

# Discovery Report

*Lower West Fork Trinity River, HUC 12030102*

*Dallas, Ellis, Hood, Johnson, Parker, Tarrant, and Wise Counties, Texas*

*Community Listing Available on Page i*

*05.09.2014*



# FEMA

# Project Area Community List

Community Name	CID
<b>Dallas County</b>	480165
Cedar Hill, City of	480168
Dallas, City of	480171
Duncanville, City of	480173
Grand Prairie, City of	485472
Grapevine, City of	480598
Irving, City of	480180
<b>Ellis County</b>	480798
Cedar Hill, City of	480168
Grand Prairie, City of	485472
Mansfield, City of	480606
Midlothian, City of	480801
Venus, City of	480883
<b>Hood County</b>	480356
Cresson, City of	480177
<b>Johnson County</b>	480879
Alvarado, City of	480397
Briar Oaks, City of	480398
Burleson, City of	485459
Cresson, City of	480177
Cross Timber, Town of	481685
Crowley, City of	480591
Fort Worth, City of	480596
Joshua, City of	480882
Mansfield, City of	480606
Venus, Town of	480883
<b>Parker County</b>	480520
Aledo, City of	481659
Annetta North, Town of	481664
Annetta South, Town of	481665
Annetta, Town of	481660
Azle, City of	480584
Cresson, City of	480177
Fort Worth, City of	480596
Hudson Oaks, City of	480147
Weatherford, City of	480522
Willow Park, City of	481164
Community Name	CID
Tarrant County	480582

Community Name	CID
Arlington, City of	485454
Azle, City of	480584
Bedford, City of	480585
Benbrook, City of	480586
Blue Mound, City of	480587
Burleson, City of	485459
Colleyville, City of	480590
Crowley, City of	480591
Dalworthington Gardens, City of	481013
Edgecliff Village, Town of	480592
Eules, City of	480593
Everman, City of	480594
Forest Hill, City of	480595
Fort Worth, City of	480596
Grand Prairie, City of	485472
Grapevine, City of	480598
Haltom City, City of	480599
Haslett, City of	480600
Hurst, City of	480601
Irving, City of	480180
Keller, City of	480602
Kennedale, City of	480603
Lake Worth, City of	480605
Lakeside, Town of	480604
Mansfield, City of	480606
North Richland Hills, City of	480607
Pantego, Town of	481116
Richland Hills, City of	480608
River Oaks, City of	480609
Saginaw, City of	480610
Sansom Park, City of	480611
Southlake, City of	480612
Watauga, City of	480613
Westover Hills, Town of	480615
Westworth Village, City of	480616
White Settlement, City of	480617
<b>Wise County</b>	481051

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## Acronyms and Abbreviations

AAL	Average Annualized Loss
CDC	Corridor Development Certificate
CID	Community Identification Number
CNMS	Coordinated Needs Management Strategy
CRS	Community Rating System
EMC	Emergency Management Coordinator
ESRI	Environmental Systems Research Institute
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FY	Fiscal Year
G&S	Guidelines and Specifications for Flood Hazard Mapping Partners
GIS	Geographic Information System
HAZUS	Hazards U.S.
HUC	Hydrologic Unit Code
HWM	High Water Mark
LiDAR	Light Detection and Ranging

## Acronyms and Abbreviations (continued)

MNA	Map Needs Assessment
NFIP	National Flood Insurance Program
NHD	National Hydrologic Dataset
NRCS	Natural Resources Conservation Service
NVUE	New Validated or Updated Engineering
RAMPP	Risk Mapping, Assessment, and Planning Partners
RSC	Regional Service Center
Risk MAP	Risk Mapping, Assessment, and Planning Program
RL/SRL	Repetitive Loss / Severe Repetitive Loss
TNRIS	Texas Natural Resources Information System
TWDB	Texas Water Development Board
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USGS	United States Geological Survey

## I. Executive Summary

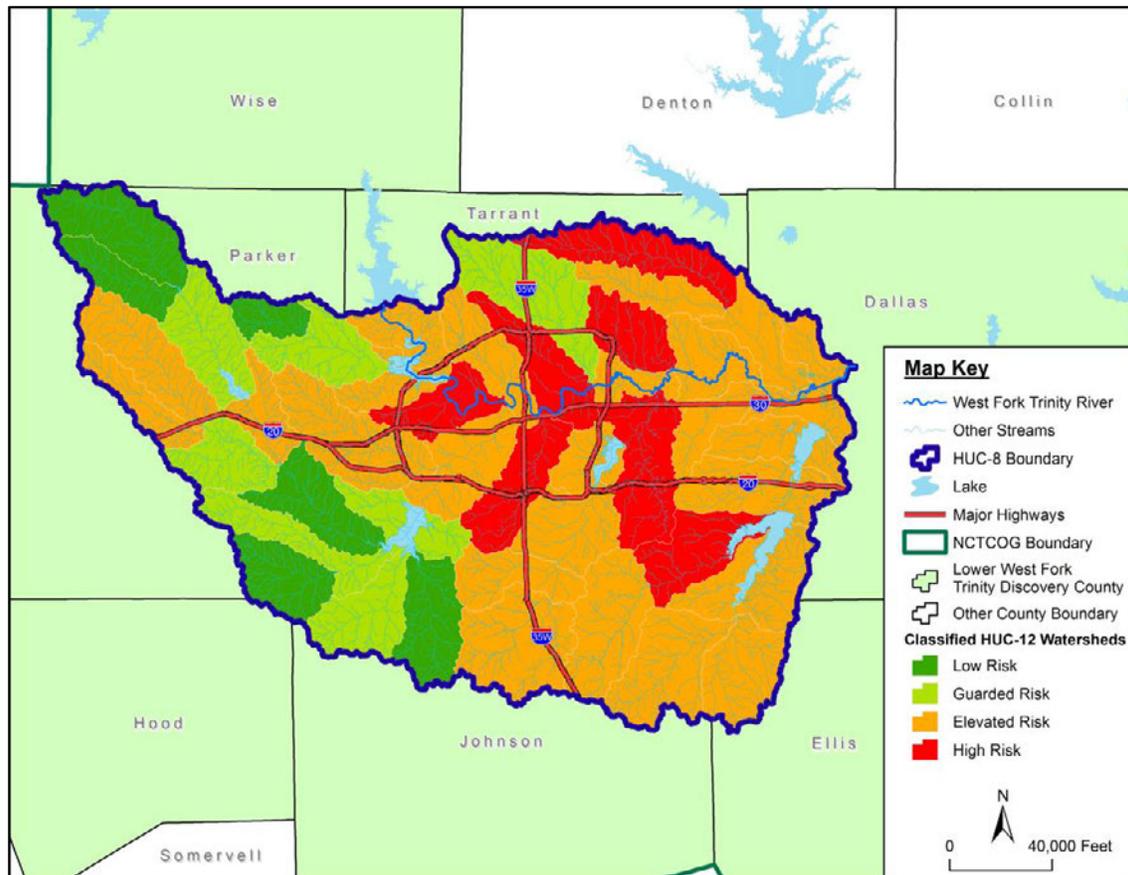
The Federal Emergency Management Agency (FEMA) is currently implementing the Risk Mapping, Assessment, and Planning (Risk MAP) Program across the nation. As part of the Risk MAP process, FEMA in partnership with the North Central Texas Council of Governments (NCTCOG) undertook the Discovery process in the Lower West Fork Trinity watershed to gather local information, 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 Hydrologic Unit Code-8 (HUC-8) Discovery watershed may/will be funded for further flood risk identification and assessment in a collaborative manner. The Discovery effort targets numerous local, regional, State, and Federal stakeholders from throughout the watershed to gather information about 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 Engagement Effort in this watershed was achieved by individual phone calls with local stakeholders as well as Pre-Discovery webinars. These Pre-Discovery webinars were used to provide information about the Discovery process. A key feature of the NCTCOG Discovery Engagement Effort was the 2009 Upper Trinity River Basin Map Needs Assessment (MNA) and data collection. The Map Needs Assessment included an unbiased prioritization of mapping needs throughout the basin. In an effort to gain public awareness of the Lower West Fork Trinity Discovery process, NCTCOG generated a Discovery newsletter, delivered it to all stakeholders within the watershed, posted information on the NCTCOG website, and held informational webinars for the Lower West Fork Trinity watershed.

Each stakeholder was encouraged to attend the Discovery meetings and become engaged in the Lower West Fork Trinity Discovery process. The Discovery meetings were held on May 29, 2013 in Fort Worth, Texas and on June 26, 2013 in Weatherford, Texas. The main goals of the Discovery meetings were 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.

Following the Discovery meetings, the identified mapping needs were prioritized similar to the 2009 Upper Trinity River Basin MNA prioritization. The ranking is a combination of Coordinated Needs Management Strategy (CNMS) criteria and guidance from the Texas Water Development Board (TWDB). This procedure is further explained in the following report. The results of the prioritization are illustrated in the figure below.



**HUC-12 Watershed Prioritization**

In addition to mapping needs, a summary of all the stakeholder comments including mapping, mitigation actions and concerns, and requests for community assistance were summarized. Potential mitigation actions and FEMA-based metrics were added to this summary to help identify projects that may/will be funded. Please see Table 15 for a full list of watershed prioritizations. This data will also be used to update the CNMS Database.

### Lower West Fork Potential Watershed Projects

HUC-8	Project FY	HUC-12 Watershed Group	Community	Milestones	Owner
Lower West Fork	FY14	Big Bear Creek 2 Flood Risk Identification Project	<ul style="list-style-type: none"> <li>• Colleyville (2.68 stream miles)</li> <li>• Grapevine (2.24 stream miles)</li> <li>• Southlake (8.61 stream miles)</li> </ul>	<ul style="list-style-type: none"> <li>• Perform CTP tasks</li> </ul>	<ul style="list-style-type: none"> <li>• NCTCOG CTP</li> </ul>
Lower West Fork	Future FY	Big Bear Creek 1 Flood Risk Identification Project	<ul style="list-style-type: none"> <li>• Euless (1.12 stream miles)</li> <li>• Grapevine (10.24 stream miles)</li> </ul>	<ul style="list-style-type: none"> <li>• Perform CTP tasks</li> </ul>	<ul style="list-style-type: none"> <li>• NCTCOG CTP</li> </ul>
Lower West Fork	Future FY	Big Bear Creek 5 Flood Risk Identification Project	<ul style="list-style-type: none"> <li>• Keller (7.94 stream miles)</li> <li>• Southlake (8.61 stream miles)</li> </ul>	<ul style="list-style-type: none"> <li>• Perform CTP tasks</li> </ul>	<ul style="list-style-type: none"> <li>• NCTCOG CTP</li> </ul>
Lower West Fork	Future FY	Farmers Branch-West Fork Trinity 4 Flood Risk Identification Project	<ul style="list-style-type: none"> <li>• Fort Worth (4.68 stream miles)</li> <li>• Westworth Village (2.21 stream miles)</li> <li>• White Settlement (5.58 stream miles)</li> </ul>	<ul style="list-style-type: none"> <li>• Perform CTP tasks</li> </ul>	<ul style="list-style-type: none"> <li>• NCTCOG CTP</li> </ul>
Lower West Fork	Future FY	Headwaters Walker Branch 1 Flood Risk Identification Project	<ul style="list-style-type: none"> <li>• Arlington (0.64 stream miles)</li> <li>• Bedford (4.7 stream miles)</li> <li>• Euless (0.94 stream miles)</li> <li>• Fort Worth (4.1 stream miles)</li> <li>• Hurst (1.62 stream miles)</li> </ul>	<ul style="list-style-type: none"> <li>• Perform CTP tasks</li> </ul>	<ul style="list-style-type: none"> <li>• NCTCOG CTP</li> </ul>
Lower West Fork	Future FY	Headwaters Walker Branch 4 Flood Risk Identification Project	<ul style="list-style-type: none"> <li>• North Richland Hills (2.67 stream miles)</li> </ul>	<ul style="list-style-type: none"> <li>• Perform CTP tasks</li> </ul>	<ul style="list-style-type: none"> <li>• NCTCOG CTP</li> </ul>

Several potential Targeted Actions were identified during the Discovery Process. These actions are opportunities for continued involvement with those stakeholders in the Lower West Fork Trinity watershed. The Targeted Actions were entered into FEMA’s Mitigation Action Tracker on May 9, 2014. Additional effort should be made to encourage the handful of communities within the watershed not currently participating to join the National Flood Insurance Program (NFIP) and to encourage interested communities to join the Community Rating System (CRS) Program.

**Targeted Actions**

Action Item	Focus Area	Community	Milestones	Deadline	Owner
Encourage non-participating communities to join NFIP	Regional	<ul style="list-style-type: none"> <li>• Town of Annetta North</li> </ul>	<ul style="list-style-type: none"> <li>• Increase outreach to non-participating communities</li> <li>• Hold informational workshops for non-participating communities</li> <li>• Identify number of properties within the floodplain in non-participating communities</li> <li>• Assist communities with preparing application documents</li> <li>• Assist communities with developing/adopting floodplain management regulations</li> </ul>	<ul style="list-style-type: none"> <li>• Workshops by March 2015</li> <li>• Continuous effort to assist with regulations</li> </ul>	NCTCOG & FEMA
Promote adoption of higher standards	Regional	<ul style="list-style-type: none"> <li>• Communities that have not participated in TFMA Higher Standards Survey</li> </ul>	<ul style="list-style-type: none"> <li>• Target outreach to communities to participate in TFMA Survey</li> <li>• Assist communities with selecting/adopting higher standards</li> </ul>	<ul style="list-style-type: none"> <li>• Annual</li> <li>• In conjunction with CRS efforts</li> </ul>	NCTCOG & FEMA
Encourage non-participating communities to join CRS program	Regional	See Table 13 for list of non-participating communities	<ul style="list-style-type: none"> <li>• Hold informational workshop for all non-participating communities</li> <li>• Hold in-depth workshop on application preparation for interested communities</li> <li>• Assist communities with preparing application</li> <li>• Form FAST-CRS Users group for DFW metroplex to promote sharing of knowledge and resources</li> </ul>	<ul style="list-style-type: none"> <li>• Workshops by March 2015</li> <li>• Continuous support for application renewal</li> </ul>	NCTCOG & FEMA
Assist communities with development of Hazard Mitigation Plan	Regional	See area below Table 6 for list of communities without an approved hazard mitigation plan	<ul style="list-style-type: none"> <li>• Verify community hazard plan status</li> <li>• Hold workshops with communities to develop HMP, with efforts focused on flood hazards</li> <li>• Hold workshops with communities to update HMP</li> <li>• Hold workshops to train community staff on how to implement and uphold HMP</li> </ul>	<ul style="list-style-type: none"> <li>• Workshops by March 2015</li> <li>• Continuous support for plan updates and renewal</li> </ul>	NCTCOG & FEMA

### Targeted Actions

Action Item	Focus Area	Community	Milestones	Deadline	Owner
Promote adoption of <i>integrated</i> Stormwater Management (iSWM) program	Regional	All communities within NCTCOG area	<ul style="list-style-type: none"> <li>• Promote iSWM roundtable and establish regional outreach/education program</li> <li>• Assist communities with adopting iSWM standards</li> </ul>	<ul style="list-style-type: none"> <li>• Continuous support for interested communities</li> </ul>	NCTCOG
Update NCTCOG RiskMAP business plan annually	Watershed	All communities within NCTCOG area	<ul style="list-style-type: none"> <li>• Hold Public Works Roundup and Floodplain Administrators roundtable meetings to gain stakeholder feedback</li> <li>• Continue Floodplain Management Task Force for Trinity River Common Vision Program</li> <li>• Collect feedback, concerns, and needs from communities</li> <li>• Incorporate community feedback into annual plan submitted to FEMA</li> </ul>	<ul style="list-style-type: none"> <li>• Annually</li> <li>• Prepare Draft Plan by end of each year (Dec 2014)</li> <li>• Finalize updated plan in Spring annually</li> </ul>	NCTCOG

Overall, the Lower West Fork Trinity Discovery process was successful in gathering and documenting information about flood risk, flood hazards, mitigation plans, mitigation activities, flooding history, development plans, and floodplain management activities to help FEMA and the communities identify areas that may be funded for further flood risk identification and assessment.

## II. Discovery Overview

FEMA is currently implementing the Risk MAP Program across the nation. The purpose of Risk MAP is continued improvement of flood hazard information for the National Flood Insurance Program (NFIP), the promotion of increased national awareness and understanding of flood risk and the support of Federal, State, and local mitigation actions to reduce risk.

The vision and intent of the Risk MAP program is to, through collaboration with State and Local entities, deliver quality data that increases public awareness and leads to mitigation actions that reduce risk to life and property. To achieve this vision, FEMA has transformed its traditional flood identification and mapping efforts into a more integrated process of more accurately identifying, assessing, communicating, planning and mitigating flood risks. Risk MAP attempts to address gaps in flood hazard data and form a solid foundation for risk assessment, floodplain management, and provide State and Local entities with information needed to mitigate flood related risks.

The FEMA Region VI office, in partnership with the NCTCOG began the Discovery process in the Lower West Fork Trinity watershed in April 2013 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. Halff Associates, Inc. (Halff) was selected as the NCTCOG's contractor to perform these Risk MAP services in the Lower West Fork Trinity watershed, a United States Geological Survey (USGS) 8-digit Hydrologic Unit Code (HUC-8) watershed.

Through the Discovery process, FEMA can determine which areas of the HUC-8 Discovery watersheds may/will be funded for further flood risk identification and assessment in a collaborative manner while taking into consideration the information collected from local communities during this process. Discovery initiates open lines of communication and relies on local involvement for productive discussions about flood risk. The process provides a forum for a watershed-wide effort to understand the interrelationships between upstream and downstream community flood risks throughout the watershed. In Risk MAP, projects are analyzed on a watershed basis; Discovery Meetings target numerous stakeholders from throughout the watershed on local, regional, State, and Federal levels.

In May 2013 and June 2013, FEMA, the State, NCTCOG and Halff held a series of Pre-Discovery informational webinars, as well as two Discovery Meetings in the watershed area. During Discovery, the NCTCOG and Halff reached out to local communities to:

- Gather information about local flood risk and flood hazards
- Review current and historic mitigation plans to understand local mitigation capabilities, hazard risk assessments, and current or future mitigation activities
- Include multi-disciplinary staff from within their community to participate and assist in the development of a watershed vision

## **i. Watershed Selection**

### ***North Central Texas Council of Governments History***

The NCTCOG is a proactive agency that has a long history of supporting floodplain **management** activities in the area comprising a 16-county region of North Central Texas, and covering over 24% of the population of the State of Texas. NCTCOG led and implemented new strategies over the past decades such as the Corridor Development Certificate (CDC) for local floodplain permit decision making along the Trinity River Corridor since 1993. NCTCOG has been a Cooperating Technical Partner (CTP) with FEMA since 2004. From providing critical Light Detection and Ranging (LiDAR) data for Map Modernization (Map Mod) activities to offering up-to-date floodplain management training for floodplain managers and community leaders in the region, NCTCOG has served as a key stakeholder for flood risk reduction in North Texas.

In 2009, NCTCOG worked with the TWDB to complete the Upper Trinity River Watershed Flood MNA study. This effort quantified unmet flood hazard mapping needs and helped plan for future flood mapping projects in our Region. The MNA project helped collect, process, and prioritize regional flood mapping needs and developed procedures and guidelines for a Statewide MNA process. The MNA project covered 12 NCTCOG counties either partially or fully and eight (8) other counties partially. The MNA effort identified 1,291 mapping requests representing 2,370 stream miles with an estimated cost of approximately \$44 million. NCTCOG and TWDB ensured that that 2009 MNA study integrated with FEMA/s Risk MAP. This effort is an essential component of Risk MAP Discovery and was used as a key basis for the selection of the Lower West Fork Trinity River Watershed. More information regarding the 2009 MNA project is included in the Engagement Efforts section of this report.

### ***Watershed Characteristics (Location, Topography, Soils, and Climate)***

The Lower West Fork Trinity Watershed is located in North Texas and covers portions of Dallas, Ellis, Hood, Johnson, Parker, Tarrant and Wise Counties. See Figure 1 for a location map of the Lower West Fork Trinity watershed. The watershed encompasses 55 communities covering approximately 1,513 square miles. The watershed is bound by the Upper West Fork Trinity, Denton and Elm Fork Trinity watersheds to the north, the Upper Trinity watershed to the east, the Chambers and Middle Brazos-Lake Whitney watersheds to the south and the Middle Brazos-Palo Pinto watershed to the west. The watershed is primarily drained by the West Fork Trinity River, which empties into the Trinity River. Some of the main tributaries include Bear Creek, Big Bear Creek, Big Fossil Creek, Clear Fork Trinity River, Cottonwood Creek, Deer Creek, Dixon Branch, Fish Creek, Indian Creek, Johnson Creek, Kirby Creek, Little Bear Creek, Marine Creek, Mountain Creek and Walnut Creek.

The Lower West Fork Trinity Watershed is an inland watershed that is characterized by undulating plains and hilly areas with scattered woods that are dissected by numerous streams. The watershed covers portions of the Blackland Prairies and Cross Timbers Prairies. The Blackland Prairies is characterized by oak, pecan, elm, bois d'arc and mesquite trees along with unproductive grasses. The Cross Timbers Prairies is characterized by uniform grasslands including Canada wildrye, hairy grama, Texas wintergrass and buffalograss. The area has been invaded by woody brush plants such as mesquite, juniper and oak. Annual rainfall in the basin ranges from 30 to 40 inches per year. The soils include "cracking clays", loams, and claypans. The majority of the soils in the watershed are well-drained with erosion, creating serious problems in grazing areas. These soils are well suited for agricultural uses.

## **Population / Land Use**

According to the 2010 U.S. Census estimates, the population within the watershed is approximately 2,378,000 people. Figure 5 displays the Lower West Fork Trinity Watershed population density. The watershed is primarily used for pasture as displayed in Figure 6. It contains both open spaces and major metropolitan areas. There is a large amount of urban cover in this watershed as depicted in Figure 7. There are 55 incorporated communities within the watershed. The percent population change from 2000 to 2010 is displayed in Figure 8.

## **Current Effective Floodplains**

The effective dates for the Flood Insurance Rate Maps (FIRMs) and Flood Insurance Studies (FIS) for Collin, Cooke, Dallas, Denton, Grayson, Montague, and Wise Counties are listed below in Table 1. These floodplain information for these counties are displayed in Figure 9. All counties were updated to Digital FIRM (DFIRMs) as part of the FEMA's Map Mod program that began in 2004. Several new engineering studies were conducted in addition to redelineation with updated topography to update these maps.

**Table 1: Current Effective Floodplain Data**

<b>County</b>	<b>Status</b>	<b>Preliminary Date</b>	<b>Effective Date</b>
Dallas	Initial Preliminary (Map Mod), Revised Preliminary (Map Mod), Dallas CTP FY10	6/22/2007 9/28/2010, 8/15/2012	7/7/2014
Ellis	Effective	1/12/2010	6/2/2013
Hood	Effective	12/23/2009	8/16/2012
Johnson	Effective	1/4/2010	12/4/2012
Parker	Effective	5/11/2007	9/26/2008
Tarrant	Effective	5/31/2007	9/25/2009
Wise	Effective	8/31/2009	12/16/2011

## **Available Topographic Data**

The available topographic data in the Lower West Fork Trinity watershed is comprised of four (4) sources. The watershed is mostly covered by Light Detection and Ranging (LiDAR) data. There are three sources of LiDAR within the basin: City of Grand Prairie LiDAR obtained in 2009, NCTCOG LiDAR obtained in 2001 and Dallas/Fort Worth LiDAR obtained in 2009. USGS topographic data is available for those portions of the watershed not covered by LiDAR. These areas are also displayed in Figure 10.

## **Coordinated Needs Management Strategy (CNMS) / FEMA Library Information**

The CNMS Inventory provides an overview of the status and attributes of existing studies within FEMA's floodplain inventory. It also provides some insight on certain physiological, climatological, or engineering methodological factors that may have changed since the date of the effective study. These attributes and change factors are considered when assigning each study a "validation status." Studies categorized as "Valid" are studies that contribute to FEMA's New Validated or Updated Engineering (NVUE) metric. Studies categorized as "Unverified" are studies that have yet to be assessed by FEMA. The CNMS classifications for the 2013 Lower West fork Trinity Watershed Discovery are displayed on Figure 5.

The CNMS inventory documents 197 miles of "valid" studies and 2,860 miles of "unverified" studies within the Lower West Fork Trinity watershed. 242 of the "unverified" studies are categorized with a subtype of "being studied", and 2,618 "unverified" miles are categorized with a subtype of "to be studied".

## ***Disaster Declarations / Flood Insurance Claims / Repetitive Losses/Severe Repetitive Loss Properties***

The Lower West Fork Trinity watershed has experienced a high number of disaster declarations in the last 60 years. Table 2 below provides details of these disaster declarations. These disasters often produce flooding events that leave high water marks. High water marks provide a reference point for planning and mitigation efforts in the area. TNRIS maintains a database of historical high water marks. There are 349 documented high water marks within the Lower West Fork Trinity watershed. These are shown on Figure 11.

**Table 2: Summary of Disaster Declarations**

<b>Date of Declaration</b>	<b>Hazard</b>	<b>Affected Counties</b>
5/15/1953	Tornado and Heavy Rain	Dallas, Wise
6/19/1953	Flood	Dallas, Wise
7/1/1954	Flood	Dallas, Wise
4/29/1957	Hurricane, Rain, Wind, Hail and Floods	Dallas, Wise
6/6/1958	Tornadoes, Ran, Hail and Floods	Dallas, Wise
7/8/1959	Floods	Dallas, Wise
7/15/1960	Heavy Rains, Hail, Floods and Tornadoes	Dallas, Wise
9/19/1961	Hurricane Carla	Dallas, Wise
9/24/1963	Hurricane Cindy	Dallas, Wise
5/12/1966	Severe storms and flooding	Dallas, Tarrant
11/30/1974	Severe Storms & Flooding	Parker
7/28/1979	Storms and Flash Floods	Dallas
10/23/1981	Severe Storms and Flooding	Wise
10/23/1981	Severe Storms & Flooding	Parker, Tarrant
5/19/1989	Severe Storms, Tornadoes and Flooding	Dallas, Wise, Ellis, Hood, Johnson, Parker, Tarrant
5/2/1990	Severe Storms, Tornadoes and Flooding	Dallas, Wise, Ellis, Hood, Johnson, Parker, Tarrant
12/26/1991	Severe Thunderstorms	Dallas, Wise, Hood, Johnson, Parker, Tarrant
9/10/1993	Extreme Fire Hazard	Dallas, Wise, Ellis, Hood, Johnson, Parker, Tarrant
4/29/1994	Severe Storms and Tornadoes	Dallas
2/23/1996	Extreme Fire Hazard	Dallas, Wise, Parker, Tarrant
6/23/1998	Fire	Dallas, Wise
8/26/1998	Tropical Storm Charley	Dallas, Wise, Ellis, Hood, Johnson, Parker, Tarrant
8/31/1999	Midlothian Fire	Ellis
9/1/1999	Extreme Fire Hazard	Dallas, Wise, Ellis, Hood, Johnson, Parker, Tarrant
1/3/2000	Saddleback Fire	Wise
4/7/2000	Severe Storms, Tornadoes and Flooding	Tarrant
10/3/2000	TX – Quail Run Fire – 10/03/00	Parker
1/5/2001	TX – Alsbury Fire - 8/29/00	Johnson
2/1/2003	Loss of the Space Shuttle Columbia	Dallas
2/1/2003	Loss of the Space Shuttle Columbia	Dallas, Ellis, Hood, Johnson, Parker, Tarrant
9/2/2005	Hurricane Katrina Evacuation	Dallas, Wise, Ellis, Hood, Johnson, Parker, Tarrant
9/21/2005 – 9/24/2005	Hurricane Rita	Dallas, Wise, Ellis, Hood, Johnson, Parker, Tarrant
12/28/2005	Kennedale Fire	Tarrant
1/11/2006	Extreme Wildfire Threat	Dallas, Wise

**Table 2: Summary of Disaster Declarations**

Date of Declaration	Hazard	Affected Counties
1/11/2006	Extreme Wildfire Threat	Dallas, Ellis, Hood, Johnson, Parker, Tarrant
1/19/2006	Huntington Brook Fire	Johnson
2/5/2006	Venus Fire Complex	Ellis
6/29/2007	Severe Storms, Tornadoes and Flooding	Wise
6/29/2007	Severe Storms, Tornadoes and Flooding	Ellis, Hood, Parker, Tarrant
8/18/2007	Hurricane Dean	Dallas, Tarrant
3/14/2008	Wildfires	Dallas, Wise, Ellis, Hood, Johnson, Parker, Tarrant
8/29/2008	Hurricane Gustav	Dallas, Tarrant
9/10/2008	Hurricane Ike	Dallas, Wise, Ellis, Parker, Tarrant
6/18/2011	County Line Fire	Ellis
5/15/2013	Tornadoes and Severe Storms	Hood

Source: FEMA, 2013. "Disaster Declarations for Texas". <http://www.fema.gov/disasters/grid/state-tribal-government/24>

There are a number of NFIP insurance claims located within the Lower West Fork Trinity watershed. Table 3 summarizes this information. In addition to NFIP claims, there are several Repetitive Loss (RL) and Severe Repetitive Loss (SRL) properties within the watershed. A large number of these RL/SRL properties are located in the City of Fort Worth. Table 4 summarizes the RL/SRL locations by county and community within the watershed. The locations of these RL/SRL properties are displayed in Figure 12.

**Table 3: NFIP Loss Information**

Community	CID	Population	Total Losses	Open Losses	Closed Losses	CWOP* Losses	Total Payments
Alvarado	480397	3,785	3	2	0	1	\$1,457
Aledo	481659	2,716	2	2	0	0	\$131,034
Arlington	485454	365,438	825	629	0	196	\$17,628,321
Azle	480584	10,947	49	39	0	10	\$1,114,627
Bedford	480585	46,979	56	31	0	25	\$158,730
Benbrook	480586	21,234	76	49	0	25	\$371,931
Blue Mound	480587	2,394	3	2	0	1	\$21,811
Burleson	485459	36,690	41	35	0	6	\$774,011
Cedar Hill	480168	45,028	20	13	0	0	\$208,187
Colleyville	480590	22,807	45	30	0	15	\$352,252
Crowley	480591	12,838	2	2	0	0	\$10,677
Dallas	480171	1,197,816	909	639	1	269	\$11,574,114
Dallas County	480165	2,368,139	79	60	0	19	\$1,162,928
Dalworthington Gardens	481013	2,259	5	3	0	2	\$20,261
Duncanville	480173	38,524	70	44	0	26	\$419,108
Edgecliff Village	480592	2,776	15	10	0	5	\$72,919
Ellis County	480798	149,610	44	37	0	7	\$670,424
Eules	480593	51,277	107	88	1	18	\$2,766,694
Everman	480594	6,108	51	41	0	10	\$605,249
Forest Hill	480595	12,355	19	12	0	7	\$145,600

Table 3: NFIP Loss Information

Community	CID	Population	Total Losses	Open Losses	Closed Losses	CWOP*	Total Payments
Fort Worth	480596	741,206	495	371	1	123	\$3,670,194
Grand Prairie	485472	175,396	322	274	0	48	\$6,652,734
Grapevine	480598	46,334	43	33	0	10	\$897,801
Haltom City	480599	42,409	121	87	0	34	\$3,310,971
Haslet	480600	1,517	2	1	0	1	\$2,646
Hood County	480356	51,182	66	42	0	24	\$672,764
Hurst	480601	37,337	110	84	0	26	\$1,183,663
Irving	480180	216,290	154	117	0	37	\$883,496
Johnson County	480879	150,934	77	67	1	9	\$1,447,705
Joshua	480882	5,910	2	2	0	0	\$4,699
Keller	480602	39,627	49	41	0	8	\$1,085,246
Kennedale	480603	6,763	18	16	0	2	\$116,642
Lake Worth	480605	4,584	1	1	0	0	\$3,952
Lakeside	480604	997	1	0	0	1	\$0
Mansfield	480606	56,368	114	96	0	18	\$3,697,038
Midlothian	480801	18,037	1	0	0	1	\$0
North Richland Hills	480607	63,343	110	86	0	24	\$714,307
Pantego	481116	2,394	9	5	0	4	\$33,720
Parker County	480520	116,927	96	84	0	12	\$1,146,917
Richland Hills	480608	7,801	97	78	0	19	\$1,135,260
River Oaks	480609	7,427	4	4	0	0	\$67,028
Saginaw	480610	19,806	7	7	0	0	\$111,200
Sansom Park	480611	4,686	1	1	0	0	\$12,760
Southlake	480612	26,575	18	15	0	3	\$146,392
Tarrant County	480582	1,809,034	212	174	1	37	\$3,675,285
Watauga	480613	23,497	84	67	0	17	\$530,215
Weatherford	480522	25,250	45	39	0	6	\$724,077
Westover Hills	480615	682	2	2	0	0	\$5,406
White Settlement	480617	16,116	93	80	0	13	\$2,045,222
Willow Park	481164	3,982	1	1	0	0	\$4,362

Source: National Flood Insurance BureauNet, Loss Information as of 3/1/2014. <http://bsa.nfipstat.fema.gov>.

Population data is from 2010 Census

\*CWOP – Closed Without Payment

**Table 4: Summary of Repetitive Loss and Severe Repetitive Loss Claims**

Community Name*	Number of RL/SRL Properties	Total Claims
<b>Dallas County</b>		
Grand Prairie, City of	37	23
Irving, City of	9	3
<b>Johnson County</b>		
Alvarado, City of	2	-
<b>Parker County</b>		
Aledo, City of	1	-
<b>Tarrant County</b>		
Arlington, City of	40	13
Azle, City of	9	4
Bedford, City of	5	1
Benbrook, City of	4	1
Burleson, City of	1	-
Fort Worth, City of	42	13
Grand Prairie, City of	15	23
*No claims found for communities not listed. Numbers reflect claims within watershed only.		

Source: FEMA Repetitive Loss/Severe Repetitive Loss Dataset, as of 12/31/2012

### ***Average Annualized Loss (AAL)***

HAZUS is FEMA’s methodology for estimating potential losses from disasters such as earthquakes, floods, and hurricanes. FEMA’s 2010 HAZUS Flood AAL study is a nationwide Level 1 analysis because it utilized national datasets (30-meter Digital Elevation Models, 2000 US Census, etc.). The results of the 2010 AAL study are best used at the county level rather than neighborhood or parcel level. Figure 13 displays the potential annualized loss risk resulting from the 2010 HAZUS study. The majority of the watershed is considered very low risk with a few isolated areas higher risk. It should be noted that the highest AAL for any Lower West Fork Trinity census tract was \$4,117,000.

FEMA also uses a risk decile to calculate risk. This risk decile is calculated per HUC-8 based on nine parameters including: total population density, historical population growth, predicted population growth, housing units, flood policies, single claims, RL, and declared disasters. The risk decile scale is a ranking of 1 to 10, with 1 being the highest and 10 being the lowest level of risk. Table 5 below displays the National Risk Decile ranking for the Lower West Fork Trinity watershed. The Texas Geographic Society has generated a Texas Hazard Mitigation Package information that includes a risk based on population vulnerability to the 1 percent annual chance flood event. This risk layer is displayed in Figure 14.

**Table 5: National Risk Decile Ranking**

Lower West Fork Trinity Risk Decile Rankings
Population: 2,378,000
National Risk Factor Rank: 24
National Risk Percentage: 0-25%
National Risk Decile: 1
National Risk Factor: 0.00482

Source: Texas Hazard Mitigation Plan, 2013

***Hazard Mitigation Plans***

There are a number of Mitigation Plans throughout the Lower West Fork Trinity Watershed. Table 6 lists FEMA-approved plans and communities that have adopted one of the approved plans.

**Table 6: Mitigation Plan Status**

Organization and Plan	Date Approved by FEMA	Expires	Included Communities
State of Texas Hazard Mitigation Plan	October 21, 2010	October 15, 2016	
City of Arlington	August 12, 2009	October 15, 2014	
City of Benbrook	June 22, 2012	August 27, 2017	
City of Fort Worth	November 6, 2008	January 6, 2014	Lakeside, Azle, Blue Mound, Dalworthington Gardens, Edgecliff Village, Everman, Fort Worth, Haslet, Keller, Kennedale, Lake Worth, NCTCOG, River Oaks, Saginaw, Sansom Park, Westlake, Westover Hills, Westworth Village, White Settlement, Unincorporated Tarrant County
City of Grand Prairie	December 16, 2011	January 26, 2017	
City of Mansfield	June 7, 2010	June 7, 2015	
City of North Richland Hills	February 2, 2012	March 21, 2017	
City of Southlake	TBD	TBD	
Tarrant County Mid-Cities	September 18, 2008	September 18, 2013	Bedford, Euless, Grapevine, Hurst, Richland Hills, Haltom City

Communities without a Hazard Mitigation Action Plan include:

- Alvarado
  - Briaroaks
  - Burleson
  - Colleyville
  - Cresson
- Cross Timber
  - Crowley
  - Forest Hill
  - Irving
  - Joshua
- Midlothian
  - Pantego
  - Venus
  - Watauga
  - Westover Hills

### III. Discovery Efforts

#### i. Engagement Effort

The Lower West Fork Trinity Engagement Effort was completed throughout the Pre-Discovery efforts of the Regional Project Team. Table 7 lists the regional project staff.

**Table 7: Regional Project Team**

Organization	Name	Project Role
FEMA R6 – Risk Analysis	Matt DuBois	Project Monitor (PM) / Risk Analysis
FEMA R6 – Risk Analysis	David Reiff	Mitigation Planning
FEMA R6 – Risk Analysis	Ron Wanhanen	Risk Analysis
FEMA R6 – Risk Analysis	Shona Gibson	Risk Analysis
FEMA R6 – Floodplain Management & Insurance	Dale Hoff	NFIP Administrator / Compliance
FEMA R6 – Hazard Mitigation Assistance	Brianne Schmidtke	Grants
USACE	Jerry Cotter	USACE – Fort Worth District
Cooperating Technical Partner – North Central Texas Council of Governments (NCTCOG)	Jack Tidwell	CTP
Cooperating Technical Partner – North Central Texas Council of Governments (NCTCOG)	Leo Valencia	CTP
Cooperating Technical Partner – North Central Texas Council of Governments (NCTCOG)	Jessica Baker	CTP Contractor
Cooperating Technical Partner – North Central Texas Council of Governments (NCTCOG)	Catherine Rowley	CTP Contractor
State of Texas – NFIP Coordinator/TWDB	Michael Segner	NFIP Coordinator
State of Texas – State Hazard Mitigation Officer	Johnna Cantrell	SHMO
State of Texas – Texas Water Development Board (TWDB)/TNRIS	Ben Buchanan	Floodplain Mapping and Data Support
Production and Technical Services Contractor – RAMPP	Elizabeth Levitz	RAMPP Study Manager (SM)
Production and Technical Services Contractor – RAMPP	Charla Marchuk	RAMPP Discovery Team Member

The Engagement Effort allowed all Regional Project Team members to understand the history of the watershed and highlighted recent engagements with the FEMA Mitigation Division. It included information about mitigation planning, active and closed grants, insurance policy information, and socio-economic overviews of the communities and a review of the recent mapping initiatives within the watershed.

The Engagement Effort in this watershed was slightly different from the standard FEMA Engagement efforts. Contact efforts targeted local, regional, State, and Federal stakeholders

throughout the watershed. State and Federal Congressional stakeholders are listed in Table 8 and shown on Figures 2, 3, and 4. All possible efforts were made to ensure that stakeholders understood Discovery and the Risk MAP processes. See the Pre-Discovery section for more information on engagement efforts.

**Table 8: Lower West Fork Trinity River Congressional Stakeholders**

State and Federal Congressional Stakeholders		
US Senators		
	Senator John Cornyn	
	Senator Ted Cruz	
US Representatives		
	District 6	Representative Joe Barton
	District 11	Representative Mike Conaway
	District 12	Representative Kay Granger
	District 13	Representative Mac Thornberry
	District 24	Representative Kenny Marchant
	District 25	Representative Roger Williams
	District 26	Representative Michael Burgess
	District 30	Representative Eddie Bernice Johnson
	District 33	Representative Marc Veasey
State Representatives		
	District 10	Representative Jim Pitts
	District 58	Representative Rob Orr
	District 60	Representative Jim Keffer
	District 61	Representative Phil King
	District 90	Representative Lon Burnam
	District 91	Representative Stephanie Kick
	District 92	Representative Jonathan Stickland
	District 93	Representative Matt Krause
	District 94	Representative Diane Patrick
	District 95	Representative Nicole Collier
	District 96	Representative Bill Zedler
	District 97	Representative Craig Goldman
	District 98	Representative Giovanni Capriglione
	District 99:	Representative Charlie Geren
	District 101:	Representative Chris Turner
	District 103	Representative Rafael Anchia
	District 104	Representative Roberto Alonzo
	District 105	Representative Linda Harper-Brown
	District 109	Representative Helen Giddings
	District 111	Representative Yvonne Davis
	District 115	Representative Bennett Ratliff
State Senators		
	District 9	Senator Kelly Hancock
	District 10	Senator Wendy Davis

**Table 8: Lower West Fork Trinity River Congressional Stakeholders**

State and Federal Congressional Stakeholders		
	District 12	Senator Jane Nelson
	District 16	Senator John Carona
	District 22	Senator Brian Birdwell
	District 23	Senator Royce West
	District 30	Senator Craig Estes

Source: Texas Legislative Council, 2013

A key feature of the NCTCOG engagement process in the Lower West Fork Trinity Watershed Discovery effort was the Upper Trinity River Basin Map Needs Assessment and data collection.

### **Upper Trinity River Basin Map Needs Assessment Project (2009)**

The NCTCOG, along with the TWDB and the Texas Natural Resources Information Service (TNRIS), conducted the Map Needs Assessment Project for the Upper Trinity Watershed in 2009, with a summary document prepared in August 2009. During this process, TWDB and NCTCOG built a database of prior, current, and planned engineering flood studies. Over 2,300 stream miles of floodplain mapping needs were gathered from the NCTCOG member communities. The map needs collection process occurred in three phases: notification, map needs collection, and map needs prioritization.

Three methods were utilized to notify stakeholders at the time and location of the regional meetings where map needs collection was to take place. These methods included the creation of a website to provide a central location for information about outreach and activity updates, informational brochures, and letters that were distributed to project stakeholders prior to the project meetings.

#### ***Stakeholder Notification and Input***

Project meetings were held to collect map needs from watershed communities. The Project Team conducted five (5) stakeholder outreach and open house meetings throughout the NCTCOG region as part of the MNA process. Stakeholders invited to these meetings included community officials and managers, city/county engineers, and floodplain managers. The meetings are listed below in Table 9. A presentation was given by Halff, which included the approach to be used in updating floodplain mapping and details of the map needs collection process. The presentation also included a discussion of the FEMA Coordinated Needs Management Strategy (CNMS) criteria as well as prioritization criteria to be used to rank the map needs. Several laptops were set up at the meeting locations with a GIS-based map needs collection tool developed by Halff. A Halff representative sat with each community representative, collected, and documented map needs into the database.

The Upper Trinity MNA prioritization was based on a combination of CNMS criteria and guidance from the TWDB. The next task was to prioritize the collected map needs.

**Table 9: 2009 Upper Trinity Watershed Map Needs Assessment Meetings**

Meeting Date	Location
July 13, 2009	Upper Trinity Regional Water District Board Room, Lewisville, TX
July 15, 2009	Decatur Civic Center, Decatur, TX
July 21, 2009	William J. Pitstick Executive Board Room, NCTCOG Offices, Arlington, TX
July 23, 2009	DalTrans Building at the TxDOT Dallas District Campus, Mesquite, TX
August 4, 2009	NCTCOG Offices, Arlington, TX

### ***Needs Collection***

At the outreach meetings, the stakeholders were introduced to the MNA project and asked to provide input about their mapping requests and needs. Communities unable to attend one of the five (5) scheduled meetings were given the opportunity to meeting with a project representative to input their needs at a location convenient to them. These meetings were conducted by community request only.

The Project Team facilitated breakout sessions so that each stakeholder had the opportunity to meeting one-on-one with a team member to walk through the map needs request process. Each community had the opportunity to verify their scoping requests gathered during the initial FEMA Map Mod scoping process. Additionally, the communities were able to record their new mapping requests, data availability, and interest in being a financial partner. Scoping requests not validated by stakeholders were retained as mapping requests, but their source has been identified as information obtained from the Map Mod scoping meetings.

All mapping requests from the stakeholders were input directly into the MNA database during the one-on-one breakout sessions. To facilitate the input of all requested information associated with a map need, an interface was created for ESRI's ArcMap environment. This interface provided an efficient way to capture and store the mapping requests.

### ***Map Needs Prioritization***

The NCTCOG MNA prioritization was based on a combination of CNMS criteria and guidance from the TWDB. A score was calculated for each map need based on the thirteen (13) objective prioritization criteria presented in Table 10. Establishing the prioritization criteria listed below was an iterative process between Halff and the TWDB.

**Table 10: 2009 Upper Trinity Watershed Map Needs Prioritization Criteria**

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

Source: 2009 North Central Texas Council of Governments Upper Trinity River Basin Map Needs Assessment

The MNA Project identified 1,291 new mapping requests across 2,370 miles of stream. These requests reflect approximately \$44 million in flood mapping needs across the MNA Project area.

## ii. Pre-Discovery Efforts

NCTCOG contacted all watershed stakeholders via emails and phone calls prior to the Discovery meeting.

### Pre-Discovery Webinars

Halff and NCTCOG held three (3) informational webinars on May 16, 2013 for local stakeholders. A copy of the webinar presentation is included in the Appendix.

The Pre-Discovery informational webinars were held to increase awareness of the Discovery process prior to the Discovery meeting so that the stakeholders would be prepared to fully participate in the Discovery process. The goals of the Pre-Discovery webinars were to:

- Explain the Discovery processes
- Explain why the NCTCOG was performing a study in the Lower West Fork Trinity watershed
- Explain FEMA's Risk MAP program and benefits
- To obtain information for Discovery in the watershed

### Outreach and Media

In an effort to gain public awareness of the Lower West Fork Trinity Discovery process, a Discovery newsletter was developed, and the information posted on the NCTCOG website as well as FEMA Region VI's along with RiskMAP6.com. The newsletter contained information about FEMA's Risk MAP program, the Discovery process, the details of the Discovery meeting, the data collection process, and the Risk MAP process beyond Discovery. This newsletter also provided links to the NCTCOG website and maps.

The NCTCOG's website at [www.nctcog.org](http://www.nctcog.org) for the Lower West Fork Trinity Discovery Project also included pages that allowed stakeholders to register for Discovery meetings. Stakeholders were also able to view information on other concurrent Discovery efforts in the region. The newsletter, Discovery map, Draft Discovery Report, and meeting presentations were all posted to this site as well as RiskMAP6.com.

### iii. Data Gathering Overview

Data collection is a significant part of the Discovery process. Data and information were requested from all stakeholders to provide a holistic view of flooding issues, flood risk, and flood mitigation capabilities within the watershed.

#### Watershed-wide Geospatial Data

Most data collected was from State and Federal organizations. Table 11 below summarizes the geospatial data collected. All geospatial data is available in Supplemental Data.

**Table 11: Lower West Fork Trinity Geospatial Data Collection**

Data Type	Data Source	Data Description
HUC Watershed Boundaries	USGS	HUC boundaries clipped to the Lower West Fork Trinity HUC-8. Also includes HUC10 and HUC12.
Roadways and Railroads	TNRIS Stratmap	Transportation Lines
Jurisdictional Boundaries	TNRIS	Data includes City and County Boundaries
Current Effective Floodplain Information	FEMA DFIRMs	Data includes Floodplains, BFEs, and Cross Sections
Stream Lines	FEMA DFIRMs	Stream Centerlines from DFIRM
Locations of Letters of Map Revision (LOMRs)	FEMA	LOMRs incorporated into Effective DFIRM databases for watershed counties
Coordinated Needs Management Strategy	FEMA	CNMS Database dated 5/07/2013
Topography	TNRIS	List of the most current ground surface topography, available on Figure 10
HAZUS-based Average Annualized Loss Estimates	FEMA	2010 HAZUS AAL per Census Tract
Coverage of Known Risk Assessment Data	Texas Hazard Mitigation Package	Based on 2000 Census : Population Vulnerability to 1% Flood and Property Value Vulnerability to 1% Flood
Location of Dams	National Inventory of Dams	Dam locations with Emergency Action Plan (EAP) status
Stream Gauges	USGS	Stream Gauge locations
Flood Claims	NFIP	Claims from 1993 to 2003
Repetitive Loss or Severe Repetitive Loss Locations	FEMA	RL/SRL locations from 1979 to 2012
Land Use	Nation Land Cover Database 2006 from TNRIS	Land Use data as of 2006, developed by USGS
Urban Cover	Nation Land Cover Database 2006 from TNRIS	Urban Cover is a field located in the Land Use
Census Tract Population Data	US Census Bureau	2010 population census
Population Density	US Census Bureau	Population density based on 2010 census
Congressional Areas	US Census Bureau	Congressional District Boundaries
High Water Marks	TNRIS	Historical high water marks obtained by TNRIS from USACE, FEMA Mitigation Team, USGS, and TxDOT

**Table 11: Lower West Fork Trinity Geospatial Data Collection**

Data Type	Data Source	Data Description
Low Water Crossings	TNRIS	Low water crossings obtained by TNRIS from newspaper articles, Flood Insurance Study (FIS) Reports, and TxDOT
Map Needs Assessment	TWDB, NCTCOG	Updated list of mapping needs throughout the Lower West Fork Trinity Watershed

***Grants / Hazard Mitigation Plans / Current Mitigation Activities***

The City of Arlington was able to obtain a Flood Protection Planning Grant from the TWDB in 2010 to update hydrology and hydraulics for the Cottonwood Creek and Fish Creek watersheds. The City also evaluated structural and non-structural alternatives to alleviate flooding hazards. The City of Kennedale received a Flood Protection Planning Grant from the TWDB in 2011 to perform hydrology and hydraulic analysis updates in the Village Creek watershed. The City of Fort Worth received a Flood Protection Planning Grant from the TWDB in 2011 to perform hydrology and hydraulic analysis updates in the Stream MSC-2 watershed. Fort Worth also evaluated structural and non-structural alternatives to alleviate flood hazards within the watershed.

As described in the *Watershed Selection* section of this report, all communities within the Lower West Fork Trinity watershed are covered under a Hazard Mitigation Plan. It is possible that all or many of these Hazard Mitigation Plans were generated using Flood Mitigation Assistance Grants. In addition to mitigation plans, many of the communities are performing mitigation activities. These mitigation activities include warning systems, channel clearing, upgrading storm drain systems, etc. A few of these mitigation activities have been funded using State and Federal grants; however, the majority of the activities are locally funded. All communities were excited to learn about the available grant programs to assist in these efforts.

***NFIP and Community Rating System Cooperation***

All communities within the Lower West Fork Trinity watershed are active in the National Flood Insurance Program (NFIP), however only eight (8) communities are active in the Community Rating System (CRS) Program. Table 12 shows communities that currently hold a CRS rating. Figure 16 illustrates participating CRS communities in the watershed. Communities that receive a CRS Ranking of 8 receive approximately 10% savings per year in flood insurance premiums. Table 13 shows potential insurance premium savings for those communities listed in Figure 16 as not currently participating in the CRS Program.

**Table 12: CRS Communities**

Community	CRS Rating
City of Arlington	7
City of Benbrook	6
City of Burleson	7
City of Cleburne	8
City of Fort Worth	8
City of Grand Prairie	5
City of Hurst	7
City of North Richland Hills	6

Source: FEMA Community Rating Systems Communities, May 2013

Table 13: Potential CRS Savings

Community Name	No. Insurance Policies	Premium Cost	Potential 10% Savings
City of Aledo	7	\$4,797	\$480
City of Alvarado	4	\$7,402	\$740
City of Azle	107	\$78,160	\$7,816
City of Bedford	169	\$94,466	\$9,447
City of Blue Mound	10	\$4,465	\$447
City of Briaroaks	3	\$1,128	\$113
City of Cedar Hill	108	\$79,203	\$7,920
City of Colleyville	187	\$89,917	\$8,992
City of Crowley	33	\$10,792	\$1,079
City of Dalworthington Gardens	23	\$14,026	\$1,403
City of Euless	164	\$133,422	\$13,342
City of Everman	88	\$68,383	\$6,838
City of Forest Hill	69	\$49,775	\$4,978
City of Godley	3	\$1,218	\$122
City of Grapevine	145	\$66,680	\$6,668
City of Haltom City	323	\$390,540	\$39,054
City of Haslet	10	\$7,236	\$724
City of Irving	708	\$618,245	\$61,825
City of Joshua	34	\$16,168	\$1,617
City of Keller	186	\$92,700	\$9,270
City of Kennedale	37	\$32,656	\$3,266
City of Lake Worth	11	\$5,863	\$586
City of Lakeside	5	\$1,203	\$120
City of Mansfield	236	\$122,210	\$12,221
City of Midlothian	23	\$18,095	\$1,810
City of Richland Hills	118	\$117,967	\$11,797
City of River Oaks	8	\$3,422	\$342
City of Saginaw	19	\$20,812	\$2,081
City of Sansom Park	2	\$2,185	\$219
City of Southlake	163	\$71,227	\$7,123
City of Venus	6	\$3,903	\$390
City of Watauga	108	\$72,413	\$7,241
City of Weatherford	133	\$96,700	\$9,670
City of Westworth Village	5	\$4,590	\$459
City of White Settlement	94	\$70,373	\$7,037
City of Willow Park	13	\$5,195	\$520
Dallas County	70	\$84,656	\$8,466
Ellis County	210	\$117,174	\$11,717
Hood County	471	\$288,667	\$28,867
Johnson County	315	\$192,900	\$19,290
Parker County	301	\$218,788	\$21,879
Tarrant County	525	\$396,362	\$39,636

**Table 13: Potential CRS Savings**

Community Name	No. Insurance Policies	Premium Cost	Potential 10% Savings
Town of Annetta	4	\$3,570	\$357
Town of Annetta South	1	\$1,936	\$194
Town of Edgecliff Village	38	\$33,064	\$3,306
Town of Pantego	17	\$12,039	\$1,204
Town of Westover Hills	4	\$2,658	\$266

Source: National Flood Insurance Bureau Net, Insurance Policy Statistics as of 2/28/2014. <http://bsa.nfipstat.fema.gov/reports/101.htm#TXT>

## iv. Discovery Meetings

Each Lower West Fork Trinity stakeholder was encouraged via phone calls and emails to attend at least one Discovery meeting. The first Discovery meeting occurred on May 29, 2013 at 9 am at the Tarrant County Public Health Administration building in Fort Worth, Texas. The second Discovery meeting occurred on June 26, 2013 at Chandor Gardens in Weatherford, Texas. Hosts of these meetings included FEMA, TWDB, NCTCOG, and Halff. The RAMPP team provided support staff for each meeting.

### Goals

The main goals of the Discovery meetings were to gather flood risk data; discuss the community's flooding history, development plans, flood mapping needs, and flood risk concerns; discuss the vision for the watershed's future, and the importance of mitigation planning and community outreach.

### Agenda

Upon arrival, stakeholders were greeted at the door and asked to sign in. Each stakeholder was provided a Community Backgrounder and Discovery Data Questionnaire. A "Community Ambassador" from the Discovery Team was assigned to each stakeholder attendee. Ambassadors assisted each stakeholder throughout the meeting in completing their Data Questionnaire and answering any questions they may have about the Discovery process. The Ambassador role helped communities feel welcome at the meeting and ensured that the Discovery Team would fully engage with the communities to learn as much about their flood risk and mitigation actions as possible. The Community Backgrounder sheet was developed for each stakeholder within the watershed to serve as a quick reference for community facts, flood risk information, policies, claims, dam/levees within the community, as well as providing a map for reference during Discovery meeting discussions.

The meetings were conducted over a three (3) hour period. A short presentation was led by Halff on the hour, each hour, during the meetings. The presentation included an introduction to FEMA's Risk MAP program and the Lower West Fork Trinity Watershed Discovery process. Following the presentation, stakeholders were encouraged to visit six (6) meeting stations in an open house format. The stations included:

- *Grants and Hazard Mitigation Planning* – information about available Federal and State Grant programs, Hazard Mitigation Planning, Emergency Action Plans, as well as implementation of projects.
- *NFIP Coordination* – information about the NFIP, NFIP's Community Rating System, Repetitive Loss Properties, as well as answering NFIP questions from attendees.

- *Risk Identification* – discussions identifying areas of growth or population change, and ways to mitigate that growth in relation to flood risks.
- *USACE Information* – discussion of current USACE projects in the region.
- *NCTCOG Programs* – information on NCTCOG programs available to stakeholders as well as answering NCTCOG questions from attendees.
- *Discovery and DFIRM Maps* – data collection process to capture information on identifying flood risk location and problems, areas of growth or planned development, answering floodplain questions, and identifying map need locations. Seven (7) large maps displaying flood hazards along with current effective countywide DFIRM panels were located at this station.

Prior to exiting the meeting, attendees were asked to stop by the checkout station. The checkout station enabled the Discovery Team to gather the Data Questionnaires as well as ensure the attendees had all of their questions answered.

Meeting data is included in Appendix B including: Presentation, sign in sheets, Community Backgrounders, Data Questionnaires, meeting photos, and Discovery maps.

### ***Post-Meeting Discovery Webinar***

Half and NCTCOG held a Post-Discovery meeting webinar on August 12, 2013 as an additional opportunity for local stakeholders to submit data and ask questions about the Discovery effort. This webinar was also an opportunity to reach out to those stakeholders who were unable to attend the Discovery Meetings but still wanted to participate. A copy of this webinar presentation is available in Appendix A.

## **v. Discovery Implementation**

The first Lower West Fork Trinity Discovery meeting was attended by ten (10) attendees representing seven (7) communities.

The second Lower West Fork Trinity Discovery meeting was attended by fifteen (15) attendees representing eight (8) communities.

All attendees were engaged in the station discussions where they provided input and information about local flood risk, flood hazards, mitigation plans, mitigation activities, flooding history, development plans, and floodplain management activities. Not only were attendees able to voice their own needs and concerns, they were able to listen to other communities concerns and needs which enabled them to spark watershed-wide discussions. As areas of risk were identified, station leaders were able to provide information about risk assessment and potential mitigation planning assistance.

### ***Summary of Stakeholder Comments***

The table below is a summary of stakeholder comments gathered from the Discovery meetings. The comments are categorized by the following types:

1. Flooding risk
2. Flooding risk / mitigation actions
3. Mapping concerns
4. Mapping needs
5. Mitigation actions – Identified
6. Mitigation actions – Completed
7. Regulations

Table 14, correlated with Figure 19, serves as a complete summary of stakeholder comments throughout the Discovery process.

**Table 14: Summary of Stakeholder Comments**

Item	Flooding Source	Information Provided by	Comment Type	Comment
1.01	Town Creek	Weatherford	Flooding Risk	Erosion issues in area
1.02	Willow Creek	Weatherford	Flooding Risk	Potential overtopping of road
1.03	Unnamed Tributary to Clear Fork Trinity River	Weatherford	Flooding Risk	Potential overtopping of road
1.04	Stream WF-7	Lakeside	Flooding Risk	Confederate Parkway - standing water at creek and SH-199
1.05	Hurricane Creek	Eules	Flooding Risk	Collapsed bridge on Hurricane Creek
1.06	Tributary BB-9	Southlake	Flooding Risk	Nuisance flooding from undeveloped land
1.07	Tributary BB-7	Southlake	Flooding Risk	Private dam is failing, came to city for help, HOA investigating EAP
2.01	Valley View Branch	Hurst and Fort Worth	Flooding Risk/Mitigation Action	Trinity Boulevard - TxDOT widened I-10. This could be a mitigation grant opportunity. Construction blocked 2 boxes of culvert to prevent (induce) downstream flooding in Fort Worth. Need a cooperative*
2.02	Stream WF-9	Richland Hills	Flooding Risk/Mitigation Action	Commercial property WF-9, study this flooding source, mitigate area to increase land area
2.03	Willow Creek (South Fork)	Kennedale	Flooding Risk/Mitigation Action	Salvage yards in floodway
2.04	Village Creek	Kennedale	Flooding Risk/Mitigation Action	City wants to request re-map of all streams in city limits upon completion of Master Plan
2.05	Plantation East Creek	Fort Worth	Flooding Risk/Mitigation Action	RL, some mitigation
2.06	Mary's Creek	Benbrook	Flooding Risk/Mitigation Action	RL properties - 3, some mitigation
2.07	Little Bear Creek	Eules	Flooding Risk/Mitigation Action	Large development including apartment buildings, restaurants and movie theater (Glade Parks)
2.08	Citywide	Kennedale	Flooding Risk/Mitigation Action	City wants to request re-map of all streams in city limits upon completion of Master Plan
3.01	Citywide	Fort Worth	Mapping Concern	40 open channel studies. Need new maps on Mary's Creek and tributaries. CTP funding exists for this.
3.02	Unnamed Tributary to Mary's Creek	Fort Worth	Mapping Concern	Revise DFIRM stream labels. Unnamed Tributary to Walnut Trib 2. 100 stream segments mislabeled
3.03	Clear Fork Trinity River	Benbrook	Mapping Concern	Mapping questionable, BFEs pulled across through no direct connection, possible split-flow area
3.04	Kirby Creek	Grand Prairie	Mapping Concern	CTP Study Stream

**Table 14: Summary of Stakeholder Comments**

Item	Flooding Source	Information Provided by	Comment Type	Comment
3.05	North Fork of Fish Creek	Grand Prairie	Mapping Concern	CTP Study Stream
3.06	Fish Creek	Grand Prairie	Mapping Concern	CTP Study Stream
3.07	Lynn Creek	Grand Prairie	Mapping Concern	CTP Study Stream
3.08	Unnamed Tributary to Walnut Creek 2	Grand Prairie	Mapping Concern	CTP Study Stream
3.09	Bowman Branch	Grand Prairie	Mapping Concern	CTP Study Stream
3.10	Unnamed Tributary to Walnut Creek 2	Grand Prairie	Mapping Concern	CTP Study Stream
3.11	Unnamed Tributary to Walnut Creek 2	Grand Prairie	Mapping Concern	CTP Study Stream
3.12	Mountain Creek	Grand Prairie	Mapping Concern	CTP Study Stream
3.13	Soap Creek	Grand Prairie	Mapping Concern	CTP Study Stream
3.14	Penwell Branch	Grand Prairie	Mapping Concern	CTP Study Stream
3.15	Bedford Branch	Grand Prairie	Mapping Concern	CTP Study Stream
3.16	Small Branch	Grand Prairie	Mapping Concern	CTP Study Stream
3.17	Bedford Branch	Grand Prairie	Mapping Concern	CTP Study Stream
3.18	Gifco Creek Tributary 2	Grand Prairie	Mapping Concern	CTP Study Stream
3.19	Gifco Creek Tributary 1	Grand Prairie	Mapping Concern	CTP Study Stream
3.20	Gifco Creek Tributary 3	Grand Prairie	Mapping Concern	CTP Study Stream
3.21	Gifco Creek	Grand Prairie	Mapping Concern	CTP Study Stream
3.22	Unnamed Tributary to Soap Creek	Grand Prairie	Mapping Concern	CTP Study Stream
3.23	Unnamed Tributary to Soap Creek	Grand Prairie	Mapping Concern	CTP Study Stream
3.24	Mills Branch	Grand Prairie	Mapping Concern	CTP Study Stream
3.25	Swadley River	Grand Prairie	Mapping Concern	CTP Study Stream
3.26	Stuart Branch	Grand Prairie	Mapping Concern	CTP Study Stream
3.27	Hollings Branch	Grand Prairie	Mapping Concern	CTP Study Stream
3.28	North Hollings Branch	Grand Prairie	Mapping Concern	CTP Study Stream
3.29	Unnamed Stream/Tributary	Grand Prairie	Mapping Concern	CTP Study Stream
3.30	Unnamed Tributary to Walnut Creek 2	Grand Prairie	Mapping Concern	CTP Study Stream
3.31	Taaffe Creek	Grand Prairie	Mapping Concern	CTP Study Stream
3.32	Alspaugh Branch (Stream 8C6)	Grand Prairie	Mapping Concern	CTP Study Stream
3.33	Cedar Creek (Stream 8C5)	Grand Prairie	Mapping Concern	CTP Study Stream
3.34	Fish Creek	Grand Prairie	Mapping Concern	CTP Study Stream
3.35	Bear Creek	Grand Prairie	Mapping Concern	CTP Study Stream
3.36	Dry Creek	Grand Prairie	Mapping Concern	CTP Study Stream
3.37	Stream 8A4	Grand Prairie	Mapping Concern	CTP Study Stream

**Table 14: Summary of Stakeholder Comments**

Item	Flooding Source	Information Provided by	Comment Type	Comment
3-38	Unnamed Stream/Tributary	Grand Prairie	Mapping Concern	CTP Study Stream
3-39	Unnamed Stream/Tributary	Grand Prairie	Mapping Concern	CTP Study Stream
3-40	Stream 8D3	Grand Prairie	Mapping Concern	CTP Study Stream
3-41	Unnamed Stream/Tributary	Grand Prairie	Mapping Concern	CTP Study Stream
3-42	Cottonwood Creek of Grand Prairie	Grand Prairie	Mapping Concern	CTP Study Stream
3-43	South Fork of Cottonwood Creek	Grand Prairie	Mapping Concern	CTP Study Stream
3-44	Stream 8D6	Grand Prairie	Mapping Concern	CTP Study Stream
3-45	Stream 8D1	Grand Prairie	Mapping Concern	CTP Study Stream
3-46	Stream WF-9	Fort Worth	Mapping Concern	LOMR by Halff Associate, Lakes of River Trails
3-47	Johnson Creek	Grand Prairie	Mapping Concern	CTP Study stream
3-48	Stream JC-1	Grand Prairie	Mapping Concern	CTP Study Stream
3-49	Holland Lake Creek	Weatherford	Mapping Concern	Wastewater treatment plant - LOMR not in Effective DFIRM
3-50	Clear Fork Trinity River	Weatherford	Mapping Concern	More recent study in area downstream of dam - EAP study in 2008
3-51	Stream WF-5	Fort Worth	Mapping Concern	SWS-020 Menefee Creek Study
3-52	Stream WF-1	Fort Worth	Mapping Concern	SWS-030, WF-1
3-53	Cottonwood Creek	Fort Worth	Mapping Concern	SWS-027, Cottonwood Creek
3-54	Stream WF-2A	Fort Worth	Mapping Concern	SWS-015, Woodhaven Creek/WF-2
3-55	Stream SC-1	Fort Worth	Mapping Concern	SWS-029, Ludelle Channel study
3-56	Stream SC-2	Fort Worth	Mapping Concern	SWS-025, Glendwood Creek study
3-57	Stream SC-6	Fort Worth	Mapping Concern	SWS-021, Greenbriar Creek study
3-58	Stream EB-1	Fort Worth	Mapping Concern	SWS-012, Edgecliff Tribs study
3-59	Edgecliff Branch	Fort Worth	Mapping Concern	SWS-036, Edgecliff Branch study
3-60	Stream VC-2	Fort Worth	Mapping Concern	SWS-026, Prairie Dog Creek, VC-2, VC-2A study
3-61	Stream VC-1	Fort Worth	Mapping Concern	SWS-019, Eastland Creek, VC-1 study
3-62	Wildcat Branch	Fort Worth	Mapping Concern	SWS-017, Wildcat Branch study
3-63	Stream WC-1	Fort Worth	Mapping Concern	SWS-016, Dunbar Channel, WC-1 study
3-64	Stream MC-1	Fort Worth	Mapping Concern	SWS-037, Tonys Creek study
3-65	Stream WF-4	Fort Worth	Mapping Concern	Lebow Channel study
3-66	Little Fossil Creek	Fort Worth	Mapping Concern	SWS-046, Little Fossil Creek study
3-67	Unnamed Tributary to South Mary's Creek	Fort Worth	Mapping Concern	SWS-034, South Marys Creek study
3-68	Stream MSC-1	Fort Worth	Mapping Concern	SWS-033, MSC-1, MSC-2 study
3-69	Plantation East Creek	Fort Worth	Mapping Concern	SWS-041, Plantation Creek study
3-70	Willow Bend Creek	Fort Worth	Mapping Concern	SWS-018, Royal Creek study
3-71	Mary's Creek	Fort Worth	Mapping Concern	SWS-009, Lower Marys Creek study
3-72	Stream CF-4	Fort Worth	Mapping Concern	SWS-022, Ridglea, CF4, CF4-A study

**Table 14: Summary of Stakeholder Comments**

Item	Flooding Source	Information Provided by	Comment Type	Comment
3.73	Stream CF-2	Fort Worth	Mapping Concern	SWS-010, Como Creek, CF-2 study
3.74	Stream CF-3	Fort Worth	Mapping Concern	SWS-028, Overton Parks, CF-3 study
3.75	Stream CF-3C	Fort Worth	Mapping Concern	SWS-011, SWS-079, Warner Channel and Zoo Creek studies
3.76	Stream CF-3A	Fort Worth	Mapping Concern	SWS-013, Upper Willow Creek, CF3A study
3.77	Stream SC-7A	Fort Worth	Mapping Concern	SWS-023, Country Day Channel study
3.78	Summer Creek	Fort Worth	Mapping Concern	SWS-039, Misc. Summer Creek Tribs study
3.79	Summer Creek	Fort Worth	Mapping Concern	SWS-035, Summer Creek study
3.80	South Fork Chambers Creek	Fort Worth	Mapping Concern	SWS-036, SC7 study
3.81	Unnamed Tributary to Walnut Creek 2	Fort Worth	Mapping Concern	SWS-023, Country Day Channel study
3.82	Crowley Branch	Fort Worth	Mapping Concern	SWS-036, Tributaries study
3.83	Stream SC-7	Fort Worth	Mapping Concern	SWS-038, Chambers Creek (South Fork) study
4.01	Village Creek	Kennedale	Mapping Need	Salvage yards in floodway; Master Plan will remove business, stream restoration and trails/parks in floodplain
4.02	Mustang Creek	Johnson County	Mapping Need	Wants new AE study on Mustang Creek and Rock Creek prior to new HWY 121
4.03	Quill Miller Creek	Johnson County	Mapping Need	Freese & Nichols did Burleson DMP; may include new studies along Zone A reaches
4.04	Unnamed Tributary to Walnut Creek Tributary A	Johnson County	Mapping Need	New study along this Zone A that might be used to enhance map
4.05	Walnut Creek	Johnson County	Mapping Need	Walnut Creek - extend Zone AE (fill gap)
4.06	Grassy Creek	Johnson County	Mapping Need	Grassy Creek - has new drainage info in area that can be used to enhance map. May need new AE study. Foresees new development growth in area
4.07	Mountain Creek and Fish Creek	Johnson County	Mapping Need	New AE on Mountain and Fish Creek for new Loop 9 extension to Hwy 67
4.08	Stream 6A2	University Park	Mapping Need	Would like stream study extended to upstream end of Stream 6A2
4.09	Turtle Creek	University Park	Mapping Need	Would like stream study extended to upstream end of Turtle Creek
4.10	Town Creek	Weatherford	Mapping Need	Town Creek is NUDALLAS - needs update
4.11	Big Fossil Creek	Richland Hills	Mapping Need	Need to update mapping for Big Fossil Creek levee sump
4.12	Stream BFC-5	Richland Hills	Mapping Need	Extend mapping to SH-26; there is a pipe at the upstream end and a lot of flooding during heavy events
4.13	Walker Branch	Hurst	Mapping Need	Study by RAMPP team; city not satisfied with product and wants study re-done
4.14	Sulphur Branch	Hurst	Mapping Need	Need updated mapping - population growth
4.15	Unnamed Tributary to Sulphur Branch	Hurst	Mapping Need	Need updated mapping - population growth
4.16	Calloway Branch	Hurst	Mapping Need	Study by RAMPP team; city not satisfied with product and wants study re-done
4.17	Valley View Branch	Hurst	Mapping Need	Need updated mapping - population growth

**Table 14: Summary of Stakeholder Comments**

Item	Flooding Source	Information Provided by	Comment Type	Comment
4.18	Stream LB-4	Hurst	Mapping Need	Need updated mapping - population growth
4.19	Stream 8A4	Grand Prairie	Mapping Need	Also known as Dalworth Creek, CTP FY13 stream
4.20	Unnamed Tributary of Clear Fork	Aledo	Mapping Need	Study needed to determine full extent of potential flooding due to undersized culverts at Hidden Valley Road.
4.21	Clear Fork Tributary No. 1	Aledo	Mapping Need	Study needed due to undersized culvert creating low water crossing at Underwood Road.
4.22	Clear Fork Tributary No. 1	Aledo	Mapping Need	Study needed at Bailey Ranch Crossing due to undersized culverts.
5.01	Little Bear Creek	Eules	Mitigation Actions - Completed	New bridge built within the Glade Parks project (not yet complete)
5.02	Unnamed Tributary to Walnut Creek 2	Fort Worth	Mitigation Actions - Completed	Capital Project - erosion control and stream study
5.03	Stream CF-5	Benbrook	Mitigation Actions - Completed	Mont Del Creek - studied, informally used
5.04	Bunker Hill Creek	Watauga	Mitigation Actions - Completed	CAPP Smith Park retention pond and dam
5.05	Timber Creek	Benbrook	Mitigation Actions - Completed	Bryant Street - current SWU CIP project installing storm drain and inlets
5.06	Timber Creek	Benbrook	Mitigation Actions - Completed	RL property acquired and demolished
5.07	Hurricane Creek	Eules	Mitigation Actions - Completed	City purchased a home that experienced frequent flooding
5.08	Lorean Branch	Hurst	Mitigation Actions - Completed	Re-studied by Halff Associates, LOMR ready for review
6.01	Spring Hill Creek	Watauga	Mitigation Actions - Identified	Local drainage issues. Design in progress. Localized flooding, 25% residences in Zone A
6.02	Stream BFC-5	Richland Hills	Mitigation Actions - Identified	Additional \$3 Million of funding needed for upstream Upper Harbisty ultimate design 100 yr BFCS
6.03	Stream BFC-5	Richland Hills	Mitigation Actions - Identified	Detention ponds - \$2 Million in construction
6.04	Valley Branch	Johnson County	Mitigation Actions - Identified	Potential location of mitigation project on Valley Branch. Might be easy to extend AE to full floodplain
6.05	South Holland Lake Creek	Weatherford	Mitigation Actions - Identified	First sump project may potentially acquire all floodplain land along Holland Lake Creek
6.06	Lake Worth	Lakeside	Mitigation Actions - Identified	Older home, no damages to date but near floodplain, worth checking
6.07	Stream BFC-5	Richland Hills	Mitigation Actions - Identified	Matthews Interceptor/Kingsbury Interceptor design to begin in August, construction in Spring 2014. Matthews Interceptor design complete, construction to begin July/August. \$3 Million for both
6.08	Unnamed Tributary to Clear Fork	Aledo	Mitigation Actions - Identified	Need to replace crossings that give insufficient drainage on west side of Plum St; undersized culverts at Robert St and James St.
6.09	Unnamed Stream	Aledo	Mitigation Actions - Identified	Need to clean out debris and sediment from channel to reduce erosion downstream of Mockingbird Ln.

**Table 14: Summary of Stakeholder Comments**

Item	Flooding Source	Information Provided by	Comment Type	Comment
6.10	Unnamed Stream	Aledo	Mitigation Actions – Identified	Channel needs to be cleared of undergrowth; outfalls along stream show erosion near Cedar Bluff Ct.
6.11	Unnamed Tributary of Clear Fork	Aledo	Mitigation Actions – Identified	Channel cleanup needed to reduce severe erosion during high velocity events around Maverick St.
7.01	Big Fossil Creek	Richland Hills	Regulations	Resolve current appeal of Tarrant County PMR on Big Fossil Creek.
7.02	Big Fossil Creek	Richland Hills	Regulations	Levee currently certified, currently maintained but wants to understand recertification process. Has 2 miles of levee downstream and outside the city limits within a wetland.
7.03	Countywide	Johnson County	Regulations	Why is map dated January 2012 when maps adopted 12/4/12? Check the links to their maps on their website
7.04	Citywide	Fort Worth	Regulations	Fort Worth now a Cooperating Technical Partner as of late 2012. Now working on MAS for new maps

Source: 2013 Lower West Fork Discovery Meetings

## IV. Watershed Findings/Prioritization Rankings

As part of the Discovery process, all efforts were made to gather 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. This section documents the Post-Discovery efforts that help identify potential actions that may/will be funded in order to assess the Discovery findings. The Post-Discovery process includes an overall analysis of potential watershed projects that will be used to guide the project selection process.

Post-Discovery data for the Lower West Fork Trinity Watershed was compiled into several figures. Effective stream study type and repetitive loss information per county is shown on Figure 21. Figure 22 displays CNMS stream status. Finally, Figure 23 shows Potential Study Streams discussed later in this report.

Table 15 below shows the distribution of stakeholder comments across the 12-digit HUC (HUC-12) watersheds within the Lower West Fork HUC-8 watershed.

### *Watershed Risk Classification*

The MNA prioritization criteria shown in Table 10 were updated with 2010 Census population totals and applied to the HUC-12 watersheds within the Lower West Fork watershed. The HUC-12 watersheds were then assigned a risk category based on the updated MNA prioritization criteria. These rankings are listed in Table 15 below and correlated with Figure 15.

Table 15: Lower West Fork Watershed Rankings

HUC-12 Watershed	Comment Type							FEMA Metrics		Risk
	Flooding Risk	Flooding Risk/Mitigation Action	Mapping Concerns	Mapping Needs	Mitigation Actions - Identified	Mitigation Actions - Completed	Regulations	Population	Current Elevation Information	
Big Bear Creek	0	0	0	1	0	0	1	98,379	Y	High
Farmers Branch - West Fork Trinity River	0	0	0	1	0	0	0	83,172	Y	High
Headwaters Sycamore Creek	0	0	0	9	0	0	0	162,335	Y	High
Headwaters Walker Branch	0	1	0	5	0	1	0	109,590	Y	High
Lynn Creek - Walnut Creek	0	0	0	5	0	0	0	106,516	Y	High
Rush Creek - Village Creek	0	1	0	2	0	0	0	164,117	Y	High
Sycamore Creek - West Fork Trinity River	0	0	0	2	0	0	0	85,194	Y	High
Cottonwood Creek - Mountain Creek Lake	0	0	0	6	0	0	0	104,493	Y	Elevated
Deer Creek - Village Creek	0	0	0	0	0	0	1	39,275	Y	Elevated
Delaware Creek - West Fork Trinity River	0	0	0	4	0	0	0	121,996	Y	Elevated
Estelle Creek - Bear Creek	0	0	0	2	0	0	0	69,337	Y	Elevated
Fish Creek - Mountain Creek Lake	0	0	0	6	0	0	0	154,581	Y	Elevated
Headwaters Mountain Creek	0	0	0	3	0	0	0	14,095	Y	Elevated
Johnson Creek	0	1	0	5	0	1	0	84,671	Y	Elevated
Johnson Creek - West Fork Trinity River	1	0	0	0	0	1	0	95,351	Y	Elevated
King Branch - Walnut Creek	0	0	0	3	0	0	0	24,195	Y	Elevated
Lake Como - Clear Fork Trinity River	0	0	0	5	1	1	0	132,912	Y	Elevated
Little Bear Creek	0	1	0	2	0	0	0	91,470	Y	Elevated
Live Oak Creek - Lake Worth	0	0	3	0	0	0	0	18,366	Y	Elevated
Low Branch - Mountain Creek	0	0	0	9	0	0	0	26,281	Y	Elevated
Marine Creek - West Fork Trinity River	0	0	1	2	0	0	0	96,105	Y	Elevated
Marys Creek	0	2	2	5	0	0	0	40,050	Y	Elevated
Quil Miller - Village Creek	0	1	0	1	0	0	0	54,916	Y	Elevated
Soap Creek	0	0	0	3	0	0	0	10,095	Y	Elevated
Squaw Creek - Clear Fork Trinity River	0	0	0	1	0	0	0	10,037	Y	Elevated

Table 15: Lower West Fork Watershed Rankings

HUC-12 Watershed	Comment Type							FEMA Metrics		Risk
	Flooding Risk	Flooding Risk/Mitigation Action	Mapping Concerns	Mapping Needs	Mitigation Actions - Identified	Mitigation Actions - Completed	Regulations	Population	Current Elevation Information	
Town Creek	1	0	0	3	0	0	0	21,836	Y	Elevated
Underwood Branch - Willow Creek	1	0	0	0	0	0	0	13,986	Y	Elevated
Village Creek - Lake Arlington	0	1	0	2	0	0	0	48,650	Y	Elevated
Walker Branch - West Fork Trinity River	0	1	0	2	0	0	0	29,664	Y	Elevated
West Fork Trinity River - Lake Worth	1	0	2	1	0	0	0	19,958	Y	Elevated
Wildcat Branch - Lake Arlington	0	1	0	5	0	1	0	60,902	Y	Elevated
Bear Creek	No Comments Received							2,296	Y	Guarded
Clear Fork Trinity River - Lake Weatherford	1	0	0	0	0	0	0	7,234	Y	Guarded
Dutch Branch - Benbrook Lake	0	0	0	1	0	0	0	19,340	Y	Guarded
Mustang Creek	0	0	0	1	0	0	0	3,550	Y	Guarded
Silver Creek - Lake Worth	No Comments Received							11,275	Y	Guarded
South Fork	No Comments Received							9,790	Y	Guarded
Whites Branch - Big Fossil Creek	0	1	0	4	2	0	2	176,079	Y	Guarded
Brown Branch - Clear Fork Trinity River	0	0	0	3	4	0	0	7,851	Y	Low
Cottonwood Creek - Clear Fork Trinity River	No Comments Received							3,883	Y	Low
Gourdneck Creek	No Comments Received							2,302	Y	Low
Headwaters Silver Creek	No Comments Received							2,518	Y	Low
Rock Creek	0	0	0	1	0	0	0	12,304	Y	Low
South Bear Creek	No Comments Received							1,357	Y	Low

### Prioritization Rankings

Map needs within the Lower West Fork watershed were documented from stakeholder comments and are listed in Table 14 under the category “Mapping Need”. These needs may come from outdated stream studies, large-scale development along the stream, or alterations to the stream itself to reduce flooding risk. Approximately 526 miles of mapping needs were captured during the 2013 Lower West Fork Discovery process. Pursuing studies along the entirety of requested miles would be cost prohibitive, so it was necessary for NCTCOG to reduce the list of potential project streams. Table 16 lists all stream study requests from participating stakeholders.

**Table 16: Lower West Fork Stream Study Requests**

<b>Community</b>	<b>Stream</b>
Aledo	Clear Fork Tributary No. 1
Aledo	Clear Fork Tributary No. 1
Aledo	Unnamed Tributary to Clear Fork Trinity River
Benbrook	Stream CF-5
Eules	Little Bear Creek
Fort Worth	Cottonwood Creek
Fort Worth	Crowley Branch
Fort Worth	Edgecliff Branch
Fort Worth	Little Fossil Creek
Fort Worth	Mary's Creek
Fort Worth	Plantation East Creek
Fort Worth	South Fork Chambers Creek
Fort Worth	Stream CF-2
Fort Worth	Stream CF-3
Fort Worth	Stream CF-3A
Fort Worth	Stream CF-3C
Fort Worth	Stream CF-4
Fort Worth	Stream EB-1
Fort Worth	Stream MC-1
Fort Worth	Stream MSC-1
Fort Worth	Stream SC-1
Fort Worth	Stream SC-2
Fort Worth	Stream SC-6
Fort Worth	Stream SC-7
Fort Worth	Stream SC-7A
Fort Worth	Stream VC-1
Fort Worth	Stream VC-2
Fort Worth	Stream WC-1
Fort Worth	Stream WF-1
Fort Worth	Stream WF-2A
Fort Worth	Stream WF-4
Fort Worth	Stream WF-5
Fort Worth	Stream WF-9
Fort Worth	Summer Creek
Fort Worth	Summer Creek
Fort Worth	Unnamed Tributary to South Mary's Creek
Fort Worth	Unnamed Tributary to Walnut Creek 2
Fort Worth	Unnamed Tributary to Walnut Creek 2
Fort Worth	Wildcat Branch
Fort Worth	Willow Bend Creek
Grand Prairie	Stream 8A4
Grand Prairie	Alspaugh Branch (Stream 8C6)

Table 16: Lower West Fork Stream Study Requests

Community	Stream
Grand Prairie	Bear Creek
Grand Prairie	Bedford Branch
Grand Prairie	Bedford Branch
Grand Prairie	Bowman Branch
Grand Prairie	Cedar Creek (Stream 8C5)
Grand Prairie	Cottonwood Creek of Grand Prairie
Grand Prairie	Dry Creek
Grand Prairie	Fish Creek
Grand Prairie	Fish Creek
Grand Prairie	Gifco Creek
Grand Prairie	Gifco Creek Tributary 1
Grand Prairie	Gifco Creek Tributary 2
Grand Prairie	Gifco Creek Tributary 3
Grand Prairie	Hollings Branch
Grand Prairie	Kirby Creek
Grand Prairie	Lynn Creek
Grand Prairie	Mills Branch
Grand Prairie	Mountain Creek
Grand Prairie	North Fork of Fish Creek
Grand Prairie	North Hollings Branch
Grand Prairie	Penwell Branch
Grand Prairie	Small Branch
Grand Prairie	Soap Creek
Grand Prairie	South Fork of Cottonwood Creek
Grand Prairie	Stream 8A4
Grand Prairie	Stream 8D1
Grand Prairie	Stream 8D3
Grand Prairie	Stream 8D6
Grand Prairie	Stuart Branch
Grand Prairie	Swadley River
Grand Prairie	Taaffe Creek
Grand Prairie	Unnamed Stream/Tributary
Grand Prairie	Unnamed Tributary to Soap Creek
Grand Prairie	Unnamed Tributary to Soap Creek
Grand Prairie	Unnamed Tributary to Walnut Creek 2
Grand Prairie	Unnamed Tributary to Walnut Creek 2
Grand Prairie	Unnamed Tributary to Walnut Creek 2
Grand Prairie	Unnamed Tributary to Walnut Creek 2
Hurst	Calloway Branch

**Table 16: Lower West Fork Stream Study Requests**

<b>Community</b>	<b>Stream</b>
Hurst	Stream LB-4
Hurst	Sulphur Branch
Hurst	Unnamed Tributary to Sulphur Branch
Hurst	Valley View Branch
Hurst	Walker Branch
Johnson County	Grassy Creek
Johnson County	Mountain Creek and Fish Creek
Johnson County	Mustang Creek
Johnson County	Unnamed Stream
Johnson County	Quill Miller Creek
Johnson County	Unnamed Tributary to Rock Creek
Johnson County	Unnamed Tributary to Walnut Creek Tributary A
Johnson County	Valley Branch
Johnson County	Walnut Creek
Kennedale	Village Creek
Lakeside	Lake Worth
Richland Hills	Big Fossil Creek
Richland Hills	Stream BFC-5
Richland Hills	Stream BFC-5
Richland Hills	Stream BFC-5
Southlake	Tributary BB-9
Watauga	Singing Hills Creek
Weatherford	Clear Fork Trinity River
Weatherford	Holland Lake Creek
Weatherford	South Holland Lake Creek
Weatherford	Town Creek

The list of HUC-12 watershed streams within the High Risk category was further refined using the ability of stakeholders to provide local match funds for potential stream studies within the watershed. Streams within High Risk watersheds with effective studies were then removed from the list of potential study areas. Streams within the watersheds that met the criteria of potential local match with no effective study were split into smaller groups of ten (10) to (15) stream miles. These stream groups are listed below in Table 17 and correlated with Figure 18.

The prioritization rankings list will be used by FEMA to determine targeted action items, potential projects, and multi-year flood risk project plans within the Lower West Fork Trinity watershed.

Table 17: Lower West Fork Watershed Prioritization Rankings (HUC-12 Watersheds)

HUC-8	Project FY	HUC-12 Watershed Group	Community	Named Streams	Stream Miles	Total Stream Miles
Lower West Fork	Future FY	Big Bear 1	Euless	Tributary BB-1	0.37	1.12
				Unnamed Stream	0.75	
			Grapevine	Tributary BB-1	0.46	10.24
				Tributary BB-2	1.45	
				Tributary BB-3	0.92	
				Tributary BB-4	1.44	
				Unnamed Streams	5.97	
	<b>Total</b>					<b>11.36</b>
	FY14	Big Bear 2	Colleyville	Tributary BB-14	0.82	2.68
				Unnamed Streams	1.86	
			Grapevine	Tributary BB-5	1.33	2.24
				Unnamed Streams	0.91	
			Southlake	Tributary BB-5	0.2	8.61
				Tributary BB-6	1.60	
				Tributary BB-7	0.71	
				Tributary BB-8	2.26	
				Tributary BB-8A	0.10	
				Tributary BB-8B	0.09	
	Unnamed Streams	3.33				
	<b>Total</b>					<b>13.53</b>
	Future FY	Big Bear 5	Keller	Tributary BB-9	0.42	7.94
				Tributary BB-10	2.30	
				Tributary BB-11	1.81	
				Tributary BB-12	1.17	
				Unnamed Streams	2.24	
			Southlake	Tributary BB-9	2.06	2.07
				Unnamed Streams	0.01	
	<b>Total</b>					<b>10.01</b>
	Future FY	Farmers Branch – West Fork Trinity River 4	Fort Worth	Farmers Branch	2.34	4.68
				Unnamed Tributary to Farmers Branch	0.70	
				Unnamed Streams	1.64	
			Westworth Village	Farmers Branch	2.21	2.21
			White Settlement	Farmers Branch	2.71	5.58
Stream FB-1				1.18		
Unnamed Tributary to Farmers Branch				0.36		
Unnamed Tributary to Stream FB-1				0.26		
Unnamed Streams			1.07			
<b>Total</b>					<b>12.47</b>	
Future FY	Headwaters Walker 1	Arlington	Unnamed Stream	0.29	0.64	
			Walker Branch	0.35		
		Bedford	Stream SB-1	1.62	4.70	
			Sulphur Branch	2.94		
			Unnamed Streams	0.14		
		Euless	Sulphur Branch	0.52	0.94	
			Unnamed Streams	0.42		
		Fort Worth	Sulphur Branch	1.10	4.10	
			Walker Branch	0.57		
			Unnamed Tributary to Sulphur Branch	1.14		
			Unnamed Streams	1.29		
		Hurst	Sulphur Branch	0.31	1.62	
			Unnamed Tributary to Sulphur Branch	0.70		
			Unnamed Streams	0.61		
		<b>Total</b>				

Table 17: Lower West Fork Watershed Prioritization Rankings

HUC-8	Project FY	HUC-12 Watershed Group	Community	Named Streams	Stream Miles	Total Stream Miles
Lower West Fork	Future FY	Headwaters Walker 4	North Richland Hills	Stream CB-1 (New)	1.32	2.67
				Stream CB-2	1.35	

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## **Appendix A – Outreach/Management**

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## Figures

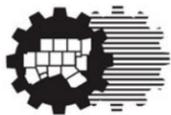
# Figure 1: HUC Locator Map

LOWER WEST FORK TRINITY WATERSHED

April 30, 2014

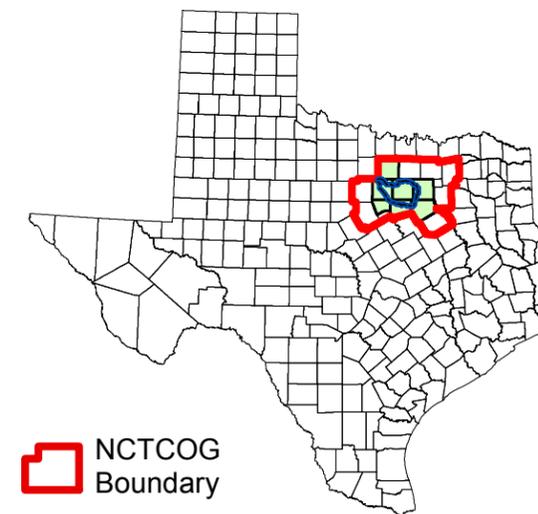


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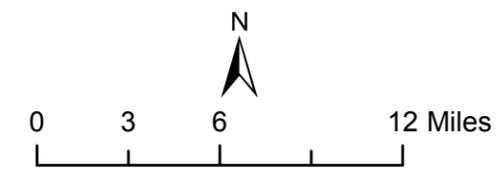
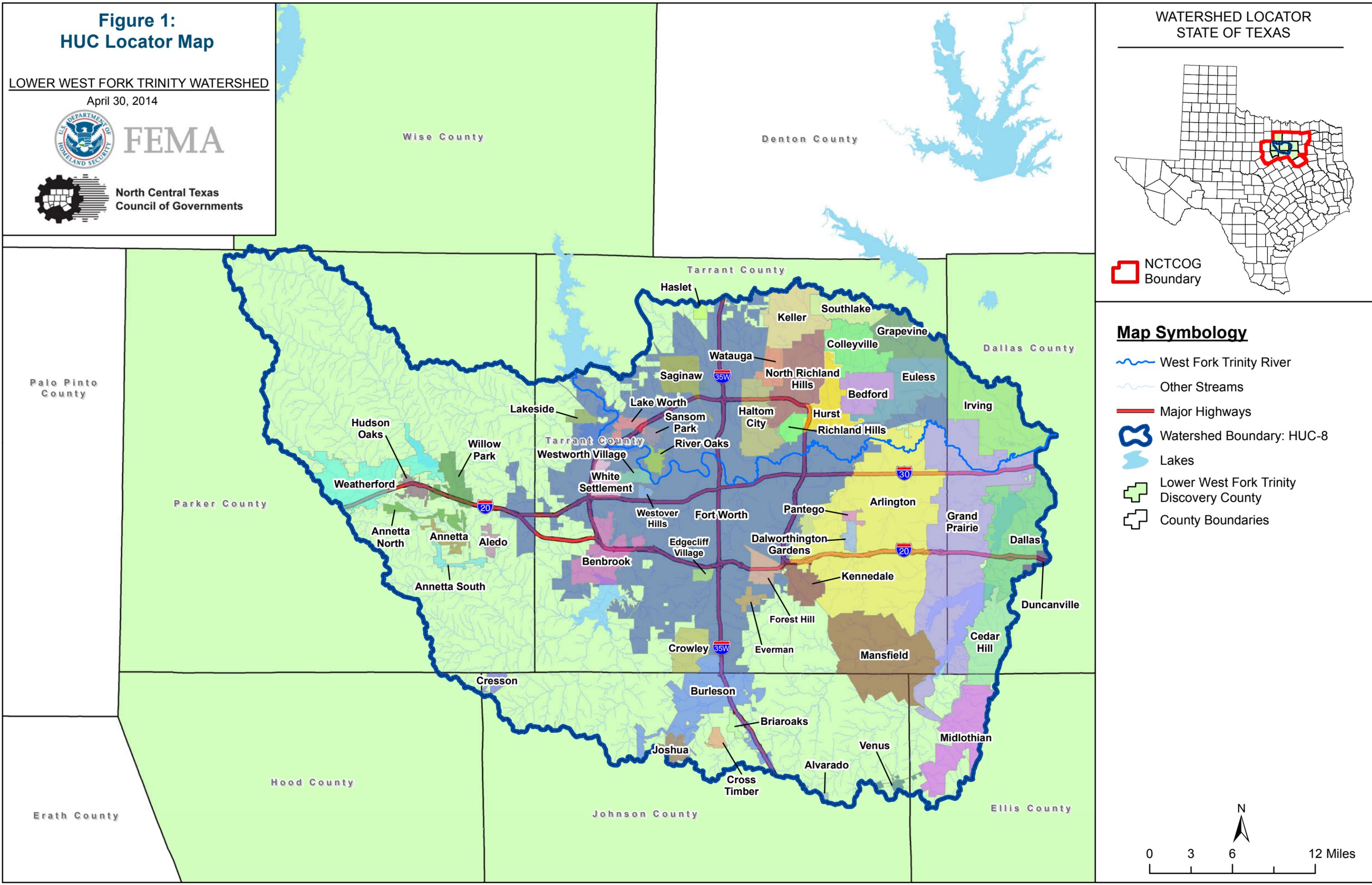
## WATERSHED LOCATOR STATE OF TEXAS



NCTCOG  
Boundary

### Map Symbology

- West Fork Trinity River
- Other Streams
- Major Highways
- Watershed Boundary: HUC-8
- Lakes
- Lower West Fork Trinity Discovery County
- County Boundaries



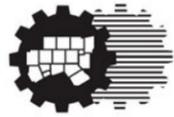
**Figure 2:  
Federal House  
Congressional Districts**

LOWER WEST FORK TRINITY WATERSHED

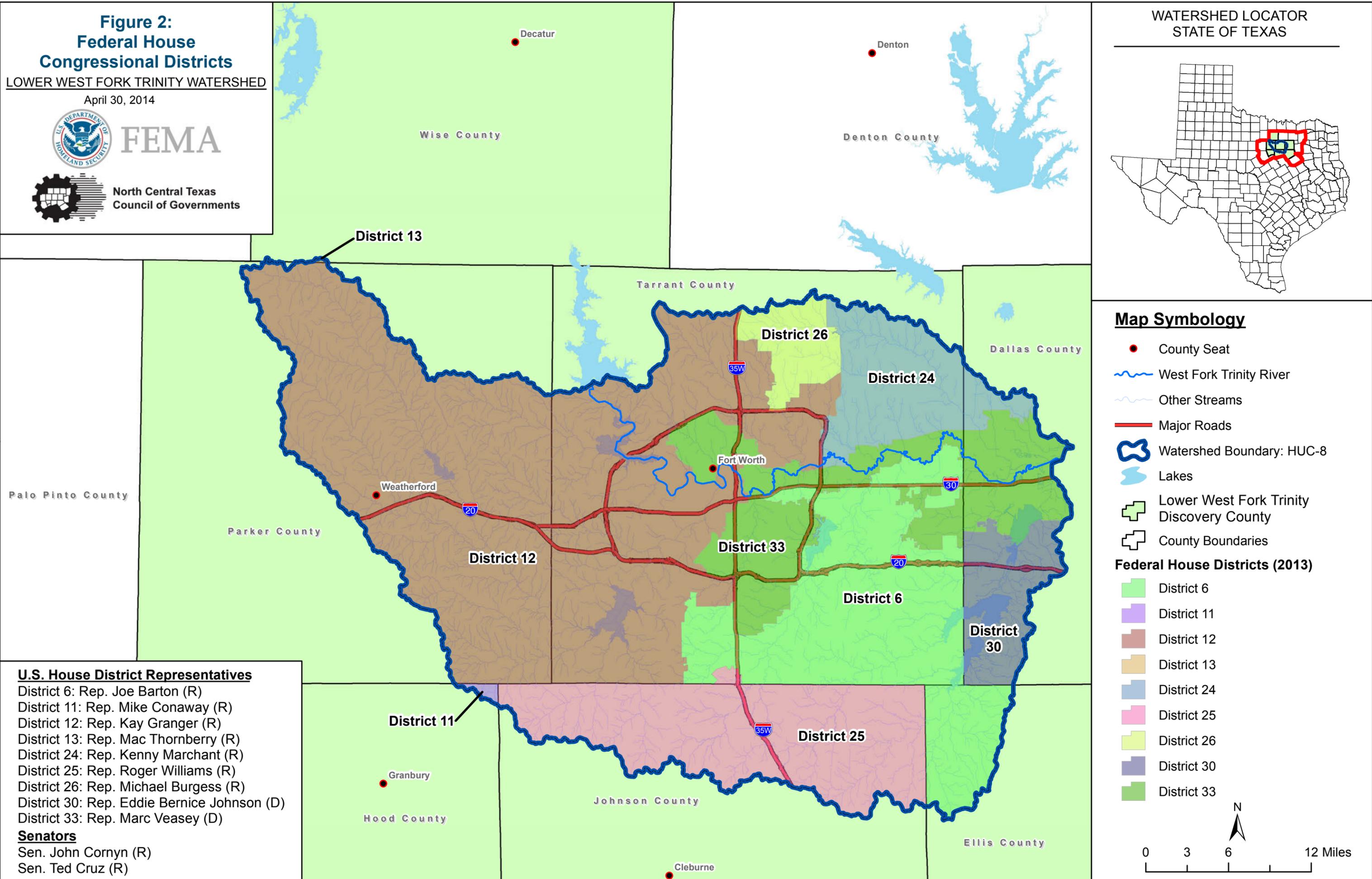
April 30, 2014



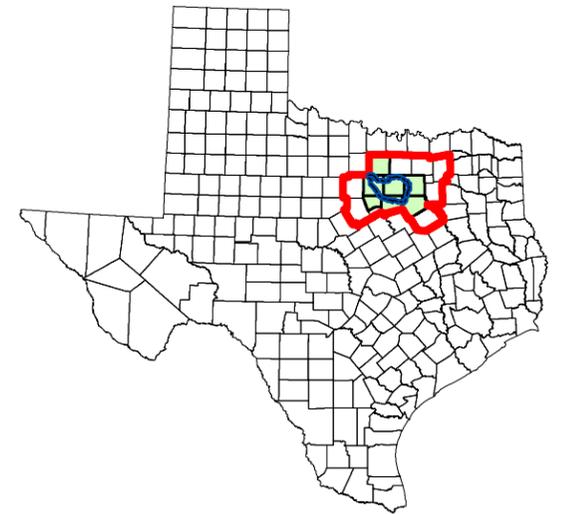
**FEMA**



North Central Texas  
Council of Governments



WATERSHED LOCATOR  
STATE OF TEXAS



**Map Symbology**

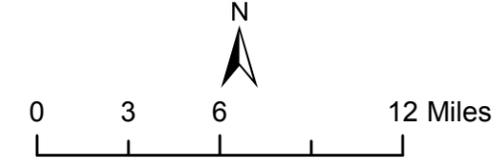
- County Seat
- ~ West Fork Trinity River
- ~ Other Streams
- Major Roads
- Watershed Boundary: HUC-8
- Lakes
- + Lower West Fork Trinity Discovery County
- + County Boundaries

**Federal House Districts (2013)**

- District 6
- District 11
- District 12
- District 13
- District 24
- District 25
- District 26
- District 30
- District 33

**U.S. House District Representatives**  
 District 6: Rep. Joe Barton (R)  
 District 11: Rep. Mike Conaway (R)  
 District 12: Rep. Kay Granger (R)  
 District 13: Rep. Mac Thornberry (R)  
 District 24: Rep. Kenny Marchant (R)  
 District 25: Rep. Roger Williams (R)  
 District 26: Rep. Michael Burgess (R)  
 District 30: Rep. Eddie Bernice Johnson (D)  
 District 33: Rep. Marc Veasey (D)

**Senators**  
 Sen. John Cornyn (R)  
 Sen. Ted Cruz (R)



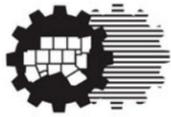
# Figure 3: State House Congressional Districts

LOWER WEST FORK TRINITY WATERSHED

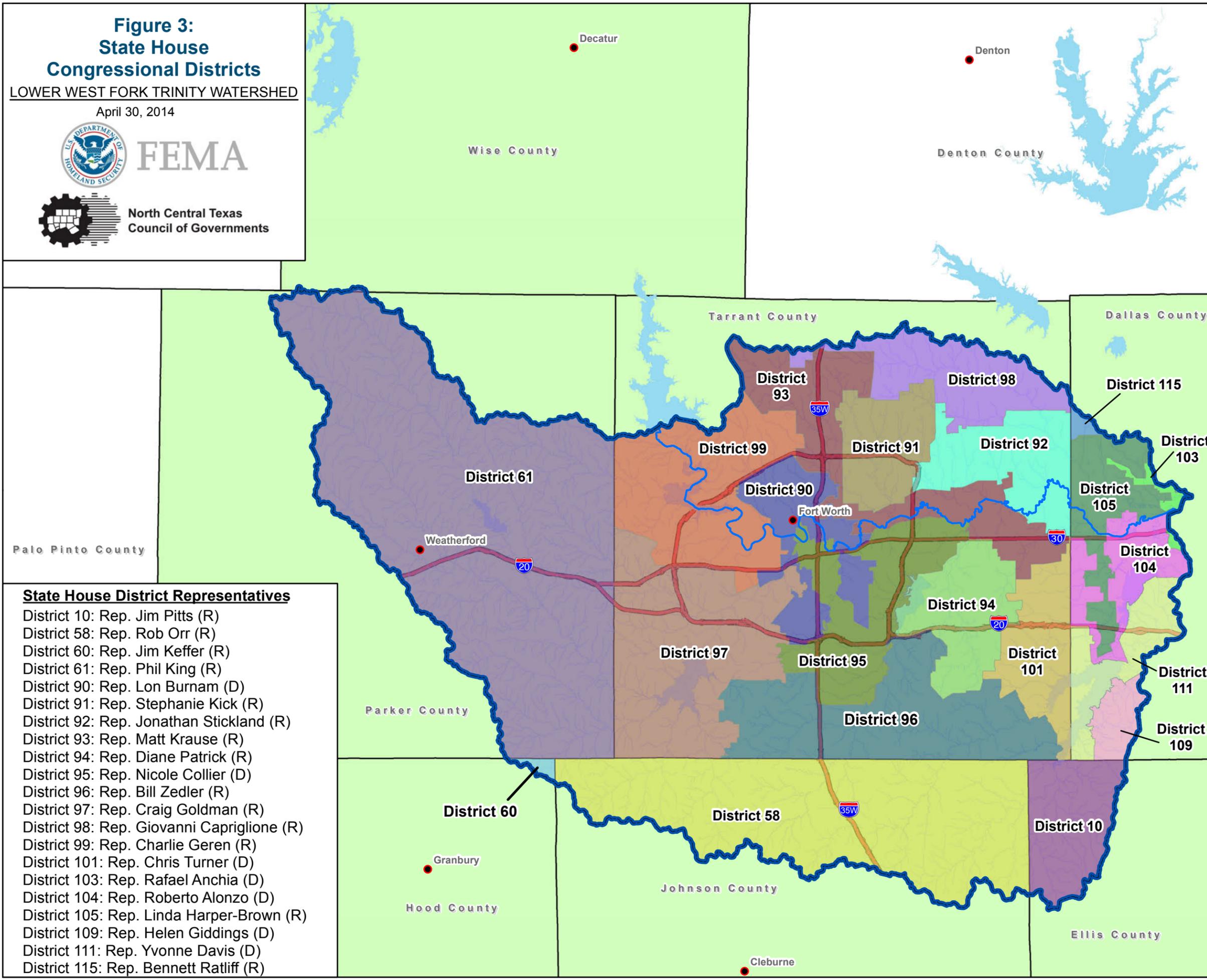
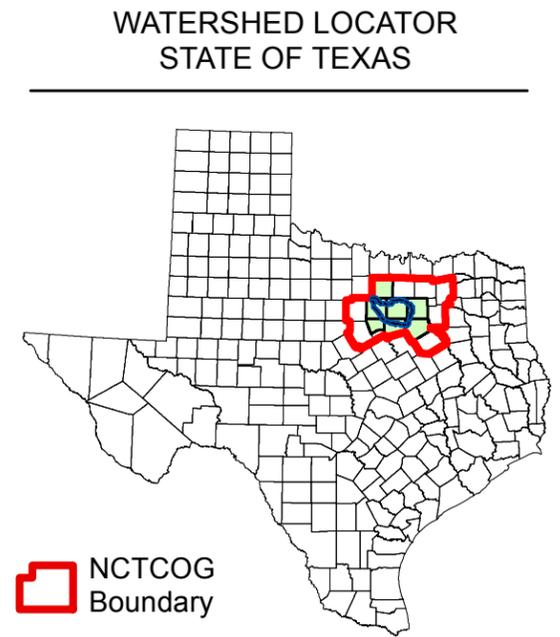
April 30, 2014



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Council of Governments



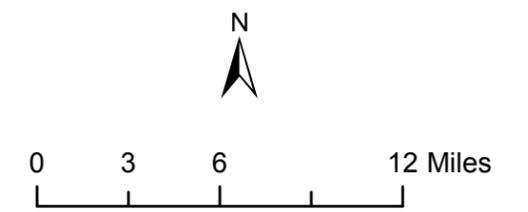
### Map Symbology

- County Seat
- ~ West Fork Trinity River
- ~ Other Streams
- Major Highways
- Watershed Boundary: HUC-8
- Lakes
- Lower West Fork Trinity Discovery County
- County Boundaries

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<span style="background-color: #6495ED; width: 15px; height: 10px; display: inline-block;"></span> District 115	

### State House District Representatives

- District 10: Rep. Jim Pitts (R)
- District 58: Rep. Rob Orr (R)
- District 60: Rep. Jim Keffer (R)
- District 61: Rep. Phil King (R)
- District 90: Rep. Lon Burnam (D)
- District 91: Rep. Stephanie Kick (R)
- District 92: Rep. Jonathan Stickland (R)
- District 93: Rep. Matt Krause (R)
- District 94: Rep. Diane Patrick (R)
- District 95: Rep. Nicole Collier (D)
- District 96: Rep. Bill Zedler (R)
- District 97: Rep. Craig Goldman (R)
- District 98: Rep. Giovanni Capriglione (R)
- District 99: Rep. Charlie Geren (R)
- District 101: Rep. Chris Turner (D)
- District 103: Rep. Rafael Anchia (D)
- District 104: Rep. Roberto Alonzo (D)
- District 105: Rep. Linda Harper-Brown (R)
- District 109: Rep. Helen Giddings (D)
- District 111: Rep. Yvonne Davis (D)
- District 115: Rep. Bennett Ratliff (R)



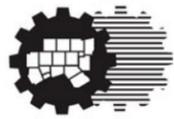
**Figure 4:  
State Senate  
Congressional Districts**

LOWER WEST FORK TRINITY WATERSHED

April 30, 2014

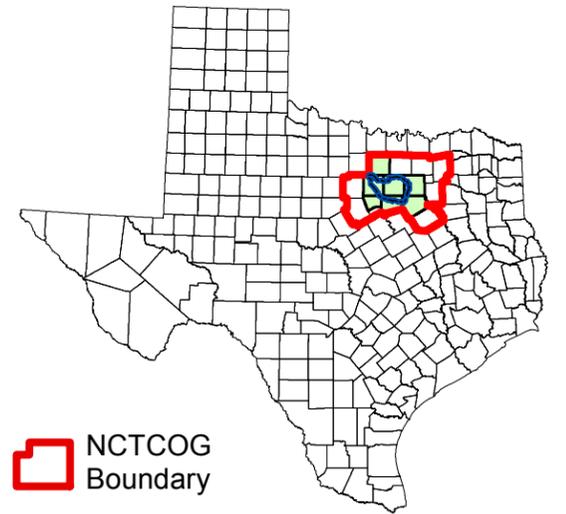


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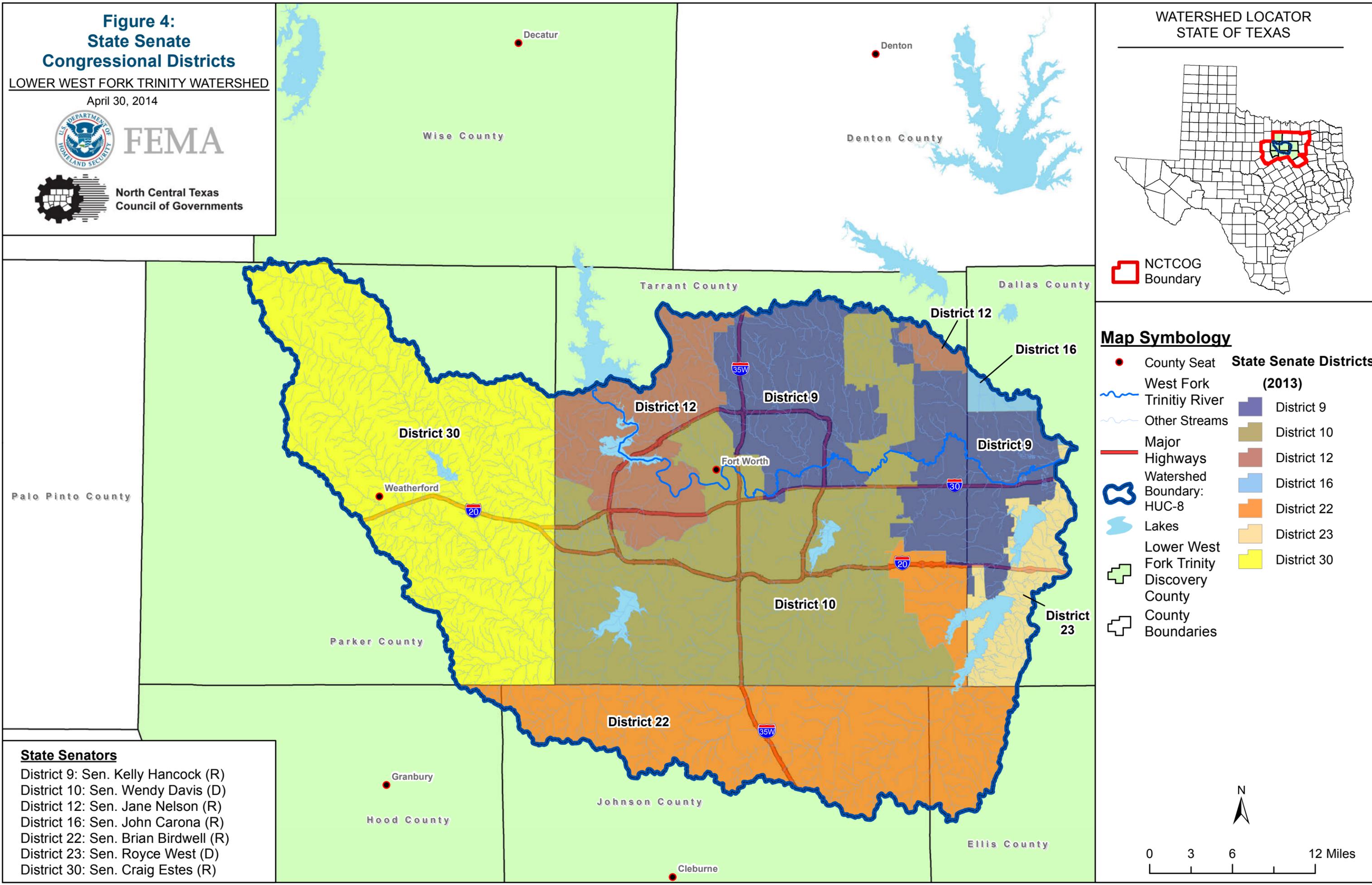


North Central Texas  
Council of Governments

WATERSHED LOCATOR  
STATE OF TEXAS



NCTCOG  
Boundary



**Map Symbology**

- County Seat
  - ~ West Fork Trinity River
  - ~ Other Streams
  - Major Highways
  - ⬮ Watershed Boundary: HUC-8
  - ⬮ Lakes
  - ⬮ Lower West Fork Trinity Discovery County
  - ⬮ County Boundaries
- | State Senate Districts (2013) |             |
|-------------------------------|-------------|
| ⬮                             | District 9  |
| ⬮                             | District 10 |
| ⬮                             | District 12 |
| ⬮                             | District 16 |
| ⬮                             | District 22 |
| ⬮                             | District 23 |
| ⬮                             | District 30 |

**State Senators**

- District 9: Sen. Kelly Hancock (R)
- District 10: Sen. Wendy Davis (D)
- District 12: Sen. Jane Nelson (R)
- District 16: Sen. John Carona (R)
- District 22: Sen. Brian Birdwell (R)
- District 23: Sen. Royce West (D)
- District 30: Sen. Craig Estes (R)



0 3 6 12 Miles

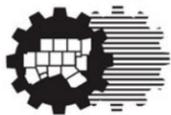
**Figure 5:  
Population Density  
and CNMS Streams**

LOWER WEST FORK TRINITY WATERSHED

April 30, 2014

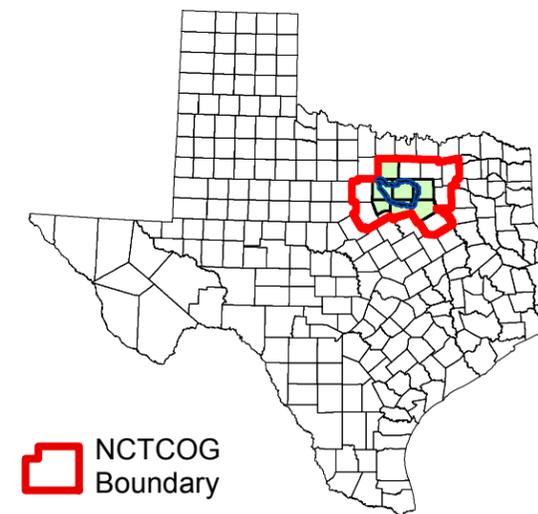


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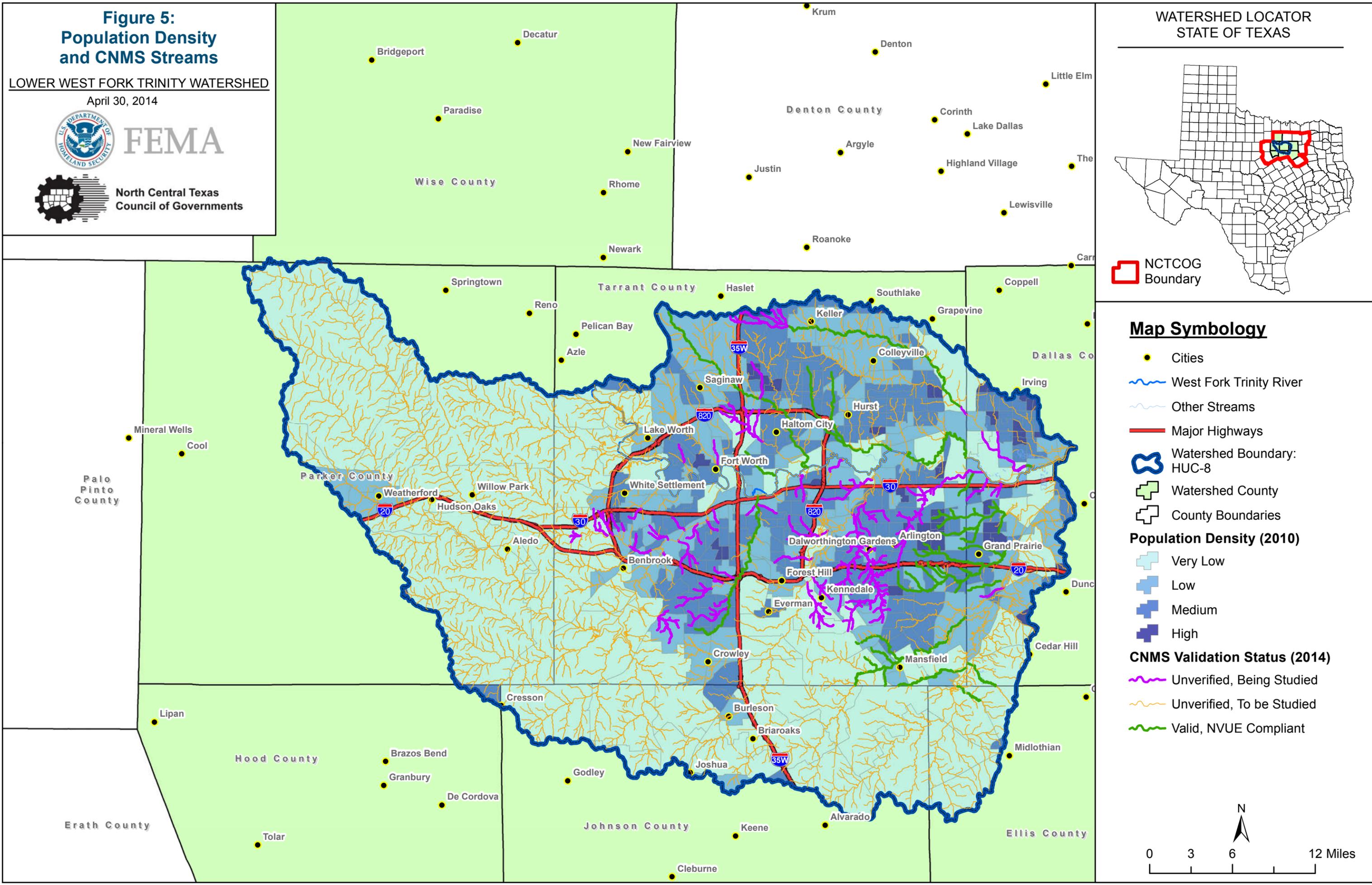


North Central Texas  
Council of Governments

WATERSHED LOCATOR  
STATE OF TEXAS



NCTCOG  
Boundary



**Map Symbology**

- Cities
  - ~ West Fork Trinity River
  - ~ Other Streams
  - Major Highways
  - Watershed Boundary: HUC-8
  - Watershed County
  - County Boundaries
- Population Density (2010)**
- Very Low
  - Low
  - Medium
  - High
- CNMS Validation Status (2014)**
- ~ Unverified, Being Studied
  - ~ Unverified, To be Studied
  - ~ Valid, NVUE Compliant



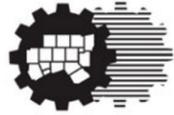
**Figure 6:  
Land Use**

LOWER WEST FORK TRINITY WATERSHED

April 30, 2014

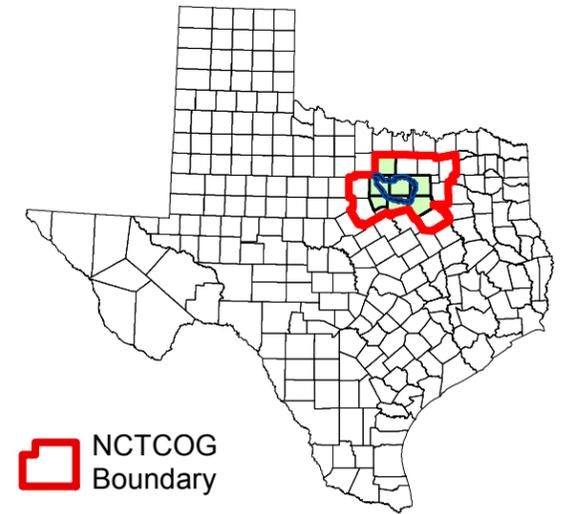


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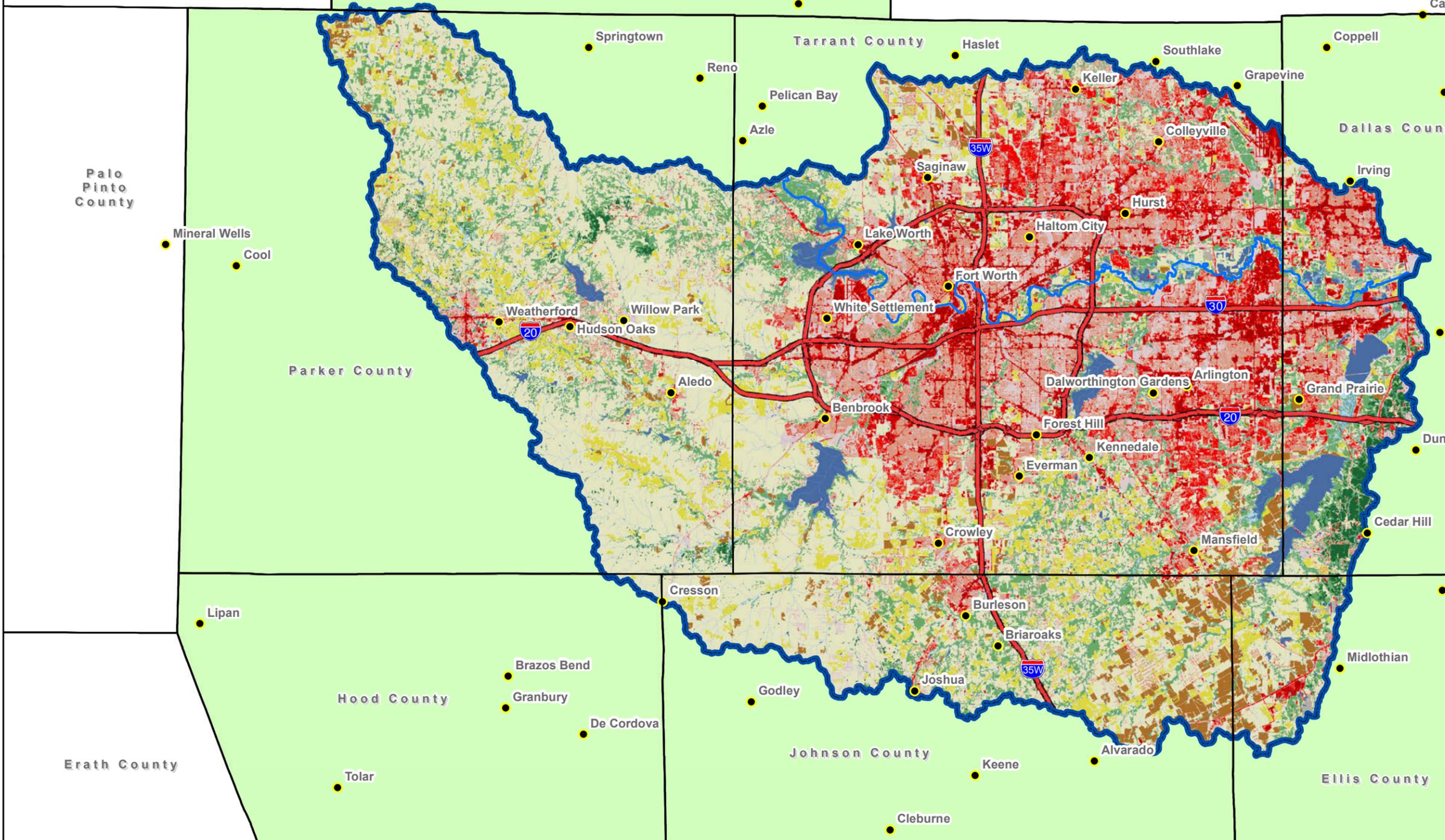


**North Central Texas  
Council of Governments**

WATERSHED LOCATOR  
STATE OF TEXAS



NCTCOG  
Boundary



**Map Symbology**

- Cities
- West Fork Trinity River
- Other Streams
- Major Highways
- Watershed Boundary: HUC-8
- Lower West Fork Trinity Discovery County
- County Boundaries
- Land Use (2006 NLCD)\***
- Open Water
- Developed Open Space
- Developed Low Intensity
- Developed Medium Intensity
- Developed High Intensity
- Barren Land
- Deciduous Forest
- Evergreen Forest
- Mixed Forest
- Shurbs
- Grassland
- Pasture
- Cultivated Crops
- Woody Wetlands
- Herbaceous Wetlands

\*NLCD is National Land Cover Dataset, created by the U.S. Geological Survey.



**Figure 7:  
Urban Cover**

LOWER WEST FORK TRINITY WATERSHED

April 30, 2014

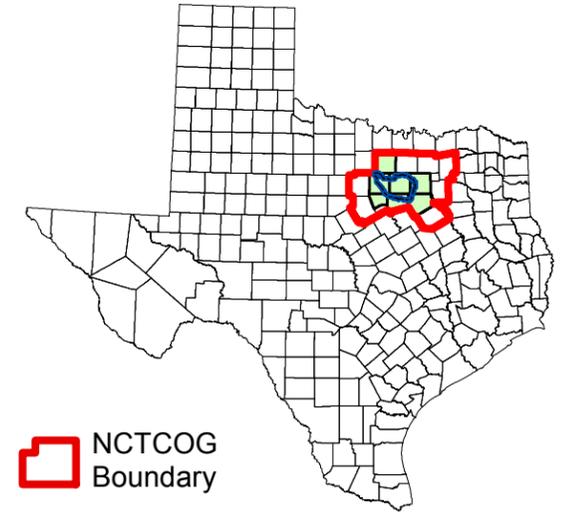


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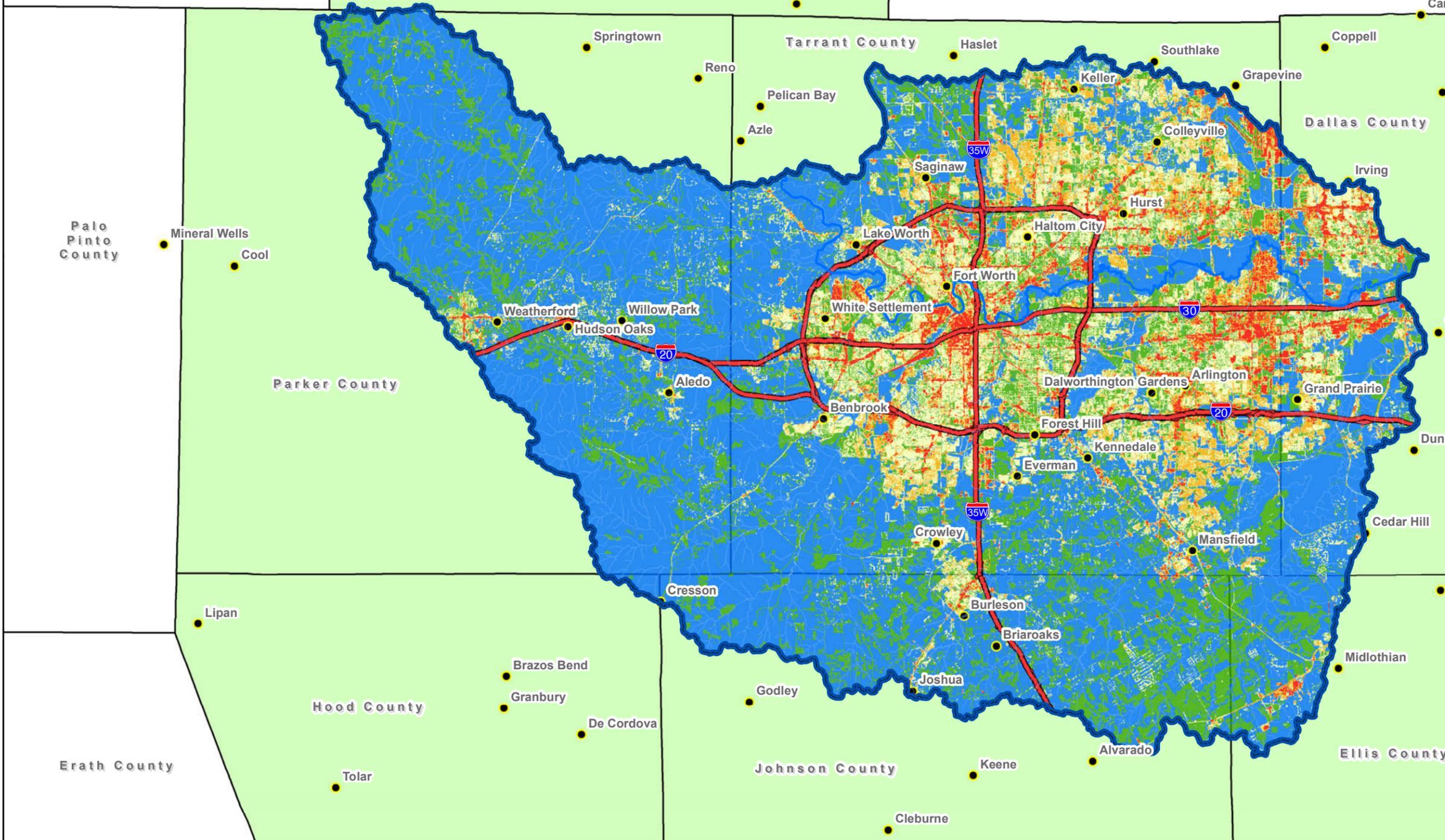


**North Central Texas  
Council of Governments**

WATERSHED LOCATOR  
STATE OF TEXAS



NCTCOG  
Boundary



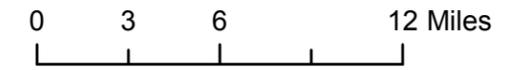
**Map Symbology**

- Cities
- West Fork Trinity River
- Other Streams
- Major Highways
- Watershed Boundary: HUC-8
- Lower West Fork Trinity Discovery County
- County Boundaries

**Urban Cover (2006 NLCD)\***

- 1 - Undeveloped
- 2 - Farmland
- 3 - Developed, Low Intensity
- 4 - Developed, Medium Intensity
- 5 - Developed, High Intensity

\*NLCD is National Land Cover Dataset, created by the U.S. Geological Survey.



**Figure 8:  
Population Change**

LOWER WEST FORK TRINITY WATERSHED

April 30, 2014

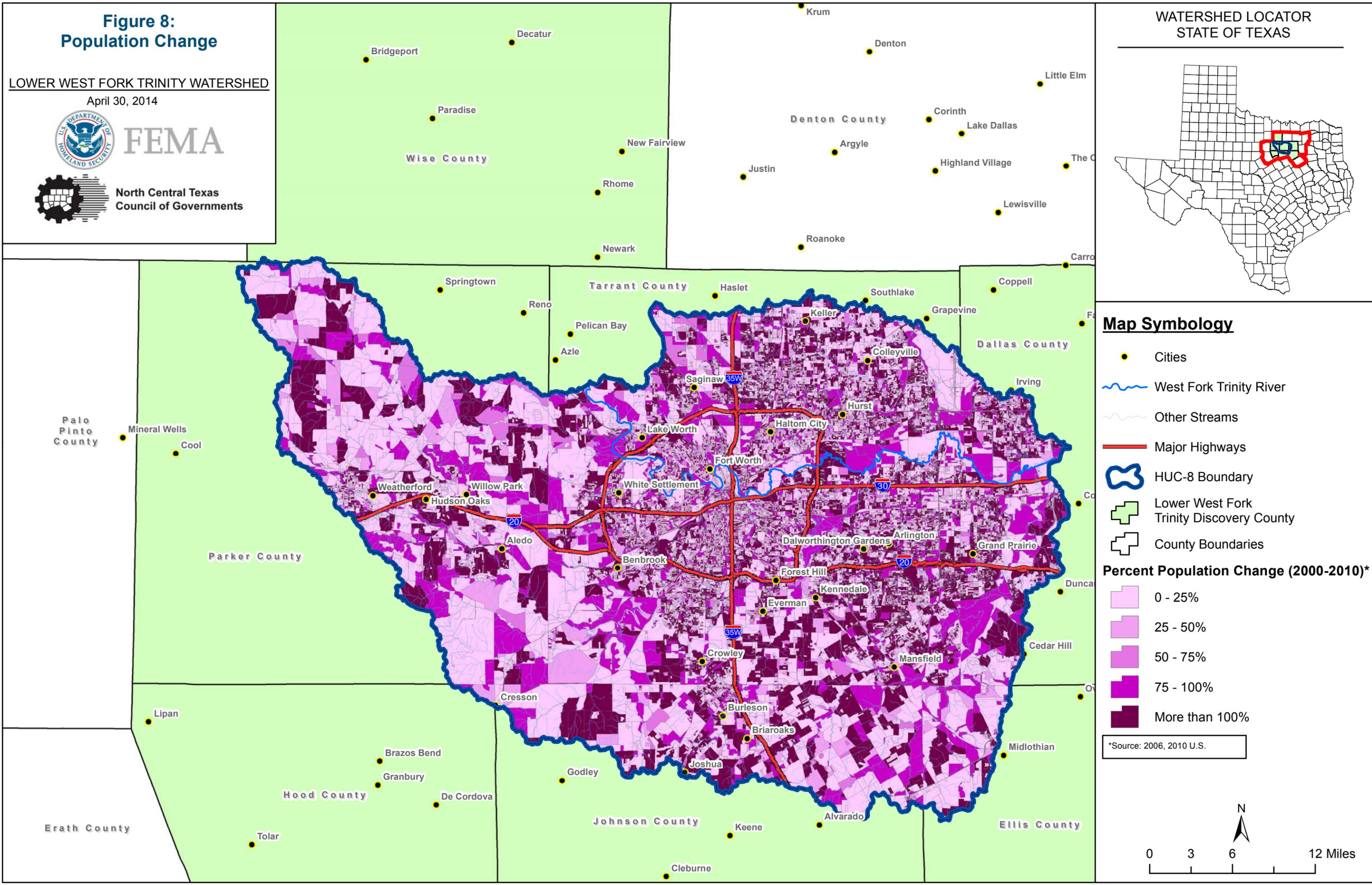
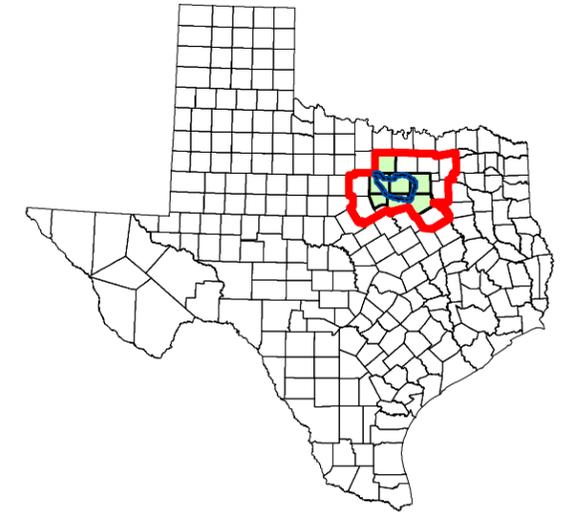


**FEMA**



North Central Texas  
Council of Governments

WATERSHED LOCATOR  
STATE OF TEXAS



**Map Symbology**

- Cities
- West Fork Trinity River
- Other Streams
- Major Highways
- HUC-8 Boundary
- Lower West Fork Trinity Discovery County
- County Boundaries

**Percent Population Change (2000-2010)\***

- 0 - 25%
- 25 - 50%
- 50 - 75%
- 75 - 100%
- More than 100%

\*Source: 2006, 2010 U.S.



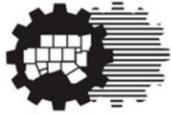
**Figure 9:  
Flood Hazard Map**

LOWER WEST FORK TRINITY WATERSHED

April 30, 2014

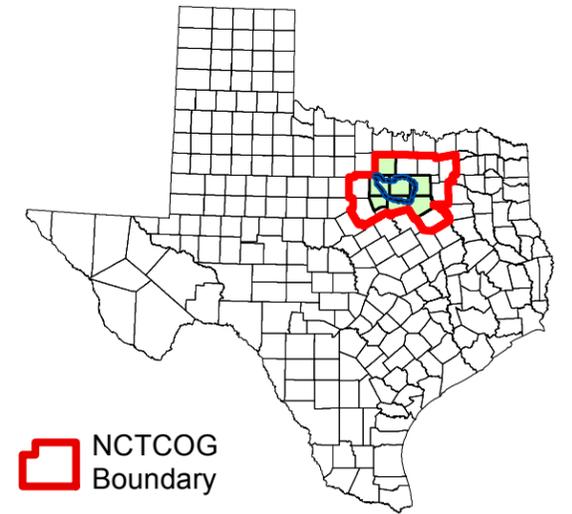


**FEMA**



North Central Texas  
Council of Governments

WATERSHED LOCATOR  
STATE OF TEXAS



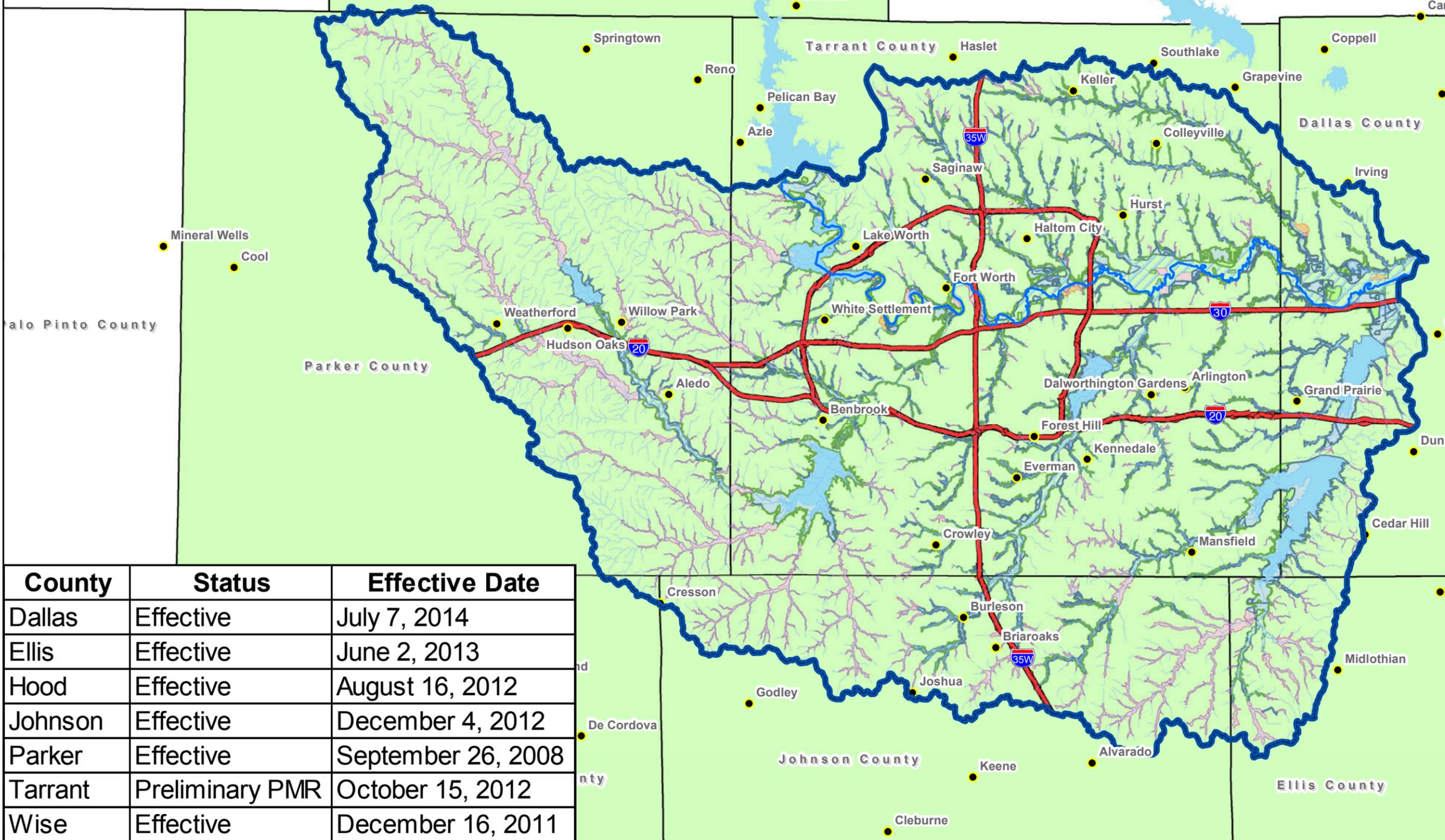
NCTCOG  
Boundary

**Map Symbology**

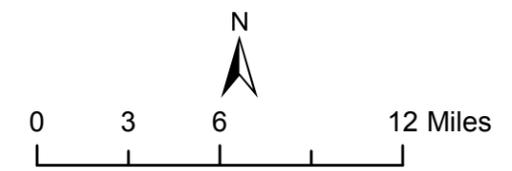
- Cities
- West Fork Trinity River
- Other Streams
- Major Highways
- Watershed Boundary: HUC-8
- Lakes
- Lower West Fork Trinity Discovery County
- County Boundaries

**Effective FEMA Floodplains (2013)**

- Zone A (100-Yr, Approximate)
- Zone AE (100-Yr, Detailed)
- Floodway
- Zone X (500-Yr, Detailed)
- Zone AO
- Zone X Protected by Levee



County	Status	Effective Date
Dallas	Effective	July 7, 2014
Ellis	Effective	June 2, 2013
Hood	Effective	August 16, 2012
Johnson	Effective	December 4, 2012
Parker	Effective	September 26, 2008
Tarrant	Preliminary PMR	October 15, 2012
Wise	Effective	December 16, 2011



**Figure 10:  
Topographic Data**

LOWER WEST FORK TRINITY WATERSHED

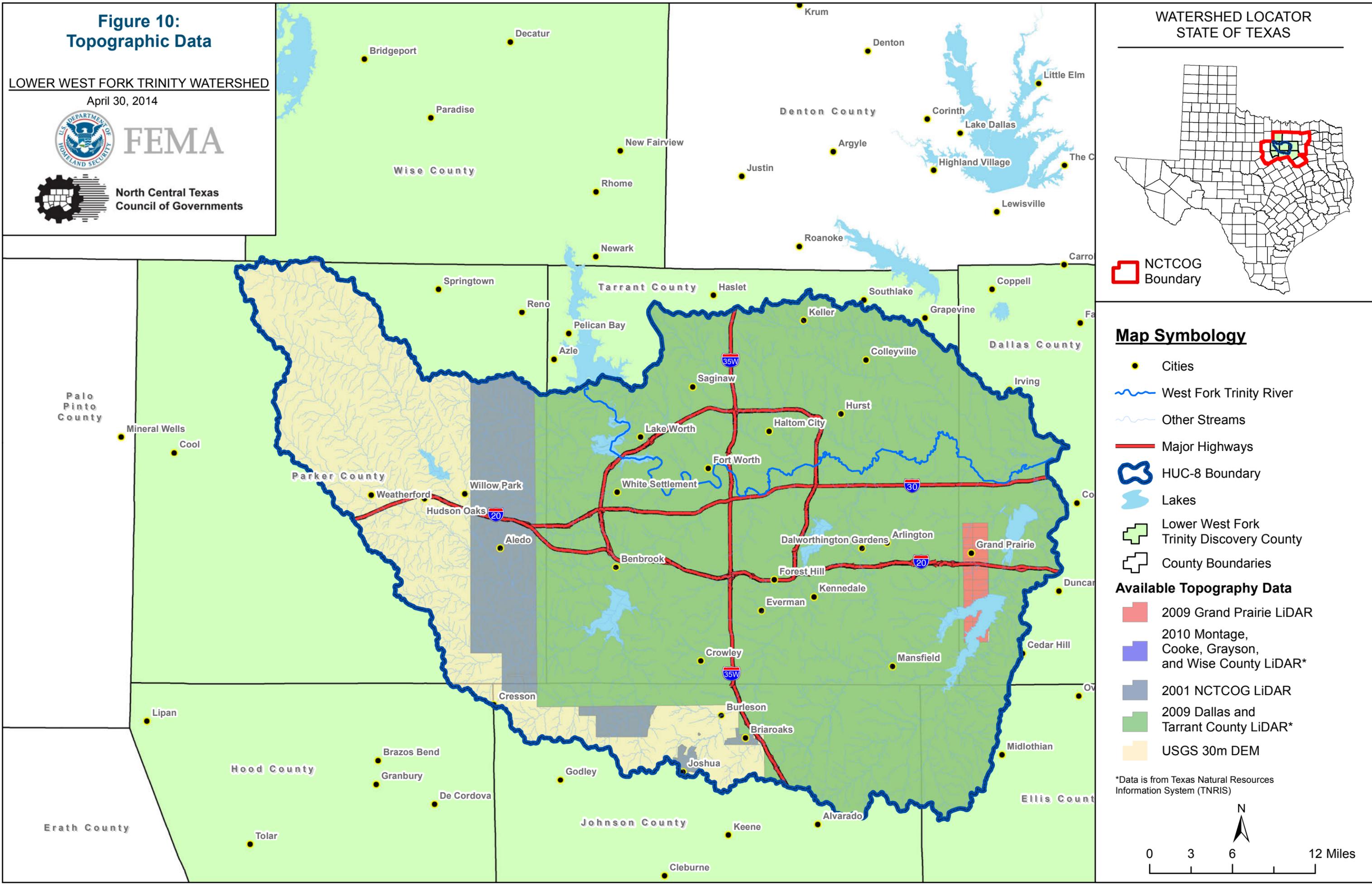
April 30, 2014



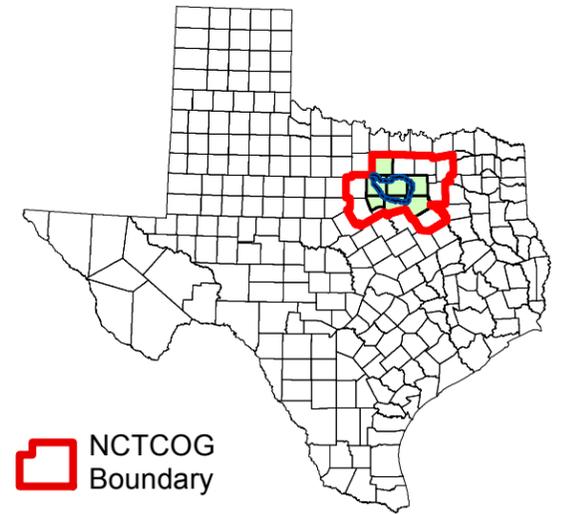
**FEMA**



North Central Texas  
Council of Governments



WATERSHED LOCATOR  
STATE OF TEXAS



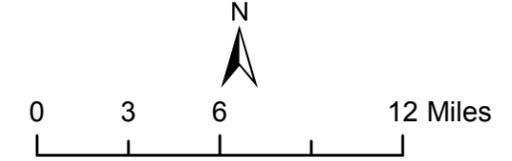
**Map Symbology**

- Cities
- ~ West Fork Trinity River
- ~ Other Streams
- Major Highways
- ⬭ HUC-8 Boundary
- ⬭ Lakes
- ⬭ Lower West Fork Trinity Discovery County
- ⬭ County Boundaries

**Available Topography Data**

- ⬭ 2009 Grand Prairie LiDAR
- ⬭ 2010 Montage, Cooke, Grayson, and Wise County LiDAR\*
- ⬭ 2001 NCTCOG LiDAR
- ⬭ 2009 Dallas and Tarrant County LiDAR\*
- ⬭ USGS 30m DEM

\*Data is from Texas Natural Resources Information System (TNRIS)



# Figure 11: Low Water Crossings and High Water Marks

LOWER WEST FORK TRINITY WATERSHED

April 30, 2014

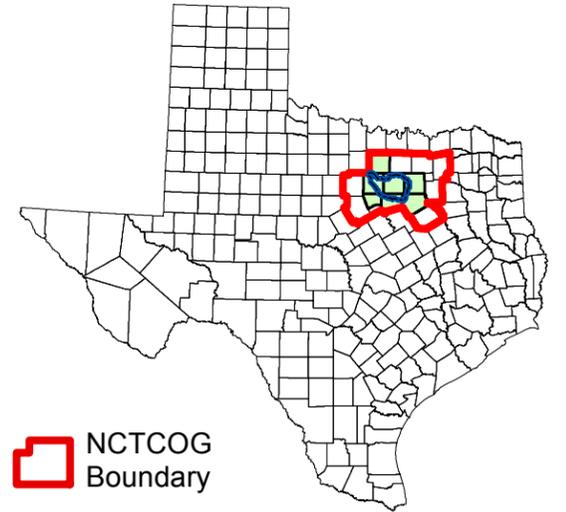


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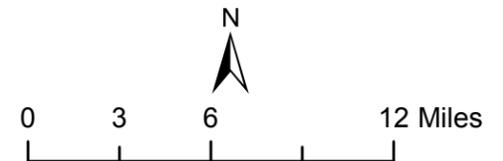
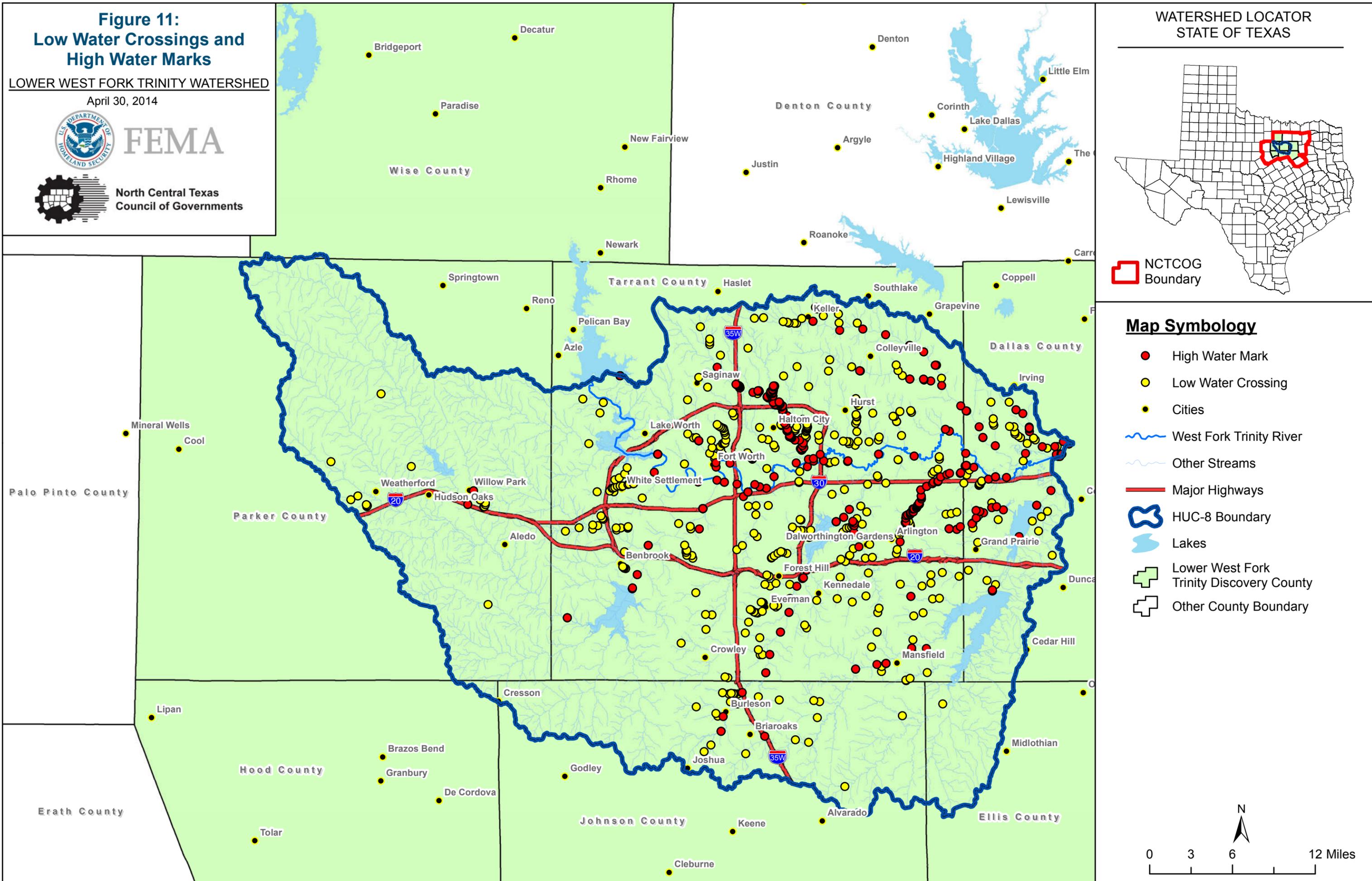
## WATERSHED LOCATOR STATE OF TEXAS



NCTCOG  
Boundary

### Map Symbology

- High Water Mark
- Low Water Crossing
- Cities
- ~ West Fork Trinity River
- ~ Other Streams
- Major Highways
- ⬮ HUC-8 Boundary
- ⬮ Lakes
- ⬮ Lower West Fork Trinity Discovery County
- ⬮ Other County Boundary

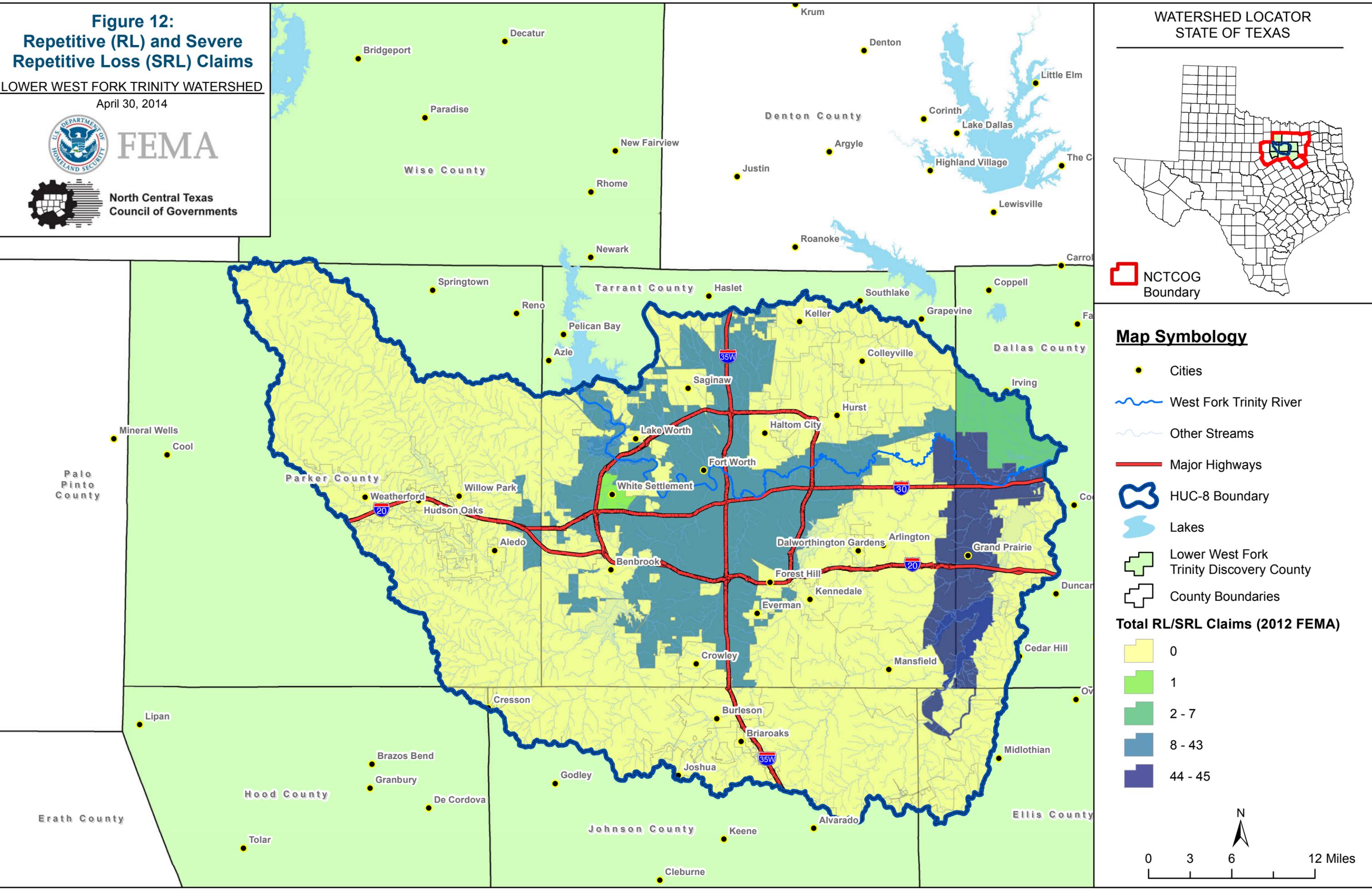


**Figure 12:  
Repetitive (RL) and Severe  
Repetitive Loss (SRL) Claims**

LOWER WEST FORK TRINITY WATERSHED  
April 30, 2014

**FEMA**

North Central Texas  
Council of Governments



**WATERSHED LOCATOR  
STATE OF TEXAS**

NCTCOG  
Boundary

**Map Symbology**

- Cities
- West Fork Trinity River
- Other Streams
- Major Highways
- HUC-8 Boundary
- Lakes
- Lower West Fork Trinity Discovery County
- County Boundaries

**Total RL/SRL Claims (2012 FEMA)**

0
1
2 - 7
8 - 43
44 - 45

0 3 6 12 Miles

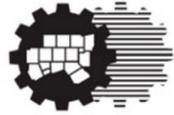
**Figure 13:  
Flood Risk - Potential Losses**

LOWER WEST FORK TRINITY WATERSHED

April 30, 2014

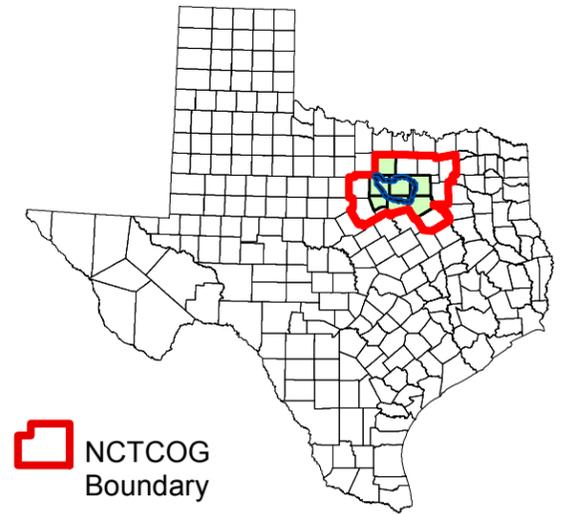


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WATERSHED LOCATOR  
STATE OF TEXAS



NCTCOG  
Boundary

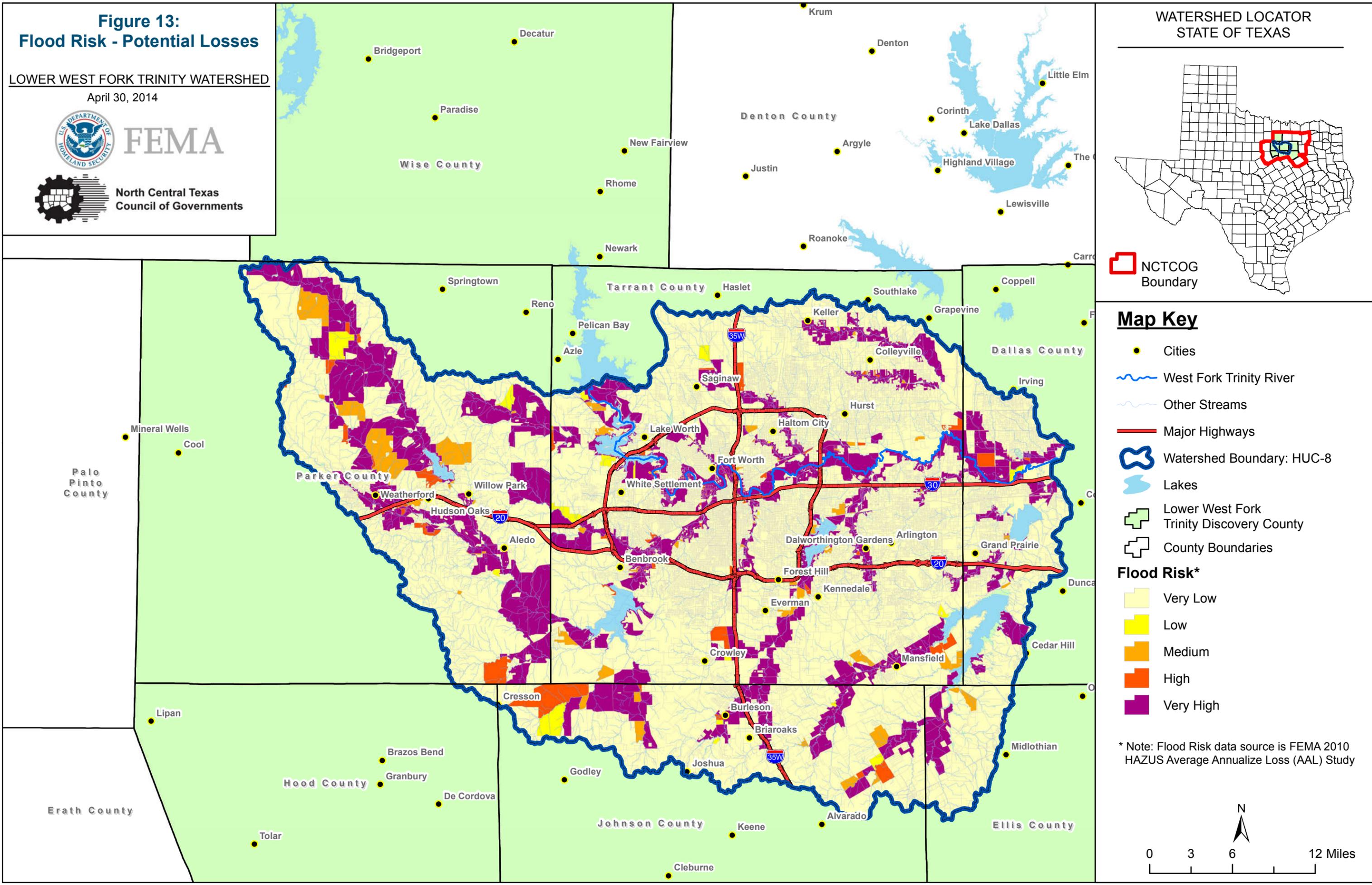
**Map Key**

- Cities
- ~ West Fork Trinity River
- ~ Other Streams
- Major Highways
- Watershed Boundary: HUC-8
- Lakes
- Lower West Fork Trinity Discovery County
- County Boundaries

**Flood Risk\***

- Very Low
- Low
- Medium
- High
- Very High

\* Note: Flood Risk data source is FEMA 2010 HAZUS Average Annualize Loss (AAL) Study



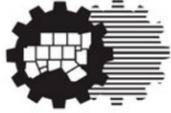
**Figure 14:  
Population Vulnerability**

LOWER WEST FORK TRINITY WATERSHED

April 30, 2014

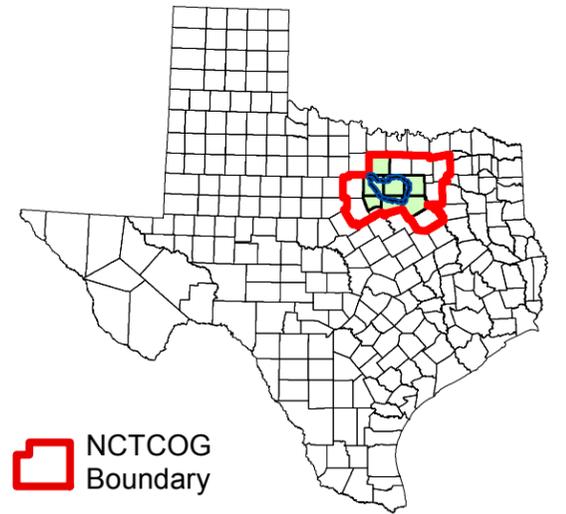


**FEMA**



North Central Texas  
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WATERSHED LOCATOR  
STATE OF TEXAS



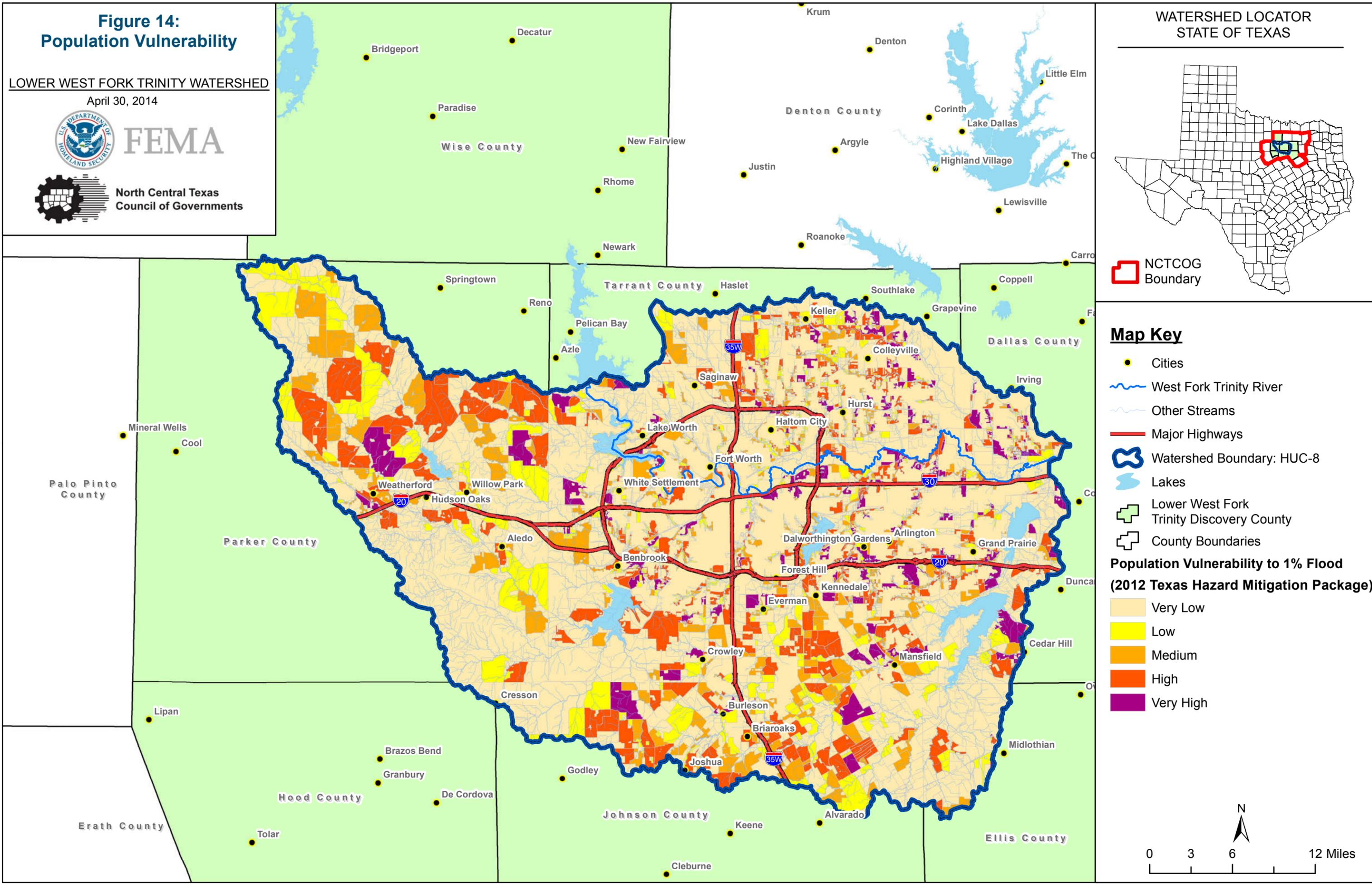
NCTCOG  
Boundary

**Map Key**

- Cities
- West Fork Trinity River
- Other Streams
- Major Highways
- Watershed Boundary: HUC-8
- Lakes
- Lower West Fork Trinity Discovery County
- County Boundaries

**Population Vulnerability to 1% Flood  
(2012 Texas Hazard Mitigation Package)**

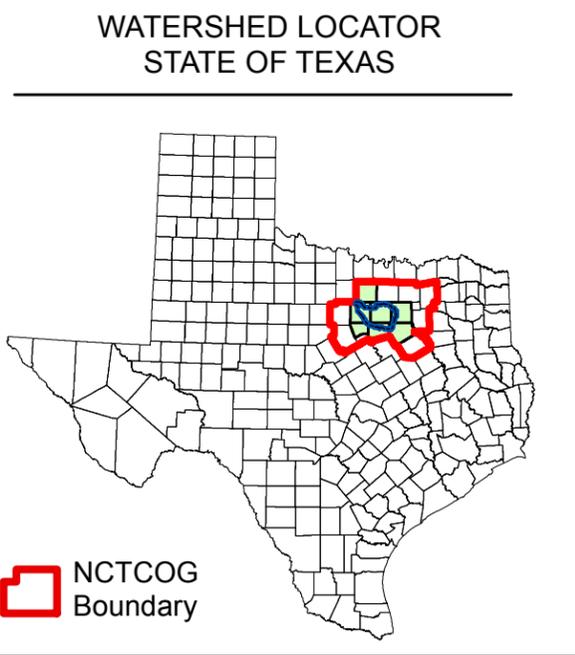
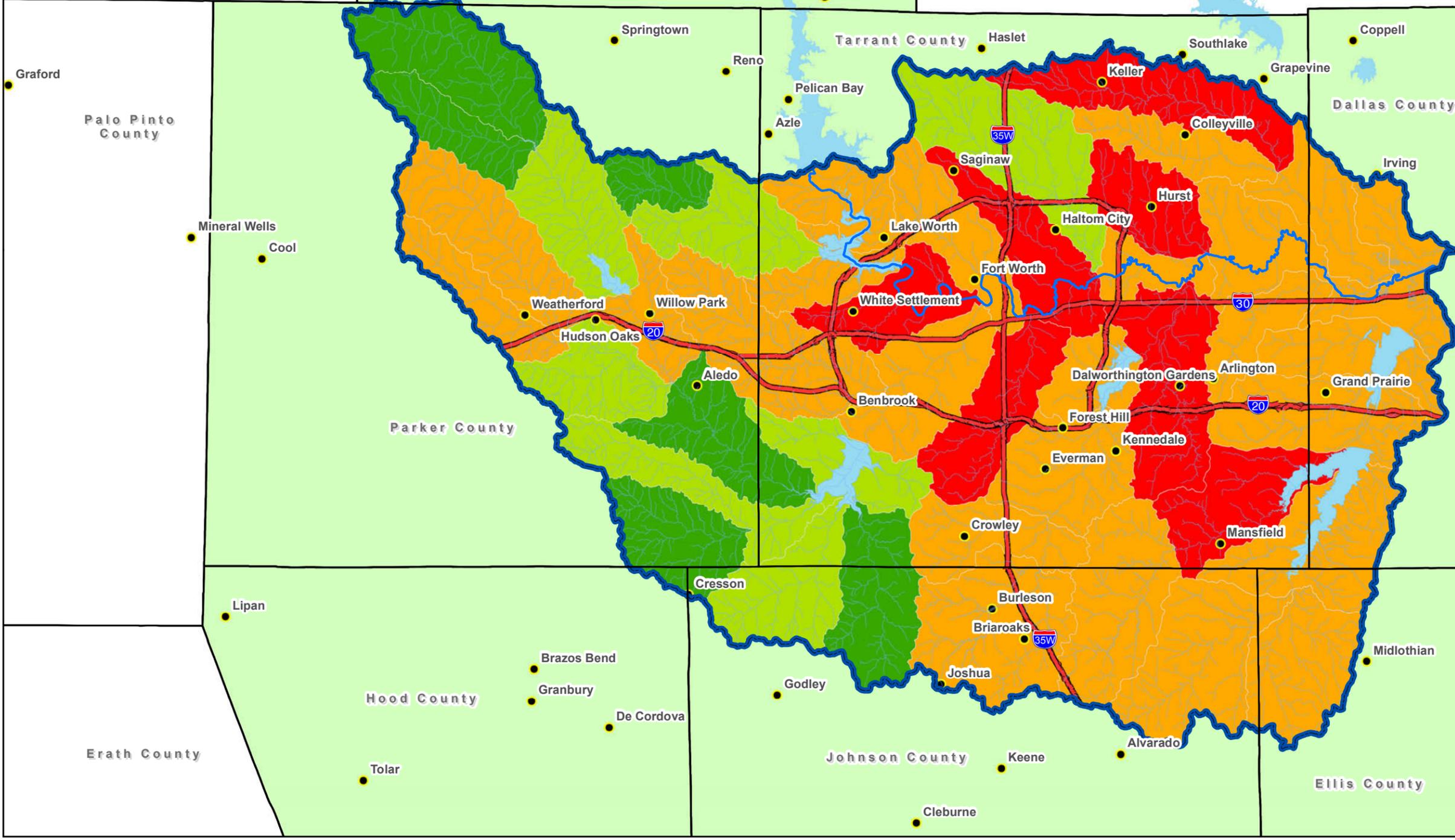
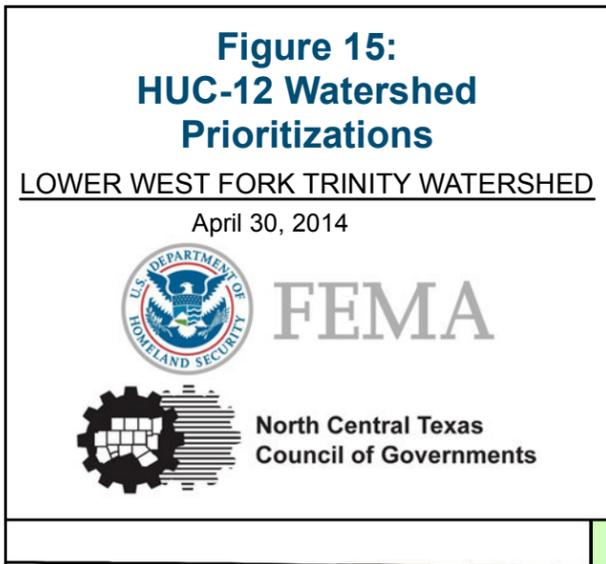
- Very Low
- Low
- Medium
- High
- Very High



**Figure 15:  
HUC-12 Watershed  
Prioritizations**

LOWER WEST FORK TRINITY WATERSHED

April 30, 2014

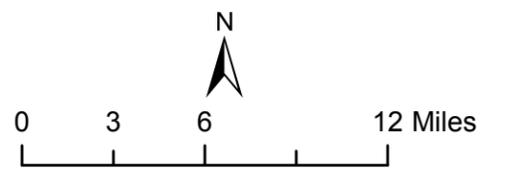


**Map Symbology**

- Cities
- ~ West Fork Trinity River
- ~ Other Streams
- Major Highways
- Watershed Boundary: HUC-8
- Lakes
- Lower West Fork Trinity Discovery County
- County Boundaries

**HUC-12 Watershed Prioritizations**

- Low Risk
- Guarded Risk (General Risk)
- Elevated Risk (Significant Risk)
- High Risk

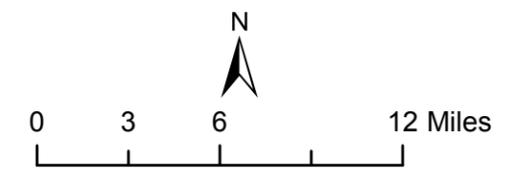
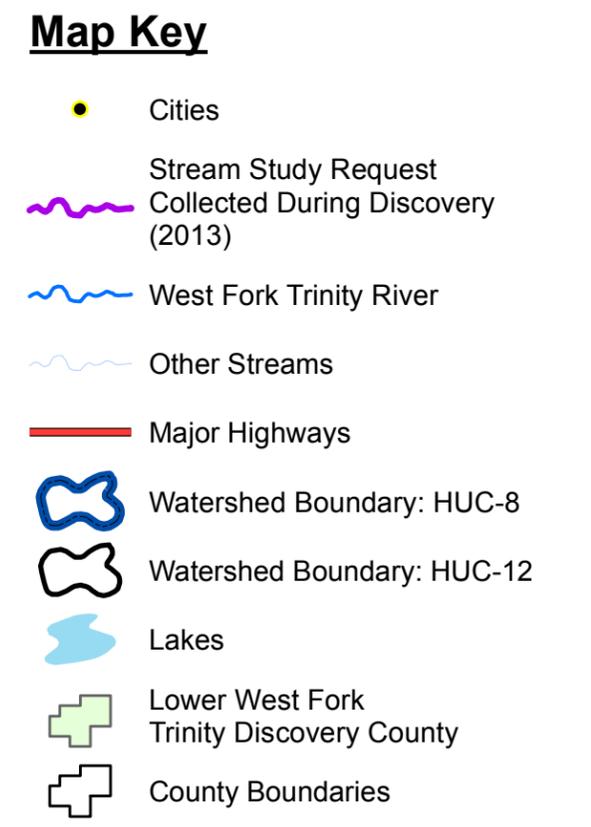
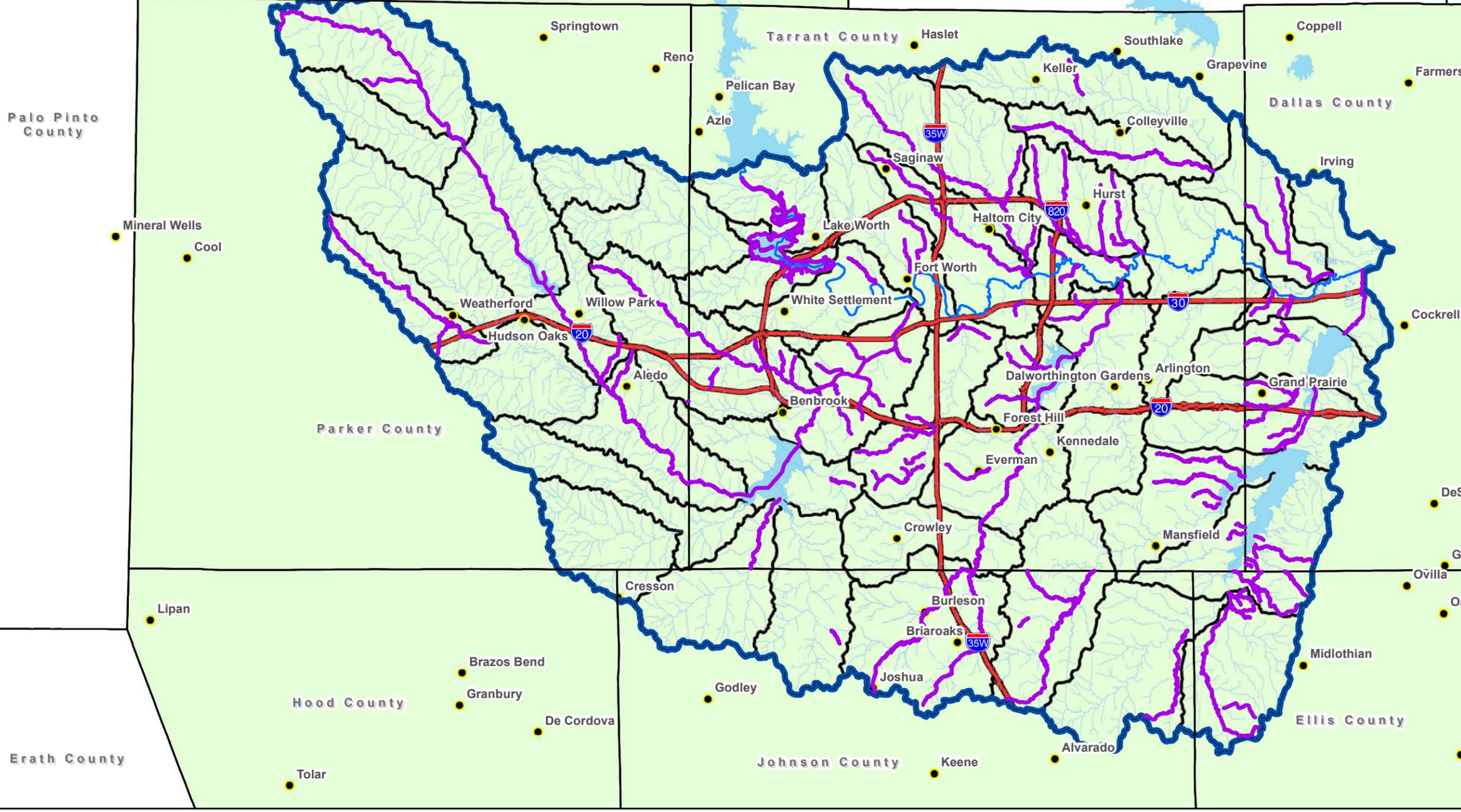
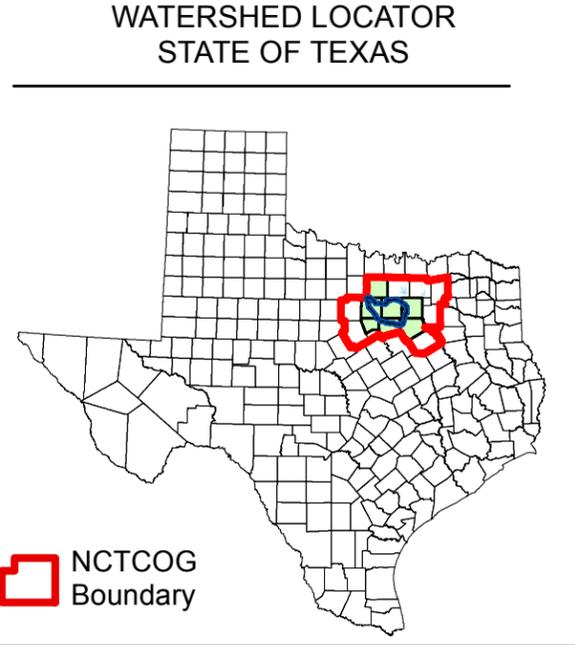
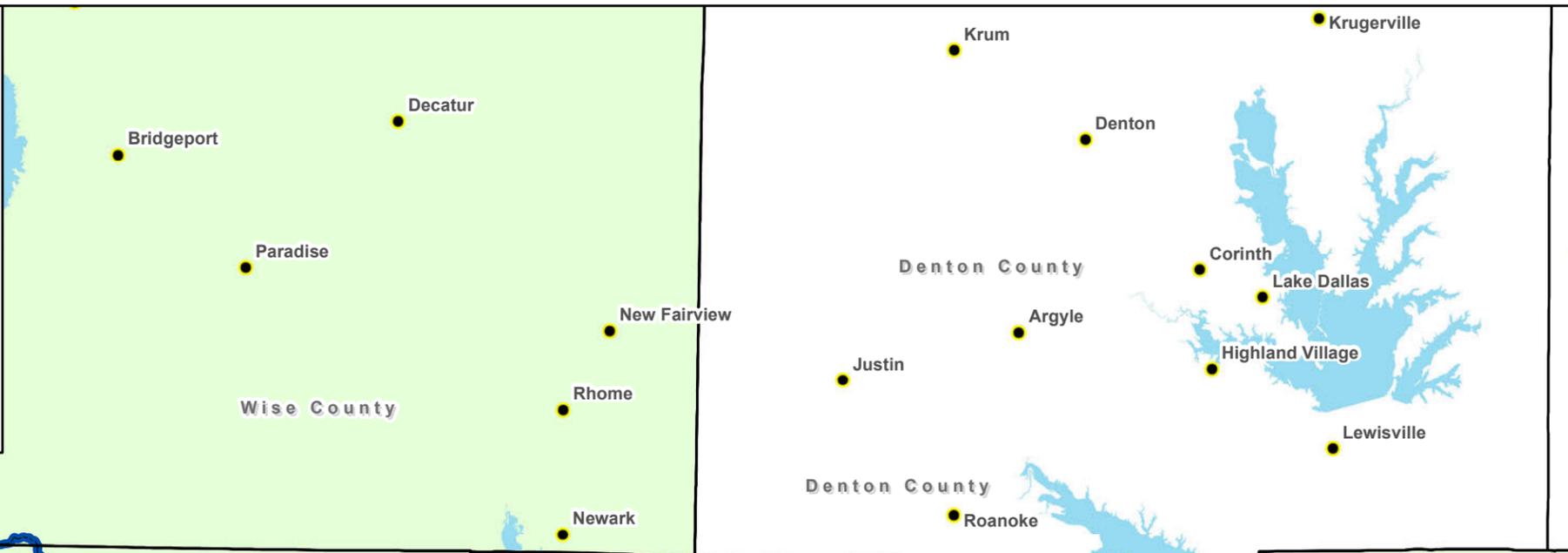




**Figure 17:  
Stream Study  
Requests**

LOWER WEST FORK TRINITY WATERSHED

April 30, 2014



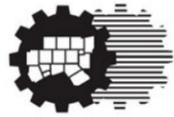
# Figure 18: Proposed Watershed Projects

LOWER WEST FORK TRINITY WATERSHED

April 30, 2014

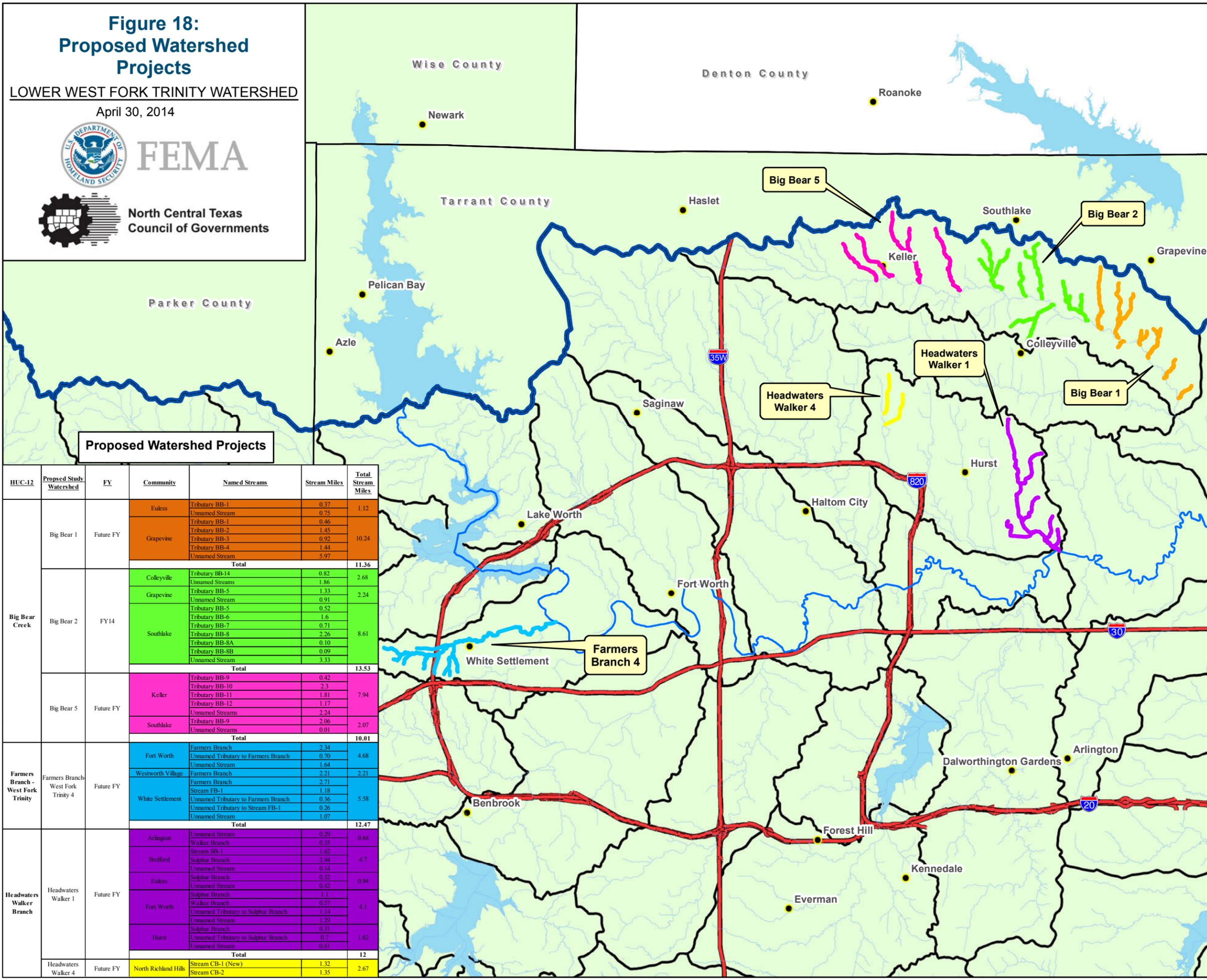
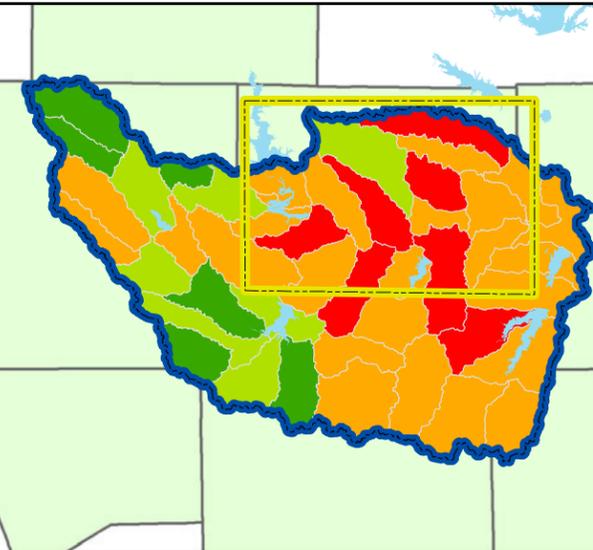


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Council of Governments

## WATERSHED LOCATOR STATE OF TEXAS



### Proposed Watershed Projects

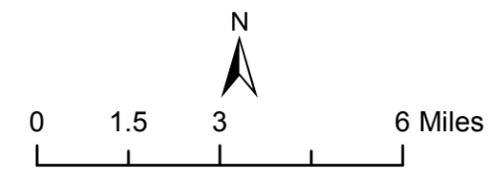
HUC-12	Proposed Study Watershed	FY	Community	Named Streams	Stream Miles	Total Stream Miles		
Big Bear Creek	Big Bear 1	Future FY	Euless	Tributary BB-1	0.37	1.12		
				Unnamed Stream	0.75			
				Tributary BB-1	0.46			
				Tributary BB-2	1.45			
				Unnamed Stream	0.92			
	Grapevine	Tributary BB-3	0.92	10.24				
		Tributary BB-4	1.44					
		Unnamed Stream	5.97					
		<b>Total</b>	<b>11.36</b>					
		Big Bear 2	FY14		Colleyville	Tributary BB-14	0.82	2.68
	Unnamed Streams			1.86				
	Grapevine			Tributary BB-5		1.33		
				Unnamed Stream		0.91		
	Southlake			Tributary BB-5		0.52	8.61	
				Tributary BB-6		1.6		
Tributary BB-7				0.71				
Tributary BB-8				2.26				
Tributary BB-8A				0.10				
Tributary BB-8B				0.09				
Unnamed Stream	3.33							
<b>Total</b>	<b>13.53</b>							
Big Bear 5	Future FY	Keller	Tributary BB-9	0.42	7.94			
			Tributary BB-10	2.3				
			Tributary BB-11	1.81				
			Tributary BB-12	1.17				
			Unnamed Streams	2.24				
Southlake	Tributary BB-9	2.06	2.07					
	Unnamed Streams	0.01						
<b>Total</b>	<b>10.01</b>							
Farmers Branch - West Fork Trinity	Future FY	Fort Worth	Farmers Branch	2.34	4.68			
			Unnamed Tributary to Farmers Branch	0.70				
			Unnamed Stream	1.64				
			Westworth Village	Farmers Branch		2.21		
				Stream FB-1		1.18		
			White Settlement	Unnamed Tributary to Farmers Branch		0.36	5.58	
				Unnamed Tributary to Stream FB-1		0.26		
				Unnamed Stream		1.07		
			<b>Total</b>	<b>12.47</b>				
			Headwaters Walker Branch	Future FY		Arlington	Unnamed Stream	0.29
Walker Branch	0.35							
Bedford	Stream SB-1	1.62						
	Sulphur Branch	2.94						
Euless	Unnamed Stream	0.14			0.94			
	Sulphur Branch	0.52						
Fort Worth	Unnamed Stream	0.42			4.1			
	Sulphur Branch	1.1						
	Walker Branch	0.57						
Hurst	Unnamed Tributary to Sulphur Branch	1.14			1.62			
	Unnamed Stream	1.29						
	Sulphur Branch	0.31						
Hurst	Unnamed Tributary to Sulphur Branch	0.7			0.61			
	Unnamed Stream	0.61						
<b>Total</b>	<b>12</b>							
Headwaters Walker 4	Future FY	North Richland Hills	Stream CB-1 (New)	1.32	2.67			
			Stream CB-2	1.35				

### Map Key

- Cities
- ~ West Fork Trinity River
- ~ Other Streams
- Major Highways
- Watershed Boundary: HUC-8
- Watershed Boundary: HUC-12
- Lakes
- Lower West Fork Trinity Discovery County
- County Boundaries

### HUC-12 Watershed Prioritizations

- Low Risk
- Guarded Risk (General Risk)
- Elevated Risk (Significant Risk)
- High Risk



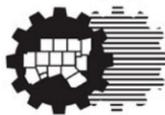
# Figure 19: Stakeholder Comments

LOWER WEST FORK TRINITY WATERSHED

April 30, 2014

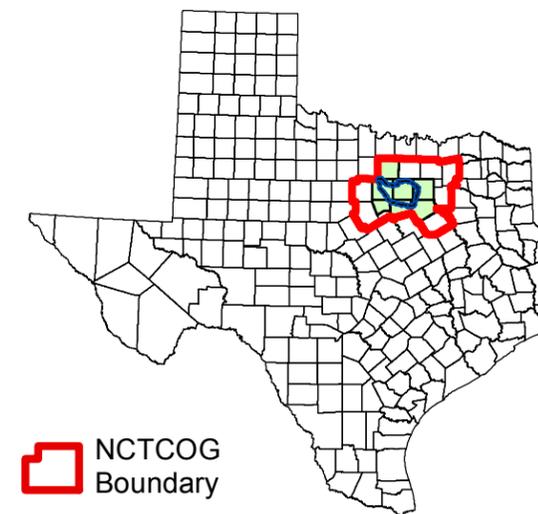


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North Central Texas  
Council of Governments

## WATERSHED LOCATOR STATE OF TEXAS



NCTCOG  
Boundary

### Map Symbology

- Cities
- Major Highways
- Watershed Boundary: HUC-8
- Lakes
- Lower West Fork Trinity Discovery County
- County Boundaries

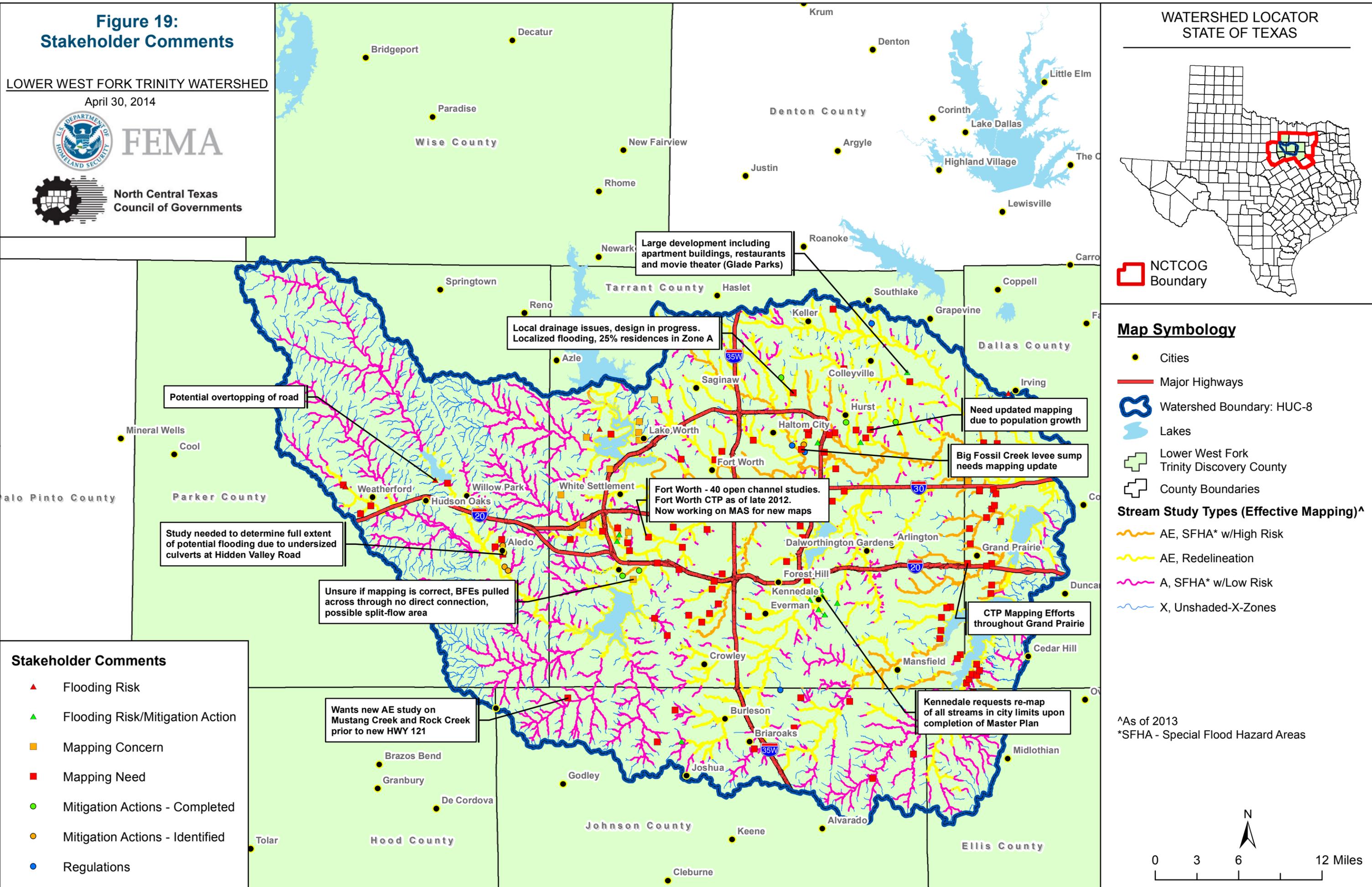
### Stream Study Types (Effective Mapping)^

- AE, SFHA\* w/High Risk
- AE, Redelineation
- A, SFHA\* w/Low Risk
- X, Unshaded-X-Zones

^As of 2013  
\*SFHA - Special Flood Hazard Areas

### Stakeholder Comments

- ▲ Flooding Risk
- ▲ Flooding Risk/Mitigation Action
- Mapping Concern
- Mapping Need
- Mitigation Actions - Completed
- Mitigation Actions - Identified
- Regulations



Potential overtopping of road

Study needed to determine full extent of potential flooding due to undersized culverts at Hidden Valley Road

Unsure if mapping is correct, BFEs pulled across through no direct connection, possible split-flow area

Wants new AE study on Mustang Creek and Rock Creek prior to new HWY 121

Local drainage issues, design in progress. Localized flooding, 25% residences in Zone A

Large development including apartment buildings, restaurants and movie theater (Glade Parks)

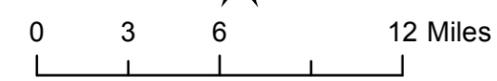
Fort Worth - 40 open channel studies. Fort Worth CTP as of late 2012. Now working on MAS for new maps

Big Fossil Creek levee sump needs mapping update

CTP Mapping Efforts throughout Grand Prairie

Kennedale requests re-map of all streams in city limits upon completion of Master Plan

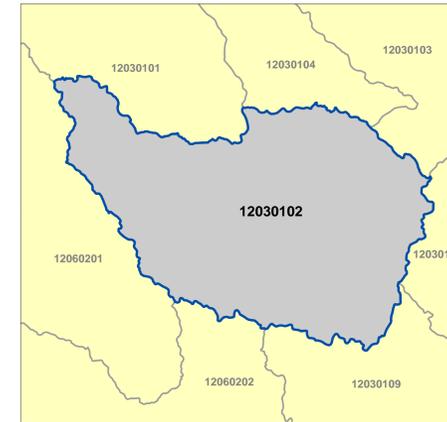
Need updated mapping due to population growth



**MAP SYMBOLOGY**

- FEMA Floodplains**
- Floodway
  - Zone AE (100-Year, Detailed)
  - Zone A (100-Year, Approximate)
  - Zone X500 (500-Year, Detailed)
  - Zone X Protected by Levee
- Transportation**
- Interstate Highway
  - US Highway
  - State Highway
  - Other Roads
  - Railroads
- Flood Claims**
- Rep Loss Properties
  - Severe Rep Loss Properties
- Other Symbols**
- USGS Gauge
  - LOMC Locations
  - Dams
  - Stream / Rivers
  - Lakes
  - City Boundaries
  - County Boundaries
  - Watershed Boundary

**WATERSHED LOCATOR**



**NATIONAL FLOOD INSURANCE PROGRAM**  
**Discovery Map**

LOWER WEST FORK TRINITY WATERSHED, TEXAS

Stream Miles: 2,995  
Studied Stream Miles: 2,163  
Detailed Study Miles: 1,244  
Approximate Study Miles: 919

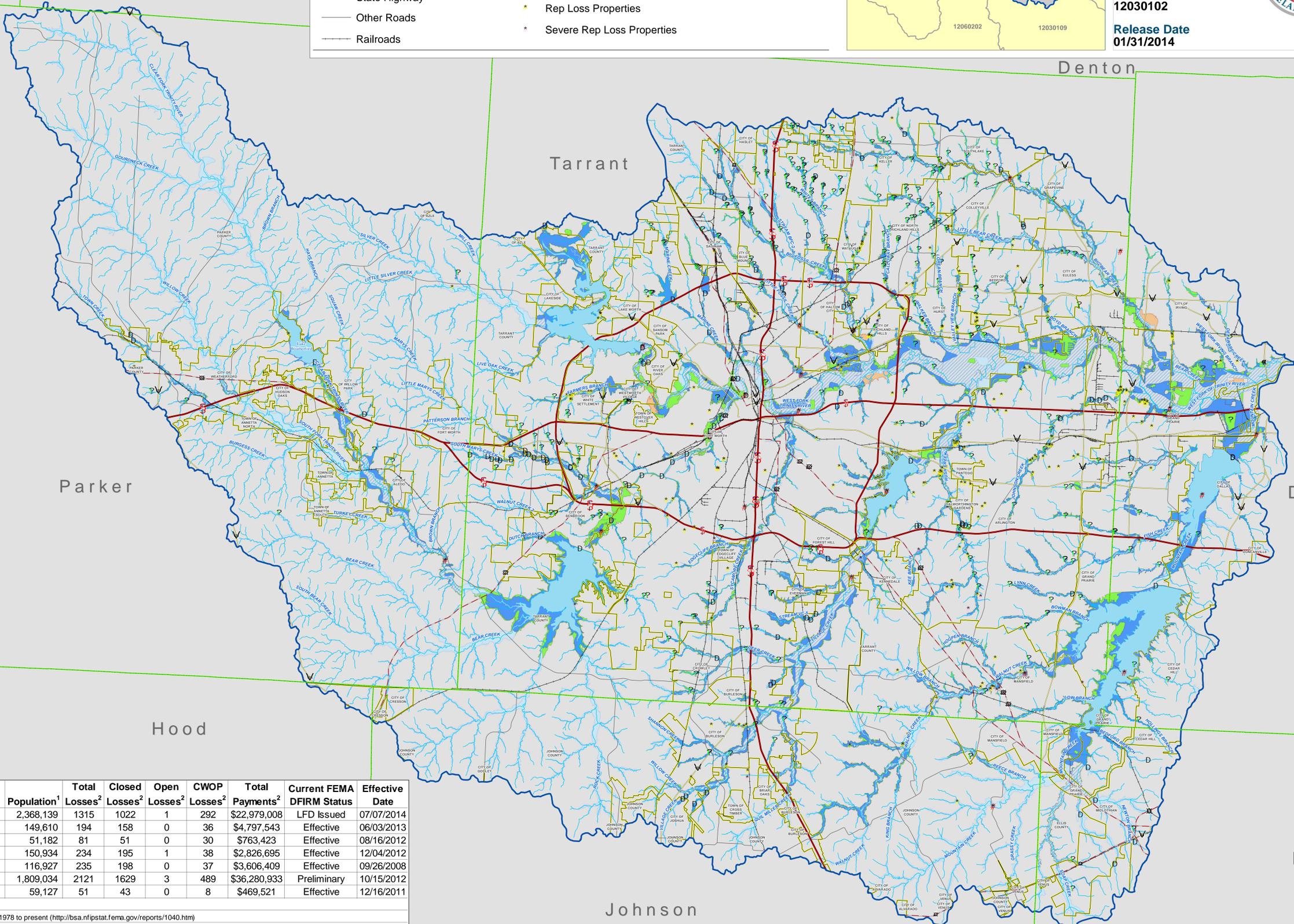


**FEMA**

HUC-8 Code  
**12030102**

Release Date  
**01/31/2014**

Community Name	CID
Dallas County	480165
Cedar Hill, City of	480166
Dallas, City of	480171
Duncanville, City of	480175
Grand Prairie, City of	480172
Greenville, City of	480508
Irving, City of	480180
Ellis County	480798
Cedar Hill, City of	480166
Grand Prairie, City of	480512
Marshall, City of	480606
Madison, City of	480801
Yates, City of	480863
Hood County	480356
Clouston, City of	480177
Johnson County	480179
Alvarado, City of	480307
Brownsville, City of	480308
Burleson, City of	480459
Cresson, City of	480177
Cross Timmer, Town of	481685
Cowley, City of	480591
Fort Worth, City of	480596
Joshua, City of	480582
Marshall, City of	480606
Yates, City of	480863
Parker County	480550
Alvord, City of	481659
Arveta North, Town of	481664
Arveta South, Town of	481665
Arveta, Town of	481660
Aska, City of	480594
Cresson, City of	480177
Fort Worth, City of	480596
Hudson Oaks, City of	480147
Weatherford, City of	480522
Willow Park, City of	481184
Tarrant County	480582
Arlington, City of	480454
Asia, City of	480584
Bedford, City of	480585
Bertrick, City of	480586
Blum Island, City of	480587
Burleson, City of	480459
Carrollville, City of	480590
Cowley, City of	480591
Dalworthington Gardens, City of	481013
Edgerton Village, Town of	480592
Elders, City of	480593
Everman, City of	480594
Forest Hill, City of	480595
Fort Worth, City of	480596
Grand Prairie, City of	480572
Greenville, City of	480598
Haltom, City of	480599
Hawthorn, City of	480600
Hunt, City of	480601
Irving, City of	480180
Keller, City of	480602
Kennedale, City of	480603
Lake Worth, City of	480604
Lakewood, Town of	480605
Marshall, City of	480606
North Richland Hills, City of	480607
Parlange, Town of	481116
Richard Hills, City of	480608
River Oaks, City of	480609
Saginaw, City of	480610
Sansom Park, City of	480611
Southlake, City of	480612
Watauga, City of	480613
Westover Hills, Town of	480615
Westworth Village, City of	480616
Wise Settlement, City of	480617
Wise County	481051



County	CID	Population <sup>1</sup>	Total Losses <sup>2</sup>	Closed Losses <sup>2</sup>	Open Losses <sup>2</sup>	CWOP Losses <sup>2</sup>	Total Payments <sup>2</sup>	Current FEMA DFIRM Status	Effective Date
Dallas	48113	2,368,139	1315	1022	1	292	\$22,979,008	LFD Issued	07/07/2014
Ellis	48139	149,610	194	158	0	36	\$4,797,543	Effective	06/03/2013
Hood	48221	51,182	81	51	0	30	\$763,423	Effective	08/16/2012
Johnson	48251	150,934	234	195	1	38	\$2,826,695	Effective	12/04/2012
Parker	48367	116,927	235	198	0	37	\$3,606,409	Effective	09/26/2008
Tarrant	48439	1,809,034	2121	1629	3	489	\$36,280,933	Preliminary	10/15/2012
Wise	48497	59,127	51	43	0	8	\$469,521	Effective	12/16/2011

<sup>1</sup> 2010 Census Data  
<sup>2</sup> FEMA Loss Statistics from 1978 to present (<http://fbsa.nipstat.fema.gov/reports/1040.htm>)  
Total losses – All losses submitted regardless of the status.  
Closed losses – Losses that have been paid.  
Open losses – Losses that have not been paid in full.  
CWOP losses - Losses that have been closed without payment.  
Total Payments – Total amount paid on losses.

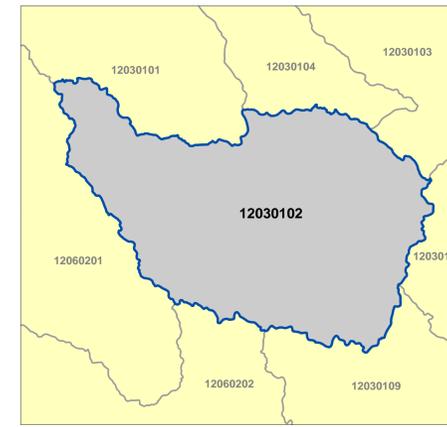


**MAP SYMOLOGY**

- Lakes
- City Boundaries
- County Boundaries
- Watershed Boundary
- Interstate Highway
- US Highway
- State Highway
- Other Roads
- Railroads
- Effective Stream Study Type\***
  - Zone A (Approximate, SFHA w/Low Risk)
  - Zone AE (New/Revised Detailed, SFHA w/High Risk)
  - Zone AE (Detailed, Redelineation)
  - Zone X (Unshaded-X-Zones, Areas of Minimal Flood Risk)
- Effective FEMA Floodplains\***
  - Floodway
  - Zone AE (100-Year, Detailed)
  - Zone A (100-Year, Approximate)
  - Zone X500 (500-Year, Detailed)
  - Zone X Protected by Levee

\*Data as of January 2014

**WATERSHED LOCATOR**



**NATIONAL FLOOD INSURANCE PROGRAM**  
**Discovery Map**

**LOWER WEST FORK TRINITY WATERSHED, TEXAS**

Stream Miles: 2,995  
 Studied Stream Miles: 2,163  
 Detailed Study Miles: 231 (New | Revised)  
 Detailed Study Miles: 1013 (Redelineation)  
 Approximate Study Miles: 919  
**HUC-8 Code**  
**12030102**  
**Release Date**  
**4/30/2014**



**FEMA**

**FY12 DISCOVERY COMMUNITIES**

Community Name	CID
<b>Dallas County</b>	
Oscar Hill, City of	480168
Dallas, City of	480171
Duncanville, City of	480173
Grand Prairie, City of	485472
Grapevine, City of	480598
Irving, City of	480180
<b>Ellis County</b>	
Cedar Hill, City of	480168
Grand Prairie, City of	485472
Manfield, City of	480606
Midlothian, City of	480801
Venus, City of	480883
<b>Hood County</b>	
Cresson, City of	480177
<b>Johnson County</b>	
Alvarado, City of	480397
Briarclark, City of	480398
Burleson, City of	485459
Cresson, City of	480177
Cross Timber, Town of	481685
Crowley, City of	480591
Fort Worth, City of	480598
<b>Parker County</b>	
Alledo, City of	481659
Annetta North, Town of	481664
Annetta South, Town of	481665
Annetta, Town of	481666
Azle, City of	480584
Cresson, City of	480177
Fort Worth, City of	480598
Hudson Oaks, City of	480147
Weatherford, City of	480522
Willow Park, City of	481164
<b>Tarrant County</b>	
Arlington, City of	485454
Azle, City of	480584
Bedford, City of	480585
Benbrook, City of	480586
Blue Mound, City of	480587
Burleson, City of	485459
Colleyville, City of	480590
Crowley, City of	480591
Dalworth Gardens, City of	481013
Edgewood Village, Town of	480592
Eufess, City of	480593
Everman, City of	480594
Forest Hill, City of	480596
Fort Worth, City of	480598
Grand Prairie, City of	485472
Grapevine, City of	480598
Haltom City, City of	480599
Hastlet, City of	480600
Hurst, City of	480601
Irving, City of	480180
Keller, City of	480602
Kennerdale, City of	480603
Lake Worth, City of	480605
Lakeside, Town of	480604
Manfield, City of	480606
North Richland Hills, City of	480607
Parlange, Town of	481116
Richard Hills, City of	480608
River Oaks, City of	480609
Saginaw, City of	480610
Sansom Park, City of	480611
Southlake, City of	480612
Watauga, City of	480613
Westover Hills, Town of	480615
Westworth Village, City of	480616
White Settlement, City of	480617
Wise County	481051

**BEST AVAILABLE TOPOGRAPHY**

Elevation Data	County / Counties
Grand Prairie LiDAR, 2009	Dallas, Tarrant
TNRIS LiDAR, 2010	Dallas, Wise
NCTCOG LiDAR, 2001	Dallas, Ellis, Johnson, Parker, Tarrant
TNRIS LiDAR, 2009	Ellis, Johnson, Parker, Tarrant
USGS 30m DEM	Hood, Johnson, Parker
NCTCOG - North Central Texas Council of Governments	
TNRIS - Texas Natural Resource Information System	
USGS - United States Geological Survey	

**LOSS STATISTICS AND MAPPING STATUS**

County	CID	Population <sup>1</sup>	Total Losses <sup>2</sup>	Closed Losses <sup>2</sup>	Open Losses <sup>2</sup>	CWOP Losses <sup>2</sup>	Total Payments <sup>2</sup>	Current FEMA DFIRM Status	Effective Date
Dallas	48113	2,368,139	1315	1022	1	292	\$22,979,008	LFD Issued	07/07/2014
Ellis	48139	149,610	194	158	0	36	\$4,797,543	Effective	06/03/2013
Hood	48221	51,182	81	51	0	30	\$763,423	Effective	08/16/2012
Johnson	48251	150,934	234	195	1	38	\$2,826,695	Effective	12/04/2012
Parker	48367	116,927	235	198	0	37	\$3,606,409	Effective	09/26/2008
Tarrant	48439	1,809,034	2121	1629	3	489	\$36,280,933	Preliminary	10/15/2012
Wise	48497	59,127	51	43	0	8	\$469,521	Effective	12/16/2011

<sup>1</sup> 2010 Census Data  
<sup>2</sup> FEMA Loss Statistics from 1978 to present (<http://bsa.nfipstat.fema.gov/reports/1040.htm>)  
 Total losses - All losses submitted regardless of the status.  
 Closed losses - Losses that have been paid.  
 Open losses - Losses that have not been paid in full.  
 CWOP losses - Losses that have been closed without payment.  
 Total Payments - Total amount paid on losses.



**MAP SYMOLOGY**

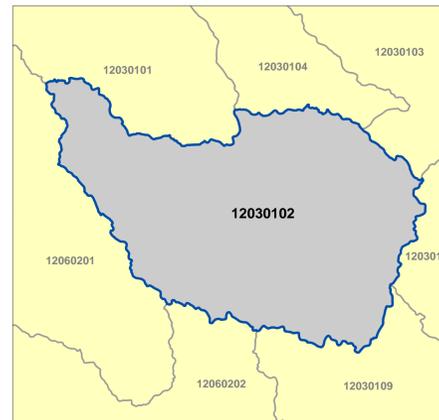
- Lakes
- City Boundaries
- County Boundaries
- Watershed Boundary
- Interstate Highway
- US Highway
- State Highway
- Other Roads
- Railroads
- Floodway
- Zone AE (100-Year, Detailed)
- Zone A (100-Year, Approximate)
- Zone X500 (500-Year, Detailed)
- Zone X Protected by Levee
- Assessed, Being Studied
- Assessed, To Be Studied
- Unverified, Being Studied
- Unverified, To Be Studied
- Valid, NVUE Compliant

**CNMS Validation Status Definitions**

<b>Assessed</b>	Unmapped streams or streams not part of FEMA's SFHA inventory that have been investigated and considered for study in current and/or future Fiscal Years (FYs).
<b>Unverified</b>	Stream has not passed the Critical and Secondary Element checks (At least one critical or four or more secondary change conditions flagged) and may either be assigned resources for restudy in current and/or future FYs.
<b>Valid</b>	Streams considered New, Validated, or Updated Engineering (NVUE) compliant (zero critical and fewer than four secondary elements flagged)
<b>To Be Studied</b>	Mapped streams that need to be studied and are planned for a future FY or unmapped streams prioritized to be mapped with an SFHA.
<b>Being Studied</b>	Mapped or Unmapped streams currently being studied or have been allocated funding for the current FY.

\*Data as of January 2014

**WATERSHED LOCATOR**



**NATIONAL FLOOD INSURANCE PROGRAM**  
**Discovery Map**

LOWER WEST FORK TRINITY WATERSHED, TEXAS

Stream Miles: 3,058  
 Valid, NVUE Compliant Miles: 159  
 Assessed, Being Studied Miles: 42  
 Assessed, To Be Studied Miles: 799  
 Unverified, Being Studied Miles: 238  
 Unverified, To Be Studied Miles: 1820  
 Population: 2,378,000  
**HUC-8 Code**  
**12030102**  
**Release Date**  
**4/30/2014**

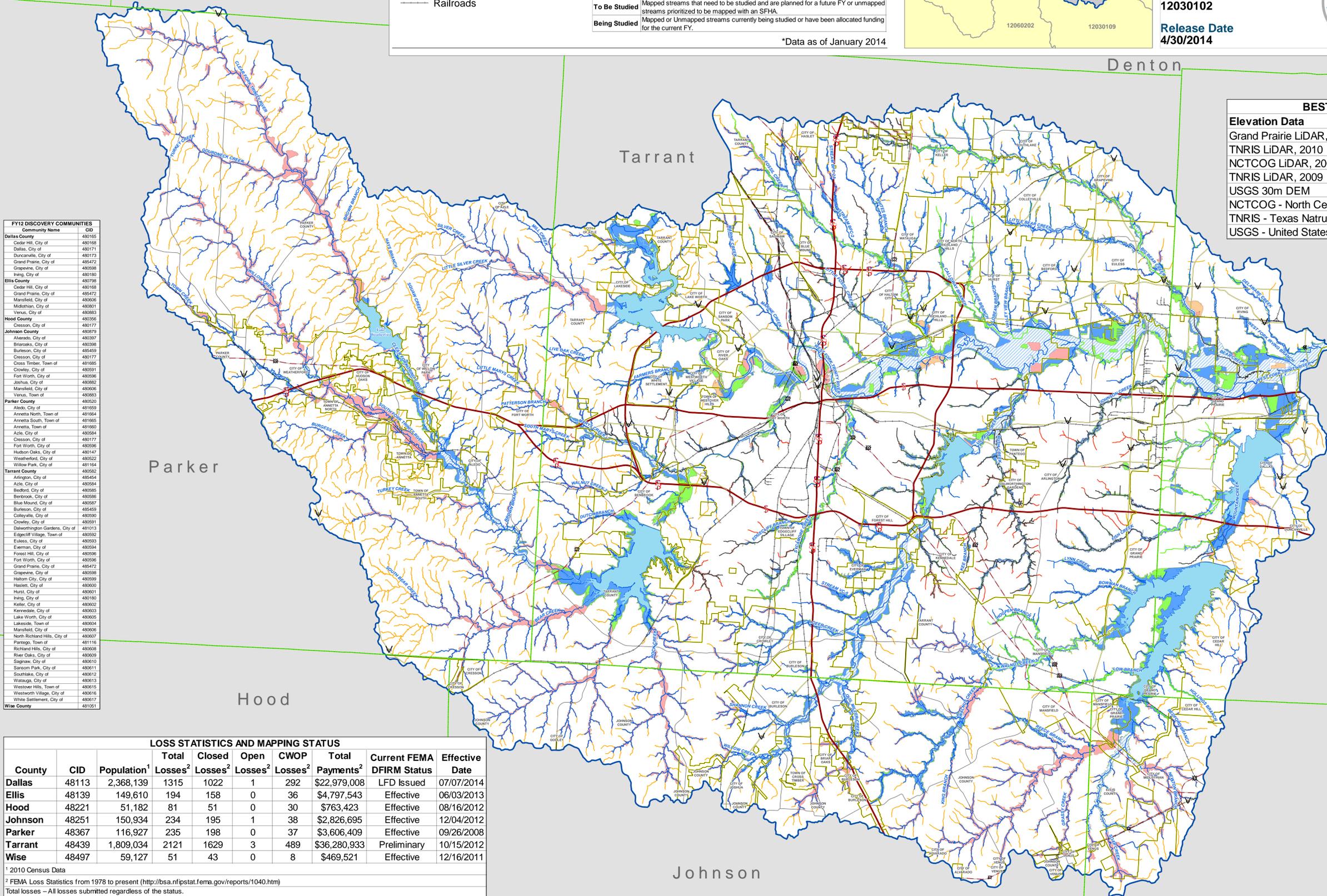


**FEMA**

Jack Wise

Denton

Collin



**FY12 DISCOVERY COMMUNITIES**

Community Name	CID
Dallas County	480165
Cedar Hill, City of	480168
Dallas, City of	480171
Duncanville, City of	480175
Grand Prairie, City of	485472
Graspvine, City of	480598
Irving, City of	480180
King, City of	480796
Ellis County	480168
Cedar Hill, City of	480168
Grand Prairie, City of	485472
Mansfield, City of	480306
Midlothian, City of	480801
Venus, City of	480883
Hood County	480356
Cresson, City of	480177
Johnson County	480879
Amarillo, City of	480397
Brenham, City of	480398
Burleson, City of	485459
Cresson, City of	480177
Cross Timber, Town of	481665
Crowley, City of	480591
Fort Worth, City of	480596
Joshua, City of	480882
Mansfield, City of	480306
Venus, Town of	480883
Parker County	480320
Aledo, City of	481659
Annetta North, Town of	481664
Annetta South, Town of	481665
Annetta, Town of	481660
Azle, City of	480584
Cresson, City of	480177
Fort Worth, City of	480596
Hudson Oaks, City of	480147
Weatherford, City of	480522
Willow Park, City of	481164
Tarrant County	480582
Arlington, City of	480584
Azle, City of	480584
Bedford, City of	480585
Bertrams, City of	480586
Blue Mound, City of	480587
Burleson, City of	485459
Colleyville, City of	480591
Crowley, City of	480591
Dalworthington Gardens, City of	481013
Edgell Village, Town of	480592
Euless, City of	480593
Euverman, City of	480594
Forest Hill, City of	480595
Fort Worth, City of	480596
Grand Prairie, City of	485472
Graspvine, City of	480598
Haltom City, City of	480599
Hicklet, City of	480600
Hurst, City of	480601
Irving, City of	480180
Keller, City of	480602
Kennedale, City of	480603
Lake Worth, City of	480605
Lakeside, Town of	480604
Mansfield, City of	480606
North Richland Hills, City of	480607
Parango, Town of	481116
Richard Hills, City of	480608
River Oaks, City of	480609
Sagraw, City of	480610
Sarson Park, City of	480611
Southlake, City of	480612
Watauga, City of	480613
Westover Hills, Town of	480615
Westworth Village, City of	480616
White Settlement, City of	480617
Wise County	481051

**BEST AVAILABLE TOPOGRAPHY**

Elevation Data	County / Counties
Grand Prairie LiDAR, 2009	Dallas, Tarrant
TNRIS LiDAR, 2010	Dallas, Wise
NCTCOG LiDAR, 2001	Dallas, Ellis, Johnson, Parker, Tarrant
TNRIS LiDAR, 2009	Ellis, Johnson, Parker, Tarrant
USGS 30m DEM	Hood, Johnson, Parker
NCTCOG - North Central Texas Council of Governments	
TNRIS - Texas Natural Resource Information System	
USGS - United States Geological Survey	

**LOSS STATISTICS AND MAPPING STATUS**

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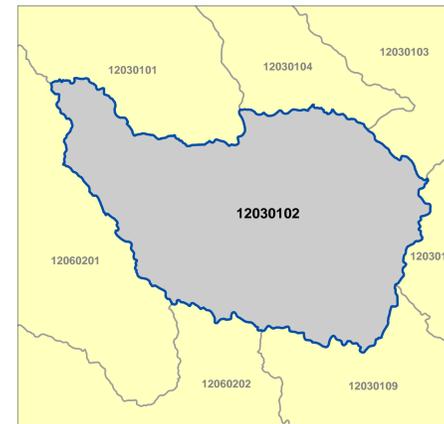


**MAP SYMOLOGY**

- Lakes
- City Boundaries
- County Boundaries
- Watershed Boundary - HUC-8
- Watershed Boundary - HUC-12
- Transportation**
  - Interstate Highway
  - US Highway
  - State Highway
  - Other Roads
  - Railroads
- Effective FEMA Floodplains\***
  - Floodway
  - Zone AE (100-Year, Detailed)
  - Zone A (100-Year, Approximate)
  - Zone X500 (500-Year, Detailed)
  - Zone X Protected by Levee
- Potential Study Streams**
  - Proposed FY14 Studies
  - Future FY Studies
  - Other Stream / Rivers
- Digital Elevation Model (DEM)**
  - High
  - Low

\*Data as of January 2014.

**WATERSHED LOCATOR**



**NATIONAL FLOOD INSURANCE PROGRAM**

**Discovery Map**

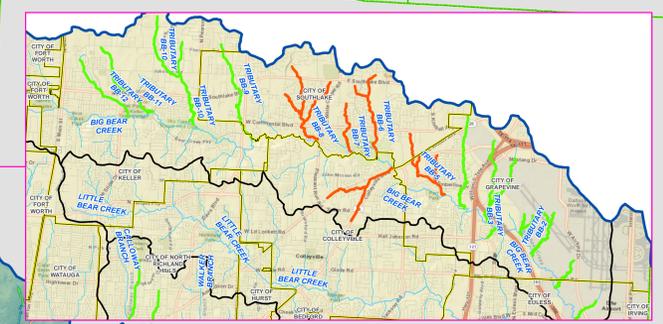
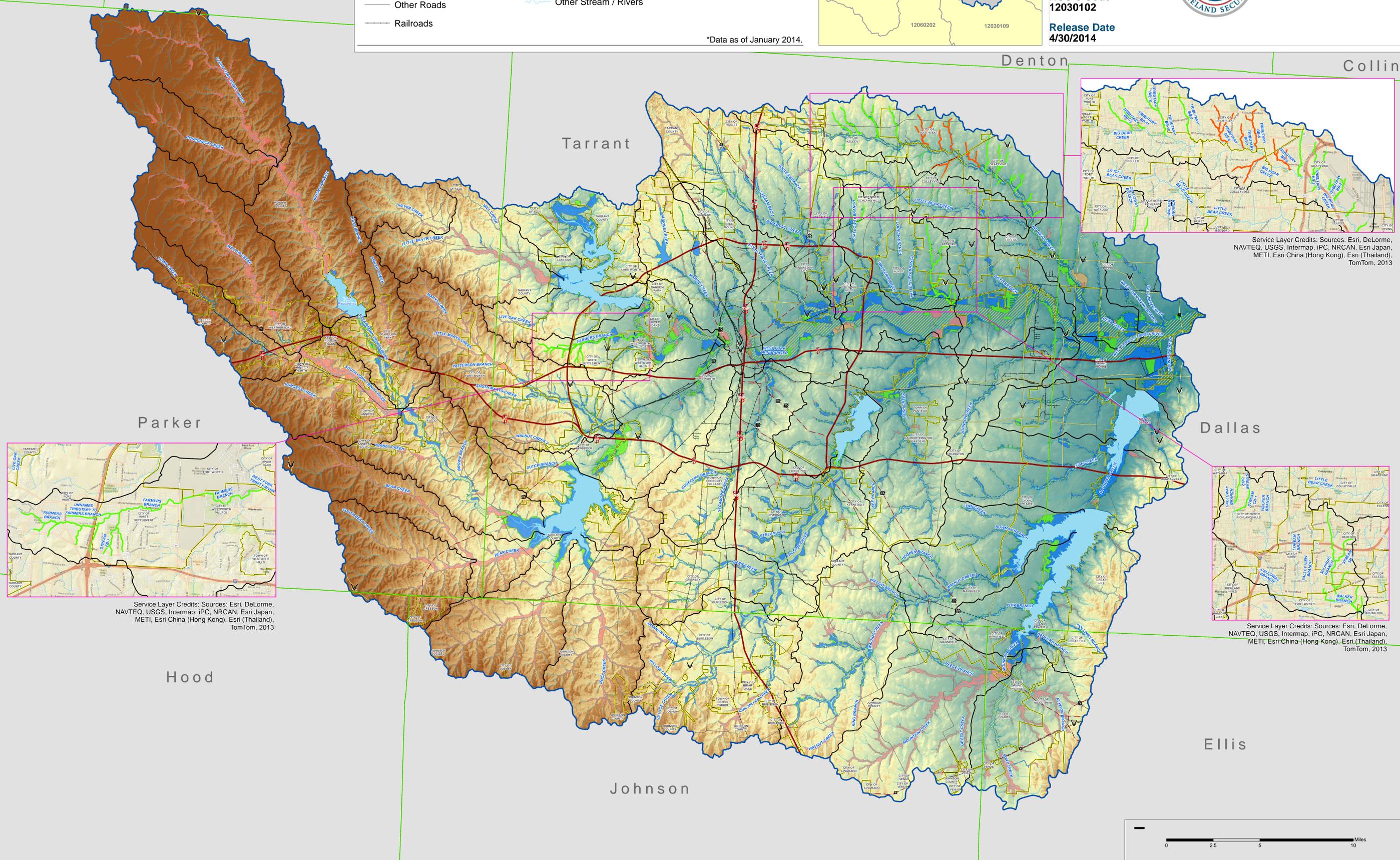
LOWER WEST FORK TRINITY WATERSHED, TEXAS



**FEMA**

HUC-8 Code  
12030102

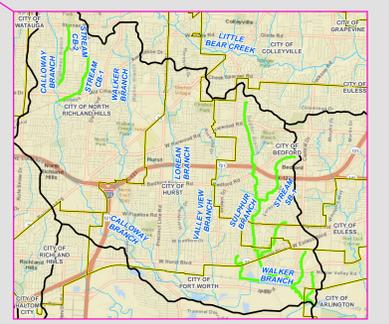
Release Date  
4/30/2014



Service Layer Credits: Sources: Esri, DeLorme, NAVTEQ, USGS, Intermap, IPC, NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, 2013



Service Layer Credits: Sources: Esri, DeLorme, NAVTEQ, USGS, Intermap, IPC, NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, 2013



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## Newsletters

# Discovery

## Lower West Fork Trinity Watershed

“Capturing a More Complete Picture of Your Community and Your Watershed”

### FEMA RiskMAP Program

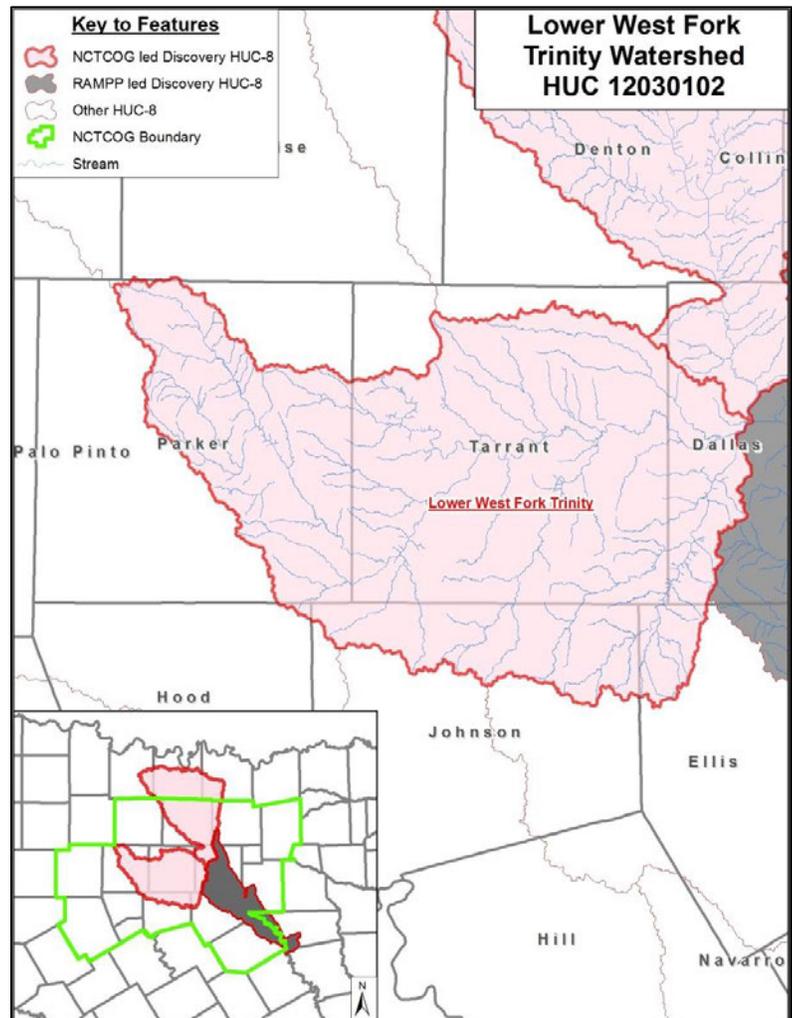
Risk Mapping, Assessment, and Planning (RiskMAP) is the Federal Emergency Management Agency (FEMA) Program that provides communities with flood information and tools they can use to enhance their mitigation plans and take action to better protect their citizens. Through more precise flood mapping products, risk assessment tools, and planning and outreach support, RiskMAP strengthens local ability to make informed decisions about reducing risk. The North Central Texas Council of Governments (NCTCOG) has been awarded a FEMA grant to assist our local governments in these important issues - locate risk, define risks, and to prepare floodplain maps within the Lower West Fork Trinity Watershed.

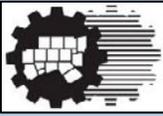
### Discovery

Discovery is the first phase of an overall Hazard Mitigation process. 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 process 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. Our team will collect region-wide datasets and will coordinate with our watershed stakeholders to obtain additional data that can inform discussions regarding flood risk. Discovery meetings will be conducted in the watershed. The key goals of the

Discovery Meetings are 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. These meetings will be “open house” style where communities are able to provide flood risk data at stations and learn more about programs that may help reduce their flood risk.

**Attend a Discovery Meeting!**  
**Details on Next Page**





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. NCTCOG's purpose is to strengthen both the individual and collective power of local governments and to help them recognize regional opportunities, eliminate unnecessary duplication, and make joint decisions. For more information, please visit [www.nctcog.org](http://www.nctcog.org).

NCTCOG is a FEMA Cooperating Technical Partner (CTP), which allows for them to collaborate with FEMA in order to help maintain current flood hazard information. The results of the 2009 Map Needs 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 in Fiscal Year 2012 (FY12) to perform Discovery. NCTCOG's MAS is included in the RiskMAP program.

## Lower West Fork Trinity Watershed - Discovery Meeting Details:

**Wednesday, May 29, 2013, 9 am – 12 pm: Tarrant County Public Health Admin Office, 1101 S Main St, Fort Worth, 76104**

- Come-and-Go Open House meeting
- Introductory Presentation (approx. 10 minutes) will be offered at 9, 10 and 11 am – Plan to attend one of the presentations and stay to meet with open house stations.
- Communities will be able to provide flood risk data at Discovery Meeting stations
- Learn more about programs that may help reduce your flood risk
- Click [here](#) to register for this meeting

**Wednesday, June 26, 2013, 9 am – 12 pm: Chandor Gardens, 711 West Lee Ave, Weatherford, 76086**

- Come-and-Go Open House meeting
- Introductory Presentation (approx. 10 minutes) will be offered at 9, 10 and 11 am – Plan to attend one of the presentations and stay to meet with open house stations.
- Communities will be able to provide additional flood risk data at stations
- Learn more about programs that may help reduce your flood risk
- Click [here](#) to register for this meeting

*Other meeting dates and locations are also being scheduled. For more information and to RSVP, contact Leo Valencia: [LValencia@nctcog.org](mailto:LValencia@nctcog.org) or 817-608-2363*

### RiskMAP Process – Discovery

NCTCOG, in partnership with FEMA Region VI, began the Discovery process in the Lower West Fork Trinity Watershed to gather local information and readily available data to determine project viability and the need for RiskMAP products to assist in the movement of communities towards resilience. Through the Discovery process, NCTCOG and FEMA can determine which areas of the watershed may 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 making Pre-Discovery community contacts to gather information. We will host a Pre-Discovery meetings webinar to highlight the Discovery process and illustrate how communities can participate. Following the Discovery meetings, projects will be identified and summarized in a Discovery Report submitted to FEMA and shared with all project stakeholders.

### Discovery Data Collection

The box 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. Please submit data or questions to Leo Valencia at [LValencia@nctcog.org](mailto:LValencia@nctcog.org) or 817-608-2363.

### Why is this Important?

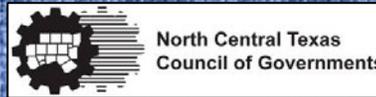
Because flood hazards change over time, this effort provides a great opportunity to take a broader look at the components and activities that contribute to your community's and your watershed's flood risk. In addition to providing another perspective, participating in this process will increase your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

### Website Information

For more information on the Discovery Process and information on the Lower West Fork Trinity Watershed, please visit: <http://www.nctcog.org/envir/SEEsafe/ctp/discovery.asp>

#### ***Requested Data from Communities:***

- Areas of 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
- Other information you'd like to share



# North Texas Discovery 2013

## What is Discovery?

Discovery is the first phase of an overall Hazard Mitigation process. 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 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. Our team will collect region-wide datasets and will coordinate with our watershed stakeholders to obtain additional data that can inform discussions regarding flood risk. The key goals of the Discovery Meetings are 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. These meetings will be *"open house" style* where communities are able to provide flood risk data at stations and learn more about programs that may help reduce their flood risk.

## Discovery Meeting Details:

**Tuesday, May 28, 2013, 9 am – 12 pm\***

Gainesville Civic Center  
311 S Weaver Street  
Gainesville, TX 76240

**Wednesday, May 29, 2013, 9 am – 12 pm\***

Tarrant County Public Health Admin Office  
1101 S Main Street  
Fort Worth, TX 76104

**Thursday, May 30, 2013, 1:30 – 4:30 pm\*\***

Trinity River Audubon Center  
6500 Great Trinity Forest Way  
Dallas, TX 75217

**Tuesday, June 25, 2013, 9 am – 12 pm\***

Frisco Senior Center  
6670 Moore Street  
Frisco, TX 75034

**Wednesday, June 26, 2013, 9 am – 12 pm\***

Chandor Gardens  
711 West Lee Avenue  
Weatherford, TX 76086

**Thursday, June 27, 2013, 9 am – 12 pm\*\***

Oran White Civic Center  
701 N Tool Drive  
Tool, TX 75143

## RSVP

\*Leo Valencia ([lvalencia@nctcog.org](mailto:lvalencia@nctcog.org))

\*\*Pamela Black ([pblack@dewberry.com](mailto:pblack@dewberry.com))

## For More Information:

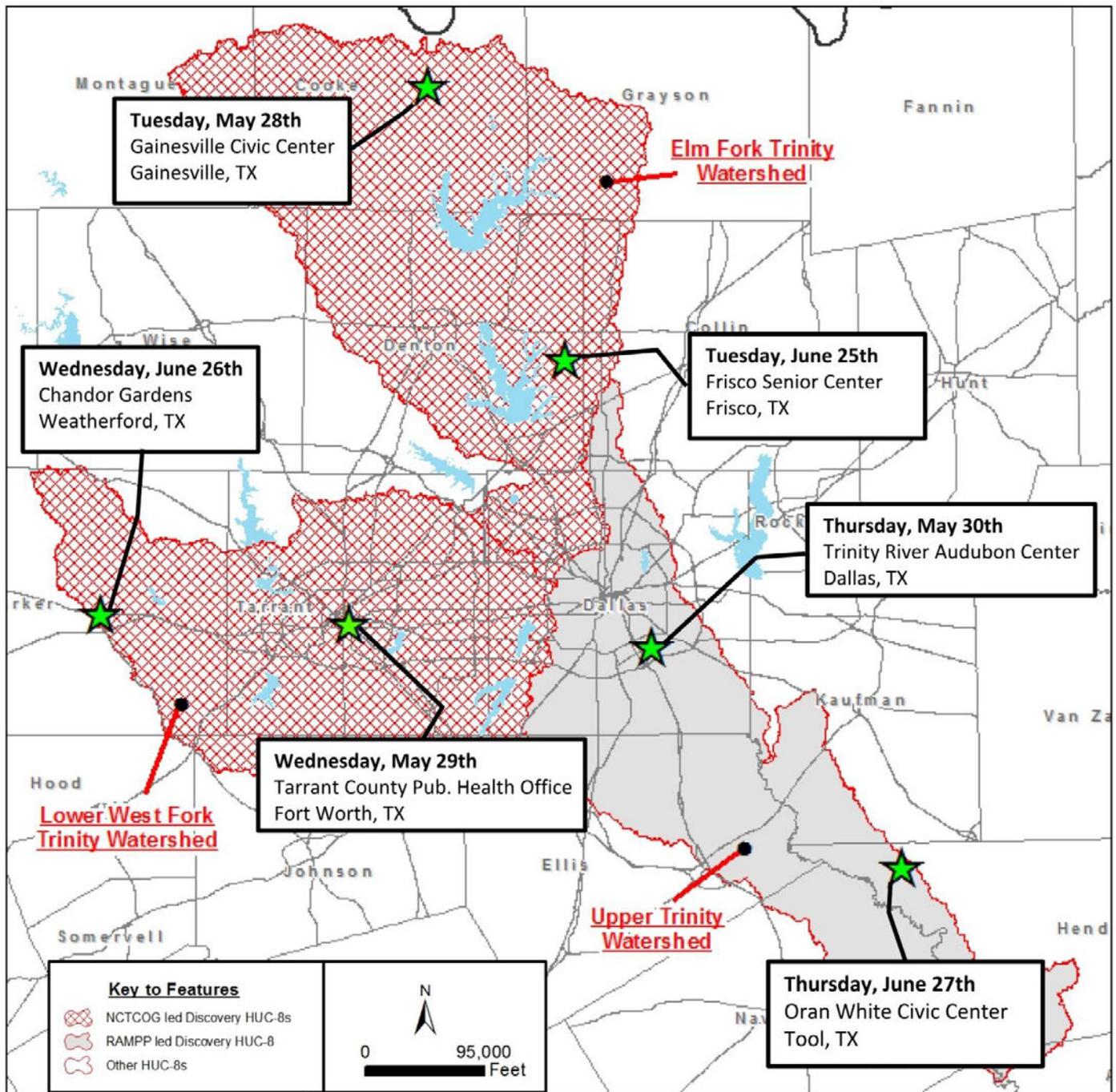
[www.nctcog.org/envir/SEEsafe/ctp/discovery.asp](http://www.nctcog.org/envir/SEEsafe/ctp/discovery.asp)

[www.riskmap6.com](http://www.riskmap6.com)

## What Data Should I Bring?

- Areas of flooding
- Historical flooding locations, mitigation activities and grant projects (ongoing and planned)
- High water marks/Low water crossings
- Comprehensive plans
- Local development and floodplain management plans
- Stormwater management activities
- Community ordinances
- Infrastructure information (bridges, levees, dams, culverts, road improvements)
- Flood Study needs
- Regional watershed plans

# Meeting Locations



## Questions?

Jack Tidwell (NCTCOG): [jtidwell@nctcog.org](mailto:jtidwell@nctcog.org)  
Leo Valencia (NCTCOG): [lvalencia@nctcog.org](mailto:lvalencia@nctcog.org)  
Jessica Baker, P.E., CFM, PMP (Halff): [jbaker@halff.com](mailto:jbaker@halff.com)

Ron Wanhanen (FEMA):  
[Ronald.Wanhanen@fema.dhs.gov](mailto:Ronald.Wanhanen@fema.dhs.gov)

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## Webinars



# North Texas Discovery

“Capturing a More Complete Picture of Your Watershed”

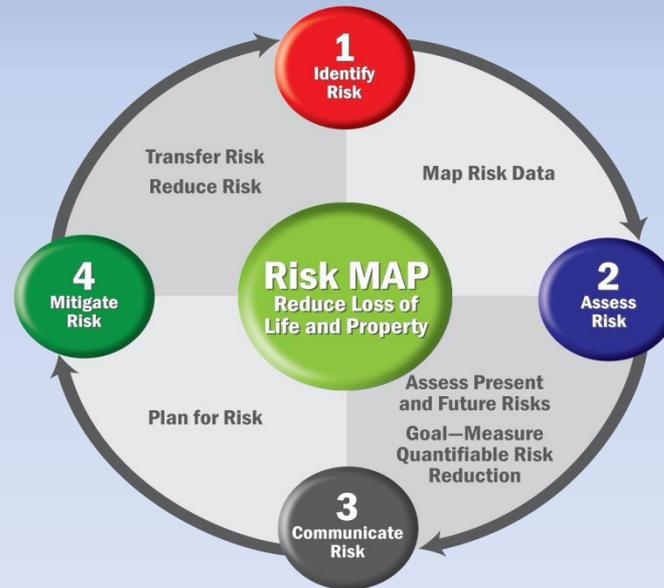
Pre-Discovery Webinars

May 16, 2013



# FEMA's Risk MAP Program

- Risk Mapping, Assessment, and Planning
  - Provides communities with flood information and tools they can use to enhance their mitigation plans and take action to better protect their citizens.
  - Risk MAP Vision
    - ACTION-driven, not map-driven



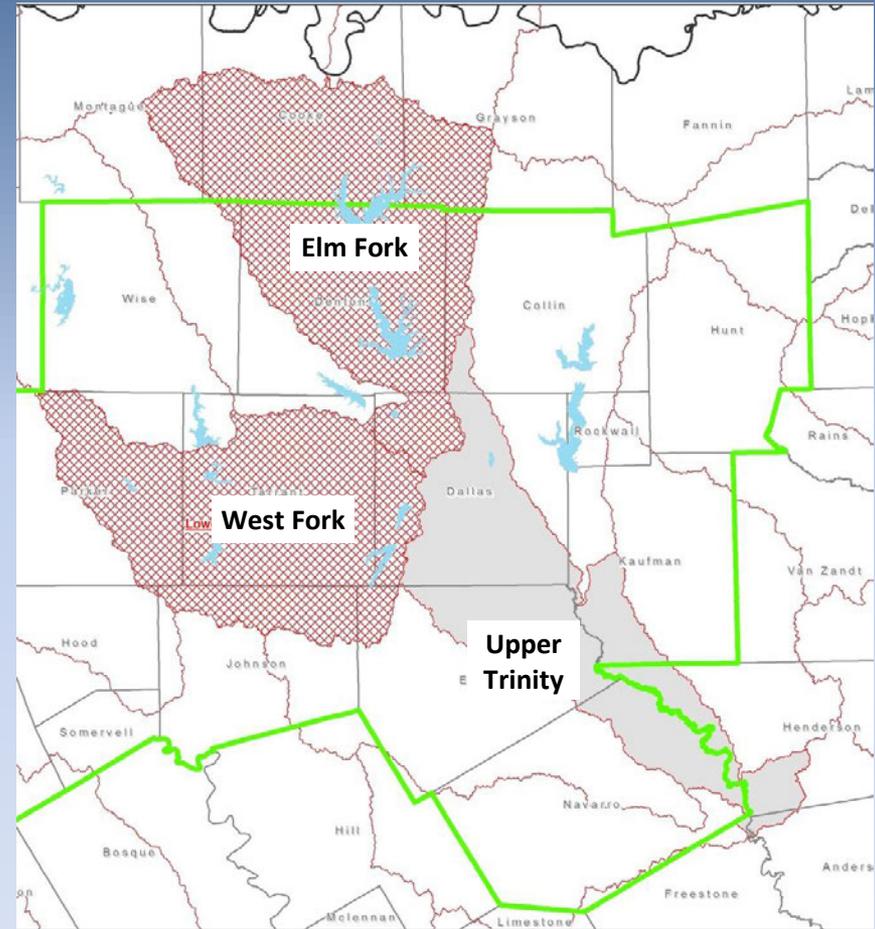
# FEMA's Risk MAP Program

- Risk MAP offers opportunities to change the way FEMA and Local communities interact
- Empowering communities
  - Reduce Future Losses
    - Implementing Mitigation Actions
  - Reduce Your Risks
    - All Hazard Mitigation Planning
    - Look for Grant Opportunities
  - Insure Your Risks
    - The National Flood Insurance Program (NFIP)
  - Communicate Effectively about Risk



# North Central Texas Council of Governments

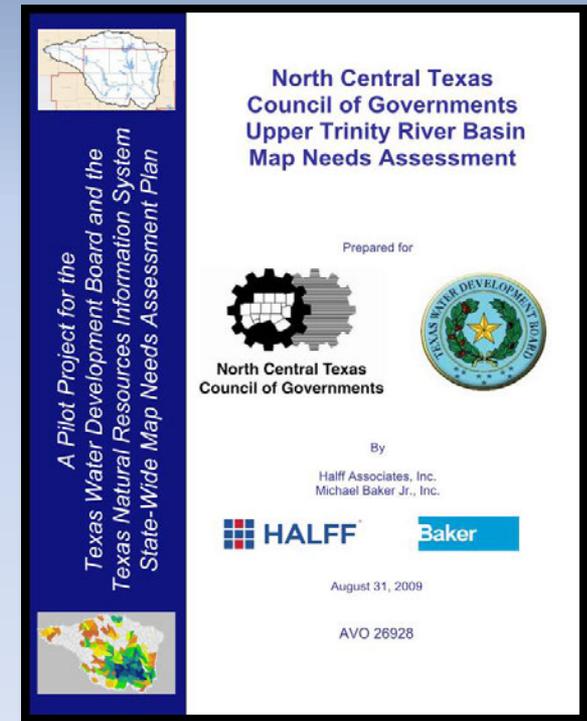
- FEMA Cooperating Technical Partner (CTP) FY 12 Project – North Texas Discovery
  - NCTCOG Leading Elm Fork and West Fork Watersheds
  - NCTCOG Supporting RAMPP for Upper Trinity Watershed



# NCTCOG 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 will utilize MNA data and update results



# Discovery

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

## Watershed Selected for Discovery

- **Selection Criteria:**
  - Risk
  - Need
  - Elevation data availability
  - Regional knowledge
  - CTP/State input

## Community Engagement / Data Collection

- **Develop watershed partnerships**
- **Discovery Newsletter**
- **Pre-Discovery community visits**
- **Gather all available data**
  - Data needs
  - Issues / Concerns
  - Areas of Mitigation

## Discovery Meeting

- **Review / validate watershed for project areas**
- **Provide information**
  - Mapping
  - Mitigation Planning
  - Grants
  - NFIP Compliance
- **Comprehensive understanding of risk in the watershed**

## Post-Meeting Coordination / Scope Refinement

- **Once data is collected**
  - FEMA will coordinate with State/NCTCOG on proposed scope refinement
  - Selected Projects – move toward Kick off meeting
  - Non-Selected Projects – engaged for potential mitigation actions, mitigation plan updates, and/or mitigation technical assistance

# Discovery Community Engagement

## FEMA ENGAGEMENT WITH STAKEHOLDERS AND DATA COLLECTION

Review of all available data begins the process...

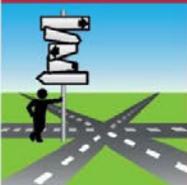
### Risk Identification and Communication

- 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?



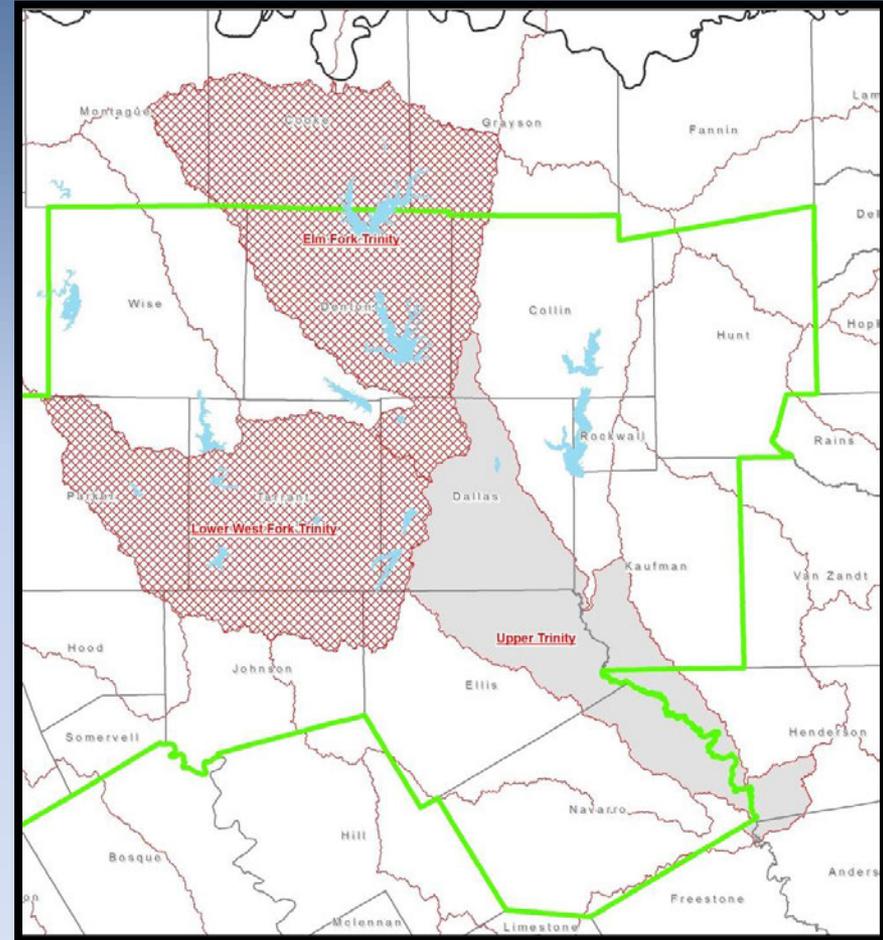
### Community Benefits and Grant Opportunities

- 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?



# North Texas Discovery

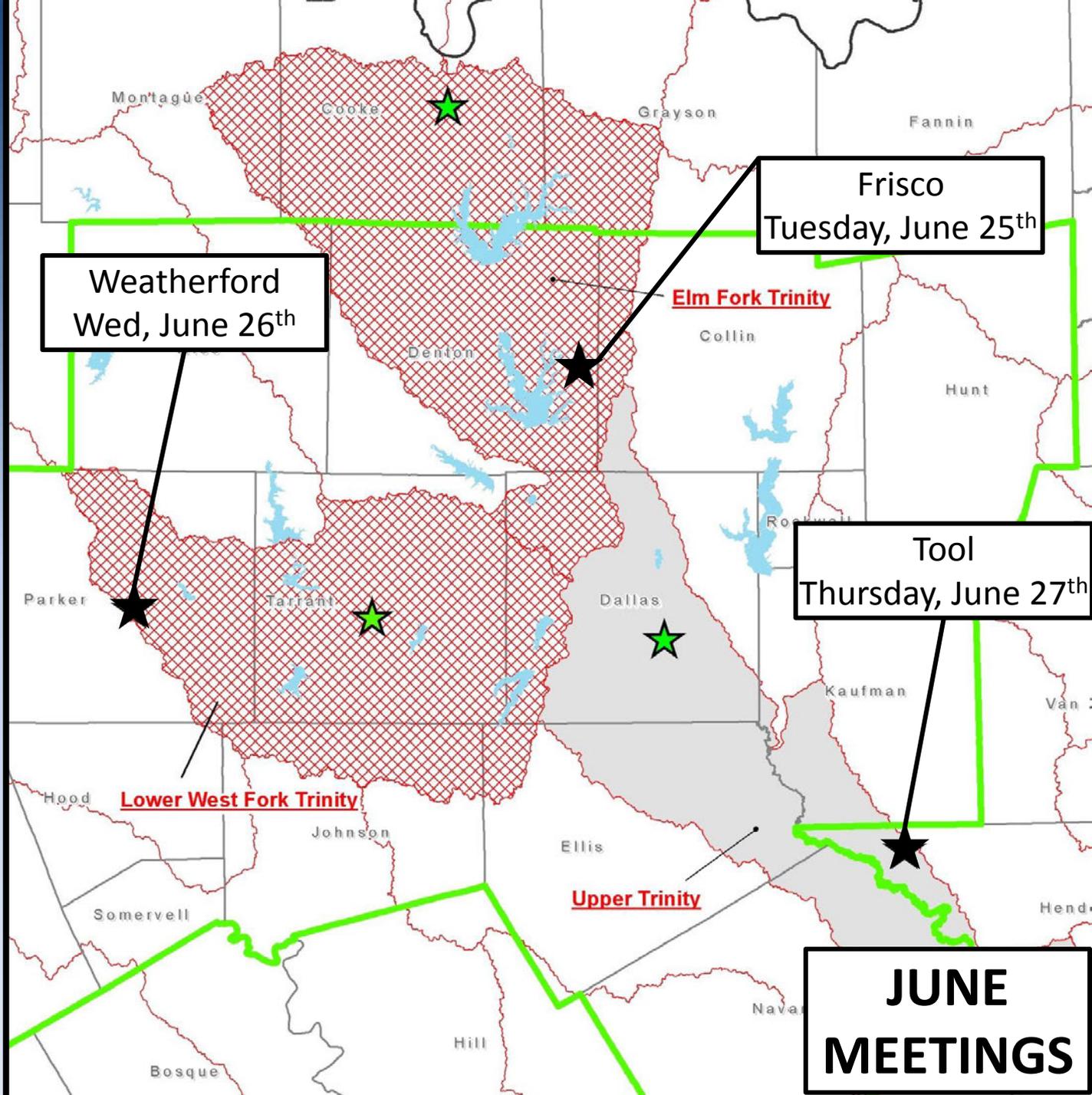
- Goals:
  - Gather information
    - Local flood risks and hazards
    - Current mitigation
  - Provide information
    - Mitigation planning and actions
    - Risk Communication





# North Texas Discovery Meetings

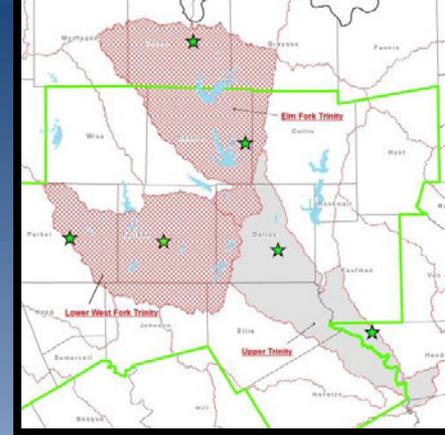
- 6 Discovery Meetings in May and June
- All community stakeholders are welcome to attend



# North Texas Discovery Meetings

Join Us for a Discovery Meeting...

- **Tuesday, May 28<sup>th</sup>**, 9 AM to 12 PM – Gainesville
- **Wednesday, May 29<sup>th</sup>**, 9 AM to 12 PM – Fort Worth
- **Thursday, May 30<sup>th</sup>**, 1:30 PM to 4:30 PM – Dallas
- **Tuesday, June 25<sup>th</sup>**, 9 AM to 12 PM – Frisco
- **Wednesday, June 26<sup>th</sup>**, 9 AM to 12 PM – Weatherford
- **Thursday, June 27<sup>th</sup>**, 9 AM – 12 PM – Tool
  
- All Community Stakeholders Welcome at Any Meeting

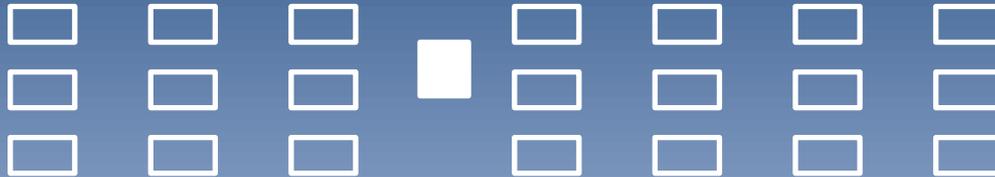


# NCTCOG Discovery Meeting Room Layout

Introductory  
Presentation (10  
min) at 9, 10,  
and 11 AM



## Community Seating



Discovery Maps for  
Comments

Risk  
Identification

Mitigation  
Planning

Open House  
Style Meetings –  
Come and Go

NCTCOG  
Programs

USACE

NFIP

Check-out

Check-in

Check-in

# Who Should Come?

- 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



# What Do I Bring?

- 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



# Discovery Newsletters



## Discovery

### Elm Fork Trinity Watershed

*"Capturing a More Complete Picture of Your Community and 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 North Central Texas Council of Governments (NCTCOG) has been awarded a FEMA grant to assist our local governments in these important issues - locate risk, define risks, and to prepare floodplain maps within the Elm Fork Trinity Watershed.

**Discovery**  
Discovery is the first phase of an overall Hazard Mitigation process. 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 process 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. Our team will collect region-wide datasets and will coordinate with our watershed stakeholders to obtain additional data that can inform discussions regarding flood risk. Discovery meetings will be conducted in the watershed. The key goals of the

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**Attend a Discovery Meeting!**  
Details on Next Page



**Key to Features**  
NCTCOG led Discovery HUC-8  
RAMPP led Discovery HUC-8  
Other HUC-8  
NCTCOG Boundary  
Stream

**Elm Fork Trinity Watershed HUC 12030103**

Map labels: Mortgage, Cooke, Grayson, Elm Fork Trinity, Wise, Denton, Collin, Lower West Fork Trinity, Upper Trinity.

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environment & development

Home > Environment and Development  
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### FEMA and NCTCOG

#### Risk MAP Discovery

The Discovery process of FEMA's Risk MAP program helps communities identify areas at risk for flooding and solutions for reducing that risk.

#### The Goal

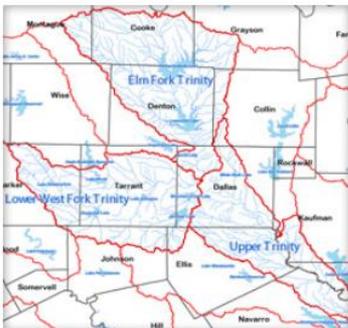
- To work closely with communities
- To better understand local flood risk,
- Mitigation efforts, and other topics and
- To spark watershed-wide discussions about increasing resilience to flooding.

#### During Discovery, we will:

- Gather information about local flood risk and flood hazards
- Review mitigation plans to understand local mitigation capabilities, hazard risk assessments, and current or future mitigation activities
- Support communities within the watershed to develop a vision for the watershed's future
- Collect information from communities about their flooding history, development plans, daily operations, and stormwater and floodplain management activities
- Use all information gathered to determine which areas of the watershed require mapping, risk assessment, or mitigation planning assistance through a Risk MAP project



- NCTCOG Leading Discovery Efforts in the [Elm Fork Trinity Watershed](#)
- [Lower West Fork Trinity Watershed](#)
- Supporting Discovery efforts in the [Upper Trinity Watershed](#)



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### FEMA and NCTCOG

#### Risk MAP Discovery - Elm Fork Trinity Watershed

Located in North Texas the Elm Fork Trinity Watershed is part of the Trinity River Basin. It has been identified by the federal government using a national standard hierarchical system which is based on surface hydrologic features. The Elm Fork is classified as a fourth-level (sub-basin) with a unique 8-digit Hydrologic Unit Code (HUC) - #12030103.

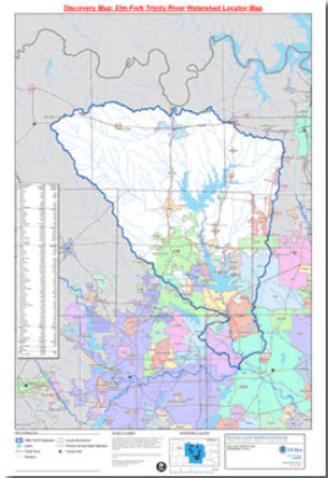
The Elm Fork Watershed covers an area of 1857.7 square miles and crosses into eight (8) counties. These counties include: Collin, Cooke, Dallas, Denton, Grayson, Montague, Tarrant, and Wise. The watershed either totally covers or partially spans across fifty-two (52) cities/towns. The Elm Fork contains about 5% of the State's total population with approximately 1,218,000 residents.

The Elm Fork of the Trinity River is the primary river in the watershed. Each of the four branches (the West Fork, the Clear Fork, the Elm Fork, and the East Fork) of the Trinity begins its journey near the Texas-Oklahoma border near the Red River. The Trinity River completes its journey at Trinity Bay (the northeast portion of Galveston Bay) in Chambers County.



- #### Elm Fork Trinity Watershed Related Information
- [Locator Map](#)
  - [Cities/Towns affected by watershed](#)
  - [Elm Fork Discovery Newsletter](#)

- #### Elm Fork Meeting Dates and Locations
- May 28th, 9:00 AM – 12:00 PM, [Gainesville Civic Center, 311 S. Weaver St., Gainesville, TX 76240](#)  
[Register](#)
  - June 25th, 9:00 AM – 12:00 PM, [Frisco Senior Center, 6670 Moore Street, Frisco TX 75034](#)  
[Register](#)



# RiskMAP6.com

RiskMAP6.com

Helping communities understand a complete picture of their natural hazard risk

- Home
- What is Risk MAP?
- The Risk MAP Process Path
- Communities: Know the Risk
- Take Action: Empowering Communities
- Contact Us
- Resources and Related Links

## Communities: Know the Risk

Arkansas

Louisiana

New Mexico

Oklahoma

Texas

Sterling County

Stonewall County

Sutton County

Swisher County

Tarrant County

Taylor County

Terrell County

Terry County

Throckmorton County

Titus County

Tom Green County

Travis County

2009 & 2011 Tarrant County Physical Map Revision

Lower West Fork Trinity Watershed Information

Elm Fork Trinity Watershed Information

### NFIP Information for Tarrant County

Mapping Information

### What's Next on the Path?

Discovery



### Resources for Lower West Fork Trinity Watershed Information

For more helpful information, look under [Resources and Related Links](#).  
For mapping questions, contact the FEMA Mapping Information eXchange (FMIX) – 1-877-336-2627.

#### Community Meetings

#### Community-specific Documents

Lower West Fork Trinity Discovery Newsletter

Lower West Fork Trinity Locator Map

Meeting Locator Map

#### Community-specific Links



# Contact Information

- NCTCOG:
  - Jack Tidwell – [JTidwell@nctcog.org](mailto:JTidwell@nctcog.org)
  - Leo Valencia – [LValencia@nctcog.org](mailto:LValencia@nctcog.org)
- Halff Associates:
  - Jessica Baker – [JBaker@halff.com](mailto:JBaker@halff.com)
- FEMA:
  - Ron Wanhanen – [Ronald.Wanhanen@fema.dhs.gov](mailto:Ronald.Wanhanen@fema.dhs.gov)
- TWDB / TNRIS:
  - Melinda Luna – [Melinda.Luna@twdb.texas.gov](mailto:Melinda.Luna@twdb.texas.gov)
  - Michael Segner – [Michael.Segner@twdb.texas.gov](mailto:Michael.Segner@twdb.texas.gov)





# North Texas Discovery

“Capturing a More Complete Picture of Your Watershed”

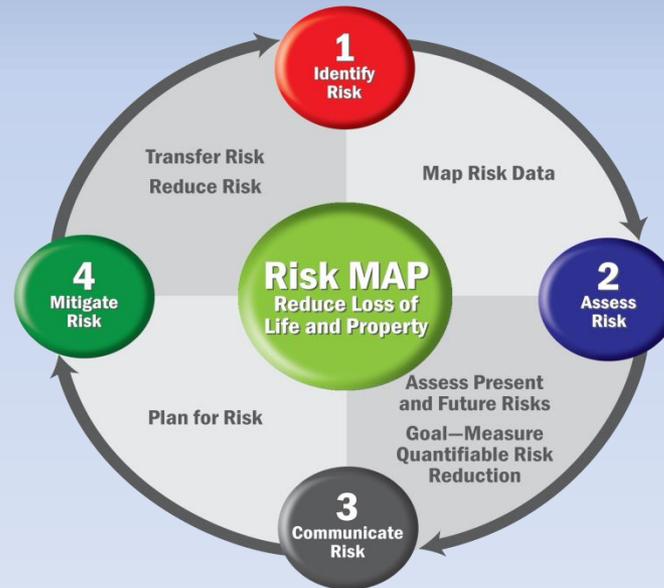
Post-Discovery Outreach Webinar

August 12, 2013



# FEMA's Risk MAP Program

- Risk Mapping, Assessment, and Planning
  - Provides communities with flood information and tools they can use to enhance their mitigation plans and take action to better protect their citizens.
  - Risk MAP Vision
    - ACTION-driven, not map-driven



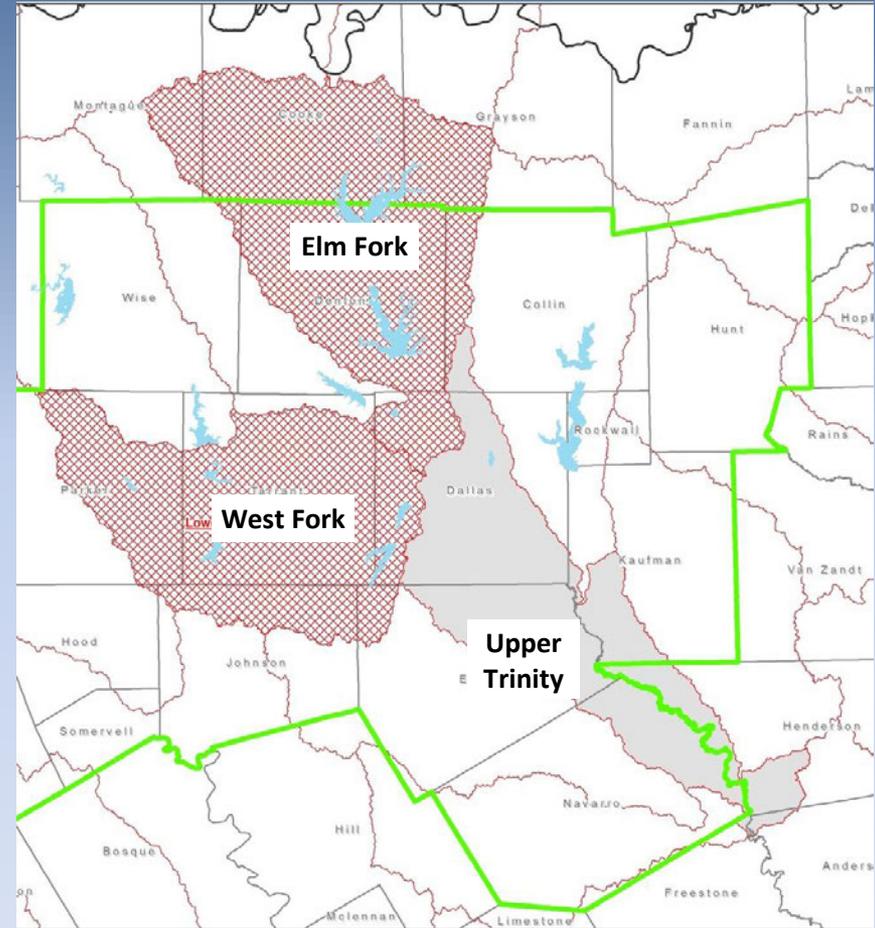
# FEMA's Risk MAP Program

- Risk MAP offers opportunities to change the way FEMA and Local communities interact
- Empowering communities
  - Reduce Future Losses
    - Implementing Mitigation Actions
  - Reduce Your Risks
    - All Hazard Mitigation Planning
    - Look for Grant Opportunities
  - Insure Your Risks
    - The National Flood Insurance Program (NFIP)
  - Communicate Effectively about Risk



# North Central Texas Council of Governments

- FEMA Cooperating Technical Partner (CTP) FY 12 Project – North Texas Discovery
  - NCTCOG Leading Elm Fork and West Fork Watersheds
  - NCTCOG Supporting RAMPP for Upper Trinity Watershed



# NCTCOG Activities

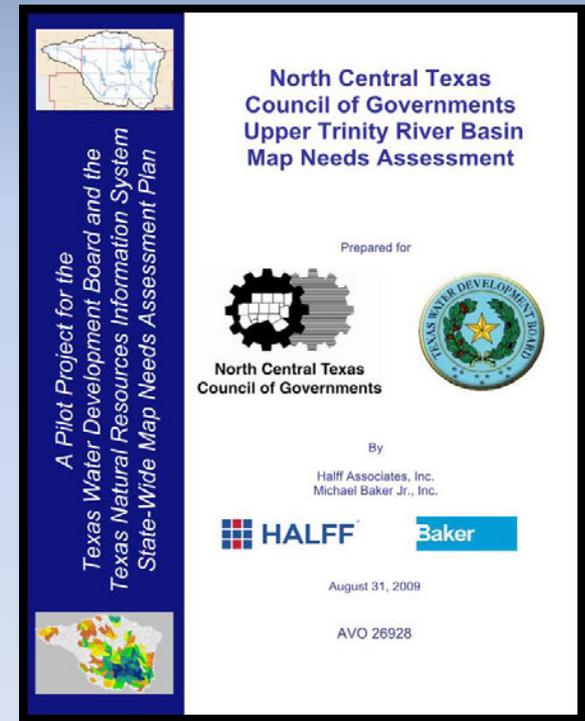
2004-2008  
FEMA Map  
Modernization

2009  
Map Needs  
Assessment

2012  
Partnered with  
FEMA for CTP  
Grant

2013  
Discovery

- 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 will utilize MNA data and update results



# Discovery

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

## Watershed Selected for Discovery

- **Selection Criteria:**
  - Risk
  - Need
  - Elevation data availability
  - Regional knowledge
  - CTP/State input

## Community Engagement / Data Collection

- **Develop watershed partnerships**
- **Discovery Newsletter**
- **Pre-Discovery community visits**
- **Gather all available data**
  - Data needs
  - Issues / Concerns
  - Areas of Mitigation

## Discovery Meeting

- **Review / validate watershed for project areas**
- **Provide information**
  - Mapping
  - Mitigation Planning
  - Grants
  - NFIP Compliance
- **Comprehensive understanding of risk in the watershed**

## Post-Meeting Coordination / Scope Refinement

- **Once data is collected**
  - FEMA will coordinate with State/NCTCOG on proposed scope refinement
  - Selected Projects – move toward Kick off meeting
  - Non-Selected Projects – engaged for potential mitigation actions, mitigation plan updates, and/or mitigation technical assistance

# Discovery Community Engagement

## FEMA ENGAGEMENT WITH STAKEHOLDERS AND DATA COLLECTION Review of all available data begins the process...

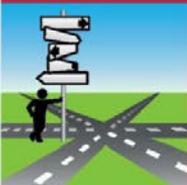
### Risk Identification and Communication

- 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 Newsletters



## Discovery Elm Fork Trinity Watershed

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**Attend a Discovery Meeting!**  
Details on Next Page



**Key to Features**  
NCTCOG led Discovery HUC-8  
RAMPP led Discovery HUC-8  
Other HUC-8  
NCTCOG Boundary  
Stream

**Elm Fork Trinity Watershed  
HUC 12030103**

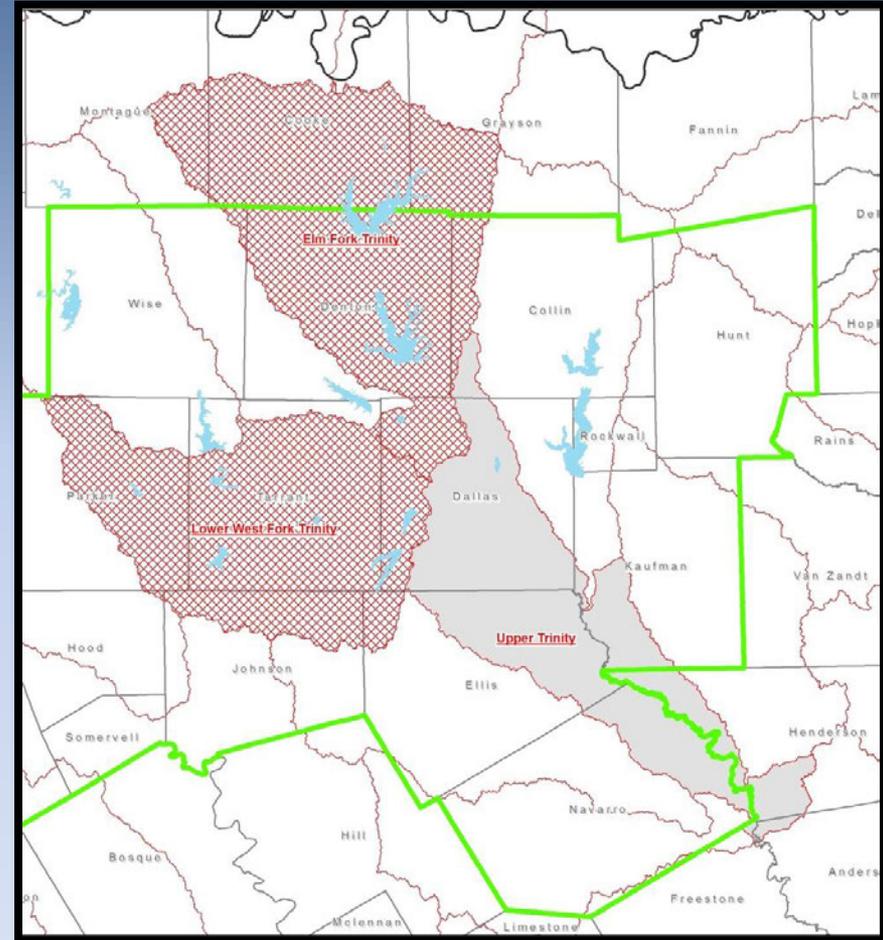
Montague, Cooke, Grayson, Wise, Denton, Collin, Lower West Fork Trinity, Upper Trinity

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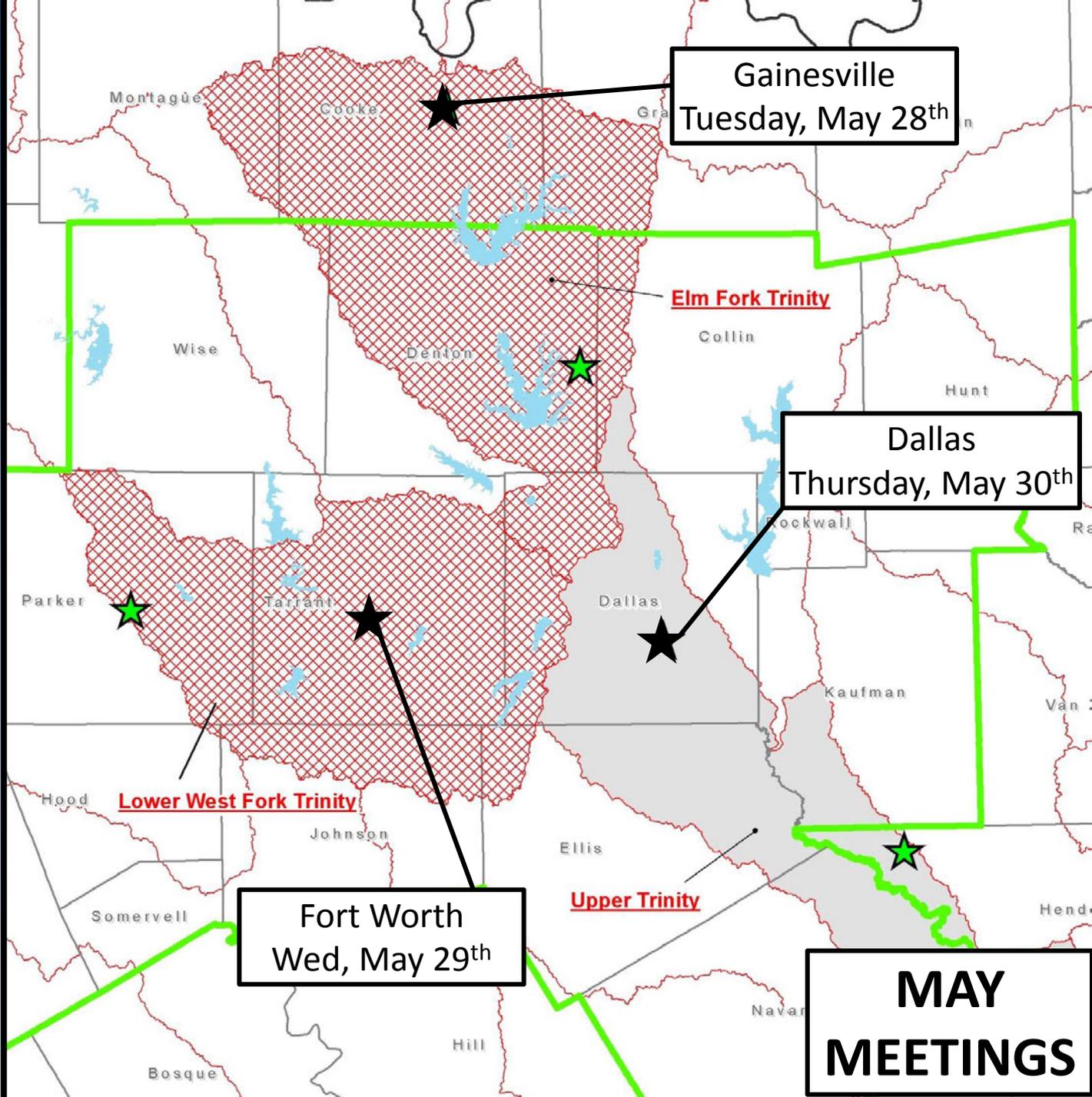
# North Texas Discovery

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



# North Texas Discovery Meetings

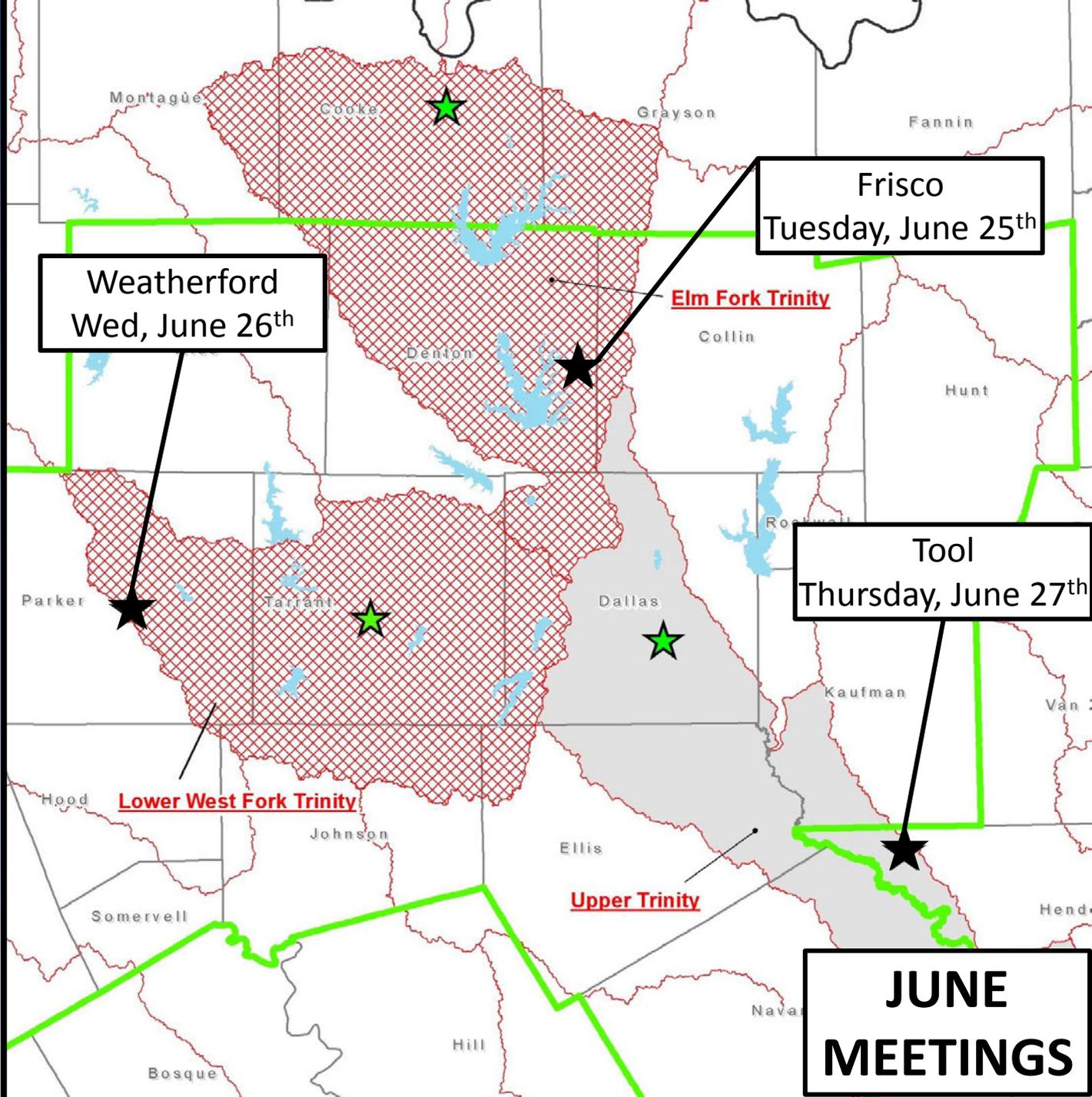
- 6 Discovery Meetings in May and June



**MAY MEETINGS**

# North Texas Discovery Meetings

- 6 Discovery Meetings in May and June



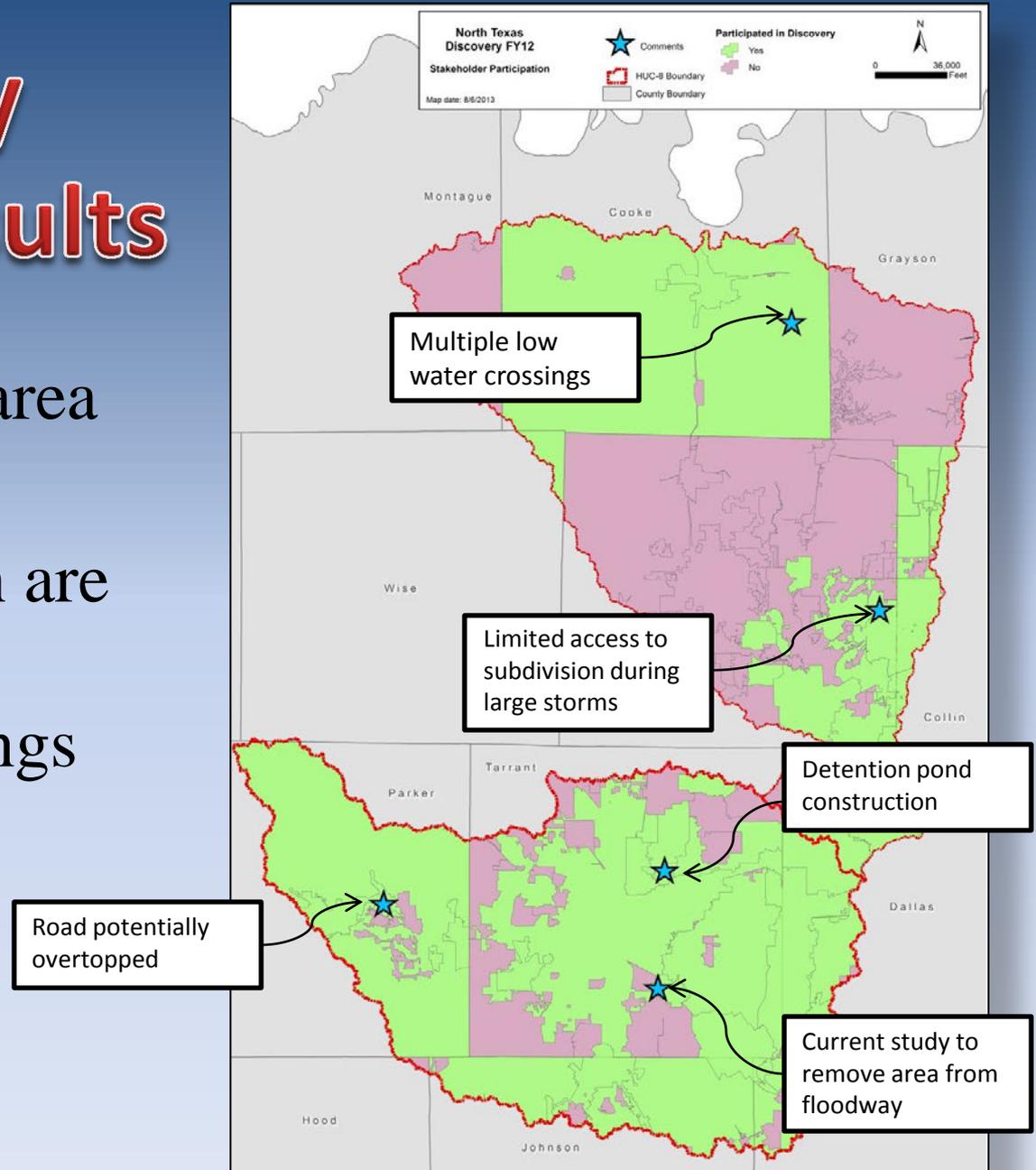
**JUNE MEETINGS**

# What Did We Find?



# Discovery Meeting Results

- 64.55% of study area covered
- Comments shown are sampling of 160+ received at meetings



# What Do We Need?

- 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



# Why Do We Need This Info?

- ***DON'T BE LEFT OUT!***
- Future FEMA projects funded in North Texas are dependent on the input and results of this Discovery effort
- Ensure your community is included!



# How do I Submit Data?

- Complete the questionnaire sent via email
- Be as thorough as possible!
- Additional data?

– Submit via email

[LValencia@nctcog.org](mailto:LValencia@nctcog.org)

– FTP available for larger datasets

   North Central Texas Council of Governments

**North Texas Discovery Data Questionnaire**

Community Name: \_\_\_\_\_

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, please let us know if you have the following information which we will coordinate with you to collect:

Data Item	Comments/Notes
Comments on the accuracy of the current floodplain mapping?	
Does your community participate in CRS? What is the community's current rating?	
Available topographic data, ongoing or future topographic acquisition efforts	
Local Hazard Mitigation Plan? If so, what is the name, approval and expiration date?	
Completed or In Progress Hazard Mitigation Projects?	
Completed or In Progress Capital Improvements Program (CIP) projects that involve flood hazard reduction?	
Master Drainage Plan(s), floodplain studies, existing/needed?	
Stormwater management plan?	
Structural and flooding issues not represented on effective DFIRMs?	
Any known undersized culverts or narrow bridge openings that restrict flow and cause flooding, or overtop frequently?	
Any information on new construction of culverts and bridges?	

**NCTCOG**  
North Central Texas Council of Governments

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### FEMA and NCTCOG

#### Risk MAP Discovery

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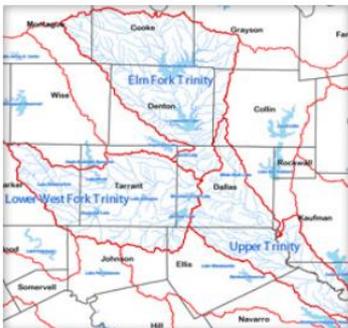
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[Lower West Fork Trinity Watershed](#)

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[Upper Trinity Watershed](#)



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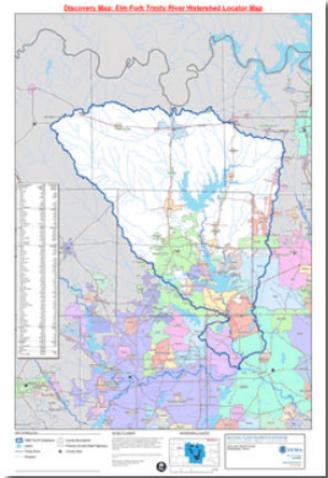


**Elm Fork Trinity Watershed Related Information**

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Helping communities understand a complete picture of their natural hazard risk

- Home
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- The Risk MAP Process Path
- Communities: Know the Risk**
- Take Action: Empowering Communities
- Contact Us
- Resources and Related Links

## Communities: Know the Risk

Arkansas

Louisiana

New Mexico

Oklahoma

Texas

Sterling County

Stonewall County

Sutton County

Swisher County

**Tarrant County**

Taylor County

Terrell County

Terry County

Throckmorton County

Titus County

Tom Green County

Travis County

2009 & 2011 Tarrant County Physical Map Revision **Lower West Fork Trinity Watershed Information** Elm Fork Trinity Watershed Information

### NFIP Information for Tarrant County

Mapping Information

### What's Next on the Path?

Discovery



### Resources for Lower West Fork Trinity Watershed Information

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For mapping questions, contact the FEMA Mapping Information eXchange (FMIX) – 1-877-336-2627.

#### Community Meetings

#### Community-specific Documents

Lower West Fork Trinity Discovery Newsletter

Lower West Fork Trinity Locator Map

Meeting Locator Map

#### Community-specific Links



# Questions?

- Please submit questions via the chat window or over the phone
- We will follow up with each of you today via phone to answer any additional questions



# Questions?

- NCTCOG:
  - Jack Tidwell – [JTidwell@nctcog.org](mailto:JTidwell@nctcog.org)
  - Leo Valencia – [LValencia@nctcog.org](mailto:LValencia@nctcog.org)
- Halff Associates:
  - Jessica Baker – [JBaker@halff.com](mailto:JBaker@halff.com)
- FEMA:
  - Ron Wanhanen – [Ronald.Wanhanen@fema.dhs.gov](mailto:Ronald.Wanhanen@fema.dhs.gov)
  - Matt DuBois – [Matthew.DuBois@fema.dhs.gov](mailto:Matthew.DuBois@fema.dhs.gov)
  - Shona Gibson – [Shona.Gibson@fema.dhs.gov](mailto:Shona.Gibson@fema.dhs.gov)

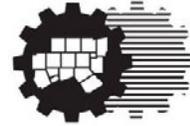


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## **Appendix B – Discovery Meetings**

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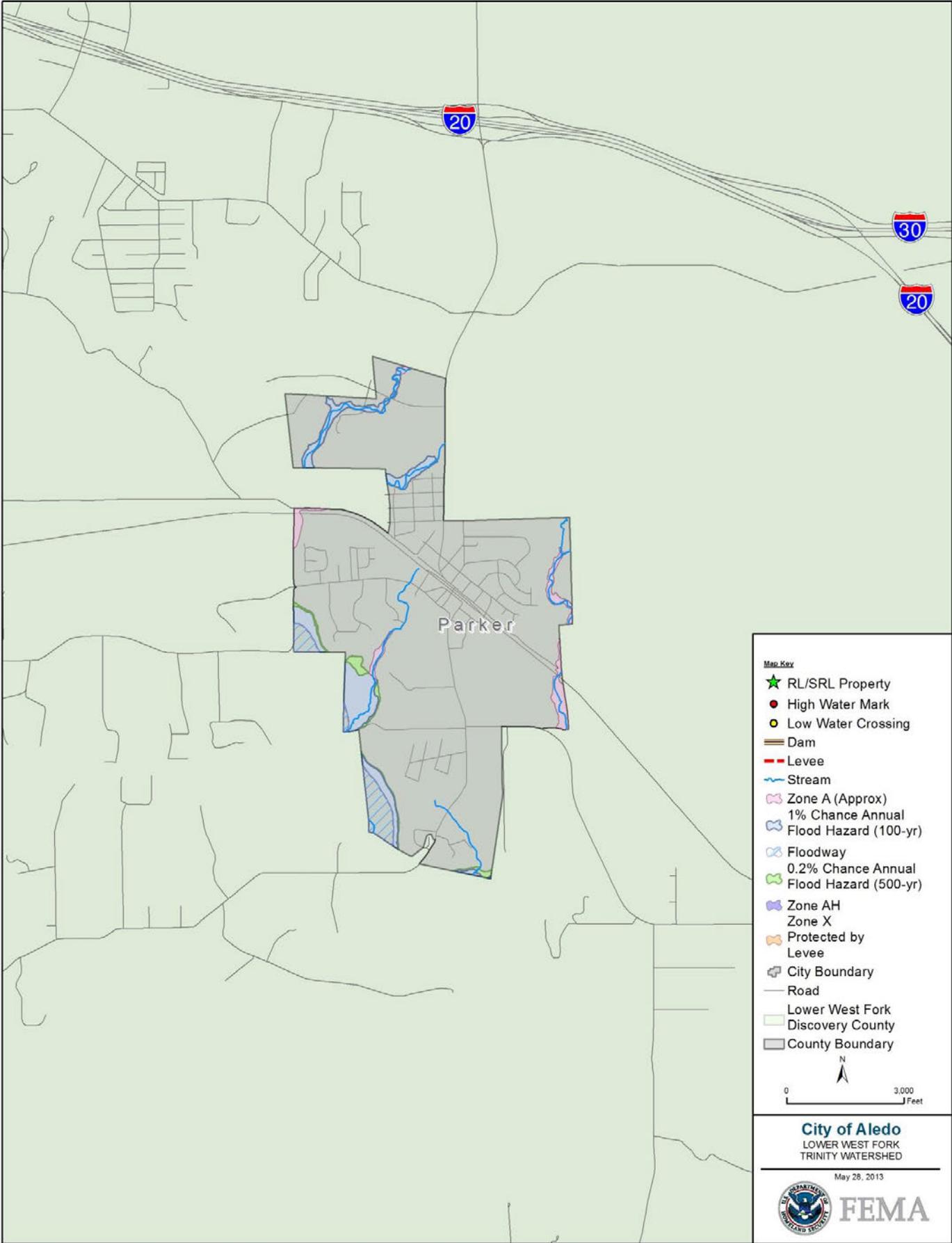
# Community Backgrounders



North Central Texas  
Council of Governments

**CITY OF ALEDO**  
**Lower West Fork Trinity Watershed**  
**NCTCOG FY12 Discovery**

<b><u>CID:</u></b>	<b>481659</b>
<b><u>Population (2010 Census):</u></b>	2,716
<b><u>NFIP Participant:</u></b>	Yes
<b><u>CRS Rating:</u></b>	NA
<b><u>Mitigation Plan Name:</u></b>	No Plan
<b><u>Plan Approval Date:</u></b>	NA
<b><u>Plan Expiration Date:</u></b>	NA
<b><u>High Water Marks:</u></b>	0
<b><u>Low Water Crossings:</u></b>	0
<b><u>DFIRM Status:</u></b>	Effective
<b><u>Effective Date:</u></b>	Parker – Sept. 26, 2008
<b><u>Total Stream Miles:</u></b>	4.05
<b><u>Total Zone A Miles:</u></b>	1.21
<b><u>Repetitive Loss Property Count:</u></b>	0
<b><u>Severe Repetitive Loss Property Count:</u></b>	0
<b><u>NFIP Policies:</u></b>	7
<b><u>NFIP Claims:</u></b>	2
<b><u>Total Losses:</u></b>	\$5,551
<b><u>Grants:</u></b>	Unknown
<b><u>Disaster Declarations:</u></b>	Unknown
<b><u>LiDAR:</u></b>	2001 NCTCOG
<b><u>Levees/Dams:</u></b>	0 levees , 0 dams
<b><u>Additional Comments:</u></b>	
<b><u>Congressmen:</u></b>	Rep. Kay Granger, Sen. John Cornyn, Sen. Ted Cruz



**Map Key**

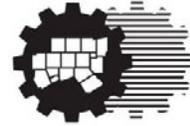
- ★ RL/SRL Property
- High Water Mark
- Low Water Crossing
- Dam
- - - Levee
- ~ Stream
- Zone A (Approx)
- 1% Chance Annual Flood Hazard (100-yr)
- Floodway
- 0.2% Chance Annual Flood Hazard (500-yr)
- Zone AH
- Zone X
- Protected by Levee
- City Boundary
- Road
- Lower West Fork
- Discovery County
- County Boundary

N

0 3,000 Feet

**City of Aledo**  
 LOWER WEST FORK  
 TRINITY WATERSHED

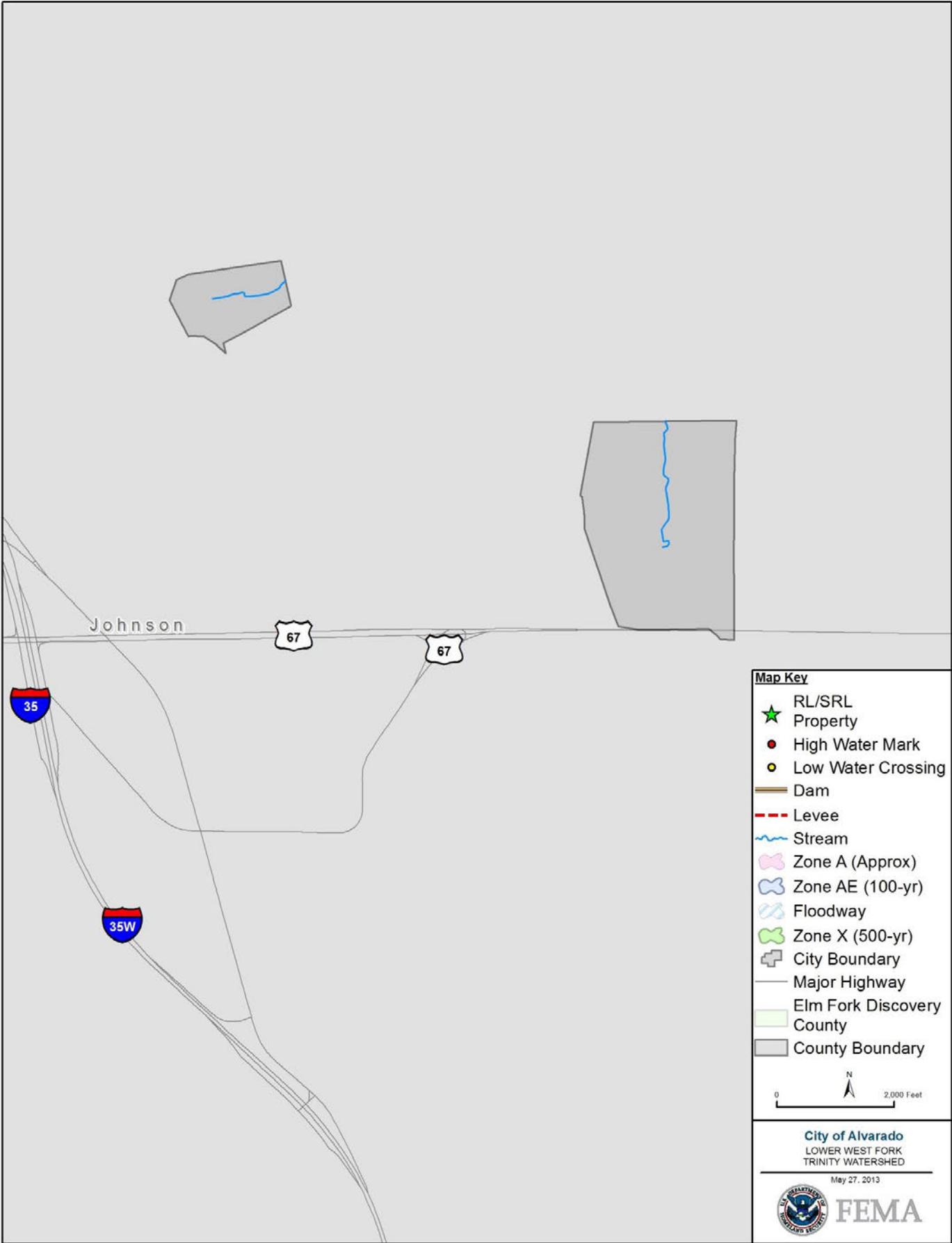
May 28, 2013



North Central Texas  
Council of Governments

**CITY OF ALVARADO**  
**Lower West Fork Trinity Watershed**  
**NCTCOG FY12 Discovery**

<b><u>CID:</u></b>	<b>480397</b>
<b><u>Population (2010 Census):</u></b>	3,785
<b><u>NFIP Participant:</u></b>	Yes
<b><u>CRS Rating:</u></b>	Unknown
<b><u>Mitigation Plan Name:</u></b>	No Plan
<b><u>Plan Approval Date:</u></b>	NA
<b><u>Plan Expiration Date:</u></b>	NA
<b><u>High Water Marks:</u></b>	0
<b><u>Low Water Crossings:</u></b>	0
<b><u>DFIRM Status:</u></b>	Effective
<b><u>Effective Date:</u></b>	December 4, 2012
<b><u>Total Stream Miles:</u></b>	0.73
<b><u>Total Zone A Miles:</u></b>	0.00
<b><u>Repetitive Loss Property Count:</u></b>	0
<b><u>Severe Repetitive Loss Property Count:</u></b>	0
<b><u>NFIP Policies:</u></b>	4
<b><u>NFIP Claims:</u></b>	3
<b><u>Total Losses:</u></b>	\$1,457
<b><u>Grants:</u></b>	Unknown
<b><u>Disaster Declarations:</u></b>	Unknown
<b><u>LiDAR:</u></b>	2010 TNRI LiDAR
<b><u>Levees/Dams:</u></b>	0 levees, 0 dams
<b><u>Additional Comments:</u></b>	
<b><u>Congressmen:</u></b>	Rep. Bill Flores, Sen. John Cornyn, Sen. Ted Cruz



**Map Key**

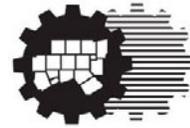
- ★ RL/SRL Property
- High Water Mark
- Low Water Crossing
- Dam
- - - Levee
- ~ Stream
- Zone A (Approx)
- Zone AE (100-yr)
- Floodway
- Zone X (500-yr)
- ⊕ City Boundary
- Major Highway
- Elm Fork Discovery County
- County Boundary

N  
0 2,000 Feet

**City of Alvarado**  
LOWER WEST FORK  
TRINITY WATERSHED

May 27, 2013

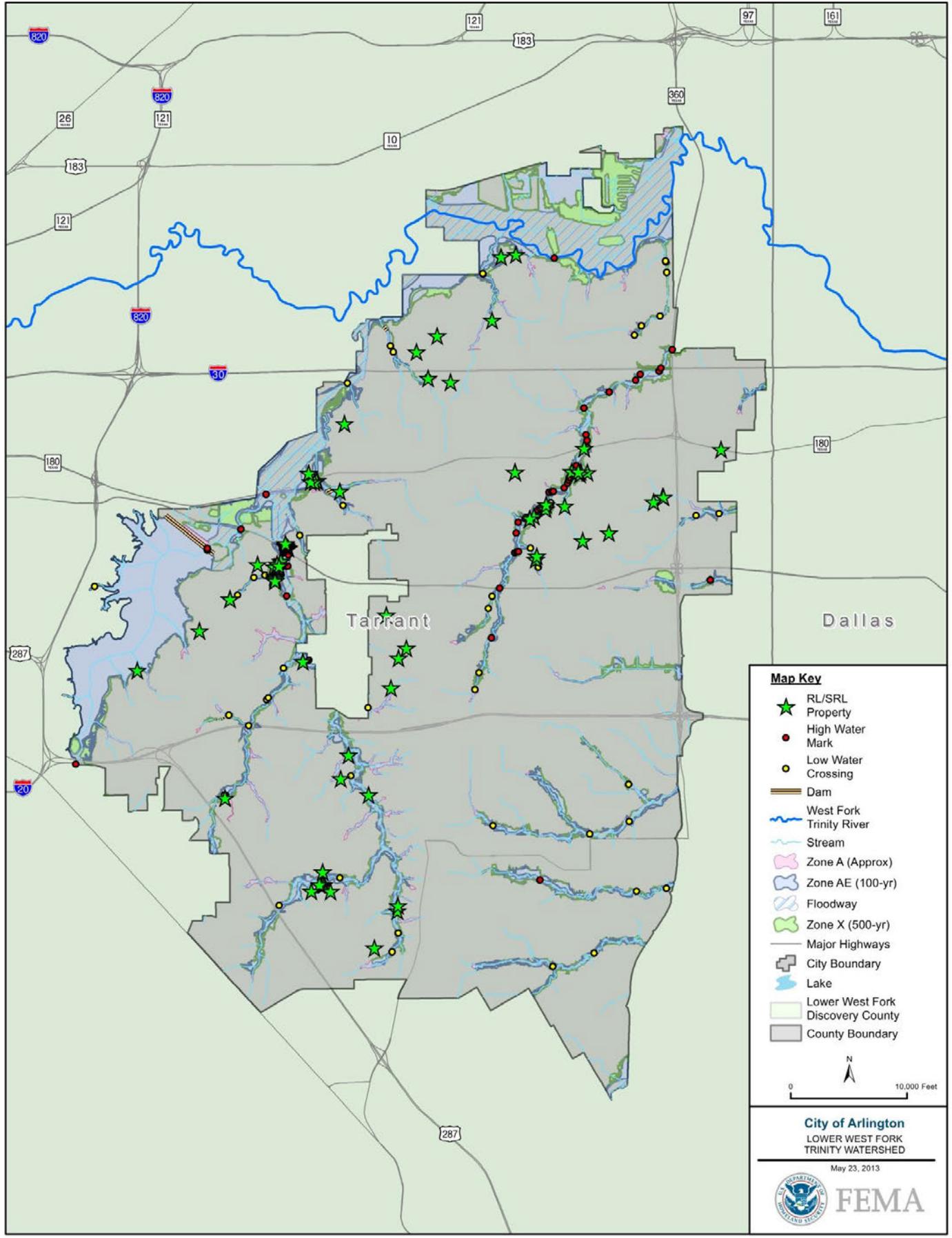


North Central Texas  
Council of Governments

**CITY OF ARLINGTON**  
Tarrant County  
**Lower West Fork Trinity Watershed**  
**North Texas Discovery FY12**

<b><u>CID:</u></b>	<b>485454</b>
<b><u>Population (2010 Census):</u></b>	365,438
<b><u>NFIP Participant:</u></b>	Yes
<b><u>CRS Rating:</u></b>	7
<b><u>Mitigation Plan Name:</u></b>	Arlington
<b><u>Plan Approval Date:</u></b>	10/15/2009
<b><u>Plan Expiration Date:</u></b>	10/15/2014
<b><u>High Water Marks:</u></b>	73
<b><u>Low Water Crossings:</u></b>	60
<b><u>DFIRM Status:</u></b>	Effective (Tarrant County)
<b><u>Effective Date:</u></b>	Sept. 25, 2009
<b><u>Total Stream Miles:</u></b>	198.33
<b><u>Total Zone A Miles:</u></b>	20.46
<b><u>Repetitive Loss Property Count:</u></b>	69
<b><u>Severe Repetitive Loss Property Count:</u></b>	15
<b><u>NFIP Policies:</u></b>	1,697
<b><u>NFIP Claims:</u></b>	825
<b><u>Total Losses:</u></b>	\$4,764,305
<b><u>Grants:</u></b>	2010 TWDB FPP (Cottonwood and Fish Creeks watersheds)
<b><u>Disaster Declarations:</u></b>	29 (Tarrant County)
<b><u>LiDAR:</u></b>	2009 TNRIS LiDAR
<b><u>Levees/Dams:</u></b>	9 dams (NID)
<b><u>Additional Comments:</u></b>	
<b><u>Congressmen:</u></b>	Rep. Joe Barton, Sen. John Cornyn, Sen. Ted Cruz



**Map Key**

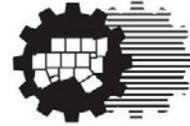
- ★ RL/SRL Property
- High Water Mark
- Low Water Crossing
- Dam
- West Fork Trinity River
- Stream
- Zone A (Approx)
- Zone AE (100-yr)
- Floodway
- Zone X (500-yr)
- Major Highways
- City Boundary
- Lake
- Lower West Fork Discovery County
- County Boundary



**City of Arlington**  
 LOWER WEST FORK  
 TRINITY WATERSHED

May 23, 2013

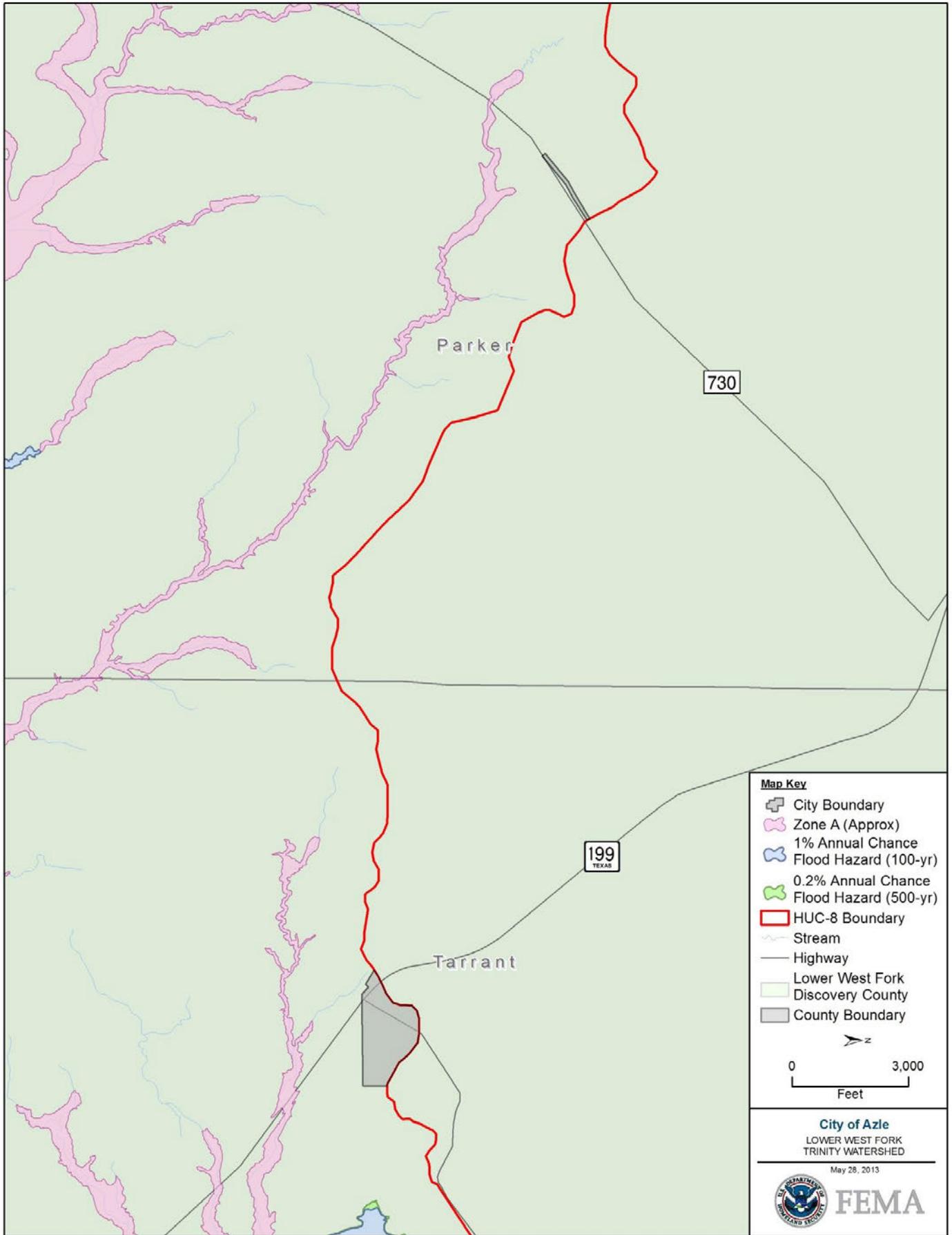


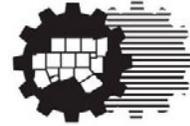


North Central Texas  
Council of Governments

**CITY OF AZLE**  
**Parker and Tarrant Counties**  
**Lower West Fork Trinity Watershed**  
**NCTCOG FY12 Discovery**

<b><u>CID:</u></b>	<b>480584</b>
<b><u>Population (2010 Census):</u></b>	2,716
<b><u>NFIP Participant:</u></b>	Yes
<b><u>CRS Rating:</u></b>	NA
<b><u>Mitigation Plan Name:</u></b>	Fort Worth
<b><u>Plan Approval Date:</u></b>	1/6/2009
<b><u>Plan Expiration Date:</u></b>	1/6/2014
<b><u>High Water Marks:</u></b>	0
<b><u>Low Water Crossings:</u></b>	0
<b><u>DFIRM Status:</u></b>	Effective
<b><u>Effective Date:</u></b>	Parker – Sept. 26, 2008 Tarrant – Sept. 25, 2009
<b><u>Total Stream Miles:</u></b>	0
<b><u>Total Zone A Miles:</u></b>	0
<b><u>Repetitive Loss Property Count:</u></b>	0
<b><u>Severe Repetitive Loss Property Count:</u></b>	0
<b><u>NFIP Policies:</u></b>	111
<b><u>NFIP Claims:</u></b>	4
<b><u>Total Losses:</u></b>	\$ 1,114,627
<b><u>Grants:</u></b>	Unknown
<b><u>Disaster Declarations:</u></b>	Unknown
<b><u>LiDAR:</u></b>	2001 NCTCOG
<b><u>Levees/Dams:</u></b>	0 levees , 0 dams
<b><u>Additional Comments:</u></b>	
<b><u>Congressmen:</u></b>	Rep. Kay Granger, Sen. John Cornyn, Sen. Ted Cruz

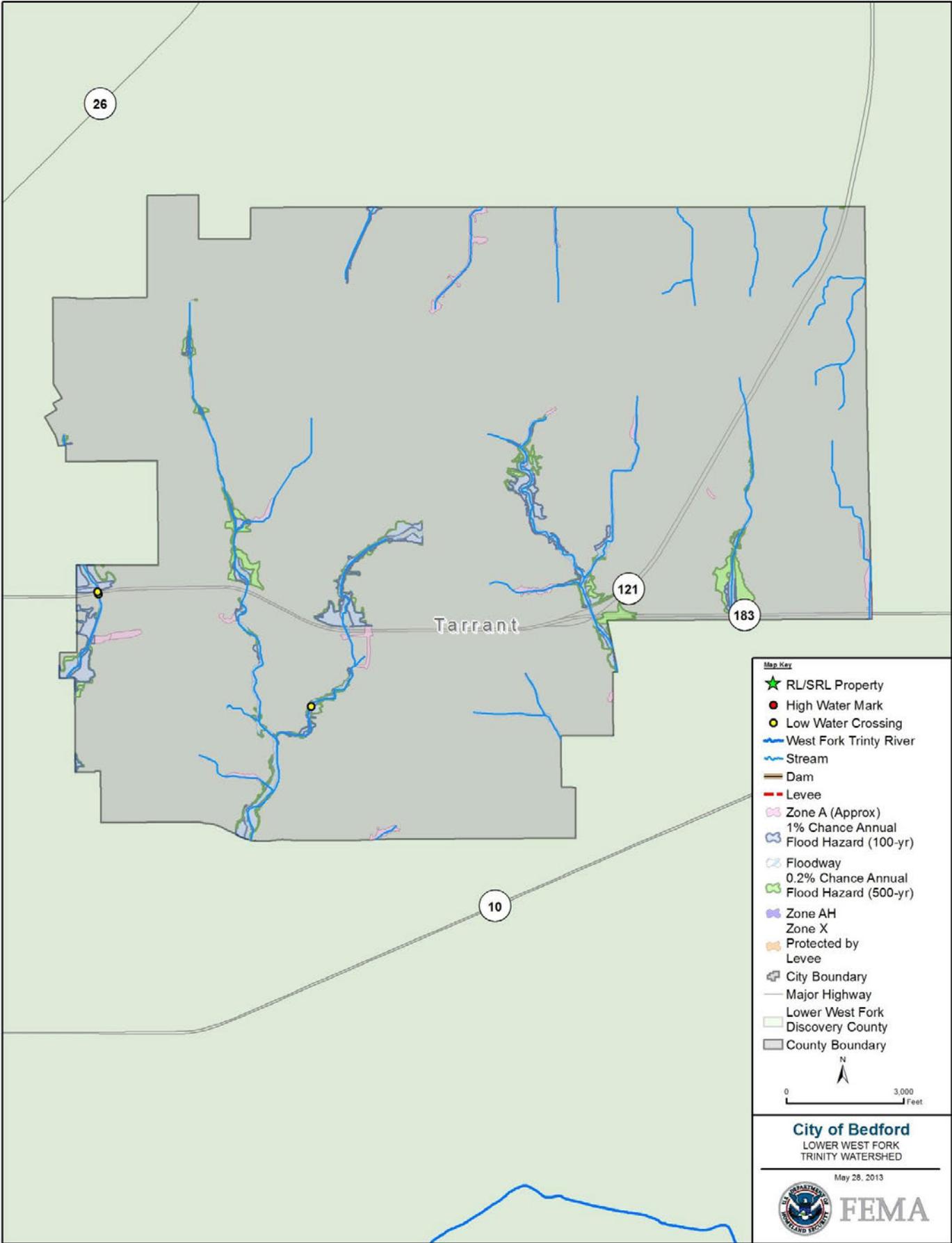




North Central Texas  
Council of Governments

**CITY OF BEDFORD**  
**Lower West Fork Trinity Watershed**  
**NCTCOG FY12 Discovery**

<b><u>CID:</u></b>	<b>480585</b>
<b><u>Population (2010 Census):</u></b>	46,979
<b><u>NFIP Participant:</u></b>	Yes
<b><u>CRS Rating:</u></b>	Unknown
<b><u>Mitigation Plan Name:</u></b>	Tarrant County Mid-Cities
<b><u>Plan Approval Date:</u></b>	9/18/2008
<b><u>Plan Expiration Date:</u></b>	9/18/2013
<b><u>High Water Marks:</u></b>	0
<b><u>Low Water Crossings:</u></b>	3
<b><u>DFIRM Status:</u></b>	Effective
<b><u>Effective Date:</u></b>	Tarrant – Sept. 25, 2009
<b><u>Total Stream Miles:</u></b>	17.22
<b><u>Total Zone A Miles:</u></b>	1.85
<b><u>Repetitive Loss Property Count:</u></b>	5
<b><u>Severe Repetitive Loss Property Count:</u></b>	0
<b><u>NFIP Policies:</u></b>	173
<b><u>NFIP Claims:</u></b>	56
<b><u>Total Losses:</u></b>	\$158,730
<b><u>Grants:</u></b>	Unknown
<b><u>Disaster Declarations:</u></b>	Unknown
<b><u>LiDAR:</u></b>	2010 TNRIS LiDAR
<b><u>Levees/Dams:</u></b>	0 levees , 0 dams
<b><u>Additional Comments:</u></b>	
<b><u>Congressmen:</u></b>	Rep. Kenny Marchant, Rep. Michael Burgess, Sen. John Cornyn, Sen. Ted Cruz



**Map Key**

- ★ RL/SRL Property
- High Water Mark
- Low Water Crossing
- West Fork Trinity River
- Stream
- Dam
- Levee
- Zone A (Approx)  
1% Chance Annual  
Flood Hazard (100-yr)
- Floodway  
0.2% Chance Annual  
Flood Hazard (500-yr)
- Zone AH
- Zone X
- Protected by  
Levee
- City Boundary
- Major Highway
- Lower West Fork  
Discovery County
- County Boundary

0 3,000 Feet

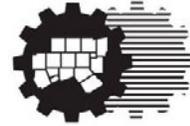
N

**City of Bedford**  
LOWER WEST FORK  
TRINITY WATERSHED

May 28, 2013



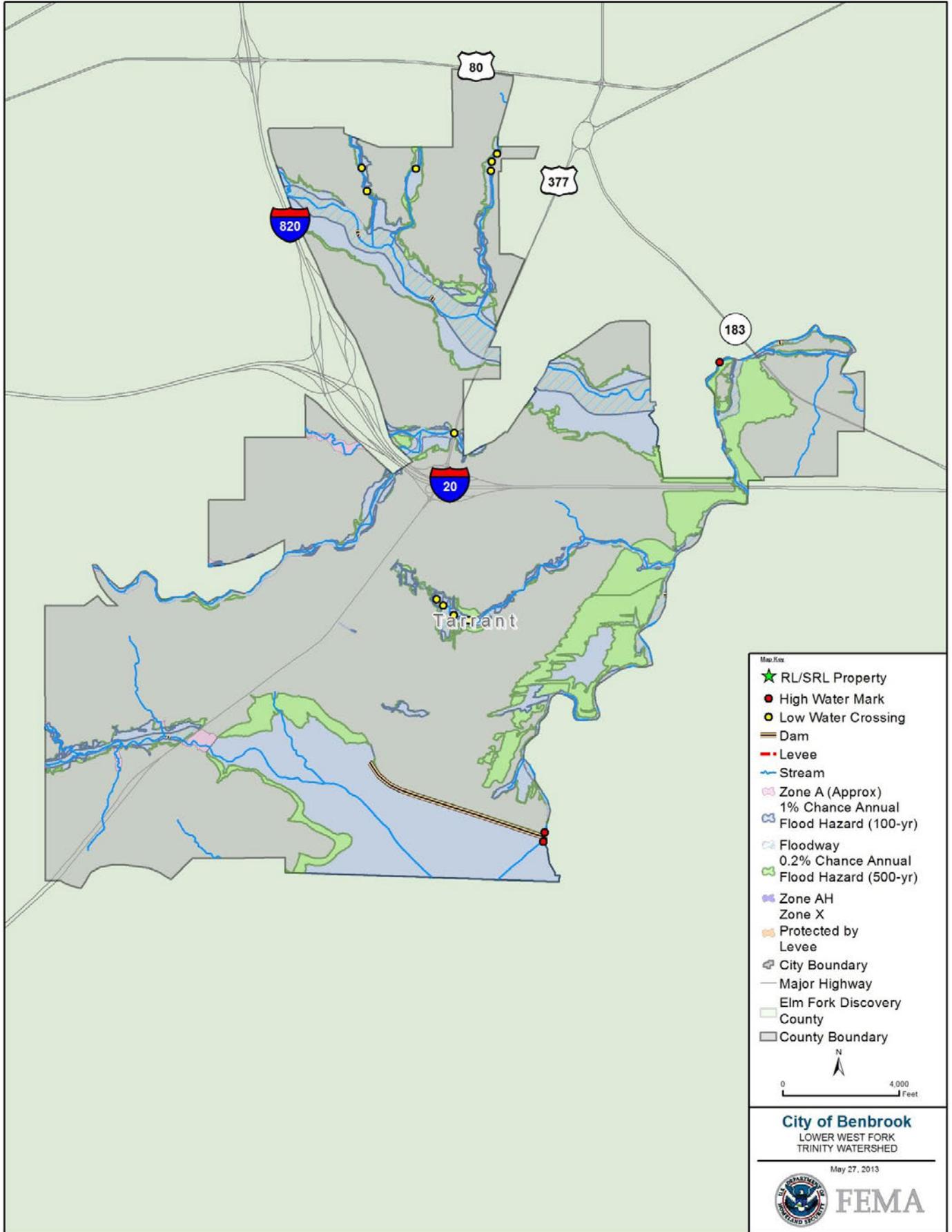
**FEMA**



North Central Texas  
Council of Governments

**CITY OF BENBROOK**  
**Lower West Fork Trinity Watershed**  
**NCTCOG FY12 Discovery**

<b><u>CID:</u></b>	<b>480586</b>
<b><u>Population (2000 Census):</u></b>	21,234
<b><u>NFIP Participant:</u></b>	Yes
<b><u>CRS Rating:</u></b>	6
<b><u>Mitigation Plan Name:</u></b>	Benbrook
<b><u>Plan Approval Date:</u></b>	8/27/2012
<b><u>Plan Expiration Date:</u></b>	8/27/2017
<b><u>High Water Marks:</u></b>	5
<b><u>Low Water Crossings:</u></b>	11
<b><u>DFIRM Status:</u></b>	Effective
<b><u>Effective Date:</u></b>	Tarrant – Sept. 25, 2009
<b><u>Total Stream Miles:</u></b>	23.5
<b><u>Total Zone A Miles:</u></b>	1.15
<b><u>Repetitive Loss Property Count:</u></b>	5
<b><u>Severe Repetitive Loss Property Count:</u></b>	0
<b><u>NFIP Policies:</u></b>	361
<b><u>NFIP Claims:</u></b>	74
<b><u>Total Losses:</u></b>	\$268,053
<b><u>Grants:</u></b>	Unknown
<b><u>Disaster Declarations:</u></b>	Unknown
<b><u>LiDAR:</u></b>	2010 TNRIS LiDAR
<b><u>Levees/Dams:</u></b>	0 levees, 7 dams
<b><u>Additional Comments:</u></b>	
<b><u>Congressmen:</u></b>	Rep. Kay Granger, Sen. John Cornyn, Sen. Ted Cruz



Map Key

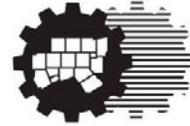
- ★ RL/SRL Property
- High Water Mark
- Low Water Crossing
- Dam
- Levee
- Stream
- Zone A (Approx)  
1% Chance Annual
- Flood Hazard (100-yr)
- Floodway  
0.2% Chance Annual
- Flood Hazard (500-yr)
- Zone AH
- Zone X
- Protected by  
Levee
- City Boundary
- Major Highway
- Elm Fork Discovery
- County
- County Boundary

0 4,000 Feet

**City of Benbrook**  
 LOWER WEST FORK  
 TRINITY WATERSHED

May 27, 2013





North Central Texas  
Council of Governments

**CITY OF BLUE MOUND**  
Tarrant County  
**Lower West Fork Trinity Watershed**  
**North Texas Discovery FY12**

<b>CID:</b>	<b>480587</b>
<b>Population (2010 Census):</b>	2,394
<b>NFIP Participant:</b>	Yes
<b>CRS Rating:</b>	N/A
<b>Mitigation Plan Name:</b>	Fort Worth
<b>Plan Approval Date:</b>	1/6/2009
<b>Plan Expiration Date:</b>	1/6/2014
<b>High Water Marks:</b>	0
<b>Low Water Crossings:</b>	0
<b>DFIRM Status:</b>	Effective (Tarrant County)
<b>Effective Date:</b>	Sept. 25, 2009
<b>Total Stream Miles:</b>	1.75
<b>Total Zone A Miles:</b>	0.37
<b>Repetitive Loss Property Count:</b>	0
<b>Severe Repetitive Loss Property Count:</b>	0
<b>NFIP Policies:</b>	9
<b>NFIP Claims:</b>	3
<b>Total Losses:</b>	\$21,811
<b>Grants:</b>	Unknown
<b>Disaster Declarations:</b>	29 (Tarrant County)
<b>LiDAR:</b>	2010 TNRIS LiDAR
<b>Levees/Dams:</b>	0 in DFIRM structures
<b>Additional Comments:</b>	
<b>Congressmen:</b>	Rep. Kay Granger, Sen. John Cornyn, Sen. Ted Cruz

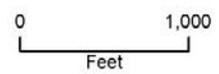
WATAUGA ROAD

Tarrant



**Map Key**

-  Zone A (Approx)
-  1% Annual Chance Flood Hazard (100-yr)
-  Floodway
-  0.2% Annual Chance Flood Hazard (500-yr)
-  Stream
-  City Boundary
-  HUC-8 Boundary
-  LWF\_Roads
-  Highway
-  Lower West Fork Discovery County
-  County Boundary

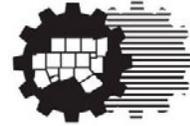


**City of Blue Mound**  
LOWER WEST FORK  
TRINITY WATERSHED

May 28, 2013



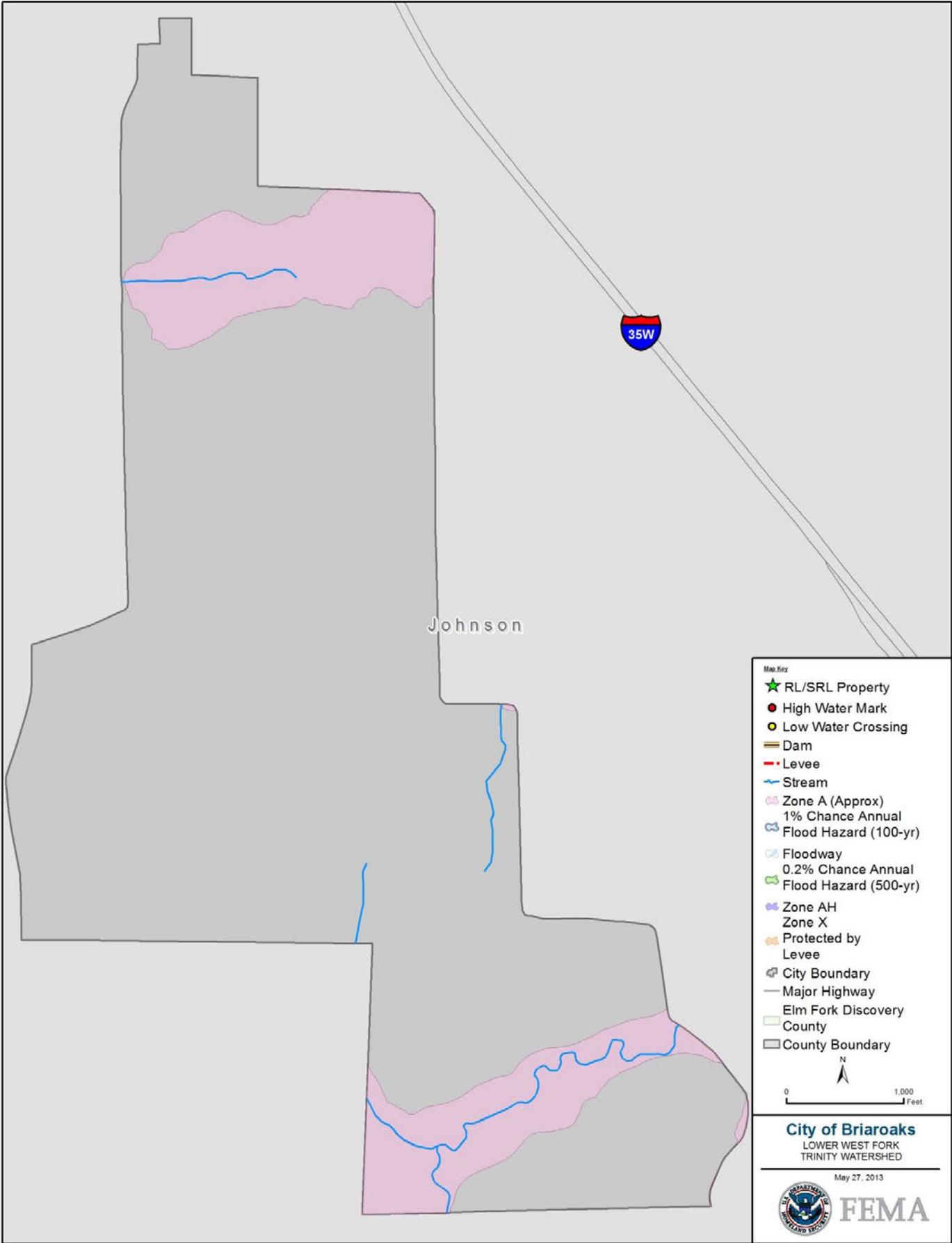
**FEMA**



North Central Texas  
Council of Governments

**CITY OF BRIAROAKS**  
**Lower West Fork Trinity Watershed**  
**NCTCOG FY12 Discovery**

<b><u>CID:</u></b>	<b>480398</b>
<b><u>Population (2000 Census):</u></b>	493
<b><u>NFIP Participant:</u></b>	No
<b><u>CRS Rating:</u></b>	NA
<b><u>Mitigation Plan Name:</u></b>	No Plan
<b><u>Plan Approval Date:</u></b>	NA
<b><u>Plan Expiration Date:</u></b>	NA
<b><u>High Water Marks:</u></b>	0
<b><u>Low Water Crossings:</u></b>	0
<b><u>DFIRM Status:</u></b>	Effective
<b><u>Effective Date:</u></b>	Johnson – Dec. 4, 2012
<b><u>Total Stream Miles:</u></b>	1.61
<b><u>Total Zone A Miles:</u></b>	1.19
<b><u>Repetitive Loss Property Count:</u></b>	0
<b><u>Severe Repetitive Loss Property Count:</u></b>	0
<b><u>NFIP Policies:</u></b>	2
<b><u>NFIP Claims:</u></b>	0
<b><u>Total Losses:</u></b>	\$0
<b><u>Grants:</u></b>	Unknown
<b><u>Disaster Declarations:</u></b>	Unknown
<b><u>LiDAR:</u></b>	2010 TNRS LiDAR, 2010 Montague Cooke Grayson Wise, & USGS 30m DEM
<b><u>Levees/Dams:</u></b>	0 levees, 0 dams
<b><u>Additional Comments:</u></b>	
<b><u>Congressmen:</u></b>	Rep. Bill Flores, Sen. John Cornyn, Sen. Ted Cruz



**Map Key**

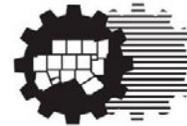
- ★ RL/SRL Property
- High Water Mark
- Low Water Crossing
- Dam
- Levee
- Stream
- Zone A (Approx)  
1% Chance Annual  
Flood Hazard (100-yr)
- Floodway  
0.2% Chance Annual  
Flood Hazard (500-yr)
- Zone AH
- Zone X
- Protected by  
Levee
- City Boundary
- Major Highway
- Elm Fork Discovery  
County
- County Boundary

N

0 1,000 Feet

**City of Briaroaks**  
LOWER WEST FORK  
TRINITY WATERSHED

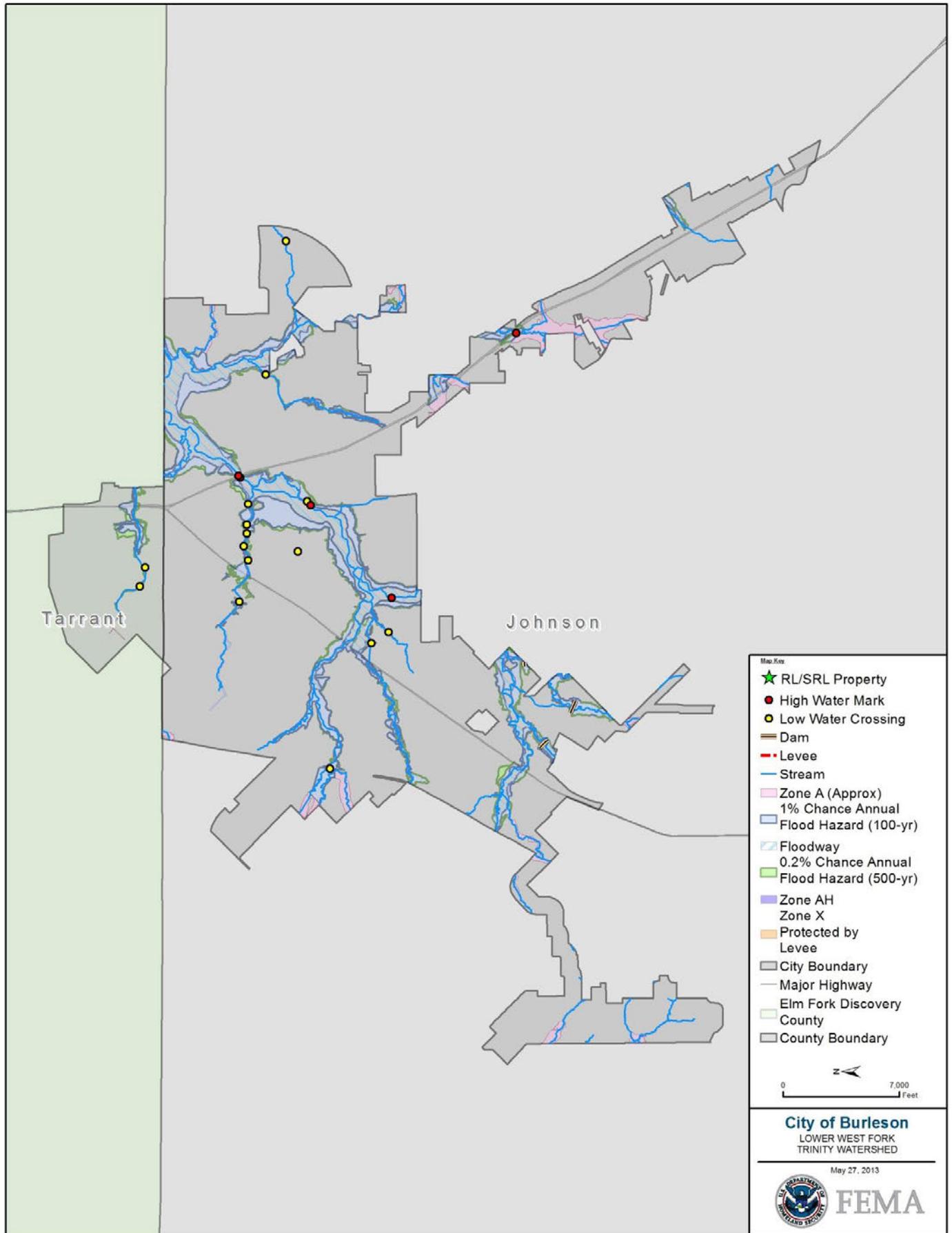
May 27, 2013



North Central Texas  
Council of Governments

**CITY OF BURLESON**  
**Lower West Fork Trinity Watershed**  
**NCTCOG FY12 Discovery**

<b><u>CID:</u></b>	<b>485459</b>
<b><u>Population (2010 Census):</u></b>	<b>37,217</b>
<b><u>NFIP Participant:</u></b>	<b>Yes</b>
<b><u>CRS Rating:</u></b>	<b>7</b>
<b><u>Mitigation Plan Name:</u></b>	<b>Emergency Management Plan – Annex P Hazard Mitigation</b>
<b><u>Plan Approval Date:</u></b>	<b>Updated 2/26/10</b>
<b><u>Plan Expiration Date:</u></b>	<b>None</b>
<b><u>High Water Marks:</u></b>	<b>5</b>
<b><u>Low Water Crossings:</u></b>	<b>15</b>
<b><u>DFIRM Status:</u></b>	<b>Effective</b>
<b><u>Effective Date:</u></b>	<b>Johnson – Dec. 4, 2012, Tarrant – Sept. 25, 2009</b>
<b><u>Total Stream Miles:</u></b>	<b>46.73</b>
<b><u>Total Zone A Miles:</u></b>	<b>6.27</b>
<b><u>Repetitive Loss Property Count:</u></b>	<b>6</b>
<b><u>Severe Repetitive Loss Property Count:</u></b>	<b>0</b>
<b><u>NFIP Policies:</u></b>	<b>130</b>
<b><u>NFIP Claims:</u></b>	<b>41</b>
<b><u>Total Losses:</u></b>	<b>\$245,329</b>
<b><u>Grants:</u></b>	<b>None</b>
<b><u>Disaster Declarations:</u></b>	<b>None</b>
<b><u>LiDAR:</u></b>	<b>2010 TNIRIS LiDAR &amp; USGS 30m DEM</b>
<b><u>Levees/Dams:</u></b>	<b>0 levees, 3 dams</b>
<b><u>Additional Comments:</u></b>	
<b><u>Congressmen:</u></b>	<b>Rep. Bill Flores, Rep. Joe Barton, Sen. John Cornyn, Sen. Ted Cruz</b>



- Map Key
- ★ RL/SRL Property
  - High Water Mark
  - Low Water Crossing
  - Dam
  - - - Levee
  - Stream
  - Zone A (Approx)  
1% Chance Annual
  - Flood Hazard (100-yr)
  - Floodway  
0.2% Chance Annual
  - Flood Hazard (500-yr)
  - Zone AH
  - Zone X
  - Protected by  
Levee
  - City Boundary
  - Major Highway
  - Elm Fork Discovery  
County
  - County Boundary

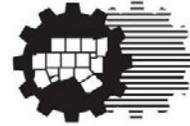
0 7,000 Feet

**City of Burleson**  
LOWER WEST FORK  
TRINITY WATERSHED

May 27, 2013



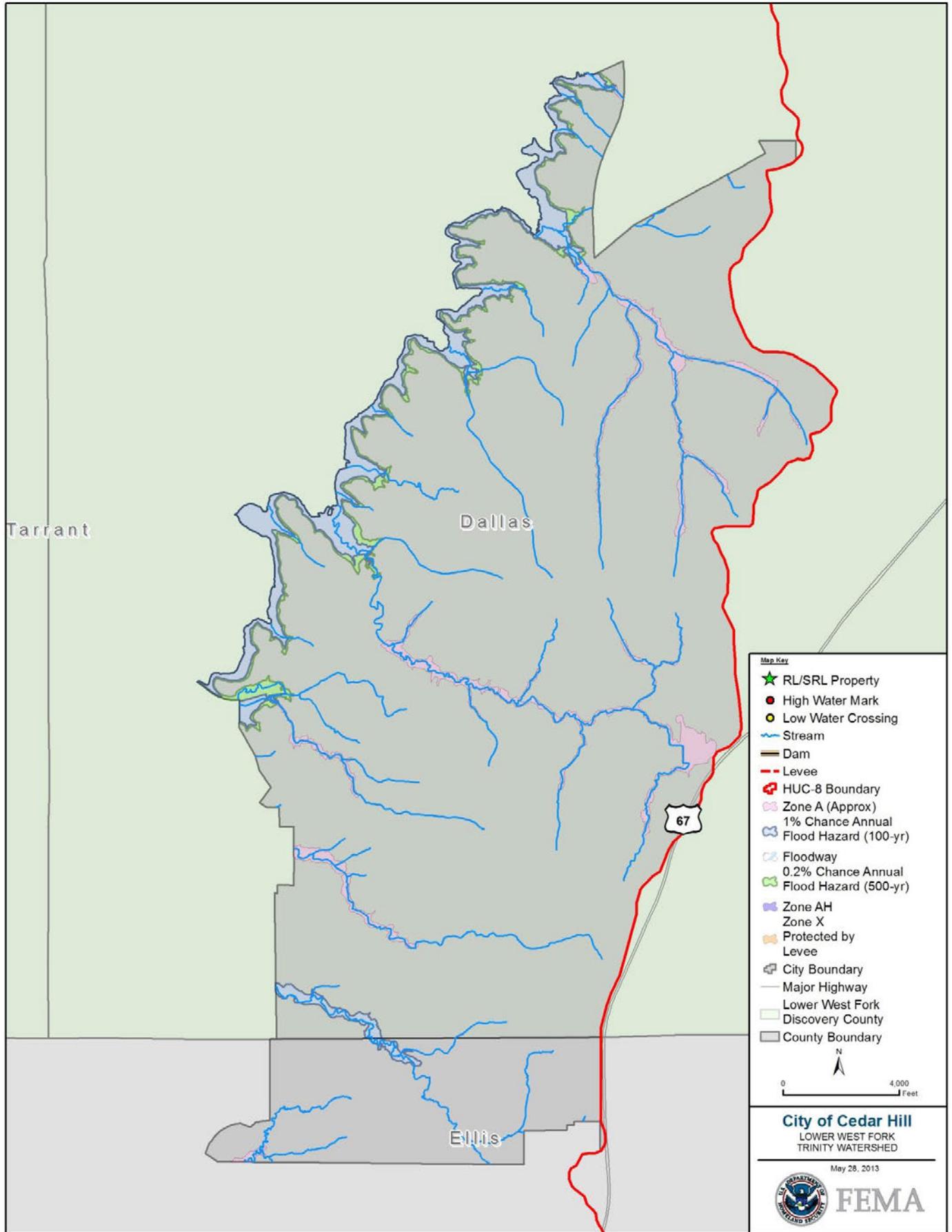
**FEMA**



North Central Texas  
Council of Governments

**CITY OF CEDAR HILL**  
**Lower West Fork Trinity Watershed**  
**NCTCOG FY12 Discovery**

<b><u>CID:</u></b>	<b>480168</b>
<b><u>Population (2010 Census):</u></b>	45,028
<b><u>NFIP Participant:</u></b>	Unknown
<b><u>CRS Rating:</u></b>	Unknown
<b><u>Mitigation Plan Name:</u></b>	Dallas County
<b><u>Plan Approval Date:</u></b>	1/12/2009
<b><u>Plan Expiration Date:</u></b>	1/2/2014
<b><u>High Water Marks:</u></b>	0
<b><u>Low Water Crossings:</u></b>	0
<b><u>DFIRM Status:</u></b>	Effective
<b><u>Effective Date:</u></b>	Dallas – Aug. 23, 2001 Ellis – June 6, 2013
<b><u>Total Stream Miles:</u></b>	43.20
<b><u>Total Zone A Miles:</u></b>	13.65
<b><u>Repetitive Loss Property Count:</u></b>	1
<b><u>Severe Repetitive Loss Property Count:</u></b>	0
<b><u>NFIP Policies:</u></b>	109
<b><u>NFIP Claims:</u></b>	20
<b><u>Total Losses:</u></b>	\$208,187
<b><u>Grants:</u></b>	Unknown
<b><u>Disaster Declarations:</u></b>	Unknown
<b><u>LiDAR:</u></b>	2010 TNRIS LiDAR & 2009 Grand Prairie
<b><u>Levees/Dams:</u></b>	0 levees , 0 dams
<b><u>Additional Comments:</u></b>	
<b><u>Congressmen:</u></b>	Rep. Kenny Marchant, Rep. Joe Barton, Sen. John Cornyn, Sen. Ted Cruz



**Map Key**

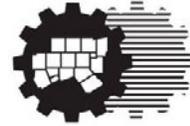
- ★ RL/SRL Property
- High Water Mark
- Low Water Crossing
- ~ Stream
- Dam
- - - Levee
- ⬮ HUC-8 Boundary
- ⬮ Zone A (Approx)
- ⬮ 1% Chance Annual Flood Hazard (100-yr)
- ⬮ Floodway
- ⬮ 0.2% Chance Annual Flood Hazard (500-yr)
- ⬮ Zone AH
- ⬮ Zone X
- ⬮ Protected by Levee
- ⬮ City Boundary
- Major Highway
- Lower West Fork Discovery County
- County Boundary

0 4,000 Feet

**City of Cedar Hill**  
 LOWER WEST FORK  
 TRINITY WATERSHED

May 28, 2013

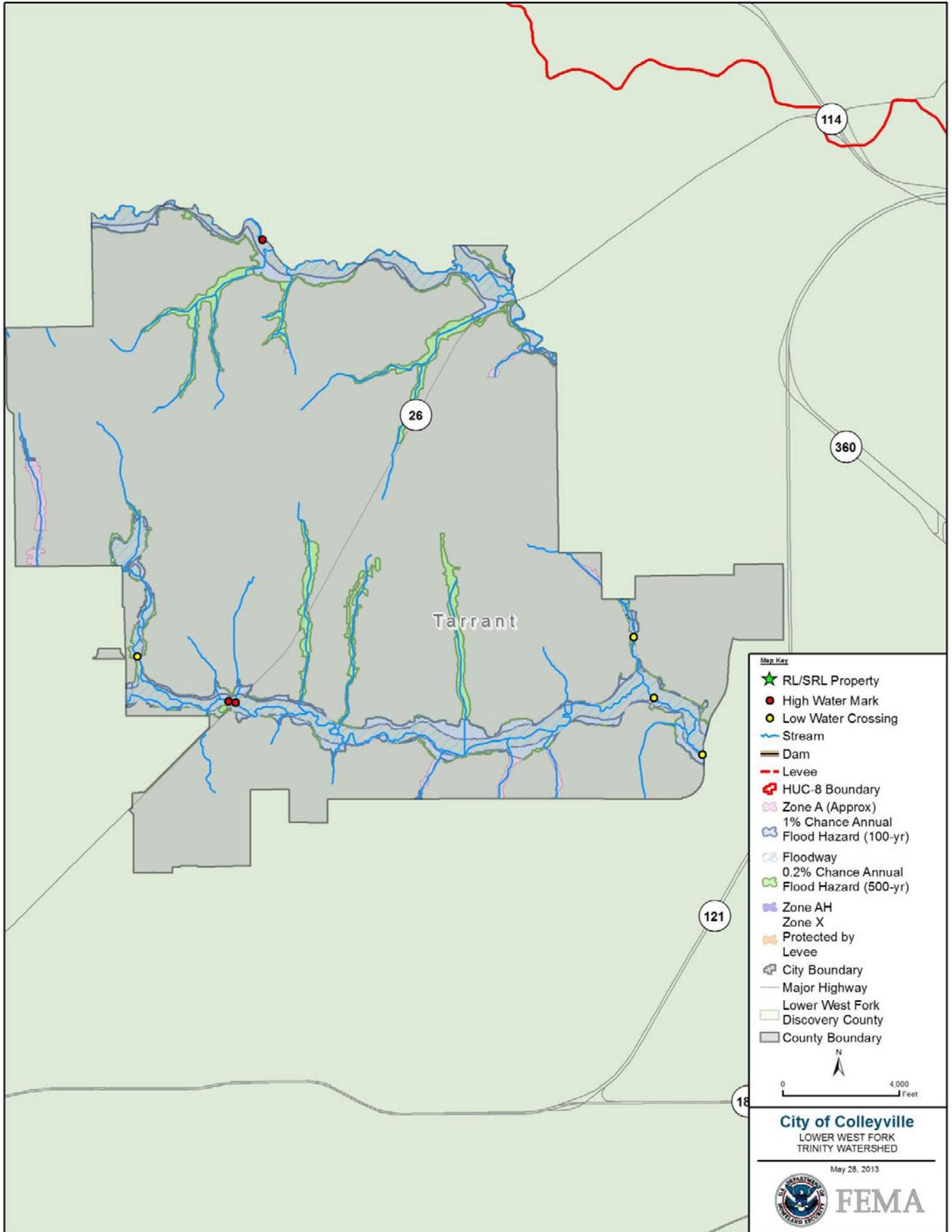




North Central Texas  
Council of Governments

**CITY OF COLLEYVILLE**  
**Lower West Fork Trinity Watershed**  
**NCTCOG FY12 Discovery**

<b><u>CID:</u></b>	<b>480590</b>
<b><u>Population (2010 Census):</u></b>	<b>22,807</b>
<b><u>NFIP Participant:</u></b>	<b>Yes</b>
<b><u>CRS Rating:</u></b>	<b>Unknown</b>
<b><u>Mitigation Plan Name:</u></b>	<b>No Plan</b>
<b><u>Plan Approval Date:</u></b>	<b>NA</b>
<b><u>Plan Expiration Date:</u></b>	<b>NA</b>
<b><u>High Water Marks:</u></b>	<b>4</b>
<b><u>Low Water Crossings:</u></b>	<b>4</b>
<b><u>DFIRM Status:</u></b>	<b>Effective</b>
<b><u>Effective Date:</u></b>	<b>Tarrant – Sept. 25, 2009</b>
<b><u>Total Stream Miles:</u></b>	<b>29.54</b>
<b><u>Total Zone A Miles:</u></b>	<b>2.02</b>
<b><u>Repetitive Loss Property Count:</u></b>	<b>1</b>
<b><u>Severe Repetitive Loss Property Count:</u></b>	<b>0</b>
<b><u>NFIP Policies:</u></b>	<b>186</b>
<b><u>NFIP Claims:</u></b>	<b>45</b>
<b><u>Total Losses:</u></b>	<b>\$352,252</b>
<b><u>Grants:</u></b>	<b>Unknown</b>
<b><u>Disaster Declarations:</u></b>	<b>Unknown</b>
<b><u>LiDAR:</u></b>	<b>2010 TNRI LiDAR</b>
<b><u>Levees/Dams:</u></b>	<b>0 levees , 2 dams</b>
<b><u>Additional Comments:</u></b>	
<b><u>Congressmen:</u></b>	<b>Rep. Kenny Marchant, Sen. John Cornyn, Sen. Ted Cruz</b>



**Map Key**

- ★ RL/SRL Property
- High Water Mark
- Low Water Crossing
- Stream
- Dam
- - - Levee
- ⊞ HUC-8 Boundary
- ⊞ Zone A (Approx) 1% Chance Annual Flood Hazard (100-yr)
- ⊞ Floodway 0.2% Chance Annual Flood Hazard (500-yr)
- ⊞ Zone AH
- ⊞ Zone X
- ⊞ Protected by Levee
- ⊞ City Boundary
- Major Highway
- Lower West Fork
- Discovery County
- County Boundary

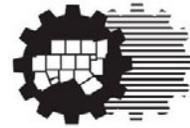
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**City of Colleyville**  
 LOWER WEST FORK  
 TRINITY WATERSHED

May 28, 2013

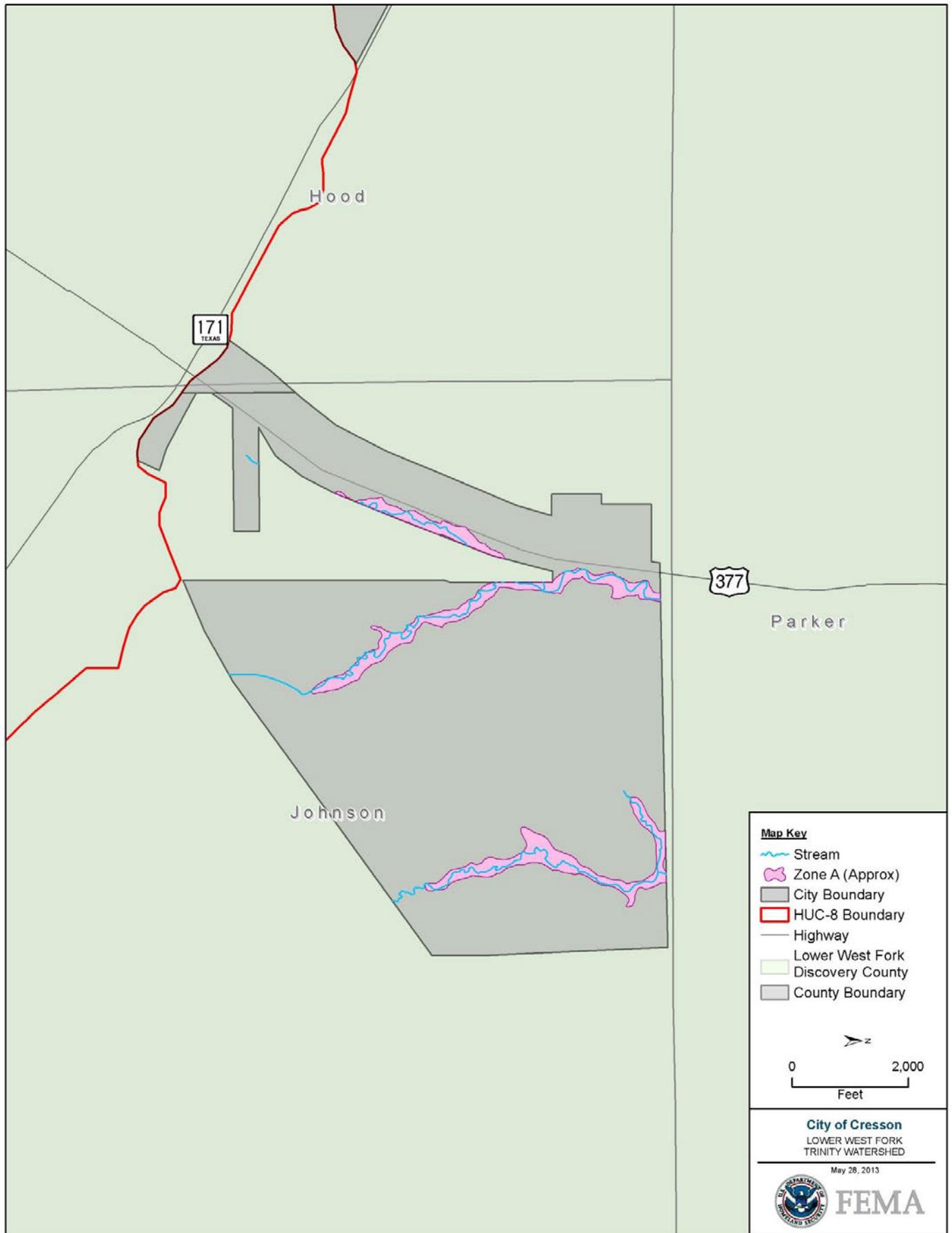


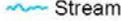
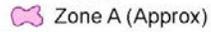
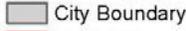
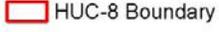
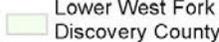
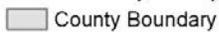


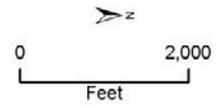
North Central Texas  
Council of Governments

**CITY OF CRESSON**  
Johnson and Hood Counties  
Lower West Fork Trinity Watershed  
North Texas Discovery FY12

<b><u>CID:</u></b>	<b>480177</b>
<b><u>Population (2010 Census):</u></b>	741
<b><u>NFIP Participant:</u></b>	Yes
<b><u>CRS Rating:</u></b>	N/A
<b><u>Mitigation Plan Name:</u></b>	No plan
<b><u>Plan Approval Date:</u></b>	
<b><u>Plan Expiration Date:</u></b>	
<b><u>High Water Marks:</u></b>	0
<b><u>Low Water Crossings:</u></b>	0
<b><u>DFIRM Status:</u></b>	Effective
<b><u>Effective Date:</u></b>	Hood – 8/16/2012; Johnson – 12/4/2012
<b><u>Total Stream Miles:</u></b>	4.08
<b><u>Total Zone A Miles:</u></b>	3.42
<b><u>Repetitive Loss Property Count:</u></b>	0
<b><u>Severe Repetitive Loss Property Count:</u></b>	0
<b><u>NFIP Policies:</u></b>	Unknown
<b><u>NFIP Claims:</u></b>	Unknown
<b><u>Total Losses:</u></b>	Unknown
<b><u>Grants:</u></b>	Unknown
<b><u>Disaster Declarations:</u></b>	1 (Hood County)
<b><u>LiDAR:</u></b>	2001 NCTCOG LiDAR, USGS 10m DEM
<b><u>Levees/Dams:</u></b>	0 in DFIRM structures
<b><u>Additional Comments:</u></b>	
<b><u>Congressmen:</u></b>	Rep. Mike Conaway, Rep. Michael Burgess, Sen. John Cornyn, Sen. Ted Cruz



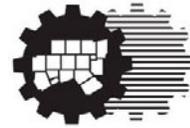
- Map Key**
-  Stream
  -  Zone A (Approx)
  -  City Boundary
  -  HUC-8 Boundary
  -  Highway
  -  Lower West Fork Discovery County
  -  County Boundary



**City of Cresson**  
LOWER WEST FORK  
TRINITY WATERSHED

May 28, 2013

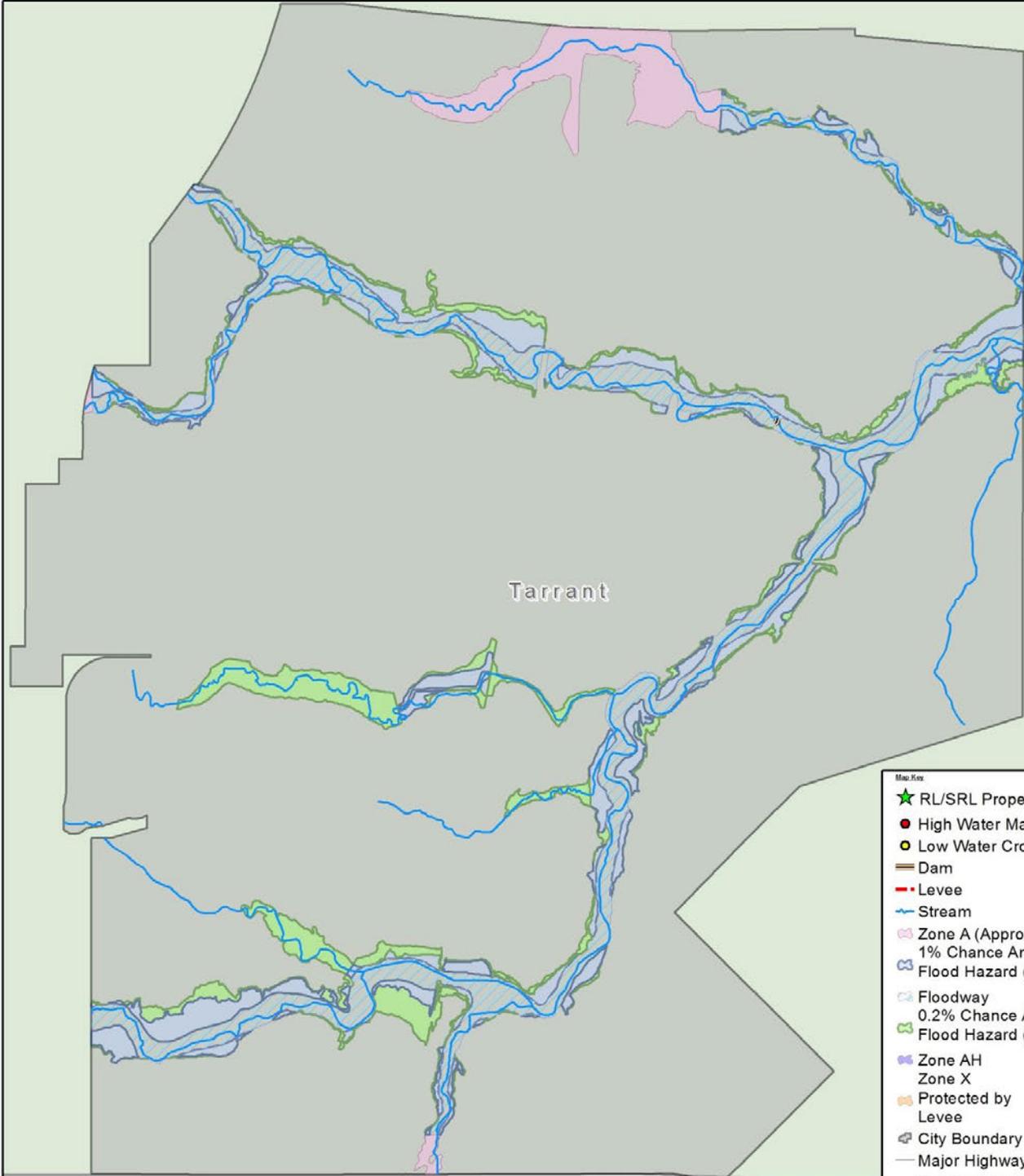




North Central Texas  
Council of Governments

**CITY OF CROWLEY**  
**Lower West Fork Trinity Watershed**  
**NCTCOG FY12 Discovery**

<b><u>CID:</u></b>	<b>480591</b>
<b><u>Population (2000 Census):</u></b>	<b>12,838</b>
<b><u>NFIP Participant:</u></b>	<b>No</b>
<b><u>CRS Rating:</u></b>	<b>NA</b>
<b><u>Mitigation Plan Name:</u></b>	<b>No Plan</b>
<b><u>Plan Approval Date:</u></b>	<b>NA</b>
<b><u>Plan Expiration Date:</u></b>	<b>NA</b>
<b><u>High Water Marks:</u></b>	<b>0</b>
<b><u>Low Water Crossings:</u></b>	<b>0</b>
<b><u>DFIRM Status:</u></b>	<b>Effective</b>
<b><u>Effective Date:</u></b>	<b>Tarrant – Sept. 25, 2009</b>
<b><u>Total Stream Miles:</u></b>	<b>18.14</b>
<b><u>Total Zone A Miles:</u></b>	<b>1.30</b>
<b><u>Repetitive Loss Property Count:</u></b>	<b>0</b>
<b><u>Severe Repetitive Loss Property Count:</u></b>	<b>1</b>
<b><u>NFIP Policies:</u></b>	<b>0</b>
<b><u>NFIP Claims:</u></b>	<b>2</b>
<b><u>Total Losses:</u></b>	<b>\$10,677</b>
<b><u>Grants:</u></b>	<b>Unknown</b>
<b><u>Disaster Declarations:</u></b>	<b>Unknown</b>
<b><u>LiDAR:</u></b>	<b>2010 TNRIS LiDAR</b>
<b><u>Levees/Dams:</u></b>	<b>0 levees , 1 dam</b>
<b><u>Additional Comments:</u></b>	
<b><u>Congressmen:</u></b>	<b>Rep. Joe Barton, Sen. John Cornyn, Sen. Ted Cruz</b>



- Map Key
- ★ RL/SRL Property
  - High Water Mark
  - Low Water Crossing
  - Dam
  - Levee
  - Stream
  - Zone A (Approx)  
1% Chance Annual  
Flood Hazard (100-yr)
  - Zone AH
  - Zone X
  - Protected by  
Levee
  - City Boundary
  - Major Highway
  - Elm Fork Discovery  
County
  - County Boundary

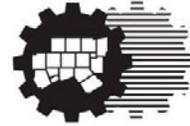


**City of Crowley**  
LOWER WEST FORK  
TRINITY WATERSHED

May 27, 2013



**FEMA**



North Central Texas  
Council of Governments

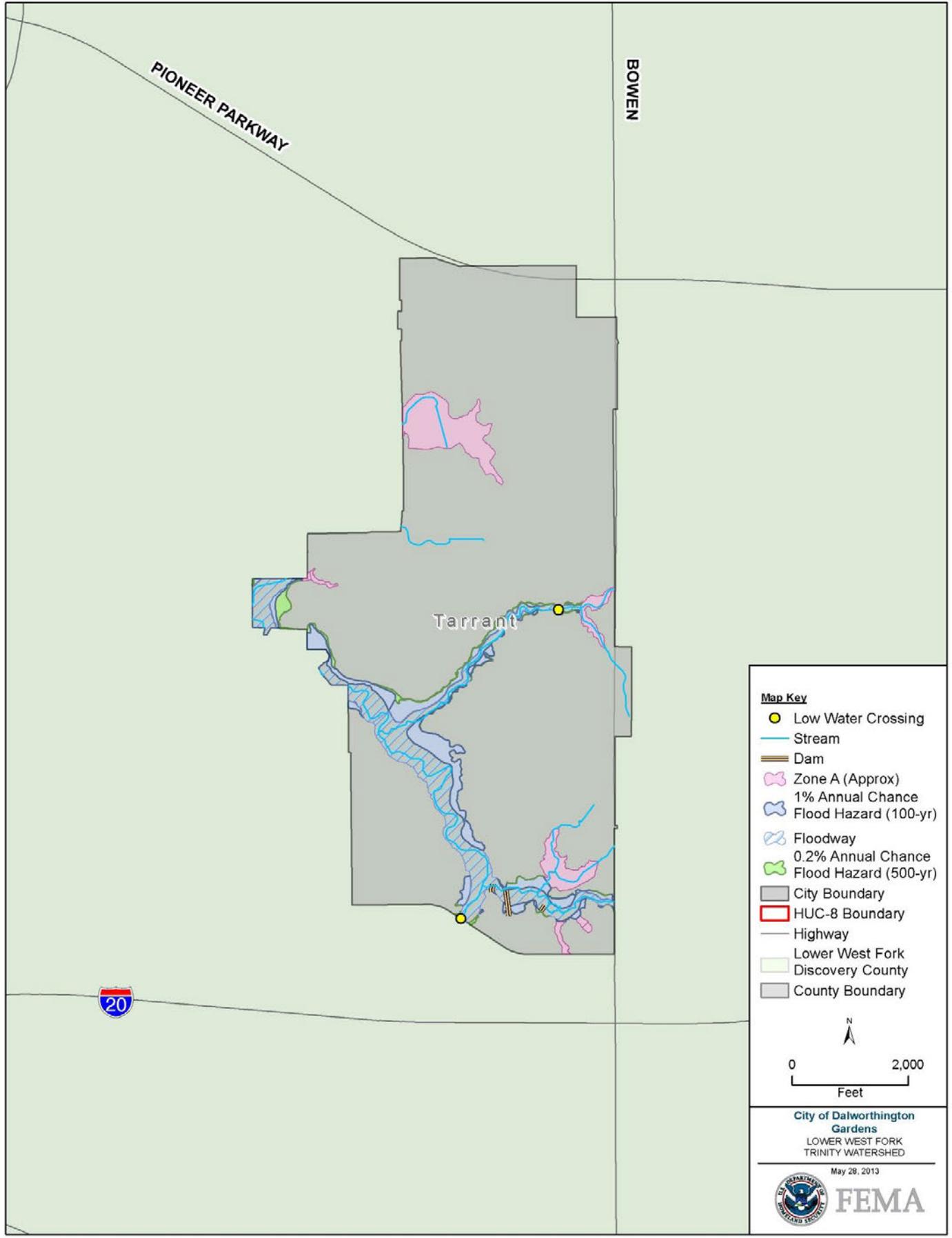
## CITY OF DALWORTHINGTON GARDENS

Tarrant County

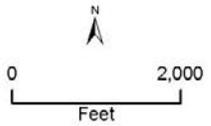
Lower West Fork Trinity Watershed

North Texas Discovery FY12

<b><u>CID:</u></b>	<b>481013</b>
<b><u>Population (2010 Census):</u></b>	2,259
<b><u>NFIP Participant:</u></b>	Yes
<b><u>CRS Rating:</u></b>	N/A
<b><u>Mitigation Plan Name:</u></b>	Fort Worth
<b><u>Plan Approval Date:</u></b>	1/6/2009
<b><u>Plan Expiration Date:</u></b>	1/6/2014
<b><u>High Water Marks:</u></b>	0
<b><u>Low Water Crossings:</u></b>	2
<b><u>DFIRM Status:</u></b>	Effective
<b><u>Effective Date:</u></b>	Tarrant – 9/25/2009
<b><u>Total Stream Miles:</u></b>	5.04
<b><u>Total Zone A Miles:</u></b>	1.02
<b><u>Repetitive Loss Property Count:</u></b>	3
<b><u>Severe Repetitive Loss Property Count:</u></b>	0
<b><u>NFIP Policies:</u></b>	21
<b><u>NFIP Claims:</u></b>	5
<b><u>Total Losses:</u></b>	\$12,649
<b><u>Grants:</u></b>	Unknown
<b><u>Disaster Declarations:</u></b>	Unknown
<b><u>LiDAR:</u></b>	2010 NCTCOG LiDAR
<b><u>Levees/Dams:</u></b>	3 dams
<b><u>Additional Comments:</u></b>	
<b><u>Congressmen:</u></b>	Rep. Joe Barton, Sen. John Cornyn, Sen. Ted Cruz



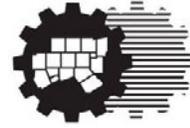
- Map Key**
- Low Water Crossing
  - Stream
  - Dam
  - Zone A (Approx)
  - 1% Annual Chance Flood Hazard (100-yr)
  - Floodway
  - 0.2% Annual Chance Flood Hazard (500-yr)
  - City Boundary
  - HUC-8 Boundary
  - Highway
  - Lower West Fork Discovery County
  - County Boundary



City of Dalworthington  
Gardens  
LOWER WEST FORK  
TRINITY WATERSHED  
May 28, 2013



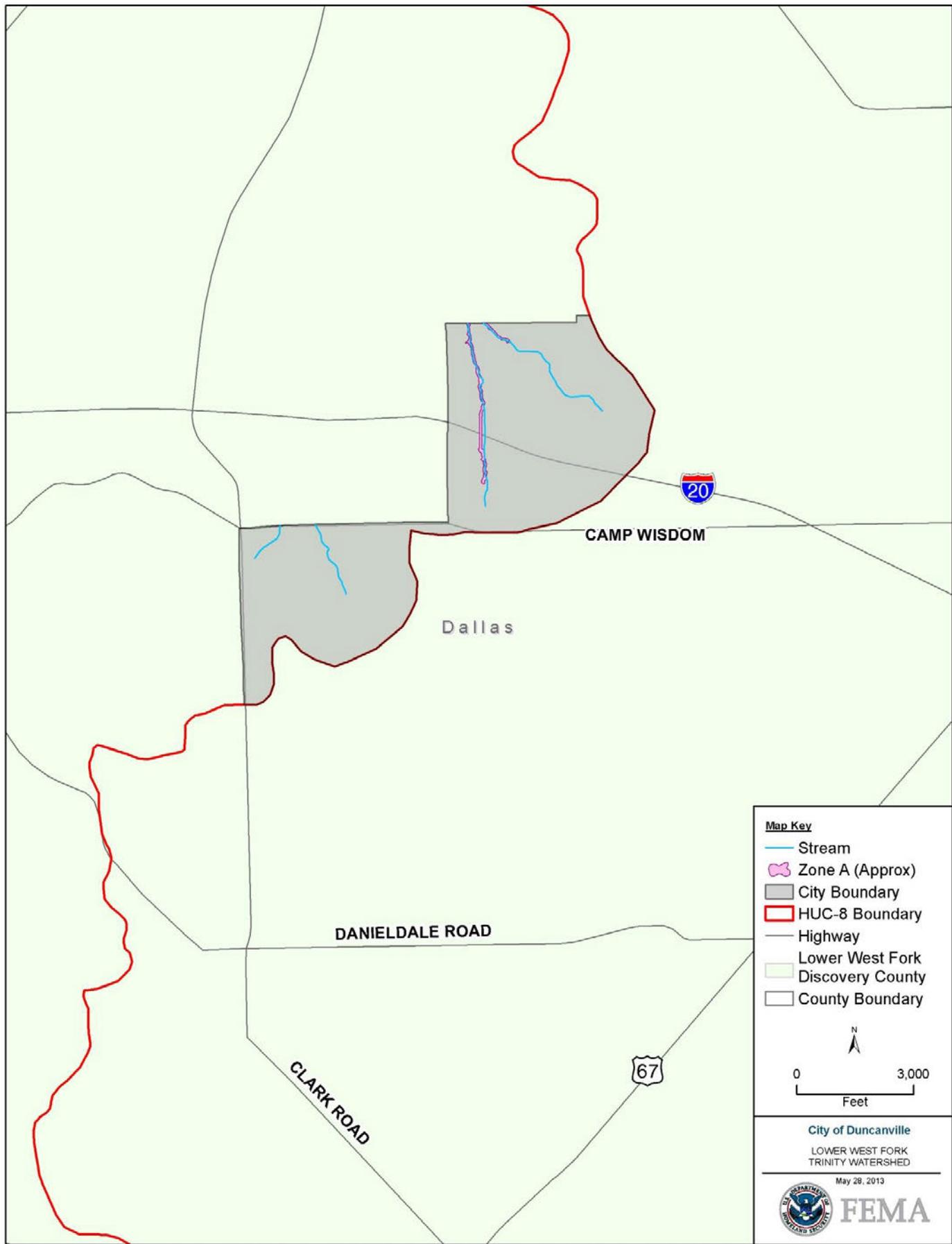
**FEMA**



North Central Texas  
Council of Governments

**CITY OF DUNCANVILLE**  
**Lower West Fork Trinity Watershed**  
**NCTCOG FY12 Discovery**

<b><u>CID:</u></b>	<b>480173</b>
<b><u>Population (2000 Census):</u></b>	<b>38,524</b>
<b><u>NFIP Participant:</u></b>	<b>Yes</b>
<b><u>CRS Rating:</u></b>	<b>7</b>
<b><u>Mitigation Plan Name:</u></b>	<b>Dallas County</b>
<b><u>Plan Approval Date:</u></b>	<b>1/12/2009</b>
<b><u>Plan Expiration Date:</u></b>	<b>1/2/2014</b>
<b><u>High Water Marks:</u></b>	<b>0</b>
<b><u>Low Water Crossings:</u></b>	<b>0</b>
<b><u>DFIRM Status:</u></b>	<b>Preliminary</b>
<b><u>Effective Date:</u></b>	<b>Dallas – 9/28/2010, 8/15/2012</b>
<b><u>Total Stream Miles:</u></b>	<b>2.32</b>
<b><u>Total Zone A Miles:</u></b>	<b>0.66</b>
<b><u>Repetitive Loss Property Count:</u></b>	<b>0</b>
<b><u>Severe Repetitive Loss Property Count:</u></b>	<b>0</b>
<b><u>NFIP Policies:</u></b>	<b>198</b>
<b><u>NFIP Claims:</u></b>	<b>70</b>
<b><u>Total Losses:</u></b>	<b>\$157,652</b>
<b><u>Grants:</u></b>	<b>Unknown</b>
<b><u>Disaster Declarations:</u></b>	<b>27 (Dallas County)</b>
<b><u>LiDAR:</u></b>	<b>2010 TNRI LiDAR</b>
<b><u>Levees/Dams:</u></b>	<b>0 in DFIRM structures</b>
<b><u>Additional Comments:</u></b>	
<b><u>Congressmen:</u></b>	<b>Rep. Eddie Johnson, Sen. John Cornyn, Sen. Ted Cruz</b>



**Map Key**

- Stream
- Zone A (Approx)
- City Boundary
- HUC-8 Boundary
- Highway
- Lower West Fork Discovery County
- County Boundary

N

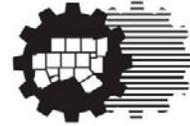
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Feet

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City of Duncanville  
LOWER WEST FORK  
TRINITY WATERSHED

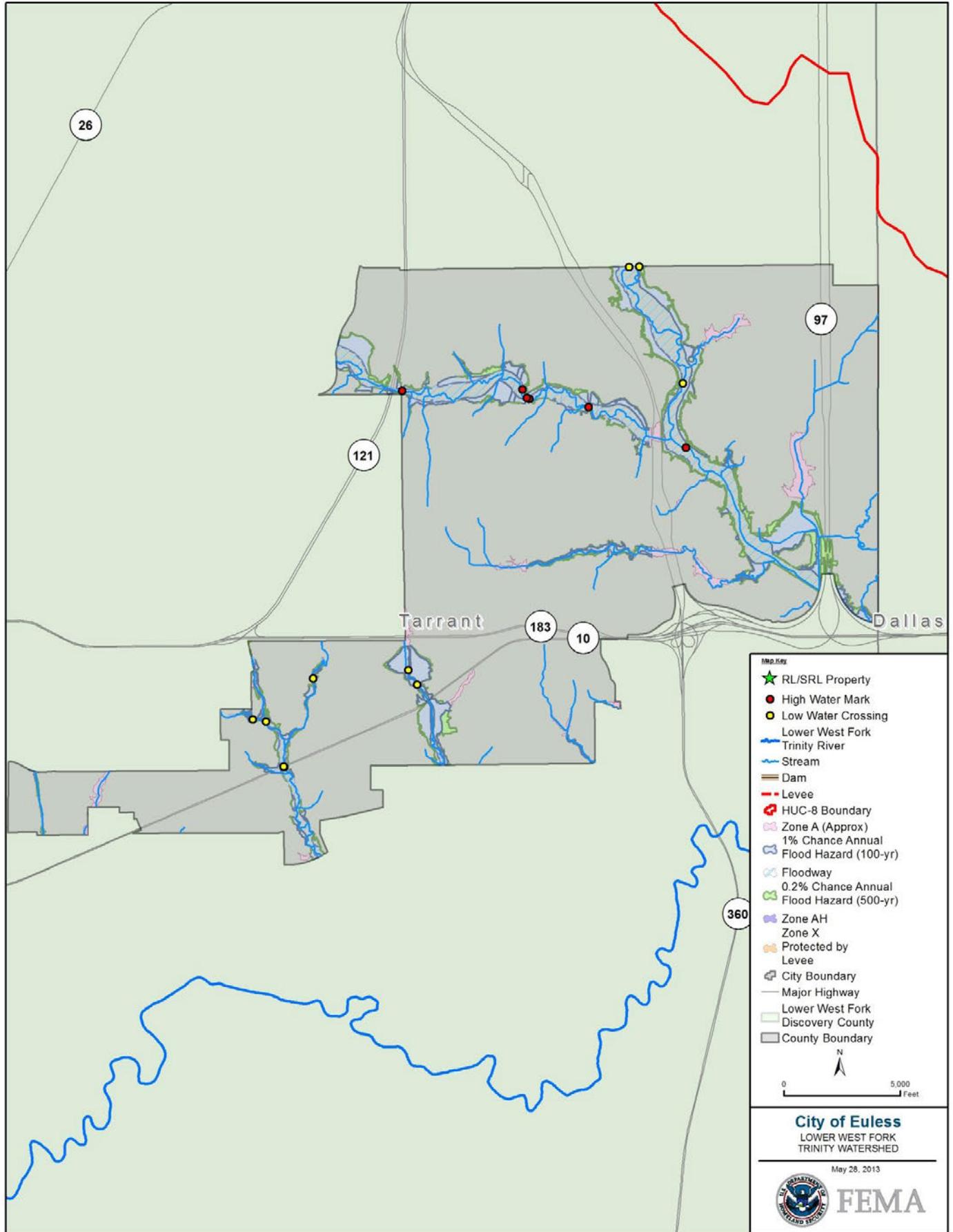
May 28, 2013



North Central Texas  
Council of Governments

**CITY OF EULESS**  
**Lower West Fork Trinity Watershed**  
**NCTCOG FY12 Discovery**

<b><u>CID:</u></b>	<b>480593</b>
<b><u>Population (2010 Census):</u></b>	51,277
<b><u>NFIP Participant:</u></b>	Yes
<b><u>CRS Rating:</u></b>	Unknown
<b><u>Mitigation Plan Name:</u></b>	Tarrant County Mid-Cities
<b><u>Plan Approval Date:</u></b>	9/18/2008
<b><u>Plan Expiration Date:</u></b>	9/18/2013
<b><u>High Water Marks:</u></b>	8
<b><u>Low Water Crossings:</u></b>	10
<b><u>DFIRM Status:</u></b>	Effective
<b><u>Effective Date:</u></b>	Tarrant – Sept. 25, 2009
<b><u>Total Stream Miles:</u></b>	33.88
<b><u>Total Zone A Miles:</u></b>	3.74
<b><u>Repetitive Loss Property Count:</u></b>	13
<b><u>Severe Repetitive Loss Property Count:</u></b>	2
<b><u>NFIP Policies:</u></b>	160
<b><u>NFIP Claims:</u></b>	107
<b><u>Total Losses:</u></b>	\$2,766,693
<b><u>Grants:</u></b>	Unknown
<b><u>Disaster Declarations:</u></b>	Unknown
<b><u>LiDAR:</u></b>	2010 TNIRIS LiDAR
<b><u>Levees/Dams:</u></b>	0 levees , 0 dams
<b><u>Additional Comments:</u></b>	
<b><u>Congressmen:</u></b>	Rep. Kenny Marchant, Sen. John Cornyn, Sen. Ted Cruz



**Map Key**

- ★ RL/SRL Property
- High Water Mark
- Low Water Crossing
- Lower West Fork Trinity River
- Stream
- Dam
- - - Levee
- HUC-8 Boundary
- Zone A (Approx)
- 1% Chance Annual Flood Hazard (100-yr)
- Floodway
- 0.2% Chance Annual Flood Hazard (500-yr)
- Zone AH
- Zone X
- Protected by Levee
- City Boundary
- Major Highway
- Lower West Fork Discovery County
- County Boundary

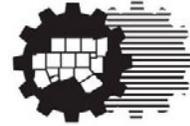
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**City of Euless**  
 LOWER WEST FORK TRINITY WATERSHED

May 26, 2013



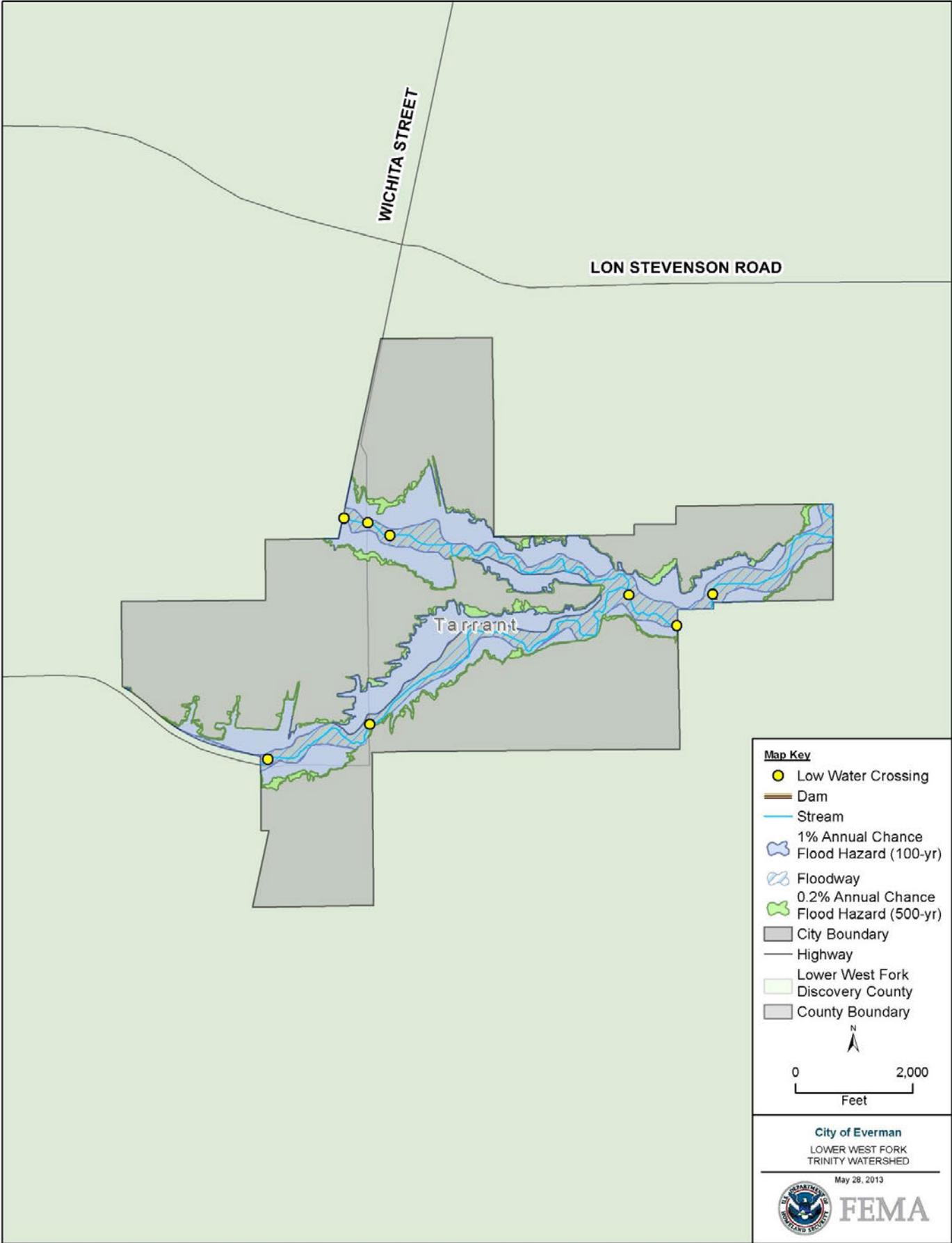
**FEMA**



North Central Texas  
Council of Governments

**CITY OF EVERMAN**  
Tarrant County  
**Lower West Fork Trinity Watershed**  
**North Texas Discovery FY12**

<b><u>CID:</u></b>	<b>480594</b>
<b><u>Population (2010 Census):</u></b>	6,108
<b><u>NFIP Participant:</u></b>	Yes
<b><u>CRS Rating:</u></b>	N/A
<b><u>Mitigation Plan Name:</u></b>	Fort Worth
<b><u>Plan Approval Date:</u></b>	1/6/2009
<b><u>Plan Expiration Date:</u></b>	1/6/2014
<b><u>High Water Marks:</u></b>	0
<b><u>Low Water Crossings:</u></b>	8
<b><u>DFIRM Status:</u></b>	Effective
<b><u>Effective Date:</u></b>	Tarrant – 9/25/2009
<b><u>Total Stream Miles:</u></b>	3.76
<b><u>Total Zone A Miles:</u></b>	0
<b><u>Repetitive Loss Property Count:</u></b>	2
<b><u>Severe Repetitive Loss Property Count:</u></b>	0
<b><u>NFIP Policies:</u></b>	95
<b><u>NFIP Claims:</u></b>	51
<b><u>Total Losses:</u></b>	\$605,248
<b><u>Grants:</u></b>	Unknown
<b><u>Disaster Declarations:</u></b>	Unknown
<b><u>LiDAR:</u></b>	2010 TNRIS LiDAR
<b><u>Levees/Dams:</u></b>	1 dam
<b><u>Additional Comments:</u></b>	
<b><u>Congressmen:</u></b>	Rep. Marc Veasey, Sen. John Cornyn, Sen. Ted Cruz



WICHITA STREET

LON STEVENSON ROAD

Tarrant

**Map Key**

- Low Water Crossing
- Dam
- Stream
- 1% Annual Chance Flood Hazard (100-yr)
- Floodway
- 0.2% Annual Chance Flood Hazard (500-yr)
- City Boundary
- Highway
- Lower West Fork Discovery County
- County Boundary

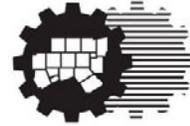
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**City of Everman**  
 LOWER WEST FORK  
 TRINITY WATERSHED  
 May 28, 2013

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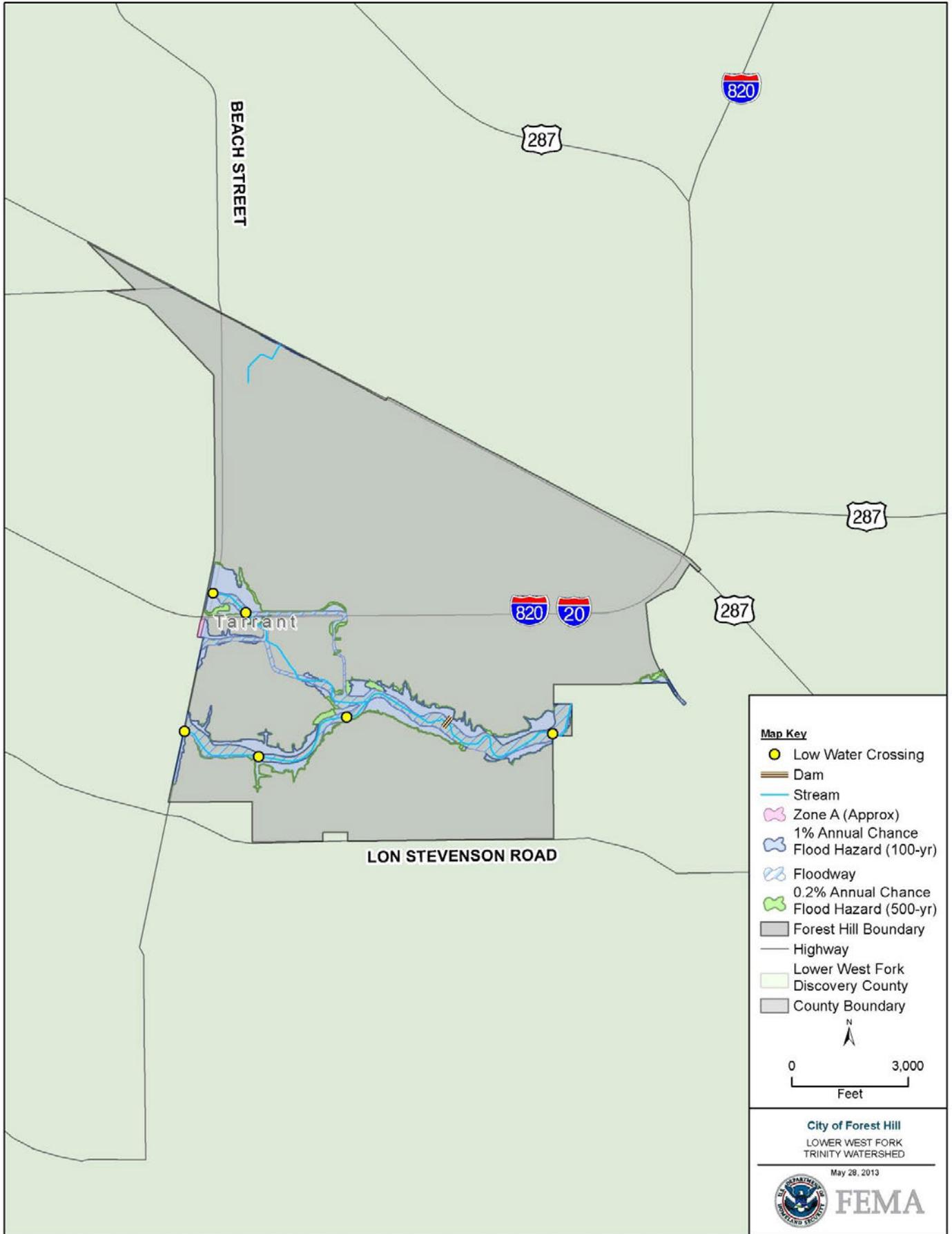
FEMA



North Central Texas  
Council of Governments

**CITY OF FOREST HILL**  
Tarrant County  
**Lower West Fork Trinity Watershed**  
**North Texas Discovery FY12**

<b>CID:</b>	<b>480595</b>
<b>Population (2010 Census):</b>	12,355
<b>NFIP Participant:</b>	Yes
<b>CRS Rating:</b>	N/A
<b>Mitigation Plan Name:</b>	None
<b>Plan Approval Date:</b>	
<b>Plan Expiration Date:</b>	
<b>High Water Marks:</b>	0
<b>Low Water Crossings:</b>	4
<b>DFIRM Status:</b>	Effective
<b>Effective Date:</b>	Tarrant – 9/25/2009
<b>Total Stream Miles:</b>	3.83
<b>Total Zone A Miles:</b>	0
<b>Repetitive Loss Property Count:</b>	0
<b>Severe Repetitive Loss Property Count:</b>	0
<b>NFIP Policies:</b>	70
<b>NFIP Claims:</b>	19
<b>Total Losses:</b>	\$19,087
<b>Grants:</b>	Unknown
<b>Disaster Declarations:</b>	Unknown
<b>LiDAR:</b>	2010 TNRIS LiDAR
<b>Levees/Dams:</b>	1 dam
<b>Additional Comments:</b>	
<b>Congressmen:</b>	Rep. Marc Veasey, Rep. Joe Barton, Sen. John Cornyn, Sen. Ted Cruz



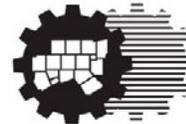
**Map Key**

- Low Water Crossing
- ▬ Dam
- Stream
- Zone A (Approx)
- 1% Annual Chance
- Flood Hazard (100-yr)
- Floodway
- 0.2% Annual Chance
- Flood Hazard (500-yr)
- Forest Hill Boundary
- Highway
- Lower West Fork
- Discovery County
- County Boundary

N

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Feet

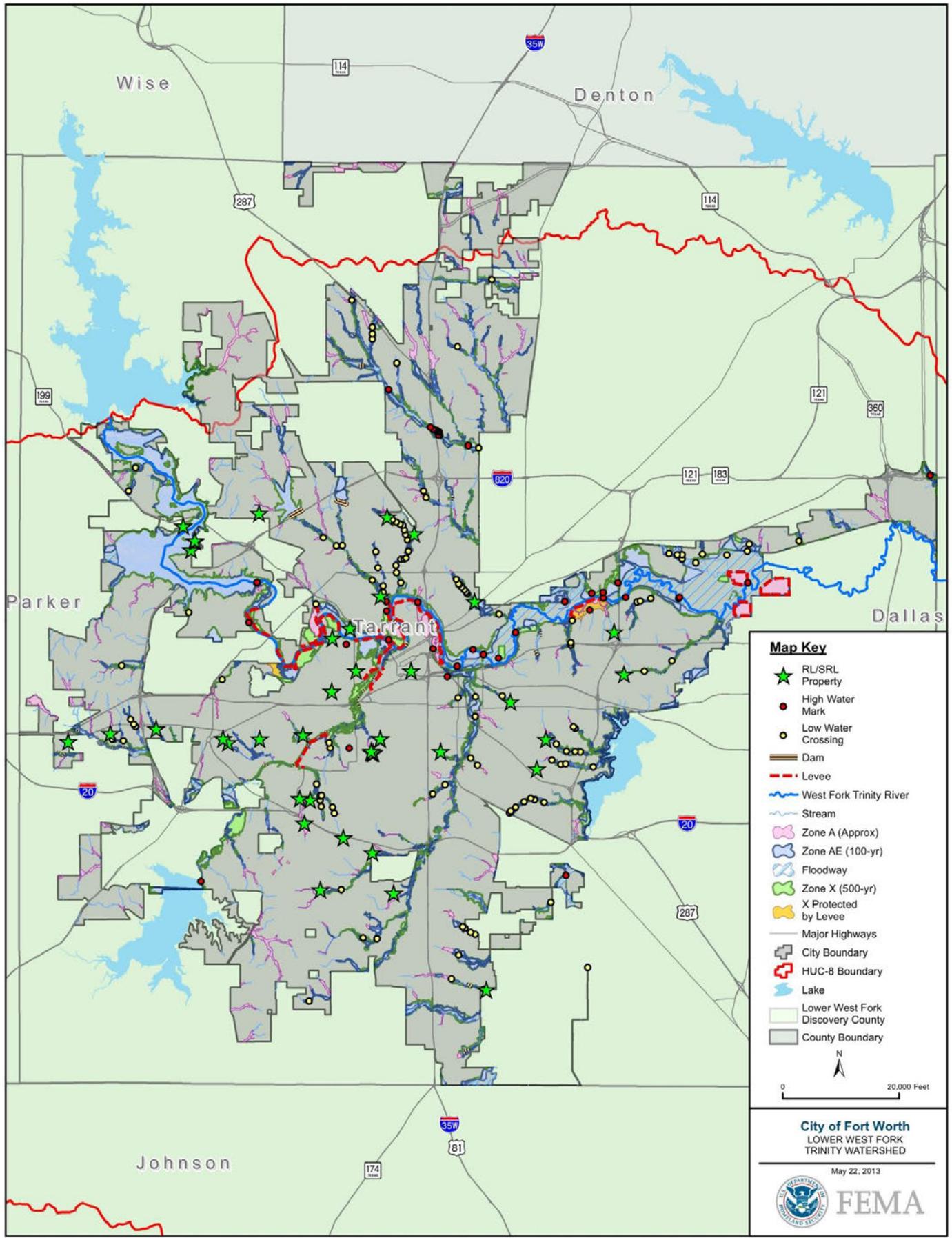
**City of Forest Hill**  
 LOWER WEST FORK  
 TRINITY WATERSHED  
 May 28, 2013



North Central Texas  
Council of Governments

**CITY OF FORT WORTH**  
Tarrant County  
**Lower West Fork Trinity Watershed**  
**North Texas Discovery FY12**

<b><u>CID:</u></b>	<b>480596</b>
<b><u>Population (2010 Census):</u></b>	741,206
<b><u>NFIP Participant:</u></b>	Yes
<b><u>CRS Rating:</u></b>	8
<b><u>Mitigation Plan Name:</u></b>	Fort Worth
<b><u>Plan Approval Date:</u></b>	1/6/2009
<b><u>Plan Expiration Date:</u></b>	1/6/2014
<b><u>High Water Marks:</u></b>	55
<b><u>Low Water Crossings:</u></b>	118
<b><u>DFIRM Status:</u></b>	Effective (Tarrant County)
<b><u>Effective Date:</u></b>	Sept. 25, 2009
<b><u>Total Stream Miles:</u></b>	536.92
<b><u>Total Zone A Miles:</u></b>	100.55
<b><u>Repetitive Loss Property Count:</u></b>	37
<b><u>Severe Repetitive Loss Property Count:</u></b>	6
<b><u>NFIP Policies:</u></b>	2,380
<b><u>NFIP Claims:</u></b>	
<b><u>Total Losses:</u></b>	\$2,057,975
<b><u>Grants:</u></b>	2011 TWDB FPP (Stream MSC-2)
<b><u>Disaster Declarations:</u></b>	27
<b><u>LiDAR:</u></b>	2009 TNRIS LiDAR
<b><u>Levees/Dams:</u></b>	44 dams, 14 levees (West/Clear Fork systems)
<b><u>Additional Comments:</u></b>	FEMA CTP
<b><u>Congressmen:</u></b>	Rep. Kay Granger, Rep. Michael Burgess, Rep. Joe Barton, Rep. Kenny Marchant



**Map Key**

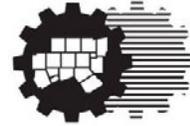
- ★ RL/SRL Property
- High Water Mark
- Low Water Crossing
- Dam
- - - Levee
- West Fork Trinity River
- Stream
- Zone A (Approx)
- Zone AE (100-yr)
- Floodway
- Zone X (500-yr)
- X Protected by Levee
- Major Highways
- City Boundary
- HUC-8 Boundary
- Lake
- Lower West Fork Discovery County
- County Boundary

0 20,000 Feet

**City of Fort Worth**  
 LOWER WEST FORK  
 TRINITY WATERSHED

May 22, 2013

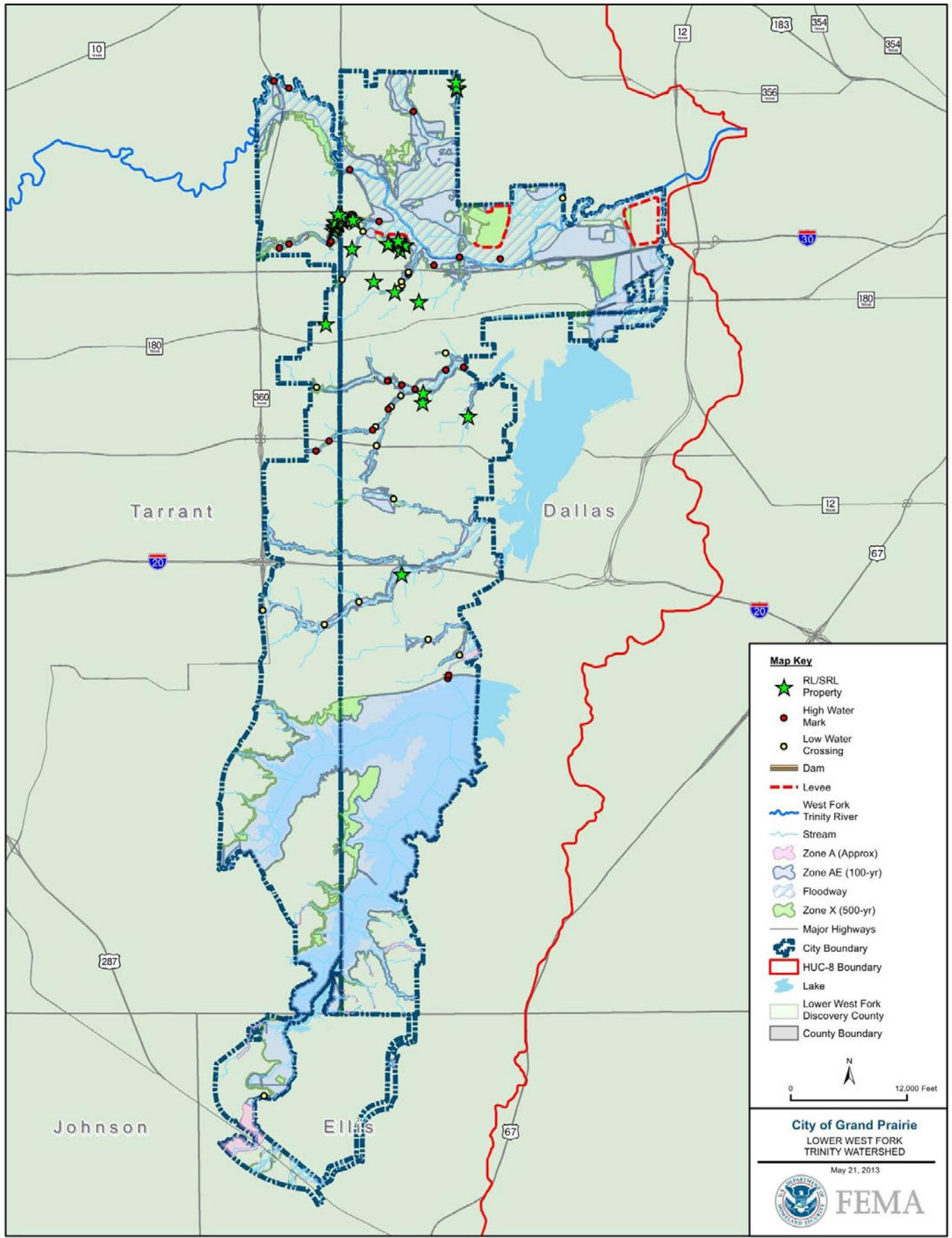




North Central Texas  
Council of Governments

**CITY OF GRAND PRAIRIE**  
**Dallas, Ellis and Tarrant Counties**  
**Lower West Fork Trinity Watershed**  
**North Texas Discovery FY12**

<b>CID:</b>	<b>485472</b>
<b>Population (2010 Census):</b>	175,396
<b>NFIP Participant:</b>	Yes
<b>CRS Rating:</b>	5
<b>Mitigation Plan Name:</b>	Grand Prairie
<b>Plan Approval Date:</b>	01/27/2012
<b>Plan Expiration Date:</b>	01/26/2013
<b>High Water Marks:</b>	40
<b>Low Water Crossings:</b>	28
<b>DFIRM Status:</b>	Effective
<b>Effective Date:</b>	Dallas – Aug. 23, 2001 Ellis – June 3, 2013 Tarrant – Sept. 25, 2009
<b>Total Stream Miles:</b>	165.51
<b>Total Zone A Miles:</b>	7.66
<b>Repetitive Loss Property Count:</b>	39
<b>Severe Repetitive Loss Property Count:</b>	4
<b>NFIP Policies:</b>	297
<b>NFIP Claims:</b>	322
<b>Total Losses:</b>	\$6,417,987
<b>Grants:</b>	2010 TWDB (Cottonwood Creek/Fish Creek watersheds – Arlington)
<b>Disaster Declarations:</b>	32 – Countywide Dallas/Tarrant
<b>LiDAR:</b>	2009 TNRIS LiDAR
<b>Levees/Dams:</b>	5 dams, 5 levees
<b>Additional Comments:</b>	
<b>Congressmen:</b>	Rep. Joe Barton, Rep. Kenny Marchant, Rep. Pete Session, Sen. John Cornyn, Sen. Ted Cruz



**Map Key**

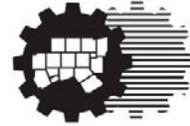
- ★ RL/SRL Property
- High Water Mark
- Low Water Crossing
- ▬ Dam
- - - Levee
- ~ West Fork Trinity River
- ~ Stream
- Zone A (Approx)
- Zone AE (100-yr)
- Floodway
- Zone X (500-yr)
- Major Highways
- City Boundary
- HUC-8 Boundary
- Lake
- Lower West Fork Discovery County
- County Boundary

0 12,000 Feet

**City of Grand Prairie**  
 LOWER WEST FORK TRINITY WATERSHED

May 21, 2013

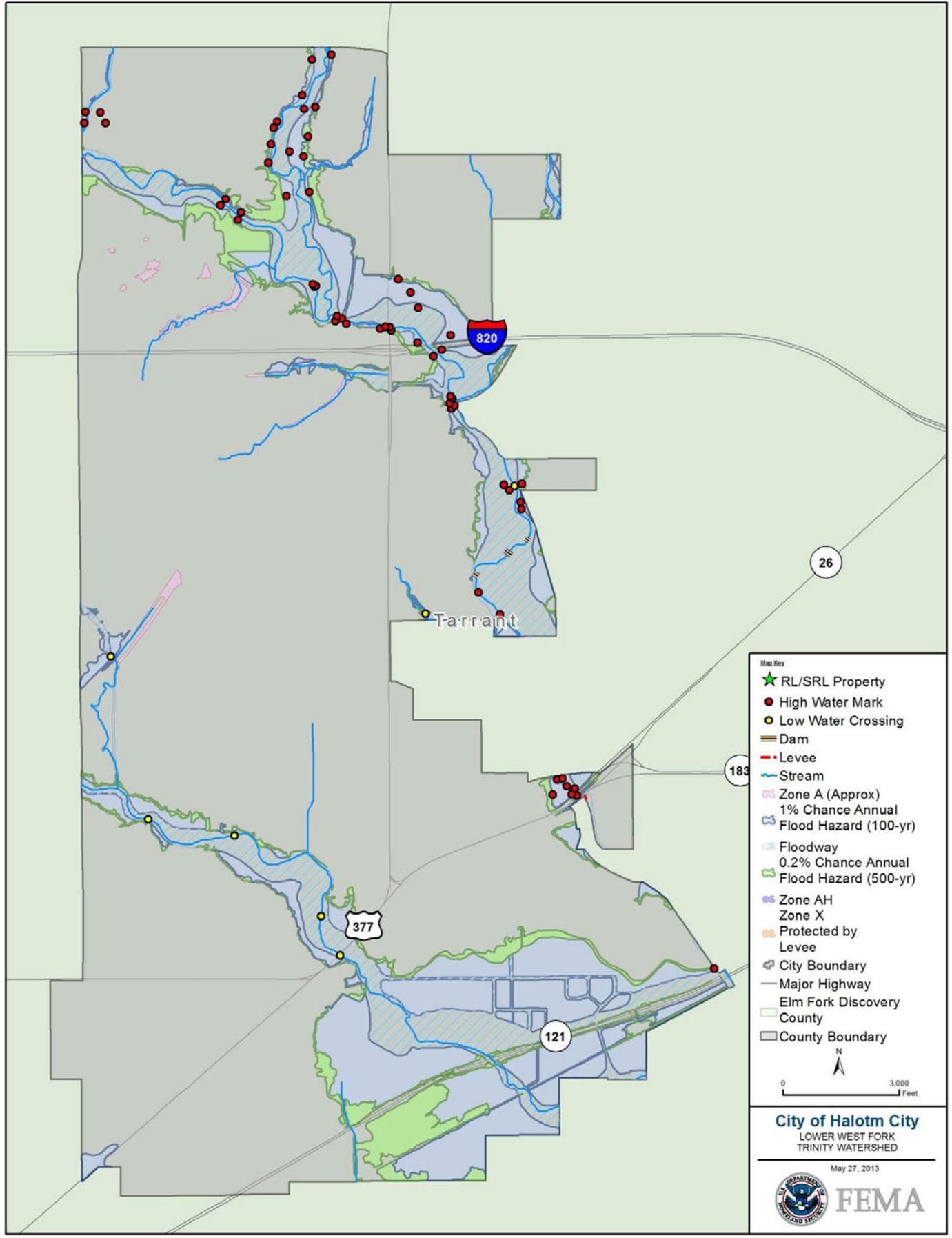




North Central Texas  
Council of Governments

**CITY OF HALTOM CITY**  
**Lower West Fork Trinity Watershed**  
**NCTCOG FY12 Discovery**

<b><u>CID:</u></b>	<b>480599</b>
<b><u>Population (2010 Census):</u></b>	42,409
<b><u>NFIP Participant:</u></b>	Yes
<b><u>CRS Rating:</u></b>	7
<b><u>Mitigation Plan Name:</u></b>	Tarrant County Mid-Cities
<b><u>Plan Approval Date:</u></b>	9/18/2008
<b><u>Plan Expiration Date:</u></b>	9/18/2013
<b><u>High Water Marks:</u></b>	68
<b><u>Low Water Crossings:</u></b>	7
<b><u>DFIRM Status:</u></b>	Effective
<b><u>Effective Date:</u></b>	Tarrant – Sept. 25, 2009
<b><u>Total Stream Miles:</u></b>	17.88
<b><u>Total Zone A Miles:</u></b>	0.92
<b><u>Repetitive Loss Property Count:</u></b>	12
<b><u>Severe Repetitive Loss Property Count:</u></b>	2
<b><u>NFIP Policies:</u></b>	329
<b><u>NFIP Claims:</u></b>	121
<b><u>Total Losses:</u></b>	\$3,310,971
<b><u>Grants:</u></b>	Unknown
<b><u>Disaster Declarations:</u></b>	Unknown
<b><u>LiDAR:</u></b>	2010 TNRIS LiDAR
<b><u>Levees/Dams:</u></b>	1 levee, 3 dams
<b><u>Additional Comments:</u></b>	
<b><u>Congressmen:</u></b>	Rep. Kay Granger, Sen. John Cornyn, Sen. Ted Cruz



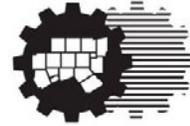
**Map Key**

- ★ RL/SRL Property
- High Water Mark
- Low Water Crossing
- Dam
- Levee
- Stream
- Zone A (Approx)
- 1% Chance Annual Flood Hazard (100-yr)
- 0.2% Chance Annual Flood Hazard (500-yr)
- Zone AH
- Zone X
- Protected by Levee
- City Boundary
- Major Highway
- Elm Fork Discovery County
- County Boundary

0 3,000 Feet

**City of Halotm City**  
 LOWER WEST FORK  
 TRINITY WATERSHED

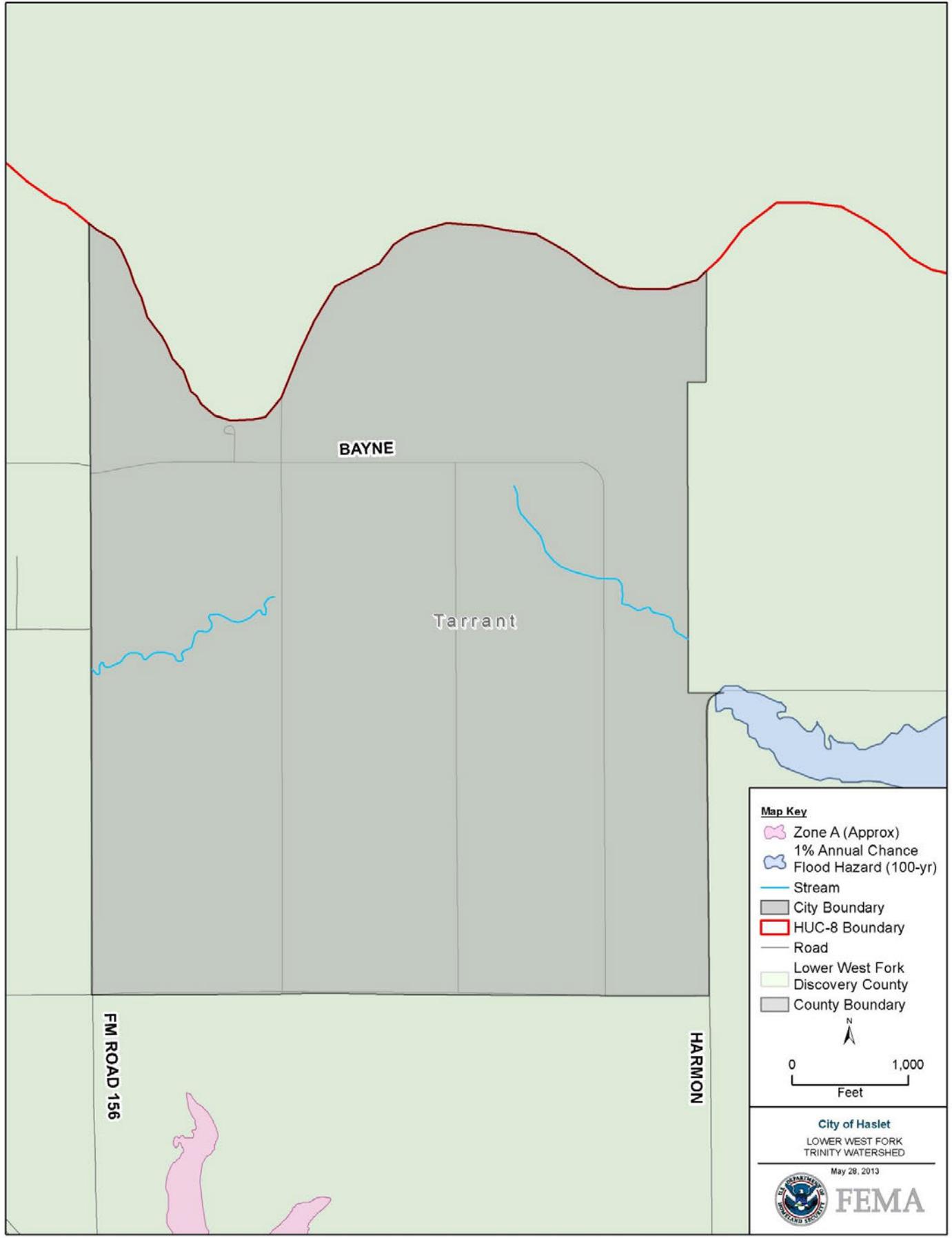




North Central Texas  
Council of Governments

**CITY OF HASLET**  
Tarrant County  
**Lower West Fork Trinity Watershed**  
**North Texas Discovery FY12**

<b><u>CID:</u></b>	<b>480600</b>
<b><u>Population (2010 Census):</u></b>	1,517
<b><u>NFIP Participant:</u></b>	Yes
<b><u>CRS Rating:</u></b>	N/A
<b><u>Mitigation Plan Name:</u></b>	None
<b><u>Plan Approval Date:</u></b>	
<b><u>Plan Expiration Date:</u></b>	
<b><u>High Water Marks:</u></b>	0
<b><u>Low Water Crossings:</u></b>	0
<b><u>DFIRM Status:</u></b>	Effective
<b><u>Effective Date:</u></b>	Tarrant – 9/25/2009
<b><u>Total Stream Miles:</u></b>	0.88
<b><u>Total Zone A Miles:</u></b>	0
<b><u>Repetitive Loss Property Count:</u></b>	0
<b><u>Severe Repetitive Loss Property Count:</u></b>	0
<b><u>NFIP Policies:</u></b>	11
<b><u>NFIP Claims:</u></b>	Unknown
<b><u>Total Losses:</u></b>	Unknown
<b><u>Grants:</u></b>	Unknown
<b><u>Disaster Declarations:</u></b>	Unknown
<b><u>LiDAR:</u></b>	2010 TNRIS LiDAR
<b><u>Levees/Dams:</u></b>	0 in DFIRM structures
<b><u>Additional Comments:</u></b>	
<b><u>Congressmen:</u></b>	Rep. Kay Granger, Sen. John Cornyn, Sen. Ted Cruz



BAYNE

Tarrant

FM ROAD 156

HARMON

**Map Key**

-  Zone A (Approx) 1% Annual Chance
-  Flood Hazard (100-yr)
-  Stream
-  City Boundary
-  HUC-8 Boundary
-  Road
-  Lower West Fork Discovery County
-  County Boundary

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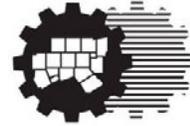
Feet

**City of Haslet**  
LOWER WEST FORK  
TRINITY WATERSHED

May 28, 2013



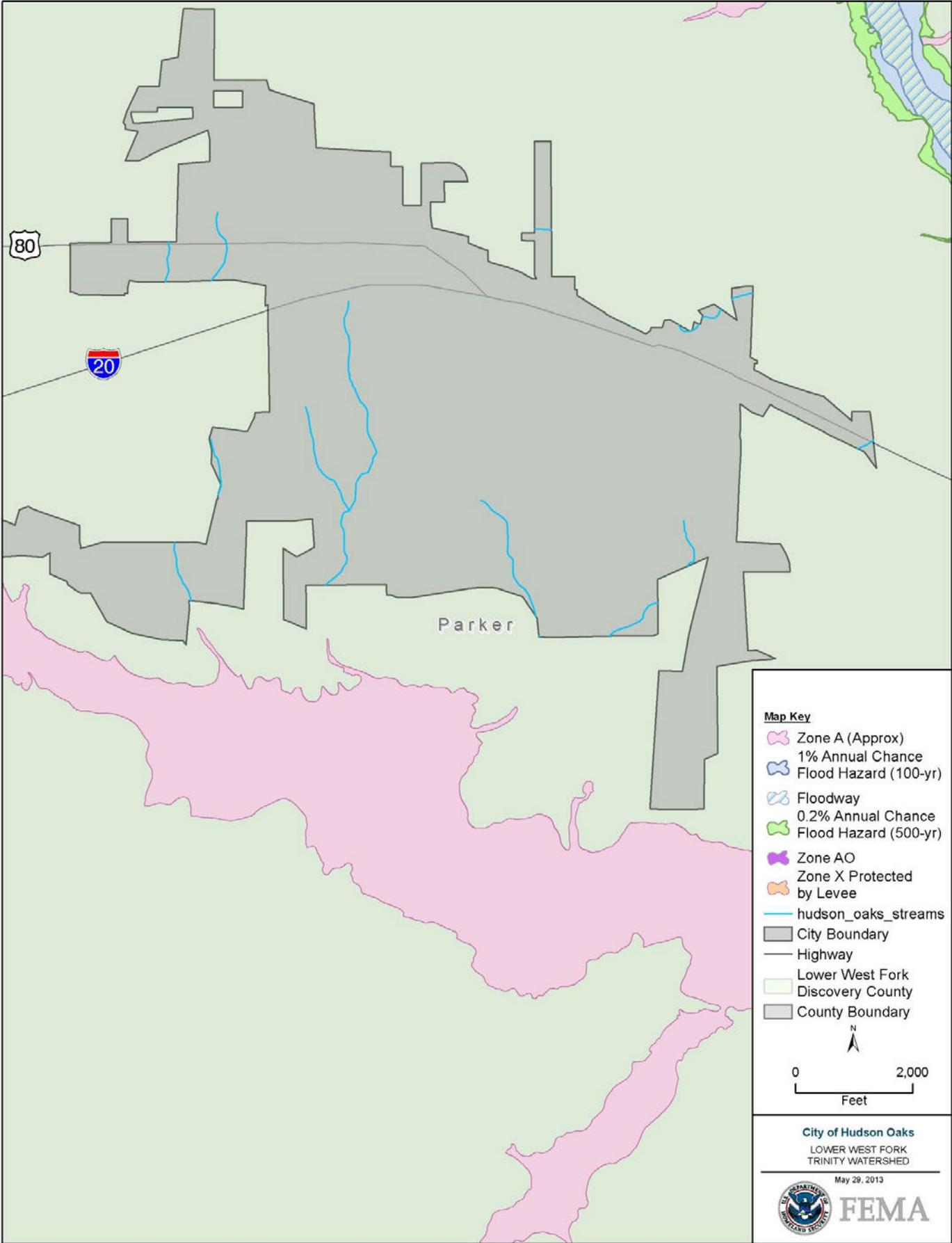

FEMA

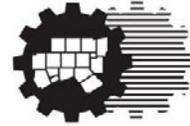


North Central Texas  
Council of Governments

**CITY OF HUDSON OAKS**  
Parker County  
**Lower West Fork Trinity Watershed**  
**North Texas Discovery FY12**

<b>CID:</b>	<b>480147</b>
<b>Population (2010 Census):</b>	1,662
<b>NFIP Participant:</b>	Yes
<b>CRS Rating:</b>	N/A
<b>Mitigation Plan Name:</b>	None
<b>Plan Approval Date:</b>	
<b>Plan Expiration Date:</b>	
<b>High Water Marks:</b>	0
<b>Low Water Crossings:</b>	0
<b>DFIRM Status:</b>	Effective
<b>Effective Date:</b>	Parker – 9/26/2008
<b>Total Stream Miles:</b>	3.33
<b>Total Zone A Miles:</b>	0
<b>Repetitive Loss Property Count:</b>	0
<b>Severe Repetitive Loss Property Count:</b>	0
<b>NFIP Policies:</b>	0
<b>NFIP Claims:</b>	Unknown
<b>Total Losses:</b>	Unknown
<b>Grants:</b>	Unknown
<b>Disaster Declarations:</b>	Unknown
<b>LiDAR:</b>	USGS
<b>Levees/Dams:</b>	0 in DFIRM structures
<b>Additional Comments:</b>	
<b>Congressmen:</b>	Rep. Kay Granger, Sen. John Cornyn, Sen. Ted Cruz

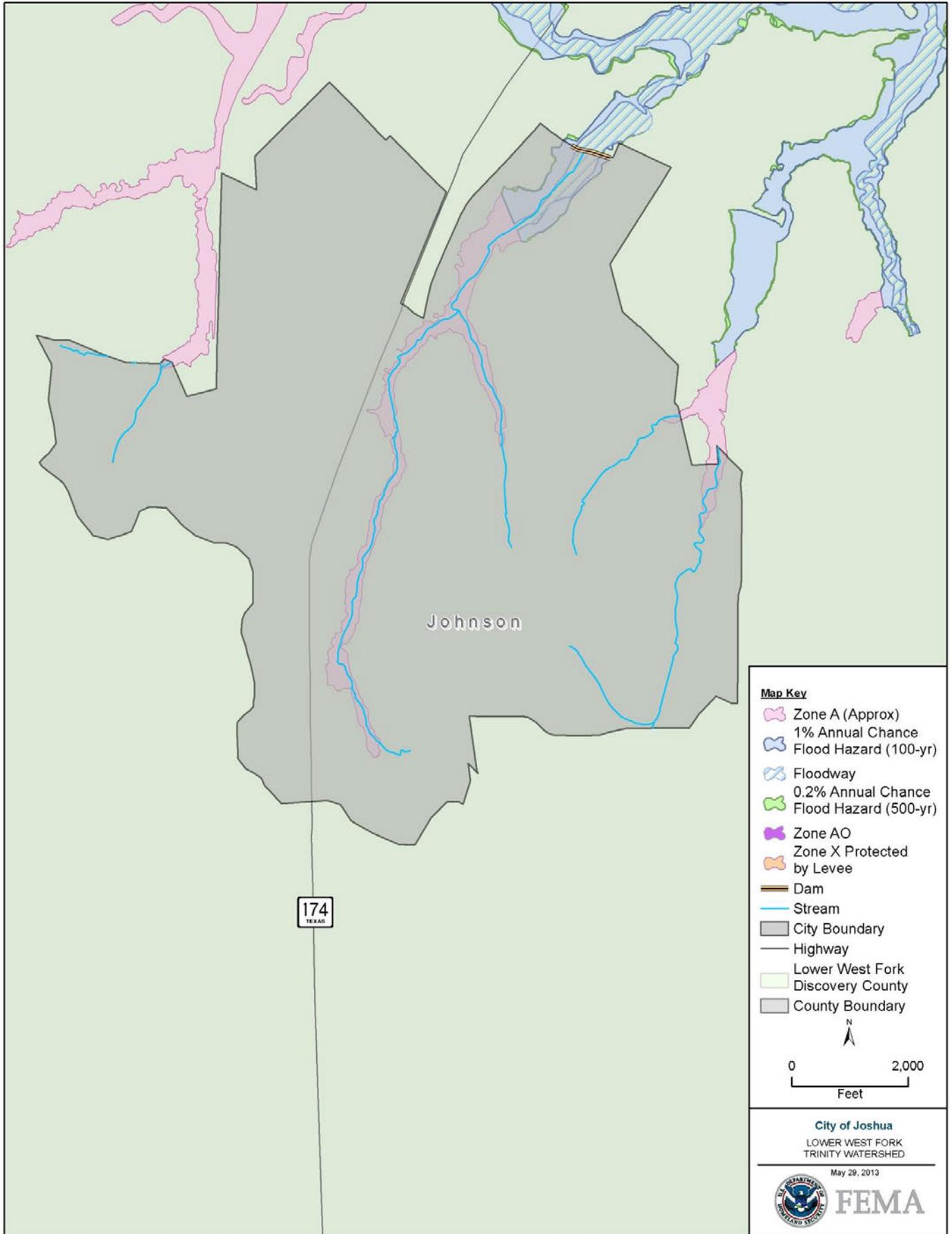




North Central Texas  
Council of Governments

**CITY OF JOSHUA**  
Johnson County  
**Lower West Fork Trinity Watershed**  
**North Texas Discovery FY12**

<b>CID:</b>	<b>480882</b>
<b>Population (2010 Census):</b>	5,910
<b>NFIP Participant:</b>	Yes
<b>CRS Rating:</b>	N/A
<b>Mitigation Plan Name:</b>	None
<b>Plan Approval Date:</b>	
<b>Plan Expiration Date:</b>	
<b>High Water Marks:</b>	0
<b>Low Water Crossings:</b>	0
<b>DFIRM Status:</b>	Effective
<b>Effective Date:</b>	Parker – 9/26/2008
<b>Total Stream Miles:</b>	6.05
<b>Total Zone A Miles:</b>	2.82
<b>Repetitive Loss Property Count:</b>	0
<b>Severe Repetitive Loss Property Count:</b>	0
<b>NFIP Policies:</b>	33
<b>NFIP Claims:</b>	2
<b>Total Losses:</b>	\$1,891
<b>Grants:</b>	Unknown
<b>Disaster Declarations:</b>	Unknown
<b>LiDAR:</b>	USGS/NCTCOG 2001
<b>Levees/Dams:</b>	1 dam
<b>Additional Comments:</b>	
<b>Congressmen:</b>	Rep. Roger Williams, Sen. John Cornyn, Sen. Ted Cruz



**Map Key**

- Zone A (Approx)
- 1% Annual Chance Flood Hazard (100-yr)
- Floodway
- 0.2% Annual Chance Flood Hazard (500-yr)
- Zone AO
- Zone X Protected by Levee
- Dam
- Stream
- City Boundary
- Highway
- Lower West Fork Discovery County
- County Boundary

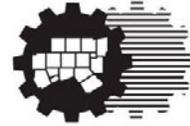
N

0 2,000

Feet

**City of Joshua**  
LOWER WEST FORK  
TRINITY WATERSHED

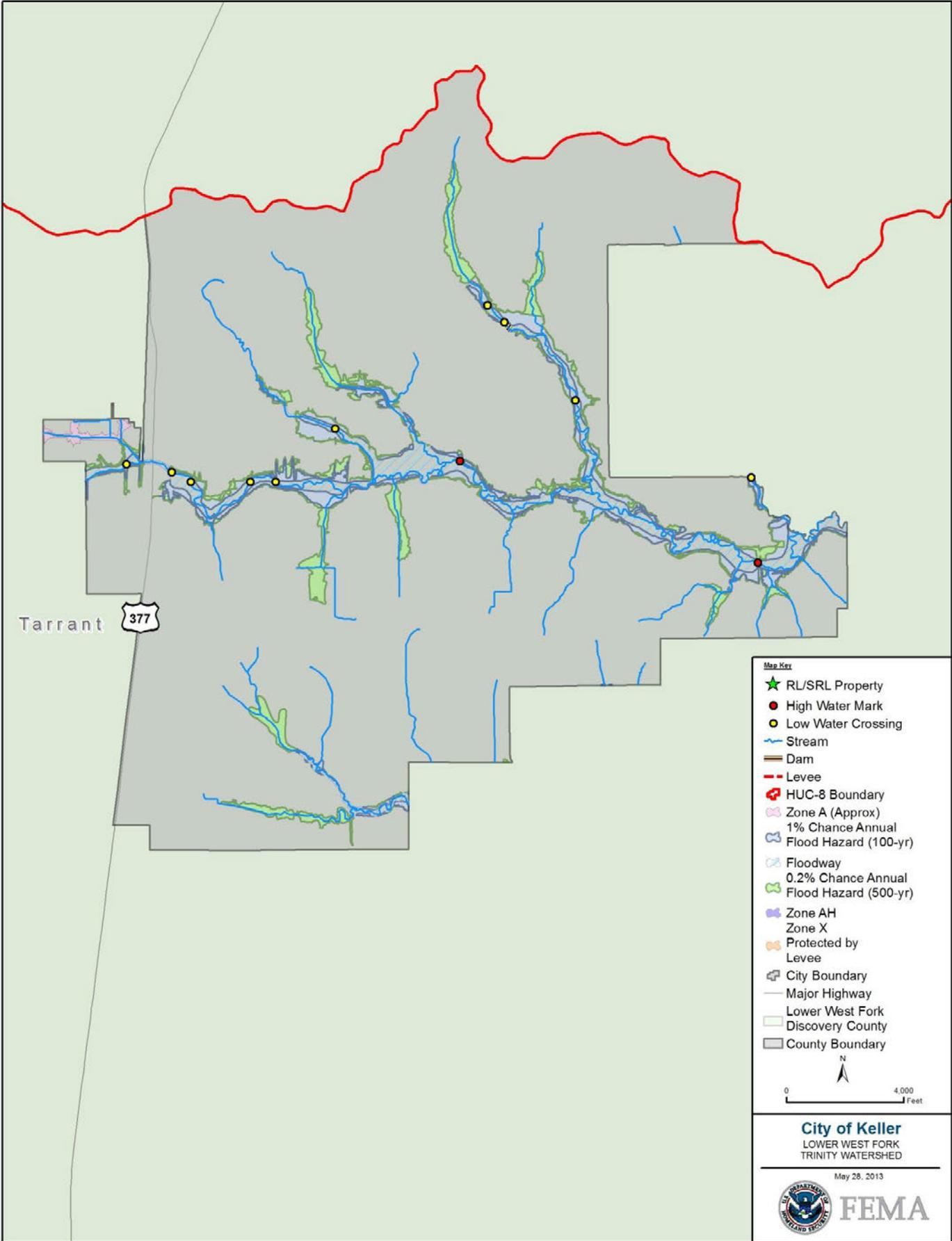
May 29, 2013



North Central Texas  
Council of Governments

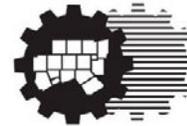
**CITY OF KELLER**  
**Lower West Fork Trinity Watershed**  
**NCTCOG FY12 Discovery**

<b><u>CID:</u></b>	<b>480602</b>
<b><u>Population (2010 Census):</u></b>	39,627
<b><u>NFIP Participant:</u></b>	Yes
<b><u>CRS Rating:</u></b>	Unknown
<b><u>Mitigation Plan Name:</u></b>	Fort Worth
<b><u>Plan Approval Date:</u></b>	1/6/2009
<b><u>Plan Expiration Date:</u></b>	1/6/2014
<b><u>High Water Marks:</u></b>	2
<b><u>Low Water Crossings:</u></b>	11
<b><u>DFIRM Status:</u></b>	Effective
<b><u>Effective Date:</u></b>	Tarrant – Sept. 25, 2009
<b><u>Total Stream Miles:</u></b>	31.59
<b><u>Total Zone A Miles:</u></b>	0.74
<b><u>Repetitive Loss Property Count:</u></b>	5
<b><u>Severe Repetitive Loss Property Count:</u></b>	2
<b><u>NFIP Policies:</u></b>	181
<b><u>NFIP Claims:</u></b>	49
<b><u>Total Losses:</u></b>	\$1,085,245
<b><u>Grants:</u></b>	Unknown
<b><u>Disaster Declarations:</u></b>	Unknown
<b><u>LiDAR:</u></b>	2010 TNRI LiDAR
<b><u>Levees/Dams:</u></b>	0 levees , 2 dams
<b><u>Additional Comments:</u></b>	
<b><u>Congressmen:</u></b>	Rep. Michael Burgess, Sen. John Cornyn, Sen. Ted Cruz



Tarrant

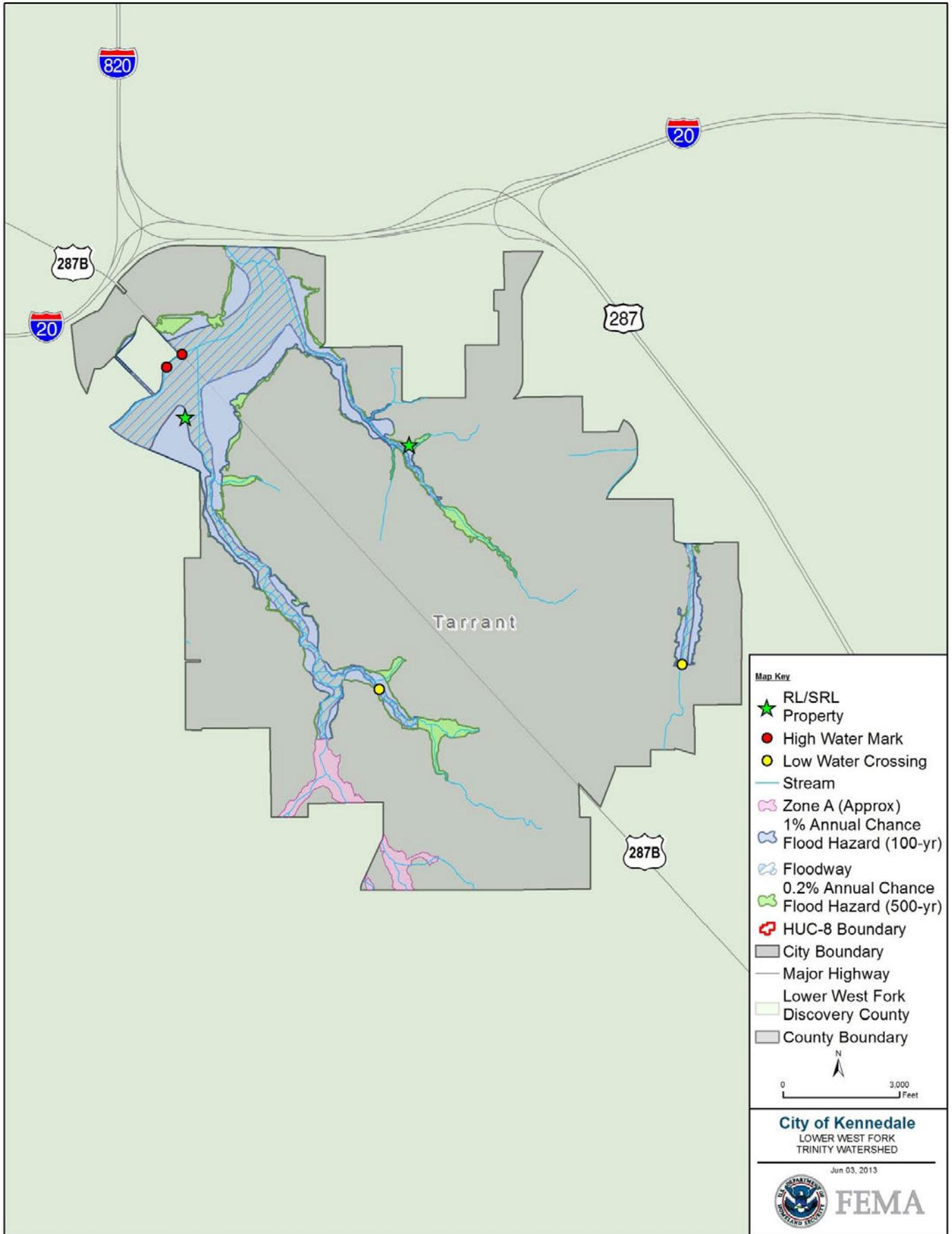
377



North Central Texas  
Council of Governments

**CITY OF KENNEDALE**  
**Lower West Fork Trinity Watershed**  
**NCTCOG FY12 Discovery**

<b><u>CID:</u></b>	<b>480603</b>
<b><u>Population (2010 Census):</u></b>	6,763
<b><u>NFIP Participant:</u></b>	Yes
<b><u>CRS Rating:</u></b>	N/A
<b><u>Mitigation Plan Name:</u></b>	Fort Worth
<b><u>Plan Approval Date:</u></b>	1/6/2009
<b><u>Plan Expiration Date:</u></b>	1/6/2014
<b><u>High Water Marks:</u></b>	2
<b><u>Low Water Crossings:</u></b>	2
<b><u>DFIRM Status:</u></b>	Effective
<b><u>Effective Date:</u></b>	Tarrant – Sept. 25, 2009
<b><u>Total Stream Miles:</u></b>	12.4
<b><u>Total Zone A Miles:</u></b>	1.13
<b><u>Repetitive Loss Property Count:</u></b>	1
<b><u>Severe Repetitive Loss Property Count:</u></b>	1
<b><u>NFIP Policies:</u></b>	38
<b><u>NFIP Claims:</u></b>	18
<b><u>Total Losses:</u></b>	\$42.057
<b><u>Grants:</u></b>	Unknown
<b><u>Disaster Declarations:</u></b>	Unknown
<b><u>LiDAR:</u></b>	2010 TNRIS
<b><u>Levees/Dams:</u></b>	0 in DFIRM structures
<b><u>Additional Comments:</u></b>	
<b><u>Congressmen:</u></b>	Rep. Joe Barton, Sen. John Cornyn, Sen. Ted Cruz



**Map Key**

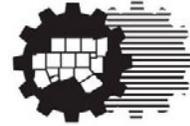
- ★ RL/SRL Property
- High Water Mark
- Low Water Crossing
- Stream
- Zone A (Approx) 1% Annual Chance Flood Hazard (100-yr)
- Floodway 0.2% Annual Chance Flood Hazard (500-yr)
- HUC-8 Boundary
- City Boundary
- Major Highway
- Lower West Fork Discovery County
- County Boundary



**City of Kennedale**  
 LOWER WEST FORK  
 TRINITY WATERSHED

Jun 03, 2013

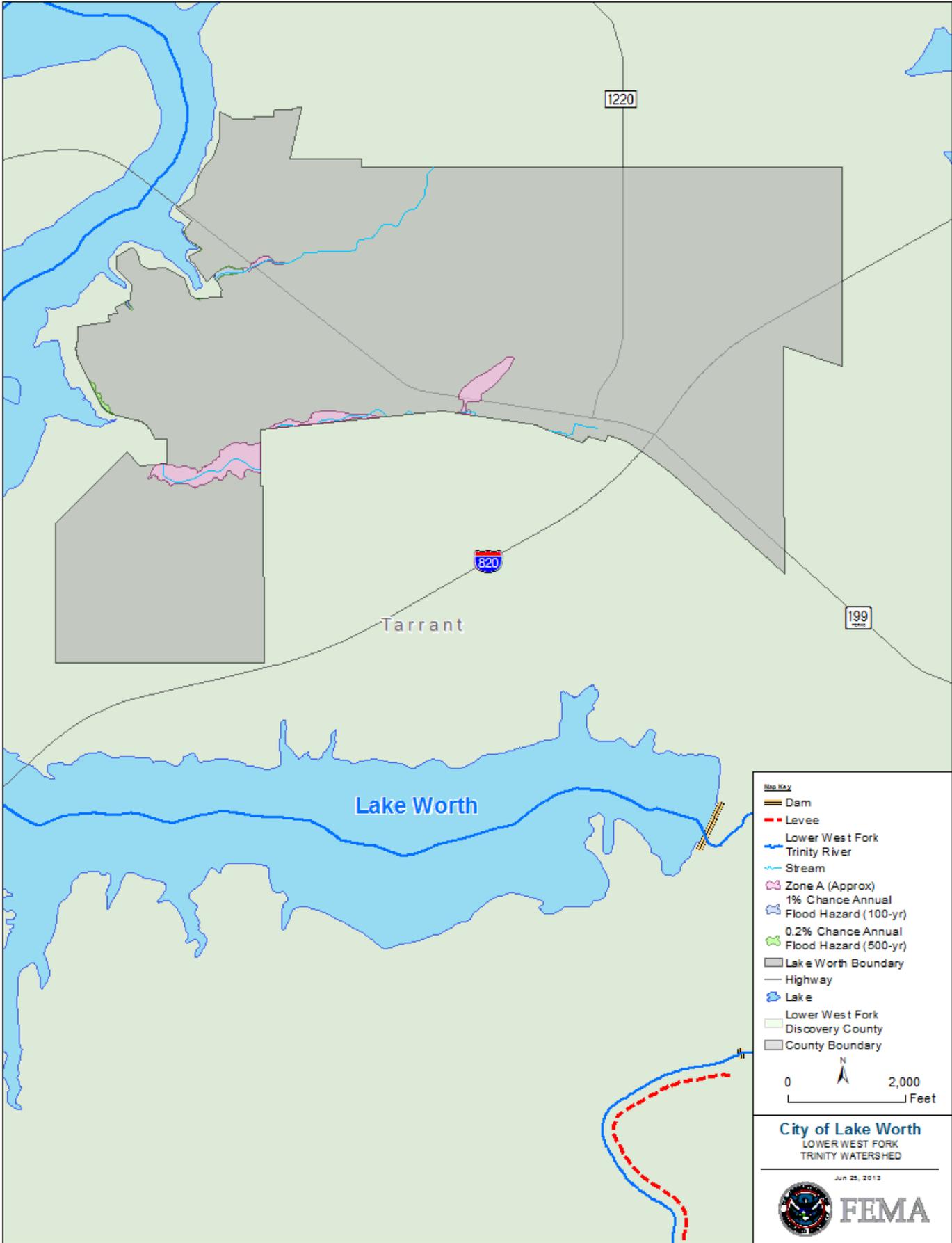




North Central Texas  
Council of Governments

**CITY OF LAKE WORTH**  
Tarrant County  
**Lower West Fork Trinity Watershed**  
**NCTCOG FY12 Discovery**

<b><u>CID:</u></b>	<b>480605</b>
<b><u>Population (2010 Census):</u></b>	4,584
<b><u>NFIP Participant:</u></b>	Yes
<b><u>CRS Rating:</u></b>	
<b><u>Mitigation Plan Name:</u></b>	Fort Worth
<b><u>Plan Approval Date:</u></b>	1/6/2009
<b><u>Plan Expiration Date:</u></b>	1/6/2014
<b><u>High Water Marks:</u></b>	0
<b><u>Low Water Crossings:</u></b>	0
<b><u>DFIRM Status:</u></b>	Effective
<b><u>Effective Date:</u></b>	Tarrant – 9/25/2009
<b><u>Total Stream Miles:</u></b>	1.87
<b><u>Total Zone A Miles:</u></b>	0.77
<b><u>Repetitive Loss Property Count:</u></b>	0
<b><u>Severe Repetitive Loss Property Count:</u></b>	0
<b><u>NFIP Policies:</u></b>	12
<b><u>NFIP Claims:</u></b>	1
<b><u>Total Losses:</u></b>	Unknown
<b><u>Grants:</u></b>	Unknown
<b><u>Disaster Declarations:</u></b>	Unknown
<b><u>LiDAR:</u></b>	2010 TNRIS
<b><u>Levees/Dams:</u></b>	
<b><u>Additional Comments:</u></b>	West Fork Trinity Levee system southwest of city
<b><u>Congressmen:</u></b>	Rep. Granger, Sen. John Cornyn, Sen. Ted Cruz



**Map Key**

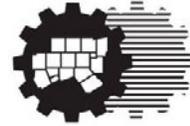
- Dam
- Levee
- Lower West Fork Trinity River
- Stream
- Zone A (Approx) 1% Chance Annual Flood Hazard (100-yr)
- 0.2% Chance Annual Flood Hazard (500-yr)
- Lake Worth Boundary
- Highway
- Lake
- Lower West Fork Discovery County
- County Boundary

0 2,000  
Feet

**City of Lake Worth**  
 LOWER WEST FORK  
 TRINITY WATERSHED

Jun 28, 2013



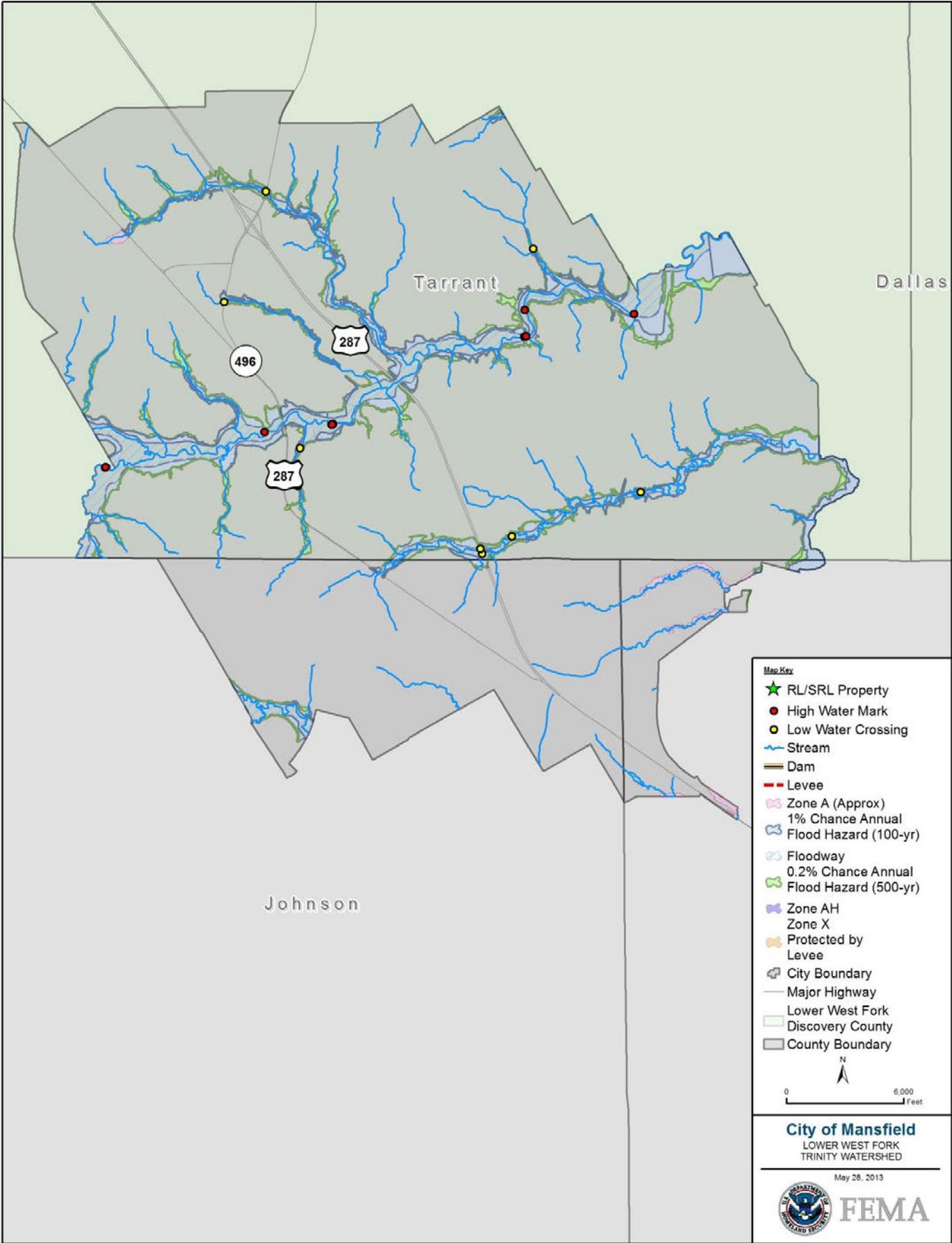


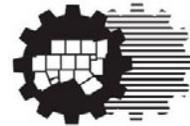
North Central Texas  
Council of Governments

**CITY OF MANSFIELD**  
**Lower West Fork Trinity Watershed**  
**NCTCOG FY12 Discovery**

<b><u>CID:</u></b>	<b>480606</b>
<b><u>Population (2010 Census):</u></b>	56,368
<b><u>NFIP Participant:</u></b>	Yes
<b><u>CRS Rating:</u></b>	Unknown
<b><u>Mitigation Plan Name:</u></b>	Mansfield
<b><u>Plan Approval Date:</u></b>	6/7/2010
<b><u>Plan Expiration Date:</u></b>	6/7/2015
<b><u>High Water Marks:</u></b>	10
<b><u>Low Water Crossings:</u></b>	12
<b><u>DFIRM Status:</u></b>	Effective
<b><u>Effective Date:</u></b>	Ellis – June 2, 2013 Johnson – Dec. 4, 2012 Tarrant – Sept. 25, 2009
<b><u>Total Stream Miles:</u></b>	75.97
<b><u>Total Zone A Miles:</u></b>	3.04
<b><u>Repetitive Loss Property Count:</u></b>	9
<b><u>Severe Repetitive Loss Property Count:</u></b>	9
<b><u>NFIP Policies:</u></b>	240
<b><u>NFIP Claims:</u></b>	
<b><u>Total Losses:</u></b>	\$3,677,959
<b><u>Grants:</u></b>	Unknown
<b><u>Disaster Declarations:</u></b>	Unknown
<b><u>LiDAR:</u></b>	2010 TNRIS LiDAR
<b><u>Levees/Dams:</u></b>	0 levees , 1 dam
<b><u>Additional Comments:</u></b>	

**Congressmen:** Rep. Joe Barton, Rep. Bill Flores,  
Kenny Marchant, Sen. John  
Cornyn, Sen. Ted Cruz

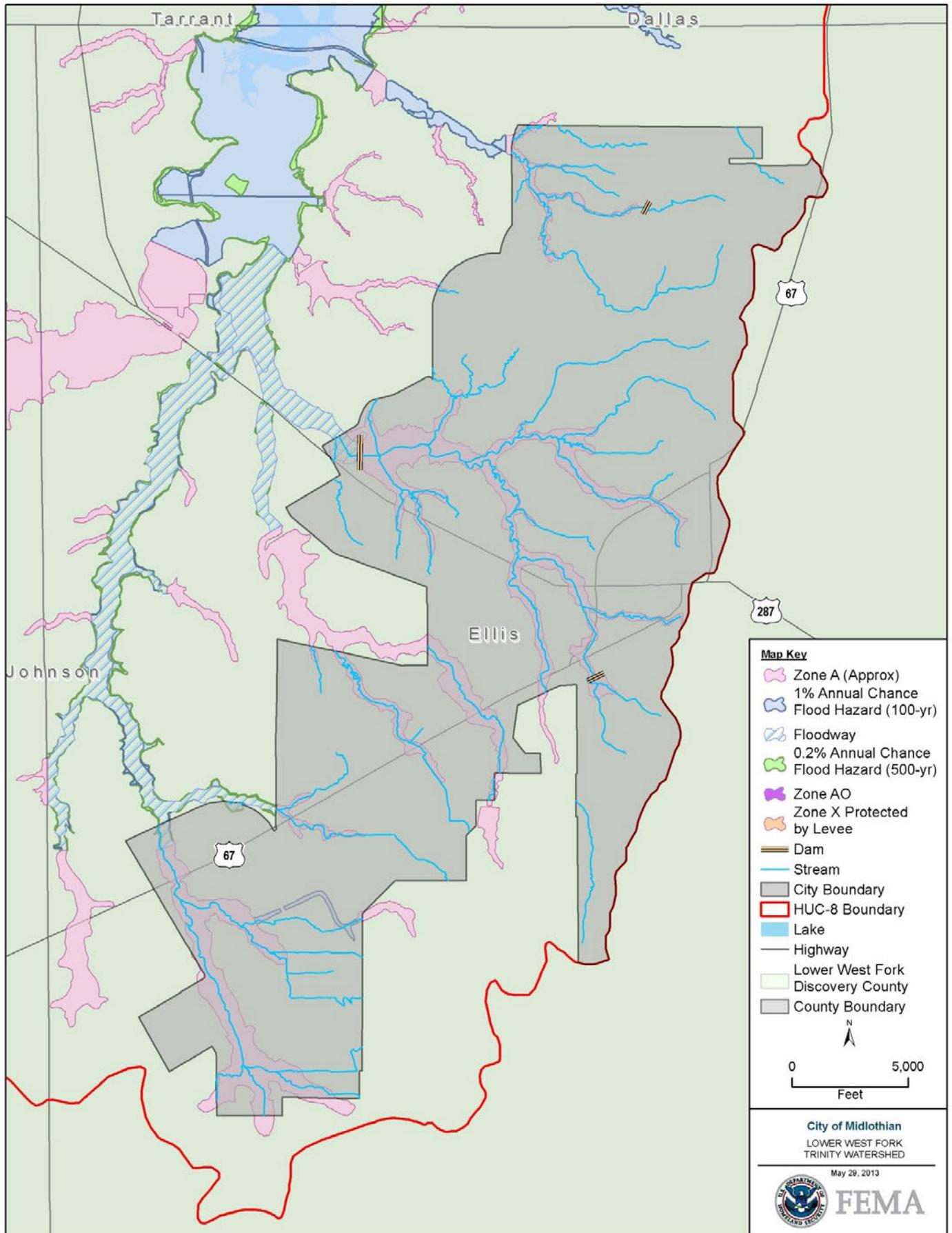


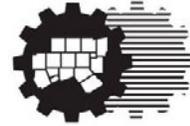


North Central Texas  
Council of Governments

**CITY OF MIDLOTHIAN**  
 Ellis County  
 Lower West Fork Trinity Watershed  
 North Texas Discovery FY12

<b><u>CID:</u></b>	<b>480801</b>
<b><u>Population (2010 Census):</u></b>	18,037
<b><u>NFIP Participant:</u></b>	Yes
<b><u>CRS Rating:</u></b>	N/A
<b><u>Mitigation Plan Name:</u></b>	None
<b><u>Plan Approval Date:</u></b>	
<b><u>Plan Expiration Date:</u></b>	
<b><u>High Water Marks:</u></b>	0
<b><u>Low Water Crossings:</u></b>	0
<b><u>DFIRM Status:</u></b>	Preliminary
<b><u>Effective Date:</u></b>	Ellis – 6/2/2013
<b><u>Total Stream Miles:</u></b>	51.51
<b><u>Total Zone A Miles:</u></b>	27.37
<b><u>Repetitive Loss Property Count:</u></b>	0
<b><u>Severe Repetitive Loss Property Count:</u></b>	0
<b><u>NFIP Policies:</u></b>	23
<b><u>NFIP Claims:</u></b>	1
<b><u>Total Losses:</u></b>	Unknown
<b><u>Grants:</u></b>	Unknown
<b><u>Disaster Declarations:</u></b>	Unknown
<b><u>LiDAR:</u></b>	USGS/Grand Prairie 2009
<b><u>Levees/Dams:</u></b>	3 dams
<b><u>Additional Comments:</u></b>	
<b><u>Congressmen:</u></b>	Rep. Joe Barton, Sen. John Cornyn, Sen. Ted Cruz





North Central Texas  
Council of Governments

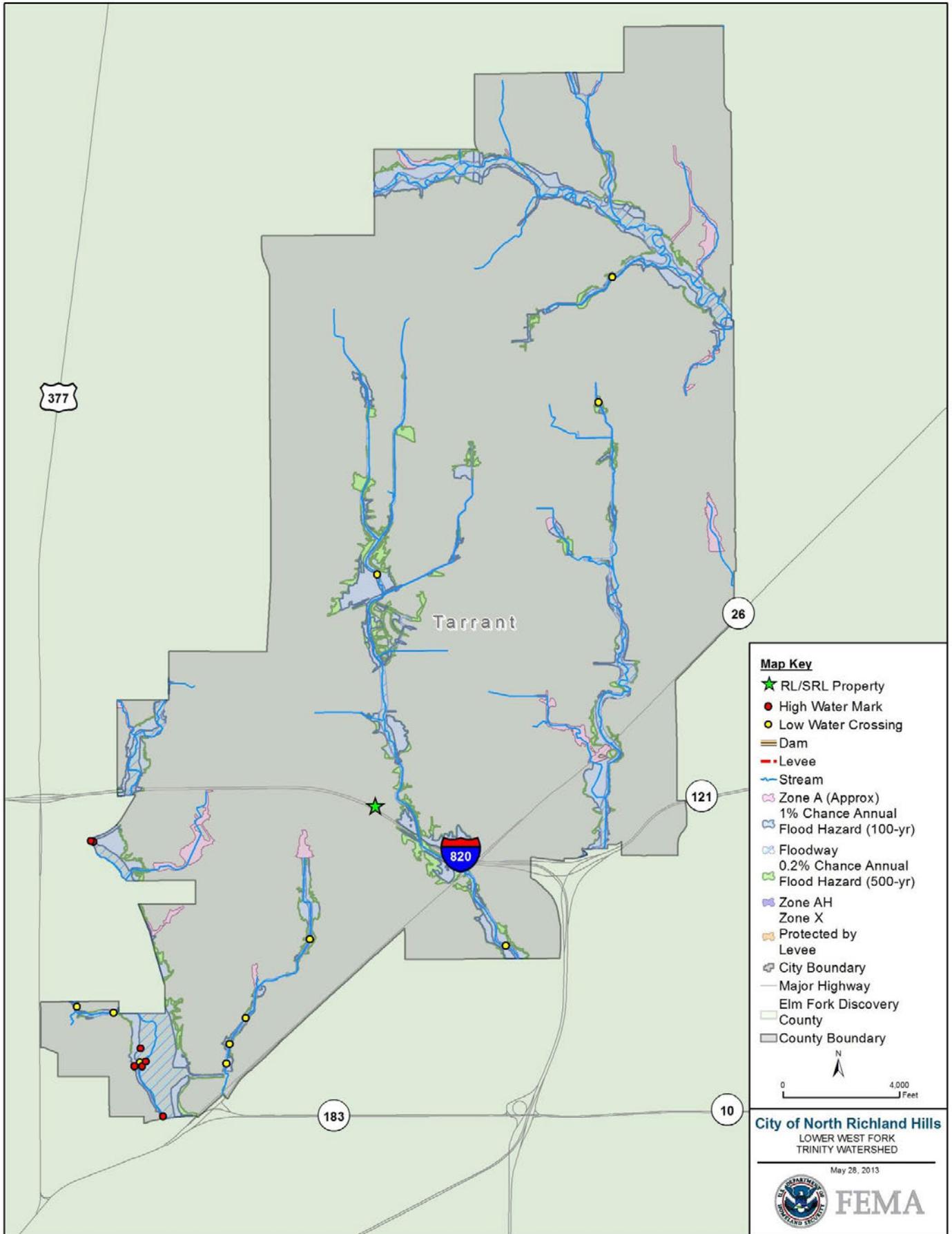
## CITY OF NORTH RICHLAND HILLS

Tarrant County

Lower West Fork Trinity Watershed

NCTCOG FY12 Discovery

<b><u>CID:</u></b>	<b>480607</b>
<b><u>Population (2010 Census):</u></b>	63,343
<b><u>NFIP Participant:</u></b>	Yes
<b><u>CRS Rating:</u></b>	6
<b><u>Mitigation Plan Name:</u></b>	North Richland Hills
<b><u>Plan Approval Date:</u></b>	3/21/2012
<b><u>Plan Expiration Date:</u></b>	3/21/2017
<b><u>High Water Marks:</u></b>	7
<b><u>Low Water Crossings:</u></b>	11
<b><u>DFIRM Status:</u></b>	Effective
<b><u>Effective Date:</u></b>	Tarrant – Sept. 25, 2009
<b><u>Total Stream Miles:</u></b>	32.03
<b><u>Total Zone A Miles:</u></b>	2.96
<b><u>Repetitive Loss Property Count:</u></b>	7
<b><u>Severe Repetitive Loss Property Count:</u></b>	0
<b><u>NFIP Policies:</u></b>	286
<b><u>NFIP Claims:</u></b>	110
<b><u>Total Losses:</u></b>	\$483,368
<b><u>Grants:</u></b>	Unknown
<b><u>Disaster Declarations:</u></b>	Unknown
<b><u>LiDAR:</u></b>	2010 TNRIS LiDAR
<b><u>Levees/Dams:</u></b>	0 in DFIRM structures
<b><u>Additional Comments:</u></b>	
<b><u>Congressmen:</u></b>	Rep. Michael Burgess, Rep. Kay Granger, Sen. John Cornyn, Sen. Ted Cruz



**Map Key**

- ★ RL/SRL Property
- High Water Mark
- Low Water Crossing
- Dam
- - - Levee
- ~ Stream
- Zone A (Approx)  
1% Chance Annual  
Flood Hazard (100-yr)
- Zone AH  
0.2% Chance Annual  
Flood Hazard (500-yr)
- Zone X
- Protected by  
Levee
- City Boundary
- Major Highway
- Elm Fork Discovery
- County
- County Boundary

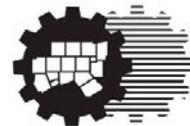
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**City of North Richland Hills**  
 LOWER WEST FORK  
 TRINITY WATERSHED

May 28, 2013



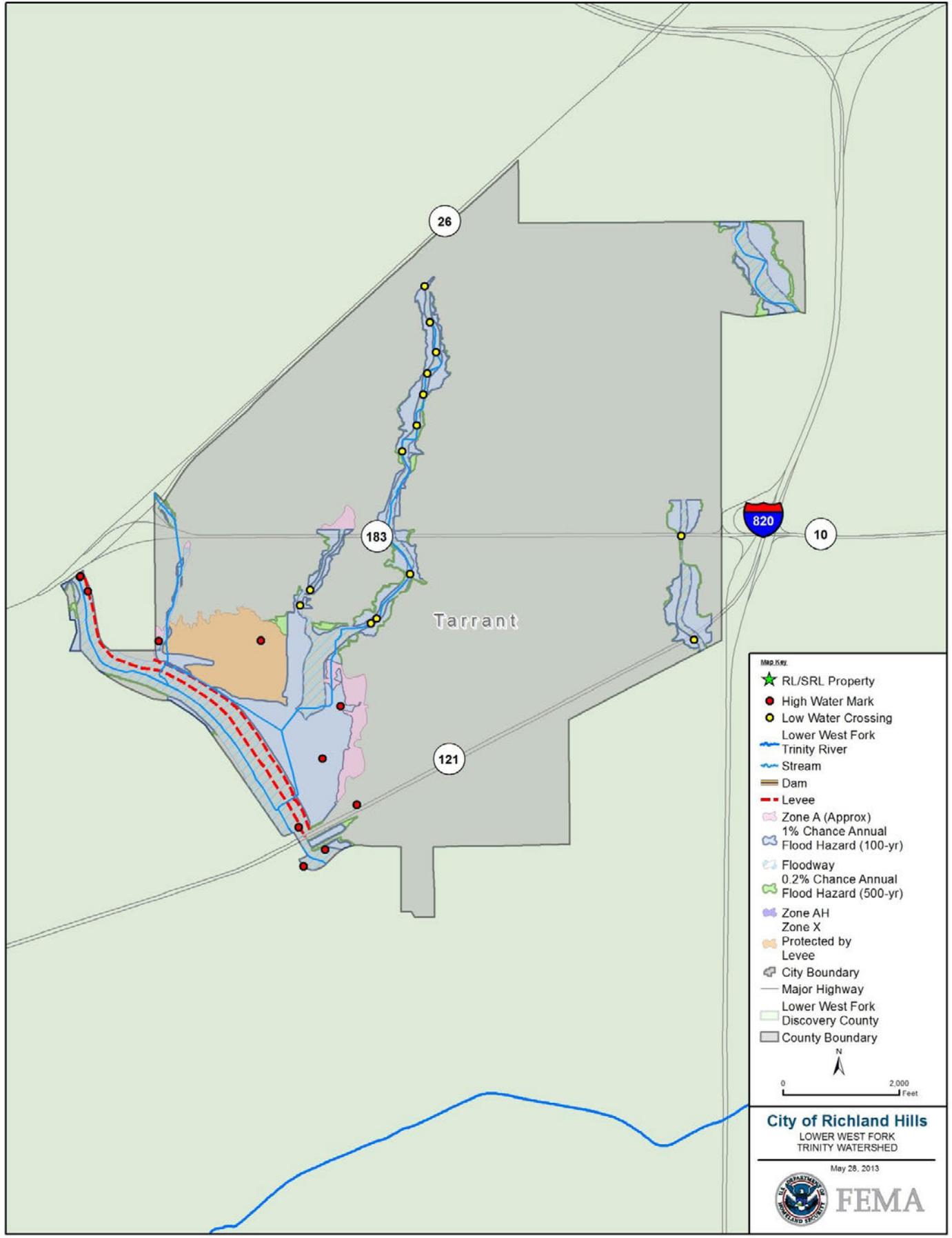
**FEMA**



North Central Texas  
Council of Governments

**CITY OF RICHLAND HILLS**  
**Lower West Fork Trinity Watershed**  
**NCTCOG FY12 Discovery**

<b><u>CID:</u></b>	<b>480608</b>
<b><u>Population (2010 Census):</u></b>	7,801
<b><u>NFIP Participant:</u></b>	Yes
<b><u>CRS Rating:</u></b>	Currently applying
<b><u>Mitigation Plan Name:</u></b>	Tarrant County Mid-Cities
<b><u>Plan Approval Date:</u></b>	12/2/2008
<b><u>Plan Expiration Date:</u></b>	12/2/2013
<b><u>High Water Marks:</u></b>	12
<b><u>Low Water Crossings:</u></b>	15
<b><u>DFIRM Status:</u></b>	Effective
<b><u>Effective Date:</u></b>	Tarrant – Sept. 25, 2009
<b><u>Total Stream Miles:</u></b>	4.89
<b><u>Total Zone A Miles:</u></b>	0.09
<b><u>Repetitive Loss Property Count:</u></b>	9
<b><u>Severe Repetitive Loss Property Count:</u></b>	1
<b><u>NFIP Policies:</u></b>	122
<b><u>NFIP Claims:</u></b>	97
<b><u>Total Losses:</u></b>	\$1,135,260
<b><u>Grants:</u></b>	Unknown
<b><u>Disaster Declarations:</u></b>	Unknown
<b><u>LiDAR:</u></b>	2010 TNRIS LiDAR
<b><u>Levees/Dams:</u></b>	1 levee , 2 dams
<b><u>Additional Comments:</u></b>	Dams are just upstream and downstream of SH-183
<b><u>Congressmen:</u></b>	Rep. Michael Burgess, Sen. John Cornyn, Sen. Ted Cruz



**Map Key:**

- ★ RL/SRL Property
- High Water Mark
- Low Water Crossing
- Lower West Fork Trinity River
- Stream
- Dam
- Levee
- Zone A (Approx) 1% Chance Annual Flood Hazard (100-yr)
- Floodway 0.2% Chance Annual Flood Hazard (500-yr)
- Zone AH
- Zone X
- Protected by Levee
- City Boundary
- Major Highway
- Lower West Fork Discovery County
- County Boundary

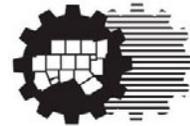
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**City of Richland Hills**  
 LOWER WEST FORK TRINITY WATERSHED

May 28, 2013

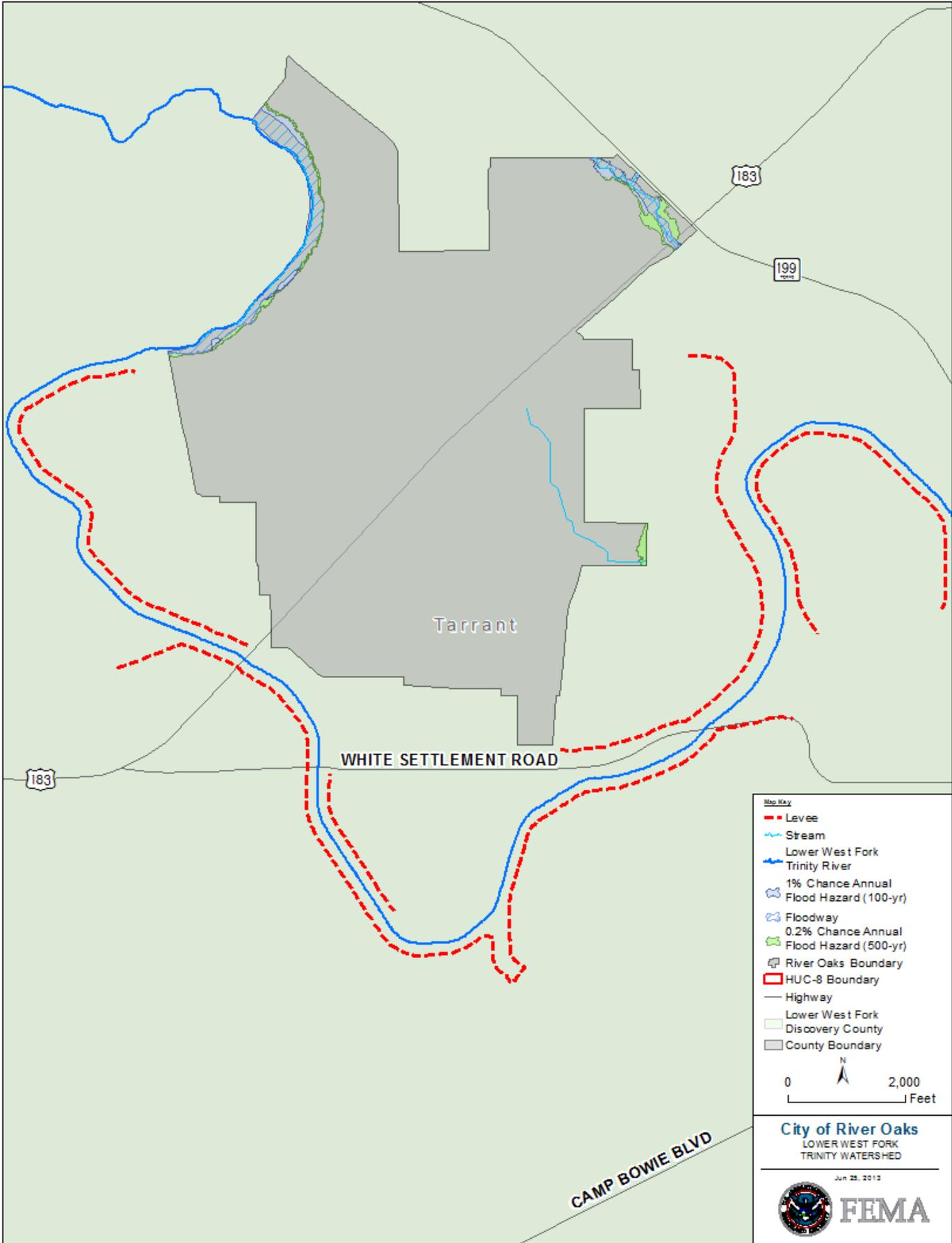




North Central Texas  
Council of Governments

**CITY OF RIVER OAKS**  
**Tarrant County**  
**Lower West Fork Trinity Watershed**  
**NCTCOG FY12 Discovery**

<b><u>CID:</u></b>	<b>480609</b>
<b><u>Population (2010 Census):</u></b>	<b>7,427</b>
<b><u>NFIP Participant:</u></b>	<b>Yes</b>
<b><u>CRS Rating:</u></b>	
<b><u>Mitigation Plan Name:</u></b>	<b>Fort Worth</b>
<b><u>Plan Approval Date:</u></b>	<b>1/6/2009</b>
<b><u>Plan Expiration Date:</u></b>	<b>1/6/2014</b>
<b><u>High Water Marks:</u></b>	<b>0</b>
<b><u>Low Water Crossings:</u></b>	<b>0</b>
<b><u>DFIRM Status:</u></b>	<b>Effective</b>
<b><u>Effective Date:</u></b>	<b>Tarrant – 9/25/2009</b>
<b><u>Total Stream Miles:</u></b>	<b>1.92</b>
<b><u>Total Zone A Miles:</u></b>	<b>0</b>
<b><u>Repetitive Loss Property Count:</u></b>	<b>0</b>
<b><u>Severe Repetitive Loss Property Count:</u></b>	<b>0</b>
<b><u>NFIP Policies:</u></b>	<b>8</b>
<b><u>NFIP Claims:</u></b>	<b>4</b>
<b><u>Total Losses:</u></b>	<b>\$65,782</b>
<b><u>Grants:</u></b>	<b>Unknown</b>
<b><u>Disaster Declarations:</u></b>	<b>Unknown</b>
<b><u>LiDAR:</u></b>	<b>2010 TNRIS</b>
<b><u>Levees/Dams:</u></b>	<b>1 levee system</b>
<b><u>Additional Comments:</u></b>	<b>West Fork Trinity Levee system</b>
<b><u>Congressmen:</u></b>	<b>Rep. Granger, Sen. John Cornyn, Sen. Ted Cruz</b>



**Map Key**

- - - Levee
- ~ ~ ~ Stream
- Lower West Fork Trinity River
- ▨ 1% Chance Annual Flood Hazard (100-yr)
- ▨ Floodway
- ▨ 0.2% Chance Annual Flood Hazard (500-yr)
- ▨ River Oaks Boundary
- ▭ HUC-8 Boundary
- Highway
- Lower West Fork Discovery County
- County Boundary

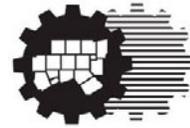
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**City of River Oaks**  
 LOWER WEST FORK  
 TRINITY WATERSHED

Jun 28, 2013



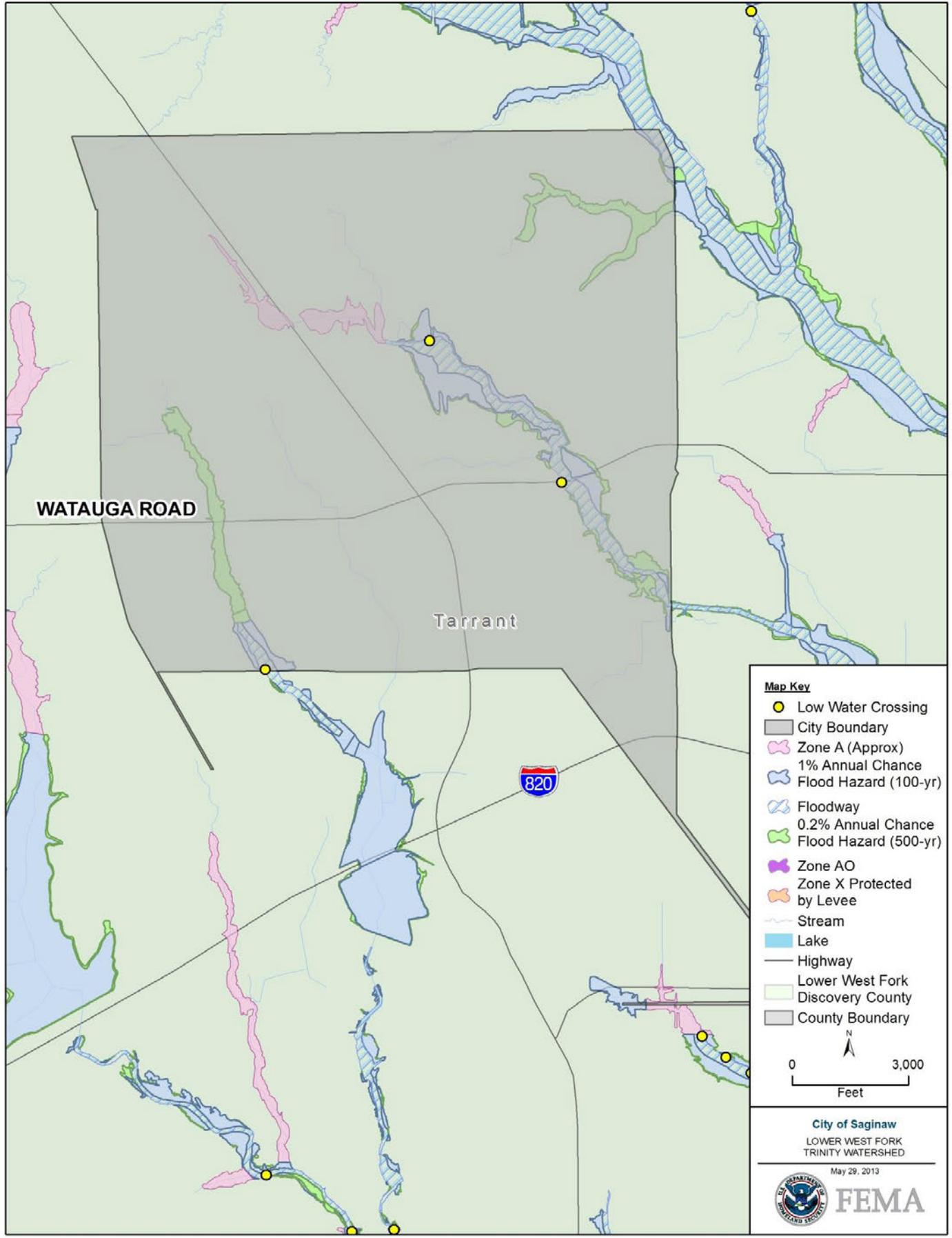
**FEMA**



North Central Texas  
Council of Governments

**CITY OF SAGINAW**  
**Lower West Fork Trinity Watershed**  
**North Texas Discovery FY12**

<b><u>CID:</u></b>	<b>480610</b>
<b><u>Population (2010 Census):</u></b>	19,806
<b><u>NFIP Participant:</u></b>	Yes
<b><u>CRS Rating:</u></b>	N/A
<b><u>Mitigation Plan Name:</u></b>	Fort Worth
<b><u>Plan Approval Date:</u></b>	1/6/2009
<b><u>Plan Expiration Date:</u></b>	1/6/2014
<b><u>High Water Marks:</u></b>	0
<b><u>Low Water Crossings:</u></b>	2
<b><u>DFIRM Status:</u></b>	Effective
<b><u>Effective Date:</u></b>	9/25/2009
<b><u>Total Stream Miles:</u></b>	13.28
<b><u>Total Zone A Miles:</u></b>	1.23
<b><u>Repetitive Loss Property Count:</u></b>	0
<b><u>Severe Repetitive Loss Property Count:</u></b>	0
<b><u>NFIP Policies:</u></b>	20
<b><u>NFIP Claims:</u></b>	7
<b><u>Total Losses:</u></b>	\$10,826
<b><u>Grants:</u></b>	Unknown
<b><u>Disaster Declarations:</u></b>	Unknown
<b><u>LiDAR:</u></b>	2010 TNRIS LiDAR
<b><u>Levees/Dams:</u></b>	0 in DFIRM structures
<b><u>Additional Comments:</u></b>	
<b><u>Congressmen:</u></b>	Rep. Kay Granger, Sen. John Cornyn, Sen. Ted Cruz



WATAUGA ROAD

Tarrant

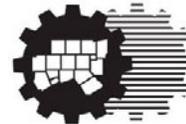


**Map Key**

- Low Water Crossing
- City Boundary
- Zone A (Approx) 1% Annual Chance Flood Hazard (100-yr)
- Floodway 0.2% Annual Chance Flood Hazard (500-yr)
- Zone AO
- Zone X Protected by Levee
- Stream
- Lake
- Highway
- Lower West Fork Discovery County
- County Boundary

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City of Saginaw  
LOWER WEST FORK  
TRINITY WATERSHED  
May 29, 2013

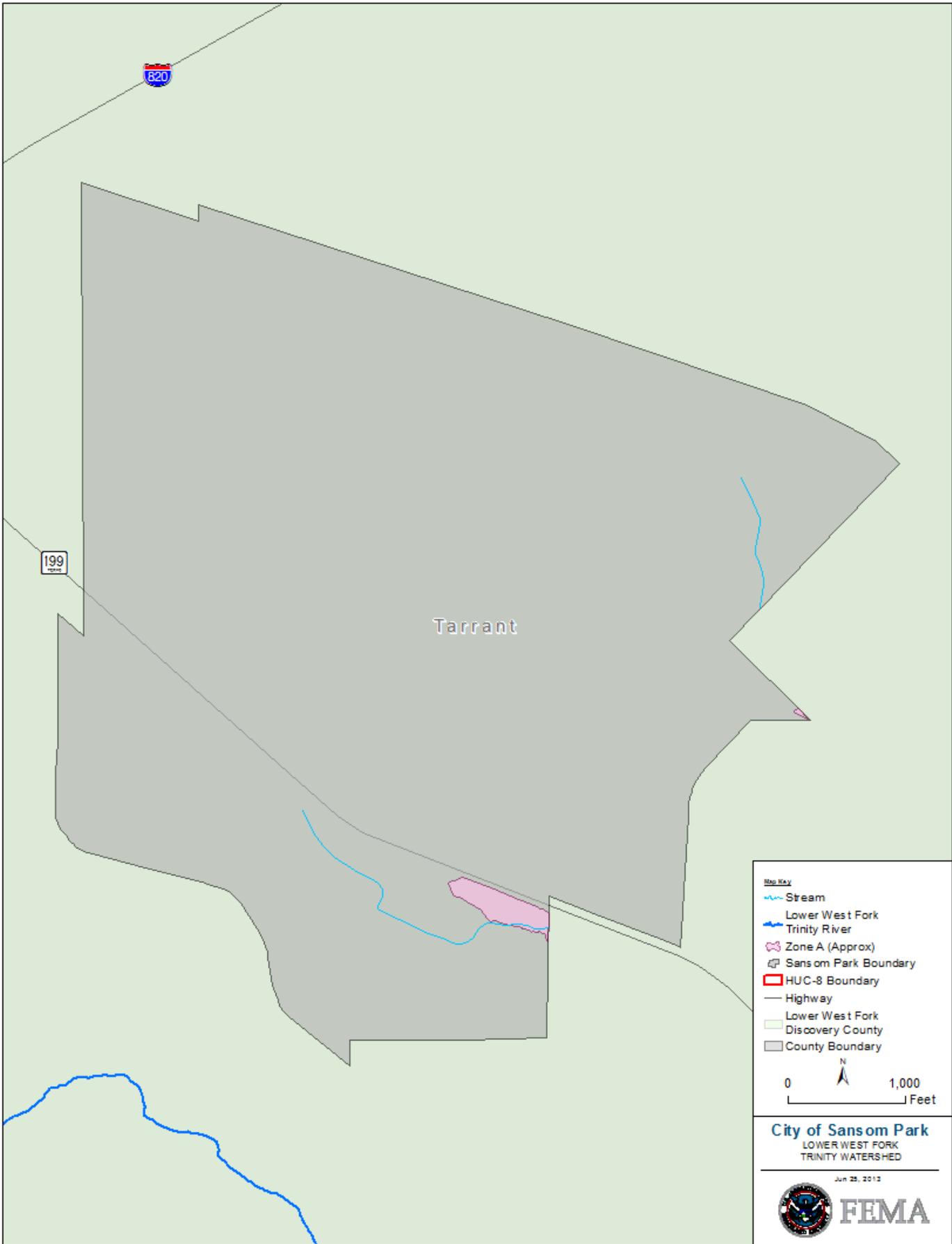


North Central Texas  
Council of Governments

**CITY OF SANSOM PARK**  
Tarrant County  
**Lower West Fork Trinity Watershed**  
NCTCOG FY12 Discovery

<b>CID:</b>	<b>480611</b>
<b>Population (2010 Census):</b>	4,686
<b>NFIP Participant:</b>	Yes
<b>CRS Rating:</b>	
<b>Mitigation Plan Name:</b>	Fort Worth
<b>Plan Approval Date:</b>	1/6/2009
<b>Plan Expiration Date:</b>	1/6/2014
<b>High Water Marks:</b>	0
<b>Low Water Crossings:</b>	0
<b>DFIRM Status:</b>	Effective
<b>Effective Date:</b>	Tarrant – 9/25/2009
<b>Total Stream Miles:</b>	0.75
<b>Total Zone A Miles:</b>	0.07
<b>Repetitive Loss Property Count:</b>	0
<b>Severe Repetitive Loss Property Count:</b>	0
<b>NFIP Policies:</b>	2
<b>NFIP Claims:</b>	1
<b>Total Losses:</b>	\$12,760
<b>Grants:</b>	Unknown
<b>Disaster Declarations:</b>	Unknown
<b>LiDAR:</b>	2010 TNRIS
<b>Levees/Dams:</b>	0 in DFIRM structures
<b>Additional Comments:</b>	

**Congressmen:** Reps. Granger and Veasey, Sen. John Cornyn,  
Sen. Ted Cruz



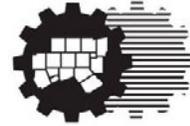
**Map Key**

- Stream
- Lower West Fork Trinity River
- Zone A (Approx)
- Sansom Park Boundary
- HUC-8 Boundary
- Highway
- Lower West Fork Discovery County
- County Boundary

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Feet

**City of Sansom Park**  
 LOWER WEST FORK  
 TRINITY WATERSHED

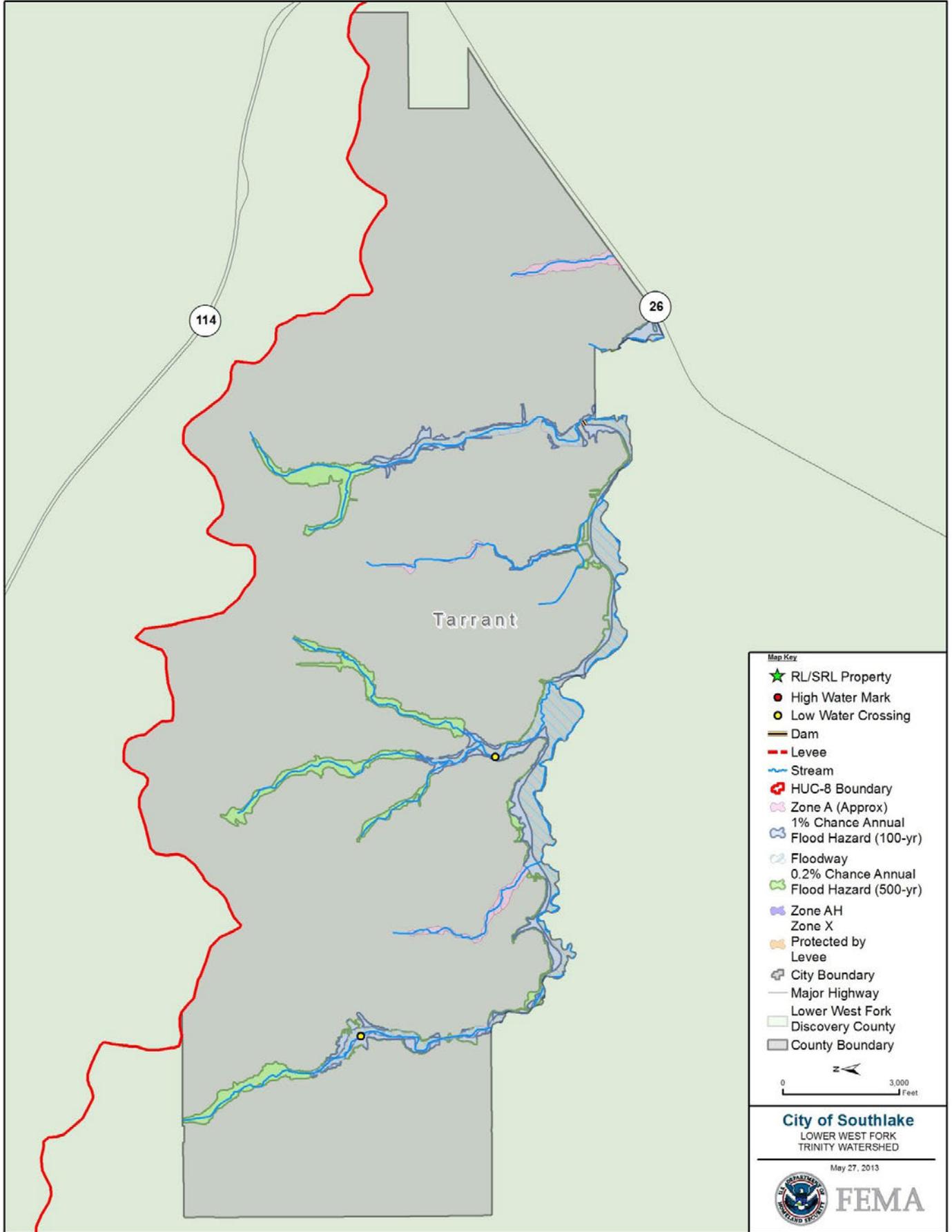
Jun 28, 2013



North Central Texas  
Council of Governments

**CITY OF SOUTHLAKE**  
**Lower West Fork Trinity Watershed**  
**NCTCOG FY12 Discovery**

<b><u>CID:</u></b>	<b>480612</b>
<b><u>Population (2010 Census):</u></b>	26,575
<b><u>NFIP Participant:</u></b>	Yes
<b><u>CRS Rating:</u></b>	NA
<b><u>Mitigation Plan Name:</u></b>	Southlake
<b><u>Plan Approval Date:</u></b>	9/24/2009
<b><u>Plan Expiration Date:</u></b>	9/24/2014
<b><u>High Water Marks:</u></b>	0
<b><u>Low Water Crossings:</u></b>	2
<b><u>DFIRM Status:</u></b>	Effective
<b><u>Effective Date:</u></b>	Tarrant – Sept. 25, 2009
<b><u>Total Stream Miles:</u></b>	14.23
<b><u>Total Zone A Miles:</u></b>	1.57
<b><u>Repetitive Loss Property Count:</u></b>	1
<b><u>Severe Repetitive Loss Property Count:</u></b>	0
<b><u>NFIP Policies:</u></b>	167
<b><u>NFIP Claims:</u></b>	
<b><u>Total Losses:</u></b>	\$146,391
<b><u>Grants:</u></b>	Unknown
<b><u>Disaster Declarations:</u></b>	Unknown
<b><u>LiDAR:</u></b>	2010 TNRIS LiDAR
<b><u>Levees/Dams:</u></b>	0 levees, 1 dam
<b><u>Additional Comments:</u></b>	
<b><u>Congressmen:</u></b>	Rep. Kenny Marchant, Sen. John Cornyn, Sen. Ted Cruz



Map Key

- ★ RL/SRL Property
- High Water Mark
- Low Water Crossing
- Dam
- - - Levee
- ~ Stream
- ⬮ HUC-8 Boundary
- ⬮ Zone A (Approx)
- ⬮ 1% Chance Annual Flood Hazard (100-yr)
- ⬮ Floodway
- ⬮ 0.2% Chance Annual Flood Hazard (500-yr)
- ⬮ Zone AH
- ⬮ Zone X
- ⬮ Protected by Levee
- ⬮ City Boundary
- Major Highway
- ⬮ Lower West Fork
- ⬮ Discovery County
- ⬮ County Boundary

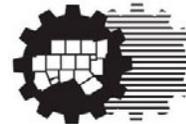


**City of Southlake**  
 LOWER WEST FORK  
 TRINITY WATERSHED

May 27, 2013



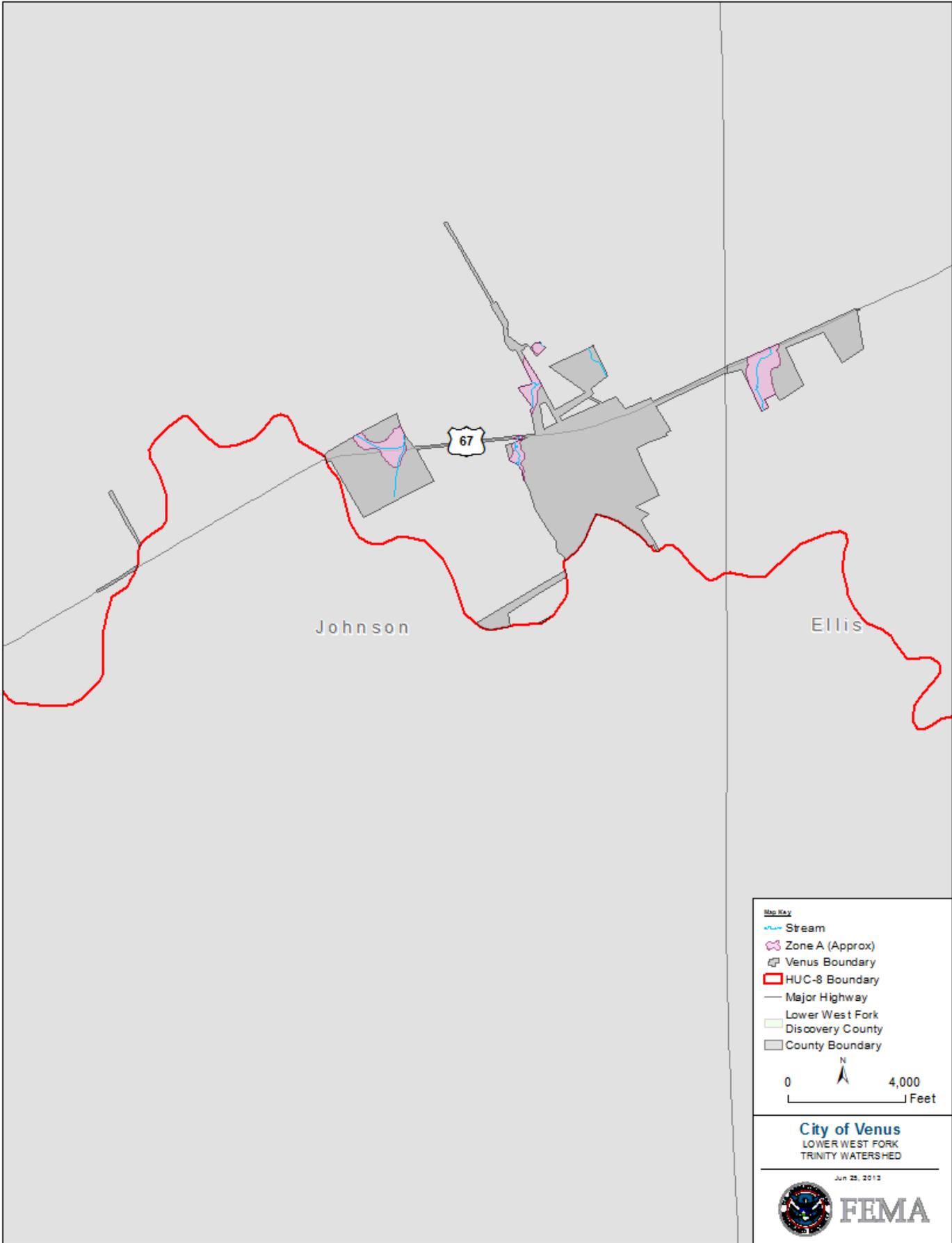
**FEMA**



North Central Texas  
Council of Governments

**TOWN OF VENUS**  
Johnson County/ Ellis County  
**Lower West Fork Trinity Watershed**  
NCTCOG FY12 Discovery

<b>CID:</b>	<b>480883</b>
<b>Population (2010 Census):</b>	2,960
<b>NFIP Participant:</b>	Yes
<b>CRS Rating:</b>	
<b>Mitigation Plan Name:</b>	None
<b>Plan Approval Date:</b>	
<b>Plan Expiration Date:</b>	
<b>High Water Marks:</b>	0
<b>Low Water Crossings:</b>	0
<b>DFIRM Status:</b>	Effective
<b>Effective Date:</b>	Johnson – 12/4/12; Ellis – 6/2/2013
<b>Total Stream Miles:</b>	1.97
<b>Total Zone A Miles:</b>	1.55
<b>Repetitive Loss Property Count:</b>	0
<b>Severe Repetitive Loss Property Count:</b>	0
<b>NFIP Policies:</b>	6
<b>NFIP Claims:</b>	Unknown
<b>Total Losses:</b>	Unknown
<b>Grants:</b>	Unknown
<b>Disaster Declarations:</b>	Unknown
<b>LiDAR:</b>	2010 TNRIS
<b>Levees/Dams:</b>	
<b>Additional Comments:</b>	
<b>Congressmen:</b>	Rep. Williams, Sen. John Cornyn, Sen. Ted Cruz



**Map Key**

- Stream
- Zone A (Approx)
- Venus Boundary
- HUC-8 Boundary
- Major Highway
- Lower West Fork
- Discovery County
- County Boundary

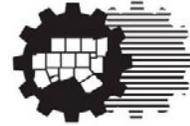
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**City of Venus**  
LOWER WEST FORK  
TRINITY WATERSHED

Jun 28, 2013



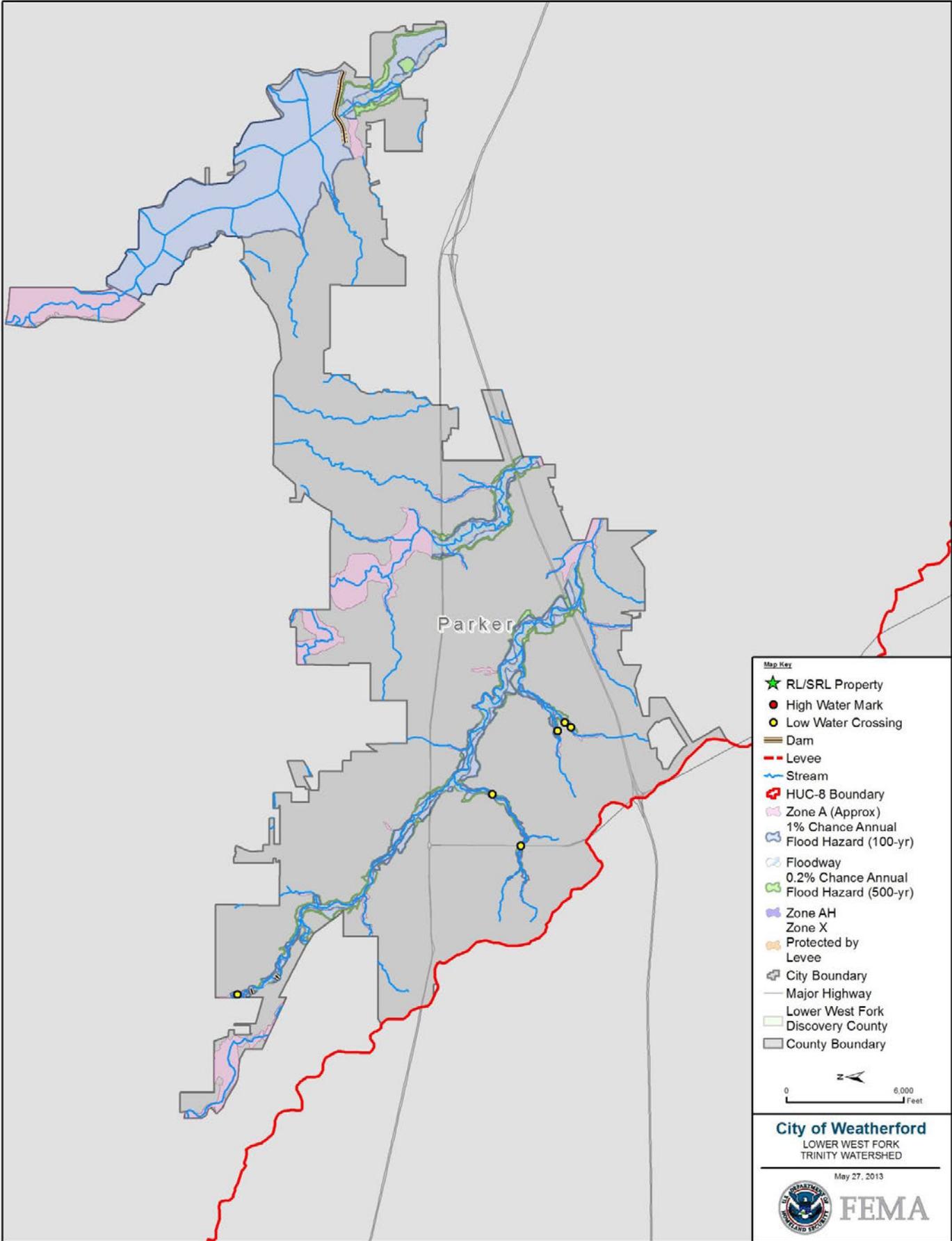
**FEMA**



North Central Texas  
Council of Governments

**CITY OF WEATHERFORD**  
**Lower West Fork Trinity Watershed**  
**NCTCOG FY12 Discovery**

<b><u>CID:</u></b>	<b>480522</b>
<b><u>Population (2010 Census):</u></b>	25,250
<b><u>NFIP Participant:</u></b>	Yes
<b><u>CRS Rating:</u></b>	NA
<b><u>Mitigation Plan Name:</u></b>	No Plan
<b><u>Plan Approval Date:</u></b>	NA
<b><u>Plan Expiration Date:</u></b>	NA
<b><u>High Water Marks:</u></b>	0
<b><u>Low Water Crossings:</u></b>	6
<b><u>DFIRM Status:</u></b>	Effective
<b><u>Effective Date:</u></b>	Parker – Sept. 26, 2008
<b><u>Total Stream Miles:</u></b>	51.43
<b><u>Total Zone A Miles:</u></b>	13.5
<b><u>Repetitive Loss Property Count:</u></b>	5
<b><u>Severe Repetitive Loss Property Count:</u></b>	1
<b><u>NFIP Policies:</u></b>	130
<b><u>NFIP Claims:</u></b>	45
<b><u>Total Losses:</u></b>	\$724,076
<b><u>Grants:</u></b>	Unknown
<b><u>Disaster Declarations:</u></b>	Unknown
<b><u>LiDAR:</u></b>	USGS 30m DEM
<b><u>Levees/Dams:</u></b>	0 levees , 3 dams
<b><u>Additional Comments:</u></b>	
<b><u>Congressmen:</u></b>	Rep. Kay Granger, Sen. John Cornyn, Sen. Ted Cruz



**Map Key**

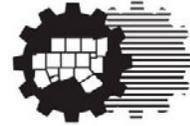
- ★ RL/SRL Property
- High Water Mark
- Low Water Crossing
- Dam
- Levee
- Stream
- HUC-8 Boundary
- Zone A (Approx)  
1% Chance Annual  
Flood Hazard (100-yr)
- Floodway  
0.2% Chance Annual  
Flood Hazard (500-yr)
- Zone AH
- Zone X
- Protected by  
Levee
- City Boundary
- Major Highway
- Lower West Fork  
Discovery County
- County Boundary

  
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**City of Weatherford**  
 LOWER WEST FORK  
 TRINITY WATERSHED

May 27, 2013



North Central Texas  
Council of Governments

## CITY OF WESTWORTH VILLAGE

Tarrant County

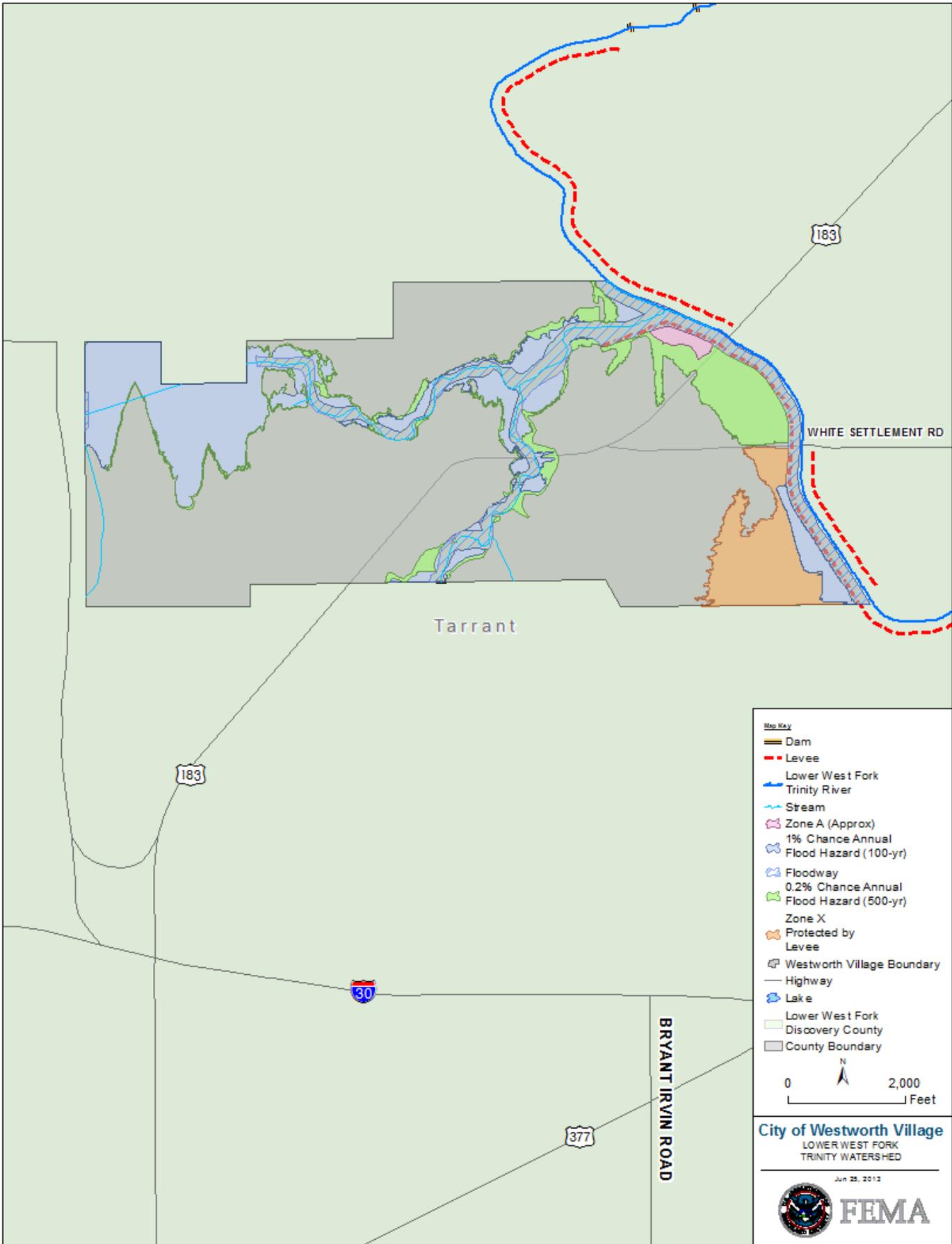
Lower West Fork Trinity Watershed

NCTCOG FY12 Discovery

<b>CID:</b>	<b>480616</b>
<b>Population (2010 Census):</b>	2,472
<b>NFIP Participant:</b>	Yes
<b>CRS Rating:</b>	
<b>Mitigation Plan Name:</b>	Fort Worth
<b>Plan Approval Date:</b>	1/6/2009
<b>Plan Expiration Date:</b>	1/6/2014
<b>High Water Marks:</b>	0
<b>Low Water Crossings:</b>	0
<b>DFIRM Status:</b>	Effective
<b>Effective Date:</b>	Tarrant – 9/25/2009
<b>Total Stream Miles:</b>	4.28
<b>Total Zone A Miles:</b>	0
<b>Repetitive Loss Property Count:</b>	0
<b>Severe Repetitive Loss Property Count:</b>	0
<b>NFIP Policies:</b>	4
<b>NFIP Claims:</b>	Unknown
<b>Total Losses:</b>	Unknown
<b>Grants:</b>	Unknown
<b>Disaster Declarations:</b>	Unknown
<b>LiDAR:</b>	2010 TNRIS
<b>Levees/Dams:</b>	1 levee system
<b>Additional Comments:</b>	West Fork Trinity Levee system

**Congressmen:**

Rep. Granger, Sen. John Cornyn, Sen. Ted Cruz



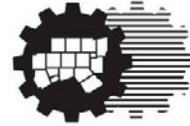
**Map Key**

- Dam
- Levee
- Lower West Fork Trinity River
- Stream
- Zone A (Approx)  
1% Chance Annual  
Flood Hazard (100-yr)
- Floodway  
0.2% Chance Annual  
Flood Hazard (500-yr)
- Zone X
- Protected by  
Levee
- Westworth Village Boundary
- Highway
- Lake
- Lower West Fork  
Discovery County
- County Boundary

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**City of Westworth Village**  
LOWER WEST FORK  
TRINITY WATERSHED

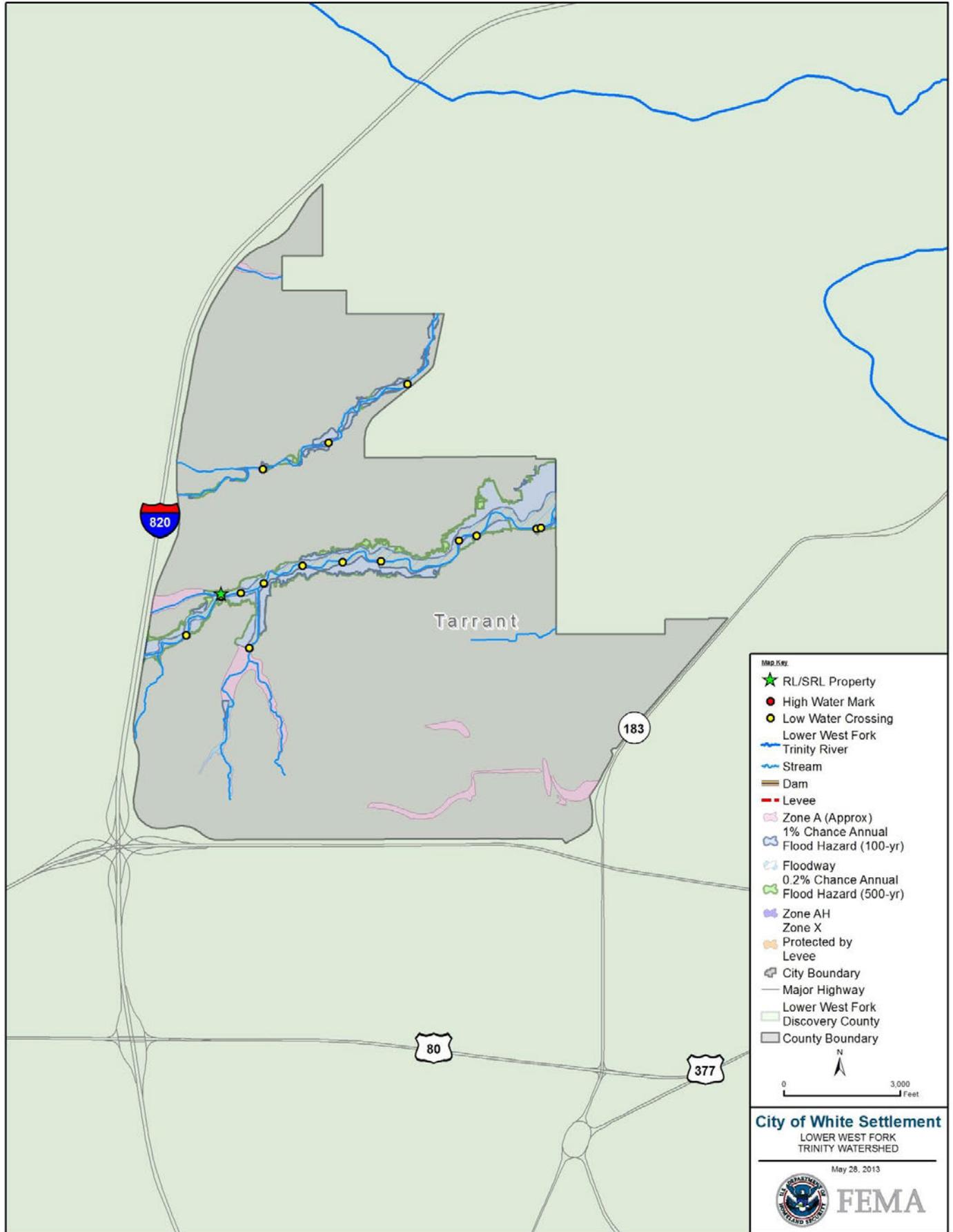
Jun 28, 2013



North Central Texas  
Council of Governments

**CITY OF WHITE SETTLEMENT**  
**Lower West Fork Trinity Watershed**  
**NCTCOG FY12 Discovery**

<b><u>CID:</u></b>	<b>480617</b>
<b><u>Population (2010 Census):</u></b>	16,116
<b><u>NFIP Participant:</u></b>	Yes
<b><u>CRS Rating:</u></b>	Unknown
<b><u>Mitigation Plan Name:</u></b>	Fort Worth
<b><u>Plan Approval Date:</u></b>	1/6/2009
<b><u>Plan Expiration Date:</u></b>	1/6/2014
<b><u>High Water Marks:</u></b>	0
<b><u>Low Water Crossings:</u></b>	15
<b><u>DFIRM Status:</u></b>	Effective
<b><u>Effective Date:</u></b>	Tarrant – Sept. 25, 2009
<b><u>Total Stream Miles:</u></b>	8.46
<b><u>Total Zone A Miles:</u></b>	1.40
<b><u>Repetitive Loss Property Count:</u></b>	16
<b><u>Severe Repetitive Loss Property Count:</u></b>	2
<b><u>NFIP Policies:</u></b>	93
<b><u>NFIP Claims:</u></b>	93
<b><u>Total Losses:</u></b>	\$2,045,221
<b><u>Grants:</u></b>	Unknown
<b><u>Disaster Declarations:</u></b>	Unknown
<b><u>LiDAR:</u></b>	2010 TNRIIS LiDAR
<b><u>Levees/Dams:</u></b>	0 levees , 0 dams
<b><u>Additional Comments:</u></b>	
<b><u>Congressmen:</u></b>	Rep. Kay Granger, Sen. John Cornyn, Sen. Ted Cruz



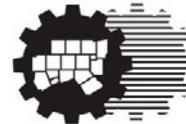
**Map Key:**

- ★ RL/SRL Property
- High Water Mark
- Low Water Crossing
- Lower West Fork Trinity River
- Stream
- Dam
- Levee
- Zone A (Approx) 1% Chance Annual Flood Hazard (100-yr)
- Floodway 0.2% Chance Annual Flood Hazard (500-yr)
- Zone AH
- Zone X
- Protected by Levee
- City Boundary
- Major Highway
- Lower West Fork Discovery County
- County Boundary

0 3,000 Feet

**City of White Settlement**  
 LOWER WEST FORK TRINITY WATERSHED

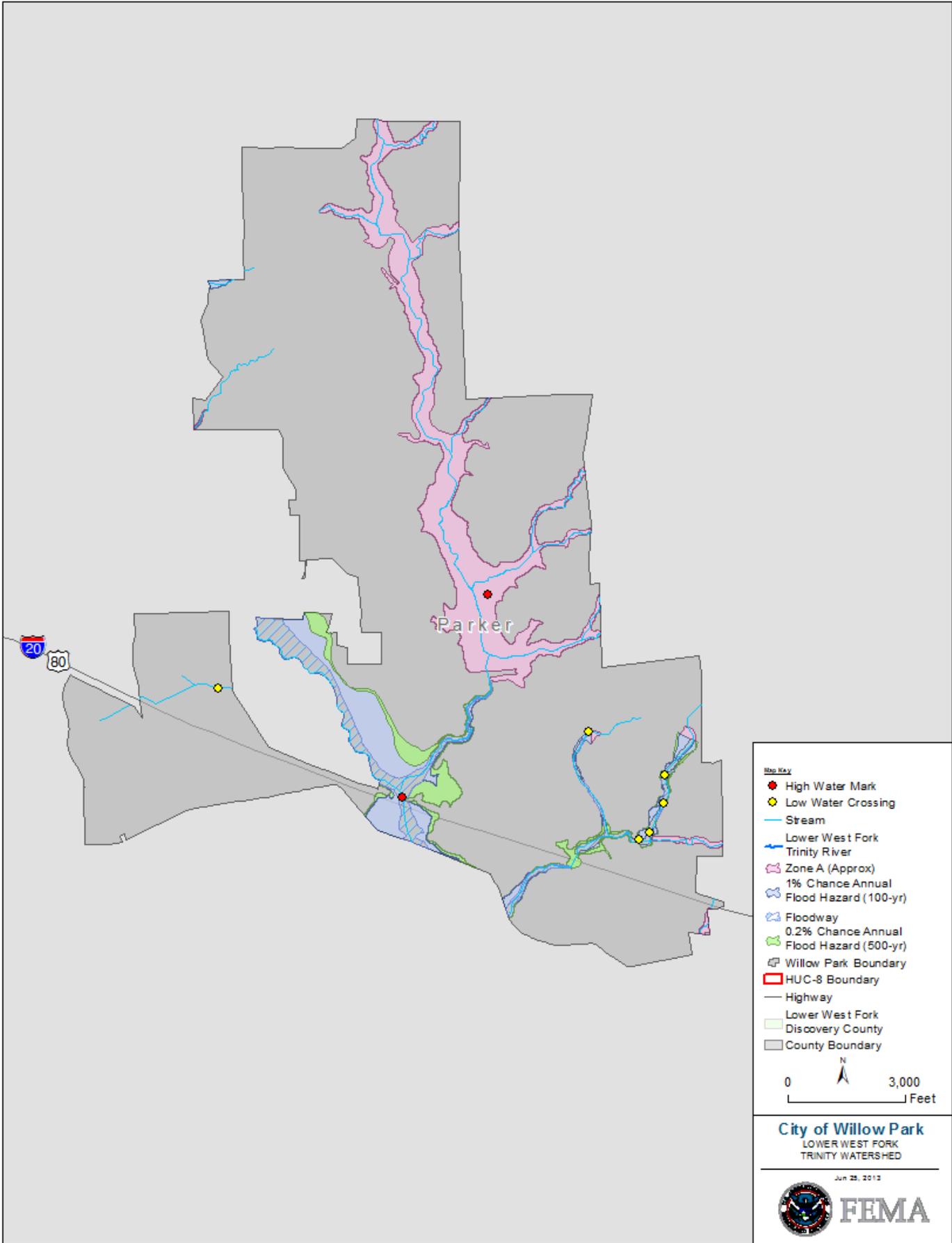
May 28, 2013



North Central Texas  
Council of Governments

**CITY OF WILLOW PARK**  
**Parker County**  
**Lower West Fork Trinity Watershed**  
**NCTCOG FY12 Discovery**

<b><u>CID:</u></b>	<b>481164</b>
<b><u>Population (2010 Census):</u></b>	<b>3,982</b>
<b><u>NFIP Participant:</u></b>	<b>Yes</b>
<b><u>CRS Rating:</u></b>	
<b><u>Mitigation Plan Name:</u></b>	<b>None</b>
<b><u>Plan Approval Date:</u></b>	
<b><u>Plan Expiration Date:</u></b>	
<b><u>High Water Marks:</u></b>	<b>3</b>
<b><u>Low Water Crossings:</u></b>	<b>6</b>
<b><u>DFIRM Status:</u></b>	<b>Effective</b>
<b><u>Effective Date:</u></b>	<b>Parker – 9/26/2008</b>
<b><u>Total Stream Miles:</u></b>	<b>13.68</b>
<b><u>Total Zone A Miles:</u></b>	<b>7.50</b>
<b><u>Repetitive Loss Property Count:</u></b>	<b>0</b>
<b><u>Severe Repetitive Loss Property Count:</u></b>	<b>0</b>
<b><u>NFIP Policies:</u></b>	<b>13</b>
<b><u>NFIP Claims:</u></b>	<b>1</b>
<b><u>Total Losses:</u></b>	<b>\$4,362</b>
<b><u>Grants:</u></b>	<b>Unknown</b>
<b><u>Disaster Declarations:</u></b>	<b>Unknown</b>
<b><u>LiDAR:</u></b>	<b>2001 NCTCOG/ USGS Contours</b>
<b><u>Levees/Dams:</u></b>	<b>0 in DFIRM structures</b>
<b><u>Additional Comments:</u></b>	<b>Downstream of Lake Weatheford &amp; Dam</b>
<b><u>Congressmen:</u></b>	<b>Rep. Kay Granger, Sen. John Cornyn, Sen. Ted Cruz</b>



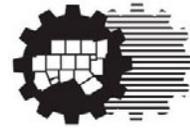
**Map Key**

- High Water Mark
- Low Water Crossing
- Stream
- Lower West Fork Trinity River
- Zone A (Approx)
- 1% Chance Annual Flood Hazard (100-yr)
- Floodway
- 0.2% Chance Annual Flood Hazard (500-yr)
- Willow Park Boundary
- HUC-8 Boundary
- Highway
- Lower West Fork Discovery County
- County Boundary

0 3,000 Feet

**City of Willow Park**  
 LOWER WEST FORK  
 TRINITY WATERSHED

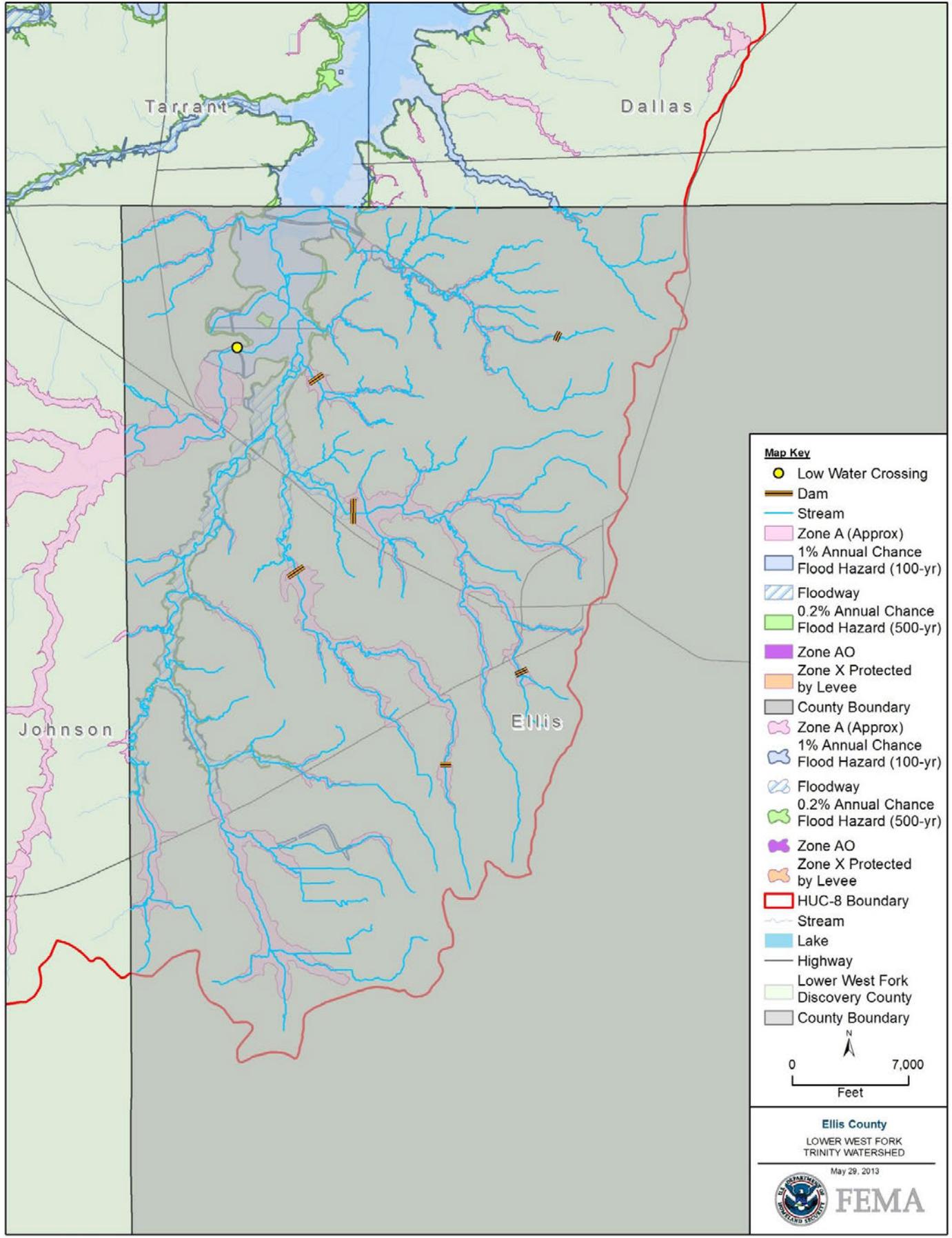
Jun 28, 2013



North Central Texas  
Council of Governments

**ELLIS COUNTY**  
**Lower West Fork Trinity Watershed**  
**North Texas Discovery FY12**

<b><u>CID:</u></b>	<b>48221</b>
<b><u>Population (2010 Census):</u></b>	149,610
<b><u>NFIP Participant:</u></b>	Yes
<b><u>CRS Rating:</u></b>	N/A
<b><u>Mitigation Plan Name:</u></b>	None
<b><u>Plan Approval Date:</u></b>	
<b><u>Plan Expiration Date:</u></b>	
<b><u>High Water Marks:</u></b>	0
<b><u>Low Water Crossings:</u></b>	1
<b><u>DFIRM Status:</u></b>	Preliminary
<b><u>Effective Date:</u></b>	6/2/2013
<b><u>Total Stream Miles:</u></b>	135.53
<b><u>Total Zone A Miles:</u></b>	53.53
<b><u>Repetitive Loss Property Count:</u></b>	0
<b><u>Severe Repetitive Loss Property Count:</u></b>	0
<b><u>NFIP Policies:</u></b>	206
<b><u>NFIP Claims:</u></b>	44
<b><u>Total Losses:</u></b>	\$670,242
<b><u>Grants:</u></b>	Unknown
<b><u>Disaster Declarations:</u></b>	Unknown
<b><u>LiDAR:</u></b>	2009 Grand Prairie LiDAR
<b><u>Levees/Dams:</u></b>	6 dams
<b><u>Additional Comments:</u></b>	
<b><u>Congressmen:</u></b>	Rep. Joe Barton, Sen. John Cornyn, Sen. Ted Cruz



**Map Key**

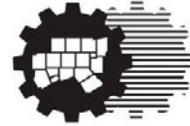
- Low Water Crossing
- ▬ Dam
- Stream
- Zone A (Approx) 1% Annual Chance Flood Hazard (100-yr)
- ▨ Floodway 0.2% Annual Chance Flood Hazard (500-yr)
- Zone AO
- Zone X Protected by Levee
- County Boundary
- Zone A (Approx) 1% Annual Chance Flood Hazard (100-yr)
- ▨ Floodway 0.2% Annual Chance Flood Hazard (500-yr)
- Zone AO
- Zone X Protected by Levee
- HUC-8 Boundary
- Stream
- Lake
- Highway
- Lower West Fork Discovery County
- County Boundary

0 7,000  
Feet

**Ellis County**  
 LOWER WEST FORK  
 TRINITY WATERSHED  
 May 29, 2013



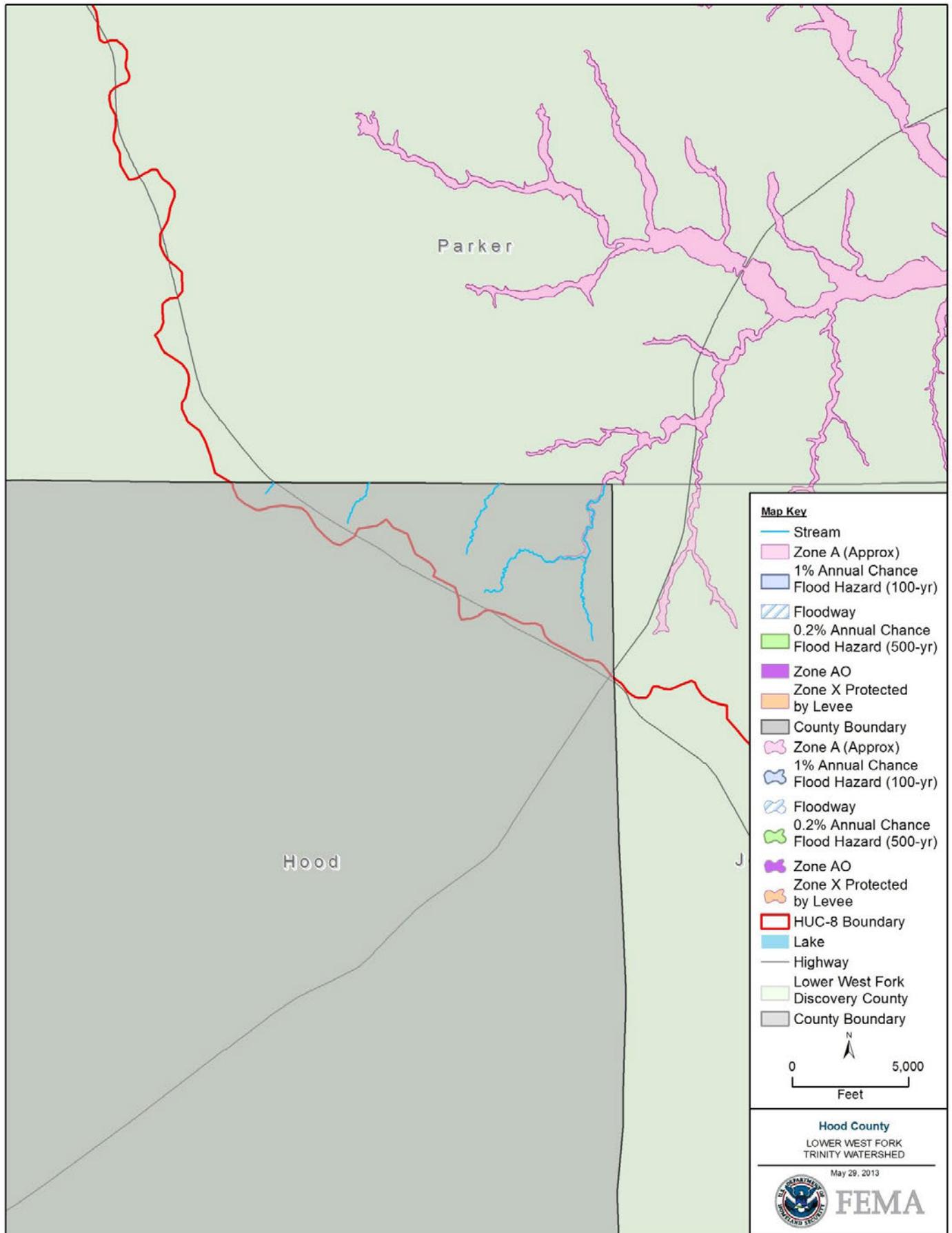
**FEMA**



North Central Texas  
Council of Governments

**HOOD COUNTY**  
**Lower West Fork Trinity Watershed**  
**North Texas Discovery FY12**

<b><u>CID:</u></b>	<b>48221</b>
<b><u>Population (2010 Census):</u></b>	51,182
<b><u>NFIP Participant:</u></b>	Yes
<b><u>CRS Rating:</u></b>	N/A
<b><u>Mitigation Plan Name:</u></b>	None
<b><u>Plan Approval Date:</u></b>	
<b><u>Plan Expiration Date:</u></b>	
<b><u>High Water Marks:</u></b>	0
<b><u>Low Water Crossings:</u></b>	0
<b><u>DFIRM Status:</u></b>	EFFECTIVE
<b><u>Effective Date:</u></b>	Hood – 8/16/2012
<b><u>Total Stream Miles:</u></b>	4.37
<b><u>Total Zone A Miles:</u></b>	1.78
<b><u>Repetitive Loss Property Count:</u></b>	0
<b><u>Severe Repetitive Loss Property Count:</u></b>	0
<b><u>NFIP Policies:</u></b>	484
<b><u>NFIP Claims:</u></b>	66
<b><u>Total Losses:</u></b>	\$672,763
<b><u>Grants:</u></b>	Unknown
<b><u>Disaster Declarations:</u></b>	1
<b><u>LiDAR:</u></b>	USGS
<b><u>Levees/Dams:</u></b>	0 in DFIRM structures
<b><u>Additional Comments:</u></b>	
<b><u>Congressmen:</u></b>	Rep. Mike Conaway, Sen. John Cornyn, Sen. Ted Cruz



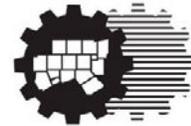
**Map Key**

- Stream
- Zone A (Approx) 1% Annual Chance
- Flood Hazard (100-yr)
- Floodway
- 0.2% Annual Chance Flood Hazard (500-yr)
- Zone AO
- Zone X Protected by Levee
- County Boundary
- Zone A (Approx) 1% Annual Chance
- Flood Hazard (100-yr)
- Floodway
- 0.2% Annual Chance Flood Hazard (500-yr)
- Zone AO
- Zone X Protected by Levee
- HUC-8 Boundary
- Lake
- Highway
- Lower West Fork Discovery County
- County Boundary

0 5,000  
Feet

**Hood County**  
 LOWER WEST FORK  
 TRINITY WATERSHED  
 May 29, 2013

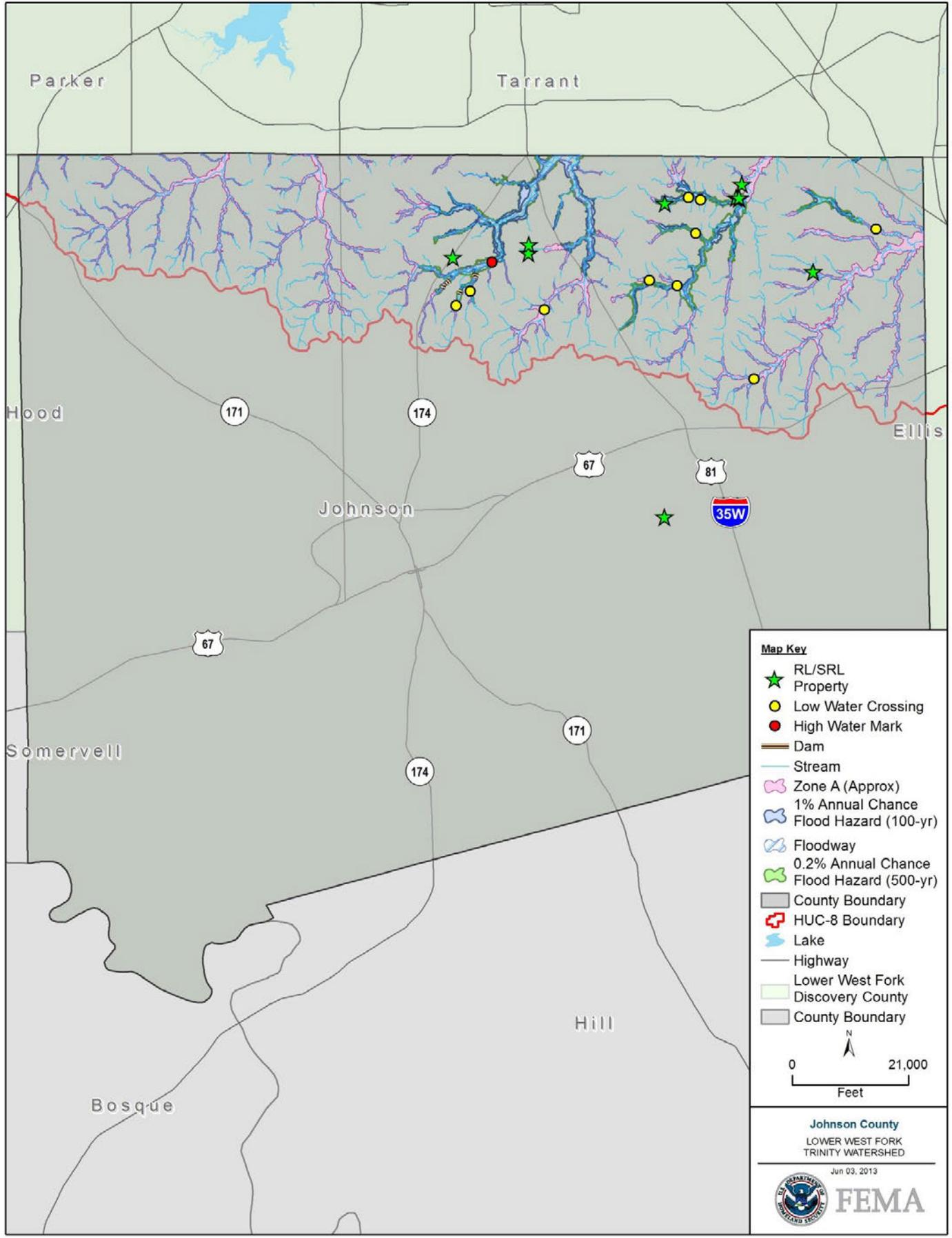




North Central Texas  
Council of Governments

**JOHNSON COUNTY**  
**Lower West Fork Trinity Watershed**  
**North Texas Discovery FY12**

<b><u>CID:</u></b>	<b>480879</b>
<b><u>Population (2010 Census):</u></b>	150,934
<b><u>NFIP Participant:</u></b>	Yes
<b><u>CRS Rating:</u></b>	N/A
<b><u>Mitigation Plan Name:</u></b>	None
<b><u>Plan Approval Date:</u></b>	-
<b><u>Plan Expiration Date:</u></b>	-
<b><u>High Water Marks:</u></b>	2
<b><u>Low Water Crossings:</u></b>	10
<b><u>DFIRM Status:</u></b>	Effective
<b><u>Effective Date:</u></b>	Johnson – 12/4/2012
<b><u>Total Stream Miles:</u></b>	448.66
<b><u>Total Zone A Miles:</u></b>	212.61
<b><u>Repetitive Loss Property Count:</u></b>	9 (1 outside watershed)
<b><u>Severe Repetitive Loss Property Count:</u></b>	2
<b><u>NFIP Policies:</u></b>	302
<b><u>NFIP Claims:</u></b>	77
<b><u>Total Losses:</u></b>	\$1,447,704
<b><u>Grants:</u></b>	Unknown
<b><u>Disaster Declarations:</u></b>	Unknown
<b><u>LiDAR:</u></b>	2010 TNRIS, 2001 NCTCOG, USGS
<b><u>Levees/Dams:</u></b>	4 dams
<b><u>Additional Comments:</u></b>	
<b><u>Congressmen:</u></b>	Rep. Roger Williams, Sen. John Cornyn, Sen. Ted Cruz



**Map Key**

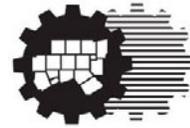
- ★ RL/SRL Property
- Low Water Crossing
- High Water Mark
- Dam
- Stream
- Zone A (Approx) 1% Annual Chance Flood Hazard (100-yr)
- 0.2% Annual Chance Flood Hazard (500-yr)
- County Boundary
- HUC-8 Boundary
- Lake
- Highway
- Lower West Fork Discovery County
- County Boundary

0 21,000  
Feet

Johnson County  
 LOWER WEST FORK  
 TRINITY WATERSHED  
 Jun 03, 2013



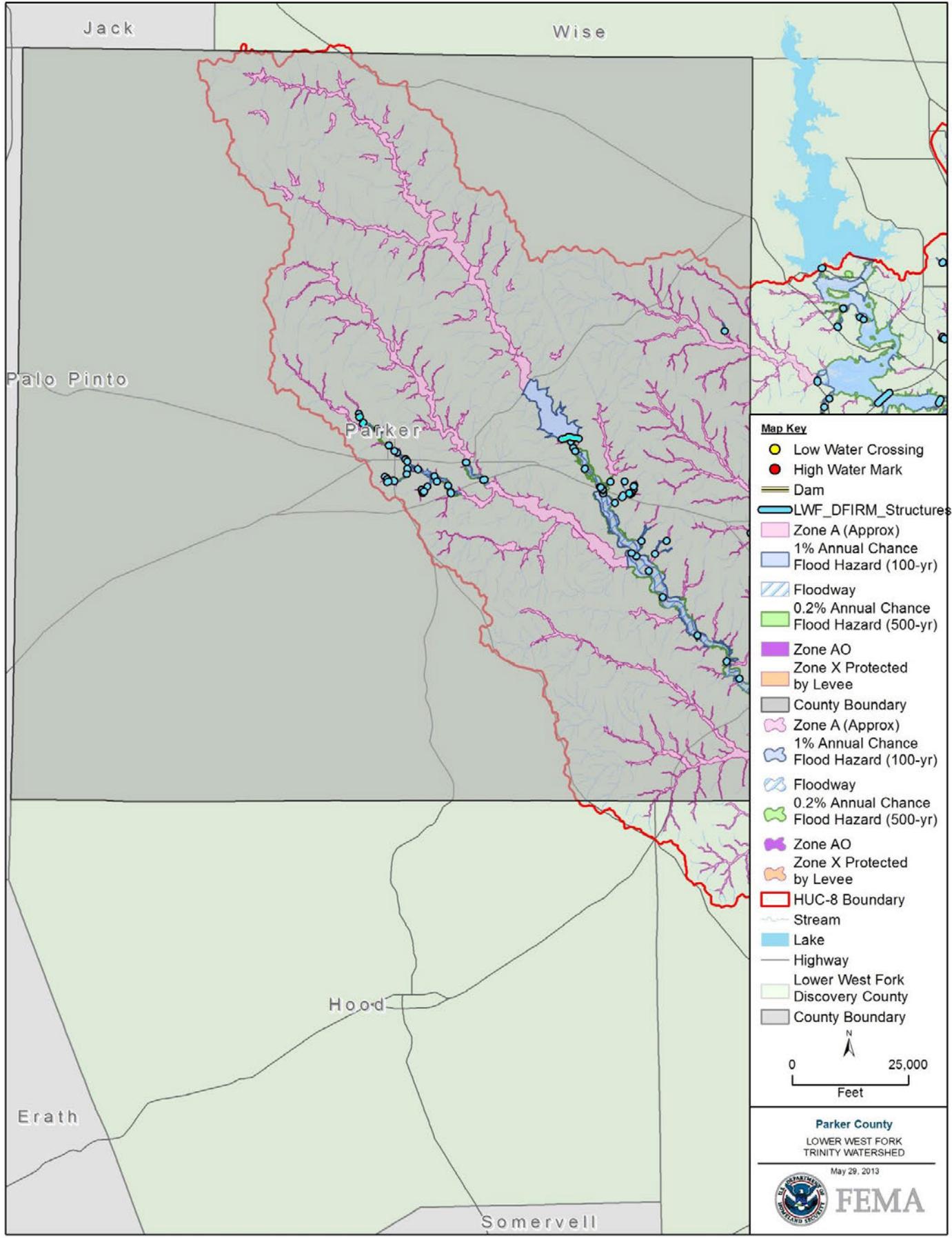
**FEMA**



North Central Texas  
Council of Governments

**PARKER COUNTY**  
**Lower West Fork Trinity Watershed**  
**North Texas Discovery FY12**

<b><u>CID:</u></b>	<b>480879</b>
<b><u>Population (2010 Census):</u></b>	116,927
<b><u>NFIP Participant:</u></b>	Yes
<b><u>CRS Rating:</u></b>	N/A
<b><u>Mitigation Plan Name:</u></b>	None
<b><u>Plan Approval Date:</u></b>	
<b><u>Plan Expiration Date:</u></b>	
<b><u>High Water Marks:</u></b>	2
<b><u>Low Water Crossings:</u></b>	10
<b><u>DFIRM Status:</u></b>	EFFECTIVE
<b><u>Effective Date:</u></b>	PARKER – 9/26/2008
<b><u>Total Stream Miles:</u></b>	906.88
<b><u>Total Zone A Miles:</u></b>	368.28
<b><u>Repetitive Loss Property Count:</u></b>	13
<b><u>Severe Repetitive Loss Property Count:</u></b>	1
<b><u>NFIP Policies:</u></b>	300
<b><u>NFIP Claims:</u></b>	96
<b><u>Total Losses:</u></b>	\$1,096,815
<b><u>Grants:</u></b>	Unknown
<b><u>Disaster Declarations:</u></b>	Unknown
<b><u>LiDAR:</u></b>	USGS/2010 TNRIS
<b><u>Levees/Dams:</u></b>	4 dams
<b><u>Additional Comments:</u></b>	
<b><u>Congressmen:</u></b>	Rep. Kay Granger, Sen. John Cornyn, Sen. Ted Cruz



**Map Key**

- Low Water Crossing
- High Water Mark
- Dam
- LWF\_DFIRM\_Structures
- Zone A (Approx)
- 1% Annual Chance Flood Hazard (100-yr)
- 0.2% Annual Chance Flood Hazard (500-yr)
- Zone AO
- Zone X Protected by Levee
- County Boundary
- Zone A (Approx)
- 1% Annual Chance Flood Hazard (100-yr)
- 0.2% Annual Chance Flood Hazard (500-yr)
- Zone AO
- Zone X Protected by Levee
- HUC-8 Boundary
- Stream
- Lake
- Highway
- Lower West Fork Discovery County
- County Boundary

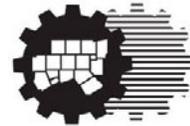
0 25,000  
Feet

N

**Parker County**  
 LOWER WEST FORK  
 TRINITY WATERSHED  
 May 29, 2013



**FEMA**

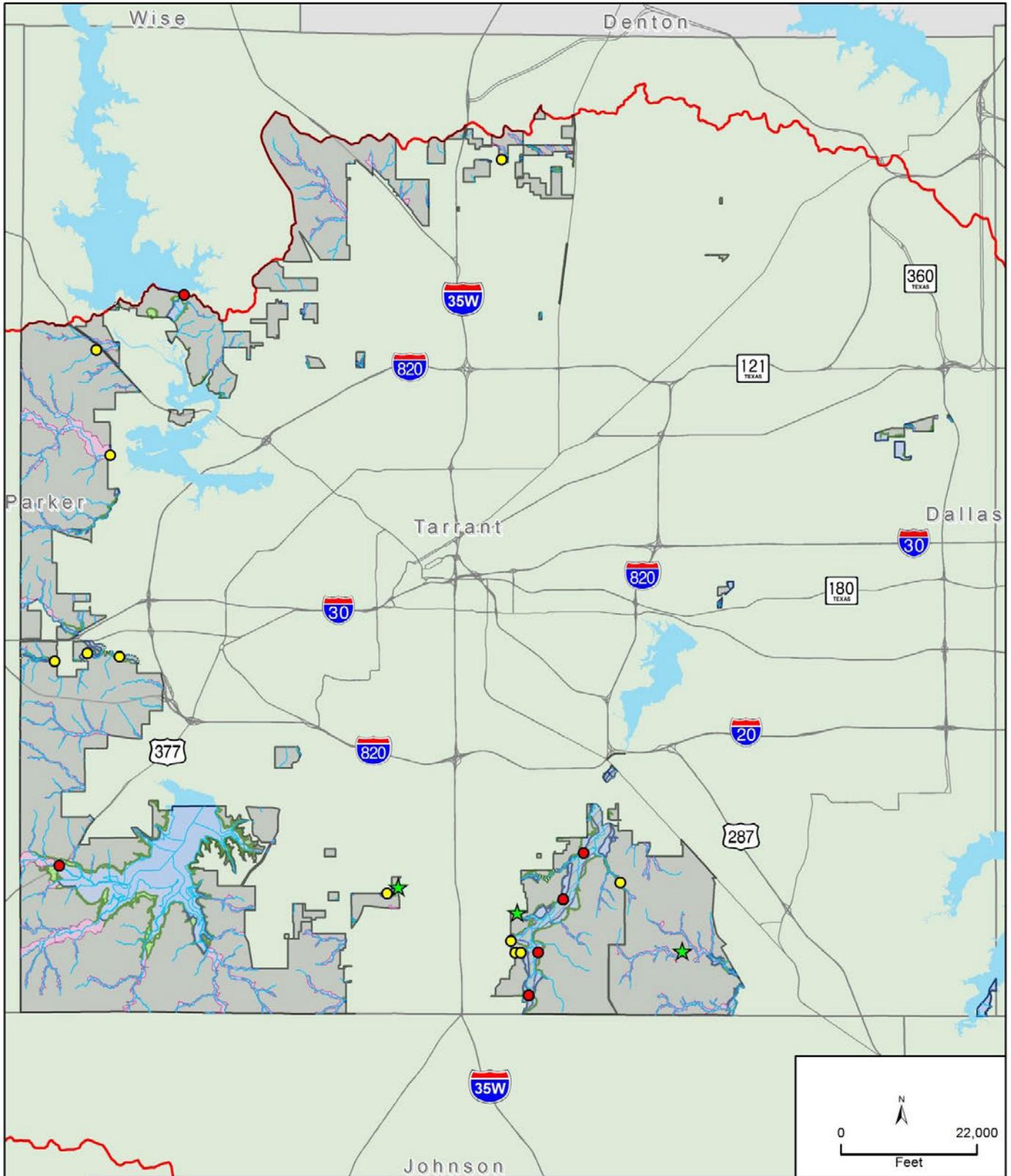


North Central Texas  
Council of Governments

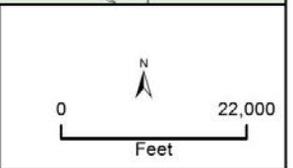
## TARRANT COUNTY

### Elm Fork Trinity/Lower West Fork Trinity Watersheds NCTCOG FY12 Discovery

<b><u>CID:</u></b>	<b>480439</b>
<b><u>Population (2010 Census):</u></b>	1,809,034
<b><u>NFIP Participant:</u></b>	Yes
<b><u>CRS Rating:</u></b>	N/A
<b><u>Mitigation Plan Name:</u></b>	Fort Worth
<b><u>Plan Approval Date:</u></b>	1/6/2009
<b><u>Plan Expiration Date:</u></b>	1/6/2014
<b><u>High Water Marks:</u></b>	0 (Elm Fork), 22 (LWF)
<b><u>Low Water Crossings:</u></b>	0 (Elm Fork), 12 (LWF)
<b><u>DFIRM Status:</u></b>	Effective
<b><u>Effective Date:</u></b>	9/25/2009
<b><u>Total Stream Miles:</u></b>	1.89 (Elm Fork), 298.07 (LWF)
<b><u>Total Zone A Miles:</u></b>	0 (Elm Fork), 141.31 (LWF)
<b><u>Repetitive Loss Property Count:</u></b>	0 (Elm Fork), 3 (LWF)
<b><u>Severe Repetitive Loss Property Count:</u></b>	0 (Elm Fork), 0 (LWF)
<b><u>NFIP Policies:</u></b>	516 (unincorporated areas)
<b><u>NFIP Claims:</u></b>	212 (unincorporated areas)
<b><u>Total Losses:</u></b>	\$3,675,284 (unincorporated areas)
<b><u>Grants:</u></b>	Unknown
<b><u>Disaster Declarations:</u></b>	Unknown
<b><u>LiDAR:</u></b>	2010 TNRIS
<b><u>Levees/Dams:</u></b>	15 dams in LWF
<b><u>Additional Comments:</u></b>	Majority of area in Lower West Fork Trinity watershed
<b><u>Congressmen:</u></b>	Reps. Marchant, Granger, Burgess, Barton and Veasey, Sens. Cornyn and Cruz



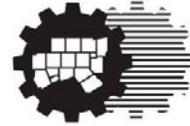
Map Key			
★ RL/SRL Property	1% Annual Chance Flood Hazard (100-yr)	Stream	Major Highways
● High Water Mark	Floodway	Boundary	Lower West Fork Discovery County
● Low Water Crossing	0.2% Annual Chance Flood Hazard (500-yr)	HUC-8 Boundary	County Boundary
— Dam		Lake	
Zone A (Approx)			



**Tarrant County**  
 LOWER WEST FORK  
 TRINITY WATERSHED  
 Jul 16, 2013



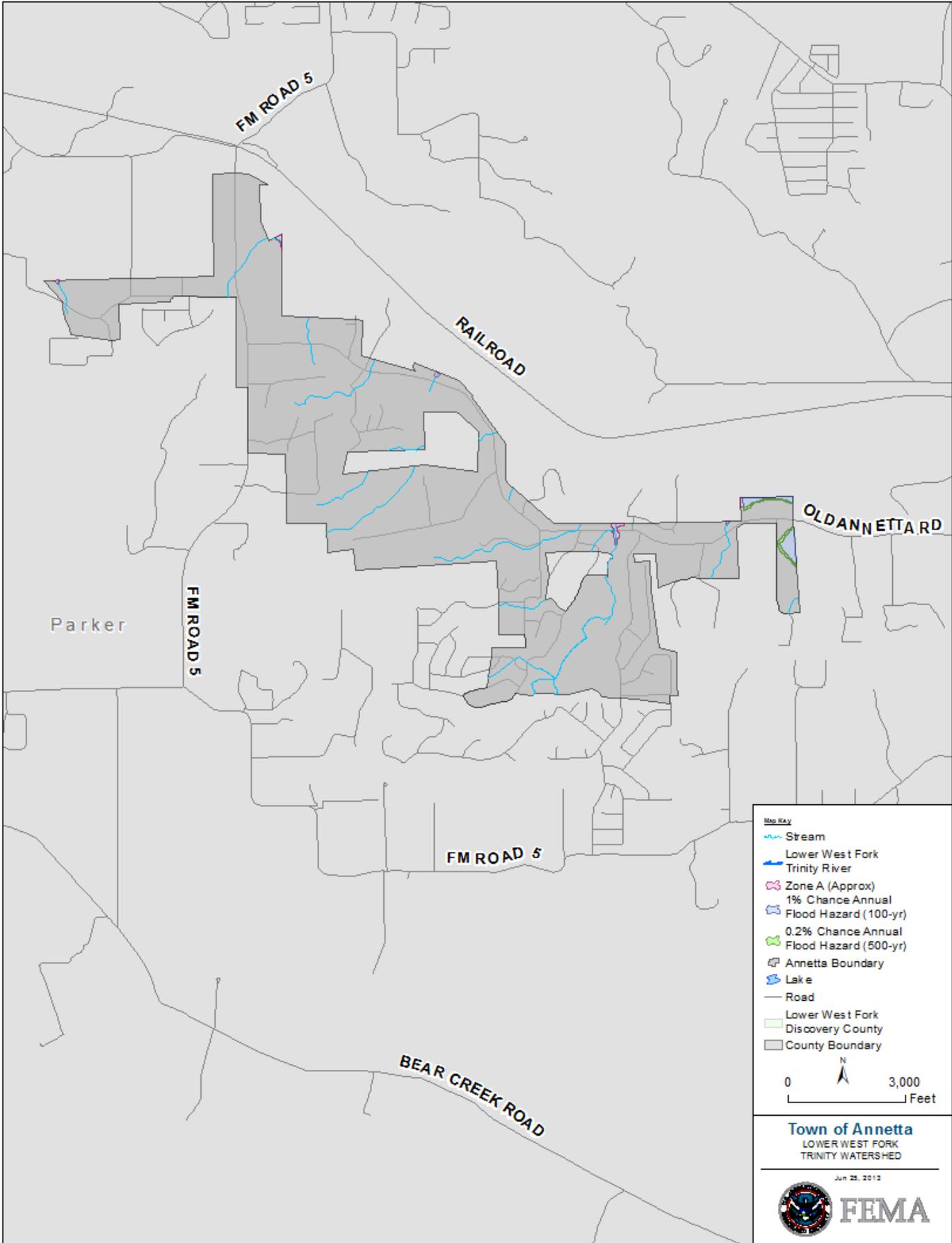
FEMA

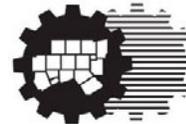


North Central Texas  
Council of Governments

**TOWN OF ANNETTA**  
Parker County  
**Lower West Fork Trinity Watershed**  
**NCTCOG FY12 Discovery**

<b><u>CID:</u></b>	<b>481660</b>
<b><u>Population (2010 Census):</u></b>	1,288
<b><u>NFIP Participant:</u></b>	Yes
<b><u>CRS Rating:</u></b>	
<b><u>Mitigation Plan Name:</u></b>	None
<b><u>Plan Approval Date:</u></b>	
<b><u>Plan Expiration Date:</u></b>	
<b><u>High Water Marks:</u></b>	0
<b><u>Low Water Crossings:</u></b>	0
<b><u>DFIRM Status:</u></b>	Effective
<b><u>Effective Date:</u></b>	Parker – 9/26/2008
<b><u>Total Stream Miles:</u></b>	5.96
<b><u>Total Zone A Miles:</u></b>	0.25
<b><u>Repetitive Loss Property Count:</u></b>	0
<b><u>Severe Repetitive Loss Property Count:</u></b>	0
<b><u>NFIP Policies:</u></b>	Unknown
<b><u>NFIP Claims:</u></b>	Unknown
<b><u>Total Losses:</u></b>	Unknown
<b><u>Grants:</u></b>	Unknown
<b><u>Disaster Declarations:</u></b>	Unknown
<b><u>LiDAR:</u></b>	2001 NCTCOG/ USGS Contours
<b><u>Levees/Dams:</u></b>	0 in DFIRM structures
<b><u>Additional Comments:</u></b>	
<b><u>Congressmen:</u></b>	Rep. Kay Granger, Sen. John Cornyn, Sen. Ted Cruz

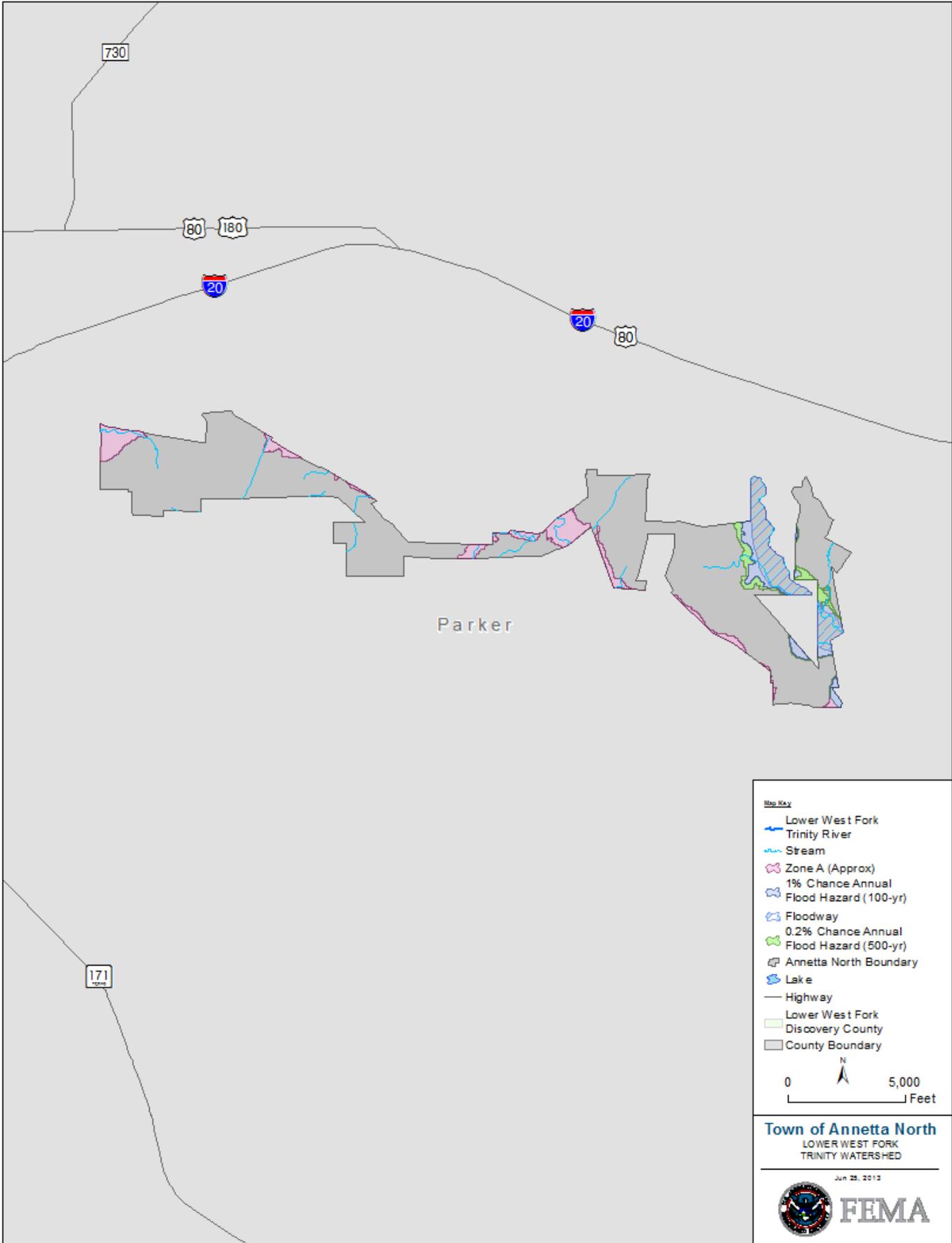




North Central Texas  
Council of Governments

**TOWN OF ANNETTA NORTH**  
Parker County  
Lower West Fork Trinity Watershed  
NCTCOG FY12 Discovery

<b>CID:</b>	<b>481664</b>
<b>Population (2010 Census):</b>	518
<b>NFIP Participant:</b>	NO
<b>CRS Rating:</b>	
<b>Mitigation Plan Name:</b>	None
<b>Plan Approval Date:</b>	
<b>Plan Expiration Date:</b>	
<b>High Water Marks:</b>	0
<b>Low Water Crossings:</b>	0
<b>DFIRM Status:</b>	Effective
<b>Effective Date:</b>	Parker – 9/26/2008
<b>Total Stream Miles:</b>	6.92
<b>Total Zone A Miles:</b>	1.78
<b>Repetitive Loss Property Count:</b>	0
<b>Severe Repetitive Loss Property Count:</b>	0
<b>NFIP Policies:</b>	Unknown
<b>NFIP Claims:</b>	Unknown
<b>Total Losses:</b>	Unknown
<b>Grants:</b>	Unknown
<b>Disaster Declarations:</b>	Unknown
<b>LiDAR:</b>	2001 NCTCOG/ USGS Contours
<b>Levees/Dams:</b>	0 in DFIRM structures
<b>Additional Comments:</b>	
<b>Congressmen:</b>	Rep. Kay Granger, Sen. John Cornyn, Sen. Ted Cruz



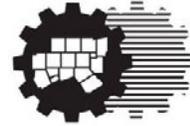
**Map Key**

- Lower West Fork Trinity River
- Stream
- Zone A (Approx) 1% Chance Annual Flood Hazard (100-yr)
- Floodway 0.2% Chance Annual Flood Hazard (500-yr)
- Annetta North Boundary
- Lake
- Highway
- Lower West Fork Discovery County
- County Boundary

0 5,000 Feet

**Town of Annetta North**  
 LOWER WEST FORK  
 TRINITY WATERSHED

Jun 28, 2013



North Central Texas  
Council of Governments

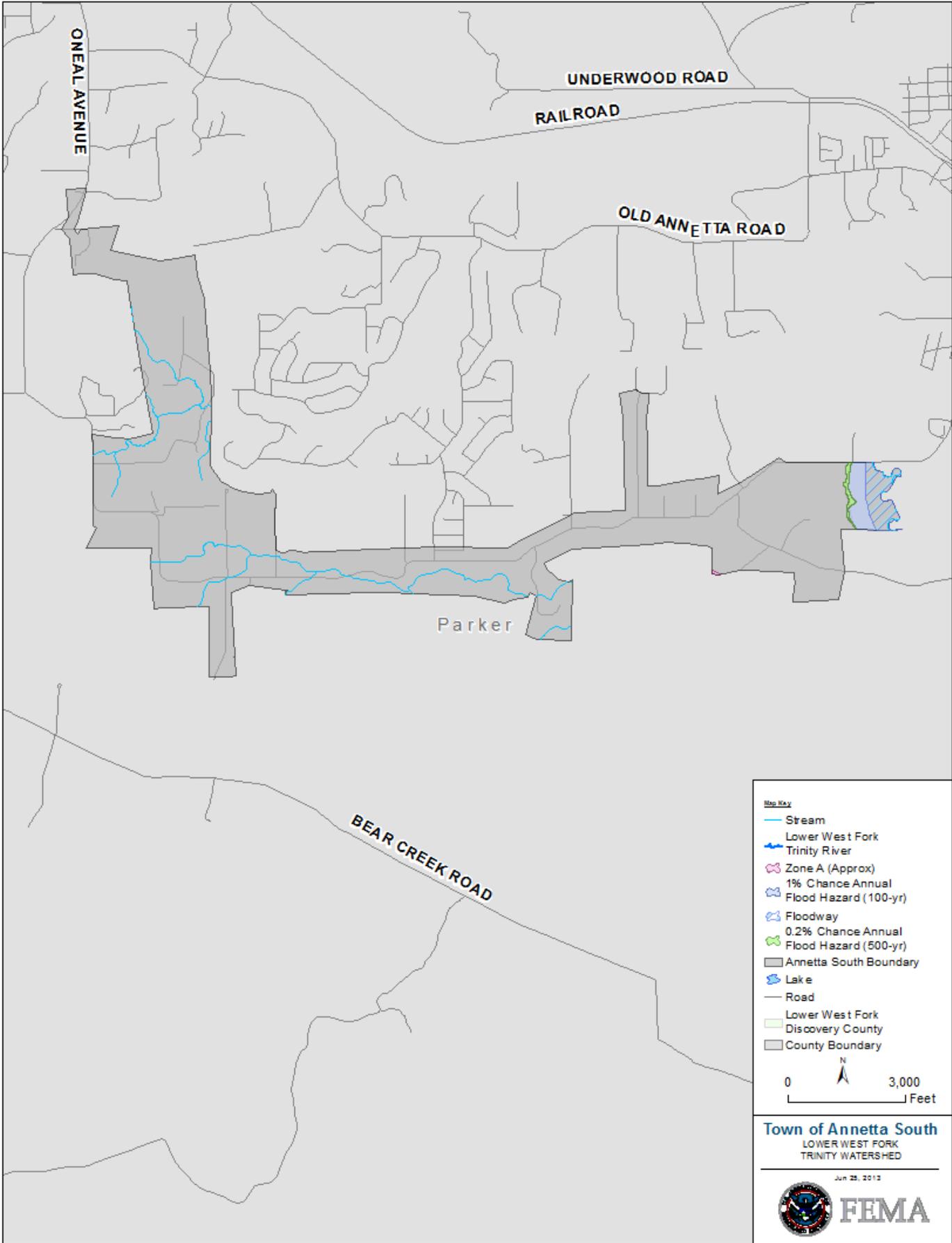
## TOWN OF ANNETTA SOUTH

Parker County

Lower West Fork Trinity Watershed

NCTCOG FY12 Discovery

<b>CID:</b>	<b>481665</b>
<b>Population (2010 Census):</b>	526
<b>NFIP Participant:</b>	Yes
<b>CRS Rating:</b>	
<b>Mitigation Plan Name:</b>	None
<b>Plan Approval Date:</b>	
<b>Plan Expiration Date:</b>	
<b>High Water Marks:</b>	0
<b>Low Water Crossings:</b>	0
<b>DFIRM Status:</b>	Effective
<b>Effective Date:</b>	Parker – 9/26/2008
<b>Total Stream Miles:</b>	5.70
<b>Total Zone A Miles:</b>	0
<b>Repetitive Loss Property Count:</b>	0
<b>Severe Repetitive Loss Property Count:</b>	0
<b>NFIP Policies:</b>	1
<b>NFIP Claims:</b>	2
<b>Total Losses:</b>	Unknown
<b>Grants:</b>	Unknown
<b>Disaster Declarations:</b>	Unknown
<b>LiDAR:</b>	2001 NCTCOG/ USGS Contours
<b>Levees/Dams:</b>	0 in DFIRM structures
<b>Additional Comments:</b>	
<b>Congressmen:</b>	Rep. Kay Granger, Sen. John Cornyn, Sen. Ted Cruz



**Map Key**

- Stream
- Lower West Fork Trinity River
- Zone A (Approx) 1% Chance Annual Flood Hazard (100-yr)
- Floodway 0.2% Chance Annual Flood Hazard (500-yr)
- Annetta South Boundary
- Lake
- Road
- Lower West Fork Discovery County
- County Boundary

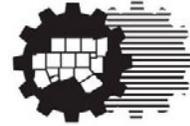
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**Town of Annetta South**  
 LOWER WEST FORK TRINITY WATERSHED

Jun 28, 2013



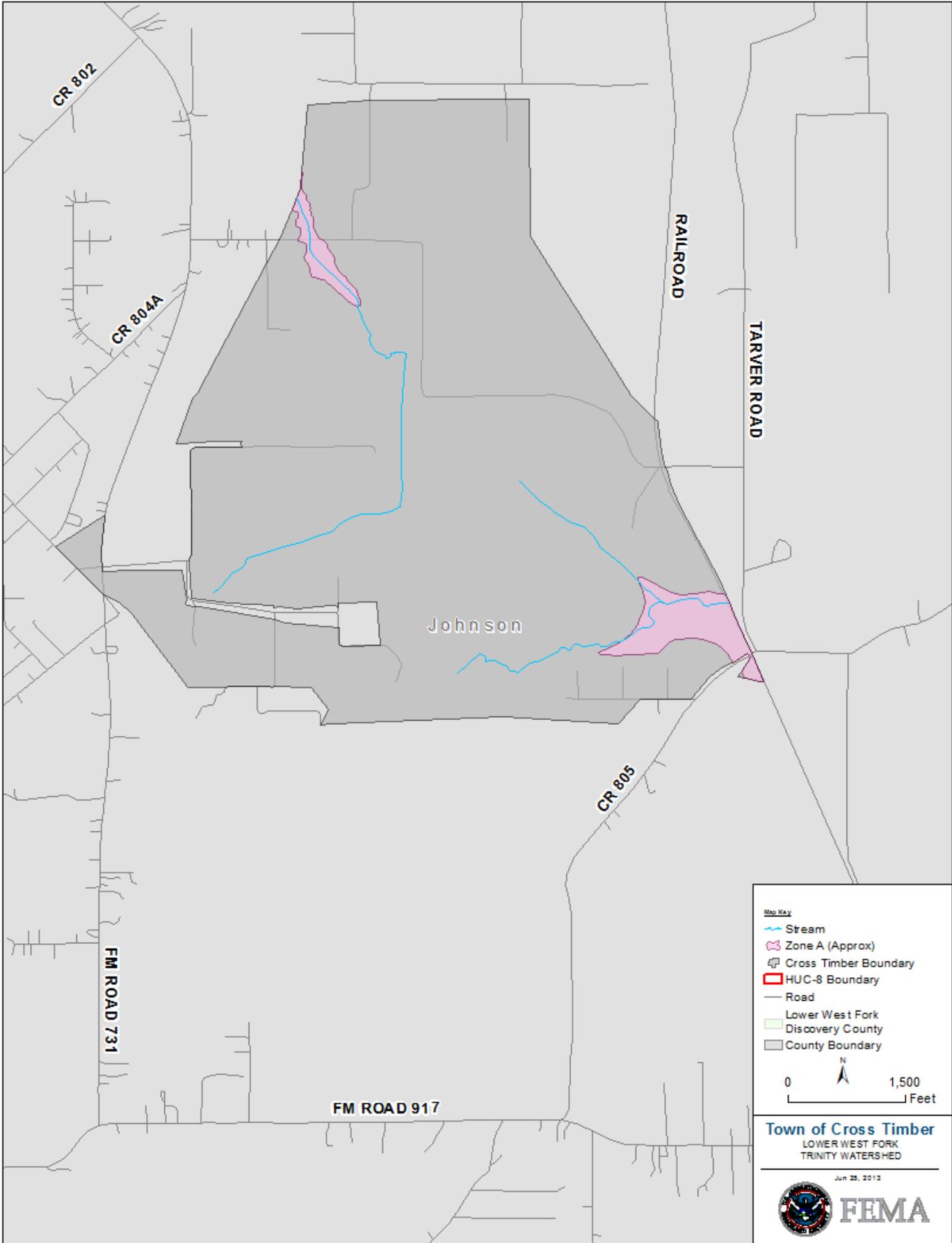
**FEMA**

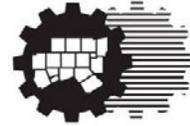


North Central Texas  
Council of Governments

**TOWN OF CROSS TIMBER**  
Johnson County  
**Lower West Fork Trinity Watershed**  
NCTCOG FY12 Discovery

<b>CID:</b>	<b>481685</b>
<b>Population (2010 Census):</b>	268
<b>NFIP Participant:</b>	Yes
<b>CRS Rating:</b>	
<b>Mitigation Plan Name:</b>	None
<b>Plan Approval Date:</b>	
<b>Plan Expiration Date:</b>	
<b>High Water Marks:</b>	0
<b>Low Water Crossings:</b>	0
<b>DFIRM Status:</b>	Effective
<b>Effective Date:</b>	Johnson – 12/4/12
<b>Total Stream Miles:</b>	2.69
<b>Total Zone A Miles:</b>	0.74
<b>Repetitive Loss Property Count:</b>	0
<b>Severe Repetitive Loss Property Count:</b>	0
<b>NFIP Policies:</b>	Unknown
<b>NFIP Claims:</b>	Unknown
<b>Total Losses:</b>	Unknown
<b>Grants:</b>	Unknown
<b>Disaster Declarations:</b>	Unknown
<b>LiDAR:</b>	2001 NCTCOG/USGS contours
<b>Levees/Dams:</b>	0 in DFIRM structures
<b>Additional Comments:</b>	
<b>Congressmen:</b>	Rep. Williams, Sen. John Cornyn, Sen. Ted Cruz

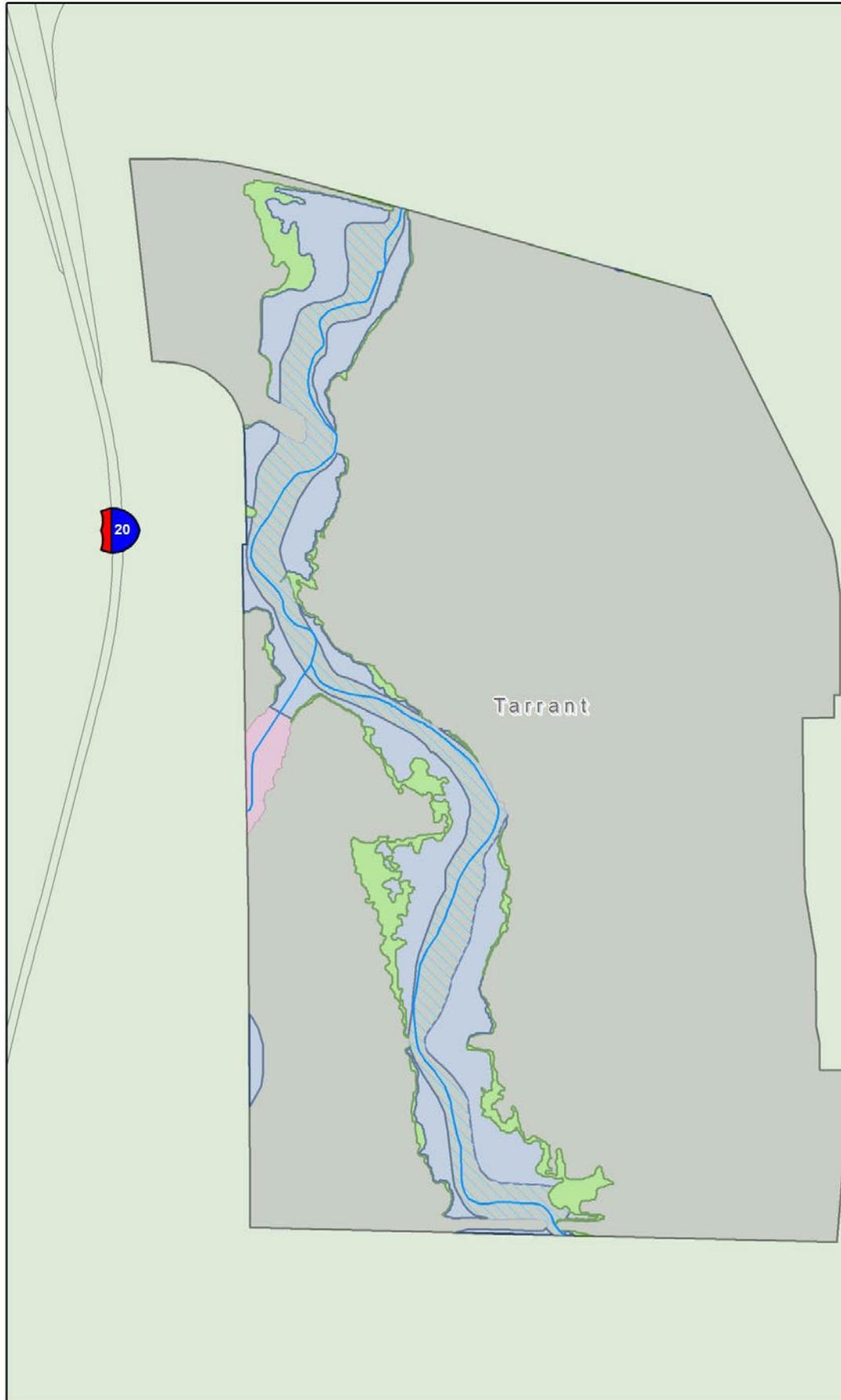




North Central Texas  
Council of Governments

**TOWN OF EDGECLIFF VILLAGE**  
**Lower West Fork Trinity Watershed**  
**NCTCOG FY12 Discovery**

<b><u>CID:</u></b>	<b>480592</b>
<b><u>Population (2010 Census):</u></b>	<b>2,776</b>
<b><u>NFIP Participant:</u></b>	<b>Unknown</b>
<b><u>CRS Rating:</u></b>	<b>Unknown</b>
<b><u>Mitigation Plan Name:</u></b>	<b>Fort Worth</b>
<b><u>Plan Approval Date:</u></b>	<b>1/6/2009</b>
<b><u>Plan Expiration Date:</u></b>	<b>1/6/2014</b>
<b><u>High Water Marks:</u></b>	<b>0</b>
<b><u>Low Water Crossings:</u></b>	<b>0</b>
<b><u>DFIRM Status:</u></b>	<b>Effective</b>
<b><u>Effective Date:</u></b>	<b>Tarrant – Sept. 25, 2009</b>
<b><u>Total Stream Miles:</u></b>	<b>2.20</b>
<b><u>Total Zone A Miles:</u></b>	<b>0.16</b>
<b><u>Repetitive Loss Property Count:</u></b>	<b>1</b>
<b><u>Severe Repetitive Loss Property Count:</u></b>	<b>0</b>
<b><u>NFIP Policies:</u></b>	<b>38</b>
<b><u>NFIP Claims:</u></b>	<b>15</b>
<b><u>Total Losses:</u></b>	<b>\$63605</b>
<b><u>Grants:</u></b>	<b>Unknown</b>
<b><u>Disaster Declarations:</u></b>	<b>Unknown</b>
<b><u>LiDAR:</u></b>	<b>2010 TNRIS LiDAR</b>
<b><u>Levees/Dams:</u></b>	<b>0 levees , 0 dams</b>
<b><u>Additional Comments:</u></b>	
<b><u>Congressmen:</u></b>	<b>Rep. Kay Granger, Sen. John Cornyn, Sen. Ted Cruz</b>



**Map Key**

- ★ RL/SRL Property
- High Water Mark
- Low Water Crossing
- ~ Stream
- Dam
- - - Levee
- Zone A (Approx)
- 1% Chance Annual Flood Hazard (100-yr)
- 0.2% Chance Annual Flood Hazard (500-yr)
- Zone AH
- Zone X
- Protected by Levee
- City Boundary
- Major Highway
- Lower West Fork Discovery County
- County Boundary

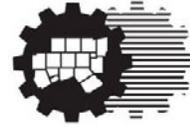
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**Town of Edgecliff Village**  
 LOWER WEST FORK  
 TRINITY WATERSHED

May 26, 2013



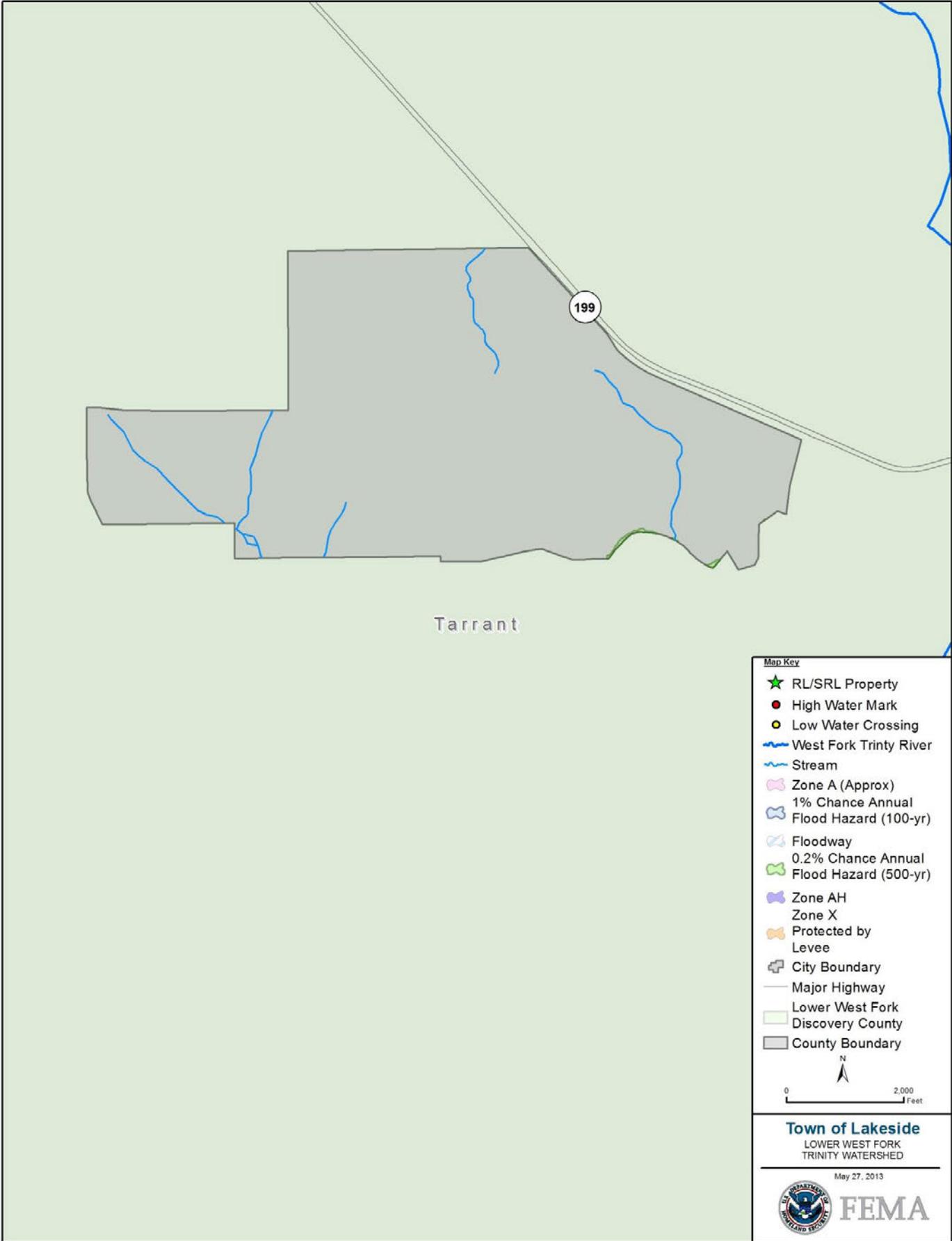
**FEMA**



North Central Texas  
Council of Governments

**TOWN OF LAKESIDE**  
**Lower West Fork Trinity Watershed**  
**NCTCOG FY12 Discovery**

<b><u>CID:</u></b>	<b>480604</b>
<b><u>Population (2010 Census):</u></b>	997
<b><u>NFIP Participant:</u></b>	No
<b><u>CRS Rating:</u></b>	NA
<b><u>Mitigation Plan Name:</u></b>	Fort Worth
<b><u>Plan Approval Date:</u></b>	1/6/2009
<b><u>Plan Expiration Date:</u></b>	1/6/2014
<b><u>High Water Marks:</u></b>	0
<b><u>Low Water Crossings:</u></b>	0
<b><u>DFIRM Status:</u></b>	Effective
<b><u>Effective Date:</u></b>	Tarrant – Sept. 25, 2009
<b><u>Total Stream Miles:</u></b>	2.54
<b><u>Total Zone A Miles:</u></b>	0
<b><u>Repetitive Loss Property Count:</u></b>	0
<b><u>Severe Repetitive Loss Property Count:</u></b>	0
<b><u>NFIP Policies:</u></b>	6
<b><u>NFIP Claims:</u></b>	0
<b><u>Total Losses:</u></b>	\$0
<b><u>Grants:</u></b>	Unknown
<b><u>Disaster Declarations:</u></b>	Unknown
<b><u>LiDAR:</u></b>	2010 TNRIS LiDAR
<b><u>Levees/Dams:</u></b>	0 levees, 0 dams
<b><u>Additional Comments:</u></b>	
<b><u>Congressmen:</u></b>	Rep. Kay Granger, Sen. John Cornyn, Sen. Ted Cruz



Tarrant

**Map Key**

- ★ RL/SRL Property
- High Water Mark
- Low Water Crossing
- West Fork Trinity River
- Stream
- Zone A (Approx)  
1% Chance Annual  
Flood Hazard (100-yr)
- Floodway  
0.2% Chance Annual  
Flood Hazard (500-yr)
- Zone AH
- Zone X
- Protected by  
Levee
- City Boundary
- Major Highway
- Lower West Fork  
Discovery County
- County Boundary

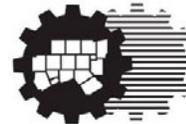
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**Town of Lakeside**  
LOWER WEST FORK  
TRINITY WATERSHED

May 27, 2013





North Central Texas  
Council of Governments

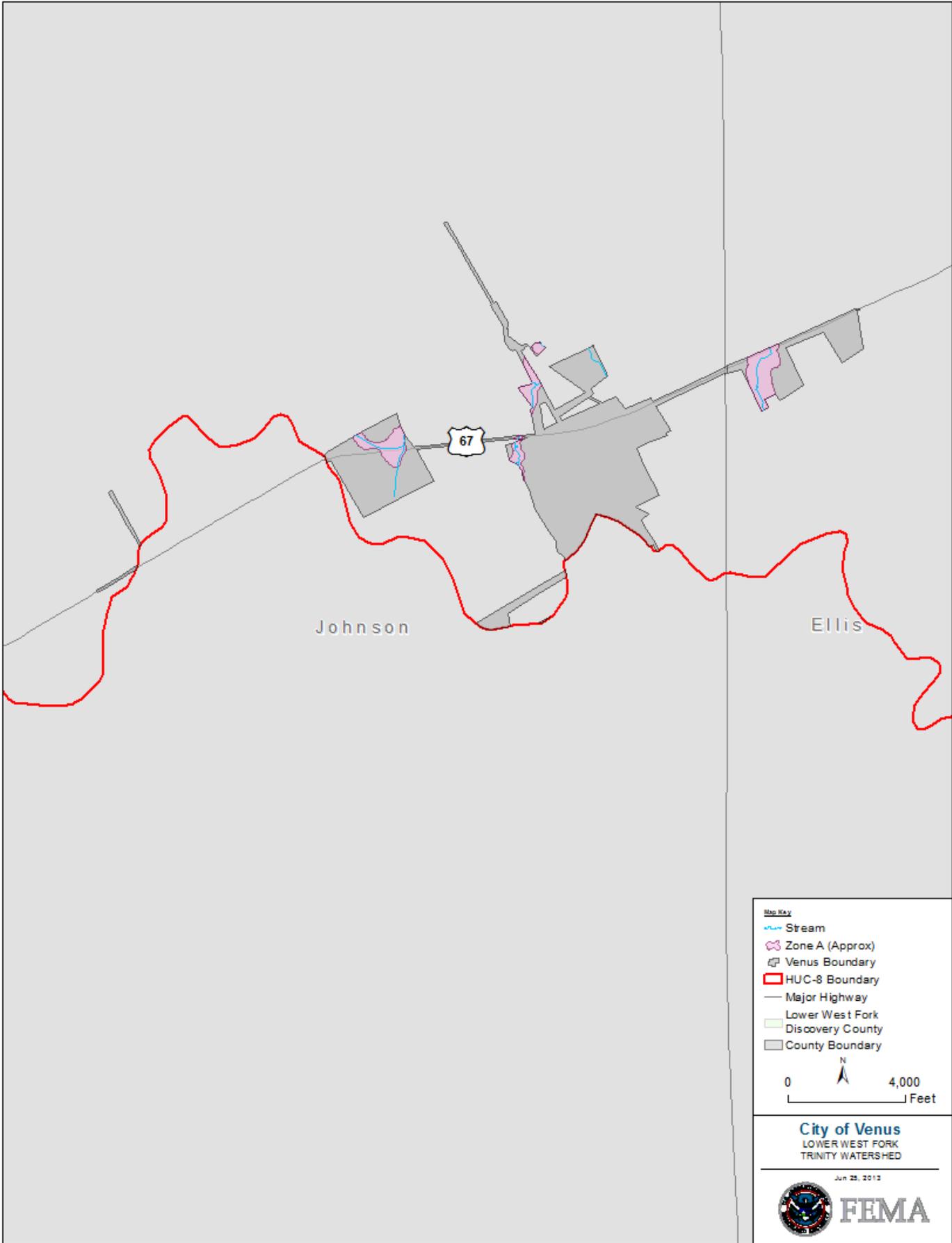
## TOWN OF WESTOVER HILLS

Tarrant County

Lower West Fork Trinity Watershed

NCTCOG FY12 Discovery

<b><u>CID:</u></b>	<b>480615</b>
<b><u>Population (2010 Census):</u></b>	682
<b><u>NFIP Participant:</u></b>	Yes
<b><u>CRS Rating:</u></b>	
<b><u>Mitigation Plan Name:</u></b>	Fort Worth
<b><u>Plan Approval Date:</u></b>	1/6/2009
<b><u>Plan Expiration Date:</u></b>	1/6/2016
<b><u>High Water Marks:</u></b>	0
<b><u>Low Water Crossings:</u></b>	0
<b><u>DFIRM Status:</u></b>	Effective
<b><u>Effective Date:</u></b>	Tarrant – 9/25/09
<b><u>Total Stream Miles:</u></b>	1.29
<b><u>Total Zone A Miles:</u></b>	0
<b><u>Repetitive Loss Property Count:</u></b>	1
<b><u>Severe Repetitive Loss Property Count:</u></b>	0
<b><u>NFIP Policies:</u></b>	4
<b><u>NFIP Claims:</u></b>	Unknown
<b><u>Total Losses:</u></b>	Unknown
<b><u>Grants:</u></b>	Unknown
<b><u>Disaster Declarations:</u></b>	Unknown
<b><u>LiDAR:</u></b>	2010 TNRIS
<b><u>Levees/Dams:</u></b>	
<b><u>Additional Comments:</u></b>	Southwest of West Fork Trinity levee system
<b><u>Congressmen:</u></b>	Rep. Granger, Sen. John Cornyn, Sen. Ted Cruz



**Map Key**

- Stream
- Zone A (Approx)
- Venus Boundary
- HUC-8 Boundary
- Major Highway
- Lower West Fork
- Discovery County
- County Boundary

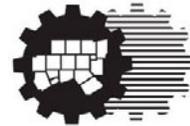
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**City of Venus**  
LOWER WEST FORK  
TRINITY WATERSHED

Jun 28, 2013



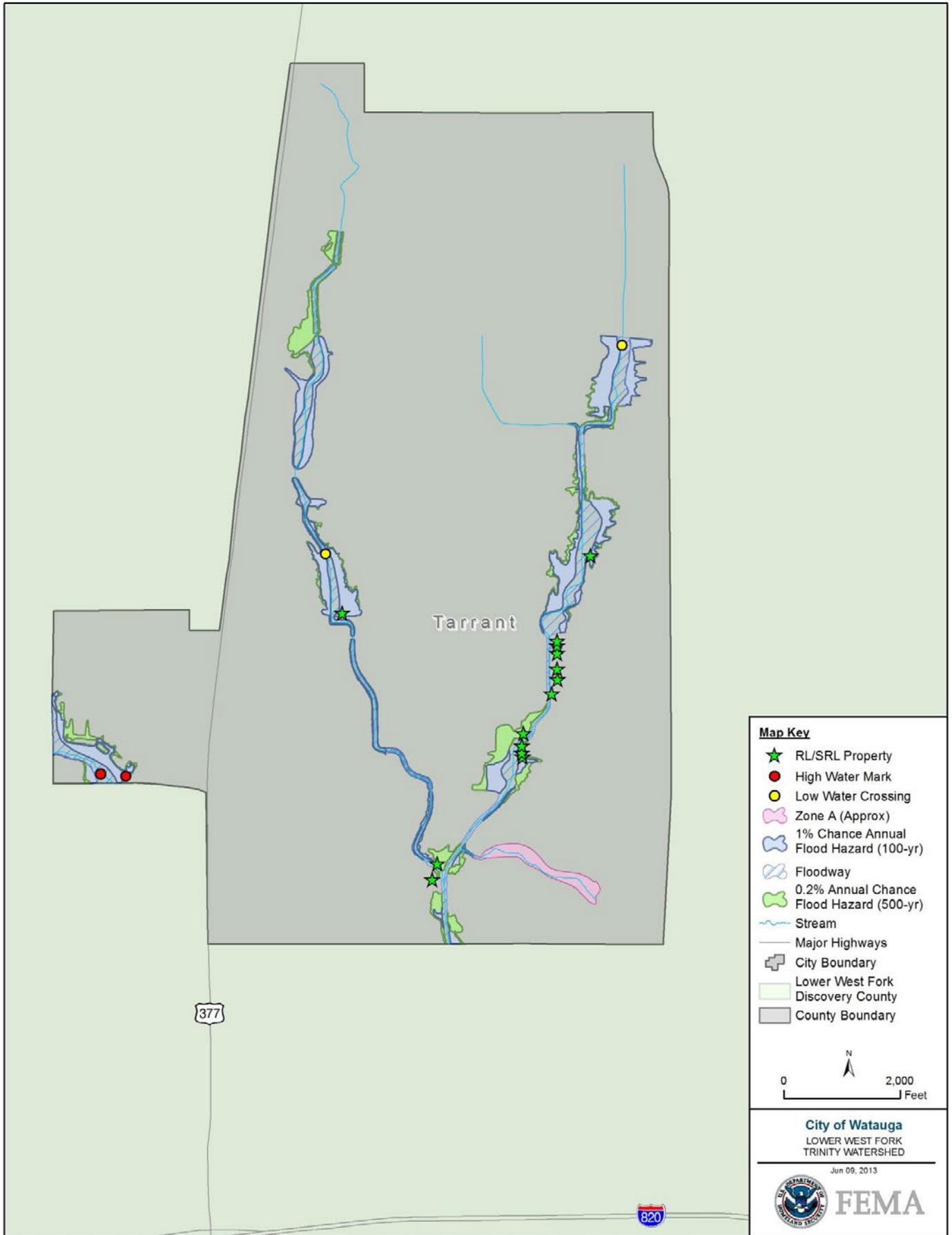
**FEMA**



North Central Texas  
Council of Governments

**City of Watauga**  
**Tarrant County**  
**Lower West Fork Trinity Watershed**  
**NCTCOG FY12 Discovery**

<b><u>CID:</u></b>	<b>480613</b>
<b><u>Population (2010 Census):</u></b>	<b>23,497</b>
<b><u>NFIP Participant:</u></b>	<b>Yes</b>
<b><u>CRS Rating:</u></b>	<b>n/a</b>
<b><u>Mitigation Plan Name:</u></b>	<b>None</b>
<b><u>Plan Approval Date:</u></b>	<b>n/a</b>
<b><u>Plan Expiration Date:</u></b>	<b>n/a</b>
<b><u>High Water Marks:</u></b>	<b>2</b>
<b><u>Low Water Crossings:</u></b>	<b>2</b>
<b><u>DFIRM Status:</u></b>	<b>Effective</b>
<b><u>Effective Date:</u></b>	<b>Tarrant – 9/25/2009</b>
<b><u>Total Stream Miles:</u></b>	<b>7.19</b>
<b><u>Total Zone A Miles:</u></b>	<b>0.21</b>
<b><u>Repetitive Loss Property Count:</u></b>	<b>14</b>
<b><u>Severe Repetitive Loss Property Count:</u></b>	<b>0</b>
<b><u>NFIP Policies:</u></b>	<b>109</b>
<b><u>NFIP Claims:</u></b>	<b>84</b>
<b><u>Total Losses:</u></b>	<b>\$530,214</b>
<b><u>Grants:</u></b>	<b>Unknown</b>
<b><u>Disaster Declarations:</u></b>	<b>Unknown</b>
<b><u>LiDAR:</u></b>	<b>2010 TNRIS</b>
<b><u>Levees/Dams:</u></b>	<b>0 in DFIRM structures</b>
<b><u>Additional Comments:</u></b>	
<b><u>Congressmen:</u></b>	<b>Senators Ted Cruz and John Cornyn, Rep. Joe Barton</b>



**Map Key**

- ★ RL/SRL Property
- High Water Mark
- Low Water Crossing
- Zone A (Approx)
- 1% Chance Annual Flood Hazard (100-yr)
- Floodway
- 0.2% Annual Chance Flood Hazard (500-yr)
- Stream
- Major Highways
- City Boundary
- Lower West Fork Discovery County
- County Boundary

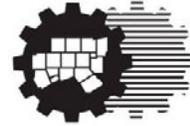
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**City of Watauga**  
 LOWER WEST FORK  
 TRINITY WATERSHED

Jun 09, 2013



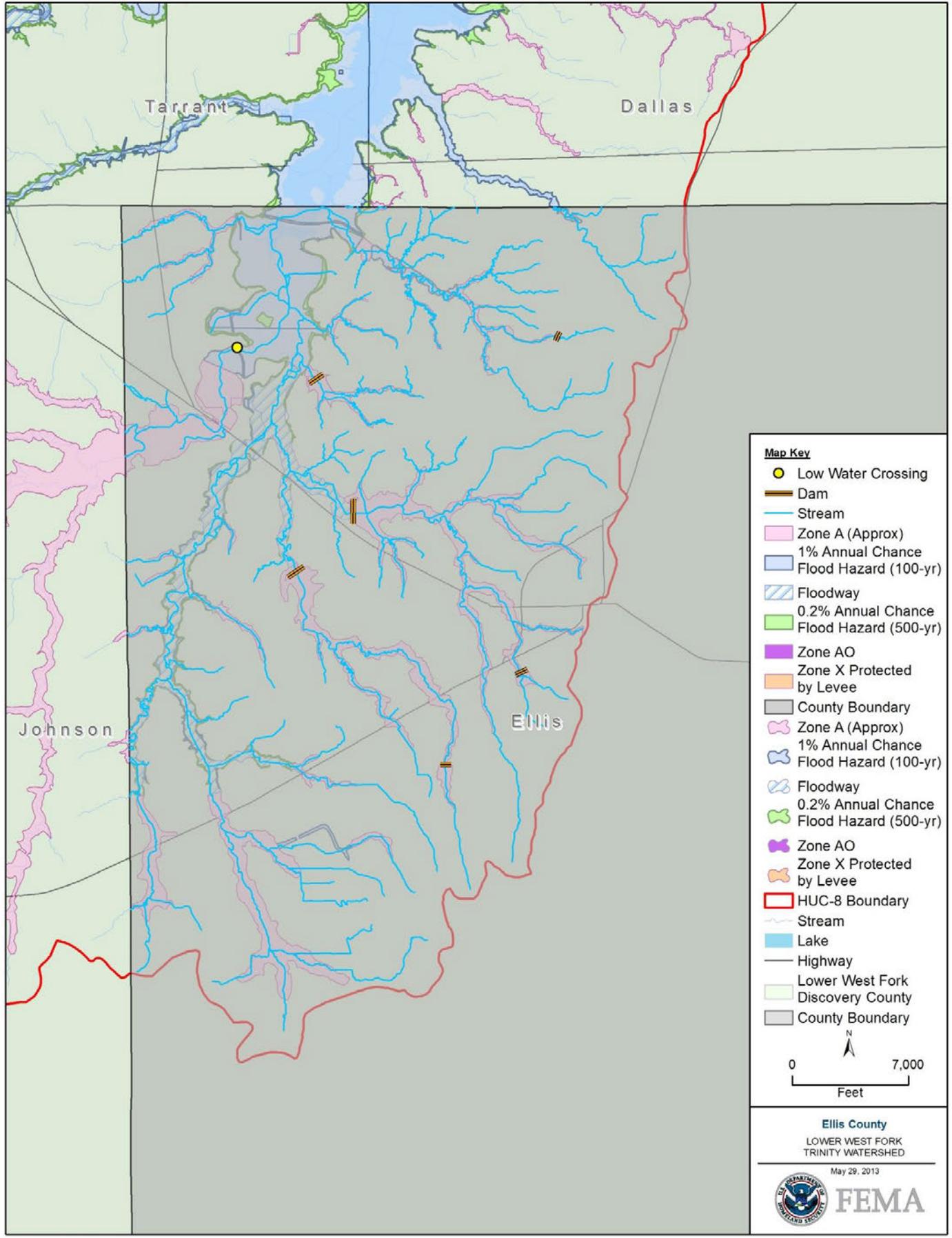
**FEMA**



North Central Texas  
Council of Governments

**CITY OF SAGINAW**  
**Lower West Fork Trinity Watershed**  
**North Texas Discovery FY12**

<b><u>CID:</u></b>	<b>480610</b>
<b><u>Population (2010 Census):</u></b>	149,610
<b><u>NFIP Participant:</u></b>	Yes
<b><u>CRS Rating:</u></b>	N/A
<b><u>Mitigation Plan Name:</u></b>	Fort Worth
<b><u>Plan Approval Date:</u></b>	1/6/2009
<b><u>Plan Expiration Date:</u></b>	1/6/2014
<b><u>High Water Marks:</u></b>	0
<b><u>Low Water Crossings:</u></b>	2
<b><u>DFIRM Status:</u></b>	Effective
<b><u>Effective Date:</u></b>	9/25/2009
<b><u>Total Stream Miles:</u></b>	135.53
<b><u>Total Zone A Miles:</u></b>	53.53
<b><u>Repetitive Loss Property Count:</u></b>	0
<b><u>Severe Repetitive Loss Property Count:</u></b>	0
<b><u>NFIP Policies:</u></b>	137
<b><u>NFIP Claims:</u></b>	33
<b><u>Total Losses:</u></b>	\$309,664
<b><u>Grants:</u></b>	Unknown
<b><u>Disaster Declarations:</u></b>	Unknown
<b><u>LiDAR:</u></b>	2009 Grand Prairie LiDAR
<b><u>Levees/Dams:</u></b>	6 dams
<b><u>Additional Comments:</u></b>	
<b><u>Congressmen:</u></b>	Rep. Joe Barton, Sen. John Cornyn, Sen. Ted Cruz



**Map Key**

- Low Water Crossing
- ▬ Dam
- Stream
- Zone A (Approx) 1% Annual Chance Flood Hazard (100-yr)
- ▨ Floodway 0.2% Annual Chance Flood Hazard (500-yr)
- Zone AO
- Zone X Protected by Levee
- County Boundary
- Zone A (Approx) 1% Annual Chance Flood Hazard (100-yr)
- ▨ Floodway 0.2% Annual Chance Flood Hazard (500-yr)
- Zone AO
- Zone X Protected by Levee
- HUC-8 Boundary
- Stream
- Lake
- Highway
- Lower West Fork Discovery County
- County Boundary

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Feet

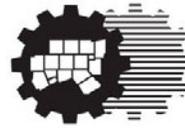
**Ellis County**  
 LOWER WEST FORK  
 TRINITY WATERSHED  
 May 29, 2013



**FEMA**

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# Community Data Questionnaires



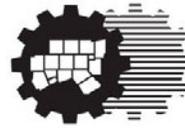
## North Texas Discovery Data Questionnaire

Community Name: City of Arlington Texas    CID: 485454

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, please let us know if you have the following information which we will coordinate with you to collect:

Data Item	Comments/Notes
Comments on the accuracy of the current floodplain mapping?	The accuracy of the current floodplain mapping is quite suspect. The hydrology and hydraulics for the majority of the City are more than 40 years old and do not reflect the impacts of significant urbanization.
Does your community participate in CRS? What is the community's current rating?	Yes. The City currently had a CRS Rating of 7.
Available topographic data, ongoing or future topographic acquisition efforts	2009 TNIRIS LiDAR Data. The City participates in topographic data updates coordinated by the NCTCOG.
Local Hazard Mitigation Plan? If so, what is the name, approval and expiration date?	Yes: Hazard Mitigation Action Plan for the City of Arlington, approved 10/15/2009. Renewal Date is 10/15/2014.
Completed or In Progress Hazard Mitigation Projects?	Multiple Repetitive Loss Properties acquired and demolished. Ongoing program to acquire and demolish Severe Repetitive Loss properties.
Completed or In Progress Capital Improvements Program (CIP) projects that involve flood hazard reduction?	Various CIP projects that have been identified in the City's Watershed Plans to reduce and mitigate flood risks. Several CIP projects that have been recently completed address flood risk reduction in unmapped areas.
Master Drainage Plan(s), floodplain studies, existing/needed?	Cottonwood Creek and Fish Creek Watersheds Flood Protection Plan (2012) Rush Creek Watershed Plan (2013) Johnson Creek Watershed Plan (2014)
Stormwater management plan?	YES
Structural and flooding issues not represented on effective DFIRMs?	YES
Any known undersized culverts or narrow bridge openings that restrict flow and cause flooding, or overtop frequently?	YES. Field Operations Staff have a list of know issues where overtopping occurs frequently and where debris issues can cause addition flood risk.
Any information on new construction of culverts and bridges?	The City has revised its practices to obtain a CLOMR and LOMR for all bridge and culvert rebuilds or new structures.
Neighborhoods or Roads that Receive Repetitive Flooding (Repetitive Loss and Severe Repetitive Loss)?	Repetitive loss areas are identified in the watershed plans and FEMA loss data. Road overtopping and frequency of overtopping are evaluated in the watershed plans.
Areas of historical flooding, high water marks (HWMs)/low water crossings (LWCs)?	
Information on existing dams/levees, new dams/levees or dams/levees not shown on DFIRM (and condition, if known)	
Information from dam Emergency Action Plans (EAPs)	A EAP exists for Lake Arlington has was recently updated.
Does your community use GIS?	YES
GIS Data Layers to include if available:	
• Hydrography	Use from other sources
• New Topographic or Survey Data	Use NCTCOG LiDAR data
• Location of critical facilities in flood hazard area	
• Locations of Previous Flood Damage	
▪ Non-SFHA Flooding Boundaries	

• Location of Dams and Levees	No known levees.
• Land Use/Zoning	YES
• Culvert/Bridge Inventories	YES
Recent Letters of Map Revision (LOMRs) or Conditional Letters of Map Revision (CLOMRs)?	The City maintains a LOMR & CLOMR library that includes a copy of all submittals.
Recent Letters of Map Amendment (LOMAs)?	All LOMA's are kept on file.
Hazard Mitigation Grants? If so, when, amount and purpose?	FMA grant in 2008-2009 for acquisition of Repetitive Loss Properties. SRL Grant in 2011 for acquisition of SRL and RL Properties.
Any disaster declarations? If so, when and what storm event?	None that have recently benefited the City.



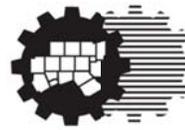
## North Texas Discovery Data Questionnaire

Community Name: **City of Benbrook – collected by Eric Hajek and Jessica Baker**

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, please let us know if you have the following information which we will coordinate with you to collect:

Data Item	Comments/Notes
Comments on the accuracy of the current floodplain mapping?	1 area – see maps
Does your community participate in CRS? What is the community's current rating?	Yes, Class 6
Available topographic data, ongoing or future topographic acquisition efforts	Non
Local Hazard Mitigation Plan? If so, what is the name, approval and expiration date?	Yes
Completed or In Progress Hazard Mitigation Projects?	Yes – see map, No projects in form, see website
Completed or In Progress Capital Improvements Program (CIP) projects that involve flood hazard reduction?	Stormwater Utility funds 1 project annually
Master Drainage Plan(s), floodplain studies, existing/needed?	Comp. Plan; late 1990s, on website
Stormwater management plan?	See website
Structural and flooding issues not represented on effective DFIRMs?	Isolated
Any known undersized culverts or narrow bridge openings that restrict flow and cause flooding, or overtop frequently?	In plan, big enough for 50yr but not 100yr
Any information on new construction of culverts and bridges?	See above
Neighborhoods or Roads that Receive Repetitive Flooding (Repetitive Loss and Severe Repetitive Loss)?	See map
Areas of historical flooding, high water marks (HWMs)/low water crossings (LWCs)?	No
Information on existing dams/levees, new dams/levees or dams/levees not shown on DFIRM (and condition, if known)	Benbrook Lake is USACE maintained; some issues with Corps releasing breach information
Information from dam Emergency Action Plans (EAPs)	
Does your community use GIS?	
GIS Data Layers to include if available:	
• Hydrography	
• New Topographic or Survey Data	
• Location of critical facilities in flood hazard area	Yes
• Locations of Previous Flood Damage	Yes – larger floods in 2004
▪ Non-SFHA Flooding Boundaries	No
• Location of Dams and Levees	No
• Land Use/Zoning	Yes
• Culvert/Bridge Inventories	No
Recent Letters of Map Revision (LOMRs) or Conditional Letters of Map Revision (CLOMRs)?	No – creek study will trigger LOMR
Recent Letters of Map Amendment (LOMAs)?	4-8 each year
Hazard Mitigation Grants? If so, when, amount and purpose?	No
Any disaster declarations? If so, when and what storm event?	No – 2004?
Other comments	A lot of interest from citizens in safe room program; need to be added to Hazard Mitigation Plan; breach

	analysis of channel dams(?) – Gilbert at TWDB says not by TWDB; check if HAZUS available for 10.1
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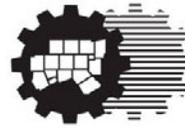


## North Texas Discovery Data Questionnaire

Community Name: **City of Burleson, Texas**

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, please let us know if you have the following information which we will coordinate with you to collect:

Data Item	Comments/Notes
Comments on the accuracy of the current floodplain mapping?	I have found some mistakes in the recently released Johnson County maps
Does your community participate in CRS? What is the community's current rating?	Yes – 7
Available topographic data, ongoing or future topographic acquisition efforts	Contours from Council of Govt
Local Hazard Mitigation Plan? If so, what is the name, approval and expiration date?	Will need to do some research
Completed or In Progress Hazard Mitigation Projects?	No
Completed or In Progress Capital Improvements Program (CIP) projects that involve flood hazard reduction?	No
Master Drainage Plan(s), floodplain studies, existing/needed?	Yes – 2006 study – we are looking at updating this in the next fiscal year
Stormwater management plan?	Yes
Structural and flooding issues not represented on effective DFIRMs?	NA – I have not been at the city long enough to have the knowledge of all issues of flooding. I am currently working with the PW's department to try and gain some history
Any known undersized culverts or narrow bridge openings that restrict flow and cause flooding, or overtop frequently?	My understanding is we have quite a few of these areas but I have not been able to identify and get them all identified in GIS
Any information on new construction of culverts and bridges?	Culverts – no bridges
Neighborhoods or Roads that Receive Repetitive Flooding (Repetitive Loss and Severe Repetitive Loss)?	We have 6 repetitive loss properties
Areas of historical flooding, high water marks (HWMs)/low water crossings (LWCs)?	Will need to research
Information on existing dams/levees, new dams/levees or dams/levees not shown on DFIRM (and condition, if known)	No dams or levees
Information from dam Emergency Action Plans (EAPs)	NA
Does your community use GIS?	Yes
GIS Data Layers to include if available:	
• Hydrography	No
• New Topographic or Survey Data	No new information other than Council of Govt
• Location of critical facilities in flood hazard area	We have a layer that shows the outline of the structure as well as aerials – the aerials are from 2011
• Locations of Previous Flood Damage	This was at one time mapped however when the former FP manager left the GIS project could not be found so this will need to be recreated
▪ Non-SFHA Flooding Boundaries	Yes
• Location of Dams and Levees	NA
• Land Use/Zoning	Yes
• Culvert/Bridge Inventories	Culverts but no bridges
Recent Letters of Map Revision (LOMRs) or Conditional Letters of Map Revision (CLOMRs)?	There have been some that have been revalidated and then some new ones. There are some that have not been revalidated or incorporated into the Johnson County maps. I am in the process of trying to identify all of those and then send to FEMA for review
Recent Letters of Map Amendment (LOMAs)?	Yes – I have seen quite a few of these in both the Tarrant County portion and the Johnson County portion of Burleson
Hazard Mitigation Grants? If so, when, amount and purpose?	No
Any disaster declarations? If so, when and what storm event?	No

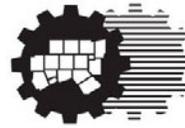


## North Texas Discovery Data Questionnaire

Community Name:     Cedar Hill    

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, please let us know if you have the following information which we will coordinate with you to collect:

Data Item	Comments/Notes
Comments on the accuracy of the current floodplain mapping?	Many areas in Zone A
Does your community participate in CRS? What is the community's current rating?	No
Available topographic data, ongoing or future topographic acquisition efforts	2011 Aerials / 2007 NCTCOG contours
Local Hazard Mitigation Plan? If so, what is the name, approval and expiration date?	None
Completed or In Progress Hazard Mitigation Projects?	Bentle Branch Regional Detention Pond
Completed or In Progress Capital Improvements Program (CIP) projects that involve flood hazard reduction?	None in progress
Master Drainage Plan(s), floodplain studies, existing/needed?	Need update
Stormwater management plan?	None
Structural and flooding issues not represented on effective DFIRMs?	Updated in preliminary maps
Any known undersized culverts or narrow bridge openings that restrict flow and cause flooding, or overtop frequently?	None
Any information on new construction of culverts and bridges?	None
Neighborhoods or Roads that Receive Repetitive Flooding (Repetitive Loss and Severe Repetitive Loss)?	None
Areas of historical flooding, high water marks (HWMs)/low water crossings (LWCs)?	No record
Information on existing dams/levees, new dams/levees or dams/levees not shown on DFIRM (and condition, if known)	None
Information from dam Emergency Action Plans (EAPs)	Bentle Branch Regional Detention
Does your community use GIS?	Yes
GIS Data Layers to include if available:	
• Hydrography	Included
• New Topographic or Survey Data	Included
• Location of critical facilities in flood hazard area	Not Known
• Locations of Previous Flood Damage	Not Known
▪ Non-SFHA Flooding Boundaries	Not Known
• Location of Dams and Levees	Not as a separate layer
• Land Use/Zoning	Included
• Culvert/Bridge Inventories	Included
Recent Letters of Map Revision (LOMRs) or Conditional Letters of Map Revision (CLOMRs)?	Bentle Branch
Recent Letters of Map Amendment (LOMAs)?	Yes
Hazard Mitigation Grants? If so, when, amount and purpose?	None
Any disaster declarations? If so, when and what storm event?	None



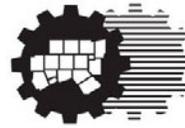
## North Texas Discovery Data Questionnaire

Community Name: Ellis County

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, please let us know if you have the following information which we will coordinate with you to collect:

Data Item	Comments/Notes
<b>Comments on the accuracy of the current floodplain mapping?</b>	
<b>Does your community participate in CRS? What is the community's current rating?</b>	
<b>Available topographic data, ongoing or future topographic acquisition efforts</b>	Various GIS contour interval layers from 2008
<b>Local Hazard Mitigation Plan? If so, what is the name, approval and expiration date?</b>	In the process of developing a plan.
<b>Completed or In Progress Hazard Mitigation Projects?</b>	Not yet.
<b>Completed or In Progress Capital Improvements Program (CIP) projects that involve flood hazard reduction?</b>	
<b>Master Drainage Plan(s), floodplain studies, existing/needed?</b>	Master Drainage Plan Needed
<b>Stormwater management plan?</b>	TCEQ mandated MS4
<b>Structural and flooding issues not represented on effective DFIRMs?</b>	
<b>Any known undersized culverts or narrow bridge openings that restrict flow and cause flooding, or overtop frequently?</b>	Several incidences of undersized culverts and bridges that overtop throughout the County.
<b>Any information on new construction of culverts and bridges?</b>	Planned rehab of several bridges by TxDOT and the County
<b>Neighborhoods or Roads that Receive Repetitive Flooding (Repetitive Loss and Severe Repetitive Loss)?</b>	
<b>Areas of historical flooding, high water marks (HWMs)/low water crossings (LWCs)?</b>	
<b>Information on existing dams/levees, new dams/levees or dams/levees not shown on DFIRM (and condition, if known)</b>	
<b>Information from dam Emergency Action Plans (EAPs)</b>	Yes. Written EAPs and breach inundation studies for most TCEQ rated High and Significant Hazard SCS flood control dams.
<b>Does your community use GIS?</b>	Yes
<b>GIS Data Layers to include if available:</b>	
• Hydrography	Yes, calculated raster from 2008 2ft contours
• New Topographic or Survey Data	Yes, 2008
• Location of critical facilities in flood hazard area	Not sure
• Locations of Previous Flood Damage	No
▪ Non-SFHA Flooding Boundaries	?
• Location of Dams and Levees	Yes
• Land Use/Zoning	No
• Culvert/Bridge Inventories	Yes, from 2010, but constantly changing
<b>Recent Letters of Map Revision (LOMRs) or Conditional Letters of Map</b>	

<b>Revision (CLOMRs)?</b>	
<b>Recent Letters of Map Amendment (LOMAs)?</b>	
<b>Hazard Mitigation Grants? If so, when, amount and purpose?</b>	Received grant from NCTCOG for developing a Hazard Mitigation Plan. An interlocal agreement was approved in the Ellis County Commissioners' Court on May 28, 2013.
<b>Any disaster declarations? If so, when and what storm event?</b>	

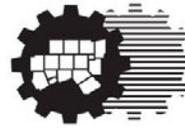


## North Texas Discovery Data Questionnaire

Community Name: **City of Euless – collected by Steve Altman**

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, please let us know if you have the following information which we will coordinate with you to collect:

Data Item	Comments/Notes
Comments on the accuracy of the current floodplain mapping?	No issues
Does your community participate in CRS? What is the community's current rating?	No but interested
Available topographic data, ongoing or future topographic acquisition efforts	2-ft contours from 2000 COG topo
Local Hazard Mitigation Plan? If so, what is the name, approval and expiration date?	Yes - Hasn't worked on plan renewal/update
Completed or In Progress Hazard Mitigation Projects?	Nothing right now – developer-based when construction calls for it
Completed or In Progress Capital Improvements Program (CIP) projects that involve flood hazard reduction?	Yes – bank stabilization projects
Master Drainage Plan(s), floodplain studies, existing/needed?	Completed in 2010 0 no plans to update
Stormwater management plan?	See above
Structural and flooding issues not represented on effective DFIRMs?	See maps
Any known undersized culverts or narrow bridge openings that restrict flow and cause flooding, or overtop frequently?	No
Any information on new construction of culverts and bridges?	Yes – new development, LOMR
Neighborhoods or Roads that Receive Repetitive Flooding (Repetitive Loss and Severe Repetitive Loss)?	Yes, collapsed bridge in 2005
Areas of historical flooding, high water marks (HWMs)/low water crossings (LWCs)?	Not sure
Information on existing dams/levees, new dams/levees or dams/levees not shown on DFIRM (and condition, if known)	Not sure
Information from dam Emergency Action Plans (EAPs)	See above
Does your community use GIS?	Yes
GIS Data Layers to include if available:	
• Hydrography	COG LOMR quality
• New Topographic or Survey Data	Yes, planimetrics, partner with TRWD
• Location of critical facilities in flood hazard area	Yes – footprint
• Locations of Previous Flood Damage	No
▪ Non-SFHA Flooding Boundaries	No
• Location of Dams and Levees	No
• Land Use/Zoning	Yes
• Culvert/Bridge Inventories	Yes – not defined
Recent Letters of Map Revision (LOMRs) or Conditional Letters of Map Revision (CLOMRs)?	No – maybe with development
Recent Letters of Map Amendment (LOMAs)?	Not recently
Hazard Mitigation Grants? If so, when, amount and purpose?	No
Any disaster declarations? If so, when and what storm event?	No
Other comments	Has buyout program; ongoing work with state for SRL program, will follow-up with Gilbert Ward

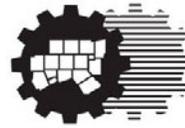


## North Texas Discovery Data Questionnaire

Community Name: **Fort Worth – Clair Davis**

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, please let us know if you have the following information which we will coordinate with you to collect:

Data Item	Comments/Notes
Comments on the accuracy of the current floodplain mapping?	Fair to poor – 2009
Does your community participate in CRS? What is the community's current rating?	Yes, Class 8
Available topographic data, ongoing or future topographic acquisition efforts	2009, maybe 2011 COG (TNRIS base)
Local Hazard Mitigation Plan? If so, what is the name, approval and expiration date?	HAZMAP
Completed or In Progress Hazard Mitigation Projects?	Yes – applied for grants but not successful
Completed or In Progress Capital Improvements Program (CIP) projects that involve flood hazard reduction?	Yes – H&H Program, LWC inventory
Master Drainage Plan(s), floodplain studies, existing/needed?	Needed
Stormwater management plan?	Not city-wide
Structural and flooding issues not represented on effective DFIRMs?	Yes – preliminary S.D. related
Any known undersized culverts or narrow bridge openings that restrict flow and cause flooding, or overtop frequently?	Yes – LWC inventory
Any information on new construction of culverts and bridges?	As-built plans, H&H
Neighborhoods or Roads that Receive Repetitive Flooding (Repetitive Loss and Severe Repetitive Loss)?	40 RL citywide
Areas of historical flooding, high water marks (HWMs)/low water crossings (LWCs)?	Yes
Information on existing dams/levees, new dams/levees or dams/levees not shown on DFIRM (and condition, if known)	Inventory in progress
Information from dam Emergency Action Plans (EAPs)	Limited availability, yes
Does your community use GIS?	Yes
GIS Data Layers to include if available:	
• Hydrography	Yes
• New Topographic or Survey Data	Yes
• Location of critical facilities in flood hazard area	No
• Locations of Previous Flood Damage	Yes
▪ Non-SFHA Flooding Boundaries	No
• Location of Dams and Levees	Yes
• Land Use/Zoning	Yes
• Culvert/Bridge Inventories	Yes
Recent Letters of Map Revision (LOMRs) or Conditional Letters of Map Revision (CLOMRs)?	Comprehensive collection at local repository, 1980 to today
Recent Letters of Map Amendment (LOMAs)?	Yes
Hazard Mitigation Grants? If so, when, amount and purpose?	Not successful – TWDB FPP Grant application
Any disaster declarations? If so, when and what storm event?	
Other comments	FTW is CTP as of late 2012, working on MAS right now; happy to supply Low Water Crossing inventory; would like individual meeting to follow-up and gather information

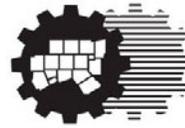


## North Texas Discovery Data Questionnaire

Community Name: **Grand Prairie – Gabe Johnson and Romin Khavari**

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, please let us know if you have the following information which we will coordinate with you to collect:

Data Item	Comments/Notes
Comments on the accuracy of the current floodplain mapping?	Data on current studies in "Data In" folder
Does your community participate in CRS? What is the community's current rating?	Yes – 5
Available topographic data, ongoing or future topographic acquisition efforts	2010 TNRIS LiDAR (2ft contours)
Local Hazard Mitigation Plan? If so, what is the name, approval and expiration date?	
Completed or In Progress Hazard Mitigation Projects?	
Completed or In Progress Capital Improvements Program (CIP) projects that involve flood hazard reduction?	
Master Drainage Plan(s), floodplain studies, existing/needed?	
Stormwater management plan?	
Structural and flooding issues not represented on effective DFIRMs?	
Any known undersized culverts or narrow bridge openings that restrict flow and cause flooding, or overtop frequently?	
Any information on new construction of culverts and bridges?	
Neighborhoods or Roads that Receive Repetitive Flooding (Repetitive Loss and Severe Repetitive Loss)?	
Areas of historical flooding, high water marks (HWMs)/low water crossings (LWCs)?	
Information on existing dams/levees, new dams/levees or dams/levees not shown on DFIRM (and condition, if known)	
Information from dam Emergency Action Plans (EAPs)	
Does your community use GIS?	Yes
GIS Data Layers to include if available:	
• Hydrography	
• New Topographic or Survey Data	
• Location of critical facilities in flood hazard area	
• Locations of Previous Flood Damage	
▪ Non-SFHA Flooding Boundaries	
• Location of Dams and Levees	
• Land Use/Zoning	
• Culvert/Bridge Inventories	
Recent Letters of Map Revision (LOMRs) or Conditional Letters of Map Revision (CLOMRs)?	
Recent Letters of Map Amendment (LOMAs)?	
Hazard Mitigation Grants? If so, when, amount and purpose?	
Any disaster declarations? If so, when and what storm event?	
Other comments	



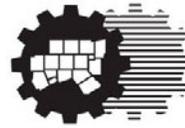
## North Texas Discovery Data Questionnaire

Community Name: **City of Highland Village – collected by Catherine Rowley**

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, please let us know if you have the following information which we will coordinate with you to collect:

Data Item	Comments/Notes
Comments on the accuracy of the current floodplain mapping?	FM 2499 missing – check DFIRMs
Does your community participate in CRS? What is the community’s current rating?	Would like to join
Available topographic data, ongoing or future topographic acquisition efforts	Halff 2’ elevations
Local Hazard Mitigation Plan? If so, what is the name, approval and expiration date?	Yes - Working to update
Completed or In Progress Hazard Mitigation Projects?	No
Completed or In Progress Capital Improvements Program (CIP) projects that involve flood hazard reduction?	Raised a bridge (Halff project)
Master Drainage Plan(s), floodplain studies, existing/needed?	Somewhat of a plan but not official
Stormwater management plan?	No – only spray for mosquitos
Structural and flooding issues not represented on effective DFIRMs?	None
Any known undersized culverts or narrow bridge openings that restrict flow and cause flooding, or overtop frequently?	Raised crossing on 537 (Halff project)
Any information on new construction of culverts and bridges?	Low water crossing at I-35E frontage road, highway expansion should fix
Neighborhoods or Roads that Receive Repetitive Flooding (Repetitive Loss and Severe Repetitive Loss)?	1 property – near city hall
Areas of historical flooding, high water marks (HWMs)/low water crossings (LWCs)?	Chinchapel Road
Information on existing dams/levees, new dams/levees or dams/levees not shown on DFIRM (and condition, if known)	None
Information from dam Emergency Action Plans (EAPs)	No
Does your community use GIS?	Yes
GIS Data Layers to include if available:	
• Hydrography	
• New Topographic or Survey Data	
• Location of critical facilities in flood hazard area	
• Locations of Previous Flood Damage	
▪ Non-SFHA Flooding Boundaries	
• Location of Dams and Levees	
• Land Use/Zoning	
• Culvert/Bridge Inventories	
Recent Letters of Map Revision (LOMRs) or Conditional Letters of Map Revision (CLOMRs)?	Yes – Halff doing LOMR (check) that’s currently under FEMA review
Recent Letters of Map Amendment (LOMAs)?	Yes – several in GIS
Hazard Mitigation Grants? If so, when, amount and purpose?	None
Any disaster declarations? If so, when and what storm event?	TS Hermine (county)
Other comments	Talked with Mayra about CRS; will send LOMA data via



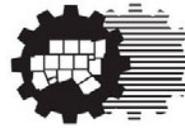


## North Texas Discovery Data Questionnaire

Community Name: \_\_\_\_\_ City of Hurst \_\_\_\_\_

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, please let us know if you have the following information which we will coordinate with you to collect:

Data Item	Comments/Notes
Comments on the accuracy of the current floodplain mapping?	No – we are doing a Master Drainage Plan to re-do all models
Does your community participate in CRS? What is the community’s current rating?	Yes - 8
Available topographic data, ongoing or future topographic acquisition efforts	Yes – NCTCOG only, no LiDAR projects
Local Hazard Mitigation Plan? If so, what is the name, approval and expiration date?	No – Tarrant County
Completed or In Progress Hazard Mitigation Projects?	No
Completed or In Progress Capital Improvements Program (CIP) projects that involve flood hazard reduction?	Yes
Master Drainage Plan(s), floodplain studies, existing/needed?	Yes
Stormwater management plan?	Yes - iSWM
Structural and flooding issues not represented on effective DFIRMs?	Yes – several roadways including NTE and SH 10
Any known undersized culverts or narrow bridge openings that restrict flow and cause flooding, or overtop frequently?	Yes
Any information on new construction of culverts and bridges?	Yes – NTE has construction plans
Neighborhoods or Roads that Receive Repetitive Flooding (Repetitive Loss and Severe Repetitive Loss)?	No – RL and SRL are only documented through flood insurance claims. Roads cannot be claimed and non-flood insured properties cannot be claimed.
Areas of historical flooding, high water marks (HWMs)/low water crossings (LWCs)?	Yes
Information on existing dams/levees, new dams/levees or dams/levees not shown on DFIRM (and condition, if known)	Yes – Chisholm Park Dam
Information from dam Emergency Action Plans (EAPs)	Yes
Does your community use GIS?	Yes
GIS Data Layers to include if available:	
• Hydrography	If this refers to H&H, yes.
• New Topographic or Survey Data	yes
• Location of critical facilities in flood hazard area	yes
• Locations of Previous Flood Damage	no
▪ Non-SFHA Flooding Boundaries	no
• Location of Dams and Levees	yes
• Land Use/Zoning	Yes
• Culvert/Bridge Inventories	Some
Recent Letters of Map Revision (LOMRs) or Conditional Letters of Map Revision (CLOMRs)?	Yes
Recent Letters of Map Amendment (LOMAs)?	Yes
Hazard Mitigation Grants? If so, when, amount and purpose?	No
Any disaster declarations? If so, when and what storm event?	Nothing recent



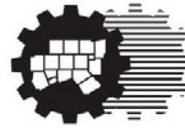
## North Texas Discovery Data Questionnaire

Community Name: City of Irving – Garry Fennell

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, please let us know if you have the following information which we will coordinate with you to collect:

Data Item	Comments/Notes
Comments on the accuracy of the current floodplain mapping?	
Does your community participate in CRS? What is the community's current rating?	No.
Available topographic data, ongoing or future topographic acquisition efforts	TNRIS LiDAR
Local Hazard Mitigation Plan? If so, what is the name, approval and expiration date?	Dallas County
Completed or In Progress Hazard Mitigation Projects?	
Completed or In Progress Capital Improvements Program (CIP) projects that involve flood hazard reduction?	
Master Drainage Plan(s), floodplain studies, existing/needed?	Studies needed: Embassy Channel (\$6.5M in work, not a FEMA stream but greater than 1 sq mi drainage area), Cottonwood Creek (1980s study, 4 LOMRs), Delaware Creek improvements, South Fork of Hackberry Creek (1978 study)
Stormwater management plan?	None
Structural and flooding issues not represented on effective DFIRMs?	
Any known undersized culverts or narrow bridge openings that restrict flow and cause flooding, or overtop frequently?	
Any information on new construction of culverts and bridges?	New culvert at parallel levee in IFCD-1
Neighborhoods or Roads that Receive Repetitive Flooding (Repetitive Loss and Severe Repetitive Loss)?	Several RL/SRL properties in database, unsure of mitigation status
Areas of historical flooding, high water marks (HWMs)/low water crossings (LWCs)?	Loop 12 under SH-114; along SH-183
Information on existing dams/levees, new dams/levees or dams/levees not shown on DFIRM (and condition, if known)	High hazard dam at Hard Rock Road south of SH-183
Information from dam Emergency Action Plans (EAPs)	None
Does your community use GIS?	Yes
GIS Data Layers to include if available:	
• Hydrography	
• New Topographic or Survey Data	
• Location of critical facilities in flood hazard area	
• Locations of Previous Flood Damage	
▪ Non-SFHA Flooding Boundaries	
• Location of Dams and Levees	
• Land Use/Zoning	
• Culvert/Bridge Inventories	
Recent Letters of Map Revision (LOMRs) or Conditional Letters of Map Revision (CLOMRs)?	SH-183 improvements at Delaware Creek – CLOMR in progress
Recent Letters of Map Amendment (LOMAs)?	
Hazard Mitigation Grants? If so, when, amount and purpose?	None

Any disaster declarations? If so, when and what storm event?	
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## North Texas Discovery Data Questionnaire

Community Name: **Johnson County (Cindy E, ambassador)**

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, please let us know if you have the following information which we will coordinate with you to collect:

Data Item	Comments/Notes
Comments on the accuracy of the current floodplain mapping?	Comments on FIRM maps with dots; Need AE studies along Mustang Creek and Rock Creek addition of 121. Will promote growth in these areas
Does your community participate in CRS? What is the community's current rating?	No but interested
Available topographic data, ongoing or future topographic acquisition efforts	No other than some COG contours but not very accurate
Local Hazard Mitigation Plan? If so, what is the name, approval and expiration date?	Almost done with COG
Completed or In Progress Hazard Mitigation Projects?	
Completed or In Progress Capital Improvements Program (CIP) projects that involve flood hazard reduction?	Currently trying
Master Drainage Plan(s), floodplain studies, existing/needed?	Not known
Stormwater management plan?	Criteria – new online document
Structural and flooding issues not represented on effective DFIRMs?	
Any known undersized culverts or narrow bridge openings that restrict flow and cause flooding, or overtop frequently?	New 121 Highway
Any information on new construction of culverts and bridges?	On new portion of 121
Neighborhoods or Roads that Receive Repetitive Flooding (Repetitive Loss and Severe Repetitive Loss)?	
Areas of historical flooding, high water marks (HWMs)/low water crossings (LWCs)?	Will look – may have database
Information on existing dams/levees, new dams/levees or dams/levees not shown on DFIRM (and condition, if known)	Knows of some, but no info on them
Information from dam Emergency Action Plans (EAPs)	?
Does your community use GIS?	One GIS license, limited
GIS Data Layers to include if available:	
• Hydrography	
• New Topographic or Survey Data	2009 or 2011 LiDAR through COG
• Location of critical facilities in flood hazard area	
• Locations of Previous Flood Damage	
▪ Non-SFHA Flooding Boundaries	
• Location of Dams and Levees	
• Land Use/Zoning	
• Culvert/Bridge Inventories	
Recent Letters of Map Revision (LOMRs) or Conditional Letters of Map Revision (CLOMRs)?	Keeps track of these in office
Recent Letters of Map Amendment (LOMAs)?	
Hazard Mitigation Grants? If so, when, amount and purpose?	
Any disaster declarations? If so, when and what storm event?	2009 Hermine but not enough damage for declaration;

	tornadoes in 2013 – just received notice of award;
<b>Other comments</b>	3ft freeboard requirement and elevation certificates for new development; Halff sent Erik a list of locations where the aerial doesn't match topography. Need new studies on new terrain in these areas. Send Erik GIS data that was used to generate map on background; interested in joining CRS, need help understanding BFEs in Zone A areas (general ballpark flood elevations), has several development areas that would benefit from detailed studies – these are separate areas in the county but would be good candidate for watershed study; spoke with Matt DuBois from FEMA at second LWF meeting

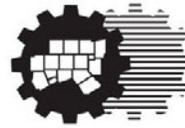
## North Texas Discovery Data Questionnaire

Community Name: **Kennedale (Rhonda Murphy, 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, please let us know if you have the following information which we will coordinate with you to collect:

Data Item	Comments/Notes
Comments on the accuracy of the current floodplain mapping?	Dry stream areas are unmapped
Does your community participate in CRS? What is the community's current rating?	No
Available topographic data, ongoing or future topographic acquisition efforts	No
Local Hazard Mitigation Plan? If so, what is the name, approval and expiration date?	Yes – Fort Worth (2009-2014)
Completed or In Progress Hazard Mitigation Projects?	Adopted Stormwater Fee – to implement
Completed or In Progress Capital Improvements Program (CIP) projects that involve flood hazard reduction?	Same as above
Master Drainage Plan(s), floodplain studies, existing/needed?	No
Stormwater management plan?	Yes
Structural and flooding issues not represented on effective DFIRMs?	No – see first question
Any known undersized culverts or narrow bridge openings that restrict flow and cause flooding, or overtop frequently?	No
Any information on new construction of culverts and bridges?	No
Neighborhoods or Roads that Receive Repetitive Flooding (Repetitive Loss and Severe Repetitive Loss)?	See first question
Areas of historical flooding, high water marks (HWMs)/low water crossings (LWCs)?	No
Information on existing dams/levees, new dams/levees or dams/levees not shown on DFIRM (and condition, if known)	See first question
Information from dam Emergency Action Plans (EAPs)	No
Does your community use GIS?	No/minimal if yes
GIS Data Layers to include if available:	
• Hydrography	
• New Topographic or Survey Data	
• Location of critical facilities in flood hazard area	
• Locations of Previous Flood Damage	
▪ Non-SFHA Flooding Boundaries	
• Location of Dams and Levees	
• Land Use/Zoning	
• Culvert/Bridge Inventories	
Recent Letters of Map Revision (LOMRs) or Conditional Letters of Map Revision (CLOMRs)?	Small LOMRs for road projects, nothing major
Recent Letters of Map Amendment (LOMAs)?	No
Hazard Mitigation Grants? If so, when, amount and purpose?	No
Any disaster declarations? If so, when and what storm event?	No
Other comments	Half doing project on Village Creek – multiple salvage yards, no other local issues with flood; Return to

*Greenspace - primary floodway - all floodplain*



## North Texas Discovery Data Questionnaire

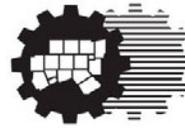
Community Name: **Town of Lakeside (Randy Whiteman, Town Admin) – collected by Jack Tidwell**

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, please let us know if you have the following information which we will coordinate with you to collect:

Data Item	Comments/Notes
Comments on the accuracy of the current floodplain mapping?	Looks good – have used for mitigation
Does your community participate in CRS? What is the community's current rating?	No
Available topographic data, ongoing or future topographic acquisition efforts	No
Local Hazard Mitigation Plan? If so, what is the name, approval and expiration date?	Don't know
Completed or In Progress Hazard Mitigation Projects?	Don't know
Completed or In Progress Capital Improvements Program (CIP) projects that involve flood hazard reduction?	Water-related and Dist. Storage
Master Drainage Plan(s), floodplain studies, existing/needed?	Not yet
Stormwater management plan?	Permit but no plan
Structural and flooding issues not represented on effective DFIRMs?	N/A
Any known undersized culverts or narrow bridge openings that restrict flow and cause flooding, or overtop frequently?	Confederate Parkway does not have drainage and needs it
Any information on new construction of culverts and bridges?	N/A
Neighborhoods or Roads that Receive Repetitive Flooding (Repetitive Loss and Severe Repetitive Loss)?	Confederate Parkway
Areas of historical flooding, high water marks (HWMs)/low water crossings (LWCs)?	N/A
Information on existing dams/levees, new dams/levees or dams/levees not shown on DFIRM (and condition, if known)	Wolf Creek
Information from dam Emergency Action Plans (EAPs)	N/A
Does your community use GIS?	No, use external consultant
GIS Data Layers to include if available:	
• Hydrography	
• New Topographic or Survey Data	
• Location of critical facilities in flood hazard area	
• Locations of Previous Flood Damage	
▪ Non-SFHA Flooding Boundaries	
• Location of Dams and Levees	
• Land Use/Zoning	
• Culvert/Bridge Inventories	
Recent Letters of Map Revision (LOMRs) or Conditional Letters of Map Revision (CLOMRs)?	No
Recent Letters of Map Amendment (LOMAs)?	No
Hazard Mitigation Grants? If so, when, amount and purpose?	No
Any disaster declarations? If so, when and what storm event?	No – Drought? Water well service in poor shape

**Other comments**

Needs to check stormwater permi status, 1886  
Confederate Park Road is low water crossing due to  
TxDOT program issue



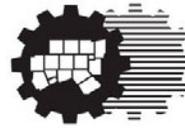
## North Texas Discovery Data Questionnaire

Community Name: City of Mansfield

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, please let us know if you have the following information which we will coordinate with you to collect:

Data Item	Comments/Notes
Comments on the accuracy of the current floodplain mapping?	Based on a combination of 2001 NTCOG contours with surveyed cross sections and some topo from areas where new construction was in foodplain. FEMA models should include ultimate, unimproved run.
Does your community participate in CRS? What is the community's current rating?	No
Available topographic data, ongoing or future topographic acquisition efforts	Partner through NCTCOG
Local Hazard Mitigation Plan? If so, what is the name, approval and expiration date?	Yes, City of Mansfield Texas Mitigation Plan
Completed or In Progress Hazard Mitigation Projects?	FMA-1 Home, SRL-3 Home, SRL-5 Home, HMGP-2 Home, HMGP-5 Home flood grants
Completed or In Progress Capital Improvements Program (CIP) projects that involve flood hazard reduction?	Hogpen Branch Pond C, Hogpen Branch Pond B , Pond Branch Dry Cleaner Acquire and Demo completed – Pond Branch Trib Channel Improvements just bid – Hogpen Branch Pond A, Hogpen Branch Debbie Ln Pond future
Master Drainage Plan(s), floodplain studies, existing/needed?	All FEMA channels have master drainage plans from early to mid 90s – Hogpen Branch needs update
Stormwater management plan?	SWMP in compliance with TCEQ state permit
Structural and flooding issues not represented on effective DFIRMs?	Several – addressed on a complaint basis
Any known undersized culverts or narrow bridge openings that restrict flow and cause flooding, or overtop frequently?	Several – some cannot be resolved without extensive embankments and therefore planning to have those areas flood
Any information on new construction of culverts and bridges?	No
Neighborhoods or Roads that Receive Repetitive Flooding (Repetitive Loss and Severe Repetitive Loss)?	Yes – Walnut Creek Dr at Walnut Creek, Retta Rd at Walnut Creek, Wilson Dr at Walnut Creek, North St at Walnut Creek, Palm St at Walnut Creek, Walnut Creek Dr at Hogpen Branch, US 287/Callender intersection at Hogpen Branch,
Areas of historical flooding, high water marks (HWMs)/low water crossings (LWCs)?	Yes
Information on existing dams/levees, new dams/levees or dams/levees not shown on DFIRM (and condition, if known)	No
Information from dam Emergency Action Plans (EAPs)	No
Does your community use GIS?	Yes
GIS Data Layers to include if available:	
• Hydrography	Yes
• New Topographic or Survey Data	Yes
• Location of critical facilities in flood hazard area	Yes
• Locations of Previous Flood Damage	Yes
▪ Non-SFHA Flooding Boundaries	No
• Location of Dams and Levees	No
• Land Use/Zoning	Yes
• Culvert/Bridge Inventories	Yes
Recent Letters of Map Revision (LOMRs) or Conditional Letters of Map Revision (CLOMRs)?	Yes – LOMR for Hogpen Branch Ponds B&C and Woodland Estate improvements
Recent Letters of Map Amendment (LOMAs)?	No
Hazard Mitigation Grants? If so, when, amount and purpose?	Awaiting – 2 applications approved by FEMA waiting on

	award letters from FEMA \$751,284.40 & \$291,739.80 - flood
<b>Any disaster declarations? If so, when and what storm event?</b>	Hermine



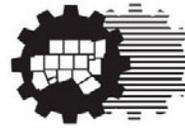
## North Texas Discovery Data Questionnaire

Community Name: **Parker County – collected by Elizabeth Levitz**

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, please let us know if you have the following information which we will coordinate with you to collect:

Data Item	Comments/Notes
Comments on the accuracy of the current floodplain mapping?	Accurate in AE zones
Does your community participate in CRS? What is the community's current rating?	No
Available topographic data, ongoing or future topographic acquisition efforts	
Local Hazard Mitigation Plan? If so, what is the name, approval and expiration date?	In progress, focused on Brazos River in neighboring watershed
Completed or In Progress Hazard Mitigation Projects?	
Completed or In Progress Capital Improvements Program (CIP) projects that involve flood hazard reduction?	None
Master Drainage Plan(s), floodplain studies, existing/needed?	
Stormwater management plan?	Yes
Structural and flooding issues not represented on effective DFIRMs?	
Any known undersized culverts or narrow bridge openings that restrict flow and cause flooding, or overtop frequently?	Yes – on Underwood Road
Any information on new construction of culverts and bridges?	No
Neighborhoods or Roads that Receive Repetitive Flooding (Repetitive Loss and Severe Repetitive Loss)?	None in this watershed
Areas of historical flooding, high water marks (HWMs)/low water crossings (LWCs)?	None in this watershed
Information on existing dams/levees, new dams/levees or dams/levees not shown on DFIRM (and condition, if known)	No
Information from dam Emergency Action Plans (EAPs)	Yes
Does your community use GIS?	No
GIS Data Layers to include if available:	
• Hydrography	
• New Topographic or Survey Data	
• Location of critical facilities in flood hazard area	
• Locations of Previous Flood Damage	
▪ Non-SFHA Flooding Boundaries	
• Location of Dams and Levees	
• Land Use/Zoning	
• Culvert/Bridge Inventories	
Recent Letters of Map Revision (LOMRs) or Conditional Letters of Map Revision (CLOMRs)?	Yes – along Brazos River
Recent Letters of Map Amendment (LOMAs)?	Yes – along Brazos River
Hazard Mitigation Grants? If so, when, amount and purpose?	No
Any disaster declarations? If so, when and what storm event?	June 1990, July 2007, June 2004
Other comments	Mitigation action – have floodplain management order requiring 2-ft of freeboard above BFE, but difficult to enforce with developers who aren't required to submit

	LOMCs to county for approval. County has no ongoing projects in unincorporated areas. Noted two comments on large maps.
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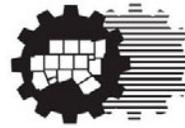


## North Texas Discovery Data Questionnaire

Community Name: **Richland Hills – Michael Barnes, Barrett Goodwin (ambassador)**

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, please let us know if you have the following information which we will coordinate with you to collect:

Data Item	Comments/Notes
Comments on the accuracy of the current floodplain mapping?	PMR Tarrant County; Big Fossil Creek 500-yr
Does your community participate in CRS? What is the community's current rating?	No, but anticipate joining this year
Available topographic data, ongoing or future topographic acquisition efforts	Yes – 2010 LiDAR
Local Hazard Mitigation Plan? If so, what is the name, approval and expiration date?	Yes, Tarrant County-Mid Cities, Expires 9/2013
Completed or In Progress Hazard Mitigation Projects?	Yes, local drainage projects
Completed or In Progress Capital Improvements Program (CIP) projects that involve flood hazard reduction?	Yes, local drainage projects
Master Drainage Plan(s), floodplain studies, existing/needed?	Yes, local drainage projects
Stormwater management plan?	
Structural and flooding issues not represented on effective DFIRMs?	Yes – PMR Tarrant County
Any known undersized culverts or narrow bridge openings that restrict flow and cause flooding, or overtop frequently?	
Any information on new construction of culverts and bridges?	Yes – local drainage projects
Neighborhoods or Roads that Receive Repetitive Flooding (Repetitive Loss and Severe Repetitive Loss)?	Yes
Areas of historical flooding, high water marks (HWMs)/low water crossings (LWCs)?	
Information on existing dams/levees, new dams/levees or dams/levees not shown on DFIRM (and condition, if known)	Certified levee on Big Fossil Creek
Information from dam Emergency Action Plans (EAPs)	
Does your community use GIS?	
GIS Data Layers to include if available:	
• Hydrography	
• New Topographic or Survey Data	
• Location of critical facilities in flood hazard area	
• Locations of Previous Flood Damage	
▪ Non-SFHA Flooding Boundaries	
• Location of Dams and Levees	
• Land Use/Zoning	
• Culvert/Bridge Inventories	
Recent Letters of Map Revision (LOMRs) or Conditional Letters of Map Revision (CLOMRs)?	
Recent Letters of Map Amendment (LOMAs)?	
Hazard Mitigation Grants? If so, when, amount and purpose?	
Any disaster declarations? If so, when and what storm event?	
Other comments	



## North Texas Discovery Data Questionnaire

Community Name: City of Weatherford

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, please let us know if you have the following information which we will coordinate with you to collect:

Data Item	Comments/Notes
Comments on the accuracy of the current floodplain mapping?	NUDALLAS modeling of streams is a concern. During Map Mod DFIRM updates, only redelineation of older studies was performed.
Does your community participate in CRS? What is the community's current rating?	Thought that Weatherford was in CRS a few years ago but not on the list. Will check on history.
Available topographic data, ongoing or future topographic acquisition efforts	It appears 2011 LiDAR Data is available from TNRS. During meeting, discussed that may not have licenses to utilize the LiDAR data files. Contours could be developed from the data after processed.
Local Hazard Mitigation Plan? If so, what is the name, approval and expiration date?	Fire Chief has started work on the Hazard Mitigation plan. Interested in continuing to move this forward.
Completed or In Progress Hazard Mitigation Projects?	
Completed or In Progress Capital Improvements Program (CIP) projects that involve flood hazard reduction?	Funding has been a major concern. Implemented a Stormwater Utility in October 2012 which is allowing the city to start stormwater master planning efforts. Starting CIP as part of first Stormwater Master Plan.
Master Drainage Plan(s), floodplain studies, existing/needed?	
Stormwater management plan?	Working on a Stormwater management plan – starting in the Holland Lake watershed first. Performing study and developing alternatives. Working to develop policies and future guidelines as part of the first watershed study.
Structural and flooding issues not represented on effective DFIRMs?	No
Any known undersized culverts or narrow bridge openings that restrict flow and cause flooding, or overtop frequently?	Roads do overtop in the City during rain events. Maintenance and silt build up are concerns. Roads often have to be closed with barricades during flood events. Recently fixed Washington – was a low water crossing and replaced with culverts.
Any information on new construction of culverts and bridges?	
Neighborhoods or Roads that Receive Repetitive Flooding (Repetitive Loss and Severe Repetitive Loss)?	Not aware of any Repetitive Loss properties. Discussed that it would be good to request the Rep Loss List from FEMA annually.
Areas of historical flooding, high water marks (HWMs)/low water crossings (LWCs)?	Most issues are erosion, yard flooding, and roads overtopping.
Information on existing dams/levees, new dams/levees or dams/levees not shown on DFIRM (and condition, if known)	Performed breach/EAP for Lake Weatherford in 2008. Holland Lake Dam EAP was submitted to TCEQ in May 2013. Sunshine Lake is not a high hazard dam.
Information from dam Emergency Action Plans (EAPs)	See above.
Does your community use GIS?	Yes
GIS Data Layers to include if available:	Working on developing a stormwater GIS layer. Utilizing DFIRM GIS data is working well.
• Hydrography	
• New Topographic or Survey Data	
• Location of critical facilities in flood hazard area	Yes
• Locations of Previous Flood Damage	

▪ Non-SFHA Flooding Boundaries	
• Location of Dams and Levees	
• Land Use/Zoning	
• Culvert/Bridge Inventories	
Recent Letters of Map Revision (LOMRs) or Conditional Letters of Map Revision (CLOMRs)?	Not many LOMRs
Recent Letters of Map Amendment (LOMAs)?	
Hazard Mitigation Grants? If so, when, amount and purpose?	Interested in the Safe Room Opportunities. Grants have been tough for the City to meet the BCA because issues are not flooding homes.
Any disaster declarations? If so, when and what storm event?	

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## Meeting Sheets



## Sign in Sheet - Meeting 1

Lower West Fork Trinity Watershed  
FEMA Region 6 and NCTCOG

Date: Wednesday, May 29, 2013

Time: 9:00 am

Location: Tarrant County Public Health Administration Office

	Name	Organization	Title	Phone	Email	Signature of Attendance
1	Barnes, Michael	City of Richland Hills	Director of Public Works	817-616-3835	mbarnes@richlandhills.com	<i>Michael Barnes</i> ✓
2	Bell, Bill	Richland Hills	Fire Chief	817-616-3755	bbell@richlandhills.com	<i>Bill Bell</i>
3	Davis, Clair	City of Fort Worth	Floodplain Administrator	817-392-5981	clair.davis@fortworthtexas.org	<i>Clair Davis</i>
4	Dumas, Erik	Johnson County	Public Works Director	817-556-6380	sdumas@johnsoncountytexas.org	<i>Erik Dumas</i>
5	Fuqua, Kirk	Parker County	Floodplain Manager	817-598-6174	kirk.fuqua@parkercountytexas.org	
6	Gattis, David	City of Benbrook	Deputy City Manager	817-249-6005	dgattis@cityofbenbrook.com	
7	Johnson, Gabe	City of Grand Prairie	Storm Water Utility Mgr and FPA	972-237-8157	gjohnson@gptx.org	<i>Gabe Johnson</i>
✓ 8	Marvin, Edith	NCTCOG	Director of Environment and Development	817-695-9211	emarvin@nctcog.org	
9	Miertschin, Keith	City of Watauga	Director of Public Works	817-514-5837	kmiertschin@cowtx.org	<i>Keith Miertschin</i> / send GIS data + map
10	Palla, David	City of Hurst Fire Department	Assistant Fire Chief	817-788-7246	dpalla@hursttx.gov	<i>David Palla</i>
✓ 11	Valencia, Leo	NCTCOG	Environmental Planner	817-608-2363	lvalencia@nctcog.org	
12	Van Winkle, Richard	City of Alvarado	Fire Chief/EMC	817-790-8884	vanwinkler@cityofalvarado.org	
13	<i>Murphy, Dorie</i>	<i>USACE</i>	<i>Silver Jacket Flood Control Program manager</i>	<i>817-886-1612</i>	<i>dorie.murphy@usace.army.mil</i>	<i>Dorie Murphy</i>
14	<i>San Miguel, Francisco</i>	<i>NCTCOG</i>	<i>Senior EP Spec.</i>	<i>817-608-5562</i>	<i>fsanmiguel@nctcog.org</i>	<i>Francisco</i>
15	<i>Lagassa, Nicholas</i>	<i>NCTCOG</i>	<i>EP Program Assistant</i>	<i>817-913-6140</i>	<i>Nlagassa@nctcog.org</i>	<i>Nicholas</i>



## Sign in Sheet - Meeting 1

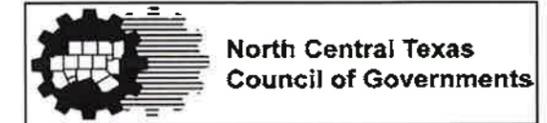
Lower West Fork Trinity Watershed  
FEMA Region 6 and NCTCOG

Date: Wednesday, May 29, 2013

Time: 9:00 am

Location: Tarrant County Public Health Administration Office

	Name	Organization	Title	Phone	Email	Signature of Attendance
16	Love	USFP			llove@halff.com	[Signature]
17	Barrett Goodwin	RAMPP	Study Manager	940-735-3337	bgoodwin@dewberry.com	[Signature]
✓ 18	James E. Coway	City of Kennedak	Director of Development Services	817-538-7357	jcovey@cityofkennedak.com	[Signature]
19	REDDY M	RAMPP	Engineer	940-735-3335	vmudumalapurthy@dewberry.com	[Signature]
20	Jim Keith	RAMPP	Associate	940-735-3341	jkeith@dewberry.com	[Signature]
✓ 21	Keith Miertschin	City of Watauga	Director of Public Works	817-514-5837		
22	Sradda Kalikivaya	Baker	Project Manager	940-435-1443	Skalikivaya@mbakercorp.com	[Signature]
23	Catherine Crowley	Halff	GIS	214-217-2484	crowley@halff.com	[Signature]
24	Eric Hajek	Halff	GIS	214-316-6359	ehajek@halff.com	[Signature]
25	Bill Brown	Arlington		817-459-6567	Bill.Brown@arlingtontx.gov	
26	Ramin Khamli	GRAND PRAIRIE	City Engineer	972-237-8145	RKHAMLI@GPTX-016	[Signature]
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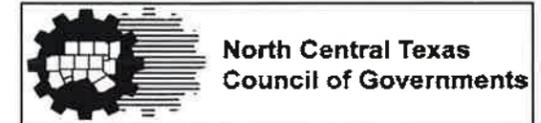
## Sign in Sheet - Meeting 2

Lower West Fork Trinity Watershed  
FEMA Region 6 and NCTCOG

Date: Wednesday, June 26, 2013  
Location: Chandor Gardens

Time: 9:00 am

Name	Organization	Title	Phone	Email	Signature of Attendance
Anderson, Steve	City of Southlake	Civil Engineer	817-748-8101	sanderson@ci.southlake.tx.us	✓
Davis, Clair	City of Fort Worth	Floodplain Administrator	817-392-5981	clair.davis@fortworthtexas.org	
Dumas, Stephen	Johnson County	Director of Public Works	817-556-6380	sdumas@johnsoncountytexas.org	
Fuqua, Kirk	Parker County	Floodplain Manager	817-598-6174	kirk.fuqua@parkercountytexas.com	✓ <span style="float: right;">out ✓</span>
Gattis, David	City of Benbrook	Deputy City Manager	817-249-6005	dgattis@benbrook-tx.gov	
Hotopp, James	City of Weatherford	Director of Water Utilities/Floodplain Administrator	817-598-4016	jhotopp@weatherfordtx.gov	
Marvin, Edith	NCTCOG	Director of Environment and Development	817-695-9211	emarvin@nctcog.org	
McCullough, Michelle	City of Burleson	Civil Engineer/ Floodplain Administrator	817-426-9616	mmccullough@burlesontx.com	
Pearson, Jeffrey	City of Euless	Civil Engineer	817-685-1877	jpearson@eulesstx.gov	✓
Scott, Shawn	Parker County Emergency Mangement	Fire Marshal / EMC	817-598-0969	shawn.scott@parkercountytexas.com	<span style="float: right;">out ✓</span>
Stroud, Janice	Parker County Emergency Mangement	Asst. EMC	817-598-0969	Janice.stroud@parkercountytexas.com	<span style="float: right;">out ✓</span>
Valencia, Leo	NCTCOG	Environmental Planner	817-608-2363	lvalencia@nctcog.org	
Waggoner, Caroline	City of North Richland Hills	Assistant Director - Engineering	817-427-6406	clwaggoner@nrhtx.com	
Whiteman, Randy	Town of Lakeside	Town Administrator	817-237-1234	rwhiteman@lakesidetexas.us	



## Sign in Sheet - Meeting 2

Lower West Fork Trinity Watershed  
FEMA Region 6 and NCTCOG

Date: Wednesday, June 26, 2013  
Location: Chandor Gardens

Time: 9:00 am

Name	Organization	Title	Phone	Email	Signature of Attendance
Woodbury, Robert	City of Cedar Hill	City Engineer	817-714-6785	robert.woodbury@cedarhilltx.com	
SMITH, Bill	CITY OF WEATHERFORD	CIVIL ENGINEER	(817) 576-4653	wsmithe@weatherfordtx.gov	Bill Smith
Hughes, Terry	" "	Director of Capital Projects	817-598-4244	thughes@weatherfordtx.gov	Terry Hughes
Scott Berman	Fraese+Nichols	Project Manager	817 735 7460	stb@fraese.com	SB
Magred, Liz	FEMA	NFIP	940-390-0507	magred.liz@fema.gov	Magred S. Odey
Manny Palacios	City of Weatherford	Dir. of Public Works	817-598-4296	mpalacios@weatherfordtx.gov	Manny Palacios
Steve Anderson	City of Southlake	Civil Engineer	817-248-8101	sanderson@ci.southlake-tx.us	Steve Anderson
Danella, Michael	USACE	Civil Engineer	817-886-1690	Michael.a.danella@usace.army.mil	Michael Danella
FUQUA, KIRK	Parker Co.	Director Planning	8175976041	Kirk.Fuqua@parkercountytx.com	Kirk Fuqua
Pearson, Jeff	City of Euless	Civil Engineer	817-685-1877	jpearson@eulessTX.gov	Jeff Pearson
Sarada Kalikivaya	Michael Baker Tr.	Project Manager	940-435-1443	Sukalivaya@mbakercorp.com	Sarada Kalikivaya
Levitz, Elizabeth	RAMPP/URS	RAMPP Study manager/ Senior Water Resources Eng	713-914-6569	elizabeth.levitz@urs.com	Elizabeth Levitz
Ward, Gilbert	TWDB	Grants Coordinator	512-463-6418	gilbert.ward@twdb.texas.gov	Gilbert Ward

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## Meeting Photos















