

Flood Management Task Force

August 13, 2021



North Central Texas
Council of Governments
Environment & Development

Welcome and Introductions

- Thanks for attending!
- Please introduce yourself in the chat box.
- Please mute your line.
- Unmute your line when you would like to speak during question and discussion time.
 - We will also watch the chat box for questions

Meeting Summary Approval

- The link to the [June meeting summary](#) is available in the chat.
- Please inform Breanne Johnson of any corrections or additions, at bjohnson@nctcog.org.

FY2021 Trinity River Common Vision Work Program

NFIP/CDC Model Consolidation Team

- The FMTF approved the Consolidation Team's Memo in January. The USACE has submitted two scopes for work related to the model consolidation.
 - Updating the newly georeferenced CDC model with approved but not yet constructed CDC project geometries from 2017 onward and future flows.
 - Creating the CDC future flows for the FEMA detailed study on the East Fork Trinity and the Trinity mainstem to extend the consolidated model.
- The USACE set aside \$485,000 from the Floodplain Management Services (FPMS) fund to complete these scopes. Internal coordination at the USACE will be occurring this FY. Updates for FY21 will be provided as they become available.

FY2021 Trinity River Common Vision Work Program

CDC Manual Update to the 5th Edition

- The NFIP-CDC Model Consolidation Team had meetings on June 30th, July 12th, and August 2nd to continue work on the 5th edition update.
 - Section 3: The CDC Process and Section 1: Introduction have been reviewed and revised with the final draft proposed.
 - Section 2: CDC Regulation & Criteria is in the process of being reviewed
- The Team will meet next on August 20th to finish review of Section 2
- Upcoming meetings will discuss Section 4 CDC Application and Appendices
- Updates will be brought to the FMTF throughout the process and your feedback will be requested.



FY2021 Trinity River Common Vision Work Program

CDC Manual Update to the 5th Edition

Current Manual

Chapter 1 General Information

Chapter 2 CDC Common

Permit Criteria

Chapter 3 CDC Application

Requirements

Chapter 4 The CDC Process

Appendices

Revised Manual

Executive Summary

Summary of Changes

Glossary

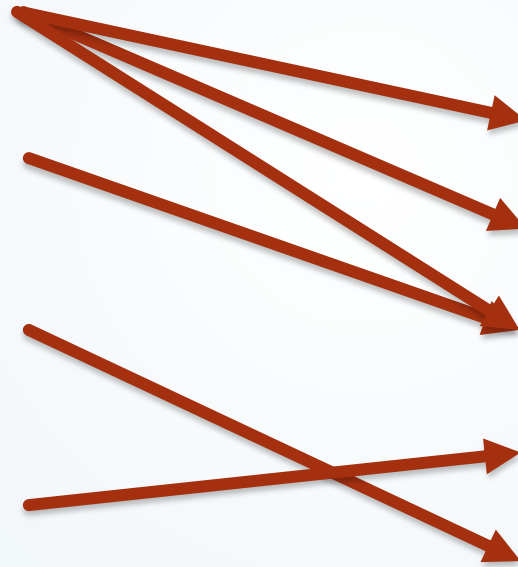
Section 1 Introduction

Section 2 CDC Regulation and Criteria

Section 3 The CDC Process

Section 4 CDC Application

Appendices



FY2021 Trinity River Common Vision Work Program

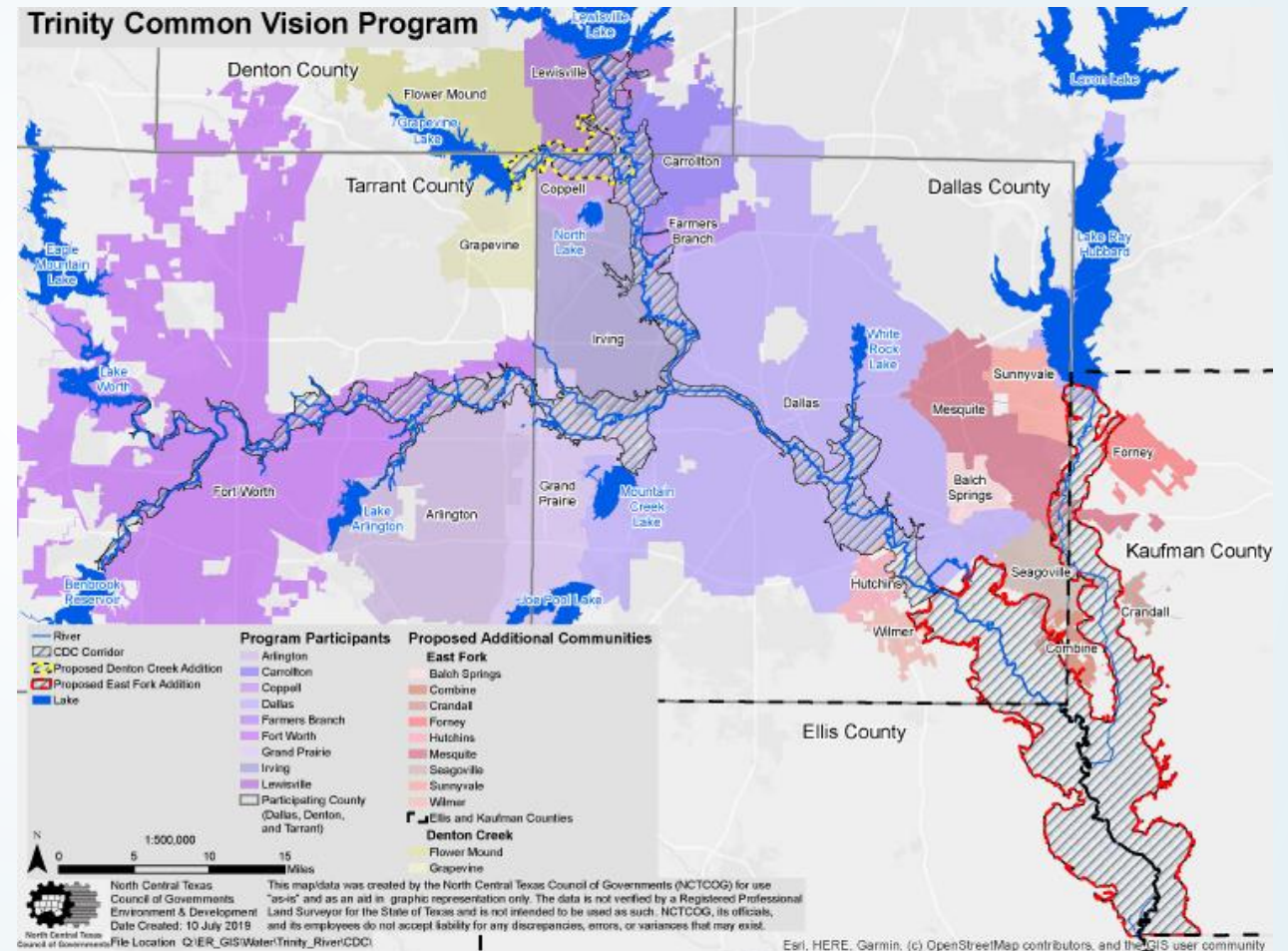
CDC Manual Update to the 5th Edition

- Main Updates and Revisions included in the new manual
 - Updating the CDC Process to include the NFIP-CDC Consolidated Model.
 - Inclusion of new Trinity River CDC website
 - CDC will be valid for two years instead of current five years and one year extensions given instead of three years
 - CDC Cost Recovery Fee renamed to CDC Application Fee
 - Addition of Model Maintenance Fee following completion of project

FY2021 Trinity River Common Vision Work Program

East Fork/Denton Creek Update

- NCTCOG staff is sending out emails to proposed communities to encourage them to join.
- Cost shares have been refined based on FEMA preliminary maps and added to the TCV Work Program.
- NCTCOG presented at the May 2021 meeting of Dallas County Southern Cities.
- NCTCOG presented to the Ellis County Commissioners Court at their July 27th. 2021 meeting.



FY2021 Trinity River Common Vision Work Program

OneRain Regional Flood Software

- Current Participants
 - McKinney
 - Arlington
 - Frisco
 - TRWD
 - DCURD (NEW – Data View Tier)
 - Highland Park (NEW – Advanced Tier 1)
- Fort Worth and Grand Prairie feed their data into the platform.
- You can find information on the contract through the North Texas SHARE website [here](#). Tiers and pricing are [here](#).
- View the regional platform at www.FloodDataNTX.com



Regional Flood Warning Software Program

Cooperative regional solution to offer a cost-effective software package for all agencies to assist in flood warning and hydrology related challenges in the area.



Regional View

Understand approaching storms across the DFW area with access to the regional data set



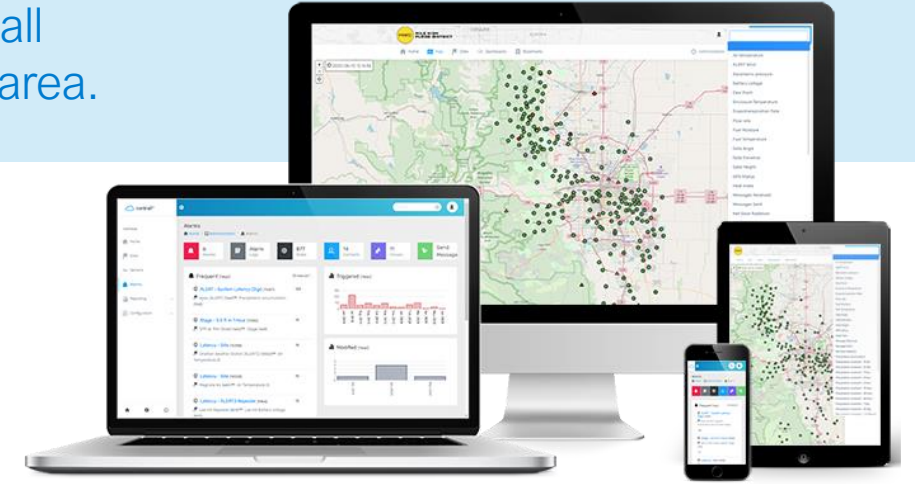
Impacts

Monitor the impacts on your agency with alarming, dashboards, and graphing of water and rainfall data



Branded Website

Provide your constituents with information through their own branded website that they can see and download data



FEATURES

- ✓ Collect, visualize & alarm on critical flood and rainfall data
- ✓ Use your own gauges or utilize the surrounding agencies' gauges
- ✓ See surrounding agency rainfall data
- ✓ View information on any device
- ✓ Easily share your data with the public
- ✓ Website branding to match your agency
- ✓ Flexible tiers and deployments for all needs

For more information:

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North Texas
SHARE
Your Public Sector Solutions Center

OneRain
The Rainfall Company

FY2021 Trinity River Common Vision Work Program

Upper Trinity Storm Shift Silver Jackets Study

➤ Summary:

- Shift storms that have occurred in/around North Texas and demonstrate their resulting floodplains and related impacts if they had occurred in Dallas County
- Partnership and community collaboration is essential
- Silver Jackets application identified NCTCOG, FEMA Region 6, Dallas County, and Texas General Land Office as partners
- Coordinating with additional stakeholders and partners

➤ \$100,000 Budget

- Silver Jackets project funded through USACE Flood Plain Management Services (FPMS) program that provides USACE technical and planning support to local, state, and federal entities

■ Scoped Tasks:

- Determine storm number & locations
- Obtain existing data
- Storm selection
- Storm shifting
- Inundation mapping
- Documentation
- Post-analysis collaboration

• 12-month Timeline

FY2021 Trinity River Common Vision Work Program

Upper Trinity Storm Shift Modeling Approach

- **Hydrology (how much water):**
 - Employs recently completed Interagency Flood Risk Management (InFRM) Upper Trinity Watershed Hydrology Assessment (WHA) data
- **Hydraulics (how water conveys):**
 - Using 2017 or newer studies obtained through collaboration with project partners
- **Inundation mapping and documentation (report):**
 - Tailoring documentation to fit the needs of project partners, thereby ensuring maximum utility



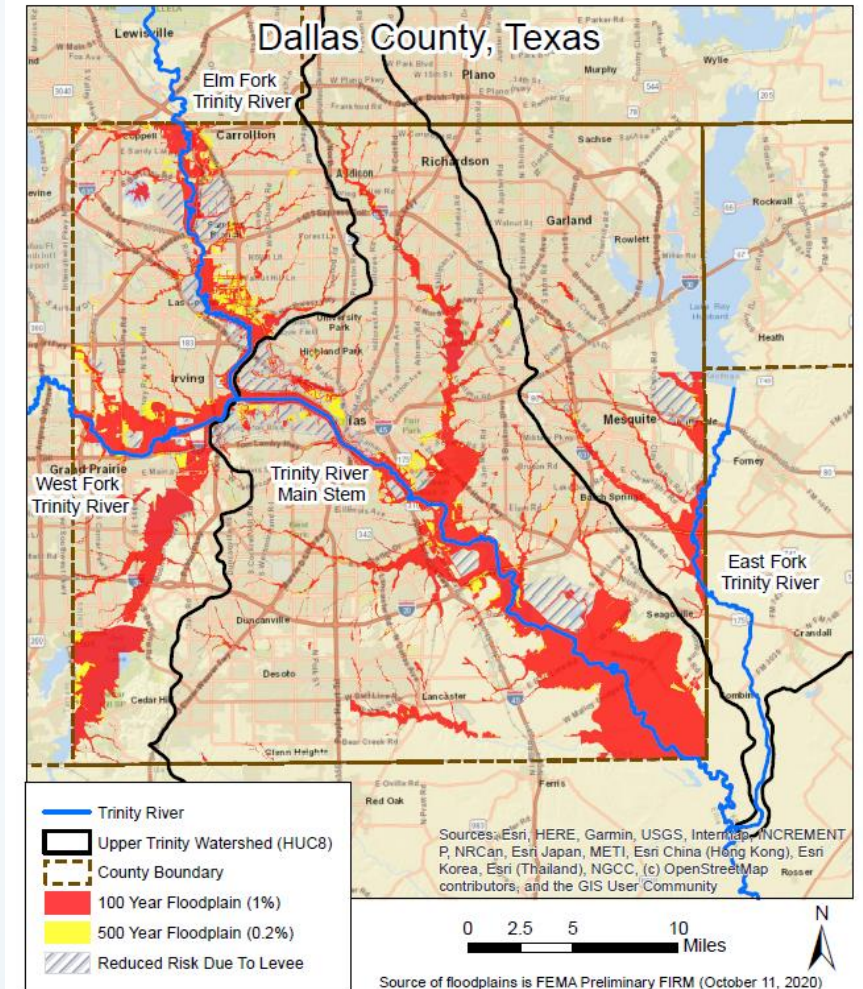
FY2021 Trinity River Common Vision Work Program

Upper Trinity Storm Selection

- Initially selected 4 storms to shift over Dallas County

Location/Storm Name	Date	Total Rainfall Depth	Rainfall Duration	Distance to Dallas County	Type of Storm
Joshua, TX	Jun 2000	11.4"	48 hours	55 miles	Convective
Nocona, TX – TS Bill	Jun 2015	13.6"	48 hours	75 miles	Tropical
Mansfield, TX	Jul 2004	17.4"	48 hours	40 miles	Convective
Dawson, TX – Hurricane Patricia	Oct-2015	22.7"	48 hours	68 miles	Tropical

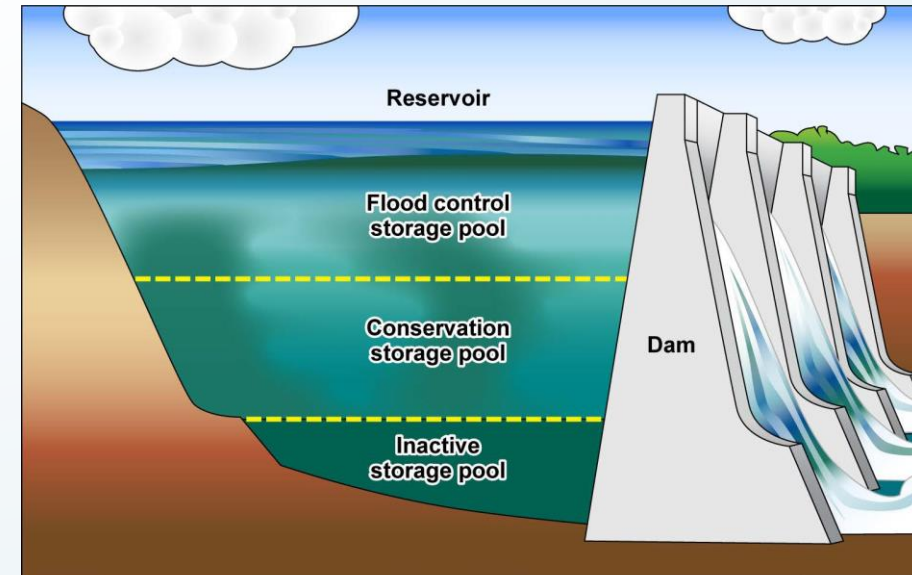
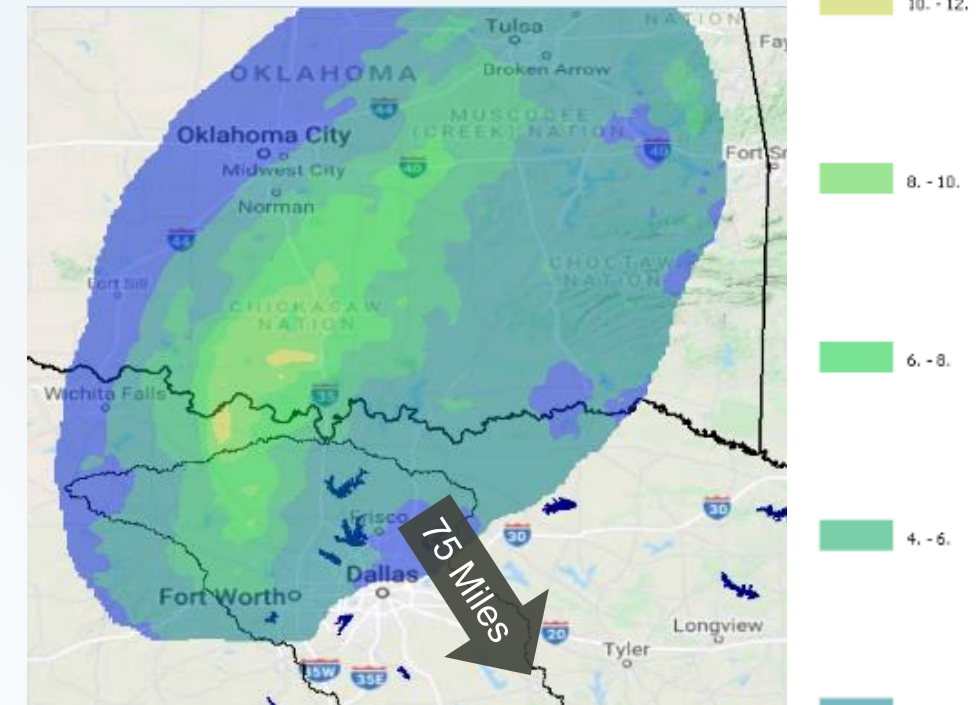
- Chose 5-6 different focus areas in Dallas County based on local coordination
- Intend to illustrate extent and timing of potential flooding



FY2021 Trinity River Common Vision Work Program

Upper Trinity Storm Shift Scenarios

- Tropical Storm Bill (13.6" in 48 hours):
 - **Dry Scenario:** Reservoirs at 85% of conservation pool (uses driest loss and baseflow parameters from Trinity WHA study).
 - **Best Estimate Scenario:** Reservoirs at top of conservation pool (uses final 100-year Trinity WHA parameters).
 - **Wet Scenario:** Reservoirs at 85% of flood pool (uses wettest loss and baseflow parameters from Trinity WHA study).



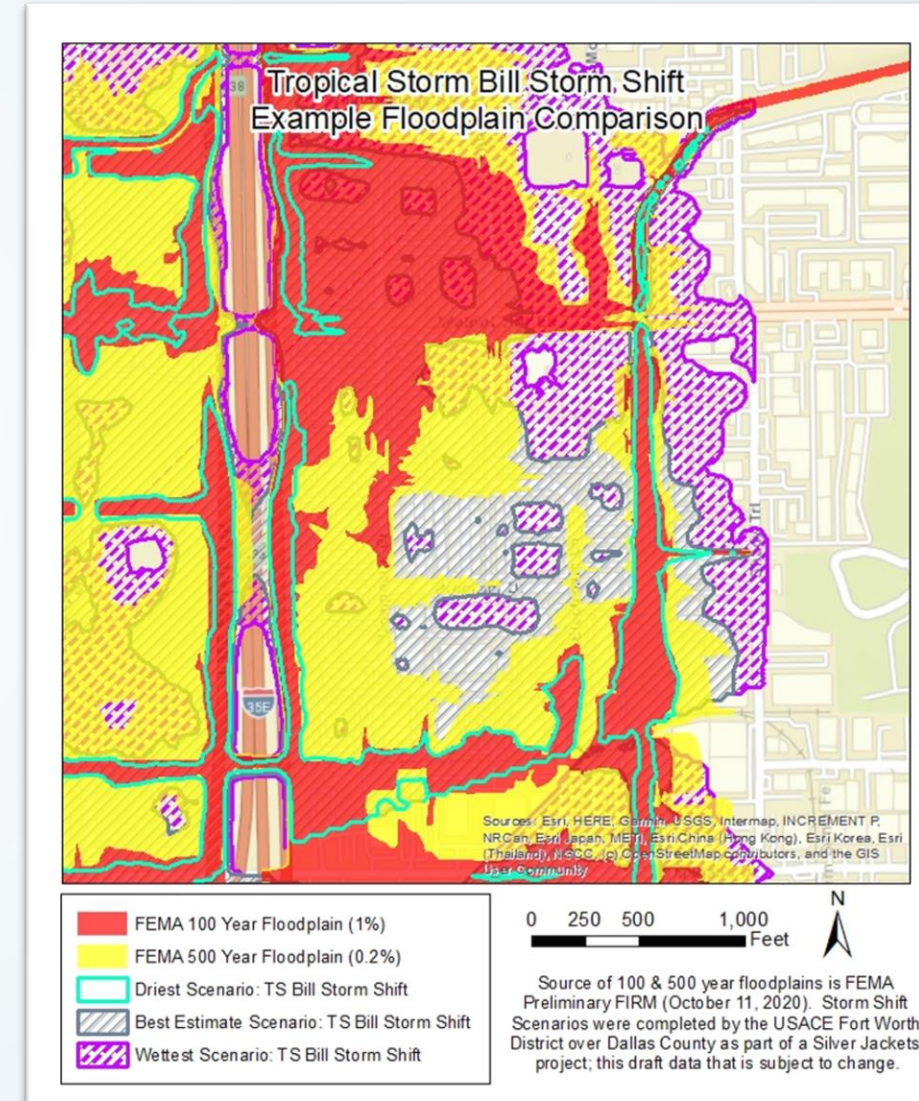
Source: GAO. | GAO-16-685

FY2021 Trinity River Common Vision Work Program

Upper Trinity Storm Shift Initial Results

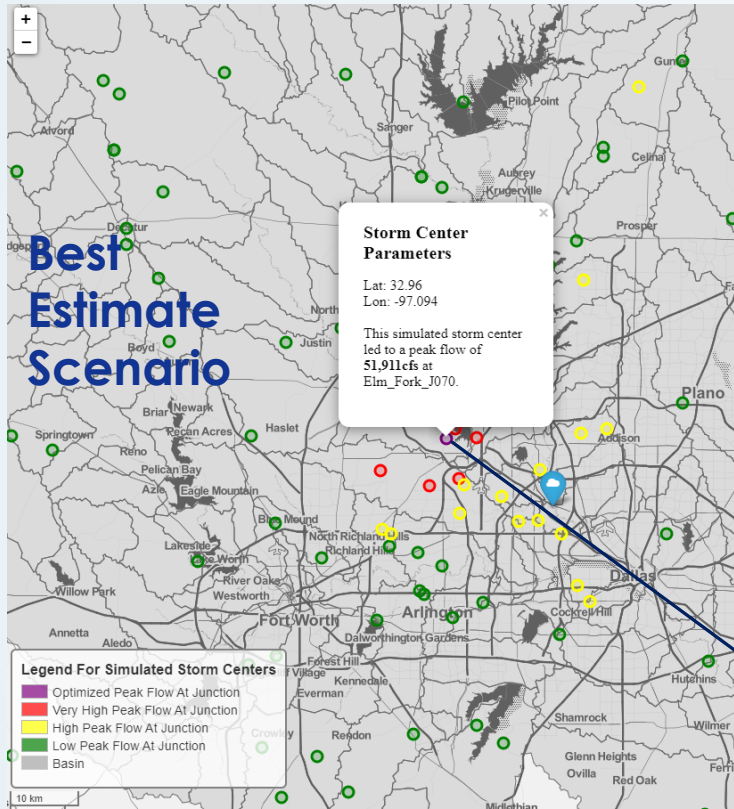
- Tropical Storm Bill (13.6" in 48 hours):
 - Example peak flows for Dry, Best Estimate, and Wet scenarios shown below
 - Includes comparisons between storm shift scenarios and Trinity Watershed Hydrology Assessment (WHA) 100, 200, & 500 year flows
 - Comparison between storm shift scenarios and FEMA 100 and 500 year floodplains shown in image to right

TS BILL STORM SHIFTS	Upper Trinity Silver Jackets Study			Trinity InFRM WHA Study		
	Dry	Best Estimate	Wet	100-yr	200-yr	500-yr
Junction	PeakFlow (cfs)	PeakFlow (cfs)	PeakFlow (cfs)	PeakFlow (cfs)	PeakFlow (cfs)	PeakFlow (cfs)
Elm Fork Junction 070	30,400	51,900	105,400	45,100	52,800	62,400



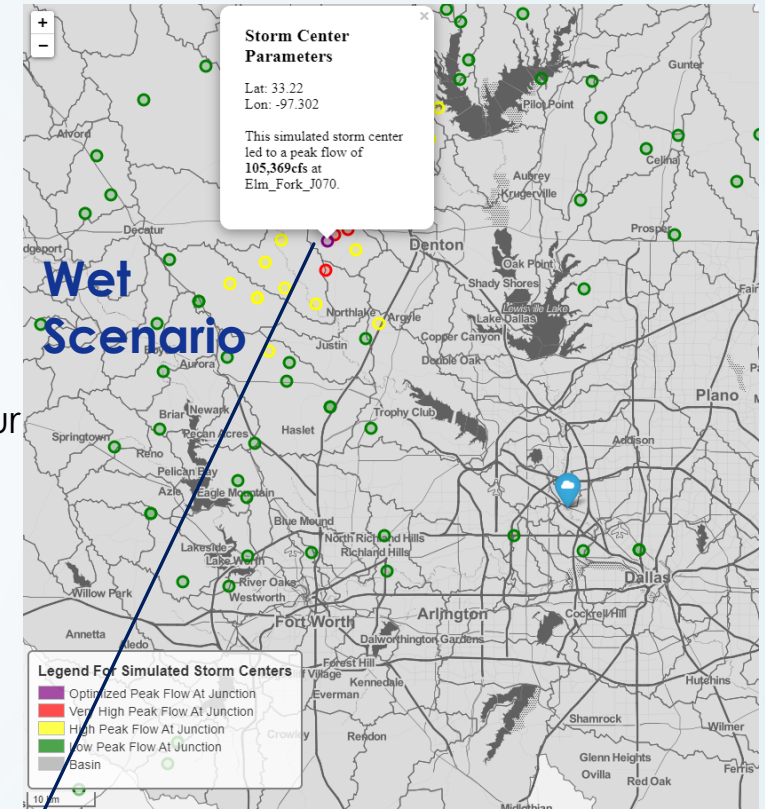
FY2021 Trinity River Common Vision Work Program

Upper Trinity Storm Shift Initial Results



Irving Convention Center (Elm Fork Junction 070) example:

- Highest flows at Irving Convention Center for scenario on left occur when storm center is located downstream of Grapevine and Lewisville Lakes
- Highest flows at Irving Convention Center for the scenario on right occur when storm center is well above (upstream of) these two lakes
- Emphasizes the significant role of reservoirs in flood control and that the storm location that yields highest flooding varies by scenario



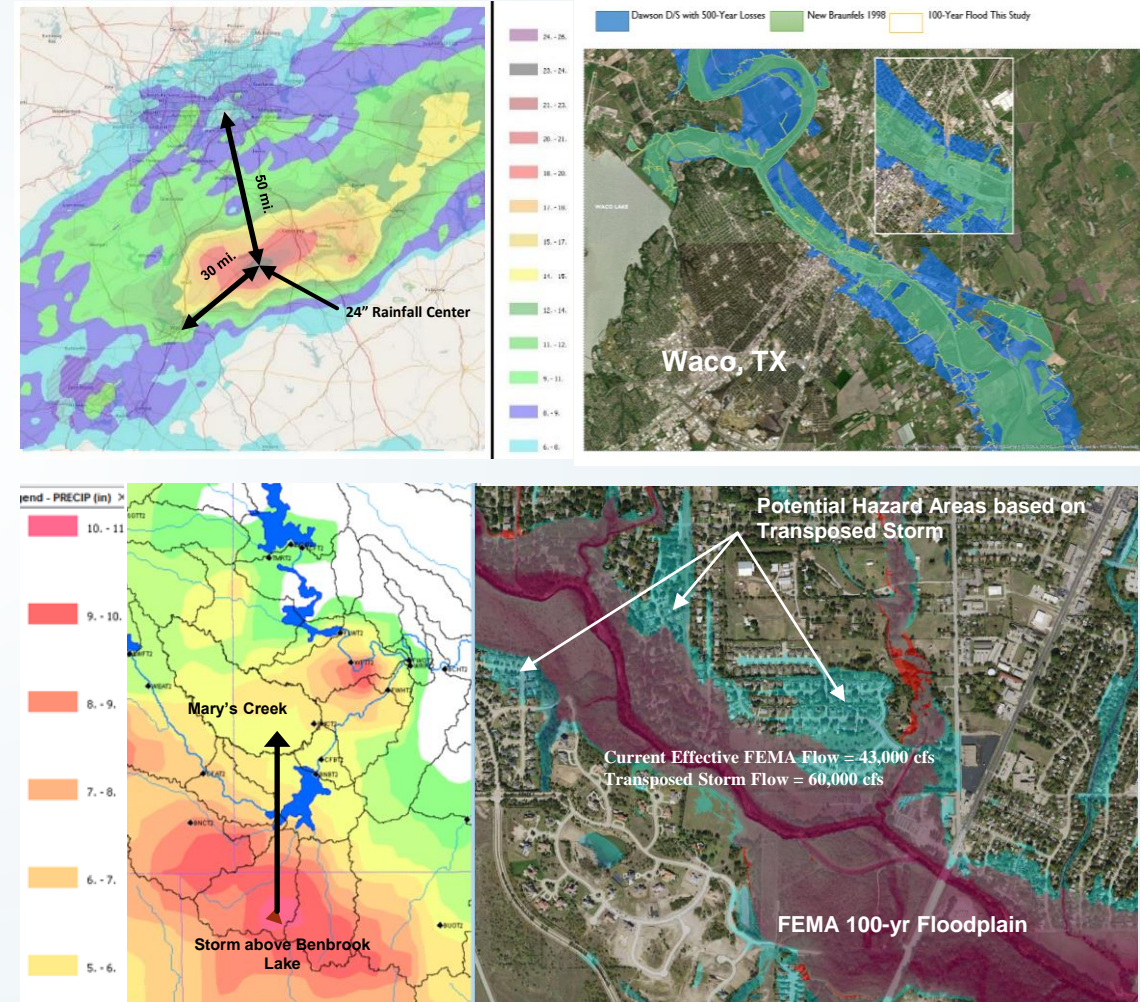
Note that this is draft data that is subject to change

TS BILL STORM SHIFTS	Upper Trinity Silver Jackets Study			Trinity InFRM WHA Study		
	Dry	Best Estimate	Wet	100-yr	200-yr	500-yr
Junction	PeakFlow (cfs)	PeakFlow (cfs)	PeakFlow (cfs)	PeakFlow (cfs)	PeakFlow (cfs)	PeakFlow (cfs)
Elm Fork Junction 070	30,400	51,900	105,400	45,100	52,800	62,400

FY2021 Trinity River Common Vision Work Program

Storm Shift Program Next Steps

- Anticipate completing Upper Trinity storm shifting study in late 2021
 - Will share results with FMTF for review and use
- Waco, TX Example
 - Issue: Uncertainty associated with determination of flood potential (dams)
 - Shifted several storms (30+ mi)
 - Examined different operational constraints, multiple scenarios
 - Outcome: showed flood potential is greater than 100-year
- Mary's Creek, DFW, TX Example
 - Issue: Uncertainty associated with determination of flood potential
 - Shifted June 2000 100-year± storm 15 miles
 - Outcome: Flood potential is greater than previously understood
- Future
 - Texas Storm Study: USACE effort that will provide a list of storms (based on region) that can be used in storm shifting and to inform other projects
 - Potential integration with planning & visualization tools such as CHARM (Community Health And Resource Management)
 - To complete additional storm shifting studies (San Marcos), continue coordination, integrate with hydrology studies, and possible InFRM product
 - Transportation and Stormwater Integration (TSI) project



Contact

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FY2022 Trinity River Common Vision Updated Cost Share Discussion

Existing Cost Shares

COST SHARES FOR CURRENT COMMON VISION PARTICIPANTS		
Participant	Acres in Floodplain (FIRM)	Cost Share
Arlington	3,351	\$3,868.52
Carrollton	5,941	\$6,858.51
Coppell	1,490	\$1,720.11
Dallas	25,787	\$29,769.45
Farmers Branch	1,472	\$1,699.33
Fort Worth	16,261	\$18,772.29
Grand Prairie	8,498	\$9,810.40
Irving	7,757	\$8,954.96
Lewisville	3,072	\$3,546.43
Seagoville (East Fork addition)	2,776	\$3,192.00
Dallas County*		\$10,000.00
Tarrant County*		\$5,000.00
Kaufman County* (East Fork addition)		\$10,000.00
TRWD*		\$5,000.00
Subtotal Current Program		\$118,192.00

"TRADITIONAL METHOD"
 Approved by the
 Trinity River Steering
 Committee on July 19,
 2001

Area based on SPF 1995
 Baseline to City Limits of
 Dallas Analysis

FY2022 Trinity River Common Vision Updated Cost Share Discussion

Prospective Members Cost Shares

COST SHARES FOR PROSPECTIVE COMMON VISION PARTICIPANTS		
Participant	Acres in Floodplain Preliminary FIRM	Cost Share**
EAST FORK		
Balch Springs	0	\$1,000.00
Combine	850	\$1,000.00
Crandall	39	\$1,000.00
Forney	214	\$1,000.00
Hutchins	830	\$1,000.00
Mesquite	2,224	\$2,558.00
Sunnyvale	826	\$1,000.00
Wilmer	458	\$1,000.00
Ellis County*		\$5,000.00
DENTON CREEK		
Flower Mound		\$1,000.00
Grapevine		\$1,000.00
TOTAL COMMON VISION PROGRAM		\$134,750.00

"TRADITIONAL METHOD"
 Approved by the
 Trinity River Steering
 Committee on July 19,
 2001

Area based on SPF 1995
 Baseline to City Limits of
 Dallas Analysis

*Counties and Special District cost share is not determined by floodplain acreage.

**Minimum cost share for participation is \$1,000.00. Communities with less than 870 acres have a \$1,000.00 cost share. Communities with greater than 870 acres are subject to a cost share based on acreage.

FY2022 Trinity River Common Vision Updated Cost Share Discussion

Proposal for Increasing Cost Share for Original Program Members

	Original Amount from 2001 - 2021	35% Increase + New Contributions	50%* Increase + New Contributions
Arlington	\$3,868.52	\$5,222.50	\$5,802.78
Carrollton	\$6,858.51	\$9,258.99	\$10,287.77
Coppell	\$1,720.11	\$2,322.15	\$2,580.17
Dallas	\$29,769.45	\$40,188.76	\$44,654.18
Farmers Branch	\$1,699.33	\$2,294.10	\$2,549.00
Fort Worth	\$18,772.29	\$25,342.59	\$28,158.44
Grand Prairie	\$9,810.40	\$13,244.04	\$14,715.60
Irving	\$8,954.96	\$12,089.20	\$13,432.44
Lewisville	\$3,546.43	\$4,787.68	\$5,319.65
Dallas County	\$5,000.00	\$10,000.00	\$10,000.00
Tarrant County	\$5,000.00	\$6,750.00	\$7,500.00
TRWD	\$5,000.00	\$6,750.00	\$7,500.00
TRA		??	??
Total Program	\$100,000.00	\$138,250.00	\$152,500.00
Less USACE Contribution	\$25,000.00	\$25,000.00	\$25,000.00
Total NCTCOG	\$75,000.00	\$113,250.00	\$127,500.00

- Many communities have nearly finalized their budgets for FY22; would instead use these numbers for their FY23 requests.
- A review of supporting materials (i.e. floodplain acreage) may be desired by some communities for verification/validation.

*<https://www.officialdata.org/us/inflation/2001?amount=1> --> Cumulative inflation from 2001 to 2021 was 52.00%.

FY2022 Trinity River Common Vision Steering Committee Meeting

- Trinity Common Vision Steering Committee

Thursday, September 9th, 2021 from 9:30-11:30 am

[Add to Calendar](#)

Meeting format to be determined – open to discussion

- Steering Committee membership is outdated and needs to be updated for FY22

FY2022 Trinity River Common Vision Steering Committee

➤ FY2022 Steering Committee Roster based on FY2021 Roster – Updates are Needed

Arlington

Carrollton

Coppell

Dallas

Dallas County

Denton County

Farmers Branch

Fort Worth

Grand Prairie

Irving

Kaufman County

Lewisville

Seagoville

Tarrant County

Tarrant Regional Water District

Trinity River Authority

Sheri Capehart, Councilmember

Kevin Falconer, Mayor

Gary Roden, Councilmember

Lee Kleinman, Councilmember

John Wiley Price, Commissioner

Bobbie Mitchell, Commissioner

Robert Dye, Mayor

Kelly Allen Gray, Councilmember

Jorja Clemson, Councilmember

Wm. David Palmer, Councilmember

Ken Cates, Commissioner, Precinct 4

Rudy Durham, Mayor

Not Currently On List, Need Elected Official Contact

B. Glen Whitley, County Judge

Leah King, Board Member

Edward Cary Williams III, Board Member

FY2022 Trinity River Common Vision Work Program Approval

- **NCTCOG is seeking the FMTF's approval of the Draft FY2022 Work Program for recommendation to the Trinity River Common Vision Steering Committee.**
- A link to the final [Draft FY22 Work Program](#) is available in the chat.
- Additions to existing Ongoing Support Activities
 - NCTCOG participation in the Trinity Regional Flood Planning Group
- Additional Technical Activities
 - Participation in the Model Consolidation Committee
 - Update the CDC Manual to the 5th Edition
 - East Fork Trinity and Denton Creek Integration
- Updated FY22 Cost Share Tables
 - Tables more accurately reflect current Common Vision participants

Other Program Related Efforts

Trinity River National Water Trail Task Force



➤ What is the Task Force?

- Coordinated effort between the Trinity Coalition, NCTCOG, and the communities and organizations situated on the Upper Trinity River to support the Paddling Trail's National Water Trail designation by the National Park Service.
- Goal: to advance recreation, tourism, and economic development along the Trinity River and to maintain and expand the physical features of the Water Trail.
- The Task Force will meet on **Wednesday, August 18th, 2021 from 2:00-3:30 pm** in-person at NCTCOG's offices, with the option to participate virtually.
- Task Force members will discuss choosing representatives and scheduling ribbon cutting events for communities along the Trail.



Other Program Related Efforts

Efforts Toward Integrated Transportation & Stormwater Planning

What is the TSI project?

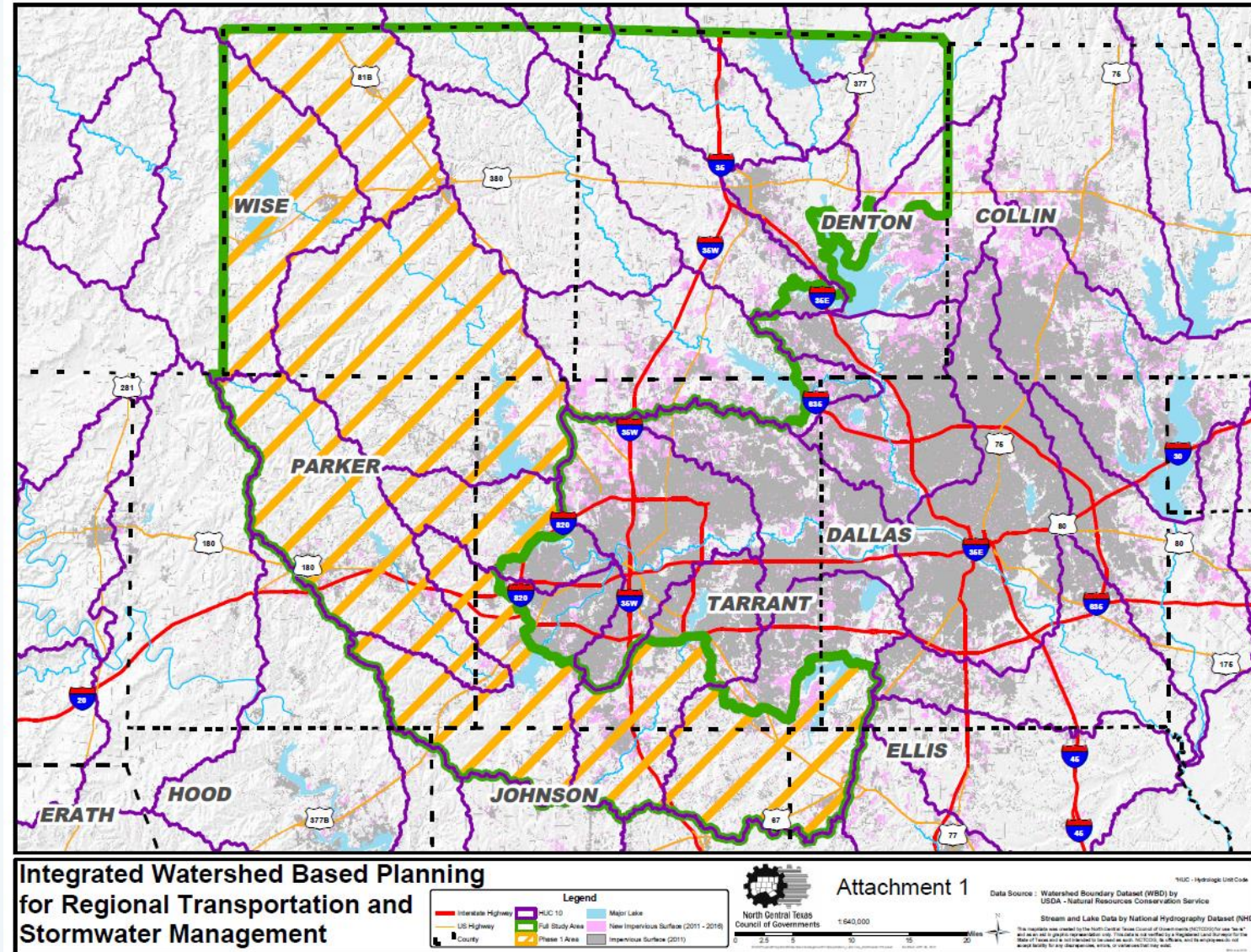
- Integration of regional stormwater management, urban development, transportation, and environmental planning: a collaborative effort with regional Transportation planners
- Proactive Prevention vs. Response

Project Kickoff (Fall)

- Initial community survey completed
- Project leads and partner organizations are meeting soon to discuss contracting and next steps
- NCTCOG is preparing CHARM for use in planning and engagement activities

Project Website:

<https://www.nctcog.org/envir/watershed-management/upper-trinity-river-transportation-and-stormwater>



Funding for Integrated Transportation and Stormwater Planning

	Submitted Applications	CONFIRMED FUNDS			ANTICIPATED APPLICATIONS*
Funding Agency/ Funding Opportunity Name	USACE (Various Authorities)	TWDB (Flood Infrastructure Fund)	Regional Transportation Council (Transportation Dollars)	FEMA (Community Outreach and Mitigation Strategies)	General Land Office (CDBG MIT or Other Funding Category)
Requested Funding	\$3.0 Million	\$3.0 Million	\$3.0 Million	\$80,000	?
Current Status	Submitted to USACE Fort Worth District in 2020.	Approved by TWDB May 27th; working to define contracting process with TWDB.	Match funding for the TWDB FIF Grant.	Award received; Phase 1 engagement is in the early stages.	NCTCOG working with USACE and GLO on next steps.

*Anticipate applying to additional funding opportunities as they become available (ex. GLO, TDEM, etc.) and working with partner organizations to identify project funding.

Other Program Related Efforts

North Central Texas Floodplain Administrators/CRS Users Group

- The Annual Combined CRS Users Group/Elected Officials Floodplain Seminar was held virtually on July 29th. There were 84 attendees.
- Trinity RFPG, ASCE, and FEMA presented on flood planning for the state of Texas, the 2021 Texas Infrastructure Report Card, utilizing building codes in flood hazard mitigation, and the NFIP's Risk Rating 2.0.
- The presentations and a recording of the seminar are available on the [CRS Users Group webpage](#). The Risk Rating 2.0 presentation has been removed from the recording per FEMA's request.
- **What topics interest you for future CRS Users Group meetings?**

Questions? Contact Breanne Johnson at bjohnson@nctcog.org or (817) 695-9148

Other Program Related Efforts

25th Annual FEMA L-273 Four-Day Course

- The Annual L-273 Course for floodplain managers, hosted by FEMA and NCTCOG, will return this fall for the 25th year!
- This four-day course will be held this **November 8-11, 2021**, at NCTCOG's offices in Arlington.
 - Registration details coming soon. Spots will be limited.
- TFMA Certified Floodplain Manager (CFM) exam to be held on Friday, November 12, 2021, following the four-day course.
 - [Register for the CFM exam here.](#)

Questions? Contact Breanne Johnson at bjohnson@nctcog.org or (817) 695-9148

Other Program Related Efforts

Cooperative Technical Partnership (CTP) Program

➤ FY18 Flood Risk Projects

- *Complete:* **Mary's Creek (Parker County)** flood risk identification is complete.

100% Complete

➤ FY19 Flood Risk Projects

- **Harriet Creek (Denton County, 7 miles)** – Survey is ongoing and hydrologic and hydraulic analysis is underway.
- **Waxahachie Creek (Ellis County, Midlothian, Waxahachie; 19 miles)** - Survey complete and hydrologic and hydraulic analyses underway.

40% Complete

55% Complete

➤ FY20 Flood Risk and Outreach Projects

- **Catherine Branch (Denton County)** – Survey complete and hydrologic and hydraulic analyses underway.
- *In Progress:* Transportation and Stormwater Integrated Project Engagement – Community survey complete; stakeholder list developed; initial community meetings in Fall 2021.

26% Complete

➤ FY21 Flood Risk Projects

- NCTCOG submitted final project applications for five projects including: Program Management; Hog Branch (Denton County); East Fork (Lowery Crossing and McKinney); Upper West Fork Discovery; COMS Project (CHARM Outreach Workshops)

Other Program Related Efforts

integrated Stormwater Management (iSWM)

Integrated Stormwater Management (iSWM) Subcommittee

- Task Order 6 Update: The iSWM Subcommittee approved the following work scope for Task Order #6 :
 - Task 2 – Reorganize/Re-evaluate Site Development Controls
 - Task 3 – BMP Design and Maintenance Training
 - Task 4 – Technical Manual Updates
 - Task 5 – Guidance on Forebay Design
 - Task 6 – Hydrologic Mimicry Research
 - Task 7 – Technical Assistance for Case Studies
 - Task 8 – Economic Benefits of iSWM Research
- At the July meeting, the subcommittee discussed Outcome 17 (Water Quality) on the iSWM Tiered Implementation Form and created a volunteer group to review and bring forward new language to clarify the documentation. The subcommittee will review the proposed new language at their next meeting.
- Next Meeting: **October 14th at 1:30 p.m.**
- The iSWM website has been updated with approved documents.
- Keep up with NCTCOG E&D meetings and events at: <https://www.nctcog.org/envir/events>



Corridor Development Certificate Applications

Progress Since Last FMTF Meeting (6/11):

- New CDC Applications
 - FW 031921-1 Wyatts Towing (Exemption)
- Technical Review Completed
 - LEW 022621-1 Murphy USA (Meets Criteria)
 - ARL 041221-01 Landfill Bridge (Meets Criteria)
- Final Action Forms
 - FW 041921-1 Riverside Park (Exemption)

Reminder:

For CDC projects submitted on or after 10/01/20, the **\$2,500 Model Maintenance Fee** should be paid when the applicant requests the LOMR from the community. Applications submitted as exemptions are not subject to this fee.

Roundtable



Next FMTF Meeting Date

Friday, October 29, 2021

9:30 a.m.

Meeting Format is TBD.

Add to Calendar:

<https://www.addevent.com/event/Km7930825>

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