Value of Local Partnerships

Texas Water Development Board Cooperating Technical Partner Program

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Texas Water Development Board

- FEMA Cooperating Technical Partner since 2001
- National Flood Insurance State Program
- Federal and State Grant and Loan Programs
- Texas Natural Resources Information System (TNRIS)
  - State clearinghouse for geographic information
    - www.tnris.texas.gov
  - Floodplain Mapping Services
    - Technical assistance for mapping issues
    - Map printing, aerial & elevation data
    - High water marks and Low water crossings

Texas Colorado River Floodplain Coalition (TCRFC)

- The TCRFC is a partnership of cities and counties in the Colorado River Basin and surrounding areas seeking better ways to reduce and mitigate flood damage.
  - *"Encourage comprehensive consistent management of the floodplain along the Colorado River and its tributaries; provide a forum for data exchange; and facilitate a structured approach to managing the complex issues related to floodplain management."*

TCRFC History of Floodplain Mapping

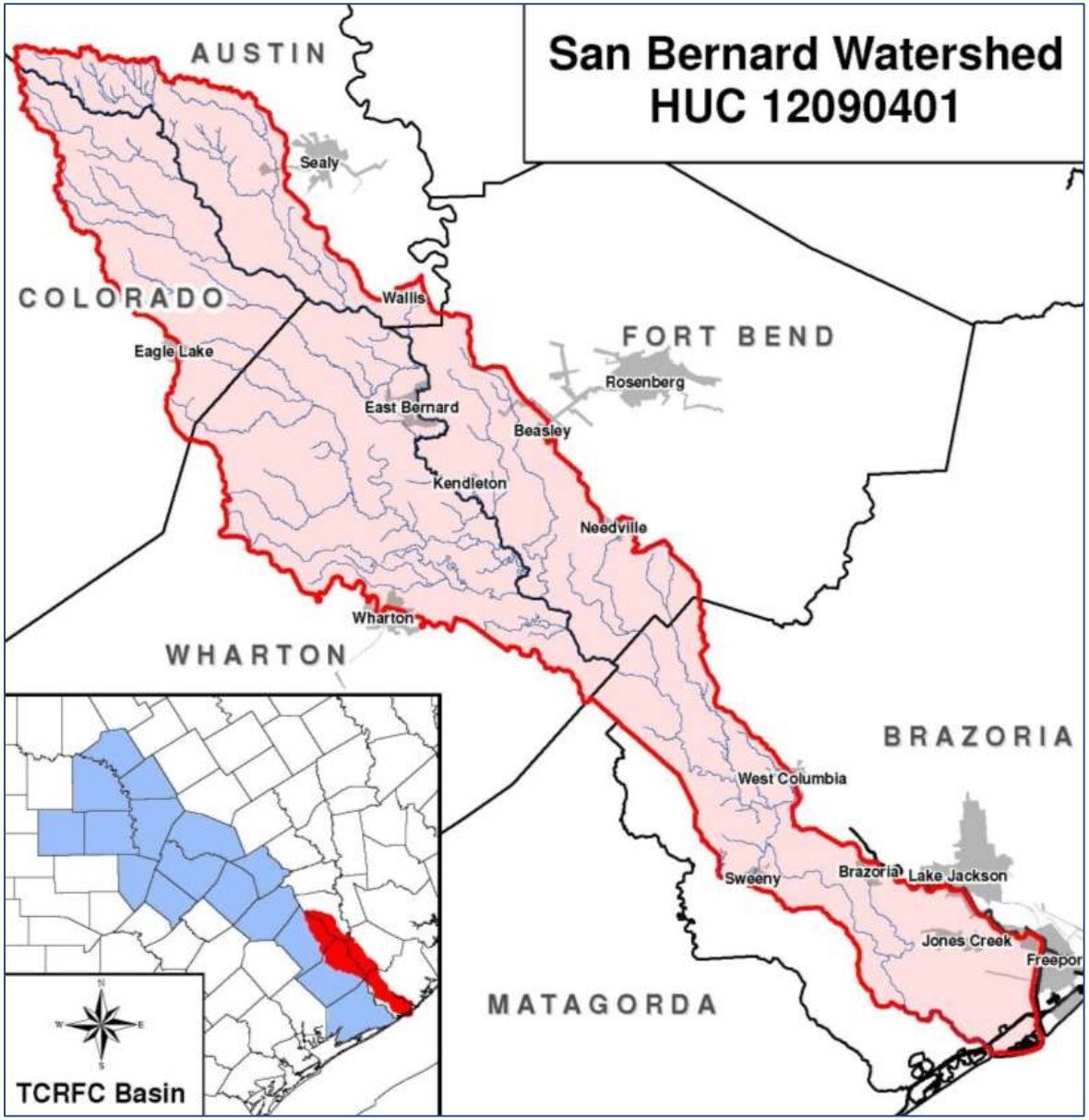
- 2000 • Formation of the TCRFC
- 2002 • Flood Damage Evaluation Project (FDEP)
- 2003 • Map Master Plan
- 2008 • FEMA Map Modernization
- 2011 • TCRFC Map Needs Assessment & 5-year Plan
- 2012 • RiskMAP – YR 1 MAS – San Bernard Watershed
- 2017 • Potential – Seeking future TWDB partnerships

TCRFC Map Needs Assessment

- Data Collection
  - Data Collection Tool
  - Accessible by all TCRFC Members
  - Meeting Data Collection Stations
- Database
  - Prior, Current, and Planned Mapping Needs
- Needs Prioritization
  - Combination of FEMA's CNMS data and Local Criteria
  - Identify watersheds with greatest Risk & Need

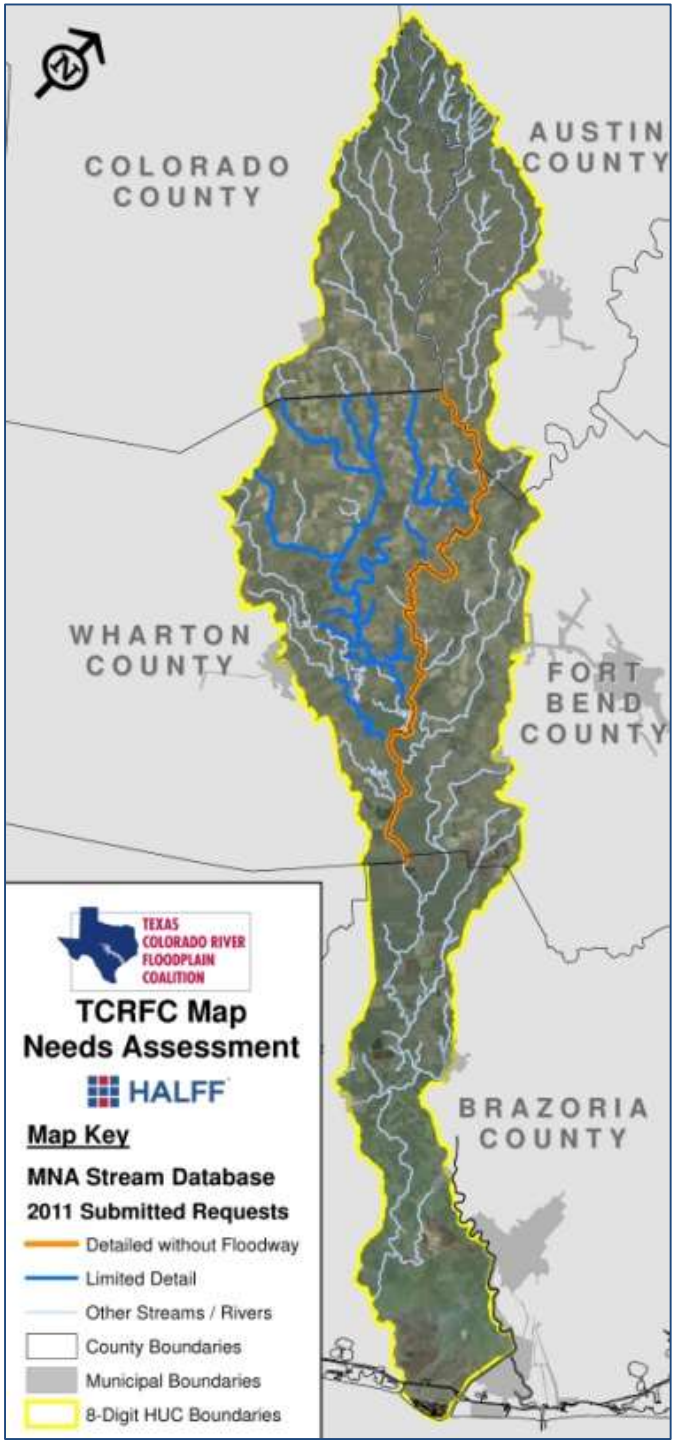
No.	Description	Weight
1	Population density	10
2	Population change (2000-2008)	10
3	Predicted population growth (next 5 & 10 years)	10
4	History of flood claims	10
5	Number of Letters of Map Change (LOMR/LOMA	5
6	Number flood events	5
7	LiDAR data available	10
8	Ability to leverage other (federal, state, regional) work	10
9	Potential of local match	10
10	Unmet Need	5
11	No NFIP floodplain (i.e. Zone X)	10
12	Existing model	5

San Bernard Watershed



TCRFC Leverage

- USACE
  - Hydrology
    - San Bernard to FM 1301 in Brazoria County
  - Hydraulics
    - San Bernard River to FM 1301 in Brazoria County
- Wharton County
  - LiDAR
  - Hydrology and Hydraulics
    - San Bernard Tributaries in Wharton County



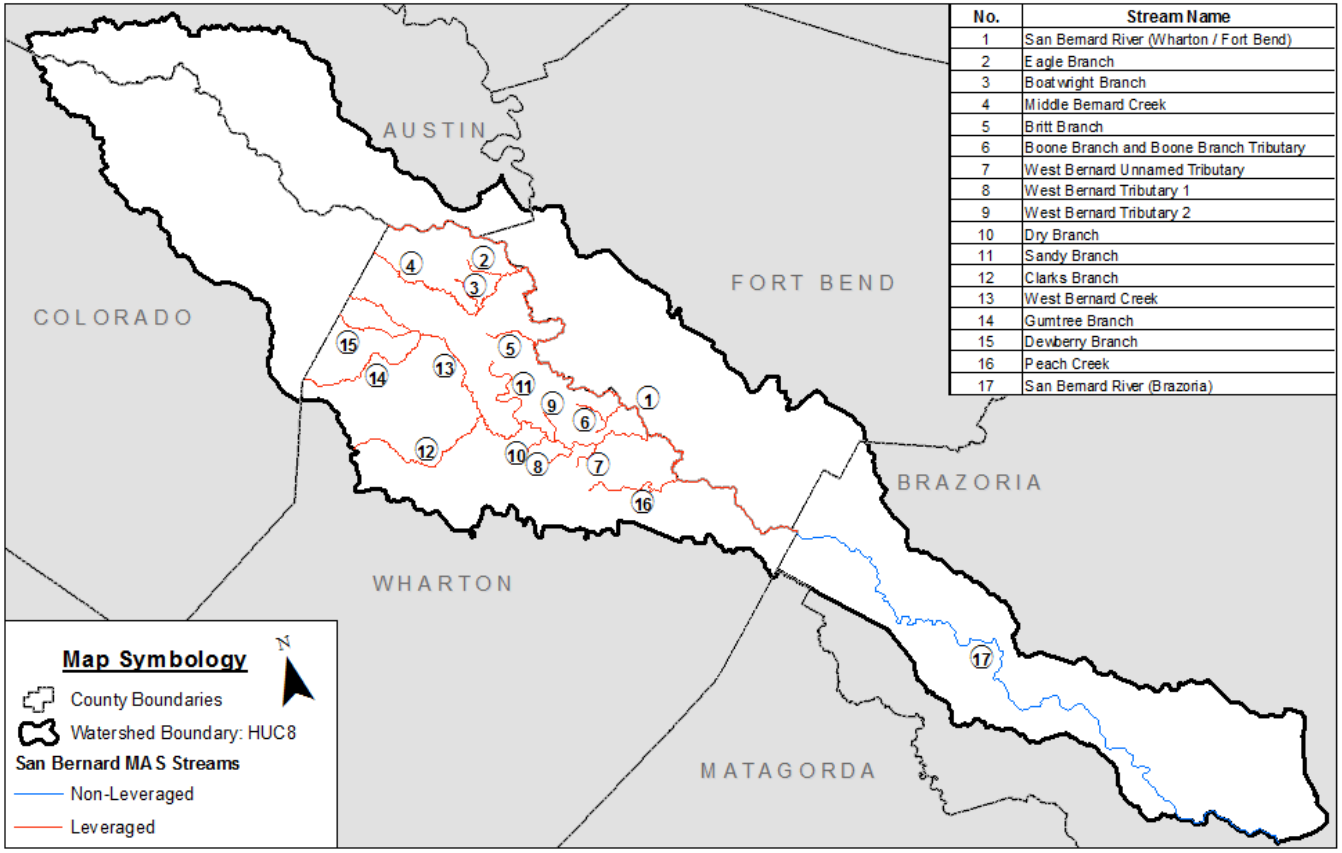
Coordination with TWDB

- TCRFC approached TWDB
  - Unified voice for Colorado River communities
    - 16 Counties / 60+ Communities
  - 70% Leverage
  - Map Needs Assessment

- TWDB Mapping Activity Statement
  - 1st Production MAS for TWDB as CTP
  - TCRFC worked with TWDB to complete MAS Application
  - FEMA Award 2011
  - $2.4M project with $1.2M in Leverage

YR 1 MAS – San Bernard Watershed

- **PH1: Discovery** – Completed 1st CTP Discovery in Texas
- **PH2&3: Wharton County Mapping** – Update Wharton County DFIRM to include leveraged study streams (San Bernard River and Tributaries)
- **PH2&3: Fort Bend County Mapping** – Update Fort Bend County DFIRM to include San Bernard river as Zone AE (San Bernard River only)
- **PH2&3: San Bernard Connectivity Hydrology** – Extend the hydrology model to the Gulf



No.	Stream Name
1	San Bernard River (Wharton / Fort Bend)
2	Eagle Branch
3	Boatwright Branch
4	Middle Bernard Creek
5	Britt Branch
6	Boone Branch and Boone Branch Tributary
7	West Bernard Unnamed Tributary
8	West Bernard Tributary 1
9	West Bernard Tributary 2
10	Dry Branch
11	Sandy Branch
12	Clarks Branch
13	West Bernard Creek
14	Gumtree Branch
15	Dewberry Branch
16	Peach Creek
17	San Bernard River (Brazoria)

PH1: Discovery

- 1st CTP Discovery in Texas
- Leveraging Local Partnerships
  - Grass-Roots Outreach
    - Individual Touches: Phone Calls & Meetings
    - Technology Support: Emails, Newsletters, Website, & Web Map
  - 5 Counties
  - 15 Communities

Project Area Community List

Community Name	CID
Austin County	480704
City of Sealy	480017
City of Wallis	480018
Brazoria County	485458
City of Brazoria	480066
City of Sweeny	485502
City of West Columbia	480081
City of Jones Creek	480072
City of Freeport	485467
City of Lake Jackson	485484
Colorado County	480144
City of Eagle Lake	480146
Fort Bend County	480228
City of Kendleton	481551
City of Needville	480820
City of Beasley	481654
City of Rosenberg	480232
Wharton County	480652
City of Wharton	480654
City of East Bernard	480650

Discovery Outreach

- Pre-Discovery Meetings & Newsletters

FEMA RiskMAP

TEXAS COLORADO RIVER FLOODPLAIN COALITION

Discovery
San Bernard Watershed

"Capturing a More Complete Picture of Your Watershed"

FEMA RiskMAP Program

Risk Mapping, Assessment, and Planning (RiskMAP) is the Federal Emergency Management Agency (FEMA) Program that provides communities with flood information and tools they can use to enhance their mitigation plans and take action to better protect their citizens. Through more precise flood mapping products, risk assessment tools, and planning and outreach support, RiskMAP strengthens local ability to make informed decisions about reducing risk. The Texas Colorado River Floodplain Coalition (TCRFC) in cooperation with the Texas Water Development Board (TWDB) has been awarded a FEMA grant to locate risk, define risks, and prepare floodplain maps within the San Bernard Watershed.

Discovery

Discovery is the first phase of the Mapping Activity Statement. During Discovery, we seek input from stakeholders within the basin to obtain information about local flood risk, flood hazards, mitigation plans, mitigation activities, flooding history, development plans, and floodplain management activities to help communities identify areas of risk. The Discovery task is the "discovery" of flood hazards and risk throughout the watershed. The Goal of Discovery is to work closely with communities to better understand local flood risk, mitigation efforts, and other topics in order to spark watershed-wide discussions about increasing resilience to flooding. Gathered information is used to determine which areas of the watershed require mapping, risk assessment, or mitigation planning assistance.

The Discovery Meeting – June 22, 2012 at 1:30 pm

American Legion Building, 8110 US 60 Highway, East Bernard, Texas

Once communities provide local flood risk and other data, a Discovery meeting will be held to display the findings and communicate where the identified areas of risk occur. The Discovery Meeting is held to review and validate the gathered flood risk data; discuss the community's flooding history, development plans, flood mapping needs, and flood risk concerns; and to discuss the vision for the watershed's future, as well as the importance of mitigation planning and community outreach.

Texas Colorado River Floodplain Coalition • phone 512-858-7302 • fax 512-858-5306 • www.tcrfc.org

TEXAS COLORADO RIVER FLOODPLAIN COALITION

Mission Statement:
"Encourage comprehensive consistent management of the floodplain along the Colorado River and its tributaries; provide a forum for data exchange; and facilitate a structured approach to managing the complex issues related to floodplain management."

The Texas Colorado Floodplain Coalition (TCRFC) is a partnership of cities and counties in the Colorado River Basin and surrounding areas seeking better ways to reduce and mitigate flood damage. The Coalition was formed in response to a combination of rapid growth, a greatly expanded number of homes and businesses in the floodplain and devastating floods that have reoccurred in the basin. For more information, please visit www.tcrfc.org.

The Texas Water Development Board (TWDB) is a FEMA Cooperating Technical Partner (CTP), which allows for them to collaborate with FEMA in order to maintain current flood hazard information. The TCRFC coordinated with the TWDB to apply for a FEMA CTP grant. The results of the Map Needs Assessment were used to develop a Mapping Activity Statement (MAS) as the basis of the CTP grant. FEMA awarded the TCRFC and TWDB with a CTP grant to perform the activities outlined in the MAS. The TCRFC/TWDB MAS is included under the RiskMAP program.

RiskMAP Process – Discovery

The FEMA Region 6 office, in partnership with the TCRFC/TWDB began the Discovery process in San Bernard watershed to gather local information and readily available data to determine project viability and the need for Risk MAP products to assist in the movement of communities towards resilience. Through the Discovery process, FEMA can determine which areas of the watershed may/will be funded for further flood risk identification and assessment in a collaborative manner, taking into consideration the information collected from local communities during this process. We are currently conducting Pre-Discovery community visits to gather information. On June 22nd, we will host the Discovery meeting to discuss the potential project areas. Following the Discovery meeting, projects will be identified for final project selection.

Discovery Data Collection

The box to the right lists data that is requested from each community within the watershed. In addition, the TCRFC is conducting a Map Needs Assessment for the TCRFC Basin and Discovery areas. During this process, the TCRFC built a database of prior, current, and planned engineering flood studies. To date over 1,600 stream miles of floodplain mapping needs were gathered from the TCRFC member communities. Data gathered from this Map Needs Assessment is used to supplement the Discovery process. We would greatly appreciate your participation in providing mapping needs for your community. For more information on the Map Needs collection process please visit www.tcrfc.org/member-resources/mapping-project/

Requested Data from Communities:

- Areas of nuisance flooding
- Historical local flooding locations, mitigation activities and grant projects (ongoing or planned)
- High water marks
- Comprehensive plans
- Local development and floodplain management plans
- Stormwater management activities
- Community ordinances
- Infrastructure information, especially for levees and new bridges, dams, culverts and road improvements
- Flood study needs
- Regional watershed plans
- Details of the current flood risk communication process

Why is this Important?

Because flood hazards change over time, this effort provides a great opportunity to take a comprehensive look at the components and activities that contribute to your community's and your watershed's flood risk. In addition to providing another perspective, participating in this process will increase your understanding of your flood risk and help you identify proactive steps you can take to protect your community from losses to life and property that often accompany flooding.

Website Information

For more information on the Discovery Process and information on the San Bernard Watershed, please visit www.tcrfc.org/member-resources/year-1-mas/san-bernard-discovery/. A GIS-based web map is available for the San Bernard Watershed. This web map is a GIS-based interactive map that includes floodplain and watershed information.

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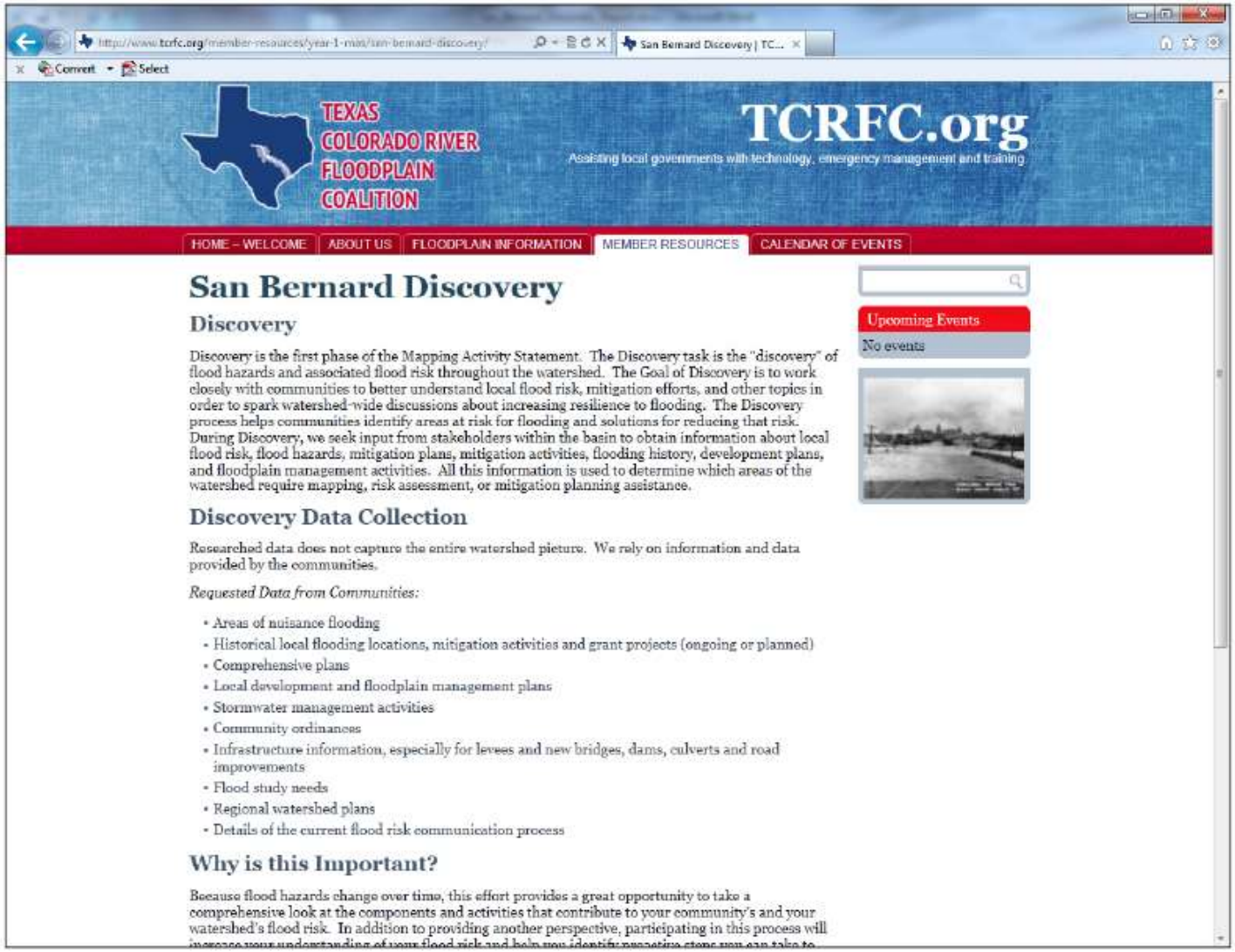
Discovery Outreach

- Discovery Web Site & Web Map



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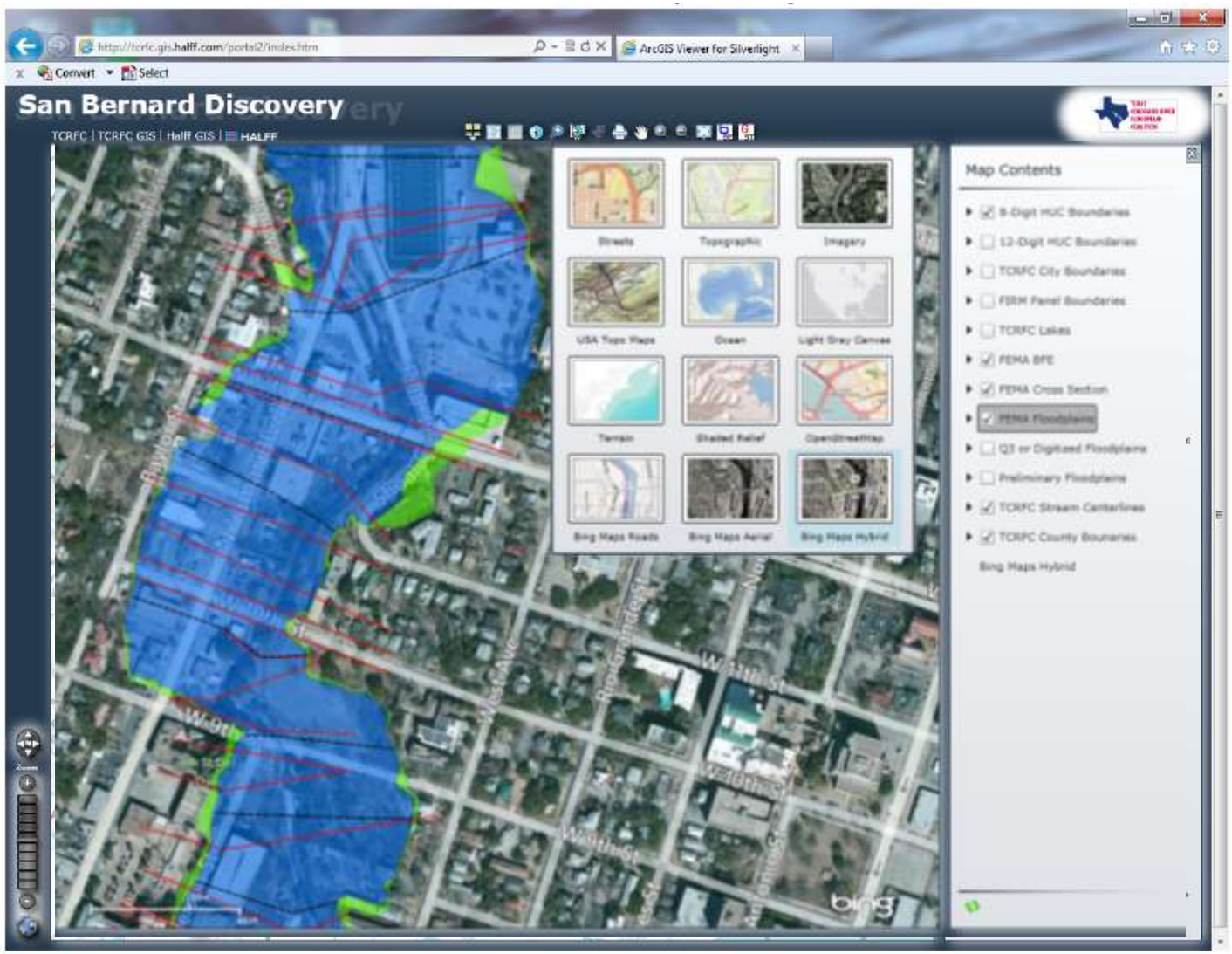
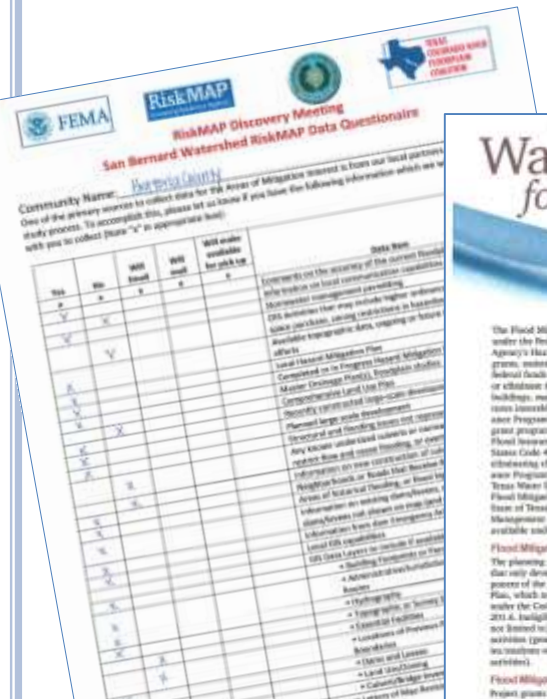
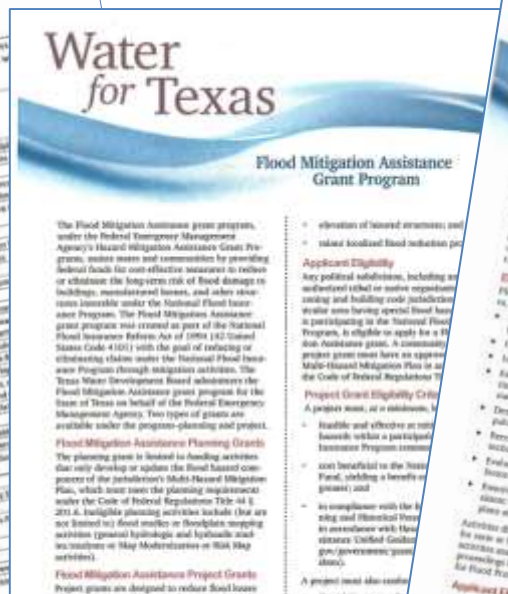
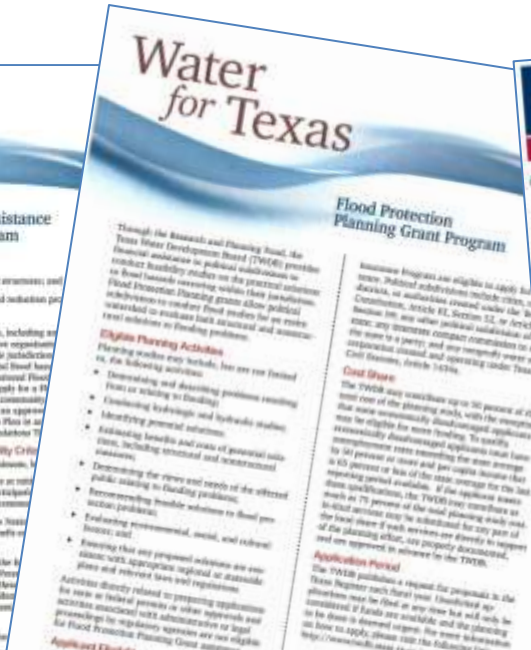


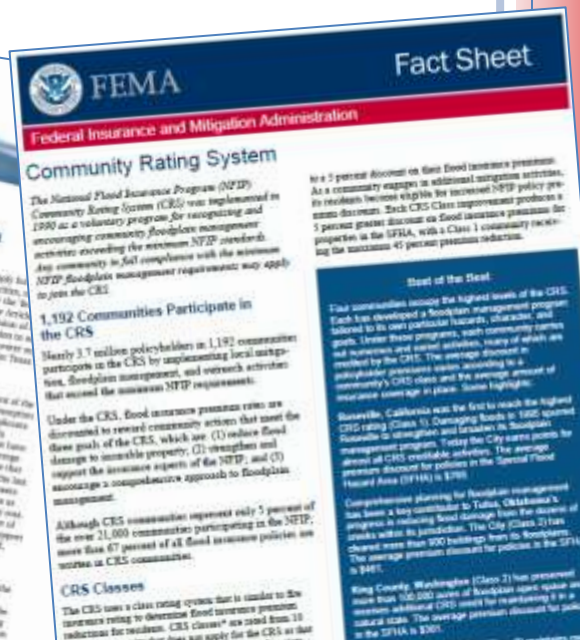
Discovery Meeting

- Goals:
  - Gather information
    - Local flood risks and hazards
    - Current mitigation
  - Provide information
    - Mitigation planning and actions
    - Risk Communication



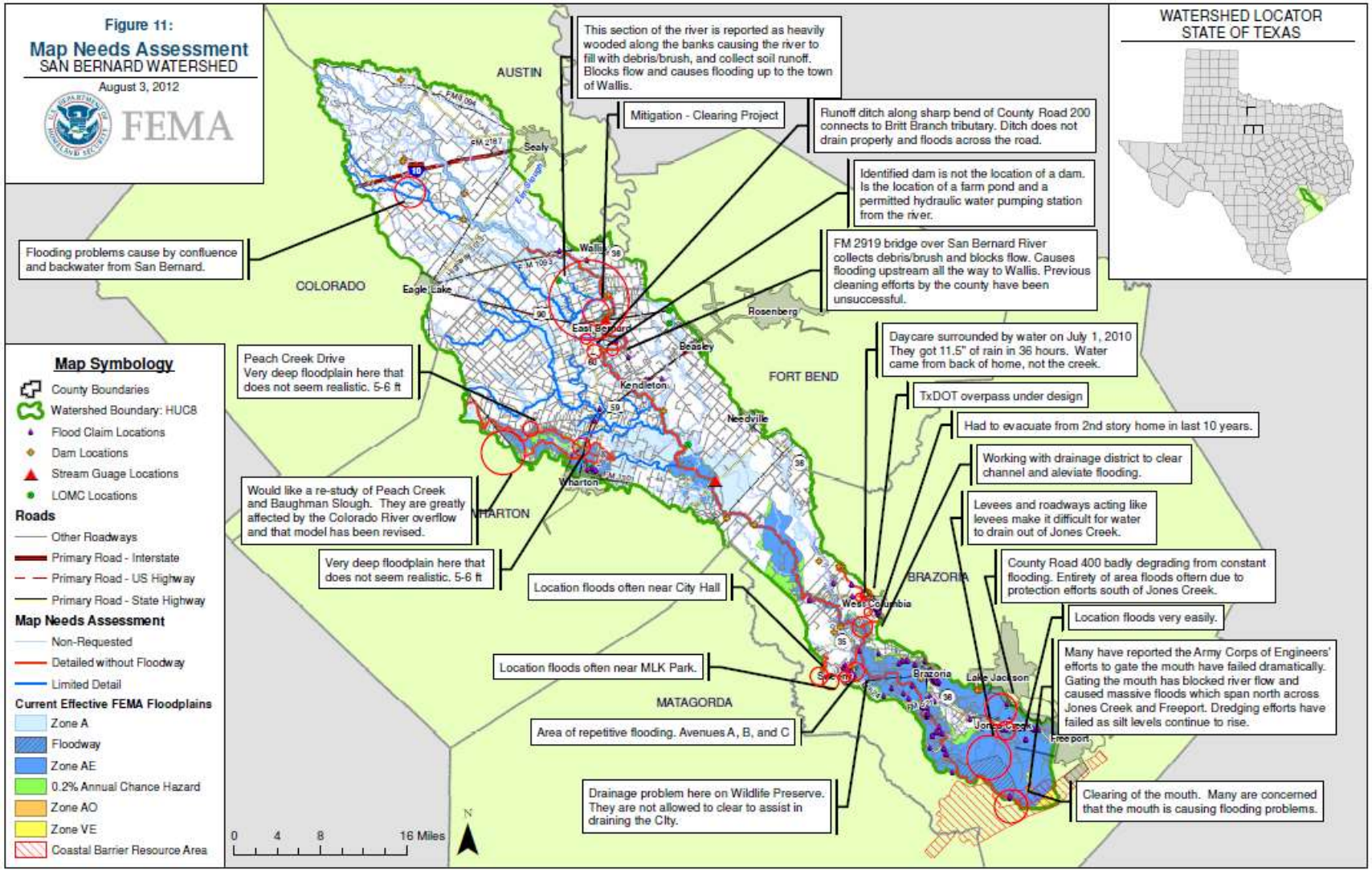






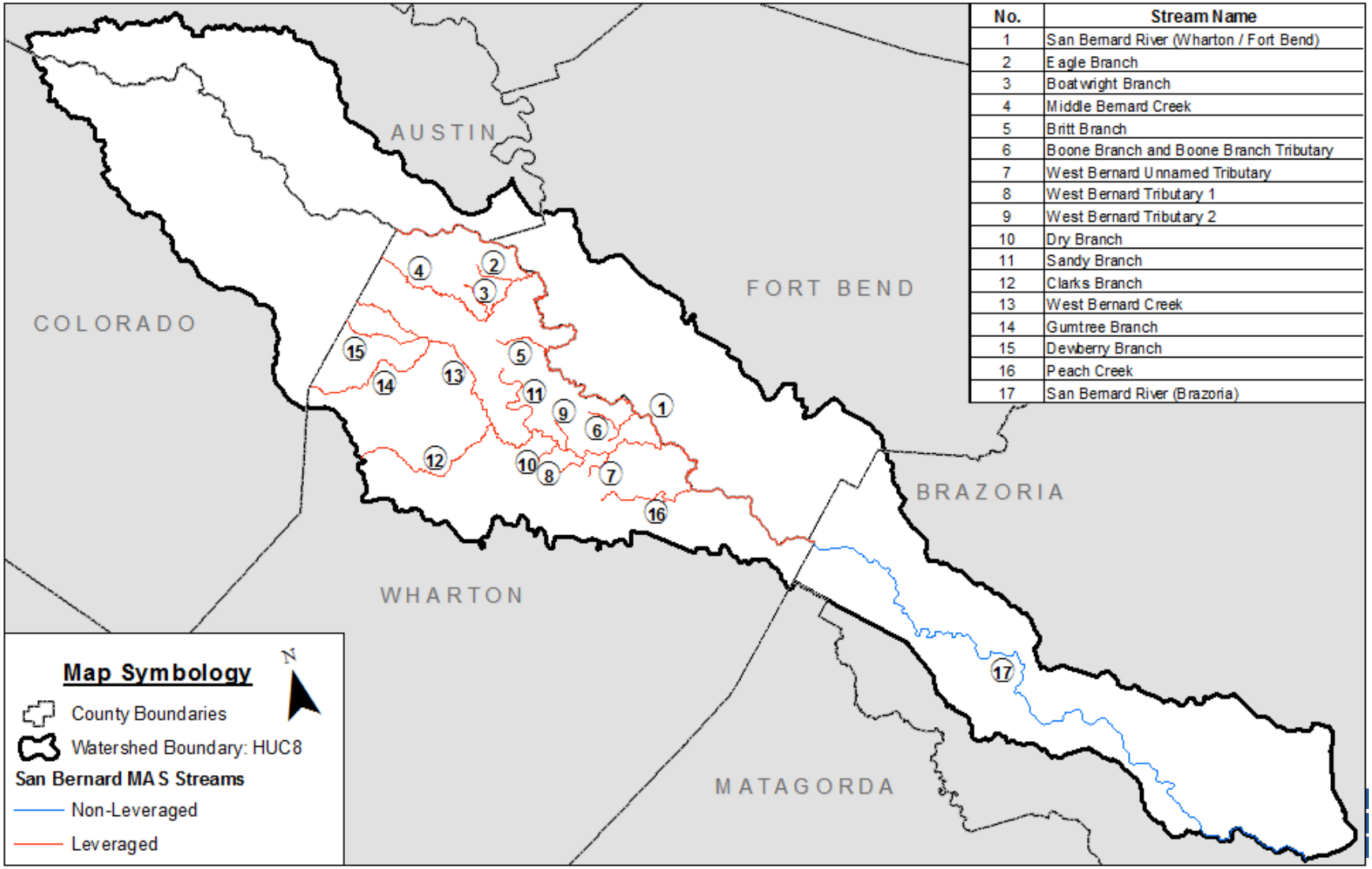
Texas Water Development Board

Discovery Data Collection



PH2&3: Engineering & Mapping

- 72 miles of Detailed Study / 128 miles of Limited Detailed Study



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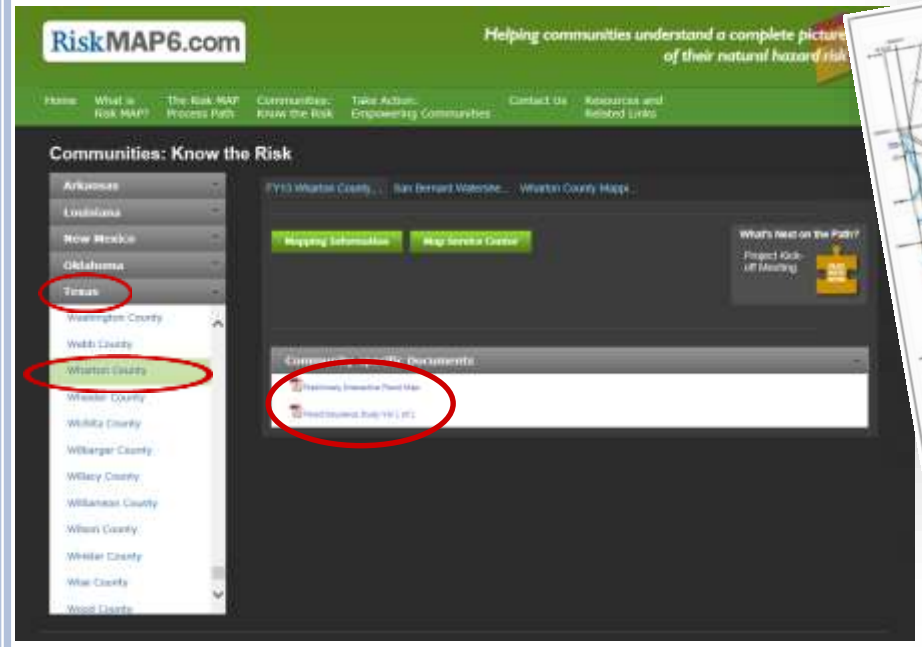
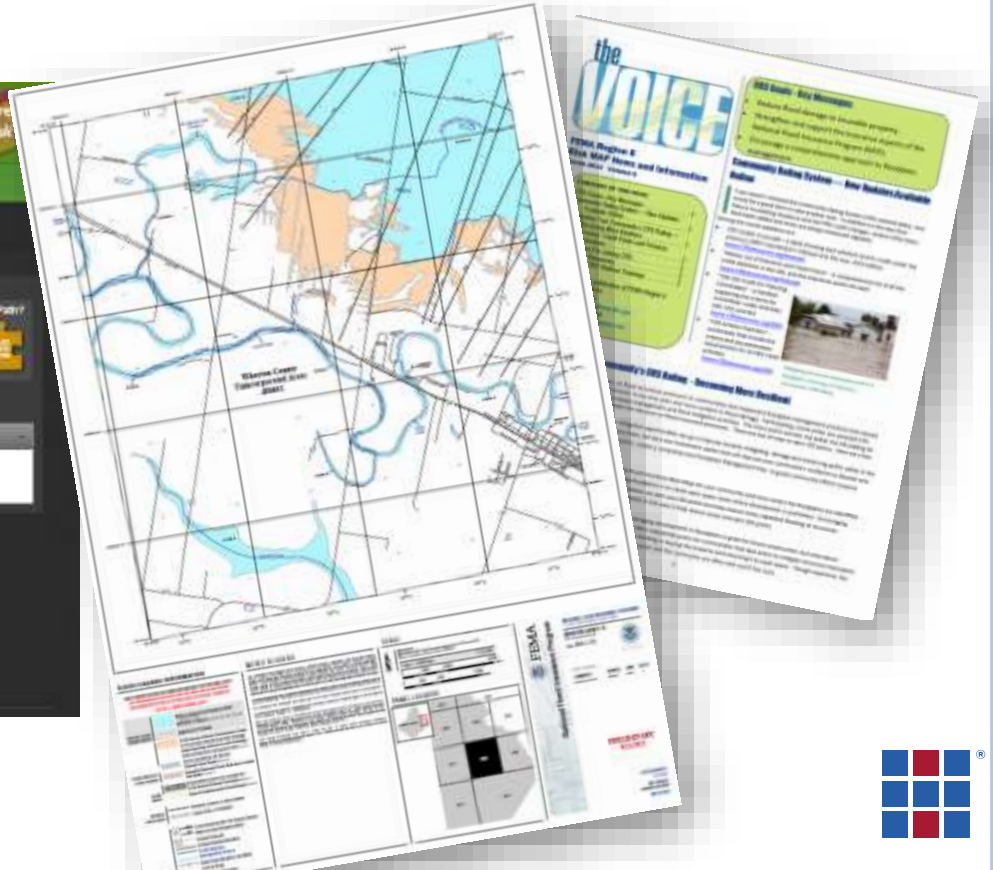
16	Peach Creek
17	San Bernard River (Brazoria)

Risk Communication

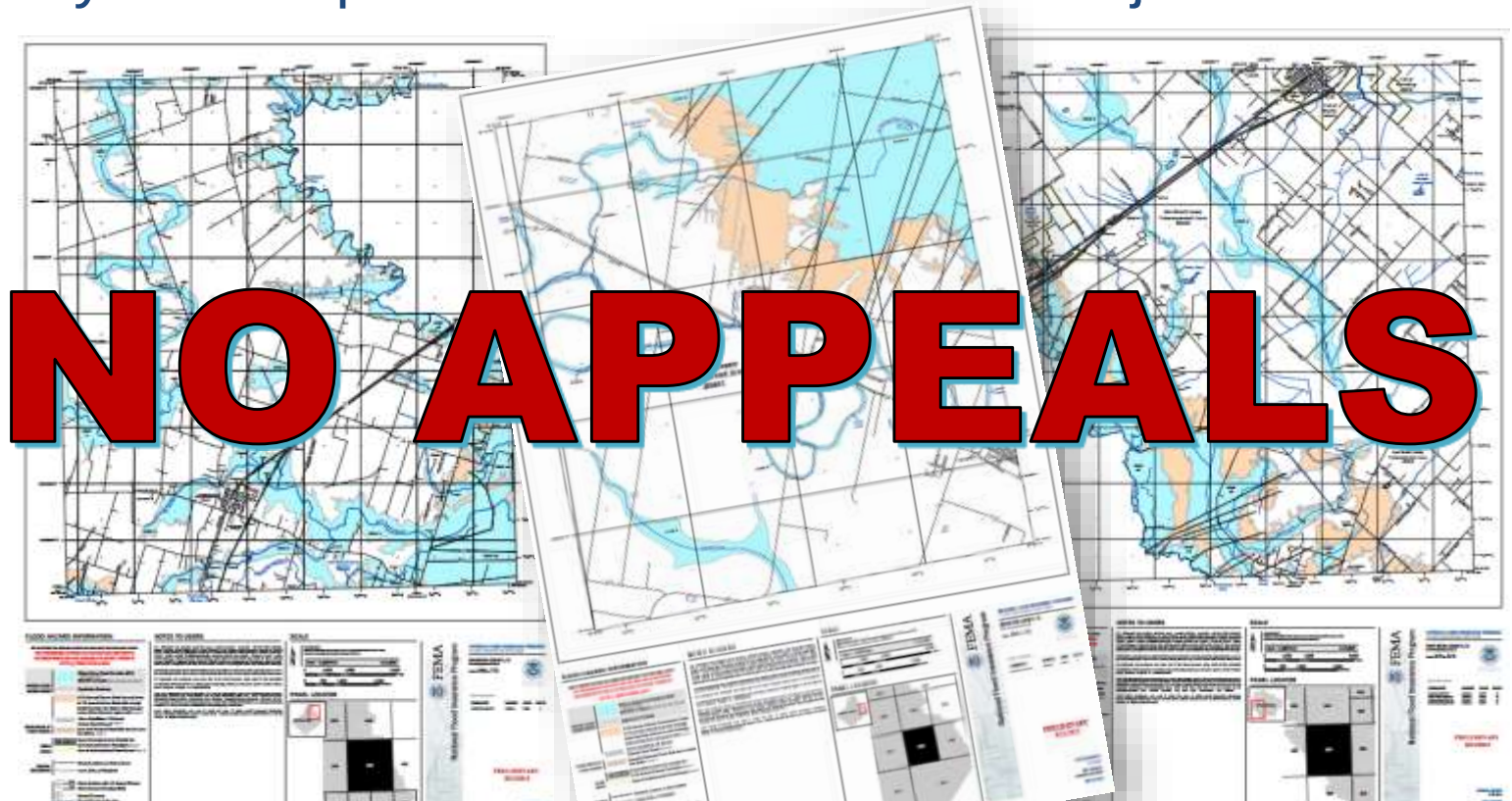
- TCRFC Outreach Tools
  - Newsletters, Newsblasts, Website & Web Map
- FEMA Outreach Tools
  - Newsletters, Fact Sheets, Handouts, Web Map, & Flood Maps





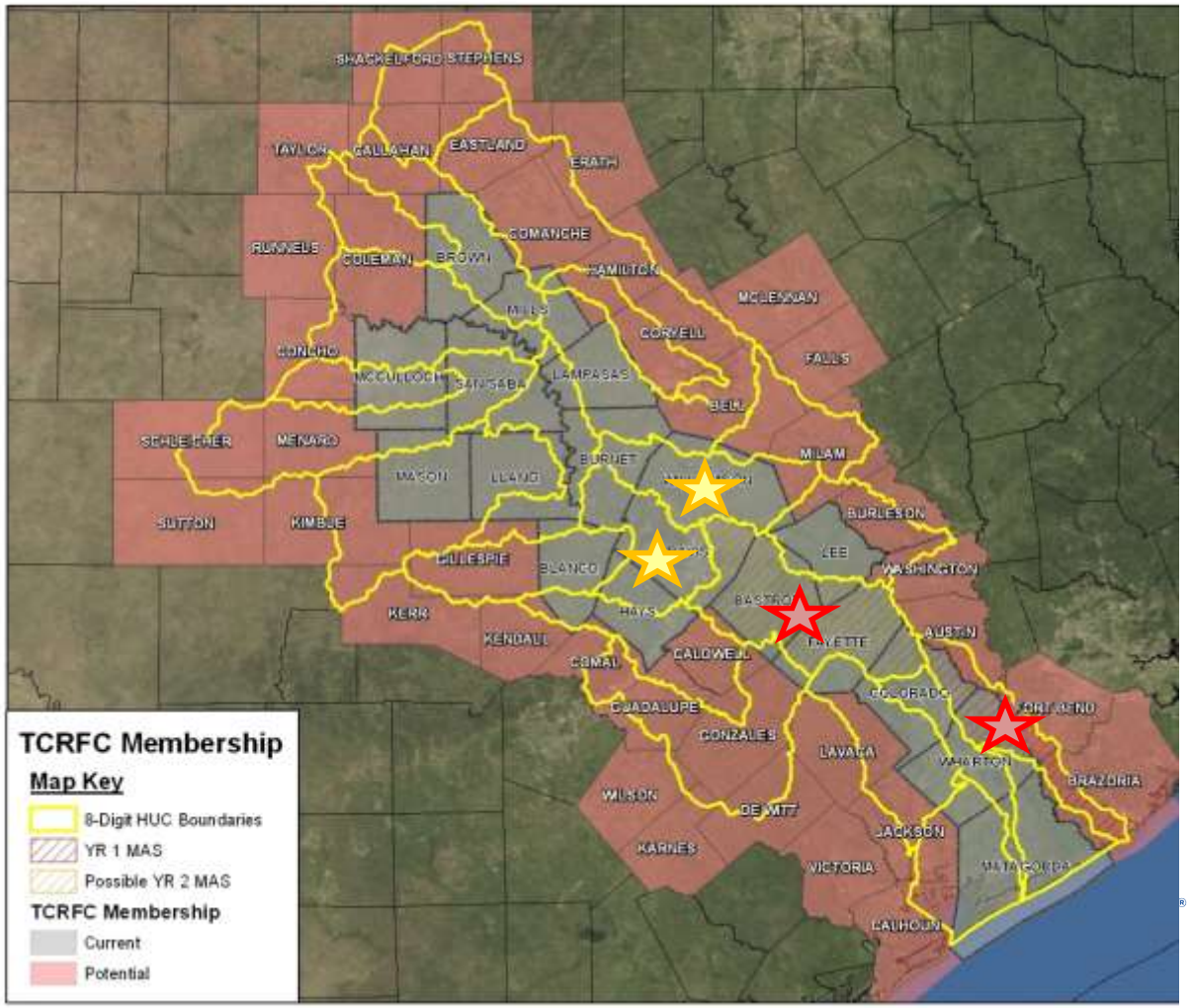
RESULTS

- Mapping Update
  - Wharton County: 22 Panels / 2 Communities
  - Fort Bend County: 5 Panels / 4 Communities
- Included and coordinated the release of a FEMA Physical Map Revision with this CTP Project



Texas Water Development Board

Lessons Learned

Potential Future Collaboration

- TCRFC / TWDB
  - YR 1 MAS – San Bernard HUC
  - Potential MAS – Colorado-Cummins HUC
- FEMA
  - Austin-Travis Lakes HUC
  - San Gabriel HUC