 - Storm water run-off
 - Sizing detention basins and outlet structures
 - More accurately designed drainage for Texas roads and Highways
 - Bridges and Culverts
- Modeling:
 - Flood Risk Management studies
 - Flood plain mapping



Why does Texas need NOAA Atlas 14?

- ▶ Today's De-facto National Standards
 - endorsed by federal water agencies
 - referenced in many federal, state, and local regs
 - NWS has a proven track record
 - Current products are from 1960's and 1970's and outdated
- Challenges:
 - Atlas 14 not funded from NWS budget
 - Performed At Request Of And Funded By Users
 - Oklahoma and Louisiana are ahead of Texas

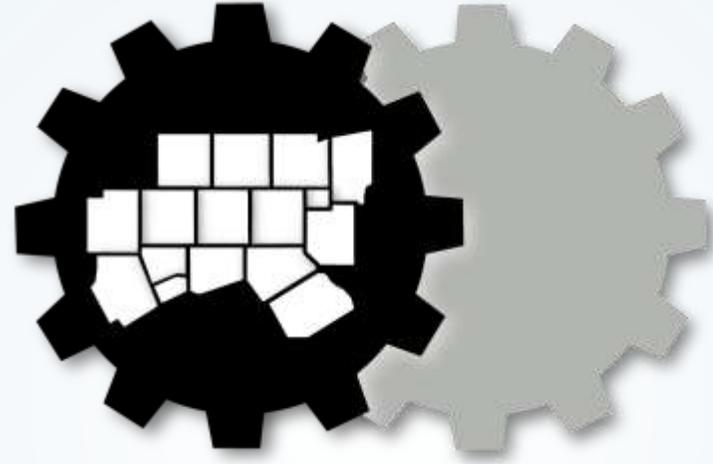


Funding and Project Schedule

- Current Project Schedule
 - Data Collection and Initial Quality Control [DONE]
 - Technical and Statistical Analysis [JUNE 2017]
 - Peer Review [AUGUST 2017]
 - Web Publication [APRIL 2018]
- Budget and Additional Studies
 - Raised \$1.3M to date
 - Coalition of Federal Agencies, State Agencies and Municipalities
 - TxDOT major contributor
 - \$300K left to raise for base package
 - Depth-Area-Duration Curve scope: \$420K
 - Trend Analysis scope: \$500K-\$1M estimate

John Ivey Higher Standards Award





Roundtable



Contact

Mia Brown, CFM

Planner, Environment and Development

mbbrown@nctcog.org

817.695.9227

Edith Marvin, P.E., CFM

Director, Environment and Development

emarvin@nctcog.org

817.695.9211

Connect



Facebook.com/nctcogenv



@nctcogenv



nctcogenv



youtube.com/user/nctcoged



EandD@nctcog.org



nctcog.org/envir