

NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS

UPPER WEST FORK TRINITY WATERSHED PRE-DISCOVERY MEETING

NCTCOG:

- Edith Marvin – EMarvin@nctcog.org
- Jai-W Hayes-Jackson – JHayes-Jackson@nctcog.org
- Kate Zielke – KZielke@nctcog.org



TWDB:

- Manuel Razo – Manuel.Razo@twdb.texas.gov
- Paul Gutierrez – Paul.Gutierrez@twdb.texas.gov



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- Samuel Amoako-Atta – sAmoako-Atta@halff.com
- Alison Hanson – aHanson@halff.com
- Katy Overbey – kOverbey@halff.com



FEMA:

- Cameron Cornett – Cameron.Cornett@fema.dhs.gov

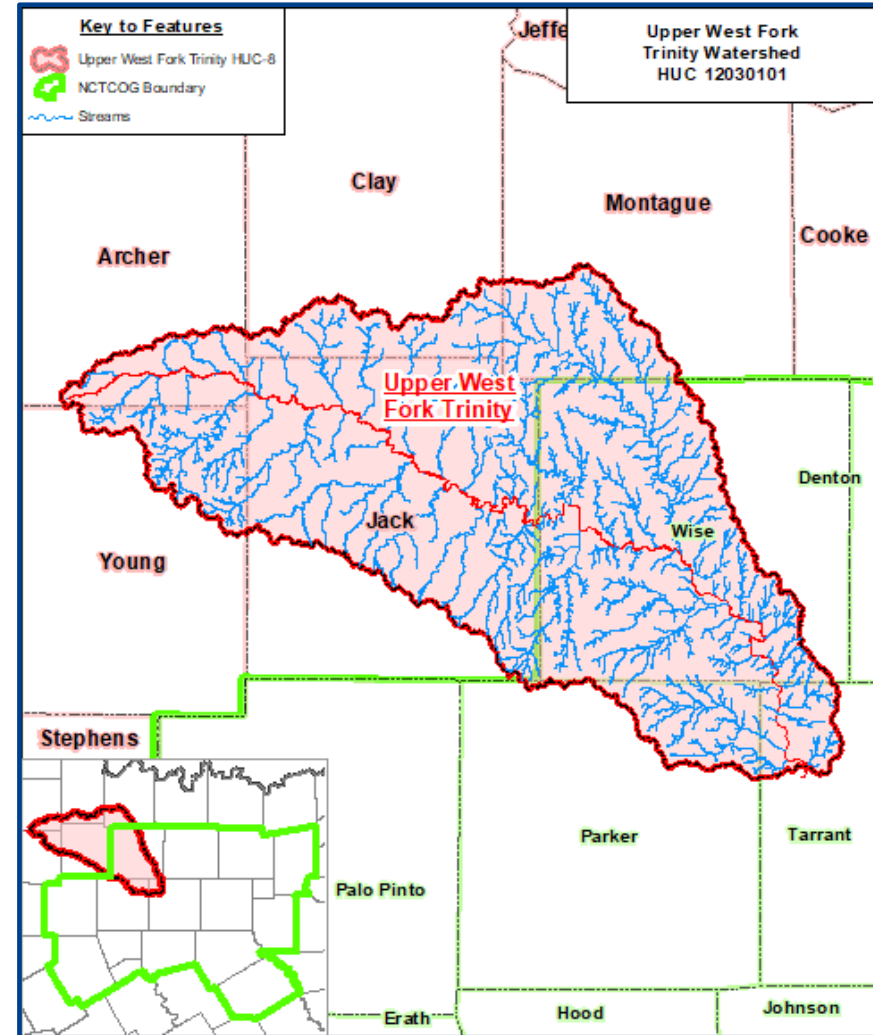


FEMA



DISCOVERY | AGENDA

- NCTCOG Overview
- Risk MAP Overview
- Discovery Overview
- NCTCOG Discovery
 - Upper West Fork Trinity Watershed
 - Pre-Discovery Activities
 - Discovery Activities
 - Post Discovery Activities
- Data Gathering and Website walk through



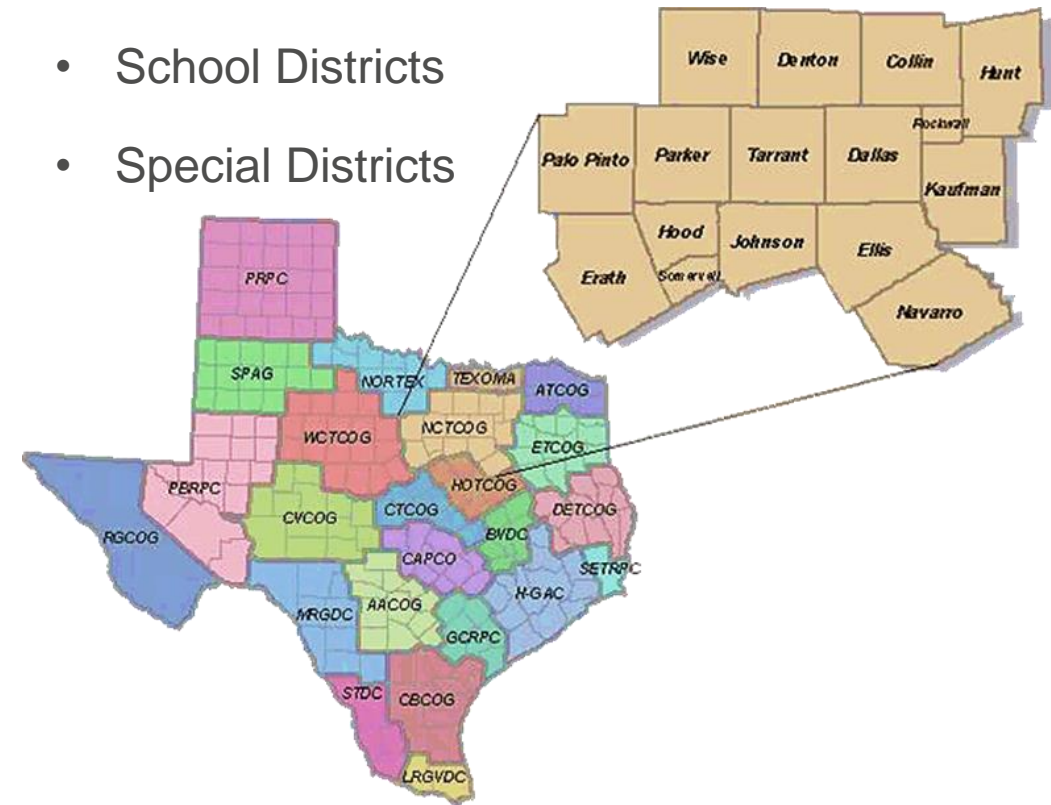
NCTCOG | WHAT IS NCTCOG'S ROLE?

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

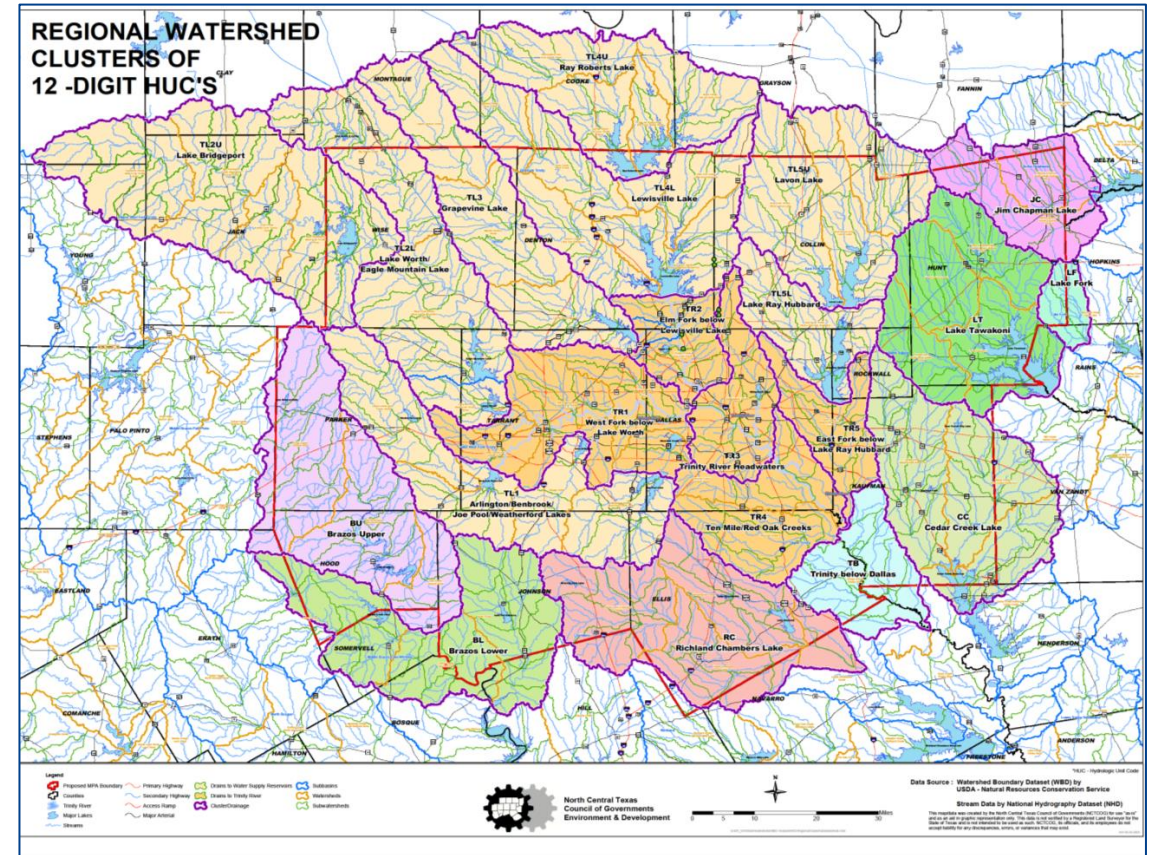
■ 230+ Member Governments

- Cities
- Counties
- School Districts
- Special Districts

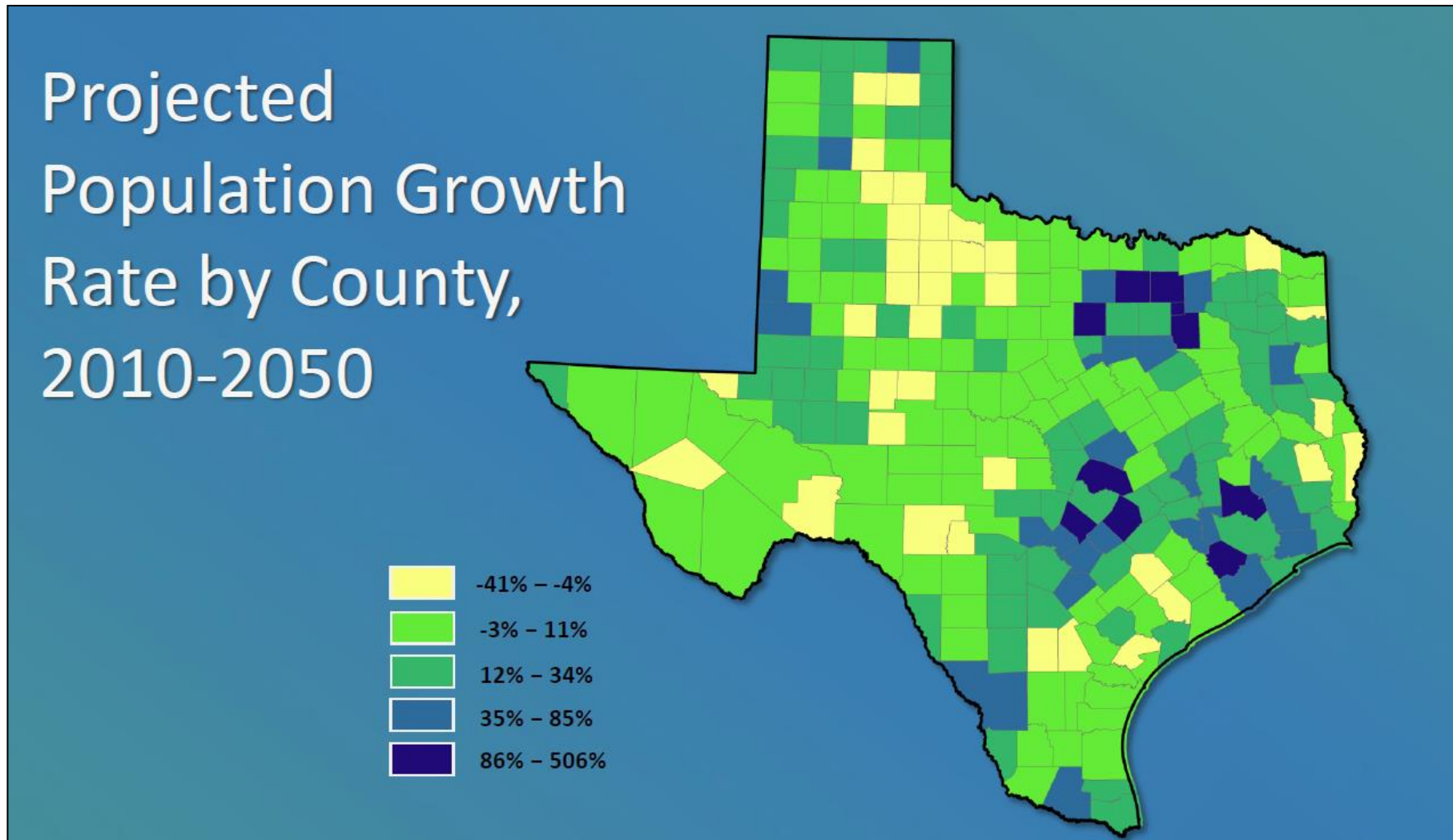


NCTCOG ENVIRONMENT AND DEVELOPMENT WATERSHED MANAGEMENT PROGRAM:

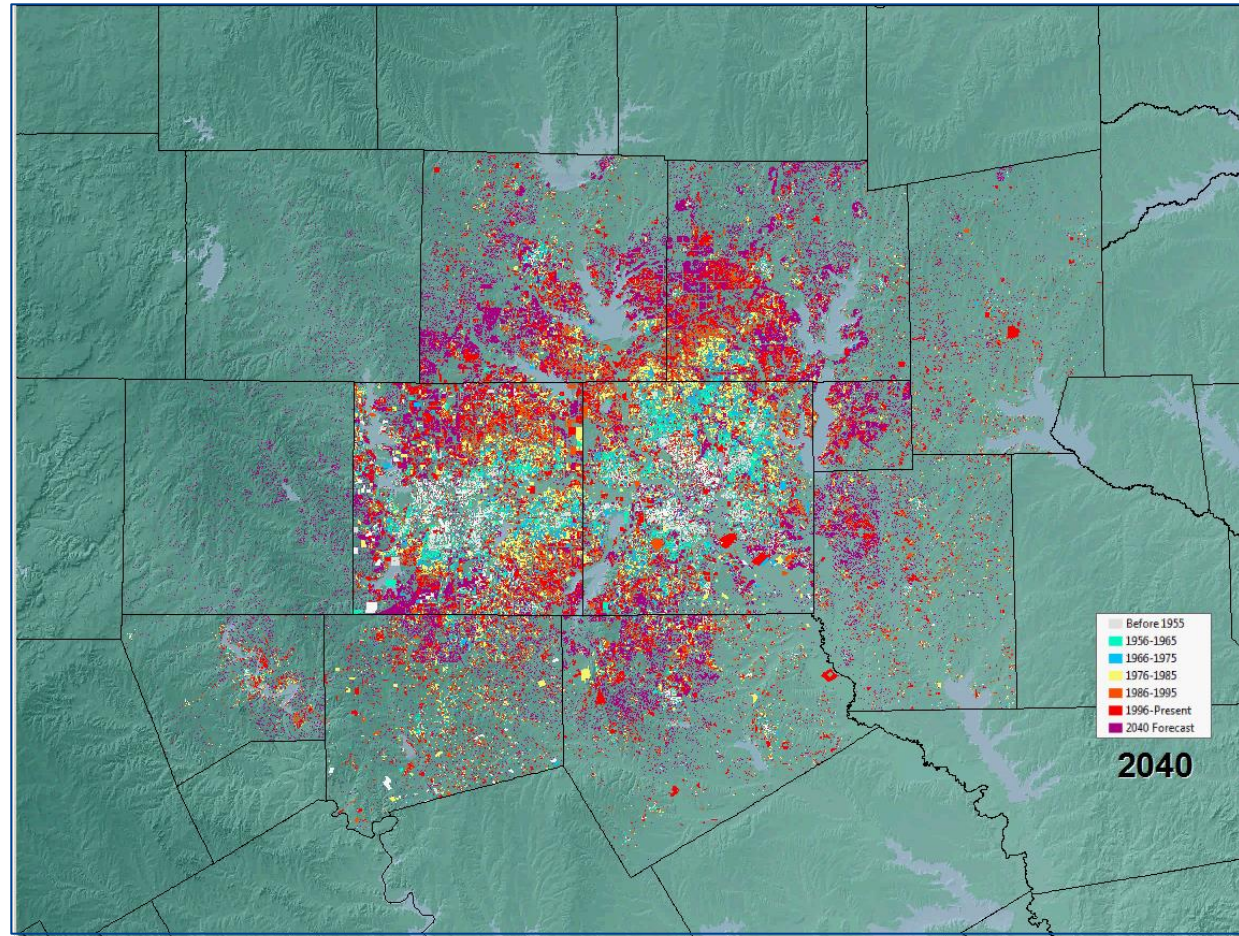
- Focus on water quality, stormwater, and floodplain topics/issues
- Floodplain
 - NCT region does not have a flood control district. Lots of local/regional entities working in their own jurisdictions
 - NCTCOG will never replace a flood control district, but as an agency, we work toward regional cooperation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



Source : Dr. Lloyd Potter, Texas State Demographer



NORTH CENTRAL TEXAS 1950-2040 GROWTH



NCTCOG GOALS AS A COOPERATING TECHNICAL PARTNER

■ Direct Goals:

- Better data for better decision making
- Coordination between communities and local/regional/state/federal organizations (what COGs do best!)
- Partnerships

■ Indirect Goals:

- Higher Standards

FEMA'S RISK MAPPING, ASSESSMENT, AND PLANNING (MAP) PROGRAM

- Provide flood information and tools for better **protection**
- **Action-Driven**, not Map-Driven, through local understanding and ownership of risk

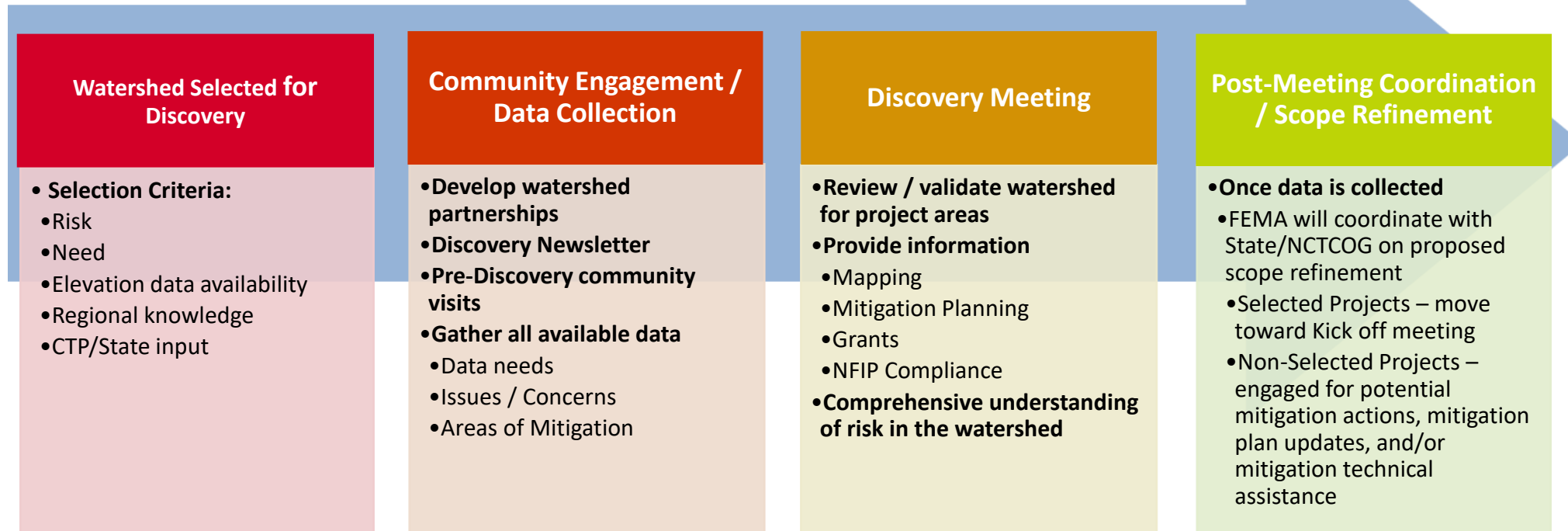


FEMA'S RISK MAPPING, ASSESSMENT, AND PLANNING (MAP) PROGRAM

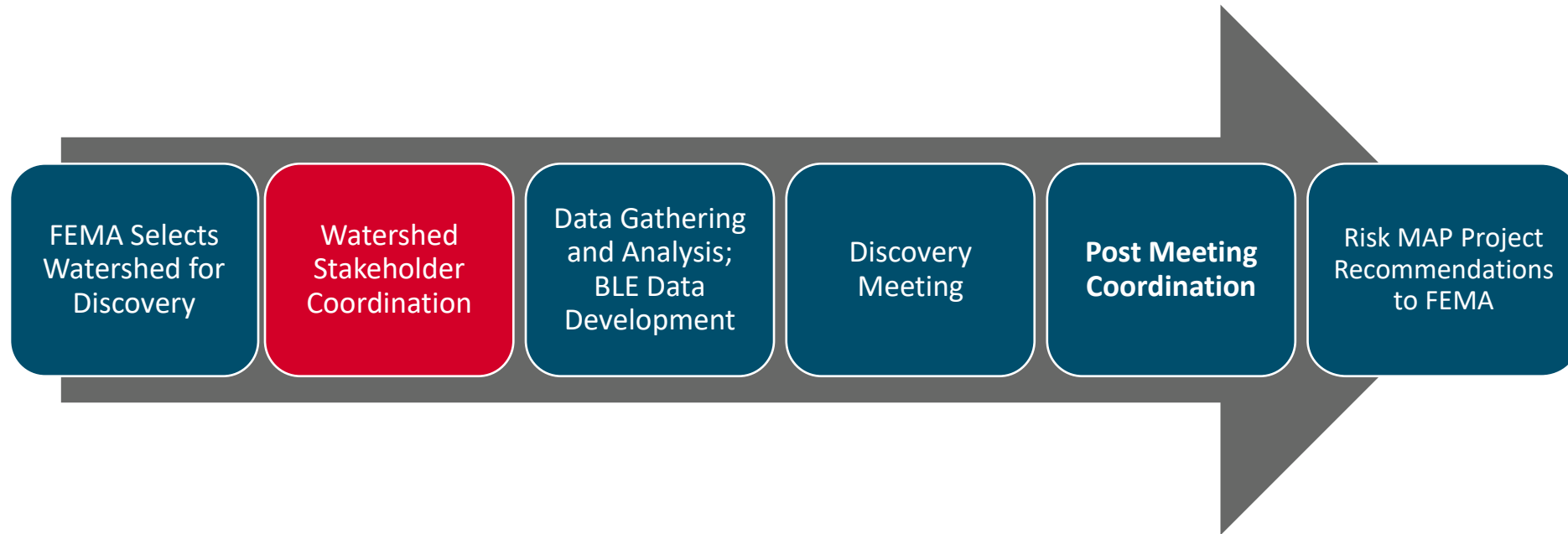
- Provide flood information and tools for better **protection**
- **Action-Driven**, not Map-Driven, through local understanding and ownership of risk



- *Capture a more complete picture of your watershed by working closely with local communities...*



DISCOVERY | DISCOVERY PROCESS



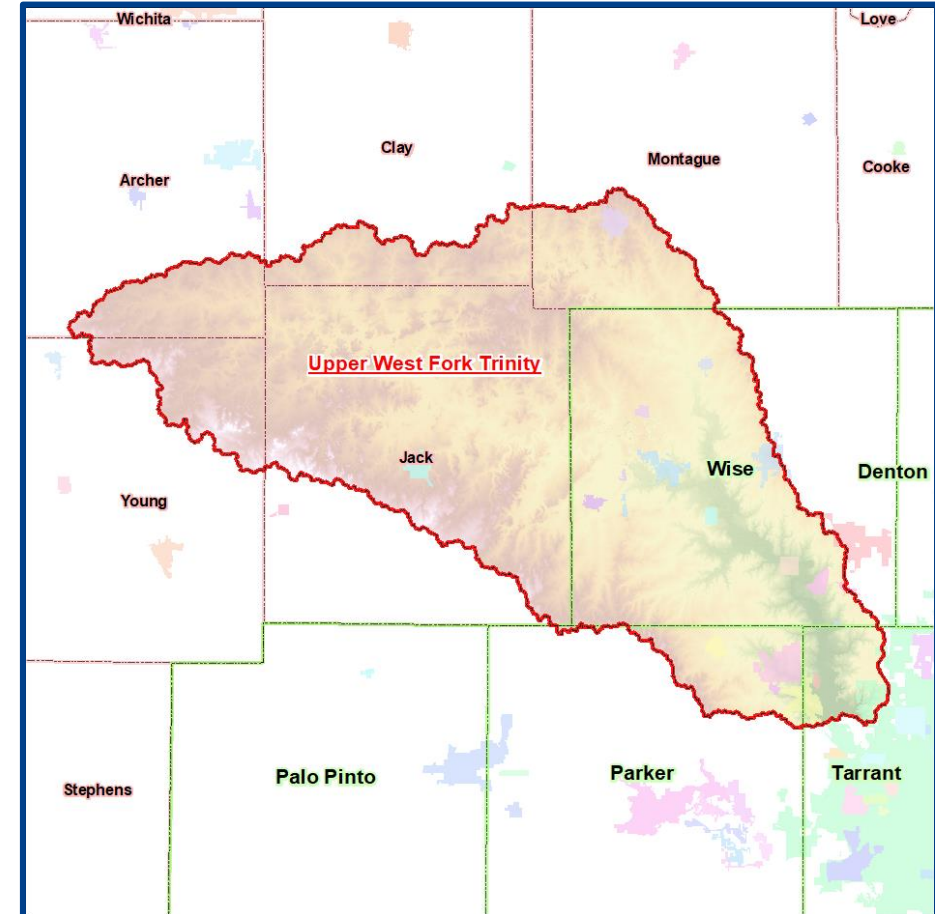
NCTCOG LEADING UPPER WEST FORK TRINITY DISCOVERY

■ Gather Information

- Local flood risks and hazards
- Current mitigation efforts

■ Provide Information

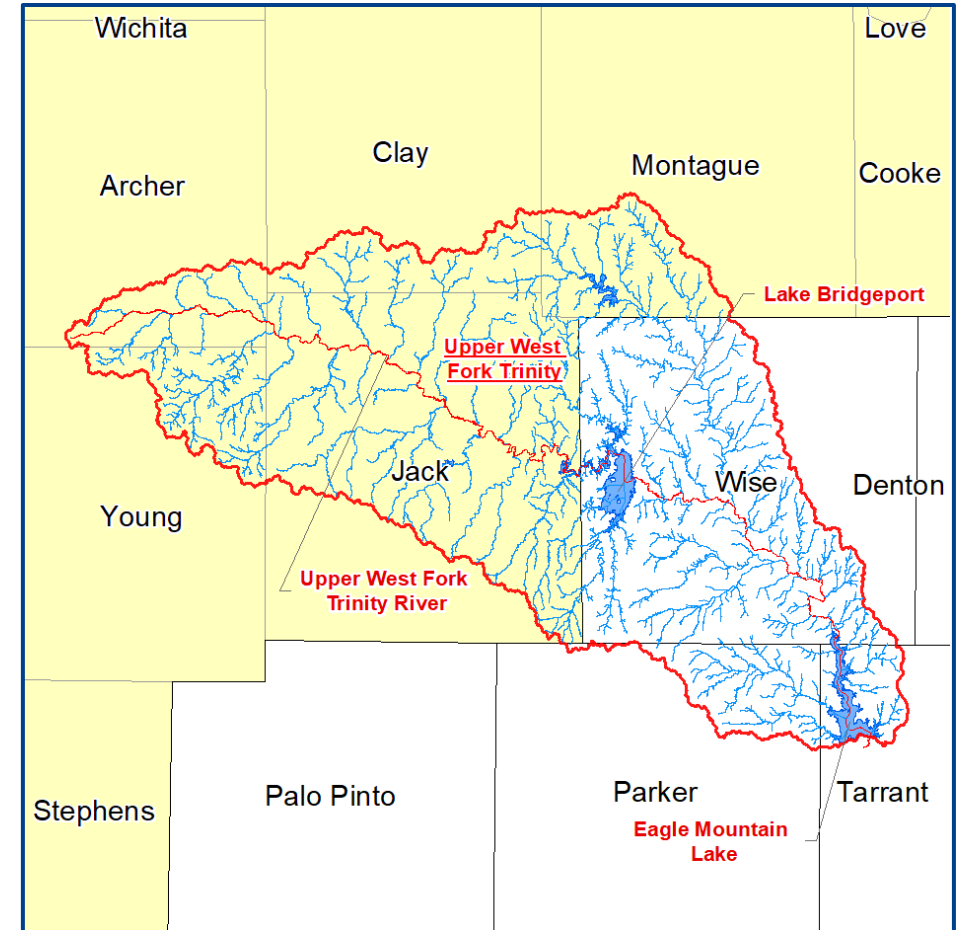
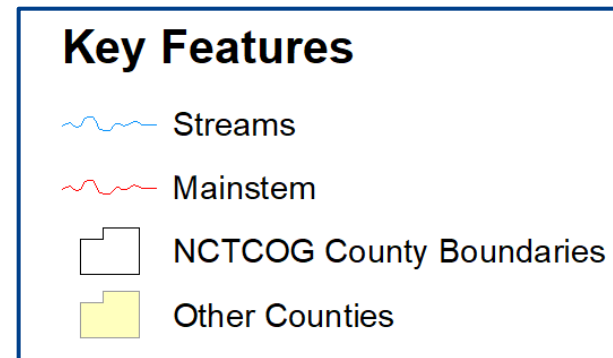
- Mitigation planning and actions
- Risk communication



BASE LEVEL ENGINEERING (BLE) | OVERVIEW

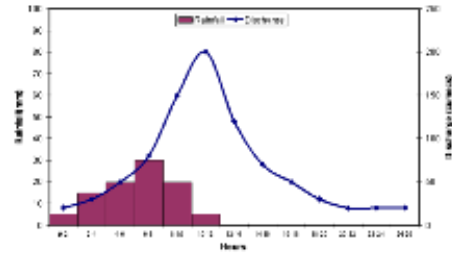
LARGE SCALE AUTOMATED ENGINEERING (LSAE) PROCESS

- BLE is best used at a larger scale (HUC8)
- LiDAR must be available
- Model review and adjustments
- Gage review included in hydrology

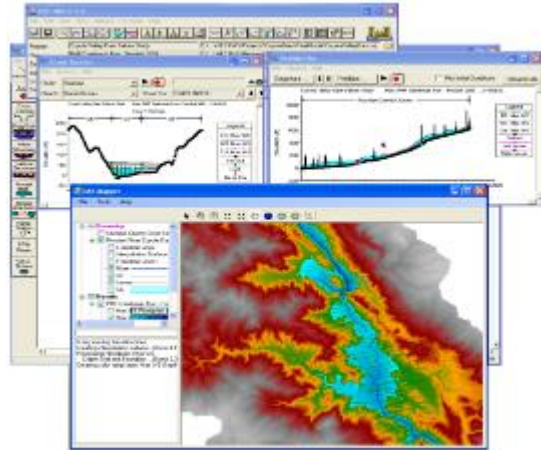


BASE LEVEL ENGINEERING (BLE) | OVERVIEW

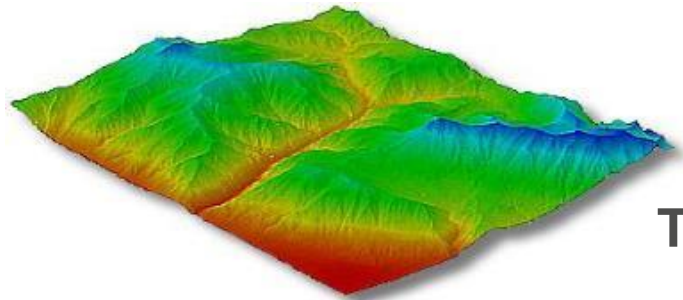
MODELING



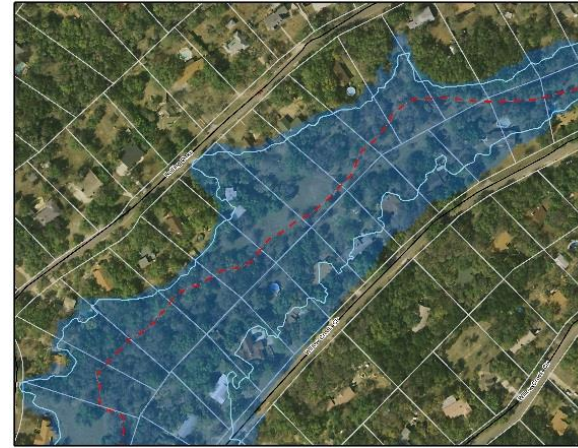
Hydrology



Hydraulics



Terrain

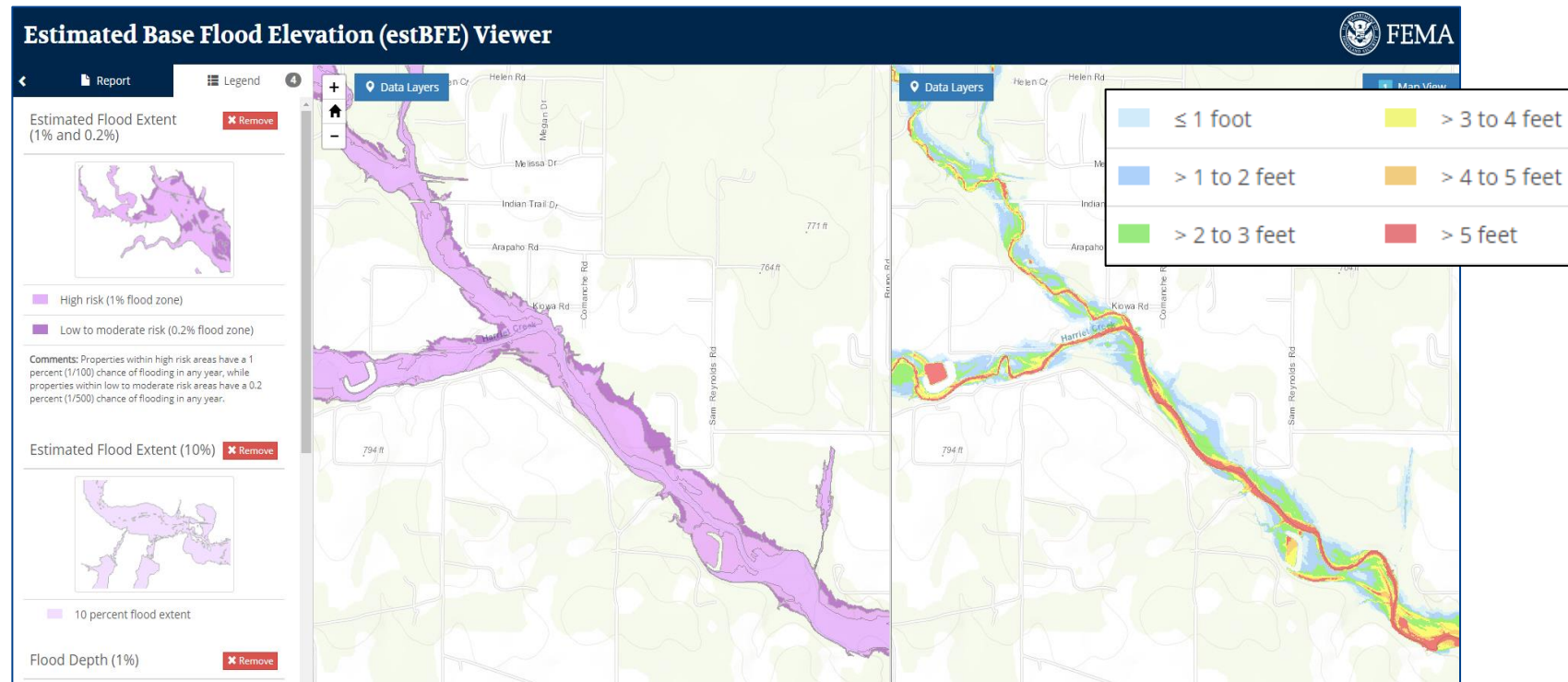


Mapping

OUTPUTS

- Hydrology modeling (Regression) flows w/gage analysis
- Hydraulic modeling (HEC-RAS) for 10%, 4%, 2%, 1% and 0.2% storm events
- 10%, 1% and 0.2% floodplain boundaries

BASE LEVEL ENGINEERING (BLE)



Non-Regulatory

- Areas of Expanded Flood Risk
- Depth and Analysis Grids
- Flood Risk Assessment

BASE LEVEL ENGINEERING (BLE) | OVERVIEW

■ Building Block for Future Model Refinement

■ Creates a data-based starting point for conversations about existing flood risk



CHEAPER



FASTER



DATA FOR REVIEW



COLLABORATIVE

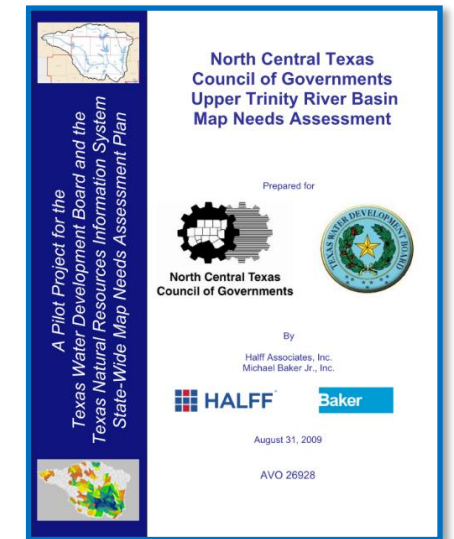
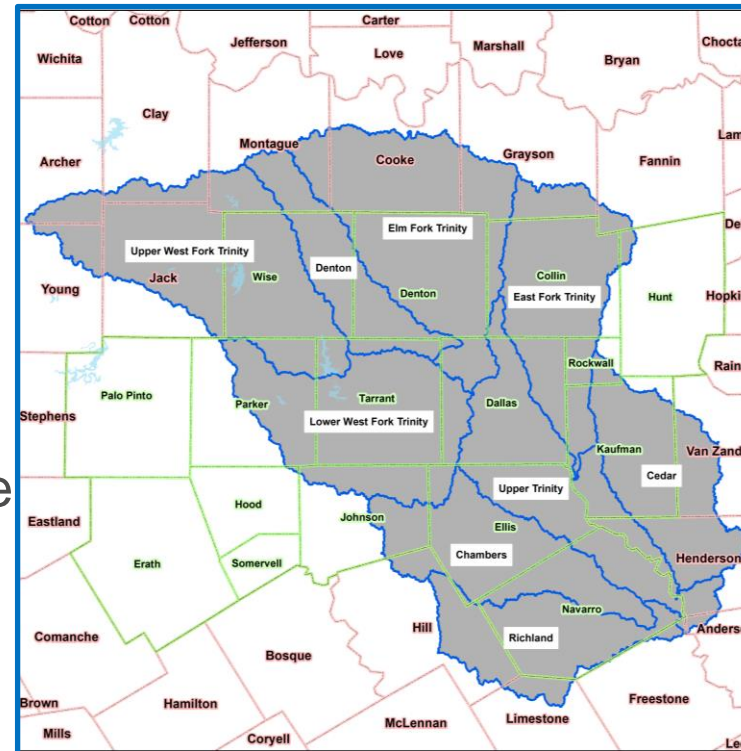
NCTCOG DISCOVERY ACTIVITIES



2009 TWDB/NCTCOG Map Needs Assessment (MNA) documented...

- 1, 291 new mapping needs
- 2,370 miles of stream
- \$44 Million in Flood Mapping Needs

2013 Discovery utilized MNA data and update results. **2021 Discovery** will do the same.



PRE-DISCOVERY MEETING

■ Inform communities of process and timeline



Upper West Fork Trinity Watershed Pre-Discovery Meetings



Pre-Discovery Webinar #1
Tuesday | September 27, 2022
9:00 AM - 10:00 AM



Pre-Discovery Webinar #2
Thursday | September 29, 2022
11:00 AM - 12:00 PM

These webinars will be online and meeting link invitations will be sent via email

Contact Jai-W Hayes Jackson for more information at jhayes-jackson@nctcog.org or 817.695.9212



Pre-Discovery Newsletter Upper West Fork Trinity Watershed

"Capturing a More Complete Picture of Your Community and Your Watershed" September 2022

Risk MAP Process and Discovery
Risk Mapping, Assessment, and Planning (Risk MAP) is the Federal Emergency Management Agency (FEMA) Program that assists communities with flood information and tools they can use to enhance their mitigation plans and better protect their citizens. Discovery is the first phase of an overall process to achieve mitigation actions for reducing risks. The North Central Texas Council of Governments (NCTCOG) has been awarded a FEMA grant to conduct Discovery in the Upper West Fork Trinity Watersheds in 2022.

The Goal: To work closely with communities to better understand local flood risk, mitigation efforts, and other topics to spark watershed-wide discussions about increasing resilience to flooding.

Pre-Discovery Webinar
September 27th, 2022
9:00 AM-10:00 AM

Pre-Discovery Webinar
September 29th, 2022
11:00 AM-12:00 PM

Pre-Discovery Meetings
In preparation for the upcoming Discovery Meeting, NCTCOG will be hosting two Pre-Discovery meetings via webinar. These webinars will introduce you to flood risk data being developed in the watershed, inform you about what to expect at the Discovery Meeting, describe who should attend, and communicate the data we need to collect from your community. Invitations to the webinars will soon be sent out via email. These webinars will be recorded and posted online should your community be unable to attend virtually. To join us for the webinars, access the link on the email invitation.

Discovery Data Collection
The section to the right lists some of the types of data requested from each community within the watershed. We would greatly appreciate your participation in providing mapping needs and flood risk data for your community.

NCTCOG requests communities to share any flood-related data to provide as complete a picture as possible.

The North Central Texas Council of Governments (NCTCOG) is a voluntary association of, by and for local governments, and was established to assist local governments in planning for common needs, cooperating mutual benefit, and coordinating for sound regional development. For more information, please visit www.nctcog.org. NCTCOG is a FEMA designated Technical Partner (CTP), which allows for them to collaborate with FEMA to help maintain current flood hazard information. The results of the 2009 Map Based Assessment Study conducted by NCTCOG and the Texas Water Development Board (TWDB) were used to develop a Mapping Activity Statement (MAS) as the basis of the FEMA CTP grant. FEMA awarded a CTP grant to NCTCOG to perform Discovery in this watershed. NCTCOG MAS is included in the Risk MAP program. Please submit Discovery data or questions to [Jhayes-Jackson@nctcog.org](mailto:jhayes-jackson@nctcog.org) or 817-695-9212.

Contact communities within watershed | Develop watershed partnerships | Analyze comments and watershed for final project selection

FEMA develops Watershed Engagement Strategy | Pre-Discovery Newsletter | Locals submit all available data to FEMA | Discovery Meeting | Discovery Process Newsletter | Discovery Map | Identify local flood hazard/risk concerns

WATERSHED SELECTED FOR DISCOVERY → **DISCOVERY MEETING** → **PROJECT AREA SELECTION**

LEGEND: ■ FEMA/State action ■ Community action ■ Product/tool for community use

NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS UPPER WEST FORK TRINITY WATERSHED PRE-DISCOVERY MEETING



North Central Texas
Council of Governments

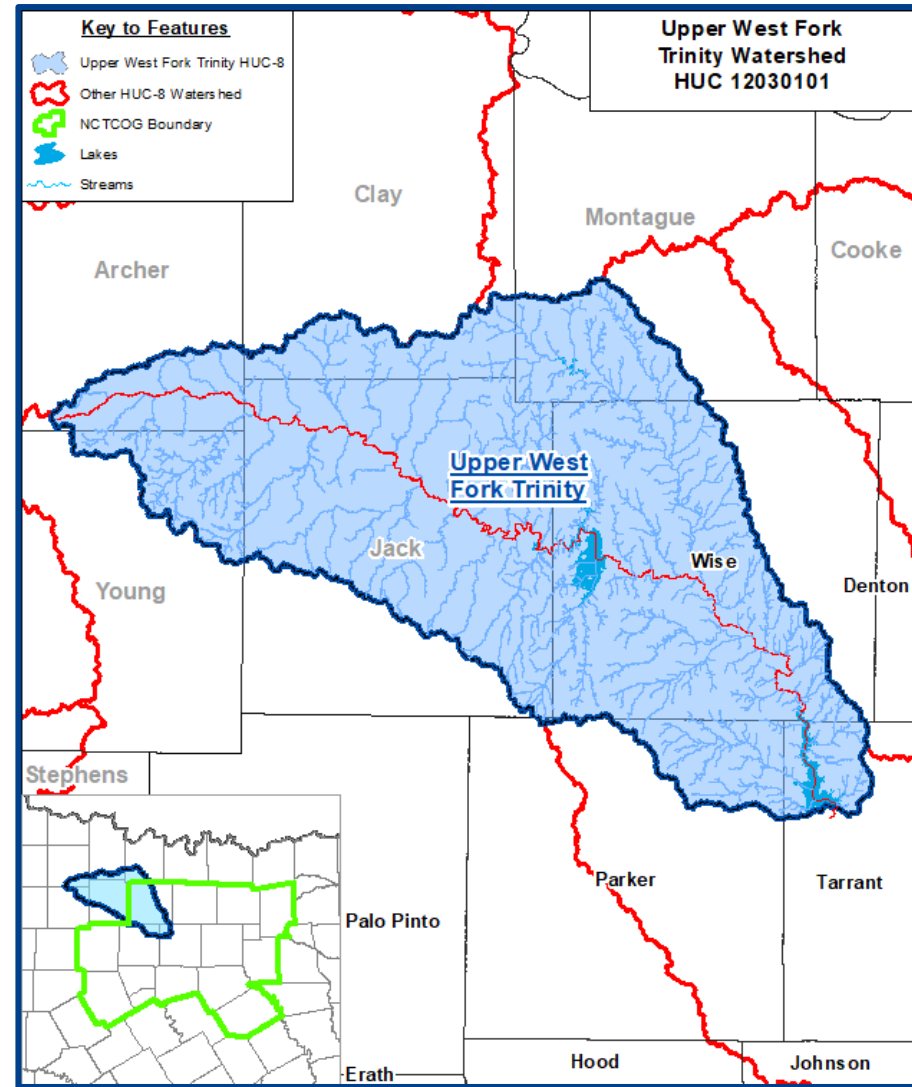


FEMA



SUBMITTING INFORMATION

- Record flooding issues concerns on our website
- Demonstrate later in presentation



What information are we interested in?

FEMA ENGAGEMENT WITH STAKEHOLDERS AND DATA COLLECTION

Review of all available data begins the process...

Risk Identification and Communication

- Low water crossings?
- Large areas of fill placement?
- Future development areas?
- Capital improvement projects?
- Channelization projects?
- Large reservoirs? O&M plan?
- Flood risk reduction projects?
- Digital stream inventory?
- Digital building stock?
- High water marks from recent flooding event?
- Elevation data? LiDAR?
- Local flood studies?



Mitigation Planning and Mitigation Actions

- Approved hazard mitigation plan?
- Local evacuation plans?
- Current land use plan?
- Future land use plan?
- Drainage master plan(s)?
- Flood reduction projects?
- Culvert enlargement projects?
- Areas of evacuation during high water?
- Local HAZUS runs?
- Digital parcel boundaries?



Engage:

- U.S. Geological Service
- U.S. Army Corps of Engineers
- U.S. Environmental Protection Agency
- State NFIP coordinator
- State Hazard Mitigation Officer
- State floodplain management associations
- State emergency management associations
- Local elected officials
- Regional authorities
- Local floodplain administrators
- Local emergency management officials
- Local levee districts
- Watershed groups
- Special interest groups
- Local business and commerce entities
- CTPs



NFIP Community Actions

- Participating in the NFIP?
- Community assistance meetings?
- Community Rating System (CRS)?
- Repetitive loss properties?
- Areas of insurance claims?
- Community assistance visits?
- Community assistance calls?
- Active Letters of Map Change (LOMCs)?
- Recent disaster? Declared?
- Data from PDAs?



Community Benefits and Grant Opportunities

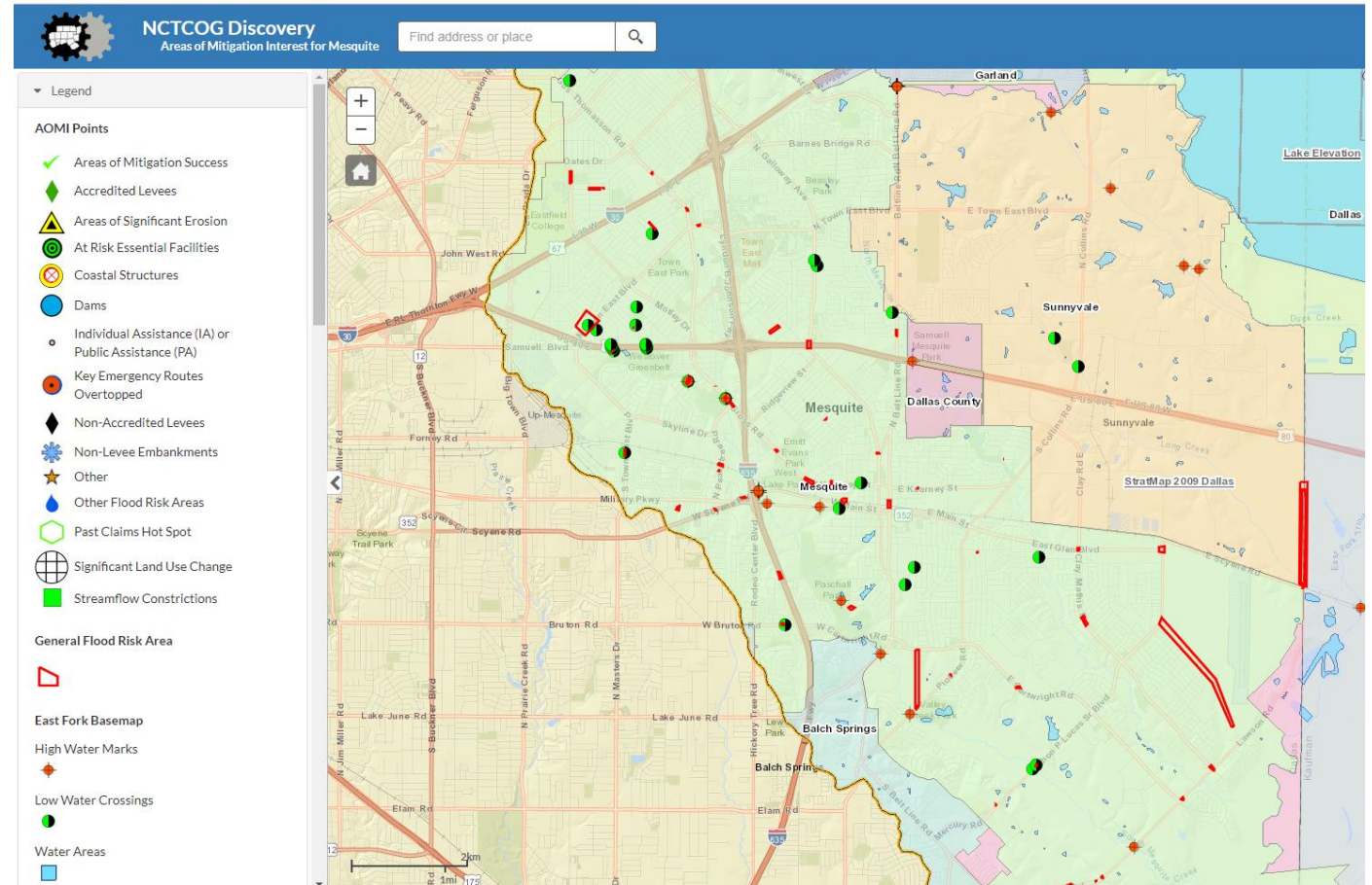
- Grant administration plan?
- Ongoing grant projects?
- Hard projects? (infrastructure)
- Soft projects? (outreach/education)
- Targeted buy-out areas?
- Elevation projects planned?
- Pre-Disaster Mitigation (PDM) grants?
- Severe Repetitive Loss (SRL) grants?
- Grants in need of engineering info?
- Post-disaster 404 projects?
- Post-disaster 406 projects?



DISCOVERY MEETINGS COMING... | PRE-DISCOVERY ACTIVITIES

SUBMITTING INFORMATION

- Enter your data online before the meeting
- Discovery meetings early 2023
- All community stakeholders are encouraged to attend



COMMUNITIES SUBMITTED FLOOD RISKS ONLINE

- Low Water Crossings
- Flooding Concerns
- Significant Land Use Change
- Issues with Effective Mapping

NCTCOG Discovery

Overall Progress 80%

Welcome ✓ Your Info ✓ Backgrounder ✓ **Questions** Map and Report ✓ Meeting Info

Use the buttons above to navigate

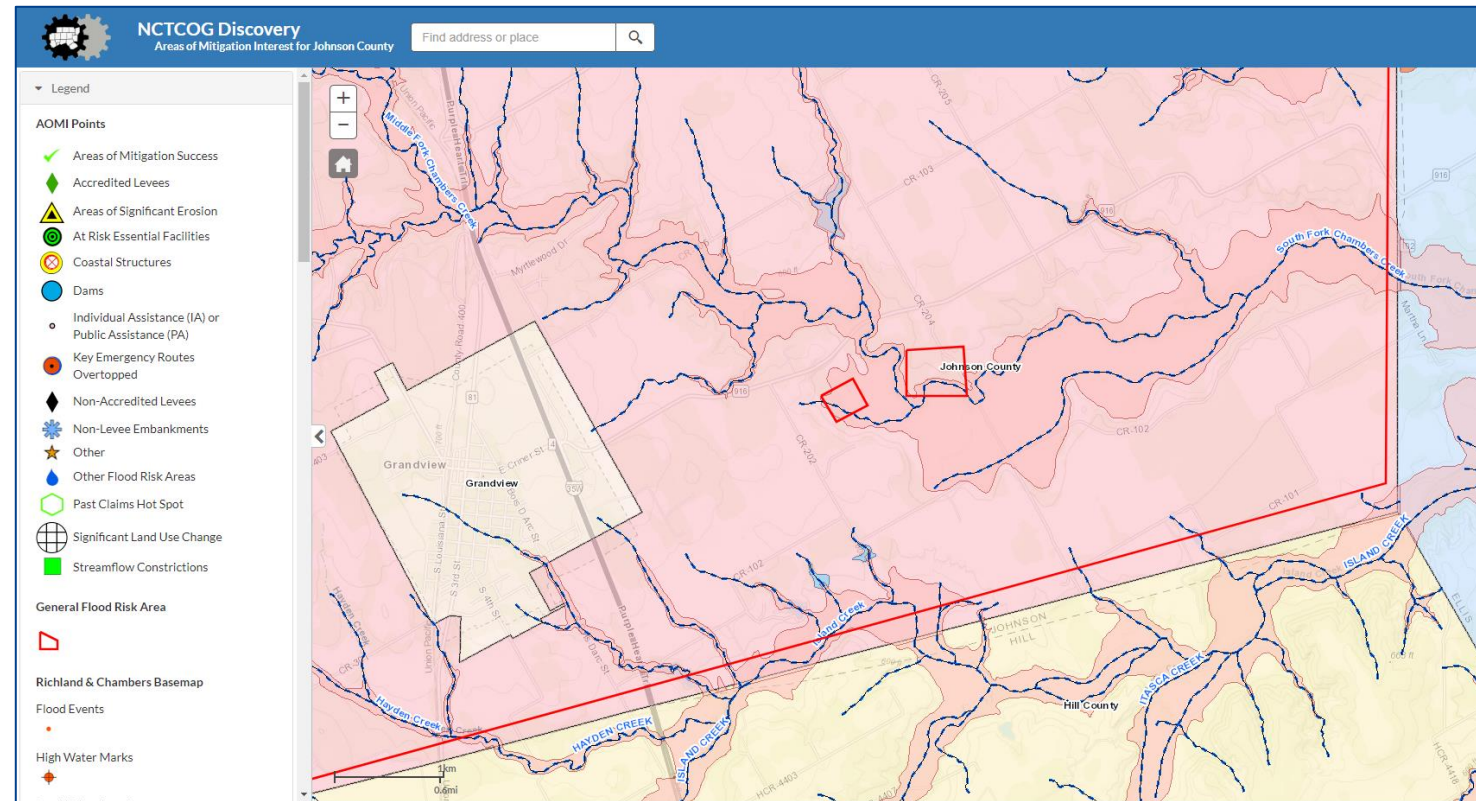
Community Questionnaire for: Johnson County

Please edit your answers as needed.

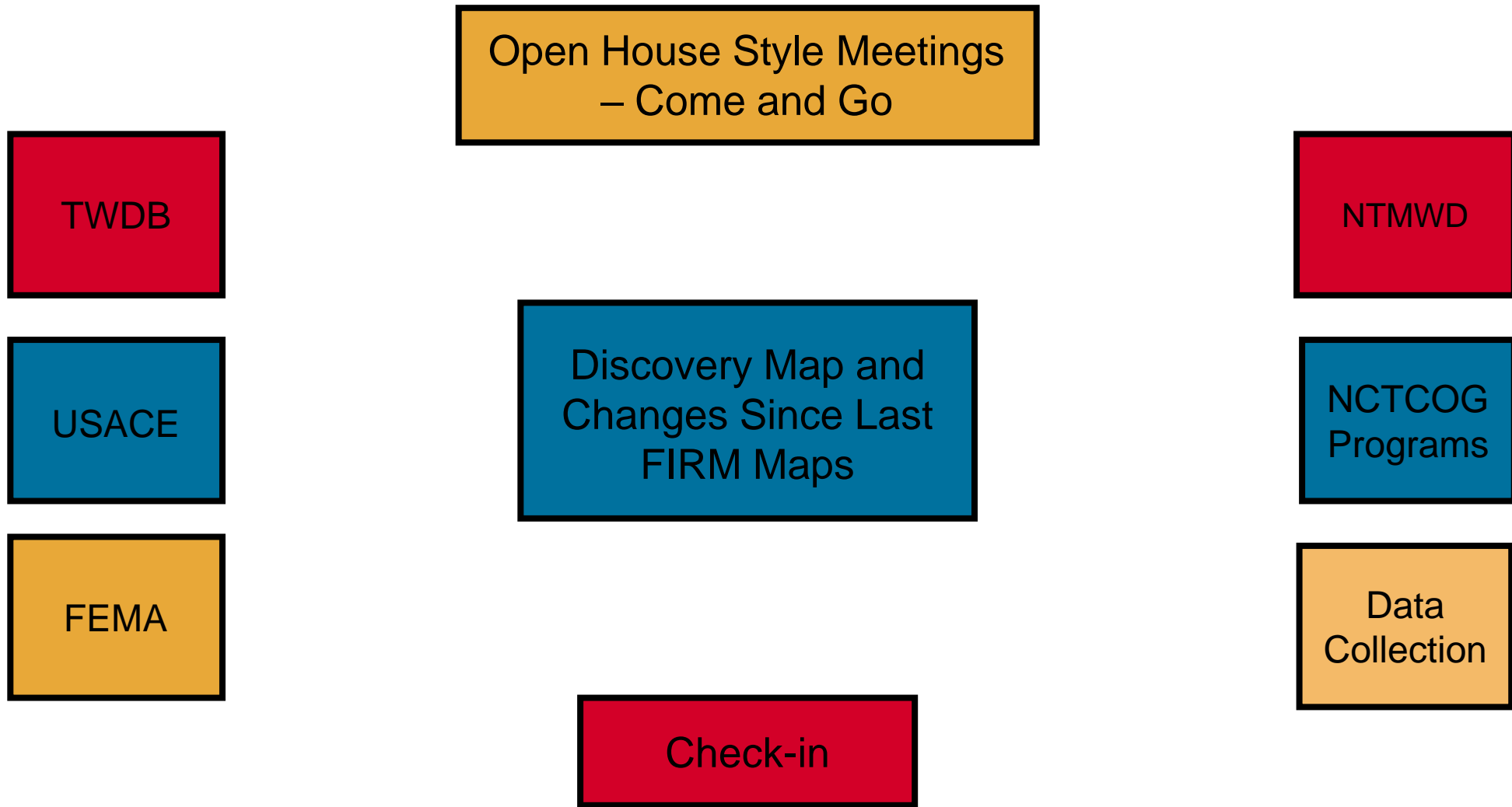
Why do you need this? +




1: Has your community experienced any major riverine flooding events that have exceeded the effective floodplain mapping limits?
 Yes No (If yes, please explain)

2: Do you believe the current floodplain mapping matched any flooding event? Are there other concerns with the accuracy of the current floodplain mapping?
 Yes No (If yes, please explain)



DISCOVERY MEETINGS – OPEN HOUSE | DISCOVERY ACTIVITIES



North Texas Discovery Journey – Guide/Ambassador Checklist

Community Name: _____

Community Contact: _____ Role: _____

Knowledge Scale (1-10; 1 = very little knowledge, 10 = very good understanding): _____

Discovery Meeting Guide: _____

One of the primary sources to collect data for the Areas of Mitigation Interest is from our local partners during the flood study process. To accomplish this, establish a dialogue with the community representative and guide them to each of the meeting stations to ensure we collect data about their mitigation needs and address their questions or concerns.

Grey – Handled at Laptop Booth Blue – Informational Booths

Data Item	Completed Pre-Meeting?	Completed/Updated At Meeting?
Backgrounder (Website) – basic information, i.e. NFIP policies/claims, floodplain stream miles, LiDAR availability, hazard mitigation plan, CRS status, etc.	<input type="checkbox"/>	<input type="checkbox"/>
Questionnaire (Website) – comments on mapping, any mitigation projects, unmapped areas that flood, high water mark data, do you use GIS, master drainage plan, etc.	<input type="checkbox"/>	<input type="checkbox"/>
Map (Website) – has community entered areas of mitigation interest (AOMI) information into the web map?	<input type="checkbox"/>	<input type="checkbox"/>

DISCOVERY MEETING – JANUARY 2023

- Receive flooding issues
- Facilitate discussion among stakeholders



DISCOVERY MEETINGS – WHAT TO EXPECT | DISCOVERY ACTIVITIES



DISCOVERY MEETINGS – WHAT TO EXPECT | DISCOVERY ACTIVITIES

WHO SHOULD ATTEND MEETINGS:

■ Community Officials Including:

- Leaders, Floodplain Administrators, City Engineers, Watershed Organizations, Planners, Emergency Managers, and GIS Specialists

■ Federal, State, and Regional Agencies

■ Other locally identified stakeholders concerned with flood risks or hazard mitigation

DISCOVERY MEETINGS – WHAT TO EXPECT | DISCOVERY ACTIVITIES

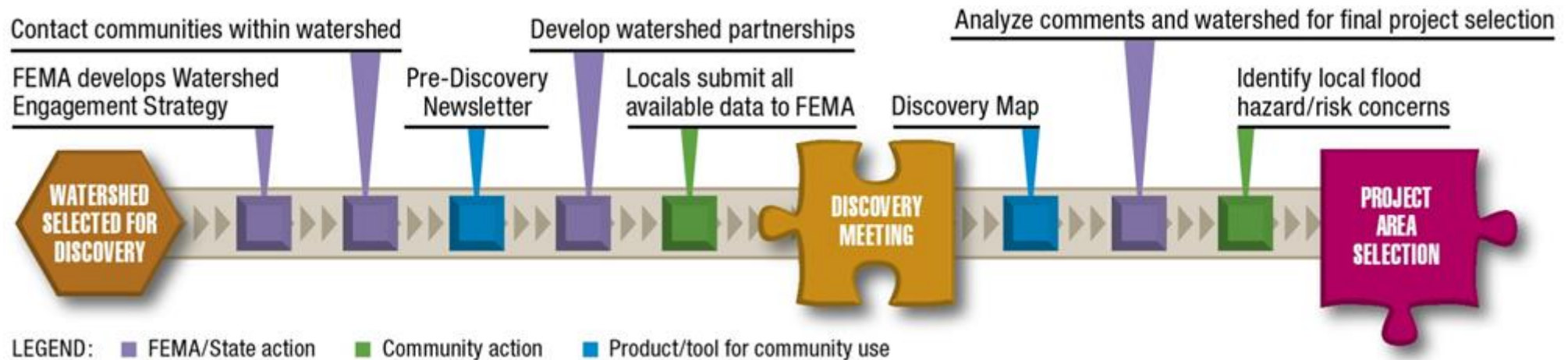
WHAT SHOULD BE BROUGHT TO MEETINGS:

- Knowledge of Flood Risks and Past Flooding in your community
- Hazard Mitigation Projects – Identified, In Progress, or Complete?
- Master Drainage Plan(s), floodplain studies – completed or identified as needs
- Questions or Concerns regarding your current Digital Flood Insurance Rate Maps – Flood Study Needs
- Current Flood Risk Communication Process
- Dams and Levees – Questions or Concerns
- GIS data

POST-DISCOVERY ACTIONS | POST-DISCOVERY ACTIVITIES

POST-DISCOVERY ACTIONS:

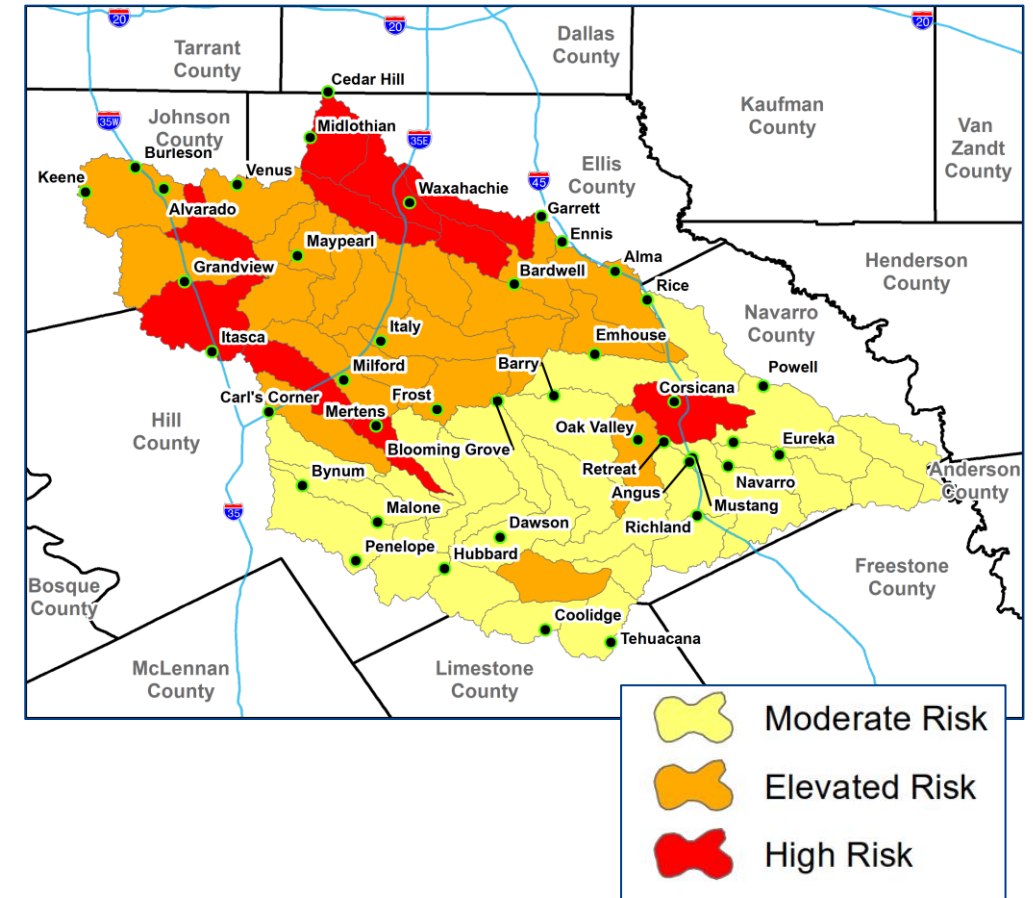
- Analyze data collected
- Review findings with NCTCOG



POST-DISCOVERY ACTIONS | POST-DISCOVERY ACTIVITIES

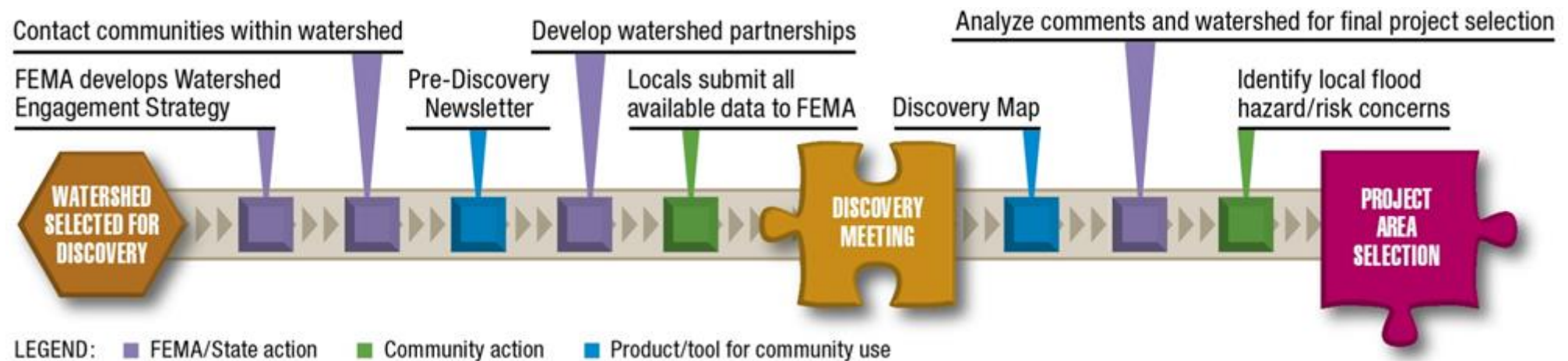
HUC-12 WATERSHED PRIORITIZATION

Criteria No.	Description	Max Weight
1	Population density	10
2	Population change	10
3	Predicted population growth	10
4	History of flood claims	10
5	History of flood events	10
6	Number of Letters of Map Change (LOMR/LOMA)	5
7	Available current topography (Y/N)	10
8	Age of technical data – hydrology (num. of years)	5
9	Age of technical data – hydraulics (num. of years)	5
10	Ability to leverage current studies (Y/N)	5
11	Potential for local funding (Y/N)	5
12	Potential for local “work in kind” (Y/N)	3
13	Previous contribution to a FEMA study (Y/N)	2
14	Stakeholder mapping request	10



POST-DISCOVERY ACTIONS | POST-DISCOVERY ACTIVITIES

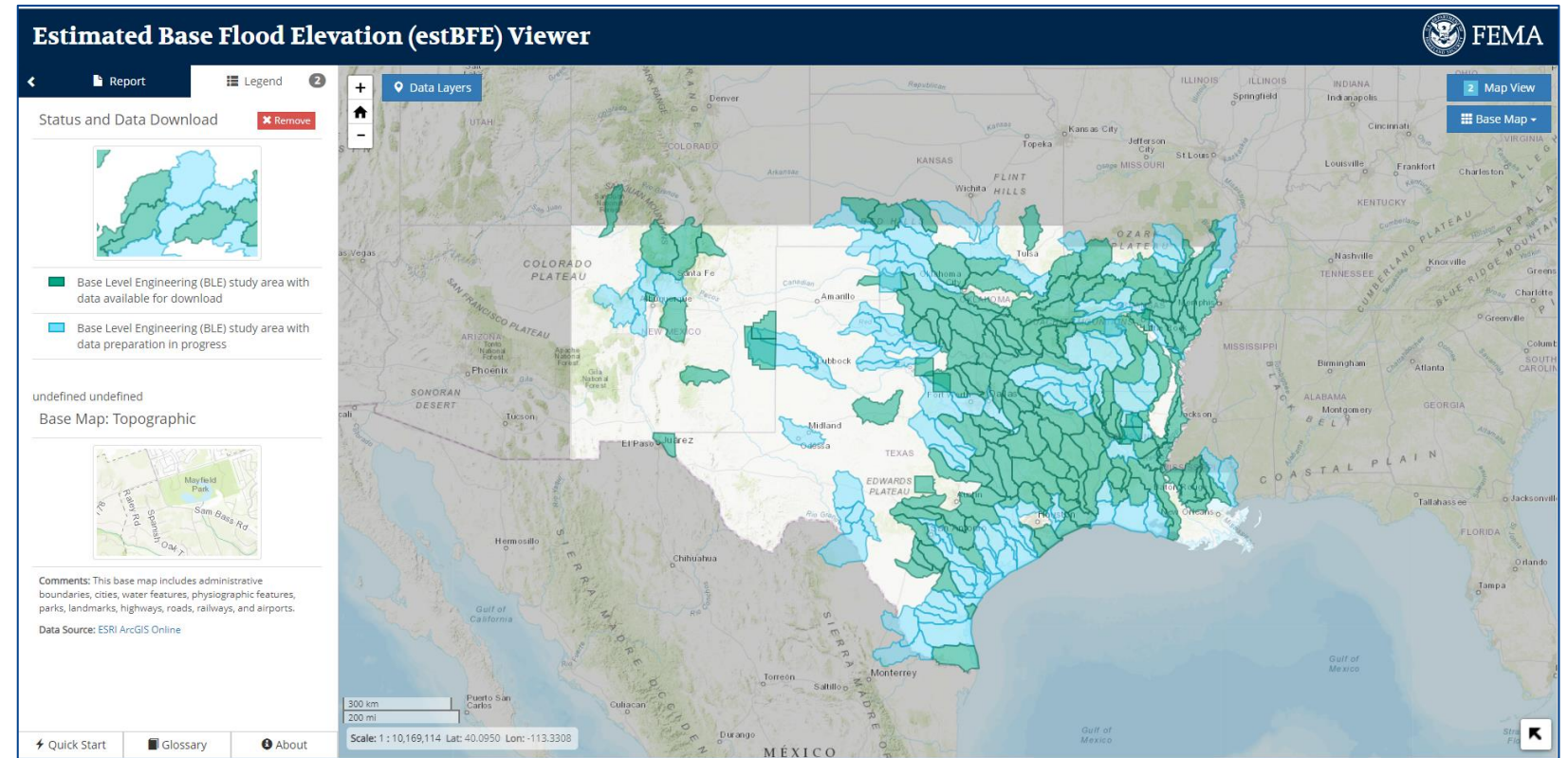
- Preliminary project selections provided to communities
- Evaluate community input
- Findings Meeting – Spring 2023
- Discovery Report – Late Summer 2023



FEMA BFE VIEWER

- View and download completed BLE data
- Useful for determining BFEs for development
- Demonstrated during Pre-Discovery Meeting
- Watch recording here: <https://youtu.be/PWt3epwHofu>
 - BFE Viewer Tutorial starts at minute 52:50






<https://webapps.usgs.gov/infrm/estBFE/>

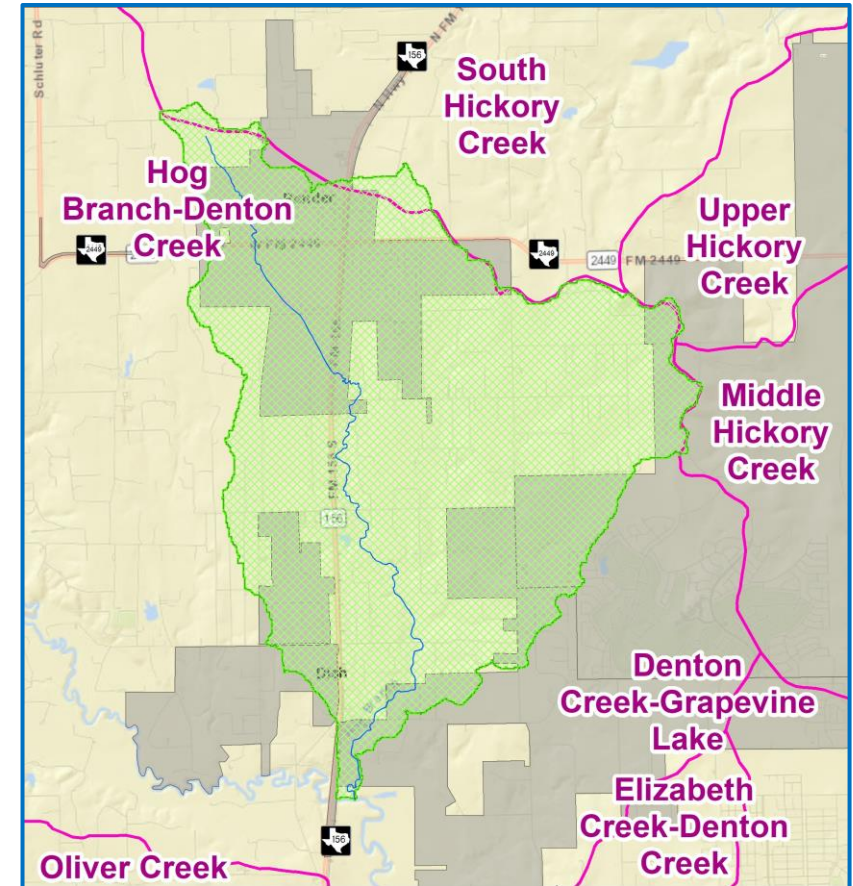


RECENT POST-DISCOVERY PROJECTS | 2021

2021 HOG BRANCH STUDY – DENTON COUNTY

- New H&H and Mapping
- Flood Risk Products including Flood Risk Assessment
- Result of Denton Creek Discovery

KEY TO FEATURES	
	Study Stream
	Study Area
	HUC - 8 Boundary
	HUC-12 Boundary
	Political Boundaries




ENTER YOUR FLOOD RISK INFORMATION ON OUR WEBSITE







<https://nctcogdiscovery.halff.com>

Login: **EMAIL ADDRESS**


Password: **NCTCOG_2022!**

NCTCOG Discovery 







Overall Progress 0%

 Welcome	 Your Info	 Backgrounder	 Questions	 Maps	 Meeting Info
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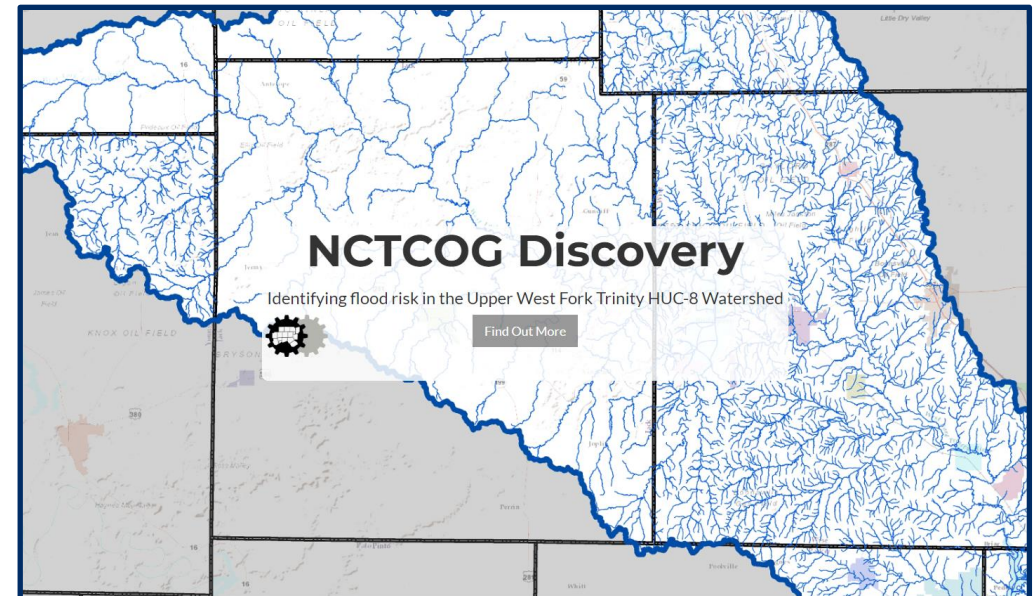
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NCTCOG Discovery 

Overall Progress 100% THANK YOU!

 Welcome ✓	 Your Info ✓	 Backgrounder ✓	 Questions ✓	 Maps ✓	 Meeting Info
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QUESTIONS?



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FEMA

