



North Central Texas
Council of Governments

Technical Advisory Group Meeting #5

May 6, 2024

Welcome & Introductions

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

Agenda

- I. Introduction
- II. Recap of February 5th Meeting
- III. Update on Current Project Progress
- IV. Technical Advisory Group Action Items
 - a. Education and Outreach
 - b. H&H
 - c. Policy
 - d. Environmental
- V. Next Steps
 - a. Education and Outreach

Recap of February 5th Meeting

February Meeting

Meeting Notes

- Presented an overview of the Stakeholder Engagement Plan efforts to date.
- Updated the group on Transportation funding opportunities and eligibility
- Provided progress report on the H&H Bridgeport Pilot Study
- Reviewed updates and Water Rights topics
- Environmental Map Demonstration

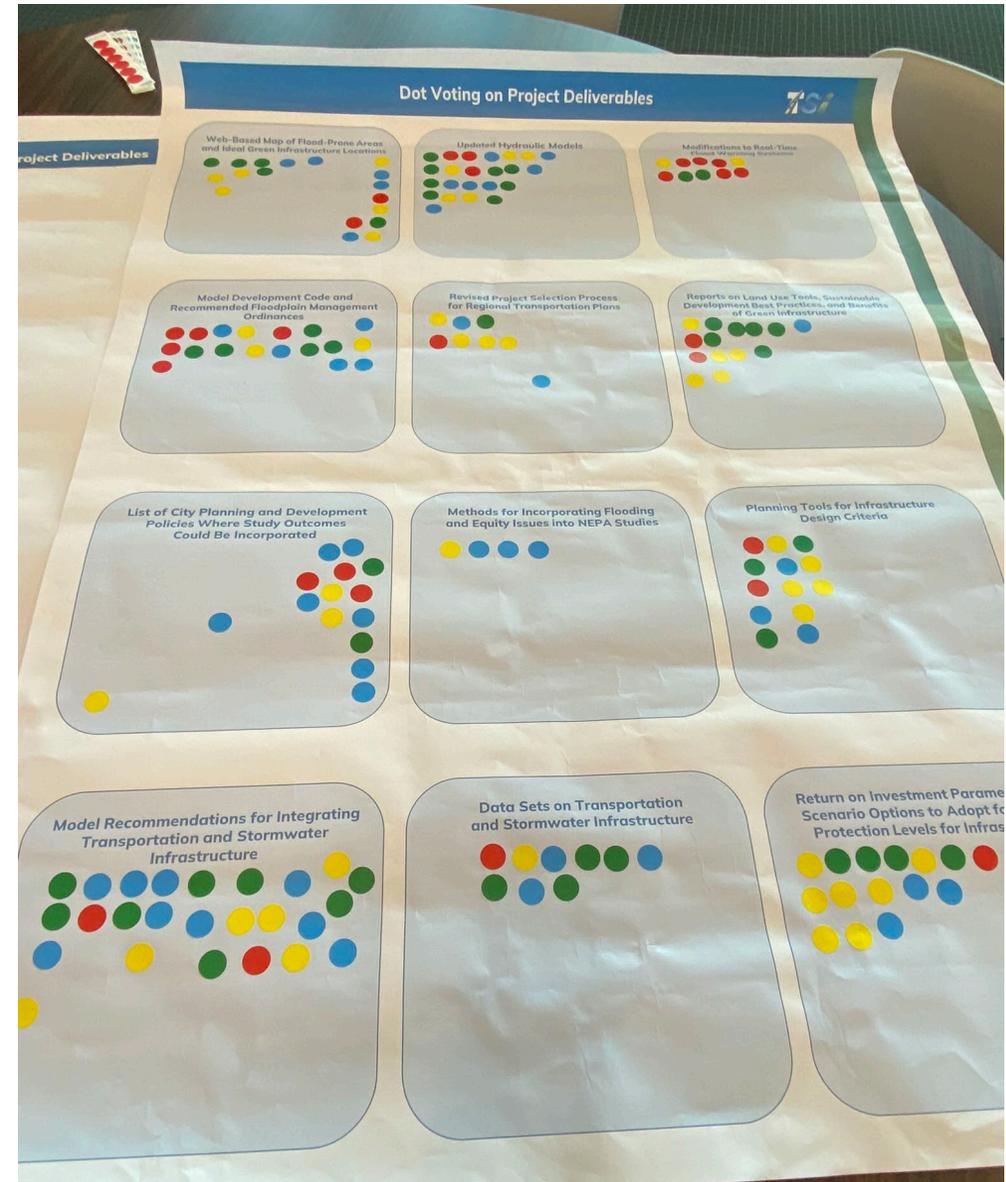
Action Items

- Finalize Stakeholder Engagement Plan
- Begin environmental planning work and Environmental Literature Review
- Apply modeling findings from the Pilot Study to the larger Study Area
- Project future stormwater fees

Update on Current Project Progress

Progress to Date

- 2 Rounds of meetings with stakeholders in the study area
- 3 Technical Advisory Group meetings
- 2 Steering Committee meeting
- 15 Communities have provided GIS and non-GIS data
- 2 Workshops conducted
 - Beginning planning for 2 additional workshops
- 2 Visits to observe challenges faced by small but developing cities
- 2 meetings with ULI's Mini-TAP Program
- SME for Transportation has kicked off work
- Equity Engagement Plan written for North Study Area (FEMA)
- Literature review has been completed and is under review
- 1D H&H Pilot Study completed
- H&H consultant selected
- Stakeholder Engagement Plan is being finalize
- Staff planning meetings with for community visits



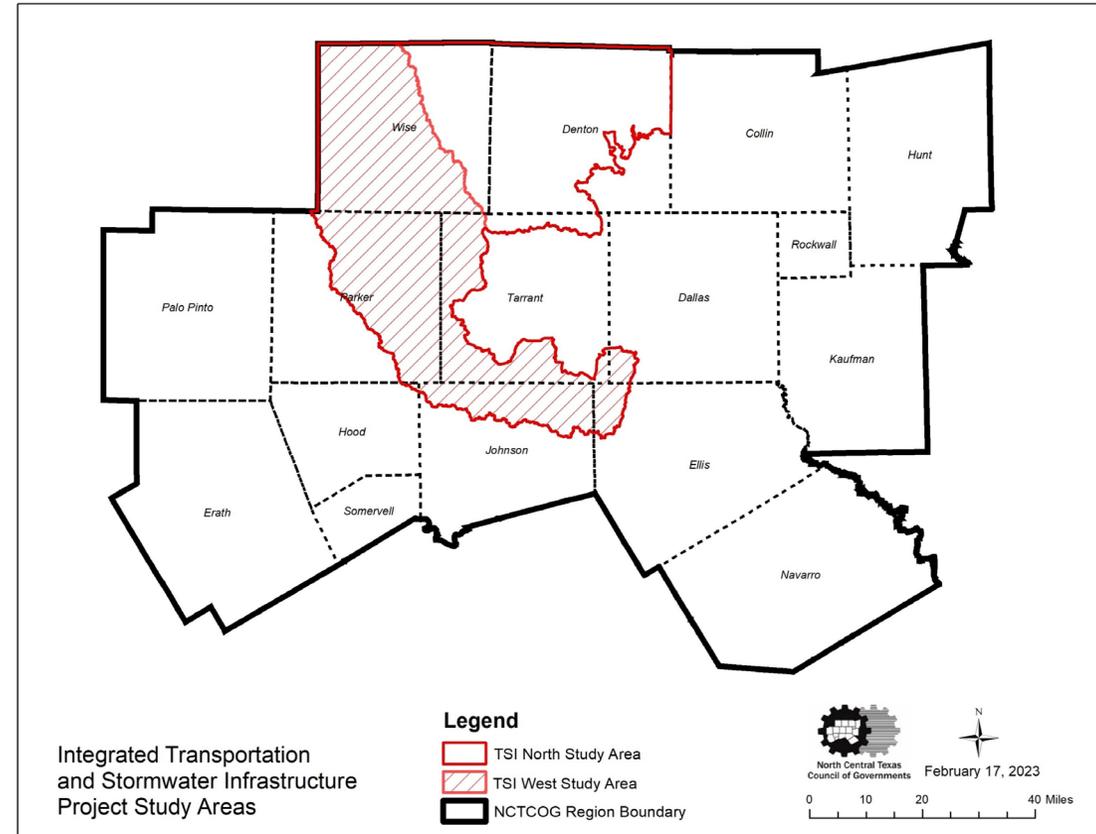
Action Items

Education & Outreach

Highlights from Stakeholder Engagement Plan

Local Government Outreach

- 48 cities, 7 counties in West Study Area
- Prioritization:
 - Equity
 - Flood history
 - Population growth
 - National Flood Insurance Program non-participation
 - Presence of relevant ordinances
 - Capacity to address flood mitigation
 - Interest in TSI study, goals



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NOAA's Storm Events Database on historical flood risk at the county scale

County	Historical Flood Events
Dallas	131
Denton	96
Ellis	66
Hood	52
Johnson	88
Parker	70
Tarrant	158
Wise	60

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City/Town	2000 Population	2020 Population	Growth Rate Percentage 2000-2020
Prosper	2,097	30,174	1339
Little Elm	3,646	46,453	1174
Celina	1,861	16,739	799
Westlake	207	1,623	684
Frisco	33,714	200,509	495
Northlake	921	5,201	465
Ponder	507	2,442	382
Venus	910	4,361	379
Midlothian	7,480	35,125	370
Roanoke	2,810	9,665	244
Aubrey	1,500	5,006	234
Rhome	551	1,630	196
Cross Roads	603	1,744	189
Aledo	1,726	4,858	181
Krum	1,979	5,483	177
Annetta	1,108	3,041	174
Mansfield	28,031	72,602	159
Oak Point	1,747	4,357	149
Crowley	7,467	18,070	142
Justin	1,891	4,409	133
Burleson	20,976	47,641	127
Hickory Creek	2,078	4,718	127
Trophy Club	6,350	13,688	116
Corinth	11,325	22,634	100

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From survey of jurisdictional records

Location of Flood-Related Regulations	Number of Jurisdictions
Stand-Alone Flood Ordinances	26
Building Ordinances or Regulations	13
Subdivision Ordinances	8
Other Regulations ¹	7
Zoning Ordinances	5
Sanitary Ordinances	2
Unified Development Code	1

Highlights from Stakeholder Engagement Plan

Local Government Outreach

- Postcards and emails sent, phone calls made to 18 communities
- Utilizing FEMA equity grant funding
 - North and West study areas
- Coming soon ... visits and windshield tours!



A planning effort seeks to reduce your community's flood risk

As your community develops, property, people, and infrastructure face increased risk. The North Central Texas Council of Governments (NCTCOG) and study partners are mapping areas and infrastructure at risk and identifying solutions to prevent flooding. The study will identify implementable projects and funding sources that could protect your community.

The study team would like to visit your community and learn about your flooding and development hotspots.

NCTCOG staff will contact you via email and phone to schedule a meeting. You can also contact the study team at TSI@nctcog.org. More information is available online at <https://www.nctcog.org/tsi>. NCTCOG looks forward to incorporating your community's needs into the study!

Highlights from Stakeholder Engagement Plan

Urban Land Institute Outreach

- ULI Dallas-Fort Worth mTAP and Advisory Services Showcase – May 2
- Presentation of results to NCTCOG team tomorrow

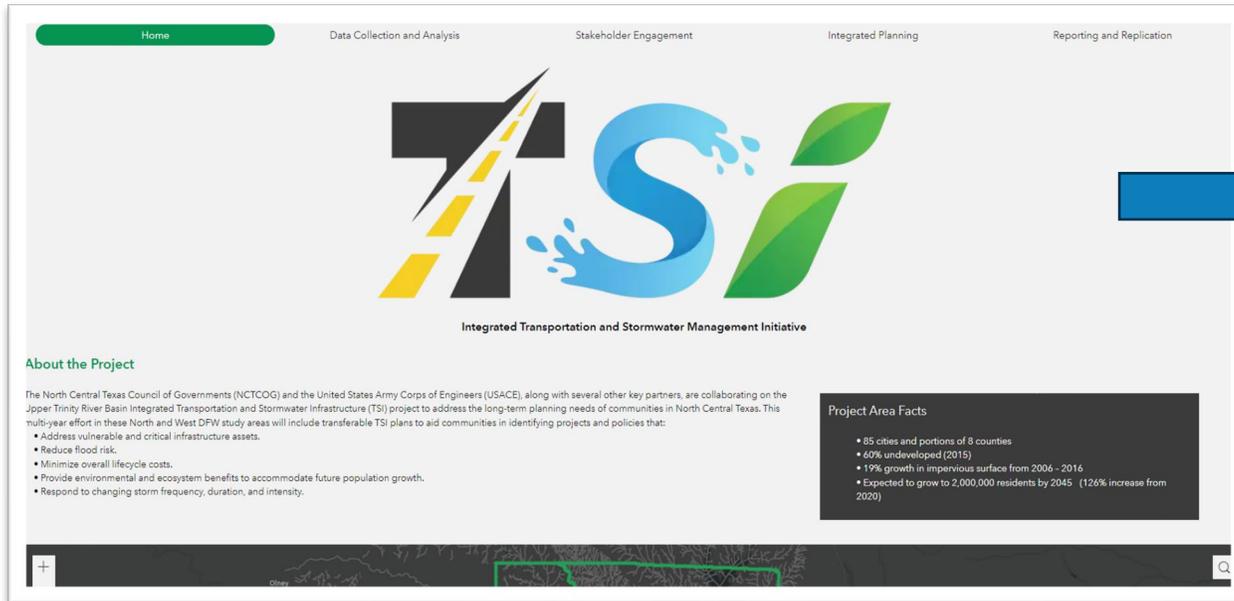


Education and Outreach

Story Map Demonstration

Summary:

- The team developed and refined multiple TSI story maps to assist in communicating and visualizing study results



Integrating Transportation & Stormwater Infrastructure (TSI)

The TSI Project is performing flood planning for rapidly urbanizing areas in the Trinity River watershed. Scroll down to learn more.

[History and Context](#)

[What We're Doing](#)

[Results and Resources](#)

History and Context

North Texas has a history of major floods. Destructive flooding events in 1922 and 1949 demonstrated the need for the regional planning and coordination for comprehensive flood control infrastructure.

<https://geospatial.nctcog.org/portal/apps/storymaps/stories/6b73437fc69643cb9b6f239831706191>

<https://geospatial.nctcog.org/portal/apps/experiencebuilder/experience/?id=ec37b19685a64d69b34f006baae90bf0>

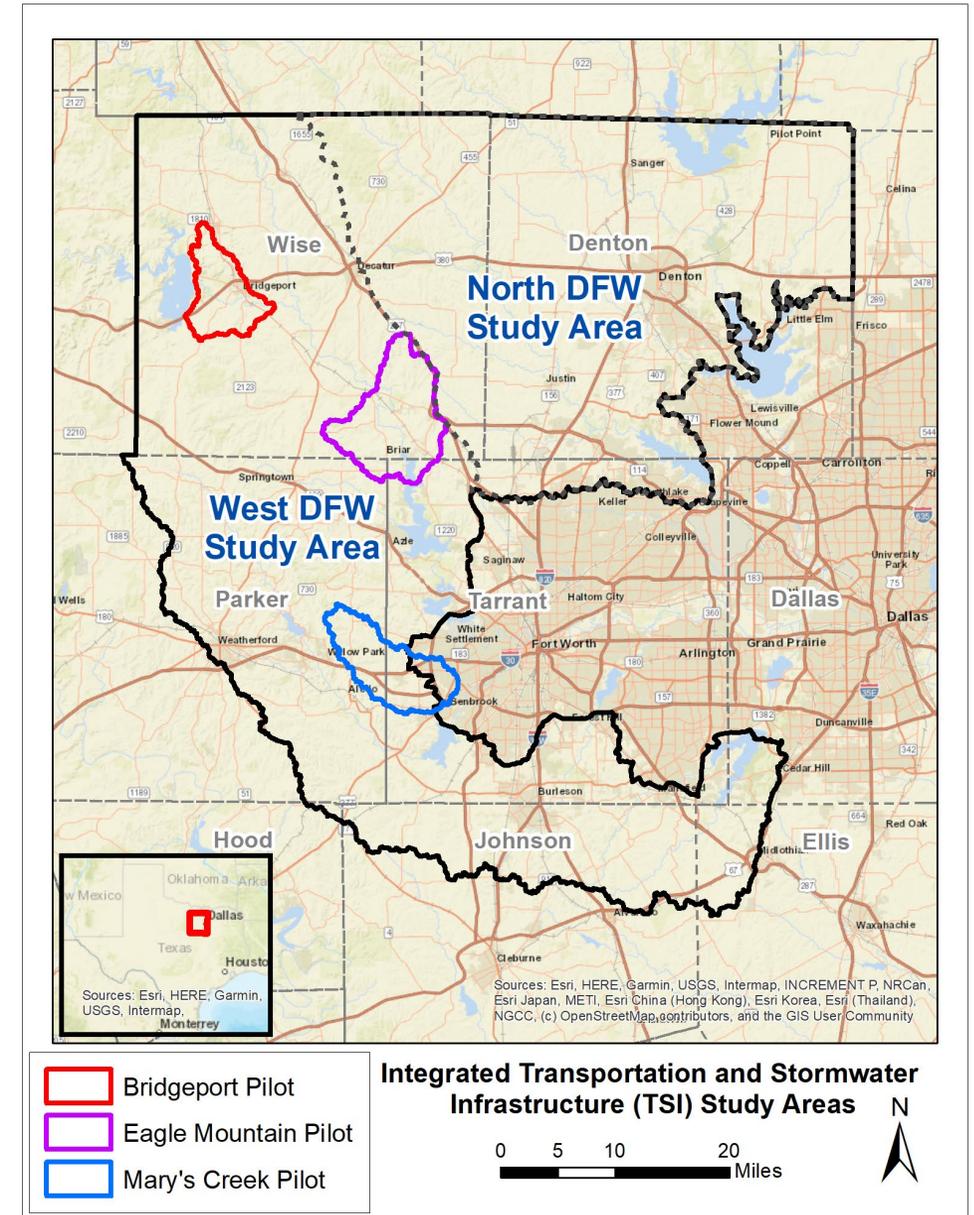
Hydrology & Hydraulics

Data and Technical Topics

H&H Pilot Study Update

Pilot Study Locations and Updates:

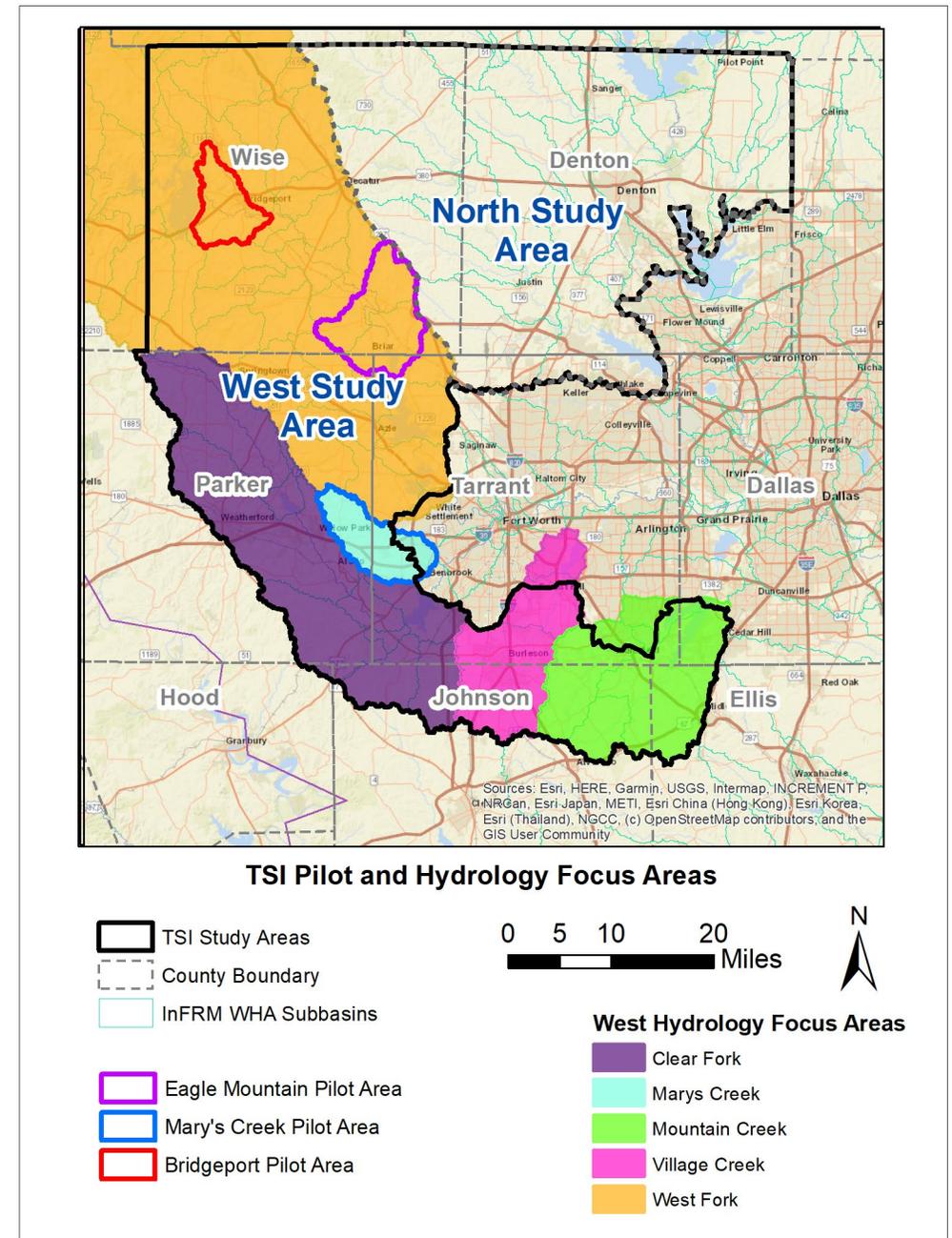
- Intent: to develop and test approach for larger effort
- Bridgeport:
 - Finalized initial H&H pilot study in late 2023
- Eagle Mountain and Mary's Creek:
 - Completing more comprehensive H&H pilot studies, including:
 - Hydrology approach development and technical enhancements
 - Hydraulics approach development and technical enhancements
 - Optimization study and urban drainage methodology refinement



Data and Technical Topics

Hydrology Update

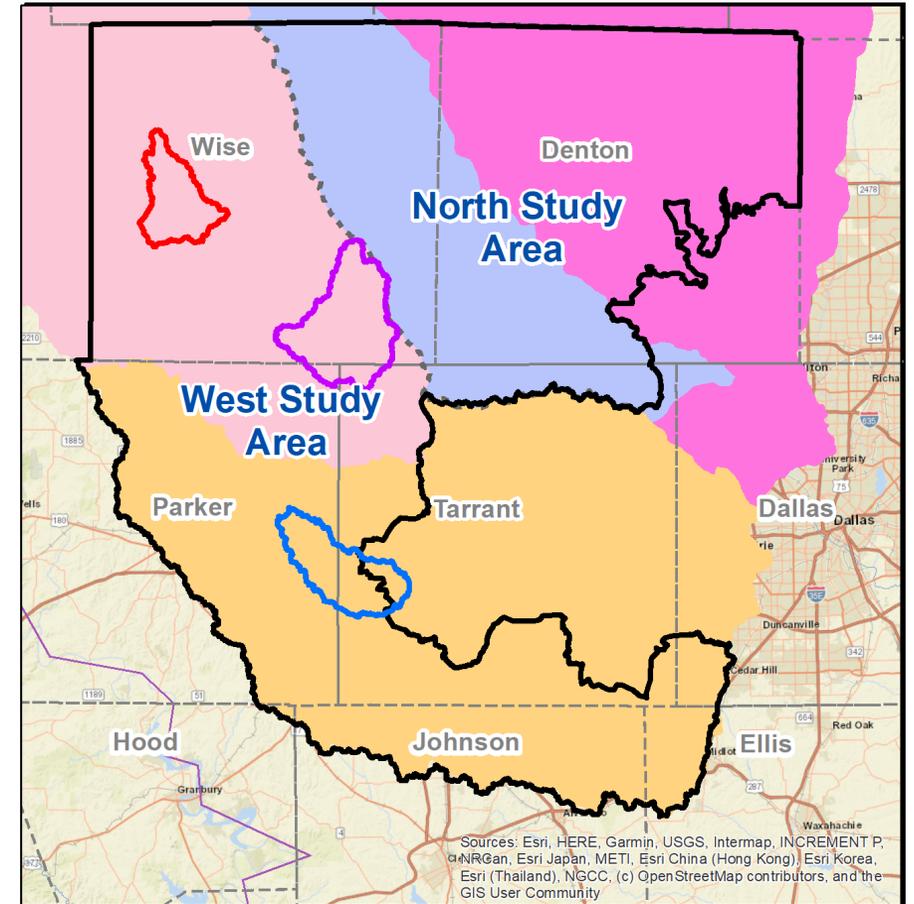
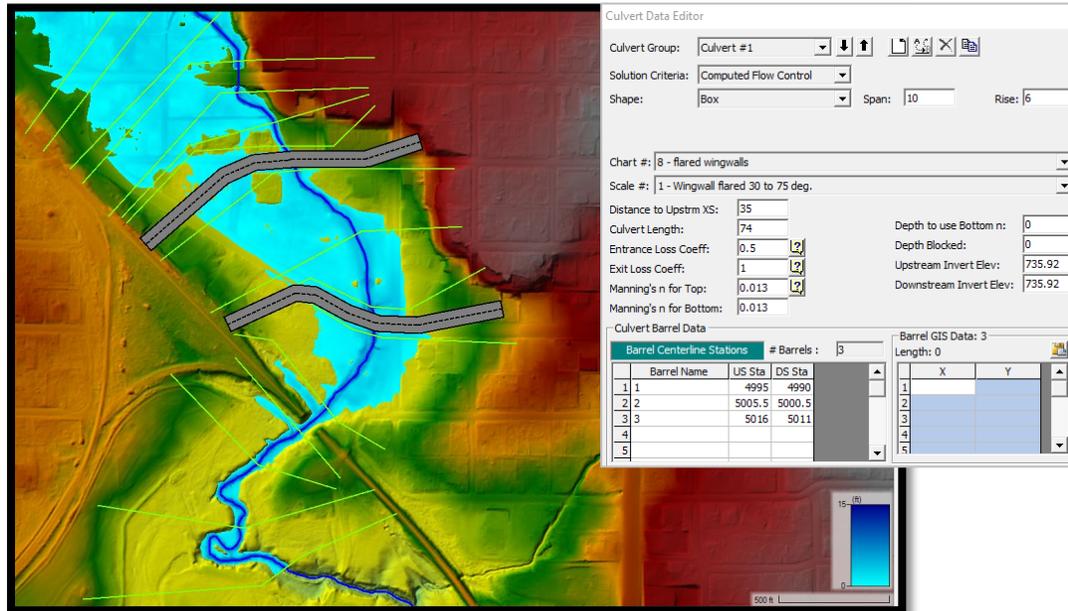
- Finishing hydrology in pilot areas and shifting focus to larger west study area
 - Mary's Creek
 - Village Creek
 - Mountain Creek
 - Clear Fork
 - West Fork
- Developed flow locations for entire west study area
- Approach for enhancements of InFRM Watershed Hydrology Assessment (WHA) to ensure quality & applicability:
 1. Delineate additional subbasins in HEC-HMS
 2. Update HMS element names and descriptions
 3. Calculate initial HMS parameters
 4. Calibrate to InFRM WHA results
 5. Update the HMS basin model for TSI current and future conditions
 6. Run TSI storm scenarios
 7. Model documentation
 8. Submit final HMS model for review and use for team members



Data and Technical Topics

Hydraulics update

- Finalizing guidance for enhancing hydraulic models:
 - Defining approach for enhancing Base Level Engineering (BLE) & potentially other hydraulic models
 - Exploring 1D vs 2D model considerations
 - Testing approaches, adding detail (such as hydraulic structures), urban drainage, determining environmental constraints, establish recurrence intervals, incorporate current/future flows, optimization scripting, etc.



TSI Pilot Areas with BLE (as of FEB 2024)

- Eagle Mountain Pilot Area
- Mary's Creek Pilot Area
- Bridgeport Pilot Area
- Denton: BLE AVAILABLE ON VIEWER (1D STUDY)
- Elm Fork Trinity: BLE AVAILABLE ON VIEWER (1D STUDY)
- Lower West Fork Trinity: BLE COMPLETE & ON VIEWER SOON (2D STUDY)
- Upper West Fork Trinity: BLE AVAILABLE ON VIEWER (1D STUDY)



BLE Viewer Link: <https://webapps.usgs.gov/infrm/estBFE/>

Data and Technical Topics

Corridor Development Certificate Program Expansion



Provides Oversight

Provides oversight for projects in the floodplain and establishes a regional review process



Project Review

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



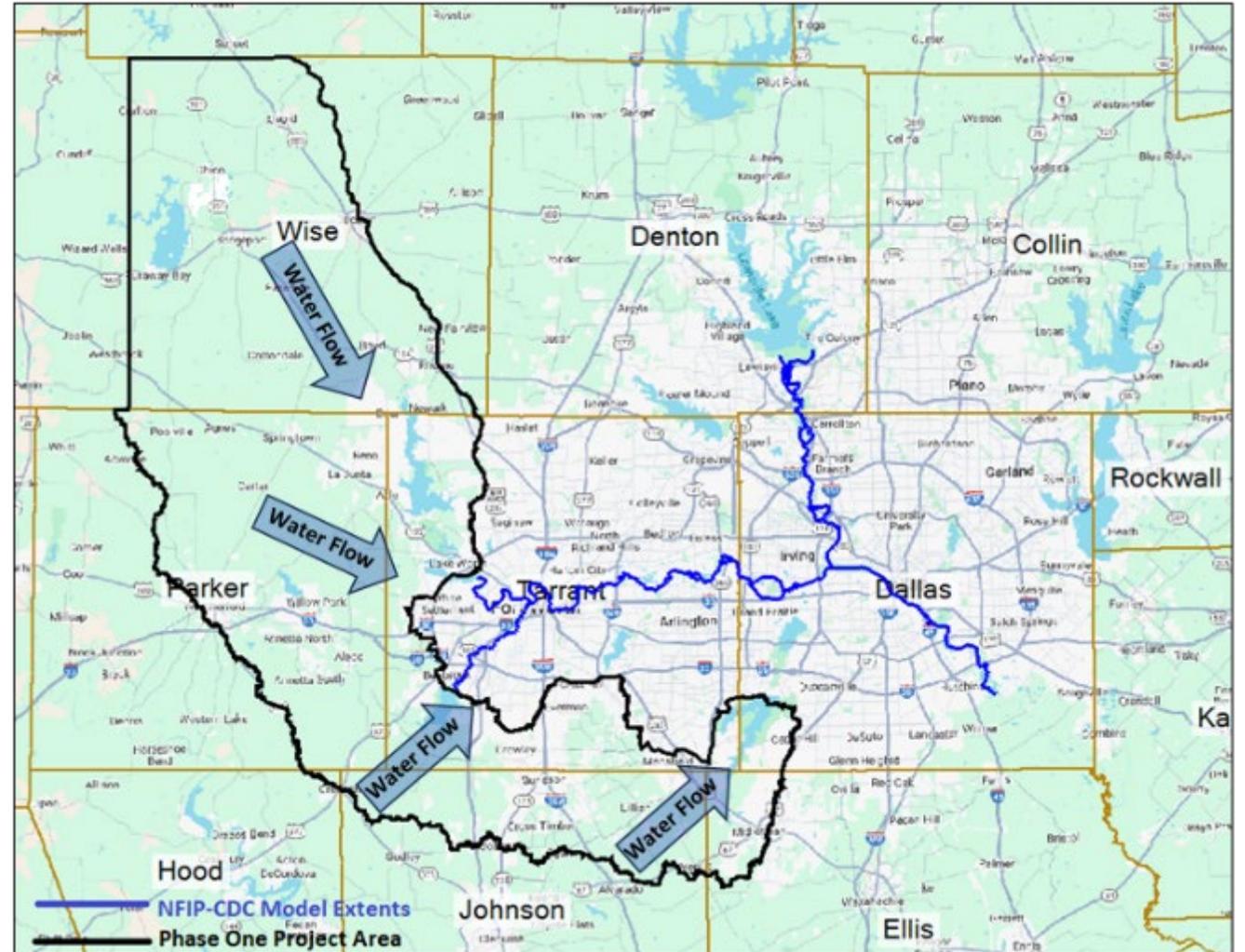
Reduces Risk

Regulates to future conditions and prevents participating communities from creating risk within the regulatory footprint

Data and Technical Topics

Corridor Development Certificate Program Expansion

- TSI team developed scope of work to explore process for expanding CDC program and the consolidated NFIP-CDC model into TSI study footprint
- Why?
 - Each of the six HUC-10 watersheds in the rapidly developing TSI West DFW study area flow into the current CDC footprint
 - Helps improve efficiency & further emphasizes proactive flood risk management in Upper Trinity watershed
 - Important to expand CDC program into TSI area to help mitigate negative flooding impacts resulting from future development
- Plan of implementation
 - Solicit stakeholder interest and input
 - Complete pilot study to test model expansion considerations
 - Document findings and recommendations



Policy

Policy

Water Rights/Green Stormwater Infrastructure Webinar

Confirmed Speakers:

- Chris Hamilton, Westwood
- Dr. Fouad Jaber, Texas A&M AgriLife

Looking for a speaker from TCEQ

Target Date June 2024



Source: Dr. Fouad Jaber, Texas AgriLife

Environmental

Next Steps

Technical Advisory Group Survey

- The TSI project team is looking for input from the Technical Advisory Group on best practices to demonstrate the value of this project to the study area communities as well as implement the findings of the research.
- We are also seeking input and suggestion on what changes can be made to increase engagement in the program.
- <https://www.surveymonkey.com/r/HYVVKCR>



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