City of OVILLA City Council

Kimberly Case, Place One | *Richard Dormier, Mayor* | *David Griffin, Place Three*
Dean Oberg, Place Two | *Doug Hunt Place Four, Mayor Pro Tem* | *Brad Piland, Place Five*

105 S. Cockrell Hill Road, Ovilla, TX 75154
Monday, June 13, 2022 *6:30 P.M.* *Council Chamber Room*

AGENDA

NOTICE is hereby given of a Regular Meeting of the City Council of the City of Ovilla, to be held on **Monday, June 13, 2022,** at **6:30 P.M**. in the Ovilla Municipal Building, Council Chamber Room, 105 S. Cockrell Hill Road, Ovilla, Texas, 75154, for the purpose of considering the following items:

I. CALL TO ORDER

- Invocation – *led by PL 1 Case*
- U.S. Pledge of Allegiance and TX Pledge - *led by PL 5 Piland*

II. COMMENTS, PRESENTATIONS, ANNOUNCEMENTS, PROCLAMATIONS

- *Introduction of Deputy Fire Chief/Fire Marshall Kevin Mooney*
- *Citizen Comment Guidelines and timer*

III. CITIZENS COMMENTS

The City Council welcomes comments from Citizens. Those wishing to speak must sign in before the meeting begins. Speakers may speak on any topic, whether on the agenda or not. The City Council cannot act upon, discuss issues raised or make any decisions at this time. Speakers under citizens' comments must observe a three-minute time limit. Inquiries regarding matters not listed on the agenda may be referred to Staff for research and possible future action.

IV. CONSENT AGENDA

The following items may be acted upon in one motion. No separate discussion or action is necessary unless requested by a Council Member, in which event those items will be pulled from the consent agenda for individual consideration on the regular agenda during this meeting.

C1. Financial Transactions over $5000
C2. Minutes of the Regular Council Meeting May 9, 2022
C3. Minutes of the Special Council Meeting May 16, 2022
C4. Consent Request and Notice to Proceed for Modification to Existing AT&T Equipment
C5. Resolution No. 2022-06 Authorizing Continued Participation with the Atmos Steering Committee

V. REGULAR AGENDA

ITEM 1. **DISCUSSION** – Review of 2022 Ellis County Hazard Mitigation Plan with Ellis County Emergency Management Specialist Brian Davis.

ITEM 2. **DISCUSSION/ACTION** - Consideration of and action on a request from Frank Blanchard to refund $900.00 paid to the City of Ovilla for annexation and zoning fees of the Stonewood Development.

ITEM 3. **DISCUSSION/ACTION** – Receive annual report from staff and recommendation from the Board Review Committee to consider and act on volunteer board appointment and/or reappointment(s) to serve a term on the Planning and Zoning Commission and/or direct staff to solicit for new applicants.

ITEM 4. **DISCUSSION/ACTION** –Receive annual report from staff and recommendation from the Board Review Committee to consider and act on volunteer board appointment and/or reappointment(s) to serve a term on the Economic Development Corporation and/or direct staff to solicit for new applicants.

ITEM 5. **DISCUSSION/ACTION** – Consideration of and action on the City Council of the City of Ovilla serving as the Board of Adjustment as allowed by Section 211.008(g) of the Local Government Code.

ITEM 6. **DISCUSSION/ACTION** – Consideration of and action on an Engineering Services Agreement by and between the City of Ovilla and Birkhoff, Hendricks and Carter, L.L.P., to complete an analysis of the Water and Wastewater Impact Fee Study update, authorizing payment of engineering services and authorizing the Mayor to execute said Agreement.

ITEM 7. **DISCUSSION/ACTION –** Consideration of and action on the appointment of the Planning and Zoning Commission and one ad hoc member to serve as an Ovilla Impact Fee Advisory Committee to conduct the Water and Wastewater Impact Fee Study Update for the City of Ovilla in conjunction with Birkhoff, Hendricks and Carter, LLP and direct staff as necessary.

ITEM 8. **DISCUSSION/ACTION** - Consideration of and action on the police department renovation including the possibility of awarding a bid for the renovation or directing staff to move forward with drafting a new plan of action for the renovation project.

ITEM 9. **DISCUSSION/ACTION** – Consideration of and action on the fiscal year 2022/2023 City of Ovilla Budget Calendar.

ITEM 10. **DISCUSSION/ACTION –** Consideration of and action on Ordinance No. 2022-10 of the City Council of the City of Ovilla, Texas, amending Ordinance No. 2021-17 providing for budget amendments to the fiscal year 2021-2022 annual budget and program of services in accordance with Chapter 1, Article 1.05, Section 1.05.038 mid-year budget review and amendment, of the City of Ovilla; providing for budget amendments to the general fund and the water & utilities fund; providing for the incorporation of premises; providing a savings clause; providing a cumulative repealer clause; providing for severability; providing for engrossment and enrollment; and providing an effective date.

ITEM 11. **DISCUSSION –** Discussion an update on the planning and kick-off festivities for Heritage Day 2022.

ITEM 12. **DISCUSSION/ACTION –** Consideration of any item(s) pulled from the Consent Agenda for individual consideration and action.

VI. STAFF REPORTS

- **Department Activity Reports / Discussion**
  - Police Department — Police Chief J. Bennett
    - Police Activity and Staffing Updates
  - Fire Department — Fire Chief B. Kennedy
    - Fire Activity and Staffing Updates
  - Public Works Department — Public Works Director J. Kuykendall
    - Public Works Activity and Staffing Updates
  - Finance Department — Finance Director S. Jungman

- Finance Activity and Staffing Updates

- Administration — City Manager P. Woodall
  - Administration Activity and Staffing Updates — City Secretary B. Taylor

EXECUTIVE SESSION

The City Council of the City of Ovilla, Texas, reserves the right to meet in a closed session on any item listed on this Agenda should the need arise, pursuant to authorization by Texas Government Code, Sections 551.071 (consultation with attorney), 551.072 (deliberations about real property), 551.073 (deliberations about gifts and donations), 551.074 (personnel matters), 551.076 (deliberations about security devices), 551.087 (economic development), 418.183 (homeland security).

A. *Convene into Executive Session.*

ES ITEM 1. DISCUSSION – Closed Session - Called pursuant to Section §551.074 (1) of the Texas Government Code: Personnel Matters; to deliberate the appointment, employment, evaluation,reassignment, duties, discipline, or dismissal of a public officer or employee.

City Manager

B. *Convene into Executive Session.*

ES ITEM 2. DISCUSSION/ACTION –Any action necessary or appropriate as a result of the closed executive session.

VII. *REQUESTS FOR FUTURE AGENDA ITEMS AND/OR ANNOUNCEMENTS BY COUNCIL AND STAFF*

VIII. *ADJOURNMENT*

THIS IS TO CERTIFY THAT A COPY OF THE NOTICE OF the June 13, 2022, Regular City Council Agenda was posted on the City Hall bulletin board, a place convenient and readily accessible to the general public at all times, and to the City's website, www.cityofovilla.org, on the 9th day of June 2022, prior to 6:00 p.m., in compliance with Chapter 551, Texas Government Code.

Bobbie Jo Taylor, City Secretary

CITY OF OVILLA, TEXAS

DATE OF POSTING: 6/9/22 TIME: 4:15 am/pm
DATE TAKEN DOWN: _____ TIME: _____ am/pm

This facility is ADA compliant. If you plan to attend this public meeting and have a disability that requires special arrangements, please call 972-617-7262 at least 48 hours in advance. Reasonable accommodation will be made to assist your needs. PLEASE SILENCE ALL CELL PHONES & OTHER ELECTRONIC EQUIPMENT WHILE THE CITY COUNCIL MEETING IS IN SESSION.

A recording of the meeting will be made and will be available to the public in accordance with the Open Meetings Act upon written request.

PURSUANT TO SECTION 30.06, PENAL CODE (TRESPASS BY LICENSE HOLDER WITH A CONCEALED HANDGUN), A PERSON LICENSED UNDER SUBCHAPTER H, CHAPTER 411, GOVERNMENT CODE (HANDGUN LICENSING LAW), MAY NOT ENTER THIS PROPERTY WITH A CONCEALED HANDGUN.

CONFORME A LA SECCIÓN 30.06 DEL CÓDIGO PENAL (ENTRADA SIN AUTORIZACIÓN POR TITULAR DE LICENCIA CON UNA PISTOLA OCULTA), UNA PERSONA CON LICENCIA BAJO EL SUBCAPÍTULO H, CAPÍTULO 411 DEL CÓDIGO DE GOBIERNO (LEY DE LICENCIAS DE PISTOLAS), NO PUEDE ENTRAR EN ESTA PROPIEDAD CON UNA PISTOLA OCULTA.

PURSUANT TO SECTION 30.07, PENAL CODE (TRESPASS BY LICENSE HOLDER WITH AN OPENLY CARRIED HANDGUN), A PERSON LICENSED UNDER SUBCHAPTER H, CHAPTER 411, GOVERNMENT CODE (HANDGUN LICENSING LAW), MAY NOT ENTER THIS PROPERTY WITH A HANDGUN THAT IS CARRIED OPENLY.

CONFORME A LA SECCIÓN 30.07 DEL CÓDIGO PENAL (ENTRADA SIN AUTORIZACIÓN POR TITULAR DE LICENCIA CON UNA PISTOLA VISIBLE), UNA PERSONA CON LICENCIA BAJO EL SUBCAPÍTULO H, CAPÍTULO 411 DEL CÓDIGO DE GOBIERNO (LEY DE LICENCIAS DE PISTOLAS), NO PUEDE ENTRAR EN ESTA PROPIEDAD CON UNA PISTOLA VISIBLE.

06.09.2022

Consent Items C1-C5

To
Honorable Mayor and Council

From
Staff

CC
Applicable Departments

C1. Financial Transactions over $5000
C2. Minutes of the Regular Council Meeting May 9, 2022
C3. Minutes of the Special Council Meeting May 16, 2022
C4. Consent Request and Notice to Proceed for Modification to Existing AT&T Equipment
C5. Resolution No. 2022-06 Authorizing Continued Participation with the Atmos Steering Committee

BACKGROUND AND JUSTIFICATION:

C1: Financial Transactions over $5000
STAFF RECOMMENDATION: Staff recommends approval

C2: Minutes of the Regular Council Meeting May 9, 2022
STAFF RECOMMENDATION: Staff recommends approval.

C3: Minutes of the Special Council Meeting May 16, 2022
STAFF RECOMMENDATION: Staff recommends approval.

C4: Consent Request and Notice to Proceed for Modification to Existing AT&T Equipment
AT&T needs to make modifications to its equipment at our facility. Typical modifications include: the addition/replacement of existing antennas and radios as well as the associated cabling
STAFF RECOMMENDATION: Staff recommends approval.

C5: Resolution No. 2022-06 Authorizing Continued Participation with the Atmos Steering Committee
Previously approved by the council in February this resolution lowers our cost of participation from $.10 per capita to $.05.
STAFF RECOMMENDATION: Staff recommends approval.

City of Ovilla
FOUNDED IN 1844

Date: June 13, 2022

To: Honorable Mayor and Council Members

Subject: Transactions over $5,000 From October 1, 2021 thru April 30, 2022

From:

Sharon Jungman – Finance Director

City of Ovilla
Transaction Detail Report
10/1/2021 - 4/30/2022

100 - General Fund **Account 100-2311000**

Post Date	Tran Date	Source	Line Description	Vendor	Invoice #	Check #	Debit	Credit	Balance
10/12/2021	10/12/2021	AP Invoice	TMRS-Employer 10/9/2021	T. M. R. S.	PY10152021		5,380.28	0.00	(5,380.52)
10/27/2021	10/27/2021	AP Invoice	TMRS-Employer 10/23/2021	T. M. R. S.	PY10292021		5,903.87	0.00	(11,284.39)
11/10/2021	11/10/2021	AP Invoice	TMRS-Employer 11/6/2021	T. M. R. S.	PY11122021		5,373.68	0.00	(16,658.07)
11/23/2021	11/23/2021	AP Invoice	TMRS-Employer 11/20/2021	T. M. R. S.	PY11242021		5,691.99	0.00	(22,350.06)
12/8/2021	12/8/2021	AP Invoice	TMRS-Employer 12/4/2021	T. M. R. S.	PY12102021		5,652.70	0.00	(28,002.76)
12/21/2021	12/21/2021	AP Invoice	TMRS-Employer 12/18/2021	T. M. R. S.	PY12232021		5,723.63	0.00	(33,726.39)
1/5/2022	1/5/2022	AP Invoice	TMRS-Employer 1/1/2022	T. M. R. S.	PY172022		6,036.07	0.00	(39,762.46)
1/20/2022	1/20/2022	AP Invoice	TMRS-Employer 1/15/2022	T. M. R. S.	PY1212022		6,173.96	0.00	(45,936.42)
2/2/2022	2/2/2022	AP Invoice	TMRS-Employer 1/29/2022	T. M. R. S.	PY242022		5,759.07	0.00	(51,695.49)
2/17/2022	2/17/2022	AP Invoice	TMRS-Employer 2/12/2022	T. M. R. S.	PY2182022		5,918.24	0.00	(57,613.73)
3/3/2022	3/3/2022	AP Invoice	TMRS-Employer 2/26/2022	T. M. R. S.	PY342022		5,946.76	0.00	(63,560.49)
3/16/2022	3/16/2022	AP Invoice	TMRS-Employer 3/12/2022	T. M. R. S.	PY3182022		5,880.04	0.00	(69,440.53)
4/1/2022	4/1/2022	AP Invoice	TMRS-Employer 3/26/2022	T. M. R. S.	PY412022		6,162.48	0.00	(75,603.01)
4/13/2022	4/13/2022	AP Invoice	TMRS-Employer 4/9/2022	T. M. R. S.	PY4152022		5,200.22	0.00	(80,803.23)
4/27/2022	4/27/2022	AP Invoice	TMRS-Employer 4/23/2022	T. M. R. S.	PY4292022		5,404.51	0.00	(86,207.74)
						Total	86,207.50	0.00	

100 - General Fund **Account 100-2311500**

Post Date	Tran Date	Source	Line Description	Vendor	Invoice #	Check #	Debit	Credit	Balance
10/12/2021	10/12/2021	AP Invoice	Federal Withholding 10/9/2021	Internal Revenue Service	PY10152021		5,857.19	0.00	(5,857.09)
10/27/2021	10/27/2021	AP Invoice	Federal Withholding 10/23/2021	Internal Revenue Service	PY10292021		7,004.53	0.00	(12,861.62)
11/10/2021	11/10/2021	AP Invoice	Federal Withholding 11/6/2021	Internal Revenue Service	PY11122021		5,527.05	0.00	(18,388.67)
11/23/2021	11/23/2021	AP Invoice	Federal Withholding 11/20/2021	Internal Revenue Service	PY11242021		6,201.61	0.00	(24,590.28)
12/8/2021	12/8/2021	AP Invoice	Federal Withholding 12/4/2021	Internal Revenue Service	PY12102021		6,026.78	0.00	(30,617.06)
12/21/2021	12/21/2021	AP Invoice	Federal Withholding 12/18/2021	Internal Revenue Service	PY12232021		6,005.03	0.00	(36,622.09)
1/5/2022	1/5/2022	AP Invoice	Federal Withholding 1/1/2022	Internal Revenue Service	PY172022		6,096.88	0.00	(42,718.97)
1/20/2022	1/20/2022	AP Invoice	Federal Withholding 1/15/2022	Internal Revenue Service	PY1212022		6,094.23	0.00	(48,813.20)
2/2/2022	2/2/2022	AP Invoice	Federal Withholding 1/29/2022	Internal Revenue Service	PY242022		5,615.11	0.00	(54,428.31)
2/17/2022	2/17/2022	AP Invoice	Federal Withholding 2/12/2022	Internal Revenue Service	PY2182022		6,235.70	0.00	(60,664.01)

3/3/2022	3/3/2022	AP Invoice	Federal Withholding 2/26/2022	Internal Revenue Service	PY342022		6,117.47	0.00	(66,781.48)
3/16/2022	3/16/2022	AP Invoice	Federal Withholding 3/12/2022	Internal Revenue Service	PY3182022		5,761.75	0.00	(72,543.23)
4/1/2022	4/1/2022	AP Invoice	Federal Withholding 3/26/2022	Internal Revenue Service	PY412022		6,565.50	0.00	(79,108.73)
4/13/2022	4/13/2022	AP Invoice	Federal Withholding 4/9/2022	Internal Revenue Service	PY4152022		5,566.41	0.00	(84,675.14)
4/27/2022	4/27/2022	AP Invoice	Federal Withholding 4/23/2022	Internal Revenue Service	PY4292022		6,364.45	0.00	(91,039.59)
						Total	91,039.69	0.00	

100 - General Fund **Account 100-2312150**

Post Date	Tran Date	Source	Line Description	Vendor	Invoice #	Check #	Debit	Credit	Balance
11/10/2021	11/10/2021	AP Invoice	ER PD UHC 11/6/2021	United Health Care	PY11122021		13,190.73	0.00	(13,190.73)
12/8/2021	12/8/2021	AP Invoice	ER PD UHC 12/4/2021	United Health Care	PY12102021		13,673.32	0.00	(26,864.05)
1/5/2022	1/5/2022	AP Invoice	ER PD UHC 1/1/2022	United Health Care	PY172022		13,673.32	0.00	(40,537.37)
2/2/2022	2/2/2022	AP Invoice	ER PD UHC 1/29/2022	United Health Care	PY242022		13,673.32	0.00	(54,210.69)
3/3/2022	3/3/2022	AP Invoice	ER PD UHC 2/26/2022	United Health Care	PY342022		14,155.91	0.00	(68,366.60)
4/1/2022	4/1/2022	AP Invoice	ER PD UHC 3/26/2022	United Health Care	PY412022		13,512.46	0.00	(81,879.06)
						Total	81,879.06	0.00	

100 - General Fund **Account 100-10-52220**

Post Date	Tran Date	Source	Line Description	Vendor	Invoice #	Check #	Debit	Credit	Balance
12/2/2021	12/2/2021	AP Invoice	Ellis Central Appraisal District	Ellis Central Appraisal District	2022-26-01	052340	5,198.93	0.00	5,198.93
3/17/2022	3/17/2022	AP Invoice	SECOND QT PAYMENT	Ellis Central Appraisal District	2022-26-02	052718	5,198.93	0.00	10,397.86
						Total	10,397.86	0.00	

100 - General Fund **Account 100-10-55240**

Post Date	Tran Date	Source	Line Description	Vendor	Invoice #	Check #	Debit	Credit	Balance
3/24/2022	3/24/2022	AP Invoice	BUDGETING SOFTWARE	ClearGov Inc.	2022-11681	052748	9,625.00	0.00	9,625.00
						Total	9,625.00	0.00	

100 - General Fund **Account 100-10-55520**

Post Date	Tran Date	Source	Line Description	Vendor	Invoice #	Check #	Debit	Credit	Balance
11/19/2021	11/19/2021	AP Invoice	ASBESTOS ABATEMENT/105 S COCKRELL HILL RD	North Texas Environmental & Demolition Services	8621 A-G	052281	9,950.00	0.00	9,950.00
11/24/2021	11/24/2021	AP Invoice	BUILDING MAINTENANCE	Centennial Contracting Inc	021378	052310	16,550.00	0.00	26,500.00
						Total	26,500.00	0.00	

100 - General Fund **Account 100-10-57420**

Post Date	Tran Date	Source	Line Description	Vendor	Invoice #	Check #	Debit	Credit	Balance
3/24/2022	3/24/2022	AP Invoice	DRAWINGS FOR CITY HALL	Mottla Enterprises, Inc.	03232022	052755	11,700.00	0.00	11,700.00

						Total	11,700.00	0.00	

100 - General Fund **Account 100-16-52160**

Post Date	Tran Date	Source	Line Description	Vendor	Invoice #	Check #	Debit	Credit	Balance
10/8/2021	10/8/2021	AP Invoice	QUARTERLY FEES	TML Intergovernmental Risk Pool	5016 100121	052123	10,140.64	0.00	10,140.64
1/20/2022	1/20/2022	AP Invoice	TML Insurance for Jan.-March 2022	TEXAS MUNICIPAL LEAGUE IRP	5016 01/01/22	052539	21,630.95	0.00	31,771.59
4/8/2022	4/8/2022	AP Invoice	TML INSURANCE	TEXAS MUNICIPAL LEAGUE IRP	TML04012022	052822	10,140.64	0.00	41,912.23
						Total	41,912.23	0.00	

100 - General Fund **Account 100-16-52240**

Post Date	Tran Date	Source	Line Description	Vendor	Invoice #	Check #	Debit	Credit	Balance
4/8/2022	4/8/2022	AP Invoice	FINAL AUDIT BILL	BKD, LLP	BK01549473	052803	8,100.00	0.00	8,100.00
						Total	8,100.00	0.00	

100 - General Fund **Account 100-16-52545**

Post Date	Tran Date	Source	Line Description	Vendor	Invoice #	Check #	Debit	Credit	Balance
2/2/2022	2/2/2022	AP Invoice	NEW PHONES AND COMPUTERS	NetGenius, Inc.	1446	052579	7,552.36	0.00	7,552.36
						Total	7,552.36	0.00	

100 - General Fund **Account 100-16-55450**

Post Date	Tran Date	Source	Line Description	Vendor	Invoice #	Check #	Debit	Credit	Balance
3/4/2022	3/4/2022	AP Invoice	UTILITIES EXPENSE	Gexa Energy LP	329811534	052669	5,000.66	0.00	5,000.66
4/14/2022	4/14/2022	AP Invoice	ELECTRICITY MARCH	Gexa Energy LP	33016856-4	052837	5,073.03	0.00	10,073.69
						Total	10,073.69	0.00	

100 - General Fund **Account 100-16-55640**

Post Date	Tran Date	Source	Line Description	Vendor	Invoice #	Check #	Debit	Credit	Balance
10/8/2021	10/8/2021	AP Invoice	QUARTERLY FEES	TML Intergovernmental Risk Pool	5016 100121	052123	5,053.16	0.00	5,053.16
1/20/2022	1/20/2022	AP Invoice	TML Insurance for Jan.-March 2022	TEXAS MUNICIPAL LEAGUE IRP	5016 01/01/22	052539	5,053.16	0.00	10,106.32
4/8/2022	4/8/2022	AP Invoice	TML INSURANCE	TEXAS MUNICIPAL LEAGUE IRP	TML04012022	052822	5,053.16	0.00	15,159.48
						Total	15,159.48	0.00	

100 - General Fund **Account 100-16-55756**

Post Date	Tran Date	Source	Line Description	Vendor	Invoice #	Check #	Debit	Credit	Balance
12/23/2021	12/23/2021	AP Invoice	First of 5 annual pmts. for ROW for Widening 664 Between Westmoreland & FM1387	Texas Department of Transportation	RCSJ 1051-01-05	052444	52,718.56	0.00	52,718.56
						Total	52,718.56	0.00	

100 - General Fund **Account 100-20-52380**

Post Date	Tran Date	Source	Line Description	Vendor	Invoice #	Check #	Debit	Credit	Balance
10/29/2021	10/29/2021	AP Invoice	COMMUNICATIONS CONTRACT	City of Midlothian	OVILLA 100121	052192	20,475.00	0.00	20,475.00
11/19/2021	11/19/2021	AP Invoice	RADIO SERVICE AGREEMENT FYE 2021-2022	City of Midlothian	RSA 2022-14	052271	7,391.00	0.00	27,866.00
						Total	27,866.00	0.00	

100 - General Fund **Account 100-20-52390**

Post Date	Tran Date	Source	Line Description	Vendor	Invoice #	Check #	Debit	Credit	Balance
11/10/2021	11/10/2021	AP Invoice	ANNUAL MEMBERSHIP FEES	City of Midlothian	SRRG-22-7	052238	8,250.00	0.00	8,250.00
						Total	8,250.00	0.00	

100 - General Fund **Account 100-20-55240**

Post Date	Tran Date	Source	Line Description	Vendor	Invoice #	Check #	Debit	Credit	Balance
10/14/2021	10/14/2021	AP Invoice	CRIMES SOFTWARE 10/2021-9/2022	Sam Houston State University	10/1/2021	052134	16,500.00	0.00	16,500.00
						Total	16,500.00	0.00	

100 - General Fund **Account 100-20-55520**

Post Date	Tran Date	Source	Line Description	Vendor	Invoice #	Check #	Debit	Credit	Balance
11/24/2021	11/24/2021	AP Invoice	BUILDING MAINTENANCE	Centennial Contracting Inc	021378	052310	13,240.00	0.00	13,240.00
						Total	13,240.00	0.00	

100 - General Fund **Account 100-30-52380**

Post Date	Tran Date	Source	Line Description	Vendor	Invoice #	Check #	Debit	Credit	Balance
11/19/2021	11/19/2021	AP Invoice	RADIO SERVICE AGREEMENT FYE 2021-2022	City of Midlothian	RSA 2022-14	052271	8,558.00	0.00	8,558.00
						Total	8,558.00	0.00	

100 - General Fund **Account 100-30-52385**

Post Date	Tran Date	Source	Line Description	Vendor	Invoice #	Check #	Debit	Credit	Balance
1/13/2022	1/13/2022	AP Invoice	EMERGENCY MEDICAL TRANSPORTATION 1ST QUARTER 10/21-12/21	City of Midlothian	EMS123121	052506	15,889.75	0.00	15,889.75
4/14/2022	4/14/2022	AP Invoice	2ND Q EMERGENCY MEDICAL TRANSPORT CONTRACT	City of Midlothian	EM033122	052832	26,977.42	0.00	42,867.17
						Total	42,867.17	0.00	

100 - General Fund **Account 100-30-55520**

Post Date	Tran Date	Source	Line Description	Vendor	Invoice #	Check #	Debit	Credit	Balance
11/24/2021	11/24/2021	AP Invoice	BUILDING MAINTENANCE	Centennial Contracting Inc	021378	052310	31,210.00	0.00	31,210.00
3/24/2022	3/24/2022	AP Invoice	BUILDING REPAIR- FIRE DEPARTMENT	Centennial Contracting Inc	022054	052746	7,455.00	0.00	38,665.00
4/8/2022	4/8/2022	AP Invoice	WATER LOSS- FIRE STATION	Mr. Restore	PR137981	052814	13,260.94	0.00	51,925.94

4/27/2022	4/27/2022	AP Invoice	1ST DRAW PAYMENT- FIRE STATION	Mr. Restore	87179	052873	7,141.60	0.00	59,067.54
						Total	59,067.54	0.00	

100 - General Fund **Account 100-30-55545**

Post Date	Tran Date	Source	Line Description	Vendor	Invoice #	Check #	Debit	Credit	Balance
1/27/2022	1/27/2022	AP Invoice	VEHICLE EXPENSES	Siddons-Martin Emergency Group, LLC	14408636	052567	7,065.28	0.00	7,065.28
2/10/2022	2/10/2022	AP Invoice	VEHICLE REPAIRS (VIN 1856)	STEWART & STEVENSON LLC	298183	052608	8,856.31	0.00	15,921.59
						Total	15,921.59	0.00	

100 - General Fund **Account 100-30-57450**

Post Date	Tran Date	Source	Line Description	Vendor	Invoice #	Check #	Debit	Credit	Balance
2/10/2022	2/10/2022	AP Invoice	BROKER FEE BRUSH TRUCK	MSC 30762 FENTON FIRE EQUIPMENT INC	3921	052600	7,250.00	0.00	7,250.00
						Total	7,250.00	0.00	

100 - General Fund **Account 100-40-55240**

Post Date	Tran Date	Source	Line Description	Vendor	Invoice #	Check #	Debit	Credit	Balance
10/8/2021	10/8/2021	AP Invoice	ANNUAL SUBSCRIPTION 9/1/21 - 8/31/21	Gov Pilot	2021-1170	052118	7,500.00	0.00	7,500.00
						Total	7,500.00	0.00	

100 - General Fund **Account 100-45-55465**

Post Date	Tran Date	Source	Line Description	Vendor	Invoice #	Check #	Debit	Credit	Balance
10/8/2021	10/8/2021	AP Invoice	SERVICES FOR AUGUST 2021	Community Waste Disposal	1195926	052096	23,522.85	0.00	23,522.85
10/8/2021	10/8/2021	AP Invoice	SERVICES FOR SEPTEMBER 2021	Community Waste Disposal	1205790	052096	23,537.78	0.00	47,060.63
11/19/2021	11/19/2021	AP Invoice	SERVICES FOR OCTOBER 2021	Community Waste Disposal	1216528	052273	23,478.06	0.00	70,538.69
1/6/2022	1/6/2022	AP Invoice	Trash Collection for Dec. 2021	Community Waste Disposal	1241501	052478	23,492.99	0.00	94,031.68
2/10/2022	2/10/2022	AP Invoice	WASTE SERVICES FOR JANUARY 2022	Community Waste Disposal	1252197	052591	25,979.08	0.00	120,010.76
3/8/2022	3/8/2022	AP Invoice	WASTE SERVICE FOR FEBRUARY	Community Waste Disposal	126565	052695	26,457.58	0.00	146,468.34
4/8/2022	4/8/2022	AP Invoice	GARBAGE SERVICE	Community Waste Disposal	122696	052808	23,522.85	0.00	169,991.19
4/14/2022	4/14/2022	AP Invoice	WASTE SERVICE FOR MARCH	Community Waste Disposal	1277911	052833	27,068.08	0.00	197,059.27
						Total	197,059.27	0.00	

100 - General Fund **Account 100-50-57450**

Post Date	Tran Date	Source	Line Description	Vendor	Invoice #	Check #	Debit	Credit	Balance
12/2/2021	12/2/2021	AP Invoice	VEHICLE EXPENSES	Rush Truck Centers of Texas, LP	1019-18913	052353	85,986.04	0.00	85,986.04

						Total	85,986.04	0.00	

100 - General Fund **Account 100-60-57440**

Post Date	Tran Date	Source	Line Description	Vendor	Invoice #	Check #	Debit	Credit	Balance
12/10/2021	12/10/2021	AP Invoice	PARK EQUIPMENT	Landmark Equipment, Inc.	35965	052371	11,000.00	0.00	11,000.00
2/23/2022	2/23/2022	AP Invoice	FENCE - LAND IMPROVEMENTS	B & R Fence Co., LLC	1070	052640	17,479.00	0.00	28,479.00
						Total	28,479.00	0.00	

200 - Water And Utilities Fund **Account 200-70-57440**

Post Date	Tran Date	Source	Line Description	Vendor	Invoice #	Check #	Debit	Credit	Balance
11/19/2021	11/19/2021	AP Invoice	SECURITY/PW	Bat Security	72284	052263	6,426.00	0.00	6,426.00
						Total	6,426.00	0.00	

200 - Water And Utilities Fund **Account 200-75-55460**

Post Date	Tran Date	Source	Line Description	Vendor	Invoice #	Check #	Debit	Credit	Balance
11/19/2021	11/19/2021	AP Invoice	WATER PURCHASE 10/1/21-11/1/21	City of Dallas	050302301494	052270	39,652.51	0.00	39,652.51
12/23/2021	12/23/2021	AP Invoice	WATER PURCHASED 11/2/21 - 12/3/21	City of Dallas	050302323211	052434	32,821.44	0.00	72,473.95
1/20/2022	1/20/2022	AP Invoice	WATERED PURCHASED 12/4/21-1/5/22	City of Dallas	050302341286	052525	33,506.48	0.00	105,980.43
3/4/2022	3/4/2022	AP Invoice	WATER PURCHASED	City of Dallas	050302373193	052662	32,150.88	0.00	138,131.31
3/24/2022	3/24/2022	AP Invoice	WATER PURCHASED	City of Dallas	050302396698	052747	25,843.24	0.00	163,974.55
4/27/2022	4/27/2022	AP Invoice	WATER METTER EQUIPEMENT	City of Dallas	050302419358	052868	29,982.40	0.00	193,956.95
						Total	193,956.95	0.00	

200 - Water And Utilities Fund **Account 200-75-57440**

Post Date	Tran Date	Source	Line Description	Vendor	Invoice #	Check #	Debit	Credit	Balance
3/24/2022	3/24/2022	AP Invoice	SMART METER PROGRAM-BROADMOOR	Smart Earth Technologies, LLC	11261	052764	9,125.35	0.00	9,125.35
						Total	9,125.35	0.00	

200 - Water And Utilities Fund **Account 200-80-52350**

Post Date	Tran Date	Source	Line Description	Vendor	Invoice #	Check #	Debit	Credit	Balance
4/14/2022	4/14/2022	AP Invoice	LIFT STATION REPAIR	Peterson Pump and Motor Service	22-0055	052841	7,400.00	0.00	7,400.00
						Total	7,400.00	0.00	

200 - Water And Utilities Fund **Account 200-80-55463**

Post Date	Tran Date	Source	Line Description	Vendor	Invoice #	Check #	Debit	Credit	Balance
10/8/2021	10/8/2021	AP Invoice	ROCRWS-DEBT SERVICE	Trinity River Authority of Texas	BH 1608	052124	9,066.00	0.00	9,066.00
10/14/2021	10/14/2021	AP Invoice	ROCRWS-DEBT SERVICES	Trinity River Authority of Texas	BH 1614	052141	9,060.00	0.00	18,126.00
12/10/2021	12/10/2021	AP Invoice	ROCRWS-DEBT SERVICE	Trinity River Authority of Texas	BH1620	052383	36,996.00	0.00	55,122.00

12/23/2021	12/23/2021	AP Invoice	ROCRWS- OPERATIONS/DEBT SERVICES	Trinity River Authority of Texas	BH 1626	052447	36,996.00	0.00	92,118.00
1/20/2022	1/20/2022	AP Invoice	BILLING FOR FEBRUARY	Trinity River Authority of Texas	BH 1632	052541	36,996.00	0.00	129,114.00
2/17/2022	2/17/2022	AP Invoice	ROCRWS-O&M/DEBT SVC	Trinity River Authority of Texas	BH 1638	052634	36,996.00	0.00	166,110.00
3/17/2022	3/17/2022	AP Invoice	TRA WATER TREATMENT	Trinity River Authority of Texas	BH 1644	052734	36,996.00	0.00	203,106.00
4/14/2022	4/14/2022	AP Invoice	WASTE SERVICE FOR MARCH	Trinity River Authority of Texas	BH 1650	052848	36,996.00	0.00	240,102.00
						Total	240,102.00	0.00	

200 - Water And Utilities Fund **Account 200-80-56440**

Post Date	Tran Date	Source	Line Description	Vendor	Invoice #	Check #	Debit	Credit	Balance
3/4/2022	3/4/2022	AP Invoice	EQUIPEMENT REPAIR	Peterson Pump and Motor Service	22-0003	052675	5,020.00	0.00	5,020.00
						Total	5,020.00	0.00	

200 - Water And Utilities Fund **Account 200-85-52240**

Post Date	Tran Date	Source	Line Description	Vendor	Invoice #	Check #	Debit	Credit	Balance
4/8/2022	4/8/2022	AP Invoice	FINAL AUDIT BILL	BKD, LLP	BK01549473	052803	8,100.00	0.00	8,100.00
						Total	8,100.00	0.00	

200 - Water And Utilities Fund **Account 200-85-52260**

Post Date	Tran Date	Source	Line Description	Vendor	Invoice #	Check #	Debit	Credit	Balance
2/2/2022	2/2/2022	AP Invoice	ENGINEERING SERVICES FOUNDERS PARK	Estes Electric, Inc	16446	052574	8,665.00	0.00	8,665.00
						Total	8,665.00	0.00	

400 - Debt Service Fund **Account 400-15-57941**

Post Date	Tran Date	Source	Line Description	Vendor	Invoice #	Check #	Debit	Credit	Balance
1/27/2022	1/27/2022	AP Invoice	2021 GOR BOND INTEREST	Wilmington Trust, National Association	011822	052570	8,126.54	0.00	8,126.54
						Total	8,126.54	0.00	

500 - Municipal Development District Fund **Account 500-10-9109217**

Post Date	Tran Date	Source	Line Description	Vendor	Invoice #	Check #	Debit	Credit	Balance
2/10/2022	2/10/2022	AP Invoice	ARCHITECT SERVICES FOR PD	Mottla Enterprises, Inc.	013022	1040	17,200.00	0.00	17,200.00
						Total	17,200.00	0.00	

600 - 4B Economic Development Fund **Account 600-10-8102240**

Post Date	Tran Date	Source	Line Description	Vendor	Invoice #	Check #	Debit	Credit	Balance
3/8/2022	3/8/2022	AP Invoice	AUDIT	BKD, LLP	BK01533468	1047	6,552.00	0.00	6,552.00
						Total	6,552.00	0.00	

600 - 4B Economic Development Fund **Account 600-10-8109216**

Post Date	Tran Date	Source	Line Description	Vendor	Invoice #	Check #	Debit	Credit	Balance
4/1/2022	4/1/2022	AP Invoice	ELECTRICAL ON PAVILLION	Estes Electric, Inc	16588	1049	18,800.00	0.00	18,800.00
4/27/2022	4/27/2022	AP Invoice	PROGRESS PAYMENT 2 60-03-2022	Estes Electric, Inc	16668	1054	10,000.00	0.00	28,800.00
						Total	28,800.00	0.00	

600 - 4B Economic Development Fund **Account 600-10-8109221**

Post Date	Tran Date	Source	Line Description	Vendor	Invoice #	Check #	Debit	Credit	Balance
4/1/2022	4/1/2022	AP Invoice	ELECTRICAL ON RESTROOM	Estes Electric, Inc	16587	1049	6,750.00	0.00	6,750.00
						Total	6,750.00	0.00	

CITY OF OVILLA MINUTES

Monday, May 9, 2022

Regular City Council Meeting

105 S. Cockrell Hill Road, Ovilla, TX 75154

Mayor Dormier called the Council Meeting of the Ovilla City Council to order at 6:30 PM, in the Ovilla Council Chamber Room, 105 S. Cockrell Hill Road Ovilla TX 75154, with notice of the meeting duly posted.

The following City Council Members were present:

Rachel Huber	Council Member, Place 1
Dean Oberg	Council Member, Place 2
David Griffin	Council Member, Place 3
Doug Hunt	Mayor Pro Tem, Place 4
Michael Myers	Council Member, Place 5

Mayor Dormier noted that all members of the Council were in attendance, thus constituting a quorum. The city manager, city secretary, department directors, and various staff were also present.

CALL TO ORDER

PL 4 Mayor Pro Tem Hunt gave the invocation and PL1 Huber led the reciting of the U.S. Pledge of Allegiance and the Pledge to the Texas Flag.

ANNOUNCEMENTS, PROCLAMATIONS, PRESENTATIONS, COMMENTS

- PL5 Myers congratulated PL 1 Elect Case and PL 5 Elect Piland on their election victory. Mr. Myers expressed thanks to the city council and staff for their help over his terms as a member of the council.
- Mayor Dormier announced that the city would hold the canvassing City of Ovilla election results on May 16, 2022, at 5:30 p.m.
- Mayor Dormier presented City Secretary, Bobbie Jo Taylor, with a proclamation celebrating Municipal Clerks Week from May 1st – to May 7th.
- Mayor Dormier presented Public Works Director, James Kuykendall, with a proclamation celebrating Public Works Week from May 15th – to May 21st.
- Mayor Dormier presented Police Chief, Joey Bennett, with a proclamation celebrating National Police Week from May 15th- to May 21st.

CITIZEN COMMENTS:

- John Sims, 3790 Bryson Midlothian, Precinct Chair Election
- Dani Muckleroy, 608 Green Meadows Lane, future planning of the City of Ovilla
- Brandon Collett, 718 Georgetown, support of his election campaign, city marquee sign, and city board appointments
- Justin Smith, 338 Johnson Lane, Code Enforcement Officer complaint

PUBLIC HEARINGS-

P1. Ordinance No. 2022-02 of The City of Ovilla adopting a new comprehensive plan, known as The Ovilla 2022 Comprehensive Land Use Plan, and providing a mechanism for amendments to The Ovilla Comprehensive Land Use Plan; providing that this ordinance shall be cumulative of all ordinances; providing a severability clause; and providing an effective date.

City Manager Woodall presented the 2022 City of Ovilla completed Comprehensive Plan. Ms. Woodall thanks all who had served on the committee to review the comprehensive plan. Ms. Woodall stated that the plan is reviewed every five (5) years per city ordinance.

Mayor Dormier opened the public hearing at 7:01 p.m.
No comments were given at this time.
Mayor Dormier closed the public hearing at 7:02 p.m.

CONSENT AGENDA –

C1. Financial Transactions over $5000
C2. Minutes of the Regular Council Meeting of April 11, 2022
C3. Investment Report for January through March 2022

PL5 Myers motioned to approve all consent agenda items.
Seconded by PL2 Oberg

No oppositions, no abstentions.
VOTE: The motion to approve carried unanimously: 5-0

REGULAR AGENDA

ITEM 1. DISCUSSION/ACTION – Consideration of and action on an Ordinance 2022-02 Of The City Of Ovilla Adopting A New Comprehensive Plan, Known As The Ovilla 2022 Comprehensive Land Use Plan, And Providing A Mechanism For Amendments To The Ovilla Comprehensive Land Use Plan; Providing That This Ordinance Shall Be Cumulative Of All Ordinances; Providing A Severability Clause; And Providing An Effective Date.

PL3 Griffin suggested that a letter of thanks be written to the citizens who participated and served on the Ovilla 2022 Comprehensive Land Use Plan.

PL4 Mayor Pro Tem Hunt motioned to approve Ordinance 2022-02 Of The City Of Ovilla Adopting A New Comprehensive Plan, Known As The Ovilla 2022 Comprehensive Land Use Plan
Seconded by PL1 Huber

No oppositions, no abstentions.
VOTE: The motion to approve carried unanimously: 5-0

ITEM 2. DISCUSSION/ACTION – Consideration of and action on Ordinance No. 2022-08 an Ordinance of the City of Ovilla, Texas, amending Appendix A, Article A4.000, Section a4.001 "Building Permit Fees" and section A4.002 "Plan Review Fees," of the Code of Ordinances of the City of Ovilla, Texas; providing revised building permit and inspection fees; providing revised plan review fees; providing a severance clause; providing for incorporation into the Ovilla Code of Ordinances; providing for immediate effect; and providing for publication.

City Secretary Taylor explained to the council that the city currently bases all plan reviews and building permits for new construction on a flat schedule of fees no matter the size or cost of the new construction. Ms. Taylor further explained legislation that no longer allowed for any city to charge a permit based on valuations of new construction. Ms. Taylor advised that staff had conducted a survey of area cities and brought forth the recommendation to the council for approval.

PL5 Myers motioned to approve Ordinance No. 2022-08 an Ordinance of the City of Ovilla, Texas, amending Appendix A, Article A4.000, Section a4.001 "Building Permit Fees" and section A4.002 "Plan Review Fees," of the Code of Ordinances of the City of Ovilla, Texas
Seconded by PL4 Hunt

No oppositions, no abstentions.
VOTE: The motion to approve carried unanimously: 5-0

ITEM 3. DISCUSSION/ACTION – Consideration of and action on Ordinance No. 2022-09 an Ordinance of the City of Ovilla, Texas, amending Chapter 10 (subdivision regulation), Article 10.02, Division 5 (design and improvement requirements); generally prohibiting "flag lots" or "panhandle lots;" providing possible exceptions and waiver of the general prohibition; providing a savings clause; providing a severance clause; providing for incorporation into the code of ordinances; providing for publication; and providing an effective date.

Mayor Dormier presented the ordinance stating that the city had previously seen a few panhandle lots approved because the code of ordinance allowed lots of this kind. The council and the mayor shared concerns about this type of platted property including fire access.

PL4 Hunt motioned to approve Ordinance No. 2022-09 an Ordinance of the City of Ovilla, Texas, amending Chapter 10 (subdivision regulation), Article 10.02, Division 5 (design and improvement requirements); generally prohibiting "flag lots" or "panhandle lots;"
Seconded by PL3 Griffin

No oppositions, no abstentions.
VOTE: The motion to approve carried unanimously: 5-0

ITEM 4. DISCUSSION/ACTION – Consideration of and action to appoint a committee to review, interview (if needed), and make a recommendation to the City Council for annual appointments to serve on City Boards and/or Commissions

PL2 Oberg motioned to appoint Mayor Dormier, City Manager Woodall, and City Secretary Taylor to a committee to review, interview (if needed), and make a recommendation to the city council for annual appointments to serve on City Boards and/or commissions.
Seconded by PL1 Huber

No oppositions, no abstentions.
VOTE: The motion to approve carried unanimously: 5-0

ITEM 5. DISCUSSION/ACTION - Consideration of and action to set the official date for Heritage Day 2022, effecting various assignments to facilitate the success of the 2022 Heritage Day Celebration and festivities.

PL1 Huber motioned to set the official date of Heritage Day as September 24, 2022, to appoint Mayor Pro Tem Hunt as the Heritage Day Coordinator, and to appoint a committee to facilitate the success of the 2022 Heritage Day Celebration and festivities to consist of Police Secretary Iris Harkenrider, Deputy City Secretary Emily Starkey, Volunteer Lindsey Pierce, Volunteer Ozzy Molina, Volunteer Brandon Collett, and the Public Works Department as assigned.
PL2 Oberg seconded the motion.

No oppositions, no abstentions.
VOTE: The motion to approve carried unanimously: 5-0

ITEM 6. DISCUSSION/ACTION - Consideration of and action on approving the sidewalk and access pathway layout and funding from Cindy Jones Park to the newly installed public restroom and to the new city pavilion

Park Superintendent Ainsley Jarvis gave an update to the council on the access pathway to the newly installed public restroom from Cindy Jones Park and leading to the new city pavilion. Mr. Jarvis stated that the project required additional funding that was not budgeted. City Finance Director Sharon Jungman explained that the funding would come from the Heritage Day Fund.

PL2 Oberg motioned to approve funding for the sidewalk and access pathway layout and funding from Cindy Jones Park to the newly installed public restroom and to the new city pavilion.
Seconded by PL1 Huber

No oppositions, no abstentions.
VOTE: The motion to approve carried unanimously: 5-0

ITEM 7. DISCUSSION/ACTION – Consideration of and action on a budget amendment to be made at the mid-year budget review to approve the purchase of an electronic marquee sign.

The council discussed the electronic marquee sign as presented by staff. The council shared concerns about the best placement of the sign which included using a monument sign instead of the current standing type of marquee in place. The council directed staff to obtain quotes for monument marquee signs to bring back to the council for consideration.

No action was taken at this time.

ITEM 8. DISCUSSION – Discuss the City Council of the City of Ovilla serving as the Board of Adjustments as allowed by Section 211 of the Local Government Code.

The Mayor and Council discussed allowing for the council to serve as the Board of Adjustment due to problems that have risen with projects that have been approved as well as quorum issues. PL5 Myers stated that he had spoken to Code Enforcement Officer, Mike Dooly and that he did not think the council needed to serve as the board at this time.

Discussion Item Only

ITEM 9. DISCUSSION – Discussion on the downtown area walking trails and sidewalk plan leading from downtown and into Heritage Park including the layout and funding for the project which may include a budget amendment to be made during the mid-year budget review.

The Council discussed the layout of the walking trails with Public Works Director Kuykendall. Mr. Kuykendall stated that the pathway may have to change layout due to owner consent needed for easements. The Council continued to address funding concerns of the project which is not currently budgeted.

Discussion Item Only

ITEM 10. DISCUSSION – Discuss options for outdoor furniture for the city pavilion including funding options and the possibility of a mid-year budget amendment to be made during the mid-year budget review.

The Council discussed outdoor furniture options with city staff which included picnic tables and benches for the pavilion. The staff requested direction for the placement of the furniture and the materials of the furniture to be placed inside or along the outside of the pavilion. The consensus from the council was heavy-duty picnic tables and benches that were not a permanent fixture inside the pavilion but could be placed along the outside of the pavilion.

Discussion Item Only

ITEM 11. DISCUSSION/ACTION – Consideration of any item(s) pulled from the Consent Agenda for individual consideration and action.

None

VI. STAFF REPORTS

- Department Activity Reports / Discussion
  - Police Department — Police Chief J. Bennett

- Police Activity and Staffing Updates

- Fire Department — Fire Chief B. Kennedy
  - Fire Activity and Staffing Updates
- Public Works Department — Public Works Director J. Kuykendall
  - Public Works Activity and Staffing Updates
    a) Culvert Cleaning Schedule.
    b) Code Enforcement Update rusted fencing on Cockrell Hill Rd. and Code Violations on Lariat Dr.
    c) Update on FM 664 funding, moving of utilities, and a general update on the TxDot expansion of the roadway.
- Finance Department — Finance Director S. Jungman
  - Finance Activity and Staffing Updates
- Administration — City Manager P. Woodall
  - Administration Activity and Staffing Updates — City Secretary B. Taylor
    a) Fraud Hotline

None

ADJOURNMENT

PL2 Oberg made a motion to adjourn. PL4 Mayor Pro Tem Hunt seconded the motion. There being no further business, Mayor Dormier adjourned the meeting at 8:33 p.m.

No oppositions, no abstentions.
VOTE: The motion to approve carried unanimously: 5-0

_____
Richard Dormier, Mayor

ATTEST:

_____
Bobbie Jo Taylor, City Secretary

APPROVED: June 13, 2022

CITY OF OVILLA MINUTES

Monday, May 16, 2022

Regular City Council Meeting

105 S. Cockrell Hill Road, Ovilla, TX 75154

Mayor Dormier called the Council Meeting of the Ovilla City Council to order at 5:30 PM, in the Ovilla Council Chamber Room, 105 S. Cockrell Hill Road Ovilla TX 75154, with notice of the meeting duly posted.

The following City Council Members were present:

Kimberly Case	Council Member, Place 1 - Elect
Dean Oberg	Council Member, Place 2
David Griffin	Council Member, Place 3
Doug Hunt	Mayor Pro Tem, Place 4
Brad Piland	Council Member, Place 5 - Elect

Mayor Dormier noted that PL2 Oberg, PL3 Griffin, and PL4 Mayor Pro Tem Hunt were in attendance, thus constituting a quorum for canvassing the election. PL1 Elect Case, PL2 Elect Piland, the city manager, city secretary, department directors, and various staff were also present.

CALL TO ORDER

Mayor Dormier gave the invocation and PL2 Oberg led the reciting of the U.S. Pledge of Allegiance and the Pledge to the Texas Flag.

CITIZEN COMMENTS:

- Terry Todd, 109 Lariat Trail, Precinct Chair Election

COMMENTS, PRESENTATIONS & REPORTS

City Secretary Taylor read the following official results of the May 7, 2022, General Election into the records:

For City Council Place 1:

Kimberly Case	Early Votes 171	Election Day Votes 191	Total Votes 362
Brandon Collett	Early Votes 100	Election Day Votes 174	Total Votes 274

Kimberly Case was declared the winner of Place 1.

For City Council Place 3:

David R. Griffin	Early Votes 211	Election Day Votes 246	Total Votes 457

Unopposed Candidate David R. Griffin was declared the winner of Place 3.

For City Council Place 5:

Sierra Killpack	Early Votes 47	Election Day Votes 41	Total Votes 88
Bradley Piland	Early Votes 108	Election Day Votes 143	Total Votes 251
Michael Myers	Early Votes 101	Election Day Votes 137	Total Votes 238

Brad Piland was declared the winner of Place 5.

Other voting total read aloud for the record:

274	Early Voting by Personal Appearance
33	Mail Ballots Cast (Absentee)
395	Election Day Ballots Cast
702	Total Ballots Cast
0	Provisional Ballots Cast
243	Registered Voters (Dallas Co.)
3086	Registered Voters (Ellis Co.)
3329	Total Registered Voters
21.08%	Voter Turnout

REGULAR AGENDA

ITEM 1. DISCUSSION/ACTION – Consideration of and action on Resolution R2022-05 of the City Council of the City of Ovilla, declaring and canvassing the results of the May 07, 2022, General Election.

PL4 Mayor Pro Tem Hunt motioned to approve Resolution R2022-05 of the City Council of the City of Ovilla, declaring and canvassing the results of the May 07, 2022, General Election.
Seconded by PL2 Oberg.

No oppositions, no abstentions.
VOTE: The motion to approve carried unanimously: 3-0

ITEM 2. DISCUSSION - Administer the Oath of Office, Statement of Elected Official, and Election Certificate to Place 1 Kimberly Case, Place 3 David Griffin and Place 5 Brad Piland.

City Secretary Taylor issued the Statement of Elected Official, Oath of Office, and the Election Certificate to Kimberly Case, David Griffin, and Brad Piland.

All members of the newly elected, and re-elected officials took their places on the council dais.

A full quorum of five members is now present.

ITEM 3. DISCUSSION/ACTION – Consideration of and action on nominations and an appointment of Mayor Pro Tem.

Mayor Dormier requested nominations from the council for Mayor Pro Tem.

PL2 Oberg nominated PL4 Mayor Pro Tem Hunt.
PL4 Mayor Pro Tem Hunt seconded the nominations.

PL1 Case nominated PL2 Oberg.

Mayor Dormier called for a vote of the nominations.

PL4 Mayor Pro Tem Hunt was confirmed with votes for approval from PL2 Oberg, PL4 Mayor Pro Tem Hunt, and Place 3 Griffin. PL1 Case and PL5 Piland opposed the motion.

ITEM 11. DISCUSSION/ACTION – Consideration of any item(s) pulled from the Consent Agenda for individual consideration and action.

None

EXECUTIVE SESSION

The City Council of the City of Ovilla, Texas, reserves the right to meet in a closed session on any item listed on this Agenda should the need arise, pursuant to authorization by Texas Government Code, Sections 551.071 (consultation with attorney), 551.072 (deliberations about real property), 551.073 (deliberations about gifts and donations), 551.074 (personnel matters), 551.076 (deliberations about security devices), 551.087 (economic development), 418.183 (homeland security).

A. Convene into Executive Session. 5:47 p.m.

ES ITEM 1. DISCUSSION - Closed Session called pursuant to Section 551.071(2) of the Texas Government Code: Consultation with the city attorney on a matter in which the city attorney's duty of confidentiality to the city clearly conflicts with the Texas Open Meetings Act regarding the following matter:

Stonewood Development

B. Reconvene into Regular (Open) Session. 6:20 p.m.

ES ITEM 2. DISCUSSION/ACTION –Any action necessary or appropriate as a result of the closed executive session.

None

REQUESTS FOR FUTURE AGENDA ITEMS AND/OR ANNOUNCEMENTS BY COUNCIL AND STAFF

PL3 Griffin requested a discussion on the city ordinance that regulates parking areas.

ADJOURNMENT

PL4 Mayor Pro Tem Hunt made a motion to adjourn. PL2 Oberg seconded the motion. There being no further business, Mayor Dormier adjourned the meeting at 6:24 p.m.

No oppositions, no abstentions.
VOTE: The motion to approve carried unanimously: 5-0

_____
Richard Dormier, Mayor

ATTEST:

_____
Bobbie Jo Taylor, City Secretary

APPROVED: June 13, 2022

MRNTX068990

RE.: AT&T DXL01693 - 105 SOUTH COCKRELL HILL ROAD, OVILLA, TX 75154

Consent Request and Notice to Proceed for Modification to Existing AT&T Equipment

AT&T, which has a wireless Telecommunication Facility located on the property referenced above.

AT&T intends to update its equipment and accessories as needed for the successful and ongoing operation of this site.

Consistent with the agreement governing this site, we are requesting your approval and consent to proceed with the modifications. The scope of work has been included.

You will be notified in advance of the construction start date.

Please sign and return at your earliest possible convenience.

City of Ovilla

By: _____

Name: _____

Title: _____

Date: _____

CORE ONE CONSULTING US LTD.
506 Second Avenue, Suite 1512
Seattle, Washington 98104

Mount Analysis Report
AT&T – 5G NR

June 28, 2021

Site Name	OAKLAND/HATCHER
Site Number	DXL01693
FA #	10042519
PTN #	3012A0XGMN
Pace #	MRNTX068990
Client	Nexius
Proposed Carrier	AT&T
Site Location	4763 CROZIER DALLAS, TX 75215 32.7518611° N NAD83 96.7570278° W NAD83
Structure Type	Pipe
Structural Usage Ratio	**29.2%**
Overall Result	**Pass**
Recommendation	--

Upon reviewing the results of this analysis, it is our opinion that the mount does meet the specified IBC/TIA/ASCE code and minimum design requirements. The existing mount is therefore deemed adequate to support the existing and proposed loading as listed in this report.

Exp. 6/30/22

Summary of Contents

Introduction
- Opening Statement
- Project Description
- Criteria
- Conclusion

Calculations

Appendix A
- Design Tables & Resources Used

Assumptions and Limitations

Our structural calculations are completed assuming all information provided to CORE ONE CONSULTING USA is accurate and applicable to this site. For the purposes of calculations, we assume an overall structure condition of “like new” and all members and connections to be free of corrosion and/or structural defects. The structure owner and/or contractor shall verify the structure’s condition prior to installation of any proposed equipment. If actual conditions differ from those described in this report CORE ONE CONSULTING USA should be notified immediately to complete a revised evaluation.

Our evaluation is completed using standard AWWA, TIA, AISC, ACI, and ASCE methods and procedures. Our structural results are proprietary and should not be used by others as their own. CORE ONE CONSULTING USA is not responsible for decisions made by others that are or are not based on our supplied assumptions and conclusions.

This report is an evaluation of the proposed carriers antenna mount only and does not reflect adequacy of the existing rooftop, other mounts, or coax mounting attachments. These elements are assumed to be adequate for the purposes of this analysis and are assumed to have been installed per their manufacturer requirements.

INTRODUCTION

At the request of **AT&T**, CORE ONE CONSULTING USA has performed a mount analysis on the existing antenna mount. All supporting documents have been obtained from the client and are assumed to be accurate and applicable to this site. The mount was analyzed using RISA 3D Version 17.0.4 engineering software.

Supporting Documentation

RFDS	AT&T RFDS ID:4202348 V1.0, Dated 06/09/21
Previous Analysis	Celeris Group Site DXL01693, Dated 08/12/14

Analysis Code Requirements

Wind Speed	105 mph (3-Second Gust)
Wind Speed w/ ice	30 mph (3-Second Gust) w/ 1.5” Ice
TIA/ASCE Revision	ANSI/TIA-222-H / ASCE 7-16
Adopted IBC	2018 IBC
Structure Class	II
Exposure Category	C
Topographic Category	1
Calculated Crest Height	0
Site Class	D- Stiff Soil
Spectral Response	S_s=0.096g, S_1=0.054g

CONCLUSION

Upon reviewing the results of this analysis, it is our opinion that the mount does meet the specified IBC/TIA/ASCE code and minimum design requirements. The existing mount is therefore deemed adequate to support the existing and proposed loading as listed in this report.

Alexander Bazeley
Structural Lead | **Core One Consulting USA**
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Final Configuration

RAD Height (ft)	Qty.	Appurtenance	Mount type	Carrier
105.0	3	Commscope NNH4-65B-R6	Pipe	AT&T
	3	Ericsson AIR6449 N77		
	3	Commscope NNH4-65B-R6R4		
	3	Commscope CBC78T-DS-43		
	3	Ericsson 4478 B14		
	3	Ericsson 8843 B2/B66A		
	3	Ericsson 4449 B5/B12		
	3	Ericsson 4415 B30		
	3	Raycap DC6		

Structure Usages

Summary		
Pipe Mount	29.2%	Pass
RATING =	**29.2%**	**Pass**

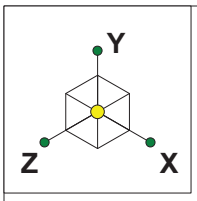
Site Name	DXL01693
Client	Nexius
Carrier	AT&T
Date	6/28/2021

Wind Loading Inputs:

Design Wind Velocity:	105	ultimate 3-second gust
Exposure Category:	C	
Adopted Building Code:	TIA-222-H	
Antenna Load Standard:	TIA-222-H	
Wind Centerline (ft):	105.00	ft
K_a:	0.90	
K_z:	1.27	
K_{zt}:	1.00	
K_d:	0.85	
K_e:	0.99	
qz=	30.07	

Ice Wind	30	Cf=	1.20			
Ice Thickness	1.5	Gh=	1.00			
Fst_Ice(psf)	7.12	Fst (psf)=	36.09	Fp=	0.05	

			Wind Force		Seismic Force	
Appurtenance Name	Total Quantity	Weight(lbs)	F-Norm (lbs)	F-Perp (lbs)	F-Norm (lbs)	F-Perp (lbs)
COMMSCOPE_NNH4-65B-R6	3	82.0	369.0	172.9	4.0	4.0
Ericsson AIR6449 N77	3	81.6	121.1	64.6	4.0	4.0
COMMSCOPE_NNH4-65B-R6	3	82.0	369.0	172.9	4.0	4.0
Commscope_CBC78T-DS-43	3	12.0	11.1	7.7	0.6	0.6
ERICSSON_RADIO 4478 B14	3	59.4	60.8	37.6	2.9	2.9
ERICSSON_RADIO 8843	3	75.0	49.5	42.4	3.7	3.7
ERICSSON_RADIO 4449 B5/B12	3	43.0	49.5	39.1	2.1	2.1
Ericsson 4415 B30	3	46.0	55.4	24.7	2.3	2.3
RAYCAP_DC6	3	38.0	57.1	25.2	1.9	1.9



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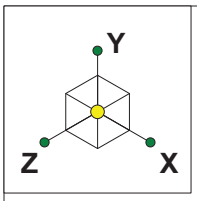

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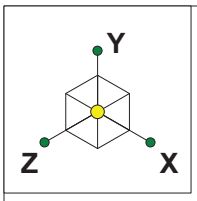

Member Length (in) Displayed

CORE ONE CONSULTIN...		
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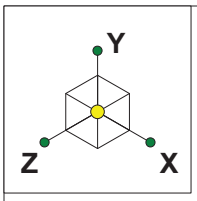
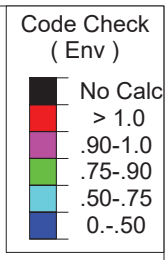
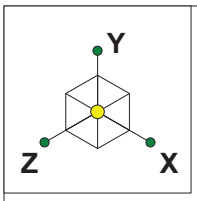
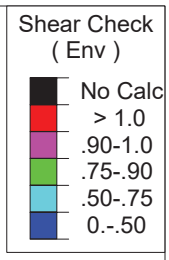




Member Code Checks Displayed (Enveloped)
Results for LC 1, 1.4D

CORE ONE CONSULTIN...	DXL01693	
APB		June 28, 2021 at 10:21 AM
		DXL01693_10042519.r3d





Member Shear Checks Displayed (Enveloped)
Results for LC 1, 1.4D

CORE ONE CONSULTIN...		
APB	DXL01693	June 28, 2021 at 10:21 AM
		DXL01693_10042519.r3d

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	MP1	N29	N25			P2.0	Beam	None	A53 Gr.B	Typical

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rul...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	P2.0	PIPE_2.0	Beam	None	A53 Gr.B	Typical	1.02	.627	.627	1.25

Hot Rolled Steel Design Parameters

	Label	Shape	Length[in]	Lbyy[in]	Lbzz[in]	Lcomp top[in]	Lcomp bot[in]	L-torqu...	Kyy	Kzz	Cb	Function
1	MP1	P2.0	84			Lbyy						Lateral

Material Takeoff

	Material	Size	Pieces	Length[in]	Weight[K]
1	Hot Rolled Steel				
2	A53 Gr.B	PIPE_2.0	1	84	.024
3	Total HR Steel		1	84	.024

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(P...
1	Self Weight	DL		-1			6			
2	Wind Load AZI 000	WLZ					6		1	
3	Wind Load AZI 090	WLX					6		1	
4	Ice Weight	OL1					6	1		
5	Wind + Ice Load AZI ...	OL2					6		1	
6	Wind + Ice Load AZI ...	OL3					6		1	
7	Service Lm1	LL								
8	Service Lm2	OL4								
9	Service Lm3	OL5								
10	Service Lm4	OL6								
11	Service Lm5	OL7								
12	Service Lv 1	OL8								
13	Service Lv 2	OL9								
14	Service Lv 3	OL10								
15	Seismic Load AZI 000	ELZ			-.049		6			
16	Seismic Load AZI 090	ELX	-.049				6			
17	BLC 2 Transient Area...	None						1		
18	BLC 3 Transient Area...	None						1		
19	BLC 5 Transient Area...	None						1		
20	BLC 6 Transient Area...	None						1		

Load Combinations

	Description	S...	P...	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
1	1.4D	Yes	Y		DL	1.4																		
2	1.2D + 1W AZI 000	Yes	Y		DL	1.2	W...	1																

Load Combinations (Continued)

	Description	S...	P...	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
3	1.2D + 1W AZI 030	Yes	Y		DL	1.2	W...	.866	W...	.5														
4	1.2D + 1W AZI 060	Yes	Y		DL	1.2	W...	.5	W...	.866														
5	1.2D + 1W AZI 090	Yes	Y		DL	1.2			W...	1														
6	1.2D + 1W AZI 120	Yes	Y		DL	1.2	W...	-.5	W...	.866														
7	1.2D + 1W AZI 150	Yes	Y		DL	1.2	W...	-.8...	W...	.5														
8	1.2D + 1W AZI 180	Yes	Y		DL	1.2	W...	-1																
9	1.2D + 1W AZI 210	Yes	Y		DL	1.2	W...	-.8...	W...	-.5														
10	1.2D + 1W AZI 240	Yes	Y		DL	1.2	W...	-.5	W...	-.8...														
11	1.2D + 1W AZI 270	Yes	Y		DL	1.2			W...	-1														
12	1.2D + 1W AZI 300	Yes	Y		DL	1.2	W...	.5	W...	-.8...														
13	1.2D + 1W AZI 330	Yes	Y		DL	1.2	W...	.866	W...	-.5														
14	0.9D + 1W AZI 000	Yes	Y		DL	.9	W...	1																
15	0.9D + 1W AZI 030	Yes	Y		DL	.9	W...	.866	W...	.5														
16	0.9D + 1W AZI 060	Yes	Y		DL	.9	W...	.5	W...	.866														
17	0.9D + 1W AZI 090	Yes	Y		DL	.9			W...	1														
18	0.9D + 1W AZI 120	Yes	Y		DL	.9	W...	-.5	W...	.866														
19	0.9D + 1W AZI 150	Yes	Y		DL	.9	W...	-.8...	W...	.5														
20	0.9D + 1W AZI 180	Yes	Y		DL	.9	W...	-1																
21	0.9D + 1W AZI 210	Yes	Y		DL	.9	W...	-.8...	W...	-.5														
22	0.9D + 1W AZI 240	Yes	Y		DL	.9	W...	-.5	W...	-.8...														
23	0.9D + 1W AZI 270	Yes	Y		DL	.9			W...	-1														
24	0.9D + 1W AZI 300	Yes	Y		DL	.9	W...	.5	W...	-.8...														
25	0.9D + 1W AZI 330	Yes	Y		DL	.9	W...	.866	W...	-.5														
26	1.2D + 1Di	Yes	Y		DL	1.2	O...	1																
27	1.2D + 1Di + 1Wi AZI 000	Yes	Y		DL	1.2	O...	1	O...	1														
28	1.2D + 1Di + 1Wi AZI 030	Yes	Y		DL	1.2	O...	1	O...	.866	O...	.5												
29	1.2D + 1Di + 1Wi AZI 060	Yes	Y		DL	1.2	O...	1	O...	.5	O...	.866												
30	1.2D + 1Di + 1Wi AZI 090	Yes	Y		DL	1.2	O...	1			O...	1												
31	1.2D + 1Di + 1Wi AZI 120	Yes	Y		DL	1.2	O...	1	O...	-.5	O...	.866												
32	1.2D + 1Di + 1Wi AZI 150	Yes	Y		DL	1.2	O...	1	O...	-.8...	O...	.5												
33	1.2D + 1Di + 1Wi AZI 180	Yes	Y		DL	1.2	O...	1	O...	-1														
34	1.2D + 1Di + 1Wi AZI 210	Yes	Y		DL	1.2	O...	1	O...	-.8...	O...	-.5												
35	1.2D + 1Di + 1Wi AZI 240	Yes	Y		DL	1.2	O...	1	O...	-.5	O...	-.8...												
36	1.2D + 1Di + 1Wi AZI 270	Yes	Y		DL	1.2	O...	1			O...	-1												
37	1.2D + 1Di + 1Wi AZI 300	Yes	Y		DL	1.2	O...	1	O...	.5	O...	-.8...												
38	1.2D + 1Di + 1Wi AZI 330	Yes	Y		DL	1.2	O...	1	O...	.866	O...	-.5												
39	(1.2+0.2Sds)D + 1E AZI 000	Yes	Y		DL	1.22	ELZ	1																
40	(1.2+0.2Sds)D + 1E AZI 030	Yes	Y		DL	1.22	ELZ	.866	E...	.5														
41	(1.2+0.2Sds)D + 1E AZI 060	Yes	Y		DL	1.22	ELZ	.5	E...	.866														
42	(1.2+0.2Sds)D + 1E AZI 090	Yes	Y		DL	1.22			E...	1														
43	(1.2+0.2Sds)D + 1E AZI 120	Yes	Y		DL	1.22	ELZ	-.5	E...	.866														
44	(1.2+0.2Sds)D + 1E AZI 150	Yes	Y		DL	1.22	ELZ	-.8...	E...	.5														
45	(1.2+0.2Sds)D + 1E AZI 180	Yes	Y		DL	1.22	ELZ	-1																
46	(1.2+0.2Sds)D + 1E AZI 210	Yes	Y		DL	1.22	ELZ	-.8...	E...	-.5														
47	(1.2+0.2Sds)D + 1E AZI 240	Yes	Y		DL	1.22	ELZ	-.5	E...	-.8...														
48	(1.2+0.2Sds)D + 1E AZI 270	Yes	Y		DL	1.22			E...	-1														
49	(1.2+0.2Sds)D + 1E AZI 300	Yes	Y		DL	1.22	ELZ	.5	E...	-.8...														
50	(1.2+0.2Sds)D + 1E AZI 330	Yes	Y		DL	1.22	ELZ	.866	E...	-.5														
51	(0.9-0.2Sds)D + 1E AZI 000	Yes	Y		DL	.88	ELZ	1																
52	(0.9-0.2Sds)D + 1E AZI 030	Yes	Y		DL	.88	ELZ	.866	E...	.5														
53	(0.9-0.2Sds)D + 1E AZI 060	Yes	Y		DL	.88	ELZ	.5	E...	.866														
54	(0.9-0.2Sds)D + 1E AZI 090	Yes	Y		DL	.88			E...	1														

Load Combinations (Continued)

	Description	S...	P...	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
55	(0.9-0.2Sds)D + 1E AZI 120	Yes	Y		DL	.88	ELZ	-.5	E...	.866														
56	(0.9-0.2Sds)D + 1E AZI 150	Yes	Y		DL	.88	ELZ	-.8...	E...	.5														
57	(0.9-0.2Sds)D + 1E AZI 180	Yes	Y		DL	.88	ELZ	-1																
58	(0.9-0.2Sds)D + 1E AZI 210	Yes	Y		DL	.88	ELZ	-.8...	E...	-.5														
59	(0.9-0.2Sds)D + 1E AZI 240	Yes	Y		DL	.88	ELZ	-.5	E...	-.8...														
60	(0.9-0.2Sds)D + 1E AZI 270	Yes	Y		DL	.88			E...	-1														
61	(0.9-0.2Sds)D + 1E AZI 300	Yes	Y		DL	.88	ELZ	.5	E...	-.8...														
62	(0.9-0.2Sds)D + 1E AZI 330	Yes	Y		DL	.88	ELZ	.866	E...	-.5														
63	1.2D + 1.5LM3 + 0.082WL (30..	Yes	Y		DL	1.2	O...	1.5	W...	.082														
64	1.2D + 1.5LM3 + 0.082WL (30..	Yes	Y		DL	1.2	O...	1.5	W...	.071	W...	.041												
65	1.2D + 1.5LM3 + 0.082WL (30..	Yes	Y		DL	1.2	O...	1.5	W...	.041	W...	.071												
66	1.2D + 1.5LM3 + 0.082WL (30..	Yes	Y		DL	1.2	O...	1.5			W...	.082												
67	1.2D + 1.5LM3 + 0.082WL (30..	Yes	Y		DL	1.2	O...	1.5	W...	-.0...	W...	.071												
68	1.2D + 1.5LM3 + 0.082WL (30..	Yes	Y		DL	1.2	O...	1.5	W...	-.0...	W...	.041												
69	1.2D + 1.5LM3 + 0.082WL (30..	Yes	Y		DL	1.2	O...	1.5	W...	-.0...														
70	1.2D + 1.5LM3 + 0.082WL (30..	Yes	Y		DL	1.2	O...	1.5	W...	-.0...	W...	-.0...												
71	1.2D + 1.5LM3 + 0.082WL (30..	Yes	Y		DL	1.2	O...	1.5	W...	-.0...	W...	-.0...												
72	1.2D + 1.5LM3 + 0.082WL (30..	Yes	Y		DL	1.2	O...	1.5			W...	-.0...												
73	1.2D + 1.5LM3 + 0.082WL (30..	Yes	Y		DL	1.2	O...	1.5	W...	.041	W...	-.0...												
74	1.2D + 1.5LM3 + 0.082WL (30..	Yes	Y		DL	1.2	O...	1.5	W...	.071	W...	-.0...												
75	1.2D + 1.5LM4 + 0.082WL (30..	Yes	Y		DL	1.2	O...	1.5	W...	.082														
76	1.2D + 1.5LM4 + 0.082WL (30..	Yes	Y		DL	1.2	O...	1.5	W...	.071	W...	.041												
77	1.2D + 1.5LM4 + 0.082WL (30..	Yes	Y		DL	1.2	O...	1.5	W...	.041	W...	.071												
78	1.2D + 1.5LM4 + 0.082WL (30..	Yes	Y		DL	1.2	O...	1.5			W...	.082												
79	1.2D + 1.5LM4 + 0.082WL (30..	Yes	Y		DL	1.2	O...	1.5	W...	-.0...	W...	.071												
80	1.2D + 1.5LM4 + 0.082WL (30..	Yes	Y		DL	1.2	O...	1.5	W...	-.0...	W...	.041												
81	1.2D + 1.5LM4 + 0.082WL (30..	Yes	Y		DL	1.2	O...	1.5	W...	-.0...														
82	1.2D + 1.5LM4 + 0.082WL (30..	Yes	Y		DL	1.2	O...	1.5	W...	-.0...	W...	-.0...												
83	1.2D + 1.5LM4 + 0.082WL (30..	Yes	Y		DL	1.2	O...	1.5	W...	-.0...	W...	-.0...												
84	1.2D + 1.5LM4 + 0.082WL (30..	Yes	Y		DL	1.2	O...	1.5			W...	-.0...												
85	1.2D + 1.5LM4 + 0.082WL (30..	Yes	Y		DL	1.2	O...	1.5	W...	.041	W...	-.0...												
86	1.2D + 1.5LM4 + 0.082WL (30..	Yes	Y		DL	1.2	O...	1.5	W...	.071	W...	-.0...												
87	1.2D + 1.5LM5 + 0.082WL (30..	Yes	Y		DL	1.2	O...	1.5	W...	.082														
88	1.2D + 1.5LM5 + 0.082WL (30..	Yes	Y		DL	1.2	O...	1.5	W...	.071	W...	.041												
89	1.2D + 1.5LM5 + 0.082WL (30..	Yes	Y		DL	1.2	O...	1.5	W...	.041	W...	.071												
90	1.2D + 1.5LM5 + 0.082WL (30..	Yes	Y		DL	1.2	O...	1.5			W...	.082												
91	1.2D + 1.5LM5 + 0.082WL (30..	Yes	Y		DL	1.2	O...	1.5	W...	-.0...	W...	.071												
92	1.2D + 1.5LM5 + 0.082WL (30..	Yes	Y		DL	1.2	O...	1.5	W...	-.0...	W...	.041												
93	1.2D + 1.5LM5 + 0.082WL (30..	Yes	Y		DL	1.2	O...	1.5	W...	-.0...														
94	1.2D + 1.5LM5 + 0.082WL (30..	Yes	Y		DL	1.2	O...	1.5	W...	-.0...	W...	-.0...												
95	1.2D + 1.5LM5 + 0.082WL (30..	Yes	Y		DL	1.2	O...	1.5	W...	-.0...	W...	-.0...												
96	1.2D + 1.5LM5 + 0.082WL (30..	Yes	Y		DL	1.2	O...	1.5			W...	-.0...												
97	1.2D + 1.5LM5 + 0.082WL (30..	Yes	Y		DL	1.2	O...	1.5	W...	.041	W...	-.0...												
98	1.2D + 1.5LM5 + 0.082WL (30..	Yes	Y		DL	1.2	O...	1.5	W...	.071	W...	-.0...												

Joint Coordinates and Temperatures

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diap...
1	N25	39	-66	-4	0	
2	N29	39	18	-4	0	
3	N3	39	-24	-4	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diap...
4	N4	33	-66	-4	0	
5	N5	33	18	-4	0	
6	N6	45	-66	-4	0	
7	N7	45	18	-4	0	
8	N8	45	-66	-7	0	
9	N9	45	18	-7	0	

Joint Boundary Conditions

	Joint Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot.[k-ft/rad]	Y Rot.[k-ft/rad]	Z Rot.[k-ft/rad]
1	N3	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction

Joint Loads and Enforced Displacements

Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^...
No Data to Print ...			

Member Point Loads (BLC 1 : Self Weight)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Y	-41	6
2	MP1	Y	-29.7	42
3	MP1	Y	-37.5	42
4	MP1	Y	-41	78
5	MP1	Y	-29.7	42
6	MP1	Y	-37.5	42

Member Point Loads (BLC 2 : Wind Load AZI 000)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Z	-166.067	6
2	MP1	Z	-27.353	42
3	MP1	Z	-22.27	42
4	MP1	Z	-166.067	78
5	MP1	Z	-27.353	42
6	MP1	Z	-22.27	42

Member Point Loads (BLC 3 : Wind Load AZI 090)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-86.462	6
2	MP1	X	-18.825	42
3	MP1	X	-21.183	42
4	MP1	X	-86.462	78
5	MP1	X	-18.825	42
6	MP1	X	-21.183	42

Member Point Loads (BLC 4 : Ice Weight)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Y	-140.602	6
2	MP1	Y	-27.071	42

Member Point Loads (BLC 4 : Ice Weight) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
3	MP1	Y	-24.445	42
4	MP1	Y	-140.602	78
5	MP1	Y	-27.071	42
6	MP1	Y	-24.445	42

Member Point Loads (BLC 5 : Wind + Ice Load AZI 000)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Z	-36.424	6
2	MP1	Z	-5.999	42
3	MP1	Z	-4.885	42
4	MP1	Z	-36.424	78
5	MP1	Z	-5.999	42
6	MP1	Z	-4.885	42

Member Point Loads (BLC 6 : Wind + Ice Load AZI 090)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-17.068	6
2	MP1	X	-3.716	42
3	MP1	X	-4.182	42
4	MP1	X	-17.068	78
5	MP1	X	-3.716	42
6	MP1	X	-4.182	42

Member Point Loads (BLC 15 : Seismic Load AZI 000)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Z	-20.5	6
2	MP1	Z	-14.85	42
3	MP1	Z	-18.75	42
4	MP1	Z	-20.5	78
5	MP1	Z	-14.85	42
6	MP1	Z	-18.75	42

Member Point Loads (BLC 16 : Seismic Load AZI 090)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-20.5	6
2	MP1	X	-14.85	42
3	MP1	X	-18.75	42
4	MP1	X	-20.5	78
5	MP1	X	-14.85	42
6	MP1	X	-18.75	42

Member Distributed Loads (BLC 4 : Ice Weight)

	Member Label	Direction	Start Magnitude[l...	End Magnitude[lb/ft,F,psf]	Start Location[in,..	End Location[in,%]
1	MP1	Y	-8.351	-8.351	0	%100

Member Distributed Loads (BLC 17 : BLC 2 Transient Area Loads)

	Member Label	Direction	Start Magnitude[l...	End Magnitude[lb/ft,F,psf]	Start Location[in,..	End Location[in,%]
1	MP1	Z	-7.143	-7.143	0	84

Member Distributed Loads (BLC 18 : BLC 3 Transient Area Loads)

	Member Label	Direction	Start Magnitude[l...	End Magnitude[lb/ft,F,psf]	Start Location[in,..	End Location[in,%]
1	MP1	X	-7.143	-7.143	0	84

Member Distributed Loads (BLC 19 : BLC 5 Transient Area Loads)

	Member Label	Direction	Start Magnitude[l...	End Magnitude[lb/ft,F,psf]	Start Location[in,..	End Location[in,%]
1	MP1	Z	-1.409	-1.409	0	84

Member Distributed Loads (BLC 20 : BLC 6 Transient Area Loads)

	Member Label	Direction	Start Magnitude[l...	End Magnitude[lb/ft,F,psf]	Start Location[in,..	End Location[in,%]
1	MP1	X	-1.409	-1.409	0	84

Member Area Loads (BLC 2 : Wind Load AZI 000)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribu...	Magnitude[psf]
1	N5	N4	N6	N7	Z	Open S...	-36.09

Member Area Loads (BLC 3 : Wind Load AZI 090)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribu...	Magnitude[psf]
1	N7	N9	N8	N6	X	Open S...	-36.09

Member Area Loads (BLC 5 : Wind + Ice Load AZI 000)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribu...	Magnitude[psf]
1	N5	N4	N6	N7	Z	Open S...	-7.12

Member Area Loads (BLC 6 : Wind + Ice Load AZI 090)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribu...	Magnitude[psf]
1	N7	N9	N8	N6	X	Open S...	-7.12

Envelope Joint Displacements

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [...	LC	Y Rotation [...	LC	Z Rotation [...	LC
1	N25	max	.132	23	0	62	.239	20	7.895e-3	14	0	98	4.352e-3	23
2		min	-.132	17	0	26	-.239	14	-7.895e-3	20	0	1	-4.352e-3	17
3	N29	max	.132	11	0	62	.239	8	7.914e-3	8	0	98	4.363e-3	5
4		min	-.132	5	0	26	-.239	2	-7.914e-3	2	0	1	-4.363e-3	11
5	N3	max	0	98	0	98	0	98	0	98	0	98	0	98
6		min	0	1	0	1	0	1	0	1	0	1	0	1
7	N4	max	0	98	0	98	0	98	0	98	0	98	0	98
8		min	0	1	0	1	0	1	0	1	0	1	0	1
9	N5	max	0	98	0	98	0	98	0	98	0	98	0	98
10		min	0	1	0	1	0	1	0	1	0	1	0	1
11	N6	max	0	98	0	98	0	98	0	98	0	98	0	98
12		min	0	1	0	1	0	1	0	1	0	1	0	1
13	N7	max	0	98	0	98	0	98	0	98	0	98	0	98
14		min	0	1	0	1	0	1	0	1	0	1	0	1
15	N8	max	0	98	0	98	0	98	0	98	0	98	0	98
16		min	0	1	0	1	0	1	0	1	0	1	0	1
17	N9	max	0	98	0	98	0	98	0	98	0	98	0	98
18		min	0	1	0	1	0	1	0	1	0	1	0	1

Envelope Joint Reactions

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [lb-ft]	LC	MY [lb-ft]	LC	MZ [lb-ft]	LC
1	N3	max	302.939	17	731.53	38	481.379	14	1.27	2	0	98	.702	11
2		min	-302.939	11	211.697	51	-481.379	8	-1.27	8	0	1	-.702	5
3	Totals:	max	302.939	17	731.53	38	481.379	14						
4		min	-302.939	11	211.697	51	-481.379	8						

Envelope AISC 14th(360-10): LRFD Steel Code Checks

	Member	Shape	C...	Loc[in]	LC	Sh...	Loc[in]	Dir	LC	phi*Pnc [l...	phi*Pnt [lb]	phi*Mn y-...	phi*M.....		Eqn
1	MP1	PIPE_...	.2..	42	8	.020	42		8	17855.085	32130	1871.625	1871...	1	H1...

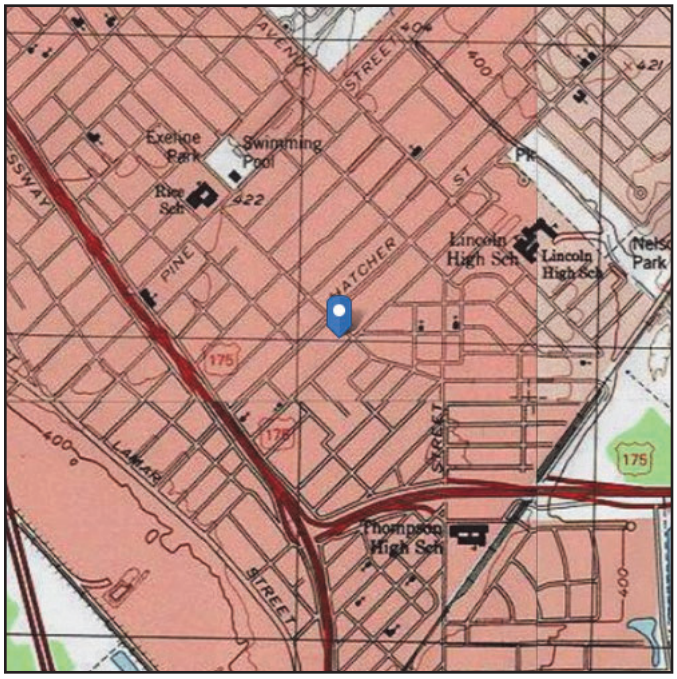
APPENDIX A
Design Tables & Resources

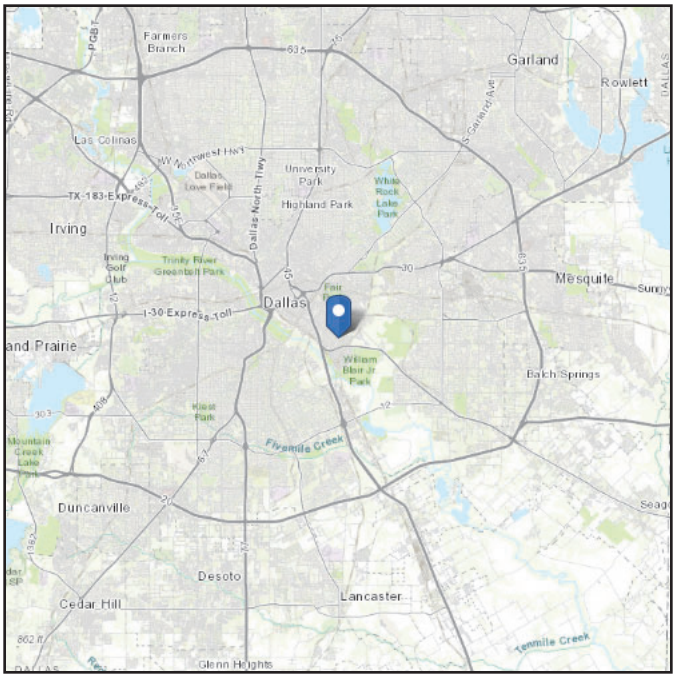
ASCE 7 Hazards Report

Address:
No Address at This Location

Standard: ASCE/SEI 7-16
Risk Category: II
Soil Class: D - Default (see Section 11.4.3)

Elevation: 414.25 ft (NAVD 88)
Latitude: 32.751861
Longitude: -96.757028





Wind

Results:

Wind Speed:	105 Vmph
10-year MRI	74 Vmph
25-year MRI	80 Vmph
50-year MRI	85 Vmph
100-year MRI	91 Vmph

Data Source: ASCE/SEI 7-16, Fig. 26.5-1B and Figs. CC.2-1–CC.2-4, and Section 26.5.2
Date Accessed: Mon Jun 28 2021

Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-16 Standard. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (annual exceedance probability = 0.00143, MRI = 700 years).

Site is not in a hurricane-prone region as defined in ASCE/SEI 7-16 Section 26.2.

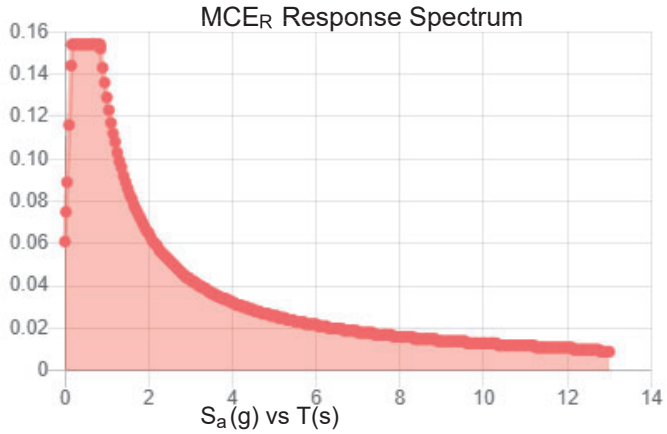
Seismic

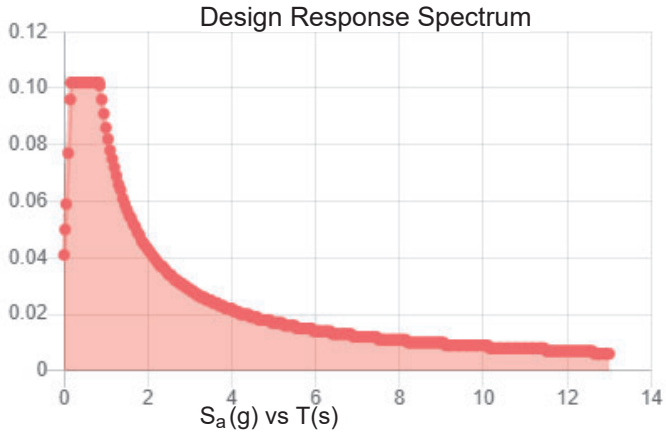
Site Soil Class: D - Default (see Section 11.4.3)

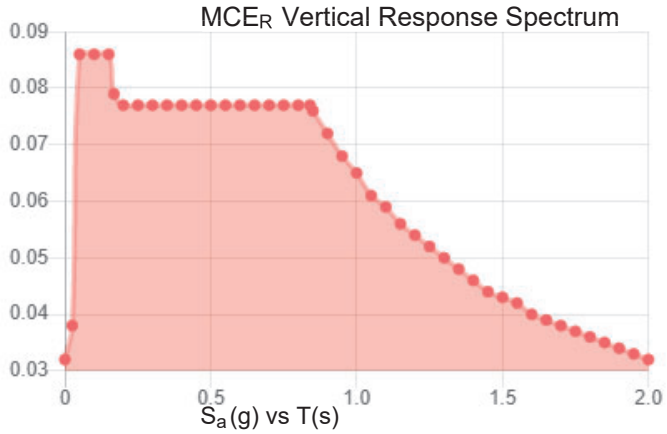
Results:

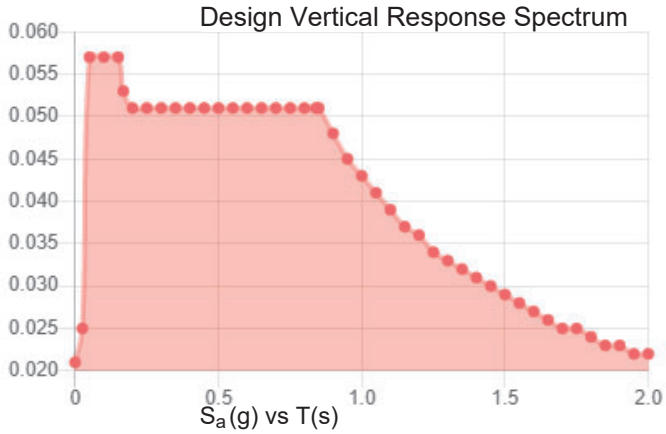
S_S :	0.096	S_{D1} :	0.086
S_1 :	0.054	T_L :	12
F_a :	1.6	PGA :	0.046
F_v :	2.4	PGA_M :	0.073
S_{MS} :	0.154	F_{PGA} :	1.6
S_{M1} :	0.129	I_e :	1
S_{DS} :	0.102	C_v :	0.7

Seismic Design Category B









Data Accessed: Mon Jun 28 2021

Date Source: USGS Seismic Design Maps based on ASCE/SEI 7-16 and ASCE/SEI 7-16 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-16 Ch. 21 are available from USGS.

Ice

Results:

Ice Thickness:	1.50 in.
Concurrent Temperature:	15 F
Gust Speed:	30 mph
Data Source:	Standard ASCE/SEI 7-16, Figs. 10-2 through 10-8
Date Accessed:	Mon Jun 28 2021

Ice thicknesses on structures in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

Values provided are equivalent radial ice thicknesses due to freezing rain with concurrent 3-second gust speeds, for a 500-year mean recurrence interval, and temperatures concurrent with ice thicknesses due to freezing rain. Thicknesses for ice accretions caused by other sources shall be obtained from local meteorological studies. Ice thicknesses in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

The ASCE 7 Hazard Tool is provided for your convenience, for informational purposes only, and is provided “as is” and without warranties of any kind. The location data included herein has been obtained from information developed, produced, and maintained by third party providers; or has been extrapolated from maps incorporated in the ASCE 7 standard. While ASCE has made every effort to use data obtained from reliable sources or methodologies, ASCE does not make any representations or warranties as to the accuracy, completeness, reliability, currency, or quality of any data provided herein. Any third-party links provided by this Tool should not be construed as an endorsement, affiliation, relationship, or sponsorship of such third-party content by or from ASCE.

ASCE does not intend, nor should anyone interpret, the results provided by this Tool to replace the sound judgment of a competent professional, having knowledge and experience in the appropriate field(s) of practice, nor to substitute for the standard of care required of such professionals in interpreting and applying the contents of this Tool or the ASCE 7 standard.

In using this Tool, you expressly assume all risks associated with your use. Under no circumstances shall ASCE or its officers, directors, employees, members, affiliates, or agents be liable to you or any other person for any direct, indirect, special, incidental, or consequential damages arising from or related to your use of, or reliance on, the Tool or any information obtained therein. To the fullest extent permitted by law, you agree to release and hold harmless ASCE from any and all liability of any nature arising out of or resulting from any use of data provided by the ASCE 7 Hazard Tool.

CORE ONE CONSULTING US LTD.
PO Box 11518
Brinbridge Island, WA 98110

August 25, 2021

Att: Nick Mcmanus
Nexius

AT&T DXL01693 Structural Opinion Letter

Site Name	OAKLAND/HATCHER
Site Number	DXL01693
FA #	10042519
PTN #	3012A0XGMN
PACE #	MRNTX068990
Client	Nexius
Proposed Carrier	AT&T
Site Location	4763 CROZIER DALLAS, TX 75215 32.7518611° N NAD83 96.7570278° W NAD83
Structure Type	water tank
Overall Result	**Pass**
Recommendation	--

Dear Mr. Mcmanus,

At the request of **Nexius**, CORE ONE CONSULTING USA has reviewed the existing water tank at the above referenced site for adequacy to support the proposed loads for the referenced project. This evaluation is based on a review of the information from the RFDS V 1.0 (dated 06/09/21) provided by AT&T, Photos (dated 2021) Provided by Nexius.

This evaluation assumes that all existing structural members are in good condition, have not been altered from the manufacturer's original design, and have been installed per the manufacturer's requirements. Prior to installation of any new appurtenances, the contractor shall inspect the condition of all relevant members and connections and shall tighten all connections. The contractor is responsible for the means and methods of construction and shall notify Core One Consultants USA immediately if any field conditions differ from those listed above.

Should you have any questions, comments or require additional information, please do not hesitate to call 1+(855) 708-2195.

Sincerely,

Analysis performed by:

Alex Bazeley
Structural Engineering Lead
Core One Consulting USA

Exp. 6/30/22

Reviewed by:

Michael Leeper, PE
Senior Professional Engineer
Core One Consulting USA

Final Configuration

RAD Height (ft)	Qty.	Appurtenance	Mount type	Carrier
105.0	3	Commscope NNH4-65B-R6	Pipe	AT&T
	3	Ericsson AIR6449 N77		
	3	Commscope NNH4-65B-R6R4		
	3	Commscope CBC78T-DS-43		
	3	Ericsson 4478 B14		
	3	Ericsson 8843 B2/B66A		
	3	Ericsson 4449 B5/B12		
	3	Ericsson 4415 B30		
	3	Raycap DC6		

DocuSign Envelope ID: 0FFCF83F-47F6-489C-B824-DEDD65802AB6

SITE INFORMATION

SITE NAME:	COCKRELL HILL / OVILLA WT
SITE ID:	DX1693
FA LOCATION CODE:	10042519
ADDRESS:	105 SOUTH COCKRELL HILL ROAD
CITY, STATE ZIP:	OVILLA, TX 75154
COUNTY:	ELLIS
LATITUDE:	32.528055°
LONGITUDE:	−96.892083°
GROUND ELEVATION:	636' A.M.S.L.
STRUCTURE TYPE:	TANK
STRUCTURE HEIGHT:	210'−0" AGL
RAD CENTER:	105'−0" AGL
APPLICANT:	AT&T MOBILITY 1801 VALLEY VIEW LANE FARMERS BRANCH, TX 75234
SITE ACQUISITION:	NEXIUS SOLUTIONS, INC. 1025 S BELTLINE RD. COPPELL, TX 75019
A&E SERVICES:	NEXIUS SOLUTIONS, INC. 2595 NORTH DALLAS PARKWAY, SUITE 300 FRISCO, TX 75034 (972) 581−9888
TOWER OWNER:	CITY OF OVILLA
CLASS IV RIGGING PLAN:	N/A

GENERAL NOTES AND APPLICABLE CODES

1. THIS IS AN UNMANNED TELECOMMUNICATION FACILITY AND NOT FOR HUMAN HABITATION.

   1.1. HANDICAPPED ACCESS IS NOT REQUIRED.
   1.2. POTABLE WATER OR SANITARY SERVICE IS NOT REQUIRED.
   1.3. NO OUTDOOR STORAGE OR ANY SOLID WASTE RECEPTACLES REQUIRED.

2. CONTRACTOR SHALL VERIFY ALL PLANS, EXISTING DIMENSIONS, AND CONDITIONS ON THE JOB SITE. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT/ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK. FAILURE TO NOTIFY THE ARCHITECT/ENGINEER PLACES THE RESPONSIBILITY ON THE CONTRACTOR TO CORRECT THE DISCREPANCIES AT THE CONTRACTOR'S EXPENSE.

3. DEVELOPMENT AND USE OF THE SITE WILL CONFORM TO ALL APPLICABLE CODES, ORDINANCES AND SPECIFICATIONS.

   3.1 ATT STANDARD − ATT−TP 76300, ATT−TP 76416 & ATT UPDATES AS REQUIRED
   3.2 BUILDING CODE: INTERNATIONAL BUILDING CODE 2015
   3.3 ELECTRICAL CODE: DESIGNED TO THE REQUIREMENTS OF THE 2017 NATIONAL ELECTRIC CODE WITH PROVISIONS. DRAWINGS WILL COMPLY WITH THE REQUIREMENTS OF THE LOCAL JURISDICTION AND THE CODE APPROVED BY THE LOCAL JURISDICTION.

   SUBCONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS.

   3.4 AMERICAN CONCRETE INSTITUTE (ACI) 318, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE.
   3.5 AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), MANUAL OF STEEL CONSTRUCTION.
   3.6 TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA)
   3.6.1 TIA 222−G, STRUCTURAL STANDARDS FOR STEEL ANTENNA SUPPORTING STRUCTURES AND ANTENNAS WITH ADDENDUM.
   3.6.2 TIA 607, GENERIC TELECOMMUNICATIONS BONDING AND GROUNDING (EARTHING) FOR CUSTOMER PREMISES.
   3.7 INSTITUTE FOR ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE)
   3.7.1 IEEE 81, GUIDE FOR MEASURING EARTH RESISTIVITY, GROUND IMPEDANCE, AND EARTH SURFACE POTENTIALS OF A GROUNDING SYSTEM.
   3.7.2 IEEE 1100 (2005) RECOMMENDED PRACTICE FOR POWERING AND GROUNDING OF ELECTRONIC EQUIPMENT.
   3.7.3 IEEE C62.41.1, RECOMMENDED PRACTICES ON CHARACTERIZATION OF SURGES IN LOW VOLTAGE (1000V OR LESS) AC POWER CIRCUITS.
   3.8 TELCORDIA, GR−1275, GENERAL INSTALLATION REQUIREMENTS.
   3.9 TELCORDIA, GR−1503, COAXIAL CONNECTORS.
   3.10 ANSI T1.311, TELECOMMUNICATIONS − DC POWER SYSTEMS − TELECOMMUNICATIONS ENVIRONMENT PROTECTION.

FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

AT&T Mobility

THE DESIGN SHOWN ON THESE DRAWINGS IS BASED ON INFORMATION GATHERED FROM AT&T RFDS V2020_1.00 DATED 3/8/2021.

SITE NAME:
COCKRELL HILL / OVILLA WT
SITE ID:
DX1693
FA LOCATION CODE:
10042519
PROJECT:
LTE−5G NR RADIO
TOWER OWNER:
CITY OF OVILLA
TOWER NUMBER:
N/A
PACE ID:
MRNTX068990
ADDRESS:
105 SOUTH COCKRELL HILL ROAD
OVILLA, TX 75154
210'−0" TANK

VICINITY MAP

SCOPE OF WORK

ALPHA, BETA, GAMMA:

5G NR RADIO (MRNTX068990): INSTALL NEW AIR6449 N77 ANTENNA ON EXISTING PIPE ON POS 3. INSTALL 2X FIBER JUMPERS AND 1X DC JUMPER. INSTALL NEW ANTENNA NNH4−65B−R6H4 ON NEW PIPE ON POS 5.
DECOM EXISTING ANTENNA SBNHH−1D65B FROM POS 3
INSTALL NEW DIPLEXER CBC78T−DS−43 ON POS 1 AND CONNECT 2X MINI DIN TO MINI DIN RF JUMPERS TO EXISTING ANTENNA ON POS 1
RECONNECT EXISTING RRUS−4478 B14 TO NEW DIPLEXER ON POS 1 USING 2X MINI DIN TO MINI DIN RF JUMPERS. INSTALL 1X NEW DC JUMPER.
DECOM TMAS FOR UMTS IF EXISTING. RECONNECT UMTS 850 TO NEW DIPLEXER CBC78T−DS−43 ON POS 1 USING 2X DIN TO MINI DIN RF JUMPERS
RELOCATE EXISTING RRUS−4415 B30 FROM POS 3 TO POS 5. THIS WILL REMAIN ON EXISTING BRACKET ON POS 2 BUT WILL BE PLUMBED TO ANTENNA ON POS 5 USING 4X MINI DIN TO MINI DIN RF JUMPERS
RECONNECT EXISTING RRUS−8843 B2/66A PCS PORTS TO NEW ANTENNA ON POS 5 USING 4X MINI DIN TO MINI DIN RF JUMPERS
RECONNECT EXISTING 4449 B5/12 TO NEW ANTENNA ON POS 5 USING 4X MINI DIN TO MINI DIN RF JUMPERS

POWER:

5G NR RADIO (MRNTX068990): INSTALL 3X 50AMP BREAKERS FOR NEW AIR 6449 N77. USE EXISTING DC12. INSTALL NEW NEMA DC6−48−60−18 NEAR EXISTING FC12S. INSTALL 3X DC2 (1X PER SECTOR). INSTALL 2X 200' 6AWG6 DC TRUNKS. INSTALL NEW 75M 18 PAIR FIBER TRUNK.

EXISTING: 3X FC12, 9X DC2, 6X 8AWG6 DC TRUNKS, 2X FIBER TRUNKS.
PROPOSED: 3X FC12, 1X NEMA DC6−48−60−18, 12X DC2, 6X 8AWG6 AND 2X 6AWG6 DC TRUNKS, 3X FIBER TRUNKS.

EXISTING POWER PLANT NETSURE 721 − 48V.

SHEET INDEX

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C−6	ENLARGED PROPOSED ANTENNA PLAN
C−7	RF SCHEDULE
C−8	EQUIPMENT DETAILS

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APPROVALS

THE FOLLOWING PARTIES HEREBY APPROVE AND ACCEPT THESE DOCUMENTS AND AUTHORIZE THE CONTRACTOR TO PROCEED WITH THE CONSTRUCTION DESCRIBED HEREIN. ALL DOCUMENTS ARE SUBJECT TO REVIEW BY THE LOCAL BUILDING DEPARTMENT AND MAY IMPOSE CHANGES OR MODIFICATIONS.

NEXIUS LEASING/SITE ACQUISITION:	DATE:
NEXIUS A&E:	DATE:
NEXIUS CM:	DATE:
AT&T CM:	DATE:
AT&T RF:	DATE:

PREPARED BY:
nexius
ENABLING SMARTER CONNECTIONS
A&E OFFICE:
2595 NORTH DALLAS PARKWAY, SUITE 300
FRISCO, TX 75034
(972) 581-9888

CLIENT:
AT&T Mobility
1801 VALLEY VIEW LANE
FARMERS BRANCH, TX 75234

FOR CONSTRUCTION

STATE OF TEXAS
JACK T. PHIPPS
103850
LICENSED
PROFESSIONAL ENGINEER
DocuSigned by:
8F2F33FCFCDB41F...
DATE SIGNED: 04/20/22
NEXIUS SOLUTIONS, INC. TEXAS FIRM NO. F−17972
FIRM REGISTRATION RENEWAL 07/31/22
PE LICENSE RENEWAL 06/30/22

SUBMITTALS

REV	DATE	DESCRIPTION	BY
A	07/22/21	FOR REVIEW	NC
0	04/20/22	FINAL CD	CH

SITE INFORMATION: TOWER OWNER:
CITY OF OVILLA
TOWER NUMBER:
N/A
SITE NAME:
COCKRELL HILL / OVILLA WT
SITE NUMBER:
DX1693
FA LOCATION CODE:
10042519
PACE ID:
MRNTX068990
ADDRESS:
105 SOUTH COCKRELL HILL ROAD
OVILLA, TX 75154

DRAWN BY: NC	DATE: 07/22/21
CHECKED BY: TB	DATE: 04/20/22

NEXIUS PTN:
3012A0XGMN

SHEET TITLE:
TITLE SHEET

SHEET NUMBER:
T-1

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GENERAL CONSTRUCTION NOTES:

1. FOR THE PURPOSE OF CONSTRUCTION DRAWINGS, THE FOLLOWING DEFINITIONS SHALL APPLY:
   - GENERAL CONTRACTOR – NEXIUS
   - SUBCONTRACTOR – CONTRACTOR (CONSTRUCTION)
   - OWNER – AT&T MOBILITY
2. ALL SITE WORK SHALL BE COMPLETED AS INDICATED ON THE DRAWINGS AND AT&T PROJECT SPECIFICATIONS.
3. GENERAL CONTRACTOR AND SUBCONTRACTOR SHALL VISIT THE SITE AND SHALL FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING THE PROPOSED WORK AND SHALL MAKE PROVISIONS. GENERAL CONTRACTOR AND SUBCONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIMSELF WITH ALL CONTRACT DOCUMENTS, FIELD CONDITIONS, DIMENSIONS, AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.
4. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. GENERAL CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF WORK.
5. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES, AND APPLICABLE REGULATIONS.
6. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
7. PLANS ARE NOT TO BE SCALED. THESE PLANS ARE INTENDED TO BE A DIAGRAMMATIC OUTLINE ONLY UNLESS OTHERWISE NOTED. DIMENSIONS SHOWN ARE TO FINISH SURFACES UNLESS OTHERWISE NOTED. SPACING BETWEEN EQUIPMENT IS THE MINIMUM REQUIRED CLEARANCE. THEREFORE, IT IS CRITICAL TO FIELD VERIFY DIMENSIONS, SHOULD THERE BE ANY QUESTIONS REGARDING THE CONTRACT DOCUMENTS, THE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A CLARIFICATION FROM THE ENGINEER PRIOR TO PROCEEDING WITH THE WORK. DETAILS ARE INTENDED TO SHOWN DESIGN INTENT. MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF WORK AND PREPARED BY THE ENGINEER PRIOR TO PROCEEDING WITH WORK.
8. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
9. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION SPACE FOR APPROVAL BY THE ENGINEER PRIOR TO PROCEEDING.
10. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF WORK AREA, ADJACENT AREAS AND BUILDING OCCUPANTS THAT ARE LIKELY TO BE AFFECTED BY THE WORK UNDER THIS CONTRACT. WORK SHALL CONFORM TO ALL OSHA REQUIREMENTS AND THE LOCAL JURISDICTION.
11. GENERAL CONTRACTOR SHALL COORDINATE WORK AND SCHEDULE WORK ACTIVITIES WITH OTHER DISCIPLINES.
12. ERECTION SHALL BE DONE IN A WORKMAN–LIKE MANNER BY COMPETENT EXPERIENCED WORKMAN IN ACCORDANCE WITH APPLICABLE CODES AND THE BEST ACCEPTED PRACTICE. ALL MEMBERS SHALL BE LAID PLUMB AND TRUE AS INDICATED ON THE DRAWINGS.
13. SEAL PENETRATIONS THROUGH FIRE RATED AREAS WITH UL LISTED MATERIALS APPROVED BY LOCAL JURISDICTION. SUBCONTRACTOR SHALL KEEP AREA CLEAN, HAZARD FREE, AND DISPOSE OF ALL DEBRIS.
14. WORK PREVIOUSLY COMPLETED IS REPRESENTED BY LIGHT SHADED LINES AND NOTES. THE SCOPE OF WORK FOR THIS PROJECT IS REPRESENTED BY DARK SHADED LINES AND NOTES. SUBCONTRACTOR SHALL NOTIFY THE GENERAL CONTRACTOR OF ANY EXISTING CONDITIONS THAT DEVIATE FROM THE DRAWINGS PRIOR TO BEGINNING CONSTRUCTION.
15. SUBCONTRACTOR SHALL PROVIDE WRITTEN NOTICE TO THE CONSTRUCTION MANAGER 48 HOURS PRIOR TO COMMENCEMENT OF WORK.
16. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
17. THE SUBCONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
18. GENERAL CONTRACTOR SHALL COORDINATE AND MAINTAIN ACCESS FOR ALL TRADES AND SUBCONTRACTORS TO THE SITE AND/OR BUILDING.
19. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR SECURITY OF THE SITE FOR THE DURATION OF CONSTRUCTION UNTIL JOB COMPLETION.
20. THE GENERAL CONTRACTOR SHALL MAINTAIN IN GOOD CONDITION ONE COMPLETE SET OF PLANS WITH ALL REVISIONS, ADDENDA, AND CHANGE ORDERS ON THE PREMISES AT ALL TIMES.
21. THE GENERAL CONTRACTOR AND SUBCONTRACTOR SHALL PROVIDE PORTABLE FIRE EXTINGUISHERS WITH A RATING OF NOT LESS THAN 2A TO 2A:10B:C AND SHALL BE WITHIN 25 FEET OF TRAVEL DISTANCE TO ALL PORTIONS OF WHERE THE WORK IS BEING COMPLETED DURING CONSTRUCTION.
22. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY THE ENGINEER. EXTREME CAUTION SHOULD BE USED BY THE SUBCONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. SUBCONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS SHALL INCLUDE BUT NOT BE LIMITED TO: A) FALL PROTECTION, B) CONFINED SPACE, C) ELECTRICAL SAFETY, AND D) TRENCHING & EXCAVATION.
23. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED, CAPPED, PLUGGED OR OTHERWISE DISCONNECTED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, AS DIRECTED BY THE RESPONSIBLE ENGINEER, AND SUBJECT TO THE APPROVAL OF THE OWNER AND/OR LOCAL UTILITIES.
24. THE AREAS OF THE OWNER'S PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, AND STABILIZED TO PREVENT EROSION.
25. SUBCONTRACTOR SHALL MINIMIZE DISTURBANCE TO THE EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE FEDERAL AND LOCAL JURISDICTION FOR EROSION AND SEDIMENT CONTROL.
26. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUNDING. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.
27. THE SUBGRADE SHALL BE BROUGHT TO A SMOOTH UNIFORM GRADE AND COMPACTED TO 95 PERCENT STANDARD PROCTOR DENSITY UNDER PAVEMENT AND STRUCTURES AND 80 PERCENT STANDARD PROCTOR DENSITY IN OPEN SPACE. ALL TRENCHES IN PUBLIC RIGHT OF WAY SHALL BE BACKFILLED WITH FLOWABLE FILL OR OTHER MATERIAL PRE–APPROVED BY THE LOCAL JURISDICTION.
28. ALL NECESSARY RUBBISH, STUMPS, DEBRIS, STICKS, STONES, AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN A LAWFUL MANNER.
29. ALL BROCHURES, OPERATING AND MAINTENANCE MANUALS, CATALOGS, SHOP DRAWINGS, AND OTHER DOCUMENTS SHALL BE TURNED OVER TO THE GENERAL CONTRACTOR AT COMPLETION OF CONSTRUCTION AND PRIOR TO PAYMENT.
30. SUBCONTRACTOR SHALL SUBMIT A COMPLETE SET OF AS–BUILT REDLINES TO THE GENERAL CONTRACTOR UPON COMPLETION OF PROJECT AND PRIOR TO FINAL PAYMENT.
31. SUBCONTRACTOR SHALL LEAVE PREMISES IN A CLEAN CONDITION.
32. THE PROPOSED FACILITY WILL BE UNMANNED AND DOES NOT REQUIRE POTABLE WATER OR SEWER SERVICE, AND IS NOT FOR HUMAN HABITAT (NO HANDICAP ACCESS REQUIRED).
33. OCCUPANCY IS LIMITED TO PERIODIC MAINTENANCE AND INSPECTION, APPROXIMATELY 2 TIMES PER MONTH, BY AT&T TECHNICIANS.
34. NO OUTDOOR STORAGE OR SOLID WASTE CONTAINERS ARE PROPOSED.
35. ALL MATERIAL SHALL BE FURNISHED AND WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST REVISION OF AT&T STANDARDS. IN CASE OF A CONFLICT BETWEEN THE CONSTRUCTION SPECIFICATION AND THE DRAWINGS, THE DRAWINGS SHALL GOVERN.
36. SUBCONTRACTORS SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS REQUIRED FOR CONSTRUCTION. IF SUBCONTRACTOR CANNOT OBTAIN A PERMIT, THEY MUST NOTIFY THE GENERAL CONTRACTOR IMMEDIATELY.
37. SUBCONTRACTOR SHALL REMOVE ALL TRASH AND DEBRIS FROM THE SITE ON A DAILY BASIS.
38. INFORMATION SHOWN ON THESE DRAWINGS WAS OBTAINED FROM SITE VISITS AND/OR DRAWINGS PROVIDED BY THE SITE OWNER. CONTRACTORS SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
39. NO WHITE STROBIC LIGHTS ARE PERMITTED. LIGHTING IF REQUIRED, WILL MEET FAA STANDARDS AND REQUIREMENTS.
40. ALL COAXIAL CABLE INSTALLATIONS TO FOLLOW MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.
41. NO NOISE, SMOKE, DUST, ODOR, OR VIBRATIONS WILL RESULT FROM THIS FACILITY.
42. NO ADDITIONAL PARKING TO BE PROPOSED. EXISTING ACCESS AND PARKING TO REMAIN.
43. NO LANDSCAPING IS PROPOSED AT THIS SITE.

SITE WORK & DRAINAGE:

PART 1 – GENERAL

CLEARING, GRUBBING, STRIPPING, EROSION CONTROL, SURVEY, LAYOUT, SUBGRADE PREPARATION AND FINISH GRADING AS REQUIRED TO COMPLETE THE PROPOSED WORK SHOWN IN THESE PLANS.

1.1 REFERENCES:

A. ANSI (AMERICAN NATIONAL STANDARDS INSTITUTE).

B. ASTM (AMERICAN SOCIETY FOR TESTING AND MATERIALS).

C. OSHA (OCCUPATION SAFETY AND HEALTH ADMINISTRATION).

1.2 INSPECTION AND TESTING:

A. FIELD TESTING OF EARTHWORK COMPACTION AND CONCRETE CYLINDERS SHALL BE PERFORMED BY SUBCONTRACTOR'S INDEPENDENT TESTING LAB. THIS WORK TO BE COORDINATED BY THE SUBCONTRACTOR.

B. ALL WORK SHALL BE INSPECTED AND RELEASED BY THE GENERAL CONTRACTOR WHO SHALL CARRY OUT THE GENERAL INSPECTION OF THE WORK WITH SPECIFIC CONCERN TO PROPER PERFORMANCE OF THE WORK AS SPECIFIED AND/OR CALLED FOR ON THE DRAWINGS. IT IS THE SUBCONTRACTOR'S RESPONSIBILITY TO REQUEST TIMELY INSPECTIONS PRIOR TO PROCEEDING WITH FURTHER WORK THAT WOULD MAKE PARTS OF WORK INACCESSIBLE OR DIFFICULT TO INSPECT.

1.3 SITE MAINTENANCE AND PROTECTION:

A. PROVIDE ALL NECESSARY JOB SITE MAINTENANCE FROM COMMENCEMENT OF WORK UNTIL COMPLETION OF THE SUBCONTRACT.

B. AVOID DAMAGE TO THE SITE AND TO EXISTING FACILITIES, STRUCTURES, TREES, AND SHRUBS DESIGNATED TO REMAIN. TAKE PROTECTIVE MEASURES TO PREVENT EXISTING FACILITIES THAT ARE NOT DESIGNATED FOR REMOVAL FROM BEING DAMAGED BY THE WORK.

C. KEEP SITE FREE OF ALL PONDING WATER.

D. PROVIDE EROSION CONTROL MEASURES IN ACCORDANCE WITH STATE DOT AND EPA REQUIREMENTS.

E. PROVIDE AND MAINTAIN ALL TEMPORARY FENCING, BARRICADES, WARNING SIGNALS AND SIMILAR DEVICES NECESSARY TO PROTECT AGAINST THEFT FROM PROPERTY DURING THE ENTIRE PERIOD OF CONSTRUCTION. REMOVE ALL SUCH DEVICES UPON COMPLETION OF THE WORK.

F. EXISTING UTILITIES: DO NOT INTERRUPT EXISTING UTILITIES SERVING FACILITIES OCCUPIED BY THE OWNER OR OTHERS, EXCEPT WHEN PERMITTED IN WRITING BY THE ENGINEER AND THEN ONLY AFTER ACCEPTABLE TEMPORARY UTILITY SERVICES HAVE BEEN PROVIDED.

G. PROVIDE A MINIMUM 48–HOUR NOTICE TO THE ENGINEER AND RECEIVE WRITTEN NOTICE TO PROCEED BEFORE INTERRUPTING ANY UTILITY SERVICE.

PART 2 – PRODUCTS

2.1 SUITABLE BACKFILL: ASTM D2321 (CLASS I, II, III OR IVA) FREE FROM FROZEN LUMPS, REFUSE, STONES OR ROCKS LARGER THAN 3 INCHES IN ANY DIMENSION OR OTHER MATERIAL THAT MAY MAKE THE INORGANIC MATERIAL UNSUITABLE FOR BACKFILL.

2.2 NON–POROUS GRANULAR EMBANKMENT AND BACKFILL: ASTM D2321 (CLASS III, IVA OR IVB) COARSE AGGREGATE. FREE FROM FROZEN LUMPS, REFUSE, STONES OR ROCKS LARGER THAN 3 INCHES IN ANY DIMENSION OR OTHER MATERIAL THAT MAY MAKE THE INORGANIC MATERIAL UNSUITABLE FOR BACKFILL.

2.3 POROUS GRANULAR EMBANKMENT AND BACKFILL: ASTM D2321 (CLASS IA, IB OR II) COARSE AGGREGATE FREE FROM FROZEN LUMPS, REFUSE, STONES OR ROCKS LARGER THAN 3 INCHES IN ANY DIMENSION OR OTHER MATERIAL THAT MAY MAKE THE INORGANIC MATERIAL UNSUITABLE FOR BACKFILL.

2.4 SELECT STRUCTURAL FILL: GRANULAR FILL MATERIAL MEETING THE REQUIREMENTS OF ASTM E850–95. FOR USE AROUND AND UNDER STRUCTURES WHERE STRUCTURAL FILL MATERIAL ARE REQUIRED.

2.5 GRANULAR BEDDING AND TRENCH BACKFILL: WELL–GRADED SAND MEETING THE GRADATION REQUIREMENTS OF ASTM D2487 (SW OR SW–SM).

2.6 COARSE AGGREGATE FOR ACCESS ROAD SUBBASE COURSE SHALL CONFORM TO ASTM D2940.

2.7 UNSUITABLE MATERIAL: HIGH AND MODERATELY PLASTIC SILTS AND CLAYS (LL>45). MATERIAL CONTAINING REFUSE, FROZEN LUMPS, DEMOLISHED BITUMINOUS MATERIAL, VEGETATIVE MATTER, WOOD, STONES IN EXCESS OF 3 INCHES IN ANY DIMENSION, AND DEBRIS AS DETERMINED BY THE CONSTRUCTION MANAGER. TYPICAL THESE WILL BE SOILS CLASSIFIED BY ASTM AS PT, MH, CH, OH, ML, AND OL.

2.8 GEOTEXTILE FABRIC: MIRAFI 500X OR APPROVED EQUAL.

2.9 PLASTIC MARKING TAPE: SHALL BE ACID AND ALKALI RESISTANT POLYETHYLENE FILM SPECIFICALLY MANUFACTURED FOR MARKING AND LOCATING UNDERGROUND UTILITIES, 6 INCHES WIDE WITH A MINIMUM THICKNESS OF 0.004 INCH. TAPE SHALL HAVE MINIMUM STRENGTH OF 1500 PSI IN BOTH DIRECTIONS AND MANUFACTURED WITH INTEGRAL CONDUCTORS, FOIL BACKING OR OTHER MEANS TO ENABLE DETECTION BY A METAL DETECTOR WHEN BURIED UP TO 3 FEET DEEP. THE METALLIC CORE OF THE TAPE SHALL BE ENCASED IN A PROTECTIVE JACKET OR PROVIDED WITH OTHER MEANS TO PROTECT IT FROM CORROSION. TAPE COLOR SHALL BE RED FOR ELECTRIC UTILITIES AND ORANGE FOR TELECOMMUNICATION UTILITIES.

PART 3 – EXECUTION

3.1 GENERAL:

A. BEFORE STARTING GENERAL SITE PREPARATION ACTIVITIES, INSTALL EROSION AND SEDIMENT CONTROL MEASURES. THE WORK AREA SHALL BE CONSTRUCTED AND MAINTAINED IN SUCH CONDITION THAT IN THE EVENT OF RAIN THE SITE WILL BE DRAINED AT ANY TIME.

B. BEFORE ALL SURVEY, LAYOUT, STAKING, AND MARKING, ESTABLISH AND MAINTAIN ALL LINES, GRADES, ELEVATIONS AND BENCHMARKS NEEDED FOR EXECUTION OF THE WORK.

C. CLEAR AND GRUB THE AREA WITHIN THE LIMITS OF THE SITE. REMOVE TREES, BRUSH, STUMPS, RUBBISH AND OTHER DEBRIS AND VEGETATION RESTING ON OR PROTRUDING THROUGH THE SURFACE OF THE SITE AREA TO BE CLEARED.

D. REMOVE THE FOLLOWING MATERIALS TO A DEPTH OF NO LESS THAN 12 INCHES BELOW THE ORIGINAL GROUND SURFACE: ROOTS, STUMPS, AND OTHER DEBRIS. BRUSH, AND REFUSE EMBEDDED IN OR PROTRUDING THROUGH THE GROUND SURFACE. RAKE, DISK OR PLOW THE AREA TO A DEPTH OF NO LESS THAN 6 INCHES, AND REMOVE TO A DEPTH OF 12 INCHES ALL ROOTS AND OTHER DEBRIS THEREBY EXPOSED.

E. REMOVE TOPSOIL MATERIAL COMPLETELY FROM THE SURFACE UNTIL THE SOIL NO LONGER MEETS THE DEFINITION OF TOPSOIL. AVOID MIXING TOPSOIL WITH SUBSOIL OR OTHER UNDESIRABLE MATERIALS.

F. EXCEPT WHERE EXCAVATION TO GREATER DEPTH IS INDICATED, FILL DEPRESSIONS RESULTING FROM CLEARING, GRUBBING & DEMOLITION WORK COMPLETELY WITH SUITABLE FILL.

G. REMOVE FROM THE SITE AND DISPOSE IN AN AUTHORIZED LANDFILL ALL DEBRIS RESULTING FROM CLEARING AND GRUBBING OPERATIONS. BURNING WILL NOT BE PERMITTED.

H. PRIOR TO EXCAVATING, THOROUGHLY EXAMINE THE AREA TO BE EXCAVATED AND/OR TRENCHED TO VERIFY THE LOCATIONS OF FEATURES INDICATED ON THE DRAWINGS AND TO ASCERTAIN THE EXISTENCE AND LOCATION OF ANY STRUCTURE, UNDERGROUND STRUCTURE, OR OTHER ITEM NOT SHOWN THAT MIGHT INTERFERE WITH THE PROPOSED CONSTRUCTION. NOTIFY THE CONSTRUCTION MANAGER OF ANY OBSTRUCTIONS THAT WILL PREVENT ACCOMPLISHMENT OF THE WORK AS INDICATED ON THE DRAWINGS.

I. SEPARATE AND STOCK PILE ALL EXCAVATED MATERIALS SUITABLE FOR BACKFILL. ALL EXCESS EXCAVATED AND UNSUITABLE MATERIALS SHALL BE DISPOSED OF OFF–SITE IN A LEGAL MANNER.

3.2 BACKFILL:

A. AS SOON AS PRACTICAL, AFTER COMPLETING CONSTRUCTION OF THE RELATED STRUCTURE, INCLUDING EXPIRATION OF THE SPECIFIED MINIMUM CURING PERIOD FOR CAST–IN–PLACE CONCRETE, BACKFILL THE EXCAVATION WITH APPROVED MATERIAL TO RESTORE THE REQUIRED FINISHED GRADE.

B. PRIOR TO PLACING BACKFILL AROUND STRUCTURES, ALL FORMS SHALL BE REMOVED AND THE EXCAVATION CLEANED OF ALL TRASH, DEBRIS, AND UNSUITABLE MATERIALS.

C. BACKFILL BY PLACING AND COMPACTING SUITABLE BACKFILL MATERIAL OR SELECT GRANULAR BACKFILL MATERIAL WHEN REQUIRED IN UNIFORM HORIZONTAL LAYERS OF NO GREATER THAN 8 INCHES LOOSE THICKNESS AND COMPACTED. WHERE HAND OPERATED COMPACTORS ARE USED, THE FILL MATERIAL SHALL BE PLACED IN LIFTS NOT TO EXCEED 4 INCHES IN LOOSE DEPTH AND COMPACTED.

D. WHENEVER THE DENSITY TESTING INDICATES THAT THE CONTRACTOR HAS NOT OBTAINED THE SPECIFIED DENSITY, THE SUCCEEDING LAYER SHALL NOT BE PLACED UNTIL THE SPECIFICATION REQUIREMENTS ARE MET UNLESS OTHERWISE AUTHORIZED BY THE GEOTECHNICAL ENGINEER. THE CONTRACTOR SHALL TAKE WHATEVER APPROPRIATE ACTION IS NECESSARY, SUCH AS DISKING AND DRYING, ADDING WATER, OR INCREASING THE COMPACTIVE EFFORT TO MEET THE MINIMUM COMPACTION REQUIREMENTS.

E. THOROUGHLY COMPACT EACH LAYER OF BACKFILL TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY AS PROVIDED BY THE STANDARD PROCTOR TEST, ASTM D 698.

3.3 TRENCH EXCAVATION:

A. UTILITY TRENCHES SHALL BE EXCAVATED TO THE LINES AND GRADES SHOWN ON THE DRAWINGS OR AS DIRECTED BY THE GENERAL CONTRACTOR. PROVIDE SHORING, SHEETING AND BRACING AS REQUIRED TO PREVENT CAVING OR SLOUGHING OF THE TRENCH WALLS.

B. EXTEND THE TRENCH WIDTH A MINIMUM OF 6 INCHES BEYOND THE OUTSIDE EDGE OF THE OUTERMOST CONDUIT.

C. WHEN SOFT YIELDING, OR OTHERWISE UNSTABLE SOIL CONDITIONS ARE ENCOUNTERED, BACKFILL AT THE REQUIRED TRENCH TO A DEPTH OF NO LESS THAN 12 INCHES BELOW THE REQUIRED ELEVATION AND BACKFILL WITH GRANULAR BEDDING MATERIAL.

3.4 TRENCH BACKFILL:

A. PROVIDE GRANULAR BEDDING MATERIAL IN ACCORDANCE WITH THE DRAWINGS AND THE UTILITY REQUIREMENTS.

B. NOTIFY THE GENERAL CONTRACTOR 24 HOURS IN ADVANCE OF BACKFILLING.

C. CONDUCT UTILITY CHECK TESTS BEFORE BACKFILLING. BACKFILL AND COMPACT TRENCH BEFORE ACCEPTANCE TESTING.

D. PLACE GRANULAR TRENCH BACKFILL UNIFORMLY ON BOTH SIDES OF THE CONDUITS IN 6–INCH UNCOMPACTED LIFTS UNTIL 12 INCHES OVER THE CONDUITS. SOLIDLY RAM AND TAMP BACKFILL INTO SPACE AROUND CONDUITS.

E. PROTECT CONDUIT FROM LATERAL MOVEMENT, IMPACT DAMAGE, OR UNBALANCED LOADING.

F. ABOVE THE CONDUIT EMBEDMENT ZONE, PLACE AND COMPACT SATISFACTORY BACKFILL MATERIAL IN 8–INCH MAXIMUM LOOSE THICKNESS LIFTS TO RESTORE THE REQUIRED FINISHED SURFACE GRADE.

G. COMPACT FINAL TRENCH BACKFILL TO A DENSITY EQUAL TO OR GREATER THAN THAT OF THE EXISTING UNDISTURBED MATERIAL IMMEDIATELY ADJACENT TO THE TRENCH BUT NO LESS THAN A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY AS PROVIDED BY THE STANDARD PROCTOR TEST, ASTM D 698.

3.5 AGGREGATE ACCESS ROAD:

A. CLEAR, GRUB, STRIP AND EXCAVATE FOR THE ACCESS ROAD TO THE LINES AND GRADES INDICATED ON THE DRAWINGS. SCARIFY TO A DEPTH OF 6 INCHES AND PROOF–ROLL ALL HOLES, RUTS, SOFT PLACES AND OTHER DEFECTS SHALL BE CORRECTED.

B. THE ENTIRE SUBGRADE SHALL BE COMPACTED TO NOT LESS THAN 95 PERCENT OF THE MAXIMUM DRY DENSITY AS PROVIDED BY THE MODIFIED STANDARD PROCTOR TEST, ASTM D 1557.

C. AFTER PREPARATION OF THE SUBGRADE IS COMPLETE THE GEOTEXTILE FABRIC (MIRAFI 500X) SHALL BE INSTALLED TO THE LIMITS INDICATED ON THE DRAWINGS BY ROLLING THE FABRIC OUT LONGITUDINALLY ALONG THE ROADWAY. THE FABRIC SHALL NOT BE DRAGGED ACROSS THE SUBGRADE. PLACE THE ENTIRE ROLL IN A SINGLE OPERATION, ROLLING OUT AS SMOOTHLY AS POSSIBLE.

D. OVERLAPS PARALLEL TO THE ROADWAY WILL BE PERMITTED AT THE CENTERLINE AND AT LOCATIONS BEYOND THE ROADWAY SURFACE WIDTH (I.E. WITHIN THE SHOULDER WIDTH) ONLY. NO LONGITUDINAL OVERLAPS SHALL BE LOCATED BETWEEN THE CENTERLINE AND THE SHOULDER. PARALLEL OVERLAPS SHALL BE A MINIMUM OF 3 FEET WIDE.

E. TRANSVERSE (PERPENDICULAR TO THE ROADWAY) OVERLAPS AT THE END OF A ROLL SHALL OVERLAP IN THE DIRECTION OF THE AGGREGATE PLACEMENT (PREVIOUS ROLL ON TOP) AND SHALL HAVE A MINIMUM LENGTH OF 3 FEET.

F. ALL OVERLAPS SHALL BE PINNED WITH STAPLES OR NAILS A MINIMUM OF 10 INCHES LONG TO INSURE POSITIONING DURING PLACEMENT OF AGGREGATE. PIN LONGITUDINAL SEAMS AT 25 FOOT CENTERS AND TRANSVERSE SEAMS EVERY 5 FEET.

G. THE AGGREGATE BASE AND SURFACE COURSES SHALL BE CONSTRUCTED IN LAYERS NOT MORE THAN 4 INCH (COMPACTED) THICKNESS. AGGREGATE TO BE PLACED ON GEOTEXTILE FABRIC SHALL BE END–DUMPED ON THE FABRIC FROM THE FREE END OF THE FABRIC OR OVER PREVIOUSLY PLACED AGGREGATE. THE FIRST LIFT SHALL BE BLADED DOWN TO A THICKNESS OF 8 INCHES PRIOR TO COMPACTION. AT NO TIME SHALL EQUIPMENT, EITHER TRANSPORTING THE AGGREGATE OR GRADING THE AGGREGATE, BE PERMITTED ON THE ROADWAY WITH LESS THAN 4 INCHES OF MATERIAL COVERING THE FABRIC.

H. THE AGGREGATE SHALL BE IMMEDIATELY COMPACTED TO NOT LESS THAN 95 PERCENT OF THE MAXIMUM DRY DENSITY AS PROVIDED BY THE PROCTOR TEST, ASTM D 1557 WITH A TAMPING ROLLER, OR WITH A PNEUMATIC–TIRED ROLLER, OR WITH A VIBRATORY MACHINE OR ANY COMBINATION OF THE ABOVE. THE TOP LAYER SHALL BE GIVEN A FINAL ROLLING WITH A THREE–WHEEL OR TANDEM ROLLER.

3.6 FINISH GRADING:

A. PERFORM ALL GRADING TO PROVIDE POSITIVE DRAINAGE AWAY FROM STRUCTURES AND SMOOTH, EVEN SURFACE DRAINAGE OF THE ENTIRE AREA WITHIN THE LIMITS OF CONSTRUCTION. GRADING SHALL BE COMPATIBLE WITH ALL SURROUNDING TOPOGRAPHY AND STRUCTURES.

B. UTILIZE SATISFACTORY FILL MATERIAL RESULTING FROM THE EXCAVATION WORK IN THE CONSTRUCTION OF FILLS, EMBANKMENTS AND FOR REPLACEMENT OF REMOVED UNSUITABLE MATERIALS.

C. ACHIEVE FINISHED GRADE BY PLACING A MINIMUM OF 4 INCHES OF 1/2" – 3/4" CRUSHED STONE ON TOP SOIL STABILIZER FABRIC.

D. REPAIR ALL ACCESS ROADS AND SURROUNDING AREAS USED DURING THE COURSE OF THIS WORK TO THEIR ORIGINAL CONDITION.

3.7 ASPHALT PAVING ROAD:

A. SECTION 400 – HOT ASPHALT MIX.

B. SECTION 702 – BITUMINOUS MATERIALS.

CONCRETE WORK

PART 1 – GENERAL

1.1 SCOPE:

A. FORM WORK, REINFORCING STEEL, ACCESSORIES, CAST–IN PLACE CONCRETE, FINISHING, CURING AND TESTING FOR STRUCTURAL CONCRETE FOUNDATIONS.

1.2 REFERENCES:

A. ACI (AMERICAN CONCRETE INSTITUTE)
   - ACI 301 SPECIFICATIONS FOR STRUCTURAL CONCRETE.
   - ACI 304 GUIDE FOR MEASURING, MIXING, TRANSPORTING AND PLACING CONCRETE.
   - ACI 305 GUIDE TO HOT WEATHER CONCRETING.
   - ACI 306 STANDARD SPECIFICATION FOR COLD WEATHER CONCRETING.
   - ACI 308 GUIDE TO CURING CONCRETING.
   - ACI 309 GUIDE FOR CONSOLIDATION OF CONCRETE.
   - ACI 318 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND COMMENTARY.
   - ACI 347 GUIDE TO FORMWORK FOR CONCRETE.

B. ASTM (AMERICAN SOCIETY FOR TESTING AND MATERIALS). THE APPLICABLE STANDARDS OF THE AMERICAN SOCIETY FOR TESTING AND MATERIALS ARE LISTED IN THE ACI STANDARDS AND ARE A PART OF THIS SPECIFICATION.

PART 2 – PRODUCTS

2.1 REINFORCING MATERIALS:

A. REINFORCING BARS: ASTM A615, GRADE 60, PROPOSED DEFORMED BILLET–STEEL BARS, PLAIN FINISH.

B. FURNISH CHAIRS, BOLSTERS, BAR SUPPORTS, SPACERS AS REQUIRED FOR SUPPORT OF REINFORCING STEEL AND WIRE FABRIC.

2.2 CONCRETE MATERIALS:

A. PORTLAND CEMENT SHALL BE TYPE II, CONFORMING TO ASTM C–150.

B. AGGREGATE SHALL CONFORM TO ASTM C–33.
   - FINE AGGREGATE SHALL BE UNIFORMLY GRADED, CLEAN SHARP, WASHED NATURAL, OR CRUSHED SAND, FREE FROM ORGANIC IMPURITIES.
   - COARSE AGGREGATE SHALL BE NATURAL WASHED GRAVEL OR WASHED CRUSHED ROCK HAVING HARD, STRONG, DURABLE PIECES, FREE FROM ADHERENT COATINGS.
   - MAXIMUM SIZE OF COARSE AGGREGATE SHALL BE 3/4 INCH IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM C–33 GRADATION SIZE NO. 67.

C. WATER USED IN CONCRETE MIX SHALL BE POTABLE, CLEAN, AND FREE FROM OILS, ACIDS, SALTS, CHLORIDES, ALKALI, SUGAR, VEGETABLE, OR OTHER DELETERIOUS SUBSTANCES.

D. THE CONCRETE SHALL CONTAIN AN AIR–ENTRAINING ADMIXTURE COMPLYING WITH THE REQUIREMENTS OF ASTM C–260 AND ACI 212. 1R AND A WATER–REDUCING ADMIXTURE COMPLYING WITH THE REQUIREMENTS OF ASTM C–494 AND ACI 212. 1R. ADMIXTURES SHALL BE PURCHASED AND BATCHED IN LIQUID SOLUTION. THE USE OF CALCIUM CHLORIDE OR AN ADMIXTURE CONTAINING CALCIUM CHLORIDE IS PROHIBITED. ADMIXTURES SHALL BE OF THE SAME MANUFACTURER TO ASSURE COMPATIBILITY. ACCEPTABLE MANUFACTURERS ARE:
   - GRACE
   - SIKA CORP.
   - MASTER BUILDERS
   - EUCLID CHEMICAL CO.
   - APPROVED EQUAL

E. CURING COMPOUND SHALL CONFORM TO ASTM C309, TYPE I, ID, CLASS A AND B AND ASTM C171 AS APPLICABLE.

2.3 CONCRETE MIX:

A. PROPORTION CONCRETE MIX IN ACCORDANCE WITH REQUIREMENTS OF ACI 301. THE STRENGTH OF CONCRETE SHALL BE AS INDICATED ON THE DRAWINGS. WHERE STRENGTH IS NOT CLEARLY INDICATED, CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4000 PSI.

B. ALL CONCRETE SHALL BE 4% TO 6% AIR ENTRAINED.

C. ALL STRUCTURAL CONCRETE

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3.5 FINISHING:

A. FINISHING OF THE FLOOR SLABS SHALL BE IN ACCORDANCE WITH ACI 302.1 SECTION 7.2 WITH A MINIMUM OF THREE TROWELINGS. THE SLAB FINISH TOLERANCE AS MEASURED IN ACCORDANCE WITH ASTM E 1155 SHALL HAVE AN OVERALL TEST NUMBER FOR FLATNESS, FF=20 AND FOR LEVEL FL=15. THE MINIMUM LOCAL NUMBER FOR FLATNESS, FF=15 AND FOR LEVEL FL=10.

B. SURFACE OF FLOOR SLAB SHALL RECEIVE TWO COATS OF CLEAR SEALER/HARDENER.

C. ABOVE GRADE WALL SURFACES SHALL HAVE A SMOOTH FORM FINISH AS DEFINED IN CHAPTER 10 OF ACI 301.

3.6 CURING:

A. FRESHLY DEPOSITED CONCRETE SHALL BE PROTECTED FROM PREMATURE DRYING AND EXCESSIVELY HOT AND COLD TEMPERATURES AND SHALL BE MAINTAINED WITH MINIMUM MOISTURE LOSS AT A RELATIVELY CONSTANT TEMPERATURE FOR A PERIOD OF TIME NECESSARY FOR THE HYDRATION OF THE CEMENT AND PROPER HARDENING OF THE CONCRETE.

B. CONCRETE SHALL BE KEPT CONTINUOUSLY MOIST AT LEAST OVERNIGHT, IMMEDIATELY FOLLOWING THE INITIAL CURING, BEFORE THE CONCRETE HAS DRIED. ADDITIONAL CURING SHALL BE ACCOMPLISHED BY ONE OF THE FOLLOWING MATERIALS OR METHODS:
- PONDING OR CONTINUOUS SPRINKLING.
- ABSORPTIVE MAT OR FABRIC KEPT CONTINUOUSLY WET.
- NON-ABSORPTIVE FILM (POLYETHYLENE) OVER PREVIOUSLY SPRINKLED SURFACE.
- SAND OR OTHER COVERING KEPT CONTINUOUSLY WET.
- CONTINUOUS STEAM (NOT EXCEEDING 150 F) OR VAPOR MIST BATH.
- SPRAYED-ON CURING COMPOUND APPLIED IN TWO COATS, SPRAYED IN PERPENDICULAR DIRECTIONS.

C. THE FINAL CURING SHALL CONTINUE UNTIL THE CUMULATIVE NUMBER OF DAYS OR FRACTION THEREOF, NOT NECESSARILY CONSECUTIVE, DURING WHICH TEMPERATURE OF THE AIR IN CONTACT WITH CONCRETE IS ABOVE 50 DEGREES F HAS TOTALED SEVEN (7) DAYS. CONCRETE SHALL NOT BE PERMITTED TO FREEZE DURING THE CURING PERIOD. RAPID DRYING AT THE END OF THE CURING PERIOD SHALL BE PREVENTED.

STRUCTURAL STEEL

PART 1 – GENERAL

1.1 SCOPE:

A. PROVIDE FABRICATION AND ERECTION OF STRUCTURAL STEEL AND OTHER ITEMS AS SHOWN ON THE DRAWINGS OR REQUIRED BY OTHER SECTIONS OF THESE SPECIFICATIONS.

1.2 REFERENCES:

A. AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC). MANUAL OF STEEL CONSTRUCTION (13TH EDITION).

B. AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM).
- ASTM A36: STRUCTURAL STEEL.
- ASTM A53: PIPE, STEEL BLACK AND HOT DIPPED, ZINC-COATED WELDED AND SEAMLESS.
- ASTM A108: STEEL BARS, CARBON, COLD FINISHED, STANDARD QUALITY.
- ASTM A123: ZINC (HOT-DIPPED GALVANIZED) COATING ON IRON AND STEEL PRODUCTS.
- ASTM A307: CARBON STEEL BOLTS AND STUDS, 60,000 PSI TENSILE STRENGTH.
- ASTM A325: HIGH-STRENGTH BOLT FOR STRUCTURAL STEEL JOINTS.
- ASTM A490: HEAT-TREATED, STRUCTURAL STEEL BOLTS, 150 (KSI) (1035MPA) TENSILE STRENGTH.
- ASTM A500: COLD-FORMED WELDED AND SEAMLESS CARBON STEEL STRUCTURAL TUBING IN ROUNDS AND SHAPES.
- ASTM A563: CARBON AND ALLOY STEEL NUTS.
- ASTM B695: COATINGS OF ZINC MECHANICALLY DEPOSITED ON IRON AND STEEL.
- ASTM F436: HARDENED STEEL WASHERS.
- ASTM F959: COMPRESSIBLE-WASHER-TYPE DIRECT TENSION INDICATOR FOR USE WITH STRUCTURAL FASTENERS.

C. AMERICAN WELDING SOCIETY (AWS):
- AWS A5.1: COVERED CARBON STEEL ARC WELDING ELECTRODES.
- AWS A5.5: LOW ALLOY STEEL COVERED ARC WELDING ELECTRODES.
- AWS D1.1: STRUCTURAL WELDING CODE – STEEL.

D. RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS (RCSC): "SPECIFICATIONS FOR STRUCTURAL JOINTS USING ASTM A325 BOLTS OR ASTM A490 BOLTS" AS ENDORSED BY AISC.

E. STEEL STRUCTURES PAINTING COUNCIL (SSPC):
- SSPC–SP3: POWER TOOL CLEANING.
- SSPC–PAINT 11: RED IRON OXIDE, ZINC CHROME, RAW LINSEED OIL OR ALKYD PAINT.

1.3 SUBMITTALS:

A. SUBMIT THE FOLLOWING FOR APPROVAL:

B. FABRICATION AND ERECTION DRAWINGS SHOWING ALL DETAILS, CONNECTIONS, MATERIAL DESIGNATIONS, AND ALL TOP STEEL ELEVATIONS.

C. WELDERS SHALL BE QUALIFIED AS PRESCRIBED IN AWS D1.1.

PART 2 – PRODUCTS

2.1 STRUCTURAL STEEL:

A. SHAPES, PLATES AND BARS SHALL CONFORM TO ASTM A36 AND ASTM A992.

B. STRUCTURAL TUBING SHALL CONFORM TO ASTM A500, GRADE B. STEEL PIPE SHALL CONFORM TO ASTM A53, TYPE E OR S, GRADE B.

2.2 ANCHOR BOLTS:

A. ANCHOR BOLTS SHALL CONFORM TO ASTM F1554 GRADE 36.

2.3 BOLTS:

A. HIGH STRENGTH BOLT SHALL CONFORM TO ASTM A325. ONE HIGH STRENGTH BOLT ASSEMBLY SHALL CONSIST OF A HEAVY HEX STRUCTURAL BOLT, A HEAVY HEX NUT, A HARDENED WASHER CONFORMING WITH ASTM F436 AND A DIRECT TENSION INDICATOR CONFORMING WITH STM F959. THE HARDENED WASHER SHALL BE INSTALLED AGAINST THE ELEMENT TURNED IN TIGHTENING

2.4 WELDING ELECTRODES:

A. WELDING ELECTRODES SHALL COMPLY WITH AWS D1.1 USING A5.1 OR A5.5 E70XX AND SHALL BE COMPATIBLE WITH THE WELDING PROCESS SELECTED.

2.5 PRIMER:

A. PRIMER SHALL BE RED OXIDE–CHROMATE PRIMER COMPLYING WITH SSPC PAINT SPECIFICATION NO. 11.

2.6 STEEL GRATING:

A. BEARING BARS FOR STEEL GRATING SHALL BE OF RECTANGULAR SECTION AND CONFORM TO ASTM A1011 HOT ROLLED CARBON STEEL SHEET AND STRIP. BEARING BARS SHALL BE SPACED 1 3/16" O.C.

B. CROSS BARS SHALL BE OF ASTM A510 CARBON STEEL RODS AND COURSE ROUND WIRE. CROSS BARS SHALL BE TWISTED WIRE ROD SPACED AT 4" O.C.

C. STEEL GRATING EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED.

D. PART 3 – EXECUTION

3.1 FABRICATION:

A. SHOP FABRICATE AND ASSEMBLY MATERIALS AS SPECIFIED HEREIN.

B. FABRICATE ITEMS OF STRUCTURAL STEEL IN ACCORDANCE WITH THE AISC SPECIFICATION, AND AS INDICATED ON THE APPROVED SHOP DRAWINGS.

C. ALL EXPOSED STRUCTURAL STEEL TO WEATHER SHALL BE HOT DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123.

D. PROPERLY MARK AND MATCH-MARK MATERIALS FOR FIELD ASSEMBLY AND FOR IDENTIFICATION AS TO LOCATION FOR WHICH INTENDED.

E. FABRICATE AND DELIVER IN A SEQUENCE WHICH WILL EXPEDITE ERECTION AND MINIMIZE FIELD HANDLING OF MATERIALS.

F. WHERE FINISHING IS REQUIRED, COMPLETE THE ASSEMBLY, INCLUDING THE WELDING OF UNITS, BEFORE START OF FINISHING OPERATIONS.

G. UPON COMPLETION OF ERECTION INSPECT ALL GALVANIZED STEEL AND PAINT ANY FIELD CUTS, WELDS, OR GALVANIZED BREAKS WITH ZINC BASED PAINT.

H. PROVIDE CONNECTIONS AS SPECIFIED HEREIN:

I. PROVIDE BOLTS AND WASHERS OF TYPES AND SIZE REQUIRED FOR COMPLETION OF FIELD ERECTION. USE 3/4 INCH DIAMETER A325 BOLTS UNLESS NOTED OTHERWISE.

J. INSTALL HIGH STRENGTH THREADED FASTENERS IN ACCORDANCE WITH RCSC "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR ASTM A490 BOLTS."

K. WELDED CONSTRUCTION SHALL COMPLY WITH AWS D1.1 FOR PROCEDURES, APPEARANCE, QUALITY OF WELD, AND METHODS USED IN CORRECTING WELDED WORK.

L. THE FABRICATOR SHALL FURNISH AND INSTALL ERECTION CLIPS FOR FIT-UP OF WELDED CONNECTIONS.

M. GUSSET AND STIFFENER PLATES SHALL BE 3/8 INCH THICK MINIMUM.

3.2 PRIMING:

A. STRUCTURAL STEEL SHALL BE PRIMED AS SPECIFIED HEREIN, UNLESS SHOWN OTHERWISE ON THE DRAWINGS.

B. STRUCTURAL STEEL SURFACE PREPARATION SHALL CONFORM TO SSPC–SP3, "POWER TOOL CLEANING."

C. SURFACE PREPARATION AND PRIMER SHALL BE IN ACCORDANCE WITH AISC CODE OF STANDARD PRACTICE.

D. MATERIALS SHALL REMAIN CLOSED UNTIL REQUIRED FOR USE, MANUFACTURER'S POST-LIFE REQUIREMENTS SHALL BE STRICTLY ADHERED TO.

E. PRIMER SHALL BE APPLIED TO DRY, CLEAN, PREPARED SURFACE AND UNDER FAVORABLE CONDITIONS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. UNLESS OTHERWISE RECOMMENDED BY THE MANUFACTURER PRIMING SHALL NOT BE DONE WHEN AMBIENT TEMPERATURE IS LESS THAN 50 DEGREES F, THE RELATIVE HUMIDITY IS MORE THAN 90 PERCENT, OR THE SURFACE TEMPERATURE IS LESS THAN 5 DEGREES F ABOVE THE DEW POINT.

F. GENERALLY ALL PRIMER SHALL BE SPRAY APPLIED. BRUSH OR ROLLER APPLICATION SHALL BE RESTRICTED TO TOUCH UP AND TO AREAS NOT ACCESSIBLE BY SPRAY GUN.

G. PRIMER SHALL BE UNIFORMLY APPLIED WITHOUT RUNS, SAGS, SOLVENT BLISTERS, DRY SPRAY OR OTHER BLEMISHES. ALL BLEMISHES AND OTHER IRREGULARITIES SHALL BE REPAIRED OR REMOVED AND THE AREA RE-COATED. SPECIAL ATTENTION SHALL BE PAID TO CREVICES, WELD LINES, BOLT HEADS, CORNERS, EDGES, ETC., TO OBTAIN THE REQUIRED NOMINAL FILM THICKNESS.

H. THE DRY FILM THICKNESS OF THE PRIMER SHALL BE 2.0 MILS.

I. IF THE PRIMER IS DAMAGED BY WELDING OR PHYSICAL ABUSE, THE AREA SHALL BE TOUCHED–UP AND REPAIRED. THE TOUCHUP PAINT SHALL BE COMPATIBLE WITH THE APPLIED PRIMER WITH MINIMUM DRY FILM THICKNESS OF 1.5 MILS.

3.3 INSTALLATION:

A. INSTALLATION OF STRUCTURAL STEEL SHALL COMPLY WITH AISC "CODE OF STANDARD PRACTICE."

B. STRUCTURAL FIELD WELDING SHALL BE DONE BY THE ELECTRIC SUBMERGED OR SHIELDED METAL ARC PROCESS. WELDED CONSTRUCTION SHALL COMPLY WITH AWS D1.1.

C. SPLICE MEMBERS ONLY WHERE INDICATED ON THE DRAWINGS.

D. ANY GAS CUTTING TORCHES HAVE TO BE APPROVED IN WRITING BY THE PROJECT STRUCTURAL ENGINEER.

E. PROVIDE TEMPORARY SHORING BRACING WITH CONNECTIONS OF SUFFICIENT STRENGTH TO BEAR IMPOSED LOADS. REMOVE TEMPORARY CONNECTIONS AND MEMBERS WHEN PERMANENT MEMBERS ARE IN PLACE AND THE FINAL CONNECTIONS HAVE BEEN MADE.

F. ALIGN AND ADJUST MEMBERS, AND OTHER SURFACES WHICH WILL BE IN PERMANENT CONTACT, BEFORE ASSEMBLY.

G. INSTALL AND FULLY TENSION HIGH STRENGTH THREADED FASTENERS IN ACCORDANCE WITH RCSC, "SPECIFICATIONS FOR STRUCTURAL JOINT USING ASTM A325 OR ASTM A490 BOLTS."

ELECTRICAL NOTES

PART 1 – GENERAL

1.1 GENERAL CONDITIONS:

A. CONTRACTOR SHALL INSPECT THE EXISTING SITE CONDITIONS PRIOR TO SUBMITTING BID. ANY QUESTIONS ARISING DURING THE BID PERIOD IN REGARDS TO THE SUBCONTRACTORS FUNCTIONS, THE SCOPE OF WORK, OR ANY OTHER ISSUE RELATED TO THIS PROJECT SHALL BE BROUGHT UP DURING THE BID PERIOD WITH THE PROJECT MANAGER FOR CLARIFICATION, NOT AFTER THE CONTRACT HAS BEEN AWARDED.

B. THE SUBCONTRACTOR SHALL OBTAIN PERMITS, LICENSES, MAKE ALL DEPOSITS, AND PAY ALL FEES REQUIRED FOR THE CONSTRUCTION PERFORMANCE FOR THE WORK UNDER THIS SECTION.

C. DRAWINGS SHOW THE GENERAL ARRANGEMENT OF ALL SYSTEMS AND COMPONENTS COVERED UNDER THIS SECTION. THE SUBCONTRACTOR SHALL VERIFY ALL DIMENSIONS. DRAWING SHALL NOT BE SCALED TO DETERMINE DIMENSIONS.

1.2 LAWS, REGULATIONS, ORDINANCES, STATUTES AND CODES:

A. ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE, AND ALL APPLICABLE LOCAL LAWS, REGULATIONS, ORDINANCES, STATUTES AND CODES. CONDUIT BENDS SHALL BE THE RADIUS BEND FOR THE TRADE SIZE OF CONDUIT IN COMPLIANCE WITH THE LATEST EDITIONS OF NEC.

1.3 REFERENCES:

A. THE PUBLICATIONS LISTED BELOW ARE PART OF THIS SPECIFICATION. EACH PUBLICATION SHALL BE THE LATEST REVISION AND ADDENDUM IN EFFECT ON THE DATE. THIS SPECIFICATION IS ISSUED FOR CONSTRUCTION UNLESS OTHERWISE NOTED. EXCEPT AS MODIFIED BY THE REQUIREMENT SPECIFIED HEREIN OR THE DETAILS OF THE DRAWINGS, WORK INCLUDED IN THIS SPECIFICATION SHALL CONFORM TO THE APPLICABLE PROVISION OF THESE PUBLICATIONS.
- ANSI/IEEE (AMERICAN NATIONAL STANDARDS INSTITUTE)
- ASTM (AMERICAN SOCIETY FOR TESTING AND MATERIALS)
- ICE (INSULATED CABLE ENGINEERS ASSOCIATION)
- NEMA (NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION)
- NFPA (NATIONAL FIRE PROTECTION ASSOCIATION)
- OSHA (OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION)
- UL (UNDERWRITERS LABORATORIES, INC.)
- AT&T GROUNDING STANDARD ND–00071

1.4 SCOPE OF WORK:

A. WORK UNDER THIS SECTION SHALL CONSIST OF FURNISHING ALL LABOR, MATERIAL, AND ASSOCIATED SERVICES REQUIRED TO COMPLETE REQUIRED CONSTRUCTION AND BE OPERATIONAL.

B. ALL ELECTRICAL EQUIPMENT UNDER THIS CONTRACT SHALL BE PROPERLY TESTED, ADJUSTED, AND ALIGNED BY THE SUBCONTRACTOR

C. THE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXCAVATING, DRAINING, TRENCHES, BACKFILLING, AND REMOVAL OF EXCESS DIRT.

D. THE SUBCONTRACTOR SHALL FURNISH TO THE OWNER WITH CERTIFICATES OF A FINAL INSPECTION AND APPROVAL FROM THE INSPECTION AUTHORITIES HAVING JURISDICTION.

E. THE SUBCONTRACTOR SHALL PREPARE A COMPLETE SET OF AS–BUILT DRAWINGS, DOCUMENT ALL WIRING EQUIPMENT CONDITIONS, AND CHANGES WHILE COMPLETING THIS CONTRACT. THE AS–BUILT DRAWINGS SHALL BE SUBMITTED AT COMPLETION OF THE PROJECT.

PART 2 – PRODUCTS

2.1 GENERAL:

A. ALL MATERIALS AND EQUIPMENT SHALL BE UL LISTED, NEW, AND FREE FROM DEFECTS.

B. ALL ITEMS OF MATERIALS AND EQUIPMENT SHALL BE ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION AS SUITABLE FOR THE USE INTENDED.

C. ALL EQUIPMENT SHALL BEAR THE UNDERWRITERS LABORATORIES LABEL OF APPROVAL, AND SHALL CONFORM TO REQUIREMENT OF THE NATIONAL ELECTRICAL CODE.

D. ALL OVER–CURRENT DEVICES SHALL HAVE AN INTERRUPTING CURRENT RATING EQUAL TO OR GREATER THAN THE SHORT CIRCUIT CURRENT TO WHICH THEY ARE SUBJECTED, 10,000 AIC MINIMUM. VERIFY AVAILABLE SHORT CIRCUIT CURRENT DOES NOT EXCEED THE RATING OF ELECTRICAL EQUIPMENT.

2.2 MATERIALS AND EQUIPMENT:

A. CONDUIT:
- RIGID METAL CONDUIT (RMC) SHALL BE HOT–DIPPED GALVANIZED INSIDE AND OUTSIDE INCLUDING ENDS AND THREADS AND ENAMELED OR LACQUERED INSIDE IN ADDITION TO GALVANIZING.
- LIQUIDTIGHT FLEXIBLE METAL CONDUIT SHALL BE UL LISTED.
- CONDUIT CLAMPS, STRAPS AND SUPPORTS SHALL BE STEEL OR MALLEABLE IRON. ALL FITTINGS SHALL BE COMPRESSION AND CONCRETE TIGHT TYPE, GROUNDING BUSHINGS WITH INSULATED THROATS SHALL BE INSTALLED ON ALL CONDUIT TERMINATIONS.
- NONMETALLIC CONDUIT AND FITTINGS SHALL BE SCHEDULE 40 PVC. INSTALL USING SOLVENT–CEMENT–TYPE JOINTS AS RECOMMENDED BY THE MANUFACTURER.

B. CONDUCTORS AND CABLE:
- CONDUCTORS AND CABLE SHALL BE FLAME–RETARDANT, MOISTURE AND HEAT RESISTANT THERMOPLASTIC, SINGLE CONDUCTOR, COPPER, TYPE THHN/THWN–2, 600 VOLT, SIZE AS INDICATED, 12 AWG SHALL BE THE MINIMUM SIZE CONDUCTOR USED.
- 10 AWG AND SMALLER CONDUCTOR SHALL BE SOLID OR STRANDED AND 8 AWG AND LARGER CONDUCTORS SHALL BE STRANDED.
- SOLDERLESS, COMPRESSION–TYPE CONNECTORS SHALL BE USED FOR TERMINATION OF ALL STRANDED CONDUCTORS.
- STRAIN–RELIEF SUPPORTS GRIPS SHALL BE HUBBELL KELLEMS OR APPROVED EQUAL. CABLES SHALL BE SUPPORTED IN ACCORDANCE WITH THE NEC AND CABLE MANUFACTURER'S RECOMMENDATIONS.
- ALL CONDUCTORS SHALL BE TAGGED AT BOTH ENDS OF THE CONDUCTOR, AT ALL PULL BOXES, J–BOXES, EQUIPMENT AND CABINETS AND SHALL BE IDENTIFIED WITH APPROVED PLASTIC TAGS (ACTION CRAFT, BRADY, OR APPROVED EQUAL).

C. DISCONNECT SWITCHES:
- DISCONNECT SWITCHES SHALL BE HEAVY DUTY, DEAD–FRONT, QUICK–MAKE, QUICK–BREAK, EXTERNALLY OPERABLE, HANDLE LOCKABLE AND INTERLOCK WITH COVER IN CLOSED POSITION, RATING AS INDICATED, UL LABELED FURNISHED IN NEMA 3R ENCLOSURE, SQUARE–D OR APPROVED EQUAL.

D. CHEMICAL ELECTROLYTIC GROUNDING SYSTEM:
- INSTALL CHEMICAL GROUNDING AS REQUIRED. THE SYSTEM SHALL BE ELECTROLYTIC MAINTENANCE FREE ELECTRODE CONSISTING OF RODS WITH A MINIMUM 2 AWG CU EXOTHERMALLY WELDED PIGTAIL, PROTECTIVE BOXES, AND BACKFILL MATERIAL. MANUFACTURER SHALL BE LYNCOLE XIT GROUNDING ROD TYPES KG–(*)CS OR KGL–(*)CS (* LENGTH AS REQUIRED.
- GROUND ACCESS BOX SHALL BE A POLYPLASTIC BOX FOR NON–TRAFFIC APPLICATIONS, INCLUDING BOLT DOWN FLUSH COVER WITH "BREATHER" HOLES, XIT MODEL #XB–22. ALL DISCONNECT SWITCHES AND CONTROLLING DEVICES SHALL BE PROVIDED WITH ENGRAVED LAMICOID NAMEPLATES INDICATING EQUIPMENT CONTROLLED, BRANCH CIRCUITS ID NUMBERING, AND THE ELECTRICAL POWER SOURCE.
- BACKFILL MATERIAL SHALL BE LYNCONITE AND LYNCOLE GROUNDING GRAVEL.

E. SYSTEM GROUNDING:
- ALL GROUNDING COMPONENTS SHALL BE TINNED AND GROUNDING CONDUCTOR SHALL BE 2 AWG BARE, SOLID, TINNED, COPPER. ABOVE GRADE GROUNDING CONDUCTORS SHALL BE INSULATED WHERE NOTED.
- GROUNDING BUSES SHALL BE BARE, TINNED, ANNEALED COPPER BARS OF RECTANGULAR CROSS SECTION. STANDARD BUS BARS MGB, SHALL BE FURNISHED AND INSTALLED BY THE SUBCONTRACTOR. THEY SHALL NOT BE FABRICATED OR MODIFIED IN THE FIELD. ALL GROUNDING BUSES SHALL BE IDENTIFIED WITH MINIMUM 3/4" LETTERS BY WAY OF STENCILING OR DESIGNATION PLATE.
- CONNECTORS SHALL BE HIGH–CONDUCTIVITY, HEAVY DUTY, LISTED AND LABELED AS GROUNDING CONNECTORS FOR THE MATERIALS USED. USE TWO–HOLE COMPRESSION LUGS WITH HEAT SHRINK FOR MECHANICAL CONNECTIONS.
- EXOTHERMIC WELDED CONNECTIONS SHALL BE PROVIDED IN KIT FORM AND SELECTED FOR THE SPECIFIC TYPES, SIZES, AND COMBINATIONS OF CONDUCTORS AND OTHER ITEMS TO BE CONNECTED.
- GROUND RODS SHALL BE COPPER–CLAD STEEL WITH HIGH–STRENGTH STEEL CORE AND ELECTROLYTIC–GRADE COPPER OUTER SHEATH, MOLTEN WELDED TO CORE, 5/8"x10'–0". ALL GROUNDING RODS SHALL BE INSTALLED WITH INSPECTION SLEEVES.
- INSTALL AN EQUIPMENT GROUNDING CONDUCTOR IN ALL CONDUITS IN COMPLIANCE WITH THE SPECIFICATIONS AND NEC. THE EQUIPMENT GROUNDING CONDUCTORS SHALL BE BONDED AT ALL JUNCTION BOXES, PULLBOXES, DISCONNECT SWITCHES, STARTERS, AND EQUIPMENT CABINETS.

F. OTHER MATERIALS:
- THE SUBCONTRACTOR SHALL PROVIDE OTHER MATERIALS, THOUGH NOT SPECIFICALLY DESCRIBED, WHICH ARE REQUIRED FOR A COMPLETELY OPERATIONAL SYSTEM AND PROPER INSTALLATION OF THE WORK.
- PROVIDE PULL BOXES AND JUNCTION BOXES WHERE SHOWN OR REQUIRED BY NEC.

G. PANELS AND LOAD CENTERS:
- ALL PANEL DIRECTORIES SHALL BE TYPEWRITTEN.

PART 3 – EXECUTION

3.1 GENERAL:

A. ALL MATERIAL AND EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

B. EQUIPMENT SHALL BE TIGHTLY COVERED AND PROTECTED AGAINST DIRT OR WATER, AND AGAINST CHEMICAL OR MECHANICAL INJURY DURING INSTALLATION AND CONSTRUCTION PERIODS.

3.2 LABOR AND WORKMANSHIP:

A. ALL LABOR FOR THE INSTALLATION OF MATERIALS AND EQUIPMENT FURNISHED FOR THE ELECTRICAL SYSTEM SHALL BE INSTALLED BY EXPERIENCED WIRE MEN, IN A NEAT AND WORKMAN–LIKE MANNER.

B. ALL ELECTRICAL EQUIPMENT SHALL BE ADJUSTED, ALIGNED AND TESTED BY THE SUBCONTRACTOR AS REQUIRED TO PRODUCE THE INTENDED PERFORMANCE.

C. UPON COMPLETION OF WORK, THE SUBCONTRACTOR SHALL THOROUGHLY CLEAN ALL EXPOSED EQUIPMENT, REMOVE ALL LABELS AND ANY DEBRIS, CRATING OR CARTONS AND LEAVE THE INSTALLATION FINISHED AND READY FOR OPERATION.

3.3 COORDINATION:

A. THE SUBCONTRACTOR SHALL COORDINATE THE INSTALLATION OF ELECTRICAL ITEMS WITH THE OWNER–FURNISHED EQUIPMENT DELIVERY SCHEDULE TO PREVENT UNNECESSARY DELAYS IN THE TOTAL WORK.

3.4 INSTALLATION:

A. CONDUIT:
- ALL ELECTRICAL WIRING SHALL BE INSTALLED IN CONDUIT AS SPECIFIED. NO CONDUIT OR TUBING OF LESS THAN 3/4 INCH TRADE SIZE.
- PROVIDE RIGID PVC SCHEDULE 80 CONDUITS FOR ALL RISERS, RMC OTHERWISE NOTED. EMT MAY BE INSTALLED FOR EXTERIOR CONDUITS WHERE NOT SUBJECT TO PHYSICAL DAMAGE.
- THE INSTALLATION OF SCHEDULE 40 PVC AND RMC CONDUITS SHALL BE 24 INCHES MINIMUM DEPTH. ALL 90 DEGREE BENDS SHALL BE RMC. EXPANSION JOINTS ARE REQUIRED ON ALL CONDUIT RISERS.
- USE GALVANIZED FLEXIBLE STEEL CONDUIT WHERE DIRECT CONNECTION TO EQUIPMENT WITH MOVEMENT, VIBRATION, OR FOR EASE OF MAINTENANCE. USE LIQUID TIGHT, FLEXIBLE METAL CONDUIT FOR OUTDOOR APPLICATIONS. INSTALL GALVANIZED FLEXIBLE STEEL CONDUIT AT ALL POINTS OF CONNECTION TO EQUIPMENT MOUNTED ON SUPPORT TO ALLOW FOR EXPANSION AND CONTRACTION.
- A RUN OF CONDUIT BETWEEN BOXES OR EQUIPMENT SHALL NOT CONTAIN MORE THAN THE EQUIVALENT OF THREE QUARTER–BENDS. CONDUIT BEND SHALL BE MADE WITH THE UL LISTED BENDER OR FACTORY 90 DEGREE ELBOWS MAY BE USED.
- FIELD FABRICATED CONDUITS SHALL BE CUT SQUARE WITH A CONDUIT CUTTING TOOL AND REAMED TO PROVIDE A SMOOTH INSIDE SURFACE.
- PROVIDE INSULATED GROUNDING BUSHING FOR ALL CONDUITS.
- SUBCONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL CONDUITS DURING CONSTRUCTION. TEMPORARY OPENINGS IN THE CONDUIT SYSTEM SHALL BE PLUGGED OR CAPPED TO PREVENT ENTRANCE OF MOISTURE OR FOREIGN MATTER. SUBCONTRACTOR SHALL REPLACE ANY CONDUITS CONTAINING FOREIGN MATERIALS THAT CANNOT BE REMOVED.
- ALL CONDUITS SHALL BE SWABBED CLEAN BY PULLING AN APPROPRIATE SIZE MANDREL THROUGH THE CONDUIT BEFORE INSTALLATION OF CONDUCTORS OR CABLES. CONDUIT SHALL BE FREE OF DIRT AND DEBRIS.
- INSTALL PULL STRINGS IN CLEAN EMPTY CONDUITS. IDENTIFY PULL STRINGS AT EACH END.
- INSTALL 2" HIGH-LY VISIBLE AND DETECTABLE TAPE 12" ABOVE ALL UNDERGROUND CONDUITS AND CONDUCTORS.
- CONDUITS SHALL BE INSTALLED IN SUCH A MANNER AS TO INSURE AGAINST COLLECTION OF TRAPPED CONDENSATION.
- PROVIDE CORE DRILLING AS NECESSARY FOR PENETRATIONS TO ALLOW FOR RACEWAYS AND CABLES TO BE ROUTED THROUGH THE BUILDING. DO NOT PENETRATE STRUCTURAL MEMBERS. SLEEVES AND/OR PENETRATIONS IN FIRE RATED CONSTRUCTION SHALL BE EFFECTIVELY SEALED WITH FIRE RATED MATERIAL WHICH SHALL MAINTAIN THE FIRE RATING OF THE WALL OR STRUCTURE. FIRE STOPS AT FLOOR PENETRATIONS SHALL PREVENT PASSAGE OF WATER, SMOKE, FIRE, AND FUMES. ALL MATERIAL SHALL BE UL APPROVED FOR THIS PURPOSE.

B. CONDUCTORS AND CABLE:
- ALL POWER WIRING SHALL BE COLOR CODED AS FOLLOWS:

DESCRIPTION	208/240/120 VOLT SYSTEMS
PHASE A	BLACK
PHASE B	RED
PHASE C	BLUE
NEUTRAL	WHITE
GROUNDING	GREEN

- SPLICES SHALL BE MADE ONLY AT OUTLETS, JUNCTION BOXES, OR ACCESSIBLE RACEWAY CONDULETS APPROVED FOR THIS PURPOSE.
- PULLING LUBRICANTS SHALL BE UL APPROVED. SUBCONTRACTOR SHALL USE NYLON OR HEMP ROPE FOR PULLING CONDUCTOR OR CABLES INTO THE CONDUIT.
- CABLES SHALL BE NEATLY TRAINED, WITHOUT INTERLACING, AND BE OF SUFFICIENT LENGTH IN ALL BOXES & EQUIPMENT TO PERMIT MAKING A NEAT ARRANGEMENT. CABLES SHALL BE SECURED IN A MANNER TO AVOID TENSION ON CONDUCTORS OR TERMINALS. CONDUCTORS SHALL BE PROTECTED FROM MECHANICAL INJURY AND MOISTURE. SHARP BENDS OVER CONDUIT BUSHINGS ARE PROHIBITED. DAMAGED CABLES SHALL BE REMOVED AND REPLACED AT THE SUBCONTRACTOR'S EXPENSE.

C. DISCONNECT SWITCHES:
- INSTALL DISCONNECT SWITCHES LEVEL AND PLUMB. CONNECT TO WIRING SYSTEM AND GROUNDING SYSTEM AS INDICATED.

D. GROUNDING:
- ALL METALLIC PARTS OF ELECTRICAL EQUIPMENT WHICH DO NOT CARRY CURRENT SHALL BE GROUNDED IN ACCORDANCE WITH THE REQUIREMENTS OF THE BUILDING MANUFACTURER, AT&T GROUNDING STANDARD ND–00071, ND–00139, AND THE NATIONAL ELECTRICAL CODE.
- PROVIDE ELECTRICAL GROUNDING AND BONDING SYSTEM INDICATED WITH ASSEMBLY OF MATERIALS, INCLUDING GROUNDING ELECTRODES, BONDING JUMPERS AND ADDITIONAL ACCESSORIES AS REQUIRED FOR A COMPLETE INSTALLATION.
- ALL GROUNDING CONDUCTORS SHALL PROVIDE A STRAIGHT DOWNWARD PATH TO GROUND WITH GRADUAL BEND AS REQUIRED. GROUNDING CONDUCTORS SHALL NOT BE LOOPED OR SHARPLY BENT. ROUTE GROUNDING CONNECTIONS AND CONDUCTORS TO GROUND IN THE SHORTEST AND STRAIGHTEST PATHS POSSIBLE TO MINIMIZE TRANSIENT VOLTAGE RISES.
- BUILDINGS AND/OR NEW TOWERS GREATER THAN 75 FEET IN HEIGHT AND WHERE THE MAIN GROUNDING CONDUCTORS ARE REQUIRED TO BE ROUTED TO GRADE, THE SUBCONTRACTOR SHALL ROUTE TWO GROUNDING CONDUCTORS FROM THE ROOFTOP, TOWERS, AND WATER TOWERS GROUNDING RING, TO THE EXISTING GROUNDING SYSTEM. THE GROUNDING CONDUCTORS SHALL NOT BE SMALLER THAN 2/0 AWG COPPER. ROOFTOP GROUNDING RING SHALL BE BONDED TO THE EXISTING GROUNDING SYSTEM, THE BUILDING STEEL COLUMNS, LIGHTNING PROTECTION SYSTEM, AND BUILDING MAIN WATER LINE (FERROUS OR NONFERROUS METAL PIPING ONLY).
- TIGHTEN GROUNDING AND BONDING CONNECTORS, INCLUDING SCREWS AND BOLTS, IN ACCORDANCE WITH MANUFACTURER'S PUBLISHED TORQUE TIGHTENING VALUES FOR CONNECTORS AND BOLTS. WHERE MANUFACTURER'S TORQUING REQUIREMENTS ARE NOT AVAILABLE, TIGHTEN CONNECTIONS TO COMPLY WITH TIGHTENING TORQUE VALUES SPECIFIED IN UL TO ASSURE PERMANENT AND EFFECTIVE GROUNDING.
- SUBCONTRACTOR SHALL VERIFY THE LOCATIONS OF GROUNDING TIE–IN–POINTS TO THE EXISTING GROUNDING SYSTEM. ALL UNDERGROUND GROUNDING CONNECTIONS SHALL BE MADE BY THE EXOTHERMIC WELD PROCESS AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
- ALL GROUNDING CONNECTIONS SHALL BE INSPECTED FOR TIGHTNESS. EXOTHERMIC WELDED CONNECTIONS SHALL BE APPROVED BY THE INSPECTOR HAVING JURISDICTION BEFORE BEING PERMANENTLY CONCEALED.
- APPLY CORROSION–RESISTANCE FINISH TO FIELD CONNECTIONS AND PLACES WHERE FACTORY APPLIED PROTECTIVE COATINGS HAVE BEEN DESTROYED. USE KOPR–SHIELD ANTI–OXIDATION COMPOUND ON ALL COMPRESSION GROUND CONNECTIONS.
- A SEPARATE, CONTINUOUS, INSULATED EQUIPMENT GROUNDING CONDUCTOR SHALL BE INSTALLED IN ALL FEEDER AND BRANCH CIRCUITS.
- BOND ALL INSULATED GROUNDING BUSHINGS WIT

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1 SITE PLAN
SCALE: 1:40

N

1" = 40'-0"
40' 0 40' 80' 160'

PREPARED BY:
nexius
ENABLING SMARTER CONNECTIONS
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FRISCO, TX 75034
(972) 581-9888

CLIENT:
AT&T Mobility
1801 VALLEY VIEW LANE
FARMERS BRANCH, TX 75234

FOR CONSTRUCTION

STATE OF TEXAS
JACK T. PHIPPS
103850
LICENSED
PROFESSIONAL ENGINEER
Not Signed Until:
DATE SIGNED: 04/20/22
NEXIUS SOLUTIONS, INC. TEXAS FIRM NO. F-17972
FIRM REGISTRATION RENEWAL 07/31/22
PE LICENSE RENEWAL 06/30/22

SUBMITTALS

REV	DATE	DESCRIPTION	BY
A	07/22/21	FOR REVIEW	NC
0	04/20/22	FINAL CD	CH

SITE INFORMATION:
TOWER OWNER:
CITY OF OVILLA
TOWER NUMBER:
N/A
SITE NAME:
COCKRELL HILL / OVILLA WT
SITE NUMBER:
DX1693
FA LOCATION CODE:
10042519
PACE ID:
MRNTX068990
ADDRESS:
105 SOUTH COCKRELL HILL ROAD
OVILLA, TX 75154

DRAWN BY:	DATE:
NC	07/22/21
CHECKED BY:	DATE:
TB	04/20/22

NEXIUS PTN:
3012A0XGMN

SHEET TITLE:
OVERALL SITE PLAN

SHEET NUMBER:
C-1

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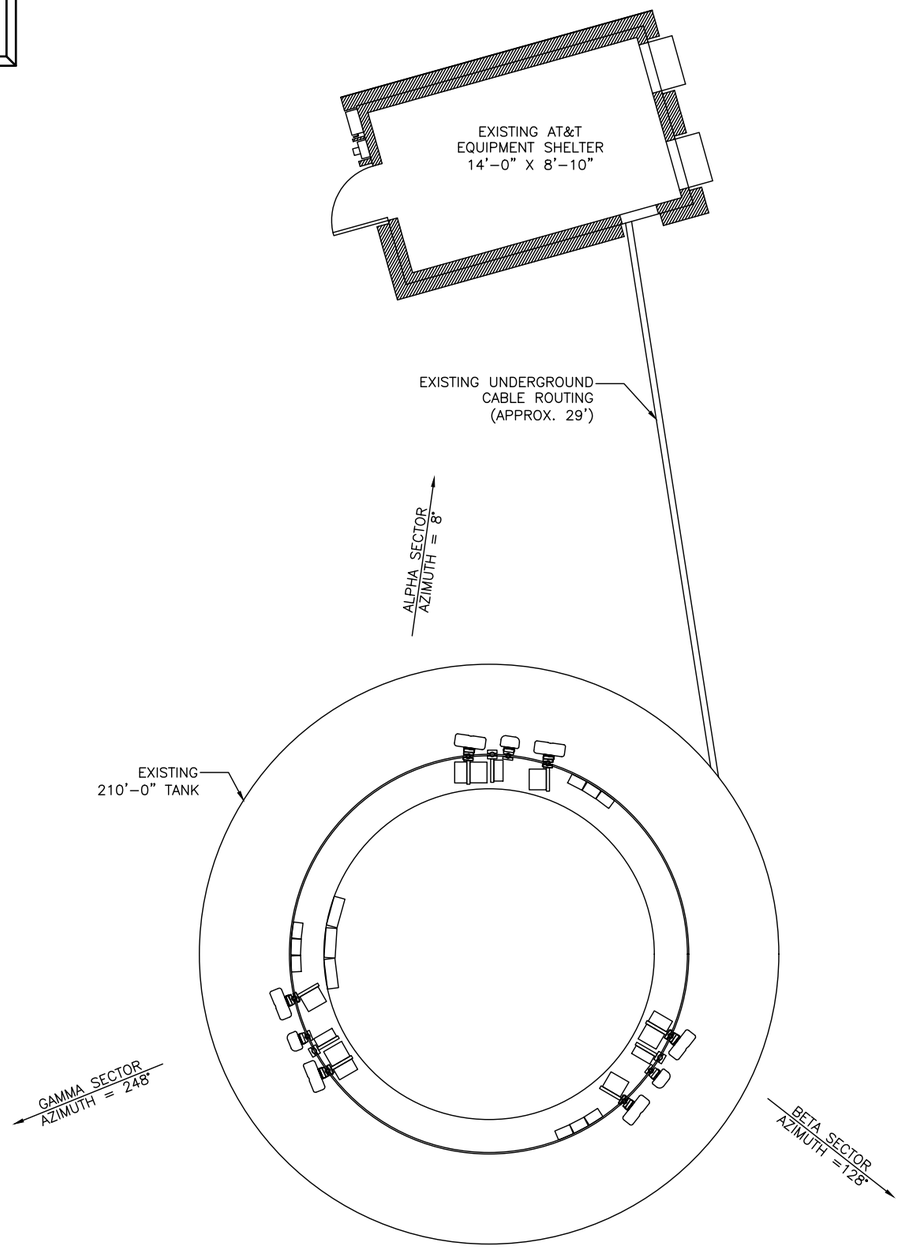
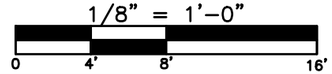


2 COMPOUND PLAN
SCALE: 1/8" = 1'-0"



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(972) 581-9888

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FARMERS BRANCH, TX 75234

FOR CONSTRUCTION

STATE OF TEXAS
JACK T. PHIPPS
103850
LICENSED
PROFESSIONAL ENGINEER

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DATE SIGNED: 04/20/22
NEXIUS SOLUTIONS, INC. TEXAS FIRM NO. F-17972
FIRM REGISTRATION RENEWAL 07/31/22
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CITY OF OVILLA
TOWER NUMBER:
N/A
SITE NAME:
COCKRELL HILL / OVILLA WT
SITE NUMBER:
DX1693
FA LOCATION CODE:
10042519
PACE ID:
MRNTX068990
ADDRESS:
105 SOUTH COCKRELL HILL ROAD
OVILLA, TX 75154

DRAWN BY:	DATE:
NC	07/22/21
CHECKED BY:	DATE:
TB	04/20/22

NEXIUS PTN:
3012A0XGMN

SHEET TITLE:
EQUIPMENT LAYOUT PLAN

SHEET NUMBER:
C-2

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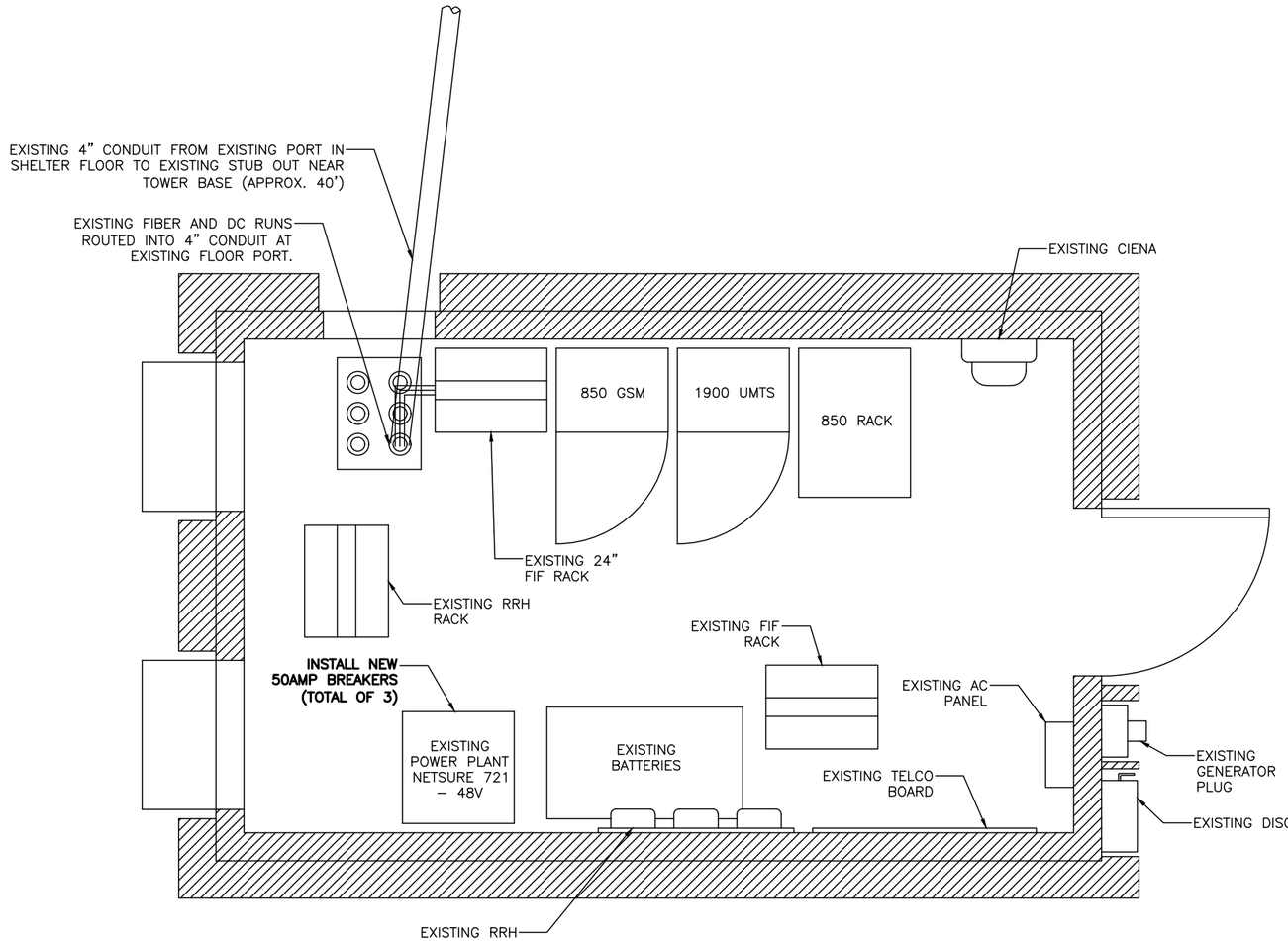

2 SHELTER PLAN
SCALE: 3/8" = 1'–0"

3/8" = 1'–0"
0 1'–4" 2'–8" 5'–4"

PREPARED BY:
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(972) 581-9888

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Digitally Signed by:
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DATE SIGNED: 04/20/22

NEXIUS SOLUTIONS, INC. TEXAS FIRM NO. F–17972
FIRM REGISTRATION RENEWAL 07/31/22
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SITE INFORMATION:
TOWER OWNER: CITY OF OVILLA
TOWER NUMBER: N/A
SITE NAME: COCKRELL HILL / OVILLA WT
SITE NUMBER: DX1693
FA LOCATION CODE: 10042519
PACE ID: MRNTX068990
ADDRESS: 105 SOUTH COCKRELL HILL ROAD OVILLA, TX 75154

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SHEET TITLE: EQUIPMENT LAYOUT PLAN

SHEET NUMBER: C-3

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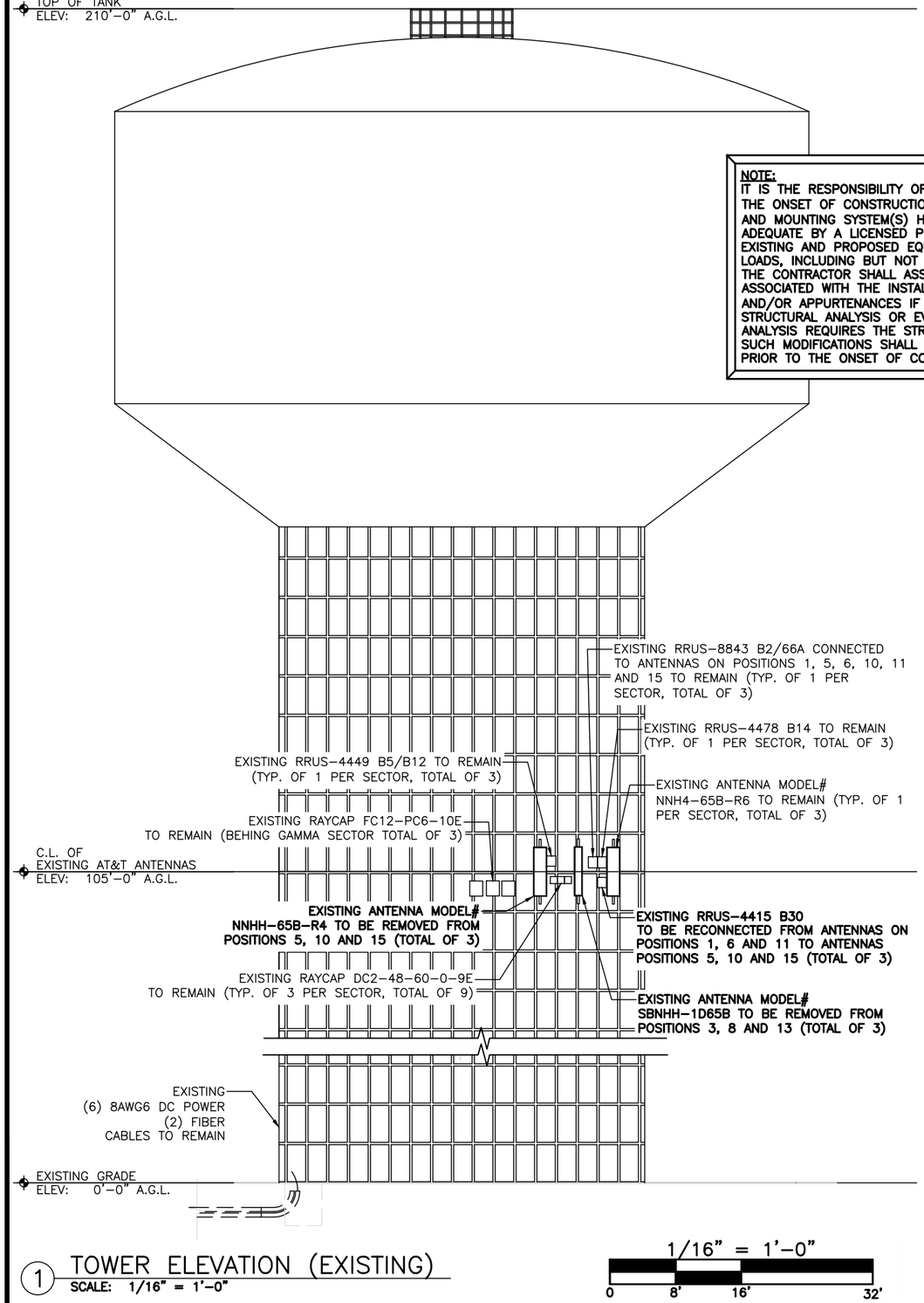
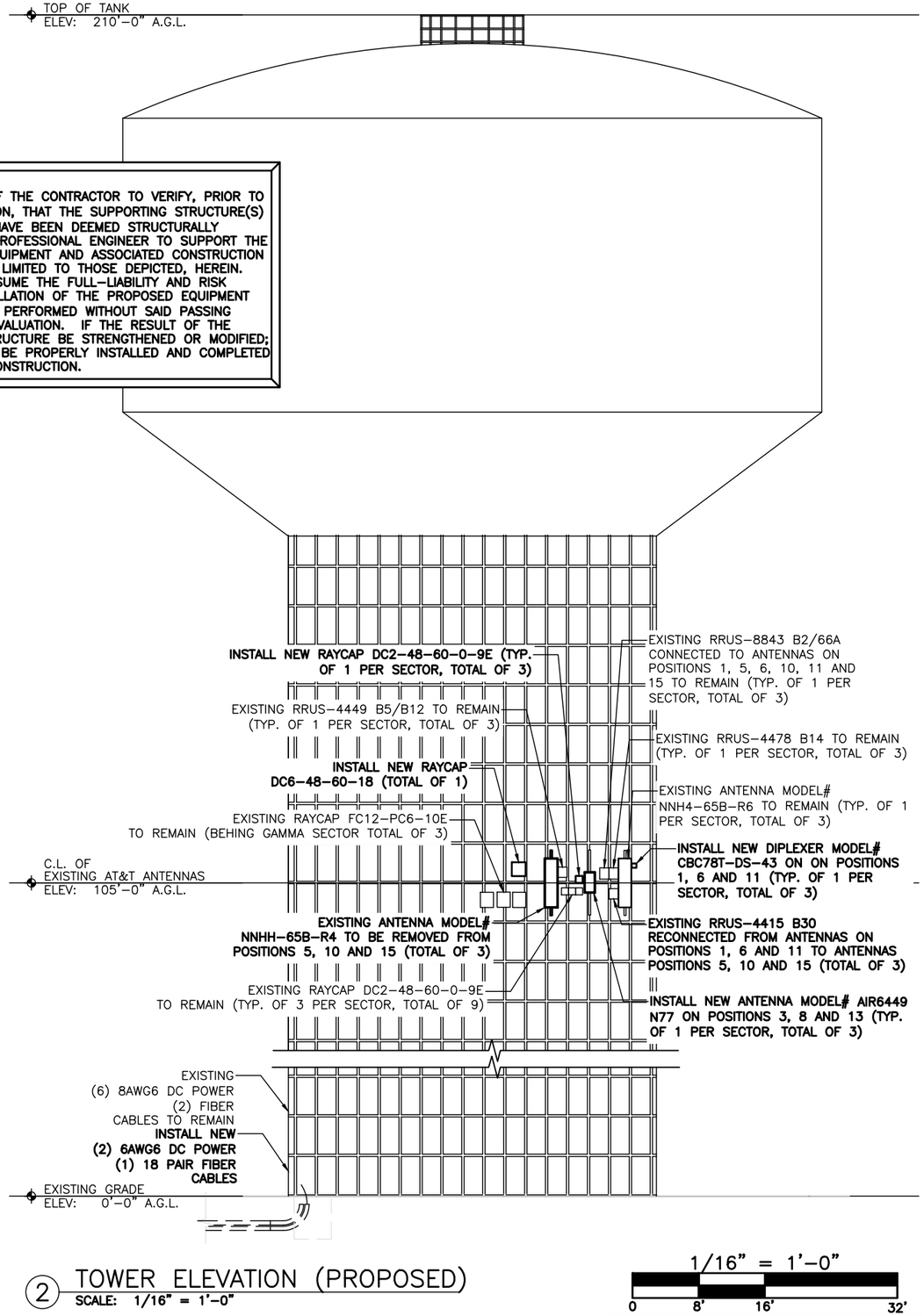


1 TOWER ELEVATION (EXISTING)
SCALE: 1/16" = 1'-0"

1/16" = 1'-0"
0 8' 16' 32'

NOTE:
IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY, PRIOR TO THE ONSET OF CONSTRUCTION, THAT THE SUPPORTING STRUCTURE(S) AND MOUNTING SYSTEM(S) HAVE BEEN DEEMED STRUCTURALLY ADEQUATE BY A LICENSED PROFESSIONAL ENGINEER TO SUPPORT THE EXISTING AND PROPOSED EQUIPMENT AND ASSOCIATED CONSTRUCTION LOADS, INCLUDING BUT NOT LIMITED TO THOSE DEPICTED, HEREIN. THE CONTRACTOR SHALL ASSUME THE FULL-LIABILITY AND RISK ASSOCIATED WITH THE INSTALLATION OF THE PROPOSED EQUIPMENT AND/OR APPURTENANCES IF PERFORMED WITHOUT SAID PASSING STRUCTURAL ANALYSIS OR EVALUATION. IF THE RESULT OF THE ANALYSIS REQUIRES THE STRUCTURE BE STRENGTHENED OR MODIFIED; SUCH MODIFICATIONS SHALL BE PROPERLY INSTALLED AND COMPLETED PRIOR TO THE ONSET OF CONSTRUCTION.



2 TOWER ELEVATION (PROPOSED)
SCALE: 1/16" = 1'-0"

1/16" = 1'-0"
0 8' 16' 32'

PREPARED BY:
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(972) 581-9888

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FARMERS BRANCH, TX 75234

FOR CONSTRUCTION

STATE OF TEXAS
JACK T. PHIPPS
103850
LICENSED
PROFESSIONAL ENGINEER
Not Signed Until:
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PACE ID: MRNTX068990
ADDRESS: 105 SOUTH COCKRELL HILL ROAD OVILLA, TX 75154

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SHEET TITLE: TOWER ELEVATIONS

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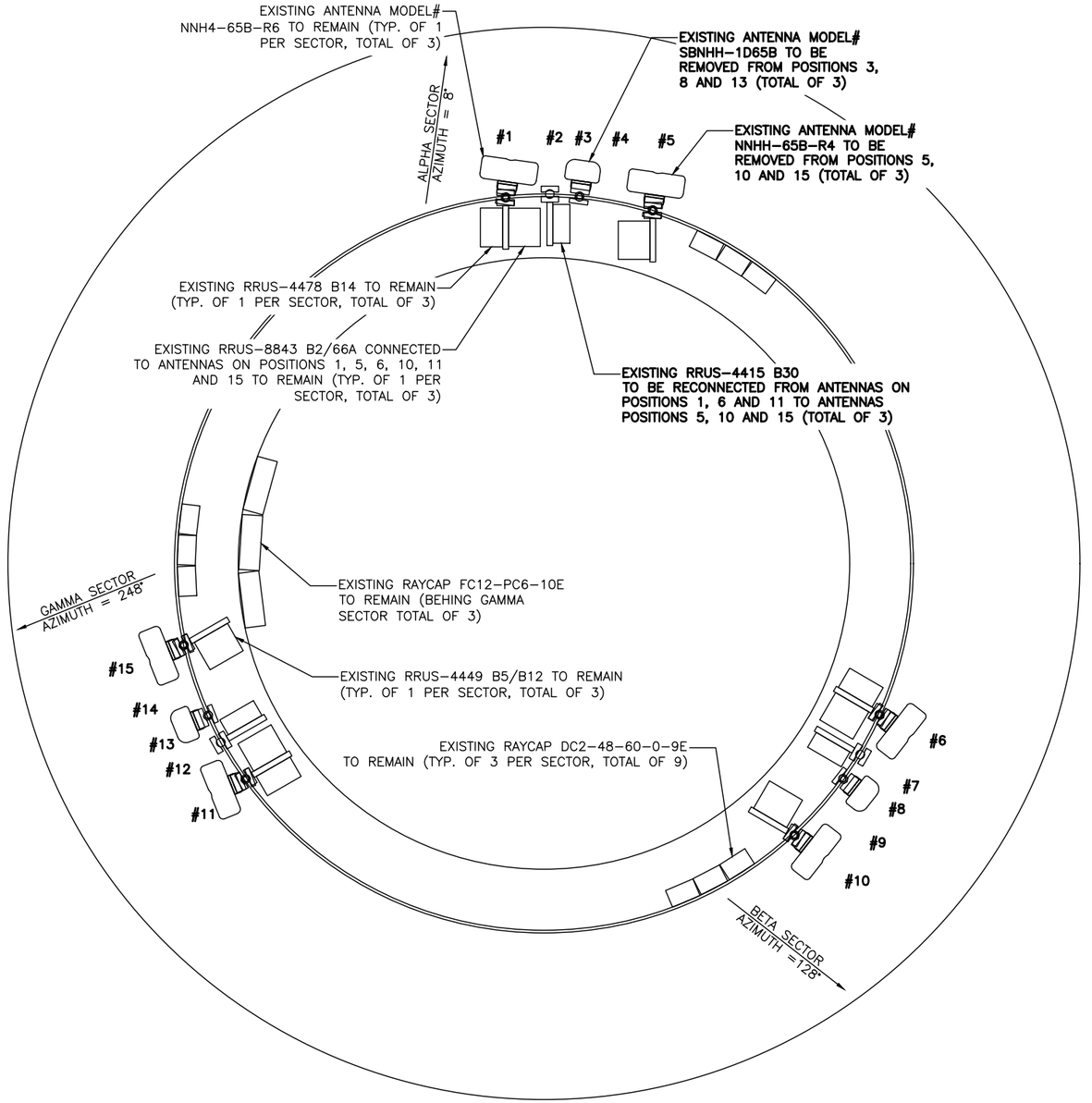

1 ANTENNA PLAN (EXISTING)
SCALE: 1/4" = 1'-0"

N

1/4" = 1'-0"
0 2' 4' 8'

PREPARED BY:

nexius
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SHEET TITLE: ENLARGED ANTENNA PLANS

SHEET NUMBER: C-5

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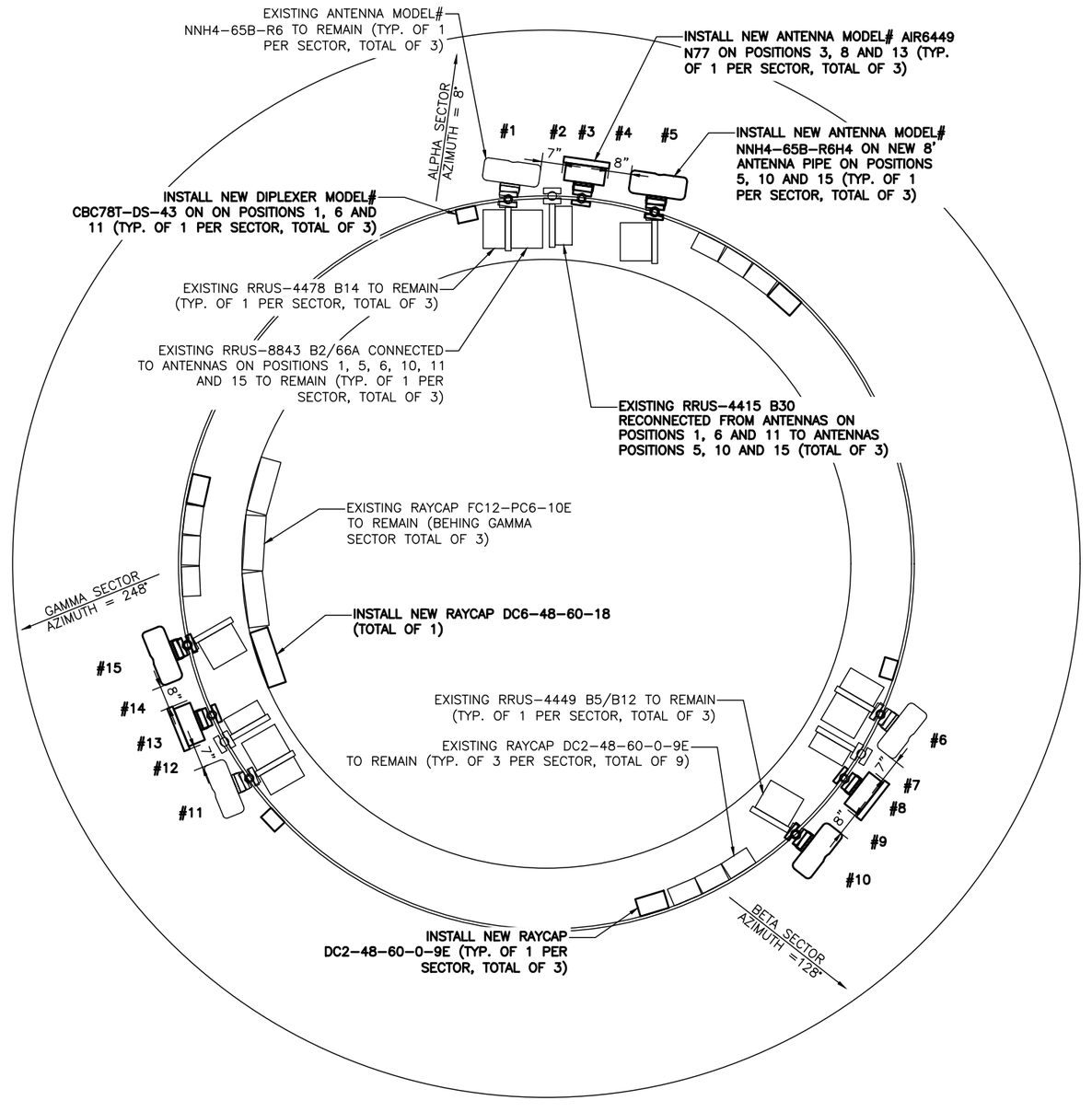

1 ANTENNA PLAN (PROPOSED)
SCALE: 1/4" = 1'-0"

N

1/4" = 1'-0"
0 2' 4' 8'

PREPARED BY:

nexius
ENABLING SMARTER CONNECTIONS

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FOR CONSTRUCTION

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DocuSigned by: JTPhipps
6F2F23F5C0B41F...
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NEXIUS PTN: 3012A0XGMN

SHEET TITLE: ENLARGED ANTENNA PLANS

SHEET NUMBER: C-6

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EXISTING											
SECTOR	ANTENNA TECHNOLOGY	ANTENNA POSITION	MODEL	RAD CENTER (AGL)	AZIMUTH	COAX CABLES	OTHER CABLES	TMA'S	TOWER DIPLEXERS	RRU'S	OTHER DEVICES
ALPHA	LTE-700 / AWS / WCS	#1	NNH4-65B-R6	105'-0"	8°	N/A	(6) 8AWG6 DC POWER (2) FIBER	N/A	N/A	(1) 4478 B14 (1) 8843 B2/B66A (1) 4415 B30	(9) DC2-48-60-0-9E (3) FC12-PC6-10E
	N/A	#2	N/A					N/A	N/A	N/A	
	UMTS-850	#3	SBNHH-1D65B					N/A	N/A	N/A	
	N/A	#4	N/A					N/A	N/A	N/A	
	LTE-700 / 850 / 1900	#5	NNHH-65B-R4					N/A	N/A	(1) 4449 B5/B12	
BETA	LTE-700 / AWS / WCS	#6	NNH4-65B-R6	105'-0"	128°			N/A	N/A	(1) 4478 B14 (1) 8843 B2/B66A (1) 4415 B30	
	N/A	#7	N/A					N/A	N/A	N/A	
	UMTS-850	#8	SBNHH-1D65B					N/A	N/A	N/A	
	N/A	#9	N/A					N/A	N/A	N/A	
	LTE-700 / 850 / 1900	#10	NNHH-65B-R4					N/A	N/A	(1) 4449 B5/B12	
GAMMA	LTE-700 / AWS / WCS	#11	NNH4-65B-R6	105'-0"	248°			N/A	N/A	(1) 4478 B14 (1) 8843 B2/B66A (1) 4415 B30	
	N/A	#12	N/A					N/A	N/A	N/A	
	UMTS-850	#13	SBNHH-1D65B					N/A	N/A	N/A	
	N/A	#14	N/A					N/A	N/A	N/A	
	LTE-700 / 850 / 1900	#15	NNHH-65B-R4					N/A	N/A	(1) 4449 B5/B12	

PROPOSED											
SECTOR	ANTENNA TECHNOLOGY	ANTENNA POSITION	MODEL	RAD CENTER (AGL)	AZIMUTH	COAX CABLES	OTHER CABLES	TMA'S	TOWER DIPLEXERS	RRU'S	OTHER DEVICES
ALPHA	LTE-700 / AWS / UMTS-850	#1	NNH4-65B-R6	105'-0"	8°	N/A	(6) 8AWG6 DC POWER (2) 6AWG6 DC POWER (2) FIBER (1) 18 PAIR FIBER	N/A	(1) CBC78T-DS-43	(1) 4478 B14 (1) 8843 B2/B66A	(12) DC2-48-60-0-9E (3) FC12-PC6-10E (1) DC6-48-60-18
	N/A	#2	N/A					N/A	N/A	N/A	
	5G 3.5GHZ	#3	AIR6449 N77					N/A	N/A	N/A	
	N/A	#4	N/A					N/A	N/A	N/A	
	LTE-700 / 850 1900 / WCS	#5	NNH4-65B-R6					N/A	N/A	(1) 4449 B5/B12 (1) 4415 B30	
BETA	LTE-700 / AWS / UMTS-850	#6	NNH4-65B-R6	105'-0"	128°			N/A	(1) CBC78T-DS-43	(1) 4478 B14 (1) 8843 B2/B66A	
	N/A	#7	N/A					N/A	N/A	N/A	
	5G 3.5GHZ	#8	AIR6449 N77					N/A	N/A	N/A	
	N/A	#9	N/A					N/A	N/A	N/A	
	LTE-700 / 850 1900 / WCS	#10	NNH4-65B-R6					N/A	N/A	(1) 4449 B5/B12 (1) 4415 B30	
GAMMA	LTE-700 / AWS / UMTS-850	#11	NNH4-65B-R6	105'-0"	248°			N/A	(1) CBC78T-DS-43	(1) 4478 B14 (1) 8843 B2/B66A	
	N/A	#12	N/A					N/A	N/A	N/A	
	5G 3.5GHZ	#13	AIR6449 N77					N/A	N/A	N/A	
	N/A	#14	N/A					N/A	N/A	N/A	
	LTE-700 / 850 1900 / WCS	#15	NNH4-65B-R6					N/A	N/A	(1) 4449 B5/B12 (1) 4415 B30	

PREPARED BY:
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FRISCO, TX 75034
(972) 581-9888

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AT&T Mobility
1801 VALLEY VIEW LANE
FARMERS BRANCH, TX 75234

FOR CONSTRUCTION

STATE OF TEXAS
JACK T. PHIPPS
103850
LICENSED
PROFESSIONAL ENGINEER
Not Signed Until Final
DocuSigned by:
6F2F23F5C0B41F...
DATE SIGNED: 04/20/22
NEXIUS SOLUTIONS, INC. TEXAS FIRM NO. F-17972
FIRM REGISTRATION RENEWAL 07/31/22
PE LICENSE RENEWAL 06/30/22

SUBMITTALS

REV	DATE	DESCRIPTION	BY
A	07/22/21	FOR REVIEW	NC
0	04/20/22	FINAL CD	CH

SITE INFORMATION:
TOWER OWNER: CITY OF OVILLA
TOWER NUMBER: N/A
SITE NAME: COCKRELL HILL / OVILLA WT
SITE NUMBER: DX1693
FA LOCATION CODE: 10042519
PACE ID: MRNTX068990
ADDRESS: 105 SOUTH COCKRELL HILL ROAD
OVILLA, TX 75154

DRAWN BY:	DATE:
NC	07/22/21
CHECKED BY:	DATE:
TB	04/20/22

NEXIUS PTN: 3012A0XGMN

SHEET TITLE: RF SCHEDULE

SHEET NUMBER: C-7

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COMMSCOPE NNH4-65B-R6	
DIMENSIONS (HxWxD)	71.96"x19.61"x7.76"
WEIGHT	83.11 lbs.

1 COMMSCOPE NNH4-65B-R6 DETAIL
N.T.S.

ERICSSON AIR6449N77	
DIMENSIONS (HxWxD)	30.4"x15.9"x8.1"
WEIGHT	81.6 lbs.

2 ERICSSON - AIR6449N77
N.T.S.

TWIN DIPLEXER- CBC78T-DS-43	
DIMENSIONS (HxWxD)	6.37"x6.92"x4.76"
WEIGHT	10.36 lbs.

3 TWIN DIPLEXER- CBC78T-DS-43
N.T.S.

RAYCAP DC6-48-60-18E	
DIMENSIONS (HxWxD)	20.06"x20.00"x6.37"
WEIGHT	18.5 lbs.

4 RAYCAP - DC6-48-60-18E
N.T.S.

RAYCAP DC2-48-60-0-9E	
DIMENSIONS (HxWxD)	10.25"x10.25"x6.20"
WEIGHT	16 lbs.

5 RAYCAP DC2-48-60-0-9E DETAIL
N.T.S.

PREPARED BY:
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FRISCO, TX 75034
(972) 581-9888

CLIENT:
AT&T Mobility
1801 VALLEY VIEW LANE
FARMERS BRANCH, TX 75234

FOR CONSTRUCTION

STATE OF TEXAS
JACK T. PHIPPS
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OVILLA, TX 75154

DRAWN BY:	DATE:
NC	07/22/21
CHECKED BY: TB	DATE: 04/20/22

NEXIUS PTN: 3012A0XGMN

SHEET TITLE: EQUIPMENT DETAILS

SHEET NUMBER: C-8

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RESOLUTION NO. 2022-06

A RESOLUTION AUTHORIZING CONTINUED PARTICIPATION WITH THE ATMOS CITIES STEERING COMMITTEE; AND AUTHORIZING THE PAYMENT OF FIVE CENTS PER CAPITA TO THE ATMOS CITIES STEERING COMMITTEE TO FUND REGULATORY AND RELATED ACTIVITIES RELATED TO ATMOS ENERGY CORPORATION

WHEREAS, the City of _____ is a regulatory authority under the Gas Utility Regulatory Act (GURA) and has exclusive original jurisdiction over the rates and services of Atmos Energy Corporation, Mid-Tex Division (Atmos) within the municipal boundaries of the city; and

WHEREAS, the Atmos Cities Steering Committee (ACSC) has historically intervened in Atmos rate proceedings and gas utility related rulemakings to protect the interests of municipalities and gas customers residing within municipal boundaries; and

WHEREAS, ACSC is participating in Railroad Commission dockets and projects, as well as court proceedings and legislative activities, affecting gas utility rates; and

WHEREAS, the City is a member of ACSC; and

WHEREAS, in order for ACSC to continue its participation in these activities which affects the provision of gas utility service and the rates to be charged, it must assess its members for such costs; NOW THEREFORE,

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF _____, TEXAS:

I.

That the City is authorized to continue its membership with the Atmos Cities Steering Committee to protect the interests of the City of _____ and protect the interests of the customers of Atmos Energy Corporation, Mid-Tex Division residing and conducting business within the City limits.

II.

The City is further authorized to pay its 2022 assessment to the ACSC in the amount of five cents ($0.05) per capita.

III.

A copy of this Resolution and approved assessment fee payable to "*Atmos Cities Steering Committee*" shall be sent to:

Brandi Stigler
Atmos Cities Steering Committee
c/o Arlington City Attorney's Office, Mail Stop 63-0300
101 S. Mesquite St., Suite 300
Arlington, Texas 76010

PRESENTED AND PASSED on this the _____ day of _____, 2022, by a vote of _____ ayes and _____ nays at a regular meeting of the City Council of the City of _____, Texas.

_____
Signature
Mayor

ATTEST:

_____
Signature
City Secretary

City of Arlington, c/o Atmos Cities Steering Committee
Attn: Brandi Stigler
101 S. Mesquite St., Ste 300
MS #63-0300
Arlington, TX 76010

Invoice

Date	Invoice #
1/4/2022	22-112

Bill To
City of Ovilla

Item	Population	Per Capita	Amount
2022 Membership Assessment	4,288	0.05	214.40

Please make check payable to: Atmos Cities Steering Committee and mail to Atmos Cities Steering Committee, Attn: Brandi Stigler, Arlington City Attorney's Office, 101 S. Mesquite St., Ste 300, MS #63-0300, Arlington, Texas 76010

Total $214.40

City of Ovilla

Ovilla City Council

AGENDA ITEM REPORT

Item 1

Meeting Date: June 13, 2022 Department: Fire Department

☒Discussion ☒Action Budgeted Expense: ☐YES ☐NO ☒N/A

Submitted By: Staff

Reviewed By: ☒ City Manager ☒ City Secretary ☐City Attorney

☐ Finance Director ☒ Other: Fire Chief

AGENDA ITEM:
ITEM 1. DISCUSSION – Review of 2022 Ellis County Hazard Mitigation Plan with Ellis County Emergency Management Specialist Brian Davis.
Attachments:
1. 2022 Ellis County Hazard Mitigation Plan
Discussion / Justification:
Participating jurisdictions in the 2022 update of the Ellis County Hazard Mitigation Plan are reviewing the document to ensure it meets our expectations and FEMA's planning requirements. This multi-jurisdictional plan is the first requirement for a jurisdiction to be eligible to receive any FEMA-mitigation funding and is meant to be a guideline for the community's resiliency strategy. This process is being led by the North Central Texas Council of Governments Emergency Preparedness Department.
Recommendation / Staff Comments:
N/A
Sample Motion(s):
Discussion Only

2022

Ellis County Hazard Mitigation Plan

North Central Texas Council of Governments

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Executive Summary

We cannot control when or where a tornado or other natural hazard will strike, but we can save lives and reduce property damage by understanding the risks and taking action to address those risks. In the process, we can increase resilience in our community, environment, and economy. Participating jurisdictions in the Ellis County Hazard Mitigation Plan (HMP) are dedicated to the protection of local citizens and their property, and to the improvement of the quality of life for all residents.

Mitigation has been defined as "sustained action to reduce or eliminate long-term risk to human life and property from natural, human-caused, and technological hazards."[1] It is fundamentally a loss-prevention function characterized by planned, long-term alteration of the built environment to ensure resilience against natural and human-caused hazards. This loss-prevention function has been illustrated by the Multi-Hazard Mitigation Council study of the Federal Emergency Management Agency (FEMA) mitigation projects, which shows that for every dollar invested in mitigation, six dollars of disaster losses were avoided.[2]

Mitigation should form the foundation of every emergency management agency's plans and procedures. Emergency management agencies should adopt mitigation practices to reduce, minimize, or eliminate hazards in their community. The Ellis County Hazard Mitigation Plan identifies the hazards faced by participating jurisdictions, vulnerabilities to these hazards, and mitigation strategies for the future. The plan fulfills the requirements of the Federal Disaster Mitigation Act as administered by the Texas Division of Emergency Management (TDEM) and the Federal Emergency Management Agency (FEMA).

This plan is not legally binding but instead is a tool for the jurisdiction to use to become more resilient to natural hazards. Mitigation actions will be implemented as capabilities and funding allow.

[1] State of Texas Mitigation Handbook, page 1-1.

[2] Natural Hazard Mitigation Saves: 2017 Interim Report, page 1.

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Common Acronyms

EMC- Emergency Management Coordinator

EOC- Emergency Operations Center

FEMA- Federal Emergency Management Agency

HMP- Hazard Mitigation Plan

HMPT- Hazard Mitigation Planning Team

LPT- Local Planning Team

N/A- Not Applicable

NCEI- National Centers for Environmental Information

NCTCOG- North Central Texas Council of Governments

NFIP- National Flood Insurance Program

NFPA- National Fire Protection Association

NWS- National Weather Service

OWS- Outdoor Warning Siren

RLP- Repetitive Loss Properties

SRLP- Severe Repetitive Loss Properties

TDEM- Texas Division of Emergency Management

TFS- Texas A&M Forest Service

TPW- Texas Parks & Wildlife Department

TxDOT- Texas Department of Transportation

UTA- University of Texas at Arlington

WUI- Wildland-Urban Interface

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Chapter 1: Introduction

1.1 Overview

The Ellis County Hazard Mitigation Plan (HMP) was previously referred to as the Hazard Mitigation Action Plan and fulfills the requirements of the Disaster Mitigation Act of 2000 (DMA 2000), which is administered by the Federal Emergency Management Agency (FEMA). The Disaster Mitigation Act provides federal assistance to state and local emergency management entities to mitigate the effects of disasters. The HMP also encourages cooperation among various organizations across political subdivisions.

This HMP is an update of the 2015 FEMA-approved HMP. With each update, new challenges are identified, new strategies proposed, and when incorporated, the updated plan grows in complexity, but not necessarily in utility.

This HMP is the result of two years of study, data collection, analysis, and community feedback. Representatives and citizens from participating jurisdictions attended public meetings to discuss the hazards their communities face and the vulnerabilities those hazards present.

All participants involved in this plan understand the benefits of developing and implementing mitigation plans and strategies. Elected officials, public safety organizations, planners, and many others have worked together to develop and implement this HMP, displaying that they have the vision to implement mitigation practices and therefore reduce the loss of life and property in their communities.

There is also understanding that the participating jurisdictions in this HMP are not liable to completing the actions their identified in their mitigation strategy. The actions are suggestions, and the jurisdictions will strive to implement the actions as fundings, staffing, and time allows.

Information was collected up to 2021.

Changes Since Last Plan

Question	Answer
➢ Have priorities changed since the last mitigation plan? If so, how?	No
➢ Are there any changes in development? * If so, please describe.	There has been a major increase in development as the population increases.
➢ How has your level of vulnerability changed since the last mitigation plan, if at all?	Increase in population, businesses, and commuters

**Changes in development* means recent development (for example, construction completed since the last plan was approved), potential development (for example, development planned or under consideration by the jurisdiction), or conditions that may affect the risks and vulnerabilities of the jurisdictions (for example, climate variability, declining populations or projected increases in population, or foreclosures). Not all development will affect a jurisdiction's vulnerability.

1.2 Authority

The Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act), as amended by the Disaster Mitigation Act of 2000, provides the legal basis for state, tribal, and local governments to undertake risk-based approaches to reducing natural hazard risks through mitigation planning. Specifically, the Stafford Act requires state, tribal, and local governments to develop and adopt FEMA-approved hazard mitigation plans as a condition for receiving certain types of non-emergency disaster assistance.

The Stafford Act authorizes the following grant programs:

- Hazard Mitigation Grant Program (HMGP), which helps communities implement hazard mitigation measures following a Presidential major disaster declaration. This program also funds development and update of hazard mitigation plans.
- Pre-Disaster Mitigation Grant Program (PDM), which awards planning and project grants to assist states, territories, federally-recognized tribes, and local communities in implementing sustained pre-disaster natural hazard mitigation programs. Such efforts may include development or update of hazard mitigation plans.
- Public Assistance Grant Program (PA), which provides assistance to state, tribal, and local governments, and certain types of private nonprofit organizations so that communities can quickly respond to and recover from major disasters or emergencies declared by the President.
- Fire Management Assistance Grant Program (FMAG), which provides assistance to state, tribal, and local governments for the mitigation, management, and control of fires on publicly or privately-owned forests or grasslands that threaten such destruction as would constitute a major disaster.

Title 44, Chapter 1, Part 201 (44 CFR Part 201) of the Code of Federal Regulations (CFR) contains requirements and procedures to implement the hazard mitigation planning provisions of the Stafford Act.

The purpose of the Stafford Act, as amended by the Disaster Mitigation Act of 2000, is “to reduce the loss of life and property, human suffering, economic disruption, and disaster assistance costs resulting from natural disasters.” Chapter 322 of the act specifically addresses mitigation planning and requires state and local governments to prepare multi-hazard mitigation plans as a precondition for receiving FEMA mitigation grants.

This Ellis County Hazard Mitigation Plan was developed by the Ellis County Hazard Mitigation Planning Team (HMPT) under the direction and guidance of the North Central Texas Council of Governments (NCTCOG) Emergency Preparedness Department. The plan represents collective efforts of citizens, elected and appointed government officials, business leaders, non-profit organizations, and other stakeholders. This plan, and updating the plan, and timely future updates of this plan, will allow Ellis County and participating jurisdictions to comply with the Disaster Mitigation Act of 2000 and its implementation regulations, 44 CFR Part 201.6, thus resulting in eligibility to apply for federal aid for technical assistance and post-disaster hazard mitigation project funding. The update will also prioritize potential risks and vulnerabilities in an effort to minimize the effects of disasters in the participating communities.

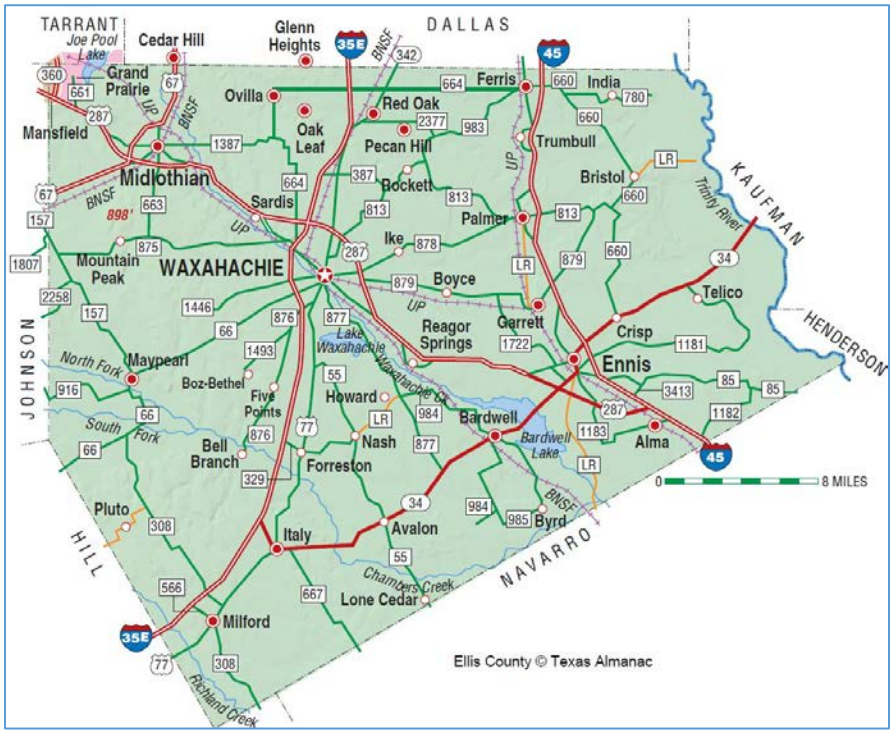
1.3 Scope

This plan identifies natural hazards that could threaten life and property in the communities. The scope of this plan includes both short and long-term mitigation strategies, implementation, strategies, and possible sources of project funding to mitigate identified hazards.

The planning area for this plan is for Ellis County, Texas (marked in red on the Texas map) and includes the following jurisdictions:

- City of Alma
- City of Bardwell
- City of Ennis
- City of Ferris
- City of Garrett
- City of Italy
- City of Maypearl
- City of Midlothian
- City of Milford
- City of Oak Leaf
- City of Ovilla
- City of Palmer
- City of Red Oak
- City of Waxahachie

All jurisdictions were participants in the 2015 plan. The following map reflects a more detailed look of the county.



Source: Texas State Historical Association

1.4 Purpose

This HMP is intended to enhance and complement federal and state recommendations for the mitigation of natural hazards in the following ways:

- Substantially reduce the risk of loss of life, injuries, and hardship from the destruction of natural and technological disasters.
- Improve public awareness of the need for individual preparedness and building safer, more disaster resilient communities.
- Develop strategies for long-term community sustainability during community disasters.
- Develop governmental and business continuity plans that will continue essential private sector and governmental operations during disasters.

Ellis County is susceptible to a number of different natural hazards that have potential to cause property loss, loss of life, economic hardship, and threats to public health and safety. Occurrence of natural disasters cannot be prevented; however, their impact on people and property can be lessened through hazard mitigation measures.

Mitigation planning is imperative to lessen the impact of disasters in Ellis County. This plan is an excellent method by which to organize Ellis County's mitigation strategies. The implementation of the plan and its components is vital to preparing a community that is resilient to the effects of a disaster. The implementation of this HMP can reduce loss of life and property and allow the participating communities to operate with minimal disruption of vital services to citizens. This HMP provides a risk assessment of the hazards Ellis County is exposed to and puts forth several mitigation goals and objectives that are based on that risk assessment.

1.5 Mitigation Goals

The goals of the participants' mitigation strategy are to protect life and reduce bodily harm from natural hazards, and to lessen the impacts of natural hazards on property and the community through hazard mitigation. These goals are the basis of this plan and summarize what the Ellis County Hazard Mitigation Planning Team will accomplish by implementing this plan.

1.6 Plan Organization

This Ellis County HMP is organized into five chapters which satisfy the mitigation requirements in 44 CFR Part 201.6, with four appendices providing the required supporting documentation.

Chapter 1: Introduction

Describes the purpose of the Ellis County Hazard Mitigation Plan and introduces the mitigation planning process.

Chapter 2: Planning Process

Describes the planning process and organization for each participating jurisdiction, satisfying requirements 201.6(c)(1), 201.6(b)(2), 201.6(b)(1), 201.6(b)(3), 201.6(c)(4)(i), 201.6(c)(4)(ii), and 201.6(c)(4)(iii).

Chapter 3: Hazard Identification and Risk Assessment

Describes the hazards identified, location of hazards, previous events, and jurisdictional profiles, satisfying requirements 201.6(c)(2)(i) and 201.6(c)(2)(ii).

Chapter 4: Mitigation Strategy

Reflects on the mitigation actions previously identified and examines the ability of Ellis County and participating jurisdictions to implement and manage a comprehensive mitigation strategy, satisfying requirements 201.6(c)(1), 201.6(c)(3)(i), 201.6(c)(3)(ii), 201.6(c)(3)(iii), 201.6(c)(3)(iv), 201.6(c)(4)(ii), and 201.6(b)(3).

Chapter 5: Conclusion

Appendix A: Maps & Tables

Appendix B: Capabilities Assessment

Appendix C: NCTCOG Programs

Appendix D: Public Documents

Appendix E: Local Planning Teams

1.7 Ellis County Hazard Mitigation Strategy Maintenance Process

The Ellis County Hazard Mitigation Planning Team, consisting of a representative from each participating jurisdiction, will continue to collaborate as a planning group in coordination with Ellis County Office of Emergency Management. Primary contact will be through emails and conference calls, with strategy meetings to occur at least annually. The points of contact for the county and jurisdictions will jointly lead the plan maintenance and update process by:

- Assisting jurisdictional Local Planning Teams in updating their individual contributions to the county Hazard Mitigation Plan.
- Assisting interested Local Planning Teams that would like to begin their mitigation planning process.
- Facilitating Ellis County HMP meetings and disseminating information.
- Collaborating on data collections and record keeping.
- Requesting updates and status reports on planning mechanisms.
- Requesting updates and status reports on mitigation action projects.
- Assisting jurisdictions with mitigation grants.
- Assisting jurisdictions with implementing mitigation goals and action projects.
- Providing mitigation training opportunities.
- Maintaining documentation of local adoption resolutions for the Ellis County Hazard Mitigation Plan.

1.8 Ellis County Hazard Mitigation Plan Adoption

Once the Ellis County Hazard Mitigation Plan has received FEMA "Approved Pending Local Adoption" each participating jurisdiction will take the Ellis County HMP to their Commissioners Court or city councils for final public comment and local adoption. A copy of the resolution will be inserted into the Ellis County HMP and held on file at the North Central Texas Council of Governments.

Chapter 2: Planning Process

Requirement	
§201.6(b)	An open public involvement process is essential to the development of an effective plan. In order to develop a more comprehensive approach to reducing the effects of natural disasters, the planning process shall include:
§201.6(b)(1)	An opportunity for the public to comment on the plan during the drafting stage and prior to plan approval;
§201.6(b)(2)	An opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia and other private and non-profit interests to be involved in the planning process; and
§201.6(b)(3)	Review and incorporation, if appropriate, of existing plans, studies, reports, and technical information.
§201.6(c)(1)	[The plan shall document] the planning process used to develop the plan, including how it was prepared, who was involved in the process, and how the public was involved.
§201.6(c)(4)(i)	[The plan maintenance process shall include a] section describing the method and schedule of monitoring, evaluating, and updating the mitigation plan within a five-year cycle
§201.6(c)(4)(iii)	[The plan maintenance process shall include a] discussion on how the community will continue public participation in the plan maintenance process.

2.1 Collaborative Process

A comprehensive county approach was taken in developing the plan. An open public involvement process was established for the public, neighboring communities, regional agencies, businesses, academia, etc. to provide opportunities for everyone to become involved in the planning process and to make their views known. The meetings were advertised with notices in public places and city websites and social media pages.

Each participating jurisdiction gathered their information using a Local Planning Team (LTP), comprised of local staff that could contribute to development of this mitigation plan. The leaders of each of these LPT's comprised the Ellis County Hazard Mitigation Planning Team (HMPT) and other relevant agencies. The HMPT met regularly with the North Central Texas Council of Governments in order to submit individual assessments and data into one multi-jurisdictional mitigation plan.

Stakeholders were invited to participate, via email, by participating jurisdictions.

The North Central Texas Council of Governments was responsible for plan facilitation and coordination with Ellis County HMPT members and stakeholders throughout the process.

2.1.1 Points of Contacts

The following are members of the Ellis County Hazard Mitigation Planning Team (HMPT). These HMPT members were also the point(s) of contact for their respective jurisdiction during this plan update.

Ellis County HMPT Members

Jurisdiction	Job Title	Role in the HMPT
Alma	City Secretary	Jurisdictional information and LPT Lead
Bardwell	Emergency Management Coordinator	Jurisdictional information and LPT Lead
Ennis	City Secretary	Jurisdictional information and LPT Lead
Ferris	City Secretary	Jurisdictional information and LPT Lead
Garrett	City Secretary	Jurisdictional information and LPT Lead
Italy	City Secretary	Jurisdictional information and LPT Lead
Maypearl	City Secretary	Jurisdictional information and HMPT Lead
Midlothian	Emergency Management Coordinator	Jurisdictional information and LPT Lead
Milford	Emergency Management Coordinator	Jurisdictional information and LPT Lead
Oak Leaf	City Secretary	Jurisdictional information and LPT Lead
Ovilla	Emergency Management Coordinator	Jurisdictional information and LPT Lead
Palmer	City Secretary	Jurisdictional information and LPT Lead
Red Oak	Fire Marshall	Jurisdictional information and LPT Lead
Waxahachie	Emergency Management Coordinator	Jurisdictional information and LPT Lead
Ellis County Unincorporated	Emergency Management Specialist	Jurisdictional information and LPT Lead

Each HMPT member led a Local Planning Team (LPT) in their respective jurisdictions. The LPT members are listed in Appendix E.

2.1.2 Stakeholders

Stakeholders were invited to participate in the planning process, via email, and included local and regional agencies involved in hazard mitigation activities, agencies that have the authority to regulate development, and neighboring communities.

Stakeholders

Organization Represented	Position
Kaufman County	Emergency Management Coordinator

Organization Represented	Position
Navarro County	Emergency Management Coordinator
Dallas County	Emergency Management Coordinator
Tarrant County	Emergency Management Coordinator
U.S. Army Corps of Engineers	Director – Civil Works
Texas A&M Forest Service	WUI Specialist
Independent School Districts of Participating Jurisdictions	Superintendents
Texas Department of Transportation	Emergency Operations
Utility Providers	Emergency Operations
Local Emergency Planning Committee	Emergency Management Coordinator
Texas Division of Emergency Management	District Coordinator, Field Response
Texas Division of Emergency Management	Hazard Mitigation Planner
State Fire Marshal's Office	District 6, Inspector
National Weather Service – Fort Worth	Warning & Coordination Meteorologist
NCTCOG's Emergency Preparedness Planning Council	Chair
NCTCOG's Regional Emergency Preparedness Advisory Council	Chair
Local City Councils	Local elected officials
Brazos River Authority	Project Manager

2.1.3 Public Involvement

During the development of this hazard mitigation plan, COVID-19 safety protocols were in affect and public meetings were discouraged. Therefore, the team decided to distribute a mitigation survey to collect feedback from the public. The link to the survey was share via social media platforms and jurisdiction's official websites.

The supporting documentation, advertisements, and details of this survey, along with a summary of the responses, are documented within Appendix D of this HMP. The responses from the survey were used by the Local Planning Teams to influence decision making on their mitigation actions.

Public participation will remain an active component of this plan, even after adoption, to ensure citizens understand what the community is doing on their behalf, and to provide a chance for input on community vulnerabilities and mitigation activities that will inform the plan's content. Public involvement is also an opportunity to educate the public about hazards and risks in the community, types of activities to mitigate those risks, and how these activities impact them. Involvement will be sought in a multitude of ways, including but not limited to, periodic presentations on the plan's progress to elected officials, schools, or other community groups; annual questionnaires or surveys; public meetings; and postings on social media and interactive websites.

2.2 Existing Data and Plans

Existing hazard mitigation information and other relevant hazard mitigation plans were reviewed during the development of this plan. Data was gathered through numerous sources, including Geographic Information Systems (GIS). The intent of reviewing existing material was to identify existing data and information, shared objectives, and past and ongoing activities that can help inform the mitigation plan.

It also helps identify the existing capabilities and planning mechanisms to implement the mitigation strategy. The table below outlines the sources used to collect data for the plan:

Data Source	Data Incorporation	Purpose
County appraisal data, census data, city land use data	Population and demographics	Population counts, parcel data, and land use data
National Centers for Environmental Information (NCEI)	Hazard occurrences	Previous event occurrences and mapping for hazards
Texas A&M Forest Service/Texas Wildfire Risk Assessment Summary Report	Wildfire threat and urban interface	Mapping and wildfire vulnerability
U.S. Army Corps of Engineers National Dam Inventory	Dam information	Dam list
Federal Emergency Management Agency (FEMA) Digital Flood Insurance Rate Map (DFIRM) Flood Zones, National Flood Insurance Program (NFIP) studies	Flood zone maps and NFIP information	GIS mapping of flood zones and NFIP data
October 2017 NFIP Flood Insurance Manual Change Package	NFIP Information	Repetitive Loss Properties and Community Rating System (CRS) ratings
State of Texas Hazard Mitigation Plan, 2013 and 2018 editions	Hazards and mitigation strategy	Support the goals of the state
Previous Ellis County HMP	All Chapters	This is an update of that plan
Hazard Mitigation: Integrating Best Practices into Planning	Planning process	Use proven techniques in developing the HMP
Environmental Protection Agency (EPA) Superfund National Priority List	Protected sites	Risk assessment- identify critical areas
National Register of Historic Places	Historic districts	Risk assessment
Texas Parks & Wildlife List of Rare Species	Endangered or protected species	Risk assessment
Texas Water Development Board	Lake information	Vulnerabilities
U.S. Department of Agriculture	Soil type	Expansive Soils description

2.3 Timeframe & Planning Meetings

The planning process for the update of the Ellis County Hazard Mitigation Plan was approximately two years. The table below is the timeline followed. During the planning process, the Hazard Mitigation Planning Team met to discuss relevant information from the jurisdiction and to review objectives and progress of the plan. The goals of these meetings were to gather information and to provide guidance for the jurisdictions throughout the planning stages. The meetings were hosted by the North Central Texas Council of Governments for the Hazard Mitigation Planning Team or individually within the Local Planning Teams.

Activity	Time Period
Kickoff meeting	July 2021

Activity	Time Period
Created planning teams	July 2021
Capabilities assessment	September 2021
Hazard identification & risk assessment	September 2021
Public outreach	February 2022
Mitigation strategy (goals & action items)	February 2022
Review HMP draft	March 2022
Update plan as needed	April 2022
Final draft review	May 2022
Send HMP to TDEM/make revisions as needed	May 2022
Send to FEMA/ make revisions as needed	To be determined
Adoption & signatures	Once “Approved Pending Adoption” designated received.

Activities were either led or monitored by the North Central Texas Council of Governments (NCTCOG) and public outreach strategies were conducted by the participating jurisdictions.

2.4 Plan Implementation

The Ellis County Hazard Mitigation Planning process was overseen by the North Central Texas Council of Governments (NCTCOG). The plan was submitted to the Texas Division of Emergency Management (TDEM) and the Federal Emergency Management Agency (FEMA) for approval. It is expected that all participating jurisdictions will formally adopt the plan by resolution once the “Approved Pending Adoption” designation by FEMA is received, in accordance with the Disaster Mitigation Act of 2000.

Each jurisdiction participating in this plan is responsible for implementing specific mitigation actions as prescribed in the mitigation strategies. In each mitigation strategy, every proposed action is assigned to a specific local department or agency in order to assign responsibility and accountability and increase the likelihood of subsequent implementation. This approach enables individual jurisdictions to update their unique mitigation strategy as needed without altering the broader focus of the county-wide plan. The separate adoption of locally-specific actions also ensures that each jurisdiction is not held responsible for monitoring and implementing the actions of other jurisdictions involved in the planning process.

The Ellis County Emergency Management Coordinator or their designee is the lead position for plan implementation and will work with the Ellis County Hazard Mitigation Planning Team (HMPT) to ensure mitigation actions are implemented into jurisdictional planning procedures. Each participating jurisdiction will implement the plan and their individual mitigation actions in the timeframe appropriate for their planning processes. As necessary, the HMPT will seek outside funding sources to implement mitigation projects in both the pre-disaster and post-disaster environments. When applicable, potential funding sources have been identified for proposed actions listed in the mitigation strategies.

2.5 Multijurisdictional Strategy and Considerations

The Ellis County Office of Emergency Management will lead activities for mitigation planning county-wide. Although The Ellis County Office of Emergency Management will be responsible for maintaining this plan, including the documentation of in-progress and completed action items, each participating jurisdiction is

responsible for reporting hazards, their costs, and a status report on mitigation actions to the North Central Texas Council of Governments (NCTCOG) for recording in the plan.

Each jurisdiction is responsible for completing mitigation activities by providing the capabilities and authorities needed to carry out activities. Participating jurisdictions completed an analysis of their current legal, staffing, and fiscal capabilities as they relate to hazard mitigation planning. Jurisdictional capabilities and authorities identified to ensure successful mitigation planning are located within the jurisdictional annexes.

2.6 Plan Evaluation

All members of the Ellis County Hazard Mitigation Planning Team (HMPT) will be responsible for ensuring that the Ellis County Hazard Mitigation Plan (HMP) is evaluated as required. Specifically, the Ellis County Emergency Management Coordinator, or their designee, will convene the HMPT and ensure an evaluation is conducted in a thorough manner. This evaluation will include analysis of current mitigation projects, evaluation of success, reevaluation of future mitigation needs, and prioritization based upon changes in needs and/or capabilities of Ellis County.

The HMPT will reconvene annually to ensure that projects are on track and to reevaluate the mitigation goals, objectives, and action items. The mitigation plan shall be viewed as an evolving, dynamic document.

2.7 Plan Update

The Disaster Mitigation Act of 2000 requires that the Ellis County Hazard Mitigation Plan be updated at least once every five years. During this process, all chapters of the plan will be updated with current information, and analyses and new and/or modified mitigation actions will be developed. The revised plan will be submitted for state and federal review and approval and presented for approval to the Ellis County Commissioners Court and the respective councils of incorporated cities included in this HMP. Likewise, each participating jurisdiction will undergo the same process for reviewing, revising, and updating their respective plans and submitting them for approval by state, federal, and the local jurisdiction's governing body. The plan will be updated every five years in accordance with federal requirements. Ellis County's Emergency Management Coordinator or their designee will be responsible for ensuring that this requirement is met. Ellis County and the Hazard Mitigation Planning Team will review the HMP annually for needed updates. The HMPT will be involved in this process to ensure all jurisdictions provide input into the planning process. The public will be invited to participate in this process through public hearings.

2.8 Plan Maintenance

It is the intention of all documented plan participants to formally adopt the Ellis County Hazard Mitigation Plan after each maintenance revision. Once all participants adopt the changes, the revised HMP and proof of adoption will be submitted by the North Central Texas Council of Governments (NCTCOG) to the Texas Division of Emergency Management and the Federal Emergency Management Agency. The plan will be revised and maintained as required under the guidance of the HMP and formally adopted by Ellis County and jurisdiction elected officials after each revision.

Following formal adoption by the Ellis County's Commissioners Court and formal adoption of the plan by the governing council of each participating jurisdiction, the actions outlined in the HMP will be implemented by the county and participating jurisdictions as described throughout this document.

The Ellis County Emergency Management Coordinator (EMC), or their designee, is responsible for ensuring the HMP and its components are monitored, evaluated, and reviewed semiannually by the responsible personnel. The EMC will use email to request the monitoring activities noted below be implemented and changes documented. The progress of action items will be tracked electronically as "in progress," "deferred," or "completed."

These and other changes affecting the plan will be documented within the Ellis County HMP file and identified as updates. Updates will be shared between participants by email or in a meeting (if deemed appropriate) twice a year, and included in annual evaluations and reviews, and the five-year update of the plan.

Members of the Hazard Mitigation Planning Team (HMPT) are responsible for ensuring their mitigation strategy is monitored, evaluated, and reviewed on an annual basis. This will be accomplished by the Ellis County EMC calling an annual meeting of the HMPT, whose members will assist in plan review, evaluation, updates, and monitoring. This meeting will be open to the public and public notices will encourage community participation.

During this annual meeting, the members will provide information and updates on the implementation status of each action item included in the plan. As part of the evaluation, the HMPT will assess whether goals address current and expected conditions, whether the nature and/or magnitude of the risks have changed, if current resources are appropriate for implementing the HMP, whether outcomes have occurred as expected, and if agencies and other partners participated as originally proposed. These activities will take place according to the following timetable:

Responsible Personnel	Activity	Update Schedule
Local Planning Team Point of Contact	Monitoring Plan: track implementation and action items, changes to risk assessment, changes to Local Planning Team (LPT), changes to capabilities, and plan integrations.	Twice a year
	Evaluate Plan: assess effectiveness by evaluating completed actions, implementation processes, responsible personnel, and lessons learned.	Annually
	Update Plan	Once every five years

At least once every five years, or more frequently if such a need is determined by the participants, the HMP will undergo a major update with NCTCOG. During this process, all chapters of the plan will be updated with current information and analyses and new and/or modified mitigation action plans will be developed. The revised plan will be submitted for review and approval to the Texas Division of Emergency Management and the Federal Emergency Management Agency and presented to the governing council for approval and adoption. The plan will be updated every five years in accordance with regulations.

2.9 Incorporation into Existing Planning Mechanisms

The primary means for integrating mitigation strategies into other local planning mechanisms will be through the revision, update, and implementation of each participating jurisdiction's individual plans that require specific planning and administrative tasks (for example, plan amendments, ordinance revisions, and capital improvement projects).

The members of the HMPT will remain charged with ensuring that the goals and strategies of new and updated local planning documents for their jurisdictions are consistent with the goals and actions of the Ellis County HMP and will not contribute to increased hazard vulnerability in Ellis County or its participating jurisdictions.

During the planning process for new and updated local planning documents, such as a comprehensive plan, capital improvement plan, or emergency management plan, Ellis County and its participating jurisdictions will provide a copy of the Ellis County HMP to the appropriate parties and recommend that all goals and strategies of new and updated local planning documents are consistent with and support the goals of the Ellis County HMP and will not contribute to increased hazards in the affected jurisdiction(s).

Chapter 3: Hazard Identification and Risk Assessment

Requirement	
§201.6(c)(2)(i)	[The risk assessment shall include a] description of the type, location and extent of all natural hazards that can affect the jurisdiction. The plan shall include information on previous occurrences of hazard events and on the probability of future hazard events.
§201.6(c)(2)(ii)	[The risk assessment shall include a] description of the jurisdiction's vulnerability to the hazards described in paragraph (c)(2)(i) of this section. This description shall include an overall summary of each hazard and its impact on the community. All plans approved after October 1, 2008 must also address NFIP [National Flood Insurance Program] insured structures that have been repetitively damaged by floods. The plan should describe vulnerability in terms of:
§201.6(c)(2)(ii)(A)	The types and numbers of existing and future buildings, infrastructure, and critical facilities located in the identified hazard areas;
§201.6(c)(2)(ii)(B)	An estimate of the potential dollar losses to vulnerable structures identified in this section and a description of the methodology used to prepare the estimate.
§201.6(c)(2)(ii)(C)	Providing a general description of land uses and development trends within the community so that mitigation options can be considered in future land use decisions.
§201.6(c)(2)(iii)	For multi-jurisdictional plans, the risk assessment section must assess each jurisdiction's risks where they vary from the risks facing the entire planning area.

3.1 Major Disaster Declarations

The following table lists the major disaster declarations that have occurred in Texas since the approval of the previous HMP, beginning with most recent. Rows in red signify that the county qualified for Individual Assistance for the disaster, and those in orange would signify that the county qualified for Public Assistance for the disaster. Yellow would mean that the county qualified for both.

Disaster	Event	Incident Period	Declared
DR-4586	Texas Severe Winter Storms	February 11-21, 2021	February 19, 2021
DR-4572	Texas Hurricane Laura	August 23-27, 2020	December 9, 2020
DR-4485	Texas Covid-19 Pandemic	January 20, 2020 and continuing	March 25, 2020
DR-4466	Texas Tropical Storm Imeda	September 17-23, 2019	October 04, 2019
DR-4454	Texas Severe Storms and Flooding	June 24-25, 2019	July 17, 2019
DR-4416	Texas Severe Storms and Flooding	September 10-November 02, 2018	February 25, 2019

Disaster	Event	Incident Period	Declared
DR-4377	Texas Severe Storms and Flooding	June 19- July 13,2018	July 06, 2018
DR-4332	Texas Hurricane Harvey	August 23- September 15, 2017	August 25, 2017
DR-4272	Texas Severe Storms and Flooding	May 22- June 24, 2016	June 11, 2016
DR-4269	Texas Severe Storms and Flooding	April 17-30, 2016	April 25, 2016
DR-4266	Texas Severe Storms, Tornadoes, and Flooding	March 07-29, 2016	March 19, 2016
DR-4255	Texas Severe Winter Storms, Tornadoes, Straight-line Winds, and Flooding	December 26- January 21, 2016	February 09, 2016
DR-4245	Texas Severe Storms, Tornadoes, Straight-line Winds, and Flooding	October 22-31, 2015	November 25, 2015
DR-4223	Texas Severe Storms, Tornadoes, Straight-line Winds, and Flooding	May 04- June 22, 2015	May 29, 2015
DR-4159	Texas Severe Storms and Flooding	October 30-31, 2013	December 20, 2013
DR-4136	Texas Explosion	April 17-20, 2013	August 02, 2013

Source: FEMA

3.2 Natural Hazard Profiles

Through an assessment of previous federally declared disasters in Texas, the State of Texas Hazard Mitigation Plan, historical and potential events in Ellis County, and a review of available local mitigation plans, it was determined that this Hazard Mitigation Plan (HMP) will address the risks associated with the following nine natural hazards:

- Drought
- Earthquakes
- Expansive Soils
- Extreme Heat
- Flooding (including dam failure)
- Thunderstorms (including hail, wind, and lightning)
- Tornadoes
- Wildfires
- Winter Storms

Due to the low probability and history of occurrence of coastal erosion, land subsidence, and hurricane/tropical storm, they will not be profiled in this plan.

Since the adoption of the 2015 HMP, the definition of a thunderstorm now includes hail, high winds, and lightning. These individual hazards within a thunderstorm will not be listed nor categorized separately.

Around 2013, areas of North Central Texas began experiencing earthquakes. It is suspected that dormant fault lines have been disturbed. Earthquakes have been added to the list of natural hazards profiled in this update for jurisdictions that feel they could be potentially impacted by them.

For this HMP, dam failure is considered a technological hazard and the effects of dam failure will be addressed in the flooding portion of this plan when applicable. Dam failure is an accidental or

unintentional collapse, breach, or other failure of an impoundment structure that results in downstream flooding.

Along with a general description and historical occurrences, each participating jurisdiction described the location, probability of a future event, and the maximum probable extent of each hazard. The following terms were used to describe the categories:

Location: Location is the geographic area within the planning area that is affected by the hazard. The planning area refers to individual jurisdictions. Planning area refers to the size of the participating jurisdiction providing the description.

- **Negligible**- Less than 10% of planning area would be impacted by a single event.
- **Limited**- 10 to 25% of planning area would be impacted by a single event.
- **Significant**- 26 to 99% of planning area would be impacted by a single event.
- **Extensive**- 100% of planning area would be impacted by a single event, or the event has no boundary and could occur anywhere within the planning area.

Probability of Future Events: This information was based on historic events and changing climate.

- **Unlikely**- Less than 1% annual probability.
- **Possible**- Between 1 and 10% annual probability.
- **Likely**- Between 10 and 100% annual probability.
- **Highly Likely**- 100% annual probability.

Level of Possible Damage: Based on historic events and future probability.

- **Minor**- Only minor property damage and minimal disruption of life. Temporary shutdown of critical facilities. Very few injuries, if any.
- **Limited**- More than 10% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for more than one day. Minor injuries possible.
- **Critical**- More than 25% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for more than one week. Multiple deaths/injuries.
- **Catastrophic**- More than 50% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for 30 days or more. High number of deaths/injuries possible.

Maximum Probable Extent: Based on historic events and future probability.

- **Minor**- Minor classification on the scientific scale.
- **Medium**- Medium classification on the scientific scale.
- **Major**- Major classification on the scientific scale.

Scientific Scale

Hazard	Classification		
	Minor	**Medium**	**Major**
Drought	• PDSI -1.99 to +1.99 • D0	• PDSI -2.00 to -2.99 • D1	• PDSI -3.00 to -5.00 • D2-D4
Earthquake	• Magnitude < 4.9	• Magnitude 5.0-6.9	• Magnitude > 7.0
Expansive Soils	• EI Expansion Potential: 21-50 (Low)	• EI Expansion Potential: 51-90 (Medium)	• EI Expansion Potential: 91-130 (High)

	• EI Expansion Potential: 0-21 (Very Low)		• EI Expansion Potential: >130 (Very High)
Extreme Heat	• Heat Index 80F°-96F° with 40% humidity	• Heat Index 97F°-104F° with 40% humidity	• Heat Index >105F° with 40% humidity
Flooding	• Within 100yr Flood Zone, • Zone AE, A • < 10 feet of water	• Within 500yr Flood Zone, Zone X • 10-25 feet of water	• Extending Beyond 100yr and 500yr Flood Zones, Zone A, AE, X • > 25 feet of water
Flooding from Dam Failure	• < 20% of critical facilities in the inundation zone; • Dam Storage capacity less than 10,000 acre-feet	• 20-50% of critical facilities in the inundation zone; • Dam Storage capacity between 10,000 and 100,000 acre- feet	• > 50% of critical facilities in the inundation zone; • Dam Storage capacity 100,000 acre-feet or more
Thunderstorm	• Hail 0”-1.6” • Wind Knots <1-10 • LAL: 1-2	• Hail 1.6”-2.4” • Wind Knots 11-27 • LAL: 3-4	• Hail 2.4”->4” • Wind Knots 28-64+ • LAL: 5-6
Tornado	• EF0	• EF1-EF2	• EF3-EF5
Wildfire	• KBDI 0-300	• KBDI 300-500	• KBDI 500-800
Winter Storms	• Temperatures 40F° to 35F° • Wind Speed <25 MPH • Ice Accumulation <.50 inches	• Temperatures 30F° to 20F° • Wind Speed 25-35 MPH • Ice Accumulation .10-1.00 inches	• Temperatures 15F° to -45F° • Wind Speed >35 MPH • Ice Accumulation >.25 inches
Abbreviations: • **PDSI:** Palmer Drought (Severity) Index • **EI:** Expansion Index test • **LAL:** Lightning Activity Level • **EF:** Enhanced Fujita scale • **KBDI:** Keetch-Byram Drought Index			

In this chapter, historical events are analyzed. The National Centers for Environmental Information (NCEI) receives storm data from the National Weather Service (NWS). NWS receives their information from a variety of sources, which include but are not limited to: county, state and federal emergency management officials, local law enforcement officials, SkyWarn spotters, NWS damage surveys, newspaper clipping services, the insurance industry, and the general public, among others. NWS Storm Data are geographically categorized by county or by NWS Forecast Zone. Localized events such as a tornado, thunderstorm winds, flash floods, and hail are categorized using the *Ellis Co.* (County) designation. More

widespread events that can impact the entire county equally, such as heat, cold, drought, floods, and winter weather, are categorized using the *Ellis (Zone)*.

Below is an overview of the total historical dollar losses from the severe weather events within the participating jurisdictions collected by NWS since the previous hazard mitigation plan.

Historical Dollar Losses, 2012-2021				
Hazard	**# of Events**	**Property Loss**	**Crop Loss**	**Total**
Drought	31	$1,000	$52,500	$53,500
Extreme Heat	3	$0	$0	$0
Flooding	10	$6,000	$0	$6,000
Thunderstorms (hail, wind, lightning)	98	$2,218,400	$0	$2,218,400
Tornadoes	5	$10,798,000		$10,798,000
Winter Storms	7	$950,000		$950,000
Total Damage Costs				$1,900,000.00

Not all events have been reported to NWS. Based on the information in the chart above, an increase in climate variability, and increasing populations, it is expected that the same level of damage experienced in the past will occur in the future, if not more, for each event.

Below are the hazard summaries, in alphabetical order, for each participating jurisdiction.

3.2.1 Drought

Potential impacts from drought include:

- Property damage
- Loss of water supply
- Increases grassfire potential and intensity
- Negative impact on citizens, to include water restrictions and lack of drinkable water supply
- Impact on car washes, parks, and pools
- Impact on crops, livestock, and natural vegetation
- Increase in food prices
- Dust storms, leading to transportation accidents
- Natural environments damage, to include protected species and critical habitats
- Pipeline damage

Drought				
Jurisdiction	**Location**	**Probability of Future Events**	**Level of Possible Damage**	**Maximum Probable Extent/Strength**
Alma	Extensive	Likely	Limited	Major
Bardwell	Extensive	Likely	Limited	Major
Ennis	Extensive	Likely	Minor	Minor
Ferris	Extensive	Likely	Limited	Major

Drought				
Jurisdiction	**Location**	**Probability of Future Events**	**Level of Possible Damage**	**Maximum Probable Extent/Strength**
Garrett	Extensive	Possible	Limited	Major
Italy	Extensive	Likely	Limited	Major
Maypearl	Extensive	Likely	Minor	Major
Midlothian	Extensive	Likely	Limited	Major
Milford	Extensive	Likely	Limited	Major
Oak Leaf	Extensive	Likely	Minor	Major
Ovilla	Extensive	Likely	Limited	Major
Palmer	Extensive	Likely	Limited	Major
Red Oak	Extensive	Possible	Minor	Major
Waxahachie	Extensive	Likely	Limited	Major
Ellis County Unincorporated	Extensive	Likely	Limited	Major

The following chart describes the drought monitoring indices along with drought severity, return period, and a description of the possible impacts of the severity of drought.

Drought Severity	Return Period (years)	Description of Possible Impacts	Drought Monitoring Indices		
			Standardized Precipitation Index (SPI)	NDMC* Drought Category	Palmer Drought Index
Minor Drought	3 to 4	Going into drought; short-term dryness slowing growth of crops or pastures; fire risk above average. Coming out of drought; some lingering water deficits; pastures or crops not fully recovered.	-0.5 to -0.7	D0	-1.0 to -1.9
Moderate Drought	5 to 9	Some damage to crops or pastures; fire risk high; streams, reservoirs, or wells low, some water shortages developing or imminent, voluntary water use restrictions requested.	-0.8 to -1.2	D1	-2.0 to -2.9
Severe Drought	10 to 17	Crop or pasture losses likely; fire risk very high; water shortages common; water restrictions imposed.	-1.3 to -1.5	D2	-3.0 to -3.9
Extreme Drought	18 to 43	Major crop and pasture losses; extreme fire danger; widespread water shortages or restrictions.	-1.6 to -1.9	D3	-4.0 to -4.9
Exceptional Drought	44+	Exceptional and widespread crop and pasture losses; exceptional fire risk; shortages of water in reservoirs, streams, and wells creating water emergencies.	less than -2	D4	-5.0 or less

*NDMC - National Drought Mitigation Center

Source of groundwater or surface-supply:
Alma: Rice Water Supply **Bardwell**: Water is provided to the City from Rural Bardwell WSC. **Ennis**: Lake Bardwell **Ferris**: City of Ferris purchases water from Rockett SUD. Rockett SUD purchases surface water from City of Midlothian. **Garrett**: Unknown **Italy**: Ground-water wells, 2 Trinity River Aquifer, and 1 Woodbine Aquifer **Maypearl**: Wells and purchased **Midlothian**: Tarrant Regional Water District (TRWD) and Joe Pool Lake **Milford**: Files Valley Water **Oak Leaf:** Water is provided by the City of Glenn Heights, Rockett S.U.D. and Sardis Lone-Elm Water. **Ovilla**: Unknown **Palmer**: Water is provided to the city from Rockett SUD. **Red Oak**: Dallas Water Utility **Waxahachie**: Unknown **Ellis County Unincorporated:** Water is provided to the county from multiple sources: Joe Pool, Richland Chambers Reservoir, Cedar Creek, Lake Waxahachie, Lake Bardwell. Ellis County also partners with the Trinity River Authority.
Describe the type of water restrictions the jurisdiction enforces, either year-round or during a drought:
Alma: Water conservation public education on city website. **Bardwell**: None **Ennis**: None **Ferris**: We have 5-phase drought criteria with plans to reduce water usage by 2%, 5%, 10%, 15%, and 30% respectively for each stage. **Garrett**: City of Garret & Community Water partner with TCEQ on water restrictions. **Italy**: The City of Italy partners with TCEQ on water restrictions. **Maypearl**: None **Midlothian**: City of Midlothian's adopted *Drought Contingency* and *Water Conservation Plan for Retail/Wholesale Customers:* In preparation of the upcoming summer months, the City of Midlothian encourages residents to continue practical water usage in an effort to reduce the likelihood of implementation of mandatory water conservation measures. **Milford**: None **Oak Leaf**: We enforce no restrictions. The water provider is responsible for enforcement. **Ovilla**: None **Palmer**: We have a drought contingency plan in place. **Red Oak**: Sliding scale, from "reduced non-essential water use" to "no outdoor water use." **Waxahachie**: None **Ellis County Unincorporated:** Ellis County partners with TCEQ on water restrictions.

Drought can be defined as a water shortage caused by the natural reduction in the amount of precipitation expected over an extended period of time, usually a season or more in length. It can be aggravated by other factors such as high temperatures, high winds, and low relative humidity. Drought can impact the

economy, environment, and society by limiting food and drinking water, destroying habitat, and triggering health and safety problems due to poor water quality and increased wildfires.

In Texas, local governments are empowered to take action on the behalf of those they serve. When drought conditions exist, a burn ban can be put in place by a county judge or county Commissioners Court prohibiting or restricting outdoor burning for public safety.[3]

Historical Events- Drought

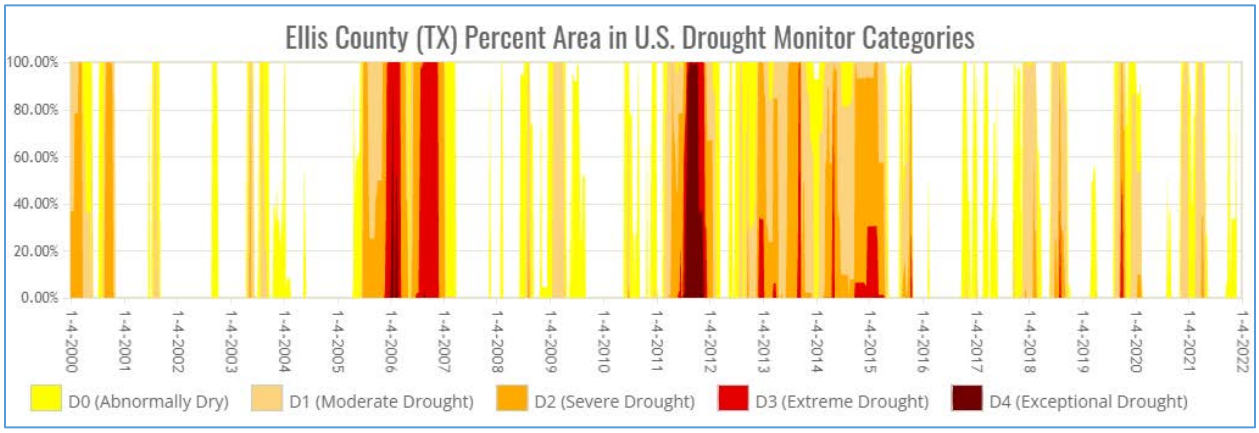
Location	Date	Type	Mag	Dth	Inj	PrD	CrD
ELLIS CO.	1/1/2012	Drought		0	0	0	4000
ELLIS CO.	11/13/2012	Drought		0	0	0	2000
ELLIS CO.	12/1/2012	Drought		0	0	0	2000
ELLIS CO.	1/1/2013	Drought		0	0	0	1000
ELLIS CO.	2/1/2013	Drought		0	0	0	2000
ELLIS CO.	3/19/2013	Drought		0	0	0	1000
ELLIS CO.	4/1/2013	Drought		0	0	0	3000
ELLIS CO.	6/18/2013	Drought		0	0	0	2000
ELLIS CO.	7/1/2013	Drought		0	0	0	2000
ELLIS CO.	8/1/2013	Drought		0	0	0	5000
ELLIS CO.	9/1/2013	Drought		0	0	0	4000
ELLIS CO.	3/11/2014	Drought		0	0	0	3000
ELLIS CO.	4/1/2014	Drought		0	0	0	3000
ELLIS CO.	5/1/2014	Drought		0	0	0	2000
ELLIS CO.	6/1/2014	Drought		0	0	0	500
ELLIS CO.	9/28/2014	Drought		0	0	0	0
ELLIS CO.	10/1/2014	Drought		0	0	0	2000
ELLIS CO.	11/1/2014	Drought		0	0	0	1000
ELLIS CO.	12/1/2014	Drought		0	0	0	6000
ELLIS CO.	1/1/2015	Drought		0	0	0	1000
ELLIS CO.	2/1/2015	Drought		0	0	0	2000
ELLIS CO.	3/1/2015	Drought		0	0	0	1000
ELLIS CO.	4/1/2015	Drought		0	0	0	1000
ELLIS CO.	10/1/2015	Drought		0	0	1000	0
ELLIS CO.	7/24/2018	Drought		0	0	0	0
ELLIS CO.	8/1/2018	Drought		0	0	0	1000
ELLIS CO.	9/24/2019	Drought		0	0	0	1000

[3] Fire Danger: Texas Burn Bans. Texas A&M Forest Service. 2018. <http://texasforestservice.tamu.edu/TexasBurnBans/>

Historical Events- Drought							
Location	**Date**	**Type**	**Mag**	**Dth**	**Inj**	**PrD**	**CrD**
ELLIS CO.	10/1/2019	Drought		0	0	0	0
ELLIS CO.	1/21/2020	Drought		0	0	0	0
ELLIS CO.	2/1/2020	Drought		0	0	0	0
ELLIS CO.	4/1/2021	Drought		0	0	0	0
Totals:				0	0	$1,000	$52,500

Source: NOAA National Centers for Environmental Information

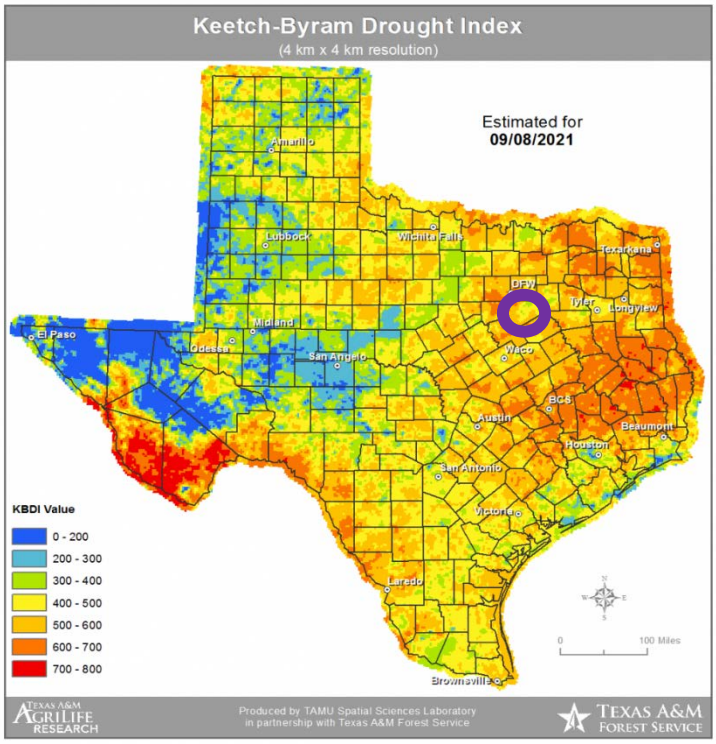
During these times the value of cattle decreased dramatically due to low cattle weight caused by drought impact on feed lots. Cattle had to be shipped to Oklahoma and farmers had to buy hay to feed cattle instead of growing it themselves. Water levels are a critical concern during this time. The following chart reflects the annual changes in drought conditions within the County.



Source: United States Drought Monitor.

As shown in the Percent Area graph above, the time period from 2011-2012 had the greatest severity and longest time period of D3-D4 drought conditions. Besides major crop damage, these extreme drought conditions have the potential to put Ellis County in extreme fire danger and could cause widespread water shortage and restrictions, creating a water emergency.

Texas A&M Forest Service (TFS) uses Keetch-Byram Drought Index (KBDI) for determination of drought conditions within the State of Texas. The KBDI is based on a daily water balance, where a drought factor is balanced with precipitation and soil moisture (assumed to have a maximum storage capacity of 8-inches) and is expressed in hundredths of an inch of soil moisture depletion.



The KBDI attempts to measure the amount of precipitation necessary to return the soil to full field capacity. It is a closed system ranging from 0 to 800, where 0 represents a saturated soil, and 800 an absolutely dry soil. At any point along the scale, the KBDI value indicates the amount of precipitation it would take to bring the moisture level back to zero, or saturation.

KBDI was developed to correlate the effects of drought on wildfire potential. This relationship is reflected in the following table.

Index Value (inches)	Color Label	Implications
0 – 200	Blue	Soil moisture and large class fuel moistures are high and do not contribute much to fire intensity. Typical of early spring following winter precipitation.
200 – 400	Blue -> Green	Fuels are beginning to dry and contribute to wildfire intensity. Heavier fuels will still not readily ignite and burn. This is often seen in late spring or early summer.
400 – 600	Yellow -> Orange	Lower litter and duff layers contribute to fire intensity and will burn actively. Wildfire intensity begins to increase significantly. Larger fuels could burn or smolder for several days. This is often seen in late summer and early fall.
600 – 800	Reds	Often associated with more severe drought with increased wildfire occurrence. Intense, deep-burning fires with extreme intensities can be expected. Live fuels can also be expected to burn actively at these levels.

3.2.2 Earthquakes

Potential impacts from earthquakes include:

- Injury or death
- Property and infrastructure damage
- Water contamination or loss via broken pipes
- Transportation and communication disruption or damage
- Increase in traffic accidents
- Building collapse

- Natural gas leak
- Misplaced residents
- Power outages
- Natural environments damage, to include protected species and critical habitats

Earthquakes				
Jurisdiction	**Location**	**Probability of Future Events**	**Level of Possible Damage**	**Maximum Probable Extent/Strength**
Alma	Extensive	Unlikely	Limited	Minor
Bardwell	Limited	Possible	Minor	Minor
Ennis	Extensive	Unlikely	Limited	Minor
Ferris	Negligible	Unlikely	Minor	Minor
Garrett	Extensive	Possible	Minor	Minor
Italy	Limited	Possible	Minor	Minor
Maypearl	Limited	Unlikely	Catastrophic	Major
Midlothian	Limited	Possible	Minor	Minor
Milford	Limited	Possible	Minor	Minor
Oak Leaf	Negligible	Unlikely	Minor	Minor
Ovilla	Extensive	Unlikely	Limited	Minor
Palmer	Limited	Possible	Minor	Minor
Red Oak	Negligible	Unlikely	Minor	Minor
Waxahachie	Extensive	Unlikely	Limited	Minor
Ellis County Unincorporated	Extensive	Possible	Minor	Minor

Does your jurisdiction require a permit for foundation repairs? *Reviewing permits can help a jurisdiction determine the amount of damage in the community.*

Alma: Yes
Bardwell: No
Ennis: Yes
Ferris: No
Garrett: Yes
Italy: No
Maypearl: Yes
Midlothian: Yes, if digging or repairing foundation. Building Permits | Midlothian, TX - Official Website
Milford: No
Oak Leaf: No
Ovilla: No
Palmer: No
Red Oak: Yes
Waxahachie: No
Ellis County Unincorporated: No

Does your jurisdiction allow fracking?
Alma: N/A **Bardwell:** N/A **Ennis:** No **Ferris:** Yes **Garrett:** Unknown **Italy:** Yes **Maypearl:** No **Midlothian:** **Milford:** N/A **Oak Leaf:** No **Ovilla:** Unknown **Palmer:** Unknown **Red Oak:** Unknown **Waxahachie:** Unknown **Ellis County Unincorporated:** Yes, per Texas Rail Road Commission permitting procedures.

An earthquake is a sudden motion or trembling of the earth, either caused by an abrupt release of accumulated strain on the tectonic plates that comprise the earth's crust or from human activities. Scientific studies have tied the quakes in North Central Texas to the disposal of wastewater from oil and gas production.

Magnitude and intensity measure different characteristics of earthquakes. Magnitude measures the energy released at the source of the earthquake and is determined from measurements on seismographs. Intensity measures the strength of shaking produced by the earthquake at a certain location and is determined from effects on people, human structures, and the natural environment.

The Modified Mercalli Intensity Scale classifies earthquakes by the amount of damage inflicted. It quantifies a quake's effects on the land's surface, people, and structures involved. The following is an abbreviated description of the levels of Modified Mercalli intensity.

Intensity	Shaking	Description/Damage
I	Not felt	Not felt except by a very few under especially favorable conditions.
II	Weak	Felt only by a few persons at rest, especially on upper floors of buildings.
III	Weak	Felt quite noticeably by persons indoors, especially on upper floors of buildings. Many people do not recognize it as an earthquake. Standing motor cars may rock slightly. Vibrations similar to the passing of a truck. Duration estimated.
IV	Light	Felt indoors by many, outdoors by few during the day. At night, some awakened. Dishes, windows, doors disturbed; walls make cracking sound. Sensation like heavy truck striking building. Standing motor cars rocked noticeably.
V	Moderate	Felt by nearly everyone; many awakened. Some dishes, windows broken. Unstable objects overturned. Pendulum clocks may stop.

Intensity	Shaking	Description/Damage
VI	Strong	Felt by all, many frightened. Some heavy furniture moved; a few instances of fallen plaster. Damage slight.
VII	Very strong	Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable damage in poorly built or badly designed structures; some chimneys broken.
VIII	Severe	Damage slight in specially designed structures; considerable damage in ordinary substantial buildings with partial collapse. Damage great in poorly built structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned.
IX	Violent	Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb. Damage great in substantial buildings, with partial collapse. Buildings shifted off foundations.
X	Extreme	Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations. Rails bent.

Source: USGS Earthquake Hazards Program.

The following table gives intensities that are typically observed at locations near the epicenter of earthquakes of different magnitudes.

Magnitude	Typical Maximum Modified Mercalli Intensity
1.0 - 3.0	**I**
3.0 - 3.9	**II - III**
4.0 - 4.9	**IV - V**
5.0 - 5.9	**VI - VII**
6.0 - 6.9	**VII - IX**
7.0 and higher	**VIII** or higher

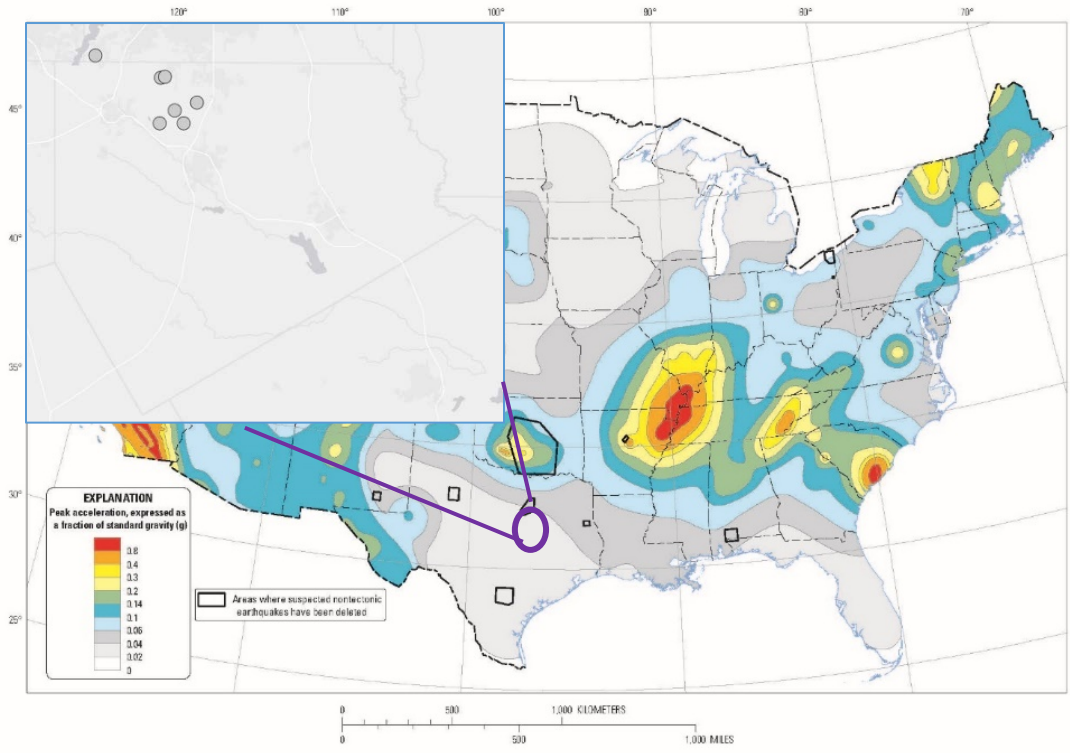
Source: USGS Earthquake Hazards Program.

The following data and map from the United States Geological Survey (USGS) reflect the earthquakes recorded in Ellis County from 2012-2021 and shows that the County has a very low risk of future earthquakes.

Historical Events- Earthquakes

TIME	LATITUDE	LONGITUDE	MAG	PLACE
2013-10-16T13:37:09.350Z	32.5272	-96.9032	2.4	1 km W of Ovilla, Texas
2013-03-17T23:50:20.630Z	32.48	-96.887	2.5	5 km S of Ovilla, Texas
2013-03-17T23:41:23.840Z	32.491	-96.85	2.6	3 km S of Oak Leaf, Texas
2013-02-24T21:07:49.700Z	32.462	-96.872	2.7	6 km SSW of Oak Leaf, Texas

Historical Events- Earthquakes				
TIME	**LATITUDE**	**LONGITUDE**	**MAG**	**PLACE**
2013-02-24T12:56:02.980Z	32.526	-96.91	2.6	2 km W of Ovilla, Texas
2013-02-24T10:35:52.230Z	32.462	-96.912	2.5	7 km SSW of Ovilla, Texas
2012-10-17T02:57:30.640Z	32.557	-97.019	2.7	6 km WSW of Cedar Hill, Texas
2013-10-16T13:37:09.350Z	32.5272	-96.9032	2.4	1 km W of Ovilla, Texas



Two-percent probability of exceedance in 50 years map of peak ground acceleration

Source: USGS

3.2.3 Expansive Soils

Potential impacts from expansive soils include:

- Property damage due to foundation damage
- Water contamination or loss via broken pipes
- Building and infrastructure damage

- Road damage
- Transportation delays due to road condition
- Damage to utility lines
- Damage to crops and livestock

Expansive Soils				
Jurisdiction	**Location**	**Probability of Future Events**	**Level of Possible Damage**	**Maximum Probable Extent/Strength**
Alma	Extensive	Possible	Minor	Medium
Bardwell	Extensive	Possible	Minor	Medium
Ennis	Extensive	Likely	Limited	Minor
Ferris	Extensive	Possible	Minor	Medium
Garrett	Extensive	Likely	Minor	Minor
Italy	Extensive	Possible	Minor	Medium
Maypearl	Extensive	Possible	Minor	Medium
Midlothian	Extensive	Possible	Minor	Medium
Milford	Extensive	Possible	Minor	Minor
Oak Leaf	Extensive	Likely	Minor	Medium
Ovilla	Extensive	Possible	Minor	Medium
Palmer	Extensive	Possible	Minor	Medium
Red Oak	Extensive	Likely	Minor	Major
Waxahachie	Extensive	Possible	Minor	Medium
Ellis County Unincorporated	Extensive	Possible	Minor	Medium

A common procedure for evaluating and rating soil expansion potential is the Expansion Index (EI) test. The Expansion Index, EI, is used to measure a basic index property of soil and therefore, the EI is comparable to other indices such as the liquid limit, plastic limit, and plasticity index of soils.

Expansion Index (EI)	EI Potential Expansion
0-20	Very Low
21-50	Low
51-90	Medium
91-130	High
>130	Very High

Source: Expansion Index

Expansive soils are soils that expand when water is added and shrink when they dry out. It contains large percentages of swelling clays that may experience volume changes of up to 40% in the absence or presence of water. This continuous change in soil volume can cause homes built on this soil to move unevenly and crack.

Expansive soil or clay is considered to be one of the more problematic soils and it causes damage to various civil engineering structures. Expansive soils behave differently from other normal soils due to their tendency to swell and shrink. A list of expansive soils include:

- Smectite
- Bentonite
- Montmorillonite
- Beidellite
- Vermiculite
- Attapulgite
- Nontronite
- Chlorite
- Pedialyte

Because of this swelling and shrinking behavior, expansive soils may cause the following problems in structures or construction projects:

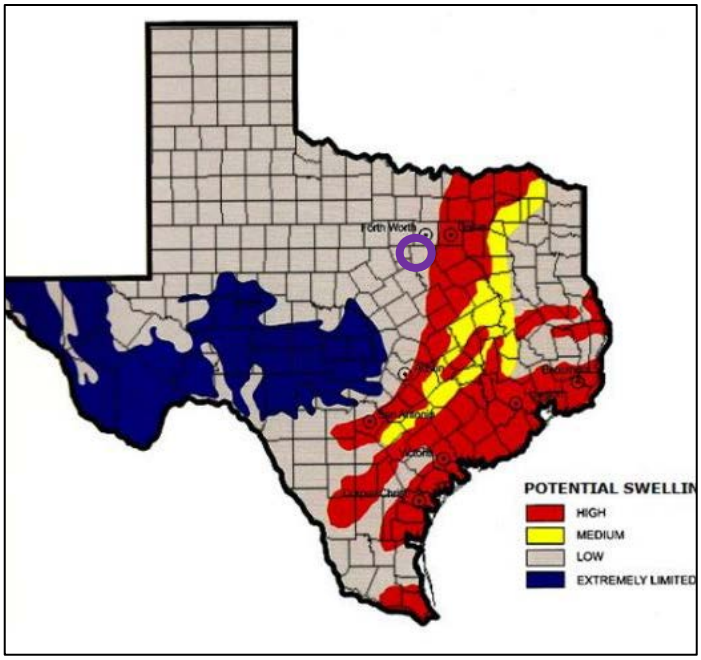
- Structural damage to lightweight structures such as sidewalks and driveways
- Lifting of buildings, damage to basements, and building settlement
- Cracks in walls and ceilings
- Damage to pipelines and other public utilities
- Lateral movement of foundations and retaining walls due to pressure exerted on vertical walls
- Loss of residual shear strength causing instability of slopes, etc.

Therefore, it is essential to check for the presence of expansive soil and a suitable treatment method should be adopted before commencing any construction projects. In some cases, postconstruction treatment of expansive soil may be required if the situation has not been dealt with before construction.

Homes built on expanding smectite clays without due precautions will likely be structurally damaged as the clay takes up water. Damage can be minor, but it also can be severe enough for the home to be structurally unsafe. Expansive soil is considered one of the most common causes of pavement distresses in roadways.

Expansive soils is a condition that is native to Texas soil characteristics, and cannot be documented as a time-specific event, except when it leads to structural and infrastructure damage. The great increase in damages in Texas caused by problems with expansive soils can be traced to the rise in residential slab-on-grade construction which began to accelerate in the 1960s. Prior to that time, most residential construction in Texas was pier and beam, with wood siding or other non-masonry covering. Affected homes will be heavily influenced by their proximity to a large body of water, whereas older pier and beam foundations will behave in an entirely different manner.

Even though structural foundation issues occur throughout the state, there is little documentation of site-specific past events from local, state, or national datasets. This makes it difficult to quantify damage on a county level, and the hazard poses no real threat to the public as there are no known fatalities. As such, there is currently no methodology to provide specific examples of previous occurrences for expansive soils in Texas. Damages from expansive soils are most prevalent when periods of moderate to high precipitation are followed by drought and then again by periods of heavy rainfall.



Geographically, Ellis County comprises 740 square miles with three geographical areas. The western half is a part of the Grand Prairie, where the predominant soil type is alkaline loam over limestone. About one-third of the county is in the Eastern Cross Timbers, with acid soils that are both loamy with clay subsoil and sandy with loamy subsoils. The rest of the area to the east is Blackland Prairie, with deep clayey, alkaline soils. The average annual precipitation is thirty-three inches, and temperature averages range between a winter low of 35° F and a summer high of 96°. [4]

3.2.4 Extreme Heat

Potential impacts from extreme heat include:

- Heatstroke or death. Elderly people who cannot afford air conditioning are at greatest risk
- Property damage
- Loss of water supply
- Increases grassfire potential and intensity
- Impact on logistics
- Power outages
- Road and train track buckling
- Disruption in critical infrastructure operations
- Vehicle engine failure
- Damage to crops

Extreme Heat				
Jurisdiction	**Location**	**Probability of Future Events**	**Level of Possible Damage**	**Maximum Probable Extent/Strength**
Alma	Extensive	Likely	Minor	Major

[4] Richard Elam, "Ellis County," *Handbook of Texas Online*, accessed September 20, 2021, <https://www.tshaonline.org/handbook/entries/johnson-county.>

Published by the Texas State Historical Association.

Extreme Heat				
Jurisdiction	**Location**	**Probability of Future Events**	**Level of Possible Damage**	**Maximum Probable Extent/Strength**
Bardwell	Extensive	Likely	Minor	Major
Ennis	Extensive	Likely	Limited	Minor
Ferris	Extensive	Highly Likely	Limited	Medium
Garrett	Extensive	Likely	Minor	Minor
Italy	Extensive	Likely	Minor	Major
Maypearl	Extensive	Possible	Minor	Minor
Midlothian	Extensive	Likely	Minor	Major
Milford	Extensive	Likely	Minor	Major
Oak Leaf	Extensive	Likely	Minor	Major
Ovilla	Extensive	Likely	Minor	Major
Palmer	Extensive	Likely	Minor	Major
Red Oak	Extensive	Likely	Minor	Major
Waxahachie	Extensive	Likely	Minor	Major
Ellis County Unincorporated	Extensive	Likely	Minor	Major

Describe the special events or sporting events held outside during the summer and any heat-related illnesses reported since 2012.

Alma: High School graduations, Ennis ISD and community sports
Bardwell: Students from Bardwell attend Ennis ISD schools where various special events occur: High School graduations, Ennis ISD and community Sports. All sporting events occur outdoors during the summer months that poses risks for heat related illnesses in the community.
Ennis: Freedom Festival and drag racing events. Ennis has had 10-15 heat exposures reported from their outdoor events since 2021.
Ferris: Various youth and intramural sports leagues including baseball, football, and soccer.
Garrett: None
Italy: July 4th Celebrations, Youth Summer Sports (Baseball/Softball), and Guns & Hoses Softball Game.
Maypearl: Baseball, Football, Track and Field, 4th of July Events to Antique Alleys, Movies in the Park to Market Days.
Midlothian: MISD High School graduations (May), 8th Street Dance (May), Movies in the Park (May – August), Independence Day Parade and Fireworks (July 3-4). All sporting events occur outdoors during the summer months that poses risks for heat related illnesses in the community.
Milford: High School Football and various sporting events held by the ISD.
Oak Leaf: The City of Oak Leaf hosts an annual National Night Out event in October.
Ovilla: None
Palmer: None
Red Oak: “Red, White and Blue” event 7/4 every year; “Founders Day” event held in September every year.

Waxahachie: Various youth and intramural sports leagues including baseball, football, and soccer.
Ellis County Unincorporated: Ellis County and its local judications host several events throughout the summer. Ranging from 4th of July celebrations to summer camps at local retreats.

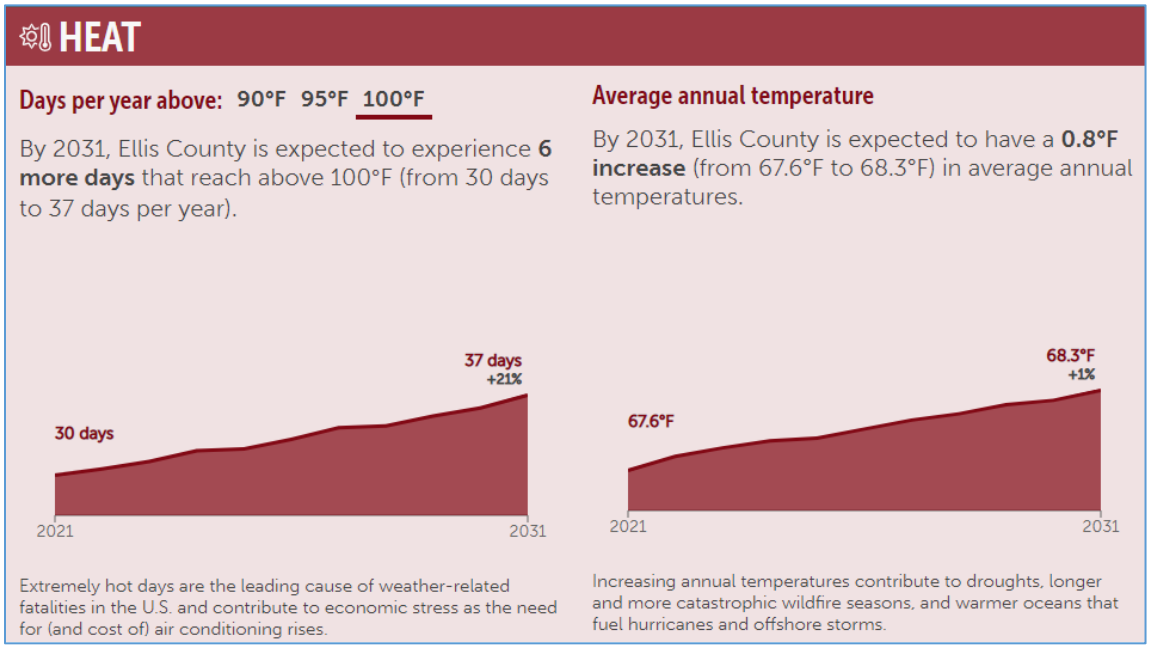
The Northern Ellis Emergency Dispatch has identified numerous heat related illnesses from 2012 – 2021 for the cities of Midlothian, Ovilla, and Red Oak.

Historical Events- Extreme Heat

Location	Date	Type	Mag	Dth	Inj	PrD	CrD
ELLIS CO.	6/20/2019	Excessive Heat		1	0	0	0
ELLIS CO.	8/13/2020	Excessive Heat		0	0	0	0
ELLIS CO.	8/28/2020	Excessive Heat		0	0	0	0
Totals:				**1**		**$0**	**$0**

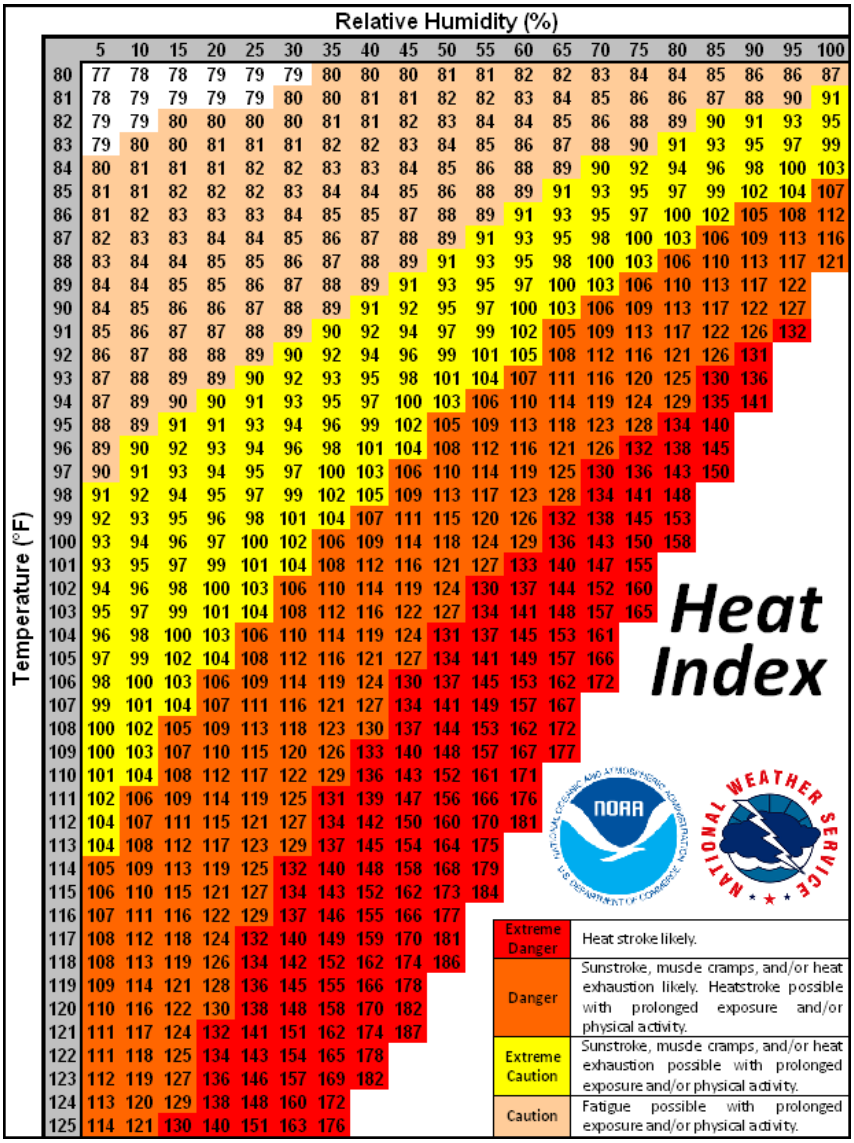
Extreme heat is characterized by a combination of very high temperatures and exceptionally humid conditions. When persisting over a period of time, it is called a heat wave. Heat indices between 105 and 110 degrees occurred across Ellis County during the afternoons of June 20 through June 21, 2019. The medical examiner determined that an 11-month old girl died of hyperthermia after being left in a hot car in Bardwell, TX on the afternoon of the 21st.

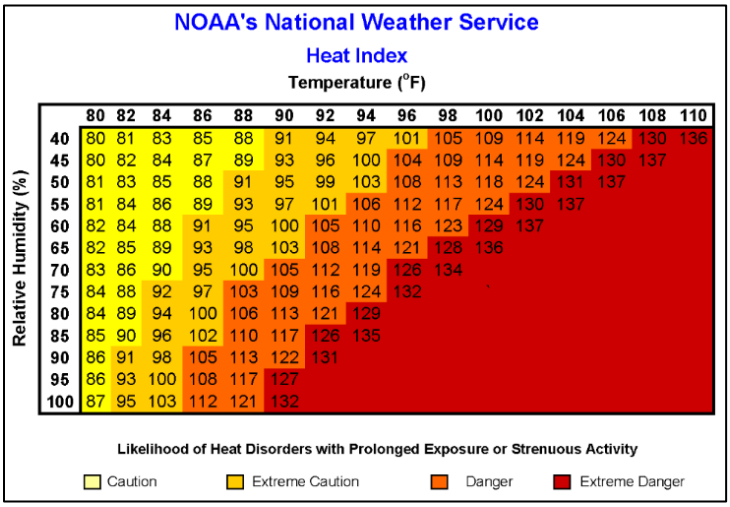
Headwater Economics provided the following data for the number of days per year above 100°F over the next 10 years.



The National Weather Service (NWS) offers a Heat Index chart for areas with high heat but low relative humidity. Since heat index values were devised for shady, light wind conditions, exposure to full sunshine can increase heat index values by up to 15°F. Also, strong winds, particularly with very hot, dry air, can be extremely hazardous.

Below, NOAA's Heat Index is a measure of how hot it really feels when relative humidity is factored in with the actual air temperature. As an example, if the air temperature is 96°F and the relative humidity is 65%, the heat index- how hot it feels -is 121°F. The red area without numbers indicates extreme danger. NWS will initiate alert procedures when the Heat Index is expected to exceed 105°-110°F (depending on local climate) for at least 2 consecutive days.





Extreme heat can be a factor that drastically impacts drought conditions, as high temperatures lead to an increased rate of evaporation. The total number of days per year with maximum temperature above various thresholds is an indicator of how often very hot conditions occur. Depending upon humidity, wind, and physical workload, people who work outdoors or don't have access to air conditioning may feel very uncomfortable or experience heat stress or illness on very hot days. Hot days also stress plants, animals, and human infrastructure

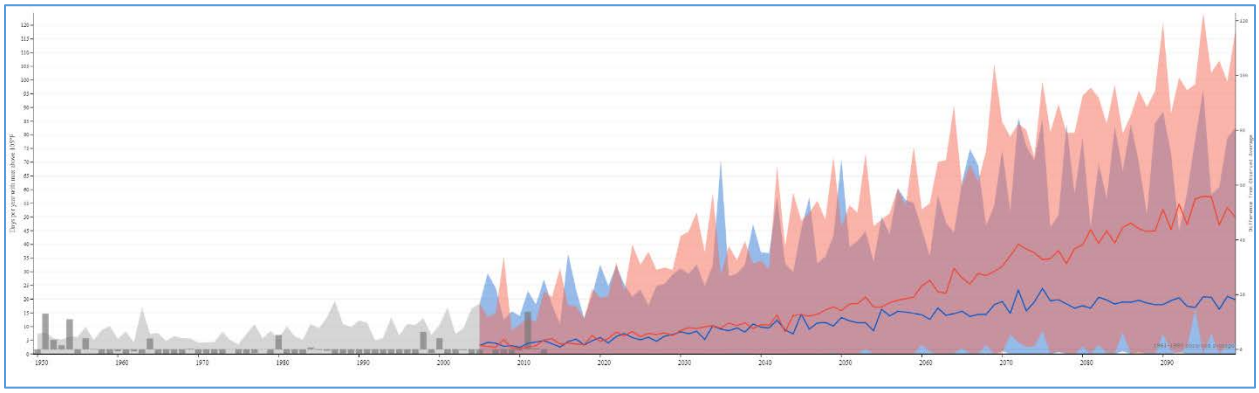
such as roads, railroads, and electric lines. Increased demand for electricity to cool homes and buildings can place additional stress on energy infrastructure.

Below is a visual representation of the expected amount of days per year that are over 105°F in Ellis County. The trend shows how global emissions have a major role in climate variance and has an impact on extreme heat.

- The blue band shows projections for 2006–2100 based on a future in which humans stop increasing global emissions of heat-trapping gases by 2040 and then dramatically reduce them through 2100. The top edge of the band represents the maximum value modeled at each time step; the bottom edge of the band represents the minimum. The darker blue line shows the weighted mean of projections for lower emissions.

- The red band shows projections for 2006–2100 based on a future in which global emissions of heat-trapping gases continue increasing through 2100. The top edge of the band represents the maximum value modeled at each time step; the bottom edge of the band represents the minimum. The red line shows the weighted mean of all projections for higher emissions.

Predicted Number of Days with a Maximum Temperature Over 105°F in Ellis County



Source: U.S. Climate Resilience Toolkit

3.2.5 Flooding

Potential impacts from flooding include:

- Loss of electricity
- Loss of, or contamination of, water supply
- Loss of property
- Structure and infrastructure damage – flooded structures and eroded roads
- Misplaced residents
- Snakes migrate and number of mosquitoes increase
- Fire – as a result of loss of water supply
- Debris in transportation paths
- Emergency response delays
- Disruption of traffic can lead to impacts to the economy
- Natural environment damage, to include protected species and critical habitats

Flooding				
Jurisdiction	**Location**	**Probability of Future Events**	**Level of Possible Damage**	**Maximum Probable Extent/Strength**
Alma	Extensive	Likely	Limited	Medium
Bardwell	Limited	Likely	Limited	Minor
Ennis	Limited	Likely	Limited	Medium
Ferris	Negligible	Highly Likely	Minor	Minor
Garrett	Limited	Likely	Limited	Minor
Italy	Limited	Likely	Limited	Minor
Maypearl	Limited	Likely	Critical	Medium
Midlothian	Limited	Likely	Limited	Minor
Milford	Limited	Possible	Limited	Minor
Oak Leaf	Limited	Likely	Limited	Minor
Ovilla	Extensive	Likely	Limited	Medium
Palmer	Limited	Likely	Limited	Minor
Red Oak	Limited	Likely	Limited	Medium
Waxahachie	Extensive	Likely	Limited	Medium
Ellis County Unincorporated	Extensive	Likely	Limited	Minor
Flooding from Dam Failure				
Jurisdiction	**Location**	**Probability of Future Events**	**Level of Possible Damage**	**Maximum Probable Extent/Strength**
Alma	Negligible	Unlikely	Limited	Minor
Bardwell	Negligible	Unlikely	Limited	Minor
Ennis	Negligible	Unlikely	Limited	Minor
Ferris	Negligible	Unlikely	Limited	Minor
Garrett	Negligible	Unlikely	Limited	Minor
Italy	Negligible	Unlikely	Limited	Minor
Maypearl	Negligible	Unlikely	Limited	Minor
Midlothian	Negligible	Unlikely	Limited	Minor
Milford	Negligible	Unlikely	Limited	Minor
Oak Leaf	Negligible	Unlikely	Limited	Minor
Ovilla	Negligible	Unlikely	Limited	Minor
Palmer	Negligible	Unlikely	Limited	Minor
Red Oak	Negligible	Unlikely	Limited	Minor
Waxahachie	Negligible	Unlikely	Limited	Minor
Ellis County Unincorporated	Negligible	Unlikely	Limited	Minor

Flooding is defined as *the accumulation of water within a water body and the overflow of excess water onto adjacent floodplain lands*. Flooding can occur anywhere with low-lying areas, clogged drains, and/or intense rain. Common flooding hazards within the planning area include flood hazards from flash flooding and new development. A flash flood is a rapid flood that inundates low-lying areas in less than six hours. This is caused by intense rainfall from a thunderstorm or several thunderstorms. Flash floods can also occur from the collapse of a man-made structure or ice dam. Construction and development can change the natural drainage and create brand new flood risks as the concrete that comes with new buildings, parking lots, and roads create less land that can absorb excess precipitation from heavy rains. Flash floods are a high-risk hazard since they can tear out trees and destroy buildings and bridges.

Floodwater can disguise many dangerous obstacles, like uncovered manholes or debris that can cause someone to fall over. Standing water, or water that isn't flowing, can also become a breeding ground for insects that can make people very ill. Another risk can be downed power lines which may still be live.

Besides rains and river or lake overflow, dam failure can also cause flooding. A dam is defined as a barrier constructed across a watercourse for the purpose of storage, control, or diversion of water. Dams typically are constructed of earth, rock, concrete, or mine tailings. A dam failure is an accidental or unintentional collapse, breach, or other failure of an impoundment structure that results in downstream flooding. Dam failure is a technological/man-made hazard that leads to a natural hazard, flooding.

According to the Association of State Dam Safety Officials, dam failures are most likely to happen for one of five reasons:

1. Overtopping caused by water spilling over the top of a dam. Overtopping of a dam is often a precursor of dam failure. National statistics show that overtopping due to inadequate spillway design, debris blockage of spillways, or settlement of the dam crest account for approximately 34% of all U.S. dam failures.

2. Foundation Defects, including settlement and slope instability, cause about 30% of all dam failures.

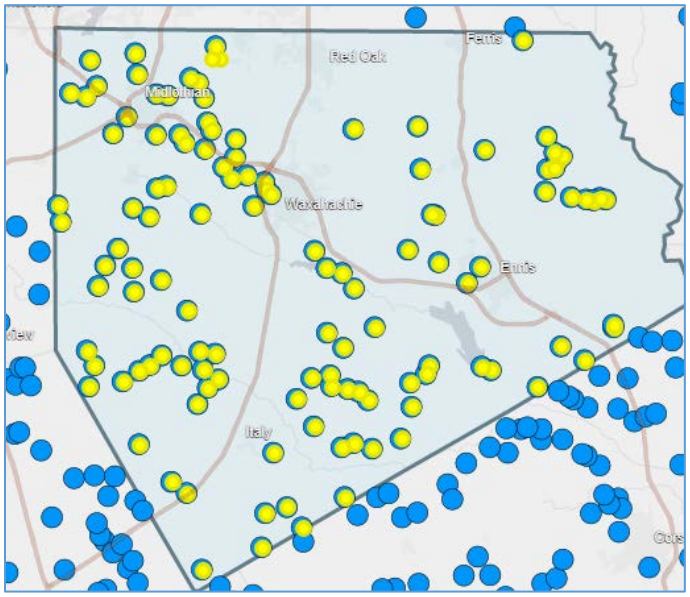
3. Cracking caused by movements like the natural settling of a dam.

4. Inadequate maintenance and upkeep.

5. Piping is when seepage through a dam is not properly filtered and soil particles continue to progress and form sink holes in the dam. Another 20% of U.S. dam failures have been caused by piping (internal erosion caused by seepage). Seepage often occurs around hydraulic structures, such as pipes and spillways; through animal burrows; around roots of woody vegetation; and through cracks in dams, dam appurtenances, and dam foundations.

The occasional overtopping of the spillway from major rainfall is the main cause of flooding from dam failure within North Central Texas. Although dam failures have the potential to cause extensive damage, there has been no recorded failures in Ellis County, nor is it predicted to occur in the next 5 years, as a wide array of measures are taken to ensure structural integrity.

The United States Corps of Engineers (USACE) and the Texas Commission on Environmental Quality (TCEQ) have conducted extensive dam failure training for jurisdictional staff, reducing the impact of flooding from a dam failure to the jurisdictions. Jurisdictions have also worked with the private owners to ensure maintenance is enforced and regulated.



The yellow dots in this map represent the dams within Ellis County. It can be said that the inundation area of each dam is a 5-mile radius from the dam in addition to flooding along the banks of the body of water downstream, within the 500-year floodplain. The actual inundation maps can be found in the EAP of each dam.

Potential impacts from dam failure flooding include:

- Property and crop damage
- Transportation delays
- Injury or death

The hazard extent rating scale for dam failure is based on the amount of potential damage that can be caused by a failure. For the purposes of this hazard analysis, damage from dam failure only takes into account areas where developed property is affected.

Extent Scale			
Flooding from Dam Failure	**Minor**	**Medium**	**Major**
	• < 20% of critical facilities in the inundation zone; • Dam Storage capacity less than 10,000 acre-feet	• 20-50% of critical facilities in the inundation zone; • Dam Storage capacity between 10,000 and 100,000 acre- feet	• > 50% of critical facilities in the inundation zone; • Dam Storage capacity 100,000 acre-feet or more

The dams are identified and described in Section 3.4.1 'Critical Facilities and Infrastructure' of this plan, as we view the dams themselves as critical facilities/infrastructure and not natural hazards.

The floodplain (or flood zone) is the land adjoining the channel of a river, stream, ocean, lake, or other watercourse or water body that is susceptible to flooding. The statistical meaning of terms like "100-year flood" can be confusing. Simply stated, a floodplain can be located anywhere; it just depends on how large and how often a flood event occurs. Floodplains are those areas that are subject to inundation from flooding. Floods and the floodplains associated with them are often described in terms of the percent chance of a flood event happening in any given year. As a community management or planning term,

“floodplain” or “flood zone” most often refers to an area that is subject to inundation by a flood that has a 1% chance of occurring in any given year (commonly referred to as the 100-year floodplain).

Some jurisdictions had information about land parcels withing the 100-year floodplain. The following tables reflect their data.

	Source	Total Parcels Intersecting 100-year Floodplain	Residential Parcels Located in 100-year Floodplain	Percentage of Total Residential Parcels Located in 100-year Floodplain	Commercial and Industrial Parcels in 100-year Floodplain	Percentage of Commercial and Industrial Parcels in 100-year Floodplain
Midlothian		1146	279	24.35%	80	6.98%
Oak Leaf	Ellis Appraisal District Property Map with FEMA FIRM overlay		96	13	0	0
Ellis County	County GIS		2025	11%	71	20%

Ferris Land Cover Types and Acreage Located Within the 100-year Floodplain			
Land Cover Type	**Total Area in Jurisdiction (Acres)**	**Total Area in the 100-year Floodplain (Acres)**	**Percentage (%) of Area in the 100-year Floodplain**
Single Family Residence	321.6	0	0%
Multifamily Residence	1.4	0	0%
Vacant Lots & Tracts	94.8	0	.4%
Qualified Open Space and Land	708.5	3	0%
Improvements on Qualified Op	95.8	0	0%
Commercial Real Property	318.7	0	0%
Industrial and Manufacturing	3.3	0	0%
Railroad	7	0	0%
Residential Inventory	53.2	0	0%
Totally Exempt Property	328.3	0	0%
Total	**1,925.7**	**3**	**.4%**

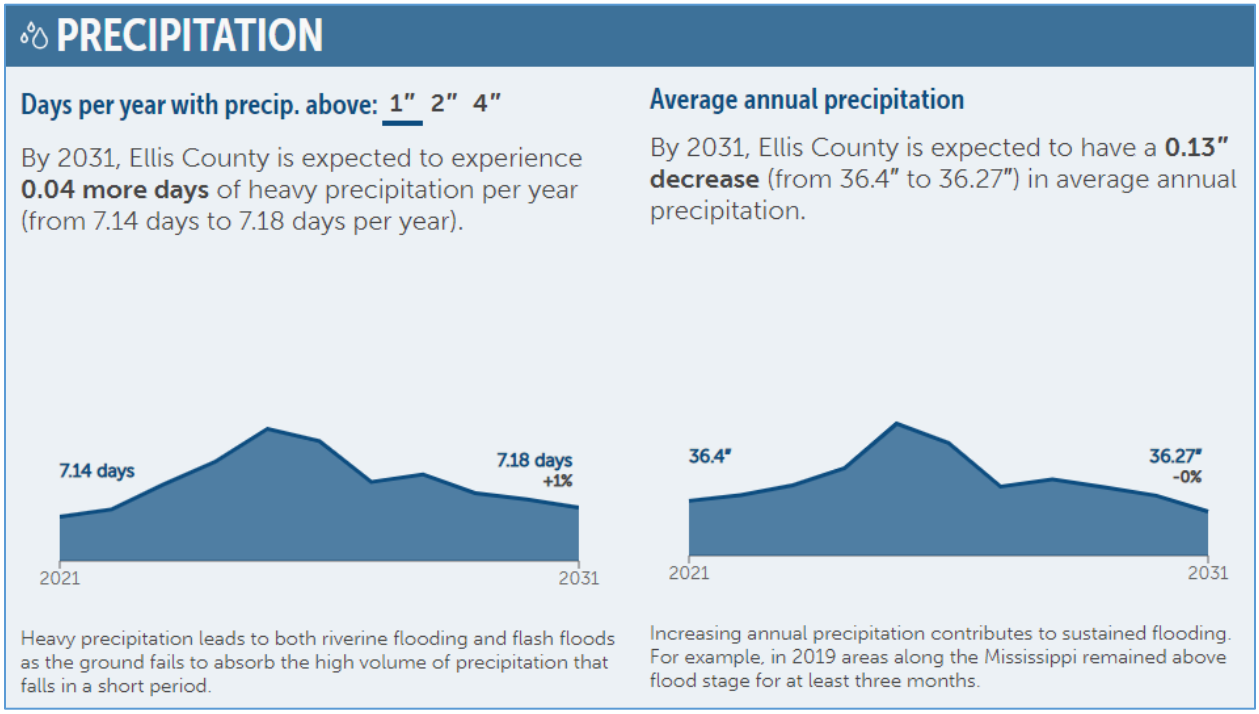
Italy Land Cover Types and Acreage Located Within the 100-year Floodplain			
Land Cover Type	**Total Area in Jurisdiction (Acres)**	**Total Area in the 100-year Floodplain (Acres)**	**Percentage (%) of Area in the 100-year Floodplain**
Vacant	262.9	Not known	Not known
Residential	297.10	Not known	Not known
Commercial	74.9	Not known	Not known
Agricultural	520.1	Not known	Not known
Public	90	Not known	Not known
Total	**1245**		

Midlothian Land Cover Types and Acreage Located Within the 100-year Floodplain			
Land Cover Type	**Total Area in Jurisdiction (Acres)**	**Total Area in the 100-year Floodplain (Acres)**	**Percentage (%) of Area in the 100-year Floodplain**
Agriculture	12847.1514	1161.289245	9.04%
Commercial	363.130634	30.609858	8.43%
Central Business District	11.979386	0	0.00%
Community Retail	158.447393	13.220695	8.34%
General Professional	126.722212	4.438379	3.50%
High Industrial	6081.467668	274.979564	4.52%
Light Industrial	1308.097598	133.240995	10.19%
Medium Density 1	49.565714	17.94299	36.20%
Medium Density 2	0.998463	0	0.00%
Multi-Family	34.23947	0	0.00%
Mobile Home	52.641879	1.866386	3.55%
Medium Industrial	490.056682	119.3618	24.36%
N8	7.169242	0	0.00%
Planned Development	12536.56778	1237.291944	9.87%
Residential 2.5	368.786887	48.8412	13.24%
Residential 3	336.918383	25.193806	7.48%
Single Family 1	3287.992037	252.40284	7.68%
Single Family 2	396.912378	21.446251	5.40%
Single Family 3	501.270583	66.802175	13.33%
Single Family 4	597.737948	12.209549	2.04%
Unclassified	24065.91944	2335.82796	9.71%
Total	**63623.77317**	**5756.965637**	**9.05%**

Oak Leaf Land Cover Types and Acreage Located Within the 100-year Floodplain			
Land Cover Type	**Total Area in Jurisdiction (Acres)**	**Total Area in the 100-year Floodplain (Acres)**	**Percentage (%) of Area in the 100-year Floodplain**
Residential	1090.30	244.18	21%
Farmland/Undeveloped	418.64	97.86	23%
Business	7.86	0	0%
Total	**1516.80**	**342.04**	**44%**

Ellis County Land Cover Types and Acreage Located Within the 100-year Floodplain			
Land Cover Type	**Total Area in Jurisdiction (Acres)**	**Total Area in the 100-year Floodplain (Acres)**	**Percentage (%) of Area in the 100-year Floodplain**
Commercial	22,165	12,830	57.88%
Utilities	117	1	0.85%
Residential	49,282	8,838	17.93%
Farmland/Undeveloped	416,561	268,238	64.39%
Total	**488,125**	**289,907**	**59.39%**

Headwater Economics provided the following data for the number of days per year with precipitation above 1" over the next 10 years.



The following questions address the overall flooding issues within the participating jurisdictions of Ellis County.

What rivers, creeks, and/or lakes are in your jurisdiction?
Alma: Nearby water includes Grays Creek, Cummins Creek, Burns Creek, Walker Creek, Lake Bardwell (located west of Alma), and Reservoir 1 (Barker Rd). **Bardwell:** None **Ennis:** Bardwell Lake, Lake Clark, City Lake **Ferris:** Long Branch Creek and Bear Creek are two creeks to the southwest of our jurisdiction. **Garrett:** None **Italy:** Houston Creek **Maypearl:** Chambers Creek, Oak Branch Creek, Bee Creek are in our city or surrounding area that affects us. **Midlothian:** Major streams: The major streams in the City of Midlothian, as defined in this Ordinance, are Armstrong Creek, Bedford Branch, Cottonwood Creek, Hollings Branch, Long Branch, Newton Branch, North Prong Creek, Sanders Branch, Soap Creek, South Prong Creek, and Waxahachie Creek. **Milford:** Mill Creek and Richland Creek **Oak Leaf:** Little Creek and Red Oak Creek **Ovilla:** Little Creek and Red Oak Creek **Palmer:** There are various ponds and lakes in the area. **Red Oak:** Red Oak Creek, Little Creek, Bear Creek, Brushy Creek **Waxahachie:** Lake Waxahachie, Katy Lake, and Waxahachie Creek are the main lakes and creeks in the city. **Ellis County Unincorporated:** There are various rivers, creeks, and lakes in the area. Please see maps in Appendix A.
Which of these water sources have a history of flooding?
Alma: All **Bardwell:** N/A **Ennis:** Bardwell Lake **Ferris:** All (but there are no structures at risk) **Garrett:** N/A **Italy:** None **Maypearl:** All **Midlothian:** All streams in the City of Midlothian, as defined in this Ordinance, are Armstrong Creek, Bedford Branch, Cottonwood Creek, Hollings Branch, Long Branch, Newton Branch, North Prong Creek, Sanders Branch, Soap Creek, South Prong Creek, and Waxahachie Creek have the potential for flooding or flash flooding. **Milford:** None **Oak Leaf:** All **Ovilla:** All **Palmer:** All **Red Oak:** All **Waxahachie:** All **Ellis County Unincorporated:** Multiple water sources have a history of flooding.
Name any streets or intersections that experience flooding or flash flooding:
Alma: I-45 **Bardwell:** None

Ennis: N/A
Ferris: 5th Street underpass at I-45 and 8th Street underpass at I-45.
Garrett: None
Italy: Venice Street & Milan Street
Maypearl: Main Street experiences the worst; drainage systems are challenged.
Midlothian: Old Fort Worth Rd West of Ward Rd/ Creek Bend Drive (flood markers installed 2020-2021)/ Nueces Trail (flood markers installed 2020-2021)/ Ponding on various streets in the City of Midlothian after significant rainfall.
Milford: None
Oak Leaf: Locust Drive at Uhl Road intersection/ S. Hampton Road at Little Creek/ S. Hampton Road at Red Oak Creek/ and Forest Brook Drive at Red Oak Creek.
Ovilla: None
Palmer: Various roads experience flash flooding.
Red Oak:

- 101 Live Oak Watkins Park
- 200 Live Oak, Lindsey Park (Sports Fields)
- 673 E Ovilla Rd Soccer Fields (Eastridge Elm)
- 122 S Hwy 342 ROISD sports / practice fields (ROHS)
- 154 Louise Ritter Blvd ROISD Sports / practice fields (ROJRHS)
- 200 Lake View Parkway, City Lake / Pearson Park
- Red Oak Golf Course (RO Creek)
- N. Pratt Road Bridges (Flood Prone)
- Red Oak Creek Bridges (flood Prone)
- Crest Brook at low water crossing (has flood gauge)
- 600 Blk. Shawnee (Flood Gate)
- Country Ridge @ Summer Hill (Flood Prone)
- 1400 Stainback (Flood Prone)
- 600 & 1100 Blk. Pierce (Flood Prone)
- 400 Blk. S IH-35 Trailer Park behind Taxidermy shop (Flood Prone RO Creek)

Waxahachie: Various roads experience flash flooding.
Ellis County Unincorporated: Various roads experience flash flooding.

What critical facilities or infrastructure (airports, dams, water treatment facilities, wastewater treatment facilities, schools, hospitals, fire stations, and police stations) are located in the 100-year floodplain?
Out of the 122 dams in Ellis County, Bardwell Dam is the only high-hazard dam, though a total of 38 dams are required to have Emergency Actions Plans. More dam information is in *Section 3.4.1*. Maypearl has a Wastewater Treatment Facility. In Red Oak, Qual Run lift station, water, and sewer lines are within the floodplain.
In the event of a wildfire, will flooding and erosion be an issue in restoring destroyed forested slopes?
No

The following table reflects the loss statistic of NFIP policy holders.

Loss Statistics as of 01/05/2022			
Community	Claim Status	Sum of Number of Losses	Sum of Total Net Payments
ELLIS COUNTY* (480798)		76	$1,845,040
	Closed with payment	57	$1,845,040

Loss Statistics as of 01/05/2022			
Community	Claim Status	Sum of Number of Losses	Sum of Total Net Payments
	Closed without payment	19	$0
ENNIS, CITY OF (480207)		1	$0
	Closed without payment	1	$0
ITALY, CITY OF (480800)		1	$8,118
	Closed with payment	1	$8,118
MIDLOTHIAN, CITY OF (480801)		6	$214,199
	Closed with payment	3	$214,199
	Closed without payment	2	$0
	Open	1	$0
OAK LEAF, CITY OF (481672)		10	$1,817,768
	Closed with payment	8	$1,817,768
	Closed without payment	2	$0
OVILLA, CITY OF (481155)		7	$562,304
	Closed with payment	5	$562,304
	Closed without payment	2	$0
RED OAK, CITY OF (481650)		6	$236,625
	Closed with payment	6	$236,625
WAXAHACHIE, CITY OF (480211)		25	$157,532
	Closed with payment	15	$157,532
	Closed without payment	10	$0

Historical Events- Flooding

Location	County/Zone	Date	Type	Dth	Inj	PrD	CrD
ELLIS CO.	MAYPEARL	5/12/2014	Flash Flood	0	0	0	0
ELLIS CO.	PALMER	6/25/2014	Flash Flood	0	0	0	0
ELLIS CO.	ENNIS	5/10/2015	Flash Flood	0	0	0	0
ELLIS CO.	RED OAK	5/26/2015	Flash Flood	0	0	0	0
ELLIS CO.	MIDLOTHIAN	10/23/2015	Flash Flood	0	0	5000	0
ELLIS CO.	RED OAK	10/31/2015	Flash Flood	0	0	1000	0
ELLIS CO.	MAYPEARL	6/12/2016	Flash Flood	0	0	0	0

Historical Events- Flooding							
Location	**County/Zone**	**Date**	**Type**	**Dth**	**Inj**	**PrD**	**CrD**
ELLIS CO.	PALMER	8/17/2016	Flash Flood	0	0	0	0
ELLIS CO.	PALMER	5/25/2015	Flood	0	0	0	0
ELLIS CO.	MAYPEARL	4/10/2017	Flood	0	0	0	0
Totals:				0	0	$6,000	$0

Source: NOAA National Centers for Environmental Information

3.2.6 Thunderstorms

Potential impacts from thunderstorms include:

- Property damage to fences, vehicles, equipment, and roofs
- Transportation delays
- Injury or death
- Electrical grid problems
- Power outage
- Communication problems – phone and internet lines down
- Natural environment damage, to include protected species and critical habitats
- Property damage
- Crop damage
- Fire- caused by lightning
- Blocked roadways from trees and damaged property

Thunderstorms				
Jurisdiction	**Location**	**Probability of Future Events**	**Level of Possible Damage**	**Maximum Probable Extent/Strength**
Alma	Extensive	Highly Likely	Limited	Medium
Bardwell	Extensive	Highly Likely	Limited	Medium
Ennis	Extensive	Likely	Critical	Major
Ferris	Extensive	Highly Likely	Limited	Medium
Garrett	Extensive	Likely	Minor	Minor
Italy	Extensive	Highly Likely	Limited	Medium
Maypearl	Extensive	Highly Likely	Critical	Medium
Midlothian	Extensive	Highly Likely	Limited	Medium
Milford	Extensive	Highly Likely	Limited	Medium
Oak Leaf	Extensive	Highly Likely	Limited	Medium
Ovilla	Extensive	Highly Likely	Limited	Medium
Palmer	Extensive	Highly Likely	Limited	Medium
Red Oak	Extensive	Highly Likely	Limited	Major
Waxahachie	Extensive	Highly Likely	Limited	Medium

Thunderstorms				
Jurisdiction	**Location**	**Probability of Future Events**	**Level of Possible Damage**	**Maximum Probable Extent/Strength**
Ellis County Unincorporated	Extensive	Highly Likely	Limited	Medium

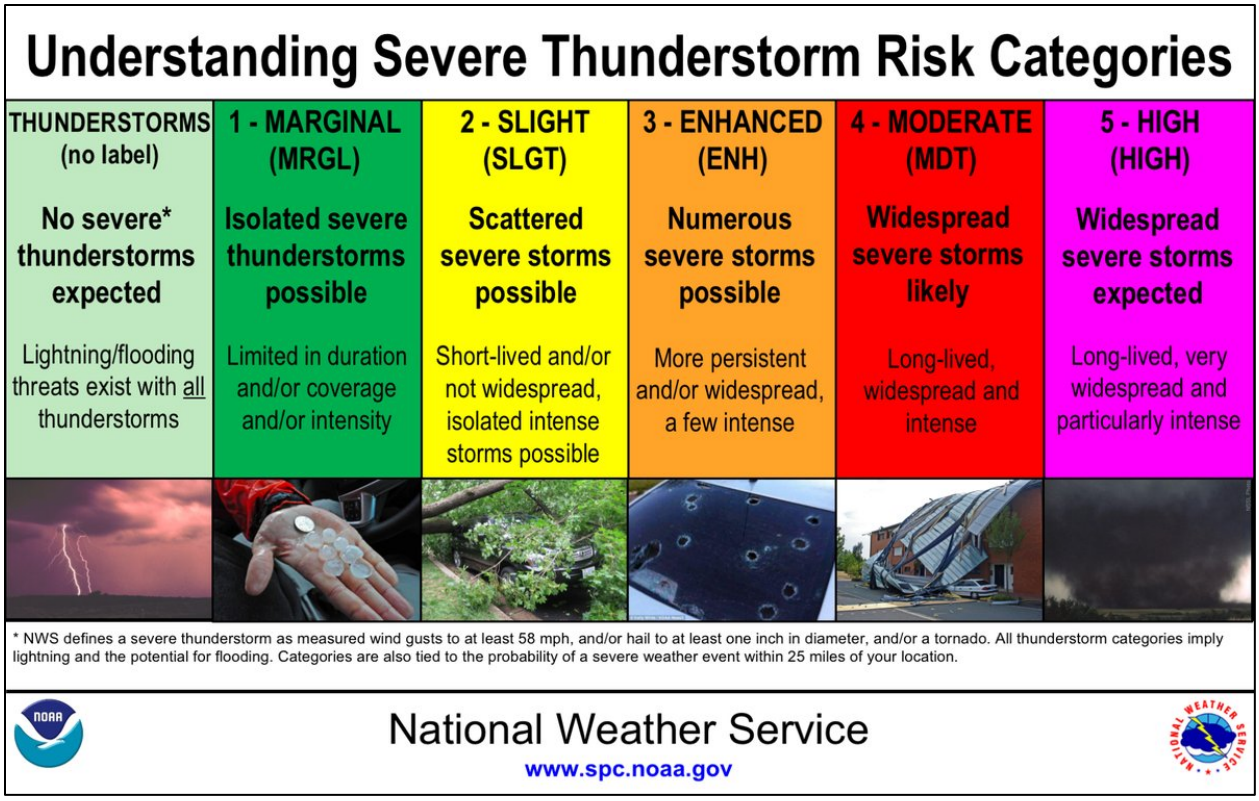
Although most new homes and buildings in the participating jurisdictions are built to resist the effects of all but the strongest thunderstorms, several mobile and manufactured home parks and vehicles remain vulnerable. Thousands of homes and vehicles can be damaged by high winds, hail, and lightning in a single storm, causing millions of dollars in damages.[5]

A thunderstorm is a storm that consists of rain-bearing clouds and has the potential to produce hail, high winds, and lightning.

- **Hail:** Hail occurs when, at the outgrowth of a severe thunderstorm, balls or irregularly shaped lumps of ice greater than 19.05 mm (0.75 inches) in diameter fall with rain. Evidence indicates maximum hailstone size is the most important parameter relating to structural damage, especially towards the more severe end of the scale. It must be noted that hailstone shapes are also an important feature, especially as the "effective" diameter of non-spheroidal specimens should ideally be an average of the coordinates. Spiked or jagged hail can also increase some aspects of damage.
- **Wind:** Straight-line winds are often responsible for the wind damage associated with a thunderstorm. Downbursts or micro-bursts are examples of damaging straight-line winds. A downburst is a small area of rapidly descending rain and rain-cooled air beneath a thunderstorm that produces a violent, localized downdraft covering 2.5 miles or less. Wind speeds in some of the stronger downbursts can reach 100 to 150 miles per hour, which is similar to that of a strong tornado. The winds produced from a downburst often occur in one direction and the worst damage is usually on the forward side of the downburst.
- **Lightning:** Lightning results from the buildup and discharge of electrical energy between positively and negatively charged areas within thunderstorms. A "bolt" or brilliant flash of light is created when the buildup becomes strong enough. These bolts of lightning can be seen in cloud-to-cloud or cloud-to-ground strikes. Bolts of lightning can reach temperatures approaching 50,000°F. While lightning is mostly affiliated with thunderstorms, lightning often strikes outside of these storms, as far as 10 miles away from any rainfall. Direct strikes have the power to cause significant damage to buildings, critical facilities, infrastructure, and the ignition of wildfires which can result in widespread damages to property and persons. Lightning is the most significant natural contributor to fires affecting the built environment.

The National Weather Service uses the following Storm Prediction Center (SPC) activity levels to represent severe weather outlooks and used to determine the extent of thunderstorm conditions:

[5] State of Texas Mitigation Plan. 2013, page 72.



The Storm Prediction Center uses a five-level risk system to define potential severe weather risks. Level one is the lowest and level five is the highest. Level one and level two are the most commonly issued. Level three through level five become progressively rarer. A higher risk level means a higher probability of severe weather impacting your area. Another way to think about the risks is using a color-risk scale. From the lowest risk to highest the colors transition from green to yellow to orange to red to pink.

- **A Level 1 (Marginal) Risk** of severe weather is issued when strong to borderline severe storms are possible. Thunderstorms are expected to be limited in their organization and/or only last a short amount of time. Severe thunderstorm coverage is anticipated to be very low along with marginal intensity.

- **A Level 2 (Slight/Standard) Risk** indicates the potential for severe thunderstorms. Coverage of severe thunderstorms is anticipated to be isolated to widely scattered. This is issued for most of our 'dryline' days where the number of storms will be limited, but quite intense. Varying levels of intensity are possible and depend on the severe weather setup. This risk is the 'standard' risk level for most of our severe weather days.

- **A Level 3 (Enhanced) Risk** indicates scattered to numerous severe thunderstorms are possible. This risk is issued when a higher concentration of severe weather is possible. Varying levels of severe weather intensity are expected, but the risk for higher-end severe weather increases. Depending on the setup there could be an increased risk for several tornadoes (some strong), giant hail, and/or widespread damaging wind gusts.

- **A Level 4 (Moderate) Risk** is rare and indicates increased confidence in a significant severe weather event. Numerous severe thunderstorms are expected with widespread severe weather.

Several strong, long-lived tornadoes, giant hail, and/or widespread destructive wind gusts are expected. The specific hazards will depend on the setup, but intense severe weather is likely.

- **A Level 5 (High) Risk** is very rare. A High Risk is issued only when confidence is high in a major outbreak of tornadoes and/or a long-lived derecho with hurricane-force wind gusts. Violent, long-lived tornadoes, giant hail, and/or an intense derecho are probable. While any of the above risk levels can and do produce high-end impacts, a high-risk issuance is a precursor to a 'Red Letter' day with devastating impacts.

Historical Events- Thunderstorms *(hail, high wind, lightning)*							
Location	**Date**	**Type**	**Mag**	**Dth**	**Inj**	**PrD**	**CrD**
RED OAK	4/3/2012	Hail	1	0	0	0	0
WAXAHACHIE	4/3/2012	Hail	1	0	0	0	0
RED OAK	4/3/2012	Hail	1	0	0	0	0
ALMA	5/7/2012	Hail	1.75	0	0	3000	0
MIDLOTHIAN	6/13/2012	Hail	1.25	0	0	100000	0
MIDLOTHIAN	6/13/2012	Hail	2.75	0	0	300000	0
MIDLOTHIAN	6/13/2012	Hail	1.5	0	0	0	0
MIDLOTHIAN	6/13/2012	Hail	1.75	0	0	160000	0
RED OAK	3/23/2013	Hail	1	0	0	0	0
FERRIS	5/21/2013	Hail	0.88	0	0	0	0
PALMER	5/21/2013	Hail	0.88	0	0	0	0
MIDLOTHIAN	3/28/2014	Hail	1	0	0	0	0
RED OAK	3/28/2014	Hail	0.75	0	0	0	0
RED OAK	3/28/2014	Hail	1	0	0	0	0
FERRIS	3/28/2014	Hail	1	0	0	0	0
FERRIS	3/28/2014	Hail	1.25	0	0	0	0
ENNIS	4/21/2014	Hail	1	0	0	0	0
WAXAHACHIE	4/21/2014	Hail	1.75	0	0	40000	0
WAXAHACHIE	4/21/2014	Hail	1	0	0	0	0
WAXAHACHIE	4/21/2014	Hail	0.75	0	0	0	0
MIDLOTHIAN	4/21/2014	Hail	0.88	0	0	0	0
WAXAHACHIE	4/21/2014	Hail	0.75	0	0	0	0
ENNIS	4/27/2014	Hail	1	0	0	0	0
WAXAHACHIE	10/2/2014	Hail	1.25	0	0	0	0
RED OAK	10/2/2014	Hail	1	0	0	0	0
MIDLOTHIAN	4/18/2015	Hail	1	0	0	0	0
WAXAHACHIE	4/18/2015	Hail	1	0	0	0	0
WAXAHACHIE	4/24/2015	Hail	1.75	0	0	12000	0
WAXAHACHIE	4/24/2015	Hail	1.5	0	0	4000	0
MIDLOTHIAN	4/26/2015	Hail	1	0	0	0	0
RED OAK	3/17/2016	Hail	0.75	0	0	0	0
MIDLOTHIAN	3/30/2016	Hail	1	0	0	0	0
RED OAK	5/11/2016	Hail	0.75	0	0	0	0
MIDLOTHIAN	2/27/2017	Hail	0.75	0	0	0	0
WAXAHACHIE	2/27/2017	Hail	1	0	0	0	0

Historical Events- Thunderstorms *(hail, high wind, lightning)*							
Location	**Date**	**Type**	**Mag**	**Dth**	**Inj**	**PrD**	**CrD**
WAXAHACHIE	2/27/2017	Hail	1	0	0	0	0
WAXAHACHIE	2/27/2017	Hail	1	0	0	0	0
WAXAHACHIE	2/27/2017	Hail	0.88	0	0	0	0
MIDLOTHIAN	5/3/2017	Hail	1	0	0	1000	0
OVILLA	5/3/2017	Hail	1	0	0	1000	0
RED OAK	5/3/2017	Hail	1	0	0	1000	0
WAXAHACHIE	5/3/2017	Hail	1	0	0	1000	0
RED OAK	5/3/2017	Hail	1	0	0	1000	0
ENNIS	5/3/2017	Hail	1	0	0	1000	0
MIDLOTHIAN	4/21/2018	Hail	1.5	0	0	0	0
OVILLA	4/21/2018	Hail	1	0	0	0	0
MIDLOTHIAN	4/21/2018	Hail	1	0	0	0	0
MIDLOTHIAN	4/21/2018	Hail	1.25	0	0	0	0
WAXAHACHIE	4/21/2018	Hail	1	0	0	0	0
MIDLOTHIAN	11/30/2018	Hail	0.88	0	0	0	0
PALMER	6/9/2019	Hail	1.5	0	0	0	0
MIDLOTHIAN	4/28/2020	Hail	1	0	0	0	0
WAXAHACHIE	4/28/2020	Hail	0.88	0	0	0	0
WAXAHACHIE	4/28/2020	Hail	1	0	0	0	0
WAXAHACHIE	4/28/2020	Hail	1	0	0	0	0
MIDLOTHIAN	4/28/2020	Hail	0.88	0	0	0	0
RED OAK	5/5/2020	Hail	1	0	0	0	0
OVILLA	8/16/2020	Hail	0.75	0	0	0	0
FERRIS	3/24/2021	Hail	1.5	0	0	0	0
MAYPEARL BEE ARPT	4/9/2021	Hail	0.75	0	0	0	0
MAYPEARL BEE ARPT	4/9/2021	Hail	1	0	0	0	0
MAYPEARL	4/9/2021	Hail	2	0	0	8000	0
MIDLOTHIAN	4/9/2021	Hail	0.75	0	0	0	0
MIDLOTHIAN	4/9/2021	Hail	0.88	0	0	0	0
MIDLOTHIAN	4/9/2021	Hail	1	0	0	0	0
MIDLOTHIAN	4/9/2021	Hail	1	0	0	0	0
MIDLOTHIAN	4/9/2021	Hail	1	0	0	0	0
OVILLA	4/9/2021	Hail	1	0	0	0	0
MILFORD	4/9/2021	Hail	1.75	0	0	3000	0
MAYPEARL	4/9/2021	Hail	1.75	0	0	50000	0
MAYPEARL	4/9/2021	Hail	1.5	0	0	0	0
MAYPEARL BEE ARPT	4/9/2021	Hail	1.75	0	0	5000	0
ITALY	4/9/2021	Hail	3	0	0	20000000	0
WAXAHACHIE	7/9/2012	Lightning		0	0	271000	0
WAXAHACHIE	8/16/2014	Lightning		0	0	200000	0
RED OAK	8/16/2014	Lightning		0	0	37000	0
MIDLOTHIAN	5/4/2012	Thunderstorm Wind	52	0	0	5000	0

Historical Events- Thunderstorms *(hail, high wind, lightning)*							
Location	**Date**	**Type**	**Mag**	**Dth**	**Inj**	**PrD**	**CrD**
ITALY	5/31/2012	Thunderstorm Wind	56	0	0	15000	0
MILFORD	5/31/2012	Thunderstorm Wind	56	0	0	4000	0
WAXAHACHIE	8/13/2013	Thunderstorm Wind	43	0	0	1000	0
MIDLOTHIAN	4/18/2015	Thunderstorm Wind	58	0	0	8000	0
WAXAHACHIE	4/18/2015	Thunderstorm Wind	52	0	0	3000	0
BARDWELL	5/10/2015	Thunderstorm Wind	50	0	0	5000	0
OVILLA	5/24/2015	Thunderstorm Wind	43	0	0	1000	0
MIDLOTHIAN	5/26/2015	Thunderstorm Wind	59	0	0	0	0
WAXAHACHIE	5/26/2015	Thunderstorm Wind	58	0	0	0	0
MIDLOTHIAN	5/26/2015	Thunderstorm Wind	63	0	0	0	0
WAXAHACHIE	11/17/2015	Thunderstorm Wind	50	0	0	0	0
MIDLOTHIAN	3/29/2017	Thunderstorm Wind	55	0	0	0	0
ENNIS	3/29/2017	Thunderstorm Wind	50	0	0	1000	0
ITALY	3/13/2019	Thunderstorm Wind	61	0	0	20000	0
ITALY	3/13/2019	Thunderstorm Wind	55	0	0	10000	0
ALMA	5/18/2019	Thunderstorm Wind	55	0	0	10000	0
RED OAK	6/23/2019	Thunderstorm Wind	50	0	0	0	0
WAXAHACHIE	6/29/2019	Thunderstorm Wind	48	0	0	500	0
OVILLA	10/20/2019	Thunderstorm Wind	54	0	0	5000	0
ENNIS	10/21/2019	Thunderstorm Wind	60	0	0	10000	0
WAXAHACHIE	7/2/2020	Thunderstorm Wind	50	0	0	0	0
Total Hail:				**0**	**0**	**$2,069,100**	**$0**
Total Lightning:				**0**	**0**	**$50,800**	**$0**
Total Thunderstorm Wind:				**0**	**0**	**$98,500**	**$0**

Source: NOAA National Centers for Environmental Information

3.2.7 Tornadoes

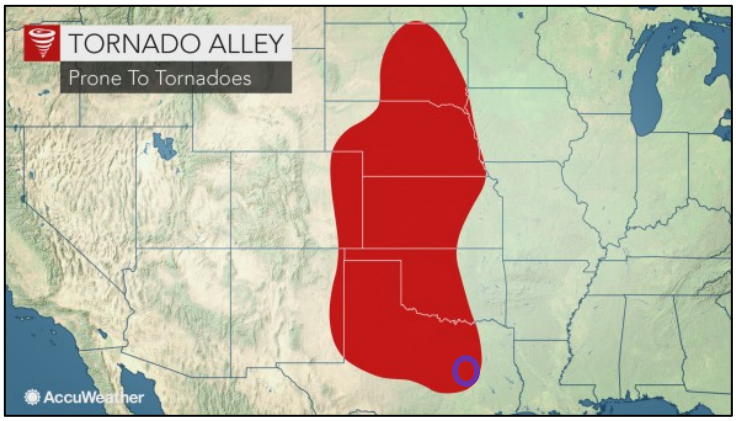
Potential impacts from tornadoes include:

- Injury or death
- Power outage
- Blocked roadways from trees and damaged property
- Natural gas pipeline breaks – fire injuries, possible deaths
- Transportation disruption
- Rerouting traffic
- Loss of property
- Structure and infrastructure damage
- Misplaced residents
- Natural environment damage, to include protected species and critical habitats

Tornadoes				
Jurisdiction	**Location**	**Probability of Future Events**	**Level of Possible Damage**	**Maximum Probable Extent/Strength**
Alma	Extensive	Possible	Limited	Medium
Bardwell	Significant	Highly Likely	Critical	Medium
Ennis	Significant	Likely	Critical	Major
Ferris	Significant	Possible	Catastrophic	Minor
Garrett	Extensive	Possible	Limited	Medium
Italy	Significant	Highly Likely	Critical	Medium
Maypearl	Extensive	Highly Likely	Catastrophic	Major
Midlothian	Significant	Highly Likely	Critical	Medium
Milford	Significant	Possible	Critical	Medium
Oak Leaf	Negligible	Unlikely	Minor	Minor
Ovilla	Extensive	Possible	Limited	Medium
Palmer	Significant	Highly Likely	Critical	Medium
Red Oak	Negligible	Possible	Limited	Major
Waxahachie	Extensive	Possible	Catastrophic	Medium
Ellis County Unincorporated	Extensive	Highly Likely	Critical	Medium

A tornado is a violently rotating column of air that comes in contact with the ground. A tornado can either be suspended from, or occur underneath, a cumuliform cloud. It is often, but not always, visible as a condensation funnel.

Residents in Ellis County are no strangers to tornadic events, as this area of Texas is a part of "Tornado Alley." Tornado Alley is an area of the U.S. where there is a high potential for tornado development. This area encompasses much of northern Texas northward through Oklahoma, Kansas, Nebraska and parts of New Mexico, South Dakota, Iowa, and eastern Colorado, as seen in this picture.



Are there any community safe rooms in your jurisdiction?
There are various locations within the Ferris Independent School District with safe rooms. Two schools in Midlothian have designated safe rooms: Dieterich Middle School Gymnasium (2800 Sudith Lane) and Midlothian Heritage High School (4000 FM 1387) has a community safe room that is currently being built in 2021.

The Enhanced Fujita Scale, or EF Scale, is the scale for rating the strength of tornadoes during the observed time period via the damage they cause. The scale takes into account how most structures are designed and is thought to be an accurate representation of the surface wind speeds in the most violent tornadoes.

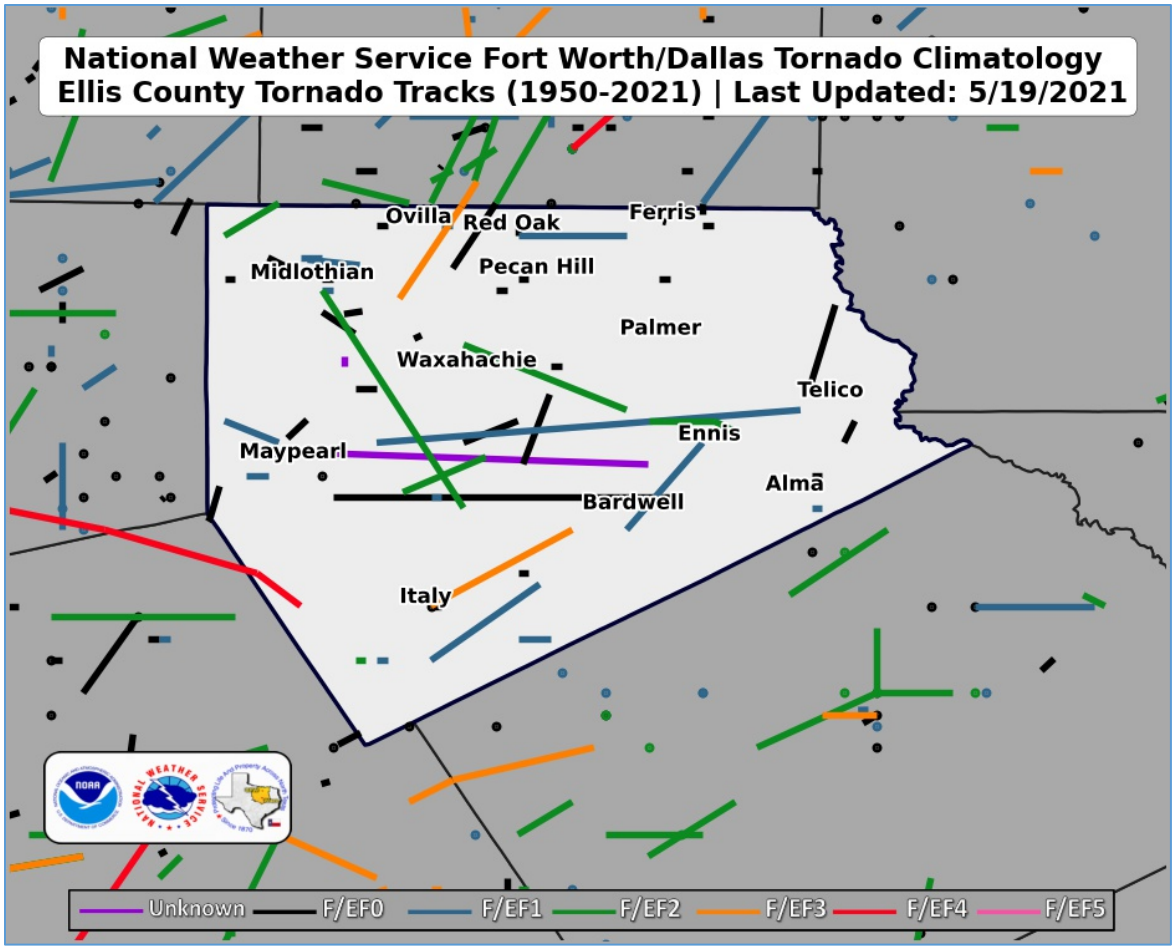
EF Rating	Wind Speeds	Expected Damage		
EF-0	65-85 mph	'Minor' damage: shingles blown off or parts of a roof peeled off, damage to gutters/siding, branches broken off trees, shallow rooted trees toppled.		
EF-1	86-110 mph	'Moderate' damage: more significant roof damage, windows broken, exterior doors damaged or lost, mobile homes overturned or badly damaged.		
EF-2	111-135 mph	'Considerable' damage: roofs torn off well constructed homes, homes shifted off their foundation, mobile homes completely destroyed, large trees snapped or uprooted, cars can be tossed.		
EF-3	136-165 mph	'Severe' damage: entire stories of well constructed homes destroyed, significant damage done to large buildings, homes with weak foundations can be blown away, trees begin to lose their bark.		
EF-4	166-200 mph	'Extreme' damage: Well constructed homes are leveled, cars are thrown significant distances, top story exterior walls of masonry buildings would likely collapse.		
EF-5	> 200 mph	'Massive/incredible' damage: Well constructed homes are swept away, steel-reinforced concrete structures are critically damaged, high-rise buildings sustain severe structural damage, trees are usually completely debarked, stripped of branches and snapped.		

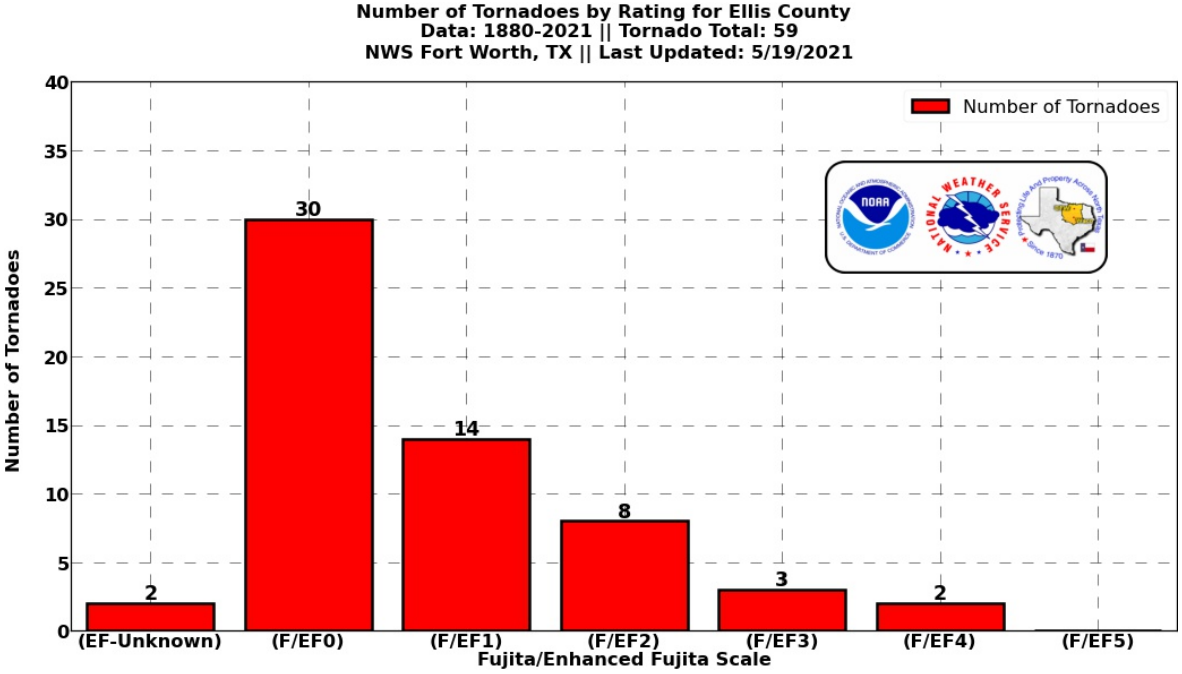
Historical Events- Tornadoes

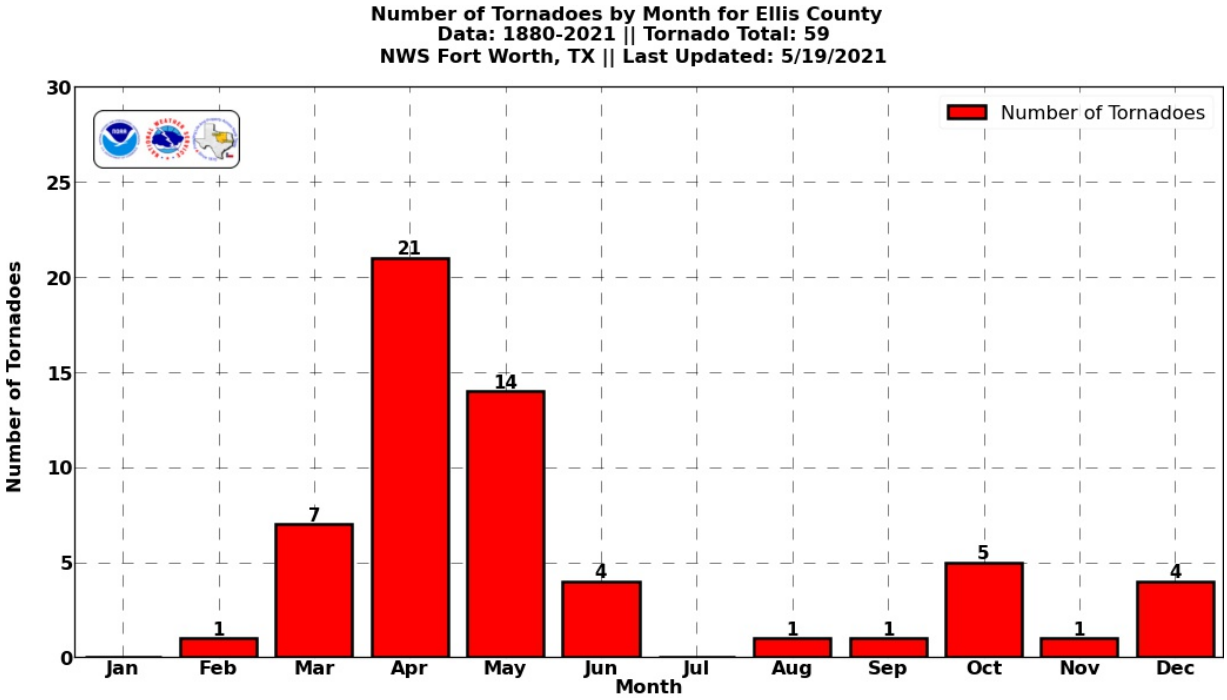
Location	Date	Type	Mag	Dth	Inj	PrD	CrD
ENNIS	5/15/2013	Tornado		0	1	3000	0
MIDLOTHIAN	4/24/2015	Tornado		0	0	650000	0
MAYPEARL	12/26/2015	Tornado		0	0	120000	0
MIDLOTHIAN	10/20/2019	Tornado		0	0	25000	0
FERRIS	10/20/2019	Tornado		0	0	10000000	0
Totals:				**0**	**1**	**$10,798,000**	**$0**

Source: NOAA National Centers for Environmental Information

Property damage included damage to trees, power lines, and homes. The following map and charts are from the National Weather Service (NWS) Fort Worth Tornado Climatology page. They reflect historical tornado data in the County.


National Weather Service Fort Worth/Dallas Tornado Climatology
Ellis County Tornado Tracks (1950-2021) | Last Updated: 5/19/2021
Ovilla
Red Oak
Ferris
Midlothian
Pecan Hill
Palmer
Waxahachie
Telico
Ennis
Maypearl
Almā
Bardwell
Italy
Unknown
F/EF0
F/EF1
F/EF2
F/EF3
F/EF4
F/EF5


Number of Tornadoes by Rating for Ellis County
Data: 1880-2021 || Tornado Total: 59
NWS Fort Worth, TX || Last Updated: 5/19/2021
Number of Tornadoes
Number of Tornadoes
Fujita/Enhanced Fujita Scale
0
5
10
15
20
25
30
35
40
2
30
14
8
3
2
(EF-Unknown)
(F/EF0)
(F/EF1)
(F/EF2)
(F/EF3)
(F/EF4)
(F/EF5)



3.2.8 Wildfires

Potential impacts from wildfires include:

- Injury or death
- Property and fence damage
- Road closure
- Loss of power – burning utility poles
- Loss of property
- Loss of crops and livestock
- Structure and infrastructure damage
- Misplaced residents
- Loss of resources
- Natural environments damage, to include protected species and critical habitats

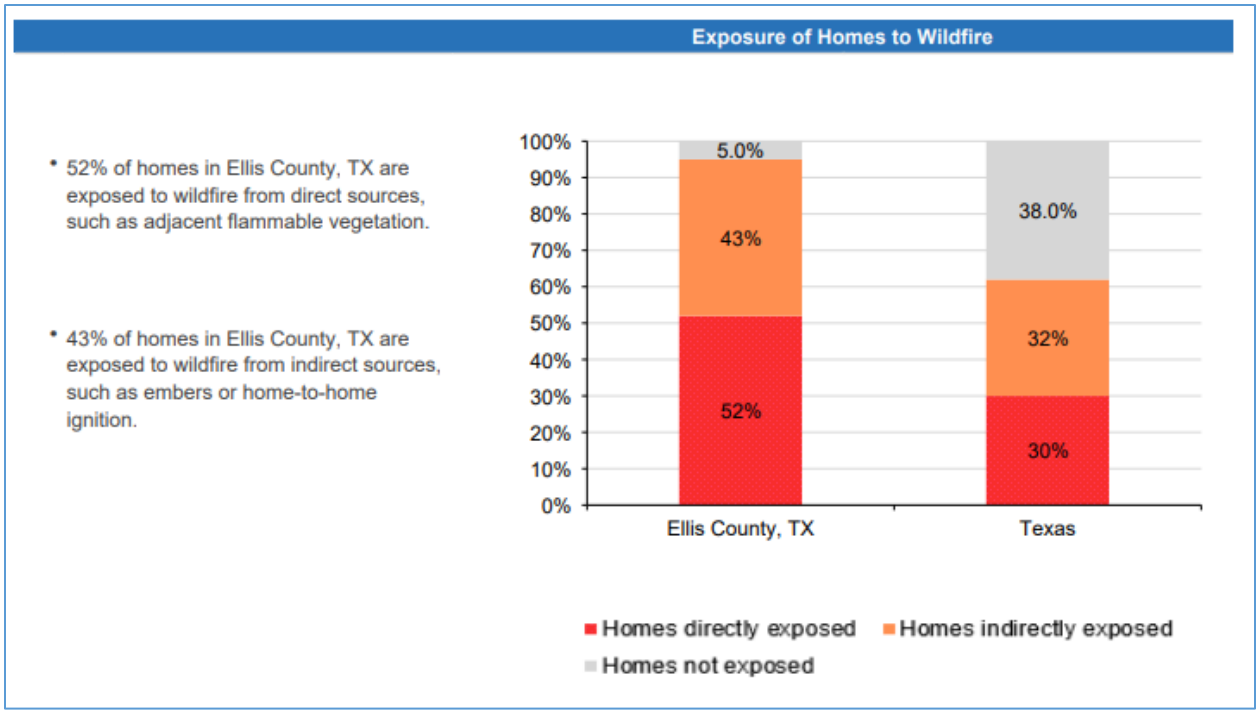
Wildfires				
Jurisdiction	**Location**	**Probability of Future Events**	**Level of Possible Damage**	**Maximum Probable Extent/Strength**
Alma	Limited	Possible	Limited	Minor
Bardwell	Limited	Likely	Limited	Minor
Ennis	Limited	Unlikely	Limited	Minor
Ferris	Negligible	Likely	Minor	Major
Garrett	Limited	Likely	Limited	Minor
Italy	Limited	Likely	Limited	Minor
Maypearl	Extensive	Unlikely	Catastrophic	Minor

Wildfires				
Jurisdiction	**Location**	**Probability of Future Events**	**Level of Possible Damage**	**Maximum Probable Extent/Strength**
Midlothian	Limited	Likely	Limited	Minor
Milford	Limited	Possible	Limited	Minor
Oak Leaf	Negligible	Unlikely	Minor	Minor
Ovilla	Limited	Possible	Limited	Minor
Palmer	Limited	Likely	Limited	Minor
Red Oak	Negligible	Possible	Minor	Minor
Waxahachie	Limited	Possible	Limited	Minor
Ellis County Unincorporated	Limited	Likely	Limited	Minor

Does your jurisdiction participate in prescribed burns? *A controlled or prescribed burn, also known as hazard reduction burning, backfire, swailing, or a burn-off, is a wildfire set intentionally for purposes of forest management, farming, prairie restoration or greenhouse gas abatement.*
Alma: No **Bardwell:** N/A **Ennis:** No **Ferris:** Yes **Garrett:** No **Italy:** Yes **Maypearl:** No **Midlothian:** No **Milford:** No **Oak Leaf:** No **Ovilla:** No **Palmer:** No **Red Oak:** No **Waxahachie:** No **Ellis County Unincorporated:** Yes, the Fire Marshal's Office issues permits

The Keetch-Byram Drought Index (KBDI) is used by the Texas A&M Forest Service and was developed to correlate the effects of drought on wildfire potential. This relationship is reflected in the *Drought* hazard section.

According to Headwater Economics, 52% of homes in Ellis County are exposed to wildfire from direct sources, such as adjacent flammable vegetation, and 43% of homes in Ellis County are exposed to wildfire from indirect sources, such as embers or home-to-home ignition. The chart below reflects this data. More details on the county's wildfire risk are provided in *A Profile of Wildfire Risk* in Appendix F.

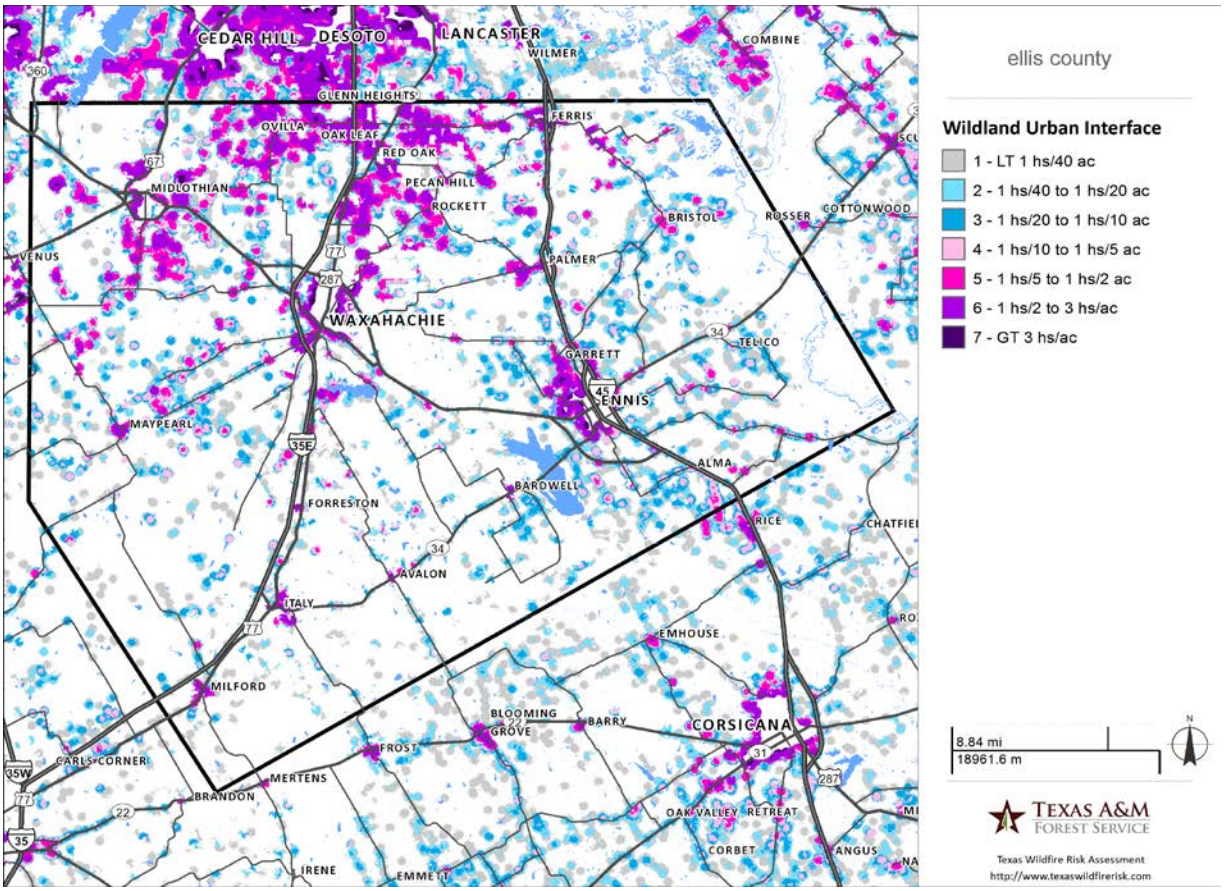


Wildland Urban Interface

For the purposes of this hazard analysis, wildfires are assessed under what is known as the wildland-urban interface (WUI). The WUI is an area of development that is susceptible to wildfires due to the amount of structures located in an area with vegetation that can act as fuel for a wildfire. The WUI creates an environment in which fire can move readily between structural and vegetation fuels. The expansion of these areas has increased the likelihood that wildfires will threaten structures and people.

WUI – Population and Acres in Ellis County

Housing Density	WUI Population	Percent of WUI Population	WUI Acres	Percent of WUI Acres
LT 1hs/40ac	1,431	1.2 %	64,552	30.7 %
1hs/40ac to 1hs/20ac	2,803	2.3 %	34,655	16.5 %
1hs/20ac to 1hs/10ac	6,237	5.1 %	34,472	16.4 %
1hs/10ac to 1hs/5ac	10,677	8.8 %	28,625	13.6 %
1hs/5ac to 1hs/2ac	20,201	16.6 %	24,881	11.8 %
1hs/2ac to 3hs/1ac	72,908	59.9 %	22,715	10.8 %
GT 3hs/1ac	7,533	6.2 %	598	0.3 %
Total	**121,790**	**100.0 %**	210,498	100.0 %

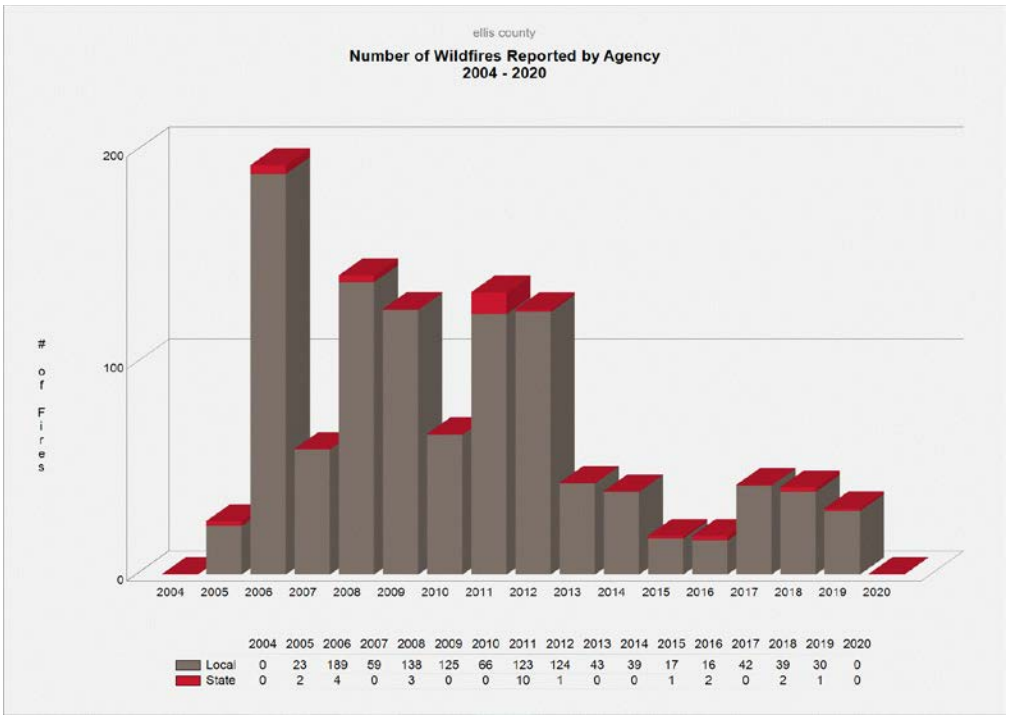


Wildfire Occurrence Statistics

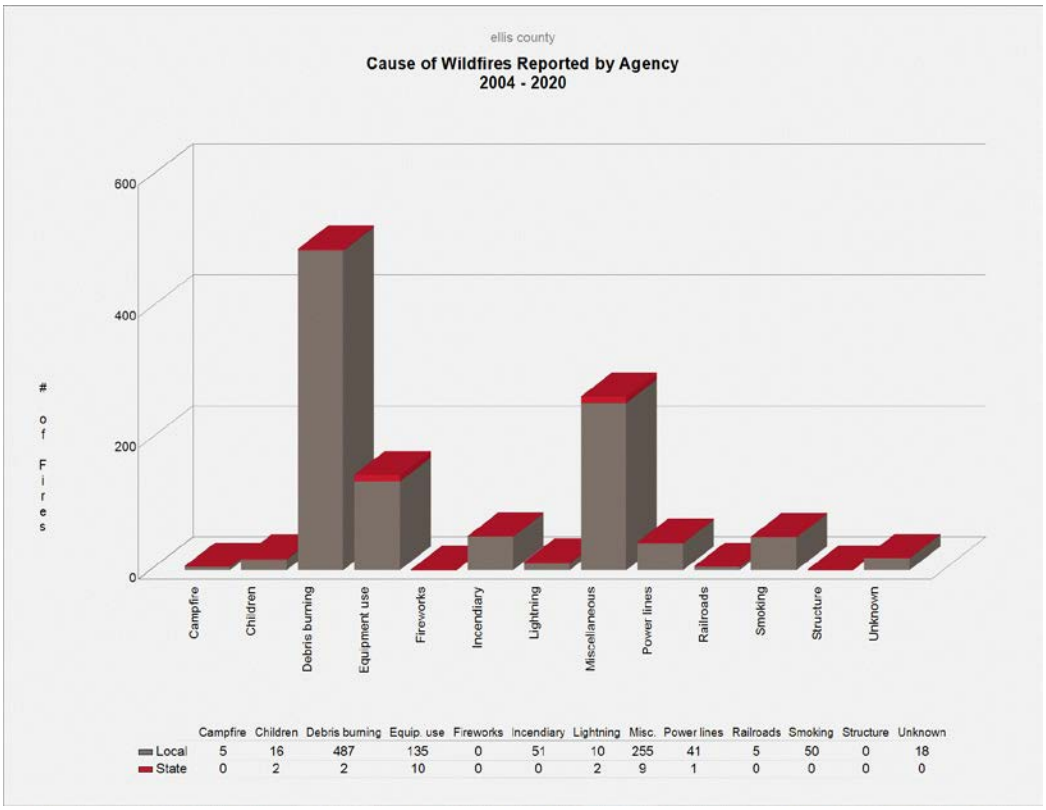
Wildfire occurrence statistics provide insight as to the number of fires, acres burned and cause of fires in Texas. These statistics are useful for prevention and mitigation planning. They can be used to quantify the level of fire business, determine the time of year most fires typically occur, and develop a fire prevention campaign aimed at reducing a specific fire cause. The fire occurrence statistics are grouped by primary response agency type, which include:

- **Texas Forest Service (TFS)** – The Texas Forest Service fire occurrence database represents all state-reported fires.
- **Local** – The local category includes fires reported via Texas Forest Service's online fire department reporting system. It is a voluntary reporting system that includes fires reported by both paid and volunteer fire departments since 2004.

Seventeen years of historic fire report data was used to create the fire occurrence summary charts. Data was obtained from state and local fire department report data sources for the years 2004 to 2020. The compiled fire occurrence database was cleaned to remove duplicate records and to correct inaccurate locations.



The following Wildfire Ignitions dataset from the Texas A&M Forest Service (TFS) shows the cause of the fires reported in 2004-2020. The date range is set by TFS.



Source: Texas A&M Forest Service

Prioritized Fuel Reduction and Treatment of Structural Ignitability

Wildfire, or wildland fire, is any fire occurring on grassland, forest, or prairie, regardless of ignition source, damages, or benefits. Wildfires are fueled almost exclusively by natural vegetation. Interface or intermix fires are urban/wildland fires in which vegetation and the built environment provide fuel. The following chart shows the vegetation, and thus the amount of fuel sources, in Ellis County. Grassland is the majority of vegetation in the county and can be used for grazing.

	Class	Description	Acres	Percent
	Open Water	All areas of open water, generally with < 25% cover of vegetation or soil	10,500	1.7 %
	Developed Open Space	Impervious surfaces account for < 20% of total cover (i.e. golf courses, parks, etc…)	29,397	4.7 %
	Developed Low Intensity	Impervious surfaces account for 20-49% of total cover	31,022	5.0 %
	Developed Medium Intensity	Impervious surfaces account for 50-79% of total cover	4,867	0.8 %
	Developed High Intensity	Impervious surfaces account for 80-100%of total cover	2,392	0.4 %
	Barren Land (Rock/Sand/Clay)	Vegetation generally accounts for <15% of total cover	1,795	0.3 %
	Cultivated Crops	Areas used for the production of annual crops, includes land being actively tilled	135,916	21.7 %
	Pasture/Hay	Areas of grasses and/or legumes planted for livestock grazing or hay production	97,302	15.5 %
	Grassland/Herbaceous	Areas dominated (> 80%) by grammanoid or herbaceous vegetation, can be grazed	231,567	37.0 %
	Marsh	Low wet areas dominated (>80%) by herbaceous vegetation	1,135	0.2 %
	Shrub/Scrub	Areas dominated by shrubs/trees < 5 meters tall, shrub canopy > than 20% of total vegetation	1,031	0.2 %
	Floodplain Forest	> 20% tree cover, the soil is periodically covered or saturated with water	9,949	1.6 %
	Deciduous Forest	> 20% tree cover, >75% of tree species shed leaves in response to seasonal change	64,653	10.3 %
	Live Oak Forest	> 20% tree cover, live oak species represent >75% of the total tree cover	373	0.1 %
	Live Oak/Deciduous Forest	> 20% tree cover, neither live oak or deciduous species represent >75% of the total tree cover	2	0.0 %
	Juniper or Juniper/Live Oak Forest	> 20% tree cover, juniper or juniper/live oak species represent > 75% of the total tree cover	183	0.0 %
	Juniper/Deciduous Forest	> 20% tree cover, neither juniper or deciduous species represent > 75% of the total tree cover	4,027	0.6 %
	Pinyon/Juniper Forest	> 20% tree cover, pinyon or juniper species represent > 75% of the total tree cover	0	0.0 %
	Eastern Redcedar Forest	> 20% tree cover, eastern redcedar represents > 75% of the total tree cover	1	0.0 %
	Eastern Redcedar/Deciduous Forest	> 20% tree cover, neither eastern redcedar or deciduous species represent > 75% of the total tree cover	0	0.0 %
	Pine Forest	> 20% tree cover, pine species represent > 75% of the total tree cover	0	0.0 %

	Pine Regeneration	Areas of pine forest in an early successional or transitional stage	0	0.0 %
	Pine/Deciduous Forest	> 20% tree cover, neither pine or deciduous species represent > 75% of the total tree cover	0	0.0 %
	Pine/Deciduous Regeneration	Areas of pine or pine/deciduous forest in an early successional or transitional stage	0	0.0 %
	Total		**626,112**	**100.0 %**

Source: Texas Wildfire Risk Assessment Portal Professional Viewer.

Common practices to minimize the spread of wildfire are fuel breaks and fire breaks. A **fuel break** is the thinning of vegetation, or fuels, over a specific area of land. They are most commonly used to surround a community and slow the spread of a wildfire. By decreasing the amount of vegetation that the fire has to travel through, the risk of extreme fire behavior greatly depreciates.

Types of fuel breaks include:

- **Mechanical Treatments**- A mechanical treatment removes fuels by cutting shrubs, small trees and ladder fuels that make up the understory of a forested area. Materials are either taken from the site or chipped into smaller pieces. Fuels are selected for removal based on how they would contribute to a wildfire. For example, a thick patch of cedar could readily ignite and release significant heat and embers. This fuel type contributes to the rapid spread of a wildfire and would need to be removed.

The objective of mechanical treatment is to reduce the intensity of wildfire. If there is less fuel to burn the fire stays low to the ground giving firefighters a safer condition in which to work.

- **Mulching**- A mulching operation is intended to break fuels into smaller pieces and spread them within the fuel break. While the smaller pieces will still carry fire, they will significantly reduce the intensity of it. The goal is to reduce ladder fuels like tall brush that could carry a ground fire into the top of a tree.

Mulching equipment is classified as either traditional mowers or mulchers that grind the material. Heavy duty mowers are useful when fuels are small enough to be pushed over. However, for sites with an established woody mid-story, or ladder fuels, other equipment may be needed.

- **Herbicide Treatment**- Herbicides are used to control invasive species of plants that will “take over” an area. Invasive plant species can also be reduced with mechanical thinning.

The effectiveness of herbicide treatments depends on existing vegetation, topography, and other local restrictions. Thick underbrush may require mechanical treatments prior to the use of herbicides.

- **Grazing**- Removing fuels by grazing relies on the consumption of plants by animals. Various types of livestock are used in this way across the state, including Ellis County.

- **Prescribed Burning**- Prescribed or controlled, burning is the most commonly used tool for managing hazardous fuel buildups because of its relatively low cost per acre. Prescribed fire improves natural habitats and reduces heavy fuels. It is important to use a certified prescribe burn manager to improve fire safety and reduce smoke management issues.

Fuel breaks are most effective when placed along a natural fire break like a road. Choosing a site along a road also allows easy access for equipment. Regular maintenance of breaks increases their effectiveness in preventing wildfires. To maintain a fuel break, the use of herbicides as a follow up treatment to mulching will help reduce the amount of weed sprouts. Grazing is also an option to maintain a fuel break.

When creating a fuel break, these tips should be used:

- Follow a natural fire break or contour lines.
- Prune large trees to 10 feet from ground.
- Remove ladder fuels such as tall brush and small trees.
- Thin trees to create a crown spacing of 25 to 30 feet.
- Break up thick areas of brush.
- Maintain a minimum width of 60 feet on flat land and 100 feet on slopes.

A **fire break** is a break in vegetation. In some cases, it may be a gravel road, a river, or a clearing made by a bulldozer. A 'green' fire break uses grasses with high moisture content, such as winter rye or winter wheat to provide a break in the continuity of the fuel. If wide enough, a fire break will stop the spread of direct flame. However, embers can still be lofted into the air and travel across the line.

Considering the various types of fuel and fire breaks, the participating jurisdictions who have identified wildfires as a threat have listed wildfire mitigation actions in Chapter 4, along with actions for all the other identified hazards.

3.2.9 Winter Storms

Potential impacts from winter storms include:

- Structure and infrastructure damage
- Injury or death
- Power outages
- Loss of ability to use roads for driving
- Increased traffic accidents
- Loss of heat
- Stranded travelers / motels at full capacity
- Tree debris create fuel load for fire hazard
- Delayed emergency response time
- Frozen/ busted pipes leading to loss of water
- Disruption of traffic
- Impacts to the economy
- Communication capabilities decrease

Winter Storms				
Jurisdiction	**Location**	**Probability of Future Events**	**Level of Possible Damage**	**Maximum Probable Extent/Strength**
Alma	Extensive	Likely	Limited	Medium
Bardwell	Extensive	Likely	Limited	Medium

Winter Storms				
Jurisdiction	**Location**	**Probability of Future Events**	**Level of Possible Damage**	**Maximum Probable Extent/Strength**
Ennis	Extensive	Likely	Critical	Major
Ferris	Extensive	Likely	Minor	Major
Garrett	Extensive	Likely	Limited	Medium
Italy	Extensive	Likely	Limited	Medium
Maypearl	Extensive	Highly Likely	Catastrophic	Major
Midlothian	Extensive	Likely	Limited	Medium
Milford	Extensive	Likely	Limited	Medium
Oak Leaf	Extensive	Possible	Minor	Medium
Ovilla	Extensive	Likely	Limited	Medium
Palmer	Extensive	Likely	Limited	Medium
Red Oak	Extensive	Possible	Limited	Major
Waxahachie	Extensive	Likely	Limited	Medium
Ellis County Unincorporated	Extensive	Likely	Limited	Medium

Weather Conditions and SPIA Index Levels at a Glance:

Ice and Wind: Radial Ice in Inches; Wind in Miles per Hour.	< 15 mph	15-25 mph	25-35 mph	> = 35 mph
0.10 – 0.25 inches	0	1	2	3
0.25 – 0.50 inches	1	2	3	4
0.50 – 0.75 inches	2	3	4	5
0.75 – 1.00 inches	3	4	5	5
1.00 – 1.50 inches	4	5	5	5
> 1.50 inches	5	5	5	5

The Sperry-Piltz Ice Accumulation (SPIA) Index is used to determine the extent of winter conditions.

Winter storms originate as mid-latitude depressions or cyclonic weather systems, sometimes following the path of the jet stream. A winter storm or blizzard combines heavy snowfall, high winds, extreme cold, and ice storms. Many winter depressions give rise to exceptionally heavy rain and widespread flooding and conditions worsen if the precipitation falls in the form of snow. The winter storm season varies widely, depending on latitude, altitude, and proximity to moderating influences. The time period of most winter

weather is expected to be during the winter season, between November and March. Winter storms affect the entire planning area equally.

During periods of extreme cold and freezing temperatures, water pipes can freeze and crack, roads and bridges can become unpassable, and critical services could be paralyzed. Ice can build up, causing power lines to break under the weight or causing tree limbs to fall on the lines. These events can disrupt electric service for long periods of time.

There are over 534 bridges in Ellis County. Bridge details are located in Section 3.3, *Vulnerabilities and Changes in Development*.

One of the most recent disaster declarations in the County, and the whole State, was for a winter storm.

Disaster	Event	Incident Period	Declared
DR-4586	Texas Severe Winter Storms	February 11-21, 2021	February 19, 2021

DR-4586 showed how the effect of no power resulted in lack of heat and lack of water, causing hypothermia and death in many vulnerable populations. The following news article, *Death Toll From Texas Winter Storm Continues to Rise*, from The New York Times, reflects this disaster:

Death Toll From Texas Winter Storm Continues to Rise
Epidemiologists examining causes of deaths reported from Feb. 11 to March 5 have added 59 deaths to the storm's toll, bringing it to 210.

By Christine Hauser and Edgar Sandoval
July 14, 2021

> "The death toll from the freezing winter weather that battered Texas and caused widespread power outages this year has risen by 59, bringing the total to 210, officials said.
>
> The human loss — of young and old, in urban and rural communities — has devastated families across Texas. The Department of State Health Services, which released the latest data on Tuesday, said the numbers could rise as epidemiologists examine the causes of deaths reported from Feb. 11 to March 5.
>
> "The majority of confirmed deaths were associated with hypothermia," the department said in a report. Other deaths were caused by vehicle accidents, carbon monoxide poisoning, falls, fire, and exacerbation of chronic illnesses tied to the winter storm, it said.
>
> The deaths took place across 60 counties, the data shows. The hardest hit were Harris County, with 43 confirmed storm deaths; Travis County, with 28; and Dallas, with 20."

An economic impact may occur due to increased consumption of heating fuel, which can lead to energy shortages and higher prices. Schools often close when severe winter weather is forecasted, and it becomes a logistical burden for parents who then have to miss work or find alternative childcare. House fires and resulting deaths tend to occur more frequently from increased and improper use of alternate heating sources. Fires during winter storms also present a greater danger because water supplies may freeze and impede firefighting efforts.

According to the Texas Tribune, “the 2021 February power outages… were primarily caused by the inability of power plants to operate in the extreme cold. It was the same problem that Texas faced during the 2011 winter storm.” They go on to say, “But after the 2011 storm, recommendations made by federal regulators and experts to better prepare the Texas electricity grid for winter weather were never implemented by Texas leaders. When the February storm caused even bigger disruptions, state leaders were hammered publicly for ignoring the warnings of 2011.

Lawmakers this year passed a sweeping piece of legislation to require power plants to “weatherize” their facilities against extreme weather conditions. They left the details of how to do that up to the Public Utility Commission of Texas, which regulates utilities and is designing the weatherization requirements for power plants, and the Texas Railroad Commission, which regulates the state’s oil and gas industry.”[6]

The following article highlights the severe impacts of winter weather in North Central Texas and Ellis County. Although this article describes a 2013 storm, it also describes what Ellis County could experience again.

National Weather Service: North Texas Snowfall Events

December 5-6, 2013

A winter storm affected much of North and Central Texas for an extended period from December 5th through the 10th. A combination of freezing rain, sleet, and a little snow began falling during the day on the 5th and continued through the morning hours of the 6th. As the ice and sleet settled on the 6th, a thick layer of ice paralyzed most of the area north of a line from Goldthwaite to Cleburne to Ennis to Sulphur Springs. In this area, accumulations of sleet and ice measured up to 5" with the highest amounts from Denton to Sherman to Bonham.

Temperatures remained below freezing until the 9th and 10th resulting in a prolonged winter event. Most residents were forced to remain at home for several days. A new term, coined "cobblestone ice," was used to describe the condition of the ice on the interstates and highways due to the compaction of ice and sleet.

NBC 5 News captured "cobblestone ice" on North Texas roads

South of this area, lighter amounts of icing occurred producing mainly icy bridges, overpasses, and elevated surfaces. As a result of the ice storm, significant tree damage occurred with thousands of tree branches falling under the weight of the ice. Power lines were also brought down, and at the peak of the storm, 275,000 customers were without power in the North Texas region. Most schools, especially in the hardest hit areas, were closed for several days. Some businesses were forced to close for a day or two also. Hundreds of injuries were reported due to falls on the ice but exact numbers were not available. Seven fatalities occurred during this event; 4 in vehicles, 2 from exposure, and 1 from a fall on the ice. Early estimates from the insurance council estimated $30 million in residential insured loses. The estimate did not include damage to vehicles or roads. Many roads and bridges were

[6] By Erin Douglas, The Texas Tribune. <https://www.texastribune.org/2021/10/21/texas-power-companies-winter-weather-rule/>, texastribune.org

damaged from the ice and/or from attempts by Texas Department of Transportation to remove the ice using plows and graders. Hundreds of people and semi-trucks were stranded for long periods on many of the main highways and interstates including I-35 from Fort Worth to the Oklahoma border and Interstate 20 from Fort Worth going west. The clean-up from this event took weeks and even a few months is some places.[7]

Historical Events- Winter Storm							
Location	**Date**	**Type**	**Mag**	**Dth**	**Inj**	**PrD**	**CrD**
ELLIS (ZONE)	12/5/2013	Winter Storm		0	0	40000	0
ELLIS (ZONE)	2/23/2015	Winter Storm		0	0	300000	0
ELLIS (ZONE)	3/5/2015	Heavy Snow		0	0	0	0
ELLIS (ZONE)	12/7/2017	Winter Weather		0	0	0	0
ELLIS (ZONE)	10/31/2019	Cold/Wind Chill		0	0	0	0
ELLIS (ZONE)	2/13/2021	Winter Storm		0	0	10000	0
ELLIS (ZONE)	2/14/2021	Extreme Cold/Wind Chill		0	0	600000	0
Totals:				0	0	950K	0.00K

Source: NOAA National Centers for Environmental Information

3.3 Vulnerabilities and Changes in Development

Vulnerabilities can be social, environmental, economic, or political in nature. These vulnerabilities in turn have various impacts.

We know that, by definition, disasters can cause death and injury. We also know that housing and schools may be destroyed. These particular losses may be considered to be social impacts, as they affect the ability of individuals and families to function.

With regard to negative environmental impacts, if a community contains important ecological sites (e.g., the site of a unique flora or fauna habitat), then these areas may be extremely vulnerable to almost any sort of disaster.

There is monetary loss, or negative economic impact, whenever buildings, non-structural property, or infrastructure is damaged or destroyed. These losses can also result in loss of jobs, loss of economic stability, and loss of services (e.g., power). The more vulnerable the community is to these types of losses, the greater the economic vulnerability to a disaster.

The ability of the community to influence policy makers to reduce vulnerabilities is critical. A disaster entails political impacts. After a disaster has struck, a community often turns to its politicians when looking for guidance. Vulnerabilities may be considered in terms of the individual, the location, the capacity to respond, and the time of day, week, or year.

[7] North Texas Snowfall Events 2013-1879, National Weather Service.
<https://www.weather.gov/fwd/snowevents>

According to FEMA, the definition of vulnerability is *"the susceptibility of people, property, industry, resources, ecosystems, or historic buildings and artifacts to the negative impact of a disaster*." The Ellis County Hazard Mitigation Planning Team (HMPT) conducted a risk assessment to determine vulnerabilities in their jurisdictions. The following information is an overview of vulnerabilities within Ellis County, including data about critical facilities/infrastructure, historic buildings, lakes, and natural environment.

The overall vulnerability level and priorities of the participants have remained the same since the previous mitigation plan.

3.3.1 Critical & Vulnerable Facilities, Infrastructure, and Assets

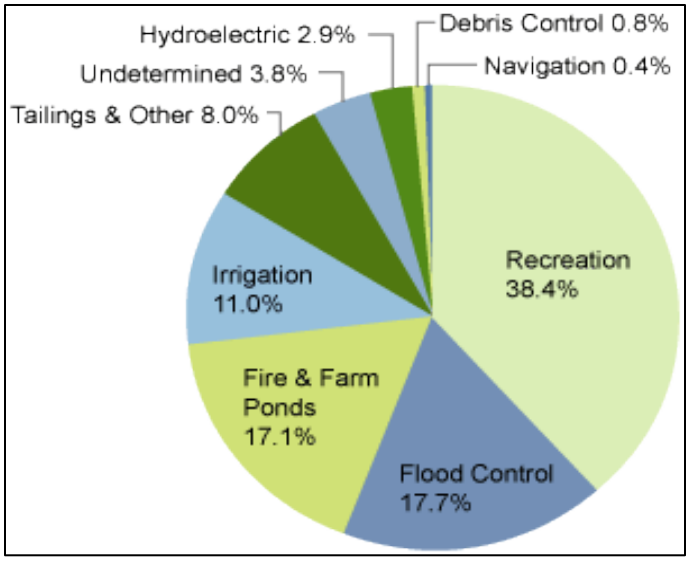
According to the Department of Homeland Security, there are 16 critical infrastructure sectors whose assets, systems, and networks, whether physical or virtual, are considered so vital to the United States that their incapacitation or destruction would have a debilitating effect on security, national economic security, national public health or safety, or any combination thereof. The following list identifies the 16 critical infrastructure sectors.

Critical Infrastructure Sectors

1. Chemical Sector
2. Commercial Facilities Sector
3. Communication Sector
4. Critical Manufacturing Sector
5. Dams Sector
6. Defense Industrial Base Sector
7. Emergency Services Sector
8. Energy Sector
9. Financial Services Sector
10. Food and Agriculture Sector
11. Government Facilities Sector
12. Healthcare and Public Health Sector
13. Information Technology Sector
14. Nuclear Reactors, Materials, and Waste Sector
15. Transportation Sector
16. Water and Wastewater Systems Sector

The age of this infrastructure ties into its level of vulnerability. The older the infrastructure, the more likely it is to fail due to the impacting hazards. Collapsed bridges, unsafe power grids, interrupted water supply-weak infrastructure can turn natural hazards into disasters. Critical facilities and infrastructure provide services and functions essential to a community, especially during and after a disaster. For a critical facility to function, building systems and equipment must remain operational. Furthermore, it must be supplied with essential utilities (typically power, water, waste disposal, and communications, but occasionally natural gas and steam). When critical infrastructure fails, it becomes nearly impossible to aid those who lack the means of evacuating on their own. This results in rescue operations that take longer to plan and execute and pose increased risks to first responders and residents due to the lack of information on the number of affected residents or the location of those who need additional assistance. The following sections go into detail about some (not all) of these critical facilities and infrastructures. An inventory of critical facilities in each participating jurisdiction is located in the Appendix A.

5. Dams Sector



Source: FEMA- Benefits of Dams

Dams provide a range of economic, environmental, and social benefits, including recreation, flood control, water supply, hydroelectric power, waste management, river navigation, and wildlife habitat. The graph to the right reflects the benefits of dams in the United States.

Dams are classified by hazard potential. A high-hazard-potential rating does not imply that a dam has an increased risk for failure; it simply means that if failure were to occur, the resulting consequences would likely be a direct loss of human life and extensive property damage. Over the last 20 years, the number of high-hazard-potential dams has more than doubled as development steadily encroaches on once-rural dams and reservoirs. Please contact the dam owner or the Dam Safety Section of the TCEQ for detailed information on specific dams**.**

Responsibility

Local emergency management is only responsible for the *impact* of flooding from dam failure on surrounding areas. The responsibility for maintaining a safe dam rests with its owner. Dam owners are:

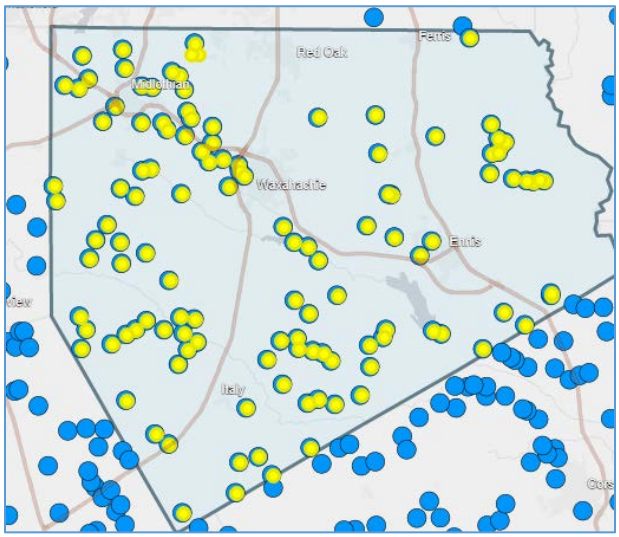
- responsible for maintaining safety *at* and *around* their dam.
- the only ones who can directly maintain the dams and implement mitigation and safety measures on the structures.[8]
- responsible for ensuring that their dam is in compliance with the Texas Commission on Environmental Quality's (TCEQ) regulations regarding emergency action plans. [9]

Additionally, each dam owner required to have an emergency action plan must know and be prepared to take the actions outlined in their emergency action plan, should their dam begin to fail.

Responsible Parties	Dam Related Safety Activities
Dam Owners/Operators	• Identification of emergency at dam • Initial notifications • Implementation of repairs • Security and technical assistance on site
Local Emergency Management and Local Responders	• Public warning • Possible evacuation

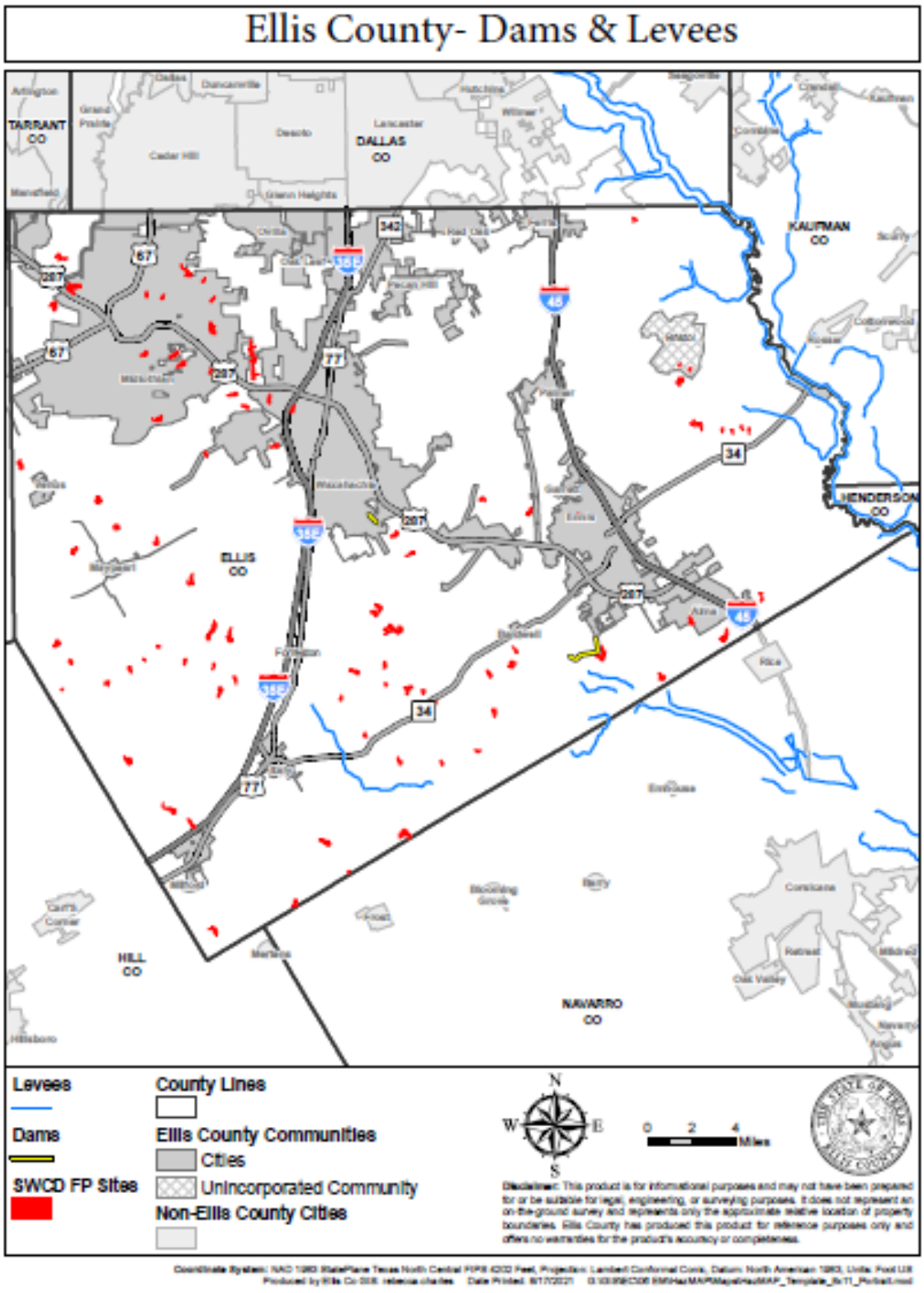
[8] https://damsafety-prod.s3.amazonaws.com/s3fs-public/files/All%20-%20Dam%20Owner%20Fact%20Sheets%202019.pdf Dam Ownership Fact Sheet. 2018.
[9] https://www.tceq.texas.gov/compliance/investigation/damsafetyprog.html For the most up-to-date information, contact TCEQ directly.

Responsible Parties	Dam Related Safety Activities
	• Shelter plan activated • Rescue and recovery • State of Emergency declaration • Termination of emergency status
State Emergency Management	• Aid affected area when requested • Coordinate specialized assistance • Notify appropriate state agencies • Determine who does what in an emergency



According to USACE, there are 122 total dams within Ellis County and are identified by the yellow dots in the following map. The inundation maps of these dams are located in the Emergency Action Plan of each dam.

The following is a list of the dams in Ellis County provided by the United States Army Corps of Engineers. Those without a city name can be presumed to be located in the unincorporated County. The list reflects the most current 2018 National Inventory of Dams (NID) database. More details than provided on the following list is available on the National Inventory of Dams website.


Ellis County- Dams & Levees
TARRANT CO
DALLAS CO
KAUFMAN CO
HENDERSON CO
ELLIS CO
HILL CO
NAVARRO CO
Levees
Dams
SWCD FP Sites
County Lines
Ellis County Communities
Cities
Unincorporated Community
Non-Ellis County Cities
N
W
E
S
0 2 4 Miles

Dam Name	NID ID	Owner Names	City	Primary Purpose	Hazard Potential Classification	EAP Prepared
Village Walker Creek WS SCS Site 3 Dam	TX01292	ELLIS COUNTY;ELLIS COUNTY LID 2;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Not Required
Village Walker Creek WS SCS Site 7 Dam	TX01296	ELLIS COUNTY;ELLIS COUNTY LID 2;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Not Required
Village Walker Creek WS SCS Site 4 Dam	TX01293	ELLIS COUNTY;ELLIS COUNTY LID 2;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Not Required
Village Walker Creek WS SCS Site 8a Dam	TX01298	ELLIS COUNTY;ELLIS COUNTY LID 2;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Not Required
Village Walker Creek WS SCS Site 6 Dam	TX01295	ELLIS COUNTY;ELLIS COUNTY LID 2;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Not Required
Village Walker Creek WS SCS Site 8 Dam	TX01297	ELLIS COUNTY;ELLIS COUNTY LID 2;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Not Required
Village Walker Creek WS SCS Site 5 Dam	TX01294	ELLIS COUNTY;ELLIS COUNTY LID 2;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Not Required
Village Walker Creek WS SCS Site 2 Dam	TX01291	ELLIS COUNTY;ELLIS COUNTY LID 2;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Not Required
Chambers Creek WS SCS Site 102 Dam	TX01320	ELLIS COUNTY;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Not Required
Chambers Creek WS SCS Site 9 Dam	TX01270	ELLIS COUNTY;ELLIS PRAIRIE SWCD	SARDIS	Flood Risk Reduction	Not Available	Yes
Chambers Creek WS SCS Site 19 Dam	TX01287	CITY OF ENNIS;ELLIS COUNTY;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Not Required
Mountain Creek WS SCS Site 9 Dam	TX01310	ELLIS COUNTY;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Yes
Chambers Creek WS SCS Site 94 Dam	TX01249	ELLIS COUNTY;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Not Required

Dam Name	NID ID	Owner Names	City	Primary Purpose	Hazard Potential Classification	EAP Prepared
Chambers Creek WS SCS Site 24 Dam	TX04523	ELLIS COUNTY;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Not Required
Chambers Creek WS SCS Site 83 Dam	TX01319	ELLIS COUNTY;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Not Required
Chambers Creek WS SCS Site 23 Dam	TX01254	ELLIS COUNTY;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Not Required
Chambers Creek WS SCS Site 92 Dam	TX01251	ELLIS COUNTY;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Not Required
Chambers Creek WS SCS Site 93 Dam	TX01250	ELLIS COUNTY;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Not Required
Chambers Creek WS SCS Site 89 Dam	TX01252	ELLIS COUNTY;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Yes
Chambers Creek WS SCS Site 55 Dam	TX01306	ELLIS COUNTY;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Not Required
Chambers Creek WS SCS Site 98a Dam	TX01241	ELLIS COUNTY;ELLIS PRAIRIE SWCD	MILFORD	Flood Risk Reduction	Not Available	Yes
Chambers Creek WS SCS Site 82 Dam	TX01258	ELLIS COUNTY;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Not Required
Chambers Creek WS SCS Site 97 Dam	TX01243	ELLIS COUNTY;ELLIS PRAIRIE SWCD	MILFORD	Flood Risk Reduction	Not Available	Yes
Chambers Creek WS SCS Site 56 Dam	TX01261	ELLIS COUNTY;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Yes
Chambers Creek WS SCS Site 11 Dam	TX01272	ELLIS COUNTY;ELLIS PRAIRIE SWCD	SARDIS	Flood Risk Reduction	Not Available	Yes
Chambers Creek WS SCS Site 86 Dam	TX01238	ELLIS COUNTY;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Not Required

Dam Name	NID ID	Owner Names	City	Primary Purpose	Hazard Potential Classification	EAP Prepared
Chambers Creek WS SCS Site 78 Dam	TX01227	ELLIS COUNTY;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Not Required
Chambers Creek WS SCS Site 79d Dam	TX04525	ELLIS COUNTY;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Not Required
Chambers Creek WS SCS Site 53 Dam	TX01304	ELLIS COUNTY;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	No
Chambers Creek WS SCS Site 110 Dam	TX01248	ELLIS COUNTY;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Not Required
Chambers Creek WS SCS Site 115 Dam	TX01230	ELLIS COUNTY;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Not Required
Chambers Creek WS SCS Site 29 Dam	TX01228	ELLIS COUNTY;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Not Required
Chambers Creek WS SCS Site 17 Dam	TX01277	ELLIS COUNTY;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	No
Chambers Creek WS SCS Site 80 Dam	TX01260	ELLIS COUNTY;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Not Required
Chambers Creek WS SCS Site 101c Dam	TX01234	ELLIS COUNTY;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Not Required
Chambers Creek WS SCS Site 107 Dam	TX01245	ELLIS COUNTY;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Yes
Chambers Creek WS SCS Site 125 Dam	TX01283	ELLIS COUNTY;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Not Required
Chambers Creek WS SCS Site 95 Dam	TX01229	ELLIS COUNTY;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Not Required
Chambers Creek WS SCS Site 6 Dam	TX01268	ELLIS COUNTY;ELLIS PRAIRIE SWCD	SARDIS	Flood Risk Reduction	Not Available	Yes

Dam Name	NID ID	Owner Names	City	Primary Purpose	Hazard Potential Classification	EAP Prepared
Mountain Creek WS SCS Site 11 Dam	TX01315	ELLIS COUNTY;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Not Required
Chambers Creek WS SCS Site 10 Dam	TX01271	ELLIS COUNTY;ELLIS PRAIRIE SWCD	WAXAHACHIE	Flood Risk Reduction	Not Available	Yes
Richland Creek WS SCS Site 44 Dam	TX01236	ELLIS COUNTY;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Not Required
Chambers Creek WS SCS Site 85b Dam	TX01237	ELLIS COUNTY;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Not Required
Chambers Creek WS SCS Site 118 Dam	TX01289	ELLIS COUNTY;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Not Required
Chambers Creek WS SCS Site 79b Dam	TX01262	ELLIS COUNTY;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Not Required
Chambers Creek WS SCS Site 116 Dam	TX01231	ELLIS COUNTY;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Not Required
Chambers Creek WS SCS Site 81 Dam	TX01259	ELLIS COUNTY;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Not Required
Chambers Creek WS SCS Site 75c Dam	TX06649	ELLIS COUNTY;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Not Required
Chambers Creek WS SCS Site 126 Dam	TX01284	ELLIS COUNTY;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Yes
Chambers Creek WS SCS Site 49a Dam	TX04524	ELLIS COUNTY;ELLIS PRAIRIE SWCD	MAY PEARL	Flood Risk Reduction	Not Available	Not Required
Chambers Creek WS SCS Site 108 Dam	TX01246	ELLIS COUNTY;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Not Required
Chambers Creek WS SCS Site 16 Dam	TX01276	ELLIS COUNTY;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Yes

Dam Name	NID ID	Owner Names	City	Primary Purpose	Hazard Potential Classification	EAP Prepared
Chambers Creek WS SCS Site 20 Dam	TX01288	CITY OF ENNIS;ELLIS COUNTY;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Not Required
Chambers Creek WS SCS Site 77 Dam	TX01307	ELLIS COUNTY;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Not Required
Chambers Creek WS SCS Site 111 and 112	TX01256	ELLIS COUNTY;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Yes
Chambers Creek WS SCS Site 108a Dam	TX05787	ELLIS COUNTY;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Not Required
Chambers Creek WS SCS Site 75b Dam	TX01303	ELLIS COUNTY;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Not Required
Chambers Creek WS SCS Site 12 Dam	TX01273	ELLIS COUNTY;ELLIS PRAIRIE SWCD	WAXAHACHIE	Flood Risk Reduction	Not Available	Yes
Chambers Creek WS SCS Site 54 Dam	TX01305	ELLIS COUNTY;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	No
Chambers Creek WS SCS Site 109 Dam	TX01247	ELLIS COUNTY;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Not Required
Chambers Creek WS SCS Site 79a Dam	TX01239	ELLIS COUNTY;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Not Required
Chambers Creek WS SCS Site 106 Dam	TX04526	ELLIS COUNTY;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	No
Chambers Creek WS SCS Site 98 Dam	TX01242	ELLIS COUNTY;ELLIS PRAIRIE SWCD	MILFORD	Flood Risk Reduction	Not Available	Yes
Chambers Creek WS SCS Site 113 Dam	TX01253	ELLIS COUNTY;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Not Required

Dam Name	NID ID	Owner Names	City	Primary Purpose	Hazard Potential Classification	EAP Prepared
Chambers Creek WS SCS Site 99 Dam	TX01235	ELLIS COUNTY;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Not Required
Chambers Creek WS SCS Site 121a Dam	TX01233	ELLIS COUNTY;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Not Required
Chambers Creek WS SCS Site 117 Dam	TX01232	ELLIS COUNTY;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Not Required
Chambers Creek WS SCS Site 84 Dam	TX01257	ELLIS COUNTY;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Not Required
Chambers Creek WS SCS Site 100 Dam	TX01244	ELLIS COUNTY;ELLIS PRAIRIE SWCD	NONE	Flood Risk Reduction	Not Available	Not Required
Chambers Creek WS SCS Site 15 Dam	TX01275	ELLIS COUNTY;ELLIS PRAIRIE SWCD	WAXAHACHIE	Flood Risk Reduction	Not Available	Yes
Chambers Creek WS SCS Site 2b Dam	TX01316	ELLIS COUNTY;ELLIS PRAIRIE SWCD	SARDIS	Flood Risk Reduction	Not Available	Yes
Grays Creek WS SCS Site 102 Dam	TX05824	ELLIS PRAIRIE SWCD		Flood Risk Reduction	Not Available	Not Required
Bell Branch Ranch Dam	TX01240	BELL BRANCH RANCH VAN C ELLIS		Recreation	Not Available	Not Required
Chambers Creek WS SCS Site 3 Dam	TX01265	ELLIS COUNTY;ELLIS PRAIRIE SWCD	SARDIS	Flood Risk Reduction	Not Available	Yes
Chambers Creek WS SCS Site 2f Dam	TX01264	ELLIS COUNTY;ELLIS PRAIRIE SWCD	SARDIS	Flood Risk Reduction	Not Available	Yes
Chambers Creek WS SCS Site 5 Dam	TX01267	ELLIS COUNTY;ELLIS PRAIRIE SWCD	SARDIS	Flood Risk Reduction	Not Available	Yes
Chambers Creek WS SCS Site 4 Dam	TX01266	ELLIS COUNTY;ELLIS PRAIRIE SWCD	SARDIS	Flood Risk Reduction	Not Available	Yes

Dam Name	NID ID	Owner Names	City	Primary Purpose	Hazard Potential Classification	EAP Prepared
Grays Creek WS SCS Site 101 Dam	TX05823	ELLIS PRAIRIE SWCD		Flood Risk Reduction	Not Available	Not Required
Chambers Creek WS SCS Site 8 Dam	TX01318	ELLIS COUNTY;ELLIS PRAIRIE SWCD	SARDIS	Flood Risk Reduction	Not Available	Yes
Chambers Creek WS SCS Site 7 Dam	TX01269	ELLIS COUNTY;ELLIS PRAIRIE SWCD	SARDIS	Flood Risk Reduction	Not Available	Yes
Chambers Creek WS SCS Site 14 Dam	TX01280	ELLIS COUNTY;ELLIS PRAIRIE SWCD	WAXAHACHIE	Flood Risk Reduction	Not Available	Yes
Chambers Creek WS SCS Site 1 Dam	TX01317	ELLIS COUNTY;ELLIS PRAIRIE SWCD	SARDIS	Flood Risk Reduction	Not Available	Yes
Chambers Creek WS SCS Site 20a Dam	TX01285	CITY OF ENNIS;ELLIS COUNTY;ELLIS PRAIRIE SWCD	ENNIS	Flood Risk Reduction	Not Available	Yes
Chambers Creek WS SCS Site 13 Dam	TX01274	ELLIS COUNTY;ELLIS PRAIRIE SWCD	WAXAHACHIE	Flood Risk Reduction	Not Available	Yes
Chambers Creek WS SCS Site 2a Dam	TX01263	ELLIS COUNTY;ELLIS PRAIRIE SWCD	SARDIS	Flood Risk Reduction	Not Available	Yes
Shiloh Forest East Dam	TX07550				Not Available	No
Shiloh Forest West Dam	TX09738				Not Available	No
Beulah Dam	TX09494	STEVE HAWKS		Recreation	Not Available	Yes
Hefner Lake No 1 Dam	TX01301	CW HEFNER		Recreation	Not Available	Not Required
Hefner Lake No 2 Dam	TX01302	CW HEFNER		Recreation	Not Available	Not Required
Mg Wilson Gss	TX06183	MG WILSON	NONE	Other	Not Available	Not Required
Obrien Gss	TX06187	TERRANCE OBRIEN	NONE	Fire Protection, Stock, Or Small Fish Pond	Not Available	Not Required
Wilemon Lake Dam	TX01308	PEARY WILEMON		Fire Protection, Stock, Or Small Fish Pond	Not Available	Not Required

Dam Name	NID ID	Owner Names	City	Primary Purpose	Hazard Potential Classification	EAP Prepared
Matthews Gss	TX06182	ODOS MATTHEWS JR	MAYPEARL	Fire Protection, Stock, Or Small Fish Pond	Not Available	Not Required
Borders Gss	TX06186	CAMPBELL & CAMPBELL LP	NONE	Fire Protection, Stock, Or Small Fish Pond	Not Available	Not Required
Joint Booster Pump Station No 3 Reservoir Dam	TX07441	TARRANT REGIONAL WATER DISTRICT		Other	Not Available	Yes
Lake Clopton Dam	TX01281	PETE CLOPTON		Recreation	Not Available	Not Required
Cement Plant Dam	TX01313	MARTIN MARIETTA MATERIALS SOUTHWEST INC		Other	Not Available	Yes
Cherry Lake Dam	TX01299	WB CHERRY		Recreation	Not Available	Not Required
Griffith Dam	TX01290	LYNN GRIFFITH		Fire Protection, Stock, Or Small Fish Pond	Not Available	Not Required
Ellis Lake Dam	TX01300	MS JOHNSON		Recreation	Not Available	Not Required
Mackinnon Gss	TX06181	JOHN MACKINNON	NONE	Fire Protection, Stock, Or Small Fish Pond	Not Available	Not Required
Crawford Dam	TX06650	BILLY CRAWFORD	NONE	Fish and Wildlife Pond	Not Available	Not Required
Everett Gss	TX06180	NL EVERETT	NONE	Fire Protection, Stock, Or Small Fish Pond	Not Available	Not Required
Camp Hobilitzelle Lake Dam	TX01311	THE SALVATION ARMY		Recreation	Not Available	Not Required
South Prong Dam	TX01255	ELLIS COUNTY WCID 1		Water Supply	Not Available	Yes
Youngblood Gss	TX06184	HERMAN YOUNGBLOOD	NONE	Fire Protection, Stock, Or Small Fish Pond	Not Available	Not Required
Midlothian Balancing Reservoir Dam	TX07464	TARRANT REGIONAL WATER DISTRICT A WCID		Other	Not Available	Yes
Mountain Creek WS SCS Site 10 Dam	TX01309	DALWORTH SWCD;ELLIS COUNTY	NONE	Flood Risk Reduction	Not Available	Yes
Jh Wilson Gss	TX06185	JOHN WILSON	BRITTON	Fire Protection, Stock, Or Small Fish Pond	Not Available	Not Required

Dam Name	NID ID	Owner Names	City	Primary Purpose	Hazard Potential Classification	EAP Prepared
Couch Gss	TX06179	DONALD BONHAM	COLUMBUS	Fire Protection, Stock, Or Small Fish Pond	Not Available	Not Required
Ten Mile Creek WS SCS Site 9 Dam	TX04724	CULBERSON COUNTY;HIGHPOINT SWCD	WALNUT SPRINGS	Flood Risk Reduction	Not Available	Not Required
Lake Clark Dam	TX01286	CITY OF ENNIS		Flood Risk Reduction	Not Available	Yes
Waxahachie Country Club Lake Dam	TX01282	WAXAHACHIE COUNTRY CLUB	WAXAHACHIE	Irrigation	Not Available	Yes
Daniel Gss	TX06197	OLIVER DANIEL	NONE	Fire Protection, Stock, Or Small Fish Pond	Not Available	Not Required
Crossroads Lake Dam	TX01312	CROSSROADS PROPERTY		Recreation	Not Available	Not Required
Hi View Ranch Lake Dam	TX01278	AH MEADOWS		Irrigation	Not Available	Not Required
Diamond J Ranch Dam No 2	TX04268	WEST BEN B AND DEPREZ PATRICK F	WAXAHACHIE	Recreation	Not Available	Not Required
Rodney Green Dam	TX07085	RODNEY GREEN		Other	Not Available	Not Required
Ash Grove Cement Plant Dam	TX01314	GIFFORD-HILL & COMPANY INC		Other	Not Available	Not Required
Katy Lake Dam	TX01279	KATY LAKE HOMEOWNERS ASSOCIATION	WAXAHACHIE	Recreation	Not Available	Yes
Bardwell Dam	TX00001	USACE - Fort Worth District	CORSICANA	Flood Risk Reduction	High	Yes

Source: USACE National Inventory of Dams

** An Emergency Action Plan (EAP) is a formal document that identifies potential emergency conditions at a dam and specifies actions to be followed to minimize loss of life and property damage. Under the EAP category, the following acronyms are used Y (Yes), N (No), or NR (Not Required).*

15. Transportation Sector (Roads & Bridges)

Roads make a crucial contribution to economic development and growth and bring important social benefits. They are of vital importance to make a community grow and develop. In addition, providing access to employment, social, health and education services makes a road network crucial in fighting against poverty. Roads open more areas and stimulate economic and social development. For those reasons, road infrastructure is the most important of all public assets. Bridges are also immensely important to everyday travel. Bridges allow safe passage where previously it was not possible or much more difficult. Bridges allow people go to school, seek medical help, and go to work without having to negotiate a busy road, a dangerous railway line, or a fast-flowing river. As extreme weather events become more common, transport infrastructure is increasingly being tested by these events.

Roads and bridges that are not owned by jurisdictions fall under the responsibility of the Texas Department of Transportation (TxDOT). TxDOT uses the following terminology when describing their roadways.

- **On-System**: Under the jurisdiction of TxDOT.
- **Off-System**: Not under the jurisdiction of TxDOT.
- **Centerline Mileage**: Mileage of a segment of roadway, regardless of the number of through lanes. Unless otherwise specified, "mileage" in this document is by default centerline mileage. Centerline mileage for mainlanes is calculated separately from centerline mileage for frontage roads, which are considered distinct roadways. For instance, a 1-mile segment of highway with left and right roadbeds, each with four lanes, would be represented as 1 centerline mile. If that segment contained right and left frontage roads, the mainlanes and frontage roads would be represented in the data as 3 unique roadways, 1 centerline mile each, for a total of 3 miles.
- **Lane Mileage**: Mileage of all through lanes of a segment of roadway. For instance, a 1-mile segment of highway with left and right roadbeds, each with four through lanes, would be represented as 8 lane miles. As with centerline mileage, frontage road lane mileage is calculated separately from the lane mileage of mainlanes.
- **Daily Vehicle Miles of Travel (DVMT)**: Daily number of miles traveled by all vehicles. Inclusive of Truck DVMT.
- **Truck Daily Vehicle Miles of Travel (Truck DVMT)**: Daily number of miles traveled by trucks only. Unlike other data types, Truck DVMT values are not rounded before aggregation. Therefore, aggregating Truck DVMT by different combinations of subtotal values may result in a negligible discrepancy from the Statewide Total, especially regarding Rural / Urban subtotals. Roadway Data Tables: The data for many of these reports are also available in tabular format in the MultiYear
- Roadway Data Tables. This document also contains extensive annotations regarding data criteria and calculations and is intended as a companion to these Annual Reports. The Roadway Data Tables can be found at the following URL: https://www.txdot.gov/inside-txdot/division/transportation-planning/roadway-inventory.html

The following table reflects the miles of TxDOT roads in Ellis County, the 71st county in their report.

Data Source: YE2020 Certified Files

TEXAS DEPARTMENT OF TRANSPORTATION

Annual Report - Highway Status Open To Traffic Only

Transportation Planning and Programming Division

Mileage

by County by Highway System

County	Highway System	Centerline	Lane	DVMT	Truck DVMT
Ellis (71)					
	IH Highways	56.499	272.780	2,569,959.119	683,159.648
	US Highways	77.867	262.186	1,604,887.237	207,998.278
	State Highways, Spurs, Loops, Business Routes	66.883	158.290	336,427.849	40,961.023
	Farm or Ranch to Market Roads and Spurs	303.543	617.136	841,442.815	39,936.167
	Frontage Roads	118.811	236.980	176,907.485	10,021.375
	On-System Subtotal	623.603	1,547.372	5,529,624.505	982,076.491
	City Streets	649.504	1,318.254	423,897.122	13,784.895
	Certified County Roads	926.926	1,853.852	190,726.033	6,801.705
	Federal Roads	11.962	23.924	838.658	25.527
	Off-System Subtotal	1,588.392	3,196.030	615,461.813	20,612.127
	County Total	2,211.995	4,743.402	6,145,086.318	1,002,688.618

Source: TxDOT Roadways Inventory 2020 Annual Report

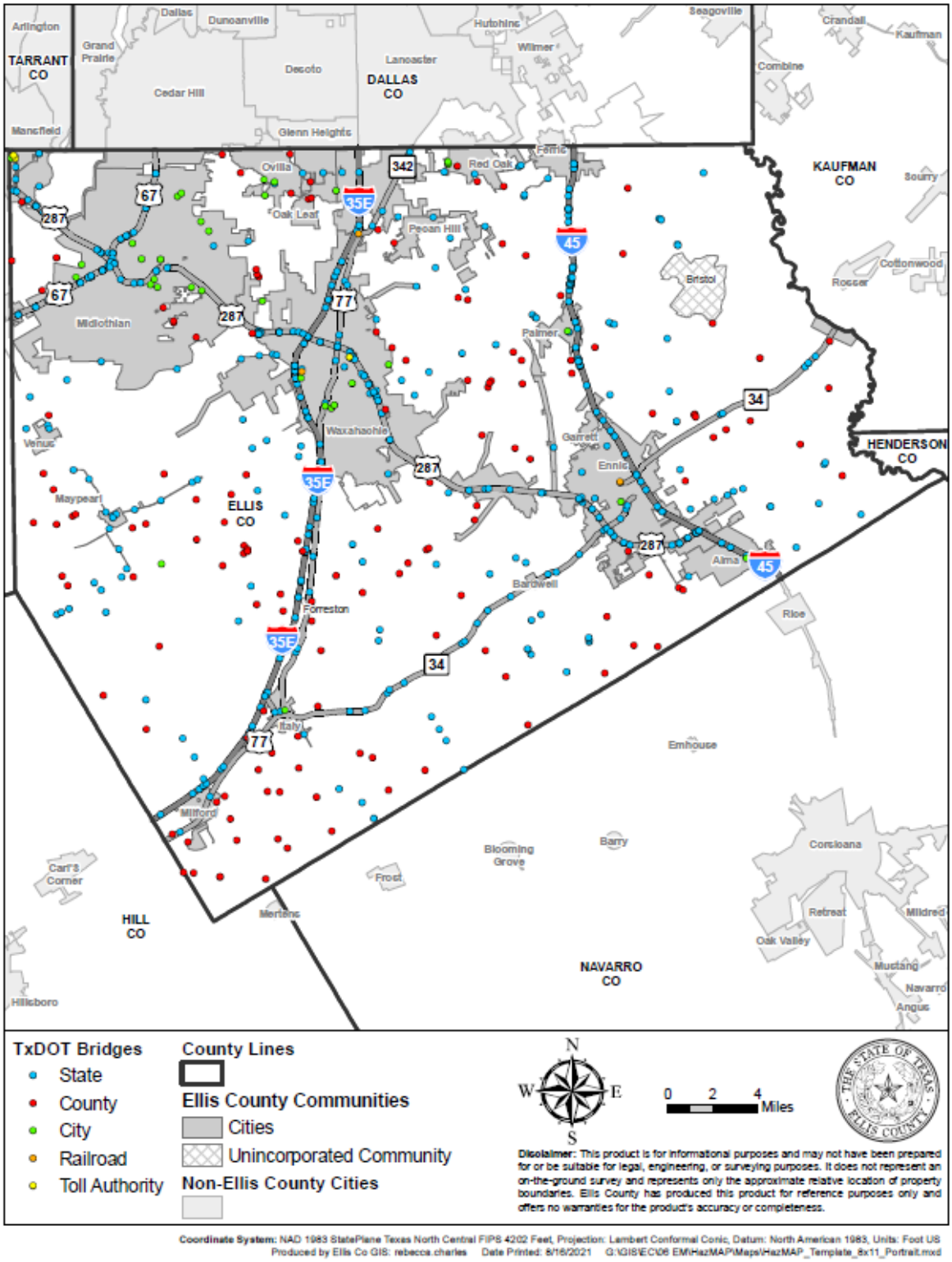
The TxDOT manages 659 on & off system bridges open to public traffic within the County.

- On-system bridges are located on the designated state highway system, are maintained by TxDOT, and are typically funded with a combination of federal and state or state-only funds.
- Off-system bridges are not part of the designated state highway system and are under the direct jurisdiction of the local government such as a county, city, other political subdivision of the state, or special district with authority to finance a highway improvement project.

Utilizing an assortment of funding sources and programs, TxDOT is continuously developing improvement projects for public bridges throughout the year. Most funds available for bridge projects are allocated towards Category 6 of TxDOT's Unified Transportation Program (UTP). Within Category 6 are several programs with the goal of improving the condition of Texas bridges. Most notable are 1) the Highway Bridge Program (HBP) which focuses on replacement projects; and 2) the Bridge Maintenance and Improvement Program (BMIP) which focuses on bridge preservation projects. Recently, TxDOT has developed the Bridge System Safety Program (BSSP), intended to upgrade safety features on bridges that are otherwise in good condition.[10]

[10] TxDOT Bridge Division. Report of Texas Bridge; Fiscal year 2020. < https://ftp.txdot.gov/pub/txdot-info/library/reports/gov/bridge/fy20.pdf>

Ellis County- TxDOT Bridges



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Coordinate System: NAD 1983 StatePlane Texas North Central FIPS 4202 Feet, Projection: Lambert Conformal Conic, Datum: North American 1983, Units: Foot US
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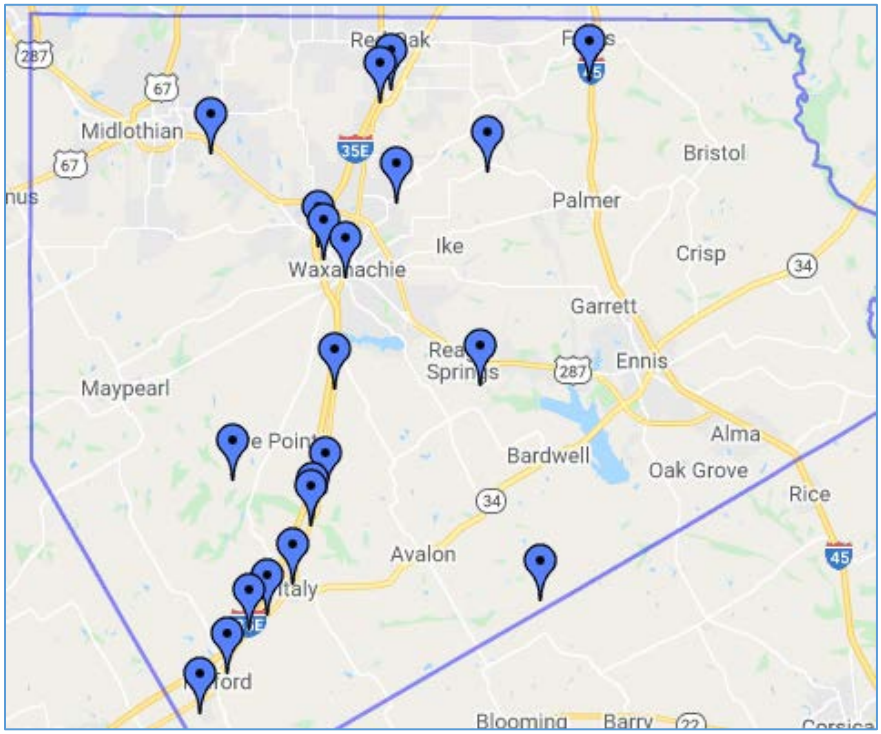
Ellis County adopted a Master Thoroughfare Plan to assist in long-term project planning. The plan includes a map that provides the framework for existing and future transportation networks. In addition, the document provides an analysis of existing conditions, existing and potential issues, as well as classification for future transportation corridors. This thoroughfare plan shows road networks through private rural land. Those future projects may take years to develop and the alignments are not yet determined. The last update was in 2007 but a lot has changed since then. The population has grown exponentially and with more growth headed towards Ellis County, they wanted to look at the county as a whole and develop recommendations to assist with those transportation issues. In 2019, Ellis County hired Freese & Nichols, Inc. to update its Master Thoroughfare Plan. This update gives reasonable long-term guidance to County officials and will be reviewed regularly and updated approximately every 5-7 years to reflect changes in growth and development. The county will utilize the master thoroughfare plan for long-term planning and investment decisions for future projects. Some maps from this Thoroughfare Plan can be found in Appendix A.

Below is a detailed list and coinciding map of the historic and notable bridges within the county. Some of these bridges have been abandoned yet could be transformed into bike or animal bridges to provide options during evacuations.



Name ▼	Location	Status	Design	Year Built	Year Lost	Span Length (ft.)	Total Length (ft.)
BNSF - Waxahachie Creek Bridge	BNSF Railway over Waxahachie Creek	Open to traffic	Pony/through plate girder	--	--	--	--
Brookside Road Bridge	Brookside Road over Waxahachie Creek	Open to traffic	Stringer	1955	--	29.9	122.1
Chambers Creek Bridge	Armstrong Road over Chambers Creek	Open to traffic	Steel stringer	1992	--	55.1	188.0

Name ▼	Location	Status	Design	Year Built	Year Lost	Span Length (ft.)	Total Length (ft.)
Getzandaner Park Footbridge	Footpath over Waxahachie Creek	Open to pedestrians only	Warren pony truss	1910	--	--	98.0
Holden Road Bridge	Holden Road over Branch of Chambers Creek	Open to traffic	Warren pony truss with alternating verticals	--	--	38.1	39.0
MKT - Chambers Creek Bridge	Bridge over Chambers Creek	Derelict/abandoned	Concrete deck girder	1923	--	--	--
MKT - Chambers Creek Bridge	Bridge over Chambers Creek	Derelict/abandoned	Through truss	--	--	--	--
MKT - Hog Creek Bridge	MKT Railroad over Hog Creek	Abandoned	Unknown	--	--	--	--
MKT - Houston Creek Bridge	Abandoned Missouri-Kansas-Texas Railroad over Houston Creek	Derelict/abandoned	Slab	--	--	--	--
MKT - Little Onion Creek	Bridge over Little Onion Creek	Derelict/abandoned	Timber stringer	--	--	--	--

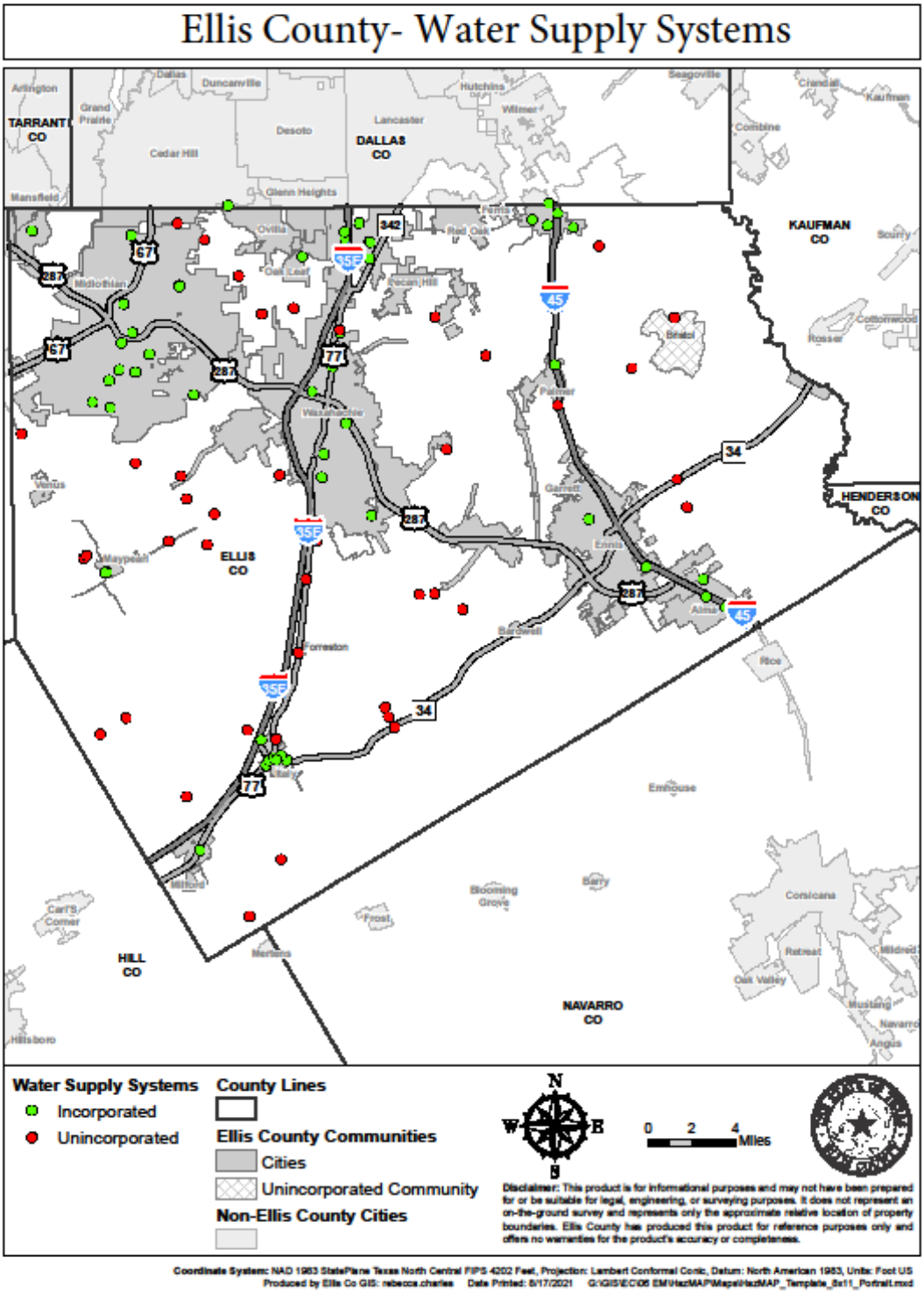
Name ▼	Location	Status	Design	Year Built	Year Lost	Span Length (ft.)	Total Length (ft.)
MKT - Mill Creek Bridge	MKT Railroad over Mill Creek	Abandoned	Polygonal Warren pony truss	1933	--	25.0	60.0
MKT - Waxahachie Creek Bridge	Abandoned Missouri-Kansas-Texas Railroad over Waxahachie Creek	Abandoned	Polygonal Warren pony truss	1926	--	--	--
Mt. Zion Road Bridge	road over unnamed creek	Open to traffic	Warren pony truss with alternating verticals	1910	--	70.0	70.0
Richland Creek Bridge	Old Brandon Road over Richland Creek	Bypassed by new bridge	Warren pony truss with alternating verticals	ca. 1930	--	28.9	91.9
Rogers Street Bridge	Rogers Street over Waxahachie Creek	Open to pedestrians	Pratt through truss	1889	--	--	--
Rutherford's Crossing Bridge	Rutherford Road over Red Oak Creek	Closed to traffic	Warren pony truss	1919	--	69.9	69.9

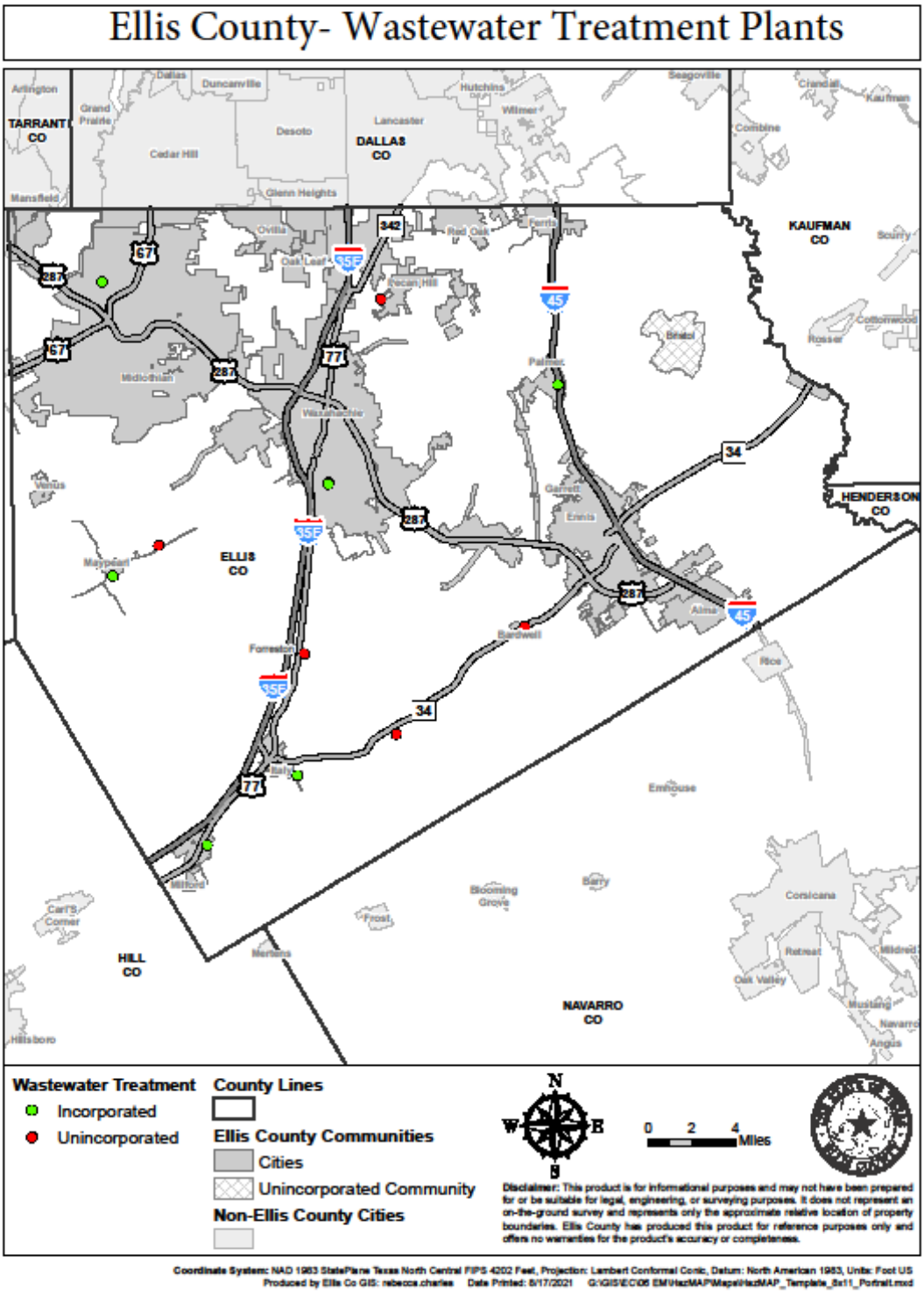
Name ▼	Location	Status	Design	Year Built	Year Lost	Span Length (ft.)	Total Length (ft.)
Spring Creek Road Bridge	Spring Creek Road over Grove Creek	Preserved awaiting full restoration	Pratt through truss	1890	--	44.9	134.8
Texas Electric - Culvert (Near Italy)	Texas Electric Railway over Small Stream	Abandoned	Concrete culvert	--	--	--	--
UP - Long Branch Bridge	Railroad (UP) over Long Branch	Open to traffic	Deck plate girder	1938	--	--	--
UP - Red Oak Creek Bridge	Railroad (UP) over Red Oak Creek	Open to traffic	Warren pony truss	--	--	--	--
UP - US77 Overpass	Railroad (UP) over US 77	Open to traffic	Deck plate girder	1940	--	124.0	129.9

Name ▼	Location	Status	Design	Year Built	Year Lost	Span Length (ft.)	Total Length (ft.)
Waxahachie Viaduct	US 77 (Elm Street) over Union Pacific Railroad and Waxahachie Creek	Open to traffic	Concrete tee beam	1931	--	56.1	1121.1
Witten Road Bridge	Old railroad grade over Unnamed creek	Derelict/abandoned	Concrete stringer	1911	--	14.0	14.0

Source: Bridgehunter.com

16. Water and Wastewater Systems Sector




Ellis County- Wastewater Treatment Plants
TARRANT CO
DALLAS CO
KAUFMAN CO
HENDERSON CO
ELLIS CO
HILL CO
NAVARRO CO
Arlington
Grand Prairie
Dallas
Duncanville
Cedar Hill
Desoto
Lancaster
Hutchins
Wilmer
Seagoville
Crandall
Kaufman
Combine
Mansfield
Glenn Heights
Ovilla
Oak Leaf
Red Oak
Ferris
Scurry
Pecan Hill
Rosser
Cottonwood
Bristol
Midlothian
Waxahachie
Palmer
Venus
Garrett
Ennis
Maypearl
Alma
Rice
Forreston
Bardwell
Italy
Emhouse
Milford
Carl's Corner
Blooming Grove
Barry
Frost
Corsicana
Retreat
Oak Valley
Mildred
Mustang
Navarro
Angus
Hillsboro
Wastewater Treatment
Incorporated
Unincorporated
County Lines
Ellis County Communities
Cities
Unincorporated Community
Non-Ellis County Cities
N
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0 2 4 Miles
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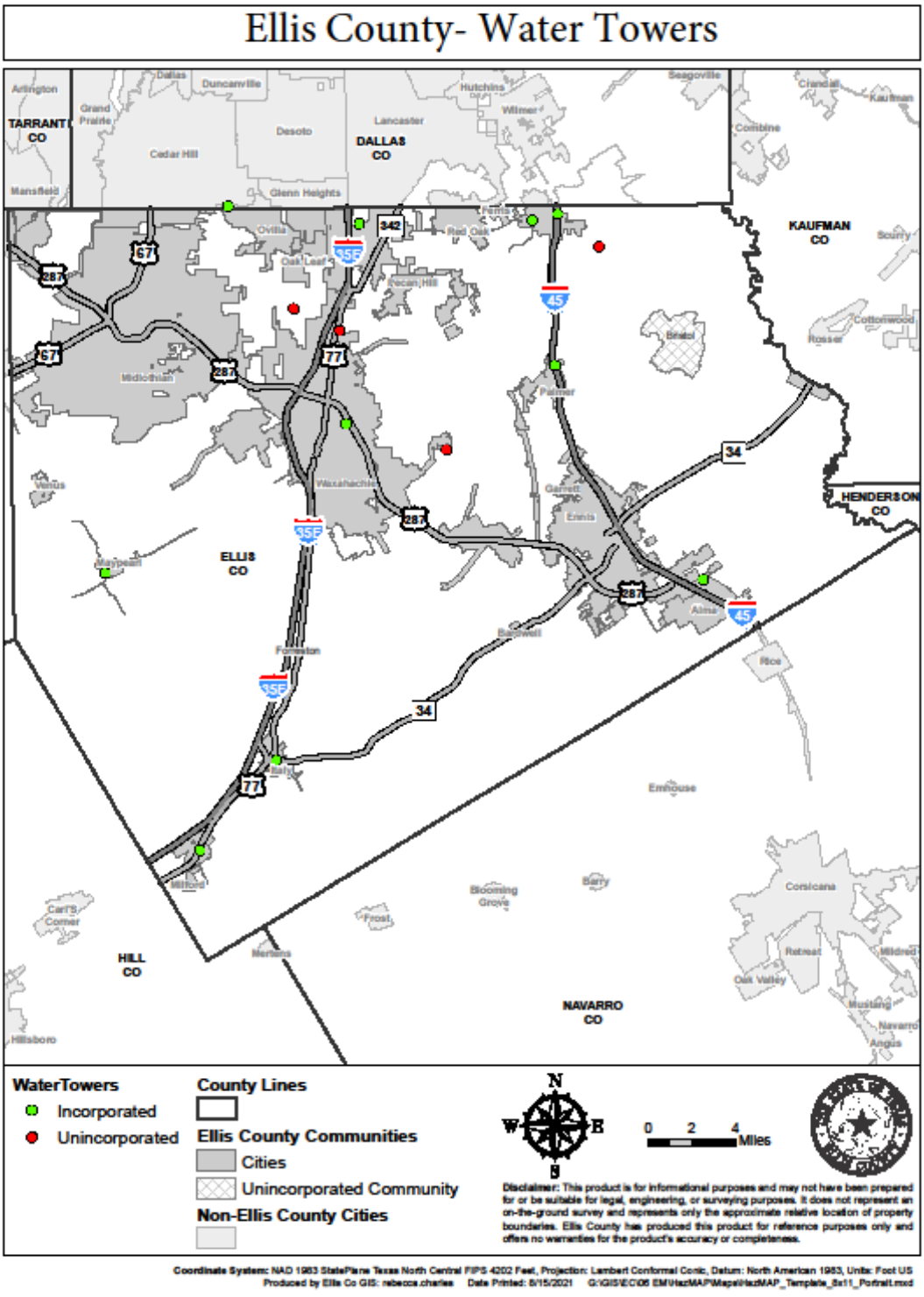
Ellis County- Water Towers
TARRANT CO
DALLAS CO
KAUFMAN CO
HENDERSON CO
ELLIS CO
HILL CO
NAVARRO CO
Arlington
Grand Prairie
Dallas
Duncanville
Cedar Hill
Desoto
Lancaster
Hutchins
Wilmer
Seagoville
Crandall
Kaufman
Combine
Mansfield
Glenn Heights
Ovilla
Oak Leaf
Red Oak
Ferris
Scurry
Pecan Hill
Cottonwood
Rosser
Bristol
Midlothian
Palmer
Venus
Waxahachie
Garrett
Ennis
Maypearl
Alma
Rice
Forreston
Bardwell
Italy
Emhouse
Milford
Carl's Corner
Blooming Grove
Barry
Frost
Corsicana
Retreat
Oak Valley
Mildred
Mustang
Navarro
Angus
Hillsboro
Nemo
WaterTowers
Incorporated
Unincorporated
County Lines
Ellis County Communities
Cities
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Bodies of water, such as lakes, reservoirs, and rivers, are vulnerable to severe weather and natural hazards, and the level of water has a dramatic effect on drought and flooding impacts on people and property in the participating jurisdictions.

The following list identifies all the lakes and reservoirs in the County.

Name	United States Geological Survey Topographic Map
Bardwell Lake	Ennis West
Bell Branch Ranch Lake	Italy
Camp Hobilitzelle Lake	Venus
Cement Plant Lake	Venus
Cherry Lake	Bristol
Crossroads Lake	Venus
Diamond J Ranch Lake Number 2	Midlothian
Gifford-Hill Lake	Britton
Griffith Reservoir	Palmer
Hefner Lake Number 1	Bristol
Hefner Lake Number 2	Bristol
Hi-View Ranch Lake	Midlothian
Johnson Lake	Bristol
Katy Lake	Waxahachie
Lake Clark	Ennis West
Lake Clopton	Waxahachie
Lake Waxahachie	Forreston
Old Lake	Ennis West
Range Reservoir	Ennis West
Soil Conservation Service Site 1 Reservoir	Cedar Hill
Soil Conservation Service Site 10 Reservoir	Venus
Soil Conservation Service Site 10 Reservoir	Midlothian
Soil Conservation Service Site 100 Reservoir	Avalon
Soil Conservation Service Site 101c Reservoir	Frost
Soil Conservation Service Site 102 Reservoir	Avalon
Soil Conservation Service Site 106 Reservoir	Avalon
Soil Conservation Service Site 107 Reservoir	Avalon
Soil Conservation Service Site 108 Reservoir	Avalon
Soil Conservation Service Site 109 Reservoir	Avalon
Soil Conservation Service Site 11 Reservoir	Midlothian
Soil Conservation Service Site 11 Reservoir	Britton
Soil Conservation Service Site 110 Reservoir	Avalon
Soil Conservation Service Site 111 and 112 Reservoir	Forreston
Soil Conservation Service Site 113 Reservoir	Forreston
Soil Conservation Service Site 115 Reservoir	Cryer Creek

Name	United States Geological Survey Topographic Map
Soil Conservation Service Site 116 Reservoir	Cryer Creek
Soil Conservation Service Site 117 Reservoir	Cryer Creek
Soil Conservation Service Site 118 Reservoir	Ennis West
Soil Conservation Service Site 12 Reservoir	Midlothian
Soil Conservation Service Site 121a Reservoir	Emhouse
Soil Conservation Service Site 125 Reservoir	Ennis East
Soil Conservation Service Site 126 Reservoir	Ennis East
Soil Conservation Service Site 13 Reservoir	Midlothian
Soil Conservation Service Site 14 Reservoir	Waxahachie
Soil Conservation Service Site 15 Reservoir	Midlothian
Soil Conservation Service Site 16 Reservoir	Midlothian
Soil Conservation Service Site 17 Reservoir	Midlothian
Soil Conservation Service Site 19 Reservoir	Ennis West
Soil Conservation Service Site 2 Reservoir	Bristol
Soil Conservation Service Site 20 Reservoir	Ennis West
Soil Conservation Service Site 23 Reservoir	Forreston
Soil Conservation Service Site 24 Reservoir	Forreston
Soil Conservation Service Site 29 Reservoir	Cryer Creek
Soil Conservation Service Site 2a Reservoir	Midlothian
Soil Conservation Service Site 2b Reservoir	Midlothian
Soil Conservation Service Site 2f Reservoir	Midlothian
Soil Conservation Service Site 3 Reservoir	Midlothian
Soil Conservation Service Site 3 Reservoir	Bristol
Soil Conservation Service Site 4 Reservoir	Bristol
Soil Conservation Service Site 4 Reservoir	Midlothian
Soil Conservation Service Site 44 Reservoir	Mertens
Soil Conservation Service Site 49a Reservoir	Venus
Soil Conservation Service Site 5 Reservoir	Midlothian
Soil Conservation Service Site 5 Reservoir	Bristol
Soil Conservation Service Site 53 Reservoir	Maypearl
Soil Conservation Service Site 54 Reservoir	Maypearl
Soil Conservation Service Site 55 Reservoir	Maypearl
Soil Conservation Service Site 56 Reservoir	Boz
Soil Conservation Service Site 6 Reservoir	Midlothian
Soil Conservation Service Site 6 Reservoir	Bristol
Soil Conservation Service Site 7 Reservoir	Bristol
Soil Conservation Service Site 7 Reservoir	Midlothian
Soil Conservation Service Site 75b Reservoir	Maypearl
Soil Conservation Service Site 77 Reservoir	Maypearl
Soil Conservation Service Site 78 Reservoir	Files Valley
Soil Conservation Service Site 790 Reservoir	Boz

Name	United States Geological Survey Topographic Map
Soil Conservation Service Site 79a Reservoir	Italy
Soil Conservation Service Site 79b Reservoir	Boz
Soil Conservation Service Site 8 Reservoir	Bristol
Soil Conservation Service Site 8 Reservoir	Midlothian
Soil Conservation Service Site 80 Reservoir	Boz
Soil Conservation Service Site 81 Reservoir	Boz
Soil Conservation Service Site 82 Reservoir	Boz
Soil Conservation Service Site 83 Reservoir	Italy
Soil Conservation Service Site 84 Reservoir	Boz
Soil Conservation Service Site 85b Reservoir	Italy
Soil Conservation Service Site 86 Reservoir	Italy
Soil Conservation Service Site 89 Reservoir	Avalon
Soil Conservation Service Site 8a Reservoir	Bristol
Soil Conservation Service Site 9 Reservoir	Midlothian
Soil Conservation Service Site 9 Reservoir	India
Soil Conservation Service Site 9 Reservoir	Venus
Soil Conservation Service Site 92 Reservoir	Avalon
Soil Conservation Service Site 93 Reservoir	Avalon
Soil Conservation Service Site 94 Reservoir	Avalon
Soil Conservation Service Site 95 Reservoir	Cryer Creek
Soil Conservation Service Site 97 Reservoir	Italy
Soil Conservation Service Site 98 Reservoir	Italy
Soil Conservation Service Site 98a Reservoir	Italy
Soil Conservation Service Site 99 Reservoir	Frost
Wilemon Lake	Maypearl

Source: TX HomeTownLocator

Historic Buildings and Districts

Historic landmarks and districts are important to consider when evaluating vulnerabilities to hazards. What is historic, and worth saving, varies with the beholder. “Historic” applies to a building that is part of a community’s tangible past. Due to the advanced of these structures, they are highly susceptible to cracking, leaning, and total destruction caused by any of the hazards. The Ellis County Historical Commission is responsible for identifying and preserving Ellis County's historic resources. The Historical Commission assists in the development of tourism by helping the county's citizens become aware of the economic benefits derived from the preservation and promotion of Ellis County's historical sites, areas, and resources.

Historic buildings and structures, artwork, monuments, family heirlooms, and historic documents are often irreplaceable, and may be lost forever in a disaster if not considered in the mitigation planning process. The loss of these resources is all the more painful because of how often residents rely on their presence after a disaster, to reinforce connections with neighbors and the larger community, and to seek comfort in the aftermath of a disaster.

The continued presence of historic properties in Ellis County enhances the quality life; it helps to establish sense of place and defines the very character of the community. The Historical Commission focuses on conserving each of Ellis County 's cities historic resources and promoting civic awareness of the communities' history.

According to the Texas Historic Sites Atlas, there are 122 national register properties, 4 courthouses, 122 cemeteries, 2 museums, and 125 historical markers throughout Ellis County.[11]

3.3.2 Vulnerable Populations & Species

In the context of emergencies, vulnerable groups may include individuals with disabilities, pregnant women, children, elderly persons, prisoners, certain members of ethnic minorities, people with language barriers, and the impoverished. For these populations, emergency response failures can have catastrophic consequences, including loss of the ability to work or live independently, permanent injury, and death. Without appropriate preparation, vulnerable individuals may not be able to evacuate as instructed, reach points of distribution for medical countermeasures, understand written or verbal communications during an emergency, or find suitable housing if their residences are destroyed during a disaster. Along with vulnerable populations, there are natural assets that are more vulnerable to natural disasters than others.

Vulnerable Population

New technologies that provide 9-1-1 and public safety officials with the ability to proactively engage the community have had a dramatic effect on mortality rates during these increasing amounts and strength of natural disasters. Identifying at risk populations and providing them with information and assistance when they most need it can make a significant difference, especially in the event of an evacuation or seeking shelter. One measure of the strength of a community's response and recovery system is its attentiveness to its most vulnerable citizens. It is a cruel fact: disasters discriminate.

The following table provides demographic information from the U.S. Census Bureau QuickFacts. QuickFacts provides statistics for all states and counties, and for cities and towns with a ***population of 5,000 or more***. Note that the cities of Alma, Bardwell, Ferris, Garrett, Italy, Maypearl, Milford, Oak Leaf, Ovilla, and Palmer do not have QuickFacts data available. The Ellis County column of numbers includes the county in its entirety.

Demographics Table

	Waxahachie city, Texas	Red Oak city, Texas	Midlothian city, Texas	Ennis city, Texas	Ellis County, Texas
Population estimates, July 1, 2019, (V2019)	**37,988**	**13,464**	**33,532**	**20,357**	**184,826**
PEOPLE					
Population					
Population estimates, July 1, 2019, (V2019)	**37,988**	**13,464**	**33,532**	**20,357**	**184,826**

[11] Texas Historical Sites Atlas. 2015. Texas Historical Commission. <https://atlas.thc.state.tx.us/>

	Waxahachie city, Texas	Red Oak city, Texas	Midlothian city, Texas	Ennis city, Texas	Ellis County, Texas
Population estimates base, April 1, 2010, (V2019)	29,538	10,733	22,918	18,593	149,610
Population, percent change - April 1, 2010 (estimates base) to July 1, 2019, (V2019)	28.6%	25.4%	46.3%	9.5%	23.5%
Population, Census, April 1, 2020	41,140	14,222	35,125	20,159	192,455
Population, Census, April 1, 2010	29,621	10,769	18,037	18,513	149,610
Age and Sex					
Persons under 5 years, percent	7.6%	6.2%	6.8%	7.9%	6.7%
Persons under 18 years, percent	26.0%	30.7%	28.5%	27.6%	26.5%
Persons 65 years and over, percent	12.6%	10.8%	10.7%	13.7%	13.1%
Female persons, percent	50.5%	53.2%	51.0%	52.0%	50.6%
Race and Hispanic Origin					
White alone, percent	79.5%	57.2%	88.4%	74.2%	84.1%
Black or African American alone, percent(a)	13.3%	32.9%	5.0%	15.2%	12.2%
American Indian and Alaska Native alone, percent(a)	0.5%	0.2%	0.4%	0.7%	0.8%
Asian alone, percent(a)	0.6%	0.8%	0.8%	0.2%	0.8%
Native Hawaiian and Other Pacific Islander alone, percent(a)	0.0%	0.0%	0.0%	0.0%	0.1%
Two or More Races, percent	3.4%	6.7%	4.4%	4.5%	1.9%
Hispanic or Latino, percent(b)	25.2%	20.4%	15.2%	46.1%	26.9%
White alone, not Hispanic or Latino, percent	60.4%	42.6%	74.8%	36.3%	58.9%
Population Characteristics					
Veterans, 2015-2019	2,083	922	1,976	752	10,718
Foreign born persons, percent, 2015-2019	6.0%	5.3%	3.8%	16.6%	7.7%
Housing					

	Waxahachie city, Texas	Red Oak city, Texas	Midlothian city, Texas	Ennis city, Texas	Ellis County, Texas
Housing units, July 1, 2019, (V2019)	X	X	X	X	65,940
Owner-occupied housing unit rate, 2015-2019	55.4%	66.3%	80.6%	62.5%	74.4%
Median value of owner-occupied housing units, 2015-2019	$176,300	$207,600	$228,000	$111,200	$191,400
Median selected monthly owner costs -with a mortgage, 2015-2019	$1,549	$1,849	$1,868	$1,358	$1,663
Median selected monthly owner costs -without a mortgage, 2015-2019	$551	$645	$631	$484	$553
Median gross rent, 2015-2019	$1,088	$1,136	$1,192	$915	$1,054
Building permits, 2020	X	X	X	X	2,731
Families & Living Arrangements					
Households, 2015-2019	12,276	4,040	9,812	6,557	57,307
Persons per household, 2015-2019	2.77	3.11	3.03	2.95	3.00
Living in same house 1 year ago, percent of persons age 1 year+, 2015-2019	82.7%	81.8%	86.2%	89.2%	87.7%
Language other than English spoken at home, percent of persons age 5 years+, 2015-2019	15.2%	10.5%	7.7%	37.2%	18.0%
Computer and Internet Use					
Households with a computer, percent, 2015-2019	94.2%	96.0%	96.6%	87.8%	94.4%
Households with a broadband Internet subscription, percent, 2015-2019	86.6%	91.8%	94.2%	81.4%	87.8%
Education					
High school graduate or higher, percent of persons age 25 years+, 2015-2019	88.0%	92.2%	94.4%	72.7%	86.2%
Bachelor's degree or higher, percent of persons age 25 years+, 2015-2019	22.9%	23.9%	32.6%	15.9%	24.3%
Health					
With a disability, under age 65 years, percent, 2015-2019	8.2%	6.4%	7.8%	6.2%	8.0%

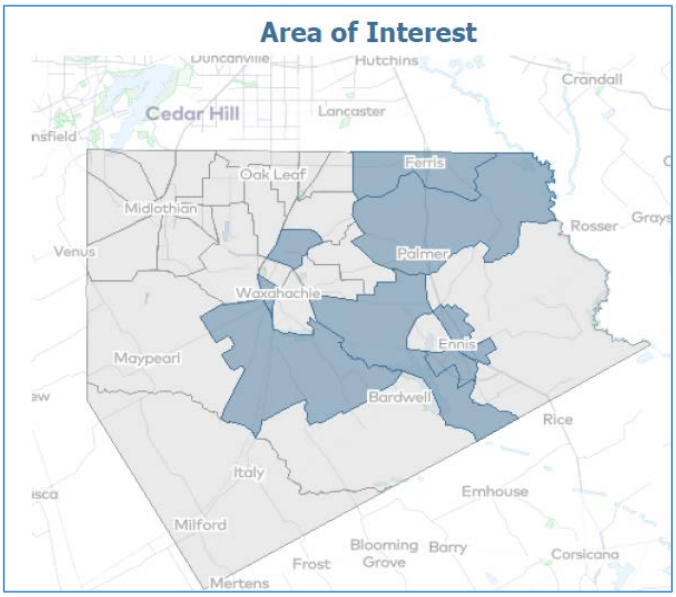
	Waxahachie city, Texas	Red Oak city, Texas	Midlothian city, Texas	Ennis city, Texas	Ellis County, Texas
Persons without health insurance, under age 65 years, percent	16.4%	11.5%	10.8%	27.0%	18.9%
Economy					
In civilian labor force, total, percent of population age 16 years+, 2015-2019	66.5%	72.7%	70.8%	66.2%	66.7%
In civilian labor force, female, percent of population age 16 years+, 2015-2019	61.3%	68.0%	64.0%	61.3%	60.6%
Total accommodation and food services sales, 2012 ($1,000)(c)	84,981	D	D	36,279	177,743
Total health care and social assistance receipts/revenue, 2012 ($1,000)(c)	169,329	17,631	23,735	D	326,638
Total manufacturers shipments, 2012 ($1,000)(c)	1,293,840	D	1,378,217	1,356,243	4,129,652
Total retail sales, 2012 ($1,000)(c)	623,921	93,645	232,312	332,962	1,459,370
Total retail sales per capita, 2012(c)	$20,068	$8,451	$12,162	$17,850	$9,478
Transportation					
Mean travel time to work (minutes), workers age 16 years+, 2015-2019	26.3	36.3	32.0	23.6	30.6
Income & Poverty					
Median household income (in 2019 dollars), 2015-2019	$65,589	$71,957	$95,306	$57,619	$76,871
Per capita income in past 12 months (in 2019 dollars), 2015-2019	$29,149	$31,154	$35,084	$24,123	$32,571
Persons in poverty, percent	12.3%	6.1%	5.3%	15.0%	8.7%
BUSINESSES					
Businesses					
Total employer establishments, 2019	X	X	X	X	3,221
Total employment, 2019	X	X	X	X	46,208
Total annual payroll, 2019 ($1,000)	X	X	X	X	1,998,579
Total employment, percent change, 2018-2019	X	X	X	X	-0.1%
Total nonemployer establishments, 2018	X	X	X	X	16,101

All firms, 2012	2,751	1,126	1,720	1,777	12,813
Men-owned firms, 2012	1,377	589	1,005	931	7,028
Women-owned firms, 2012	927	353	529	594	4,063
Minority-owned firms, 2012	811	436	274	591	3,413
Nonminority-owned firms, 2012	1,693	633	1,342	1,048	8,949
Veteran-owned firms, 2012	249	106	112	93	1,121
Nonveteran-owned firms, 2012	2,305	964	1,497	1,490	11,080
GEOGRAPHY					
Geography					
Population per square mile, 2010	621.6	719.6	362.5	669.4	159.9
Land area in square miles, 2010	47.65	14.97	49.75	27.65	935.49
FIPS Code	4876816	4861196	4848096	4824348	48139

Source: US Census Bureau Quick Facts, www.census.gov.

Overall, there are 8 census tracts in Ellis County that show to be more vulnerable to natural disasters due to their demographics and climate exposure, according to Headwater Economics. A full report, *Neighborhoods at Risk*, can be found in Appendix F. The following areas in blue identity tracks that met the following criteria:

- People who don't speak English well
- People without health insurance
- Children under 5 years
- Area lacking tree canopy
- Area of impervious surface
- Area in 500-yr floodplain



Vulnerable Species

Currently, there are no regional plans related to the future of North Texas' natural assets of habitat, plants, animals, open space areas and corridors, tree canopy, or carbon footprint. There are studies of particular topics that have been conducted for other purposes. For example, the Environmental Impact Statement of an individual project considers the project's impact on endangered species. Also, there are studies underway on particular topics but for smaller areas within the North Texas region.[12]

Under Chapter 12.0011 of the Texas Parks and Wildlife Code, Texas Parks and Wildlife Department (TPWD) is charged with "providing recommendations that will protect fish and wildlife resources to local, state, and federal agencies that approve, permit, license, or construct developmental projects" and

[12] North Texas to 2030: Extending the Trends. Vision North Texas.

"providing information on fish and wildlife resources to any local, state, and federal agencies or private organizations that make decisions affecting those resources." Project types reviewed by TPWD include reservoirs, highway projects, pipelines, urban infrastructure, utility construction, renewable energy, and residential and commercial construction, as well as many others.

Each state in the U.S. has completed a Wildlife Action Plan or Comprehensive Wildlife Conservation Strategy to improve the stability and recovery of species which are in decline, already listed as threatened or endangered, and/or are representative of the diversity and health of the state's wildlife. To date, these plans have become important guides for natural resource management programs, conservation funding, partnership building, project development, and problem-solving at local and regional levels. TPWD is the steward of the Texas Conservation Action Plan, formerly called the Texas Comprehensive Wildlife Conservation Strategy 2005 - 2010 or Texas Wildlife Action Plan.

While the Texas Conservation Action Plan is a conservation plan for species at most at risk, its primary purpose is to bring people together to realize conservation benefits, prevent species listings, and preserve our natural heritage for future generations. Handbooks contain information on Species of Greatest Conservation Need, regionally important habitats, local conservation goals and projects, regional and statewide activities, contact information for conservation partners, and maps. The activities in each handbook are starting points to engage landowners, land-use planners, natural resources professionals, and the public in regional and local community-based conservation.[13]

The Texas Parks and Wildlife Department established the following list of rare, threatened, and endangered species within Ellis County. All species on the county list are tracked in the Texas Natural Diversity Database (TXNDD).[14] Species that appear on county lists do not all share the same probability of occurrence within the county. Ranges depicted by the county list online application do not distinguish between breeding range, wintering range, and migratory range. Therefore, species shown on the lists have varying degrees of potential occurrence depending on the season or habitat availability/suitability. The county list is intended to provide county-level information regarding potential occurrence of protected (i.e. federal- or state-listed threatened or endangered) species and Species of Greatest Conservation Need (SGCN).

Taxon	Common Name	Description
Amphibians	Woodhouse's toad	Terrestrial and aquatic: A wide variety of terrestrial habitats are used by this species, including forests, grasslands, and barrier island sand dunes. Aquatic habitats are equally varied.
Amphibians	Strecker's chorus frog	Terrestrial and aquatic: Wooded floodplains and flats, prairies, cultivated fields and marshes. Likes sandy substrates.

[13] Texas Conservation Action Plan. Texas Parks & Wildlife.
< https://tpwd.texas.gov/huntwild/wild/wildlife_diversity/nongame/tcap/>

[14] Texas Parks and Wildlife Department, Wildlife Division, Diversity and Habitat Assessment Programs. TPWD County Lists of Protected Species and Species of Greatest Conservation Need. Ellis County. 09 December 2021.

Taxon	Common Name	Description
Amphibians	southern crawfish frog	Terrestrial and aquatic: The terrestial habitat is primarily grassland and can vary from pasture to intact prairie; it can also include small prairies in the middle of large forested areas. Aquatic habitat is any body of water but preferred habitat is ephemeral wetlands.
Birds	white-faced ibis	Prefers freshwater marshes, sloughs, and irrigated rice fields, but will attend brackish and saltwater habitats; currently confined to near-coastal rookeries in so-called hog-wallow prairies. Nests in marshes, in low trees, on the ground in bulrushes or reeds, or on floating mats.
Birds	wood stork	Prefers to nest in large tracts of baldcypress (Taxodium distichum) or red mangrove (Rhizophora mangle); forages in prairie ponds, flooded pastures or fields, ditches, and other shallow standing water, including salt-water; usually roosts communally in tall snags, sometimes in association with other wading birds (i.e. active heronries); breeds in Mexico and birds move into Gulf States in search of mud flats and other wetlands, even those associated with forested areas; formerly nested in Texas, but no breeding records since 1960
Birds	bald eagle	Found primarily near rivers and large lakes; nests in tall trees or on cliffs near water; communally roosts, especially in winter; hunts live prey, scavenges, and pirates food from other birds
Birds	Black Rail	Salt, brackish, and freshwater marshes, pond borders, wet meadows, and grassy swamps; nests in or along edge of marsh, sometimes on damp ground, but usually on mat of previous years dead grasses; nest usually hidden in marsh grass or at base of Salicornia
Birds	whooping crane	Small ponds, marshes, and flooded grain fields for both roosting and foraging. Potential migrant via plains throughout most of state to coast; winters in coastal marshes of Aransas, Calhoun, and Refugio counties.
Birds	piping plover	Beaches, sandflats, and dunes along Gulf Coast beaches and adjacent offshore islands. Also spoil islands in the Intracoastal Waterway. Based on the November 30, 1992 Section 6 Job No. 9.1, Piping Plover and Snowy Plover Winter Habitat Status Survey, algal flats appear to be the highest quality habitat. Some of the most important aspects of algal flats are their relative inaccessibility and their continuous availability throughout all tidal conditions. Sand flats often appear to be preferred over algal flats when both are available, but large portions of sand flats along the Texas coast are available only during low-very low tides and are often completely unavailable during extreme high tides or strong north winds. Beaches appear to serve as a secondary habitat to the flats associated with the primary bays, lagoons, and inter-island passes. Beaches are rarely used on the southern Texas coast, where bayside habitat is always available, and are abandoned as bayside habitats become available on the central and northern coast. However, beaches are probably a vital habitat along the central and northern coast (i.e. north of Padre Island) during periods of extreme high tides that cover the flats. Optimal site characteristics appear to be large in area, sparsely vegetated, continuously available or in close proximity to secondary habitat, and with limited human disturbance.
Birds	Rufa Red Knot	Habitat: Primarily seacoasts on tidal flats and beaches, herbaceous wetland, and Tidal flat/shore. Bolivar Flats in Galveston County, sandy beaches Mustang Island, few on outer coastal and barrier beaches, tidal mudflats and salt marshes

Taxon	Common Name	Description
Birds	Franklin's gull	This species is only a spring and fall migrant throughout Texas. It does not breed in or near Texas. Winter records are unusual consisting of one or a few individuals at a given site (especially along the Gulf coastline). During migration, these gulls fly during daylight hours but often come down to wetlands, lake shore, or islands to roost for the night.
Birds	interior least tern	Sand beaches, flats, bays, inlets, lagoons, islands. Subspecies is listed only when inland (more than 50 miles from a coastline); nests along sand and gravel bars within braided streams, rivers; also know to nest on man-made structures (inland beaches, wastewater treatment plants, gravel mines, etc); eats small fish and crustaceans, when breeding forages within a few hundred feet of colony
Birds	western burrowing owl	Open grasslands, especially prairie, plains, and savanna, sometimes in open areas such as vacant lots near human habitation or airports; nests and roosts in abandoned burrows
Birds	Chestnut-collared Longspur	Occurs in open shortgrass settings especially in patches with some bare ground. Also occurs in grain sorghum fields and Conservation Reserve Program lands
Mammals	southeastern myotis bat	Caves are rare in Texas portion of range; buildings, hollow trees are probably important. Historically, lowland pine and hardwood forests with large hollow trees; associated with ecological communities near water. Roosts in cavity trees of bottomland hardwoods, concrete culverts, and abandoned man-made structures.
Mammals	cave myotis bat	Colonial and cave-dwelling; also roosts in rock crevices, old buildings, carports, under bridges, and even in abandoned Cliff Swallow (Hirundo pyrrhonota) nests; roosts in clusters of up to thousands of individuals; hibernates in limestone caves of Edwards Plateau and gypsum cave of Panhandle during winter; opportunistic insectivore.
Mammals	tricolored bat	Forest, woodland and riparian areas are important. Caves are very important to this species.
Mammals	big brown bat	Any wooded areas or woodlands except south Texas. Riparian areas in west Texas.
Mammals	eastern red bat	Red bats are migratory bats that are common across Texas. They are most common in the eastern and central parts of the state, due to their requirement of forests for foliage roosting. West Texas specimens are associated with forested areas (cottonwoods). Also common along the coastline. These bats are highly mobile, seasonally migratory, and practice a type of wandering migration". Associations with specific habitat is difficult unless specific migratory stopover sites or wintering grounds are found. Likely associated with any forested area in East
Mammals	hoary bat	Hoary bats are highly migratory, high-flying bats that have been noted throughout the state. Females are known to migrate to Mexico in the winter, males tend to remain further north and may stay in Texas year-round. Commonly associated with forests (foliage roosting species) but are found in unforested parts of the state and lowland deserts. Tend to be captured over water and large, open flyways.
Mammals	swamp rabbit	Primarily found in lowland areas near water including: cypress bogs and marshes, floodplains, creeks and rivers.

Taxon	Common Name	Description
Mammals	Muskrat	Found in fresh or brackish marshes, lakes, ponds, swamps, and other bodies of slow-moving water. Most abundant in areas with cattail. Dens in bank burrow or conical house of vegetation in shallow vegetated water. It is primarily found in the Rio Grande near El Paso and in SE Texas in the Houston area.
Mammals	long-tailed weasel	Includes brushlands, fence rows, upland woods and bottomland hardwoods, forest edges & rocky desert scrub. Usually live close to water.
Mammals	eastern spotted skunk	Generalist; open fields prairies, croplands, fence rows, farmyards, forest edges & woodlands. Prefer wooded, brushy areas & tallgrass prairies. S.p. ssp. interrupta found in wooded areas and tallgrass prairies, preferring rocky canyons and outcrops when such sites are available.
Mammals	western hog-nosed skunk	Habitats include woodlands, grasslands & deserts, to 7200 feet, most common in rugged, rocky canyon country; little is known about the habitat of the ssp. telmalestes
Mammals	mountain lion	Generalist; found in a wide range of habitats statewide. Found most frequently in rugged mountains & riparian zones.
Reptiles	alligator snapping turtle	Aquatic: Perennial water bodies; rivers, canals, lakes, and oxbows; also swamps, bayous, and ponds near running water; sometimes enters brackish coastal waters. Females emerge to lay eggs close to the waters edge.
Reptiles	western chicken turtle	Aquatic and terrestrial: This species uses aquatic habitats in the late winter, spring and early summer and then terrestrial habitats the remainder of the year. Preferred aquatic habitats seem to be highly vegetated shallow wetlands with gentle slopes. Specific terrestrial habitats are not well known.
Reptiles	eastern box turtle	Terrestrial: Eastern box turtles inhabit forests, fields, forest-brush, and forest-field ecotones. In some areas they move seasonally from fields in spring to forest in summer. They commonly enters pools of shallow water in summer. For shelter, they burrow into loose soil, debris, mud, old stump holes, or under leaf litter. They can successfully hibernate in sites that may experience subfreezing temperatures.
Reptiles	western box turtle	Terrestrial: Ornate or western box trutles inhabit prairie grassland, pasture, fields, sandhills, and open woodland. They are essentially terrestrial but sometimes enter slow, shallow streams and creek pools. For shelter, they burrow into soil (e.g., under plants such as yucca) (Converse et al. 2002) or enter burrows made by other species.
Reptiles	slender glass lizard	Terrestrial: Habitats include open grassland, prairie, woodland edge, open woodland, oak savannas, longleaf pine flatwoods, scrubby areas, fallow fields, and areas near streams and ponds, often in habitats with sandy soil.
Reptiles	Texas horned lizard	Terrestrial: Open habitats with sparse vegetation, including grass, prairie, cactus, scattered brush or scrubby trees; soil may vary in texture from sandy to rocky; burrows into soil, enters rodent burrows, or hides under rock when inactive. Occurs to 6000 feet, but largely limited below the pinyon-juniper zone on mountains in the Big Bend area.

Taxon	Common Name	Description
Reptiles	Prairie Skink	The prairie skink can occur in any native grassland habitat across the Rolling Plains, Blackland Prairie, Post Oak Savanna and Pineywoods ecoregions.
Reptiles	common garter snake	Terrestrial and aquatic: Habitats used include the grasslands and modified open areas in the vicinity of aquatic features, such as ponds, streams or marshes. Damp soils and debris for cover are thought to be critical.
Reptiles	Texas garter snake	Terrestrial and aquatic: Habitats used include the grasslands and modified open areas in the vicinity of aquatic features, such as ponds, streams or marshes. Damp soils and debris for cover are thought to be critical.
Reptiles	timber (canebrake) rattlesnake	Terrestrial: Swamps, floodplains, upland pine and deciduous woodland, riparian zones, abandoned farmland. Limestone bluffs, sandy soil or black clay. Prefers dense ground cover, i.e. grapevines, palmetto.
Insects	American bumblebee	Habitat description is not available at this time.
Insects	a katydid	Habitat description is not available at this time.
Insects	No accepted common name	Habitat description is not available at this time.
Mollusks	Sandbank Pocketbook	Occurs in small streams to large rivers in slow to moderate current in sandy mud to sand and gravel substrate. Can occur in a variety of habitats but most common in littoral habitats such as banks or backwaters or in protected areas along point bars (Randklev et al. 2013b; Randklev et al. 2014a; Troia et al. 2015). [Mussels of Texas 2019]
Mollusks	Louisiana Pigtoe	Occurs in small streams to large rivers in slow to moderate currents in substrates of clay, mud, sand, and gravel. Not known from impoundments (Howells 2010f; Randklev et al. 2013b; Troia et al. 2015). [Mussels of Texas 2019]
Mollusks	Texas Heelsplitter	Occurs in small streams to large rivers in standing to slow-flowing water; most common in banks, backwaters and quiet pools; adapts to some reservoirs. Often found in soft substrates such as mud, silt or sand (Howells et al. 1996; Randklev et al. 2017a). [Mussels of Texas 2019]
Mollusks	Trinity Pigtoe	Found in a variety of habitats but most common in riffles. Inhabits various substrates though most often sand, gravel, and cobble (species was recently split from Texas Pigtoe and occurs in similar habitats; Howells 2010a; Randklev et al. 2013b; Randklev et al. 2014a; Troia et al 2015). [Mussels of Texas 2020]
Plants	Engelmann's bladderpod	Grasslands and calcareous rock outcrops in a band along the eastern edge of the Edwards Plateau, ranging as far north as the Red River (Carr 2015).
Plants	Hall's prairie clover	In grasslands on eroded limestone or chalk and in oak scrub on rocky hillsides; Perennial; Flowering May-Sept; Fruiting June-Sept

Taxon	Common Name	Description
Plants	Sutherland hawthorn	In mesic soils of woods or on edge of woods, treeline/fenceline, or thicket. Above\near creeks and draws, in river bottoms. Flowering Mar-Apr; fruiting May-Oct.

3.3.3 Factors that Increase Vulnerability

Climate Variability

A key factor to an increase in vulnerability is climate variability, also known as climate change. According to the United States Environmental Protection Agency (EPA),

> Texas's climate is changing. Most of the state has warmed between one-half and one-degree Fahrenheit (°F) in the past century. In the eastern two-thirds of the state, average annual rainfall is increasing, yet the soil is becoming drier. Rainstorms are becoming more intense, and floods are becoming more severe... In the coming decades, storms are likely to become more severe, deserts may expand, and summers are likely to become increasingly hot and dry, creating problems for agriculture and possibly human health. Our climate is changing because the earth is warming. People have increased the amount of carbon dioxide in the air by 40% since the late 1700s. Other heat-trapping greenhouse gases are also increasing. These gases have warmed the surface and lower atmosphere of our planet about one degree during the last 50 years. Evaporation increases as the atmosphere warms, which increases humidity, average rainfall, and the frequency of heavy rainstorms in many places—but contributes to drought in others…[15]

The following is an article from the Dallas Morning News that describes the effects of climate change in North Central Texas and the impacts on the existing natural hazards:

> The United States has just come off a record year for weather and climate disasters and, by most accounts, it's only going to get worse.
>
> Last year hurricanes Harvey, Irma, and Maria; the wildfires and floods in California; and tornado outbreaks in the Midwest and the South delivered $306.2 billion in damages, more than any year in history when adjusted for inflation.
>
> Texas is particularly vulnerable to a changing climate. It has had more costly weather-related disasters than any other state, and those events will happen more often as air and ocean temperatures climb, scientists say.
>
> "Climate change is not just about polar bears," said Katharine Hayhoe, a climate scientist at Texas Tech University with an impressive YouTube following. "It will affect North Texas profoundly."
>
> Between 2041 and 2050, Dallas-Fort Worth may see August temperatures rise from a mean of 86 °F at the end of the 20th century to 94 °F, with extremes rising above 120, reports one study by scientists at the University of Texas at Arlington.

[15] What Climate Change Means for Texas. August 2016. EPA 430-F-16-045. United States Environmental Protection Agency. <https://archive.epa.gov/epa/sites/production/files/2016-09/documents/climate-change-tx.pdf>

Longer droughts and more extreme rainstorms will pose a challenge for those who manage drinking water supplies, those who raise cattle, and those who oversee our roads and railways.

The changes may also have unexpected effects on people's daily lives, including jobs. Intense heat can imperil cars and airplanes, evaporate drinking water supplies, and halt outdoor labor such as farm work and construction.

Adam Smith, a scientist with the federal government's main climate agency, the National Oceanic and Atmospheric Administration, calls Texas "the disaster capital of the United States."

As Smith explains, Texas is susceptible to almost every kind of weather and climate hazard, from extreme cold to extreme heat, from severe drought and wildfires to torrential floods. Texas is also home to a booming population and critical infrastructure, including the petrochemical plants that were damaged in Hurricane Harvey.

"Texas is a hot-spot for a wide range of extreme natural events due to its geography," said Smith. "We expect many of these extremes to become more frequent and intense as time moves forward."

While uncertainty is built into climate models, scientists have a high degree of confidence in many of the changes they observe and predict.

The bigger, longer and more common an event is, the greater the accuracy with which scientists can project how climate change will impact it, said Hayhoe, a lead author of a November 2017 climate change report overseen by scientists at 13 federal agencies. Larger events have more data associated with them and can be easier to model.

Researchers are very confident that climate change will increase both average and extreme temperatures. They are also confident that climate change is likely to increase the risk of heavy precipitation in many areas and may bring stronger droughts to the south-central and southwestern parts of the U.S.

Projected impacts on smaller-scale events like tornadoes and hailstorms are less well understood.

One area of consensus is the cause of climate change. "It is extremely likely that human activities, especially emissions of greenhouse gases, are the dominant cause of the observed warming since the mid-20th century," note the authors of the Fourth National Climate Assessment, a Congressionally mandated review that scientists conduct every four years. They add that there are no convincing alternative explanations.

Below is how these changes will affect our area, the evidence behind the projections, and how confident scientists are in each of these findings.

Heat

More record-setting heat in North Texas is a virtual certainty. Already, we are living through the warmest period in the history of modern civilization, the federal report found, and that warming will accelerate.

Climate science contrarians often attack the models on which climate projections are based. Myron Ebell, who led President Donald Trump's transition team at the Environmental Protection Agency, accepts that humans are most likely responsible for warming, but he says models have exaggerated the outcome. Ebell is director of the Center for Energy and Environment at the

Competitive Enterprise Institute, a libertarian advocacy group based in Washington, D.C. He acknowledges that he is not a scientist.

In fact, researchers have used models to predict global temperature changes for more than 50 years, and the models' projections have been fairly accurate over the long term. In the early 21st century, a discrepancy appeared between observed and modeled temperatures-a period dubbed the "global warming slowdown" or "hiatus."

Scientists have published scores of studies on the mismatch and tied it to several factors that contributed to lower-than-expected observed temperatures. Those factors include a series of small volcanic eruptions, the cooling effects of which scientists had underestimated, and lower than expected solar output.

Findings from those studies are helping to improve climate model simulations and helping scientists better understand why there are differences between simulations and observations in the early 21stcentury, said Ben Santer, a climate scientist at the Lawrence Livermore National Laboratory.

Global average temperatures increased about 1.8 degrees Fahrenheit in the last 115 years. In Dallas, they climbed from about 65 °F during the early part of the 20th century to 68 °F during the most recent decade. If nothing is done to reduce emissions of carbon dioxide and other greenhouse gases, average temperatures in the city may reach the low 70s by 2050 and surpass 75°F by the end of the century.

Earlier this year, Amir Jina and colleagues published a study in the journal *Science* that estimated economic damage from climate change in each county of the United States.

Once temperatures reach the high 90s, equal to or above body temperature, fatality rates go up.

Besides people, heat also affects roads. A 2015 study by the University of Texas at Arlington (UTA) that focused on the impact of climate change on transportation predicted "an increase in wildfires along paved highways, heat-induced stress on bridges and railroads, air-conditioning problems in public transport vehicles and heat-related accidents by failure of individual vehicles and heat-related stress."

The study concluded, "These impacts can be translated into substantial mobility and economic loss."

Drought

Along with heat will come stronger drought, which "has profound economic impacts," said Hayhoe.

The prediction that North Texas will have longer and more severe droughts is based on multiple factors, including the relationship between high temperatures and soil dryness and the presence of more frequent and longer lasting high-pressure systems in summer that suppress rainfall and deflect storms away from our area.

Hayhoe points to Texas' 2010-2013 drought as a probable sign of things to come. Although this drought occurred naturally, as a result of a strong La Niña event that typically brings dry conditions to our area, it was exacerbated by extreme heat. That event created severe hay shortages for

cattle farmers and led some ranchers to prematurely slaughter their herds or export them out of state.

"Cotton can be drought-resistant, but not cattle," said Hayhoe.

The 2015 UTA study predicts a reduction in soil moisture of 10% to 15% in all seasons by 2050, which can also lead to cracked pavement and the premature loss of roads, railways, and other infrastructure.

Heat and drought also pose a problem for drinking water supplies, which North Texas sources from surface reservoirs that will be increasingly prone to evaporation. Hayhoe says some water managers are considering pumping the reservoirs underground during exceptionally hot and dry conditions, or covering them with polymer "blankets."

The blankets are an invisible layer of organic molecules that can help reduce evaporation.

Floods

While it's not likely that annual precipitation totals will change in North Texas, rainfall patterns likely will. Hayhoe and Nielsen-Gammon both say we will likely see enhanced "feast or famine" cycles with torrential rainstorms in the spring followed by longer than usual dry periods.

These predictions carry a high degree of certainty, because climatologists have already recorded this trend playing out.

"Rainfall becoming more extreme is something we expect because we've observed this not just in North Texas but throughout the United States, and models consistently predict it will continue to happen," said Nielsen-Gammon.

Severe rainstorms, the UTA scientists predict, will have the capacity to flood highway exit and service roads in the Federal Emergency Management Agency (FEMA) 100-year floodplain.

"While the state highway system was built above flooding levels, the connector roads may be easily flooded," said Arne Winguth, a climate scientist at UTA who co-authored the report.

Tornadoes and hail

Two events climate scientists cannot reliably project are hailstorms and tornadoes. "A lot of the things we care about are too small-scale to predict with more confidence," said Nielsen-Gammon. "The historical record is not large enough for longer-term forecasts."

There is some evidence that tornadoes, like rainstorms, are becoming more concentrated on fewer days and that their season has become less predictable.

The same is true with hail. "One thing we expect to happen with a warming climate is that the average humidity in the lower atmosphere may decrease, and if that happens it's easier for hail to stay frozen," said Nielsen-Gammon. "That factor might increase hailstorms, but that's just one of many factors that do affect hail."

Economy

Jina of the University of Chicago predicted in his study that climate change would decrease Dallas County's annual income by 10% to 20% in the coming decades unless emissions are reduced. "North Texas is one of the worst-affected places in the country," he said. Much of the loss comes from higher mortality rates, soaring air-conditioning costs, and reduced labor productivity.

> To track labor productivity, Jina and his colleagues examined national time-use surveys, diaries kept by thousands of volunteers across the country, and compared them with local weather data. He found that on extremely hot days, people tended to stop working about 30 minutes early.
>
> "There's direct evidence that people concentrate less well, make more mistakes and their brain just functions less efficiently if it's too hot," he said. Heat also disrupts sleep. "The general lack of productivity leads to them saying, 'No more work today.'"
>
> The good news is that many climate-change effects are manageable. They do require local and federal authorities to plan ahead and take action, said Smith of the National Oceanic and Atmospheric Administration.
>
> "It is important," he said, "to address where we build, how we build and also to build protections for populations already exposed in vulnerable areas."[16]

All participating jurisdictions are experiencing the effects of climate variability.

Population Increase

Population growth and distribution, especially increased population density and urbanization, increases vulnerability to disasters.[17] The elderly, very young, those without air conditioning or heating, and outdoor laborers are most at risk to the effects of extreme heat and winter storms. Residents living in a floodplain are most at risk to flooding and residents living in the Wildland-Urban Interface (WUI) are most at risk to wildfires. Those living in poverty and in homes not built using enhanced building codes are most susceptible to the damages of these hazards.

The following table reflects the **estimated** changes in participating jurisdictions' demographics since the adoption of the 2015 HMP, gathered by the North Central Texas Council of Governments. In the table, population estimates for Ellis County refers to the entire county, not just the unincorporated portion. Population estimates are based on current housing inventories for cities in the NCTCOG Region with populations of 1,000 or more. The following cities marked in grey had a population too small to calculate.

Jurisdiction	2010 Population Estimate	2021 Population Estimate
Alma		
Bardwell		
Ennis	18,513	20,940
Ferris	2,436	3,020
Garrett		
Italy	1,863	1,880
Maypearl		
Midlothian	18,037	36,090
Milford		
Oak Leaf	1,298	1,400

[16] Climate change to bring North Texas longer droughts, heavy rains, 120-degree temps within 25 years. Kuchment, Anna. 2018, February 15. <https://www.dallasnews.com/news/climate-change-1/2018/02/15/climate-change-to-bring-texas-longer-droughts-heavy-rains-120-temps-august-within-25-years>

[17] Ben Wisner et al., At Risk: Natural Hazards, People's Vulnerability, and Disasters, 2d ed. (London: Routledge, 2004).

Jurisdiction	2010 Population Estimate	2021 Population Estimate
Ovilla	3,492	4,190
Palmer	2,000	2,280
Red Oak	10,769	14,550
Waxahachie	29,621	40,750
Ellis County	*149,610*	*206,810*

Source: 2021 NCTCOG Population Estimates. North Central Texas Regional Data Center.

Repetitive Loss Properties

Among the National Flood Insurance Policy (NFIP) policyholders are thousands whose properties have flooded multiple times. Called "repetitive loss properties," these are buildings and/or contents for which the NFIP has paid at least two claims of more than $1,000 in any 10-year period since 1978. "Severe repetitive loss properties" are those for which the program has either made at least four payments for buildings and/or contents of more than $5,000 or at least two building-only payments that exceeded the value of the property.

These two kinds of properties are the biggest draw on the NFIP Fund. They not only increase the NFIP's annual losses and the need for borrowing; but they drain funds needed to prepare for catastrophic events. Community leaders and residents should also be concerned with the Repetitive Loss problem because residents' lives are disrupted and may be threatened by the continual flooding.

The primary objective of identifying these properties is to eliminate or reduce the damage to property and the disruption to life caused by repeated flooding of the same properties.

The tables below provide information about the repetitive loss and severe repetitive loss properties within the participating jurisdictions, as provided by the Federal Emergency Management Agency. More details about the properties are not available to the public.

Repetitive Loss Properties as of 01/05/2022						
City	Occupancy	Rated Flood Zone 1	Cumulative Building Payment	Cumulative Contents Payment	Total Losses	Total Paid
BARDWELL	SINGLE FMLY	X	5311.96	258	2	5569.96
Mitigated	NO					
NFIP Insured	NO					
OAK LEAF	SINGLE FMLY	X	46672.63	23600.76	2	70273.39
Mitigated	NO					
NFIP Insured	NO					
RED OAK	SINGLE FMLY	X	13848.78	2142.74	2	15991.52
Mitigated	NO					
NFIP Insured	NO					
RED OAK	SINGLE FMLY	AE	36362.27	0	2	36362.27
Mitigated	NO					
NFIP Insured	YES					
RED OAK	SINGLE FMLY	X	37015.31	10779.57	2	47794.88

Repetitive Loss Properties as of 01/05/2022						
City	Occupancy	Rated Flood Zone 1	Cumulative Building Payment	Cumulative Contents Payment	Total Losses	Total Paid
Mitigated	NO					
NFIP Insured	NO					
RED OAK	SINGLE FMLY	X	10129.48	12562.81	2	22692.29
Mitigated	NO					
NFIP Insured	NO					
WAXAHACHIE	SINGLE FMLY	AE	51568.71	0	5	51568.71
Mitigated	NO					
NFIP Insured	NO					
WAXAHACHIE	SINGLE FMLY	C	7379.47	0	2	7379.47
Mitigated	NO					
NFIP Insured	NO					
WAXAHACHIE	SINGLE FMLY	X	70713.12	11267.89	5	81981.01
Mitigated	YES					
NFIP Insured	NO					
WAXAHACHIE	SINGLE FMLY	X	38313.48	9045.84	2	47359.32
Mitigated	NO					
NFIP Insured	NO					

New Development

Unsustainable development is one of the major factors in the rising costs of natural disasters. Many mitigation design strategies and technologies serve double duty, by not only preventing or reducing disaster losses but serving the broader goal of long-term community sustainability. For example, land use regulations prohibiting development in flood-prone areas may also help preserve the natural and beneficial functions of floodplains. New development in hazard-prone areas increases the risk of damage and injury from that hazard.

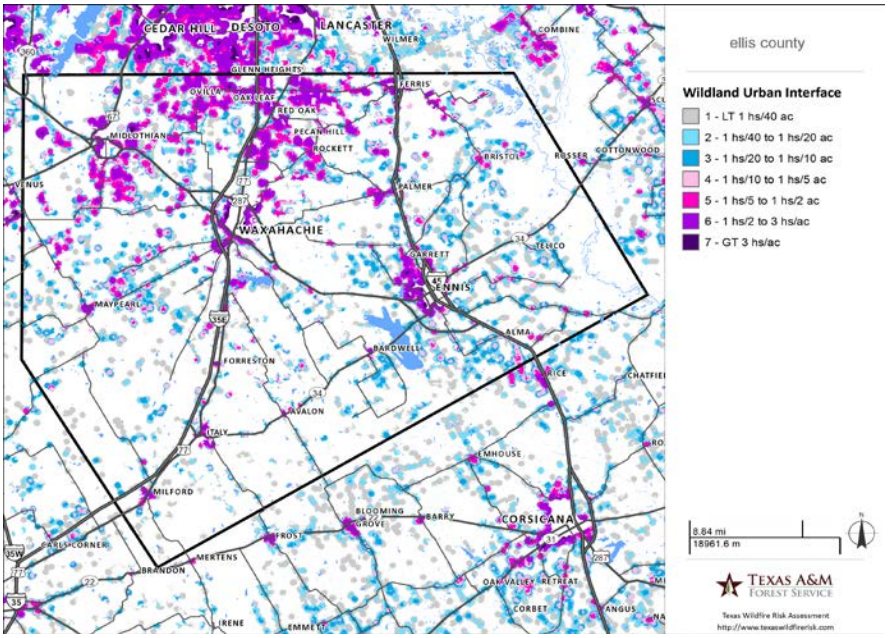
No new developments in hazard-prone areas were identified within the participating jurisdictions.

Wildland-Urban Interface

The Wildland-Urban Interface (WUI) layer of a map reflects housing density depicting where humans and their structures meet or intermix with wildland fuels. WUI housing density is categorized based on the standard Federal Register and United States Forest Service (USFS) Silvis data set categories. The number of housing density categories is extended to provide a better gradation of housing distribution to meet specific requirements of the states for their fire protection planning activities. While units of the data set are in houses per square kilometer, which is consistent with other data such as USFS SILVIS, the data is presented as the number of houses per acre to aid with interpretation and use in Texas.

Wildfires can cause significant damage to property and threatens the lives of people who are unable to evacuate WUI areas. All improved property, critical facilities, and critical structures and infrastructure located in these wildfire-prone areas are considered vulnerable and can be exposed to this hazard. The following map reflects the WUI areas in Ellis County.

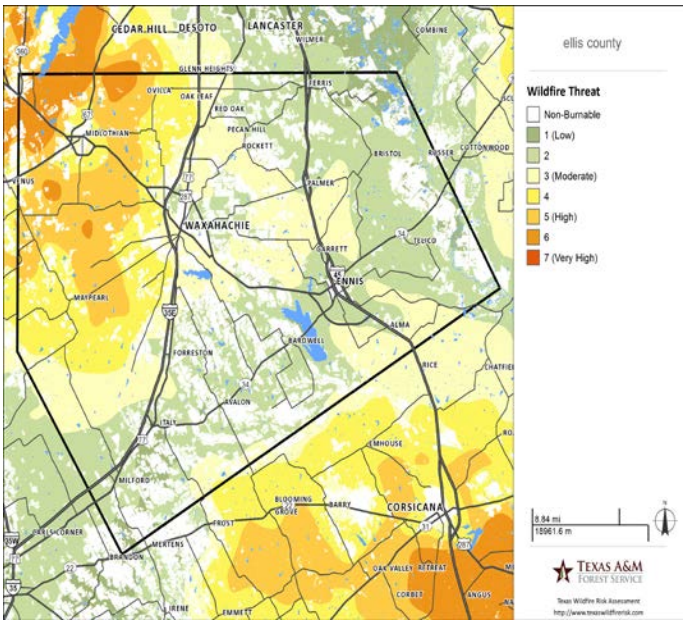
Source: Texas Wildfire Risk Assessment Portal Professional Viewer.



Wildfire Threat is the likelihood of a wildfire occurring or burning into an area. Threat is derived by combining a number of landscape characteristics including surface and canopy fuels, resultant fire behavior, historical fire occurrence, percentile weather derived from historical weather observations, and terrain conditions. These inputs are combined using analysis techniques based on established fire science.

The measure of wildfire threat used in the Texas Wildfire Risk Assessment (TWRA) is based on the Wildland Fire Susceptibility Index (WFSI). WFSI combines the probability of an acre igniting (Wildfire Ignition Density), and the expected final fire size based on rate of spread in four percentile weather categories. WFSI is defined as the likelihood of an acre burning.

Source: Texas Wildfire Risk Assessment Portal Professional Viewer.



3.3.4 Factors that Decrease Vulnerability

Factors that decrease vulnerability to hazards include the mitigation actions that have previously been implemented, the adoption of new codes and policies, and the participation in regional projects sponsored by the North Central Texas Council of Governments (NCTCOG) and other governing agencies.

Local Mitigation Activities

The participating jurisdictions have implemented a variety of mitigation actions to protect their communities from damaging disasters. These previous mitigation actions are described in detail in Chapter 4.

National Policy

On October 5, 2018, President Trump signed the Disaster Recovery Reform Act of 2018 (DRRA) into law as part of the Federal Aviation Administration Reauthorization Act of 2018. These reforms acknowledge the shared responsibility of disaster response and recovery, aim to reduce the complexity of FEMA and build the nation's capacity for the next catastrophic event. The law contains more than 50 provisions that require FEMA policy or regulation changes for full implementation, as they amend the Robert T. Stafford Disaster Relief and Emergency Assistance Act. It has yet to be seen how the DRRA will be implemented and how it will impact state and local agencies, but highlights from the DRRA include:

Highlights from the DRRA include:

- **Greater investment in mitigation, before a disaster:** Authorizing the National Public Infrastructure Pre-Disaster Hazard Mitigation Grant Program, which will be funded through the Disaster Relief Fund as a six percent set aside from disaster expenses.
    - This program will focus on funding public infrastructure projects that increase community resilience before a disaster occurs.
    - Previously, funding for pre-disaster mitigation grants relied on congressional appropriations which varied from year to year. Now, with a reliable stream of sufficient funding, communities will be able to plan and execute mitigation programs to reduce disaster risk nationwide.
    - According to a 2017 National Institute of Building Sciences report, the nation saves six dollars in future disaster costs for every one dollar invested in mitigation activities.
- **Reducing risk from future disasters after fire:** Providing hazard mitigation grant funding in areas that received Fire Management Assistance Grants as a result of wildfire. Adding fourteen new mitigation project types associated with wildfires and windstorms.
- **Increasing state capacity to manage disaster recovery:** Allowing for higher rates of reimbursement to state, local and tribal partners for their administrative costs when implementing public assistance (12 percent) and hazard mitigation projects (15 percent). Additionally, the legislation provides flexibility for states and tribes to administer their own post-disaster housing missions, while encouraging the development of disaster housing strategies.
    - States, tribes, territories and local governments bear significant administrative costs implementing disaster recovery programs. Often these costs can be high and substantially burdensome for the impacted entity to meet. Increasing the funding for administrative

costs will enable faster, more effective delivery of vital recovery programs to communities.

  - State and tribal officials have the best understanding of the temporary housing needs for survivors in their communities. This provision incentivizes innovation, cost containment and prudent management by providing general eligibility requirements while allowing them the flexibility to design their own programs.

- **Providing greater flexibility to survivors with disabilities:** Increasing the amount of assistance available to individuals and households affected by disasters, including allowing accessibility repairs for people with disabilities, without counting those repairs against their maximum disaster assistance grant award.

- **Retaining skilled response and recovery personnel:** Authorizing FEMA to appoint certain types of temporary employees who have been with the agency for three continuous years to full time positions in the same manner as federal employees with competitive status. This allows the agency to retain and promote talented, experienced emergency managers.

National Flood Insurance Program

The National Flood Insurance Program (NFIP) aims to reduce the impact of flooding on private and public structures. It does so by providing affordable insurance to property owners, renters and businesses and by encouraging communities to adopt and enforce floodplain management regulations. These efforts help mitigate the effects of flooding on new and improved structures. Overall, the program reduces the socio-economic impact of disasters by promoting the purchase and retention of general risk insurance, but also of flood insurance, specifically. When a community participates in the NFIP, it participates in one of two phases: the Emergency Program or the Regular Program.

Emergency Program: Entry-level participation phase.
- Limited coverage
- Flat rates
- Basic Flood Hazard Boundary Map (FHBM)*

**Initial flood hazard identification*

Regular Program: Most participating communities are in this phase.
- Full participation
- Detailed Flood Insurance Rate Map (FIRM)
- NFIP's full limits of insurance

- Flood Insurance Risk Zones means zone designations on Flood Hazard Boundary Map (FHBM) and Flood Insurance Rate Map (FIRM) that indicate the magnitude of the flood hazard in specific areas of a community. The zone categories are below:

High Risk Area	Description
In communities that participate in the NFIP, mandatory flood insurance purchase requirements apply to all of these zones.	
Zone A	Special flood hazard areas inundated by the 100-year flood; base flood elevations are not determined. Areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage. Because detailed analyses are not performed for such areas; no depths or base flood elevations are shown within these zones.

Zone AE	Special flood hazard areas inundated by the 100-year flood; base flood elevations are determined. The base floodplain where base flood elevations are provided. AE Zones are now used on new format FIRMs instead of A1-A30 Zones.
Zone A1-30	Special flood hazard areas inundated by the 100-year flood; base flood elevations are determined. These are known as numbered A Zones (e.g., A7 or A14). This is the base floodplain where the FIRM shows a BFE (old format).
Zone AO	Special flood hazard areas inundated by the 100-year flood; with flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. River or stream flood hazard areas, and areas with a 1% or greater chance of shallow flooding each year, usually in the form of sheet flow, with an average depth ranging from 1 to 3 feet. These areas have a 26% chance of flooding over the life of a 30-year mortgage. Average flood depths derived from detailed analyses are shown within these zones.
Zone AH	Special flood hazard areas inundated by the 100-year flood; flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations are determined. Areas with a 1% annual chance of shallow flooding, usually in the form of a pond, with an average depth ranging from 1 to 3 feet. These areas have a 26% chance of flooding over the life of a 30-year mortgage. Base flood elevations derived from detailed analyses are shown at selected intervals within these zones.
Zone A99	Special flood hazard areas inundated by the 100-year flood to be protected from the 100-year flood by a Federal flood protection system under construction; no base flood elevations are determined. Areas with a 1% annual chance of flooding that will be protected by a Federal flood control system where construction has reached specified legal requirements. No depths or base flood elevations are shown within these zones.
Moderate to Low Risk Area	**Description**
In communities that participate in the NFIP, flood insurance is available to all property owners and renters in these zones.	
Zone B and Zone X (shaded)	Areas of 500-year flood; areas subject to the 100-year flood with average depths of less than 1 foot or with contributing drainage area less than 1 square mile; and areas protected by levees from the base flood. Area of moderate flood hazard, usually the area between the limits of the 100- year and 500-year floods. B Zones are also used to designate base floodplains of lesser hazards, such as areas protected by levees from 100-year flood, or shallow flooding areas with average depths of less than one foot or drainage areas less than 1 square mile.
Zone C and Zone X (un-shaded)	Areas determined to be outside the 500-year floodplain. Area of minimal flood hazard usually depicted on FIRMs as above the 500-year flood level. Zone C may have ponding and local drainage problems that don't warrant a detailed study or designation as base floodplain. Zone X is the area determined to be outside the 500-year flood and protected by levee from 100- year flood.
Undetermined Risk Area	**Description**
Zone D	Areas with possible but undetermined flood hazards. No flood hazard analysis has been conducted. Flood insurance rates are commensurate with the uncertainty of the flood risk.

The following table includes the NFIP status of the participating jurisdictions. Jurisdictions participating in the NFIP are required to regulate any development in designated flood prone areas.

NFIP STATUS							
Community Name	**CID**	**County**	**Initial FHBM Identified**	**Initial FIRM Identified**	**Current Effective Map Date**	**Re-Emer Date**	**Tribal**

NFIP STATUS							
Bardwell	481087#	Ellis	07/30/76	06/15/12	06/05/12(M)	06/05/12	No
Ennis	480207#	Ellis	06/28/74	06/15/82	06/03/13	06/15/82	No
Ferris	481076#	Dallas/Ellis	02/01/74	08/22/78	07/07/14	08/22/78	No
Italy	480800#	Ellis	08/15/75	01/20/99	06/03/13	08/12/10	No
Maypearl	480208#	Ellis	11/29/74	01/20/99	06/03/13	01/03/12	No
Midlothian	480801#	Ellis	07/09/76	09/04/85	06/03/13	09/04/85	No
Milford	480802#	Ellis	08/29/75	01/20/99	06/03/13	03/06/01	No
Oak Leaf	481672#	Ellis	Unknown	01/20/99	06/03/13	09/15/00	No
Ovilla	481155#	Dallas/Ellis	07/11/75	04/15/80	07/07/14	04/15/80	No
Palmer	480209#	Ellis	08/13/76	06/01/90	06/03/13	06/01/90	No
Red Oak	481650#	Ellis	Unknown	01/20/99	06/03/13	01/20/99	No
Waxahachie	480211#	Ellis	06/28/74	08/01/80	06/03/13	08/01/80	No
Ellis County Unincorporated	480798#	Ellis	08/16/77	08/19/87	06/03/13	08/19/87	No
CID: A different community identification number is assigned for the incorporated city versus the unincorporated county.							
Community Name: The incorporated city or unincorporated county, parish, or borough.							
County: This column should match the relative incorporated city, township, village, or other entity.							
Init FHBM Identified: This date tells when the Flood Hazard Boundary Map was created. This map is only a factor in communities that do not have a Flood Insurance Rate Map.							
Init FIRM Identified: This date represents the community's first Flood Insurance Rate Map, and it is important because it represents the dividing line between two building categories called Pre-FIRM and Post-FIRM.							
Current Effective Map Date: This is the date of the map currently in effect.							
Reg-Emer Date: The date the community first joined the NFIP. An "E" next to the date indicates that the community is in the Emergency Program and subject to limited coverage. If there is no "E" next to the date, then the community participates in the Regular Program.							
Tribal: A "yes" in this column indicates that the participating community is a tribal nation.							
NSFHA: A 'Non-Special Flood Hazard Area' is an area that is in a moderate-to-low risk flood zone (Zones B, C, X Pre- and Post-FIRM)							

Source: FEMA Community Status Book Report, http://www.fema.gov/cis/TX.html.

The following table includes jurisdictions not participating in the NFIP.

Community Name	CID	County	Initial FHBM Identified	Initial FIRM Identified	Current Effective Map Date	Sanction Date	Tribal
Alma	481546#	Ellis	04/29/80	01/20/99	06/03/13	04/29/81	No
Garrett	480799#	Ellis					No

In Ellis County, all work within a Federal Emergency Management Agency (FEMA) designated floodplain requires a floodplain permit.

The NFIP offers three Standard Flood Insurance Policy forms: Dwelling, General Property, and Residential Condominium Building Association. These forms provide policyholders with a description of their coverage and other important coverage information. Below is a table of the local policy statistics of policies in force (PIF) and should not be considered an official federal report.

Policy Statistics as of 01/05/2022				
Community Name	**Community Number**	**PIF**	**Total Coverage**	**Total Premium + FPF**
BARDWELL, CITY OF	481087	3	$405,000	$2,454
ELLIS COUNTY*	480798	284	$81,158,500	$224,793
ENNIS, CITY OF	480207	30	$6,195,800	$23,128
FERRIS, CITY OF	481076	1	$210,000	$400
ITALY, CITY OF	480800	1	$280,000	$686
MAYPEARL, CITY OF	480208	3	$1,700,000	$2,632
MIDLOTHIAN, CITY OF	480801	60	$18,661,100	$48,549
OAK LEAF, CITY OF	481672	24	$8,059,000	$14,523
OVILLA, CITY OF	481155	17	$5,642,000	$10,209
PALMER, CITY OF	480209	13	$3,008,900	$10,729
RED OAK, CITY OF	481650	24	$7,386,300	$12,999
UNKNOWN	UNKNOWN	13	$4,513,000	$23,416
WAXAHACHIE, CITY OF	480211	128	$35,119,000	$99,917

The following table describes NFIP compliance within the participating jurisdictions. More education by FEMA would benefit these rural communities.

NFIP Topic	Source of Information
How many structures are exposed to flood risk within the community?	Community Floodplain Administrator (FPA)
Bardwell: Unknown	
Ennis: Unknown	
Ferris: None	
Italy: Unknown	
Maypearl: Unknown	
Midlothian: Unknown	
Milford: Unknown	
Oak Leaf: Unknown	
Ovilla: Unknown	
Palmer: Unknown	
Red Oak: Unknown	
Waxahachie: Unknown	
Ellis County Unincorporated: Unknown	
Describe any areas of flood risk with limited NFIP policy coverage	Community FPA and FEMA Insurance Specialist
Bardwell: Unknown	
Ennis: Unknown	
Ferris: None	
Italy: Unknown	
Maypearl: Unknown	

NFIP Topic	Source of Information
Midlothian: Unknown	
Milford: Unknown	
Oak Leaf: Unknown	
Ovilla: Unknown	
Palmer: Unknown	
Red Oak: Unknown	
Waxahachie: Unknown	
Ellis County Unincorporated: Unknown	
Is the Community FPA or NFIP Coordinator certified?	Community FPA
Bardwell: Unknown	
Ennis: Unknown	
Ferris: No- vacant	
Italy: Unknown	
Maypearl: No- vacant	
Midlothian: Unknown	
Milford: Unknown	
Oak Leaf: Unknown	
Ovilla: Unknown	
Palmer: No	
Red Oak: No	
Waxahachie: Unknown	
Ellis County Unincorporated: Yes	
Is floodplain management an auxiliary function?	Community FPA
Bardwell: Unknown	
Ennis: Unknown	
Ferris: No	
Italy: Unknown	
Maypearl: Unknown	
Midlothian: Unknown	
Milford: Unknown	
Oak Leaf: Unknown	
Ovilla: Unknown	
Palmer: Unknown	
Red Oak: No	
Waxahachie: Unknown	
Ellis County Unincorporated: Yes	
Provide an explanation of NFIP administration services (e.g. permit review, GIS, education or outreach, inspections, engineering capability)	Community FPA
Bardwell: Unknown	
Ennis: Unknown	

NFIP Topic	Source of Information
Ferris: Unknown	
Italy: Unknown	
Maypearl: Unknown	
Midlothian: Unknown	
Milford: Unknown	
Oak Leaf: Unknown	
Ovilla: Unknown	
Palmer: Unknown	
Red Oak: Permit and development plan review.	
Waxahachie: Unknown	
Ellis County Unincorporated: Permit review, GIS, outreach, limited engineering services	
What are the barriers to running an effective NFIP program in the community, if any?	Community FPA
Bardwell: Unknown	
Ennis: Unknown	
Ferris: Short staffing	
Italy: Unknown	
Maypearl: Short staffing	
Midlothian: Short staffing	
Milford: Short staffing	
Oak Leaf: Short staffing	
Ovilla: Short staffing	
Palmer: Funding and staffing	
Red Oak: Funding and staffing	
Waxahachie: Short staffing	
Ellis County Unincorporated: Outdated maps & data; ignorance on how NFIP works and why it exists.	
Is the community in good standing with the NFIP?	State NFIP Coordinator, FEMA NFIP Specialist, community records
Bardwell: Unknown	
Ennis: Unknown	
Ferris: Unknown	
Italy: Unknown	
Maypearl: Unknown	
Midlothian: Unknown	
Milford: Unknown	
Oak Leaf: Unknown	
Ovilla: Unknown	
Palmer: Unknown	
Red Oak: Unknown	
Waxahachie: Unknown	
Ellis County Unincorporated: Yes	

NFIP Topic	Source of Information
Are there any outstanding compliance issues (i.e. current violations)?	State NFIP Coordinator, FEMA NFIP Specialist, community records
Bardwell: Unknown	
Ennis: Unknown	
Ferris: Unknown	
Italy: Unknown	
Maypearl: Unknown	
Midlothian: Unknown	
Milford: Unknown	
Oak Leaf: Unknown	
Ovilla: Unknown	
Palmer: Unknown	
Red Oak: Unknown	
Waxahachie: Unknown	
Ellis County Unincorporated: Unknown	
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	State NFIP Coordinator, FEMA NFIP Specialist, community records
Bardwell: Unknown	
Ennis: Unknown	
Ferris: Unknown	
Italy: Unknown	
Maypearl: Unknown	
Midlothian: Unknown	
Milford: Unknown	
Oak Leaf: Unknown	
Ovilla: Unknown	
Palmer: Unknown	
Red Oak: Unknown	
Waxahachie: Unknown	
Ellis County Unincorporated:	
Is a CAV or CAC scheduled or needed?	State NFIP Coordinator, FEMA NFIP Specialist, community records
Bardwell: Unknown	
Ennis: Unknown	
Ferris: Unknown	
Italy: Unknown	
Maypearl: Unknown	
Midlothian: Unknown	
Milford: Unknown	
Oak Leaf: Unknown	
Ovilla: Unknown	

NFIP Topic	Source of Information
Palmer: Unknown	
Red Oak: Unknown	
Waxahachie: Unknown	
Ellis County Unincorporated:	
Are the FIRMs digital or paper?	Community FPA
Bardwell: Digital	
Ennis: Digital	
Ferris: Paper	
Italy: Digital	
Maypearl: Unknown	
Midlothian: Unknown	
Milford: Unknown	
Oak Leaf: Unknown	
Ovilla: Unknown	
Palmer: Paper	
Red Oak: Digital	
Waxahachie: Unknown	
Ellis County Unincorporated: Digital	
Do floodplain development regulations meet or exceed FEMA or state minimum requirements? If so, in what ways?	Community FPA
Bardwell: Unknown	
Ennis: Unknown	
Ferris: Yes, City of Ferris uses City of Fort Worth Drainage Criteria	
Italy: Unknown	
Maypearl: Unknown	
Midlothian: Unknown	
Milford: Unknown	
Oak Leaf: Unknown	
Ovilla: Unknown	
Palmer: Unknown	
Red Oak: Yes, we require a minimum of 2' above BFE for any structures adjacent to the floodplain and adjacent to any drainage areas not included in the FIRM's.	
Waxahachie: Unknown	
Ellis County Unincorporated: Yes	
Provide an explanation of the permitting process.	Community FPA, State, FEMA NFIP
Bardwell: Unknown	
Ennis: Unknown	
Ferris: Through permits at www.ferristexas.gov, developer of project component submits a Floodplain Development Permit for any work near or adjacent to floodplains within the City. City staff inspect construction site to make sure floodplains are not impacted by any new construction.	

NFIP Topic	Source of Information
Italy: Unknown	
Maypearl: Unknown	
Midlothian: Unknown	
Milford: Unknown	
Oak Leaf: Unknown	
Ovilla: Unknown	
Palmer: Unknown	
Red Oak: Floodplain development permit submitted and processed by City Engineer. FEMA long form elevation certificate required in some cases. Developer required to submit LOMA, LOMR, CLOMR, etc. required to be submitted to FEMA by City.	
Waxahachie: Unknown	
Ellis County Unincorporated: Permits applied for through the Department of Development either in-person or inline. Floodplain Permit applications are submitted through the Engineering Department for review and approval or denial.	

Community Rating System

The Community Rating System (CRS) is a voluntary program for communities that participate in the National Flood Insurance Program (NFIP). The goals of the CRS are to reduce flood damages to insurable property, strengthen and support the insurance aspects of the NFIP, and encourage a comprehensive approach to floodplain management. The CRS has been developed to provide incentives in the form of premium discounts for communities to go beyond the minimum floodplain management requirements to develop extra measures to provide protection from flooding. For a community to be eligible, it must be in full compliance with the NFIP.

All communities start out with a Class 10 rating, which provides no discount. There are 10 CRS classes: Class 1 requires the most credit points and gives the greatest premium discount; Class 10 identifies a community that does not apply for the CRS or does not obtain a minimum number of credit points and receives no discount. There are 18 activities recognized as measures for eliminating exposure to floods. Credit points are assigned to each activity. The activities are organized under 4 main categories:

- Public Information
- Mapping and Regulation
- Flood Damage Reduction
- Flood Preparedness

Premium discounts ranging from 5% to a maximum of 45% are applied to eligible policies written in a community as recognition of the floodplain management activities instituted.

All CRS communities must maintain completed FEMA elevation and floodproofing certificates for all new and substantially improved construction in the Special Flood Hazard Area (SFHA) after the date of application for CRS classification. These certificates must be available upon request. Therefore, in writing a policy, an agent/producer should be able to get these certificates from any CRS community. In addition, some CRS communities receive credit for having completed certificates for Post-Flood Insurance Rate Map (FIRM) buildings constructed prior to the CRS application date. If they do receive this credit, these certificates should also be available to agents/producers writing flood insurance.

According to the April 2022 Community Rating System Eligible Communities Report, there are no CRS communities amongst the plan participants in Ellis County.

3.3.5 Greatest Vulnerabilities

Below is a list of the participating jurisdictions greatest vulnerabilities in relation to natural hazards.

Alma	• Any substantial event would be devastating to the financial capabilities of the city • Any major event would overwhelm the local resources
Bardwell	• Any substantial event would be devastating to the financial capabilities of the city • Any major event would overwhelm the local resources
Ennis	• Any substantial event would be devastating to the financial capabilities of the city • Any major event would overwhelm the local resources
Ferris	• Any substantial event would be devastating to the financial capabilities of the city • Any major event would overwhelm the local resources
Garrett	• Any substantial event would be devastating to the financial capabilities of the city • Any major event would overwhelm the local resources
Italy	• Any substantial event would be devastating to the financial capabilities of the city • Any major event would overwhelm the local resources
Maypearl	• Minor/Major event would overwhelm our resources. • Limited road infrastructure for emergency escape.
Midlothian	• A large, complex, incident would overwhelm and exhaust our local available resources and require mutual aid resources to support our local response. • The City of Midlothian would require support of regional special operations teams to come and support our local response.
Milford	• Any substantial event would be devastating to the financial capabilities of the city
Oak Leaf	• Any substantial event would be devastating to the financial capabilities of the city • Any major event would overwhelm the local resources
Ovilla	• Any substantial event would be devastating to the financial capabilities of the city
Palmer	• Any major event would overwhelm the local resources
Red Oak	• Any large events would overwhelm and exhaust local resources • There are two new multi-family complexes being built and a new senior living facility.

Waxahachie	• Any substantial event would be devastating to the financial capabilities of the city • Any major event would overwhelm the local resources
Ellis County Unincorporated	• Any major event would overwhelm the local resources

3.4 Hazard Ranking

Due to the frequency of occurrence and high impact of hazards during this planning period, the ranking order of these hazards has changed since the 2015 plan. After assessing the vulnerabilities, capabilities, and risks, the participating jurisdictions considered the possible effects on population, economy, existing and future structures, improved property, critical facilities and infrastructure, and the natural environment when ranking each hazard.

The following table reflects the rankings of each hazard, per jurisdiction.

Jurisdiction	Drought	Earthquake	Expansive Soils	Extreme Heat	Flooding	Thunderstorms	Tornadoes	Wildfires	Winter Storms
Alma	6	9	7	5	4	2	1	8	3
Bardwell	7	9	8	6	3	2	1	4	5
Ennis	4	9	7	5	6	1	2	8	3
Ferris	4	9	8	3	6	2	5	1	7
Garrett	5	9	6	3	8	2	4	7	1
Italy	5	9	8	7	2	1	3	6	4
Maypearl	6	9	7	5	4	2	1	8	3
Midlothian	6	8	9	7	2	3	1	4	5
Milford	7	9	8	6	5	1	2	3	4
Oak Leaf	7	9	8	5	3	2	1	4	6
Ovilla	6	9	7	5	4	2	1	8	3
Palmer	7	9	8	6	3	2	1	4	5
Red Oak	6	9	4	4	2	1	3	6	3
Waxahachie	6	9	7	5	4	2	1	8	3
Ellis County Unincorporated	7	9	8	6	3	2	1	4	5

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Chapter 4: Mitigation Strategy

Requirement	
§201.6(c)(3)	[The plan shall include the following:] A mitigation strategy that provides the jurisdiction's blueprint for reducing the potential losses identified in the risk assessment, based on existing authorities, policies, programs, and resources, and its ability to expand on and improve these existing tools.
§201.6(c)(3)(i)	[The hazard mitigation strategy shall include a] description of mitigation goals to reduce or avoid long-term vulnerabilities to the identified hazards.
§201.6(c)(3)(iii)	[The hazard mitigation strategy shall include a] section that identifies and analyzes a comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each hazard, with particular emphasis on new and existing buildings and infrastructure. All plans approved by FEMA [Federal Emergency Management Agency] after October 1, 2008, must also address the jurisdiction's participation in the NFIP [National Flood Insurance Program], and continued compliance with NFIP requirements, as appropriate.
§201.6(c)(3)(iv)	[The hazard mitigation strategy shall include an] action plan, describing how the action identified in paragraph (c)(3)(ii) of this section will be prioritized, implemented, and administered by the local jurisdiction. Prioritization shall include a special emphasis on the extent to which benefits are maximized according to a cost benefit review of the proposed projects and their associated costs.
§201.6(c)(4)(ii)	For multi-jurisdictional plans, there must be identifiable action items specific to the jurisdiction requesting FEMA approval or credit of the plan. [The plan shall include a] process by which local governments incorporate the requirements of the mitigation plan into other planning mechanisms such as comprehensive or capital improvements, when appropriate.

4.1 Mitigation Goals

The Ellis County Hazard Mitigation Planning Team reviewed the previous Ellis County mitigation goals and unanimously agreed to forego these goals and adopt the following hazard mitigation goals:

"Our goals are to protect life and reduce bodily harm from natural hazards, and to lessen the impacts of natural hazards on property and the community through hazard mitigation."

4.2 Mitigation Strategy

The mitigation strategy serves as the long-term blueprint for reducing the potential losses identified in the risk assessment. The Stafford Act directs hazard mitigation plans to describe hazard mitigation actions and establish a strategy to implement those actions. Therefore, all other requirements for a hazard mitigation plan lead to and support the mitigation strategy.

Numerous actions can be taken, and hazard mitigation interventions put in place, to minimize the impacts of natural hazards and reduce the overall risk of disasters, while also increasing community resilience. Some actions cut across multiple hazards; others are uniquely designed to address a single hazard. The types of actions include:

- Locals plans and regulations
- Structure and infrastructure projects
- Natural systems protection
- Education and awareness programs

Each participating jurisdiction recommended strategies and actions that would support the mitigation goals, then went through a ranking process to determine which actions they would prioritize for completion. The jurisdictions conducted a cost benefit analysis to determine which strategies would most benefit their community. All project cost estimations are based on agency expertise by those submitting mitigation actions as well as previous project costs; however, many projects provided have not yet undergone the official benefit-cost analysis provided by FEMA. In these cases, jurisdictions derived the benefit cost per project based on a study conducted by the National Institute of Building Science. The key findings of the report included that $1 spent on mitigation saves society an average of $6, with positive benefit-cost ratios for all hazard types studied.[18] Therefore, to reflect the benefits of future projects, each estimated project was multiplied by 6 to represent the benefit of each mitigation strategy. Utilizing this information, in addition to their jurisdiction's priorities, jurisdictions ranked their mitigation strategies and submitted them to the HMPT.

4.3 Funding Priorities

As necessary, Ellis County and participating jurisdictions will seek outside funding sources to implement mitigation projects in both the pre-disaster and post-disaster environments. When applicable, potential funding sources have been identified for proposed actions listed in the mitigation strategies.

Priority will go towards projects will the highest positive impact on community resilience.

4.4 Mitigation Action Items

Previous Mitigation Action Items

The action items in the 2015 Ellis County HMP were determined by the 2015 Local Planning Team (LPT) in each jurisdiction. Below are the action items from each participating jurisdiction from the 2015 plan and

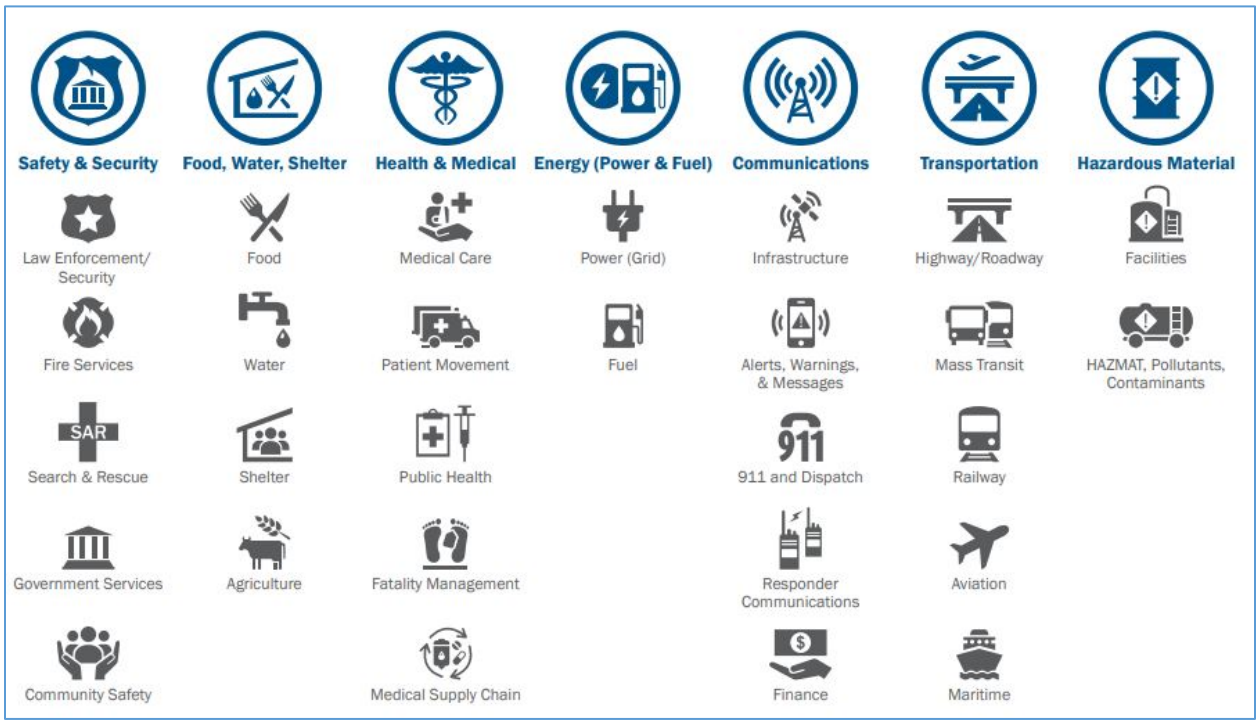
[18] Multihazard Mitigation Council (2017) Natural Hazard Mitigation Saves 2017 Interim Report: An Independent Study. Principal Investigator Porter, K.; Co-Principal Investigators Scawthorn, C.; Dash, N.; Santos, J.; Investigators: Eguchi, M., Ghosh., S., Huyck, C., Isteita, M., Mickey, K., Rashed, T.; P. Schneider, Director, MMC. National Institute of Building Sciences, Washington.

the status of each action. Actions deleted are no longer a priority and actions deferred are deferred to this HMP.

New Mitigation Action Items

New action items were determined by each participating jurisdiction's Local Planning Team for this plan. These actions include mitigation actions that qualify for mitigation funding as well as enforcement, maintenance, and response actions that the jurisdictions have identified as opportunities to increase their resiliency to hazards. The "primary" community lifeline each action impacts will also be identified. These actions will be implemented as time, staffing, funding, and community support allows.

Community Lifelines and Lifeline Components



FEMA launched the Community Lifelines Framework in 2019 to help communities better monitor disruptions to critical services and systems following a disaster and reduce cascading impacts across government and business functions. BRIC—Building Resilient Infrastructure in Communities—is a new FEMA grant program that takes hazard mitigation measures further than ever before. It encourages larger-scale projects that not only reduce risk from all hazards but also create community resilience. BRIC encourages Community Lifeline projects that promote more resilient energy, water, transportation, flood protection, food distribution, and other critical community services that protect communities before natural disasters strike. When applying to BRIC, the applicant must indicate that the project will mitigate risk to at least one of the seven Community Lifelines to enable the continuous operation of critical government and business functions essential to human health and safety or economic security. Community Lifelines are the most fundamental services in the community that, when stabilized, enable all other aspects of society to function.

While Community Lifelines were developed to support response planning and operations, the concept can be applied across the entire preparedness cycle. Efforts to protect, prevent, and mitigate potential

impacts to Community Lifelines, and building back stronger and smarter during recovery, will drive overall resilience of the nation.

Since the seven Community Lifelines and their respective components (as shown in the graph) were introduced, they have resonated strongly in response and recovery circles to organize both day-to-day operations and strategic planning after a disaster. Community Lifelines can also be a powerful tool for state, local, tribal, and territorial governments to use in evaluating risk and developing strategies to reduce hazard impacts.

The new actions have been identified with the community lifelines that they primarily impact, though an action could impact multiple lifelines. When applying for FEMA BRIC funding, this tool could be especially useful.

Estimated Benefits

During the capabilities assessment and hazard analysis, previously impacted assets and populations were analyzed to determine the highest probability of damage and potential of loss of life per hazard. To determine the estimated benefit of each action item, data from the 2017 Interim Report was used to develop a cost-benefit analysis [*Estimated Cost x 6 = Estimated Benefit*], as it reports that $1 spent in mitigation saves a community an average of $6 in recovery.[19]

Below are the action items for this hazard mitigation plan:

[19] Natural Hazard Mitigation Saves: 2017 Interim Report. National Institute of Building Science.
< https://www.nibs.org/page/mitigationsaves>

City of Alma Mitigation Action Items

STATUS	2015 MITIGATION ACTIONS
Deferred to 2022 HMP	Develop and implement a comprehensive public education program.
Deferred to 2022 HMP	Develop, implement, and enforce water conservation codes and ordinances.
Deferred to 2022 HMP	Purchase and distribute hail and wind resistant window coverings to vulnerable populations.
Deferred to 2022 HMP	Adopt and Promote the National Flood Insurance Program
Deferred to 2022 HMP	Adopt and enforce mandatory insulation and lightning protection codes for new construction.
Deferred to 2022 HMP	Partner with the Texas Fire Service in establishing Alma as a "Firewise" community
Deferred to 2022 HMP	Conduct earthquake assessment study to determine potential for earthquakes to affect public facilities and utilities.
Deferred to 2022 HMP	Conduct a soil analysis to determine the scope, impact, and extent of expansive soils
Deferred to 2022 HMP	Hire consultant to complete new inundation studies of all high and moderate hazard dams.

Hazard(s) Addressed:
All Hazards

Action: Install back-up emergency generators and automatic transfer switches (UPS systems) in new and existing city facilities that house critical infrastructure, personnel, and equipment to include existing and new City of Alma facilities. (Emergency generator, electrician costs, transfer switches, status monitors, wiring for facilities).

Participating Jurisdiction	City of Alma
Sites and Location(s):	Alma Community Center City of Alma Municipal Administrative Offices – City Hall 469-881-1405 — 104 Interurban Rd, Alma, Texas 75119 Alma Volunteer Fire Department 972-875-6832 — 104 B Interurban Rd, Alma, Texas 75119

	Alma Police Department 469-881-1406 — 104 Interurban Rd, Alma, Texas 75119 Alma Lift Station — 121 Main St. Alma, TX 75119 Alma Municipal Court 469-456-0403 — 104 Interurban Rd, Alma, Texas 75119
Priority:	1
Estimated Cost:	$1M
Estimated Benefit:	$6M
Potential Funding Source(s):	FEMA Hazard Mitigation Grant Program (HMGP), General Fund, Capital Improvement
Lead Agency/Department Responsible:	City Manager, Police Chief, Fire Chief, Emergency Management
Implementation Schedule:	12 – 18 months

Hazard(s) Addressed:
Tornado, Thunderstorm, Wildfire, Winter Storms

Action: Construction of storm shelters, community safe rooms (hardening) in existing and new construction of recreational and government buildings / facilities.	
Participating Jurisdiction	City of Alma
Priority:	2
Estimated Cost:	$2
Estimated Benefit:	$12M
Potential Funding Source(s):	FEMA Hazard Mitigation Grant Program (HMGP), General Fund, Capital Improvement
Lead Agency/Department Responsible:	City Manager, Police Chief, Fire Chief, Emergency Management
Implementation Schedule:	36 months

Hazard(s) Addressed:
All Hazards

Action: Outdoor Warning Siren System to include warning coverage, communications, security, to provide alert, warning and notification to residents and visitors during all hazards emergencies/disasters to include newer updated technologies to include NWS polygon activation, wind sensor for high wind activations and updated outdoor warning sirens due to city growth.	
Participating Jurisdiction	City of Alma
Priority:	3
Estimated Cost:	$200,000
Estimated Benefit:	$2.5M
Potential Funding Source(s):	FEMA Hazard Mitigation Grant Program (HMGP), General Fund, Capital Improvement
Lead Agency/Department Responsible:	City Manager, Police Chief, Fire Chief, Emergency Management
Implementation Schedule:	18 months

Hazard(s) Addressed:
Flooding, Thunderstorms

Action: Improve and Enhance Storm Water Draining capabilities to prevent flooding in flood prone areas. A storm water study may be needed to identify storm water drainage projects and associated costs for each project.	
Participating Jurisdiction	City of Alma
Priority:	4
Estimated Cost:	$200,000 - $2.5M
Estimated Benefit:	$15M
Potential Funding Source(s):	FEMA Hazard Mitigation Grant Program (HMGP), General Fund, Capital Improvement
Lead Agency/Department Responsible:	City Manager, Public Works, Police Chief, Fire Chief, Emergency Management
Implementation Schedule:	36 months

Hazard(s) Addressed:
Expansive Soils, Flooding, Thunderstorms

Action: Improve and increase the capacity of storm water system by expanding creeks downstream channel to prevent flooding in flood prone areas to include structural stormwater management projects.	
Participating Jurisdiction	City of Alma
Priority:	5

Estimated Cost:	$1M
Estimated Benefit:	$6M
Potential Funding Source(s):	FEMA Hazard Mitigation Grant Program (HMGP), General Fund, Capital Improvement
Lead Agency/Department Responsible	City Manager, Police Chief, Fire Chief, Emergency Management
Implementation Schedule:	36 months

Hazard(s) Addressed:
Expansive Soils, Flooding, Thunderstorms

Action: Conduct creek and stream bank erosion studies: conduct a study to identify vulnerability to stream bank erosion. Identify cost effective actions.

Participating Jurisdiction	City of Alma
Priority:	6
Estimated Cost:	$500,000
Estimated Benefit:	$3M
Potential Funding Source(s):	FEMA Hazard Mitigation Grant Program (HMGP), General Fund, Capital Improvement
Lead Agency/Department Responsible	City Manager, Police Chief, Fire Chief, Emergency Management
Implementation Schedule:	36 months

Hazard(s) Addressed:
Flooding

Action: Participate in the National Flood Insurance Program.

Participating Jurisdiction	City of Alma
Priority:	7
Estimated Cost:	$5,000
Estimated Benefit:	$30,000
Potential Funding Source(s):	Grants
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	36 months

City of Bardwell Mitigation Action Items

STATUS	2015 MITIGATION ACTIONS
Deferred to 2022 HMP	Develop and implement a comprehensive public education program.
Deferred to 2022 HMP	Develop, implement, and enforce water conservation codes and ordinances.
Deferred to 2022 HMP	Purchase and distribute hail and wind resistant window coverings to vulnerable populations.
Deferred to 2022 HMP	Adopt and Promote the National Flood Insurance Program
Deferred to 2022 HMP	Adopt, implement, and enforce International Residential Code
Deferred to 2022 HMP	Partner with the Texas Fire Service in establishing Bardwell as a "Firewise" community
Deferred to 2022 HMP	Conduct earthquake assessment study to determine potential for earthquakes to affect public facilities and utilities.
Deferred to 2022 HMP	Conduct a soil analysis to determine the scope, impact, and extent of expansive soils
Deferred to 2022 HMP	Hire consultant to complete new inundation studies of all high and moderate hazard dams.

Hazard(s) Addressed:
All Hazards

Action: Acquire and install generators, the generator connections/infrastructure, proper mounting system, security barriers, and fuel reservoir for existing and future critical facilities to prevent power failure in the event of a disaster and to continue essential duties.

Participating Jurisdiction	City of Bardwell
Priority:	1
Estimated Cost:	$75,000
Estimated Benefit:	$450,000
Potential Funding Source(s):	City Budget and Hazard Mitigation Grants
Lead Agency/Department Responsible:	Mayor, City Secretary
Implementation Schedule:	24 months

Hazard(s) Addressed:
All Hazards

Action: Retrofit existing and future government-owned facilities to withstand all hazards.	
Participating Jurisdiction	City of Bardwell
Priority:	2
Estimated Cost:	$250,000
Estimated Benefit:	$1.5 M
Potential Funding Source(s):	City budge, Donations, Hazard Mitigation Grants
Lead Agency/Department Responsible:	Mayor, City Secretary
Implementation Schedule:	36 Months

Hazard(s) Addressed:
Flooding

Action: Implement and promote the National Flood Insurance Program using an education campaign and staff training.	
Participating Jurisdiction	City of Bardwell
Priority:	3
Estimated Cost:	$2,000
Estimated Benefit:	$12,000
Potential Funding Source(s):	Grants
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	36 months

City of Ennis Mitigation Action Items

STATUS	2015 MITIGATION ACTIONS
Deferred to 2022 HMP	Adopt and promote a comprehensive public education program.
Deferred to 2022 HMP	Develop and implement new building codes to mitigate against natural hazards.
Deferred to 2022 HMP	Purchase and install CASA WX Radar.
Deferred to 2022 HMP	Expand Outdoor Warning Systems to New Populations
Deferred to 2022 HMP	Install redundant OWS activation switches
Deferred to 2022 HMP	Develop and Implement Expansive Soil Code Enforcement Program
Deferred to 2022 HMP	Develop and implement drought mitigation plan
Deferred to 2022 HMP	Purchase and install two lightning guard systems
Deferred to 2022 HMP	Replace Water Lines with Larger Pipe
Deferred to 2022 HMP	Develop and implement wildfire mitigation public education program
Deferred to 2022 HMP	Conduct a soil analysis to determine the scope, impact, and extent of expansive soils
Deferred to 2022 HMP	Hire consultant to complete new inundation studies of all high and moderate hazard dams that could potentially affect property and populations within the city.
Deferred to 2022 HMP	Conduct earthquake assessment study to determine potential for earthquakes to affect public facilities and utilities.

Hazard(s) Addressed:
All Hazards

Action: Acquire and install generators, the generator connections/infrastructure, proper mounting system, security barriers, and fuel reservoir for existing and future critical facilities to prevent power failure in the event of a disaster and to continue essential duties.

Participating Jurisdiction	City of Ennis
Priority:	1
Estimated Cost:	$30,000
Estimated Benefit:	$180,000.
Potential Funding Source(s):	Grants

Lead Agency/Department Responsible:	Office of Emergency Management
Implementation Schedule:	36 months

Hazard(s) Addressed
All Hazards

Action: Retrofit and incorporate tornado shelters into existing and future government-owned facilities to withstand all hazards.

Participating Jurisdiction	City of Ennis
Priority:	2
Estimated Cost:	$200,000
Estimated Benefit:	$1.2 M
Potential Funding Source(s):	Grants
Lead Agency/Department Responsible:	Office of Emergency Management
Implementation Schedule:	36 months

Hazard(s) Addressed:
All Hazards

Action: Incorporate elevated water storage in underserved areas.

Participating Jurisdiction	City of Ennis
Priority:	3
Estimated Cost:	$2M
Estimated Benefit:	$12M
Potential Funding Source(s):	Grants, General Fund
Lead Agency/Department Responsible:	Office of Emergency Management, City Council
Implementation Schedule:	36 months

Hazard(s) Addressed:
All Hazards

Action: Retrofit Service Center with community safe room.

Participating Jurisdiction	City of Ennis
Priority:	4
Estimated Cost:	$200,000

Estimated Benefit:	$1.2 M
Potential Funding Source(s):	Grants
Lead Agency/Department Responsible:	Office of Emergency Management
Implementation Schedule:	36 months

Hazard(s) Addressed:
All Hazards

Action: Educate the public on their risks to our hazards, and mitigation actions to take, using various outreach methods.

Participating Jurisdiction	City of Ennis
Priority:	5
Estimated Cost:	$5,000
Estimated Benefit:	$30,000
Potential Funding Source(s):	Grants
Lead Agency/Department Responsible:	Office of Emergency Management
Implementation Schedule:	36 months

Hazard(s) Addressed:
Flooding

Action: Implement and promote the National Flood Insurance Program using an education campaign and staff training.

Participating Jurisdiction	City of Ennis
Priority:	6
Estimated Cost:	$2,000
Estimated Benefit:	$12,000
Potential Funding Source(s):	Grants
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	36 months

City of Ferris Mitigation Action Items

STATUS	2015 MITIGATION ACTIONS
In-Progress	Purchase and Install a CASA-WX Radar
Complete	Stricter building code adoption, implementation, and enforcement.
In-Progress	Harden City Hall Against Severe Weather-related Natural Hazards
Deferred to 2022 HMP	Addition of 2 Early Warning Sirens for New Populations
Deferred to 2022 HMP	Establish select city buildings as cooling centers and warming centers to allow citizens, especially vulnerable populations, to seek refuge from extreme hot and cold temperatures.
Deferred to 2022 HMP	Implement Individual Tornado Safe Room Rebate Program
Complete	Create, implement and enforce water rationing ordinance
In Progress	Purchasing and distributing NOAA Weather Radios to public facilities
Complete	Expansive Soil Enforcement Program
Complete	Conduct a soil analysis to determine the scope, impact, and extent of expansive soils
Deleted – No Longer A Priority	Conduct earthquake study to assess potential for earthquakes and their impacts
Deleted – No Longer A Priority	Hire consultant to complete new inundation studies of all high and moderate hazard dams within the county.

Hazard(s) Addressed:
All Hazards

Action: Develop and incorporate strategic planning for hazardous events.

Participating Jurisdiction	City of Ferris
Priority:	1
Estimated Cost:	$17,000
Estimated Benefit:	$102,000
Potential Funding Source(s):	Budgeted Items, TEEX, Texas Wildfire Management
Lead Agency/Department Responsible:	Office of Emergency Management
Implementation Schedule:	Continuously Ongoing and Evaluated

Hazard(s) Addressed:
All Hazards

Action: Create Interlocal Agency Agreements with Ellis County and South Dallas County Jurisdictions to ensure a rapid response time in the event of a disaster to minimize loss of life and economic down time.

Participating Jurisdiction	City of Ferris
Priority:	2
Estimated Cost:	$9,200
Estimated Benefit:	$55,200
Potential Funding Source(s):	Budgeted Items, TEEX, Texas Wildfire Management
Lead Agency/Department Responsible:	Office of Emergency Management
Implementation Schedule:	Continuously Ongoing and Evaluated

Hazard(s) Addressed:
All Hazards

Action: Create and send social media alerts ahead of hazardous events with tips on personal mitigation techniques.

Participating Jurisdiction	City of Ferris
Priority:	3
Estimated Cost:	$1,350
Estimated Benefit:	$8,100
Potential Funding Source(s):	Budgeted Items, TEEX, Texas Wildfire Management
Lead Agency/Department Responsible:	Office of Emergency Management
Implementation Schedule:	Continuously Ongoing and Evaluated

Hazard(s) Addressed:
Flooding

Action: Implement and promote the National Flood Insurance Program using an education campaign and staff training.

Participating Jurisdiction	City of Ferris
Priority:	4
Estimated Cost:	$2,000
Estimated Benefit:	$12,000
Potential Funding Source(s):	Grants

Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	36 months

City of Garrett Mitigation Action Items

STATUS	2015 MITIGATION ACTIONS
Deferred to 2022 HMP	Develop and implement a comprehensive public education program.
Deleted – no longer a priority at this time	Develop, implement, and enforce water conservation codes and ordinances.
Deleted – no longer a priority at this time	Purchase and distribute hail and wind resistant window coverings to vulnerable populations.
In Progress	Adopt and Promote the National Flood Insurance Program
Deleted – no longer a priority at this time	Adopt, implement, and enforce International Residential Code
Deleted – no longer a priority at this time	Partner with the Texas Fire Service in establishing Garrett as a "Firewise" community
Deleted – no longer a priority at this time	Conduct earthquake study to assess potential for earthquakes and their impacts
Deleted – no longer a priority at this time	Conduct a soil analysis to determine the scope, impact, and extent of expansive soils
Deleted – no longer a priority at this time	Hire consultant to complete new inundation studies of all high and moderate hazard dams.

Hazard(s) Addressed:
All Hazards

Action: Assist homeowners with application and implementation of residential mitigation projects.

Participating Jurisdiction	City of Garrett
Priority:	1
Estimated Cost:	$5,000
Estimated Benefit:	$30,000
Potential Funding Source(s):	Grants, general fund
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed:
Flooding

Action: Participate in the National Flood Insurance Program (NFIP).

Participating Jurisdiction	City of Garrett
Priority:	2
Estimated Cost:	$5,000
Estimated Benefit:	$30,000
Potential Funding Source(s):	Grants, general fund
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed:
All Hazards

Action: Acquire and install generators, the generator connections/infrastructure, proper mounting system, security barriers, and fuel reservoir for existing and future critical facilities to prevent power failure in the event of a disaster and to continue essential duties.

Participating Jurisdiction	City of Garrett
Priority:	3
Estimated Cost:	$1M
Estimated Benefit:	$6M
Potential Funding Source(s):	Grants, general fund
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed:
Earthquakes, Flooding, Wildfires

Action: Update land use planning, using zoning maps & regulations, to prevent future residential development in floodplains and other hazard-prone areas and place requirements on development methods.

Participating Jurisdiction	City of Garrett
Priority:	4
Estimated Cost:	$2,000
Estimated Benefit:	$12,000

Potential Funding Source(s):	Grants, general fund
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed:
All Hazards

Action: Maintain fuel on-site or have multiple ways to obtain fuel for maintaining power during a power outage from an event.

Participating Jurisdiction	City of Garrett
Priority:	5
Estimated Cost:	$10,000
Estimated Benefit:	$60,000
Potential Funding Source(s):	Grants, general fund
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed:
All Hazards

Action: Adopt and enforce most current building codes.

Participating Jurisdiction	City of Garrett
Priority:	6
Estimated Cost:	$500
Estimated Benefit:	$3,000
Potential Funding Source(s):	Grants, general fund
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed:
All Hazards

Action: Update codes, policies, and regulations to address risks and vulnerabilities to hazards.

Participating Jurisdiction	City of Garrett
Priority:	7

Estimated Cost:	$500
Estimated Benefit:	$3,000
Potential Funding Source(s):	Grants, general fund
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed:
All Hazards

Action: Retrofit existing and future government-owned facilities to withstand all hazards.

Participating Jurisdiction	City of Garrett
Priority:	8
Estimated Cost:	$1M
Estimated Benefit:	$6M
Potential Funding Source(s):	Grants, general fund
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed:
All Hazards

Action: Educate the public on their risks to our hazards, and mitigation actions to take, using various outreach methods.

Participating Jurisdiction	City of Garrett
Priority:	9
Estimated Cost:	$5,000
Estimated Benefit:	$30,000
Potential Funding Source(s):	Grants, general fund
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed
Flooding

Action: Buyout or relocate SRL, RL, and other vulnerable structures within or near a floodplain or dam spillway.

Participating Jurisdiction	City of Garrett
Priority:	10
Estimated Cost:	$500,000
Estimated Benefit:	$3M
Potential Funding Source(s):	Grants, general fund
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed
Flooding

Action: Educate the public on NFIP policies and their flood risks from various flood sources (bodies of water, dams, flash flooding).

Participating Jurisdiction	City of Garrett
Priority:	11
Estimated Cost:	$500
Estimated Benefit:	$3,000
Potential Funding Source(s):	Grants, general fund
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed:
All Hazards

Action: Incorporate nature-based, green infrastructure throughout the planning area, where applicable.

Participating Jurisdiction	City of Garrett
Priority:	12
Estimated Cost:	$20,000
Estimated Benefit:	$1.2M
Potential Funding Source(s):	Grants, general fund
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed:
Wildfires

Action: Create defensible space around existing and future development in the WUI.

Participating Jurisdiction	City of Garrett
Priority:	13
Estimated Cost:	$10,000
Estimated Benefit:	$60,000
Potential Funding Source(s):	Grants, general fund
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed:
All Hazards

Action: Work with neighboring communities on multi-jurisdictional mitigation projects and studies.

Participating Jurisdiction	City of Garrett
Priority:	14
Estimated Cost:	$200,000
Estimated Benefit:	$1.2M
Potential Funding Source(s):	Grants, general fund
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed:
All Hazards

Action: Conduct hazard studies in planning area and surrounding jurisdictions, to address data deficiencies and to update our risk assessment.

Participating Jurisdiction	City of Garrett
Priority:	15
Estimated Cost:	$70,000
Estimated Benefit:	$420,000
Potential Funding Source(s):	Grants, general fund
Lead Agency/Department Responsible:	Public Works

Implementation Schedule:	36 months

City of Italy Mitigation Action Items

STATUS	2015 MITIGATION ACTIONS
Deferred to 2022 HMP	Adopt and promote a comprehensive public education program.
Deferred to 2022 HMP	Adopt, implement, and enforce International Residential Code
Deferred to 2022 HMP	Implement Individual Tornado Safe Room Rebate Program
In-progress	Develop and implement a tree-trimming program
Deferred to 2022 HMP	Develop and Implement a Plan for Clearing Roadways
Deferred to 2022 HMP	Harden City Hall Against Severe Weather-related Natural Hazards
Deferred to 2022 HMP	Purchase and implement telephone-based mass notification system.
Deferred to 2022 HMP	Dig New Ditches Along Floodplains to Mitigate Flooding
Deferred to 2022 HMP	Conduct earthquake study to assess potential for earthquakes and their impacts
Deferred to 2022 HMP	Hire consultant to complete new inundation studies of all high and moderate hazard dams within the county.
Deferred to 2022 HMP	Conduct a soil analysis to determine the scope, impact, and extent of expansive soils

Hazard(s) Addressed:
All Hazards

Action: Purchase and install generators for three (3) wells to ensure the continued supply of water during hazardous events.

Participating Jurisdiction	City of Italy
Priority:	1
Estimated Cost:	200,000.00
Estimated Benefit:	1,200,000.00
Potential Funding Source(s):	CDBG, general operating
Lead Agency/Department Responsible:	Public Works Department
Implementation Schedule:	6 months

Hazard(s) Addressed:
Drought, Winter Storms

Action: Design and install a public well to ensure water is available to residents.

Participating Jurisdiction	City of Italy
Priority:	2
Estimated Cost:	50,000.00
Estimated Benefit:	300,000.00
Potential Funding Source(s):	General operating
Lead Agency/Department Responsible:	Public Works Department
Implementation Schedule:	6 months

Hazard(s) Addressed:
All Hazards

Action: Acquire and install generators and the associated equipment/fuel for city's supervisory control and data acquisition (SCADA) system to prevent power failure to this critical software.

Participating Jurisdiction	City of Italy
Priority:	3
Estimated Cost:	75,000.00
Estimated Benefit:	450,000.00
Potential Funding Source(s):	General operating, grants
Lead Agency/Department Responsible:	Public Works Department
Implementation Schedule:	6 months

Hazard(s) Addressed:
Thunderstorms, Tornadoes, Wildfires

Action: Purchase and install outdoor warning sirens.

Participating Jurisdiction	City of Italy
Priority:	4
Estimated Cost:	100,000.00
Estimated Benefit:	600,000.00
Potential Funding Source(s):	General operating
Lead Agency/Department Responsible:	Fire Department

Implementation Schedule:	6 months

Hazard(s) Addressed:
Earthquake, Extreme Heat, Flooding, Thunderstorms, Tornadoes, Wildfires, Winter Storms

Action: Create an emergency shelter for citizens.

Participating Jurisdiction	City of Italy
Priority:	5
Estimated Cost:	1,000,000.00
Estimated Benefit:	6,000,000.00
Potential Funding Source(s):	Hazard Mitigation grants, general operating
Lead Agency/Department Responsible:	Office of Emergency Management
Implementation Schedule:	24 months

Hazard(s) Addressed
All Hazards

Action: Purchase and install generators for six (6) lift stations.

Participating Jurisdiction	City of Italy
Priority:	6
Estimated Cost:	150,000.00
Estimated Benefit:	900,000.00
Potential Funding Source(s):	CDBG, general operating
Lead Agency/Department Responsible:	Public Works Department
Implementation Schedule:	6 months

Hazard(s) Addressed:
Extreme Heat, Flooding, Thunderstorms, Tornadoes, Wildfires, Winter Storms

Action: Create an 8x8 cinderblock building to house chlorine room equipment and SCADA tower controls.

Participating Jurisdiction	City of Italy
Priority:	7
Estimated Cost:	15,000.00
Estimated Benefit:	90,000.00

Potential Funding Source(s):	General operating
Lead Agency/Department Responsible:	Public Works Department
Implementation Schedule:	6 months

Hazard(s) Addressed:
Extreme Heat, Thunderstorms, Tornadoes, Winter Storms

Action: Create covered parking for city vehicles and equipment.

Participating Jurisdiction	City of Italy
Priority:	8
Estimated Cost:	100,000.00
Estimated Benefit:	600,000.00
Potential Funding Source(s):	General operating
Lead Agency/Department Responsible:	Public Works Department
Implementation Schedule:	12 months

Hazard(s) Addressed
Drought, Extreme Heat, Wildfires

Action: Acquire water tanker trucks (both potable and non-potable) to have in the event when existing water supplies is critically low or compromised or to wet vegetation to prevent a wildfire.

Participating Jurisdiction	City of Italy
Priority:	9
Estimated Cost:	50,000.00
Estimated Benefit:	300,000.00
Potential Funding Source(s):	General operating
Lead Agency/Department Responsible:	Public Works Department
Implementation Schedule:	6 months

Hazard(s) Addressed:
Flooding

Action: Implement and promote the National Flood Insurance Program using an education campaign and staff training.

Participating Jurisdiction	City of Italy

Priority:	10
Estimated Cost:	$2,000
Estimated Benefit:	$12,000
Potential Funding Source(s):	Grants
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	36 months

City of Maypearl Mitigation Action Items

STATUS	2015 MITIGATION ACTIONS
Deferred to 2022 HMP	Develop and implement comprehensive public education program.
Deferred to 2022 HMP	Establish public cooling/warming stations in city hall, fire department, school buildings, and/or churches
Deferred to 2022 HMP	Develop and implement water rationing regulations
Deferred to 2022 HMP	Implement the "Firewise" program from the Texas Forest Service.
Deferred to 2022 HMP	Develop and implement a tree-trimming program.
Deferred to 2022 HMP	Create a Storm Water Management Program to analyze historical and current conditions contributing to flooding. Program would offer a better understanding of flooding patters and allow for better development of mitigation projects.
Deferred to 2022 HMP	Purchase and distribute hail and wind resistant window coverings to vulnerable populations.
Deferred to 2022 HMP	Conduct earthquake study to assess potential for earthquakes and their impacts
Deferred to 2022 HMP	Purchase and Install a Generator for City Hall.
Deferred to 2022 HMP	Conduct a soil analysis to determine the scope, impact, and extent of expansive soils
Deferred to 2022 HMP	Hire consultant to complete new inundation studies of all high and moderate hazard dams within the county.

Safety and Security

Hazard(s) Addressed:
All Hazards

Action: Build a new city hall to withstand hazards. *Our building is severely antiquated. We have patched the roof due to hail, it can rain at times in our court and city council chambers, the HVAC system poorly manages heating and cooling, windows and doors are all leaking, and other hazards such as lightening can easily occur. Other hazards would likely destroy valuable city archives and records and the office spaces and equipment.*

Participating Jurisdiction	City of Maypearl

Priority:	1
Estimated Cost:	$1M
Estimated Benefit:	$6M
Potential Funding Source(s):	FEMA grants
Lead Agency/Department Responsible:	Public Works, Mayor, City Administrator, City Secretary and Contractors
Implementation Schedule:	36 months

Hazard(s) Addressed:
Flooding, Thunderstorms, Tornadoes, Wildfire

Action: Purchase, install, and support an Outdoor Warning System across the City of Maypearl.

Participating Jurisdiction	City of Maypearl
Priority:	2
Estimated Cost:	$350,000
Estimated Benefit:	$2.1M
Potential Funding Source(s):	FEMA grants
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	36 months

Hazard(s) Addressed:
Flooding, Thunderstorms, Tornadoes, Wildfire

Action: Install emergency activation switches and emergency shut offs in redundant locations.

Participating Jurisdiction	City of Maypearl
Priority:	3
Estimated Cost:	$25,000
Estimated Benefit:	$150,000
Potential Funding Source(s):	FEMA grants
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed:
Thunderstorms

Action: Acquire and install lightning guard systems in public venues. *Lightning guards would be installed at places like our parks and sports complexes for City youth – warning when lightning is 30 minutes away to allow for advanced evacuation and notification for safety.*

Participating Jurisdiction	City of Maypearl
Priority:	4
Estimated Cost:	$90,000
Estimated Benefit:	$540,000
Potential Funding Source(s):	FEMA grants
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed:
All Hazards

Action: Acquire and implement a telephone-based mass notification system.

Participating Jurisdiction	City of Maypearl
Priority:	5
Estimated Cost:	$10,000
Estimated Benefit:	$60,000
Potential Funding Source(s):	FEMA grants
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	36 months

Hazard(s) Addressed:
Flooding

Action: Enhance ditches, drainage, and plumbing to mitigate flooding.

Participating Jurisdiction	City of Maypearl
Priority:	6
Estimated Cost:	$200,000
Estimated Benefit:	$1.2M

Potential Funding Source(s):	FEMA grants
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed:
All Hazards

Action: Acquire and install generator(s) in City facilities.

Participating Jurisdiction	City of Maypearl
Priority:	7
Estimated Cost:	$300,000
Estimated Benefit:	$1.8M
Potential Funding Source(s):	FEMA grants
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed
Flooding, Wildfire

Action: Enforce codes for high grass and debris cleanup. Currently, we have no resources to execute code enforcement.

Participating Jurisdiction	City of Maypearl
Priority:	8
Estimated Cost:	$45,000 annually + $25,000 equipment/materials= $70,000
Estimated Benefit:	$420,000
Potential Funding Source(s):	FEMA grants
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed:
Thunderstorms, Tornadoes

Action: Install a community saferoom.	
Participating Jurisdiction	City of Maypearl
Priority:	9
Estimated Cost:	$50,000
Estimated Benefit:	$300,000
Potential Funding Source(s):	FEMA grants
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed:
All Hazards

Action: Adopt, implement, improve upon, and enforce additional international residential code to mitigate against natural hazards.	
Participating Jurisdiction	City of Maypearl
Priority:	10
Estimated Cost:	$15,000
Estimated Benefit:	$90,000
Potential Funding Source(s):	FEMA grants
Lead Agency/Department Responsible:	Planning & Zoning Commission
Implementation Schedule:	36 months

Hazard(s) Addressed:
Drought, Earthquakes, Expansive Soils, Wildfires

Action: Replace water lines with enhanced pipes & assess access/improve fire hydrants and water delivery systems.	
Participating Jurisdiction	City of Maypearl
Priority:	11
Estimated Cost:	$1.5M
Estimated Benefit:	$9M
Potential Funding Source(s):	FEMA grants
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed:
Extreme Heat, Winter Storm

Action: Establish select city buildings and the Maypearl schools as cooling and warming centers to allow citizens, especially vulnerable populations, to seek refuge from extreme temperatures.

Participating Jurisdiction	City of Maypearl
Priority:	12
Estimated Cost:	$20,000
Estimated Benefit:	$120,000
Potential Funding Source(s):	FEMA grants
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	36 months

Hazard(s) Addressed:
Thunderstorms, Tornadoes, Wildfire, Winter Storms

Action: Purchasing and distributing NOAA Weather Radios to public facilities.

Participating Jurisdiction	City of Maypearl
Priority:	13
Estimated Cost:	$3,000
Estimated Benefit:	$18,000
Potential Funding Source(s):	FEMA grants
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	36 months

Hazard(s) Addressed:
Thunderstorms, Tornadoes, Wildfire, Winter Storms

Action: Enhance and implement a robust tree trimming program that can be consistently executed in the City.

Participating Jurisdiction	City of Maypearl
Priority:	14
Estimated Cost:	Staff & Equipment/Resources: $45k annually
Estimated Benefit:	$270,000
Potential Funding Source(s):	FEMA grants

Lead Agency/Department Responsible:	Public Works, Mayor, City Administrator and City Secretary
Implementation Schedule:	36 months

Hazard(s) Addressed:
Winter Storm

Action: Develop and implement a plan for ice prevention and clearing roadways.

Participating Jurisdiction	City of Maypearl
Priority:	15
Estimated Cost:	$50,000
Estimated Benefit:	$300,000
Potential Funding Source(s):	FEMA grants
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed
Flooding

Action: Create a Storm Water Management Program to analyze historical and current conditions contributing to flooding and execute recommendations. *Program would offer a better understanding of flooding patterns and allow for better development and execution of mitigation activities.*

Participating Jurisdiction	City of Maypearl
Priority:	16
Estimated Cost:	$500,000
Estimated Benefit:	$3M
Potential Funding Source(s):	FEMA grants
Lead Agency/Department Responsible:	Public Works, Mayor, City Administrator, City Secretary, Consultants and Contractors
Implementation Schedule:	36 months

Hazard(s) Addressed:
Extreme Heat, Thunderstorms, Tornadoes, Winter Storms

Action: Install covered parking for government vehicle and critical equipment.	
Participating Jurisdiction	City of Maypearl
Priority:	17
Estimated Cost:	$35,000
Estimated Benefit:	$210,000
Potential Funding Source(s):	FEMA grants
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed
Extreme Heat, Thunderstorms

Action: Mitigate severe weather by installing covered patios in public parks and other facilities in the City.	
Participating Jurisdiction	City of Maypearl
Priority:	18
Estimated Cost:	$10,000 per patio
Estimated Benefit:	$60,000
Potential Funding Source(s):	FEMA grants
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed:
Thunderstorms, Tornado, Wildfire, Winter Storms

Action: Develop, adopt, execute, and enforce an ordinance to limit debris on private properties.	
Participating Jurisdiction	City of Maypearl
Priority:	19
Estimated Cost:	$30,000 (staffing)
Estimated Benefit:	$180,000
Potential Funding Source(s):	FEMA grants
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed:
Drought, Earthquakes, Expansive Soils

Action: Improve the water supply and delivery systems to save water by installing new water delivery systems to eliminate breaks and leaks.

Participating Jurisdiction	City of Maypearl
Priority:	20
Estimated Cost:	$3M
Estimated Benefit:	$18M
Potential Funding Source(s):	FEMA grants
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed:
All Hazards

Action: Develop, adopt, execute and action to have fuel storage in case of to ensure continuity of operations during a disaster.

Participating Jurisdiction	City of Maypearl
Priority:	21
Estimated Cost:	$15,000
Estimated Benefit:	$90,000
Potential Funding Source(s):	FEMA grants
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed:
All Hazards

Action: Develop and implement a comprehensive public education program to cover all hazards.

Participating Jurisdiction	City of Maypearl
Priority:	22
Estimated Cost:	$15,000
Estimated Benefit:	$90,000
Potential Funding Source(s):	FEMA grants

Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	36 months

Hazard(s) Addressed:
Flooding

Action: Adopt, implement, and promote the National Flood Insurance Program.

Participating Jurisdiction	City of Maypearl
Priority:	23
Estimated Cost:	$2,000
Estimated Benefit:	$12,000
Potential Funding Source(s):	FEMA grants
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	36 months

Hazard(s) Addressed:
Wildfire

Action: Partner with the Texas A&M Forest Service to establish a "Firewise" community.

Participating Jurisdiction	City of Maypearl
Priority:	24
Estimated Cost:	$15,000
Estimated Benefit:	$90,000
Potential Funding Source(s):	FEMA grants
Lead Agency/Department Responsible:	Fire Department
Implementation Schedule:	36 months

Hazard(s) Addressed:
Flooding, Thunderstorms, Tornadoes, Wildfire, Winter Storms

Action: Purchase, install and support a Weather Radar System to provide the public more accurate weather data and geographically specific weather data culled from the most active levels of the atmosphere.

Participating Jurisdiction	City of Maypearl

Priority:	25
Estimated Cost:	$2.5M
Estimated Benefit:	$15M
Potential Funding Source(s):	FEMA grants
Lead Agency/Department Responsible:	Public Works

Hazard(s) Addressed:
Thunderstorms, Tornadoes

Action: Purchase and distribute hail and wind resistant window coverings to vulnerable populations.

Participating Jurisdiction	City of Maypearl
Priority:	26
Estimated Cost:	$1M
Estimated Benefit:	$6M
Potential Funding Source(s):	FEMA grants
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed:
Flooding, Thunderstorms, Tornadoes, Wildfire, Winter Storms

Action: Assist citizens with funding for purchase of NOAA weather alert radios.

Participating Jurisdiction	City of Maypearl
Priority:	27
Estimated Cost:	$4,000
Estimated Benefit:	$24,000
Potential Funding Source(s):	FEMA grants
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	36 months

Hazard(s) Addressed: Extreme Heat	
Action: Conduct a study extreme heat and its effects on vulnerable populations to determine and then execute a monitoring population program.	
Participating Jurisdiction	City of Maypearl
Priority:	28
Estimated Cost:	$5,000
Estimated Benefit:	$30,000
Potential Funding Source(s):	FEMA grants
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	36 months

Hazard(s) Addressed: Expansive Soils	
Action: Conduct a soil analysis to determine the scope, impact and extent of expansive soils and act on analysis recommendations.	
Participating Jurisdiction	City of Maypearl
Priority:	29
Estimated Cost:	$75,000
Estimated Benefit:	$450,000
Potential Funding Source(s):	FEMA grants
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	36 months

Hazard(s) Addressed	Earthquake
Action: Conduct earthquake assessment study to determine potential for earthquakes to affect the City of Maypearl.	
Participating Jurisdiction	City of Maypearl
Priority:	30
Estimated Cost:	$40,000
Estimated Benefit:	$240,000
Potential Funding Source(s):	FEMA grants
Lead Agency/Department Responsible:	City Administration

Implementation Schedule:	36 months

City of Midlothian Mitigation Action Items

STATUS	2015 MITIGATION ACTIONS
Deferred to 2022 HMP	Develop and implement comprehensive public education program.
Deferred to 2022 HMP	Expand Outdoor Warning Systems to New Populations
Deferred to 2022 HMP	Implement the Texas Tornado Safe Room Rebate Program
Deferred to 2022 HMP	Harden new City facilities to withstand impacts from natural hazards.
Deferred to 2022 HMP	Assist citizens with funding for purchase of NOAA Weather Alert Radios.
Deferred to 2022 HMP	Develop public education campaign to encourage “hail resistant” roofing in new construction and roof replacements.
Deferred to 2022 HMP	Expand building codes to include stricter requirements for mitigating impacts of natural hazards on private structures.
Deferred to 2022 HMP	Educate builders and residents about mitigating wind damage.
Deferred to 2022 HMP	Increase public education concerning winter storm mitigation.
Deferred to 2022 HMP	Conduct a study to determine feasibility of monitoring populations at risk from extreme heat.
Deferred to 2022 HMP	Develop public education program on the dangers of excessive heat.
Deferred to 2022 HMP	Determine how the community and its water sources have been impacted by droughts in the past.
Deferred to 2022 HMP	Design water delivery systems to accommodate drought events and develop new and/or upgrade existing water delivery systems to eliminate breaks and leaks.
Deferred to 2022 HMP	Design and implement specific water conservation public education efforts to complement existing programs.
Deferred to 2022 HMP	Increase public education on how to reduce the risks from wildfires.
Deferred to 2022 HMP	Increase code enforcement activity for high grass and debris clean up.
Deferred to 2022 HMP	Increase public education about the effects of expansive soils.
Deferred to 2022 HMP	Expansive soil building codes for developers and builders.
Deferred to 2022 HMP	Conduct a soil analysis to determine the scope, impact, and extent of expansive soils
Deferred to 2022 HMP	Conduct earthquake study to assess potential for earthquakes and their impacts

Deferred to 2022 HMP	Hire consultant to complete new inundation studies of all high and moderate hazard dams within the county.

Hazard(s) Addressed:
All Hazards

Action: Install back-up emergency generators and automatic transfer switches (UPS systems) in new and existing city facilities that house critical infrastructure, personnel, and equipment to include existing and new City of Midlothian facilities, (Emergency generator, electrician costs, transfer switches, status monitors, wiring for facilities) to prevent the loss of power.

Participating Jurisdiction	City of Midlothian
Sites and Location(s):	City of Midlothian, Texas 76065 Midlothian Police Department, Emergency Operations Center / 9-1-1 Center, 1150 N Highway 67, Midlothian, Texas 76065 Midlothian Recreation Center Midlothian City Hall Midlothian Library Midlothian Conference Center, 1 Community Circle Midlothian Senior Activity Center, 4 Community Cir. Midlothian Water Treatment Plant, 440 Tayman Rd Midlothian Water Treatment Plant, 1761 Auger Rd Midlothian Public Works Facility and Barn Midlothian Parks and Recreation Barn Animal Shelter Raw water pump station at Joe Pool Lake (Mansfield Highway located in Cedar Hill) Generator on wheels 100KW (100 kva), electrician costs, transfer switches, status monitors, wiring for facilities
Priority:	1
Estimated Cost:	$1M
Estimated Benefit:	$6M
Potential Funding Source(s):	FEMA Hazard Mitigation Grant Program (HMGP), General Fund, Capital Improvement
Lead Agency/Department Responsible:	Public Works, Engineering & Utilities, Police Department, Parks and Recreation, City Manager's Office, Emergency Management.
Implementation Schedule:	12 months

Hazard(s) Addressed:
Thunderstorm, Tornado, Wildfires, Winter Storms

Action: Construction of storm shelters, community safe rooms (hardening) in existing and new construction of recreational and government buildings / facilities.	
Participating Jurisdiction	City of Midlothian
Sites and Location(s):	Midlothian Police Department, Emergency Operations Center / 9-1-1 Center, 1150 N Highway 67, Midlothian, Texas 76065 Midlothian Recreation Center Midlothian City Hall Midlothian Library
Priority:	2
Estimated Cost:	$2
Estimated Benefit:	$12M
Potential Funding Source(s):	FEMA Hazard Mitigation Grant Program (HMGP), General Fund, Capital Improvement
Lead Agency/Department Responsible:	Midlothian Engineering, Midlothian Public Works Department, Midlothian PD Emergency Management, Parks and Recreation, City Manager's Office
Implementation Schedule:	36 months

Hazard(s) Addressed:
Earthquakes, Thunderstorms, Tornadoes, Wildfires

Action: Enhancement of Outdoor Warning Siren System to include:

- **Increased warning coverage, communications, and security**
- **Provide warnings and notifications to residents and visitors during hazardous events to include newer technologies, such as NWS polygon activation, wind sensor for high wind activations, and updated outdoor warning sirens due to city growth.**

Participating Jurisdiction	City of Midlothian

Sites and Location(s):

Siren Number	Siren Location (address)	GPS Coordinates (Lat /Long)
Siren Controller (Dispatch)	1150 N Highway 67 Midlothian Police Department	32.492956 x -96.996659

1	Jaycee Park, Baseball Field 1809 Meadow Lane	32.503662 x -96.997563
2	TE Baxter Elementary School 1050 Park Place Blvd 972-775-8281	32.496044 x -96.961349
3	Walnut Grove Middle School 990 N Walnut Grove Rd 972-775-5355 x3	32.492197 x -96.940730
4	Longbranch Elementary School 6631 FM 1387 972-775-2830	32.404807 x -96.908395
5	The Mile – Midlothian Innovative Learning Experience 700 W Avenue H 972-775-8239	32.480185 x -96.999035
6	Power Foam 550 Murray ST 972-299-5556	32.474996 x -96.978111
7	Walnut Grove Rd & Clancey 1081 S Walnut Grove Rd	32.472523 x -96.942057
8	2800 Blk 663 Byrd Ranch & FM 663 (Autumn Run)	32.454396 x -96.987444
9	LaRue Miller Elementary School & Dieterich Middle School Sudith Ln & Sunbeam Ct 972-775-4497	32.450748 x -96.971723
10	Billy Ray Rd & Monroe Drive (Crystal Forest Estates)	32.441070 x -96.947744
11	Mt Peak Elementary School 5201 FM 663 Behind Station 3 972-775-2881	32.428869 x -97.002072
12	McAlpin Rd & Whitehead Rd (Country South)	32.424737 x -96.975926
13	Camp Hoblitzelle Singleton Rd & Indian Creek Dr 972-723-2387	32.404807 x -97.005275

	14	Midlothian Power Plant - Luminant 4601 Brookhollow Dr 972-923-7415 (Control Room) 972-923-7474 (Plant Electrical Engineer)	32.431249x -97.053551
	Additional Sirens	Locations within the city due to growth	TBD

Priority:	3
Estimated Cost:	$500,000
Estimated Benefit:	$3M
Potential Funding Source(s):	FEMA Hazard Mitigation Grant Program (HMGP), General Fund, Capital Improvement
Lead Agency/Department Responsible:	Police Department / Emergency Management
Implementation Schedule:	18 months

Hazard(s) Addressed:
Flooding, Thunderstorms

Action: Improve and enhance storm water draining capabilities to prevent flooding in flood prone areas. *See list of potential storm water drainage projects below and associated costs for each project.*

Participating Jurisdiction	City of Midlothian

Sites and Location(s):	City of Midlothian Storm Water Utility Projects

	Stormwater System O&M and Project Improvement Costs	Cost
1.	Contract street sweeping (yearly)	$50,000
2.	Household hazardous waste collection program (yearly)	$35,000
3.	MS4 storm water management program (yearly)	$30,000
4.	Navarro College	$250,000
5.	Creek Bend	$800,000
6.	Oak Tree Lane	$250,000
7.	Stevie Mike Drive and Mr. Bob Drive	$750,000
8.	Boardwalk Street and Short Line Boulevard	$350,000
9.	Melanie Trail and Walter Stephenson Road	$750,000
10.	Eastgate Drainage Improvements	$350,000
11.	Roundabout Drive	$500,000
12.	Lena Lane and Hillcrest Street	$500,000
13.	S. 14th Street (north of FM 875)	$1,000,000
14.	Onward Road	$1,250,000
15.	Mockingbird Lane (west of Park Place)	$750,000
16.	Oak Tree Lane within Lake Grove	$100,000
17.	N. Walnut Grove Road (north of Mockingbird Lane)	$150,000
18.	Hayes Road (north of FM 1387)	$500,000
19.	Hayes Road (west of Longbranch Road)	$250,000
20.	Francis Lane	$250,000
21.	Plainview Road (west of Keri Lane)	$350,000
22.	Plainview Road (west of Coldwater Court)	$350,000
23.	Plainview Road (south of Duvall Lane)	$350,000
24.	Sudith Lane (south of Plum Creek)	$350,000
25.	Ashford Lane (west of Whispering Hills Drive)	$250,000
26.	Ashford Lane (east of S. 14th Street)	$250,000
27.	McAlpin Road (west of Shallow Creek)	$350,000
28.	Whitehead Road (south of Ashford Lane)	$350,000
29.	Waterworks Road	$750,000
30.	Belmont Lane (west of FM 663)	$250,000
31.	Creekbend	$500,000
32.	Mount Zion Road	$550,000
33.	South Midlothian Parkway	$750,000
34.	Kroger Detention Pond Storm Drain System	$2,500,000

Priority:	4
Estimated Cost:	$200,000 - $2.5M
Estimated Benefit:	$15M
Potential Funding Source(s):	FEMA Hazard Mitigation Grant Program (HMGP), General Fund, Capital Improvement, Storm Water Impact Fees
Lead Agency/Department Responsible:	Engineering & Utilities Department
Implementation Schedule:	36 months

Hazard(s) Addressed:
Expansive Soils, Flooding, Thunderstorms

Action: Improve and increase the capacity of storm water system by expanding creeks downstream channel to prevent flooding in flood prone areas to include structural stormwater management projects.	
Participating Jurisdiction	City of Midlothian
Sites and Location(s):	*The major streams in the City of Midlothian, as defined in this Ordinance, are Armstrong Creek, Bedford Branch, Cottonwood Creek, Hollings Branch, Long Branch, Newton Branch, North Prong Creek, Sanders Branch, Soap Creek, South Prong Creek, and Waxahachie Creek.* City of Midlothian, Texas 76065
Priority:	5
Estimated Cost:	$1M
Estimated Benefit:	$6M
Potential Funding Source(s):	FEMA Hazard Mitigation Grant Program (HMGP), General Fund, Capital Improvement
Lead Agency/Department Responsible	Engineering Department
Implementation Schedule:	36 months

Hazard(s) Addressed
Expansive Soils, Flooding, Thunderstorms

Action: Conduct creek and stream bank erosion studies: conduct a study to identify vulnerability to stream bank erosion. Identify cost effective actions. *The major streams in the City of Midlothian, as defined in the city ordinance, are Armstrong Creek, Bedford Branch, Cottonwood Creek, Hollings Branch, Long Branch, Newton Branch, North Prong Creek, Sanders Branch, Soap Creek, South Prong Creek, and Waxahachie Creek.*	
Participating Jurisdiction	City of Midlothian
Sites and Location(s):	*The major streams in the City of Midlothian, as defined in the city ordinance, are Armstrong Creek, Bedford Branch, Cottonwood Creek, Hollings Branch, Long Branch, Newton Branch, North Prong Creek, Sanders Branch, Soap Creek, South Prong Creek, and Waxahachie Creek.* City of Midlothian, Texas 76065
Priority:	6
Estimated Cost:	$500,000
Estimated Benefit:	$3M
Potential Funding Source(s):	FEMA Hazard Mitigation Grant Program (HMGP), General Fund, Capital Improvement
Lead Agency/Department Responsible	Engineering Department
Implementation Schedule:	36 months

Hazard(s) Addressed
Thunderstorms

Action: Install lightning prediction and notification systems in Back Alley Plaza, Civic Center Park, Hawkins Spring Park, Heritage Park, Jaycee Park, Kimmel Park, Margie Webb Park, Midlothian Community Park, Midlothian Dog Park, Midlothian Sports Complex, Mockingbird Nature Park, Mountain Peak Park, Ridgeview Park, Triangle Park, Recreation Center and new city parks to provide early warning of the possibility of lightning in the immediate area and increase public safety during outdoor activities.

Participating Jurisdiction	City of Midlothian
Sites and Location(s):	Back Alley Plaza, Civic Center Park, Hawkins Spring Park, Heritage Park, Jaycee Park, Kimmel Park, Margie Webb Park, Midlothian Community Park, Midlothian Dog Park, Midlothian Sports Complex, Mockingbird Nature Park, Mountain Peak Park, Ridgeview Park, Triangle Park, Recreation Center and new city parks City of Midlothian, Texas 76065
Priority:	7
Estimated Cost:	$200,000
Estimated Benefit:	$1.2M
Potential Funding Source(s):	FEMA Hazard Mitigation Grant Program (HMGP), General Fund, Capital Improvement
Lead Agency/Department Responsible:	Parks and Recreation
Implementation Schedule:	18 months

Hazard(s) Addressed
All Hazards

Action: Develop and implement a comprehensive public education and outreach program for all-hazards that provides information on mitigation techniques.

Participating Jurisdiction	City of Midlothian
Priority:	8
Estimated Cost:	$50,000
Estimated Benefit:	$300,000
Potential Funding Source(s):	FEMA Hazard Mitigation Grant Program (HMGP), General Fund, Capital Improvement
Lead Agency/Department Responsible	Midlothian Fire Department, Midlothian Police Department, Emergency Management, Public Information Officer, Engineering & Utilities, Public Works
Implementation Schedule:	12 months

Hazard(s) Addressed:
Expansive Soils, Flooding, Thunderstorms

Action: Improve creek and stream bank stabilization measures with the use of hard / soft engineering techniques that combine low profile rock with vegetative plating to allow for a more natural condition of creeks located in Midlothian.

Participating Jurisdiction	City of Midlothian
Sites and Location(s):	*The major streams in the City of Midlothian, as defined in the city ordinance, are Armstrong Creek, Bedford Branch, Cottonwood Creek, Hollings Branch, Long Branch, Newton Branch, North Prong Creek, Sanders Branch, Soap Creek, South Prong Creek, and Waxahachie Creek.* City of Midlothian, Texas 76065
Priority:	9
Estimated Cost:	$2M
Estimated Benefit:	$12M
Potential Funding Source(s):	FEMA Hazard Mitigation Grant Program (HMGP), General Fund, Capital Improvement
Lead Agency/Department Responsible	Engineering Department & Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed:
Thunderstorms, Tornado

Action: Purchase hail and wind resistant windows or window coverings for new and existing city facilities.

Participating Jurisdiction	City of Midlothian
Sites and Location(s):	All city facilities located in the City of Midlothian, Texas 76065 Midlothian Public Safety Complex, 1150 N Highway 67, Midlothian, Texas 76065
Priority:	10
Estimated Cost:	$1M
Estimated Benefit:	$6M
Potential Funding Source(s):	FEMA Hazard Mitigation Grant Program (HMGP), General Fund, Capital Improvement
Lead Agency/Department Responsible	Engineering Department, Public Works, Police Department, Emergency Management, City Manager's Office
Implementation Schedule:	36 months

Hazard(s) Addressed:
Extreme Heat

Action: Reduce heat island effect by installing cool roof products for city facilities that reflect sunlight and heat away from buildings.

Participating Jurisdiction	City of Midlothian
Sites and Location(s):	All city facilities located in the City of Midlothian, Texas 76065 Midlothian Public Safety Complex, 1150 N Highway 67, Midlothian, Texas 76065 Midlothian Recreation Center Midlothian City Hall Midlothian Library
Priority:	11
Estimated Cost:	$1M
Estimated Benefit:	$6M
Potential Funding Source(s):	FEMA Hazard Mitigation Grant Program (HMGP), General Fund, Capital Improvement
Lead Agency/Department Responsible	Engineering Department, Public Works, Police Department, Emergency Management, City Manager's Office
Implementation Schedule:	36 months

Hazard(s) Addressed:
Drought, Extreme Heat, Wildfires

Action: Incorporate of drought tolerant, fire resistant, and xeriscaping practices and install water-saving equipment in new and existing city facilities.

Participating Jurisdiction	City of Midlothian
Sites and Location(s):	All city facilities and city owned right-of-way located in the City of Midlothian, Texas 76065
Priority:	12
Estimated Cost:	$200,000
Estimated Benefit:	$1.2M
Potential Funding Source(s):	FEMA Hazard Mitigation Grant Program (HMGP), General Fund, Capital Improvement

Lead Agency/Department Responsible	Engineering & Utilities Department, Public Works, Parks and Recreation, Police Department, Emergency Management, City Manager's Office
Implementation Schedule:	18 months

Hazard(s) Addressed:
Extreme Heat, Winter Storms

Action: Create a weatherization assistance program to assist the vulnerable population and protect them from extreme heat and cold.

Participating Jurisdiction	City of Midlothian
Sites and Location(s):	Provides qualified families with an energy audit and installation of weatherization measures to increase their home's energy efficiency.
Priority:	13
Estimated Cost:	$200,000
Estimated Benefit:	$1.2M
Potential Funding Source(s):	FEMA Hazard Mitigation Grant Program (HMGP), General Fund, Capital Improvement
Lead Agency/Department Responsible	Public Works, Utility Billing, Police Department, MPD Community Services, Emergency Management
Implementation Schedule:	18 months

Hazard(s) Addressed:
Thunderstorms

Action: Install a combined technology of structural protection devices (lightning rods), arrestors, and grounding minimize lightning damage to critical facilities and emergency communications infrastructure.

Participating Jurisdiction	City of Midlothian
Sites and Location(s):	City of Midlothian city facilities to include communications infrastructure, 76065.
Priority:	14
Estimated Cost:	$200,000
Estimated Benefit:	$1.2M
Potential Funding Source(s):	FEMA Hazard Mitigation Grant Program (HMGP), General Fund, Capital Improvement
Lead Agency/Department Responsible	IT Department, Police Department, Emergency Management

Implementation Schedule:	18 months

Hazard(s) Addressed:
Earthquakes, Expansive Soils

Action: Work with Ellis County and other jurisdictions in Ellis County and participate in an earthquake study to help determine the levels of risk and potential mitigation strategies. The study will not have any effect on buildings. However, the findings from the study may result in changes in the building and infrastructure building codes and ordinances.

Participating Jurisdiction	City of Midlothian
Sites and Location(s):	City of Midlothian, Texas 76065
Priority:	15
Estimated Cost:	$250,000
Estimated Benefit:	$1.5M
Potential Funding Source(s):	FEMA Hazard Mitigation Grant Program (HMGP), General Fund, Capital Improvement
Lead Agency/Department Responsible	Emergency Management
Implementation Schedule:	24 months

Hazard(s) Addressed:
Flooding, Thunderstorms

Action: Buyout structures that are in the floodplain. Land Acquisition and removal of old structures for repetitive loss. Residential structures located within the floodplain and may have repetitive losses due to flooding to return to green space or park land.

Participating Jurisdiction	City of Midlothian
Sites and Location(s):	City of Midlothian, Texas 76065
Priority:	16
Estimated Cost:	$5M
Estimated Benefit:	$30M
Potential Funding Source(s):	FEMA Hazard Mitigation Grant Program (HMGP), General Fund, Capital Improvement
Lead Agency/Department Responsible	City Manager's Office, Parks, Engineering
Implementation Schedule:	36 months

City of Milford Mitigation Action Items

STATUS	2015 MITIGATION ACTIONS
Deferred to 2022 HMP	Develop and implement comprehensive public education program.
Deferred to 2022 HMP	Develop, implement, and enforce water conservation codes and ordinances.
Deferred to 2022 HMP	Purchase and distribute hail and wind resistant window coverings to vulnerable populations.
Deferred to 2022 HMP	Create and Implement Long-Term Stormwater Management Program
Deferred to 2022 HMP	Adopt, implement, and enforce stricter construction requirements through ordinances.
Deferred to 2022 HMP	Partner with the Texas Fire Service to establish Milford as a "Firewise" community.
Deferred to 2022 HMP	Conduct a soil analysis to determine the scope, impact, and extent of expansive soils
Deferred to 2022 HMP	Conduct earthquake study to assess potential for earthquakes and their impacts
Deferred to 2022 HMP	Hire consultant to complete new inundation studies of all high and moderate hazard dams within the county.

Hazard(s) Addressed:
All Hazards

Action: Develop and implement a comprehensive public education and outreach program for all-hazards.

Participating Jurisdiction	City of Milford
Priority:	1
Estimated Cost:	$20,000.00
Estimated Benefit:	$120,000.00
Potential Funding Source(s):	75% FEMA Grants, 25% General operating budget
Lead Agency/Department Responsible:	Emergency Management Coordinator
Implementation Schedule:	36 months

Hazard(s) Addressed:
Flooding, Thunderstorms, Tornadoes, Winter Storm

Action: Purchase, install and support a Weather Radar System to provide the public more accurate weather data and geographically specific weather data culled from the most active levels of the atmosphere.	
Participating Jurisdiction	City of Milford
Priority:	2
Estimated Cost:	$300,000.00
Estimated Benefit:	$1.8M
Potential Funding Source(s):	75% FEMA Grants, 25% General operating budget
Lead Agency/Department Responsible:	Emergency Management Coordinator
Implementation Schedule:	36 months

Hazard(s) Addressed:
Extreme Heat, Winter Storm

Action: Create a weatherization assistance program to assist the vulnerable population and protect them from extreme temperatures.	
Participating Jurisdiction	City of Milford
Priority:	3
Estimated Cost:	$150,000.00
Estimated Benefit:	$900,000.00
Potential Funding Source(s):	75% FEMA Grants, 25% General operating budget
Lead Agency/Department Responsible:	Emergency Management Coordinator
Implementation Schedule:	36 months

Hazard(s) Addressed:
Drought, Earthquakes, Expansive Soils, Wildfires

Action: Replace water lines with enhanced pipes & assess access/improve fire hydrants and water delivery systems.	
Participating Jurisdiction	City of Milford
Priority:	4
Estimated Cost:	$700,000.00
Estimated Benefit:	$4.2M
Potential Funding Source(s):	75% FEMA Grants, 25% General operating budget
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed:
Flooding

Action: Implement and promote the National Flood Insurance Program using an education campaign and staff training.

Participating Jurisdiction	City of Milford
Priority:	5
Estimated Cost:	$2,000
Estimated Benefit:	$12,000
Potential Funding Source(s):	Grants
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	36 months

City of Oak Leaf Mitigation Action Items

STATUS	2015 MITIGATION ACTIONS
Deferred to 2022 HMP	Mitigate the Effects of Severe Weather to Citizens Through Outdoor Warning Systems.
Deferred to 2022 HMP	Mitigate the Effects of Hazards to Citizens Through Public Education Program
Deferred to 2022 HMP	Purchase Generator to Provide Power to City Municipal Buildings
Deferred to 2022 HMP	Installation of Community Saferoom
Deferred to 2022 HMP	Conduct earthquake study to assess potential for earthquakes and their impacts
Deferred to 2022 HMP	Develop, implement and enforce a water rationing plan
Deferred to 2022 HMP	Conduct a soil analysis to determine the scope, impact, and extent of expansive soils
Deferred to 2022 HMP	Partner with the county and other jurisdictions to hire a consultant to complete inundation studies of all high and moderate hazard dams within the county.

Hazard(s) Addressed:
Flooding

Action: Limit or restrict development in floodplain areas by requiring that floodplains be kept as open space.

Participating Jurisdiction	City of Oak Leaf
Priority:	1
Estimated Cost:	$500
Estimated Benefit:	$3,000
Potential Funding Source(s):	General Operating Fund
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	12 months

Hazard(s) Addressed:
Thunderstorms

Action: Posting warning signage at local parks, county fairs, and other outdoor venues.

Participating Jurisdiction	City of Oak Leaf
Priority:	2

Estimated Cost:	$200
Estimated Benefit:	$1,200
Potential Funding Source(s):	General Operating Fund
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	12 months

Hazard(s) Addressed:
Thunderstorms

Action: Protect critical facilities and infrastructure from lighting damage by installing lightning protection devices and methods, such as lightning rods and grounding, on communications infrastructure and other critical facilities.

Participating Jurisdiction	City of Oak Leaf
Priority:	3
Estimated Cost:	$5,000.00
Estimated Benefit:	$30,000.00
Potential Funding Source(s):	General Operating Fund
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	24 months

Hazard(s) Addressed:
Wildfire

Action: Organize a local fire department tour to show local elected officials and planners the most vulnerable areas of the community's wildland-urban interface and increase their understanding of risks

Participating Jurisdiction	City of Oak Leaf
Priority:	4
Estimated Cost:	$1,000
Estimated Benefit:	$6,000
Potential Funding Source(s):	General Operating Fund
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	24 months

Hazard(s) Addressed:
Wildfire

Action: Inform the public about proper wildfire evacuation procedures.	
Participating Jurisdiction	City of Oak Leaf
Priority:	5
Estimated Cost:	$1,000
Estimated Benefit:	$6,000
Potential Funding Source(s):	General Operating Fund
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	6 months

Hazard(s) Addressed:
Extreme Heat

Action: Reduce heat island effects by increasing tree plantings around buildings to shade parking lots and along public rights-of-way.	
Participating Jurisdiction	City of Oak Leaf
Priority:	6
Estimated Cost:	$40,000
Estimated Benefit:	$240,000
Potential Funding Source(s):	General Operating Fund, Grant
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	24 months

Hazard(s) Addressed:
Flooding

Action: Incorporate flood mitigation in local planning by passing and enforcing an ordinance that regulates dumping in streams and ditches	
Participating Jurisdiction	City of Oak Leaf
Priority:	7
Estimated Cost:	$500
Estimated Benefit:	$3,000
Potential Funding Source(s):	General Operating Fund
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	12 months

Hazard(s) Addressed:
Earthquake, Thunderstorms

Action: Increase hail and lightening risk awareness and earthquake safety techniques to follow during and after an earthquake by mailing safety brochures with quarterly newsletters.

Participating Jurisdiction	City of Oak Leaf
Priority:	8
Estimated Cost:	$1,000
Estimated Benefit:	$6,000
Potential Funding Source(s):	General Operating Fund
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	6 months

Hazard(s) Addressed:
Expansive Soils

Action: Use membrane to allow streets to stay intact.

Participating Jurisdiction	City of Oak Leaf
Priority:	9
Estimated Cost:	$2,200,000
Estimated Benefit:	$13,200,000
Potential Funding Source(s):	General Operating Fund
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	36 months

Hazard(s) Addressed:
Earthquakes, Expansive Soils

Action: Install flex-pipes in new city building construction.

Participating Jurisdiction	City of Oak Leaf
Priority:	10
Estimated Cost:	$500
Estimated Benefit:	$3,000
Potential Funding Source(s):	General Operating Fund
Lead Agency/Department Responsible:	City Administration

Implementation Schedule:	36 months

Hazard(s) Addressed:
Winter Storms

Action: Create a campaign to encourage homeowners to install carbon monoxide monitors and alarms.

Participating Jurisdiction	City of Oak Leaf
Priority:	11
Estimated Cost:	$500
Estimated Benefit:	$3,000
Potential Funding Source(s):	General Operating Fund
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	12 months

Hazard(s) Addressed:
Extreme Heat, Winter Storms

Action: Assist vulnerable populations by establishing and promoting accessible heating or cooling centers in the community.

Participating Jurisdiction	City of Oak Leaf
Priority:	12
Estimated Cost:	$500,000
Estimated Benefit:	$3,000,000
Potential Funding Source(s):	Grant
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	36 months

Hazard(s) Addressed:
Drought

Action: Educate residents regarding incorporating drought tolerant or xeriscape landscaping to reduce dependence on irrigation.

Participating Jurisdiction	City of Oak Leaf
Priority:	13
Estimated Cost:	$500

Estimated Benefit:	$3,000
Potential Funding Source(s):	General Operating Fund
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	1 to 2 years

Hazard(s) Addressed:
Drought

Action: Educate residents on water saving techniques regarding installation of low-flow water saving showerheads and toilets.

Participating Jurisdiction	City of Oak Leaf
Priority:	14
Estimated Cost:	$500
Estimated Benefit:	$3,000
Potential Funding Source(s):	General Operating Fund
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	1 to 2 years

Hazard(s) Addressed:
Tornado

Action: Promote Severe Weather Awareness Week.

Participating Jurisdiction	City of Oak Leaf
Priority:	15
Estimated Cost:	$100
Estimated Benefit:	$600
Potential Funding Source(s):	General Operating Fund
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	12 months

Hazard(s) Addressed:
Thunderstorms, Tornado

Action: Promote use of National Oceanic and Atmospheric Administration (NOAA) weather radios.

Participating Jurisdiction	City of Oak Leaf

Priority:	16
Estimated Cost:	$100
Estimated Benefit:	$600
Potential Funding Source(s):	General Operating Fund
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	12 months

Hazard(s) Addressed:
Earthquake

Action: Use Hazus to quantitatively estimate potential losses from an earthquake.

Participating Jurisdiction	City of Oak Leaf
Priority:	17
Estimated Cost:	$100
Estimated Benefit:	$600
Potential Funding Source(s):	General Operating Fund
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	1 to 2 years

Hazard(s) Addressed
Flooding

Action: Implement and promote the National Flood Insurance Program using an education campaign and staff training.

Participating Jurisdiction	City of Oak Leaf
Priority:	18
Estimated Cost:	$2,000
Estimated Benefit:	$12,000
Potential Funding Source(s):	Grants
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	36 months

City of Ovilla Mitigation Action Items

STATUS	2015 MITIGATION ACTIONS
Deferred to 2022 HMP	Mitigate the Effects of Hazards to Citizens Through Public Education
Deferred to 2022 HMP	Purchase and implement communication early warning system connected to NOAA Weather Service, such as Blackboard Connect
Deferred to 2022 HMP	Purchase and install an outdoor early warning system.
Deferred to 2022 HMP	Install covered parking areas
Deferred to 2022 HMP	Conduct earthquake study to assess potential for earthquakes and their impacts
Deferred to 2022 HMP	Conduct a soil analysis to determine the scope, impact, and extent of expansive soils
Deferred to 2022 HMP	Hire consultant to complete new inundation studies of all high and moderate hazard dams within the county.

Hazard(s) Addressed:
All Hazards

Action: Assist homeowners with application and implementation of residential mitigation projects.

Participating Jurisdiction	City of Ovilla
Priority:	1
Estimated Cost:	$5,000
Estimated Benefit:	$30,000
Potential Funding Source(s):	Grants, general fund
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed:
Flooding

Action: Participate in the National Flood Insurance Program (NFIP).

Participating Jurisdiction	City of Ovilla
Priority:	2
Estimated Cost:	$5,000
Estimated Benefit:	$30,000

Potential Funding Source(s):	Grants, general fund
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed:
All Hazards

Action: Acquire and install generators, the generator connections/infrastructure, proper mounting system, security barriers, and fuel reservoir for existing and future critical facilities to prevent power failure in the event of a disaster and to continue essential duties.

Participating Jurisdiction	City of Ovilla
Priority:	3
Estimated Cost:	$1M
Estimated Benefit:	$6M
Potential Funding Source(s):	Grants, general fund
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed:
Earthquakes, Flooding, Wildfires

Action: Update land use planning, using zoning maps & regulations, to prevent future residential development in floodplains and other hazard-prone areas and place requirements on development methods.

Participating Jurisdiction	City of Ovilla
Priority:	4
Estimated Cost:	$2,000
Estimated Benefit:	$12,000
Potential Funding Source(s):	Grants, general fund
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed:
All Hazards

Action: Maintain fuel on-site or have multiple ways to obtain fuel for maintaining power during a power outage from an event.

Participating Jurisdiction	City of Ovilla
Priority:	5
Estimated Cost:	$10,000
Estimated Benefit:	$60,000
Potential Funding Source(s):	Grants, general fund
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed:
All Hazards

Action: Adopt and enforce most current building codes.

Participating Jurisdiction	City of Ovilla
Priority:	6
Estimated Cost:	$500
Estimated Benefit:	$3,000
Potential Funding Source(s):	Grants, general fund
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed:
All Hazards

Action: Update codes, policies, and regulations to address risks and vulnerabilities to hazards.

Participating Jurisdiction	City of Ovilla
Priority:	7
Estimated Cost:	$500
Estimated Benefit:	$3,000
Potential Funding Source(s):	Grants, general fund
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed:
All Hazards

Action: Retrofit existing and future government-owned facilities to withstand all hazards.	
Participating Jurisdiction	City of Ovilla
Priority:	8
Estimated Cost:	$1M
Estimated Benefit:	$6M
Potential Funding Source(s):	Grants, general fund
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed:
All Hazards

Action: Educate the public on their risks to our hazards, and mitigation actions to take, using various outreach methods.	
Participating Jurisdiction	City of Ovilla
Priority:	9
Estimated Cost:	$5,000
Estimated Benefit:	$30,000
Potential Funding Source(s):	Grants, general fund
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed:
Flooding

Action: Buyout or relocate SRL, RL, and other vulnerable structures within or near a floodplain or dam spillway.	
Participating Jurisdiction	City of Ovilla
Priority:	10
Estimated Cost:	$500,000
Estimated Benefit:	$3M
Potential Funding Source(s):	Grants, general fund
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed:
Flooding

Action: Educate the public on NFIP policies and their flood risks from various flood sources (bodies of water, dams, flash flooding).

Participating Jurisdiction	City of Ovilla
Priority:	11
Estimated Cost:	$500
Estimated Benefit:	$3,000
Potential Funding Source(s):	Grants, general fund
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed:
All Hazards

Action: Incorporate nature-based, green infrastructure throughout the planning area, where applicable.

Participating Jurisdiction	City of Ovilla
Priority:	12
Estimated Cost:	$20,000
Estimated Benefit:	$1.2M
Potential Funding Source(s):	Grants, general fund
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed:
Wildfires

Action: Create defensible space around existing and future development in the WUI.

Participating Jurisdiction	City of Ovilla
Priority:	13
Estimated Cost:	$10,000
Estimated Benefit:	$60,000
Potential Funding Source(s):	Grants, general fund
Lead Agency/Department Responsible:	Public Works

Implementation Schedule:	36 months

Hazard(s) Addressed:
All Hazards

Action: Work with neighboring communities on multi-jurisdictional mitigation projects and studies.

Participating Jurisdiction	City of Ovilla
Priority:	14
Estimated Cost:	$200,000
Estimated Benefit:	$1.2M
Potential Funding Source(s):	Grants, general fund
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed:
All Hazards

Action: Conduct hazard studies in planning area and surrounding jurisdictions, to address data deficiencies and to update our risk assessment.

Participating Jurisdiction	City of Ovilla
Priority:	15
Estimated Cost:	$70,000
Estimated Benefit:	$420,000
Potential Funding Source(s):	Grants, general fund
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

City of Palmer Mitigation Action Items

STATUS	2015 MITIGATION ACTIONS
Deferred to 2022 HMP	Develop and implement telephone warning program for residents and businesses to receive early warning from the National Weather Service and local agencies.
Deferred to 2022 HMP	Mitigate extreme weather by building covered patios in public parks
Deferred to 2022 HMP	Develop and implement a public education program
Deferred to 2022 HMP	Develop and implement a watering ordinance and enforcement capabilities
Deferred to 2022 HMP	Conduct a soil analysis to determine the scope, impact, and extent of expansive soils
Deferred to 2022 HMP	Develop Expansive Soil Code and Enforcement
Deferred to 2022 HMP	Conduct earthquake study to assess potential for earthquakes and their impacts
Deferred to 2022 HMP	Hire consultant to complete new inundation studies of all high and moderate hazard dams within the county.
Deferred to 2022 HMP	Develop, Adopt, and Enforce an Ordinance to Require Underground Power Lines for New Construction
Deferred to 2022 HMP	Develop, Adopt, and Enforce an Ordinance to Limit Debris on Private Properties

Hazard(s) Addressed:
Earthquakes, Extreme Heat, Flooding, Thunderstorms, Tornado, Wildfire, Winter Storms

Action: Purchase and install generator(s) in City facilities.

Participating Jurisdiction	City of Palmer
Priority:	1
Estimated Cost:	$350,000
Estimated Benefit:	$2.1M
Potential Funding Source(s):	CDBG grants
Lead Agency/Department Responsible:	Public Works, Mayor, City Administrator, City Secretary and Contractors
Implementation Schedule:	36 months

Hazard(s) Addressed:
Flooding

Action: Enhance drainage ditches to mitigate flooding.

Participating Jurisdiction	City of Palmer
Priority:	2
Estimated Cost:	$200,000
Estimated Benefit:	$1.2M
Potential Funding Source(s):	FEMA grants
Lead Agency/Department Responsible:	Public Works, Mayor, City Administrator, City Secretary and Contractors
Implementation Schedule:	36 months

Hazard(s) Addressed:
Thunderstorms, Tornadoes, Wildfire

Action: Purchase and install Outdoor Warning Sirens.

Participating Jurisdiction	City of Palmer
Priority:	3
Estimated Cost:	$350,000
Estimated Benefit:	$2.1M
Potential Funding Source(s):	FEMA grants
Lead Agency/Department Responsible:	Mayor, City Administrator, City Secretary, Consulting Firm, and Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed:
Thunderstorms

Action: Purchase and install lightning guard systems in public venues. Lightning Guard would be installed at places like our parks and sports complexes for City youth – warning when lightning is 30 minutes away to allow for advanced evacuation and notification for safety.

Participating Jurisdiction	City of Palmer
Priority:	4
Estimated Cost:	$100,000

Estimated Benefit:	$600,000
Potential Funding Source(s):	FEMA grants
Lead Agency/Department Responsible:	Public Works, Mayor, City Administrator, City Secretary and Contractors
Implementation Schedule:	36 months

Hazard(s) Addressed:
Drought, Wildfires

Action: Replace water lines with enhanced pipes and improve fire hydrants and water delivery systems to ensure water pressure to support a significant drought or wildfire.

Participating Jurisdiction	City of Palmer
Priority:	5
Estimated Cost:	$1.5M
Estimated Benefit:	$9M
Potential Funding Source(s):	FEMA grants
Lead Agency/Department Responsible:	Public Works, Mayor, City Administrator, City Secretary and Contractors
Implementation Schedule:	36 months

Hazard(s) Addressed:
Extreme Heat, Winter Storms

Action: Establish select city buildings and potentially the Palmer schools as cooling and warming centers to allow citizens, especially vulnerable populations, to seek refuge from extreme hot and cold temperatures.

Participating Jurisdiction	City of Palmer
Priority:	6
Estimated Cost:	$30,000
Estimated Benefit:	$180,000
Potential Funding Source(s):	FEMA grants
Lead Agency/Department Responsible:	Public Works, Mayor, City Administrator, City Secretary, Maypearl ISD Superintendent and Contractors
Implementation Schedule:	36 months

Hazard(s) Addressed:
Extreme Heat, Flooding, Thunderstorms, Tornado, Winter Storms, Wildfire

Action: Purchasing and distributing NOAA Weather Radios to public facilities.

Participating Jurisdiction	City of Palmer
Priority:	7
Estimated Cost:	$3,000
Estimated Benefit:	$18,000
Potential Funding Source(s):	FEMA grants
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed:
Thunderstorms, Tornadoes, Wildfire, Winter Storms

Action: Implement a tree trimming program that can be executed in the City.

Participating Jurisdiction	City of Palmer
Priority:	8
Estimated Cost:	Staff & Equipment/Resources: $45k annually
Estimated Benefit:	$270,000
Potential Funding Source(s):	FEMA grants
Lead Agency/Department Responsible:	Public Works, Mayor, City Administrator and City Secretary
Implementation Schedule:	36 months

Hazard(s) Addressed:
Winter Storm

Action: Develop and implement a plan for clearing roadways.

Participating Jurisdiction	City of Palmer
Priority:	9
Estimated Cost:	$50,000
Estimated Benefit:	$300,000
Potential Funding Source(s):	FEMA grants
Lead Agency/Department Responsible:	Public Works

Implementation Schedule:	36 months

Hazard(s) Addressed:
All Hazards

Action: Develop a public education program that involves mitigation education for all hazards.

Participating Jurisdiction	City of Palmer
Priority:	10
Estimated Cost:	$10,000
Estimated Benefit:	$60,000
Potential Funding Source(s):	FEMA grants
Lead Agency/Department Responsible:	Mayor, City Administrator, City Secretary, Consulting Firm
Implementation Schedule:	36 months

Hazard(s) Addressed:
Flooding

Action: Adopt, implement, and promote the National Flood Insurance Program.

Participating Jurisdiction	City of Palmer
Priority:	11
Estimated Cost:	$2,000
Estimated Benefit:	$12,000
Potential Funding Source(s):	FEMA grants
Lead Agency/Department Responsible:	Mayor, City Administrator, City Secretary, Consulting Firm
Implementation Schedule:	36 months

Hazard(s) Addressed:
All Hazards

Action: Enforce International Residential Code to mitigate against natural hazards.

Participating Jurisdiction	City of Palmer
Priority:	12
Estimated Cost:	$5000
Estimated Benefit:	$30,000
Potential Funding Source(s):	FEMA grants

Lead Agency/Department Responsible:	Mayor, City Administrator, City Secretary, Consulting Firm, Planning & Zoning Commission
Implementation Schedule:	36 months

Hazard(s) Addressed:
Earthquake

Action: Conduct earthquake assessment study to determine potential for earthquakes to affect the City of Palmer.

Participating Jurisdiction	City of Palmer
Priority:	13
Estimated Cost:	$40,000
Estimated Benefit:	$240,000
Potential Funding Source(s):	FEMA grants
Lead Agency/Department Responsible:	Mayor, City Administrator, City Secretary, Consulting Firm
Implementation Schedule:	36 months

Hazard(s) Addressed:
Drought, Extreme Heat, Flooding, Thunderstorms, Tornado, Wildfire, Winter Storms

Action: Assist citizens with funding for purchase of NOAA weather alert radios.

Participating Jurisdiction	City of Palmer
Priority:	14
Estimated Cost:	$4,000
Estimated Benefit:	$24,000
Potential Funding Source(s):	FEMA grants
Lead Agency/Department Responsible:	Public Works, Mayor, City Administrator, City Secretary, Consultants and Contractors
Implementation Schedule:	36 months

Hazard(s) Addressed:
Extreme Heat

Action: Conduct a study extreme heat and its effects on vulnerable populations to determine and then execute a monitoring population program.

Participating Jurisdiction	City of Palmer

Priority:	15
Estimated Cost:	$5,000
Estimated Benefit:	$30,000
Potential Funding Source(s):	FEMA grants
Lead Agency/Department Responsible:	Fire Department, Public Works, Mayor, City Administrator, City Secretary, Consultants and Contractors
Implementation Schedule:	36 months

Hazard(s) Addressed:
Extreme Heat, Thunderstorms, Winter Storms

Action: Mitigate extreme weather by building covered patios in public parks and other facilities in the City.

Participating Jurisdiction	City of Palmer
Priority:	16
Estimated Cost:	$12,000 per patio
Estimated Benefit:	$72,000
Potential Funding Source(s):	FEMA grants
Lead Agency/Department Responsible:	Public Works, Mayor, City Administrator, City Secretary and Contractors
Implementation Schedule:	36 months

Hazard(s) Addressed:
Earthquakes, Flooding, Thunderstorms, Tornado, Wildfire, Winter Storms

Action: Execute and Enforce an Ordinance to limit debris on private properties

Participating Jurisdiction	City of Palmer
Priority:	17
Estimated Cost:	$50,000 (staffing)
Estimated Benefit:	$300,000
Potential Funding Source(s):	FEMA grants
Lead Agency/Department Responsible:	Public Works, Mayor, City Administrator, City Secretary and Contractors
Implementation Schedule:	36 months

Hazard(s) Addressed:
Drought

Action: Improve the water supply and delivery systems to save water by installing new water delivery systems.

Participating Jurisdiction	City of Palmer
Priority:	18
Estimated Cost:	$1.5M
Estimated Benefit:	$9M
Potential Funding Source(s):	FEMA grants
Lead Agency/Department Responsible:	Public Works, Mayor, City Administrator, City Secretary and Contractors
Implementation Schedule:	36 months

City of Red Oak Mitigation Action Items

STATUS	2015 MITIGATION ACTIONS
Deferred to 2022 HMP	Purchase and Install a CASA-WX Radar
Deferred to 2022 HMP	Minimize loss of life and property from natural hazards through code adoption, implementation, and enforcement.
Deferred to 2022 HMP	Harden City Hall Against Severe Weather-related Natural Hazards
Deferred to 2022 HMP	Addition of 2 Early Warning Sirens
Deferred to 2022 HMP	Establish select city buildings as cooling centers and warming centers to allow citizens, especially vulnerable populations, to seek refuge from extreme hot and cold temperatures.
Deferred to 2022 HMP	Implement Individual Tornado Safe Room Rebate Program
Deferred to 2022 HMP	Create and implement ordinance detailing enforcement for water rationing
Deferred to 2022 HMP	Purchasing and distributing NOAA Weather Radios to public facilities
Deferred to 2022 HMP	Expansive Soil Code Enforcement Program
Deferred to 2022 HMP	Conduct a soil analysis to determine the scope, impact, and extent of expansive soils
Deferred to 2022 HMP	Conduct earthquake study to assess potential for earthquakes and their impacts
Deferred to 2022 HMP	Hire consultant to complete new inundation studies of all high and moderate hazard dams within the county.

Hazard(s) Addressed:
All Hazards

Action: Plan for and build Station 3 to better serve the community by having a less vulnerable fire station.

Participating Jurisdiction	City of Red Oak
Priority:	1
Estimated Cost:	$6 M
Estimated Benefit:	$36 M
Potential Funding Source(s):	Capital / Bond /Grant
Lead Agency/Department Responsible:	Fire Department
Implementation Schedule:	24 months

Hazard(s) Addressed:
All Hazards

Action: Add nine (9) fire personnel to ensure the city can save lives and prevent damages during disasters. These personnel will also be assisting in mitigation planning.

Participating Jurisdiction	City of Red Oak
Priority:	2
Estimated Cost:	$1.5 M
Estimated Benefit:	$9 M
Potential Funding Source(s):	Safer Grant
Lead Agency/Department Responsible:	Fire Department
Implementation Schedule:	12 months

Hazard(s) Addressed
Drought, Flooding

Action: Install an elevated water storage tank 2.25MG.

Participating Jurisdiction	City of Red Oak
Priority:	3
Estimated Cost:	$5,720,000.00
Estimated Benefit:	$34,320,000
Potential Funding Source(s):	Capital / Bond/ Grant
Lead Agency/Department Responsible:	Red Oak Public Works
Implementation Schedule:	24 months

Hazard(s) Addressed:
Drought, Extreme Heat, Flooding

Action: Add five (5) new 3.6 MGD pumps at Methodist Pump Station to ensure continuity of critical operations.

Participating Jurisdiction	City of Red Oak
Priority:	4
Estimated Cost:	$3,620,000.00
Estimated Benefit:	$21,720,000
Potential Funding Source(s):	Capital/ Bond / Grant
Lead Agency/Department Responsible:	Red Oak Public Works
Implementation Schedule:	24 months

Hazard(s) Addressed:
Drought, Earthquakes, Expansive Soils

Action: Install and upgrade water lines in the City of Red Oak.

Participating Jurisdiction	City of Red Oak
Priority:	5
Estimated Cost:	$1,610,000.00
Estimated Benefit:	$9,660,000
Potential Funding Source(s):	Capital / Bond / Grant
Lead Agency/Department Responsible:	Red Oak Public Works
Implementation Schedule:	24 months

Hazard(s) Addressed
All Hazards

Action: Install generators at City buildings.

Participating Jurisdiction	City of Red Oak
Priority:	6
Estimated Cost:	$450,000
Estimated Benefit:	$2.7 M
Potential Funding Source(s):	Capital / Bond / Grant
Lead Agency/Department Responsible:	Emergency Management
Implementation Schedule:	12 months

City of Waxahachie Mitigation Action Items

STATUS	2015 MITIGATION ACTIONS
Deferred to 2022 HMP	Develop and implement a comprehensive public education program
Deferred to 2022 HMP	Purchase and implement telephone-based notification system
Deferred to 2022 HMP	Expand outdoor warning systems to new developments
Deferred to 2022 HMP	Apply for grants to install safe rooms to reduce the injuries and deaths to citizens associated with high winds and debris from a tornado or severe weather event.
Deferred to 2022 HMP	Install public accessible safe rooms in new construction city facilities to reduce the injuries and deaths to citizens associated with high winds and debris from a tornado or severe weather event.
Deferred to 2022 HMP	Assist citizens with funding for purchase of Weather Alert Radios.
Deferred to 2022 HMP	Develop public education campaign to encourage “hail resistant” roofing in new construction and roof replacements.
Deferred to 2022 HMP	Develop public education concerning winter storm mitigation.
Deferred to 2022 HMP	Determine how the community and its water sources have been impacted by droughts in the past.
Deferred to 2022 HMP	Improve water supply and delivery systems to save water by installing new water delivery system to eliminate breaks and leaks.
Deferred to 2022 HMP	Design and implement specific water conservation public education efforts to complement existing programs.
Deferred to 2022 HMP	Development and implement wildfire mitigation public education program
Deferred to 2022 HMP	Conduct earthquake study to assess potential for earthquakes and their impacts
Deferred to 2022 HMP	Hire consultant to complete new inundation studies of all high and moderate hazard dams within the county.
Deferred to 2022 HMP	Conduct a soil analysis to determine the scope, impact, and extent of expansive soils
Deferred to 2022 HMP	Mitigate hazard of dam failure at South Prong Dam and emergency spillway

Hazard(s) Addressed:
All Hazards

Action: Assist homeowners with application and implementation of residential mitigation projects.

Participating Jurisdiction	City of Waxahachie
Priority:	1
Estimated Cost:	$5,000
Estimated Benefit:	$30,000
Potential Funding Source(s):	Grants, general fund
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed:
Flooding

Action: Participate in the National Flood Insurance Program (NFIP).

Participating Jurisdiction	City of Waxahachie
Priority:	2
Estimated Cost:	$5,000
Estimated Benefit:	$30,000
Potential Funding Source(s):	Grants, general fund
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed:
All Hazards

Action: Acquire and install generators, the generator connections/infrastructure, proper mounting system, security barriers, and fuel reservoir for existing and future critical facilities to prevent power failure in the event of a disaster and to continue essential duties.

Participating Jurisdiction	City of Waxahachie
Priority:	3
Estimated Cost:	$1M
Estimated Benefit:	$6M
Potential Funding Source(s):	Grants, general fund

Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed:
Earthquakes, Flooding, Wildfires

Action: Update land use planning, using zoning maps & regulations, to prevent future residential development in floodplains and other hazard-prone areas and place requirements on development methods.

Participating Jurisdiction	City of Waxahachie
Priority:	4
Estimated Cost:	$2,000
Estimated Benefit:	$12,000
Potential Funding Source(s):	Grants, general fund
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed:
All Hazards

Action: Maintain fuel on-site or have multiple ways to obtain fuel for maintaining power during a power outage from an event.

Participating Jurisdiction	City of Waxahachie
Priority:	5
Estimated Cost:	$10,000
Estimated Benefit:	$60,000
Potential Funding Source(s):	Grants, general fund
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed:
All Hazards

Action: Adopt and enforce most current building codes.

Participating Jurisdiction	City of Waxahachie
Priority:	6

Estimated Cost:	$500
Estimated Benefit:	$3,000
Potential Funding Source(s):	Grants, general fund
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed:
All Hazards

Action: Update codes, policies, and regulations to address risks and vulnerabilities to hazards.

Participating Jurisdiction	City of Waxahachie
Priority:	7
Estimated Cost:	$500
Estimated Benefit:	$3,000
Potential Funding Source(s):	Grants, general fund
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed:
All Hazards

Action: Retrofit existing and future government-owned facilities to withstand all hazards.

Participating Jurisdiction	City of Waxahachie
Priority:	8
Estimated Cost:	$1M
Estimated Benefit:	$6M
Potential Funding Source(s):	Grants, general fund
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed:
All Hazards

Action: Educate the public on their risks to our hazards, and mitigation actions to take, using various outreach methods.

Participating Jurisdiction	City of Waxahachie
Priority:	9
Estimated Cost:	$5,000
Estimated Benefit:	$30,000
Potential Funding Source(s):	Grants, general fund
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed:
Flooding

Action: Buyout or relocate SRL, RL, and other vulnerable structures within or near a floodplain or dam spillway.

Participating Jurisdiction	City of Waxahachie
Priority:	10
Estimated Cost:	$500,000
Estimated Benefit:	$3M
Potential Funding Source(s):	Grants, general fund
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed:
Flooding

Action: Educate the public on NFIP policies and their flood risks from various flood sources (bodies of water, dams, flash flooding).

Participating Jurisdiction	City of Waxahachie
Priority:	11
Estimated Cost:	$500
Estimated Benefit:	$3,000
Potential Funding Source(s):	Grants, general fund
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed:
All Hazards

Action: Incorporate nature-based, green infrastructure throughout the planning area, where applicable.

Participating Jurisdiction	City of Waxahachie
Priority:	12
Estimated Cost:	$20,000
Estimated Benefit:	$1.2M
Potential Funding Source(s):	Grants, general fund
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed:
Wildfires

Action: Create defensible space around existing and future development in the WUI.

Participating Jurisdiction	City of Waxahachie
Priority:	13
Estimated Cost:	$10,000
Estimated Benefit:	$60,000
Potential Funding Source(s):	Grants, general fund
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Hazard(s) Addressed:
All Hazards

Action: Work with neighboring communities on multi-jurisdictional mitigation projects and studies.

Participating Jurisdiction	City of Waxahachie
Priority:	14
Estimated Cost:	$200,000
Estimated Benefit:	$1.2M
Potential Funding Source(s):	Grants, general fund
Lead Agency/Department Responsible:	Public Works

Implementation Schedule:	36 months

Hazard(s) Addressed:
All Hazards

Action: Conduct hazard studies in planning area and surrounding jurisdictions, to address data deficiencies and to update our risk assessment.

Participating Jurisdiction	City of Waxahachie
Priority:	15
Estimated Cost:	$70,000
Estimated Benefit:	$420,000
Potential Funding Source(s):	Grants, general fund
Lead Agency/Department Responsible:	Public Works
Implementation Schedule:	36 months

Ellis County Unincorporated Mitigation Action Items

STATUS	2015 MITIGATION ACTIONS
Ongoing	Develop and implement a comprehensive public education program
Deferred to 2022 HMP	Develop and implement a drought mitigation plan
Deleted – no longer a priority	Purchase and distribute hail and wind resistant window coverings to vulnerable populations.
Deferred to 2022 HMP	Develop and implement storm water drainage system for new development
Deferred to 2022 HMP	Equip and implement county facilities as "warming and cooling centers" for affected populations.
Deferred to 2022 HMP	Partner with the Texas Fire Service in creating "Firewise" Communities in Ellis County.
Deleted – No longer a priority	Conduct earthquake assessment study to determine potential for earthquakes to affect public facilities and utilities.
Deferred to 2022 HMP	Conduct a soil analysis to determine the scope, impact, and extent of expansive soils
Deferred to 2022 HMP	Protect Critical Infrastructure by Installing Lightning Rods
Ongoing	Hire consultant to complete new inundation studies of all high and moderate hazard dams within the county.

Hazard(s) Addressed:
All Hazards

Action: Install back-up emergency generators and automatic transfer switches (UPS systems) in new and existing county facilities that house critical infrastructure, personnel, and equipment to include existing and new county facilities. (Emergency generator, electrician costs, transfer switches, status monitors, wiring for facilities).

Participating Jurisdiction	Ellis County Unincorporated
Priority:	1
Estimated Cost:	$1M
Estimated Benefit:	$6M
Potential Funding Source(s):	FEMA Hazard Mitigation Grant Program (HMGP), General Fund
Lead Agency/Department Responsible:	County Commissioners, Emergency Management
Implementation Schedule:	12 months

Hazard(s) Addressed:
All Hazards

Action: Retrofit existing and future county buildings with community safe rooms.

Participating Jurisdiction	Ellis County Unincorporated
Priority:	2
Estimated Cost:	$200,000
Estimated Benefit:	$1.2 M
Potential Funding Source(s):	Community Development Block Grant, FEMA Hazard Mitigation Grant Program, General Funds
Lead Agency/Department Responsible:	Emergency Management, County Engineer, County Commissioners
Implementation Schedule:	24 months

Hazard(s) Addressed:
All Hazards

Action: Add grant management/mitigation staff to ensure all Hazard Mitigation Actions are carried out and fulfilled.

Participating Jurisdiction	Ellis County Unincorporated
Priority:	3
Estimated Cost:	$65,000
Estimated Benefit:	$390,000
Potential Funding Source(s):	FEMA Hazard Mitigation Grant Program, General Funds
Lead Agency/Department Responsible:	Emergency Management
Implementation Schedule:	6 months

Hazard(s) Addressed:
All Hazards

Action: Incorporate elevated water storage in underserved areas.

Participating Jurisdiction	Ellis County Unincorporated
Priority:	4
Estimated Cost:	$2M
Estimated Benefit:	$12M

Potential Funding Source(s):	FEMA Hazard Mitigation Grant Program, General Funds
Lead Agency/Department Responsible:	County Engineer, Emergency Management, County Commissioners
Implementation Schedule:	24 months

Hazard(s) Addressed:
Expansive Soils

Action: Road improvements to county roads that would combat the effects of expansive soils.

Participating Jurisdiction	Ellis County Unincorporated
Priority:	5
Estimated Cost:	$8M
Estimated Benefit:	$48M
Potential Funding Source(s):	FEMA Hazard Mitigation Grant Program
Lead Agency/Department Responsible:	County Commissioners, County Engineer
Implementation Schedule:	36 months

Hazard(s) Addressed:
Winter Storms

Action: Have deicing equipment and supplies readily available to precincts in the event of winter weather.

Participating Jurisdiction	Ellis County Unincorporated
Priority:	6
Estimated Cost:	$500,000
Estimated Benefit:	$3,000,000
Potential Funding Source(s):	FEMA Hazard Mitigation Grant Program (HMGP), General Fund
Lead Agency/Department Responsible:	County Commissioners, Emergency Management
Implementation Schedule:	36 months

Hazard(s) Addressed:
Flooding

Action: Clean ditches and remove obstructions from culverts to provide unobstructed flow of runoff water.	
Participating Jurisdiction	Ellis County Unincorporated
Priority:	7
Estimated Cost:	$350,000
Estimated Benefit:	$2,100,000
Potential Funding Source(s):	County General Fund
Lead Agency/Department Responsible:	County Commissioners
Implementation Schedule:	24 months

Hazard(s) Addressed:
All Hazards

Action: Incorporate nature-based, green infrastructure throughout the planning area, where applicable.	
Participating Jurisdiction	Ellis County Unincorporated
Priority:	8
Estimated Cost:	$1M
Estimated Benefit:	$6M
Potential Funding Source(s):	FEMA Hazard Mitigation Grant Program, General Funds
Lead Agency/Department Responsible:	County Commissioners, County Engineer
Implementation Schedule:	24 months

Hazard(s) Addressed:
All Hazards

Action: Conduct hazard studies in planning area and surrounding jurisdictions, to address data deficiencies and to update our risk assessment.	
Participating Jurisdiction	Ellis County Unincorporated
Priority:	9
Estimated Cost:	$100,000
Estimated Benefit:	$600,000
Potential Funding Source(s):	FEMA Hazard Mitigation Grant Program, General Funds
Lead Agency/Department Responsible:	Emergency Management
Implementation Schedule:	12 months

Hazard(s) Addressed:
Wildfires

Action: Address fire mitigation through access, signage, fire hydrants, water availability, vegetation management, and special building construction standards in new communities.

Participating Jurisdiction	Ellis County Unincorporated
Priority:	10
Estimated Cost:	$800,000
Estimated Benefit:	$4.8 M
Potential Funding Source(s):	FEMA Hazard Mitigation Grant Program, General Funds
Lead Agency/Department Responsible:	Emergency Management, County Commissioners, County Fire Marshal
Implementation Schedule:	36 months

Hazard(s) Addressed:
All Hazards

Action: Installing quick-connect emergency generator hook-ups for critical facilities

Participating Jurisdiction	Ellis County Unincorporated
Priority:	11
Estimated Cost:	$300,000
Estimated Benefit:	$1.8M
Potential Funding Source(s):	FEMA Hazard Mitigation Grant Program, General Funds
Lead Agency/Department Responsible:	County Engineer, Emergency Management, County Commissioners
Implementation Schedule:	24 months

Hazard(s) Addressed:
Drought, Expansive Soils, Extreme Heat, Flooding

Action: Use Smartscape in existing and new developments landscapes; implement landscape techniques to stabilize soil; plant trees to create shaded areas for public

Participating Jurisdiction	Ellis County Unincorporated
Priority:	12
Estimated Cost:	$100,000

Estimated Benefit:	$600,000
Potential Funding Source(s):	FEMA Hazard Mitigation Grant Program, General Funds, Property Owners
Lead Agency/Department Responsible:	County Engineer, Department of Development, County Commissioners
Implementation Schedule:	24 months

Hazard(s) Addressed:
Drought, Earthquakes, Expansive Soils, Extreme Heat, Flooding, Winter Storms

Action: Ensure new and existing utilities are strengthened and reinforced with insulation and flex piping to prevent disruption in services.

Participating Jurisdiction	Ellis County Unincorporated
Priority:	13
Estimated Cost:	$500,000
Estimated Benefit:	$3M
Potential Funding Source(s):	FEMA Hazard Mitigation Grant Program, General Funds, Property Owners
Lead Agency/Department Responsible:	County Engineer, Department of Development, County Commissioners
Implementation Schedule:	24 months

Hazard(s) Addressed:
All Hazards

Action: Work with neighboring communities on multi-jurisdictional mitigation projects and studies.

Participating Jurisdiction	Ellis County Unincorporated
Priority:	14
Estimated Cost:	$100,000
Estimated Benefit:	$600,000
Potential Funding Source(s):	FEMA Hazard Mitigation Grant Program, General Funds
Lead Agency/Department Responsible:	Emergency Management
Implementation Schedule:	12 months

Hazard(s) Addressed: All Hazards	
Action: Educate the public on their risks to our hazards, and mitigation actions to take, using various outreach methods.	
Participating Jurisdiction	Ellis County Unincorporated
Priority:	15
Estimated Cost:	$50,000
Estimated Benefit:	$300,000
Potential Funding Source(s):	FEMA Hazard Mitigation Grant Program (HMGP), General Fund
Lead Agency/Department Responsible:	Emergency Management, Public Information Officer
Implementation Schedule:	12 months

4.5 Incorporation into Existing Planning Mechanisms

Based on Requirement 201.6(c)(4(ii) and the State of Texas Mitigation Plan, the vulnerability and capabilities assessment for the town were carefully reviewed and considered when developing the mitigation actions for this plan. The Local Planning Team (LPT) will establish a process in which the mitigation strategy, goals, objectives, and actions outlined in this plan will be incorporated into the existing local planning strategies. At this time, the HMP has not been formally integrated into existing planning mechanisms.

Once the plan is adopted, the LPT will coordinate implementation with the responsible parties in the town, as well as external stakeholders as needed.

The following steps will be taken in implementing this HMP into local plans:

1. Change is proposed by an elected official or other interested party.
2. Proposal is placed on the local agenda of the governing body.
3. Agenda is published at least 10 days in advance of the meeting at which it will be discussed, so members of the public have an opportunity to attend the discussion meeting. Publication may be made by posting the agenda on the city's website, in the city newsletter, or on a public bulletin board.
4. Proposal is discussed at the planning meeting, including any comments by members of the public attendance.
5. Proposal is voted on by the governing body.
6. If the proposal is passed, the change is implemented by the appropriate party.

Planning mechanisms in which the HMP will be integrated are listed below.

Jurisdiction	Type of Plan or Activity	Department Responsible	Update Schedule	Actions to be Integrated
Alma	Ellis County Emergency Management Plan	Emergency Management	Every 5 Years	Hazard Identification and Risk Assessment, Mitigation Strategies
Bardwell	Comprehensive Plan	City Administration	Annually	Reference this HMP when developing the plan.
Ennis	Comprehensive Plan	City Administration	Annually	Reference this HMP when developing the plan.
Ennis	Emergency Operations Plan	Office of Emergency Management	Annually	
Ferris	Capital Improvement Plan	City Administration	Annually	Reference this HMP when developing the plan.
Ferris	Comprehensive Plan	Planning, Zoning, and Public Works Departments	Annually	Reference this HMP when developing the plans for critical infrastructure and resources.
Ferris	Operational Plan	Fire Department	Annually	Reference this HMP and incorporate actions as City of Ferris continues to grow.
Ferris	Master Plan	Building Department, Planning & Zoning, Public Works	Annually	Reference this HMP.
Garrett	Comprehensive Plan	City Administration	Annually	Reference this HMP when developing the plan.
Italy	Comprehensive Plan	Planning, Zoning, and Public Works Departments	Annually	
Italy	Emergency Operations Plan	City Administration		
Maypearl	Comprehensive Development Plan	City Administration	As needed	
Midlothian	Comprehensive Plan	City Administration	Annually	Reference this HMP when developing the plan.
Milford	Comprehensive Plan	City Administration	Annually	Reference this HMP when developing the plan.

Jurisdiction	Type of Plan or Activity	Department Responsible	Update Schedule	Actions to be Integrated
Oak Leaf	Comprehensive Plan	City Administration	Annually	Reference this HMP when developing the plan.
Palmer	Comprehensive Plan	City Administration	Annually	Reference this HMP when developing the plan.
Red Oak	Comprehensive Plan	City Administration	Annually	Reference this HMP when developing the plan.
Waxahachie	Comprehensive Plan	City Administration	Annually	Reference this HMP when developing the plan.
Unincorporated Ellis	Emergency Operations Plan	Emergency Management	Annually	The HMP will be referenced when updating annexes to the EOP.

Although it is recognized that there are many possible benefits to integrating components of this Hazard Mitigation Plan (HMP) into other planning mechanisms, the participating jurisdictions consider this HMP, including development and maintenance, to be the primary vehicle to ensure implementation of local hazard mitigation actions.

Chapter 5: Conclusion

Through the development of this plan, Ellis County has developed a thorough hazard history, an inventory of critical facilities, and an assessment of their current capabilities. This data, when used in conjunction with the updated information about hazard threats and vulnerabilities, will prove to be invaluable to Ellis County and its participating jurisdictions.

Natural hazards have been identified county-wide and technological hazards have been listed for selected jurisdictions that opted to include these hazards. Mitigation projects that could reduce the risk of lives and property due to the identified threats have been compiled and prioritized.

The creation of the Ellis County Hazard Mitigation Planning Team (HMPT) brought together stakeholders from communities and organizations onto one planning team. This group has been able to work together effectively and efficiently to produce this document and establish a greater awareness of risks and mitigation strategies.

In addition to the HMPT, the creation of the Local Planning Team (LPT) in each jurisdiction brought together stakeholders and departments within the jurisdiction onto one planning team. This group was able to work together effectively and efficiently to produce jurisdictional data for this document and establish a greater awareness of risks and mitigation strategies.

This plan will continue to evolve as necessary to properly represent the threats and vulnerabilities affecting Ellis County. Continued public participation is encouraged and will continue through the ongoing multijurisdictional hazard mitigation process. The plan, in its entirety (not limited to but including development, public participation, hazard identification, and mitigation actions), will continue to be monitored and evaluated.

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Appendix A: Maps & Tables

This appendix contains each participating jurisdiction’s maps and Critical/Vulnerable Facilities & Infrastructure tables.

City of Alma

At Risk To: (X for Yes)									**City of Alma Critical and Vulnerable Facility and Infrastructure Table**	
Dam Failure	Drought	Expansive Soils	Extreme Heat	Flooding	Thunderstorms	Tornadoes	Wildfires	Winter Storms	**Name or Description**	**Address**
	x	x	x	x	x	x	x	x	Alma Community Center City of Alma Municipal Administrative Offices – City Hall 469-881-1405	104 Interurban Rd.
	x	x	x	x	x	x	X	x	Alma Volunteer Fire Department 972-875-6832	104 B Interurban Rd.
	x	x	x	x	x	x	x	x	Alma Police Department 469-881-1406	104 Interurban Rd.
	X	x	X	X	X	X	x	x	Alma Lift Station	121 Main St.
	X	x	X	X	X	X	x	x	Alma Municipal Court 469-456-0403	104 Interurban Rd.
X	X	X	X	X	X	X	x	x	Interstate 45 (owned by TxDOT)	

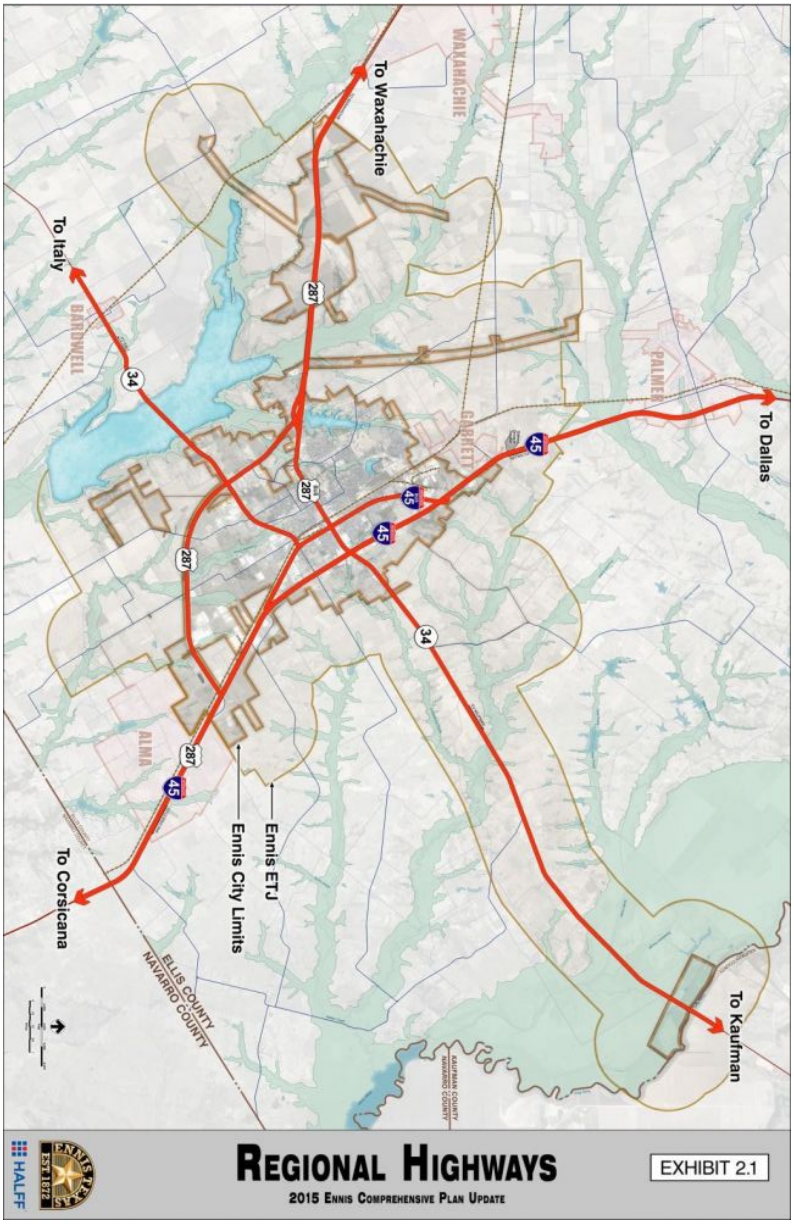
City of Bardwell

At Risk To: (X for Yes)									City of Alma Critical and Vulnerable Facility and Infrastructure Table	
Dam Failure	Drought	Expansive Soils	Extreme Heat	Flooding	Thunderstorms	Tornadoes	Wildfires	Winter Storms	**Name or Description**	**Address**
	x	x	x	x	x	x	x	x	Bardwell Food Market	400 Sycamore
	x	x	x	x	x	x	X	x	Helena Chemical Co	
	x	x	x	x	x	x	x	x	Scrappy's Recycling Center	5545 TX-34
	X	x	X	X	X	X	x	x	DCI Sanitation	101 Planter Gin Rd.
	X	x	X	X	X	X	x	x	Ashcraft Beef	101 Front St
	X	X	X	X	X	X	x	x	First Baptist Church of Bardwell	204 Beaulah St.

City of Ennis

At Risk To: (X for Yes)									City of Ennis Critical and Vulnerable Facility and Infrastructure Table	
Dam Failure	Drought	Expansive Soils	Extreme Heat	Flooding	Thunderstorms	Tornadoes	Wildfires	Winter Storms	**Name or Description**	**Address**
						X		X	Fire Station #2	901 MLK
						X		X	Library	501 W Ennis Ave
						X		X	Bluebonnet Rehab	2300 Oak Grove
						X		X	Ennis Care Center	1200 Hall

At Risk To: (X for Yes)									**City of Ennis Critical and Vulnerable Facility and Infrastructure Table**	
Dam Failure	Drought	Expansive Soils	Extreme Heat	Flooding	Thunderstorms	Tornadoes	Wildfires	Winter Storms	**Name or Description**	**Address**
						X		X	Legend Oaks	1400 Medical Center
						X		X	Brookdale Living	2500 Yorkstown
						X			Bluebonnet Mobile Home Park	101 Lilac
						X			La Casa Mobile Home Park	1100 Smith
						X		X	Waste Water Plant	401 Plant Road
						X		X	Water Treatment Plant	4100 Beach
				X		X			Jeff's RV Park	401 North IH45
						X		X	City Hall	115 West Brown
						X		X	Welcome Center	201 NW Main
						X		X	Ennis Regional	2203 West Lampasas
						X		X	Ennis High School	1405 Lake Bardwell
						X		X	Ennis Junior High School	3101 Ensign
						X		X	Elementary Schools	1501 Austin
						X		X	Pre K – Kindergarten Schools	600 MLK
						X		X	Intermediate Schools	501 North Clay


To Waxahachie
To Italy
To Dallas
To Corsicana
To Kaufman
Ennis City Limits
Ennis ETJ
ELLIS COUNTY
NAVARRO COUNTY
WAXAHACHIE
BARDWELL
GARRETT
PALMER
ALMA
287
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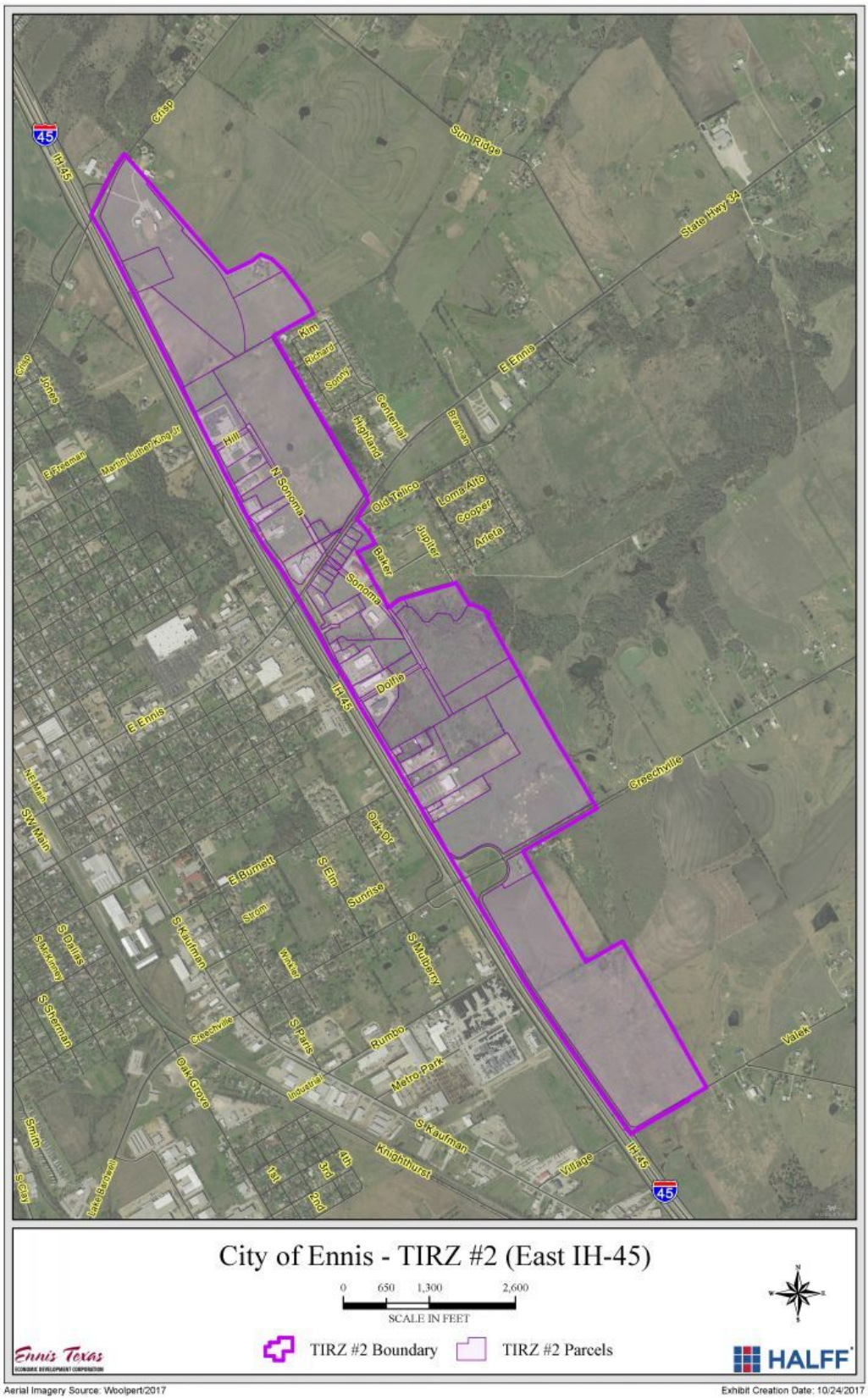
REGIONAL HIGHWAYS
2015 ENNIS COMPREHENSIVE PLAN UPDATE
EXHIBIT 2.1
HALFF


City of Ennis - TIRZ #2 (East IH-45)
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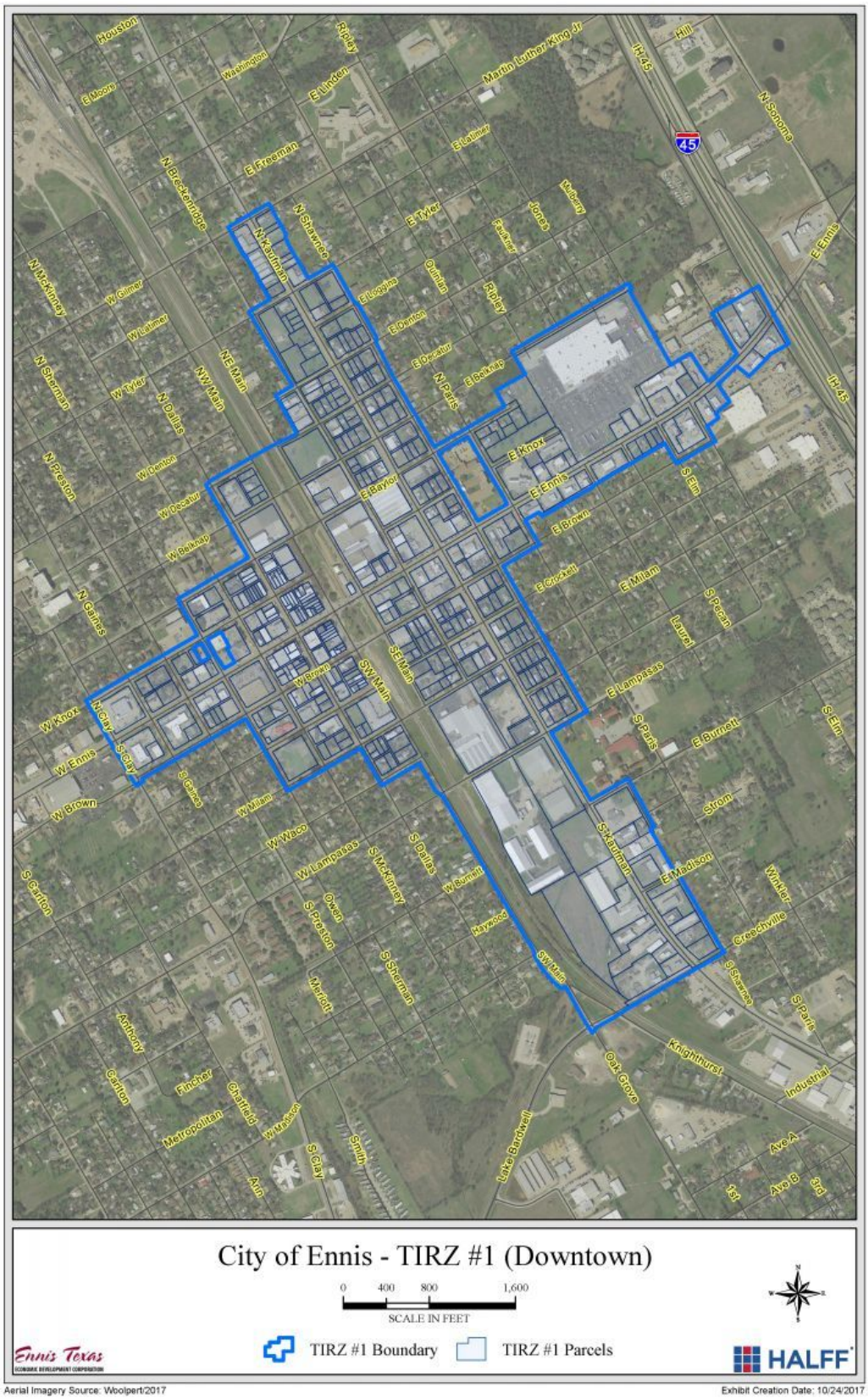
SCALE IN FEET
TIRZ #2 Boundary
TIRZ #2 Parcels
Ennis Texas
HALFF
Aerial Imagery Source: Woolpert/2017
Exhibit Creation Date: 10/24/2017
IH-45
Sun Ridge
State Hwy 34
E Ennis
Crechville
Knighthurst
Village
Valek
Metro Park
Industrial
Rumbo
Oak Grove
Oak Dr
Sunrise
Walker
Dolphe
Jupiter
Baker
Sonoma
Old Telico
Loma Alto
Cooper
Arleta
Highland
Centennial
Brannan
Hill
Kim
Richard
Sonny
Jones
Martin Luther King Jr
E Freeman
NE Main
SW Main
E Burnett
S Elm
S Dallas
S McKinney
S Sherman
S Paris
S Kaufman
S Mulberry
Shirley
Smith
1st
2nd
4th
3rd


City of Ennis - TIRZ #1 (Downtown)
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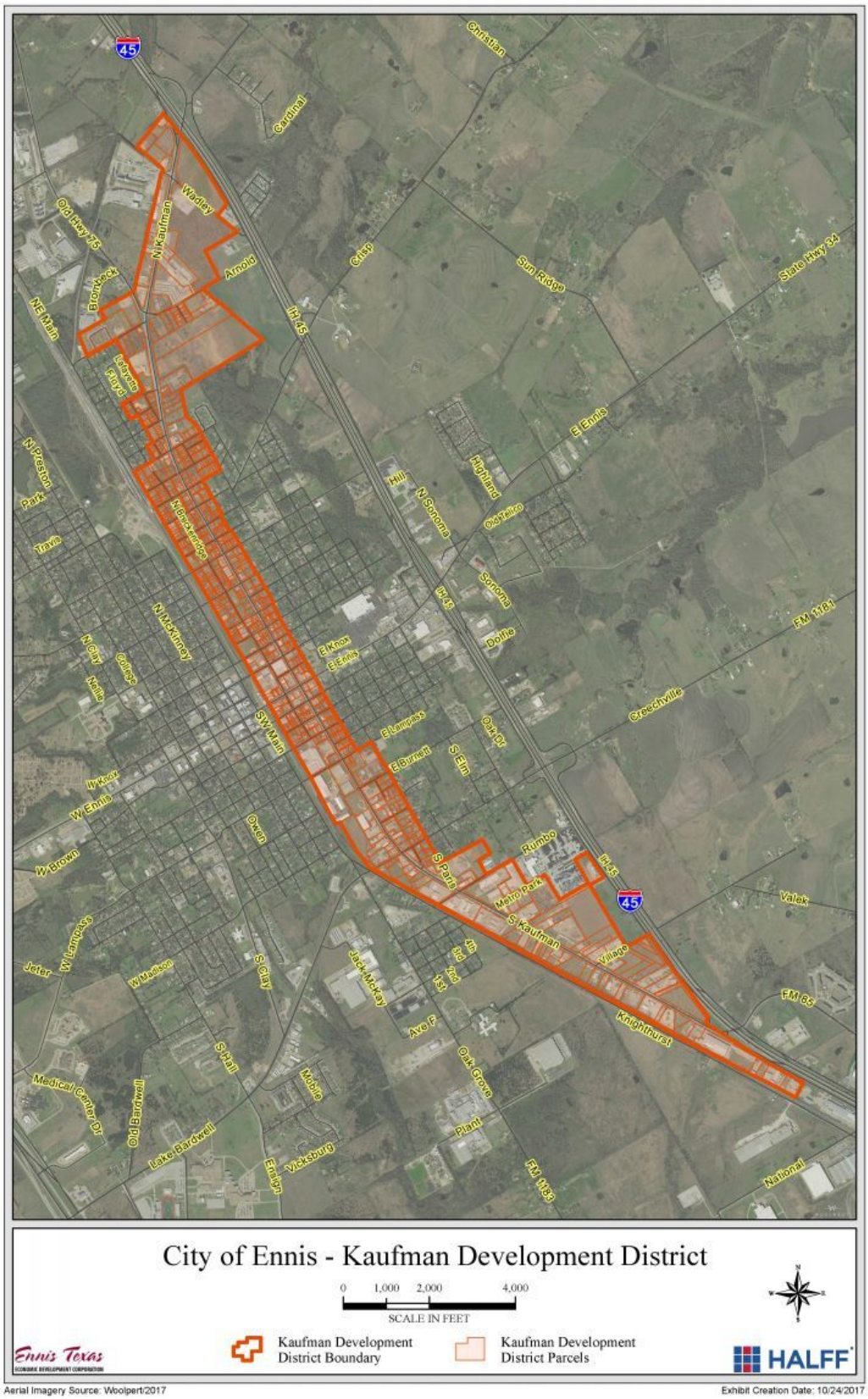
SCALE IN FEET
TIRZ #1 Boundary
TIRZ #1 Parcels
Ennis Texas
HALFF
Aerial Imagery Source: Woolpert/2017
Exhibit Creation Date: 10/24/2017


City of Ennis - Kaufman Development District
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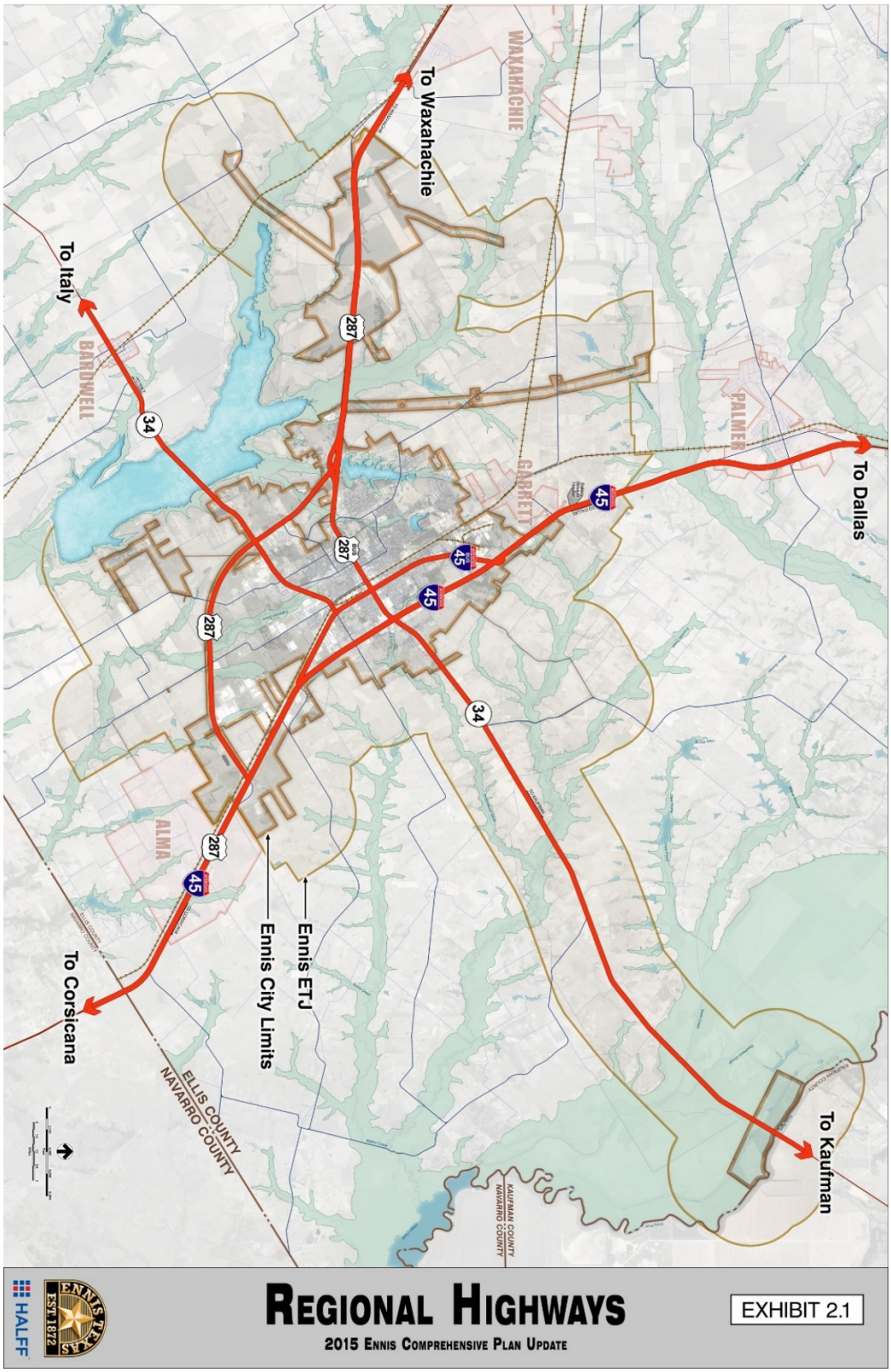
SCALE IN FEET
Kaufman Development District Boundary
Kaufman Development District Parcels
Ennis Texas
HALFF
Aerial Imagery Source: Woolpert/2017
Exhibit Creation Date: 10/24/2017
IH 45
Ferris Plaza
N Preston Park
N McKinney
E Knox
E Ennis
W Ennis
W Brown
W Lampasas
W Madison
S Hall
Medical Center Dr
Old Bardwell
Lake Bardwell
Vicksburg
Mobile
Plant
Oak Grove
Aye F
Jack McKay
S Clay
Owen
Rumbo
S Kaufman
Village
Knighthurst
Valek
Creechville
Dome
Sonoma
N Sonoma
Highland
E Ennis
Sun Ridge
Crisp
Cardinal
Christian
Wadley
Arnold
Old Hwy 75
Brookbeck
NE Main
State Hwy 34
FM 1181
FM 85
National
FM 1183


To Waxahachie
To Italy
To Dallas
To Corsicana
To Kaufman
WAXAHACHIE
BARDWELL
PALMER
GARRETT
ALMA
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Ennis City Limits
Ennis ETJ
ELLIS COUNTY
NAVARRO COUNTY
KAUFMAN COUNTY
NAVARRO COUNTY
HALFF
EST 1872
REGIONAL HIGHWAYS
2015 ENNIS COMPREHENSIVE PLAN UPDATE
EXHIBIT 2.1

SCHOOLS
01 Ennis High School
02 Ennis Middle School
03 Dorie Miller Intermediate School
04 David Crockett Early Childhood Ctr.
05 Jarmon Bowie Elementary
06 Ennis Primary School
07 Stephen F. Austin Elementary
08 Sam Houston Elementary
09 Travis Elementary
10 William B. Travis Elementary
11 G.W. Carver Early Childhood Ctr.
12 Jack Lummus Intermediate School
PARKS
City of Ennis Parks
01 Ennis Lake Park
02 Bluebonnet Park
03 Community Park
04 Fairview Park
05 Frankie Wheat Park
06 Garrett Park
07 Joyce Park
08 Knights Park
09 Lake Clark Park
10 Lions Park
11 Mary McDowell Park
12 Pierce Park
13 Roger Mabe Park
14 Sandy Park
15 The Triangle Park
16 Veterans Memorial Park
17 Wily Cook Park
18 US COE Park
19 Ellis County Fair Park
20 Little Mustang Creek Park
21 Waxahachie Creek Park
22 Wyly Martin Park
23 Mott Park
US COE Land
24 Conservation & Limited Use
25 Waterway
26 Mustang Point
0 1/4 1/2 1 Miles
0 1,250 2,500 5,000 7,500 10,000 Feet
ELLIS COUNTY
MAYHEW COUNTY
Bardwell Lake
Waxahachie Creek
Chambers Creek
Onion Creek
Mustang Creek
Lake Waxahachie
Lake Ennis
Ennis Lake
Ennis Country Club
Oakland Cemetery
Ennis Municipal Airport
Ennis Industrial Park
Ennis Industrial Park
TO WAXAHACHIE
TO DALLAS
TO OVILLA
TO MILFORD
TO ITALY
TO WAXAHACHIE
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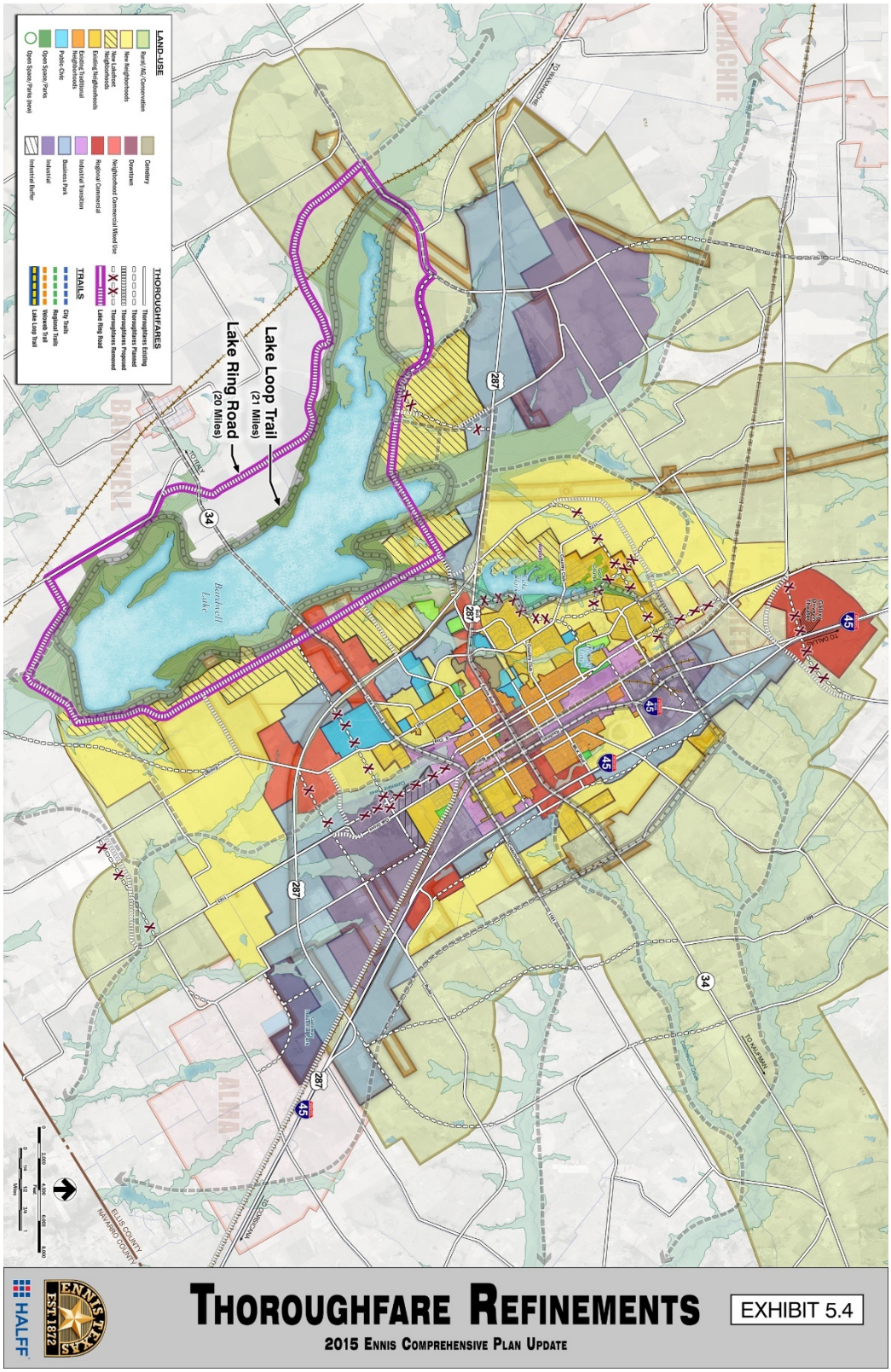
LAND-USE
Rural/ AG/ Conservation
New Neighborhoods
New Lakefront Neighborhoods
Existing Neighborhoods
Neighborhood Transitional
Public-Civic
Open Space/ Parks
Open Space/ Parks (new)
Cemetery
Downtown
Neighborhood Commercial Mixed Use
Regional Commercial
Industrial Transition
Business Park
Industrial
Industrial Buffer
THOROUGHFARES
Thoroughfare Existing
Thoroughfare Planned
Thoroughfare Proposed
Thoroughfare Removed
Lake Ring Road
TRAILS
City Trails
Regional Trails
Veterans Trail
Lake Loop Trail
Lake Ring Road
(20 Miles)
Lake Loop Trail
(21 Miles)
Bardwell Lake
ENNIS
MILNA
ELLIS COUNTY
NAVARRO COUNTY
TO WAXAHACHIE
TO DALLAS
TO CORSICANA
TO KAUFMAN
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HALFF
ENNIS TEXAS EST. 1872
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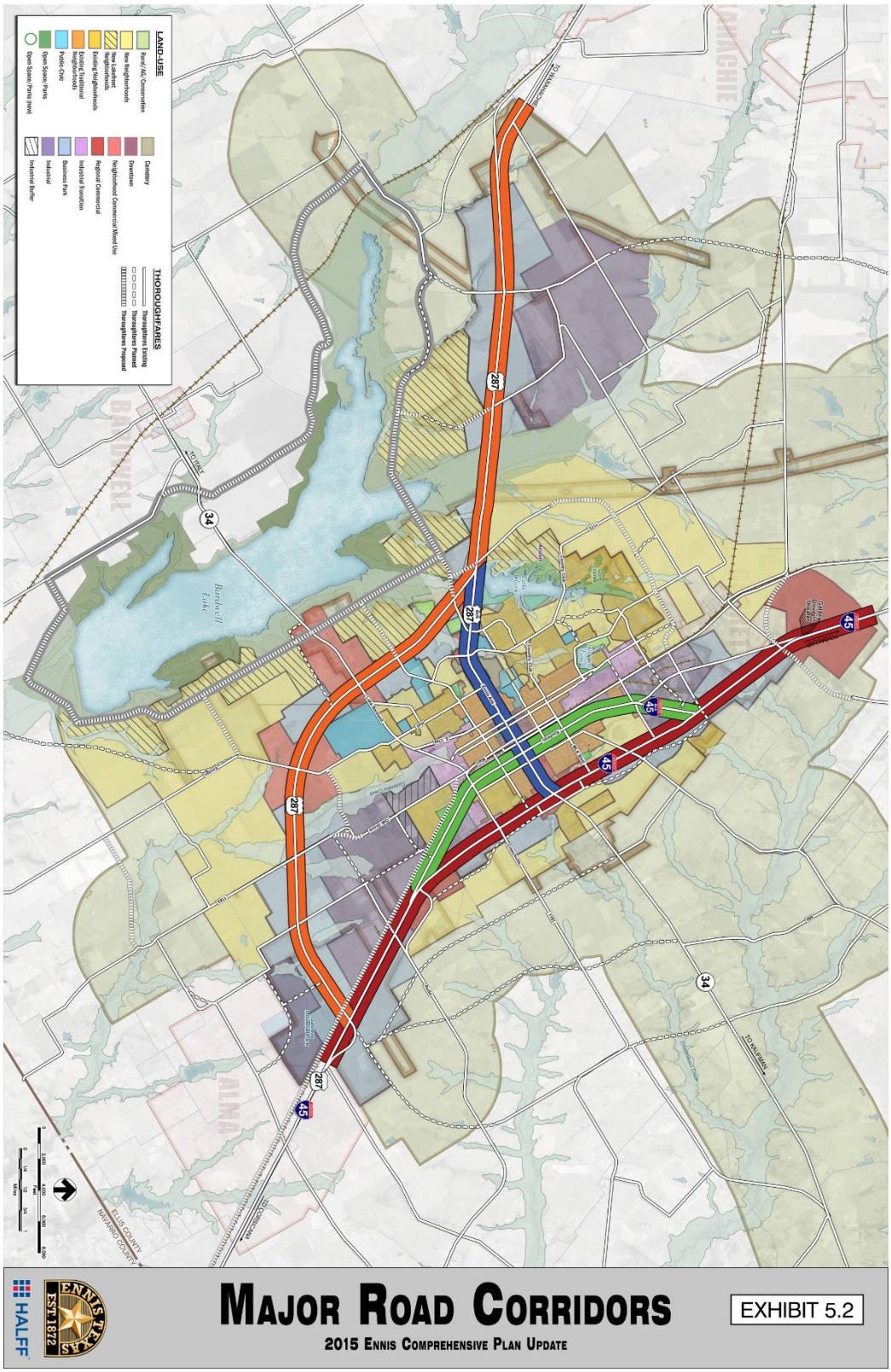
LAND-USE
Rural/ AG/ Conservation
New Neighborhoods
New Lakefront Neighborhoods
Existing Neighborhoods
Neighborhood Transitional
Public/ Civic
Open Space/ Parks
Open Space/ Parks (new)
Cemetery
Downtown
Neighborhood Commercial Mixed Use
Regional Commercial
Industrial Transition
Business Park
Industrial
Industrial Buffer
THOROUGHFARES
Thoroughfare Existing
Thoroughfare Planned
Thoroughfare Proposed
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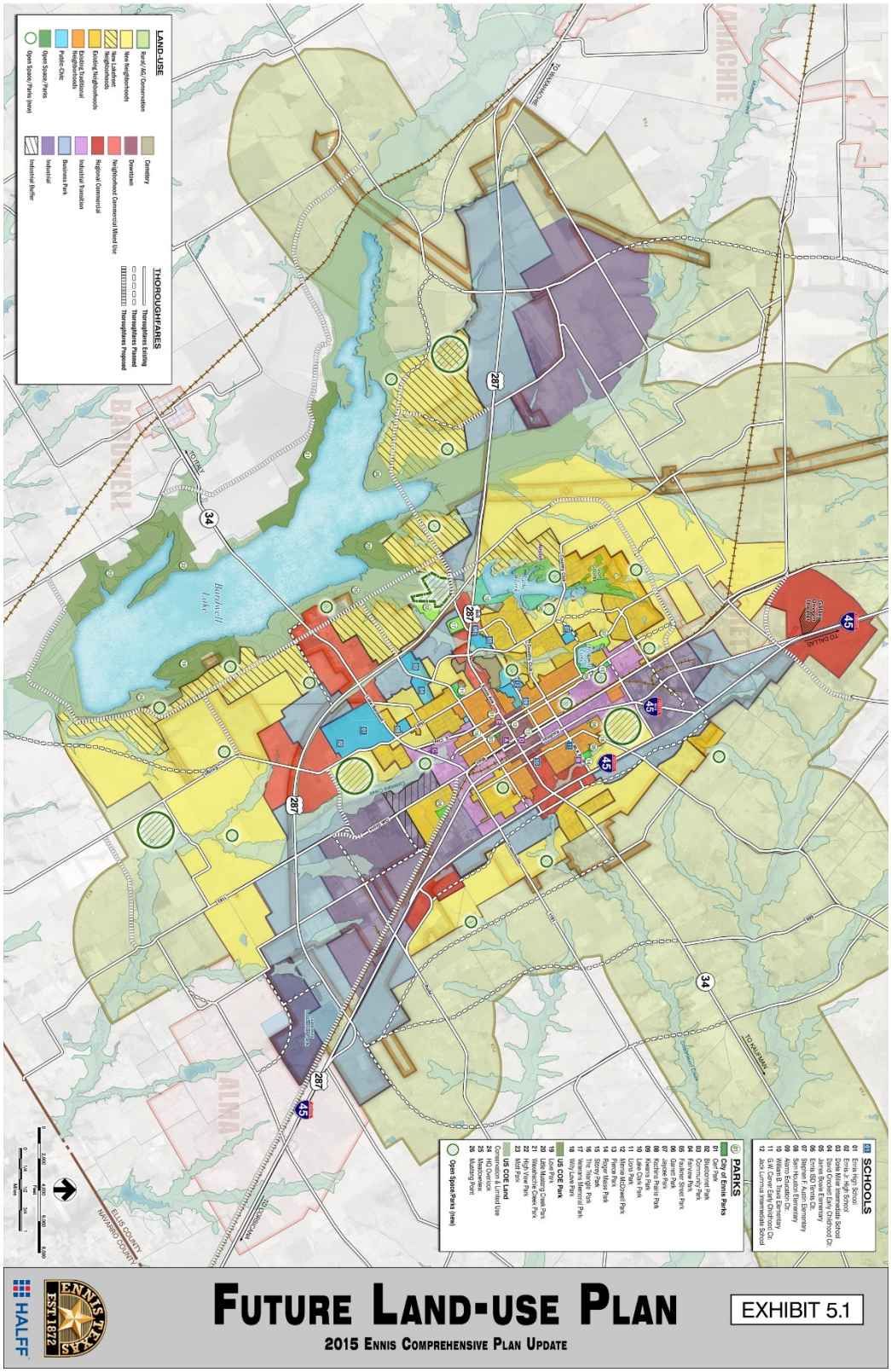
34
45
MAJOR ROAD CORRIDORS
EXHIBIT 5.2
2015 ENNIS COMPREHENSIVE PLAN UPDATE
HALFF
ENNIS TEXAS EST. 1872


LAND-USE
Rural/ AG/ Conservation
New Neighborhoods
New Lakefront Neighborhoods
Existing Neighborhoods
Neighborhood Transitional
Public/ Civic
Open Space/ Parks
Open Space/ Parks (new)
Cemetery
Downtown
Neighborhood Commercial Mixed Use
Regional Commercial
Industrial Transition
Business Park
Industrial
Industrial Buffer
THOROUGHFARES
Thoroughfare Existing
Thoroughfare Planned
Thoroughfare Proposed
SCHOOLS
01 Ennis High School
02 Ennis Intermediate School
03 Dale Miller Intermediate School
04 David Crockett Early Childhood Ctr.
05 Jarmon Bowie Elementary
06 Ennis Junior High
07 Stephen F. Austin Elementary
08 Sam Houston Elementary
09 Ryan Elementary
10 William B. Travis Elementary
11 G.W. Conner Early Childhood Ctr.
12 Jack Lummus Intermediate School
PARKS
City of Ennis Parks
01 Ennis Skate Park
02 Bluebonnet Park
03 Community Park
04 Fairview Park
05 Frederick Meyer Park
06 Garrett Park
07 Joyce Pate
08 Kiwanis Park
09 Knights Park
10 Lake Clark Park
11 Lions Park
12 Mary McDowell Park
13 Pierce Park
14 Roger Mabe Park
15 Sandy Park
16 Tre Tiempo Park
17 Veterans Memorial Park
18 Wily Cove Park
US COE Park
19 Bardwell Lake
US COE Land
20 Little Mustang Creek Park
21 Waxahachie Creek Park
22 Wyly Martin Park
23 Wolf Park
Conservation & Limited Use
24 Ferris Overlook
25 Midlothian
26 Mustang Point
Open Space/Parks (new)
Bardwell Lake
Waxahachie Creek
Mustang Creek
Chambers Creek
Ferris Overlook
Midlothian
BARDWELL
ALMA
ENNIS
TO WAXAHACHIE
TO DALLAS
TO CORSICANA
TO HUTCHINS
TO MIDLOTHIAN
ELLIS COUNTY
NAVARRO COUNTY
287
34
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1/4
1/2
1 Miles
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1,250
2,500
5,000
7,500
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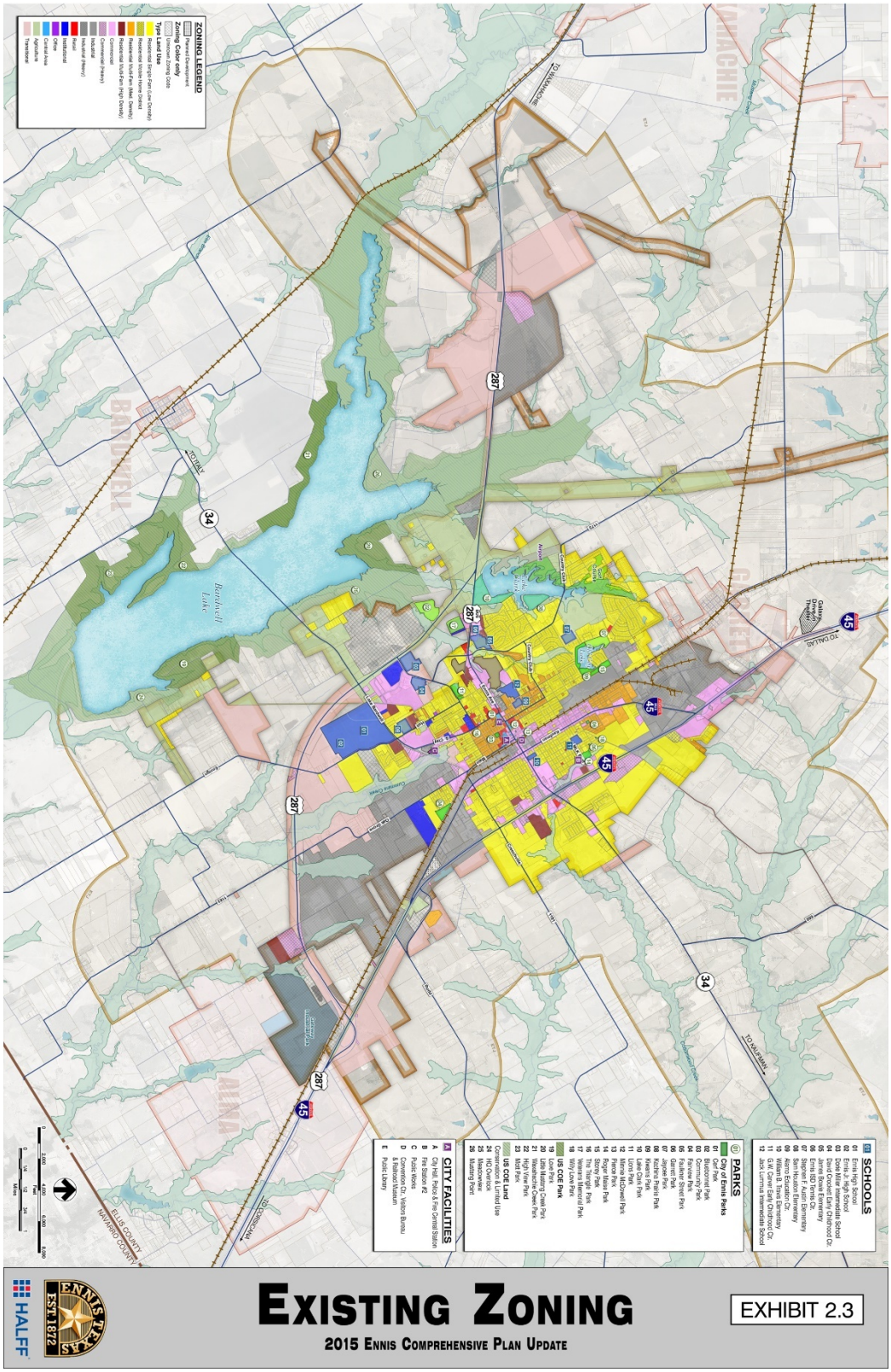
Feet
HALFF
ENNIS TEXAS EST. 1872
FUTURE LAND-USE PLAN
2015 ENNIS COMPREHENSIVE PLAN UPDATE
EXHIBIT 5.1



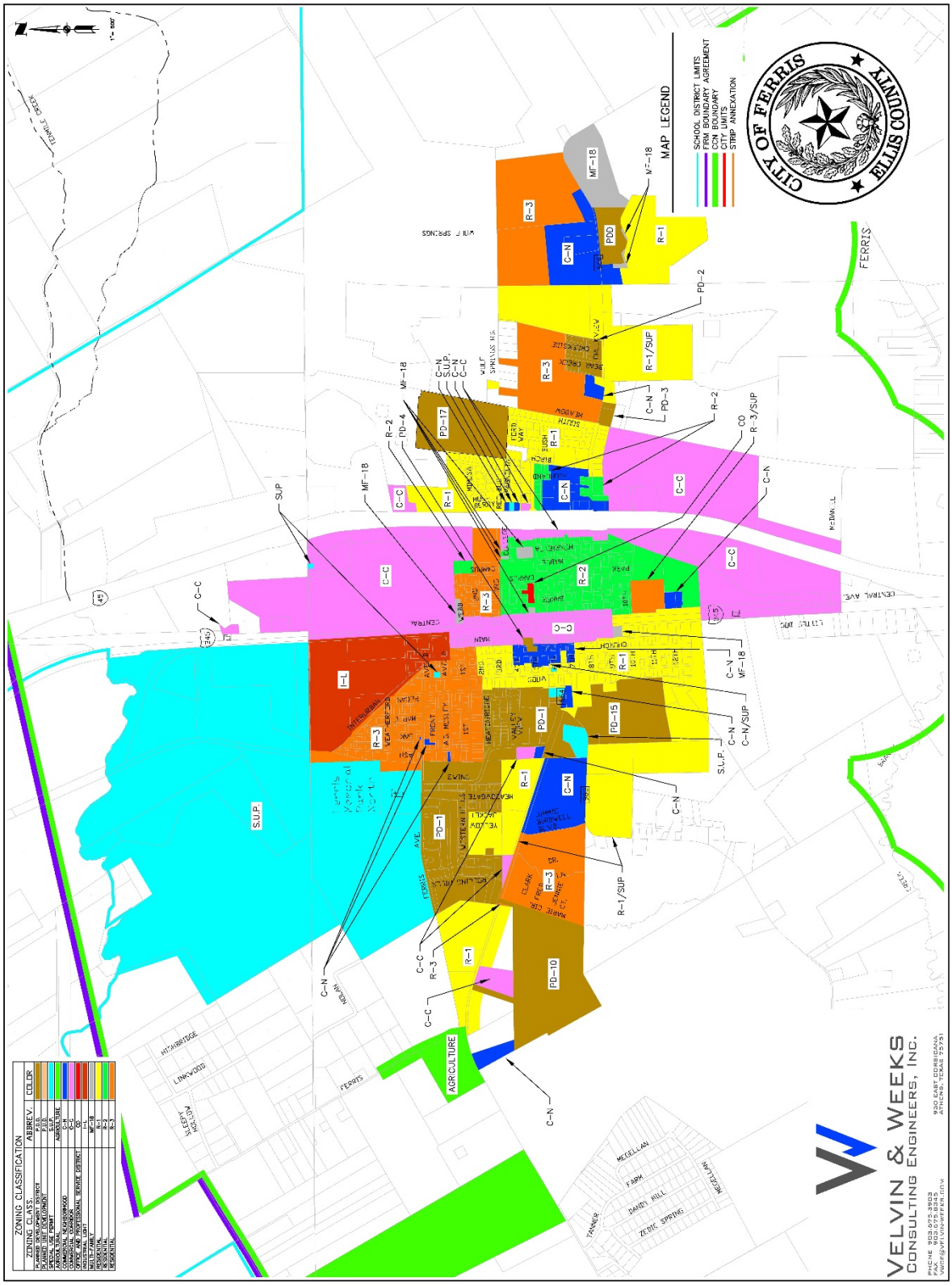
City of Ferris

At Risk To: (X for Yes)									**City of Ferris Critical and Vulnerable Facility and Infrastructure Table**	
Dam Failure	Drought	Expansive Soils	Extreme Heat	Flooding	Thunderstorms	Tornadoes	Wildfires	Winter Storms	**Name or Description**	**Address**
			X		X	X	X	X	Ferris Fire Department	111 Ewing Blvd.
			X		X	X	X	X	Ferris Police Department	111 Ewing Blvd.
			x		x	x	x	x	Ferris ESD Building (Houses department equipment and Careflite)	101 Ewing Blvd.
			x		x	x		x	Old Ferris Fire Station (Houses department equipment)	203 S. Church
			x		x	x		x	Commercial State Bank	200 N. I.45
			x		x	x		x	EZ Mart	100 N. Central
			x		x	x		x	Valero	1050 N. I-45
			x		x	x		x	City Hall	101 S. Main
			x		x	x		x	Council Chambers/Courts	215 W. 6th St.
			x		x	x		x	Waste Management	1201 N. Central
			x		x	x		x	ATCO	601 S. I-45
			x		x	x		x	Ferris Family Medicine	207 W. 5th
			x		x	x		x	Cardio Vascular Health Solutions	201 W. 5th
			x		x	x		x	U.S. Drug Mart	103. S. Main
			x		x	x		x	Wester Hills Water Tower	1082 Western Hills
			x		x	x		x	I-45 Water Tower	N I-45 Service Road
			x		x	x		x	Danny's Automotive	110 N. Central

At Risk To: (X for Yes)									**City of Ferris Critical and Vulnerable Facility and Infrastructure Table**	
Dam Failure	Drought	Expansive Soils	Extreme Heat	Flooding	Thunderstorms	Tornadoes	Wildfires	Winter Storms	**Name or Description**	**Address**
			x		x	x		x	R&W Automotive	401. S. Main
			x		x	x		x	Western Hills Apartments	100 Ewing Blvd.
			x		x	x		x	Bear Creek Apartments	311 Bear Creek Dr.
			x		x	x		x	Ferris Christian Academy	425 W. 6th St.
			x		x	x		x	Country School	100 N I-45
			x		x	x		x	Ferris Street Church of Christ	509 Ferris Rd.
			x		x	x		x	Methodist Church	109 Church St.
			x		x	x		x	First Baptist Church	304 W. 5th
			x		x	x		x	Covenant Church	959 FM 664
			x		x	x		x	The Church at Texas	2475 S I-45
			x		x	x		x	God's Kingdom United Methodist Church	701 A D Mosely
			x		x	x		x	First United Methodist Church	101 Redbud St.
			x		x	x		x	Igeslia Bautista La Fe	201 E. 8th
			x		x	x		x	Centro De Avivamiento Christian El Libano	209 S. Church
			x		x	x		x	Lighthouse Church of God	708 N. Wood
			x		x	x		x	Greater Mt. Rose Primitive Baptist	708 Ferris Rd.
			x		x	x		x	Corpus Christi Catholic Parish	111 N. Wood
			x		x	x		x	Ferris Baptist Fellowship	809 E. 8th

At Risk To: (X for Yes)									**City of Ferris Critical and Vulnerable Facility and Infrastructure Table**	
Dam Failure	Drought	Expansive Soils	Extreme Heat	Flooding	Thunderstorms	Tornadoes	Wildfires	Winter Storms	**Name or Description**	**Address**
			x		x	x		x	First Presbyterian Church of Ferris	205 N. Church
			x		x	x		x	Scout House	514 Mable St.
			x		x	x		x	Ferris Senior Citizens Center	603 N. Church St.
			x		x	x		x	Ferris Public Library	301 E. 10th
			x		x	x		x	Ferris ISD Administration Building.	301 E. 5th
			x		x	x		x	Ingram Elementary School	600 S. Central
			x		x	x		x	Ferris Intermediate School	601 FM664
			x		x	x		x	Luce Mae McDonald Elementary School	500 FM 983
			x		x	x		x	Ferris High School	1025 E. 8th
			x		x	x		x	Ferris Junior High	1002 E. 8th
			x		x	x		x	Training Academy 4 U	213A W. 6th Street
			x		x	x		x	5th Street I-45 Bridge	5th & I-45
			x		x	x		x	8th Street I-45	8th & I-45
			x		x	x		x	Park USA	1200 N. I-45
			x		x	x		x	Brookshire Brothers	610 S. Central St.
			x		x	x		x	Mi Tienda Carniceria & Café	507 S. Main St.
			x		x	x		x	Ferris Food Mart	1050 N. I-45
			x		x	x		x	Family Dollar	460 FM664
			x		x	x		x	Dollar General	620 S. Central

At Risk To: (X for Yes)									**City of Ferris Critical and Vulnerable Facility and Infrastructure Table**	
Dam Failure	Drought	Expansive Soils	Extreme Heat	Flooding	Thunderstorms	Tornadoes	Wildfires	Winter Storms	**Name or Description**	**Address**
			x		x	x		x	Frontier Communications	306 W. 6th
			x		x	x		x	Union Pacific Railroad	Parallel to Central St.


CITY OF FERRIS
ELLIS COUNTY
MAP LEGEND
SCHOOL DISTRICT LIMITS
FIRM BOUNDARY AGREEMENT
CITY LIMITS
STRIP ANNEXATION
ZONING CLASSIFICATION
ZONING CLASS.
ABBREV.
COLOR
PLANNED DEVELOPMENT
PLANNED UNIT DEVELOPMENT
SPECIAL USE PERMIT
AGRICULTURE
COMMERCIAL NEIGHBORHOOD
COMMERCIAL SERVICE
OFFICE AND PROFESSIONAL SERVICE DISTRICT
MULTI-FAMILY UNIT
RESIDENTIAL
RESIDENTIAL
RESIDENTIAL
VELVIN & WEEKS
CONSULTING ENGINEERS, INC.
920 EAST CORSICANA
ATHENS, TEXAS 75751
PHONE 903.675.3803
FAX 903.675.8345
VWPE@VELVINWEEKS.COM
FERRIS
AGRICULTURE
ATTOYAC BAY
LINKWOOD
FERRYS
MCLELLAN
FARM
DANDY HILL
ZESTY SPRING
TANNER
CENTRAL AVE.
MAIN
FREIGHT
HEADQUARTERS
WESTERN HILLS
SUP
C-C
C-N
R-1
R-2
R-3
I-L
PD-1
PD-2
PD-3
PD-4
PD-10
PD-15
PD-17
MF-18
R-1/SUP
C-N/SUP
R-3/SUP

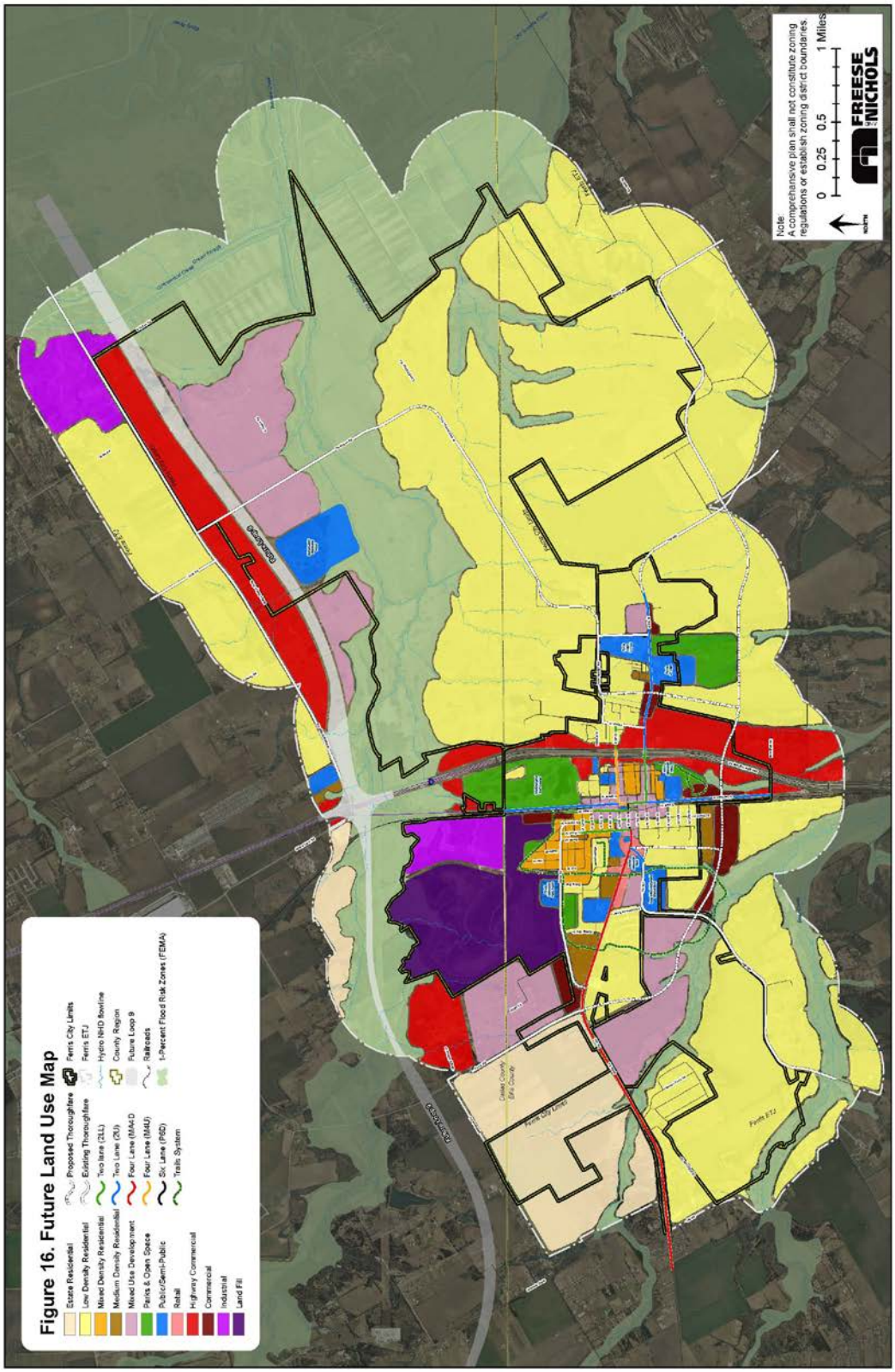
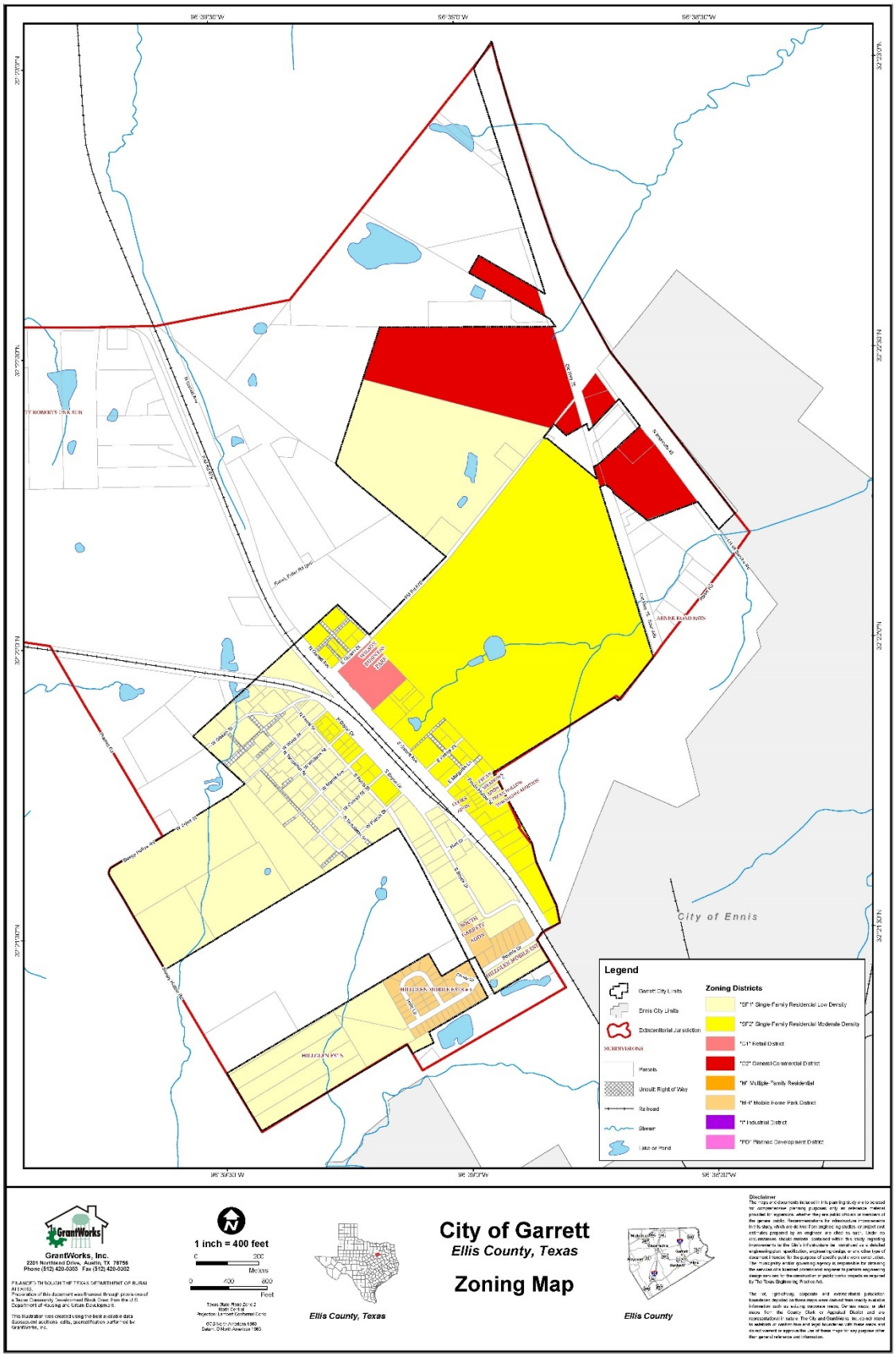


Figure 16. Future Land Use Map
Estate Residential
Low Density Residential
Mixed Density Residential
Medium Density Residential
Mixed Use Development
Parks & Open Space
Public/Semi-Public
Retail
Highway Commercial
Commercial
Industrial
Land Fill
Proposed Thoroughfare
Existing Thoroughfare
Two Lane (2LU)
Two Lane (2U)
Four Lane (M4U)
Four Lane (M4D)
Six Lane (P6D)
Trails System
Ferris City Limits
Ferris ETJ
Hydro NHD Routine
County Region
Future Loop 9
Railroads
1-Percent Flood Risk Zones (FEMA)
Note:
A comprehensive plan shall not constitute zoning regulations or establish zoning district boundaries.
0 0.25 0.5 1 Miles
FREESE NICHOLS

City of Garrett

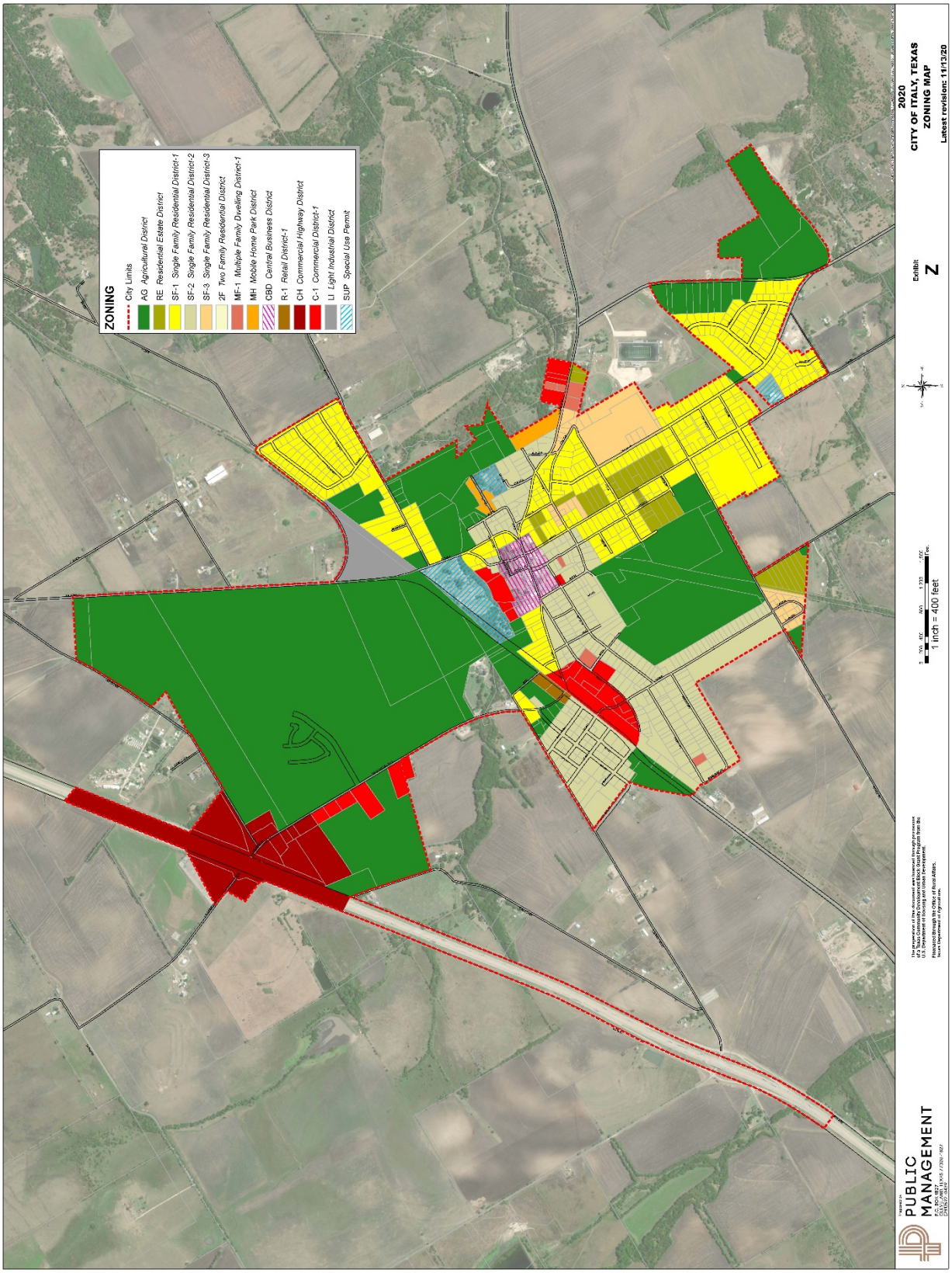
At Risk To: (X for Yes)									**City of Garrett Critical and Vulnerable Facility and Infrastructure Table**		
Dam Failure	Drought	Expansive Soils	Extreme Heat	Flooding	Thunderstorms	Tornadoes	Wildfires	Winter Storms	**Name or Description**	**Address**	**Occupancy**
					X	X		X	Government Offices	208 N. Ferris	8
					X	X		X	Police Station	208 N. Ferris	4
					X	X		X	Lift Station	W. Wyatt	N/A
					X	X		X	Lift Station	Pecan Hollow	N/A
					X	X		X	Lift Station	Gibson	N/A
					X	X		X	Garrett Baptist Church	403 S. Templeton	200


City of Ennis
Legend
Garrett City Limits
Ennis City Limits
Extraterritorial Jurisdiction
SUBDIVISIONS
Parcels
Unbuilt Right of Way
Railroad
Stream
Lake or Pond
Zoning Districts
"SF1" Single Family Residential Low Density
"SF2" Single Family Residential Moderate Density
"C1" Retail District
"C2" General Commercial District
"M" Multiple Family Residential
"MH" Mobile Home Park District
"I" Industrial District
"PD" Planned Development District
GrantWorks, Inc.
2201 Northland Drive, Austin, TX 78756
Phone (512) 420-2065 Fax (512) 420-2002
1 inch = 400 feet
Meters
Feet
Ellis County, Texas
City of Garrett
Ellis County, Texas
Zoning Map
Ellis County
Disclaimer

City of Italy

At Risk To: (X for Yes)									**City of Italy Critical and Vulnerable Facility and Infrastructure Table**	
Dam Failure	Drought	Expansive Soils	Extreme Heat	Flooding	Thunderstorms	Tornadoes	Wildfires	Winter Storms	**Name or Description**	**Address**
X	X	X	X	X	X	X	X	X	Trinity Nursing and Rehabilitation	220 Davenport St.
	X	X	X	X	X	X	X	X	Italy High School	300 College St.
	X	X	X	X	X	X	X	X	Stafford Elementary School	301 Harris St.
	X	X	X	X	X	X	X	X	Italy Fire Station	301 TX 34
	X	X	X	X	X	X	X	X	Italy Police Station	101 W. Main St.
	X	X	X	X	X	X	X	X	Italy Public Works Building	413 Clark St.
	X	X	X	X	X	X	X	X	Italy Ground Storage	108 N. Simms St.
	X	X	X	X	X	X	X	X	Italy Elevated Storage	105 S. Ward St.
	X	X	X	X	X	X	X	X	Waste Water Treatment Plant	1100 Hwy 667
	X	X	X	X	X	X	X	X	Well #1	291 Houston St.
	X	X	X	X	X	X	X	X	Well #2	609 Clark St.
	X	X	X	X	X	X	X	X	Well #3	615 Clark St.
	X	X	X	X	X	X	X	X	Lift station #1	601 Dale Evans Pump
	X	X	X	X	X	X	X	X	Lift station #2	13428 Mosley St.
	X	X	X	X	X	X	X	X	Lift station #3	517 SW State Hwy 34
	X	X	X	X	X	X	X	X	Lift station #4	419 Taylor St.

At Risk To: (X for Yes)									**City of Italy Critical and Vulnerable Facility and Infrastructure Table**	
Dam Failure	Drought	Expansive Soils	Extreme Heat	Flooding	Thunderstorms	Tornadoes	Wildfires	Winter Storms	**Name or Description**	**Address**
	X	X	X	X	X	X	X	X	Lift station #5	225 N. Ward St.
	X	X	X	X	X	X	X	X	Lift station #6	191 Kinfolk Ln.
	X	X	X	X	X	X	X	X	Water Clerk Office	124 E. Main St.

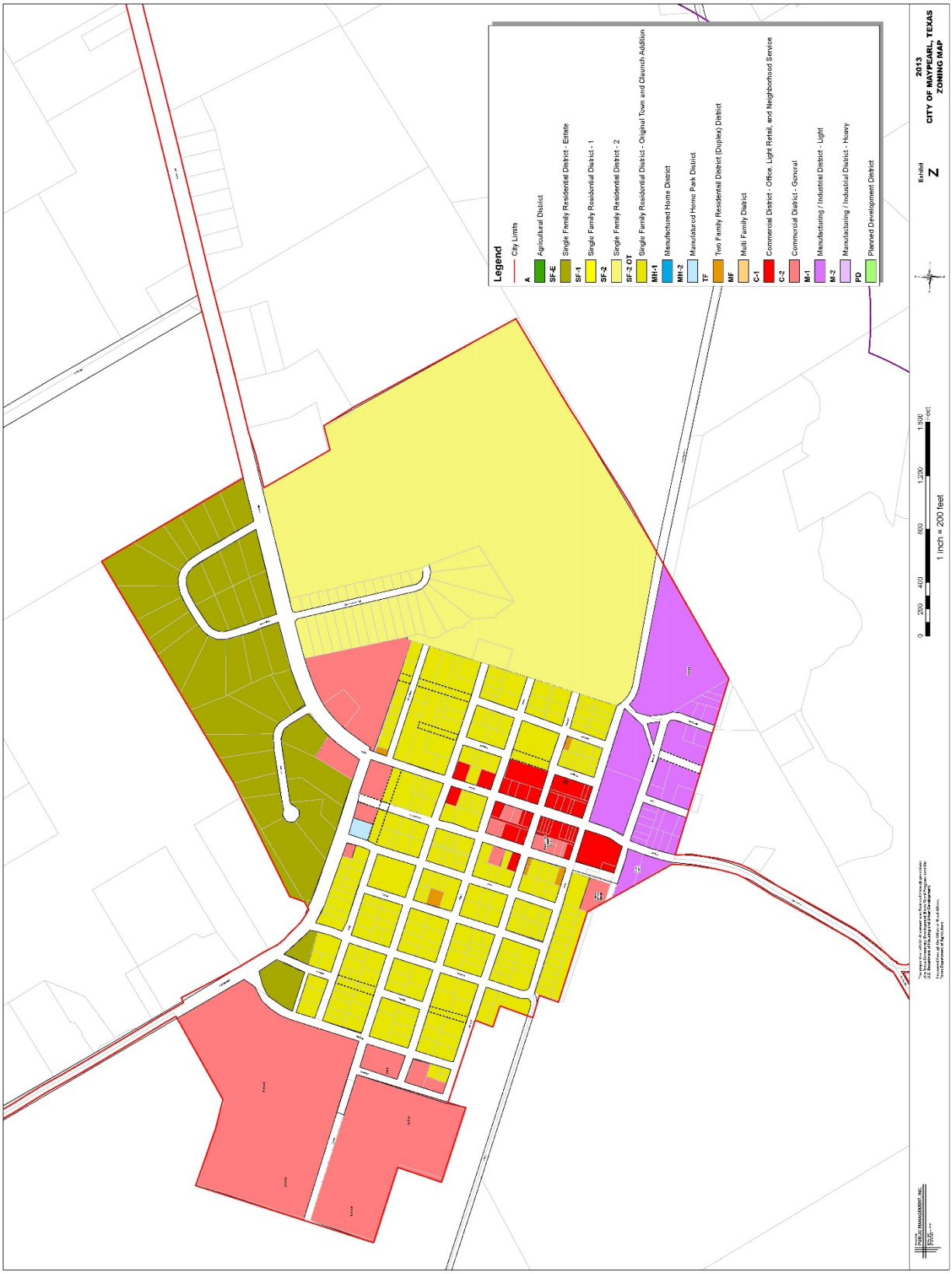

ZONING
City Limits
AG Agricultural District
RE Residential Estate District
SF-1 Single Family Residential District-1
SF-2 Single Family Residential District-2
SF-3 Single Family Residential District-3
2F Two Family Residential District
MF-1 Multiple Family Dwelling District-1
MH Mobile Home Park District
CBD Central Business District
R-1 Retail District-1
CH Commercial Highway District
C-1 Commercial District-1
LI Light Industrial District
SUP Special Use Permit
2020
CITY OF ITALY, TEXAS
ZONING MAP
Latest revision: 11/13/20
Exhibit
Z
1 inch = 400 feet
PUBLIC MANAGEMENT

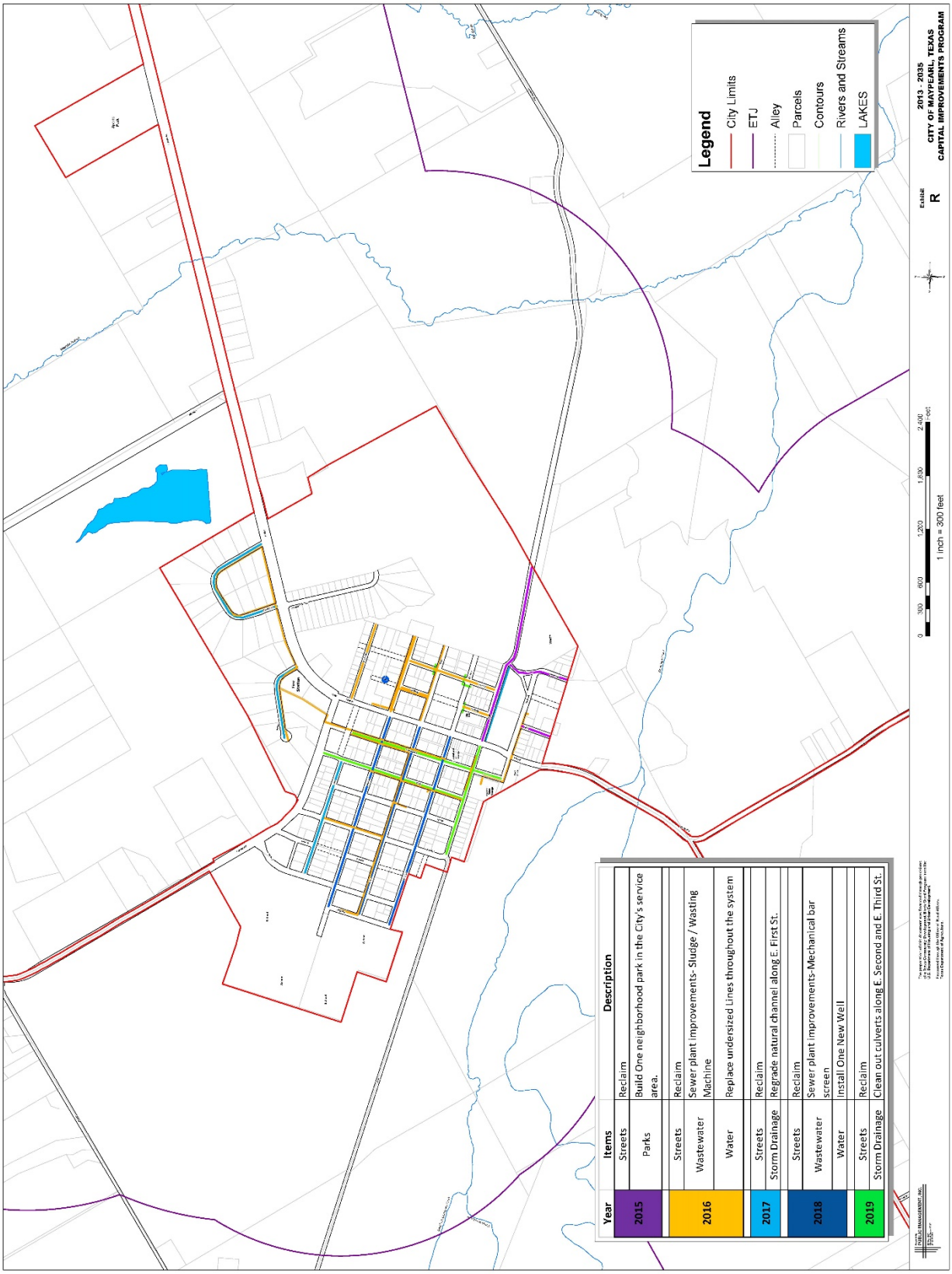
City of Maypearl

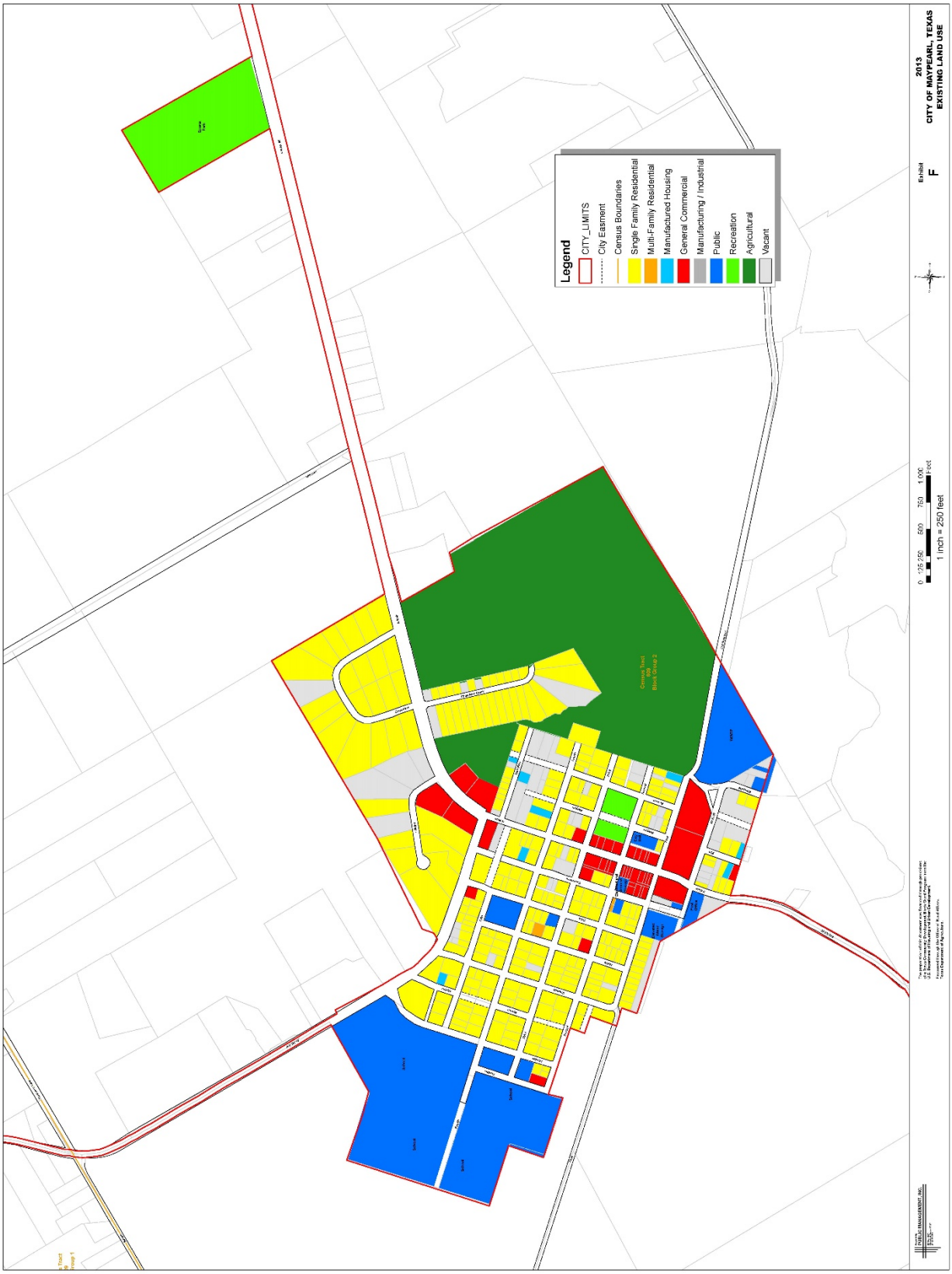
At Risk To: (X for Yes)									**City of Maypearl Critical and Vulnerable Facility and Infrastructure Table**	
Dam Failure	Drought	Expansive Soils	Extreme Heat	Flooding	Thunderstorms	Tornadoes	Wildfires	Winter Storms	**Name or Description**	**Address**
		X	X	X	X	X	X	X	Maypearl ISD – 4 facilities	600 Phillips, 301 3rd St, 301 Panther St, 1025 4th St
		X	X	X	X	X	X	X	Maypearl City Hall	104 2nd St
		X	X	X	X	X	X	X	Police Department	104 2nd St
		X	X	X	X	X	X	X	Cowboy Bank	100 S Main St
		X	X	X	X	X	X	X	Maypearl Post Office	80 S Main St
		X	X	X	X	X	X	X	Brookshire Brothers	109 S Main St
		X	X	X	X	X	X	X	Exxon	2 Hillridge Ln
		X	X	X	X	X	X	X	Dollar General	755 N Main St
		X	X	X	X	X	X	X	Ellis County ESD 1 Fire Department	750 N Main St
		X	X	X	X	X	X	X	Maypearl Church of Christ	6091 FM 66
		X	X	X	X	X	X	X	Brookshire Brother Fueling Station	109 S Main St
		X	X	X	X	X	X	X	Maypearl ISD Administrative Offices	3rd St
		X	X	X	X	X	X	X	Maypearl First Assembly of God	505 Noble St
		X	X	X	X	X	X	X	Maypearl Historical Museum	W Martin Luther King Blvd
		X	X	X	X	X	X	X	Big Wheel and Tire Auto Shop	201 N Main St

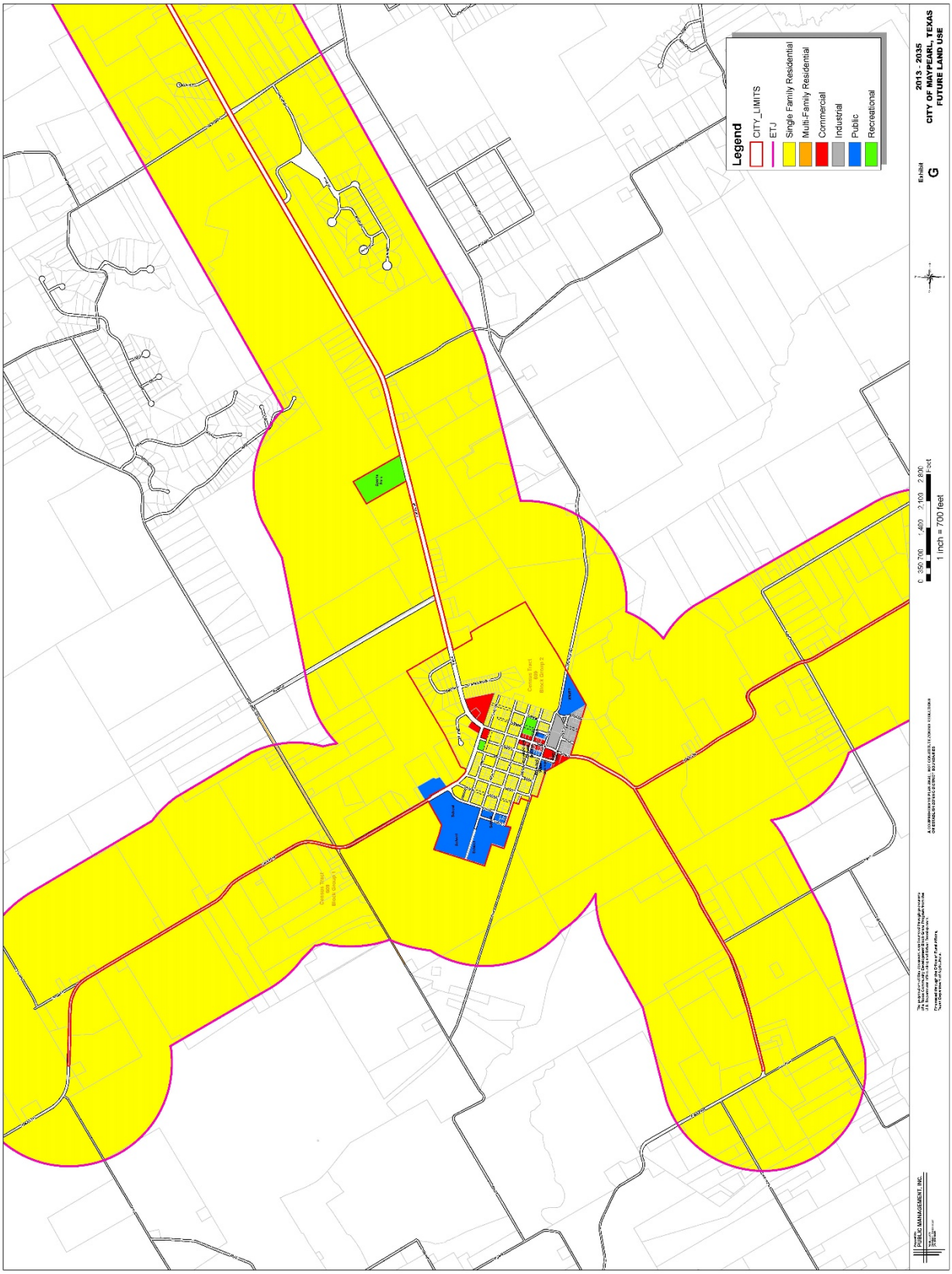
At Risk To: (X for Yes)									**City of Maypearl Critical and Vulnerable Facility and Infrastructure Table**	
Dam Failure	Drought	Expansive Soils	Extreme Heat	Flooding	Thunderstorms	Tornadoes	Wildfires	Winter Storms	**Name or Description**	**Address**
		X	X	X	X	X	X	X	Triple T Amusements – owners of the fair w/ amusement equipment locally	201 N Main St
		X	X	X	X	X	X	X	Little Angels Childcare	221 S Main St
		X	X	X	X	X	X	X	Maypearl First United Methodist Church	301 3rd St
		X	X	X	X	X	X	X	First Baptist Church of Maypearl	5744 FM 66
		X	X	X	X	X	X	X	Ranchhouse Cowboy Church	7205 FM 66
	X	X	X	X	X	X	X	X	WG Roesler Stadium	600 Phillips St
	X	X	X	X	X	X	X	X	Maypearl Sports Park	5720 FM 66
		X	X	X	X	X	X	X	Cell Towers	W Martin Luther King Blvd & Commerce Street
		X	X	X	X	X	X	X	Internet Towers	W Martin Luther King Blvd & Commerce Street
		X	X	X	X	X	X	X	Bridges	FM 66 before Chambers Creek & Creekview Circle
		X	X	X	X	X	X	X	Sewer Lines	Throughout city

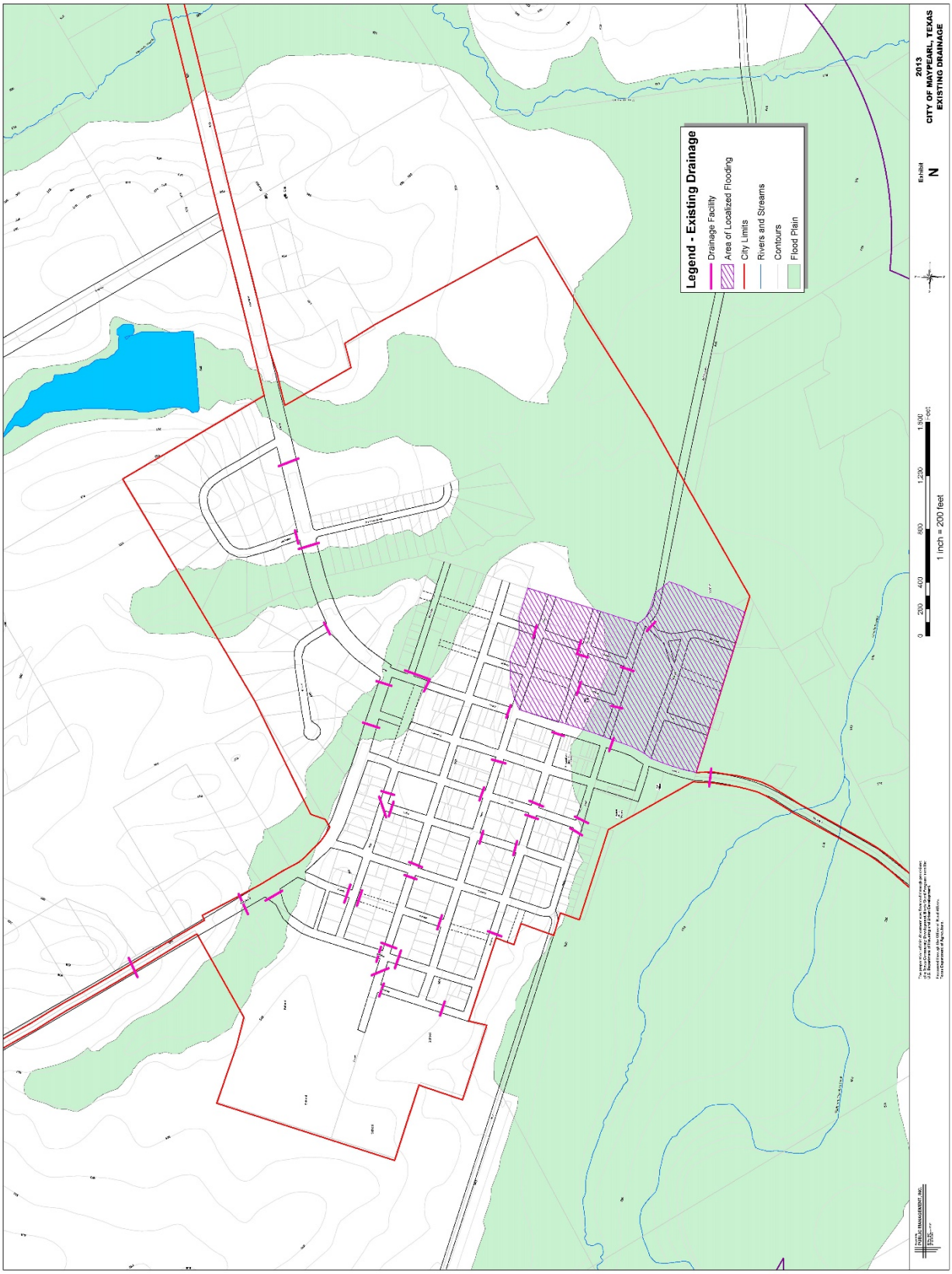
At Risk To: (X for Yes)									**City of Maypearl Critical and Vulnerable Facility and Infrastructure Table**	
Dam Failure	Drought	Expansive Soils	Extreme Heat	Flooding	Thunderstorms	Tornadoes	Wildfires	Winter Storms	**Name or Description**	**Address**
		X	X	X	X	X	X	X	Utility Lines	Throughout city
		X	X	X	X	X	X	X	Wastewater Treatment Plant	3611-3838 Old Maypearl RD
		X	X	X	X	X	X	X	Water lines	Throughout city
		X	X	X	X	X	X	X	Major Roadway	Main Street, 287, 66 are the majors
		X	X	X	X	X	X	X	Water tower(s)	W. Martin Luther King Blvd & Commerce St / W. 2nd St & Commerce St
		X	X	X	X	X	X	X	Water storage	W. 2nd St & Commerce St

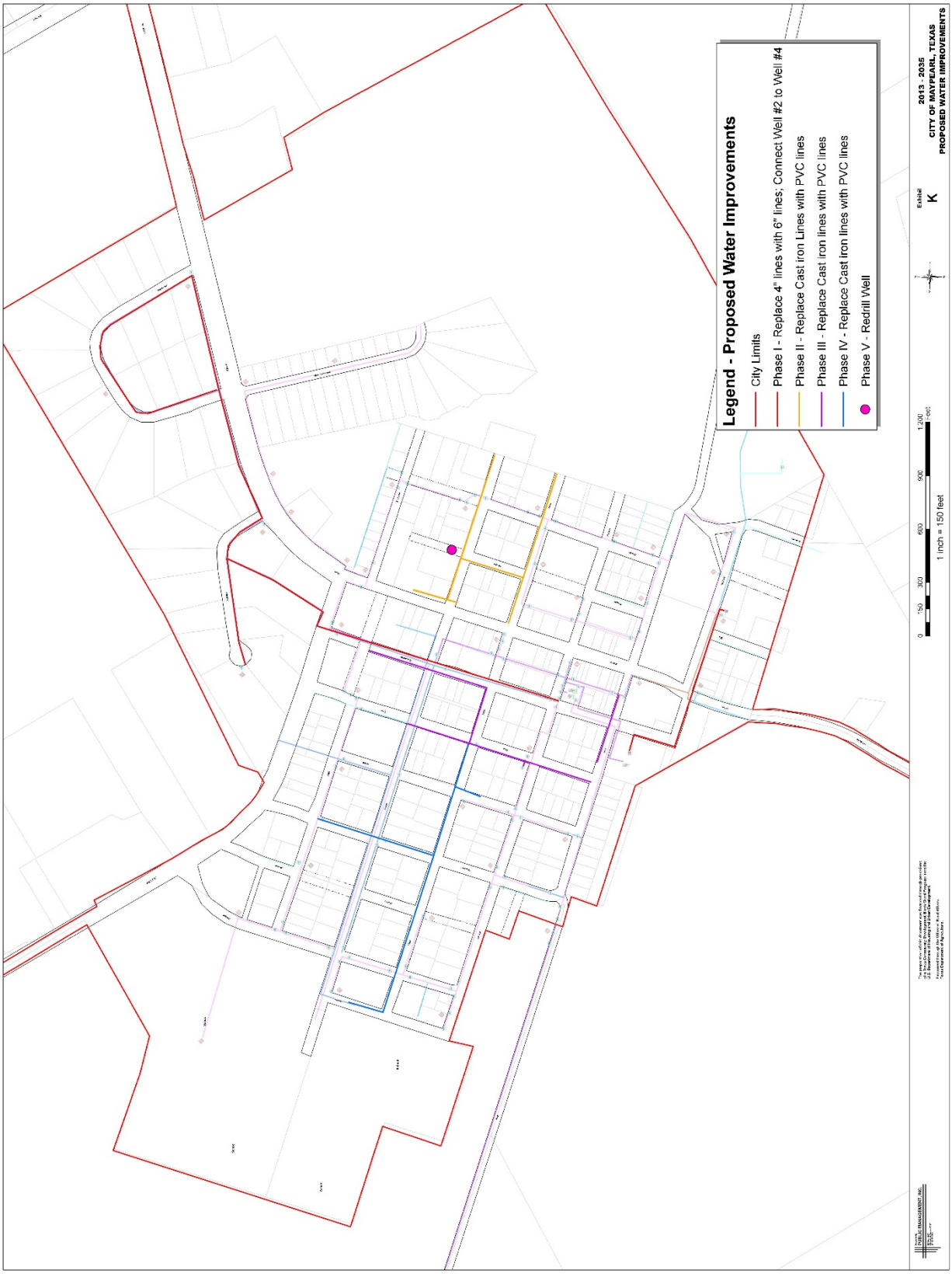

Legend
City Limits
A Agricultural District
SF-E Single Family Residential District - Estate
SF-1 Single Family Residential District - 1
SF-2 Single Family Residential District - 2
SF-2 OT Single Family Residential District - Original Town and Claunch Addition
MH-1 Manufactured Home District
MH-2 Manufactured Home Park District
TF Two Family Residential District (Duplex) District
MF Multi Family District
C-1 Commercial District - Office, Light Retail, and Neighborhood Service
C-2 Commercial District - General
M-1 Manufacturing / Industrial District - Light
M-2 Manufacturing / Industrial District - Heavy
PD Planned Development District
Exhibit
Z
2013
CITY OF MAYPEARL, TEXAS
ZONING MAP
0 200 400 800 1,200 1,600 Feet
1 inch = 200 feet

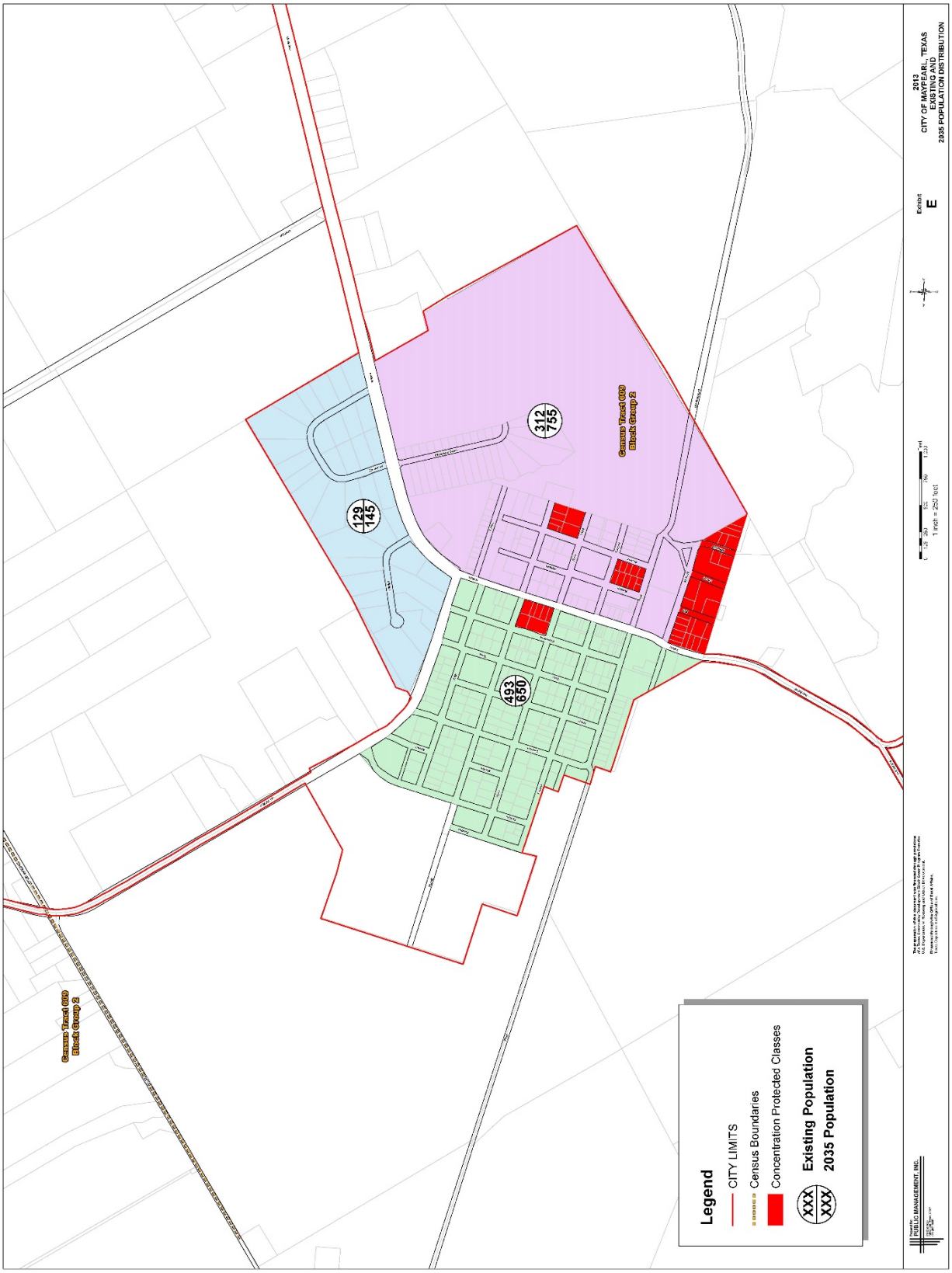

Legend
City Limits
ETJ
Alley
Parcels
Contours
Rivers and Streams
LAKES
2013 - 2035
CITY OF MAYPEARL, TEXAS
CAPITAL IMPROVEMENTS PROGRAM
Exhibit
R
0 300 600 1,200 1,800 2,400 Feet
1 inch = 300 feet
Year | Items | Description
2015 | Streets | Reclaim
Parks | Build One neighborhood park in the City's service area.
2016 | Streets | Reclaim
Wastewater | Sewer plant improvements- Sludge / Wasting Machine
Water | Replace undersized Lines throughout the system
2017 | Streets | Reclaim
Storm Drainage | Regrade natural channel along E. First St.
2018 | Streets | Reclaim
Wastewater | Sewer plant improvements-Mechanical bar screen
Water | Install One New Well
2019 | Streets | Reclaim
Storm Drainage | Clean out culverts along E. Second and E. Third St.


Legend
CITY_LIMITS
City Easment
Census Boundaries
Single Family Residential
Multi-Family Residential
Manufactured Housing
General Commercial
Manufacturing / Industrial
Public
Recreation
Agricultural
Vacant
2013
CITY OF MAYPEARL, TEXAS
EXISTING LAND USE
Exhibit
F
1 inch = 250 feet


Legend
CITY_LIMITS
ETJ
Single Family Residential
Multi-Family Residential
Commercial
Industrial
Public
Recreational
Exhibit
G
2013 - 2035
CITY OF MAYPEARL, TEXAS
FUTURE LAND USE
0 350 700 1,400 2,100 2,800 Feet
1 inch = 700 feet
PUBLIC MANAGEMENT, INC.


Legend - Existing Drainage
Drainage Facility
Area of Localized Flooding
City Limits
Rivers and Streams
Contours
Flood Plain
2013
CITY OF MAYPEARL, TEXAS
EXISTING DRAINAGE
Exhibit
N
0
200
400
800
1,200
1,600
1 inch = 200 feet


Legend - Proposed Water Improvements
City Limits
Phase I - Replace 4" lines with 6" lines; Connect Well #2 to Well #4
Phase II - Replace Cast iron Lines with PVC lines
Phase III - Replace Cast iron lines with PVC lines
Phase IV - Replace Cast iron lines with PVC lines
Phase V - Redrill Well
0 150 300 600 900 1,200 Feet
1 inch = 150 feet
Exhibit
K
2013 - 2035
CITY OF MAYPEARL, TEXAS
PROPOSED WATER IMPROVEMENTS


Census Tract 609
Block Group 2
129
145
312
755
493
650
Census Tract 609
Block Group 2
Legend
CITY LIMITS
Census Boundaries
Concentration Protected Classes
XXX
XXX
Existing Population
2035 Population
1 inch = 250 feet
Exhibit
E
2013
CITY OF MANSFIELD, TEXAS
EXISTING AND
2035 POPULATION DISTRIBUTION

City of Midlothian

At Risk To: (X for Yes)									**City of Midlothian Critical and Vulnerable Facility and Infrastructure Table**		
Dam Failure	Drought	Expansive Soils	Extreme Heat	Flooding	Thunderstorms	Tornadoes	Wildfires	Winter Storms	**Name or Description**	**Address**	**Occupancy**
X	X	X	X	X	X	X	X	X	Midlothian Community Park	3601 S 14th St Midlothian, Tx 76065	105 acres
X	X	X	X	X	X	X	X	X	Kimmel Park	124 N 1st St, Midlothian, Tx 76065	2.1 acres
X	X	X	X	X	X	X	X	X	Jaycee Park (baseball complex)	1711 Meadow Lane, Midlothian, Tx 76065	10 acres
X	X	X	X	X	X	X	X	X	Heritage Park & Site of the Larkin Newton Log Cabin which was built in 1848.	234 N 8th St, Midlothian. Tx 76065	Downtown Park
X	X	X	X	X	X	X	X	X	Hawkins Spring Park	1498 FM 1387, Midlothian, Tx 76065	21.7 acres
X	X	X	X	X	X	X	X	X	Band Stand at Kimmel Park	124 N 1st St, Midlothian, Tx 76065	2.1 acres
X	X	X	X	X	X	X	X	X	Midlothian Law Enforcement Gun Range and Training Room	4521 Wiley St, Midlothian, Texas 76065	-
X	X	X	X	X	X	X	X	X	Midlothian Fire Department – Fire Training Center	Auger Rd, Midlothian, Texas 76065	5 acres

At Risk To: (X for Yes)									**City of Midlothian Critical and Vulnerable Facility and Infrastructure Table**		
Dam Failure	Drought	Expansive Soils	Extreme Heat	Flooding	Thunderstorms	Tornadoes	Wildfires	Winter Storms	**Name or Description**	**Address**	**Occupancy**
X	X	X	X	X	X	X	X	X	Water Treatment Plant #1	440 Tayman Dr, Midlothian, Tx 76065	-
X	X	X	X	X	X	X	X	X	Water Treatment Plant #2	1762 Auger Rd, Midlothian, Texas 76065	-
X	X	X	X	X	X	X	X	X	Midlothian Animal Shelter	1050Highway 67, Midlothian, Tx 76065	37 dogs, 8 cats, 4 outdoors 4 kennels
X	X	X	X	X	X	X	X	X	Northern Ellis Emergency Dispatch (NEED) 9-1-1 Dispatch for Midlothian, Ovilla, Red Oak	1150 N Highway 67, Midlothian, Tx 76065	10
X	X	X	X	X	X	X	X	X	Midlothian Police Department (Law Enforcement Center & Jail)	1150 N Highway 67, Midlothian, Tx 76065	250
X	X	X	X	X	X	X	X	X	Midlothian Fire Station #3	770 Tower Rd, Midlothian, Tx 76065	5-10
X	X	X	X	X	X	X	X	X	Public Safety Radio Tower	770 Tower Rd, Midlothian, Tx 76065	-
X	X	X	X	X	X	X	X	X	Midlothian Fire Station #2	33661 FM 1387, Midlothian, Tx 76065	5-10

At Risk To: (X for Yes)									**City of Midlothian Critical and Vulnerable Facility and Infrastructure Table**		
Dam Failure	Drought	Expansive Soils	Extreme Heat	Flooding	Thunderstorms	Tornadoes	Wildfires	Winter Storms	**Name or Description**	**Address**	**Occupancy**
X	X	X	X	X	X	X	X	X	Midlothian Fire Station #1	1900 W Main St, Midlothian, Tx 76065	5-10
X	X	X	X	X	X	X	X	X	Midlothian Fire Administration	100 W Avenue F, Midlothian, Tx 76065	10
X	X	X	X	X	X	X	X	X	Building Inspections	101 W Avenue F, Midlothian, Tx 76065	4
X	X	X	X	X	X	X	X	X	Municipal Court	1150 Highway 67, Midlothian, Tx 76065	7-8 employees, 150 people in courtroom
X	X	X	X	X	X	X	X	X	Parks and Recreation Department	101 W Avenue E, Midlothian, Tx 76065	4
X	X	X	X	X	X	X	X	X	Public Works Department	1050 N Highway 67, Midlothian, Tx 76065	25
X	X	X	X	X	X	X	X	X	City Hall	104 W Avenue E, Midlothian, Tx 76065	50-100
X	X	X	X	X	X	X	X	X	Ridgeview Park	750 Walter Stephenson Rd, Midlothian, Tx 76065	8.6 acres
X	X	X	X	X	X	X	X	X	Pavilion at Kimmel Park	124 N 1st St, Midlothian, Tx 76065	2.1 acres

At Risk To: (X for Yes)									**City of Midlothian Critical and Vulnerable Facility and Infrastructure Table**		
Dam Failure	Drought	Expansive Soils	Extreme Heat	Flooding	Thunderstorms	Tornadoes	Wildfires	Winter Storms	**Name or Description**	**Address**	**Occupancy**
X	X	X	X	X	X	X	X	X	Mountain Peak Community Park	6440 Hill Drive, Midlothian, Tx 76065	10 acres
X	X	X	X	X	X	X	X	X	Mockingbird Nature Park	1361 Onward Rd, Midlothian, Tx 76065	62 acres
X	X	X	X	X	X	X	X	X	Midlothian Dog Park	1111 Walter Stephenson Rd, Midlothian, Tx 76065	4 acres
X	X	X	X	X	X	X	X	X	Midlothian Sports Complex (volleyball, softball, tennis)	1400 S 14th St, Midlothian, Tx 76065	25 acres
X	X	X	X	X	X	X	X	X	Midlothian Conference Center	1 Community Circle Drive, Midlothian, Tx 76065	Over 1,000 people
X	X	X	X	X	X	X	X	X	Midlothian Senior Activity Center	4 Community Circle Drive, Midlothian, Texas 76065	100 people
X	X	X	X	X	X	X	X	X	Outdoor Warning Siren #1	1711 Meadow Lane, Midlothian, Tx 76065	-
X	X	X	X	X	X	X	X	X	Outdoor Warning Siren #2	1050 Park Place Blvd, Midlothian, Tx 76065	-
X	X	X	X	X	X	X	X	X	Outdoor Warning Siren #3	990 N Walnut Grove Rd, Midlothian, Tx 76065	-

At Risk To: (X for Yes)									**City of Midlothian Critical and Vulnerable Facility and Infrastructure Table**		
Dam Failure	Drought	Expansive Soils	Extreme Heat	Flooding	Thunderstorms	Tornadoes	Wildfires	Winter Storms	**Name or Description**	**Address**	**Occupancy**
X	X	X	X	X	X	X	X	X	Outdoor Warning Siren #4	6631 FM 1387, Midlothian, Tx 76065	-
X	X	X	X	X	X	X	X	X	Outdoor Warning Siren #5	4th St & Avenue I, Midlothian, Tx 76065	-
X	X	X	X	X	X	X	X	X	Outdoor Warning Siren #6	Murray St & E Main St, Midlothian, Tx 76065	-
X	X	X	X	X	X	X	X	X	Outdoor Warning Siren #7	Clancey & S Walnut Grove Rd, Midlothian, Tx 76065	-
X	X	X	X	X	X	X	X	X	Outdoor Warning Siren #8	Byrd Ranch Rd & FM 663, Midlothian, Tx 76065	-
X	X	X	X	X	X	X	X	X	Outdoor Warning Siren #9	2800 Sudith Lane, Midlothian, Tx 76065	-
X	X	X	X	X	X	X	X	X	Outdoor Warning Siren #10	Monroe Drive (Crystal Forest Estates), Midlothian, Tx 76065	-
X	X	X	X	X	X	X	X	X	Outdoor Warning Siren #11	5201 FM 663, Midlothian, Tx 76065	-
X	X	X	X	X	X	X	X	X	Outdoor Warning Siren #12	1601 Mc Alpin Rd, Midlothian, Tx 76065	-

At Risk To: (X for Yes)									**City of Midlothian Critical and Vulnerable Facility and Infrastructure Table**		
Dam Failure	Drought	Expansive Soils	Extreme Heat	Flooding	Thunderstorms	Tornadoes	Wildfires	Winter Storms	**Name or Description**	**Address**	**Occupancy**
X	X	X	X	X	X	X	X	X	Outdoor Warning Siren #13	8401 Singleton Rd, (Indian Creek), Midlothian, Tx 76065	-
X	X	X	X	X	X	X	X	X	Outdoor Warning Siren #14	4601 Brookhollow Drive, Midlothian, Tx 76065 (Luminant Energy)	-
X	X	X	X	X	X	X	X	X	Methodist Medical Center	1201 W US 287, Midlothian, Tx 76065	46 Beds
X	X	X	X	X	X	X	X	X	Legacy Oaks of Midlothian	614 S 14th St, Midlothian, Tx 76065	200 residents
X	X	X	X	X	X	X	X	X	Midlothian Healthcare Center	900 George Hopper Rd, Midlothian, Tx 76065	120 residents
X	X	X	X	X	X	X	X	X	Midtowne Assisted Living and Memory Care	910 S 9th St, Midlothian, Tx 76065	75 residents
X	X	X	X	X	X	X	X	X	Tarleton State University – Midlothian Campus	899 Mount Zio Rd, Midlothian, Texas 76065	Varies by semester
X	X	X	X	X	X	X	X	X	Navarro Collee – Midlothian Campus	899 Mount Zion Rd, Midlothian, Texas 76065	Varies by semester
X	X	X	X	X	X	X	X	X	MISD Transportation Facility	601 E Avenue E, Midlothian, Texas 76065	60 bus drivers

At Risk To: (X for Yes)									**City of Midlothian Critical and Vulnerable Facility and Infrastructure Table**		
Dam Failure	Drought	Expansive Soils	Extreme Heat	Flooding	Thunderstorms	Tornadoes	Wildfires	Winter Storms	**Name or Description**	**Address**	**Occupancy**
X	X	X	X	X	X	X	X	X	MISD Randall Hill Support Center	315 E Avenue E, Midlothian, Texas 76065	TBD
X	X	X	X	X	X	X	X	X	Mills Administrative Building (MISD)	100 Walter Stephenson Rd, Midlothian, Tx 76065	250
X	X	X	X	X	X	X	X	X	Midlothian ISD FFA Agricultural Building	1851 Mockingbird Lane, Midlothian, Texas 76065	40 acres
X	X	X	X	X	X	X	X	X	Midlothian ISD Multi-Purpose Stadium	1800 S 14th St, Midlothian, Tx 76065	7,669
X	X	X	X	X	X	X	X	X	Don Floyd Memorial Stadium (baseball fields)	923 S 9th St, Midlothian, Tx 76065	8,005 seats
X	X	X	X	X	X	X	X	X	Midlothian High School Athletic Complex	923 S 9th St, Midlothian, Tx 76065	38,000 SF Athletic Complex with locker rooms for track & field, football, golf, and soccer; as well as, a new 7,400 SF weight room and 1,340 SF
X	X	X	X	X	X	X	X	X	Roesler Field House at Midlothian High School	923 S 9th St, Midlothian, Tx 76065	

At Risk To: (X for Yes)									**City of Midlothian Critical and Vulnerable Facility and Infrastructure Table**		
Dam Failure	Drought	Expansive Soils	Extreme Heat	Flooding	Thunderstorms	Tornadoes	Wildfires	Winter Storms	**Name or Description**	**Address**	**Occupancy**
											Training facility.
X	X	X	X	X	X	X	X	X	Midlothian High School	923 S 9th St, Midlothian, Tx 76065	1,829
X	X	X	X	X	X	X	X	X	Midlothian Heritage High School	4000 FM 1387, Midlothian, Tx 76065	1,040
X	X	X	X	X	X	X	X	X	Walnut Grove Middle School	990 N Walnut Grove Rd, Midlothian, Texas 76065	1,120
X	X	X	X	X	X	X	X	X	Frank Seale Middle School	700 George Hopper Rd, Midlothian, Texas 76065	1,168
X	X	X	X	X	X	X	X	X	Dieterich Middle School	2881 Ledgestone Lane, Midlothian, Tx 76065	751
X	X	X	X	X	X	X	X	X	J.A. Vitosvsky Elementary School	333 Church St, Midlothian, Tx 76065	654
X	X	X	X	X	X	X	X	X	Mt Peak Elementary School	5201 FM 663, Midlothian, Tx 76065	690
X	X	X	X	X	X	X	X	X	LaRue Miller Elementary School	2800 Sudith Lane, Midlothian, Tx 76065	632

At Risk To: (X for Yes)									**City of Midlothian Critical and Vulnerable Facility and Infrastructure Table**		
Dam Failure	Drought	Expansive Soils	Extreme Heat	Flooding	Thunderstorms	Tornadoes	Wildfires	Winter Storms	**Name or Description**	**Address**	**Occupancy**
X	X	X	X	X	X	X	X	X	McClatchey Elementary School	6631 Shiloh Rd, Midlothian, Tx 76065 (Ovilla)	635
X	X	X	X	X	X	X	X	X	Longbranch Elementary School	6631 FM 1387, Midlothian, Texas 76065	623
X	X	X	X	X	X	X	X	X	J.R. Irvin Elementary School	600 S Fifth St, Midlothian, Tx 76065	591
X	X	X	X	X	X	X	X	X	MISD Midlothian Innovative Learning Experience	W Avenue I and 4th Street, Midlothian, Texas 76065	878
X	X	X	X	X	X	X	X	X	Jenkins Child Care Center (Early Child Care Center)	W Avenue I and 4th Street, Midlothian, Texas 76065	125
X	X	X	X	X	X	X	X	X	T.E. Baxter Elementary School	1050 Park Place Blvd, Midlothian, Tx 76065	564
X	X	X	X	X	X	X	X	X	Mid-Way Regional Airport	131 Airport Drive, Midlothian, Texas 76065	Midlothian / Waxahachie
X	X	X	X	X	X	X	X	X	Mt Peak Water Special Utility District	5671 Waterworks Rd, Midlothian, Tx 76065	-
X	X	X	X	X	X	X	X	X	Sardis-Lone Elm Water Supply Corp.	1941 Bryson Lane, Midlothian, Tx 76065	-

At Risk To: (X for Yes)									**City of Midlothian Critical and Vulnerable Facility and Infrastructure Table**		
Dam Failure	Drought	Expansive Soils	Extreme Heat	Flooding	Thunderstorms	Tornadoes	Wildfires	Winter Storms	**Name or Description**	**Address**	**Occupancy**
X	X	X	X	X	X	X	X	X	TRA Mountain Creek Regional Waste Water Treatment Plant	1717 Auger Rd, Midlothian, Tx 76065	-
X	X	X	X	X	X	X	X	X	South Midlothian Parkway Lift Station	1821 S Midlothian, Texas 76065	-
X	X	X	X	X	X	X	X	X	East Lift Station	800 E Avenue E, Midlothian, Texas 76065	-
X	X	X	X	X	X	X	X	X	Fox Run Lift Station	1798 Vista Ridge Drive West, Midlothian, Tx 76065	-
X	X	X	X	X	X	X	X	X	Hillcrest Lift Station	5649 FM 663, Midlothian, Tx 76065	-
X	X	X	X	X	X	X	X	X	Hill Drive Lift Station	6499 Hill Drive, Midlothian, Tx 76065	-
X	X	X	X	X	X	X	X	X	Jaycee Park Lift Station	1801 Meadows Lane, Midlothian, Tx 76065	-
X	X	X	X	X	X	X	X	X	Coventry Crossing Lift Station	6050 Toley Drive, Midlothian, Texas 76065	-
X	X	X	X	X	X	X	X	X	Lawson Farms Lift Station	3042 S 14th St, Midlothian, Tx 76065	-

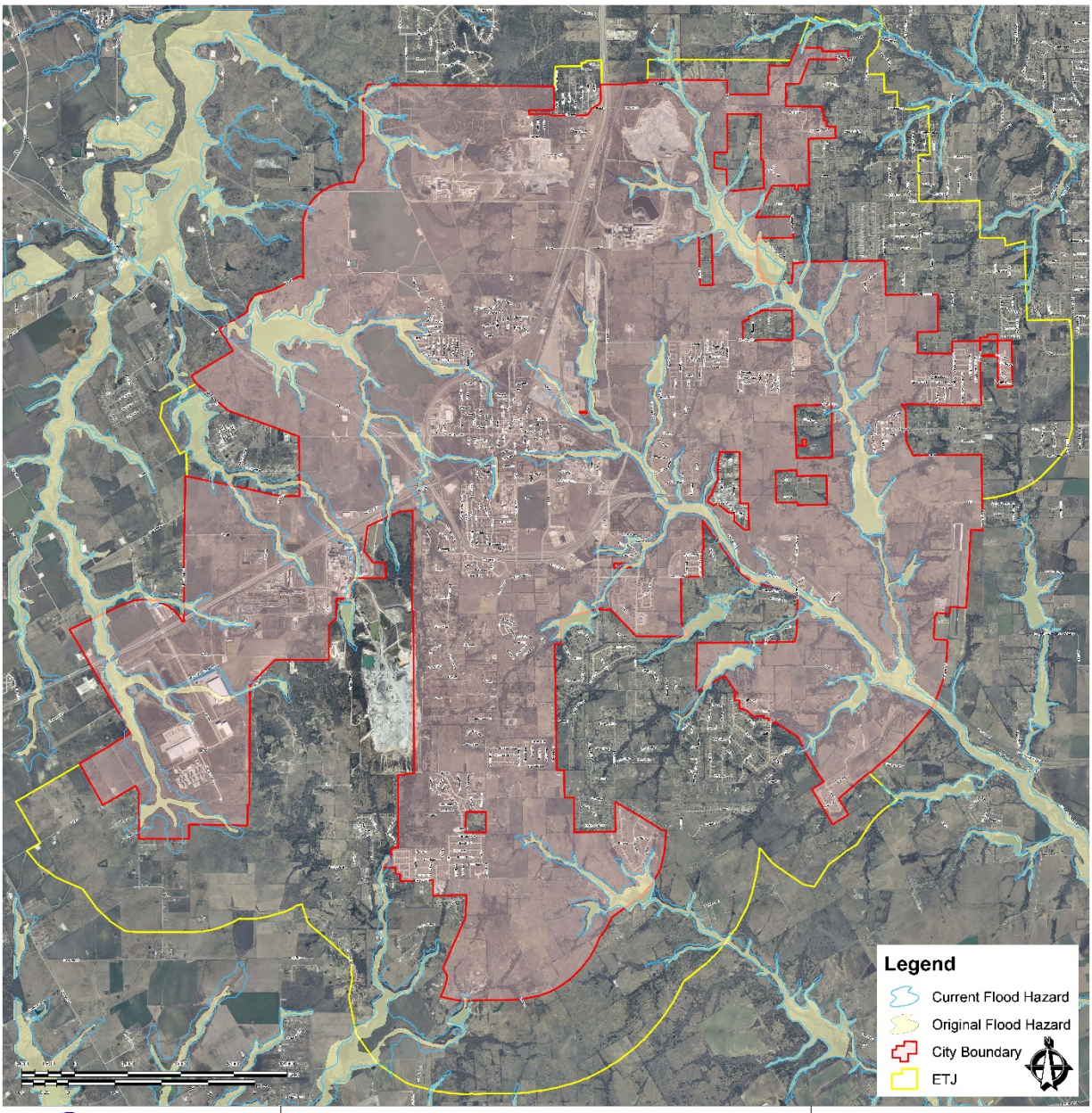
At Risk To: (X for Yes)									**City of Midlothian Critical and Vulnerable Facility and Infrastructure Table**		
Dam Failure	Drought	Expansive Soils	Extreme Heat	Flooding	Thunderstorms	Tornadoes	Wildfires	Winter Storms	**Name or Description**	**Address**	**Occupancy**
X	X	X	X	X	X	X	X	X	Meadows at Long Branch Lift Station	901 Mill Pond Dr, Midlothian, Tx 76065	-
X	X	X	X	X	X	X	X	X	Padera Lake Lift Station	4101 W Highway 287, Midlothian, Tx 76065	-
X	X	X	X	X	X	X	X	X	Niagra Steel Lift Station	1273 US Highway 67, Midlothian, Tx 76065	-
X	X	X	X	X	X	X	X	X	Pebble Creek Lift Station	306 Westview Terrace, Midlothian, Texas 76065	-
X	X	X	X	X	X	X	X	X	Southeast Lift Station	5078 E Highway 287, Midlothian, Tx 76065	-
X	X	X	X	X	X	X	X	X	Valley View Lift Station	1799 WFM 875, Midlothian, Texas 76065	-
X	X	X	X	X	X	X	X	X	Mountain Peak Vault I	2022 S 9th St, Midlothian, Tx 76065	-
X	X	X	X	X	X	X	X	X	Mountain Peak Vault II	2401 S Highway 67, Midlothian, Texas 76065	-
X	X	X	X	X	X	X	X	X	Rockett Meter Vault	6649 FM 1387, Midlothian, Tx 76065	-
X	X	X	X	X	X	X	X	X	Venus Meter Vault / Station,	3690 VV Jones Rd	-

At Risk To: (X for Yes)									**City of Midlothian Critical and Vulnerable Facility and Infrastructure Table**		
Dam Failure	Drought	Expansive Soils	Extreme Heat	Flooding	Thunderstorms	Tornadoes	Wildfires	Winter Storms	**Name or Description**	**Address**	**Occupancy**
X	X	X	X	X	X	X	X	X	Grand Prairie Vault I	4542 W Highway 287, Midlothian, Texas 76065	-
X	X	X	X	X	X	X	X	X	Grand Prairie Vault II	440 Tayman Drive, Midlothian, Tx 76065	-
X	X	X	X	X	X	X	X	X	Saris Vault I	2820 Oak Tree Lane, Midlothian, Tx 76065	-
X	X	X	X	X	X	X	X	X	Sardis Vault II	3231 Mockingbird Ln, Midlothian, Tx 76065	-
X	X	X	X	X	X	X	X	X	Midlothian Fuel Pumps – Public Works	1050 N Highway 67, Midlothian, Texas 76065	-
X	X	X	X	X	X	X	X	X	Utility Barn / Kennel	1070 N Highway 67, Midlothian, Tx 76065	25
X	X	X	X	X	X	X	X	X	Public Works / Streets Barn	1070 N Highway 67, Midlothian, Tx 76065	25
X	X	X	X	X	X	X	X	X	Parks and Recreation Barn	1070 N Highway 67, Midlothian, Tx 76065	25
X	X	X	X	X	X	X	X	X	Elevated Water Tank, Midlothian Water Tower 1	1510 S 9th St, Midlothian, Tx 76065	-

At Risk To: (X for Yes)									**City of Midlothian Critical and Vulnerable Facility and Infrastructure Table**		
Dam Failure	Drought	Expansive Soils	Extreme Heat	Flooding	Thunderstorms	Tornadoes	Wildfires	Winter Storms	**Name or Description**	**Address**	**Occupancy**
X	X	X	X	X	X	X	X	X	Elevated Water Tank, Midlothian Water Tower 2	3231 Mockingbird Lane, Midlothian, Tx 76065	-
X	X	X	X	X	X	X	X	X	5th Street Well, Midlothian	407 N 5th St, Midlothian, Tx 76065	-
X	X	X	X	X	X	X	X	X	US 287 Bridges & Overpasses	Midlothian, Texas 76065	-
X	X	X	X	X	X	X	X	X	Highway 67 Bridges & Overpasses	Midlothian, Texas 76065	-
X	X	X	X	X	X	X	X	X	8th Street Bridge over Railroad Tracks	Midlothian, Texas 76065	-
X	X	X	X	X	X	X	X	X	BNSF Railroad Tracks	Midlothian, Texas 76065	-
X	X	X	X	X	X	X	X	X	Churches	Midlothian, Texas 76065	Varies
X	X	X	X	X	X	X	X	X	Daycares	Midlothian, Texas 76065	Varies
X	X	X	X	X	X	X	X	X	Pecan Acres Mobile Home Park	41 Pecan Acres, Midlothian, Texas 76065	12.5 acres
X	X	X	X	X	X	X	X	X	Village South Mobile Home Park	19 Village South MHP, Midlothian, Texas 76065; 8 Lancer Drive, Midlothian, Tx 76065	200 units

At Risk To: (X for Yes)									**City of Midlothian Critical and Vulnerable Facility and Infrastructure Table**		
Dam Failure	Drought	Expansive Soils	Extreme Heat	Flooding	Thunderstorms	Tornadoes	Wildfires	Winter Storms	**Name or Description**	**Address**	**Occupancy**
X	X	X	X	X	X	X	X	X	MidTex RV Park	4391 Miller Rd, Midlothian, Texas 76065	Varies
X	X	X	X	X	X	X	X	X	CHAMBERS CREEK WS SCS SITE 16 DAM	-96.97 32.4099	-
X	X	X	X	X	X	X	X	X	MOUNTAIN CREEK WS SCS SITE 10 DAM	-97.042 32.498	-
X	X	X	X	X	X	X	X	X	CHAMBERS CREEK WS SCS SITE 2A DAM	-96.93 32.4874	-
X	X	X	X	X	X	X	X	X	CHAMBERS CREEK WS SCS SITE 2F DAM	-96.927 32.4659	-
X	X	X	X	X	X	X	X	X	CHAMBERS CREEK WS SCS SITE 3 DAM	-96.98 32.4907	-
X	X	X	X	X	X	X	X	X	CHAMBERS CREEK WS SCS SITE 4 DAM	-96.968 32.4895	-
X	X	X	X	X	X	X	X	X	CHAMBERS CREEK WS SCS SITE 5 DAM	-96.981 32.4552	-
X	X	X	X	X	X	X	X	X	CHAMBERS CREEK WS SCS SITE 6 DAM	-96.956 32.4551	-
X	X	X	X	X	X	X	X	X	CHAMBERS CREEK WS SCS SITE 7 DAM	-96.951 32.4483	-
X	X	X	X	X	X	X	X	X	CHAMBERS CREEK WS SCS SITE 2B DAM	-96.937 32.5005	-

At Risk To: (X for Yes)									**City of Midlothian Critical and Vulnerable Facility and Infrastructure Table**		
Dam Failure	Drought	Expansive Soils	Extreme Heat	Flooding	Thunderstorms	Tornadoes	Wildfires	Winter Storms	**Name or Description**	**Address**	**Occupancy**
X	X	X	X	X	X	X	X	X	CHAMBERS CREEK WS SCS SITE 1 DAM	-96.945 32.5049	-
X	X	X	X	X	X	X	X	X	CHAMBERS CREEK WS SCS SITE 8 DAM	-96.93 32.4425	-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Original Flood Hazard
City Boundary
ETJ
Midlothian
DFW's Southern Star
City of Midlothian
Flood Hazard
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Date: 5/3/2013
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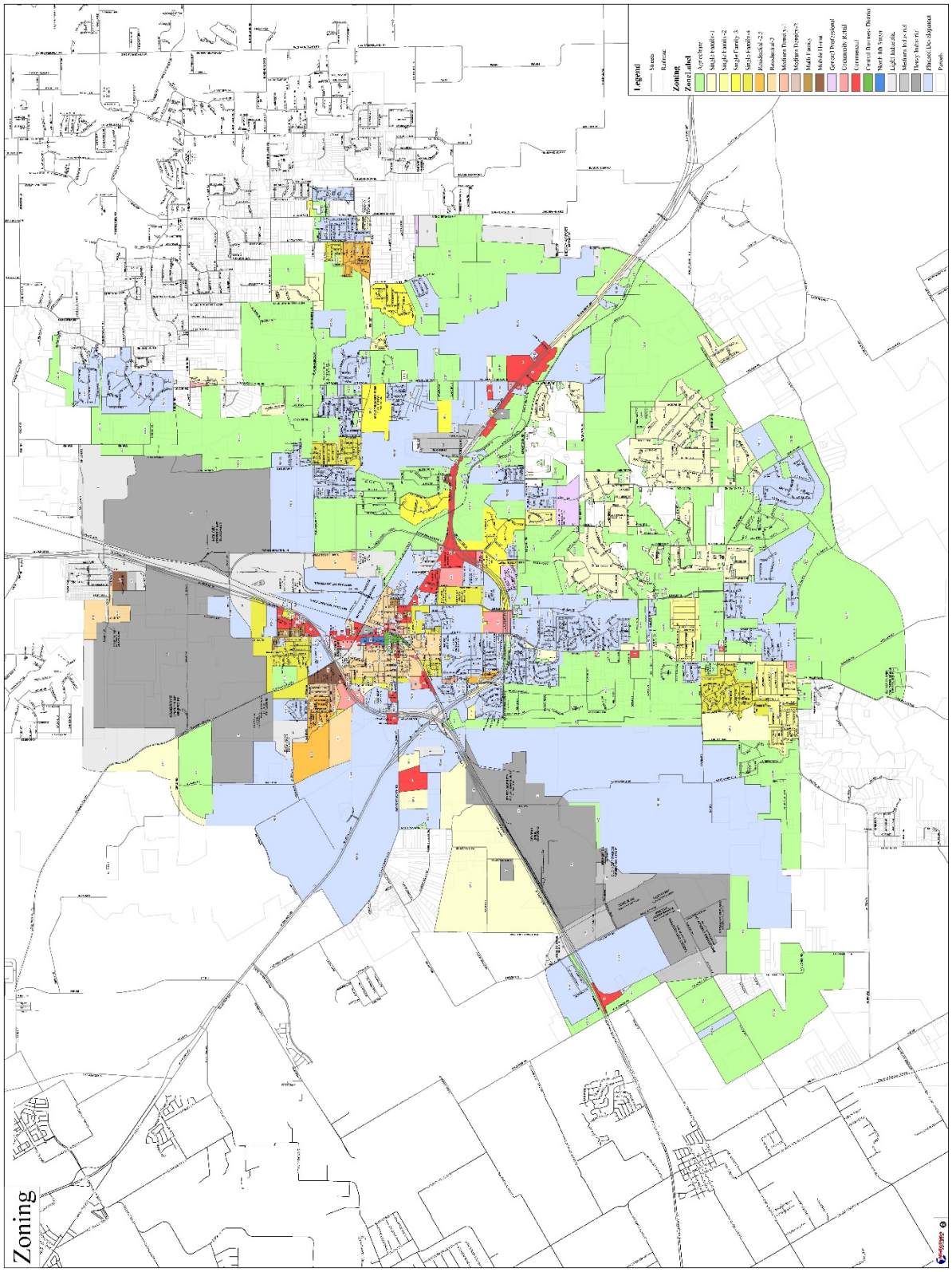
Disclaimer: This map is a graphic illustration and is not intended to establish precise dimensions. The City of Midlothian assumes no liability for the accuracy of this map.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Streets
Railroad
Zoning
Zone Label
Agriculture
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Single Family-2
Single Family-3
Single Family-4
Residential-2
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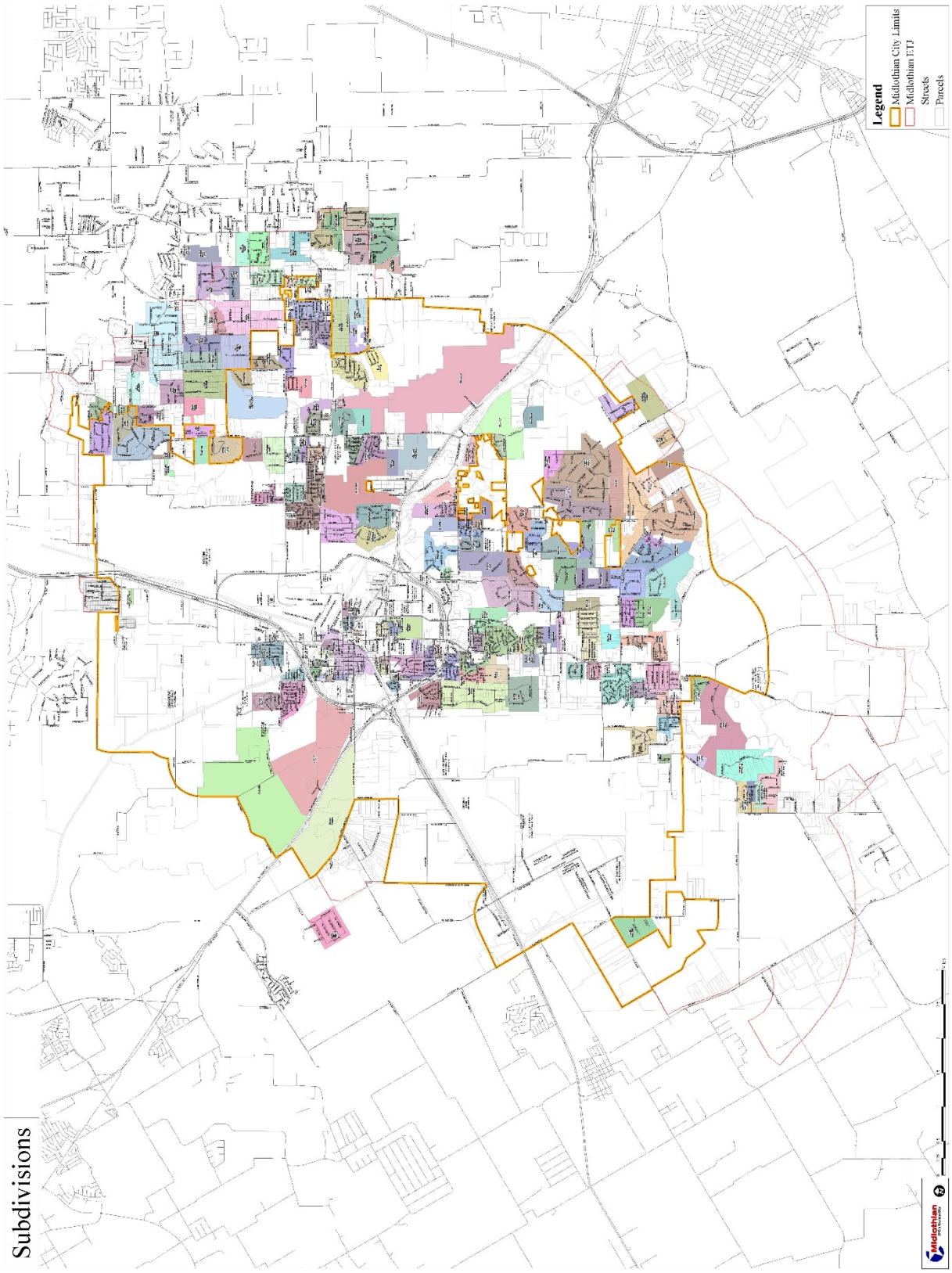
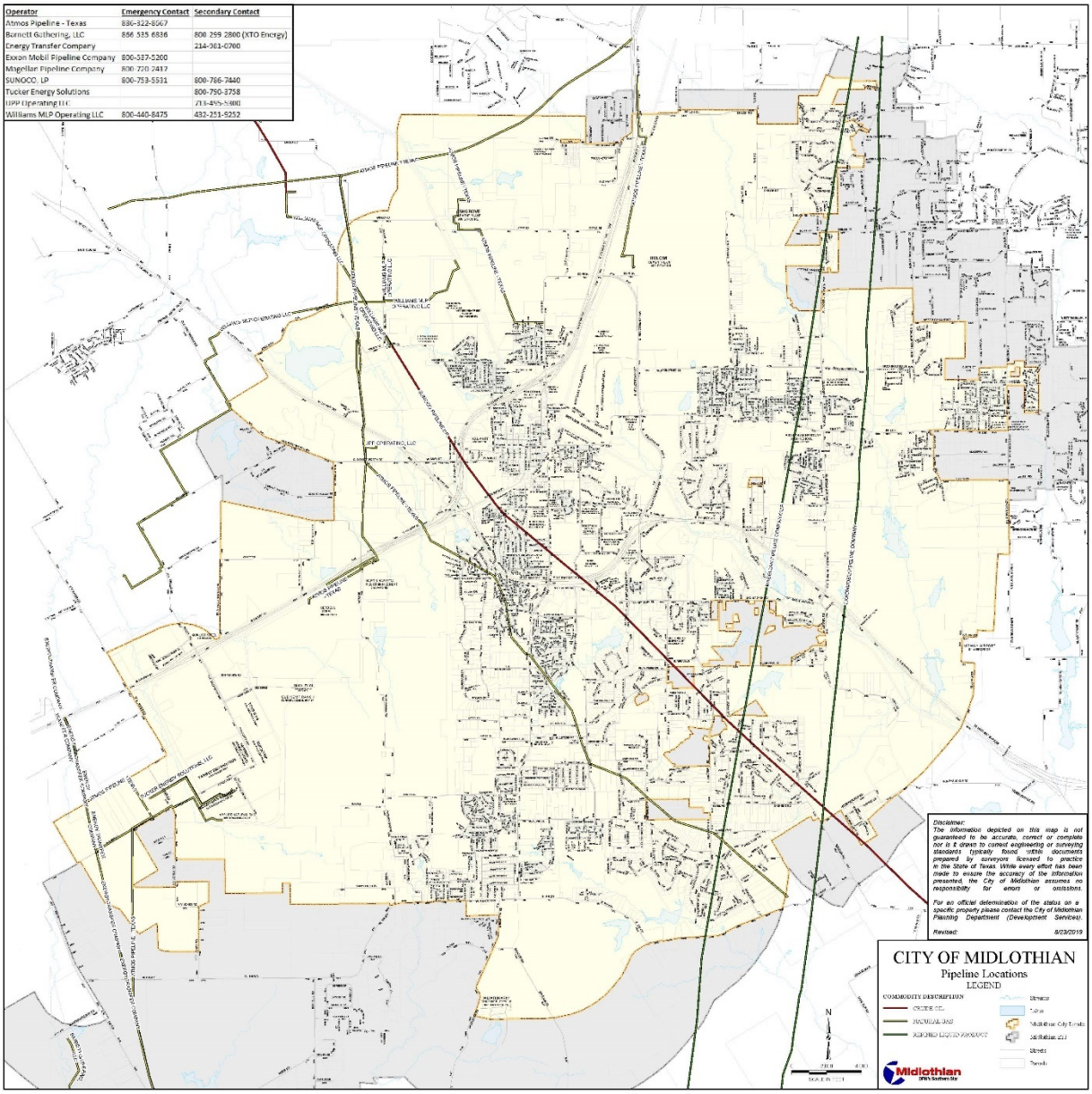
Residential-3
Medium Density-1
Medium Density-2
Multi Family
Mobile Home
General Professional
Community Retail
Commercial
General Business District
Heavy Industrial
Light Industrial
Medium Industrial
Heavy Industrial
Planned Development District
Parcels
Zoning


Legend
Midlothian City Limits
Midlothian ETJ
Streets
Parcels
Subdivisions

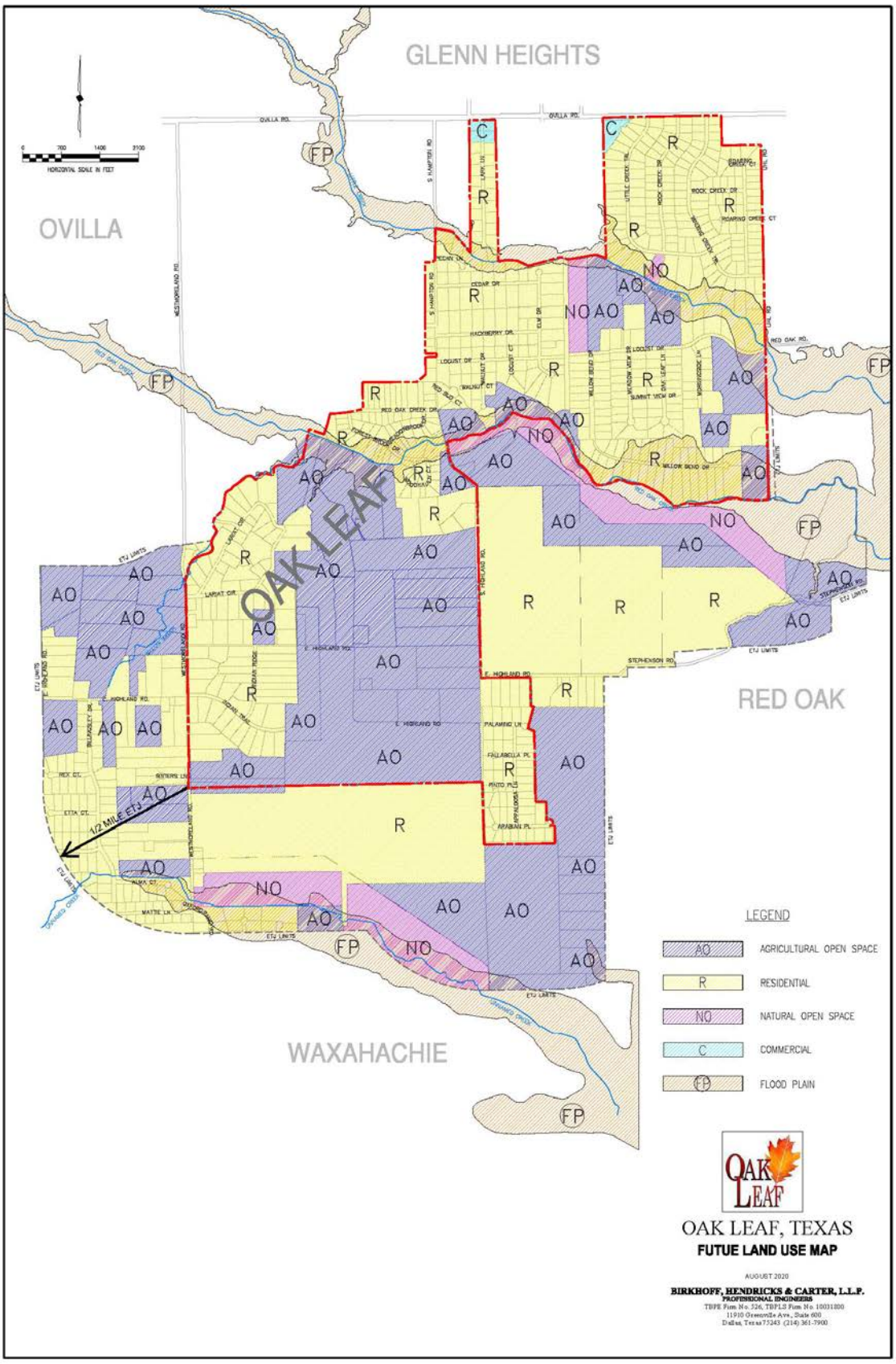


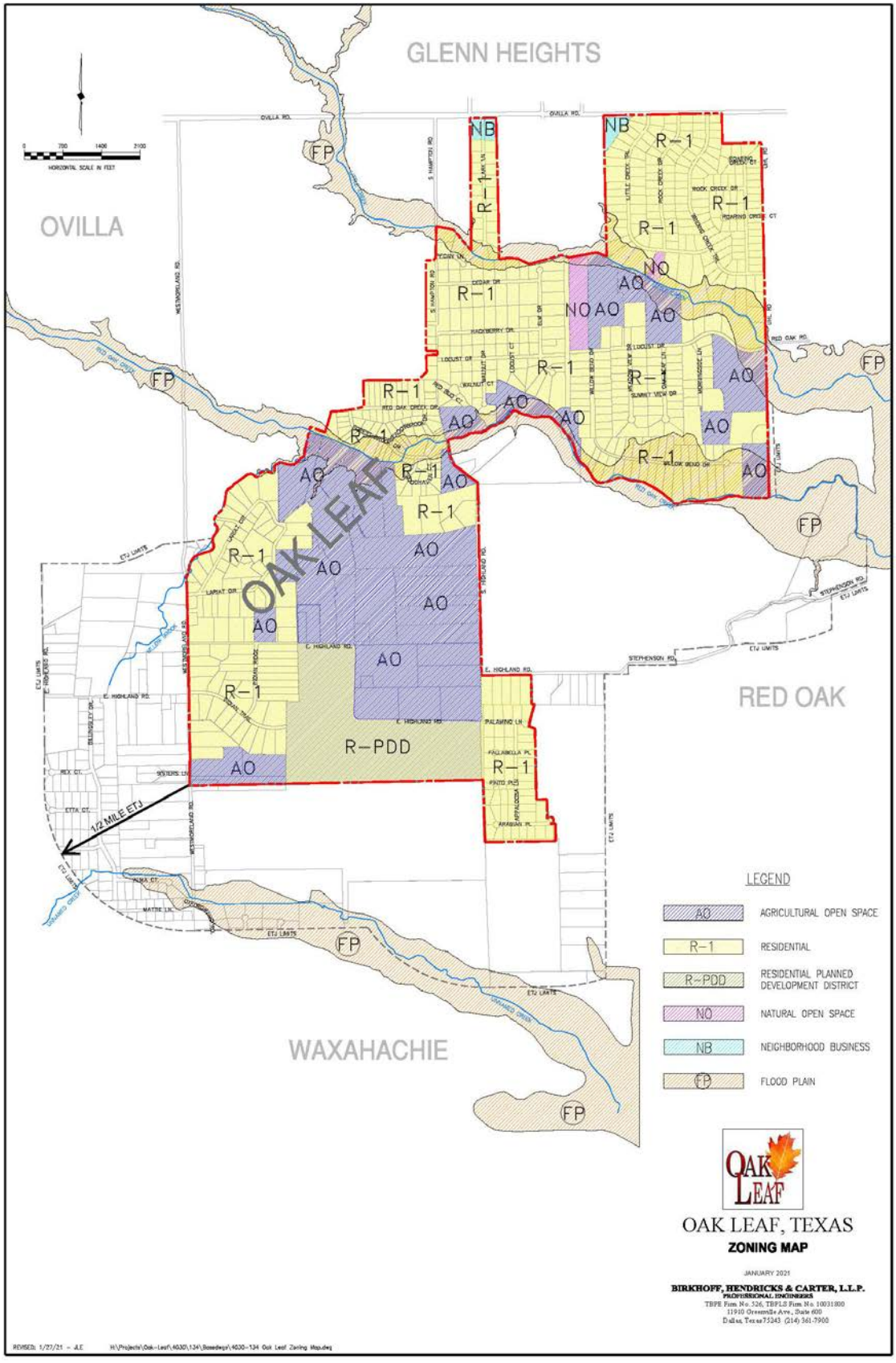
City of Milford

At Risk To: (X for Yes)									City of Milford Critical and Vulnerable Facility and Infrastructure Table	
Dam Failure	Drought	Expansive Soils	Extreme Heat	Flooding	Thunderstorms	Tornadoes	Wildfires	Winter Storms	**Name or Description**	**Address**
	x	x	x	x	x	x	x	x	City of Milford Municipal Building	107 S. Main
	x	x	x	x	x	x	x	x	City of Milford Senior Center	109 S. Main
	x	x	x	x	x	x	x	x	Milford VFD	104 Pecan St
	x	x	x	x	x	x	x	x	Milford Post Office	200 N Main

City of Oak Leaf

At Risk To: (X for Yes)									City of Oak Leaf Critical and Vulnerable Facility and Infrastructure Table	
Dam Failure	Drought	Expansive Soils	Extreme Heat	Flooding	Thunderstorms	Tornadoes	Wildfires	Winter Storms	**Name or Description**	**Address**
				x	x	x	x	x	City Hall/ Government Offices	301 Locust Drive
				x	x	x		x	Locust Drive Bridge	725 Locust Drive
				x	x	x		x	Forest Brook Drive Bridge	112 Forest Brook Drive
				x	x	x		x	Cell Tower	301 Locust Drive


GLENN HEIGHTS
OVILLA
OAK LEAF
RED OAK
WAXAHACHIE
1/2 MILE ETJ
LEGEND
AO AGRICULTURAL OPEN SPACE
R RESIDENTIAL
NO NATURAL OPEN SPACE
C COMMERCIAL
FP FLOOD PLAIN
OAK LEAF, TEXAS
FUTUE LAND USE MAP
AUGUST 2020
BIRKHOFF, HENDRICKS & CARTER, L.L.P.
PROFESSIONAL ENGINEERS


GLENN HEIGHTS
OVILLA
OAK LEAF
RED OAK
WAXAHACHIE
R-1
R-PDD
AO
NO
NB
FP
1/2 MILE ETJ
LEGEND
AGRICULTURAL OPEN SPACE
RESIDENTIAL
RESIDENTIAL PLANNED DEVELOPMENT DISTRICT
NATURAL OPEN SPACE
NEIGHBORHOOD BUSINESS
FLOOD PLAIN
OAK LEAF, TEXAS
ZONING MAP
JANUARY 2021
BIRKHOFF, HENDRICKS & CARTER, L.L.P.
PROFESSIONAL ENGINEERS
11910 Greenville Ave., Suite 600
Dallas, Texas 75243 (214) 361-7900

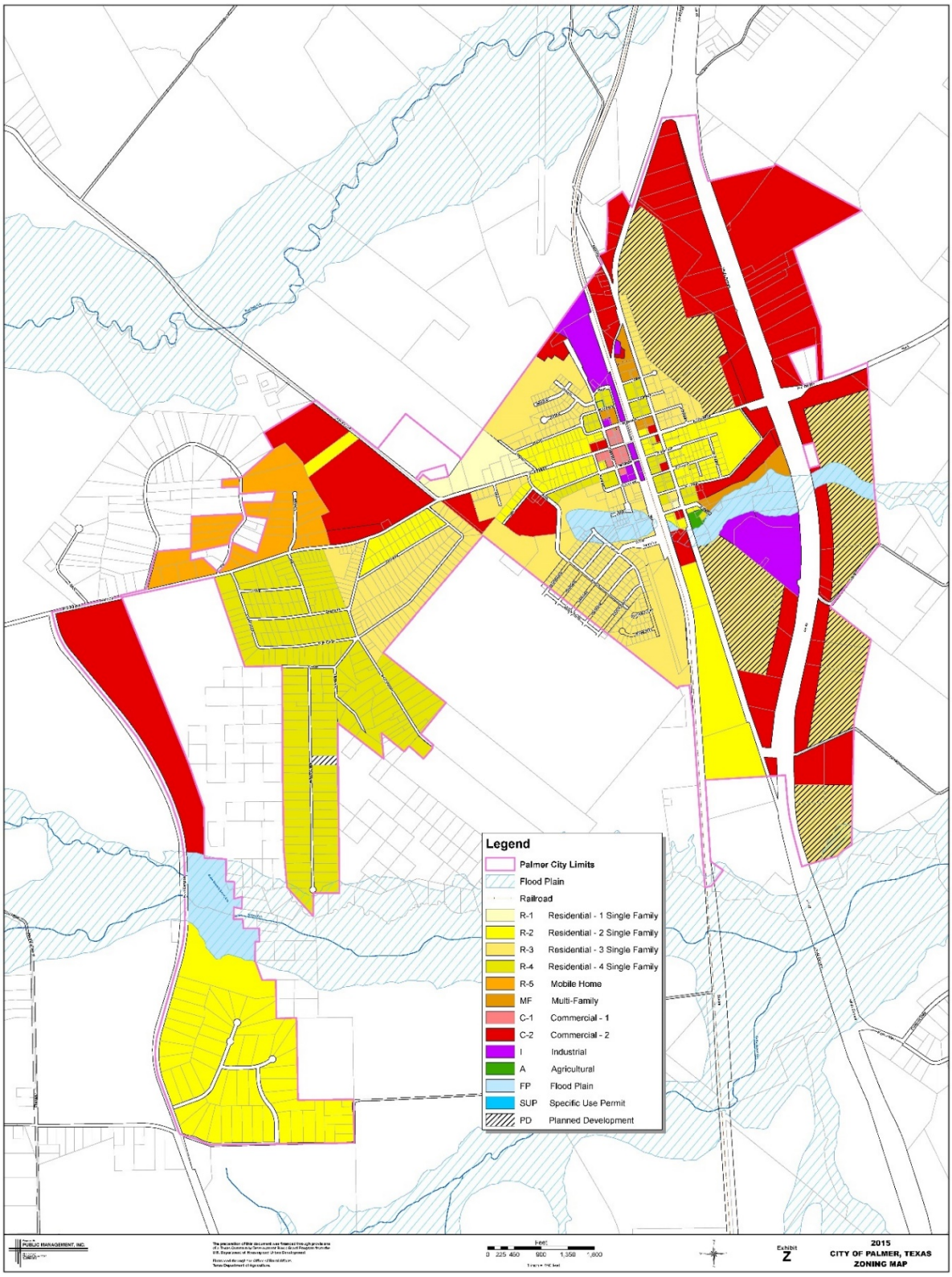
City of Ovilla

At Risk To: (X for Yes)									City of Ovilla Critical and Vulnerable Facility and Infrastructure	
Dam Failure	Drought	Expansive Soils	Extreme Heat	Flooding	Thunderstorms	Tornadoes	Wildfires	Winter Storms	**Name or Description**	**Address**

City of Palmer

At Risk To: (X for Yes)									City of Palmer Critical and Vulnerable Facility and Infrastructure	
Dam Failure	Drought	Expansive Soils	Extreme Heat	Flooding	Thunderstorms	Tornadoes	Wildfires	Winter Storms	**Name or Description**	**Address**

At Risk To: (X for Yes)									**City of Palmer Critical and Vulnerable Facility and Infrastructure**	
Dam Failure	Drought	Expansive Soils	Extreme Heat	Flooding	Thunderstorms	Tornadoes	Wildfires	Winter Storms	**Name or Description**	**Address**



City of Red Oak

At Risk To: (X for Yes)									**City of Red Oak Critical and Vulnerable Facility and Infrastructure Table**	
Dam Failure	Drought	Expansive Soils	Extreme Heat	Flooding	Thunderstorms	Tornadoes	Wildfires	Winter Storms	**Name or Description**	**Address**
					X	x		x	Red Oak 6th Grade Center	154 FM 2377
					X	X		x	Red Oak ISD Bus Barn	154 FM 2377
					X	X		x	Red Oak ISD Maintenance	154 FM 2377
					X	X		x	Wooden Elementary	200 FM 2377
					X	X		x	Eastridge Elementary	725 E Ovilla Rd
					X	X		x	Red Oak Elementary	200 Valley Ridge
					X	X		X	Red Oak High School	220 Hwy 342 Building 1
					X	X		X	Red Oak High Field House	220 Hwy 342 Building 2
					X	X		x	Red Oak ISD Admin Bld.	109 Red Oak Rd.
					X	x		X	Life School	777 I-35E Bld.1
					X	X		X	Life School Admin Bld.	132 Ovilla Rd. A
					X	X		X	Red Oak Health Rehab	101 Reese Dr.

At Risk To: (X for Yes)									**City of Red Oak Critical and Vulnerable Facility and Infrastructure Table**	
Dam Failure	Drought	Expansive Soils	Extreme Heat	Flooding	Thunderstorms	Tornadoes	Wildfires	Winter Storms	**Name or Description**	**Address**
					X	X		X	Arabella Assisted Living	200 Washington St.
					X	X		X	Legacy Oak Independent Living	240 Washington St
					X	X		X	Carson Street Apartments	320 Carson
					X	X		X	Emerson Apartments	351 Hickory Creek Dr.
					X	X		X	Hawk Ave Senior Living	300 Hawk Ave
					x	x		x	Red Oak Career Tech	156 FM 2377
					x	x		x	Red Oak Middle School Complex	154 FM 2377
					x	x		x	Red Oak ISD Ag. Building	351 Bell Chapel RD
					X	X		X	Legacy Square Apartments	241 Overlook Dr.
					X	X		X	Living Oak Apartment	200 Brothers BLVD
					X	X		X	Red Oak Apartments	507 W Red Rd.
					X	X		X	Red Oak Town Village	200 Ryan Dr.

At Risk To: (X for Yes)									**City of Red Oak Critical and Vulnerable Facility and Infrastructure Table**	
Dam Failure	Drought	Expansive Soils	Extreme Heat	Flooding	Thunderstorms	Tornadoes	Wildfires	Winter Storms	**Name or Description**	**Address**
					X	X		X	South Meadow Apartments	110 Sierra Grande
					X	X		X	Summit Place Apartments	112 S Summit St.
					X	X		X	The Oaks	777 S Interstate 35E
					X	X		X	Life Point Community Church	201 FM 2377
					X	X		X	Landmark Baptist Church	982 E Ovilla RD
					x	X		x	Iglesia Fuego De Dios	211 N Main ST
					X	X		X	First United Methodist Church	600 Daubitz RD
					X	X		X	Eastridge Baptist	732 E Ovilla RD
					X	X		X	Refugee Temple	620 Daubitz RD
					X	X		X	First Baptist Church	320 E Ovilla RD

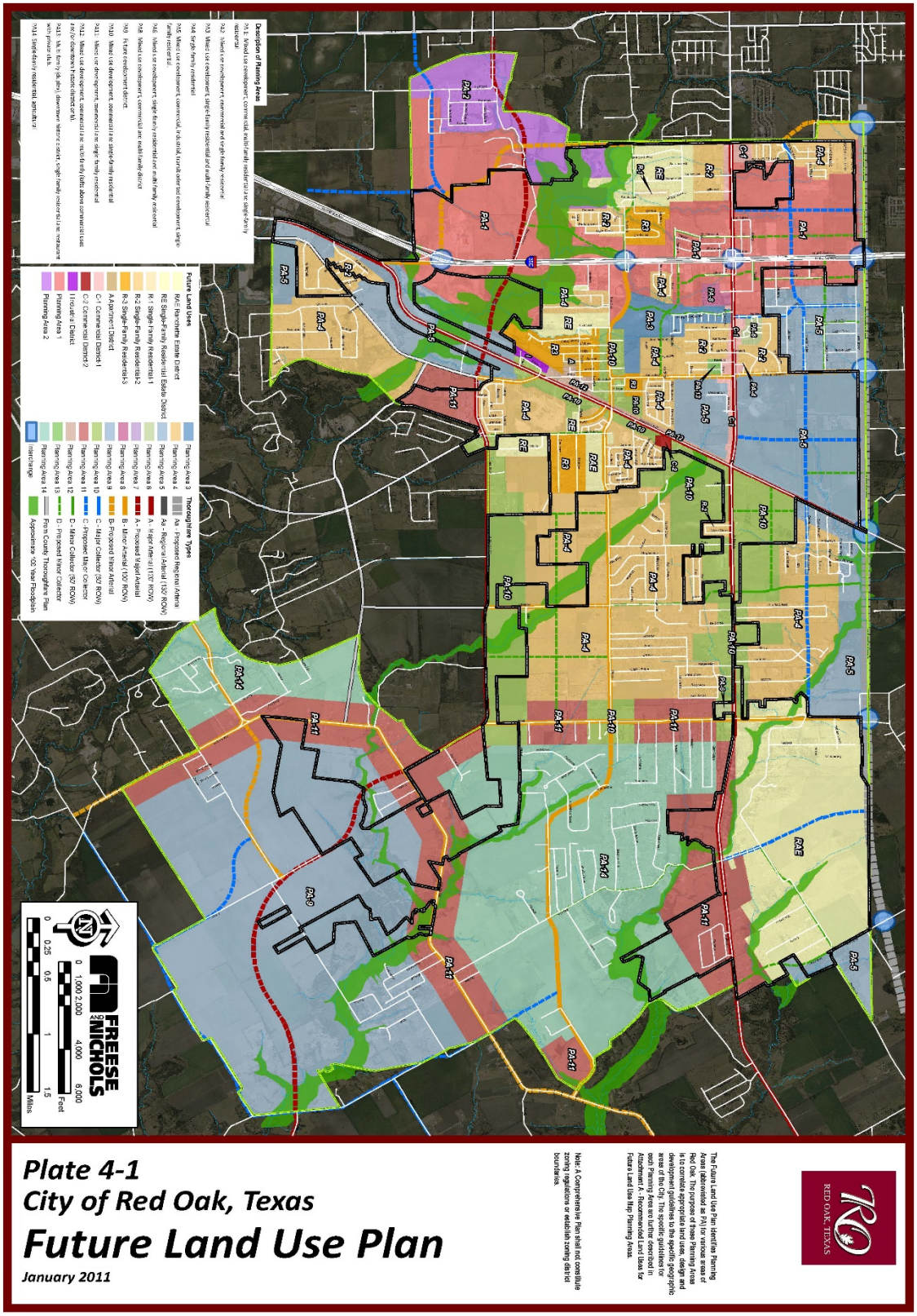
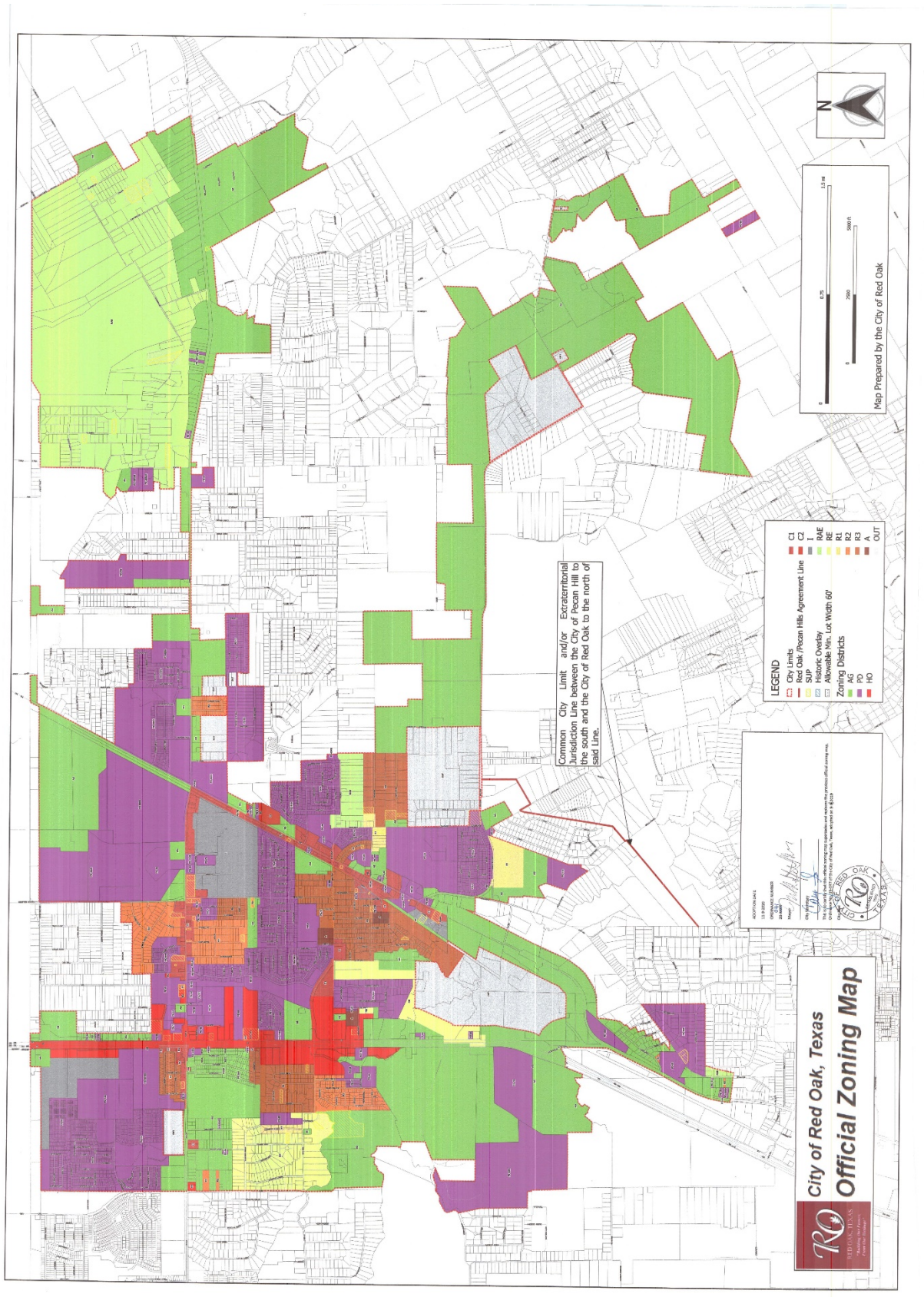
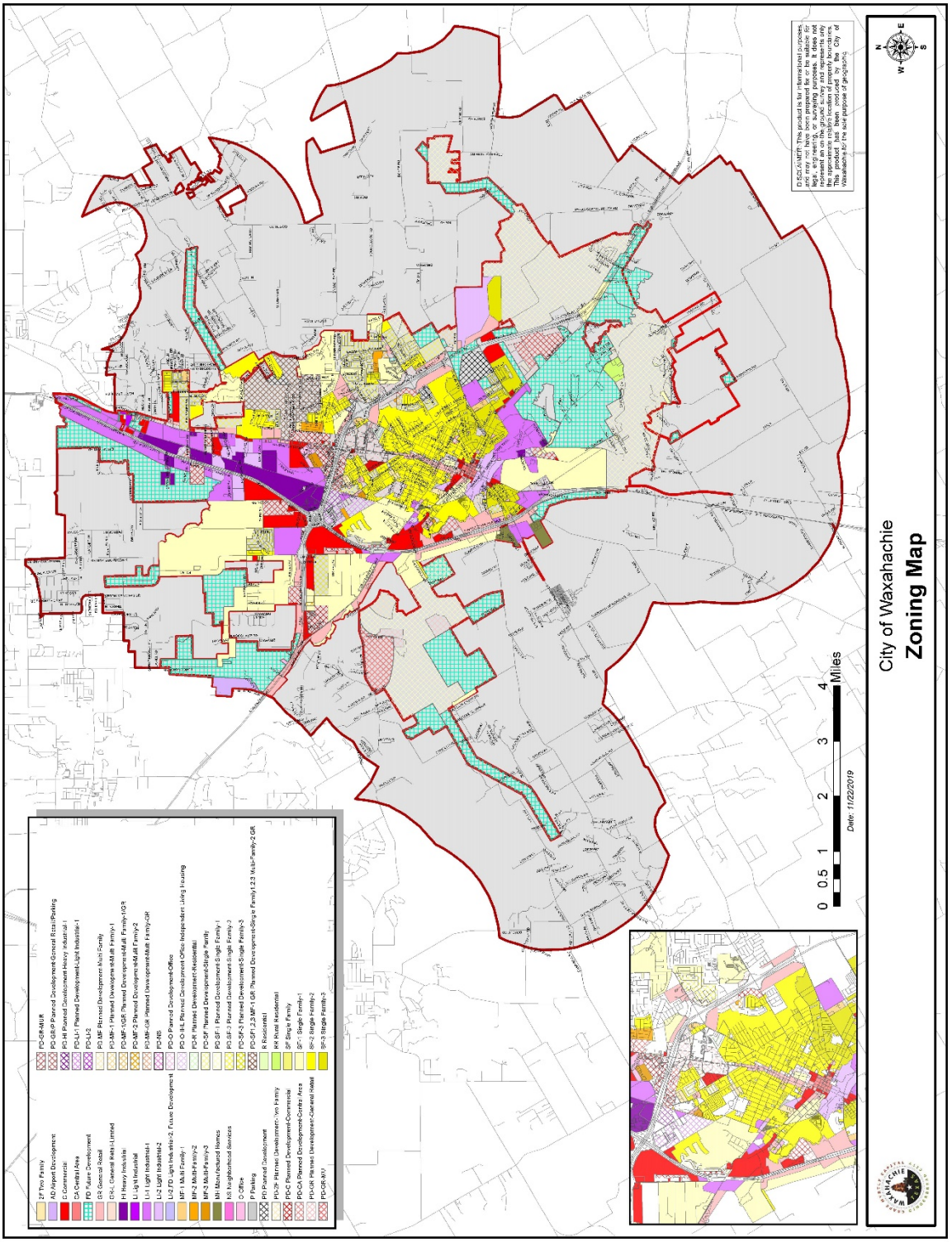


Plate 4-1
City of Red Oak, Texas
Future Land Use Plan
January 2011
RED OAK, TEXAS
FREESE NICHOLS
Miles
Feet
Note: A Comprehensive Plan shall not constitute zoning regulations or establish zoning district boundaries.


City of Red Oak, Texas
Official Zoning Map
LEGEND
City Limits
Red Oak /Pecan Hills Agreement Line
SUP
Historic Overlay
Allowable Min. Lot Width 60'
Zoning Districts
AG
PD
HO
C1
C2
I
RAE
RE
R1
R2
R3
A
OUT
Common City Limit and/or Extraterritorial Jurisdiction Line between the City of Pecan Hill to the south and the City of Red Oak to the north of said Line.
Map Prepared by the City of Red Oak
N

City of Waxahachie

At Risk To: (X for Yes)									**City of Waxahachie Critical and Vulnerable Facility and Infrastructure**	
Dam Failure	Drought	Expansive Soils	Extreme Heat	Flooding	Thunderstorms	Tornadoes	Wildfires	Winter Storms	**Name or Description**	**Address**


City of Waxahachie
Zoning Map
0 0.5 1 2 3 4 Miles
Date: 11/22/2019
N
E
S
W

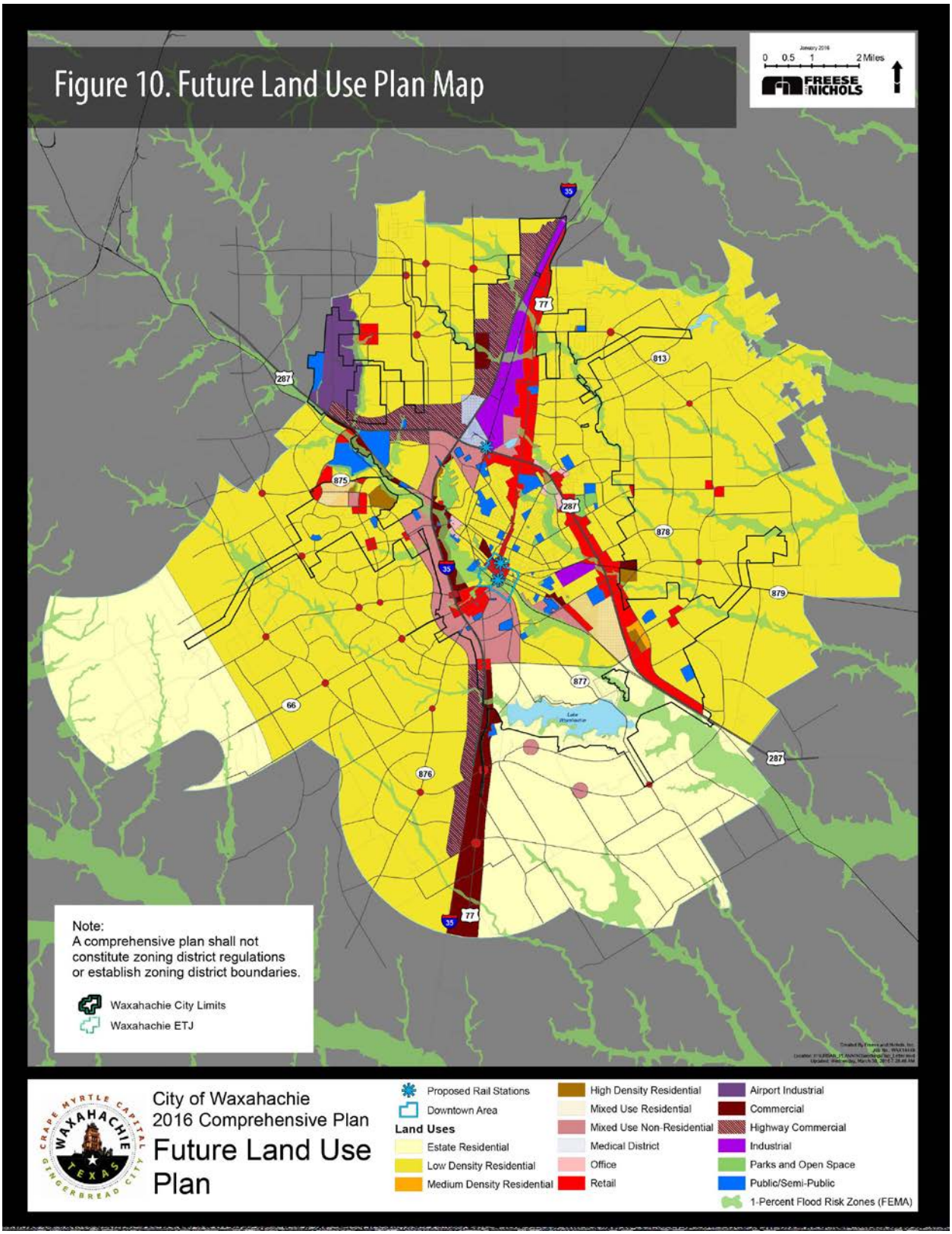


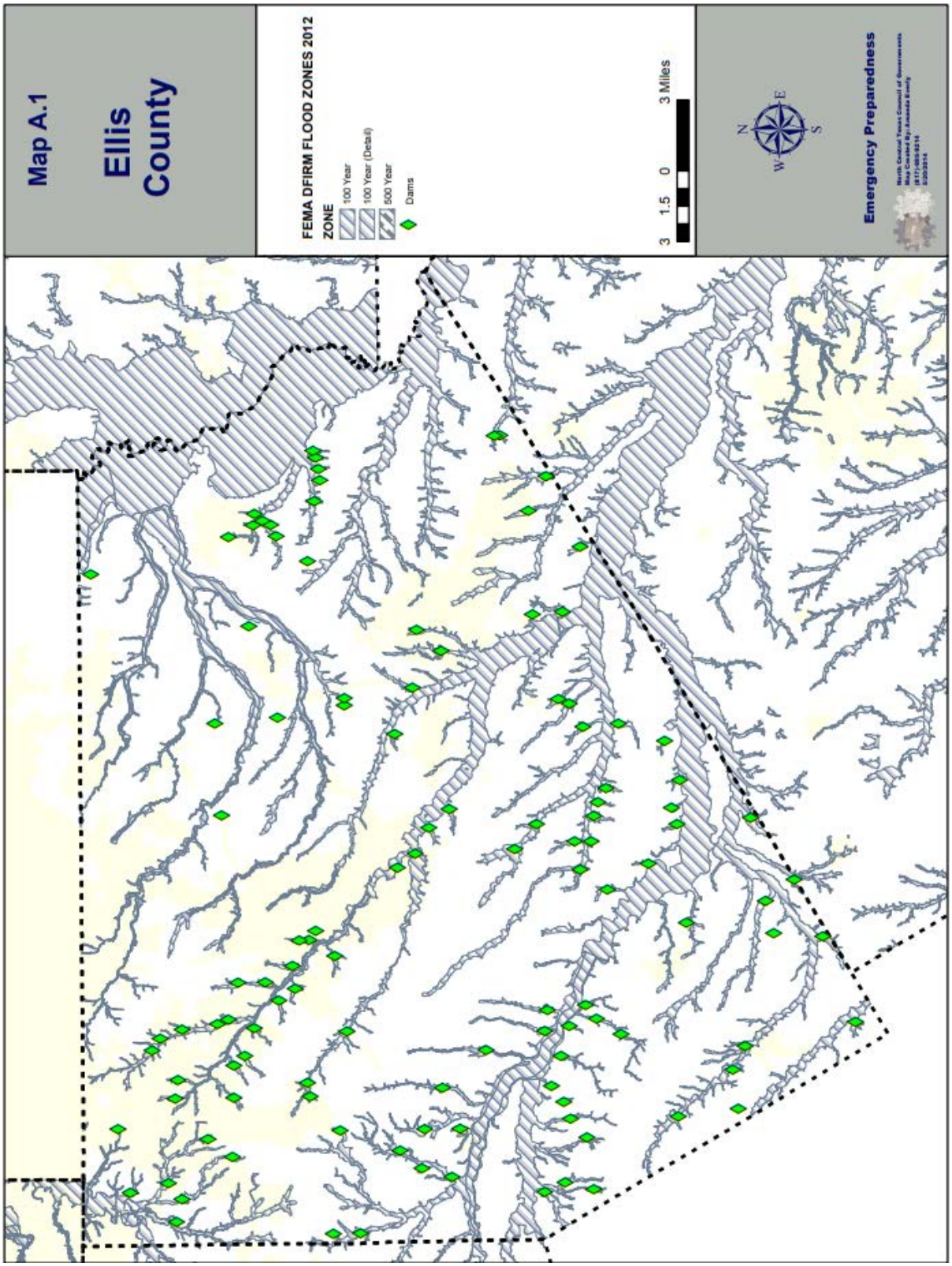
Figure 10. Future Land Use Plan Map
0 0.5 1 2 Miles
FREESE NICHOLS
Note:
A comprehensive plan shall not constitute zoning district regulations or establish zoning district boundaries.
Waxahachie City Limits
Waxahachie ETJ
City of Waxahachie
2016 Comprehensive Plan
Future Land Use Plan
Proposed Rail Stations
Downtown Area
Land Uses
Estate Residential
Low Density Residential
Medium Density Residential
High Density Residential
Mixed Use Residential
Mixed Use Non-Residential
Medical District
Office
Retail
Airport Industrial
Commercial
Highway Commercial
Industrial
Parks and Open Space
Public/Semi-Public
1-Percent Flood Risk Zones (FEMA)

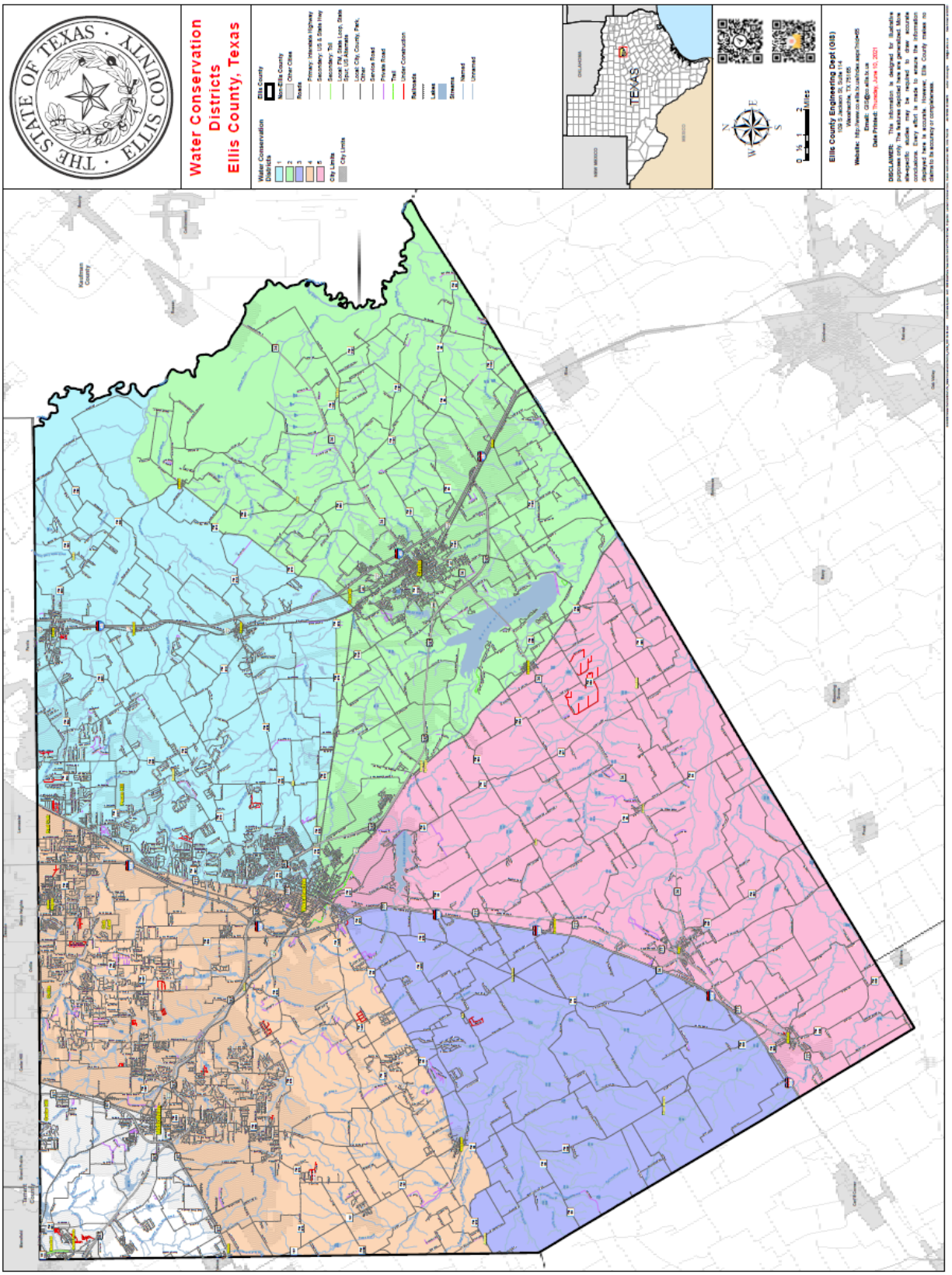
Ellis County Unincorporated

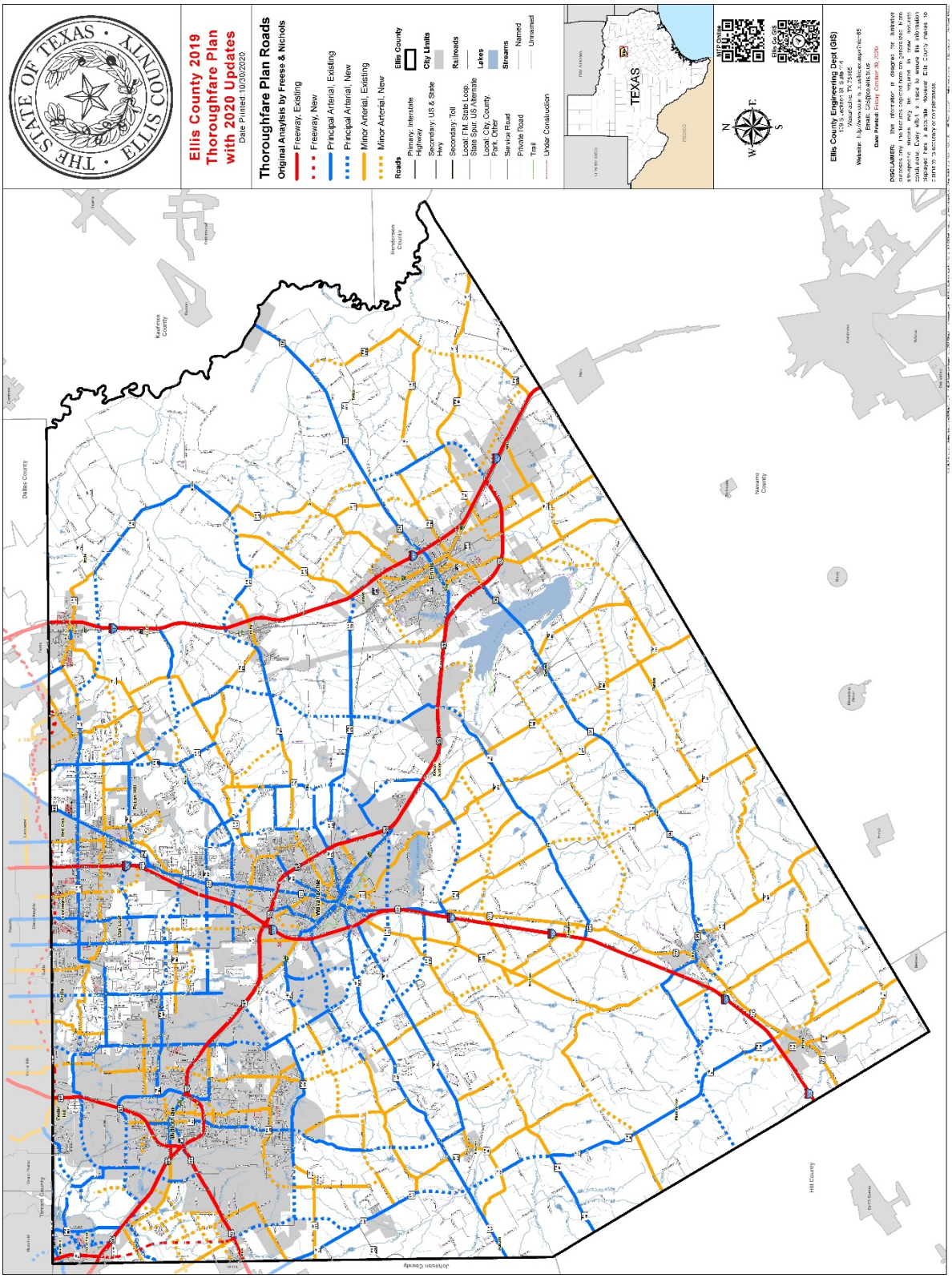
At Risk To: (X for Yes)									**Ellis County Critical and Vulnerable Facility and Infrastructure**	
Dam Failure	Drought	Expansive Soils	Extreme Heat	Flooding	Thunderstorms	Tornadoes	Wildfires	Winter Storms	**Name or Description**	**Address**
X	X	X	X	X	X	X	X	X	CENTRAL HIGH VFD	3929 FM 1183
X	X	X	X	X	X	X	X	X	TELICO VFD	8527 FM1181, Ennis, TX 75119
X	X	X	X	X	X	X	X	X	BRISTOL VFD	101 S Old Walnut, Ennis, TX 75119
X	X	X	X	X	X	X	X	X	ESD 6 VFD STATION 1	1816 FM 66, Waxahachie, TX 75167
X	X	X	X	X	X	X	X	X	AVALON VFD	101 S FM 55 Italy, Tx 76651
X	X	X	X	X	X	X	X	X	GARRETT RURAL VFD	6116 FM 879, Ennis, TX 75119
X	X	X	X	X	X	X	X	X	RED OAK FIRE STATION 2	1201 Pierce Rd, Red Oak, TX 75154
X	X	X	X	X	X	X	X	X	FORRESTON VFD	114 Forreston Rd, Waxahachie, TX 75165
X	X	X	X	X	X	X	X	X	BAYLOR SCOTT AND WHITE MEDICAL CENTER – WAXAHACHIE	2400 I-35E, Waxahachie, TX 75165
X	X	X	X	X	X	X	X	X	ENNIS REGIONAL HOSPITAL	2201 W Lampasas Ennis, TX 75119
X	X	X	X	X	X	X	X	X	METHODIST MIDLOTHIAN	1201 E, US-287, Midlothian, TX 76065

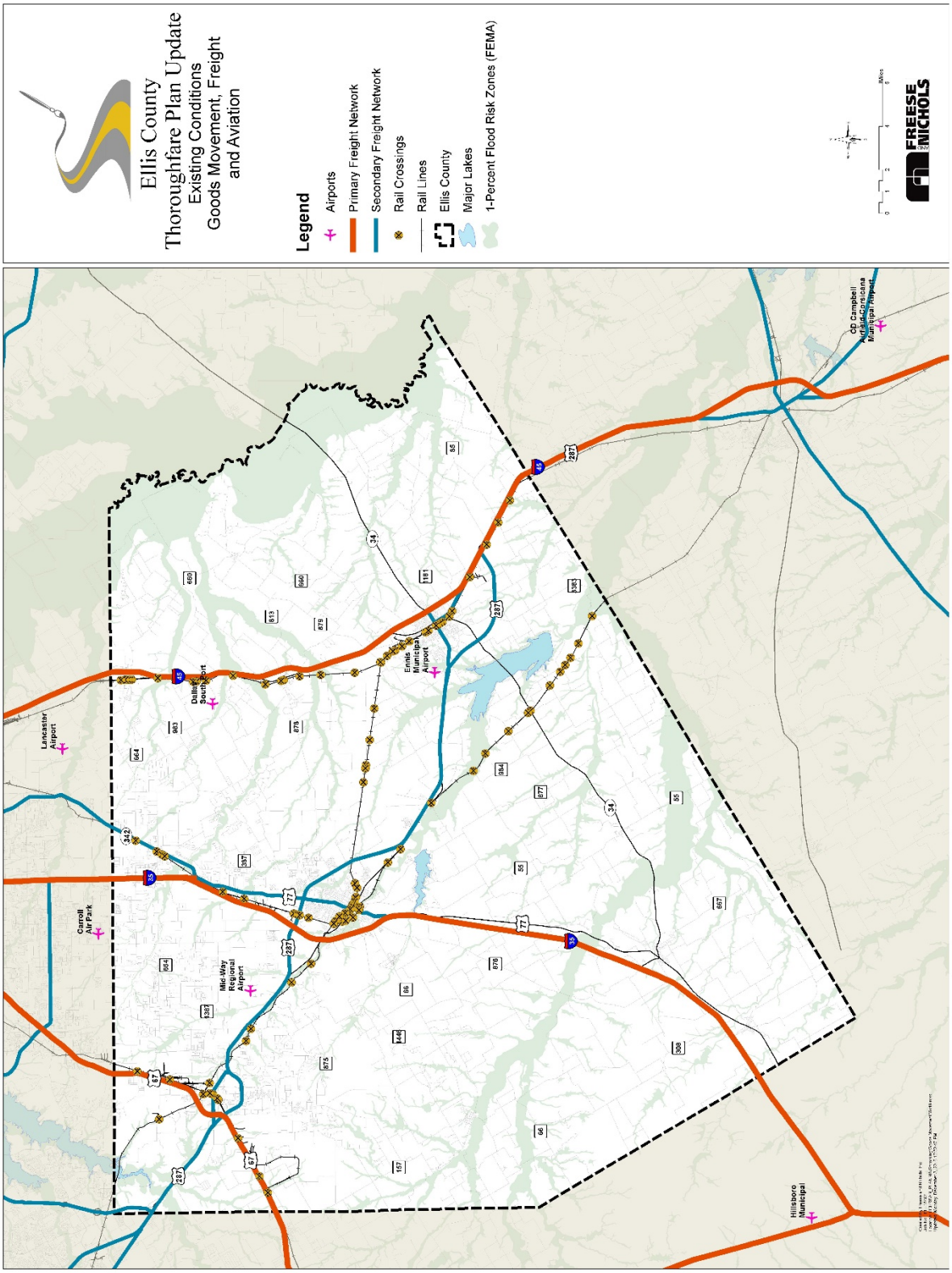
At Risk To: (X for Yes)									**Ellis County Critical and Vulnerable Facility and Infrastructure**	
Dam Failure	Drought	Expansive Soils	Extreme Heat	Flooding	Thunderstorms	Tornadoes	Wildfires	Winter Storms	**Name or Description**	**Address**
X	X	X	X	X	X	X	X	X	FERRIS POLICE DEPT	201 S Church St, Ferris, TX 75125
X	X	X	X	X	X	X	X	X	ELLIS COUNTY SHERIFFS' OFFICE AND JAIL	300 S Jackson St, Waxahachie, TX 75165
X	X	X	X	X	X	X	X	X	PALMER PD AND MUNICIPAL COURT	114 W Jefferson St, Palmer, TX 75152
X	X	X	X	X	X	X	X	X	GARRETT PD	208 N Ferris St Ennis, TX 75119
X	X	X	X	X	X	X	X	X	CITY OF OVILLA	105 S Cockrell Hill Rd, Red Oak, TX 75154
X	X	X	X	X	X	X	X	X	ECSO LAW ENFORCEMENT CENTER (LEC)	2272 Farm to Market Rd 878, Waxahachie, TX 75165
X	X	X	X	X	X	X	X	X	ITALY POLICE DEPT	101 W Main St, Italy, TX 76651
X	X	X	X	X	X	X	X	X	AMR ELLIS COUNTY EMS	2250 US-287 BUS Suite B, Waxahachie, TX 75167
X	X	X	X	X	X	X	X	X	ELLIS COUNTY HISTORIC COURTHOUSE	101 W. Main St. Waxahachie Tx, 75165

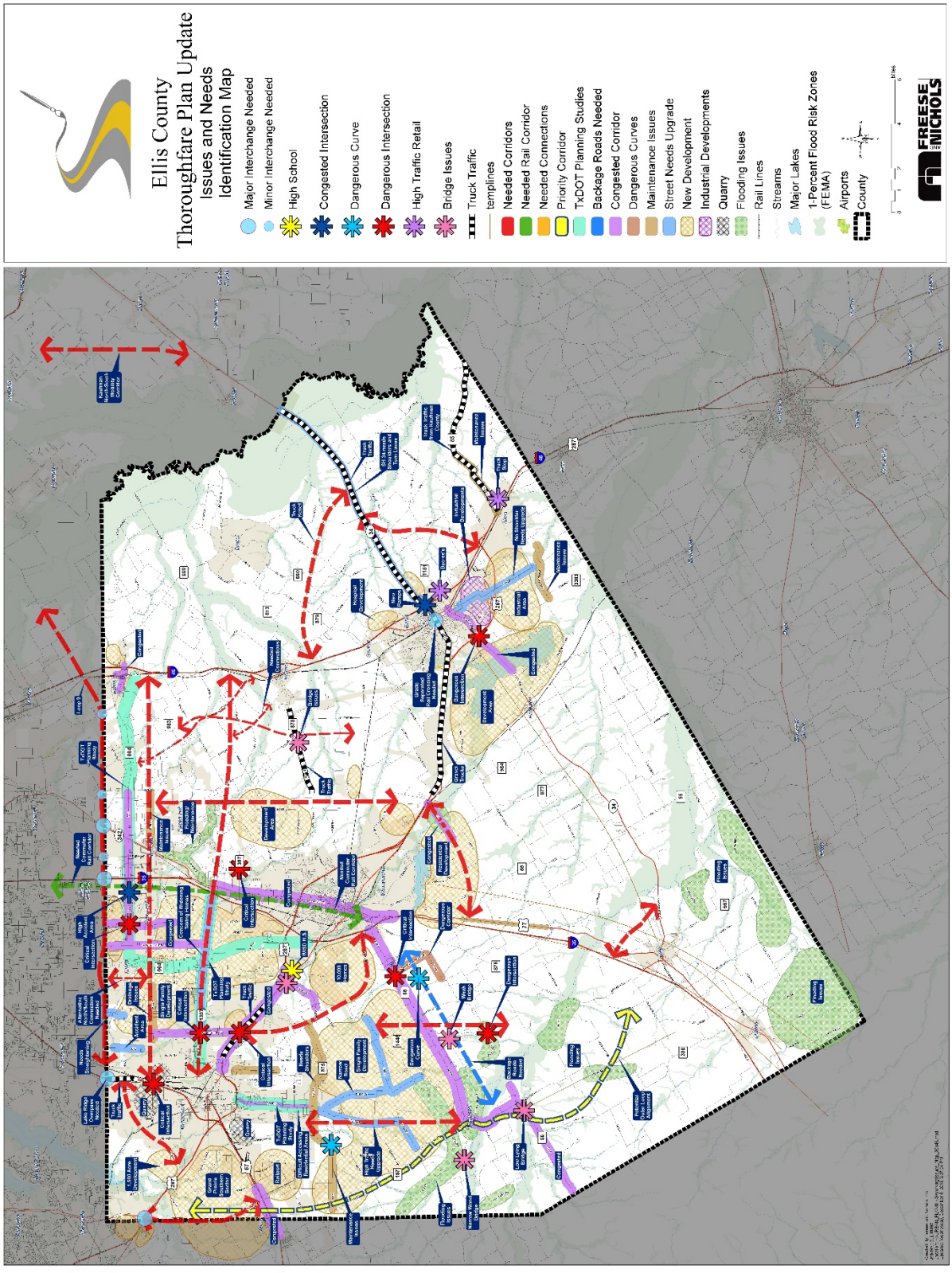
At Risk To: (X for Yes)									**Ellis County Critical and Vulnerable Facility and Infrastructure**	
Dam Failure	Drought	Expansive Soils	Extreme Heat	Flooding	Thunderstorms	Tornadoes	Wildfires	Winter Storms	**Name or Description**	**Address**
X	X	X	X	X	X	X	X	X	MID-WAY REGIONAL AIRPORT	131 Airport Dr, Midlothian, TX 76065
X	X	X	X	X	X	X	X	X	MOONBOW AIRPORT	1520 E Highland Rd, Waxahachie, TX 75167
X	X	X	X	X	X	X	X	X	HURN AIRPORT	Farm to Market Rd 878, Waxahachie, TX 75165


Map A.1
Ellis County
FEMA DFIRM FLOOD ZONES 2012
ZONE
100 Year
100 Year (Detail)
500 Year
Dams
3 1.5 0 3 Miles
N
W
E
S
Emergency Preparedness


THE STATE OF TEXAS · ELLIS COUNTY ·
Water Conservation Districts
Ellis County, Texas
Ellis County
Non-Ellis County
Other Cities
Roads
Primary: Interstate Highway
Secondary: US & State Hwy
Secondary: FM, Ranch to Mkt, Loop, State Spur, US Alternate
Local: City, County, Park, Other
Dirt
Gravel Road
Private Road
Trail
Under Construction
Railroads
Lakes
Streams
Named
Unnamed
Water Conservation Districts
City Limits
TEXAS
N
W
E
S
0 3.5 7 Miles
Ellis County Engineering Dept (GIS)
Website:
Date Printed:
DISCLAIMER:


THE STATE OF TEXAS · ELLIS COUNTY ·
Ellis County 2019 Thoroughfare Plan with 2020 Updates
Date Printed: 10/30/2020
Thoroughfare Plan Roads
Original Anaylsis by Freese & Nichols
Freeway, Existing
Freeway, New
Principal Arterial, Existing
Principal Arterial, New
Minor Arterial, Existing
Minor Arterial, New
Roads
Primary: Interstate Highway
Secondary: US & State Hwy
Secondary: Toll
Local: FM, State Loop, State Spur, US Alternate
Local: City, County, Park, Other
Service Road
Private Road
Trail
Under Construction
Ellis County
City Limits
Railroads
Lakes
Streams
Named
Unnamed
TEXAS
N
W
E
S
Ellis County Engineering Dept (GIS)
Waxahachie, TX 75165
Webster: http://www.co.ellis.tx.us/engineering/gis.asp
Date Printed: Friday, October 30, 2020
DISCLAIMER:
Dallas County
Kaufman County
Henderson County
Navarro County
Hill County
Johnson County
Tarrant County


Ellis County
Thoroughfare Plan Update
Existing Conditions
Goods Movement, Freight
and Aviation
Legend
Airports
Primary Freight Network
Secondary Freight Network
Rail Crossings
Rail Lines
Ellis County
Major Lakes
1-Percent Flood Risk Zones (FEMA)
FREESE NICHOLS
Lancaster Airport
Dallas Executive Airport
Ennis Municipal Airport
Mid-Way Regional Airport
Garrett Air Park
Hillsboro Municipal
Cleburne Municipal Airport


Ellis County
Thoroughfare Plan Update
Issues and Needs
Identification Map
Major Interchange Needed
Minor Interchange Needed
High School
Congested Intersection
Dangerous Curve
Dangerous Intersection
High Traffic Retail
Bridge Issues
Truck Traffic
templines
Needed Corridors
Needed Rail Corridor
Needed Connections
Priority Corridor
TxDOT Planning Studies
Backage Roads Needed
Congested Corridor
Dangerous Curves
Maintenance Issues
Street Needs Upgrade
New Development
Industrial Developments
Quarry
Flooding Issues
Rail Lines
Streams
Major Lakes
1-Percent Flood Risk Zones
(FEMA)
Airports
County
FREESE NICHOLS

Appendix B: Capabilities Assessment

The following capability assessments examine the ability of the jurisdictions to implement and manage a comprehensive mitigation strategy. Strengths, weaknesses, and resources of the jurisdictions are identified as a means to develop an effective Hazard Mitigation Plan (HMP). The capabilities identified in these assessments were evaluated collectively to develop feasible recommendations, which support the implementation of effective mitigation activities.

The assessments include questions regarding existing plans, policies, and regulations that contribute to or hinder the ability to implement hazard mitigation activities, including legal and regulatory capabilities; administrative and technical capabilities; and fiscal capabilities.

City of Alma

Planning and Regulatory Assessment

Planning and regulatory capabilities are the plans, policies, codes, and ordinances that prevent and reduce the impacts of natural hazards.

Type of Plans	Have capability?	Level	If Yes…		
Comprehensive or Master Plan	☒ Yes ☐ No ☐ N/A	☒ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☒ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☒ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☒ No	**Comments (optional):**
Capital Improvement Plan (CIP)	☐ Yes ☐ No ☒ N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement	☐ Yes ☐ No	**Comments (optional):**

Type of Plans	Have capability?	Level	If Yes…		
			mitigation actions?		
Economic Development Plan	☐ Yes ☐ No ☒ N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**
Local Emergency Operations Plan	☒ Yes ☐ No ☐ N/A	☒ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☒ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☒ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☒ Yes ☐ No	**Comments (optional):**
Continuity of Operations Plan	☐ Yes ☒ No ☐ N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**

Type of Plans	Have capability?	Level	If Yes…		
Transportation Plan	☐Yes ☒No ☐N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐Yes ☐No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐Yes ☐No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐Yes ☐No	**Comments (optional):**
Stormwater Management Plan	☐Yes ☒No ☐N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐Yes ☐No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐Yes ☐No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐Yes ☐No	**Comments (optional):**
Community Wildfire Protection Plan	☐Yes ☒No ☐N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐Yes ☐No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐Yes ☐No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐Yes ☐No	**Comments (optional):**
Green Infrastructure Plan	☐Yes ☐No	☐ Local	**Does the plan address natural hazards?**	☐Yes ☐No	**Comments (optional):**

Type of Plans	Have capability?	Level	If Yes…		
	☒N/A	☐ County ☐ Region	**Does the plan identify projects to include in the mitigation strategy?**	☐Yes ☐No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐Yes ☐No	**Comments (optional):**
Parks or Open Space Plan	☐Yes ☐No ☒N/A	☐ Local ☒ County ☐ Region	**Does the plan address natural hazards?**	☐Yes ☐No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☒Yes ☐No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐Yes ☐No	**Comments (optional):**
Hazard Mitigation Plan	☒Yes ☐No ☐N/A	☐ Local ☒ County ☐ Region	**Does the plan address natural hazards?**	☐Yes ☐No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐Yes ☐No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐Yes ☐No	**Comments (optional):**

Land Use Planning and Ordinances	Have capability?	If Yes…		
Zoning Ordinance	☒Yes	**Is the ordinance an effective measure for**	☒Yes	**Comments (optional):**

Land Use Planning and Ordinances	Have capability?	If Yes…		
	☐ No ☐ N/A	**reducing hazard impacts?**	☐ No	
		Is the ordinance adequately administered and enforced?	☒ Yes ☐ No	**Comments (optional):**
Subdivision Ordinance	☒ Yes ☐ No ☐ N/A	**Is the ordinance an effective measure for reducing hazard impacts?**	☒ Yes ☐ No	**Comments (optional):**
		Is the ordinance adequately administered and enforced?	☐ Yes ☐ No	**Comments (optional):**
		Is the FIRM adequately administered and enforced?	☐ Yes ☐ No	**Comments (optional):**
Natural Hazard Specific Ordinance (e.g., stormwater, wildfire)	☐ Yes ☒ No ☐ N/A	**Is the ordinance an effective measure for reducing hazard impacts?**	☐ Yes ☐ No	**Comments (optional):**
		Is the ordinance adequately administered and enforced?	☐ Yes ☐ No	**Comments (optional):**
Acquisition of land for open space and public recreation uses	☐ Yes ☒ No ☐ N/A	**Is the ordinance an effective measure for reducing hazard impacts?**	☐ Yes ☐ No	**Comments (optional):**
		Is the ordinance adequately administered and enforced?	☐ Yes ☐ No	**Comments (optional):**

Building Code, Permitting, and Inspections	Have capability?	
Building Code	☒ Yes ☐ No ☐ N/A	**Version/Year: 2009 IBC**

Building Code Effectiveness Grading Schedule (BGEGS) Score	☐Yes ☒No ☐N/A	**Score:**
Fire Department ISO Rating	☐Yes ☒No ☐N/A	**Rating:**
Site Plan Review Requirements	☒Yes ☐No ☐N/A	**Review method: Building Inspector**

Administrative and Technical Assessment

Administrative and technical capabilities include staff and their skills and tools that can be used for mitigation planning and to implement specific mitigation actions.

Administration	**Have capability?**	**If Yes…**
Planning Commission	☐Yes ☐No ☒N/A	**Describe capability:**
Mitigation Planning Committee	☒Yes	**Describe capability:** Identifies hazards, conducts a risk and vulnerability assessment, and creates and monitors mitigation actions.
Maintenance programs to reduce risk (e.g., tree trimming, clearing drainage systems)	☒Yes ☐No ☐N/A	**Describe capability:** Tree trimming, clearing drainage systems
Mutual Aid Agreements	☒Yes ☐No ☐N/A	**Describe capability:** County and state mutual aid agreements

Staff	Have capability? FT/PT*	If Yes…	
***Full-time (FT) or part-time (PT) position**			
Chief Building Official	☒Yes-FT ☐Yes- PT ☐No ☐N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☒ Yes ☐No
Parks and Recreation Director	☐Yes-FT ☐Yes- PT ☒No ☐N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐No
Emergency Manager	☐Yes-FT ☒Yes- PT ☐No ☐N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐No
Community Planner	☐Yes-FT ☐Yes- PT ☐No ☒N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐No
Civil Engineer	☐Yes-FT ☐Yes- PT ☐No ☐N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐No

Staff	Have capability? FT/PT*	If Yes…	
***Full-time (FT) or part-time (PT) position**			
GIS Coordinator	☐Yes-FT ☐Yes- PT ☒No ☐N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐No
Public Works Director	☐Yes-FT ☐Yes- PT ☒No ☐N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐No
Fire Chief	☐Yes-FT ☒Yes- PT ☐No ☐N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☒ Yes ☐No
Environmental Director	☐Yes-FT ☐Yes- PT ☒No ☐N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐No

Technical	Have capability?	If Yes…
Warning Systems/Services	☐Yes	**Describe capability:**

Technical	Have capability?	If Yes…	
(e.g., Reverse 911, outdoor warning signals)	☒No ☐N/A	**Has capability been used to assess or mitigate risk in the past?**	☐ Yes ☐ No
		If yes, for what type of hazard event?	
Hazard data and information	☐Yes ☒No ☐N/A	**Describe capability:**	
		Has capability been used to assess or mitigate risk in the past?	☐ Yes ☐ No
		If yes, for what type of hazard event?	
Grant writing	☐Yes ☒No ☐N/A	**Describe capability:**	
		Has capability been used to assess or mitigate risk in the past?	☐ Yes ☐ No
		If yes, for what type of hazard event?	
HaZUS analysis or GIS software	☐Yes ☒No ☐N/A	**Describe capability:**	
		Has capability been used to assess or mitigate risk in the past?	☐ Yes ☐ No
		If yes, for what type of hazard event?	

Education and Outreach Assessment

Education and outreach programs and methods can be used to implement mitigation activities and communicate hazard-related information.

Program or Organization	Have capability?	If Yes…	
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	☐Yes ☐No ☒N/A	**Could the program or organization help implement future mitigation activities?**	☐ Yes ☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation:	
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	☐Yes ☐No ☒N/A	**Could the program or organization help implement future mitigation activities?**	☐ Yes ☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation:	
Natural disaster or safety related school programs	☐Yes ☒No ☐N/A	**Could the program or organization help implement future mitigation activities?**	☐ Yes ☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation:	
Public/private partnership initiatives addressing disaster-related issues	☐Yes ☒No ☐N/A	**Could the program or organization help implement future mitigation activities?**	☐ Yes ☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation:	
StormReady certification	☐Yes ☒No ☐N/A		
Firewise Communities Certification	☐Yes ☒No ☐N/A		

Financial Assessment

Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation.

Funding Resources	Have capability?	If Yes…	
Capital Improvements Project funding	☐ Yes ☒ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	
Authority to levy taxes for specific purposes	☒ Yes ☐ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☒ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☒ No
		If yes, for what type of mitigation activities?	
Fees for water, sewer, gas, and/or electric services	☒ Yes ☐ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☒ No
		Has the funding resource been used in past for mitigation activities for mitigation activities?	☐ Yes ☒ No
		If yes, for what type of mitigation activities?	
Impact fees for new development	☐ Yes ☐ No ☒ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes

Funding Resources	Have capability?	If Yes…	
			☐ No
		If yes, for what type of mitigation activities?	
Stormwater utility fee	☐ Yes ☐ No ☒ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	
Incurrence of debt through general obligation bonds and/or special tax bonds	☐ Yes ☐ No ☒ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	
Incur debt through private activities	☐ Yes ☒ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	
Community Development Block Grant	☐ Yes ☒ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No

Funding Resources	Have capability?	If Yes…	
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	
Other federal funding programs (e.g. FEMA mitigation grants)	☐ Yes ☐ No ☒ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	
State funding programs	☐ Yes ☒ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	

How can these capabilities be expanded and improved to reduce risk?
Actions that can expand and improve existing authorities, plans, policies, and resources for mitigation include budgeting and passing policies and procedures for mitigation actions, adopting and implementing stricter mitigation regulations, approving the hiring and training of staff for mitigation activities, and approving mitigation updates to existing plans as new needs are recognized.

City of Bardwell

Planning and Regulatory Assessment

Planning and regulatory capabilities are the plans, policies, codes, and ordinances that prevent and reduce the impacts of natural hazards.

Type of Plans	Have capability?	Level	If Yes…		
Comprehensive or Master Plan	☐ Yes ☒ No ☐ N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**
Capital Improvement Plan (CIP)	☐ Yes ☒ No ☐ N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**
Economic Development Plan	☐ Yes ☒ No ☐ N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional):**

Type of Plans	Have capability?	Level	If Yes…		
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**
Local Emergency Operations Plan	☒ Yes ☐ No ☐ N/A	☐ Local – ☒ County Ellis County Emergency Management Plan, 02/10/2021 ☐ Region	**Does the plan address natural hazards?**	☒ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☒ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☒ Yes ☐ No	**Comments (optional):**
Continuity of Operations Plan	☐ Yes ☒ No ☐ N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement	☐ Yes	**Comments (optional):**

Type of Plans	Have capability?	Level	If Yes…		
			mitigation actions?	☐ No	
Transportation Plan	☐ Yes ☒ No ☐ N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**
Stormwater Management Plan	☒ Yes ☐ No ☐ N/A	☒ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☒ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☒ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**
Community Wildfire Protection Plan	☐ Yes ☒ No ☐ N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to	☐ Yes	**Comments (optional):**

Type of Plans	Have capability?	Level	If Yes…		
			include in the mitigation strategy?	☐ No	
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**
Green Infrastructure Plan	☐ Yes ☐ No ☒ N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**
Parks or Open Space Plan	☐ Yes ☐ No ☒ N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☒ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**

Type of Plans	Have capability?	Level	If Yes…		
Hazard Mitigation Plan	☒Yes ☐No ☐N/A	☐Local ☒County ☐Region	**Does the plan address natural hazards?**	☒ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☒ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☒ Yes ☐ No	**Comments (optional):**

Land Use Planning and Ordinances	Have capability?	If Yes…		
Zoning Ordinance	☒Yes ☐No ☐N/A	**Is the ordinance an effective measure for reducing hazard impacts?**	☒Yes ☐No	**Comments (optional):**
		Is the ordinance adequately administered and enforced?	☒Yes ☐No	**Comments (optional):**
Subdivision Ordinance	☒Yes ☐No ☐N/A	**Is the ordinance an effective measure for reducing hazard impacts?**	☒Yes ☐No	**Comments (optional):**
		Is the ordinance adequately administered and enforced?	☒Yes ☐No	**Comments (optional):**
		Is the FIRM adequately administered and enforced?	☐Yes ☐No	**Comments (optional):**
Natural Hazard Specific Ordinance	☐Yes	**Is the ordinance an effective measure for**	☐Yes	**Comments (optional):**

Land Use Planning and Ordinances	Have capability?	If Yes…		
(e.g., stormwater, wildfire)	☒No ☐N/A	**reducing hazard impacts?**	☐No	
		Is the ordinance adequately administered and enforced?	☐Yes ☐No	**Comments (optional):**
Acquisition of land for open space and public recreation uses	☐Yes ☒No ☐N/A	**Is the ordinance an effective measure for reducing hazard impacts?**	☐Yes ☐No	**Comments (optional):**
		Is the ordinance adequately administered and enforced?	☐Yes ☐No	**Comments (optional):**

Building Code, Permitting, and Inspections	Have capability?	
Building Code	☐Yes ☒No ☐N/A	**Version/Year:**
Building Code Effectiveness Grading Schedule (BGEGS) Score	☐Yes ☒No ☐N/A	**Score:**
Fire Department ISO Rating	☐Yes ☒No ☐N/A	**Rating:**
Site Plan Review Requirements	☒Yes ☐No ☐N/A	**Review method: Building Inspector**

Administrative and Technical Assessment

Administrative and technical capabilities include staff and their skills and tools that can be used for mitigation planning and to implement specific mitigation actions.

Administration	Have capability?	If Yes…

Planning Commission	☐Yes ☒No ☐N/A	**Describe capability:**
Mitigation Planning Committee	☒Yes	**Describe capability:** The City of Bardwell participates in the Ellis County Hazard Mitigation Action Planning Committee that Identifies hazards, conducts a risk and vulnerability assessment, and creates and monitors mitigation actions.
Maintenance programs to reduce risk (e.g., tree trimming, clearing drainage systems)	☒Yes ☐No ☐N/A	**Describe capability:** Tree trimming, clearing drainage systems
Mutual Aid Agreements	☒Yes ☐No ☐N/A	**Describe capability:** County and state mutual aid agreements

Staff	**Have capability? FT/PT***	**If Yes…**	
***Full-time (FT) or part-time (PT) position**			
Chief Building Official	☐Yes-FT ☐Yes- PT ☒No ☐N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐No
Parks and Recreation Director	☐Yes-FT ☐Yes- PT ☒No ☐N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☒No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☒No
Emergency Manager	☐Yes-FT	**Is staffing adequate to enforce regulations?**	☐ Yes

Staff	Have capability? FT/PT*	If Yes…	
***Full-time (FT) or part-time (PT) position**			
	☐Yes- PT ☒No ☐N/A		☐No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐No
Community Planner	☐Yes-FT ☐Yes- PT ☐No ☒N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐No
Civil Engineer	☐Yes-FT ☐Yes- PT ☒No ☐N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐No
GIS Coordinator	☐Yes-FT ☐Yes- PT ☒No ☐N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐No
Public Works Director	☐Yes-FT ☐Yes- PT ☒No ☐N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐No

Staff	Have capability? FT/PT*	If Yes…	
***Full-time (FT) or part-time (PT) position**			
Fire Chief	☐ Yes-FT ☒ Yes- PT ☐ No ☐ N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐ No
		Is staff trained on natural hazards and mitigation?	☒ Yes ☐ No
Environmental Director	☐ Yes-FT ☐ Yes- PT ☒ No ☐ N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐ No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐ No

Technical	Have capability?	If Yes…	
Warning Systems/Services (e.g., Reverse 911, outdoor warning signals)	☐ Yes ☒ No ☐ N/A	**Describe capability:**	
		Has capability been used to assess or mitigate risk in the past?	☐ Yes ☒ No
		If yes, for what type of hazard event?	
Hazard data and information	☒ Yes ☐ No ☐ N/A	**Describe capability:** The Ellis County Hazard Mitigation Action Plan has historical occurrences of natural hazards that are reviewed during the planning process to determine risks to people, property and the environment.	
		Has capability been used to assess or mitigate risk in the past?	☒ Yes ☐ No
		If yes, for what type of hazard event? Natural hazards	
Grant writing	☐ Yes	**Describe capability:**	

Technical	Have capability?	If Yes…	
	☒No ☐N/A	**Has capability been used to assess or mitigate risk in the past?**	☐Yes ☐No
		If yes, for what type of hazard event?	
HaZUS analysis or GIS software	☐Yes ☒No ☐N/A	**Describe capability:**	
		Has capability been used to assess or mitigate risk in the past?	☐Yes ☐No
		If yes, for what type of hazard event?	

Education and Outreach Assessment

Education and outreach programs and methods can be used to implement mitigation activities and communicate hazard-related information.

Program or Organization	Have capability?	If Yes…	
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	☐Yes ☐No ☒N/A	**Could the program or organization help implement future mitigation activities?**	☐ Yes ☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation:	
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	☐Yes ☐No ☒N/A	**Could the program or organization help implement future mitigation activities?**	☐ Yes ☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation:	
Natural disaster or safety related school programs	☐Yes ☒No ☐N/A	**Could the program or organization help implement future mitigation activities?**	☐ Yes ☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation:	

Program or Organization	Have capability?	If Yes…	
Public/private partnership initiatives addressing disaster-related issues	☐Yes ☒No ☐N/A	**Could the program or organization help implement future mitigation activities?**	☐ Yes ☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation:	
StormReady certification	☐Yes ☒No ☐N/A		
Firewise Communities Certification	☐Yes ☒No ☐N/A		

Financial Assessment

Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation.

Funding Resources	Have capability?	If Yes…	
Capital Improvements Project funding	☐Yes ☒No ☐N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	
Authority to levy taxes for specific purposes	☒Yes ☐No ☐N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☒ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes

Funding Resources	Have capability?	If Yes…	
			☒ No
		If yes, for what type of mitigation activities?	
Fees for water, sewer, gas, and/or electric services	☒Yes ☐No ☐N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☒ No
		Has the funding resource been used in past for mitigation activities for mitigation activities?	☐ Yes ☒ No
		If yes, for what type of mitigation activities?	
Impact fees for new development	☐Yes ☐No ☒N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	
Stormwater utility fee	☐Yes ☐No ☒N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	
Incurrence of debt through general obligation bonds and/or special tax bonds	☐Yes ☐No ☒N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No

Funding Resources	Have capability?	If Yes…	
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	
Incur debt through private activities	☐ Yes ☒ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	
Community Development Block Grant	☒ Yes ☐ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☒ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☒ No
		If yes, for what type of mitigation activities?	
Other federal funding programs (e.g. FEMA mitigation grants)	☒ Yes ☐ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☒ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☒ No
		If yes, for what type of mitigation activities?	
State funding programs	☐ Yes	**Could the resource be used to fund future mitigation activities?**	☐ Yes

Funding Resources	Have capability?	If Yes…	
	☒No ☐N/A		☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	

How can these capabilities be expanded and improved to reduce risk?
Actions that can expand and improve existing authorities, plans, policies, and resources for mitigation include budgeting and passing policies and procedures for mitigation actions, adopting and implementing stricter mitigation regulations, approving the hiring and training of staff for mitigation activities, and approving mitigation updates to existing plans as new needs are recognized.

City of Ennis

Planning and Regulatory Assessment

Planning and regulatory capabilities are the plans, policies, codes, and ordinances that prevent and reduce the impacts of natural hazards.

Type of Plans	Have capability?	Level	If Yes…		
Comprehensive or Master Plan	☒Yes ☐No ☐N/A	☒ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☒Yes ☐No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☒Yes ☐No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☒Yes ☐No	**Comments (optional):**
Capital Improvement Plan (CIP)	☒Yes ☐No	☒ Local	**Does the plan address natural hazards?**	☒Yes ☐No	**Comments (optional):**

Type of Plans	Have capability?	Level	If Yes…		
	☐N/A	☐ County ☐ Region	**Does the plan identify projects to include in the mitigation strategy?**	☒Yes ☐No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☒Yes ☐No	**Comments (optional):**
Economic Development Plan	☒Yes ☐No ☐N/A	☒ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☒Yes ☐No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☒Yes ☐No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☒Yes ☐No	**Comments (optional):**
Local Emergency Operations Plan	☒Yes ☐No ☐N/A	☒ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☒Yes ☐No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☒Yes ☐No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☒Yes ☐No	**Comments (optional):**
Continuity of Operations Plan	☒Yes ☐No ☐N/A	☐ Local ☐ County	**Does the plan address natural hazards?**	☒Yes ☐No	**Comments (optional):**
			Does the plan identify projects to include in the	☒Yes ☐No	**Comments (optional):**

Type of Plans	Have capability?	Level	If Yes…		
		☐ Region	**mitigation strategy?**		
			Can the plan be used to implement mitigation actions?	☒ Yes ☐ No	**Comments (optional):**
Transportation Plan	☐ Yes ☒ No ☐ N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☒ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☒ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☒ Yes ☐ No	**Comments (optional):**
Stormwater Management Plan	☒ Yes ☐ No ☐ N/A	☒ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☒ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☒ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☒ Yes ☐ No	**Comments (optional):**
Community Wildfire Protection Plan	☐ Yes ☐ No ☐ N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☒ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☒ Yes ☐ No	**Comments (optional):**

Type of Plans	Have capability?	Level	If Yes…		
			Can the plan be used to implement mitigation actions?	☒Yes ☐No	**Comments (optional):**
Green Infrastructure Plan	☒Yes ☐No ☐N/A	☒ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☒Yes ☐No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☒Yes ☐No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☒Yes ☐No	**Comments (optional):**
Parks or Open Space Plan	☒Yes ☐No ☐N/A	☒ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☒Yes ☐No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☒Yes ☐No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☒Yes ☐No	**Comments (optional):**
Hazard Mitigation Plan	☒Yes ☐No ☐N/A	☒ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☒Yes ☐No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☒Yes ☐No	**Comments (optional):**
			Can the plan be used to implement	☒Yes ☐No	**Comments (optional):**

Type of Plans	Have capability?	Level	If Yes…		
			mitigation actions?		

Land Use Planning and Ordinances	Have capability?	If Yes…		
Zoning Ordinance	☒Yes ☐No ☐N/A	**Is the ordinance an effective measure for reducing hazard impacts?**	☒Yes ☐No	**Comments (optional):**
		Is the ordinance adequately administered and enforced?	☒Yes ☐No	**Comments (optional):**
Subdivision Ordinance	☒Yes ☐No ☐N/A	**Is the ordinance an effective measure for reducing hazard impacts?**	☒Yes ☐No	**Comments (optional):**
		Is the ordinance adequately administered and enforced?	☐Yes ☐No	**Comments (optional):**
		Is the FIRM adequately administered and enforced?	☐Yes ☐No	**Comments (optional):**
Natural Hazard Specific Ordinance (e.g., stormwater, wildfire)	☐Yes ☒No ☐N/A	**Is the ordinance an effective measure for reducing hazard impacts?**	☐Yes ☐No	**Comments (optional):**
		Is the ordinance adequately administered and enforced?	☐Yes ☐No	**Comments (optional):**
Acquisition of land for open space and public recreation uses	☒Yes ☐No ☐N/A	**Is the ordinance an effective measure for reducing hazard impacts?**	☒Yes ☐No	**Comments (optional):**
		Is the ordinance adequately administered and enforced?	☒Yes ☐No	**Comments (optional):**

Building Code, Permitting, and Inspections	Have capability?	
Building Code	☒Yes ☐No ☐N/A	**Version/Year: IBC 2015**
Building Code Effectiveness Grading Schedule (BGEGS) Score	☐Yes ☐No ☐N/A	**Score:**
Fire Department ISO Rating	☒Yes ☐No ☐N/A	**Rating: 2**
Site Plan Review Requirements	☒Yes ☐No ☐N/A	**Review method:**

Administrative and Technical Assessment

Administrative and technical capabilities include staff and their skills and tools that can be used for mitigation planning and to implement specific mitigation actions.

Administration	Have capability?	If Yes…
Planning Commission	☒Yes ☐No ☐N/A	**Describe capability:**
Mitigation Planning Committee	☒Yes	**Describe capability:** Identifies hazards, conducts a risk and vulnerability assessment, and creates and monitors mitigation actions.
Maintenance programs to reduce risk (e.g., tree trimming, clearing drainage systems)	☒Yes ☐No ☐N/A	**Describe capability:** Tree trimming, clearing drainage systems
Mutual Aid Agreements	☒Yes ☐No	**Describe capability:** County and state mutual aid agreements

	☐N/A	

Staff	Have capability? FT/PT*	If Yes…	
***Full-time (FT) or part-time (PT) position**			
Chief Building Official	☒Yes-FT ☐Yes- PT ☐No ☐N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☒ Yes ☐No
Parks and Recreation Director	☒Yes-FT ☐Yes- PT ☐No ☐N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☒ Yes ☐No
Emergency Manager	☒Yes-FT ☐Yes- PT ☐No ☐N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☒ Yes ☐No
Community Planner	☒Yes-FT ☐Yes- PT ☐No ☐N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☒ Yes ☐No
Civil Engineer	☒Yes-FT ☐Yes- PT	**Is staffing adequate to enforce regulations?**	☒ Yes ☐No

Staff	Have capability? FT/PT*	If Yes…	
***Full-time (FT) or part-time (PT) position**			
	☐ No ☐ N/A	**Is staff trained on natural hazards and mitigation?**	☐ Yes ☐ No
GIS Coordinator	☒ Yes-FT ☐ Yes- PT ☐ No ☐ N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐ No
		Is staff trained on natural hazards and mitigation?	☒ Yes ☐ No
Public Works Director	☒ Yes-FT ☐ Yes- PT ☐ No ☐ N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐ No
		Is staff trained on natural hazards and mitigation?	☒ Yes ☐ No
Fire Chief	☒ Yes-FT ☐ Yes- PT ☐ No ☐ N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐ No
		Is staff trained on natural hazards and mitigation?	☒ Yes ☐ No
Environmental Director	☐ Yes-FT ☐ Yes- PT ☒ No ☐ N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☒ No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☒ No

Technical	Have capability?	If Yes…	
Warning Systems/Services (e.g., Reverse 911, outdoor warning signals)	☒Yes ☐No ☐N/A	**Describe capability:**	
		Has capability been used to assess or mitigate risk in the past?	☐ Yes ☒ No
		If yes, for what type of hazard event?	
Hazard data and information	☒Yes ☐No ☐N/A	**Describe capability:**	
		Has capability been used to assess or mitigate risk in the past?	☒ Yes ☐ No
		If yes, for what type of hazard event?	
Grant writing	☒Yes ☐No ☐N/A	**Describe capability:**	
		Has capability been used to assess or mitigate risk in the past?	☒ Yes ☐ No
		If yes, for what type of hazard event?	
HaZUS analysis or GIS software	☒Yes ☐No ☐N/A	**Describe capability:**	
		Has capability been used to assess or mitigate risk in the past?	☒ Yes ☐ No
		If yes, for what type of hazard event?	

Education and Outreach Assessment

Education and outreach programs and methods can be used to implement mitigation activities and communicate hazard-related information.

Program or Organization	Have capability?	If Yes…	
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	☒Yes ☐No ☐N/A	**Could the program or organization help implement future mitigation activities?**	☒ Yes ☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation:	
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	☒Yes ☐No ☐N/A	**Could the program or organization help implement future mitigation activities?**	☒ Yes ☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation:	
Natural disaster or safety related school programs	☒Yes ☐No ☐N/A	**Could the program or organization help implement future mitigation activities?**	☒ Yes ☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation:	
Public/private partnership initiatives addressing disaster-related issues	☒Yes ☐No ☐N/A	**Could the program or organization help implement future mitigation activities?**	☒ Yes ☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation:	
StormReady certification	☐Yes ☒No ☐N/A		
Firewise Communities Certification	☐Yes ☒No ☐N/A		

Financial Assessment

Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation.

Funding Resources	Have capability?	If Yes…	
Capital Improvements Project funding	☒ Yes ☐ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☒ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☒ No
		If yes, for what type of mitigation activities?	
Authority to levy taxes for specific purposes	☒ Yes ☐ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☒ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☒ No
		If yes, for what type of mitigation activities?	
Fees for water, sewer, gas, and/or electric services	☒ Yes ☐ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☒ Yes ☐ No
		Has the funding resource been used in past for mitigation activities for mitigation activities?	☐ Yes ☒ No
		If yes, for what type of mitigation activities?	
Impact fees for new development	☐ Yes ☒ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No

Funding Resources	Have capability?	If Yes…	
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	
Stormwater utility fee	☐ Yes ☒ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	
Incurrence of debt through general obligation bonds and/or special tax bonds	☒ Yes ☐ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☒ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☒ No
		If yes, for what type of mitigation activities?	
Incur debt through private activities	☒ Yes ☐ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☒ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☒ No
		If yes, for what type of mitigation activities?	
Community Development Block Grant	☒ Yes	**Could the resource be used to fund future mitigation activities?**	☒ Yes

Funding Resources	Have capability?	If Yes…	
	☐ No ☐ N/A		☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☒ No
		If yes, for what type of mitigation activities?	
Other federal funding programs (e.g. FEMA mitigation grants)	☒ Yes ☐ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☒ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☒ No
		If yes, for what type of mitigation activities?	
State funding programs	☒ Yes ☐ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☒ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☒ No
		If yes, for what type of mitigation activities?	

How can these capabilities be expanded and improved to reduce risk?
Actions that can expand and improve existing authorities, plans, policies, and resources for mitigation include budgeting and passing policies and procedures for mitigation actions, adopting and implementing stricter mitigation regulations, approving the hiring and training of staff for mitigation activities, and approving mitigation updates to existing plans as new needs are recognized.

City of Ferris

Planning and Regulatory Assessment

Planning and regulatory capabilities are the plans, policies, codes, and ordinances that prevent and reduce the impacts of natural hazards.

Type of Plans	Have capability?	Level	If Yes…		
Comprehensive or Master Plan	☒Yes ☐No ☐N/A	☒ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☒Yes ☐No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☒Yes ☐No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☒Yes ☐No	**Comments (optional):**
Capital Improvement Plan (CIP)	☒Yes ☐No ☐N/A	☒ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☒Yes ☐No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☒Yes ☐No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☒Yes ☐No	**Comments (optional):**
Economic Development Plan	☒Yes ☐No ☐N/A	☒ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☒Yes ☐No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☒Yes ☐No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☒Yes ☐No	**Comments (optional):**
Local Emergency Operations Plan	☒Yes ☐No	☒ Local	**Does the plan address natural hazards?**	☒Yes ☐No	**Comments (optional):**

Type of Plans	Have capability?	Level	If Yes…		
	☐ N/A	☐ County ☐ Region	**Does the plan identify projects to include in the mitigation strategy?**	☒ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☒ Yes ☐ No	**Comments (optional):**
Continuity of Operations Plan	☒ Yes ☐ No ☐ N/A	☒ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☒ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☒ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☒ Yes ☐ No	**Comments (optional):**
Transportation Plan	☐ Yes ☒ No ☐ N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**
Stormwater Management Plan	☒ Yes ☐ No ☐ N/A	☒ Local ☐ County	**Does the plan address natural hazards?**	☒ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the	☒ Yes ☐ No	**Comments (optional):**

Type of Plans	Have capability?	Level	If Yes…		
		☐ Region	**mitigation strategy?**		
			Can the plan be used to implement mitigation actions?	☒ Yes ☐ No	**Comments (optional):**
Community Wildfire Protection Plan	☒ Yes ☐ No ☐ N/A	☒ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☒ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☒ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☒ Yes ☐ No	**Comments (optional):**
Green Infrastructure Plan	☐ Yes ☒ No ☐ N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**
Parks or Open Space Plan	☒ Yes ☐ No ☐ N/A	☒ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☒ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☒ Yes ☐ No	**Comments (optional):**

Type of Plans	Have capability?	Level	If Yes…		
			Can the plan be used to implement mitigation actions?	☒ Yes ☐ No	**Comments (optional):**
Hazard Mitigation Plan	☒ Yes ☐ No ☐ N/A	☒ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☒ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☒ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☒ Yes ☐ No	**Comments (optional):**

Land Use Planning and Ordinances	Have capability?	If Yes…		
Zoning Ordinance	☒ Yes ☐ No ☐ N/A	**Is the ordinance an effective measure for reducing hazard impacts?**	☒ Yes ☐ No	**Comments (optional):**
		Is the ordinance adequately administered and enforced?	☒ Yes ☐ No	**Comments (optional):**
Subdivision Ordinance	☒ Yes ☐ No ☐ N/A	**Is the ordinance an effective measure for reducing hazard impacts?**	☒ Yes ☐ No	**Comments (optional):**
		Is the ordinance adequately administered and enforced?	☒ Yes ☐ No	**Comments (optional):**
		Is the FIRM adequately administered and enforced?	☐ Yes ☐ No	**Comments (optional):**

Land Use Planning and Ordinances	Have capability?	If Yes…		
Natural Hazard Specific Ordinance (e.g., stormwater, wildfire)	☒Yes ☐No ☐N/A	**Is the ordinance an effective measure for reducing hazard impacts?**	☒Yes ☐No	**Comments (optional):**
		Is the ordinance adequately administered and enforced?	☐Yes ☐No	**Comments (optional):**
Acquisition of land for open space and public recreation uses	☒Yes ☐No ☐N/A	**Is the ordinance an effective measure for reducing hazard impacts?**	☒Yes ☐No	**Comments (optional):**
		Is the ordinance adequately administered and enforced?	☒Yes ☐No	**Comments (optional):**

Building Code, Permitting, and Inspections	Have capability?	
Building Code	☒Yes ☐No ☐N/A	**Version/Year:** 2015 IBC
Building Code Effectiveness Grading Schedule (BGEGS) Score	☐Yes ☒No ☐N/A	**Score:**
Fire Department ISO Rating	☒Yes ☐No ☐N/A	**Rating: 3**
Site Plan Review Requirements	☒Yes ☐No ☐N/A	**Review method:**

Administrative and Technical Assessment

Administrative and technical capabilities include staff and their skills and tools that can be used for mitigation planning and to implement specific mitigation actions.

Administration	Have capability?	If Yes…
Planning Commission	☒Yes ☐No ☐N/A	**Describe capability:** Plan and coordinate strategic development throughout the city.
Mitigation Planning Committee	☐Yes	**Describe capability:** Identifies hazards, conducts a risk and vulnerability assessment, and creates and monitors mitigation actions.
Maintenance programs to reduce risk (e.g., tree trimming, clearing drainage systems)	☒Yes ☐No ☐N/A	**Describe capability:** Hydrant maintenance program, tree trimming throughout city streets, annual inspections, annual pre-incident planning tours.
Mutual Aid Agreements	☒Yes ☐No ☐N/A	**Describe capability:** EDUCT mutual aid agreement.

Staff	Have capability? FT/PT*	If Yes…	
***Full-time (FT) or part-time (PT) position**			
Chief Building Official	☒Yes-FT ☐Yes- PT ☐No ☐N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☒ Yes ☐No
Parks and Recreation Director	☒Yes-FT ☐Yes- PT ☐No ☐N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☒ Yes ☐No
Emergency Manager	☒Yes-FT ☐Yes- PT	**Is staffing adequate to enforce regulations?**	☒ Yes ☐No

Staff	Have capability? FT/PT*	If Yes…	
***Full-time (FT) or part-time (PT) position**			
	☐ No ☐ N/A	**Is staff trained on natural hazards and mitigation?**	☒ Yes ☐ No
Community Planner	☐ Yes-FT ☐ Yes- PT ☐ No ☐ N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐ No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐ No
Civil Engineer	☒ Yes-FT ☐ Yes- PT ☐ No ☐ N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐ No
		Is staff trained on natural hazards and mitigation?	☒ Yes ☐ No
GIS Coordinator	☐ Yes-FT ☐ Yes- PT ☐ No ☒ N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐ No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐ No
Public Works Director	☒ Yes-FT ☐ Yes- PT ☐ No ☐ N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐ No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐ No
Fire Chief	☒ Yes-FT ☐ Yes- PT	**Is staffing adequate to enforce regulations?**	☐ Yes ☐ No

Staff	Have capability? FT/PT*	If Yes…	
***Full-time (FT) or part-time (PT) position**			
	☐ No ☐ N/A	**Is staff trained on natural hazards and mitigation?**	☐ Yes ☐ No
Environmental Director	☐ Yes-FT ☐ Yes- PT ☒ No ☐ N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐ No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐ No

Technical	Have capability?	If Yes…	
Warning Systems/Services (e.g., Reverse 911, outdoor warning signals)	☒ Yes ☐ No ☐ N/A	**Describe capability:** Outdoor tornado sirens, NIXEL text messaging system, social media	
		Has capability been used to assess or mitigate risk in the past?	☒ Yes ☐ No
		If yes, for what type of hazard event? Severe weather such as tornadoes, winter freezes, and droughts.	
Hazard data and information	☒ Yes ☐ No ☐ N/A	**Describe capability:** Tier Two Reporting System	
		Has capability been used to assess or mitigate risk in the past?	☐ Yes ☒ No
		If yes, for what type of hazard event?	
Grant writing	☐ Yes ☐ No ☐ N/A	**Describe capability:** Currently establishing a program for this.	
		Has capability been used to assess or mitigate risk in the past?	☐ Yes

Technical	Have capability?	If Yes…	
			☐ No
		If yes, for what type of hazard event?	
HaZUS analysis or GIS software	☐ Yes ☐ No ☒ N/A	**Describe capability:**	
		Has capability been used to assess or mitigate risk in the past?	☐ Yes ☐ No
		If yes, for what type of hazard event?	

Education and Outreach Assessment

Education and outreach programs and methods can be used to implement mitigation activities and communicate hazard-related information.

Program or Organization	Have capability?	If Yes…	
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access, and functional needs populations, etc.	☐ Yes ☒ No ☐ N/A	**Could the program or organization help implement future mitigation activities?**	☐ Yes ☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation:	
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	☒ Yes ☐ No ☐ N/A	**Could the program or organization help implement future mitigation activities?**	☒ Yes ☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation: Public education on how to install and use smoke detectors properly, household fire safety, education on outdoor burning.	
Natural disaster or safety related school programs	☒ Yes ☐ No ☐ N/A	**Could the program or organization help implement future mitigation activities?**	☒ Yes ☐ No

Program or Organization	Have capability?	If Yes…	
		Describe program or organization and how it relates to disaster resilience and mitigation: Public school presentations on fire safety.	
Public/private partnership initiatives addressing disaster-related issues	☒Yes ☐No ☐N/A	**Could the program or organization help implement future mitigation activities?**	☒ Yes ☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation: Private churches have in the past provided housing for displaced peoples.	
StormReady certification	☐Yes ☒No ☐N/A		
Firewise Communities Certification	☐Yes ☒No ☐N/A		

Financial Assessment

Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation.

Funding Resources	Have capability?	If Yes…	
Capital Improvements Project funding	☐Yes ☐No ☐N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐No
		If yes, for what type of mitigation activities?	
Authority to levy taxes for specific purposes	☐Yes	**Could the resource be used to fund future mitigation activities?**	☐ Yes

Funding Resources	Have capability?	If Yes…	
	☐No ☐N/A		☐No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐No
		If yes, for what type of mitigation activities?	
Fees for water, sewer, gas, and/or electric services	☐Yes ☐No ☐N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐No
		Has the funding resource been used in past for mitigation activities for mitigation activities?	☐ Yes ☐No
		If yes, for what type of mitigation activities?	
Impact fees for new development	☐Yes ☐No ☐N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐No
		If yes, for what type of mitigation activities?	
Stormwater utility fee	☐Yes ☐No ☐N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐No
		If yes, for what type of mitigation activities?	
Incurrence of debt through general obligation bonds and/or special tax bonds	☐Yes ☐No ☐N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐No
		If yes, for what type of mitigation activities?	

Funding Resources	Have capability?	If Yes…	
Incur debt through private activities	☐ Yes ☐ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	
Community Development Block Grant	☐ Yes ☐ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	
Other federal funding programs (e.g. FEMA mitigation grants)	☐ Yes ☐ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	
State funding programs	☐ Yes ☐ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	

How can these capabilities be expanded and improved to reduce risk?
Actions that can expand and improve existing authorities, plans, policies, and resources for mitigation include budgeting and passing policies and procedures for mitigation actions, adopting and implementing stricter mitigation regulations, approving the hiring and training of staff for mitigation activities, and approving mitigation updates to existing plans as new needs are recognized.

City of Garrett

Planning and Regulatory Assessment

Planning and regulatory capabilities are the plans, policies, codes, and ordinances that prevent and reduce the impacts of natural hazards.

Type of Plans	Have capability?	Level	If Yes…		
Comprehensive or Master Plan	☒Yes ☐No ☐N/A	☒ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐Yes ☒No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐Yes ☒No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐Yes ☒No	**Comments (optional):**
Capital Improvement Plan (CIP)	☐Yes ☐No ☒N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐Yes ☐No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐Yes ☐No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐Yes ☐No	**Comments (optional):**
Economic Development Plan	☐Yes ☐No ☒N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐Yes ☐No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐Yes ☐No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐Yes ☐No	**Comments (optional):**
Local Emergency Operations Plan	☒Yes ☐No	☐ Local	**Does the plan address natural hazards?**	☐Yes ☐No	**City of Garrett mirrors Ellis County Emergency**

Type of Plans	Have capability?	Level	If Yes…		
	☐ N/A	☒ County ☐ Region			**Operations Plan Adopted June 2011**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**
Continuity of Operations Plan	☐ Yes ☒ No ☐ N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**
Transportation Plan	☐ Yes ☒ No ☐ N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**
Stormwater Management Plan	☐ Yes ☒ No	☐ Local	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional):**

Type of Plans	Have capability?	Level	If Yes…		
	☐N/A	☐ County ☐ Region	**Does the plan identify projects to include in the mitigation strategy?**	☐Yes ☐No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐Yes ☐No	**Comments (optional):**
Community Wildfire Protection Plan	☐Yes ☒No ☐N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐Yes ☐No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐Yes ☐No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐Yes ☐No	**Comments (optional):**
Green Infrastructure Plan	☐Yes ☐No ☒N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐Yes ☐No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐Yes ☐No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐Yes ☐No	**Comments (optional):**
Parks or Open Space Plan	☐Yes ☐No ☒N/A	☐ Local ☐ County	**Does the plan address natural hazards?**	☐Yes ☐No	**Comments (optional):**
			Does the plan identify projects to include in the	☐Yes ☐No	**Comments (optional):**

Type of Plans	Have capability?	Level	If Yes…		
		☐ Region	**mitigation strategy?**		
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**
Hazard Mitigation Plan	☒ Yes ☐ No ☐ N/A	☐ Local ☒ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**

Land Use Planning and Ordinances	Have capability?	If Yes…		
Zoning Ordinance	☒ Yes ☐ No ☐ N/A	**Is the ordinance an effective measure for reducing hazard impacts?**	☐ Yes ☒ No	**Comments (optional):**
		Is the ordinance adequately administered and enforced?	☒ Yes ☐ No	**Comments (optional):**
Subdivision Ordinance	☒ Yes ☐ No ☐ N/A	**Is the ordinance an effective measure for reducing hazard impacts?**	☐ Yes ☒ No	**Comments (optional):**
		Is the ordinance adequately administered and enforced?	☐ Yes ☐ No	**Comments (optional):**
		Is the FIRM adequately	☐ Yes	**Comments (optional):**

Land Use Planning and Ordinances	Have capability?	If Yes…		
		administered and enforced?	☐No	
Natural Hazard Specific Ordinance (e.g., stormwater, wildfire)	☐Yes ☒No ☐N/A	**Is the ordinance an effective measure for reducing hazard impacts?**	☐Yes ☐No	**Comments (optional):**
		Is the ordinance adequately administered and enforced?	☐Yes ☐No	**Comments (optional):**
Acquisition of land for open space and public recreation uses	☒Yes ☐No ☐N/A	**Is the ordinance an effective measure for reducing hazard impacts?**	☒Yes ☐No	**Comments (optional):**
		Is the ordinance adequately administered and enforced?	☒Yes ☐No	**Comments (optional):**

Building Code, Permitting, and Inspections	Have capability?	
Building Code	☒Yes ☐No ☐N/A	**Version/Year: 2017/ IBC**
Building Code Effectiveness Grading Schedule (BGEGS) Score	☐Yes ☐No ☒N/A	**Score:**
Fire Department ISO Rating	☐Yes ☐No ☒N/A	**Rating:**
Site Plan Review Requirements	☒Yes ☐No ☐N/A	**Building Inspector**

Administrative and Technical Assessment

Administrative and technical capabilities include staff and their skills and tools that can be used for mitigation planning and to implement specific mitigation actions.

Administration	Have capability?	If Yes…
Planning Commission	☐Yes ☐No ☒N/A	**Describe capability:**
Mitigation Planning Committee	☒Yes	**Describe capability:** City of Garrett participates in Ellis County Hazard Mitigation Planning committee that identifies hazards, conducts a risk vulnerability assessment and creates and monitors mitigation actions.
Maintenance programs to reduce risk (e.g., tree trimming, clearing drainage systems)	☒Yes ☐No ☐N/A	**Describe capability:** Tree trimming is done annually thru major accessed roads though out the City. Ditches are cleaned out as needed.
Mutual Aid Agreements	☒Yes ☐No ☐N/A	**Describe capability:** Interjurisdictional Mutual Aid Agreements with the State of Texas, County of Ellis and City of Garrett to provide mutual aid emergency services. Ellis County uses all county owned resources to respond to situation as needed. Statement of Agreement with American Red Cross. County contracts with East Texas Medical Center -EMS. Agreement with Garrett Volunteer Fire Department.

Staff	Have capability? FT/PT*	If Yes…	
***Full-time (FT) or part-time (PT) position**			
Chief Building Official	☐Yes-FT ☒Yes- PT ☐No ☐N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☒ Yes ☐No

Staff	Have capability? FT/PT*	If Yes…	
***Full-time (FT) or part-time (PT) position**			
Parks and Recreation Director	☐Yes-FT ☐Yes- PT ☒No ☐N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐No
Emergency Manager	☐Yes-FT ☐Yes- PT ☒No ☐N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐No
Community Planner	☐Yes-FT ☐Yes- PT ☒No ☐N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐No
Civil Engineer	☐Yes-FT ☒Yes- PT ☐No ☐N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☒ Yes ☐No
GIS Coordinator	☐Yes-FT ☐Yes- PT ☒No ☐N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐No

Staff	Have capability? FT/PT*	If Yes…	
*Full-time (FT) or part-time (PT) position			
Public Works Director	☒Yes-FT ☐Yes- PT ☐No ☐N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☒ Yes ☐No
Fire Chief	☐Yes-FT ☐Yes- PT ☒No ☐N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐No
Environmental Director	☐Yes-FT ☐Yes- PT ☒No ☐N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐No

Staff	Have capability? FT/PT*	If Yes…	
*Full-time (FT) or part-time (PT) position			
Chief Building Official	☐Yes-FT ☒Yes- PT ☐No ☐N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☒ Yes ☐No
Parks and Recreation Director	☐Yes-FT	**Is staffing adequate to enforce regulations?**	☐ Yes

Staff	Have capability? FT/PT*	If Yes…	
***Full-time (FT) or part-time (PT) position**			
	☐Yes- PT ☒No ☐N/A		☐No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐No
Emergency Manager	☐Yes-FT ☐Yes- PT ☒No ☐N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐No
Community Planner	☐Yes-FT ☐Yes- PT ☒No ☐N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐No
Civil Engineer	☐Yes-FT ☒Yes- PT ☐No ☐N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☒ Yes ☐No
GIS Coordinator	☐Yes-FT ☐Yes- PT ☒No ☐N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐No

Staff	Have capability? FT/PT*	If Yes…	
***Full-time (FT) or part-time (PT) position**			
Public Works Director	☒Yes-FT ☐Yes- PT ☐No ☐N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☒ Yes ☐No
Fire Chief	☐Yes-FT ☐Yes- PT ☒No ☐N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐No
Environmental Director	☐Yes-FT ☐Yes- PT ☒No ☐N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐No

Technical	Have capability?	If Yes…	
Warning Systems/Services (e.g., Reverse 911, outdoor warning signals)	☐Yes ☒No ☐N/A	**Describe capability:**	
		Has capability been used to assess or mitigate risk in the past?	☐Yes ☐No
		If yes, for what type of hazard event?	
Hazard data and information	☒Yes ☐No ☐N/A	The Ellis County Hazard Mitigation Action Plan has historical occurrences of natural hazards that are reviewed during the planning process to determine risks to people, property and the environment.	

Technical	Have capability?	If Yes…	
		Has capability been used to assess or mitigate risk in the past?	☐ Yes ☐ No
		If yes, for what type of hazard event?	
Grant writing	☒ Yes ☐ No ☐ N/A	**City of Garrett uses Public Management for all grant writing and assistance.**	
		Has capability been used to assess or mitigate risk in the past?	☐ Yes ☒ No
		If yes, for what type of hazard event?	
HaZUS analysis or GIS software	☐ Yes ☒ No ☐ N/A	**Describe capability:**	
		Has capability been used to assess or mitigate risk in the past?	☐ Yes ☐ No
		If yes, for what type of hazard event?	

Education and Outreach Assessment

Education and outreach programs and methods can be used to implement mitigation activities and communicate hazard-related information.

Program or Organization	Have capability?	If Yes…	
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	☐ Yes ☒ No ☐ N/A	**Could the program or organization help implement future mitigation activities?**	☐ Yes ☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation:	
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	☐ Yes ☒ No ☐ N/A	**Could the program or organization help implement future mitigation activities?**	☐ Yes ☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation:	

Program or Organization	Have capability?	If Yes…	
Natural disaster or safety related school programs	☐Yes ☒No ☐N/A	**Could the program or organization help implement future mitigation activities?**	☐ Yes ☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation:	
Public/private partnership initiatives addressing disaster-related issues	☐Yes ☒No ☐N/A	**Could the program or organization help implement future mitigation activities?**	☐ Yes ☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation:	
StormReady certification	☐Yes ☒No ☐N/A		
Firewise Communities Certification	☐Yes ☒No ☐N/A		

Financial Assessment

Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation.

Funding Resources	Have capability?	If Yes…	
Capital Improvements Project funding	☐Yes ☐No ☒N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	

Funding Resources	Have capability?	If Yes…	
Authority to levy taxes for specific purposes	☐ Yes ☐ No ☒ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	
Fees for water, sewer, gas, and/or electric services	☒ Yes ☐ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☒ No
		Has the funding resource been used in past for mitigation activities for mitigation activities?	☐ Yes ☒ No
		If yes, for what type of mitigation activities?	
Impact fees for new development	☐ Yes ☒ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	
Stormwater utility fee	☐ Yes ☒ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No

Funding Resources	Have capability?	If Yes…	
		If yes, for what type of mitigation activities?	
Incurrence of debt through general obligation bonds and/or special tax bonds	☐Yes ☒No ☐N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	
Incur debt through private activities	☐Yes ☒No ☐N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	
Community Development Block Grant	☒Yes ☐No ☐N/A	**Could the resource be used to fund future mitigation activities?**	☒ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☒ No
		If yes, for what type of mitigation activities?	
Other federal funding programs (e.g. FEMA mitigation grants)	☒Yes ☐No ☐N/A	**Could the resource be used to fund future mitigation activities?**	☒ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes

Funding Resources	Have capability?	If Yes…	
			☒ No
		If yes, for what type of mitigation activities?	
State funding programs	☐ Yes ☒ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	

How can these capabilities be expanded and improved to reduce risk?
Actions that can expand and improve existing authorities, plans, policies, and resources for mitigation include budgeting and passing policies and procedures for mitigation actions, adopting and implementing stricter mitigation regulations, approving the hiring and training of staff for mitigation activities, and approving mitigation updates to existing plans as new needs are recognized.

City of Italy

Planning and Regulatory Assessment

Planning and regulatory capabilities are the plans, policies, codes, and ordinances that prevent and reduce the impacts of natural hazards.

Type of Plans	Have capability?	Level	If Yes…		
Comprehensive or Master Plan	☒ Yes ☐ No ☐ N/A	☒ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☒ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☒ No	**Comments (optional):**
			Can the plan be used to implement	☐ Yes ☒ No	**Comments (optional):**

Type of Plans	Have capability?	Level	If Yes…		
			mitigation actions?		
Capital Improvement Plan (CIP)	☐ Yes ☒ No ☐ N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**
Economic Development Plan	☐ Yes ☒ No ☐ N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**
Local Emergency Operations Plan	☒ Yes ☐ No ☐ N/A	☒ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☒ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☒ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☒ No	**Comments (optional):**

Type of Plans	Have capability?	Level	If Yes…		
Continuity of Operations Plan	☐Yes ☒No ☐N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐Yes ☐No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐Yes ☐No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐Yes ☐No	**Comments (optional):**
Transportation Plan	☐Yes ☒No ☐N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐Yes ☐No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐Yes ☐No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐Yes ☐No	**Comments (optional):**
Stormwater Management Plan	☐Yes ☒No ☐N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐Yes ☐No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐Yes ☐No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐Yes ☐No	**Comments (optional):**
Community Wildfire Protection Plan	☐Yes ☒No	☐ Local	**Does the plan address natural hazards?**	☐Yes ☐No	**Comments (optional):**

Type of Plans	Have capability?	Level	If Yes…		
	☐N/A	☐ County ☐ Region	**Does the plan identify projects to include in the mitigation strategy?**	☐Yes ☐No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐Yes ☐No	**Comments (optional):**
Green Infrastructure Plan	☐Yes ☒No ☐N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐Yes ☐No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐Yes ☐No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐Yes ☐No	**Comments (optional):**
Parks or Open Space Plan	☐Yes ☒No ☐N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐Yes ☐No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐Yes ☐No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐Yes ☐No	**Comments (optional):**
Hazard Mitigation Plan	☐Yes ☒No ☐N/A	☐ Local ☐ County	**Does the plan address natural hazards?**	☐Yes ☐No	**Comments (optional):**
			Does the plan identify projects to include in the	☐Yes ☐No	**Comments (optional):**

Type of Plans	Have capability?	Level	If Yes…		
		☐ Region	**mitigation strategy?**		
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**

Land Use Planning and Ordinances	Have capability?	If Yes…		
Zoning Ordinance	☒ Yes ☐ No ☐ N/A	**Is the ordinance an effective measure for reducing hazard impacts?**	☐ Yes ☒ No	**Comments (optional):**
		Is the ordinance adequately administered and enforced?	☒ Yes ☐ No	**Comments (optional):**
Subdivision Ordinance	☐ Yes ☐ No ☐ N/A	**Is the ordinance an effective measure for reducing hazard impacts?**	☐ Yes ☒ No	**Comments (optional):**
		Is the ordinance adequately administered and enforced?	☒ Yes ☐ No	**Comments (optional):**
		Is the FIRM adequately administered and enforced?	☐ Yes ☒ No	**Comments (optional):**
Natural Hazard Specific Ordinance (e.g., stormwater, wildfire)	☐ Yes ☒ No ☐ N/A	**Is the ordinance an effective measure for reducing hazard impacts?**	☐ Yes ☐ No	**Comments (optional):**
		Is the ordinance adequately administered and enforced?	☐ Yes ☐ No	**Comments (optional):**
Acquisition of land for open space	☐ Yes ☒ No	**Is the ordinance an effective measure for**	☐ Yes ☐ No	**Comments (optional):**

Land Use Planning and Ordinances	Have capability?	If Yes…		
and public recreation uses	☐N/A	**reducing hazard impacts?**		
		Is the ordinance adequately administered and enforced?	☐Yes ☐No	**Comments (optional):**

Building Code, Permitting, and Inspections	Have capability?	
Building Code	☒Yes ☐No ☐N/A	**Version/Year: 2015**
Building Code Effectiveness Grading Schedule (BGEGS) Score	☐Yes ☒No ☐N/A	**Score:**
Fire Department ISO Rating	☐Yes ☒No ☐N/A	**Rating:**
Site Plan Review Requirements	☒Yes ☐No ☐N/A	**Review method: Contract with Bureau Veritas for this service**

Administrative and Technical Assessment

Administrative and technical capabilities include staff and their skills and tools that can be used for mitigation planning and to implement specific mitigation actions.

Administration	Have capability?	If Yes…
Planning Commission	☒Yes ☐No ☐N/A	**Describe capability:** **Established by City Council to review and provide recommendations.**
Mitigation Planning Committee	☒Yes	**Describe capability:** Identifies hazards, conducts a risk and vulnerability assessment, and creates and monitors mitigation actions.

Maintenance programs to reduce risk (e.g., tree trimming, clearing drainage systems)	☒Yes ☐No ☐N/A	**Describe capability:** **Public Works department crew maintains tree trimming and clearing drainage systems, etc.**
Mutual Aid Agreements	☒Yes ☐No ☐N/A	**Describe capability:** **Established mutual aid agreements with county precincts and law enforcement agencies.**

Staff	**Have capability? FT/PT***	**If Yes…**	
***Full-time (FT) or part-time (PT) position**			
Chief Building Official	☒Yes-FT ☐Yes- PT ☐No ☐N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☒ Yes ☐No
Parks and Recreation Director	☐Yes-FT ☐Yes- PT ☒No ☐N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐No
Emergency Manager	☐Yes-FT ☒Yes- PT ☐No ☐N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☒ Yes ☐No
Community Planner	☐Yes-FT ☒Yes- PT	**Is staffing adequate to enforce regulations?**	☒ Yes ☐No

Staff	Have capability? FT/PT*	If Yes…	
***Full-time (FT) or part-time (PT) position**			
	☐ No ☐ N/A	**Is staff trained on natural hazards and mitigation?**	☒ Yes ☐ No
Civil Engineer	☐ Yes-FT ☒ Yes- PT ☐ No ☐ N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐ No
		Is staff trained on natural hazards and mitigation?	☒ Yes ☐ No
GIS Coordinator	☐ Yes-FT ☐ Yes- PT ☒ No ☐ N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐ No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐ No
Public Works Director	☒ Yes-FT ☐ Yes- PT ☐ No ☐ N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐ No
		Is staff trained on natural hazards and mitigation?	☒ Yes ☐ No
Fire Chief	☐ Yes-FT ☒ Yes- PT ☐ No ☐ N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐ No
		Is staff trained on natural hazards and mitigation?	☒ Yes ☐ No
Environmental Director	☐ Yes-FT ☐ Yes- PT	**Is staffing adequate to enforce regulations?**	☐ Yes ☐ No

Staff	Have capability? FT/PT*	If Yes…	
*Full-time (FT) or part-time (PT) position			
	☒No ☐N/A	Is staff trained on natural hazards and mitigation?	☐ Yes ☐No

Technical	Have capability?	If Yes…	
Warning Systems/Services (e.g., Reverse 911, outdoor warning signals)	☒Yes ☐No ☐N/A	Describe capability:	
		Has capability been used to assess or mitigate risk in the past?	☒ Yes ☐ No
		If yes, for what type of hazard event? Severe weather events	
Hazard data and information	☐Yes ☒No ☐N/A	Describe capability:	
		Has capability been used to assess or mitigate risk in the past?	☐ Yes ☐ No
		If yes, for what type of hazard event?	
Grant writing	☒Yes ☐No ☐N/A	Describe capability:	
		Has capability been used to assess or mitigate risk in the past?	☒ Yes ☐ No
		If yes, for what type of hazard event? FEMA	
HaZUS analysis or GIS software	☐Yes	Describe capability:	

Technical	Have capability?	If Yes…	
	☒No ☐N/A	**Has capability been used to assess or mitigate risk in the past?**	☐ Yes ☐ No
		If yes, for what type of hazard event?	

Education and Outreach Assessment

Education and outreach programs and methods can be used to implement mitigation activities and communicate hazard-related information.

Program or Organization	Have capability?	If Yes…	
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	☐Yes ☒No ☐N/A	**Could the program or organization help implement future mitigation activities?**	☐ Yes ☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation:	
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	☐Yes ☒No ☐N/A	**Could the program or organization help implement future mitigation activities?**	☐ Yes ☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation:	
Natural disaster or safety related school programs	☐Yes ☒No ☐N/A	**Could the program or organization help implement future mitigation activities?**	☐ Yes ☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation:	
Public/private partnership initiatives addressing disaster-related issues	☐Yes ☒No ☐N/A	**Could the program or organization help implement future mitigation activities?**	☐ Yes ☐ No

Program or Organization	Have capability?	If Yes…
		Describe program or organization and how it relates to disaster resilience and mitigation:
StormReady certification	☐Yes ☒No ☐N/A	
Firewise Communities Certification	☐Yes ☒No ☐N/A	

Financial Assessment

Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation.

Funding Resources	Have capability?	If Yes…	
Capital Improvements Project funding	☐Yes ☒No ☐N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	
Authority to levy taxes for specific purposes	☒Yes ☐No ☐N/A	**Could the resource be used to fund future mitigation activities?**	☒ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☒ No
		If yes, for what type of mitigation activities?	

Funding Resources	Have capability?	If Yes…	
Fees for water, sewer, gas, and/or electric services	☒ Yes ☐ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☒ Yes ☐ No
		Has the funding resource been used in past for mitigation activities for mitigation activities?	☐ Yes ☒ No
		If yes, for what type of mitigation activities?	
Impact fees for new development	☐ Yes ☒ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	
Stormwater utility fee	☐ Yes ☒ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	
Incurrence of debt through general obligation bonds and/or special tax bonds	☒ Yes ☐ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☒ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☒ No

Funding Resources	Have capability?	If Yes…	
		If yes, for what type of mitigation activities?	
Incur debt through private activities	☐Yes ☒No ☐N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	
Community Development Block Grant	☒Yes ☐No ☐N/A	**Could the resource be used to fund future mitigation activities?**	☒ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☒ No
		If yes, for what type of mitigation activities?	
Other federal funding programs (e.g. FEMA mitigation grants)	☒Yes ☐No ☐N/A	**Could the resource be used to fund future mitigation activities?**	☒ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☒ Yes ☐ No
		If yes, for what type of mitigation activities? Flooding/Winter Storm	
State funding programs	☒Yes ☐No ☐N/A	**Could the resource be used to fund future mitigation activities?**	☒ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☒ Yes

Funding Resources	Have capability?	If Yes…	
			☐ No
		If yes, for what type of mitigation activities? TDEM, COVID-19	

How can these capabilities be expanded and improved to reduce risk?
Actions that can expand and improve existing authorities, plans, policies, and resources for mitigation include budgeting and passing policies and procedures for mitigation actions, adopting and implementing stricter mitigation regulations, approving the hiring and training of staff for mitigation activities, and approving mitigation updates to existing plans as new needs are recognized.

City of Maypearl

Planning and Regulatory Assessment

Planning and regulatory capabilities are the plans, policies, codes, and ordinances that prevent and reduce the impacts of natural hazards.

Type of Plans	Have capability?	Level	If Yes…		
Comprehensive or Master Plan	☐ Yes ☒ No ☐ N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**
Capital Improvement Plan (CIP)	☐ Yes ☒ No ☐ N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☐ No	**Comments (optional):**

Type of Plans	Have capability?	Level	If Yes…		
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**
Economic Development Plan	☐ Yes ☒ No ☐ N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**
Local Emergency Operations Plan	☐ Yes ☒ No ☐ N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**
Continuity of Operations Plan	☐ Yes ☒ No ☐ N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement	☐ Yes ☐ No	**Comments (optional):**

Type of Plans	Have capability?	Level	If Yes…		
			mitigation actions?		
Transportation Plan	☐ Yes ☒ No ☐ N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**
Stormwater Management Plan	☐ Yes ☒ No ☐ N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**
Community Wildfire Protection Plan	☐ Yes ☒ No ☐ N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**

Type of Plans	Have capability?	Level	If Yes…		
Green Infrastructure Plan	☐ Yes ☒ No ☐ N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**
Parks or Open Space Plan	☐ Yes ☒ No ☐ N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**
Hazard Mitigation Plan	☒ Yes ☐ No ☐ N/A	☐ Local ☒ County ☐ Region	**Does the plan address natural hazards?**	☒ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☒ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☒ Yes ☐ No	**Comments (optional):**

Land Use Planning and Ordinances	Have capability?	If Yes…		
Zoning Ordinance	☒Yes ☐No ☐N/A	**Is the ordinance an effective measure for reducing hazard impacts?**	☐Yes ☒No	**Comments (optional):**
		Is the ordinance adequately administered and enforced?	☒Yes ☐No	**Comments (optional):**
Subdivision Ordinance	☒Yes ☐No ☐N/A	**Is the ordinance an effective measure for reducing hazard impacts?**	☐Yes ☒No	**Comments (optional):**
		Is the ordinance adequately administered and enforced?	☐Yes ☐No	**Comments (optional):**
		Is the FIRM adequately administered and enforced?	☐Yes ☐No	**Comments (optional):**
Natural Hazard Specific Ordinance (e.g., stormwater, wildfire)	☐Yes ☒No ☐N/A	**Is the ordinance an effective measure for reducing hazard impacts?**	☐Yes ☐No	**Comments (optional):**
		Is the ordinance adequately administered and enforced?	☐Yes ☐No	**Comments (optional):**
Acquisition of land for open space and public recreation uses	☐Yes ☒No ☐N/A	**Is the ordinance an effective measure for reducing hazard impacts?**	☐Yes ☐No	**Comments (optional):**
		Is the ordinance adequately administered and enforced?	☐Yes ☐No	**Comments (optional):**

Building Code, Permitting, and Inspections	Have capability?	
Building Code	☐Yes ☒No	**Version/Year:**

	☐N/A	
Building Code Effectiveness Grading Schedule (BGEGS) Score	☐Yes ☒No ☐N/A	**Score:**
Fire Department ISO Rating	☐Yes ☒No ☐N/A	**Rating:**
Site Plan Review Requirements	☒Yes ☐No ☐N/A	**Review method: Planning and Zoning Commission & Bureau Veritas**

Administrative and Technical Assessment

Administrative and technical capabilities include staff and their skills and tools that can be used for mitigation planning and to implement specific mitigation actions.

Administration	**Have capability?**	**If Yes…**
Planning Commission	☒Yes ☐No ☐N/A	**Describe capability:** Planning and Zoning Commission is established and meets monthly.
Mitigation Planning Committee	☒Yes	**Describe capability:** Identifies hazards, conducts a risk and vulnerability assessment, and creates and monitors mitigation actions.
Maintenance programs to reduce risk (e.g., tree trimming, clearing drainage systems)	☒Yes ☐No ☐N/A	**Describe capability:** We have a public works department that maintains the roads with current funding constraints as well as trims trees and clears antiquated drainage systems.
Mutual Aid Agreements	☒Yes ☐No ☐N/A	**Describe capability:** Interjurisdictional Mutual Aid Agreement: State Mutual Aid throughout the county Maypearl ISD: local partnership to aid in financial support and mutual success Ellis County Sherriff's Department: Aids in disasters

Staff	Have capability? FT/PT*	If Yes…	
***Full-time (FT) or part-time (PT) position**			
Chief Building Official	☐Yes-FT ☐Yes- PT ☒No ☐N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐No
Parks and Recreation Director	☐Yes-FT ☐Yes- PT ☒No ☐N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐No
Emergency Manager	☐Yes-FT ☒Yes- PT ☐No ☐N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☒No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☒No
Community Planner	☐Yes-FT ☐Yes- PT ☒No ☐N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐No
Civil Engineer	☐Yes-FT ☐Yes- PT ☒No ☐N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐No

Staff	Have capability? FT/PT*	If Yes…	
***Full-time (FT) or part-time (PT) position**			
GIS Coordinator	☐Yes-FT ☐Yes- PT ☒No ☐N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐No
Public Works Director	☐Yes-FT ☐Yes- PT ☒No ☐N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐No
Fire Chief	☐Yes-FT ☐Yes- PT ☒No ☐N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐No
Environmental Director	☐Yes-FT ☐Yes- PT ☒No ☐N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐No

Technical	Have capability?	If Yes…
Warning Systems/Services	☐Yes	**Describe capability:**

Technical	Have capability?	If Yes…	
(e.g., Reverse 911, outdoor warning signals)	☒No ☐N/A	**Has capability been used to assess or mitigate risk in the past?**	☐ Yes ☐ No
		If yes, for what type of hazard event?	
Hazard data and information	☐Yes ☒No ☐N/A	**Describe capability:**	
		Has capability been used to assess or mitigate risk in the past?	☐ Yes ☐ No
		If yes, for what type of hazard event?	
Grant writing	☐Yes ☒No ☐N/A	**Describe capability:**	
		Has capability been used to assess or mitigate risk in the past?	☐ Yes ☐ No
		If yes, for what type of hazard event?	
HaZUS analysis or GIS software	☐Yes ☒No ☐N/A	**Describe capability:**	
		Has capability been used to assess or mitigate risk in the past?	☐ Yes ☐ No
		If yes, for what type of hazard event?	

Education and Outreach Assessment

Education and outreach programs and methods can be used to implement mitigation activities and communicate hazard-related information.

Program or Organization	Have capability?	If Yes…	
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	☐Yes ☒No ☐N/A	**Could the program or organization help implement future mitigation activities?**	☐ Yes ☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation:	
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	☐Yes ☒No ☐N/A	**Could the program or organization help implement future mitigation activities?**	☐ Yes ☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation:	
Natural disaster or safety related school programs	☐Yes ☒No ☐N/A	**Could the program or organization help implement future mitigation activities?**	☐ Yes ☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation:	
Public/private partnership initiatives addressing disaster-related issues	☐Yes ☒No ☐N/A	**Could the program or organization help implement future mitigation activities?**	☐ Yes ☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation:	
StormReady certification	☐Yes ☒No ☐N/A		
Firewise Communities Certification	☐Yes ☒No ☐N/A		

Financial Assessment

Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation.

Funding Resources	Have capability?	If Yes…	
Capital Improvements Project funding	☐ Yes ☒ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	
Authority to levy taxes for specific purposes	☒ Yes ☐ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☒ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☒ No
		If yes, for what type of mitigation activities?	
Fees for water, sewer, gas, and/or electric services	☒ Yes ☐ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☒ Yes ☐ No
		Has the funding resource been used in past for mitigation activities for mitigation activities?	☐ Yes ☒ No
		If yes, for what type of mitigation activities?	
Impact fees for new development	☐ Yes ☒ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes

Funding Resources	Have capability?	If Yes…	
			☐ No
		If yes, for what type of mitigation activities?	
Stormwater utility fee	☐ Yes ☒ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	
Incurrence of debt through general obligation bonds and/or special tax bonds	☒ Yes ☐ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☒ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☒ No
		If yes, for what type of mitigation activities?	
Incur debt through private activities	☐ Yes ☒ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	
Community Development Block Grant	☐ Yes ☒ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No

Funding Resources	Have capability?	If Yes…	
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	
Other federal funding programs (e.g. FEMA mitigation grants)	☐ Yes ☒ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	
State funding programs	☐ Yes ☒ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	

How can these capabilities be expanded and improved to reduce risk?
Actions that can expand and improve existing authorities, plans, policies, and resources for mitigation include budgeting and passing policies and procedures for mitigation actions, adopting and implementing stricter mitigation regulations, approving the hiring and training of staff for mitigation activities, and approving mitigation updates to existing plans as new needs are recognized.

City of Midlothian

Planning and Regulatory Assessment

Planning and regulatory capabilities are the plans, policies, codes, and ordinances that prevent and reduce the impacts of natural hazards.

Type of Plans	Have capability?	Level	If Yes…		
Comprehensive Plan	☒Yes ☐No ☐N/A	☒ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☒ No	**Comments (optional): Envision Midlothian 2018 addresses: Community engagement, economic & fiscal, community character & design, land-use (floodplain ordinances), transportation, parks, trails and environment, health & safety.**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☒ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☒ No	**Comments (optional):**
Capital Improvement Plan (CIP)	☒Yes ☐No ☐N/A	☒ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☒ No	**Comments (optional): Road improvements to drainage**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☒ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☒ No	**Comments (optional):**

Type of Plans	Have capability?	Level	If Yes…		
Economic Development Plan	☒Yes ☐No ☐N/A	☒ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☒ No	**Comments (optional): In December 2019, Economic Development Board approved a Plan that identifies:** **1. Business Park** **2. Department Fundamentals** **3. Expansion** **4. Workforce Development** **5. Partnerships**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☒ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☒ No	**Comments (optional):**
Local Emergency Operations Plan	☒Yes ☐No ☐N/A	☒ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☒ Yes ☐ No	**Comments (optional): 2021 Hazard Identification and Risk Assessment City of Midlothian Emergency Management Plan** **Annex A: Warning** **Annex B: Communications** **Annex C: Mass Care & Sheltering** **Annex D: Radiological Protection** **Annex E: Evacuation** **Annex F: Firefighting** **Annex G: Law Enforcement** **Annex H: Health and Medical Services** **Annex I: Emergency Pubic Information** **Annex J: Recovery & Pre-Disaster Recovery Plan** **Annex K: Public Works and Engineering**

Type of Plans	Have capability?	Level	If Yes…		
					Annex L: Utilities **Annex M: Resource Management** **Annex N: EOC Direction and Control** **Annex O: Human Services** **Annex P: Hazard Mitigation** **Annex Q: Hazardous Materials and Oil Spill Response** **Annex R: Search and Rescue** **Annex S: Transportation** **Annex T: Volunteer & Donations Management** **Annex U: Legal** **Annex V: Terrorist Incident Response**
			Does the plan identify projects to include in the mitigation strategy?	☒ Yes ☐ No	**Comments (optional): Annex P: Hazard Mitigation & Ellis County Hazard Mitigation Action Plan**
			Can the plan be used to implement mitigation actions?	☒ Yes ☐ No	**Comments (optional):**
Continuity of Operations Plan	☐ Yes ☒ No ☐ N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☒ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☒ No	**Comments (optional):**

Type of Plans	Have capability?	Level	If Yes…		
			Can the plan be used to implement mitigation actions?	☐ Yes ☒ No	**Comments (optional):**
Transportation Plan	☒ Yes ☒ No ☐ N/A	☐ Local ☐ County ☒ Region	**Does the plan address natural hazards?**	☐ Yes ☒ No	**Comments (optional):** Metropolitan Transportation Plan, Mobility 2045, was adopted by the Regional Transportation Council on June 14, 2018
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☒ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☒ No	**Comments (optional):**
Stormwater Management Plan	☒ Yes ☐ No ☐ N/A	☒ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional): On May 27, 2014, the City passed Resolution No. 2014-25 adopting the City of Midlothian SWMP** **On January 12, 2016, Ordinance No. 2016-01 was adopted to establish *Rules and Regulations* for the SWMP.**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☒ No	**Comments (optional):**

Type of Plans	Have capability?	Level	If Yes…		
			Can the plan be used to implement mitigation actions?	☐ Yes ☒ No	**Comments (optional):**
Community Wildfire Protection Plan	☐ Yes ☐ No ☒ N/A	☒ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☒ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☒ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☒ No	**Comments (optional):**
Green Infrastructure Plan	☒ Yes ☐ No ☐ N/A	☐ Local ☐ County ☒ Region	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional): NCTCOG Green Infrastructure Guide, May 2017.** GreenInfrastructureGuide_2017.pdf (nctcog.org)
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☒ No	**Comments (optional):**
			Can the plan be used to implement	☐ Yes	**Comments (optional):**

Type of Plans	Have capability?	Level	If Yes…		
			mitigation actions?	☒ No	
Parks or Open Space Plan	☒ Yes ☐ No ☐ N/A	☒ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☒ No	**Comments (optional): 2012 Midlothian Parks, Recreation and Open Space Master Plan,** Microsoft Word - Midlothian Park Master Plan MOST CURRENT 1-12-12 App B & C not inserted yet TG.doc
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☒ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☒ No	**Comments (optional):**
Hazard Mitigation Plan	☒ Yes ☐ No ☐ N/A	☐ Local ☒ County ☐ Region	**Does the plan address natural hazards?**	☒ Yes ☐ No	**Comments (optional): Ellis County Hazard Mitigation Action Plan (2015-2016)**
			Does the plan identify projects to include in the mitigation strategy?	☒ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☒ Yes ☐ No	**Comments (optional):**

Land Use Planning and Ordinances	Have capability?	If Yes…		
Zoning Ordinance	☒Yes ☐No ☐N/A	**Is the ordinance an effective measure for reducing hazard impacts?**	☒Yes ☐No	**Comments (optional): On July 9, 2013, the City Council adopted a new Zoning Ordinance that simplified, reorganized, and reformatted the previous one and made this one more user-friendly, easier to understand and navigate to find the needed information.** Zoning Ordinance | Midlothian, TX - Official Website **Code of Ordinances:** Franklin Legal Publishing, powered by CTS z2
		Is the ordinance adequately administered and enforced?	☒Yes ☐No	**Comments (optional):**
Subdivision Ordinance	☒Yes ☐No ☐N/A	**Is the ordinance an effective measure for reducing hazard impacts?**	☐Yes ☒No	**Comments (optional): City of Midlothian Subdivision Ordinances:** Franklin Legal Publishing, powered by CTS z2
		Is the ordinance adequately administered and enforced?	☒Yes ☐No	**Comments (optional):**
		Is the FIRM adequately administered and enforced?	☒Yes ☐No	**Comments (optional): City of Midlothian Code of Ordinances:** Franklin Legal Publishing, powered by CTS z2 **Division 3. Provisions for Flood Hazard Reduction** **3.1.004 Floodplain** **3.12.041 Designation of Floodplain Administrator**

Land Use Planning and Ordinances	Have capability?	If Yes…		
				Code and Enforcement is located in the MPD Community Services Division.
Natural Hazard Specific Ordinance (e.g., stormwater, wildfire)	☒Yes ☐No ☐N/A	**Is the ordinance an effective measure for reducing hazard impacts?**	☒Yes ☐No	**Comments (optional):** Franklin Legal Publishing, powered by CTS z2 **Ordinance: Flooding, Stormwater,**
		Is the ordinance adequately administered and enforced?	☒Yes ☐No	**Comments (optional):** Code & Zoning Enforcement | Midlothian, TX - Official Website
Acquisition of land for open space and public recreation uses	☐Yes ☐No ☒N/A	**Is the ordinance an effective measure for reducing hazard impacts?**	☐Yes ☒No	**Comments (optional): The City of Midlothian does not have an ordinance to acquire land for open space and public recreation uses.**
		Is the ordinance adequately administered and enforced?	☐Yes ☒No	**Comments (optional):**

Building Code, Permitting, and Inspections	Have capability?	
Building Code	☒Yes ☐No ☐N/A	**Version/Year: City of Midlothian** **2015 International Building Code and Amendments** **2015 International Mechanical Code and Amendments** **2015 International Plumbing Code and Amendments** **2015 International Residential Code and Amendments** **2015 International Energy Conservation Code and Amendments**

		2015 International Fuel and Gas Code and Amendments **2015 International Existing Building Code and Amendments** **2015 International Fire Code and Amendments** **2014 National Electrical Code and Amendments** **Adopted Codes | Midlothian, TX - Official Website**
Building Code Effectiveness Grading Schedule (BGEGS) Score	☐ Yes ☐ No ☒ N/A	**Score:**
Fire Department ISO Rating	☒ Yes ☐ No ☐ N/A	**Rating: 2**
Site Plan Review Requirements	☒ Yes ☐ No ☐ N/A	**Review method each Thursday: The City's Development Team consists of the Planning Department, Engineering & Utilities, Public Works, Utilities Superintendent, Fire Department Chief, Fire Marshal, Chief Building Official.** Development Review Team | Midlothian, TX - Official Website

Administrative and Technical Assessment

Administrative and technical capabilities include staff and their skills and tools that can be used for mitigation planning and to implement specific mitigation actions.

Administration	Have capability?	If Yes…
Planning Commission	☒ Yes ☐ No	**Describe capability:** The City of Midlothian Planning & Zoning Commission considers all platting issues, provides guidance on long range

	☐N/A	**growth for the community, and serves as an advisory board to the City Council on ordinance amendments and zoning issues. The commission is composed of seven members serving two-year terms. City residency is required for membership. Appointments are made in December.** Planning & Zoning Commission | Midlothian, TX - Official Website
Mitigation Planning Committee	☒Yes	**Describe capability: The City of Midlothian Hazard Mitigation Planning Team is comprised of city departments and partner agencies that Identifies hazards, conducts a risk and vulnerability assessment, and creates and monitors mitigation actions. HMPT next meeting will be July 21, 2021.**
Maintenance programs to reduce risk (e.g., tree trimming, clearing drainage systems)	☒Yes ☐No ☐N/A	**Describe capability: Parks and Recreation, Public Works / Streets and tree trimming companies (contractors) hired by the City of Midlothian to conduct tree trimming operations to reduce risk on city owned property or right-of-ways.**
Mutual Aid Agreements	☒Yes ☐No ☐N/A	**Describe capability:** **1. Joint Resolution between Ellis County and the Cities of Ellis County dated Nov 10, 2003.** **2. Agreement & Contract# 48715 Master Switch User & Communications System Agreement for Radio System Access for Interoperability Communications– City of Fort Worth to provide communication access via standard communications and statewide mutual aid frequencies, February 21, 2017.** **3. Adoption of the Ellis County Hazard Mitigation Action Plan, 2015-2016, November 10, 2015.** **4. Statement of Agreement between the American Red Cross and First United Methodist Church of Midlothian to provide mass care and sheltering, disaster preparedness activities, conducting and coordinating actual disaster relief operations. The American Red Cross will maintain its capability to take immediate action to provide emergency assistance to any number of people affected by, and**

		emergency workers involved in, disaster or threat of disaster, June 18, 2015. **5. Interjurisdictional Mutual Aid Agreement, State of Texas, County of Ellis – Alma, Bardwell, Cedar Hill, Ennis, Ferris, Garrett, Glenn Heights, Grand Prairie, Italy, Mansfield, Maypearl, Midlothian, Milford, Oak Leaf, Ovilla, Palmer, Pecan Hill, Red Oak and Waxahachie to provide mutual aid emergency services.** **6. Interjurisdictional Mutual Aid Agreement for EDUCT Interjurisdictional Mutual Aid Agreement for EDUCT – Cedar Hill, DeSoto, Duncanville, Ferris, Glenn Heights, Lancaster, Midlothian, Ovilla, Red Oak and Waxahachie for Fire, EMS and police protection and law enforcement assistance to participating cities, May 24, 2005.** **7. Resolution 2005-11. National Incident Management System (NIMS) adoption, September 27, 2005.** **8 . Resolution - Interlocal Agreement for Regional Public Works Emergency Response Team, February 26, 2013.** **9. Law enforcement agreement with Ellis County regarding jail operations and other law enforcement operations.** **10. Agreement for the Northern Ellis Emergency Dispatch for Midlothian PD to provide 911 Dispatch for Ovilla and Red Oak.** **11. (See City of Emergency Management Plan for comprehensive list of agreements and contracts for emergency response.)**

Staff	**Have capability? FT/PT***	**If Yes…**	
***Full-time (FT) or part-time (PT) position**			
Chief Building Official	☒Yes-FT ☐Yes- PT	**Is staffing adequate to enforce regulations?**	☒ Yes ☐No

Staff	Have capability? FT/PT*	If Yes…	
***Full-time (FT) or part-time (PT) position**			
	☐No ☐N/A	**Is staff trained on natural hazards and mitigation?**	☒ Yes ☐No
Parks and Recreation Director	☒Yes-FT ☐Yes- PT ☐No ☐N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☒ Yes ☐No
Emergency Manager	☒Yes-FT ☐Yes- PT ☐No ☐N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☒ Yes ☐No
Community Planner	☒Yes-FT ☐Yes- PT ☐No ☐N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☒ Yes ☐No
Civil Engineer	☒Yes-FT ☐Yes- PT ☐No ☐N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☒ Yes ☐No
GIS Coordinator	☒Yes-FT ☐Yes- PT	**Is staffing adequate to enforce regulations?**	☐ Yes ☒No

Staff	Have capability? FT/PT*	If Yes…	
***Full-time (FT) or part-time (PT) position**			
	☐No ☐N/A	**Is staff trained on natural hazards and mitigation?**	☒ Yes ☐No
Public Works Director	☒Yes-FT ☐Yes- PT ☐No ☐N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☒ Yes ☐No
Fire Chief	☒Yes-FT ☐Yes- PT ☐No ☐N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☒ Yes ☐No
Environmental Director – **MPD Community Services handles nuisance calls and will notify the Texas Commission on Environmental Quality (TCEQ) for monitoring and enforcement.**	☐Yes-FT ☐Yes- PT ☐No ☒N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☒ Yes ☐No

Technical	Have capability?	If Yes…	
Warning Systems/Services (e.g., CodeRed, outdoor warning signals)	☒Yes ☐No ☐N/A	**Describe capability: The City of Midlothian operates 14 Outdoor Warning Sirens and CodeRed to provide emergency notification via cell phone through text message, voice messages and emails.**	
		Has capability been used to assess or mitigate risk in the past?	☒Yes ☐No

Technical	Have capability?	If Yes…	
		If yes, for what type of hazard event? Natural hazards such as tornadoes, high winds sustained over 70mph, large hail such as 1.50 in hail or larger, chemical emergencies or other emergencies as deemed necessary by Emergency Management.	
Hazard data and information	☒Yes ☐No ☐N/A	**Describe capability: The City of Midlothian has a Hazard Identification and Risk Assessment as part of the City of Midlothian Emergency Management Plan and the Ellis County Hazard Mitigation Action Plan.**	
		Has capability been used to assess or mitigate risk in the past?	☒Yes ☐No
		If yes, for what type of hazard event? **Natural, Man-made, technological hazards**	
Grant writing	☒Yes ☐No ☐N/A	**Describe capability: The Emergency Management Coordinator has experience in FEMA Hazard Mitigation Grant Program (HMGP) , Emergency Management Performance Grant (EMPG), State Homeland Security Grants (SHSP), and FEMA Public Assistance grants (PA). Other city departments may be experienced in other grant programs.**	
		Has capability been used to assess or mitigate risk in the past?	☐Yes ☒No
		If yes, for what type of hazard event?	
HaZUS analysis or GIS software	☒Yes ☐No ☐N/A	**Describe capability: The City of Midlothian has a GIS Specialist in the Engineering Department that has the ability to create maps for public safety and emergency management to include hazard mitigation.**	
		Has capability been used to assess or mitigate risk in the past?	☒Yes ☐No
		If yes, for what type of hazard event? All hazards	

Education and Outreach Assessment

Education and outreach programs and methods can be used to implement mitigation activities and communicate hazard-related information.

Program or Organization	Have capability?	If Yes…	
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	☒Yes ☐No ☐N/A	**Could the program or organization help implement future mitigation activities?**	☒ Yes ☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation: City of Midlothian Community Emergency Response Team (CERT), Citizens on Patrol (COP) within the Midlothian Police Department could assist with the distribution of emergency preparedness materials at city sponsored events to provide public education to the community and promote resiliency. The Office of Emergency Management has a webpage that provides emergency preparedness for the community and local businesses to promote emergency preparedness and a resilient community.	
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	☒Yes ☐No ☐N/A	**Could the program or organization help implement future mitigation activities?**	☒ Yes ☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation: City of Midlothian Community Emergency Response Team (CERT), Citizens on Patrol (COP) within the Midlothian Police Department could assist with the distribution of emergency preparedness materials, Regional Disaster Preparedness Guidebook, at city sponsored events to provide public education to the community and promote resiliency. The Midlothian Police Department hosts the National Night Out with neighborhoods within our community to promote coordination, collaboration and communication with public safety and provides an opportunity to provide emergency preparedness activities during these events.	
Natural disaster or safety related school programs	☒Yes ☐No ☐N/A	**Could the program or organization help implement future mitigation activities?**	☒ Yes ☐ No

<table>
<tr><th>Program or Organization</th><th>Have capability?</th><th>If Yes…</th></tr>
<tr><td></td><td></td><td>Describe program or organization and how it relates to disaster resilience and mitigation: The City of Midlothian regularly partners with Midlothian ISD to conduct training and exercise opportunities for each school campus for all-hazards emergency preparedness, response, recovery and mitigation. In 2020-2021, The City of Midlothian and MISD have conducted the following exercises to promote preparedness and a more resilient community:

Pipeline Emergency Table Top Exercise, October 2020

COVID 19 Response – March 2020 – Current

Winter Storm Uri and Widespread Power Outages, February 2021

Severe Weather & Tornado Table Top Exercise, April 15, 2021

MISD Parent – Student Reunification Full Scale Exercise, April 15, 2021 that includes city staff, MISD Principals, MISD Administration, MISD Transportation and Dieterich Middle School students.</td></tr>
<tr><td rowspan="2">Public/private partnership initiatives addressing disaster-related issues</td><td rowspan="2">☒Yes
☐No
☐N/A</td><td>Could the program or organization help implement future mitigation activities?</td><td>☒ Yes
☐ No</td></tr>
<tr><td colspan="2">Describe program or organization and how it relates to disaster resilience and mitigation: The Midlothian Police Department have established public/private partnerships through Community Action through Teamwork (CATT), Community Emergency Response Team, local Ministerial Alliance through local church pastors to bring the community together as a team, to prevent, combat, deter and stop crime.
Community Involvement | Midlothian, TX - Official Website</td></tr>
<tr><td>StormReady certification</td><td>☐Yes
☐No
☒N/A</td><td colspan="2"></td></tr>
</table>

Program or Organization	Have capability?	If Yes…
Firewise Communities Certification	☐Yes ☐No ☒N/A	

Financial Assessment

Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation.

Funding Resources	Have capability?	If Yes…	
Capital Improvements Project funding	☒Yes ☐No ☐N/A	**Could the resource be used to fund future mitigation activities?**	☒Yes ☐No
		Has the funding resource been used in past for mitigation activities?	☒Yes ☐No
		If yes, for what type of mitigation activities? Streets & Drainage, Stormwater	
Authority to levy taxes for specific purposes	☐Yes ☐No ☒N/A	**Could the resource be used to fund future mitigation activities?**	☐Yes ☒No
		Has the funding resource been used in past for mitigation activities?	☐Yes ☒No
		If yes, for what type of mitigation activities?	
Fees for water, sewer, gas, and/or electric services	☐Yes ☒No ☐N/A	**Could the resource be used to fund future mitigation activities?**	☒Yes ☐No
		Has the funding resource been used in past for mitigation activities for mitigation activities?	☒Yes

Funding Resources	Have capability?	If Yes…	
			☐ No
		If yes, for what type of mitigation activities?	
Impact fees for new development	☒ Yes ☐ No ☐ N/A	**Could the resource be used to fund future mitigation activities?** **The State of Texas authorizes municipalities to assess impact fees upon new developments in order to finance the construction of capital improvements necessitated by those developments.** **On December 13, 2016, Ordinance 2016-52 (Effective Date January 1, 2017) was adopted to amend the City of Midlothian's Impact Fees.** **Adopted Roadway, Water, and Wastewater Impact Fee Study (2016)** **On May 8, 2018, Ordinance 2018-27 (Effective Date May 8, 2018) was adopted to amend the City of Midlothian's Impact Fees.** **Adopted 2018 Roadway Impact Fee Update (2018)**	☐ Yes ☒ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☒ No
		If yes, for what type of mitigation activities?	
Stormwater utility fee	☐ Yes ☒ No ☐ N/A	**Could the resource be used to fund future mitigation activities?** On January 12, 2016, Ordinance No. 2016-01 was adopted to establish ***Rules and Regulations*** for the SWMP.	☐ Yes ☒ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☒ No
		If yes, for what type of mitigation activities?	
Incurrence of debt through general obligation	☒ Yes	**Could the resource be used to fund future mitigation activities?**	☒ Yes

Funding Resources	Have capability?	If Yes…	
bonds and/or special tax bonds	☐ No ☐ N/A		☐ No
		Has the funding resource been used in past for mitigation activities?	☒ Yes ☐ No
		If yes, for what type of mitigation activities? Streets and Drainage projects	
Incur debt through private activities	☐ Yes ☐ No ☒ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☒ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☒ No
		If yes, for what type of mitigation activities?	
Community Development Block Grant	☐ Yes ☐ No ☒ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☒ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☒ No
		If yes, for what type of mitigation activities?	
Other federal funding programs (e.g. FEMA mitigation grants)	☒ Yes ☐ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☒ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☒ No
		If yes, for what type of mitigation activities?	

Funding Resources	Have capability?	If Yes…	
State funding programs	☒ Yes ☐ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☒ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☒ No
		If yes, for what type of mitigation activities?	

How can these capabilities be expanded and improved to reduce risk?
The City of Midlothian has adopted and implemented actions that enhance and improve existing authorities through local ordinances, plans, policies, and resources for mitigation. The City of Midlothian also includes budgeting and passing policies and procedures for mitigation actions, adopting and implementing stricter mitigation regulations through building codes, approving the hiring and training of staff, such as the Emergency Management Coordinator, for mitigation activities, and approving mitigation updates to existing plans as new needs are recognized.

City of Milford

Planning and Regulatory Assessment

Planning and regulatory capabilities are the plans, policies, codes, and ordinances that prevent and reduce the impacts of natural hazards.

Type of Plans	Have capability?	Level	If Yes…		
Comprehensive or Master Plan	☐ Yes ☐ No ☒ N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**

Type of Plans	Have capability?	Level	If Yes…		
Capital Improvement Plan (CIP)	☐Yes ☐No ☒N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐Yes ☐No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐Yes ☐No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐Yes ☐No	**Comments (optional):**
Economic Development Plan	☐Yes ☐No ☒N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐Yes ☐No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐Yes ☐No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐Yes ☐No	**Comments (optional):**
Local Emergency Operations Plan	☐Yes ☒No ☐N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐Yes ☐No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐Yes ☐No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐Yes ☐No	**Comments (optional):**
Continuity of Operations Plan	☐Yes ☒No	☐ Local	**Does the plan address natural hazards?**	☐Yes ☐No	**Comments (optional):**

Type of Plans	Have capability?	Level	If Yes…		
	☐N/A	☐ County ☐ Region	**Does the plan identify projects to include in the mitigation strategy?**	☐Yes ☐No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐Yes ☐No	**Comments (optional):**
Transportation Plan	☐Yes ☒No ☐N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐Yes ☐No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐Yes ☐No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐Yes ☐No	**Comments (optional):**
Stormwater Management Plan	☐Yes ☒No ☐N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐Yes ☐No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐Yes ☐No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐Yes ☐No	**Comments (optional):**
Community Wildfire Protection Plan	☐Yes ☒No ☐N/A	☐ Local ☐ County	**Does the plan address natural hazards?**	☐Yes ☐No	**Comments (optional):**
			Does the plan identify projects to include in the	☐Yes ☐No	**Comments (optional):**

Type of Plans	Have capability?	Level	If Yes…		
		☐ Region	**mitigation strategy?**		
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**
Green Infrastructure Plan	☐ Yes ☒ No ☐ N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**
Parks or Open Space Plan	☐ Yes ☒ No ☐ N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**
Hazard Mitigation Plan	☒ Yes ☐ No ☐ N/A	☐ Local ☒ County ☐ Region	**Does the plan address natural hazards?**	☒ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☒ Yes ☐ No	**Comments (optional):**

Type of Plans	Have capability?	Level	If Yes…		
			Can the plan be used to implement mitigation actions?	☒Yes ☐No	**Comments (optional):**

Land Use Planning and Ordinances	Have capability?	If Yes…		
Zoning Ordinance	☒Yes ☐No ☐N/A	**Is the ordinance an effective measure for reducing hazard impacts?**	☒Yes ☐No	**Comments (optional):**
		Is the ordinance adequately administered and enforced?	☒Yes ☐No	**Comments (optional):**
Subdivision Ordinance	☒Yes ☐No ☒N/A	**Is the ordinance an effective measure for reducing hazard impacts?**	☐Yes ☐No	**Comments (optional):**
		Is the ordinance adequately administered and enforced?	☐Yes ☐No	**Comments (optional):**
		Is the FIRM adequately administered and enforced?	☐Yes ☐No	**Comments (optional):**
Natural Hazard Specific Ordinance (e.g., stormwater, wildfire)	☐Yes ☐No ☒N/A	**Is the ordinance an effective measure for reducing hazard impacts?**	☐Yes ☐No	**Comments (optional):**
		Is the ordinance adequately administered and enforced?	☐Yes ☐No	**Comments (optional):**
Acquisition of land for open space and public recreation uses	☐Yes ☐No	**Is the ordinance an effective measure for reducing hazard impacts?**	☐Yes ☐No	**Comments (optional):**

Land Use Planning and Ordinances	Have capability?	If Yes…		
	☒N/A	**Is the ordinance adequately administered and enforced?**	☐Yes ☐No	**Comments (optional):**

Building Code, Permitting, and Inspections	Have capability?	
Building Code	☒Yes ☐No ☐N/A	**Version/Year:**
Building Code Effectiveness Grading Schedule (BGEGS) Score	☐Yes ☒No ☐N/A	**Score:**
Fire Department ISO Rating	☐Yes ☐No ☒N/A	**Rating:**
Site Plan Review Requirements	☐Yes ☐No ☒N/A	**Review method:**

Administrative and Technical Assessment

Administrative and technical capabilities include staff and their skills and tools that can be used for mitigation planning and to implement specific mitigation actions.

Administration	Have capability?	If Yes…
Planning Commission	☒Yes ☐No ☐N/A	**Describe capability:** Responsible for making recommendations to the City Council on zoning and subdivision matters.
Mitigation Planning Committee	☒Yes	**Describe capability:** Identifies hazards, conducts a risk and vulnerability assessment, and creates and monitors mitigation actions.

Maintenance programs to reduce risk (e.g., tree trimming, clearing drainage systems)	☒Yes ☐No ☐N/A	**Describe capability: Maintains city facilities and property.**
Mutual Aid Agreements	☒Yes ☐No ☐N/A	**Describe capability:** Local fire department receives mutual aid when local resources are exhausted.

Staff	**Have capability? FT/PT***	**If Yes…**	
***Full-time (FT) or part-time (PT) position**			
Chief Building Official	☐Yes-FT ☐Yes- PT ☒No ☐N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐No
Parks and Recreation Director	☐Yes-FT ☐Yes- PT ☒No ☐N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐No
Emergency Manager	☐Yes-FT ☐Yes- PT ☒No ☐N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐No
Community Planner	☐Yes-FT ☐Yes- PT	**Is staffing adequate to enforce regulations?**	☐ Yes ☐No

Staff	Have capability? FT/PT*	If Yes…	
***Full-time (FT) or part-time (PT) position**			
	☒No ☐N/A	**Is staff trained on natural hazards and mitigation?**	☐ Yes ☐No
Civil Engineer	☐Yes-FT ☐Yes- PT ☒No ☐N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐No
GIS Coordinator	☐Yes-FT ☐Yes- PT ☒No ☐N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐No
Public Works Director	☒Yes-FT ☐Yes- PT ☐No ☐N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐No
Fire Chief	☐Yes-FT ☒Yes- PT ☐No ☐N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☒ Yes ☐No
Environmental Director	☐Yes-FT ☐Yes- PT	**Is staffing adequate to enforce regulations?**	☐ Yes ☐No

Staff	Have capability? FT/PT*	If Yes…	
***Full-time (FT) or part-time (PT) position**			
	☒No ☐N/A	**Is staff trained on natural hazards and mitigation?**	☐ Yes ☐No

Technical	Have capability?	If Yes…	
Warning Systems/Services (e.g., Reverse 911, outdoor warning signals)	☐Yes ☒No ☐N/A	**Describe capability:**	
		Has capability been used to assess or mitigate risk in the past?	☐ Yes ☐ No
		If yes, for what type of hazard event?	
Hazard data and information	☐Yes ☒No ☐N/A	**Describe capability:**	
		Has capability been used to assess or mitigate risk in the past?	☐ Yes ☐ No
		If yes, for what type of hazard event?	
Grant writing	☐Yes ☒No ☐N/A	**Describe capability:**	
		Has capability been used to assess or mitigate risk in the past?	☐ Yes ☐ No
		If yes, for what type of hazard event?	
HaZUS analysis or GIS software	☐Yes ☒No ☐N/A	**Describe capability:**	
		Has capability been used to assess or mitigate risk in the past?	☐ Yes

Technical	Have capability?	If Yes…	
			☐ No
		If yes, for what type of hazard event?	

Education and Outreach Assessment

Education and outreach programs and methods can be used to implement mitigation activities and communicate hazard-related information.

Program or Organization	Have capability?	If Yes…	
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	☐Yes ☒No ☐N/A	**Could the program or organization help implement future mitigation activities?**	☐ Yes ☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation:	
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	☐Yes ☒No ☐N/A	**Could the program or organization help implement future mitigation activities?**	☐ Yes ☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation:	
Natural disaster or safety related school programs	☐Yes ☒No ☐N/A	**Could the program or organization help implement future mitigation activities?**	☐ Yes ☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation:	
Public/private partnership initiatives addressing disaster-related issues	☐Yes ☒No ☐N/A	**Could the program or organization help implement future mitigation activities?**	☐ Yes ☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation:	

Program or Organization	Have capability?	If Yes…
StormReady certification	☐Yes ☒No ☐N/A	
Firewise Communities Certification	☐Yes ☒No ☐N/A	

Financial Assessment

Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation.

Funding Resources	Have capability?	If Yes…	
Capital Improvements Project funding	☐Yes ☒No ☐N/A	**Could the resource be used to fund future mitigation activities?**	☐Yes ☐No
		Has the funding resource been used in past for mitigation activities?	☐Yes ☐No
		If yes, for what type of mitigation activities?	
Authority to levy taxes for specific purposes	☐Yes ☒No ☐N/A	**Could the resource be used to fund future mitigation activities?**	☐Yes ☐No
		Has the funding resource been used in past for mitigation activities?	☐Yes ☐No
		If yes, for what type of mitigation activities?	
Fees for water, sewer, gas, and/or electric services	☒Yes	**Could the resource be used to fund future mitigation activities?**	☐Yes

Funding Resources	Have capability?	If Yes…	
	☐ No ☐ N/A		☒ No
		Has the funding resource been used in past for mitigation activities for mitigation activities?	☐ Yes ☒ No
		If yes, for what type of mitigation activities?	
Impact fees for new development	☐ Yes ☒ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	
Stormwater utility fee	☐ Yes ☒ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	
Incurrence of debt through general obligation bonds and/or special tax bonds	☐ Yes ☒ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	

Funding Resources	Have capability?	If Yes…	
Incur debt through private activities	☐ Yes ☒ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	
Community Development Block Grant	☒ Yes ☐ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☒ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☒ No
		If yes, for what type of mitigation activities?	
Other federal funding programs (e.g. FEMA mitigation grants)	☐ Yes ☒ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	
State funding programs	☐ Yes ☒ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No

Funding Resources	Have capability?	If Yes…
		If yes, for what type of mitigation activities?

How can these capabilities be expanded and improved to reduce risk?
Actions that can expand and improve existing authorities, plans, policies, and resources for mitigation include budgeting and passing policies and procedures for mitigation actions, adopting and implementing stricter mitigation regulations, approving the hiring and training of staff for mitigation activities, and approving mitigation updates to existing plans as new needs are recognized.

City of Oak Leaf

Planning and Regulatory Assessment

Planning and regulatory capabilities are the plans, policies, codes, and ordinances that prevent and reduce the impacts of natural hazards.

Type of Plans	Have capability?	Level	If Yes…		
Comprehensive or Master Plan	☒ Yes ☐ No ☐ N/A	☒ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☒ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☒ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☒ No	**Comments (optional):**
Capital Improvement Plan (CIP)	☐ Yes ☒ No ☐ N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement	☐ Yes ☐ No	**Comments (optional):**

Type of Plans	Have capability?	Level	If Yes…		
			mitigation actions?		
Economic Development Plan	☐ Yes ☒ No ☐ N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**
Local Emergency Operations Plan	☒ Yes ☐ No ☐ N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☒ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☒ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☒ Yes ☐ No	**Comments (optional):**
Continuity of Operations Plan	☐ Yes ☒ No ☐ N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**

Type of Plans	Have capability?	Level	If Yes…		
Transportation Plan	☐Yes ☒No ☐N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐Yes ☐No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐Yes ☐No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐Yes ☐No	**Comments (optional):**
Stormwater Management Plan	☐Yes ☒No ☐N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐Yes ☐No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐Yes ☐No	**Comments (optional): Oak Leaf has a MS4 Waiver Currently.**
			Can the plan be used to implement mitigation actions?	☐Yes ☐No	**Comments (optional):**
Community Wildfire Protection Plan	☐Yes ☒No ☐N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐Yes ☐No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐Yes ☐No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐Yes ☐No	**Comments (optional):**
Green Infrastructure Plan	☐Yes ☒No	☐ Local	**Does the plan address natural hazards?**	☐Yes ☐No	**Comments (optional):**

Type of Plans	Have capability?	Level	If Yes…		
	☐N/A	☐ County ☐ Region	**Does the plan identify projects to include in the mitigation strategy?**	☐Yes ☐No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐Yes ☐No	**Comments (optional):**
Parks or Open Space Plan	☐Yes ☒No ☐N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐Yes ☐No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐Yes ☐No	**Comments (optional): The City will be creating one soon.**
			Can the plan be used to implement mitigation actions?	☐Yes ☐No	**Comments (optional):**
Hazard Mitigation Plan	☒Yes ☐No ☐N/A	☐ Local ☒ County ☐ Region	**Does the plan address natural hazards?**	☒Yes ☐No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☒Yes ☐No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☒Yes ☐No	**Comments (optional):**

Land Use Planning and Ordinances	Have capability?	If Yes…		
Zoning Ordinance	☒Yes	**Is the ordinance an effective measure for**	☐Yes	**Comments (optional):**

Land Use Planning and Ordinances	Have capability?	If Yes…		
	☐No ☐N/A	**reducing hazard impacts?**	☒No	
		Is the ordinance adequately administered and enforced?	☒Yes ☐No	**Comments (optional):**
Subdivision Ordinance	☒Yes ☐No ☐N/A	**Is the ordinance an effective measure for reducing hazard impacts?**	☒Yes ☐No	**Comments (optional):**
		Is the ordinance adequately administered and enforced?	☒Yes ☐No	**Comments (optional):**
		Is the FIRM adequately administered and enforced?	☒Yes ☐No	**Comments (optional):**
Natural Hazard Specific Ordinance (e.g., stormwater, wildfire)	☐Yes ☒No ☐N/A	**Is the ordinance an effective measure for reducing hazard impacts?**	☐Yes ☐No	**Comments (optional):**
		Is the ordinance adequately administered and enforced?	☐Yes ☐No	**Comments (optional):**
Acquisition of land for open space and public recreation uses	☐Yes ☒No ☐N/A	**Is the ordinance an effective measure for reducing hazard impacts?**	☐Yes ☐No	**Comments (optional):**
		Is the ordinance adequately administered and enforced?	☐Yes ☐No	**Comments (optional):**

Building Code, Permitting, and Inspections	Have capability?	
Building Code	☒Yes ☐No ☐N/A	**Version/Year: 2015 ICC**

Building Code Effectiveness Grading Schedule (BGEGS) Score	☐Yes ☒No ☐N/A	**Score: Data unavailable**
Fire Department ISO Rating	☒Yes ☐No ☐N/A	**Rating: Class split 2/9**
Site Plan Review Requirements	☒Yes ☐No ☐N/A	**Review method: Building inspector**

Administrative and Technical Assessment

Administrative and technical capabilities include staff and their skills and tools that can be used for mitigation planning and to implement specific mitigation actions.

Administration	**Have capability?**	**If Yes…**
Planning Commission	☒Yes ☐No ☐N/A	**Describe capability:** Planning and zoning capabilities
Mitigation Planning Committee	☒Yes	**Describe capability:** Identifies hazards, conducts a risk and vulnerability assessment, and creates and monitors mitigation actions.
Maintenance programs to reduce risk (e.g., tree trimming, clearing drainage systems)	☒Yes ☐No ☐N/A	**Describe capability: Tree trimming and ditch clearing**
Mutual Aid Agreements	☒Yes ☐No ☐N/A	**Describe capability: We have a Mutual Aid Agreement with Ellis County.**

Staff	Have capability? FT/PT*	If Yes…	
***Full-time (FT) or part-time (PT) position**			
Chief Building Official	☐ Yes-FT ☒ Yes- PT ☐ No ☐ N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐ No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☒ No
Parks and Recreation Director	☐ Yes-FT ☐ Yes- PT ☒ No ☐ N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐ No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐ No
Emergency Manager	☐ Yes-FT ☒ Yes- PT ☐ No ☐ N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐ No
		Is staff trained on natural hazards and mitigation?	☒ Yes ☐ No
Community Planner	☐ Yes-FT ☐ Yes- PT ☒ No ☐ N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐ No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐ No
Civil Engineer	☐ Yes-FT ☒ Yes- PT ☐ No ☐ N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐ No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☒ No

Staff	Have capability? FT/PT*	If Yes…	
***Full-time (FT) or part-time (PT) position**			
GIS Coordinator	☐Yes-FT ☐Yes- PT ☒No ☐N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐No
Public Works Director	☐Yes-FT ☐Yes- PT ☒No ☐N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐No
Fire Chief	☐Yes-FT ☐Yes- PT ☒No ☐N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐No
Environmental Director	☐Yes-FT ☐Yes- PT ☒No ☐N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐No

Technical	Have capability?	If Yes…
Warning Systems/Services	☒Yes	**Describe capability: BlackBoard Connect messaging system**

Technical	Have capability?	If Yes…	
(e.g., Reverse 911, outdoor warning signals)	☐ No ☐ N/A	**Has capability been used to assess or mitigate risk in the past?**	☒ Yes ☐ No
		If yes, for what type of hazard event? Flood event in September 2018	
Hazard data and information	☐ Yes ☒ No ☐ N/A	**Describe capability:**	
		Has capability been used to assess or mitigate risk in the past?	☐ Yes ☐ No
		If yes, for what type of hazard event?	
Grant writing	☐ Yes ☒ No ☐ N/A	**Describe capability:**	
		Has capability been used to assess or mitigate risk in the past?	☐ Yes ☐ No
		If yes, for what type of hazard event?	
HaZUS analysis or GIS software	☐ Yes ☒ No ☐ N/A	**Describe capability:**	
		Has capability been used to assess or mitigate risk in the past?	☐ Yes ☐ No
		If yes, for what type of hazard event?	

Education and Outreach Assessment

Education and outreach programs and methods can be used to implement mitigation activities and communicate hazard-related information.

Program or Organization	Have capability?	If Yes…	
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	☐ Yes ☒ No ☐ N/A	**Could the program or organization help implement future mitigation activities?**	☐ Yes ☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation:	
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	☒ Yes ☐ No ☐ N/A	**Could the program or organization help implement future mitigation activities?**	☒ Yes ☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation: Newsletter and BlackBoard Connect. Posting information and sending messages directly to citizens.	
Natural disaster or safety related school programs	☐ Yes ☒ No ☐ N/A	**Could the program or organization help implement future mitigation activities?**	☐ Yes ☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation:	
Public/private partnership initiatives addressing disaster-related issues	☐ Yes ☒ No ☐ N/A	**Could the program or organization help implement future mitigation activities?**	☐ Yes ☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation:	
StormReady certification	☐ Yes ☒ No ☐ N/A		
Firewise Communities Certification	☐ Yes ☒ No ☐ N/A		

Financial Assessment

Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation.

Funding Resources	Have capability?	If Yes…	
Capital Improvements Project funding	☒ Yes ☐ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☒ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☒ No
		If yes, for what type of mitigation activities?	
Authority to levy taxes for specific purposes	☒ Yes ☐ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☒ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☒ No
		If yes, for what type of mitigation activities?	
Fees for water, sewer, gas, and/or electric services	☐ Yes ☒ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	
Impact fees for new development	☐ Yes ☒ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No

Funding Resources	Have capability?	If Yes…	
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	
Stormwater utility fee	☐ Yes ☒ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	
Incurrence of debt through general obligation bonds and/or special tax bonds	☒ Yes ☐ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☒ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☒ No
		If yes, for what type of mitigation activities?	
Incur debt through private activities	☒ Yes ☐ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☒ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☒ No
		If yes, for what type of mitigation activities?	
Community Development Block Grant	☒ Yes	**Could the resource be used to fund future mitigation activities?**	☒ Yes

Funding Resources	Have capability?	If Yes…	
	☐ No ☐ N/A		☐ No
		Has the funding resource been used in past for mitigation activities?	☒ Yes ☐ No
		If yes, for what type of mitigation activities? Bridge embankment repairs.	
Other federal funding programs (e.g. FEMA mitigation grants)	☒ Yes ☐ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☒ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☒ No
		If yes, for what type of mitigation activities?	
State funding programs	☒ Yes ☐ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☒ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☒ Yes ☐ No
		If yes, for what type of mitigation activities? Bridge embankment repairs.	

How can these capabilities be expanded and improved to reduce risk?
Actions that can expand and improve existing authorities, plans, policies, and resources for mitigation include budgeting and passing policies and procedures for mitigation actions, adopting and implementing stricter mitigation regulations, approving the hiring and training of staff for mitigation activities, and approving mitigation updates to existing plans as new needs are recognized.

City of Ovilla

Planning and Regulatory Assessment

Planning and regulatory capabilities are the plans, policies, codes, and ordinances that prevent and reduce the impacts of natural hazards. If check box does not work, please highlight answer.

Type of Plans	Have capability?	Level	If Yes…		
Comprehensive or Master Plan	☒Yes ☐No ☐N/A	☒ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐Yes ☒No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☒Yes ☐No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☒Yes ☐No	**Comments (optional):**
Capital Improvement Plan (CIP)	☒Yes ☐No ☐N/A	☒ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐Yes ☒No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☒Yes ☐No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☒Yes ☐No	**Comments (optional):**
Economic Development Plan	☐Yes ☒No ☐N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐Yes ☐No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐Yes ☐No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐Yes ☐No	**Comments (optional):**

Type of Plans	Have capability?	Level	If Yes…		
Local Emergency Operations Plan	☒ Yes ☐ No ☐ N/A	☐ Local ☒ County ☐ Region	**Does the plan address natural hazards?**	☒ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☒ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☒ Yes ☐ No	**Comments (optional):**
Continuity of Operations Plan	☐ Yes ☒ No ☐ N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**
Transportation Plan	☐ Yes ☒ No ☐ N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**
Stormwater Management Plan	☒ Yes ☐ No	☒ Local	**Does the plan address natural hazards?**	☒ Yes ☐ No	**Comments (optional):**

Type of Plans	Have capability?	Level	If Yes…		
	☐N/A	☐ County ☐ Region	**Does the plan identify projects to include in the mitigation strategy?**	☒Yes ☐No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☒Yes ☐No	**Comments (optional):**
Community Wildfire Protection Plan	☒Yes ☐No ☐N/A	☐ Local ☒ County ☐ Region	**Does the plan address natural hazards?**	☒Yes ☐No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐Yes ☒No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐Yes ☐No	**Comments (optional):**
Green Infrastructure Plan	☐Yes ☒No ☐N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐Yes ☐No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐Yes ☐No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐Yes ☐No	**Comments (optional):**
Parks or Open Space Plan	☒Yes ☐No ☐N/A	☒ Local ☐ County	**Does the plan address natural hazards?**	☐Yes ☒No	**Comments (optional):**
			Does the plan identify projects to include in the	☒Yes ☐No	**Comments (optional):**

Type of Plans	Have capability?	Level	If Yes…		
		☐ Region	**mitigation strategy?**		
			Can the plan be used to implement mitigation actions?	☒Yes ☐No	**Comments (optional):**
Hazard Mitigation Plan	☒Yes ☐No ☐N/A	☐ Local ☒ County ☐ Region	**Does the plan address natural hazards?**	☒Yes ☐No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☒Yes ☐No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☒Yes ☐No	**Comments (optional):**

Land Use Planning and Ordinances	Have capability?	If Yes…		
Zoning Ordinance	☒Yes ☐No ☐N/A	**Is the ordinance an effective measure for reducing hazard impacts?**	☒Yes ☐No	**Comments (optional):**
		Is the ordinance adequately administered and enforced?	☒Yes ☐No	**Comments (optional):**
Subdivision Ordinance	☒Yes ☐No ☐N/A	**Is the ordinance an effective measure for reducing hazard impacts?**	☒Yes ☐No	**Comments (optional):**
		Is the ordinance adequately administered and enforced?	☒Yes ☐No	**Comments (optional):**
		Is the FIRM adequately	☒Yes	**Comments (optional):**

Land Use Planning and Ordinances	Have capability?	If Yes…		
		administered and enforced?	☐No	
Natural Hazard Specific Ordinance (e.g., stormwater, wildfire)	☐Yes ☒No ☐N/A	**Is the ordinance an effective measure for reducing hazard impacts?**	☐Yes ☐No	**Comments (optional):**
		Is the ordinance adequately administered and enforced?	☐Yes ☐No	**Comments (optional):**
Acquisition of land for open space and public recreation uses	☐Yes ☒No ☐N/A	**Is the ordinance an effective measure for reducing hazard impacts?**	☐Yes ☐No	**Comments (optional):**
		Is the ordinance adequately administered and enforced?	☐Yes ☐No	**Comments (optional):**

Building Code, Permitting, and Inspections	Have capability?	
Building Code	☒Yes ☐No ☐N/A	**Version/Year: IBC / 2015 IEC / 2014**
Building Code Effectiveness Grading Schedule (BCEGS) Score	☐Yes ☒No ☐N/A	**Score:**
Fire Department ISO Rating	☒Yes ☐No ☐N/A	**Rating: 2**
Site Plan Review Requirements	☒Yes ☐No ☐N/A	**Review method: By Code and Checkoff List**

Administrative and Technical Assessment

Administrative and technical capabilities include staff and their skills and tools that can be used for mitigation planning and to implement specific mitigation actions.

Administration	Have capability?	If Yes…
Planning Commission	☒Yes ☐No ☐N/A	**Describe capability:** This board reviews and serve as an advisory board to the council.
Mitigation Planning Committee	☒Yes	**Describe capability:** Identifies hazards, conducts a risk and vulnerability assessment, and creates and monitors mitigation actions.
Maintenance programs to reduce risk (e.g., tree trimming, clearing drainage systems)	☒Yes ☐No ☐N/A	**Describe capability:** Public Works is in charge of trimming trees and clearing drainage systems.
Mutual Aid Agreements	☒Yes ☐No ☐N/A	**Describe capability:** The City has established Mutual Aid Agreements with local agencies to assist in a time of need. Mutual Aid Agreements are in place with Ellis County and Dallas County and we can request assistance from anyone else in those agreements.

Staff	Have capability? FT/PT*	If Yes…	
***Full-time (FT) or part-time (PT) position**			
Chief Building Official	☒Yes-FT ☐Yes- PT ☐No ☐N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☒ Yes ☐No
Parks and Recreation Director	☒Yes-FT ☐Yes- PT ☐No ☐N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☒ Yes

Staff	Have capability? FT/PT*	If Yes…	
***Full-time (FT) or part-time (PT) position**			
			☐ No
Emergency Manager	☐ Yes-FT ☒ Yes- PT ☐ No ☐ N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☒ No
		Is staff trained on natural hazards and mitigation?	☒ Yes ☐ No
Community Planner	☐ Yes-FT ☐ Yes- PT ☒ No ☐ N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐ No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐ No
Civil Engineer	☐ Yes-FT ☒ Yes- PT ☐ No ☐ N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☒ No
		Is staff trained on natural hazards and mitigation?	☒ Yes ☐ No
GIS Coordinator	☐ Yes-FT ☐ Yes- PT ☒ No ☐ N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐ No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐ No
Public Works Director	☒ Yes-FT ☐ Yes- PT	**Is staffing adequate to enforce regulations?**	☒ Yes ☐ No

Staff	Have capability? FT/PT*	If Yes…	
***Full-time (FT) or part-time (PT) position**			
	☐No ☐N/A	**Is staff trained on natural hazards and mitigation?**	☒ Yes ☐No
Fire Chief	☐Yes-FT ☒Yes- PT ☐No ☐N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☒ Yes ☐No
Environmental Director	☐Yes-FT ☐Yes- PT ☒No ☐N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐No

Technical	Have capability?	If Yes…	
Warning Systems/Services (e.g., Reverse 911, outdoor warning signals)	☒Yes ☐No ☐N/A	**Describe capability: Outdoor Warning Sirens, Blackboard Notification**	
		Has capability been used to assess or mitigate risk in the past?	☒ Yes ☐No
		If yes, for what type of hazard event? Tornado, Thunderstorm, Winter Weather, Citizen Notifications	
Hazard data and information	☐Yes ☒No ☐N/A	**Describe capability:**	
		Has capability been used to assess or mitigate risk in the past?	☐ Yes ☐No

Technical	Have capability?	If Yes…	
		If yes, for what type of hazard event?	
Grant writing	☐Yes ☒No ☐N/A	**Describe capability:**	
		Has capability been used to assess or mitigate risk in the past?	☐ Yes ☐No
		If yes, for what type of hazard event?	
HaZUS analysis or GIS software	☐Yes ☒No ☐N/A	**Describe capability:**	
		Has capability been used to assess or mitigate risk in the past?	☐ Yes ☐No
		If yes, for what type of hazard event?	

Education and Outreach Assessment

Education and outreach programs and methods can be used to implement mitigation activities and communicate hazard-related information.

Program or Organization	Have capability?	If Yes…	
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	☐Yes ☒No ☐N/A	**Could the program or organization help implement future mitigation activities?**	☐ Yes ☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation:	
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	☒Yes ☐No ☐N/A	**Could the program or organization help implement future mitigation activities?**	☒ Yes ☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation: Fire Safety Education	

Program or Organization	Have capability?	If Yes…	
Natural disaster or safety related school programs	☒ Yes ☐ No ☐ N/A	**Could the program or organization help implement future mitigation activities?**	☒ Yes ☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation: Fire Safety and Prevention	
Public/private partnership initiatives addressing disaster-related issues	☐ Yes ☒ No ☐ N/A	**Could the program or organization help implement future mitigation activities?**	☐ Yes ☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation:	
StormReady certification	☐ Yes ☐ No ☐ N/A		
Firewise Communities Certification	☐ Yes ☐ No ☐ N/A		

Financial Assessment

Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation.

Funding Resources	Have capability?	If Yes…	
Capital Improvements Project funding	☒ Yes ☐ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☒ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☒ No

Funding Resources	Have capability?	If Yes…	
		If yes, for what type of mitigation activities?	
Authority to levy taxes for specific purposes	☒ Yes ☐ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☒ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☒ No
		If yes, for what type of mitigation activities?	
Fees for water, sewer, gas, and/or electric services	☒ Yes ☐ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☒ No
		Has the funding resource been used in past for mitigation activities for mitigation activities?	☐ Yes ☒ No
		If yes, for what type of mitigation activities?	
Impact fees for new development	☒ Yes ☐ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☒ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☒ No
		If yes, for what type of mitigation activities?	
Stormwater utility fee	☐ Yes ☒ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes

Funding Resources	Have capability?	If Yes…	
			☐ No
		If yes, for what type of mitigation activities?	
Incurrence of debt through general obligation bonds and/or special tax bonds	☒ Yes ☐ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☒ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☒ No
		If yes, for what type of mitigation activities?	
Incur debt through private activities	☐ Yes ☒ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	
Community Development Block Grant	☐ Yes ☒ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	
Other federal funding programs (e.g. FEMA mitigation grants)	☒ Yes ☐ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☒ Yes ☐ No

Funding Resources	Have capability?	If Yes…	
		Has the funding resource been used in past for mitigation activities?	☒ Yes ☐ No
		If yes, for what type of mitigation activities? COVID-19 Pandemic February 2021 Winter Storm	
State funding programs	☒ Yes ☐ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☒ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☒ Yes ☐ No
		If yes, for what type of mitigation activities? COVID-19 Pandemic February 2021 Winter Storm	

How can these capabilities be expanded and improved to reduce risk?
Actions that can expand and improve existing authorities, plans, policies, and resources for mitigation include budgeting and passing policies and procedures for mitigation actions, adopting and implementing stricter mitigation regulations, approving the hiring and training of staff for mitigation activities, and approving mitigation updates to existing plans as new needs are recognized.

City of Palmer

Planning and Regulatory Assessment

Planning and regulatory capabilities are the plans, policies, codes, and ordinances that prevent and reduce the impacts of natural hazards.

Type of Plans	Have capability?	Level	If Yes…		
Comprehensive or Master Plan	☒ Yes ☐ No	☒ Local	**Does the plan address natural hazards?**	☐ Yes ☒ No	**Comments (optional):**

Type of Plans	Have capability?	Level	If Yes…		
	☐N/A	☐ County ☐ Region	**Does the plan identify projects to include in the mitigation strategy?**	☐Yes ☒No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐Yes ☒No	**Comments (optional):**
Capital Improvement Plan (CIP)	☒Yes ☐No ☐N/A	☒ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐Yes ☒No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐Yes ☒No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐Yes ☒No	**Comments (optional):**
Economic Development Plan	☒Yes ☐No ☐N/A	☒ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐Yes ☒No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐Yes ☒No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐Yes ☒No	**Comments (optional):**
Local Emergency Operations Plan	☐Yes ☒No ☐N/A	☐ Local ☐ County	**Does the plan address natural hazards?**	☐Yes ☐No	**Comments (optional):**
			Does the plan identify projects to include in the	☐Yes ☐No	**Comments (optional):**

Type of Plans	Have capability?	Level	If Yes…		
		☐ Region	**mitigation strategy?**		
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**
Continuity of Operations Plan	☐ Yes ☒ No ☐ N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**
Transportation Plan	☐ Yes ☒ No ☐ N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**
Stormwater Management Plan	☐ Yes ☒ No ☐ N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☐ No	**Comments (optional):**

Type of Plans	Have capability?	Level	If Yes…		
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**
Community Wildfire Protection Plan	☐ Yes ☒ No ☐ N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**
Green Infrastructure Plan	☐ Yes ☒ No ☐ N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**
Parks or Open Space Plan	☐ Yes ☒ No ☐ N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement	☐ Yes ☐ No	**Comments (optional):**

Type of Plans	Have capability?	Level	If Yes…		
			mitigation actions?		
Hazard Mitigation Plan	☒ Yes ☐ No ☐ N/A	☐ Local ☒ County ☐ Region	**Does the plan address natural hazards?**	☒ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☒ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☒ Yes ☐ No	**Comments (optional):**

Land Use Planning and Ordinances	Have capability?	If Yes…		
Zoning Ordinance	☒ Yes ☐ No ☐ N/A	**Is the ordinance an effective measure for reducing hazard impacts?**	☒ Yes ☐ No	**Comments (optional):**
		Is the ordinance adequately administered and enforced?	☒ Yes ☐ No	**Comments (optional):**
Subdivision Ordinance	☒ Yes ☐ No ☐ N/A	**Is the ordinance an effective measure for reducing hazard impacts?**	☒ Yes ☐ No	**Comments (optional):**
		Is the ordinance adequately administered and enforced?	☐ Yes ☐ No	**Comments (optional):**
		Is the FIRM adequately administered and enforced?	☐ Yes ☐ No	**Comments (optional):**
Natural Hazard Specific Ordinance	☐ Yes ☒ No	**Is the ordinance an effective measure for**	☐ Yes ☐ No	**Comments (optional):**

Land Use Planning and Ordinances	Have capability?	If Yes…		
(e.g., stormwater, wildfire)	☐N/A	**reducing hazard impacts?**		
		Is the ordinance adequately administered and enforced?	☐Yes ☐No	**Comments (optional):**
Acquisition of land for open space and public recreation uses	☒Yes ☐No ☐N/A	**Is the ordinance an effective measure for reducing hazard impacts?**	☒Yes ☐No	**Comments (optional):**
		Is the ordinance adequately administered and enforced?	☒Yes ☐No	**Comments (optional):**

Building Code, Permitting, and Inspections	Have capability?	
Building Code	☒Yes ☐No ☐N/A	**Version/Year: 2009**
Building Code Effectiveness Grading Schedule (BCEGS) Score	☐Yes ☐No ☒N/A	**Score:**
Fire Department ISO Rating	☐Yes ☐No ☒N/A	**Rating:**
Site Plan Review Requirements	☒Yes ☐No ☐N/A	**Review method:**

Administrative and Technical Assessment

Administrative and technical capabilities include staff and their skills and tools that can be used for mitigation planning and to implement specific mitigation actions.

Administration	Have capability?	If Yes…
Planning Commission	☐Yes ☐No ☒N/A	**Describe capability:**
Mitigation Planning Committee	☒Yes	**Describe capability:** Identifies hazards, conducts a risk and vulnerability assessment, and creates and monitors mitigation actions.
Maintenance programs to reduce risk (e.g., tree trimming, clearing drainage systems)	☐Yes ☒No ☐N/A	**Describe capability:**
Mutual Aid Agreements	☐Yes ☒No ☐N/A	**Describe capability:**

Staff	Have capability? FT/PT*	If Yes…	
***Full-time (FT) or part-time (PT) position**			
Chief Building Official	☐Yes-FT ☐Yes- PT ☒No ☐N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐No
Parks and Recreation Director	☐Yes-FT ☐Yes- PT ☒No ☐N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐No
Emergency Manager	☐Yes-FT ☐Yes- PT	**Is staffing adequate to enforce regulations?**	☐ Yes ☐No

Staff	Have capability? FT/PT*	If Yes…	
***Full-time (FT) or part-time (PT) position**			
	☒No ☐N/A	**Is staff trained on natural hazards and mitigation?**	☐ Yes ☐No
Community Planner	☐Yes-FT ☐Yes- PT ☐No ☐N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐No
Civil Engineer	☐Yes-FT ☐Yes- PT ☒No ☐N/A	**Is staffing adequate to enforce regulations? We do not have a full time or part time Civil Engineer; we use a company through contracts.**	☐ Yes ☒No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐No
GIS Coordinator	☐Yes-FT ☐Yes- PT ☒No ☐N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐No
Public Works Director	☒Yes-FT ☐Yes- PT ☐No ☐N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☒No
Fire Chief	☐Yes-FT	**Is staffing adequate to enforce regulations?**	☐ Yes

Staff	Have capability? FT/PT*	If Yes…	
***Full-time (FT) or part-time (PT) position**			
	☐Yes- PT ☐No ☒N/A		☐No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐No
Environmental Director	☐Yes-FT ☐Yes- PT ☐No ☒N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐No

Technical	Have capability?	If Yes…	
Warning Systems/Services (e.g., Reverse 911, outdoor warning signals)	☐Yes ☒No ☐N/A	**Describe capability:**	
		Has capability been used to assess or mitigate risk in the past?	☐ Yes ☐ No
		If yes, for what type of hazard event?	
Hazard data and information	☐Yes ☒No ☐N/A	**Describe capability:**	
		Has capability been used to assess or mitigate risk in the past?	☐ Yes ☐ No
		If yes, for what type of hazard event?	
Grant writing	☐Yes	**Describe capability:**	

Technical	Have capability?	If Yes…	
	☒No ☐N/A	**Has capability been used to assess or mitigate risk in the past?**	☐ Yes ☐ No
		If yes, for what type of hazard event?	
HaZUS analysis or GIS software	☐Yes ☐No ☒N/A	**Describe capability:**	
		Has capability been used to assess or mitigate risk in the past?	☐ Yes ☐ No
		If yes, for what type of hazard event?	

Education and Outreach Assessment

Education and outreach programs and methods can be used to implement mitigation activities and communicate hazard-related information.

Program or Organization	Have capability?	If Yes…	
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	☐Yes ☒No ☐N/A	**Could the program or organization help implement future mitigation activities?**	☐ Yes ☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation:	
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	☐Yes ☒No ☐N/A	**Could the program or organization help implement future mitigation activities?**	☐ Yes ☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation:	
Natural disaster or safety related school programs	☐Yes	**Could the program or organization help implement future mitigation activities?**	☐ Yes

Program or Organization	Have capability?	If Yes…	
	☐ No ☐ N/A		☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation:	
Public/private partnership initiatives addressing disaster-related issues	☐ Yes ☐ No ☒ N/A	**Could the program or organization help implement future mitigation activities?**	☐ Yes ☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation:	
StormReady certification	☐ Yes ☒ No ☐ N/A		
Firewise Communities Certification	☐ Yes ☒ No ☐ N/A		

Financial Assessment

Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation.

Funding Resources	Have capability?	If Yes…	
Capital Improvements Project funding	☐ Yes ☒ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	
Authority to levy taxes for specific purposes	☐ Yes	**Could the resource be used to fund future mitigation activities?**	☐ Yes

Funding Resources	Have capability?	If Yes…	
	☒No ☐N/A		☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	
Fees for water, sewer, gas, and/or electric services	☐Yes ☒No ☐N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	
Impact fees for new development	☐Yes ☒No ☐N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	
Stormwater utility fee	☐Yes ☐No ☒N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	

Funding Resources	Have capability?	If Yes…	
Incurrence of debt through general obligation bonds and/or special tax bonds	☒Yes ☐No ☐N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☒ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☒ No
		If yes, for what type of mitigation activities?	
Incur debt through private activities	☐Yes ☐No ☒N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	
Community Development Block Grant	☒Yes ☐No ☐N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☒ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☒ No
		If yes, for what type of mitigation activities?	
Other federal funding programs (e.g. FEMA mitigation grants)	☒Yes ☐No ☐N/A	**Could the resource be used to fund future mitigation activities?**	☒ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☒ No

Funding Resources	Have capability?	If Yes…	
		If yes, for what type of mitigation activities?	
State funding programs	☐ Yes ☒ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	

How can these capabilities be expanded and improved to reduce risk?
Actions that can expand and improve existing authorities, plans, policies, and resources for mitigation include budgeting and passing policies and procedures for mitigation actions, adopting and implementing stricter mitigation regulations, approving the hiring and training of staff for mitigation activities, and approving mitigation updates to existing plans as new needs are recognized.

City of Red Oak

Planning and Regulatory Assessment

Planning and regulatory capabilities are the plans, policies, codes, and ordinances that prevent and reduce the impacts of natural hazards.

Type of Plans	Have capability?	Level	If Yes…		
Comprehensive or Master Plan	☐ Yes ☒ No ☐ N/A	☒ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☒ Yes ☐ No	**Comments (optional): Identifies flood plan**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☒ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☒ No	**Comments (optional):**

Type of Plans	Have capability?	Level	If Yes…		
Capital Improvement Plan (CIP)	☐ Yes ☒ No ☐ N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**
Economic Development Plan	☒ Yes ☐ No ☐ N/A	☒ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☒ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☒ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☒ No	**Comments (optional):**
Local Emergency Operations Plan	☒ Yes ☐ No ☐ N/A	☒ Local ☒ County ☐ Region	**Does the plan address natural hazards?**	☒ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☒ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☒ Yes ☐ No	**Comments (optional):**
Continuity of Operations Plan	☐ Yes ☒ No	☐ Local	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional):**

Type of Plans	Have capability?	Level	If Yes…		
	☐ N/A	☐ County ☐ Region	**Does the plan identify projects to include in the mitigation strategy?**	☐ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**
Transportation Plan	☒ Yes ☐ No ☐ N/A	☒ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☒ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☒ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☒ No	**Comments (optional):**
Stormwater Management Plan	☒ Yes ☐ No ☐ N/A	☒ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☒ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☒ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☒ No	**Comments (optional):**
Community Wildfire Protection Plan	☐ Yes ☐ No ☒ N/A	☐ Local ☐ County	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the	☐ Yes ☐ No	**Comments (optional):**

Type of Plans	Have capability?	Level	If Yes…		
		☐ Region	**mitigation strategy?**		
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**
Green Infrastructure Plan	☐ Yes ☐ No ☒ N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**
Parks or Open Space Plan	☐ Yes ☒ No ☐ N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**
Hazard Mitigation Plan	☒ Yes ☐ No ☐ N/A	☒ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☒ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☒ Yes ☐ No	**Comments (optional):**

Type of Plans	Have capability?	Level	If Yes…		
			Can the plan be used to implement mitigation actions?	☒Yes ☐No	**Comments (optional):**

Land Use Planning and Ordinances	Have capability?	If Yes…		
Zoning Ordinance	☒Yes ☐No ☐N/A	**Is the ordinance an effective measure for reducing hazard impacts?**	☐Yes ☒No	**Comments (optional): Limits development in floodplain and gas well. Other chapters of the city code address hazards.**
		Is the ordinance adequately administered and enforced?	☒Yes ☐No	**Comments (optional):**
Subdivision Ordinance	☒Yes ☐No ☐N/A	**Is the ordinance an effective measure for reducing hazard impacts?**	☐Yes ☒No	**Comments (optional):**
		Is the ordinance adequately administered and enforced?	☒Yes ☐No	**Comments (optional):**
		Is the FIRM adequately administered and enforced?	☒Yes ☐No	**Comments (optional):**
Natural Hazard Specific Ordinance (e.g., stormwater, wildfire)	☐Yes ☒No ☐N/A	**Is the ordinance an effective measure for reducing hazard impacts?**	☐Yes ☐No	**Comments (optional):**
		Is the ordinance adequately administered and enforced?	☐Yes ☐No	**Comments (optional):**
Acquisition of land for open space and public recreation uses	☒Yes ☐No	**Is the ordinance an effective measure for reducing hazard impacts?**	☐Yes ☒No	**Comments (optional):**

Land Use Planning and Ordinances	Have capability?	If Yes…		
	☐N/A	**Is the ordinance adequately administered and enforced?**	☒Yes ☐No	**Comments (optional):**

Building Code, Permitting, and Inspections	Have capability?	
Building Code	☒Yes ☐No ☐N/A	**Version/Year: 2018**
Building Code Effectiveness Grading Schedule (BGEGS) Score	☒Yes ☐No ☐N/A	**Score: 4**
Fire Department ISO Rating	☒Yes ☐No ☐N/A	**Rating: 2**
Site Plan Review Requirements	☒Yes ☐No ☐N/A	**Review method: through planning and zoning**

Administrative and Technical Assessment

Administrative and technical capabilities include staff and their skills and tools that can be used for mitigation planning and to implement specific mitigation actions.

Administration	Have capability?	If Yes…
Planning Commission	☒Yes ☐No ☐N/A	**Describe capability: Can recommend to council policies**
Mitigation Planning Committee	☒Yes	**Describe capability:** Identifies hazards, conducts a risk and vulnerability assessment, and creates and monitors mitigation actions.

Maintenance programs to reduce risk (e.g., tree trimming, clearing drainage systems)	☒Yes ☐No ☐N/A	**Describe capability:** Routine maintenance of stormwater conduits. We also trim trees in the ROW.
Mutual Aid Agreements	☒Yes ☐No ☐N/A	**Describe capability:** NCTCOG Public Works Emergency Response Team, APWA Public Works Emergency Response Council, inter local agreements

Staff	**Have capability? FT/PT***	**If Yes…**	
***Full-time (FT) or part-time (PT) position**			
Chief Building Official	☒Yes-FT ☐Yes- PT ☐No ☐N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☒ Yes ☐No
Parks and Recreation Director	☒Yes-FT ☐Yes- PT ☐No ☐N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☒ Yes ☐No
Emergency Manager	☒Yes-FT ☐Yes- PT ☐No ☐N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☒ Yes ☐No
Community Planner	☒Yes-FT ☐Yes- PT	**Is staffing adequate to enforce regulations?**	☒ Yes ☐No

Staff	Have capability? FT/PT*	If Yes…	
***Full-time (FT) or part-time (PT) position**			
	☐ No ☐ N/A	**Is staff trained on natural hazards and mitigation?**	☐ Yes ☒ No
Civil Engineer	☒ Yes-FT ☐ Yes- PT ☐ No ☐ N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐ No
		Is staff trained on natural hazards and mitigation?	☒ Yes ☐ No
GIS Coordinator	☐ Yes-FT ☐ Yes- PT ☐ No ☒ N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐ No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐ No
Public Works Director	☒ Yes-FT ☐ Yes- PT ☐ No ☐ N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐ No
		Is staff trained on natural hazards and mitigation?	☒ Yes ☐ No
Fire Chief	☒ Yes-FT ☐ Yes- PT ☐ No ☐ N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐ No
		Is staff trained on natural hazards and mitigation?	☒ Yes ☐ No
Environmental Director	☐ Yes-FT ☐ Yes- PT	**Is staffing adequate to enforce regulations?**	☐ Yes ☐ No

Staff	Have capability? FT/PT*	If Yes…	
*Full-time (FT) or part-time (PT) position			
	☐No ☒N/A	**Is staff trained on natural hazards and mitigation?**	☐ Yes ☐No

Technical	Have capability?	If Yes…	
Warning Systems/Services (e.g., Reverse 911, outdoor warning signals)	☒Yes ☐No ☐N/A	**Describe capability:**	
		Has capability been used to assess or mitigate risk in the past?	☒ Yes ☐No
		If yes, for what type of hazard event? Tornado, Straight line winds, Thunderstorm/Flooding	
Hazard data and information	☐Yes ☒No ☐N/A	**Describe capability:**	
		Has capability been used to assess or mitigate risk in the past?	☐ Yes ☐No
		If yes, for what type of hazard event?	
Grant writing	☐Yes ☒No ☐N/A	**Describe capability:**	
		Has capability been used to assess or mitigate risk in the past?	☐ Yes ☐No
		If yes, for what type of hazard event?	
HaZUS analysis or GIS software	☒Yes ☐No ☐N/A	**Describe capability:** ArcGIS	
		Has capability been used to assess or mitigate risk in the past?	☐ Yes ☒No

Technical	Have capability?	If Yes…
		If yes, for what type of hazard event?

Education and Outreach Assessment

Education and outreach programs and methods can be used to implement mitigation activities and communicate hazard-related information.

Program or Organization	Have capability?	If Yes…	
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	☐Yes ☒No ☐N/A	**Could the program or organization help implement future mitigation activities?**	☐ Yes ☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation:	
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	☐Yes ☒No ☐N/A	**Could the program or organization help implement future mitigation activities?**	☐ Yes ☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation:	
Natural disaster or safety related school programs	☐Yes ☒No ☐N/A	**Could the program or organization help implement future mitigation activities?**	☐ Yes ☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation:	
Public/private partnership initiatives addressing disaster-related issues	☐Yes ☒No ☐N/A	**Could the program or organization help implement future mitigation activities?**	☐ Yes ☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation:	
Storm Ready certification	☐Yes		

Program or Organization	Have capability?	If Yes…
	☒No ☐N/A	
Firewise Communities Certification	☐Yes ☐No ☒N/A	

Financial Assessment

Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation.

Funding Resources	Have capability?	If Yes…	
Capital Improvements Project funding	☐Yes ☒No ☐N/A	**Could the resource be used to fund future mitigation activities?**	☐Yes ☐No
		Has the funding resource been used in past for mitigation activities?	☐Yes ☐No
		If yes, for what type of mitigation activities?	
Authority to levy taxes for specific purposes	☐Yes ☒No ☐N/A	**Could the resource be used to fund future mitigation activities?**	☐Yes ☐No
		Has the funding resource been used in past for mitigation activities?	☐Yes ☐No
		If yes, for what type of mitigation activities?	
Fees for water, sewer, gas, and/or electric services	☒Yes ☐No ☐N/A	**Could the resource be used to fund future mitigation activities?**	☐Yes ☒No

Funding Resources	Have capability?	If Yes…	
		Has the funding resource been used in past for mitigation activities for mitigation activities?	☐ Yes ☒ No
		If yes, for what type of mitigation activities?	
Impact fees for new development	☒ Yes ☐ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☒ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☒ No
		If yes, for what type of mitigation activities? Water and Sewer	
Stormwater utility fee	☒ Yes ☐ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☒ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☒ No
		If yes, for what type of mitigation activities?	
Incurrence of debt through general obligation bonds and/or special tax bonds	☐ Yes ☒ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	
Incur debt through private activities	☐ Yes	**Could the resource be used to fund future mitigation activities?**	☐ Yes

Funding Resources	Have capability?	If Yes…	
	☒No ☐N/A		☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	
Community Development Block Grant	☐Yes ☐No ☒N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	
Other federal funding programs (e.g. FEMA mitigation grants)	☐Yes ☒No ☐N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	
State funding programs	☐Yes ☒No ☐N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	

How can these capabilities be expanded and improved to reduce risk?
Actions that can expand and improve existing authorities, plans, policies, and resources for mitigation include budgeting and passing policies and procedures for mitigation actions, adopting, and implementing stricter mitigation regulations, approving the hiring, and training of staff for mitigation activities, and approving mitigation updates to existing plans as new needs are recognized.

City of Waxahachie

Planning and Regulatory Assessment

Planning and regulatory capabilities are the plans, policies, codes, and ordinances that prevent and reduce the impacts of natural hazards.

Type of Plans	Have capability?	Level	If Yes…		
Comprehensive or Master Plan	☒ Yes ☐ No ☐ N/A	☒ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☒ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☒ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☒ Yes ☐ No	**Comments (optional):**
Capital Improvement Plan (CIP)	☒ Yes ☐ No ☐ N/A	☒ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☒ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☒ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☒ Yes ☐ No	**Comments (optional):**

Type of Plans	Have capability?	Level	If Yes…		
Economic Development Plan	☐ Yes ☒ No ☐ N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**
Local Emergency Operations Plan	☒ Yes ☐ No ☐ N/A	☒ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☒ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☒ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☒ Yes ☐ No	**Comments (optional):**
Continuity of Operations Plan	☒ Yes ☐ No ☐ N/A	☒ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☒ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☒ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☒ No	**Comments (optional):**
Transportation Plan	☒ Yes ☐ No	☒ Local	**Does the plan address natural hazards?**	☒ Yes ☐ No	**Comments (optional):**

Type of Plans	Have capability?	Level	If Yes…		
	☐ N/A	☐ County ☐ Region	**Does the plan identify projects to include in the mitigation strategy?**	☒ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☒ Yes ☐ No	**Comments (optional):**
Stormwater Management Plan	☒ Yes ☐ No ☐ N/A	☒ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☒ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☒ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☒ Yes ☐ No	**Comments (optional):**
Community Wildfire Protection Plan	☐ Yes ☒ No ☐ N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**
Green Infrastructure Plan	☐ Yes ☒ No ☐ N/A	☐ Local ☐ County	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the	☐ Yes ☐ No	**Comments (optional):**

Type of Plans	Have capability?	Level	If Yes…		
		☐ Region	**mitigation strategy?**		
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**
Parks or Open Space Plan	☒ Yes ☐ No ☐ N/A	☒ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☒ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☒ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☒ Yes ☐ No	**Comments (optional):**
Hazard Mitigation Plan	☒ Yes ☐ No ☐ N/A	☒ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☒ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☒ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☒ Yes ☐ No	**Comments (optional):**

Land Use Planning and Ordinances	Have capability?	If Yes…		
Zoning Ordinance	☒ Yes ☐ No	**Is the ordinance an effective measure for reducing hazard impacts?**	☒ Yes ☐ No	**Comments (optional):**

Land Use Planning and Ordinances	Have capability?	If Yes…		
	☐N/A	**Is the ordinance adequately administered and enforced?**	☒Yes ☐No	**Comments (optional):**
Subdivision Ordinance	☒Yes ☐No ☐N/A	**Is the ordinance an effective measure for reducing hazard impacts?**	☒Yes ☐No	**Comments (optional):**
		Is the ordinance adequately administered and enforced?	☒Yes ☐No	**Comments (optional):**
		Is the FIRM adequately administered and enforced?	☒Yes ☐No	**Comments (optional):**
Natural Hazard Specific Ordinance (e.g., stormwater, wildfire)	☒Yes ☐No ☐N/A	**Is the ordinance an effective measure for reducing hazard impacts?**	☒Yes ☐No	**Comments (optional):**
		Is the ordinance adequately administered and enforced?	☒Yes ☐No	**Comments (optional):**
Acquisition of land for open space and public recreation uses	☒Yes ☐No ☐N/A	**Is the ordinance an effective measure for reducing hazard impacts?**	☒Yes ☐No	**Comments (optional):**
		Is the ordinance adequately administered and enforced?	☒Yes ☐No	**Comments (optional):**

Building Code, Permitting, and Inspections	Have capability?	
Building Code	☒Yes ☐No ☐N/A	**Version/Year: IBC 2018**
Building Code Effectiveness Grading Schedule (BGEGS) Score	☐Yes	**Score:**

	☒No ☐N/A	
Fire Department ISO Rating	☒Yes ☐No ☐N/A	**Rating: 2**
Site Plan Review Requirements	☒Yes ☐No ☐N/A	**Review method: DRC**

Administrative and Technical Assessment

Administrative and technical capabilities include staff and their skills and tools that can be used for mitigation planning and to implement specific mitigation actions.

Administration	**Have capability?**	**If Yes…**
Planning Commission	☐Yes ☒No ☐N/A	**Describe capability:**
Mitigation Planning Committee	☐Yes	**Describe capability:** Identifies hazards, conducts a risk and vulnerability assessment, and creates and monitors mitigation actions.
Maintenance programs to reduce risk (e.g., tree trimming, clearing drainage systems)	☒Yes ☐No ☐N/A	**Describe capability:** Trimming, street maintenance, creek dredging
Mutual Aid Agreements	☒Yes ☐No ☐N/A	**Describe capability:** EDUCT, PWERT, NTPA

Staff	**Have capability? FT/PT***	**If Yes…**	
***Full-time (FT) or part-time (PT) position**			
Chief Building Official	☒Yes-FT ☐Yes- PT	**Is staffing adequate to enforce regulations?**	☒ Yes ☐No

Staff	Have capability? FT/PT*	If Yes…	
***Full-time (FT) or part-time (PT) position**			
	☐No ☐N/A	**Is staff trained on natural hazards and mitigation?**	☒ Yes ☐No
Parks and Recreation Director	☒Yes-FT ☐Yes- PT ☐No ☐N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☒ Yes ☐No
Emergency Manager	☒Yes-FT ☐Yes- PT ☐No ☐N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☒ Yes ☐No
Community Planner	☒Yes-FT ☐Yes- PT ☐No ☐N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☒ Yes ☐No
Civil Engineer	☒Yes-FT ☐Yes- PT ☐No ☐N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☒ Yes ☐No
GIS Coordinator	☒Yes-FT ☐Yes- PT	**Is staffing adequate to enforce regulations?**	☒ Yes ☐No

Staff	Have capability? FT/PT*	If Yes…	
***Full-time (FT) or part-time (PT) position**			
	☐ No ☐ N/A	**Is staff trained on natural hazards and mitigation?**	☒ Yes ☐ No
Public Works Director	☒ Yes-FT ☐ Yes- PT ☐ No ☐ N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐ No
		Is staff trained on natural hazards and mitigation?	☒ Yes ☐ No
Fire Chief	☒ Yes-FT ☐ Yes- PT ☐ No ☐ N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐ No
		Is staff trained on natural hazards and mitigation?	☒ Yes ☐ No
Environmental Director	☐ Yes-FT ☐ Yes- PT ☒ No ☐ N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐ No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐ No

Technical	Have capability?	If Yes…	
Warning Systems/Services (e.g., Reverse 911, outdoor warning signals)	☒ Yes ☐ No ☐ N/A	**Describe capability: OWS, reverse 911, Ever Bridge**	
		Has capability been used to assess or mitigate risk in the past?	☒ Yes ☐ No

Technical	Have capability?	If Yes…	
		If yes, for what type of hazard event? Floods, tornadoes	
Hazard data and information	☐Yes ☒No ☐N/A	**Describe capability:**	
		Has capability been used to assess or mitigate risk in the past?	☐ Yes ☐ No
		If yes, for what type of hazard event?	
Grant writing	☒Yes ☐No ☐N/A	**Describe capability: State, FEMA, Private**	
		Has capability been used to assess or mitigate risk in the past?	☒ Yes ☐ No
		If yes, for what type of hazard event? Winter Storm, Covid, Tornado, Floods	
HaZUS analysis or GIS software	☒Yes ☐No ☐N/A	**Describe capability: ESRI**	
		Has capability been used to assess or mitigate risk in the past?	☒ Yes ☐ No
		If yes, for what type of hazard event? Flooding	

Education and Outreach Assessment

Education and outreach programs and methods can be used to implement mitigation activities and communicate hazard-related information.

Program or Organization	Have capability?	If Yes…	
Local citizen groups or non-profit organizations focused	☐Yes	**Could the program or organization help implement future mitigation activities?**	☐ Yes

Program or Organization	Have capability?	If Yes…	
on environmental protection, emergency preparedness, access and functional needs populations, etc.	☒No ☐N/A		☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation:	
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	☒Yes ☐No ☐N/A	**Could the program or organization help implement future mitigation activities?**	☒ Yes ☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation: Use of social media to put current and relative information out on a monthly basis.	
Natural disaster or safety related school programs	☒Yes ☐No ☐N/A	**Could the program or organization help implement future mitigation activities?**	☒ Yes ☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation: Waxahachie Crisis Management team meets to identify, address and respond to threats to our school programs.	
Public/private partnership initiatives addressing disaster-related issues	☒Yes ☐No ☐N/A	**Could the program or organization help implement future mitigation activities?**	☒ Yes ☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation: Texas Baptist Men org., Salvation Army, Red Cross, and LTRC that assists with disaster response and training within our community.	
StormReady certification	☐Yes ☒No ☐N/A		
Firewise Communities Certification	☐Yes ☒No		

Program or Organization	Have capability?	If Yes…
	☐N/A	

Financial Assessment

Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation.

Funding Resources	Have capability?	If Yes…	
Capital Improvements Project funding	☒Yes ☐No ☐N/A	**Could the resource be used to fund future mitigation activities?**	☒ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☒ Yes ☐ No
		If yes, for what type of mitigation activities? Generators, OWS, trainings	
Authority to levy taxes for specific purposes	☒Yes ☐No ☐N/A	**Could the resource be used to fund future mitigation activities?**	☒ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☒ No
		If yes, for what type of mitigation activities?	
Fees for water, sewer, gas, and/or electric services	☒Yes ☐No ☐N/A	**Could the resource be used to fund future mitigation activities?**	☒ Yes ☐ No
		Has the funding resource been used in past for mitigation activities for mitigation activities?	☒ Yes ☐ No

Funding Resources	Have capability?	If Yes…	
		If yes, for what type of mitigation activities? Stormwater mitigations, flooding mitigation	
Impact fees for new development	☒ Yes ☐ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☒ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☒ Yes ☐ No
		If yes, for what type of mitigation activities? Offsets cost of mitigation action items	
Stormwater utility fee	☐ Yes ☒ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	
Incurrence of debt through general obligation bonds and/or special tax bonds	☐ Yes ☒ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	
Incur debt through private activities	☐ Yes ☒ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No

Funding Resources	Have capability?	If Yes…	
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	
Community Development Block Grant	☐ Yes ☒ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	
Other federal funding programs (e.g. FEMA mitigation grants)	☒ Yes ☐ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☒ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☒ Yes ☐ No
		If yes, for what type of mitigation activities? Flood mitigation	
State funding programs	☐ Yes ☒ No ☐ N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	

How can these capabilities be expanded and improved to reduce risk?
Actions that can expand and improve existing authorities, plans, policies, and resources for mitigation include budgeting and passing policies and procedures for mitigation actions, adopting and implementing stricter mitigation regulations, approving the hiring and training of staff for mitigation activities, and approving mitigation updates to existing plans as new needs are recognized.

Ellis County Unincorporated

Planning and Regulatory Assessment

Planning and regulatory capabilities are the plans, policies, codes, and ordinances that prevent and reduce the impacts of natural hazards.

Type of Plans	Have capability?	Level	If Yes…		
Comprehensive or Master Plan	☒ Yes ☐ No ☐ N/A	☐ Local ☒ County ☐ Region	**Does the plan address natural hazards?**	☒ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☒ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☒ Yes ☐ No	**Comments (optional):**
Capital Improvement Plan (CIP)	☒ Yes ☐ No ☐ N/A	☐ Local ☒ County ☐ Region	**Does the plan address natural hazards?**	☒ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☒ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☒ Yes ☐ No	**Comments (optional):**
Economic Development Plan	☐ Yes ☒ No	☐ Local	**Does the plan address natural hazards?**	☒ Yes ☐ No	**Comments (optional):**

Type of Plans	Have capability?	Level	If Yes…		
	☐N/A	☐ County ☐ Region	**Does the plan identify projects to include in the mitigation strategy?**	☒Yes ☐No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☒Yes ☐No	**Comments (optional):**
Local Emergency Operations Plan	☒Yes ☐No ☐N/A	☐ Local ☒ County ☐ Region	**Does the plan address natural hazards?**	☐Yes ☐No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☒Yes ☐No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☒Yes ☐No	**Comments (optional):**
Continuity of Operations Plan	☒Yes ☐No ☐N/A	☐ Local ☒ County ☐ Region	**Does the plan address natural hazards?**	☒Yes ☐No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐Yes ☒No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☒Yes ☐No	**Comments (optional):**
Transportation Plan	☒Yes ☐No ☐N/A	☐ Local ☐ County	**Does the plan address natural hazards?**	☐Yes ☐No	**Comments (optional):**
			Does the plan identify projects to include in the	☐Yes ☐No	**Comments (optional):**

Type of Plans	Have capability?	Level	If Yes…		
		☐ Region	**mitigation strategy?**		
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**
Stormwater Management Plan	☒ Yes ☐ No ☐ N/A	☐ Local ☒ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**
Community Wildfire Protection Plan	☒ Yes ☐ No ☐ N/A	☐ Local ☒ County ☐ Region	**Does the plan address natural hazards?**	☒ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☒ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**
Green Infrastructure Plan	☐ Yes ☒ No ☐ N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☐ No	**Comments (optional):**

Type of Plans	Have capability?	Level	If Yes…		
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**
Parks or Open Space Plan	☐ Yes ☒ No ☐ N/A	☐ Local ☐ County ☐ Region	**Does the plan address natural hazards?**	☐ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☐ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☐ Yes ☐ No	**Comments (optional):**
Hazard Mitigation Plan	☒ Yes ☐ No ☐ N/A	☐ Local ☒ County ☐ Region	**Does the plan address natural hazards?**	☒ Yes ☐ No	**Comments (optional):**
			Does the plan identify projects to include in the mitigation strategy?	☒ Yes ☐ No	**Comments (optional):**
			Can the plan be used to implement mitigation actions?	☒ Yes ☐ No	**Comments (optional):**

Land Use Planning and Ordinances	Have capability?	If Yes…		
Zoning Ordinance	☐ Yes ☒ No ☐ N/A	**Is the ordinance an effective measure for reducing hazard impacts?**	☐ Yes ☐ No	**Comments (optional):**
		Is the ordinance adequately	☐ Yes ☐ No	**Comments (optional):**

Land Use Planning and Ordinances	Have capability?	If Yes…		
		administered and enforced?		
Subdivision Ordinance	☒Yes ☐No ☐N/A	**Is the ordinance an effective measure for reducing hazard impacts?**	☒Yes ☐No	**Comments (optional):**
		Is the ordinance adequately administered and enforced?	☐Yes ☐No	**Comments (optional):**
		Is the FIRM adequately administered and enforced?	☐Yes ☐No	**Comments (optional):**
Natural Hazard Specific Ordinance (e.g., stormwater, wildfire)	☒Yes ☐No ☐N/A	**Is the ordinance an effective measure for reducing hazard impacts?**	☐Yes ☐No	**Comments (optional):**
		Is the ordinance adequately administered and enforced?	☐Yes ☐No	**Comments (optional):**
Acquisition of land for open space and public recreation uses	☐Yes ☐No ☒N/A	**Is the ordinance an effective measure for reducing hazard impacts?**	☐Yes ☐No	**Comments (optional):**
		Is the ordinance adequately administered and enforced?	☐Yes ☐No	**Comments (optional):**

Building Code, Permitting, and Inspections	Have capability?	
Building Code	☐Yes ☒No ☐N/A	**Version/Year:**
Building Code Effectiveness Grading Schedule (BGEGS) Score	☐Yes ☒No ☐N/A	**Score:**

Fire Department ISO Rating	☐Yes ☐No ☒N/A	**Rating:**
Site Plan Review Requirements	☒Yes ☐No ☐N/A	**Review method:**

Administrative and Technical Assessment

Administrative and technical capabilities include staff and their skills and tools that can be used for mitigation planning and to implement specific mitigation actions.

Administration	**Have capability?**	**If Yes…**
Planning Commission	☒Yes ☐No ☐N/A	**Describe capability: Planning commission is established through the Department of Development.**
Mitigation Planning Committee	☒Yes	**Describe capability:** Identifies hazards, conducts a risk and vulnerability assessment, and creates and monitors mitigation actions.
Maintenance programs to reduce risk (e.g., tree trimming, clearing drainage systems)	☒Yes ☐No ☐N/A	**Describe capability: Each precinct in the count has Road and Bridge crews that maintain items like tree trimming and clearing drainage systems.**
Mutual Aid Agreements	☒Yes ☐No ☐N/A	**Describe capability: The county has established Mutual Aid Agreements with local agencies to assist in a time of need.** **1. Joint Resolution between Ellis County and the Cities of Ellis County dated Nov 10, 2003.** **2. Agreement & Contract# 48715 Master Switch User & Communications System Agreement for Radio System Access for Interoperability Communications– City of Fort Worth to provide communication access via standard communications and statewide mutual aid frequencies, February 21, 2017.** **3. Adoption of the Ellis County Hazard Mitigation Action Plan, 2015-2016, November 10, 2015.** **4. Statement of Agreement between the American Red Cross and First United Methodist Church of Midlothian to provide mass care and sheltering, disaster preparedness activities,**

		conducting and coordinating actual disaster relief operations. The American Red Cross will maintain its capability to take immediate action to provide emergency assistance to any number of people affected by, and emergency workers involved in, disaster or threat of disaster, June 18, 2015. **5. Interjurisdictional Mutual Aid Agreement, State of Texas, County of Ellis – Alma, Bardwell, Cedar Hill, Ennis, Ferris, Garrett, Glenn Heights, Grand Prairie, Italy, Mansfield, Maypearl, Midlothian, Milford, Oak Leaf, Ovilla, Palmer, Pecan Hill, Red Oak and Waxahachie to provide mutual aid emergency services.** **6. Interjurisdictional Mutual Aid Agreement for EDUCT Interjurisdictional Mutual Aid Agreement for EDUCT – Cedar Hill, DeSoto, Duncanville, Ferris, Glenn Heights, Lancaster, Midlothian, Ovilla, Red Oak and Waxahachie for Fire, EMS and police protection and law enforcement assistance to participating cities, May 24, 2005.** **7. Resolution 2005-11. National Incident Management System (NIMS) adoption, September** **27, 2005.**

Staff	**Have capability? FT/PT***	**If Yes…**	
***Full-time (FT) or part-time (PT) position**			
Chief Building Official	☒Yes-FT ☐Yes- PT ☐No ☐N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☒ Yes ☐No
Parks and Recreation Director	☐Yes-FT ☐Yes- PT ☒No ☐N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐No

Staff	Have capability? FT/PT*	If Yes…	
***Full-time (FT) or part-time (PT) position**			
Emergency Manager	☒Yes-FT ☐Yes- PT ☐No ☐N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☒ Yes ☐No
Community Planner	☒Yes-FT ☐Yes- PT ☐No ☐N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☒ Yes ☐No
Civil Engineer	☒Yes-FT ☐Yes- PT ☐No ☐N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐No
GIS Coordinator	☒Yes-FT ☐Yes- PT ☐No ☐N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☒ Yes ☐No
Public Works Director	☒Yes-FT ☐Yes- PT ☐No ☐N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☒ Yes ☐No

Staff	Have capability? FT/PT*	If Yes…	
***Full-time (FT) or part-time (PT) position**			
Fire Chief	☐Yes-FT ☐Yes- PT ☐No ☒N/A	**Is staffing adequate to enforce regulations?**	☐ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☐ Yes ☐No
Environmental Director	☒Yes-FT ☐Yes- PT ☐No ☐N/A	**Is staffing adequate to enforce regulations?**	☒ Yes ☐No
		Is staff trained on natural hazards and mitigation?	☒ Yes ☐No

Technical	Have capability?	If Yes…	
Warning Systems/Services (e.g., Reverse 911, outdoor warning signals)	☒Yes ☐No ☐N/A	**Describe capability:** Mass Notification System (Everbridge)	
		Has capability been used to assess or mitigate risk in the past?	☒Yes ☐No
		If yes, for what type of hazard event? Notifications sent for severe weather events.	
Hazard data and information	☒Yes ☐No ☐N/A	**Describe capability:** Ellis County Hazard Mitigation Action Plan	
		Has capability been used to assess or mitigate risk in the past?	☒Yes ☐No
		If yes, for what type of hazard event? Natural, Man-made, technological hazards Severe Weather, Floods, and Hazardous Materials Pipeline reverse 911	
Grant writing	☒Yes	**Describe capability:**	

Technical	Have capability?	If Yes…	
	☐No ☐N/A	**Has capability been used to assess or mitigate risk in the past?**	☒Yes ☐No
		If yes, for what type of hazard event? Hazard Mitigation Grants and FEMA PA	
HaZUS analysis or GIS software	☒Yes ☐No ☐N/A	**Describe capability**: A GIS Specialist in the Engineering Department that has the ability to create maps for public safety and emergency management to include hazard mitigation.	
		Has capability been used to assess or mitigate risk in the past?	☒Yes ☐No
		If yes, for what type of hazard event? All Hazards. Planning for dams and other critical infrastructures	

Education and Outreach Assessment

Education and outreach programs and methods can be used to implement mitigation activities and communicate hazard-related information.

Program or Organization	Have capability?	If Yes…	
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	☒Yes ☐No ☐N/A	**Could the program or organization help implement future mitigation activities?**	☒ Yes ☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation: CERT program	
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	☒Yes ☐No ☐N/A	**Could the program or organization help implement future mitigation activities?**	☒ Yes ☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation: Annual safety fair that promotes safety and preparedness. KnoWhat2Do public education videos, public information sharing on social media accounts, weather forecasting, environmental hazards in the	

Program or Organization	Have capability?	If Yes…	
		area, etc… prepares the community to become more resilient.	
Natural disaster or safety related school programs	☒Yes ☐No ☐N/A	**Could the program or organization help implement future mitigation activities?**	☒ Yes ☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation: School tornado poster contest helps students understand severe weather and how to prepare, mitigate, respond and recover.	
Public/private partnership initiatives addressing disaster-related issues	☒Yes ☐No ☐N/A	**Could the program or organization help implement future mitigation activities?**	☒ Yes ☐ No
		Describe program or organization and how it relates to disaster resilience and mitigation: Partnering with Chambers of Commerce's to participate in the Ellis County Preparedness Fair hosted every September (National Preparedness Month).	
StormReady certification	☐Yes ☒No ☐N/A	In the process of certification.	
Firewise Communities Certification	☐Yes ☒No ☐N/A		

Financial Assessment

Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation.

Funding Resources	Have capability?	If Yes…	
Capital Improvements Project funding	☒Yes	**Could the resource be used to fund future mitigation activities?**	☒ Yes

Funding Resources	Have capability?	If Yes…	
	☐No ☐N/A		☐ No
		Has the funding resource been used in past for mitigation activities?	☒ Yes ☐ No
		If yes, for what type of mitigation activities? Drainage for storm water.	
Authority to levy taxes for specific purposes	☐Yes ☒No ☐N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	
Fees for water, sewer, gas, and/or electric services	☐Yes ☒No ☐N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	
Impact fees for new development	☐Yes ☐No ☒N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	

Funding Resources	Have capability?	If Yes…	
Stormwater utility fee	☐Yes ☒No ☐N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☒ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☒ No
		If yes, for what type of mitigation activities?	
Incurrence of debt through general obligation bonds and/or special tax bonds	☒Yes ☐No ☐N/A	**Could the resource be used to fund future mitigation activities?**	☒ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☒ No
		If yes, for what type of mitigation activities?	
Incur debt through private activities	☐Yes ☒No ☐N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	
Community Development Block Grant	☒Yes ☐No ☐N/A	**Could the resource be used to fund future mitigation activities?**	☒ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☒ Yes ☒ No

Funding Resources	Have capability?	If Yes…	
		If yes, for what type of mitigation activities?	
Other federal funding programs (e.g. FEMA mitigation grants)	☒Yes ☐No ☐N/A	**Could the resource be used to fund future mitigation activities?**	☐ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☐ No
		If yes, for what type of mitigation activities?	
State funding programs	☒Yes ☐No ☐N/A	**Could the resource be used to fund future mitigation activities?**	☒ Yes ☐ No
		Has the funding resource been used in past for mitigation activities?	☐ Yes ☒ No
		If yes, for what type of mitigation activities?	

How can these capabilities be expanded and improved to reduce risk?
Actions that can expand and improve existing authorities, plans, policies, and resources for mitigation include budgeting and passing policies and procedures for mitigation actions, adopting and implementing stricter mitigation regulations, approving the hiring and training of staff for mitigation activities, and approving mitigation updates to existing plans as new needs are recognized.

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Appendix C: NCTCOG Programs

The North Central Texas Council of Governments (NCTCOG) is a voluntary association of, by and for local governments, established to assist in regional planning. 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. NCTCOG consists of many departments that implement programs and projects that address the mitigation goals of the participating jurisdictions.

The Environment & Development Department at NCTCOG plays a major role in regional coordination and management of reports and projects that improve regional resilience to natural hazards through the following programs:

- **The Corridor Development Certificate (CDC)** – The CDC process aims to stabilize flood risk along the Trinity River. The CDC process does not prohibit floodplain development but ensures that any development that does occur in the floodplain will not raise flood water levels or reduce flood storage capacity. A CDC permit is required to develop land within a specific area of the Trinity floodplain called the Regulatory Zone, which is similar to the 100-year floodplain.
    - Under the CDC process, local governments retain ultimate control over floodplain permitting decisions, but other communities along the Trinity River Corridor are given the opportunity to review and comment on projects in their neighbor's jurisdiction. As the Metroplex economy continues to grow and develop, the CDC process will prevent increased flood risks
- **NCTCOG-OneRain Contrail Flood Warning Software**- Contrail software that delivers automated real-time data collection, processing, validation, analysis, archiving and visualization of hydrometeorological and environmental sensor data.
- **The *integrated* Stormwater Management (iSWM) Program**- The iSWM™ Program for Construction and Development is a cooperative initiative that assists cities and counties to achieve their goals of water quality protection, streambank protection, and flood mitigation, while also helping communities meet their construction and post-construction obligations under state stormwater permits.
    - Development and redevelopment by their nature increase the amount of imperviousness in our surrounding environment. This increased imperviousness translates into loss of natural areas, more sources for pollution in runoff, and heightened flooding risks. To help mitigate these impacts, more than 60 local governments are cooperating to proactively create sound stormwater management guidance for the region through the *integrated* Stormwater Management (iSWM) Program.
- **16-County Watershed Management Initiative**- Communities from across the region come together to collaborate on how to reduce the risks of flooding in their communities.
- **Texas Smartscape**- Texas SmartScape™ is a landscape program crafted to be "smart" for North Central Texas. Based on water-efficient landscape principles, it promotes the use of plants suited to our region's soil, climate, and precipitation that don't require much—if any—additional irrigation, pesticides, fertilizer, or herbicides to thrive.

- The two main goals of the program are to:
  - Improve stormwater runoff quality
  - Conserve local water supplies

The Transportation Department promotes the following programs:

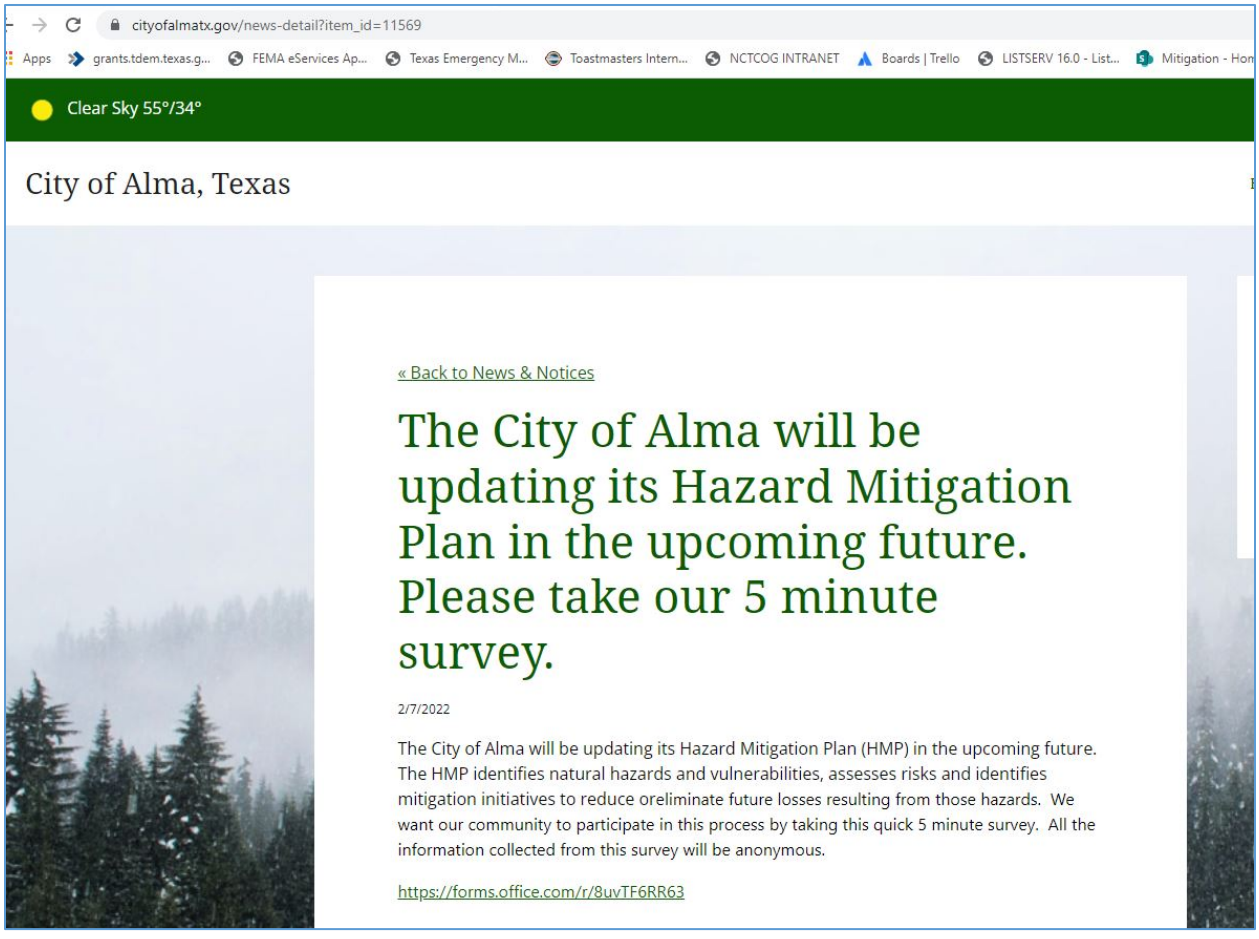
- **Bicycle-Pedestrian-** The passage of the 1991 Intermodal Surface Transportation Efficiency Act prompted NCTCOG to include non-motorized transportation network improvements in regional planning efforts. NCTCOG established the Bicycle and Pedestrian program in 1992 to address the various activities related to implementing bicycle and pedestrian facilities as an alternative mode of regional transportation.
- **Sustainable Development**- As land uses influence regional travel patterns and demand on the transportation system, and transportation connects land uses and provides access to developments, both need to be planned in conjunction with one another. NCTCOG supports Sustainable Development: mixed-use, infill, and transit-oriented developments that reduce vehicle miles traveled, enable the use of alternative modes of transportation, promote economic development, and improve air quality.

Appendix D: Public Meeting Documents

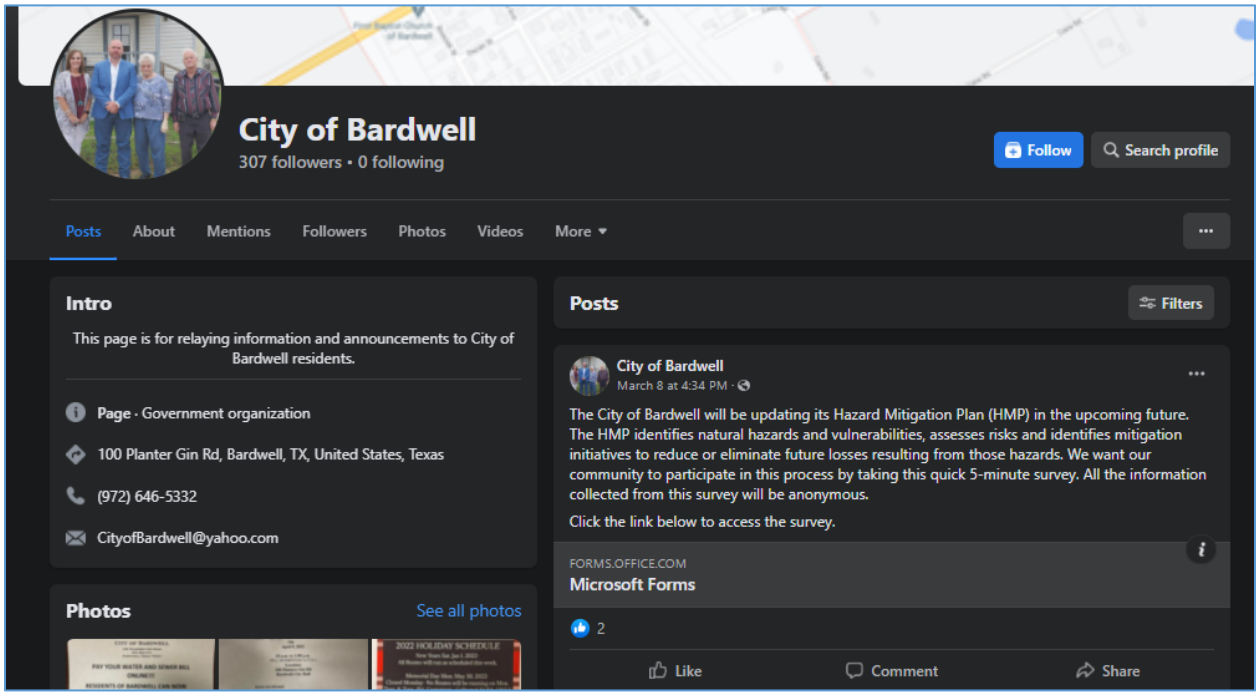
Part 1: Survey Announcement

Instead of hosting a separate public meeting outside of our regular, open planning meetings, the planning team felt that a public survey would be the best method of collecting public opinion for this plan update. The team advertised a Hazard Mitigation Plan survey on their jurisdiction's websites, Twitter, and Facebook pages. Part 1 includes one screenshot of those survey posts from each participating jurisdiction.

City of Alma



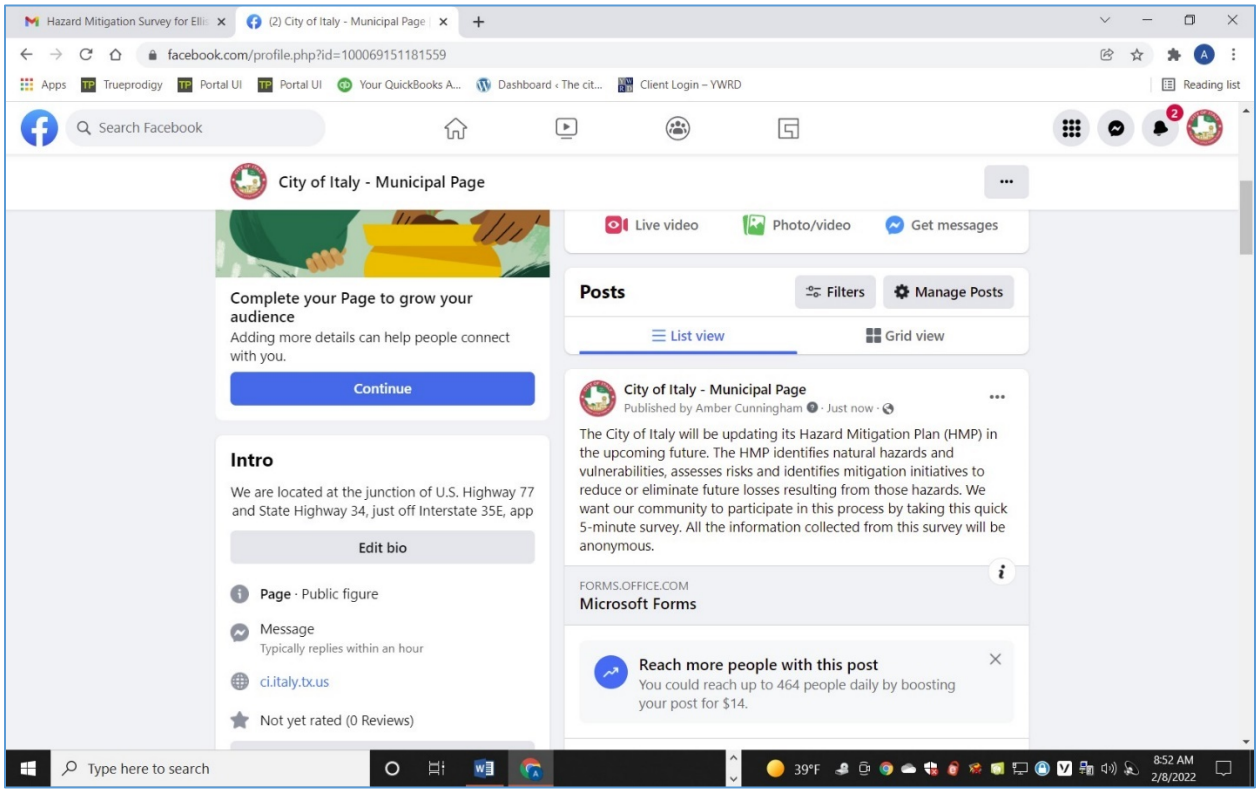
City of Bardwell



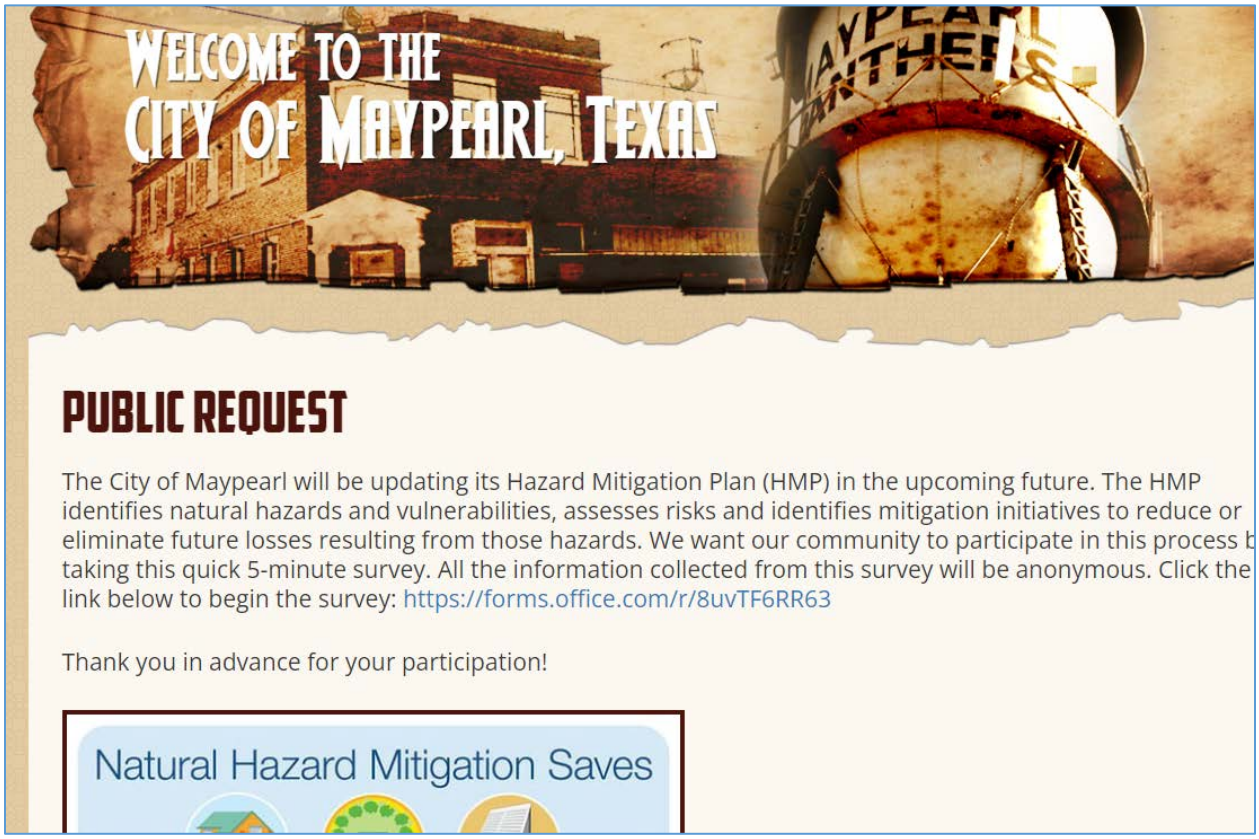
City of Ferris

City of Garrett

City of Italy



City of Maypearl



City of Midlothian

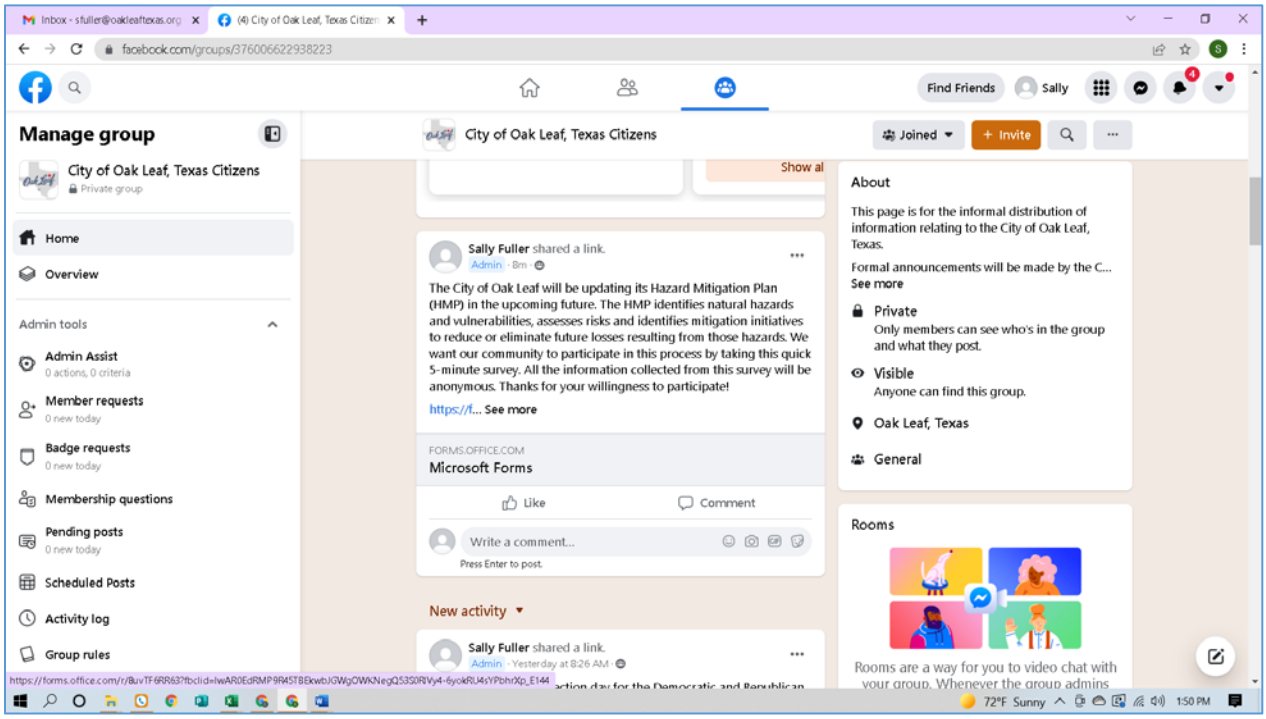
Hazard Mitigation Plan Update

The City of Midlothian will be updating its Hazard Mitigation Plan (HMP) in the upcoming future. The HMP identifies natural hazards and vulnerabilities, assesses risks and identifies mitigation initiatives to reduce or eliminate future losses resulting from those hazards. We want our community to participate in this process by taking this quick 5-minute survey. All the information collected from this survey will be anonymous.

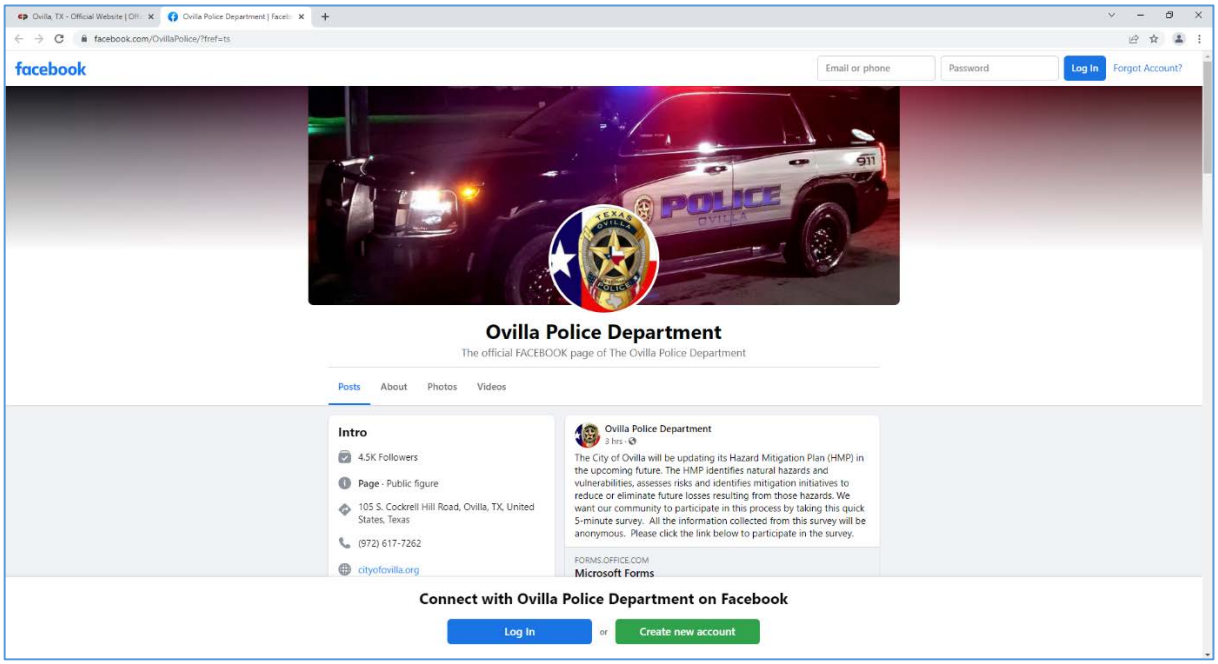
Hazard Mitigation Plan Survey

City of Milford

City of Oak Leaf

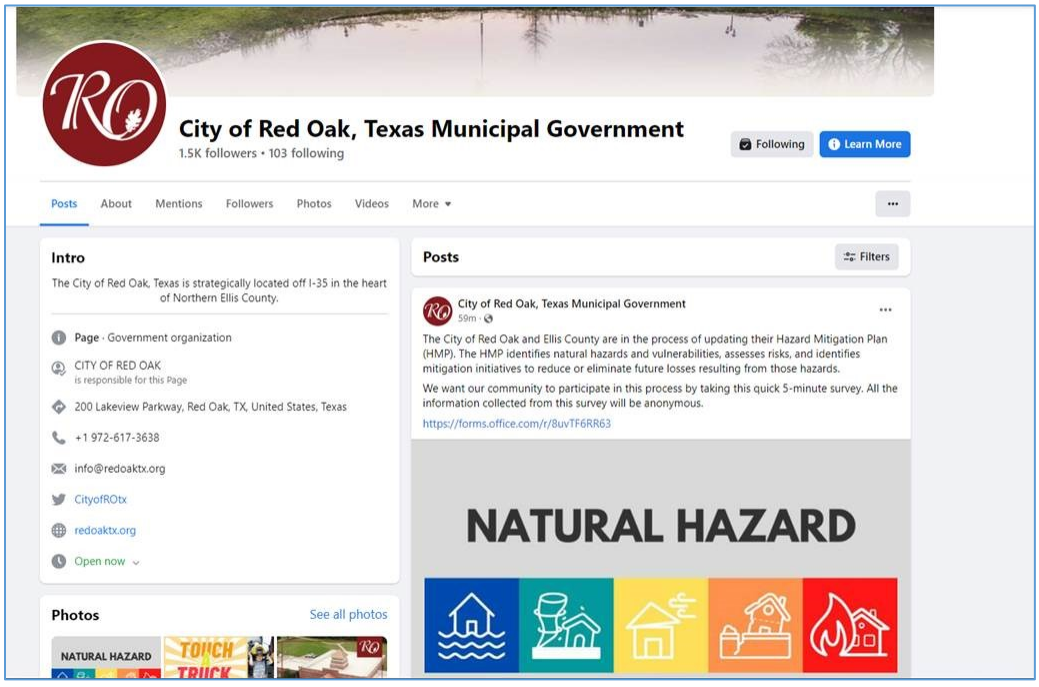


City of Ovilla

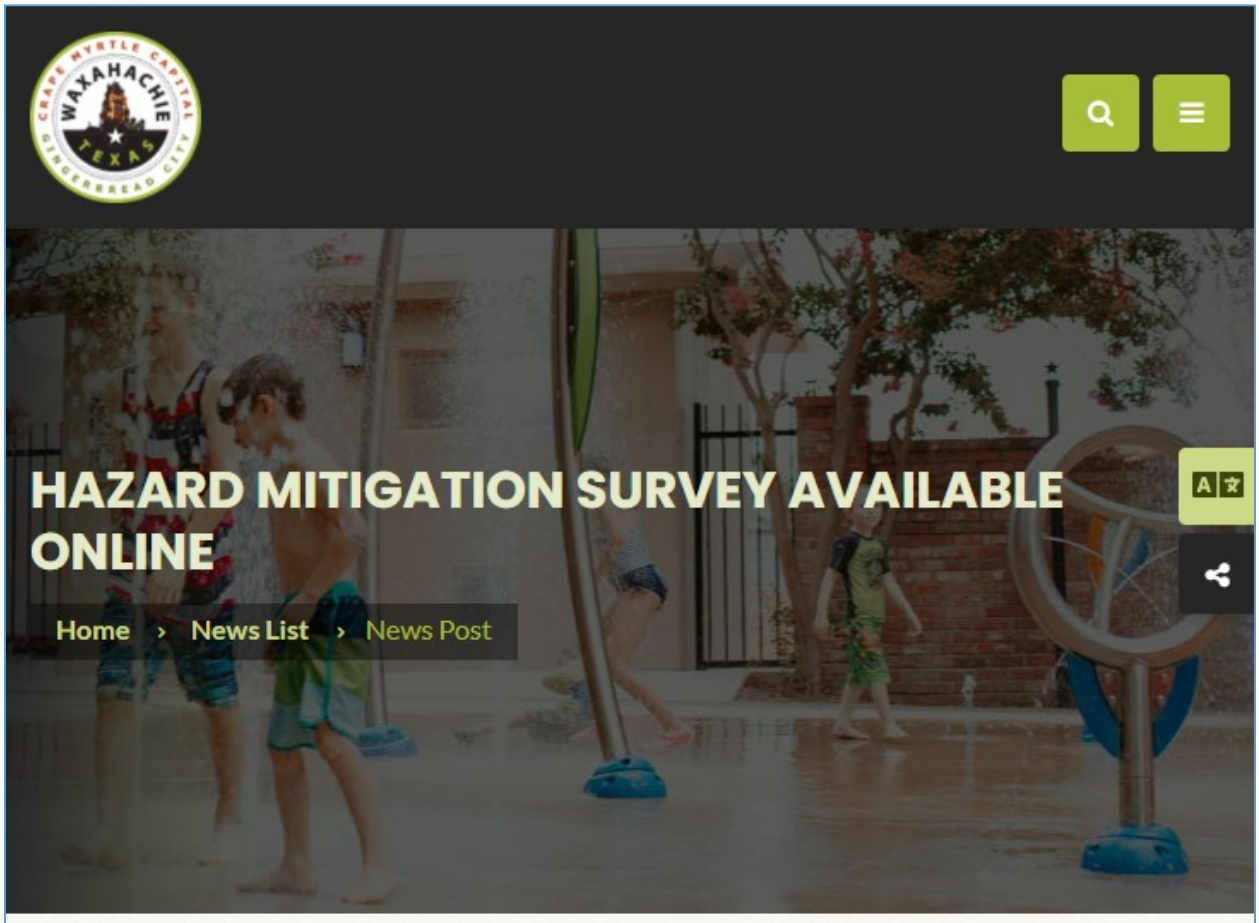


City of Palmer

City of Red Oak



City of Waxahachie



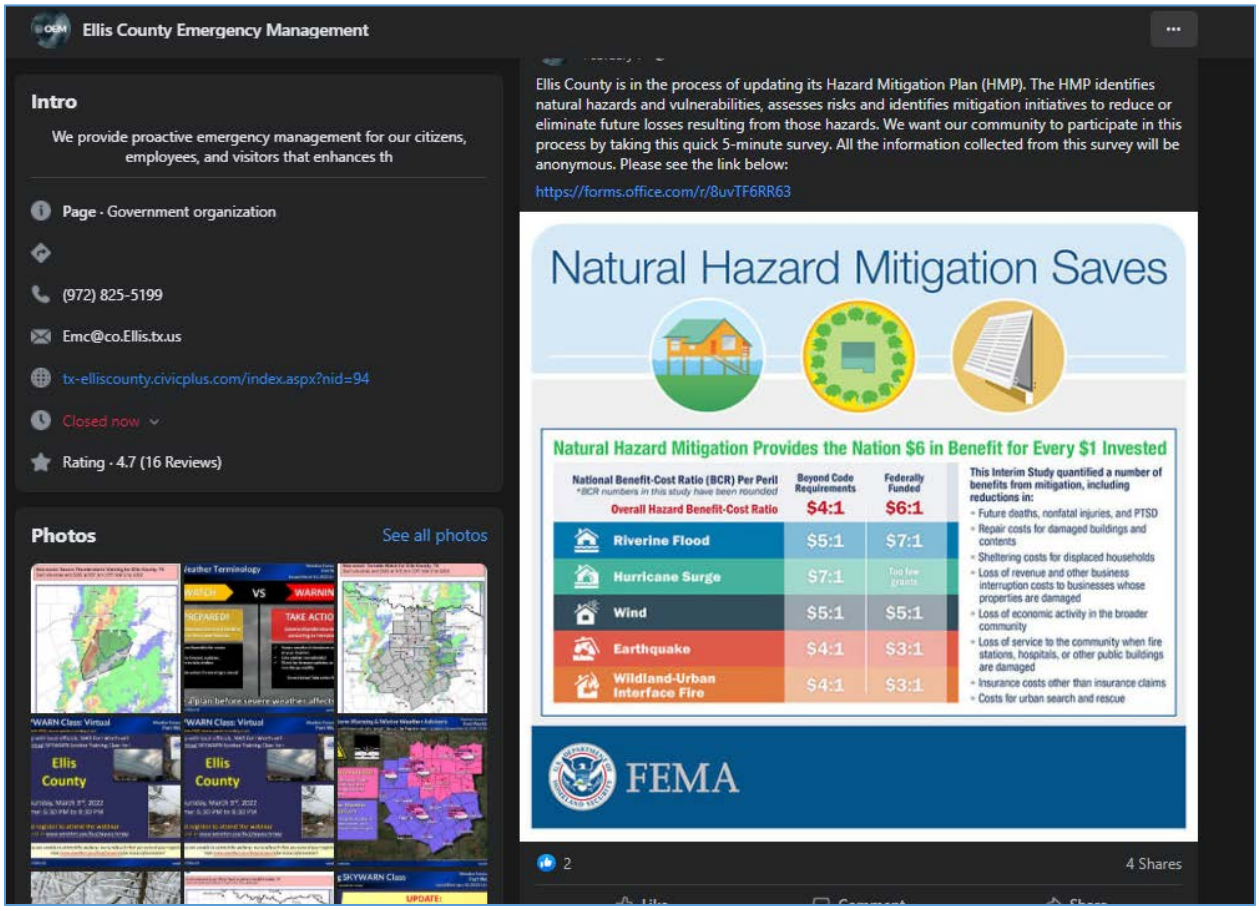
HAZARD MITIGATION SURVEY AVAILABLE ONLINE

The City of Waxahachie will be updating its Hazard Mitigation Plan (HMP) in the near future. The HMP identifies natural hazards and vulnerabilities, assesses risks and identifies mitigation initiatives to reduce or eliminate future losses resulting from those hazards. We want our community to participate in this process by taking this quick 5-minute survey. All the information collected from this survey will be anonymous.

Survey link:

https://forms.office.com/r/8uvTF6RR63

Ellis County Unincorporated



Part 2: Results

The result of the county-wide survey is below. Responses were taken into consideration when developing the mitigation strategy.

1. How long have you lived in Ellis County?

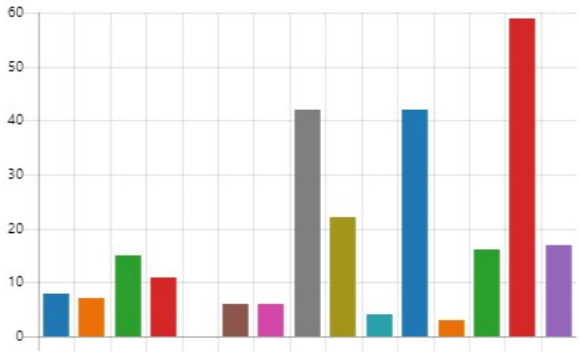
More Details

Less than 1 year	11
1 to 5 years	49
6 to 9 years	32
10 to 19 years	40
20 years or more	126

2. Please state the jurisdiction where you reside.

More Details

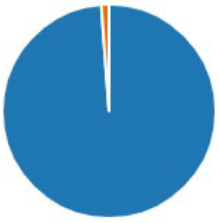
City of Alma	8
City of Bardwell	7
City of Ennis	15
City of Ferris	11
City of Garrett	0
City of Italy	6
City of Maypearl	6
City of Midlothian	42
City of Milford	22
City of Oak Leaf	4
City of Ovilla	42
City of Palmer	3
City of Red Oak	16
City of Waxahachie	59
Other	17



3. Are you responding on behalf of a residential or commercial property?

More Details

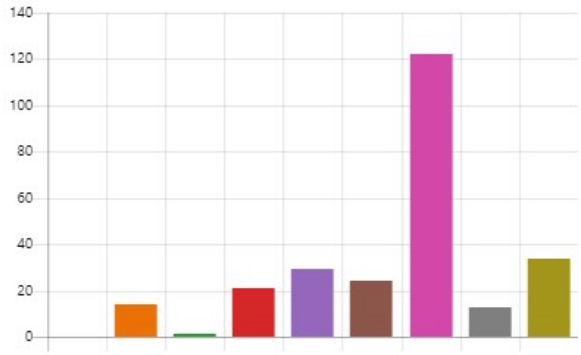
Residential	255
Commercial	3



4. Please select the one hazard you think is the highest threat to your neighborhood:

More Details Insights

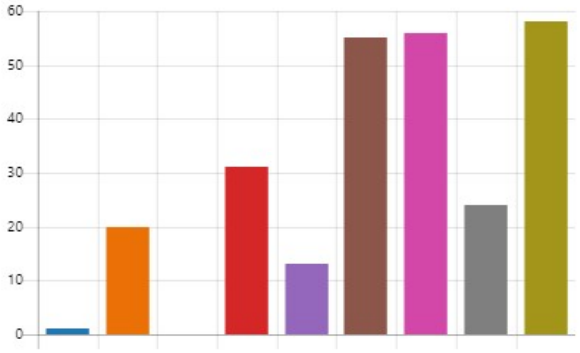
Dam Failure	0
Drought	14
Earthquake	1
Extreme Heat	21
Flood	29
Thunderstorm	24
Tornado	122
Wildfire	13
Winter Storm	34



5. Please select the one hazard you think is the second highest threat to your neighborhood:

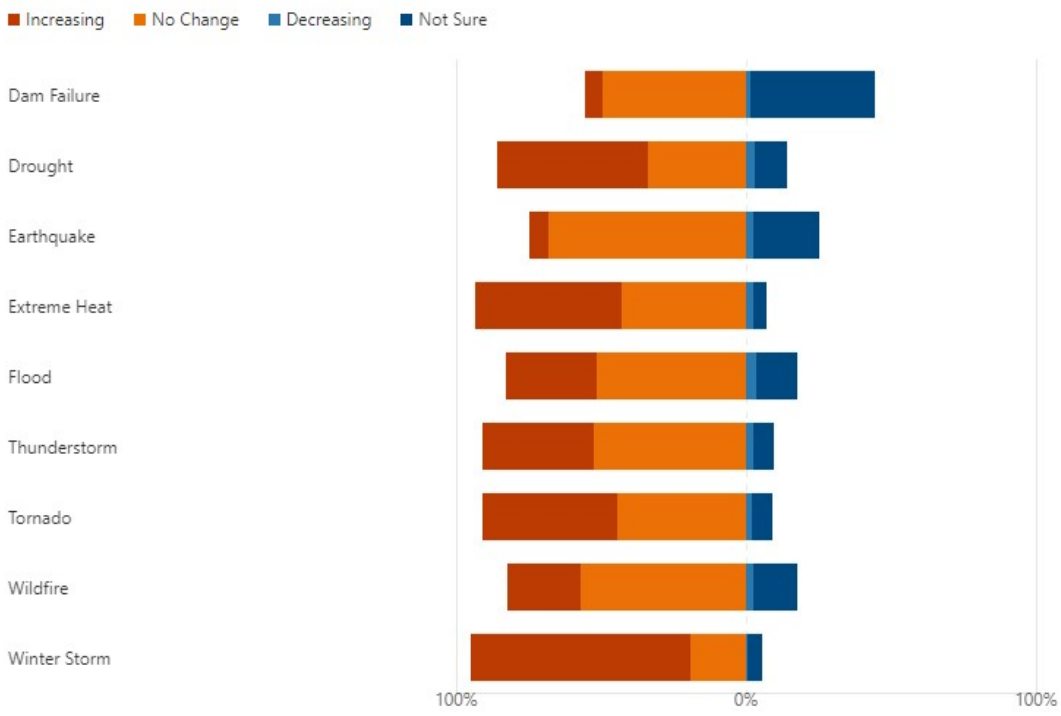
More Details

Dam Failure	1
Drought	20
Earthquake	0
Extreme Heat	31
Flood	13
Thunderstorm	55
Tornado	56
Wildfire	24
Winter Storm	58



6. Over the last 10 years, have you noticed an increase or decrease in the occurrences or intensity of any of the following hazards?

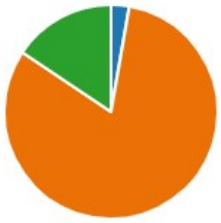
More Details



7. Is your home located in a floodplain?

More Details Insights

Yes	7
No	209
Unsure	40



8. Do you have flood insurance?

More Details Insights

Yes	27
No	209
Unsure	20

9. Have you taken any actions to make your home or neighborhood resilient to hazards?

More Details

Yes	75
No	180

10. If "Yes" to Question 9, please explain:

Adding dirt to our land to help with drainage from excessive rainfall. Mew windows to insulated from heat and cold.
Backup Power in case of grid failure.
Better insulation of house, garage, pipes.
Brush and tall grass removal, swales on contour to capture and harvest rain and mitigate flooding.
built stronger homes and buildings
Call authorities and informed them of a illegal landfill
Called the city civil engineer regarding drainage issues caused from all the new construction, purchased flood bag/sand bags
Can't have solid wood fence due to winds with storms. Changed to posts/open wire style.
Changed our foundation from pier and beam and built our pad up to avoid flooding
Clean brush, grading
Contacted and met with Judge Little and commissioner Kyle Butler with little results
Contacted the City Development office. After no assistance, have contacted the Army CoE
Enhanced Drainage around home
Expanding sprinkler systems
Generator tie in to electrical panel.
Generator, extra supplies on hand

Grass control and removing dead trees
Had a 4 foot drainage channel put in
Hail resistant roof. On site personal weather station.
Hardened
Hardening my home
Have cut new ditches, made new berms, repaired & cleaned out ditches & culverts
Have GMRS Hand Radio License for power outages and weather emergencies
I use a lot of surge protectors to reduce the risk to electronics from nearby lightning strikes
Improved drainage and water retention by replacing non native invasive grasses with native plants and water filtering granite pathways.
Increased insulation of pipes to avoid freezing.
Installed a class 4 roof
Installed a generator with transfer switch
Installed generator transfer switch and purchased generator to power home in cases of power loss
Installed more efficient windows and HVAC system to fight against global warming.
Installed shelter
Insurance, fire extinguisher
I've had to dig a trench between my two ditches (yes we have two ditches) to get water away from my house.
Keeping the lawn low, mowing the road ditch regularly,All itmes outside are secured or tied down.
Landscaping
Larger culvert pipes, bridge instead of pipe to mailbox, a large dike and a long canal.
Made sure we have drainage around the house, an evacuation plan, and a shelter spot
Metal roof
More ditches, culverts & berms
New storm windows and gutters
New windows
New windows, siding, insulation
Now around pasture. Cut trees. Collect rainwater.
Our garage flooded each time it rained heavily
Plan for I.C.E. and some extra supplies.
Purchased generator for power outages and trying to redirect heavy rainfall that drains on our property from three directions causing extreme pooling at our home and yard.
Replaced roof with higher grade shingles to withstand heat, hail, high winds.
Smoke alarms
Smoke/CO2 detectors. Fire extinguisher in home. Go bags. Stocks of food and water. CERT bags. Enough camping equipment to heat water and food.

Some but not enough due to inability
Standby Generator, drainage
Stock firewood, cut grass around pasture
Storm room ready with space, pillows, and hand cranked emergency radio that can also be plugged into electricity
Storm shelter
Tornado shelter
Tornado Shelter Installed
Tornado shelter, grading flood areas.
Tornado Shelter, With assistance of the city, drain management of storm drains behind our house
tornado shelter; whole-home generator
Trim trees away from power lines
Trim trees, shelter, stored food
Try to keep drainage ditch clean, Doesn't seem to be a priority to city
Typical prepper stuff.
We all see the flooding
we have contoured the land behind our house so the water flows to a ditch, not pooling toward our house. We live in the downtown area of Palmer.
We have for the winter storms, we have firewood and extra food and water for when we lose power.
We now have a back way out of our property!
Weatherproofing, sealing leaks, cold weather supplies (firewood, generator)
Winterization, and we keep debris build up form around our home.

11. Are you interested in making your home or neighborhood resilient to hazards?

More Details Insights

Yes	211
No	39

12. If a major disaster affected Ellis County, do you expect FEMA to help?

More Details

Yes	163
No	94

13. If "Yes", please explain:

Although we are not as heavily populated, they should still help those who have lost their home.
Assume our town & neighborhood would need any and all assistance available in the event of a major disaster
Assuming the disaster is bad enough and outside what the state can handle, a request to FEMA from the governor should be approved for FEMA assistance. Depending on the severity it may be funds for the local government to handle or funds to individuals that qualify for assistance.
But in limited quantities
Depending on the circumstances, would expect assistance with clean up, emergency shelter, etc.
depending the type of destruction, I expect FEMA to bring in support especially if homes are destroyed
Disaster declaration
Doesn't FEMA help in all areas that have major disasters?
Emergency assistance
Emergency Management is their job for MAJOR disasters
Expect assistance when needed relative to disaster size
Families will be in need. Depending on the disaster
Federal assistance and response is an expectation for any major disaster.
FEMA has resources and equipment to assist communities with emergencies.
Fema helps in disaster
Fema is Federal Emergency Management, I believe it is what FEMA was created to do.

FEMA's purpose is, in part, to respond to and recover from disasters
Financial
financial
Food, shelter, water, financial assistance are all necessary depending on the nature and severity of the disaster
Funding, emergency support personnel and equipment, portable shelters,
Guidance of finding resources of water and shelter.
help homeowners restore properties and provide temporary housing
Help in clean up and rebuilding
Help with funding, etc. to clean up and restore area.
Help with housing, food etc to provide basic needs. Financial help to replace and relocate if needed to a new home.
Help with housing..food .etc
Honestly don't know if they will
Housing and household items
I believe FEMA should assist any family that needs help. If the government can help and provide for illegals, it should be no problem helping U.S. citizens.
I expect help with cleaning up, food and shelter
I might need their help depending on severity of damage to residence
I pay income taxes and if Ellis County was impacted by a major disaster I expect FEMA to help.
I pay taxes
I pay taxes.
I thought that's what they did
I would expect as many helpers as possible.
I would expect Ellis County to receive the same assistance any other county would be eligible for.
I would expect fema to assist with food and water and low cost loans.
I would want FEMA to bring needed supplies and help set up shelters, and to help with post disaster recovery.
I'd expect FEMA to provide necessary assistance to our community in the event the need surpasses what local municipalities can provide.
If a major disaster occurs sufficiently large to warrant FEMA activation, I would expect it.
If it gets declared a natural disaster, then yes. More than likely would just bring reimbursement.
If it's a disaster, we will need all the help we can get..
If it's a major disaster, I assume we would need extra resources to help in recovery/rebuild
If it's major FEMA should help. That's what they're for
If not covered by insurance they should help.
If power out in large area or large number of building destroyed expect loan assistance/housing
if the loss exceeds fema standards fema steps in to help

If tornado comes to my street expect to help
If we were to be hit by a tornado, FEMA assistance would be important.
Immediate help (shelter, food, etc) until insurance kicks in.
In the rare instance a natural disaster would occur, we expect all the help for our community as we pull together to help others when disaster happens.
it is FEMAs job to respond to natural disasters and help the local agencies help the citizens of any effected area
It’s their job to help during natural disasters.
It’s their job!
It’s their responsibility to help in natural disasters
It’s why FEMA exists - to help communities effected by disasters.
It's FEMA, so...
it's their job.
It's their legal mandate. That said, the American Red Cross would be quicker to help.
Just help with cleanup and make sure people have necessities
lack of sufficient resources
My family is privileged inbeing able to afford ways to increase our safety and not everyone has that luxury. FEMA should be available for anyone who needs it, regardless of the area you are located in. Ellis County is real quick to claim safe haven for unborn children but what about the children already alive on earth today who might need this extra help during a disaster. Get your priorities straight.
My need help
Natural disaster
Not everyone has the abilities others have and it helps to have advocates willing to help.
Not sure what the criteria is but wouldn't fema be helpful
Provide assistance with food clothes shelter
Provide financial assistance to residents and businesses suffering losses.
Resident Financial assistance
Resources
Responding to disaster their function.
Sandra Myers
Somebody has to step in to help!
Stupid question
That is their job.
That is what FEMA is supposed to do
That is what they do. They help others. Why wouldn't they help Ellis County?
That’s what they are there for. If they help some area they should help all areas.
That’s what fema does, help in an emergency.

That’s what fema was established for.
That’s what they are there for. Federal Emergency management
That’s what we pay taxes to federal government for should our governor deem a disaster required federal emergency assistance.
That's FEMAs job. To help in a disaster but based on this question I shouldn't expect much since it's the government and past handling of disasters by FEMA
Thats what it is there for
That's what they are for.
that's what they are supposed to do
The purpose of FEMA is for an emergency
They are there to help. But zi also hope other organizations would help as well.
They help everyone else, so why not us
They need to do at least the things they do for other emergencies.
They should help,
They should provide emergency assistance as needed for our county. Food, shelter being most important.
They usually do
We don’t need/ want intrusive government
We don't have the resources the federal government has
We pay taxas
We pay taxes and isn’t that FEMAs job to help out
We would hope they would help
Why not, they help everyone else
Why not?
Why would Ellis County not get the help everyone else does
Why wouldn’t they?
Why wouldn't FEMA help? We pay federal taxes. And I don't want to make my neighborhood more resilient to hazards if it increases our local taxes.
within the first week, if the disaster is large enough, the governor can and should request federal assistance
Wouldn’t they normally for those that need help? But I would also expect there to be more response from local agencies and charitable organizations.

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Appendix E: Local Planning Teams

The following tables identify the members of the Local Planning Team (LPT) from each participating jurisdiction.

City of Alma		
Agency/Organization	**Position**	**Role in LPT**
City Administration	City Secretary	Assist in risk management and conducting capabilities assessment, attend and participate in Hazard Mitigation Planning Team meetings.
City Administration	Mayor	General oversight, hazard identification, and plan development.
City of Bardwell		
Agency/Organization	**Position**	**Role in LPT**
City Administration	Mayor	General oversight, hazard identification, and plan development.
Fire Department	Fire Chief	Assist in risk management and conducting capabilities assessment, attend and participate in Hazard Mitigation Planning Team meetings.
City of Ennis		
Agency/Organization	**Position**	**Role in LPT**
City Administration	Mayor	General oversight, hazard identification, and plan development.
Fire Department	Fire Marshal	Assist in risk management and conducting capabilities assessment, attend and participate in Hazard Mitigation Planning Team meetings.
City of Ferris		
Agency/Organization	**Position**	**Role in LPT**
City Administration	Mayor	General oversight, hazard identification, and plan development.
Fire Department	Fire Chief	Assist in risk management and conducting capabilities assessment, attend and participate in Hazard Mitigation Planning Team meetings.
City of Garrett		
Agency/Organization	**Position**	**Role in LPT**
Public Works Department	Director	Assist in risk management and conducting capabilities assessment, attend and participate in Hazard Mitigation Planning Team meetings.
City of Italy		

Agency/Organization	Position	Role in LPT
Fire Department	Fire Chief	Assist in risk management and conducting capabilities assessment, attend and participate in Hazard Mitigation Planning Team meetings.
City Administration	Mayor	General oversight, hazard identification, and plan development.
City of Maypearl		
Agency/Organization	**Position**	**Role in LPT**
City Administration	Mayor	General oversight, hazard identification, and plan development.
Police Department	Police Chief	Assist in risk management and conducting capabilities assessment, attend and participate in Hazard Mitigation Planning Team meetings.
City of Midlothian		
Agency/Organization	**Position**	**Role in LPT**
City Council	Mayor	Assist in risk management and conducting capabilities assessment, attend and participate in Hazard Mitigation Planning Team meetings.
City Administration	City Manager	Assist in risk management and conducting capabilities assessment, attend and participate in Hazard Mitigation Planning Team meetings.
City Administration	Assistant City Manager	Assist in risk management and conducting capabilities assessment, attend and participate in Hazard Mitigation Planning Team meetings.
City Administration	Public Information Officer	Provide technical, communication support and public information throughout the plan development and revision process, attend HMPT meetings
Building Inspections Department	Chief Building Official	Attend and participate in HMPT meetings; provide building code and permitting regulations.
Community Service/Code Enforcement	Community Services Manager	Attend and participate in HMPT meetings; provide building code and permitting, city regulations.
Parks and Recreation Department	Parks and Recreation Director	Provide expertise in open space planning and land development; attend HMPT meetings; Parks and Recreation
Parks and Recreation Department	Park Operations Manager	Provide expertise in open space planning and land development; attend HMPT meetings; Parks and Recreation

Engineering Department	GIS Specialist / Engineering	Assist in risk assessment, conducting capabilities assessment, attend and participate in HMPT meetings and identify mitigation strategies. Assist with GIS mapping required for Hazard Mitigation Plan.
Engineering Department	Engineering Director / Floodplain Administrator	Provide technical information and capabilities assessment including land development, city codes and ordinances, an provide city engineer to provide technical assistance. Storm water projects, Attend HMPT meetings. Expertise in floodplain.
Water Treatment Plant	Water Treatment Plant – Auger and Tayman WTP(s)	Provide an update on capability assessment, support mitigation planning protects, provide expertise in capability assessment, assist in development of mitigation strategies, technical expert in water/waste water operations.
Water Treatment Plant	Water Treatment Plant Manager – Tayman Plant	Provide an update on capability assessment, support mitigation planning protects, provide expertise in capability assessment, assist in development of mitigation strategies, technical expert in water/waste water operations.
Human Resources and Finance	Finance & Human Resources Director	Attend and participate in HMPT meetings and provide expertise in budget, capital improvement plan, funding sources, Hazard mitigation plan development, assist in risk assessment and conducting risk assessment and identifying potential mitigation strategies.
Finance Department	Assistant Finance Director	Attend and participate in HMPT meetings and provide expertise in budget, capital improvement plan, funding sources, Hazard mitigation plan development, assist in risk assessment and conducting risk assessment and identifying potential mitigation strategies.
Fire Department	Fire Chief	Assists in hazard identification and plan development, assist in risk assessment and conducting capabilities assessment

		and provide input on the hazard identification process and mitigation strategies.
Fire Department	Assistant Fire Chief	Assists in hazard identification and plan development, assist in risk assessment and conducting capabilities assessment and provide input on the hazard identification process and mitigation strategies.
Fire Department	Fire Marshal	Assists in hazard identification and plan development, assist in risk assessment and conducting capabilities assessment and provide input on the hazard identification process and mitigation strategies, building codes, fire codes, fire inspections.
Information Technology Department	IT Director	Provide technical support, data for risk assessment, attend HMPT meetings, assists with IT technology needed for hazard mitigation.
Planning Department	Planning Director	Provide technical information and capabilities assessment include land development, city codes, and ordinances.
Public Works	Public Works Director	Provide an update on capability assessment, support mitigation planning protects, provide expertise in capability assessment, assist in development of mitigation strategies and emergency generators to mitigate the loss of commercial power for critical infrastructure.
Public Works	Streets Superintendent	Assist in risk assessment, conducting capabilities assessment, attend and participate in HMPT meetings and identify mitigation strategies, Streets, and CIKR technical expert
Public Works	Utilities Supervisor	Provide an update on capability assessment, support mitigation planning protects, provide expertise in capability assessment, assist in development of mitigation strategies, technical expert in water/waste water operations.

Northern Ellis Emergency Dispatch	Northern Ellis Emergency Dispatch (9-1-1)	Assist in hazard identification and plan development, assist in risk assessment and conducting capabilities assessment and provide input on the hazard identification process and mitigation strategies. Oversees 911 Communications Center for Midlothian, Ovilla and Red Oak.
Police Department Administration	Police Chief	Assist in risk assessment, conducting capabilities assessment, attend and participate in HMPT meetings and identify mitigation strategies, law enforcement technical expert.
Police Department Administration	Assistant Police Chief	Assist in risk assessment, conducting capabilities assessment, attend and participate in HMPT meetings and identify mitigation strategies, law enforcement technical expert.
Senior Center	Senior Center Director	Provide expertise senior activity center; attend HMPT meetings; Senior Activity Center
Midlothian Conference Center	Conference Center Director	Provide expertise Conference Center operations that can be used as a critical facility during emergencies and disasters.
Human Resources Department	Human Resources Coordinator	Assist in risk management and conducting capabilities assessment, attend and participate in Hazard Mitigation Planning Team meetings, policy administration, coordination with City Management and city personnel.
Emergency Management	Emergency Management Coordinator	HMPT Coordinator, for hazard identification and plan development, assist in risk assessment and conducting capabilities assessment and provide input on the hazard identification process and mitigation strategies.
Commanders	MPD Commander / Safety and Security Director for MISD	Assist in risk assessment, conducting capabilities assessment, attend and participate in HMPT meetings and identify mitigation strategies, law enforcement technical expert for Midlothian ISD Schools.
City of Milford		

Agency/Organization	Position	Role in LPT
Administration	City Administrator	Assist in risk management and conducting capabilities assessment, attend and participate in Hazard Mitigation Planning Team meetings.
City Administration	Mayor	General oversight, hazard identification, and plan development.
City of Oak Leaf		
Agency/Organization	**Position**	**Role in LPT**
Administration	City Secretary	Assist in risk management and conducting capabilities assessment, attend and participate in Hazard Mitigation Planning Team meetings.
City Administration	Mayor	General oversight, hazard identification, and plan development.
City of Ovilla		
Agency/Organization	**Position**	**Role in LPT**
City Council	Mayor	General oversight, hazard identification, and plan development.
City Administration	City Manager	General oversight, hazard identification, and plan development.
Fire Department	Fire Chief	General oversight, hazard identification, and plan development.
Fire Department	EMC	General oversight, hazard identification, and plan development.
Police Department	Police Chief	Hazard identification and plan development.
Police Department	Assistant EMC	Hazard identification and plan development.
Fire Department	Deputy Chief / Fire Marshal	Hazard identification and plan development.
City of Palmer		
Agency/Organization	**Position**	**Role in LPT**
City Administration	City Administrator	Assist in risk management and conducting capabilities assessment, attend and participate in Hazard Mitigation Planning Team meetings.
City Administration	Mayor	General oversight, hazard identification, and plan development.
City of Red Oak		
Agency/Organization	**Position**	**Role in LPT**
City Manager's Office	City Manager	Chief Administrative Officer
Fire	Fire Chief	Emergency Management Coordinator
Fire	Fire Chief	Fire Services
City Engineer	Engineer	Municipal Infrastructure
Public Works	Director	Roads/Barricades

Fire	Fire Marshal	Logistics
City of Waxahachie		
Agency/Organization	**Position**	**Role in LPT**
Emergency Management	Emergency Management Coordinator	Assist in risk management and conducting capabilities assessment, attend and participate in Hazard Mitigation Planning Team meetings.
City Administration	Mayor	General oversight, hazard identification, and plan development.
Ellis County Unincorporated		
Agency/Organization	**Position**	**Role in LPT**
Commissioners Court	County Judge	General oversight, hazard identification, and plan development.
Office of the County Judge	Chief of Staff	General oversight, hazard identification, and plan development.
Commissioners Court	Commissioner	General oversight, hazard identification, and plan development.
Commissioners Court	Commissioner	General oversight, hazard identification, and plan development.
Commissioners Court	Commissioner	General oversight, hazard identification, and plan development.
Commissioners Court	Commissioner	General oversight, hazard identification, and plan development.
Emergency Management	Emergency Management Coordinator	Assist in risk management and conducting capabilities assessment, attend and participate in Hazard Mitigation Planning Team meetings.
Emergency Management	Emergency Management Specialist	HMPT Coordinator, for hazard identification and plan development, assist in risk assessment and conducting capabilities assessment and provide input on the hazard identification process and mitigation strategies.
Emergency Management	Emergency Management Planner	Assist in risk management and conducting capabilities assessment, attend and participate in Hazard Mitigation Planning Team meetings.
GIS & 9-1-1 Addressing (Geographic Info Systems)	GIS Specialist / Engineering	Assist in risk assessment, conducting capabilities assessment, attend and participate in HMPT meetings and identify mitigation strategies. Assist with GIS mapping required for Hazard Mitigation Plan.
GIS & 9-1-1 Addressing (Geographic Info Systems)	GIS Specialist / Engineering	Assist in risk assessment, conducting capabilities assessment, attend and

		participate in HMPT meetings and identify mitigation strategies. Assist with GIS mapping required for Hazard Mitigation Plan.
Engineering Department	Water Shed Technician	Provide technical information and capabilities assessment including land development, city codes and ordinances, an provide city engineer to provide technical assistance. Storm water projects, Attend HMPT meetings. Expertise in floodplain.
Engineering Department	County Engineer	Assist in risk assessment, conducting capabilities assessment, attend and participate in HMPT meetings and identify mitigation strategies.
Engineering Department	Assistant County Engineer	Provide technical information and capabilities assessment including land development, city codes and ordinances, an provide city engineer to provide technical assistance. Storm water projects, Attend HMPT meetings. Expertise in floodplain.
Development	Department of Development	Attend and participate in HMPT meetings; provide building code and permitting, county regulations.
GIS & 9-1-1 Addressing (Geographic Info Systems)	Legal – District Attorney's Office	Attend and participate in HMPT meetings; provide legal aid for code and permitting county regulations.
Fire Department	Fire Marshal	Assists in hazard identification and plan development, assist in risk assessment and conducting capabilities assessment and provide input on the hazard identification process and mitigation strategies, building codes, fire codes, fire inspections.
Captain	Sheriff's Office	Assists in hazard identification and plan development, assist in risk assessment and conducting capabilities assessment.

Appendix F: Risk Reports

The risk reports in this Appendix include TFS's *Texas Wildfire Risk Assessment Summary Report*, which provides a consistent, comparable set of scientific results to be used as a foundation for wildfire mitigation planning in Ellis County; *Neighborhoods at Risk*, from Headwater Economics and refers to the County's neighborhoods at risk; and Headwater's *Wildfire Risk* report that presents data about wildfire risk, socioeconomic vulnerability, and land use to help communities understand their relative wildfire risk profile.

Texas Wildfire Risk Assessment Summary Report

Texas A&M Forest Service

Ellis County

Report was generated using www.texaswildfirerisk.com

Report version: 4.0

Report generated: 12/9/2021

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Users should also note that property boundaries included in any product do not represent an on- the-ground survey suitable for legal, engineering, or surveying purposes. They represent only the approximate relative locations.

Introduction

TWRA Summary Report

Welcome to the Texas Wildfire Risk Assessment Summary Report for **Ellis County**. This report contains a set of selected products developed by the Texas Wildfire Risk Assessment project, which have been summarized explicitly for the Ellis County project area.

The **Texas Wildfire Risk Assessment** (TWRA) provides a consistent, comparable set of scientific results to be used as a foundation for wildfire mitigation planning in Texas. Results of the assessment can be used to help prioritize areas in the state where tactical analyses, community interaction and education, or mitigation treatments might be necessary to reduce risk from wildfires. The TWRA products included in this report are designed to provide the information needed to support the following key priorities:

- Identify areas that are most prone to wildfire
- Identify areas that may require additional tactical planning, specifically related to mitigation projects and Community Wildfire Protection Planning
- Provide the information necessary to justify resource, budget and funding requests
- Allow agencies to work together to better define priorities and improve emergency response, particularly across jurisdictional boundaries
- Increase communication with local residents and the public to address community priorities and needs
- Plan for response and suppression resource needs
- Plan and prioritize hazardous fuel treatment programs

To learn more about the TWRA project or to create a custom summary report, go to www.texaswildfirerisk.com.

Products

Each product in this report is accompanied by a general description, table, chart and/or map. A list of available TWRA products in this report is provided in the following table.

TWRA Product	Description
Wildland Urban Interface	Depicts where humans and their structures meet or intermix with wildland fuel
Values Response Index	Represents a rating of the potential impact of a wildfire on values and assets
WUI Response Index	Represents a rating of the potential impact of a wildfire on people and their homes
Pine Plantation Index	Represents a rating of the potential impact of a wildfire on pine plantations
Community Protection Zones	Represents those areas designated as primary and secondary priorities for community protection planning
Wildfire Threat	Likelihood of a wildfire occurring or burning into an area
Wildfire Ignition Density	Likelihood of a wildfire starting based on historical ignition patterns
Wildfire Occurrence Statistics	Information regarding number of fires, acres suppressed and cause of fire
Characteristic Rate of Spread	Represents the speed with which a fire moves in a horizontal direction across the landscape
Characteristic Flame Length	Represents the distance between the tip and base of the flame
Intensity	Quantifies the potential fire intensity for an area by orders of magnitude
Fire Type - Extreme	Represents the potential fire type (surface or canopy) under the extreme percentile weather category
Surface Fuels	Contains the parameters needed to compute surface fire behavior characteristics
Vegetation	General vegetation and landcover types
Pine Age	Age of pine and mixed pine/deciduous forest
Pine Plantations	Pine stands that are planted and actively managed for financial gain or other economic reasons

Wildland Urban Interface

Description

Texas is one of the fastest growing states in the Nation, with much of this growth occurring adjacent to metropolitan areas. This increase in population across the state will impact counties and communities that are located within the Wildland Urban Interface (WUI). The WUI is described as the area where structures and other human improvements meet and intermingle with undeveloped wildland or vegetative fuels. Population growth within the WUI substantially increases the risk from wildfire. In Texas nearly 85 percent of wildfires occur within two miles of a community.

For the **Ellis County** project area, it is estimated that **121,790** people or **80.1 % percent** of the total project area population (**152,018)** live within the WUI.

The Wildland Urban Interface (WUI) layer reflects housing density depicting where humans and their structures meet or intermix with wildland fuels. WUI housing density is categorized based on the standard Federal Register and U.S. Forest Service SILVIS data set categories. The number of housing density categories is extended to provide a better gradation of housing distribution to meet specific requirements for fire protection planning activities. While units of the data set are in houses per sq. km., which is consistent with other data such as USFS SILVIS, the data is presented as the number of houses per acre to aid with interpretation and use in Texas.

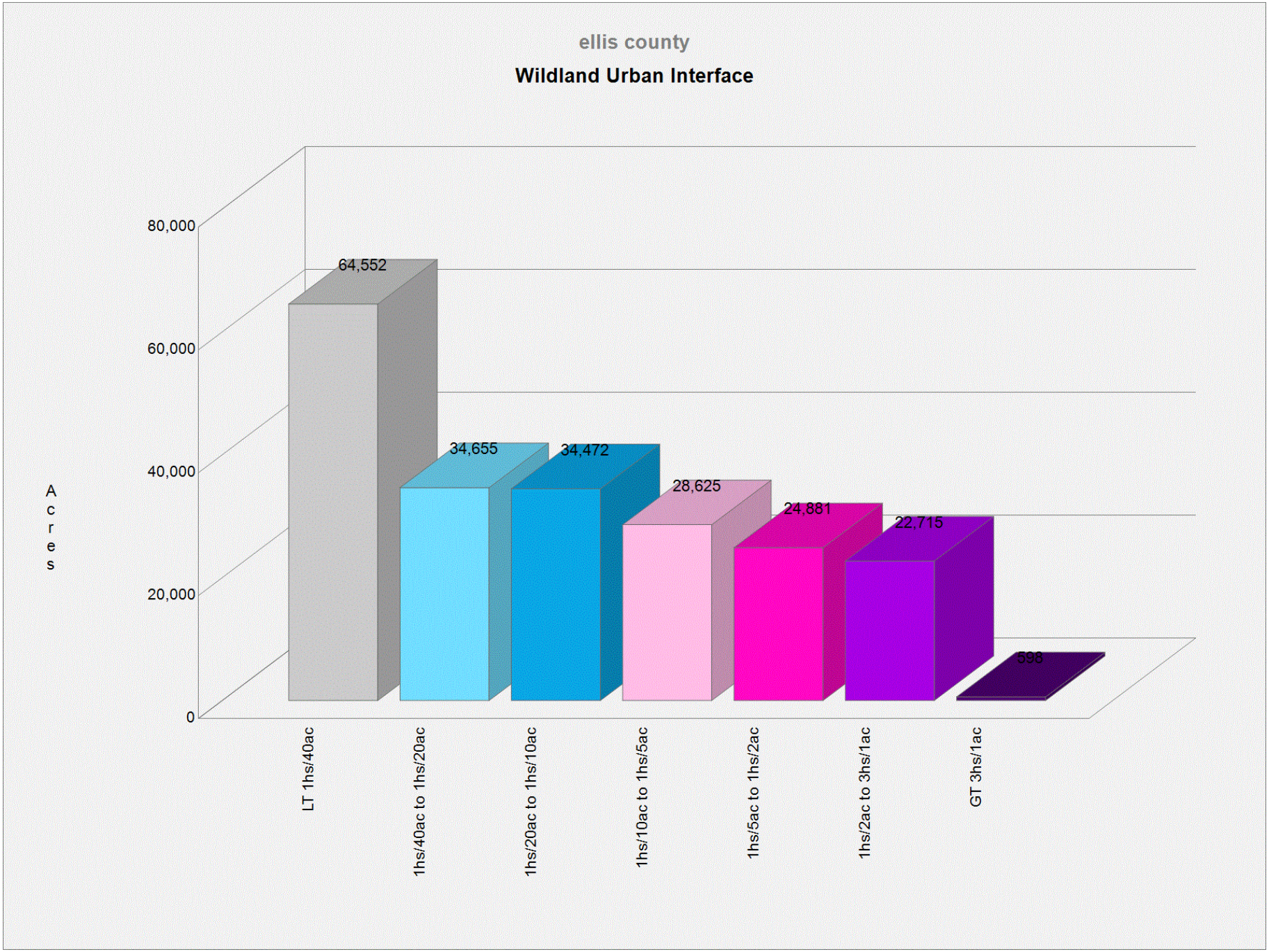
In the past, conventional wildland urban interface data sets, such as USFS SILVIS, have been used to reflect these concerns. However, USFS SILVIS and other existing data sources do not provide the level of detail needed by the Texas A&M Forest Service and local fire protection agencies.

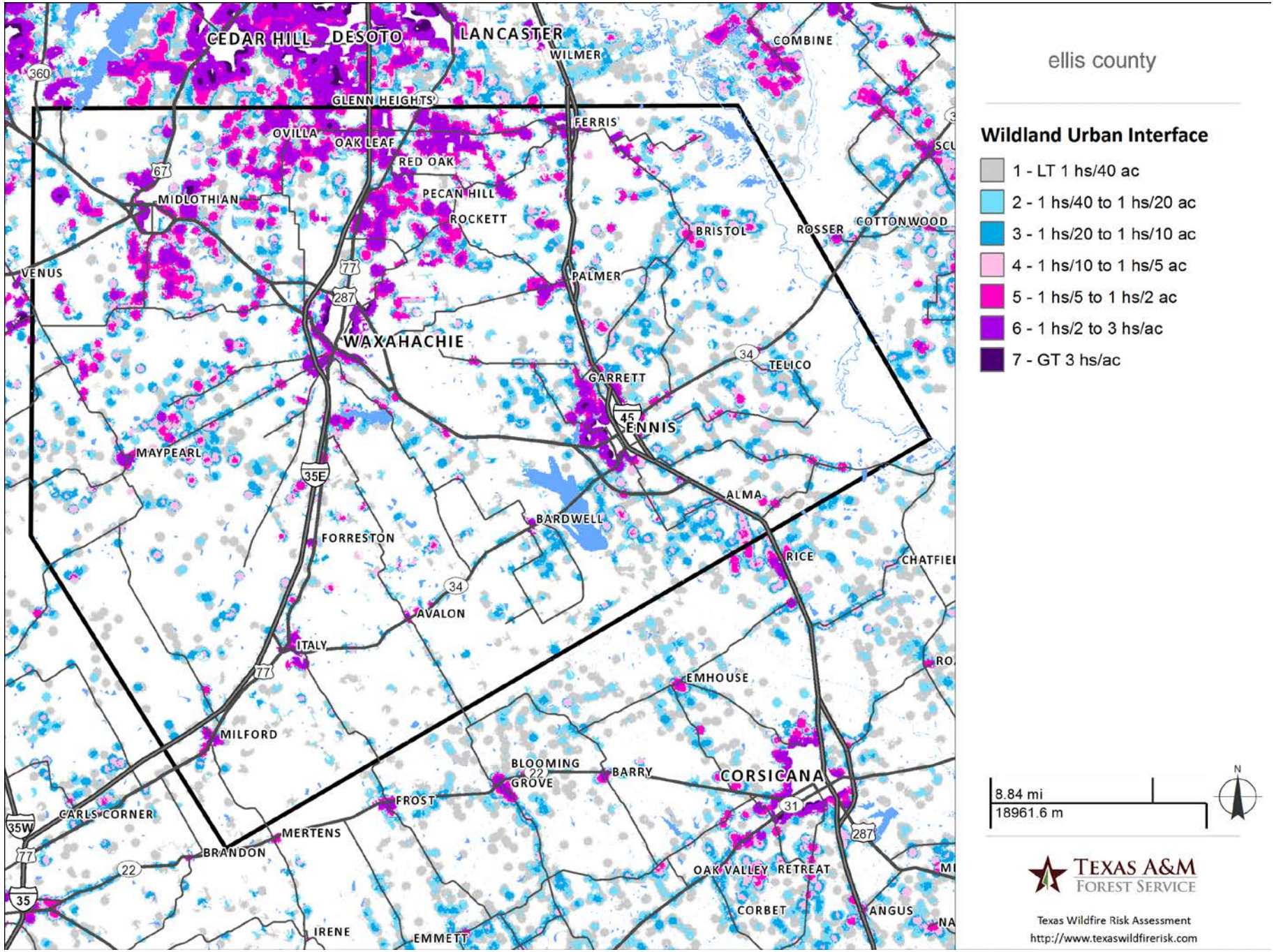
The new WUI dataset is derived using advanced modeling techniques based on the Where People Live dataset and LandScan USA population count data available from the Department of Homeland Security, HSIP Freedom Data Set. WUI is simply a subset of the Where People Live dataset. The primary difference is populated areas surrounded by sufficient non-burnable areas (i.e. interior urban areas) are removed from the Where People Live data set, as these areas are not expected to be directly impacted by a wildfire.

A more detailed description of the risk assessment algorithms is provided in the TWRA Final Report, which can be downloaded from www.texaswildfirerisk.com. Data is modeled at a 30-meter cell resolution, which is consistent with other TWRA layers.

WUI – Population and Acres

Housing Density	WUI Population	Percent of WUI Population	WUI Acres	Percent of WUI Acres
LT 1hs/40ac	1,431	1.2 %	64,552	30.7 %
1hs/40ac to 1hs/20ac	2,803	2.3 %	34,655	16.5 %
1hs/20ac to 1hs/10ac	6,237	5.1 %	34,472	16.4 %
1hs/10ac to 1hs/5ac	10,677	8.8 %	28,625	13.6 %
1hs/5ac to 1hs/2ac	20,201	16.6 %	24,881	11.8 %
1hs/2ac to 3hs/1ac	72,908	59.9 %	22,715	10.8 %
GT 3hs/1ac	7,533	6.2 %	598	0.3 %
Total	**121,790**	**100.0 %**	210,498	100.0 %


ellis county
Wildland Urban Interface
Acres
80,000
60,000
40,000
20,000
0
64,552
34,655
34,472
28,625
24,881
22,715
598
LT 1hs/40ac
1hs/40ac to 1hs/20ac
1hs/20ac to 1hs/10ac
1hs/10ac to 1hs/5ac
1hs/5ac to 1hs/2ac
1hs/2ac to 3hs/1ac
GT 3hs/1ac


CEDAR HILL
DESOTO
LANCASTER
WILMER
COMBINE
GLENN HEIGHTS
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ROCKETT
MIDLOTHIAN
BRISTOL
ROSSER
COTTONWOOD
VENUS
PALMER
WAXAHACHIE
GARRETT
TELICO
ENNIS
MAYPEARL
ALMA
BARDWELL
FORRESTON
RICE
AVALON
ITALY
EMHOUSE
MILFORD
BLOOMING GROVE
BARRY
CORSICANA
FROST
CARLS CORNER
MERTENS
BRANDON
OAK VALLEY
RETREAT
CORBET
ANGUS
IRENE
EMMETT
360
67
77
287
35E
34
45
35W
22
31
35
ellis county
Wildland Urban Interface
1 - LT 1 hs/40 ac
2 - 1 hs/40 to 1 hs/20 ac
3 - 1 hs/20 to 1 hs/10 ac
4 - 1 hs/10 to 1 hs/5 ac
5 - 1 hs/5 to 1 hs/2 ac
6 - 1 hs/2 to 3 hs/ac
7 - GT 3 hs/ac
8.84 mi
18961.6 m
N
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Texas Wildfire Risk Assessment
http://www.texaswildfirerisk.com

Values Response Index

Description

The Values Response Index (VRI) layer reflects a rating of the potential impact of a wildfire on values or assets. The VRI is an overall rating that combines the impact ratings for Wildland Urban Interface (housing density) and Pine Plantations (pine age) into a single measure. The individual ratings for each value layer, Wildland Urban Interface and Pine Plantations, were derived using a Response Function modeling approach.

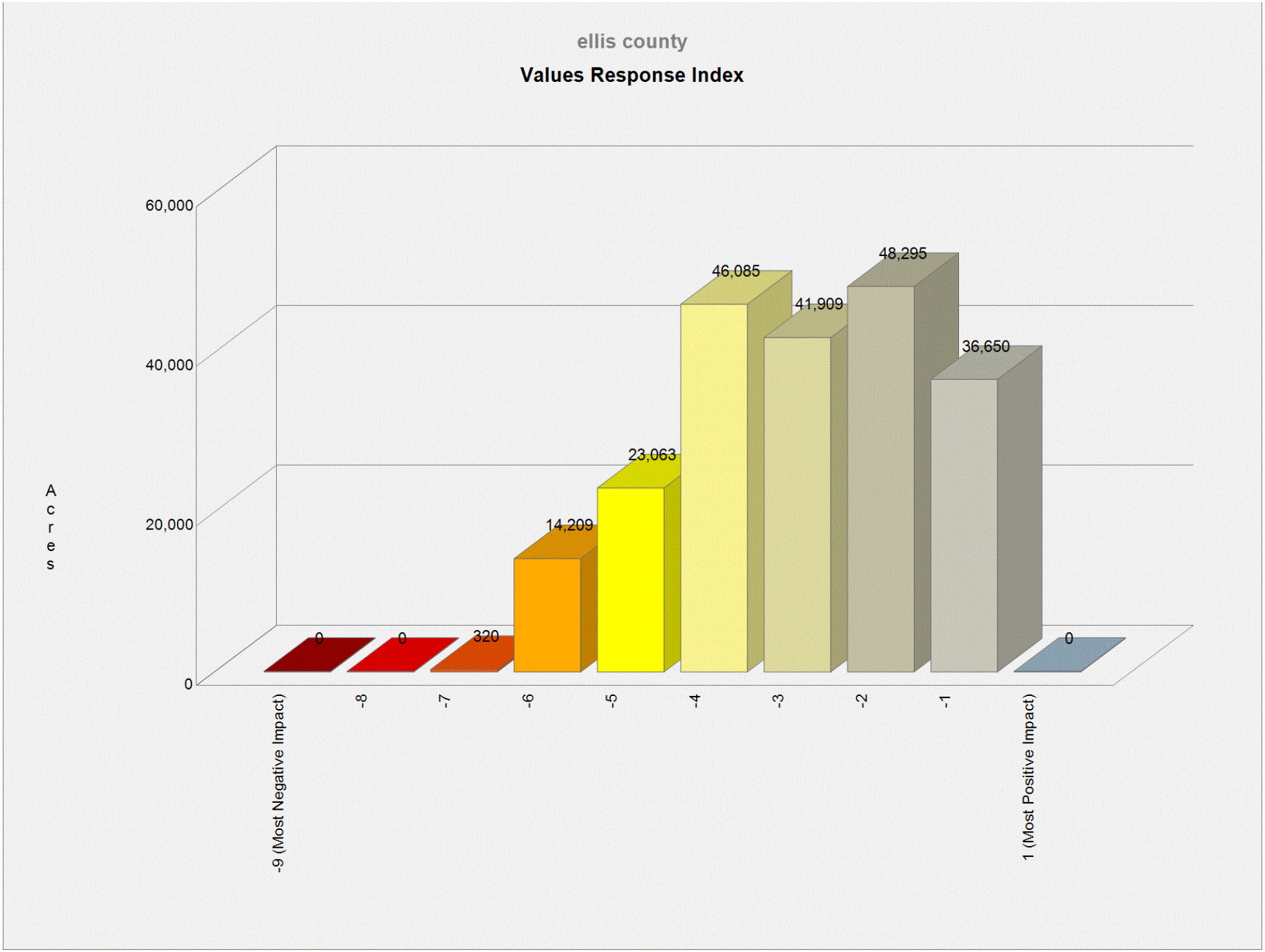
Response functions are a method of assigning a net change in the value to a *resource* or *asset* based on susceptibility to fire at different intensity levels, such as flame length. These net changes can be negative (adverse) or positive (beneficial). The theoretical range of values is from -9 to 9, with -9 representing the most adverse impact and 9 representing the most positive impact. Zero reflects no impact. The practical range is typically much smaller, however. For the TWRA, the range of values is from -9 to1. Zero values are not included because they reflect no impact to the value or asset.

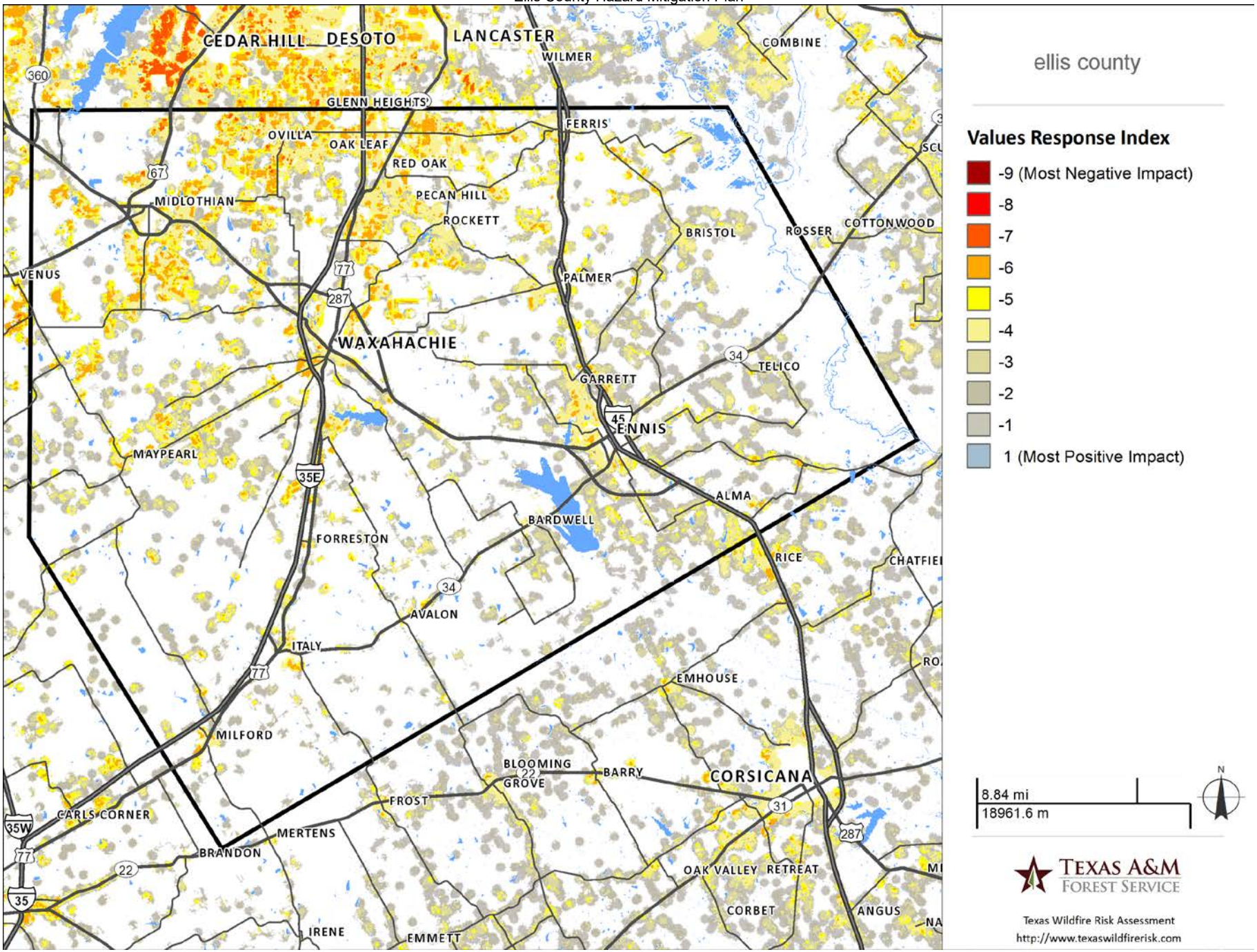
Using the Response Function approach, a rating is calculated to estimate the expected impact to values/assets at different fire intensity levels. The measure of fire intensity used in the Texas assessment is flame length (ft). Response Function outputs are first derived for each input data set and then combined to derive the Values Response Index.

Different weightings are used to combine the response function value outputs for Wildland Urban Interface (WUI) and Pine Plantations with the highest priority placed on protection of people and structures (i.e. WUI). Accordingly, WUI is given an 80% weighting and Pine Plantations a 20% weighting to calculate the statewide VRI. Response Function values and layer weightings were developed by a team of experts to reflect priorities for fire protection planning in Texas.

All areas in Texas have the VRI calculated consistently, which allows for comparison and ordination of areas across the entire state. Data is modeled at a 30-meter cell resolution, which is consistent with other TWRA layers.

Class	Acres	Percent
-9 (Least Negative Impact)	0	0.0 %
-8	0	0.0 %
-7	320	0.2 %
-6	14,209	6.7 %
-5	23,063	11.0 %
-4	46,085	21.9 %
-3	41,909	19.9 %
-2	48,295	22.9 %
-1	36,650	17.4 %
1 (Most Positive Impact)	0	0.0 %
Total	210,531	100.0 %


ellis county
Values Response Index
Acres
60,000
40,000
20,000
0
0
0
320
14,209
23,063
46,085
41,909
48,295
36,650
0
-9 (Most Negative Impact)
-8
-7
-6
-5
-4
-3
-2
-1
1 (Most Positive Impact)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BRISTOL
ROSSER
COTTONWOOD
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GARRETT
TELICO
ENNIS
MAYPEARL
ALMA
BARDWELL
FORRESTON
RICE
AVALON
ITALY
EMHOUSE
MILFORD
BLOOMING GROVE
BARRY
CORSICANA
FROST
CARLS CORNER
MERTENS
BRANDON
OAK VALLEY
RETREAT
CORBET
ANGUS
IRENE
EMMETT
ellis county
Values Response Index
-9 (Most Negative Impact)
-8
-7
-6
-5
-4
-3
-2
-1
1 (Most Positive Impact)
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WUI Response Index

Description

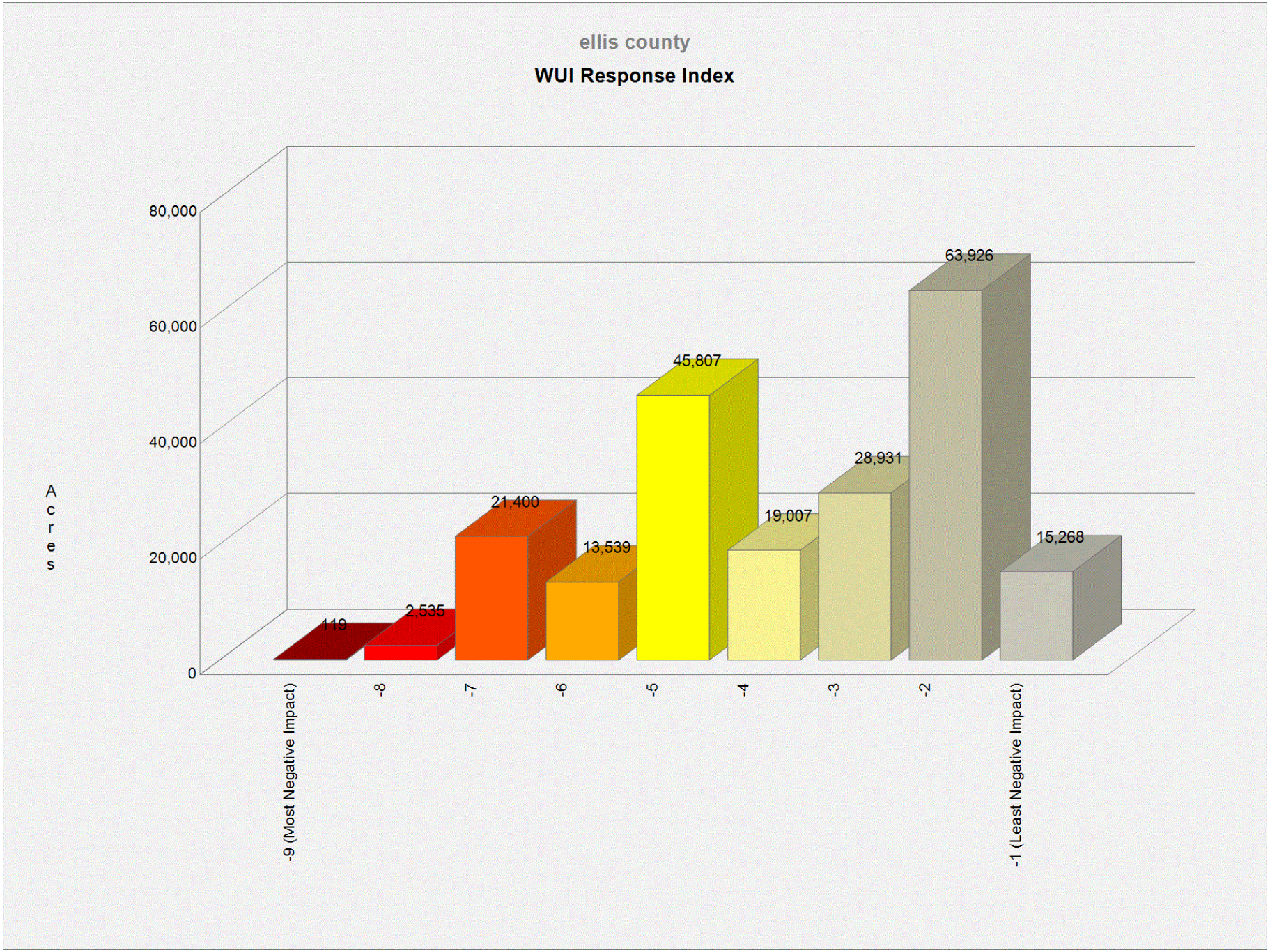
The Wildland Urban Interface (WUI) Response Index layer is a rating of the potential impact of a wildfire on people and their homes. The key input, WUI, reflects housing density (houses per acre) consistent with Federal Register National standards. The location of people living in the Wildland Urban Interface and rural areas is key information for defining potential wildfire impacts to people and homes.

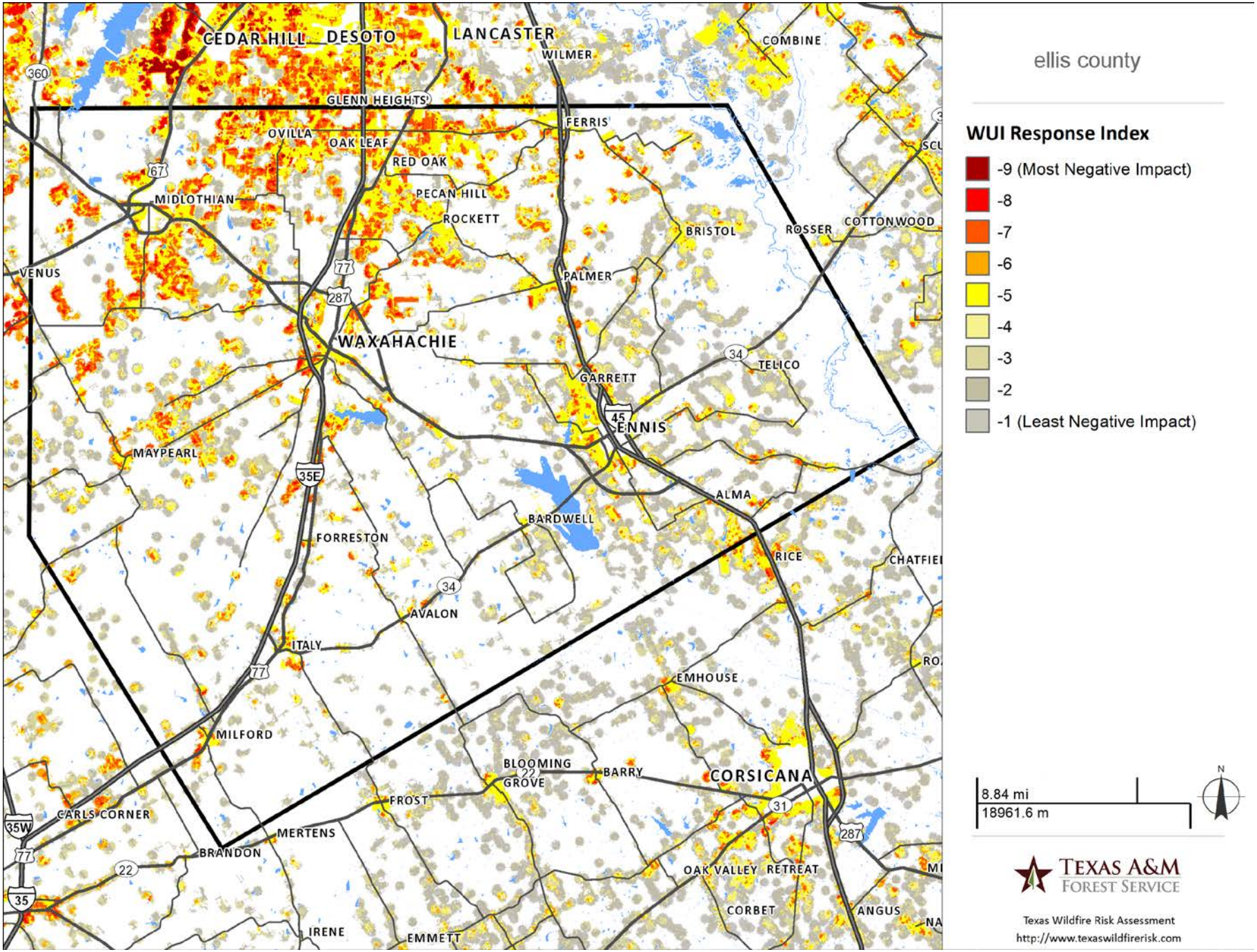
The WUI Response Index is derived using a Response Function modeling approach. Response functions are a method of assigning a net change in the value to a *resource* or *asset* based on susceptibility to fire at different intensity levels, such as flame length. The range of values is from -1 to -9, with 1 representing the least negative impact and -9 representing the most negative impact. For example, areas with high housing density and high flame lengths are rated -9 while areas with low housing density and low flame lengths are rated -1.

To calculate the WUI Response Index, the WUI housing density data was combined with Flame Length data and response functions were defined to represent potential impacts. The response functions were defined by a team of experts led by the Texas A&M Forest Service mitigation planning staff. By combining flame length with the WUI housing density data, you can determine where the greatest potential impact to homes and people is likely to occur.

Fire intensity data is modeled to incorporate penetration into urban fringe areas so that outputs better reflect real world conditions for fire spread and impact in urban interface areas. All areas in Texas have the WUI Response Index calculated consistently, which allows for comparison and ordination of areas across the entire state. Data is modeled at a 30-meter cell resolution, which is consistent with other TWRA layers.

Class	Acres	Percent
-9 (Most Negative Impact)	119	0.1 %
-8	2,535	1.2 %
-7	21,400	10.2 %
-6	13,539	6.4 %
-5	45,807	21.8 %
-4	19,007	9.0 %
-3	28,931	13.7 %
-2	63,926	30.4 %
-1	15,268	7.3 %
Total	**210,532**	**100.0 %**


ellis county
WUI Response Index
Acres
80,000
60,000
40,000
20,000
0
119
2,535
21,400
13,539
45,807
19,007
28,931
63,926
15,268
-9 (Most Negative Impact)
-8
-7
-6
-5
-4
-3
-2
-1 (Least Negative Impact)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ROSSER
COTTONWOOD
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GARRETT
ENNIS
MAYPEARL
ALMA
BARDWELL
FORRESTON
RICE
AVALON
ITALY
EMHOUSE
MILFORD
BLOOMING GROVE
BARRY
CORSICANA
FROST
CARLS CORNER
MERTENS
BRANDON
OAK VALLEY
RETREAT
CORBET
ANGUS
IRENE
EMMETT
ellis county
WUI Response Index
-9 (Most Negative Impact)
-8
-7
-6
-5
-4
-3
-2
-1 (Least Negative Impact)
8.84 mi
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Pine Plantation Response Index

Description

The Pine Plantation Response Index layer is a rating of the potential impact of a wildfire on pine plantations. The key input, Pine Plantation Age, represents the age of pine plantations across Texas and reflects the potential susceptibility to damage from wildfire.

The Pine Plantation Response Index is derived using a Response Function modeling approach. Response functions are a method of assigning a net change in the value to a *resource* or *asset* based on susceptibility to fire at different intensity levels, such as flame length. These net changes can be negative (adverse) or positive (beneficial). The theoretical range of values is from -9 to 9, with -9 representing the most adverse impact and 9 representing the most positive impact. Zero reflects no impact. The practical range is typically much smaller, however. For the TWRA, the range of values is from -9 to 3. Zero values are not included because they reflect no impact to the value or asset. For Pine Plantations, wildfire could have both adverse and beneficial impacts based on the age of the plantation and the corresponding fire intensity level.

To calculate the Pine Plantations Response Index, the Pine Plantation Age data was combined with Flame Length data, and response functions were defined to represent potential impacts. The response functions were defined by a team of experts led by the Texas A&M Forest Service mitigation planning staff. By combining flame length with the Pine Plantation Age data, you can determine where the greatest potential impact to pine plantations is likely to occur.

All areas in Texas have the Pine Plantation Index calculated consistently, which allows for comparison and ordination of areas across the entire state. Data is modeled at a 30-meter cell resolution, which is consistent with other TWRA layers.

The designated project area does not contain Pine Plantation Response Index data

Community Protection Zones

Description

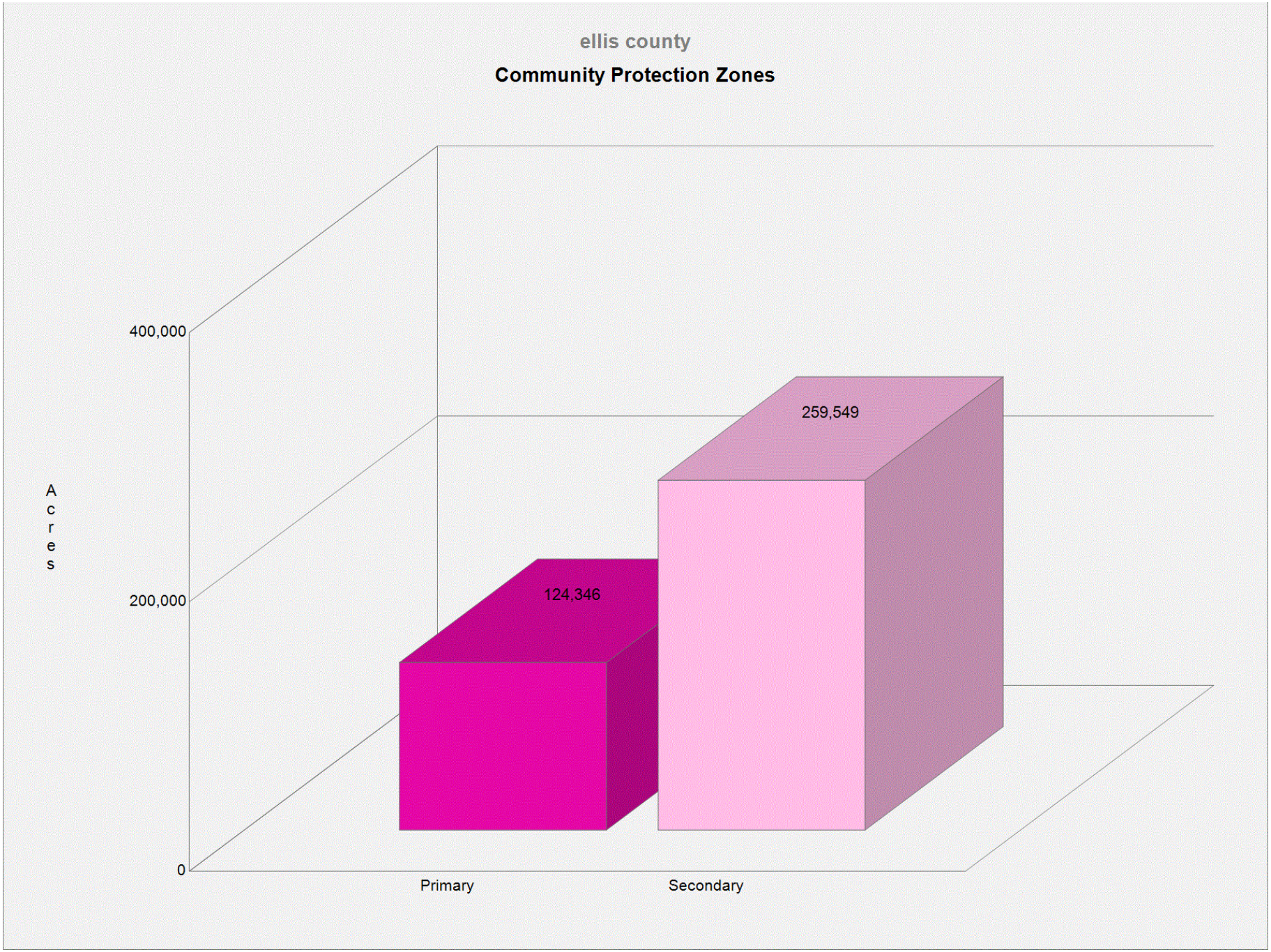
Community Protection Zones (CPZ) represent those areas considered highest priority for mitigation planning activities. CPZs are based on an analysis of the Where People Live housing density data and surrounding fire behavior potential. Rate of Spread data is used to determine the areas of concern around populated areas that are within a 2-hour fire spread distance.

General consensus among fire planners is that for fuel mitigation treatments to be effective in reducing wildfire hazard, they must be conducted within a close distance of a community. In Texas, the WUI housing density has been used to reflect populated areas in place of community boundaries. This ensures that CPZs reflect where people are living in the wildland, not jurisdictional boundaries.

CPZs represent a variable width buffer around populated areas that are within a 2-hour fire spread distance. Accordingly, CPZs will extend farther in areas where rates of spread are greater and less in areas where minimal rate of spread potential exists. CPZ boundaries inherently incorporate fire behavior conditions.

All areas in Texas have the CPZs calculated consistently, which allows for comparison and ordination of areas across the entire state. Data is modeled at a 30-meter cell resolution, which is consistent with other TWRA layers.

Class	Acres	Percent
Primary	124,346	32.4 %
Secondary	259,549	67.6 %
Total	**383,895**	**100.0 %**


ellis county
Community Protection Zones
400,000
200,000
0
Acres
124,346
259,549
Primary
Secondary

Wildfire Threat

Description

Wildfire Threat is the likelihood of a wildfire occurring or burning into an area. Threat is derived by combining a number of landscape characteristics including surface fuels and canopy fuels, resultant fire behavior, historical fire occurrence, percentile weather derived from historical weather observations, and terrain conditions. These inputs are combined using analysis techniques based on established fire science.

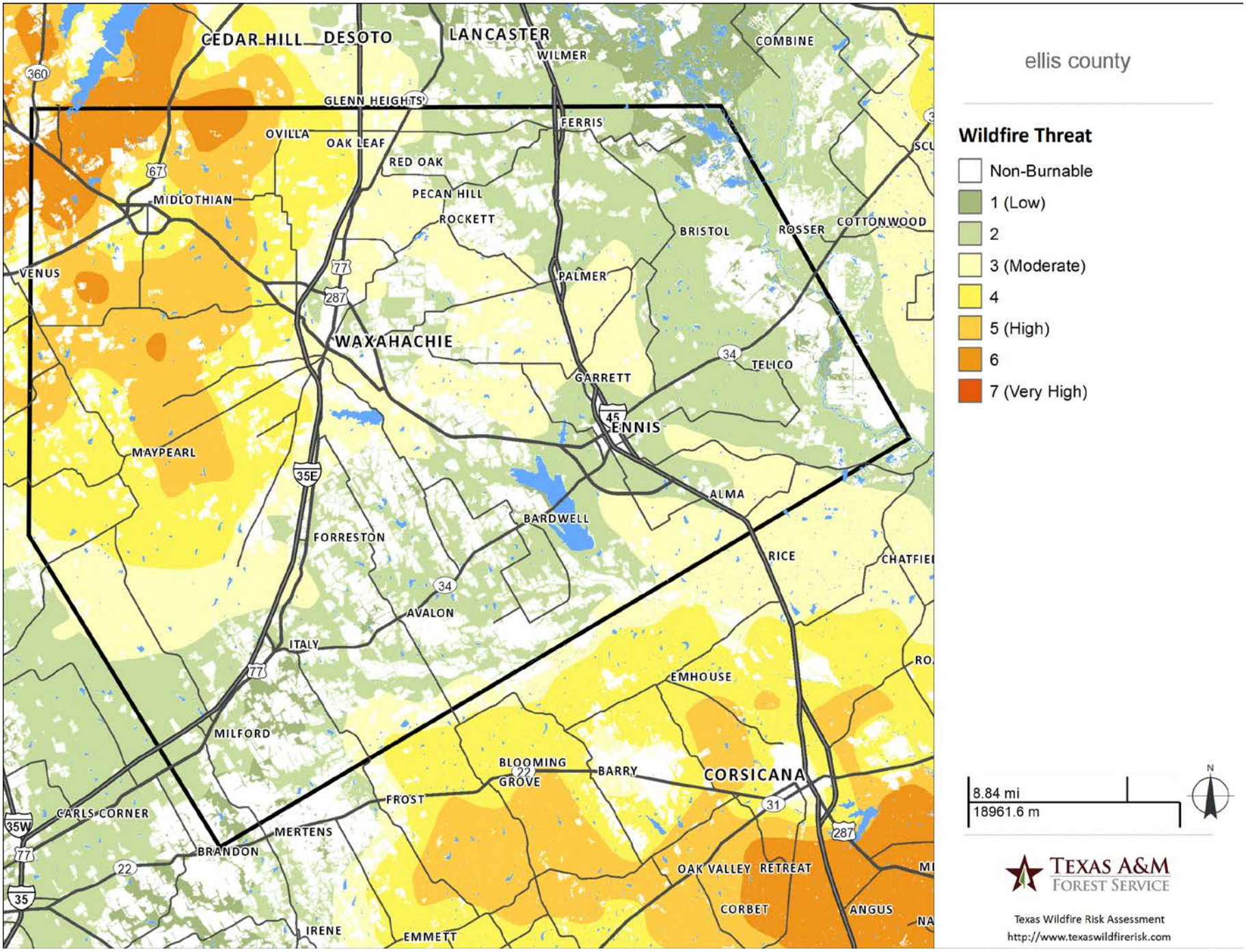
The measure of wildfire threat used in the Texas Wildfire Risk Assessment (TWRA) is called Wildland Fire Susceptibility Index, or WFSI. WFSI combines the probability of an acre igniting (Wildfire Ignition Density) and the expected final fire size based on rate of spread in four weather percentile categories. WFSI is defined as the likelihood of an acre burning. Since all areas in Texas have WFSI calculated consistently, it allows for comparison and ordination of areas across the entire state. For example, a high threat area in East Texas is equivalent to a high threat area in West Texas.

To aid in the use of Wildfire Threat for planning activities, the output values are categorized into seven (7) classes. These are given general descriptions from Low to Very High threat.

The threat map is derived at a 30 meter resolution. This scale of data was chosen to be consistent with the accuracy of the primary surface fuels dataset used in the assessment. While not appropriate for site specific analysis, it is appropriate for regional, county or local protection mitigation or prevention planning.

A more detailed description of the risk assessment algorithms is provided in the TWRA Final Report, which can be downloaded from www.texaswildfirerisk.com.

Class	Acres	Percent
Non-Burnable	156,509	25.0 %
1 (Low)	15,333	2.4 %
2	182,425	29.1 %
3 (Moderate)	126,748	20.2 %
4	67,118	10.7 %
5 (High)	61,448	9.8 %
6	16,533	2.6 %
7 (Very High)	0	0.0 %
Total	**626,114**	**100.0 %**


CEDAR HILL
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LANCASTER
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PECAN HILL
ROCKETT
MIDLOTHIAN
BRISTOL
ROSSER
COTTONWOOD
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CARLS CORNER
MERTENS
BRANDON
OAK VALLEY
RETREAT
CORBET
ANGUS
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EMMETT
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35W
35
ellis county
Wildfire Threat
Non-Burnable
1 (Low)
2
3 (Moderate)
4
5 (High)
6
7 (Very High)
8.84 mi
18961.6 m
N
TEXAS A&M FOREST SERVICE
Texas Wildfire Risk Assessment
http://www.texaswildfirerisk.com

Wildfire Ignition Density

Description

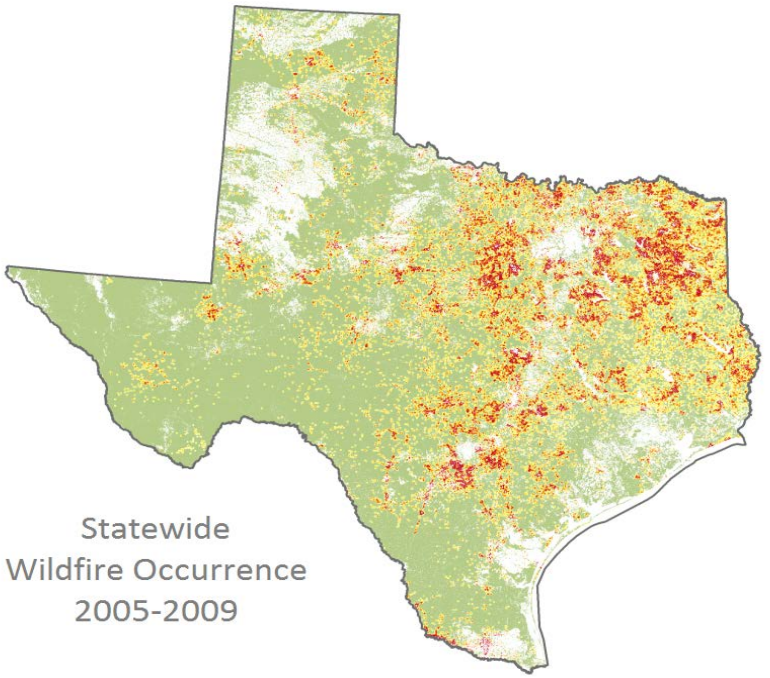
Wildfire Ignition Density is the likelihood of a wildfire starting based on historical ignition patterns. Occurrence is derived by modeling historic wildfire ignition locations to create an average ignition rate map. The ignition rate is measured in the number of fires per year per 1000 acres.

Five years of historic fire report data was used to create the ignition points for all Texas fires. Data was obtained from federal, state and local fire department report data sources for the years 2005 to 2009. For East Texas, additional fire data was obtained for state fires for the years 2000 to 2004. The compiled wildfire occurrence database was cleaned to remove duplicate records and to correct inaccurate locations. The database was then modeled to create a density map reflecting historical fire ignition rates.

The measure of wildfire occurrence used in the Texas Wildfire Risk Assessment (TWRA) is called the Wildfire Ignition Density. Since all areas in Texas have Ignition Density calculated consistently, it allows for comparison and ordination of areas across the entire state. For example, a high occurrence area in East Texas is equivalent to a high occurrence area in West Texas.

Wildfire Ignition Density is a key input into the calculation of the Wildfire Threat output. In particular, with most Texas fires being human caused, there is a repeatable spatial pattern of fire ignitions over time. This pattern identifies areas where wildfires are most likely to ignite and prevention efforts can be planned accordingly.

The TWRA Wildfire Ignition Density map is enhanced from the map derived in the Southern Wildfire Risk Assessment (SWRA) project. In particular, the Texas Wildfire Ignition Density map was derived from a larger sampling of ignition data points, including numerous volunteer and state fire reports. Previously, the SWRA was not able to incorporate many state or local data sources due to the limited availability of data. However, due to the implementation of a statewide fire reporting system, and new incentives for reporting by volunteer fire departments, there has been an increase in the number of fires reported, and an improvement in the quality of the fire ignition locations. The use of this data provides a better representation of the wildfire occurrence across the state than previously derived in the SWRA project.

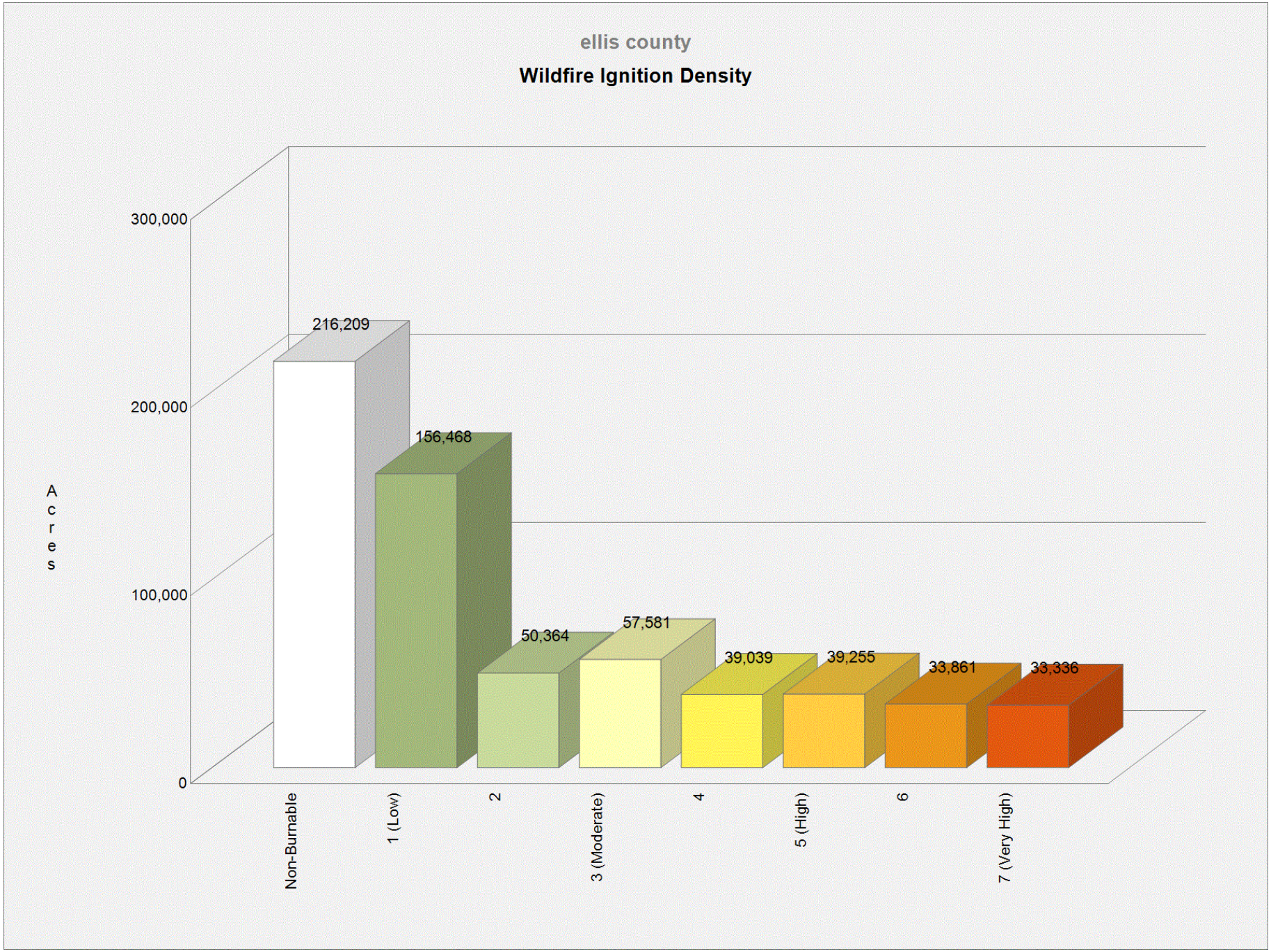


To aid in the use of Wildfire Ignition Density for planning activities, the output values are categorized into seven (7) classes reflecting average ignition rates. These are given general descriptions from Low to Very High. Seven classes are used to present finer detail for mapping purposes so that transitional areas can be easily identified.
The class breaks are determined by analyzing the Wildfire Ignition Density output values to reflect for the entire state.

The Wildfire Ignition Density map is derived at a 30-meter resolution. This scale of data was chosen to be consistent with the accuracy of the primary surface fuels dataset used in the assessment. While not appropriate for site specific analysis, it is appropriate for regional, county or local protection mitigation or prevention planning.

A more detailed description of the risk assessment algorithms is provided in the TWRA Final Report, which can be downloaded from www.texaswildfirerisk.com.

Class	Acres	Percent
Non-Burnable	216,209	34.5 %
1 (Low)	156,468	25.0 %
2	50,364	8.0 %
3 (Moderate)	57,581	9.2 %
4	39,039	6.2 %
5 (High)	39,255	6.3 %
6	33,861	5.4 %
7 (Very High)	33,336	5.3 %
Total	**626,113**	**100.0 %**


ellis county
Wildfire Ignition Density
Acres
300,000
200,000
100,000
0
216,209
156,468
50,364
57,581
39,039
39,255
33,861
33,336
Non-Burnable
1 (Low)
2
3 (Moderate)
4
5 (High)
6
7 (Very High)

Wildfire Occurrence Statistics

Description

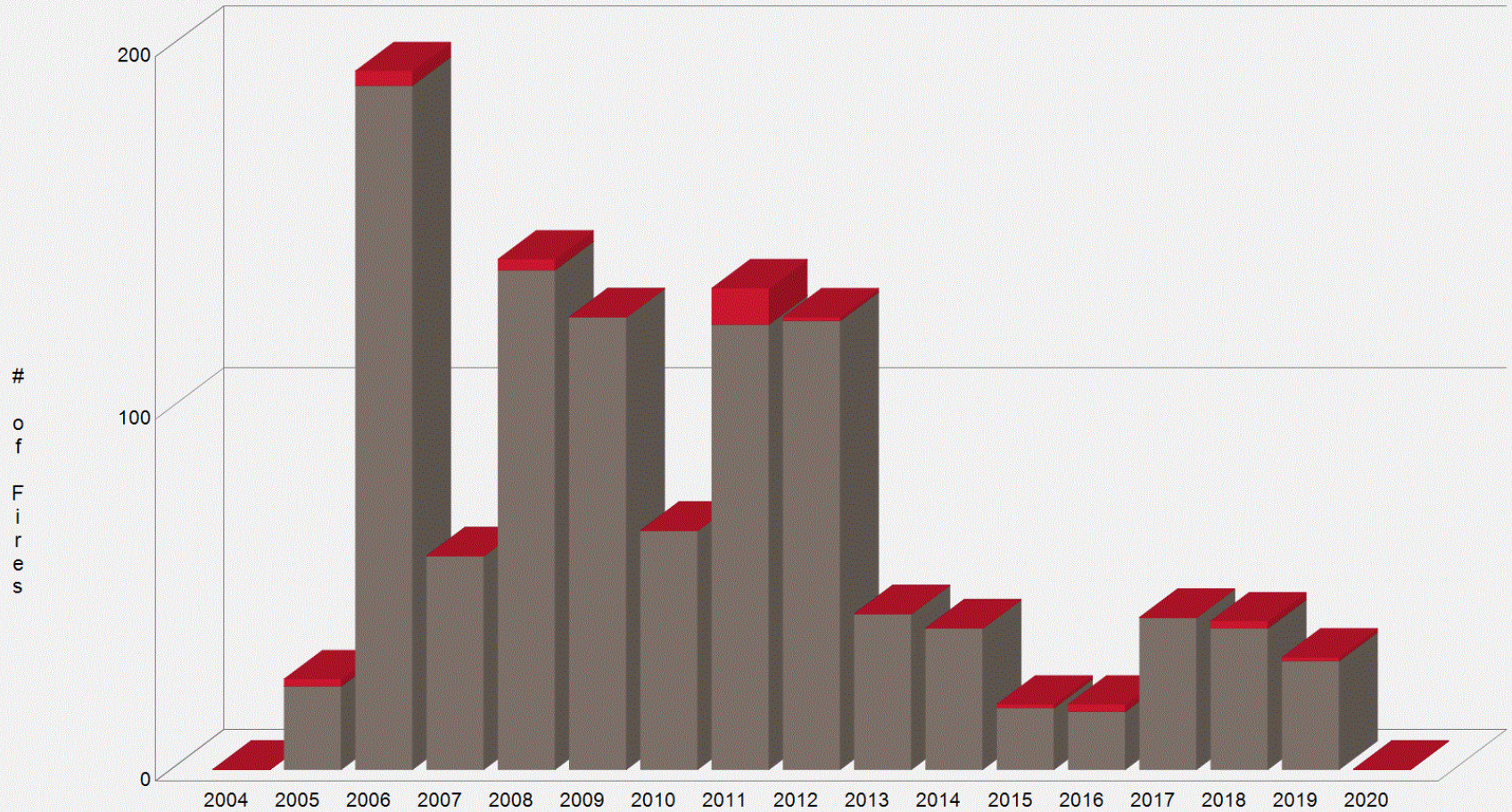
Wildfire occurrence statistics provide insight as to the number of fires, acres burned and cause of fires in Texas. These statistics are useful for prevention and mitigation planning. They can be used to quantify the level of fire business, determine the time of year most fires typically occur, and develop a fire prevention campaign aimed at reducing a specific fire cause. The fire occurrence statistics are grouped by primary response agency type, which include:

- **Texas Forest Service (TFS)** – The Texas Forest Service fire occurrence database represents all state-reported fires.
- **Local** – The local category includes fires reported via Texas Forest Service's online fire department reporting system. It is a voluntary reporting system that includes fires reported by both paid and volunteer fire departments since 2004.

Seventeen years of historic fire report data was used to create the fire occurrence summary charts. Data was obtained from state and local fire department report data sources for the years 2004 to 2020. The compiled fire occurrence database was cleaned to remove duplicate records and to correct inaccurate locations.

ellis county

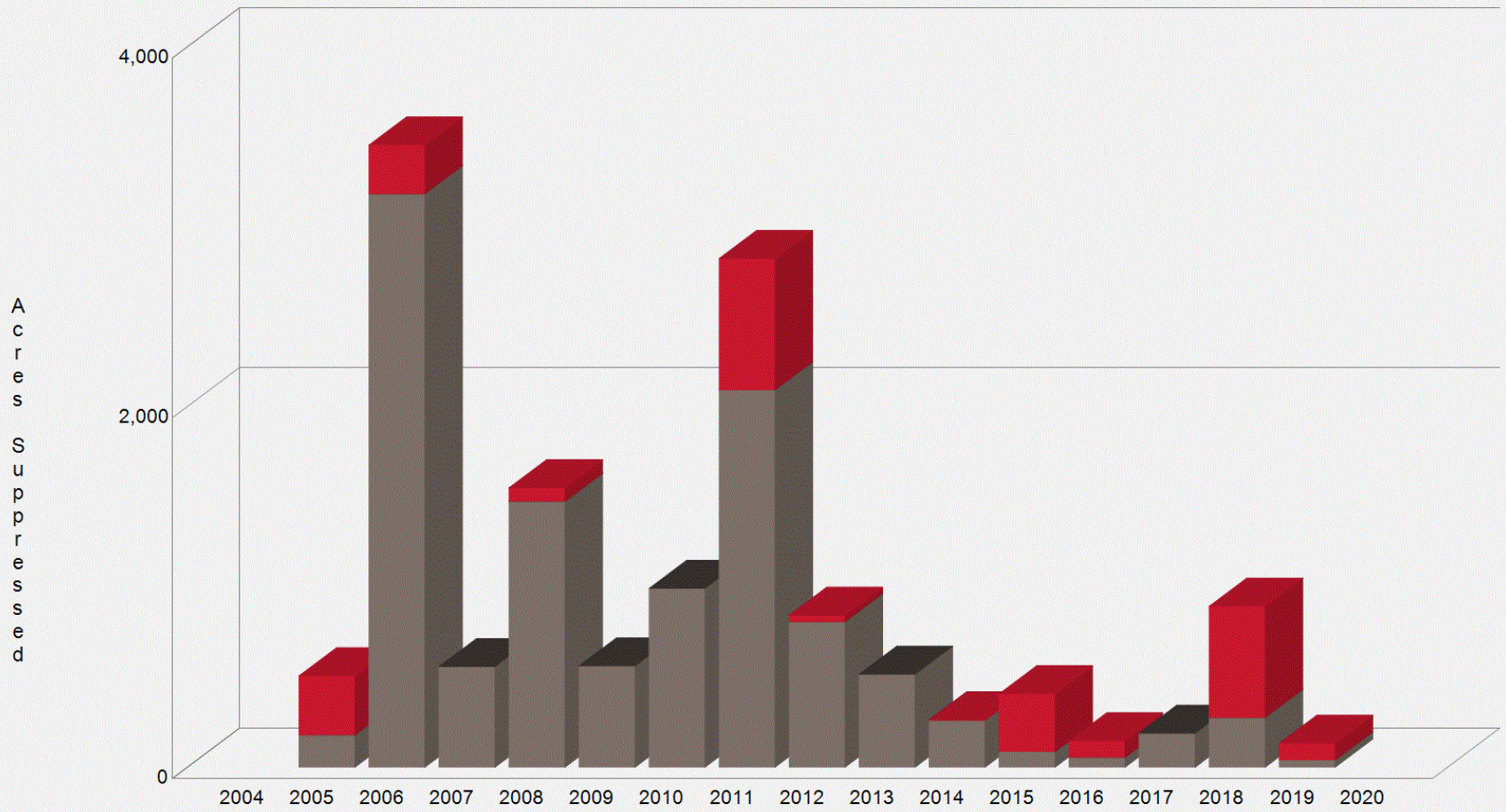
Number of Wildfires Reported by Agency
2004 - 2020



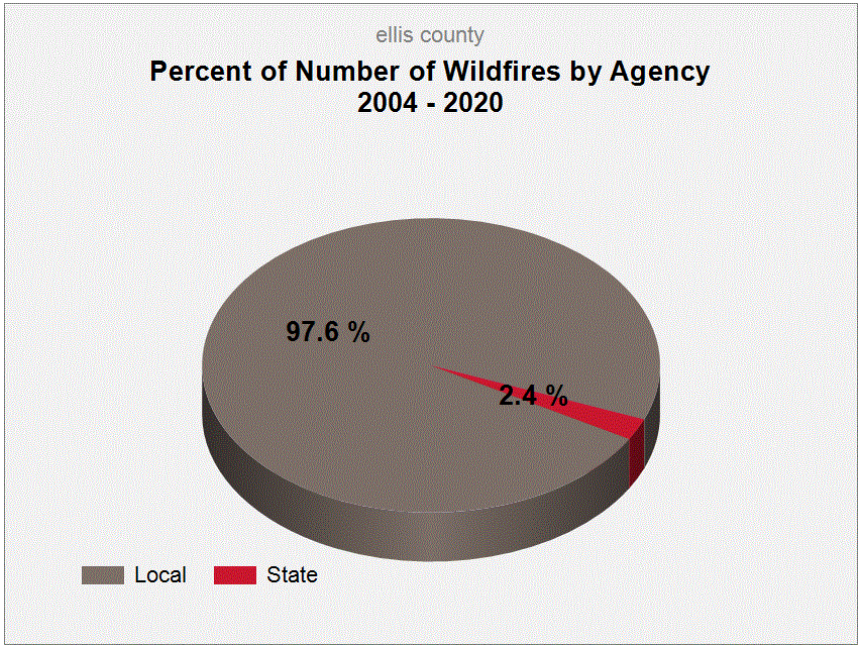
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Local	0	23	189	59	138	125	66	123	124	43	39	17	16	42	39	30	0
State	0	2	4	0	3	0	0	10	1	0	0	1	2	0	2	1	0

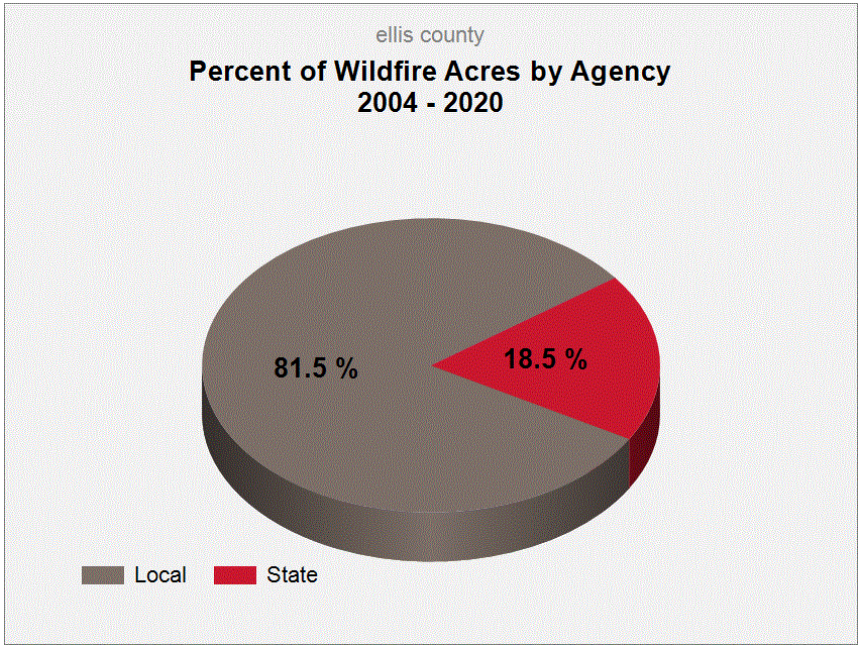
ellis county

Wildfire Acres Reported by Agency
2004 - 2020



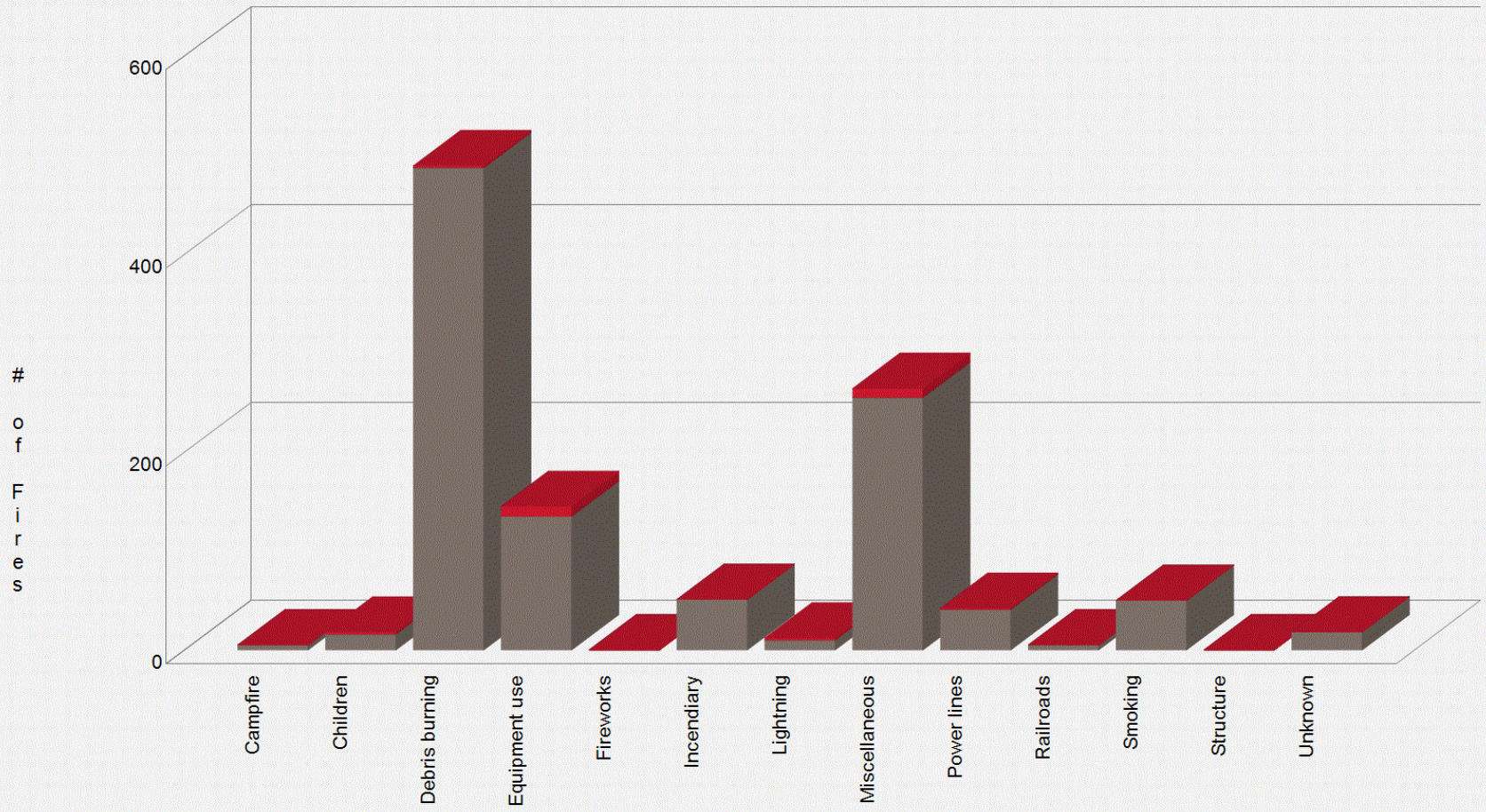
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Local	0	179	3184	558	1476	562	992	2095	808	515	262	87	55	188	276	40	0
State	0	328	270	0	75	0	0	729	35	0	0	320	91	0	617	92	0


ellis county
Percent of Number of Wildfires by Agency
2004 - 2020
97.6 %
2.4 %
Local
State


ellis county
Percent of Wildfire Acres by Agency
2004 - 2020
81.5 %
18.5 %
Local
State

ellis county

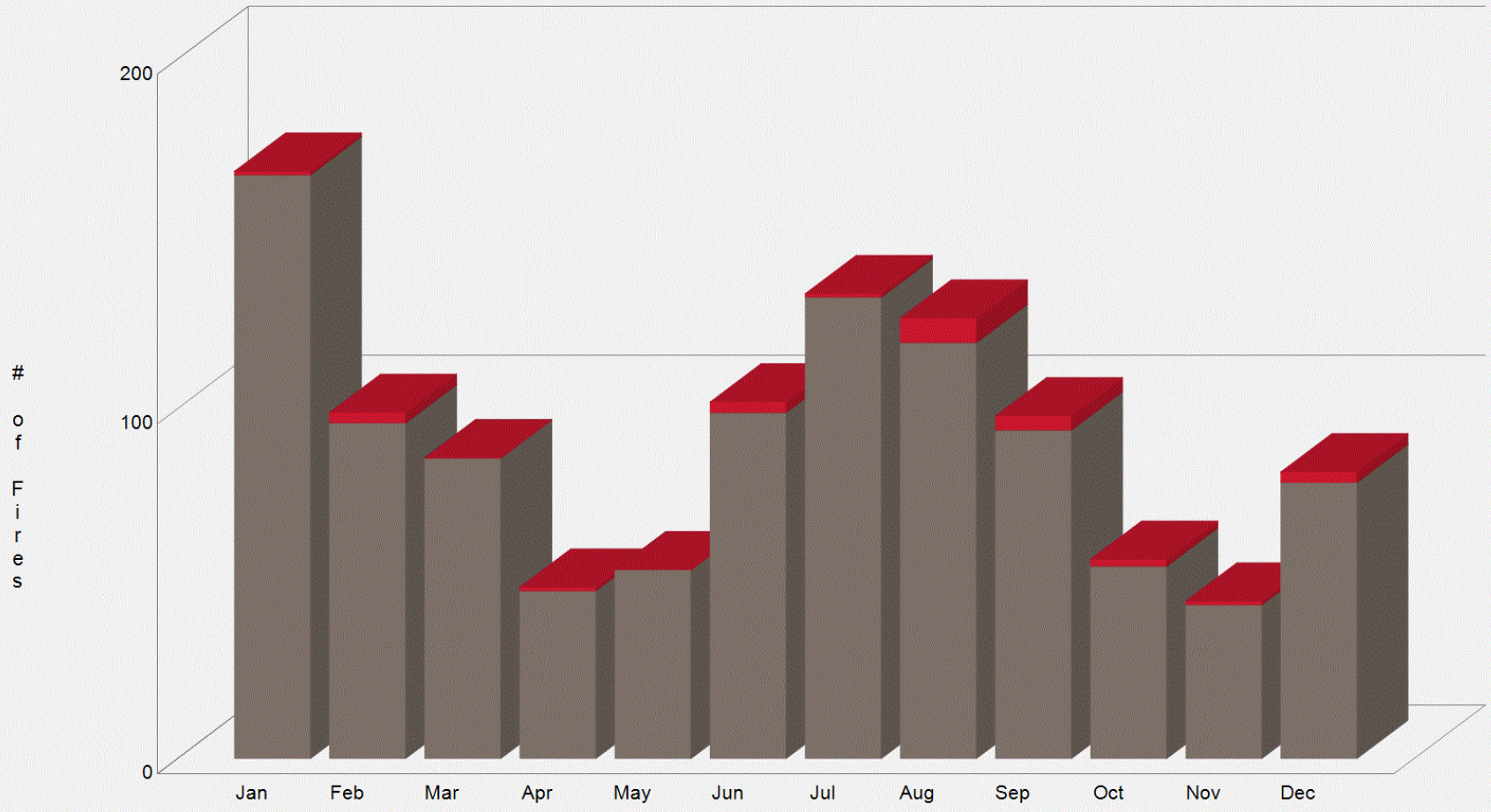
Cause of Wildfires Reported by Agency
2004 - 2020



	Campfire	Children	Debris burning	Equip. use	Fireworks	Incendiary	Lightning	Misc.	Power lines	Railroads	Smoking	Structure	Unknown
Local	5	16	487	135	0	51	10	255	41	5	50	0	18
State	0	2	2	10	0	0	2	9	1	0	0	0	0

ellis county

Number of Wildfires Reported per Month by Agency
2004 - 2020



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Local	167	96	86	48	54	99	132	119	94	55	44	79
State	1	3	0	1	0	3	1	7	4	2	1	3

Fire Behavior Overview

Description

Fire behavior is influenced by the following environmental influences:

1. **Fuels**
2. **Weather**
3. **Topography**

Fire behavior characteristics are attributes of wildland fire that pertain to its spread, intensity, and growth. Fire behavior characteristics utilized in the Texas Wildfire Risk Assessment (TWRA) include fire type, rate of spread, flame length and fireline intensity (fire intensity scale). These metrics are used to determine the potential fire behavior under different weather scenarios. Areas that exhibit moderate to high fire behavior potential can be identified for mitigation treatments, especially if these areas are in close proximity to homes, business, or other assets.

Fuels

The TWRA includes composition and characteristics for both surface fuels and canopy fuels, whereas the original Southern Wildfire Risk Assessment (SWRA) only included surface fuels. Being able to assess canopy fire potential in addition to surface fire potential represents a significant enhancement for the TWRA. Significant increases in fire behavior will now be captured if the fire has the potential to transition from a surface fire to a canopy fire.

Fuel datasets required to compute both surface and canopy fire potential include:

- **Surface Fuels**, generally referred to as fire behavior fuel models, provide the input parameters needed to compute surface fire behavior.
- **Canopy Cover** is the horizontal percentage of the ground surface that is covered by tree crowns. It is used to compute wind reduction factors and shading.
- **Canopy Ceiling Height/Stand Height** is the height above the ground of the highest canopy layer where the density of the crown mass within the layer is high enough to support vertical movement of a fire. A good estimate of canopy ceiling height would be the average height of the dominant and co-dominant trees in a stand. It is used for computing wind reduction to midflame height and spotting distances from torching trees .
- **Canopy Base Height** is the lowest height above the ground above which there is sufficient canopy fuel to propagate fire vertically . Canopy base height is a property of a plot, stand, or group of trees, not of an individual tree. For fire modeling, canopy base height is an effective value that incorporates ladder fuel, such as tall shrubs and small trees. Canopy base height is used to determine if a surface fire will transition to a canopy fire.

- **Canopy Bulk Density** is the mass of available canopy fuel per unit canopy volume (Scott & Reinhardt, 2001). Canopy bulk density is a bulk property of a stand or group of trees, not an individual tree. Canopy bulk density is used to predict whether a canopy fire can propagate through the canopy of a stand of trees.

Weather

Environmental weather parameters needed to compute fire behavior characteristics include 1-hour, 10-hour, and 100-hour timelag fuel moistures, herbaceous fuel moisture, woody fuel moisture, and the 20-foot 10 minute average wind speed. To collect this information, weather influence zones were established across the state. A weather influence zone is an area where for analysis purposes the weather on any given day is considered uniform. There are 22 weather influence zones in Texas as shown in Figure 2. Within each weather influence zone, historical daily weather is

gathered to compile a weather dataset from which four percentile weather categories are created. The percentile weather categories are intended to represent low, moderate, high, and extreme fire weather days. Fire behavior outputs are computed for each percentile weather category to determine fire potential under different weather scenarios. The four percentile weather categories include:

- Low Weather Percentile (0 – 15%)
- Moderate Weather Percentile (16 – 90%)
- High Weather Percentile (91 – 97%)
- Extreme Weather Percentile (98 – 100%)

TWRA uses the same approach as the original Southern Wildfire Risk Assessment (SWRA) for compiling the weather parameters. For a detailed description of the methodology, refer to the SWRA Final Report at www.southernwildfirerisk.com.

Topography

Topography datasets required to compute fire behavior characteristics are elevation, slope and aspect.

FIRE BEHAVIOR CHARACTERISTICS

Fire behavior characteristics provided in this report include:

- **Characteristic Rate of Spread**
- **Characteristic Flame Length**
- **Characteristic Fire Intensity Scale**
- **Fire Type - Extreme**

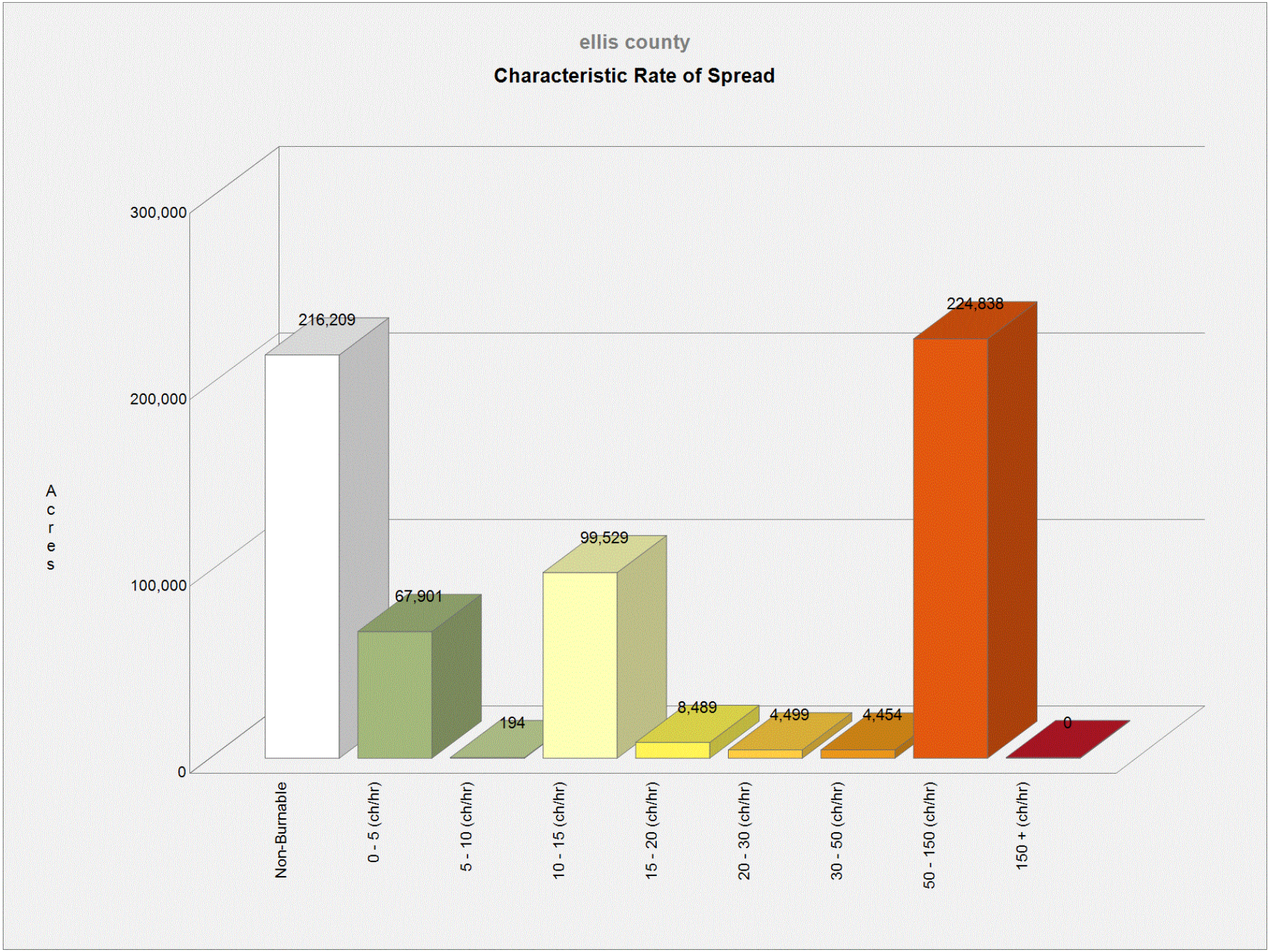
Characteristic Rate of Spread

Description

Characteristic Rate of Spread is the typical or representative rate of spread of a potential fire based on a weighted average of four percentile weather categories. Rate of spread is the speed with which a fire moves in a horizontal direction across the landscape, usually expressed in chains per hour (ch/hr) or feet per minute (ft/min). For purposes of the Texas Wildfire Risk Assessment, this measurement represents the maximum rate of spread of the fire front. Rate of Spread is the metric used to derive the Community Protection Zones.

Rate of spread is a fire behavior output, which is influenced by three environmental factors - fuels, weather, and topography. Weather is by far the most dynamic variable as it changes frequently. To account for this variability, four percentile weather categories were created from historical weather observations to represent low, moderate, high, and extreme weather days for each weather influence zone in Texas. A weather influence zone is an area where, for analysis purposes, the weather on any given day is considered uniform. There are 22 weather influence zones in Texas.

Rate of Spread	Acres	Percent
Non-Burnable	216,209	34.5 %
0 - 5 (ch/hr)	67,901	10.8 %
5 - 10 (ch/hr)	194	0.0 %
10 – 15 (ch/hr)	99,529	15.9 %
15 - 20 (ch/hr)	8,489	1.4 %
20 - 30 (ch/hr)	4,499	0.7 %
30 - 50 (ch/hr)	4,454	0.7 %
50 - 150 (ch/hr)	224,838	35.9 %
150 + (ch/hr)	0	0.0 %
Total	**626,113**	**100.0 %**


ellis county
Characteristic Rate of Spread
Acres
300,000
200,000
100,000
0
216,209
67,901
194
99,529
8,489
4,499
4,454
224,838
0
Non-Burnable
0 - 5 (ch/hr)
5 - 10 (ch/hr)
10 - 15 (ch/hr)
15 - 20 (ch/hr)
20 - 30 (ch/hr)
30 - 50 (ch/hr)
50 - 150 (ch/hr)
150 + (ch/hr)

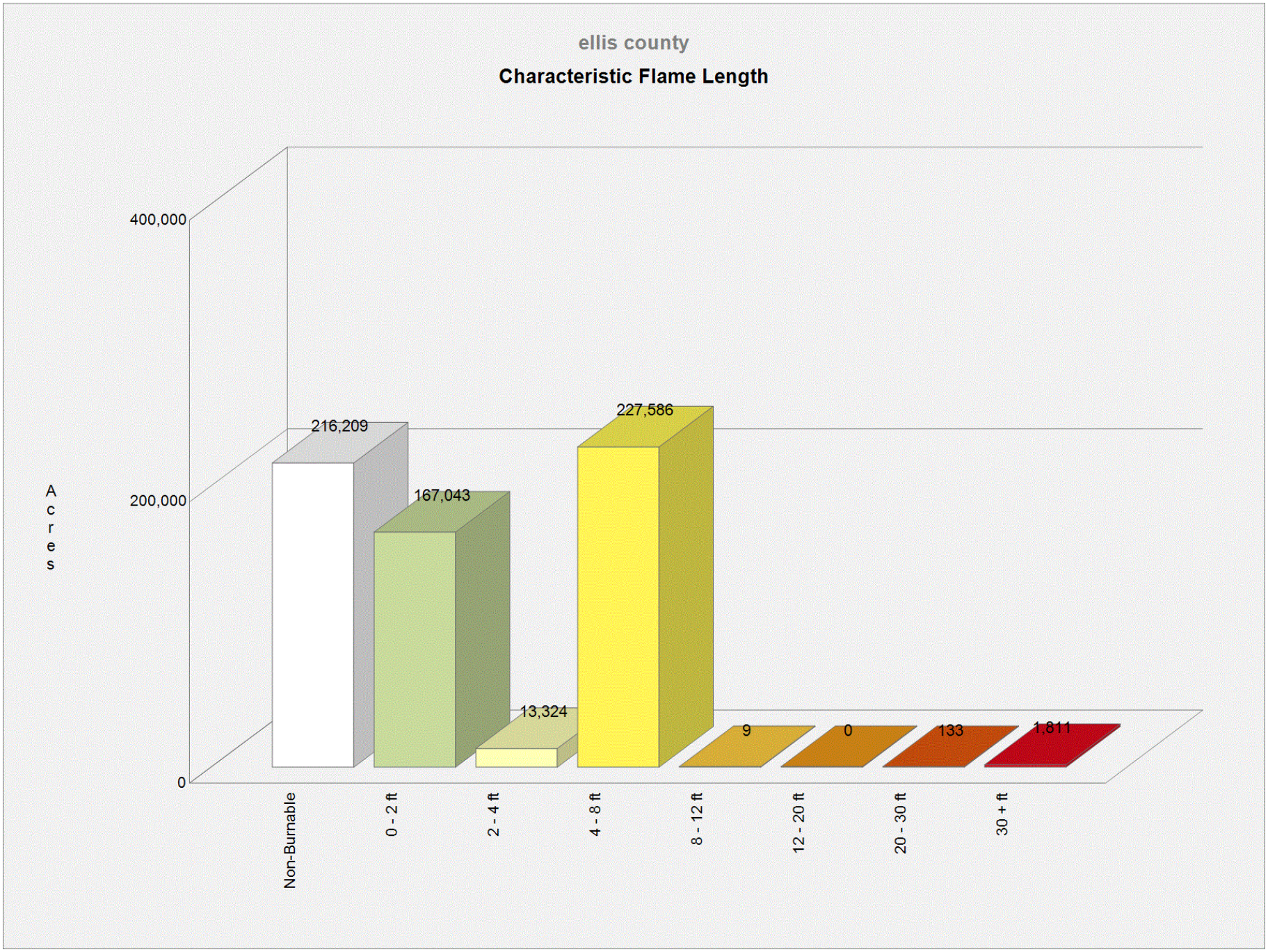
Characteristic Flame Length

Description

Characteristic Flame Length is the typical or representative flame length of a potential fire based on a weighted average of four percentile weather categories. Flame Length is defined as the distance between the flame tip and the midpoint of the flame depth at the base of the flame, which is generally the ground surface. It is an indicator of fire intensity and is often used to estimate how much heat the fire is generating. Flame length is typically measured in feet (ft). Flame length is the measure of fire intensity used to generate the response index outputs for the TWRA.

Flame length is a fire behavior output, which is influenced by three environmental factors - fuels, weather, and topography. Weather is by far the most dynamic variable as it changes frequently. To account for this variability, four percentile weather categories were created from historical weather observations to represent low, moderate, high, and extreme weather days for each weather influence zone in Texas. A weather influence zone is an area where, for analysis purposes, the weather on any given day is considered uniform. There are 22 weather influence zones in Texas.

Flame Length	Acres	Percent
Non-Burnable	216,209	34.5 %
0 - 2 ft	167,043	26.7 %
2 - 4 ft	13,324	2.1 %
4 - 8 ft	227,586	36.3 %
8 - 12 ft	9	0.0 %
12 - 20 ft	0	0.0 %
20 - 30 ft	133	0.0 %
30 + ft	1,811	0.3 %
Total	**626,115**	**100.0 %**


ellis county
Characteristic Flame Length
Acres
400,000
200,000
0
216,209
167,043
13,324
227,586
9
0
133
1,811
Non-Burnable
0 - 2 ft
2 - 4 ft
4 - 8 ft
8 - 12 ft
12 - 20 ft
20 - 30 ft
30 + ft

Characteristic Fire Intensity Scale

Description

Characteristic Fire Intensity Scale (FIS) specifically identifies areas where significant fuel hazards and associated dangerous fire behavior potential exist based on a weighted average of four percentile weather categories. Similar to the Richter scale for earthquakes, FIS provides a standard scale to measure potential wildfire intensity. FIS consist of 5 classes where the order of magnitude between classes is ten-fold. The minimum class, Class 1, represents very low wildfire intensities and the maximum class, Class 5, represents very high wildfire intensities. Refer to descriptions below.

- **Class 1, Very Low:**
  Very small, discontinuous flames, usually less than 1 foot in length; very low rate of spread; no spotting. Fires are typically easy to suppress by firefighters with basic training and non-specialized equipment.
- **Class2, Low:**
  Small flames, usually less than two feet long; small amount of very short range spotting possible. Fires are easy to suppress by trained firefighters with protective equipment and specialized tools.
- **Class 3, Moderate:**
  Flames up to 8 feet in length; short-range spotting is possible. Trained firefighters will find these fires difficult to suppress without support from aircraft or engines, but dozer and plows are generally effective. Increasing potential for harm or damage to life and property.
- **Class 4, High:**
  Large Flames, up to 30 feet in length; short-range spotting common; medium range spotting possible. Direct attack by trained firefighters, engines, and dozers is generally ineffective, indirect attack may be effective. Significant potential for harm or damage to life and property.
- **Class 5, Very High:**
  Very large flames up to 150 feet in length; profuse short-range spotting, frequent long-range spotting; strong fire-induced winds. Indirect attack marginally effective at the head of the fire. Great potential for harm or damage to life and property.

To aid in viewing on the map, FIS is presented in 1/2 class increments. Please consult the TxWRAP User Manual for a more detailed description of the FIS class descriptions.

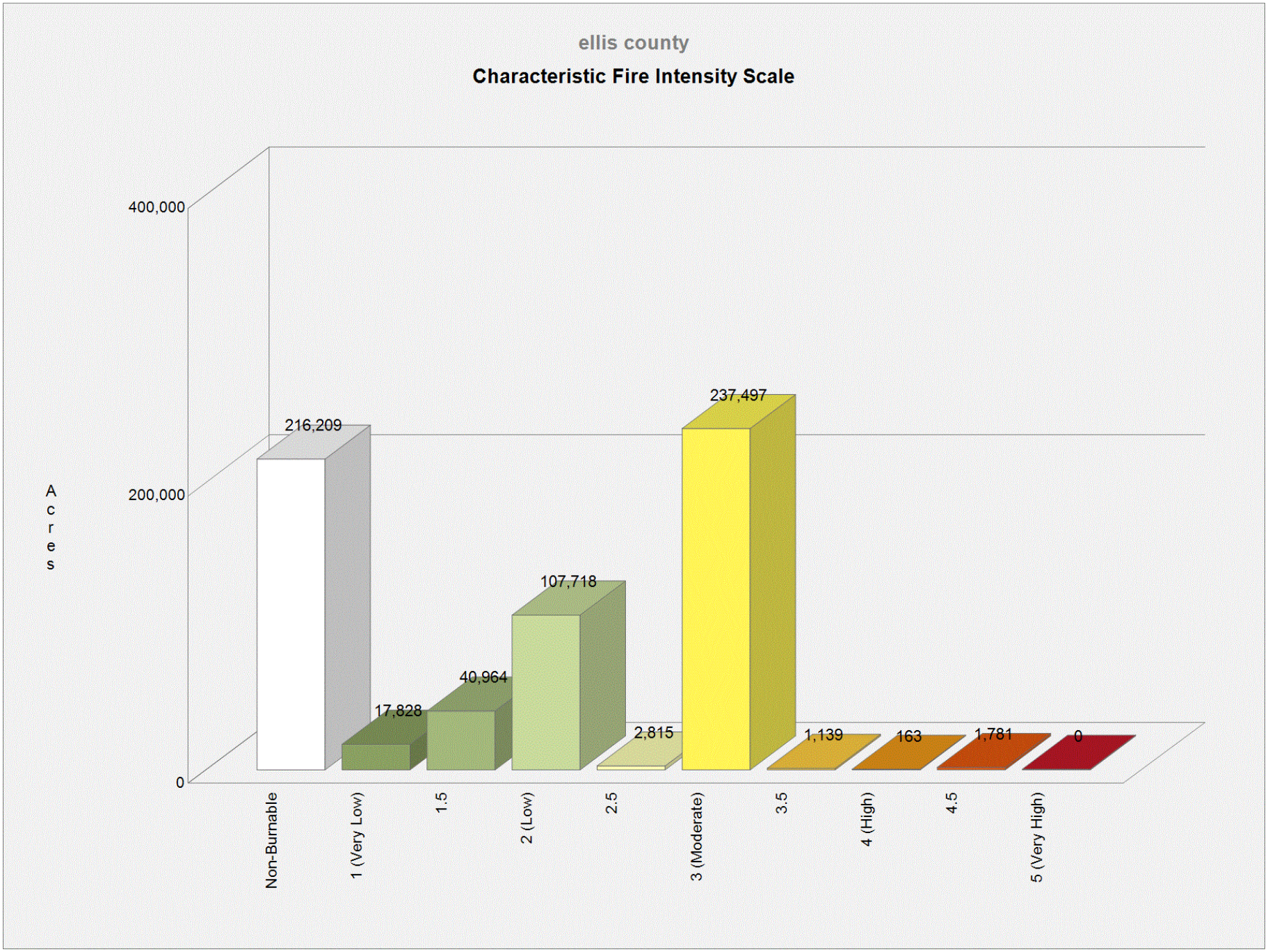
Wildfire Threat and Fire Intensity Scale are designed to complement each other. Unlike Wildfire Threat, the Fire Intensity Scale does not incorporate historical occurrence information. It only evaluates the potential fire behavior for an area, regardless if any fires have occurred there in the past. This additional information allows mitigation planners to quickly identify areas where dangerous fire behavior potential exists in relationship to nearby homes or other valued assets.

Since all areas in Texas have fire intensity scale calculated consistently, it allows for comparison and ordination of areas across the entire state. For example, a high fire intensity area in East Texas is equivalent to a high fire intensity area in West Texas.

Fire intensity scale is a fire behavior output, which is influenced by three environmental factors - fuels, weather, and topography. Weather is by far the most dynamic variable as it changes frequently. To account for this variability, four percentile weather categories were created from historical weather observations to represent low, moderate, high, and extreme weather days for each weather influence zone in Texas. A weather influence zone is an area where, for analysis purposes, the weather on any given day is considered uniform. There are 22 weather influence zones in Texas.

The fire intensity scale map is derived at a 30-meter resolution. This scale of data was chosen to be consistent with the accuracy of the primary surface fuels dataset used in the assessment. While not appropriate for site specific analysis, it is appropriate for regional, county or local planning efforts.

Class	Acres	Percent
Non-Burnable	216,209	34.5 %
1 (Very Low)	17,828	2.8 %
1.5	40,964	6.5 %
2 (Low)	107,718	17.2 %
2.5	2,815	0.4 %
3 (Moderate)	237,497	37.9 %
3.5	1,139	0.2 %
4 (High)	163	0.0 %
4.5	1,781	0.3 %
5 (Very High)	0	0.0 %
Total	**626,114**	**100.0 %**


ellis county
Characteristic Fire Intensity Scale
Acres
400,000
200,000
0
216,209
17,828
40,964
107,718
2,815
237,497
1,139
163
1,781
0
Non-Burnable
1 (Very Low)
1.5
2 (Low)
2.5
3 (Moderate)
3.5
4 (High)
4.5
5 (Very High)

Fire Type – Extreme

Description

There are two primary fire types – surface fire and canopy fire. Canopy fire can be further subdivided into passive canopy fire and active canopy fire. A short description of each of these is provided below.

Surface Fire
A fire that spreads through surface fuel without consuming any overlying canopy fuel. Surface fuels include grass, timber litter, shrub/brush, slash and other dead or live vegetation within about 6 feet of the ground.

Passive Canopy Fire
A type of crown fire in which the crowns of individual trees or small groups of trees burn, but solid flaming in the canopy cannot be maintained except for short periods (Scott & Reinhardt, 2001).

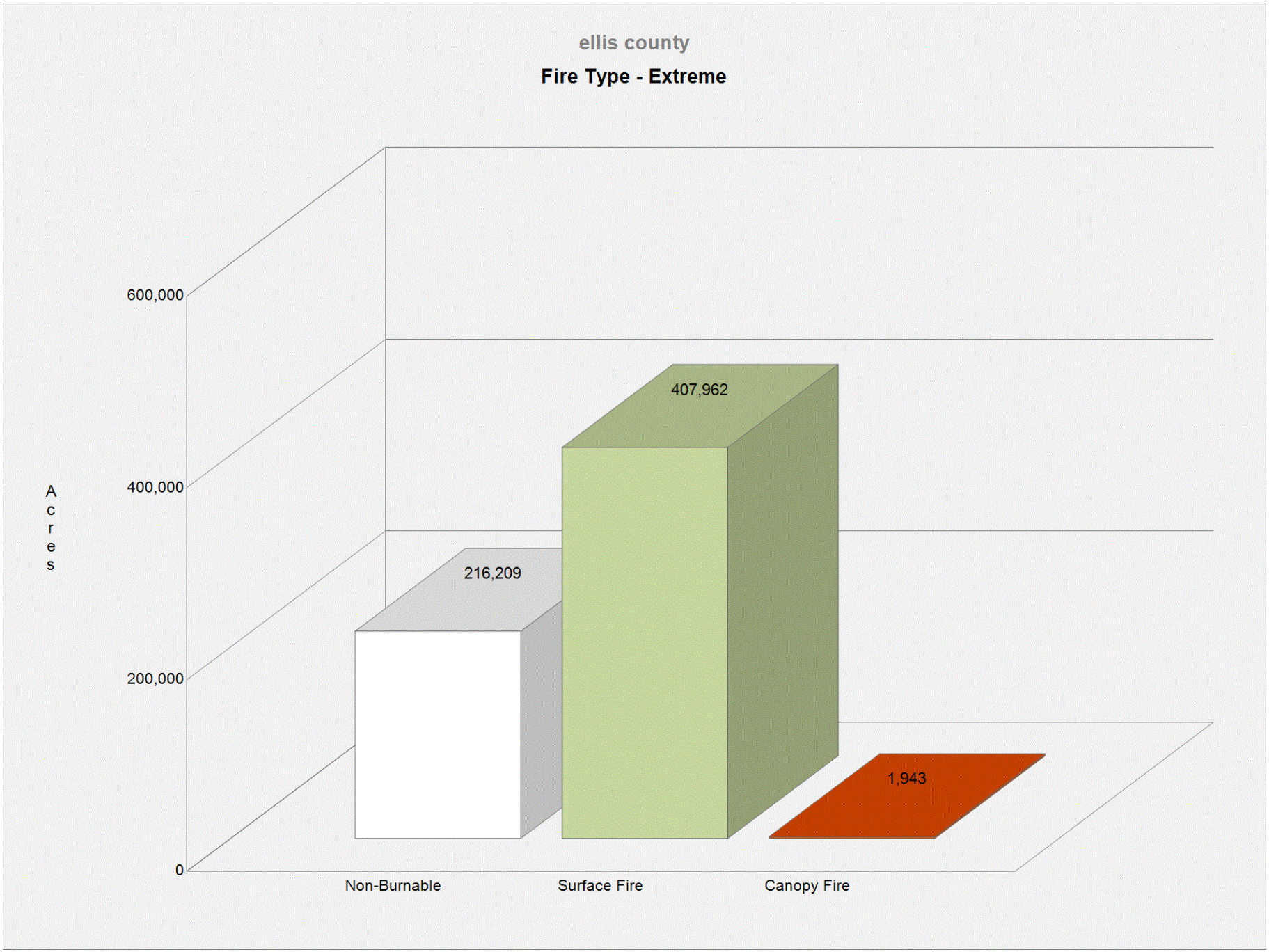
Active Canopy Fire
A crown fire in which the entire fuel complex (canopy) is involved in flame, but the crowning phase remains dependent on heat released from surface fuel for continued spread (Scott & Reinhardt, 2001).

Fire Type – Extreme represents the potential fire type under the extreme percentile weather category. The extreme percentile weather category represents the average weather based on the top three percent fire weather days in the analysis period. It is not intended to represent a worst case scenario weather event. Accordingly, the potential fire type is based on fuel conditions, extreme percentile weather, and topography.

Canopy fires are very dangerous, destructive and difficult to control due to their increased fire intensity. From a planning perspective, it is important to identify where these conditions are likely to occur on the landscape so that special preparedness measure can be taken if neces sary. The Fire Type – Extreme layer shows the footprint of where these areas are most likely to occur. However, it is important to note that canopy fires are not restricted to these areas. Under the right conditions, it can occur in other canopied areas.

The fire type - extreme map is derived at a 30-meter resolution. This scale of data was chosen to be consistent with the accuracy of the primary surface fuels dataset used in the assessment. While not appropriate for site specific analysis, it is appropriate for regional, county or local planning efforts.

Fire Type	Acres	Percent
Non-Burnable	216,209	34.5 %
Surface Fire	407,962	65.2 %
Canopy Fire	1,943	0.3 %
Total	**626,114**	**100.0 %**


ellis county
Fire Type - Extreme
600,000
400,000
200,000
0
Acres
216,209
407,962
1,943
Non-Burnable
Surface Fire
Canopy Fire

Surface Fuels

Description

Surface fuels, or fire behavior fuel models as they are technically referred to, contain the parameters needed by the Rothermel (1972) surface fire spread model to compute surface fire behavior characteristics, such as rate of spread, flame length, fireline intensity, and other fire behavior metrics. As the name might suggest, surface fuels only account for the surface fire potential. Canopy fire potential is computed through a separate but linked process. The Texas Wildfire Risk Assessment accounts for both surface and canopy fire potential in the fire behavior outputs. This represents a significant enhancement over the Southern Wildfire Risk Assessment (SWRA) where only the surface fire potential was considered.

Surface fuels are typically categorized into one of four primary fuel types based on the primary carrier of the surface fire: 1) grass, 2) shrub/brush, 3) timber litter and 4) slash. There are two standard fire behavior fuel model sets published for use. The Fire Behavior Prediction System 1982 Fuel Model Set contains 13 fuel models and the Fire Behavior Prediction System 2005 Fuel Model Set contains 40 fuel models. The TWRA uses fuel models from both sets, as well as two additional custom fuel models devised by Texas A&M Forest Service. The two custom fire behavior fuel models include 9PPL and 9HWD, both of which are a variation of Fuel Model 9 from the 1982Fuel Model Set. For a complete list of the fuel models utilized in the TWRA refer to the following table.

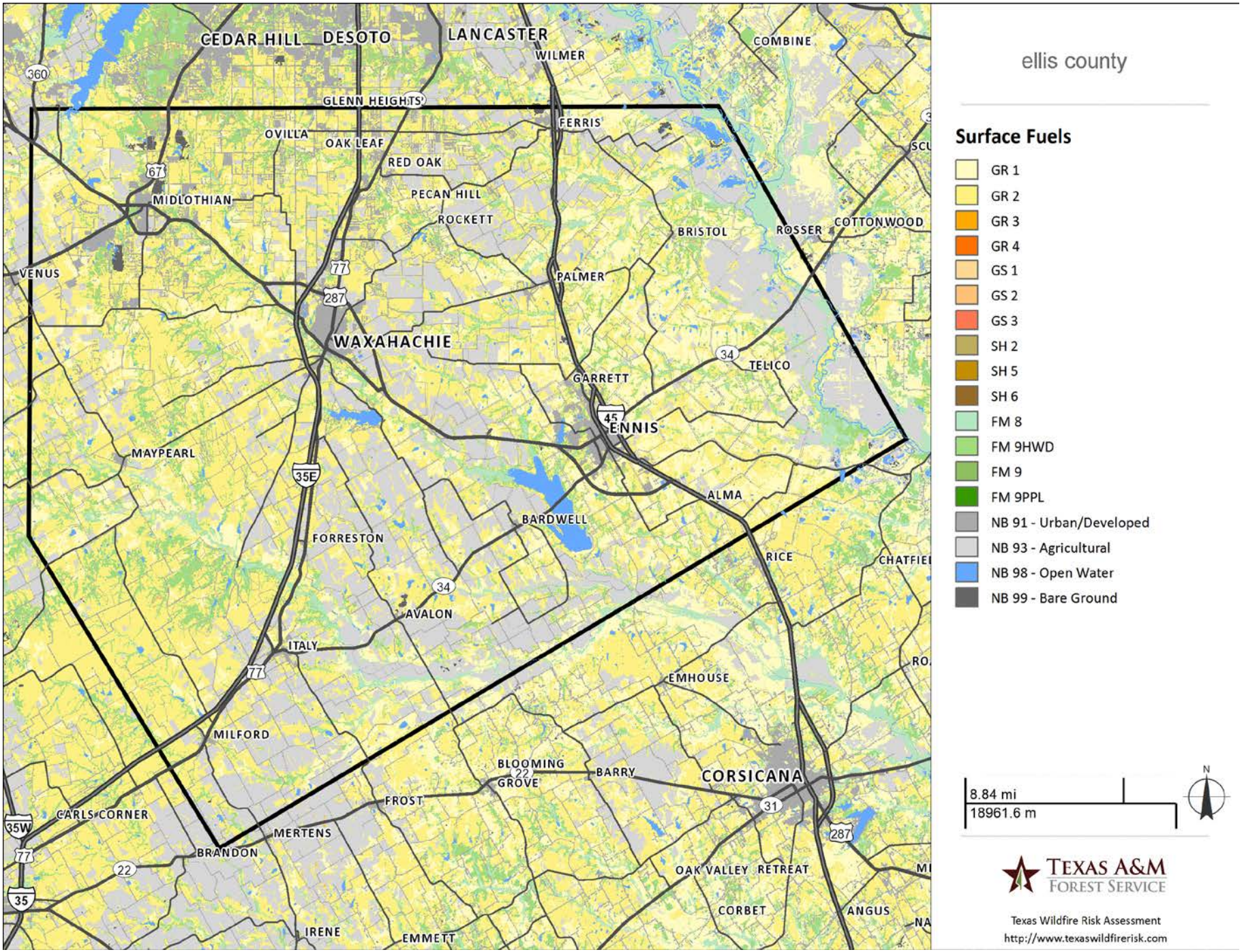
9PPL is intended to model elevated fire behavior associated with dense pine plantations/ pine stands that have an increased timber litter fuel bed depth as compared to a standard Fuel Model 9. (*Note that Fuel Model 7 from the 1982 Fuel Model Set exists in localized areas in southeast Texas, but is not included in the fuel model list. The reason is that it could not be accurately mapped due to technical limitations. Areas of Fuel Model 7 will be mapped as 9PPL, which exhibits the closest fire behavior characteristics.*)

9HWD is intended to model lower fire behavior for hardwood stands with a fluffy litter layer. The main difference from a Fuel Model 9 is the absence of pine litter in the fuel bed component.

Creation of the 30-meter statewide surface fuels dataset is a compilation of three datasets:

1. A Texas modified version of Landfire National (www.landfire.gov) was used as the foundation for the surface fuels map. Using Landfire data and methods, a team of fire behavior and vegetation experts met in Texas to recalibrate the surface fuels dataset in order to create a version specific to Texas. Satellite imagery used in the classification is circa 2001.
2. The East Texas Fuels Classification Project sponsored by Texas A&M Forest Service supplied the surface fuels data for 65 counties in East Texas. Satellite imagery used in the classification is circa 2007.
3. Specific evergreen vegetation classes (i.e. juniper, mixed juniper, and live oak) were extracted for Central Texas from the Texas Ecological Systems Classification Project - Phase 1 and cross-walked to surface fuel models as these areas weren't distinctly mapped by Landfire. This project is sponsored by Texas Parks and Wildlife and contracted to Missouri Resource Assessment Partnership. Satellite imagery used in the classification is circa 2007/2008.

Model	Surface Fuels Category	FBPS Fuel Model Set	Acres	Percent
GR1	Short, Sparse Dry Climate Grass (Dynamic)	2005	99,864	15.9 %
GR2	Low Load, Dry Climate Grass (Dynamic)	2005	239,911	38.3 %
GR3	Low Load, Very Coarse, Humid Climate Grass (Dynamic)	2005	10	0.0 %
GR4	Moderate Load, Dry Climate Grass (Dynamic)	2005	0	0.0 %
GS1	Low Load, Dry Climate Grass-Shrub (Dynamic)	2005	235	0.0 %
GS2	Moderate Load, Dry Climate Grass-Shrub (Dynamic)	2005	1,108	0.2 %
GS3	Moderate Load, Humid Climate Grass-Shrub (Dynamic)	2005	0	0.0 %
SH2	Moderate Load Dry Climate Shrub	2005	1,076	0.2 %
SH5	High Load, Dry Climate Shrub	2005	0	0.0 %
SH6	Low Load, Humid Climate Shrub	2005	0	0.0 %
FM8	Closed timber litter (compact)	2005	19,691	3.1 %
FM9 HWD	Hardwood litter (fluffy) - Low Load for Texas	2005	48,010	7.7 %
FM9	Long-needle (pine litter) or hardwood litter	2005	0	0.0 %
FM9 PPL	Long-needle (pine litter, plantations) - High Load for Texas	2005	0	0.0 %
NB91	Urban/Developed	2005	67,620	10.8 %
NB93	Agricultural	2005	135,816	21.7 %
NB98	Open Water	2005	10,979	1.8 %
NB99	Bare Ground	2005	1,795	0.3 %
	Total		**626,115**	**100.0 %**


ellis county
Surface Fuels
GR 1
GR 2
GR 3
GR 4
GS 1
GS 2
GS 3
SH 2
SH 5
SH 6
FM 8
FM 9HWD
FM 9
FM 9PPL
NB 91 - Urban/Developed
NB 93 - Agricultural
NB 98 - Open Water
NB 99 - Bare Ground
8.84 mi
18961.6 m
N
Texas A&M Forest Service
Texas Wildfire Risk Assessment
http://www.texaswildfirerisk.com
CEDAR HILL
DESOTO
LANCASTER
WILMER
COMBINE
GLENN HEIGHTS
FERRIS
OVILLA
OAK LEAF
RED OAK
MIDLOTHIAN
PECAN HILL
ROCKETT
BRISTOL
ROSSER
COTTONWOOD
VENUS
PALMER
WAXAHACHIE
TELICO
GARRETT
ENNIS
MAYPEARL
ALMA
BARDWELL
FORRESTON
RICE
AVALON
ITALY
EMHOUSE
MILFORD
BLOOMING GROVE
BARRY
CORSICANA
FROST
CARLS CORNER
MERTENS
BRANDON
OAK VALLEY
RETREAT
CORBET
ANGUS
IRENE
EMMETT
360
67
77
287
35E
34
45
35W
22
31
35

Vegetation

Description

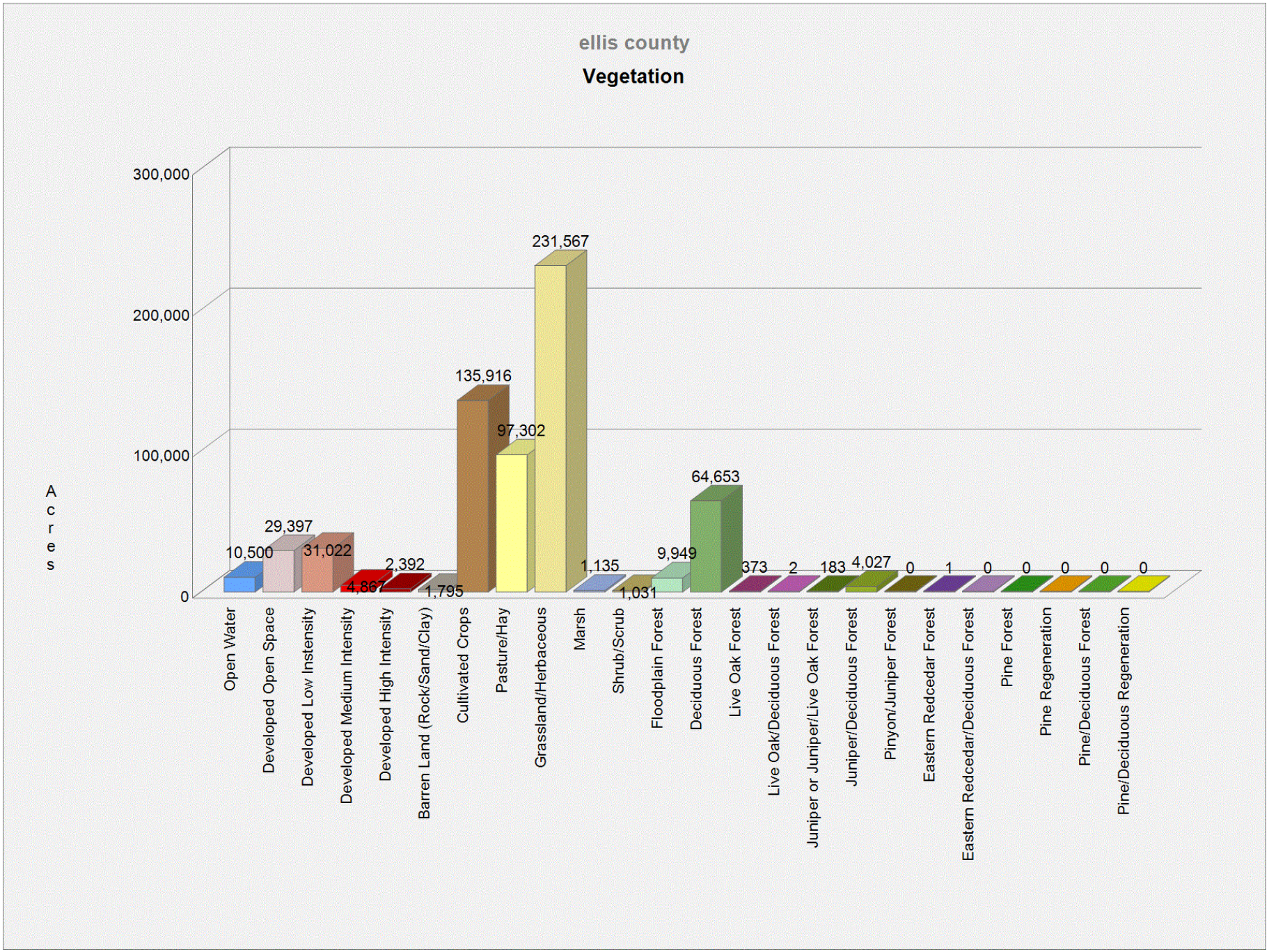
The Vegetation map describes the general vegetation and landcover types across the state of Texas. In the Texas Wildfire Risk Assessment (TWRA), the Vegetation dataset is used to support the development of the Surface Fuels, Canopy Cover, Canopy Stand Height, Canopy Base Height, and Canopy Bulk Density datasets. The vegetation classes with descriptions are shown in the following table.

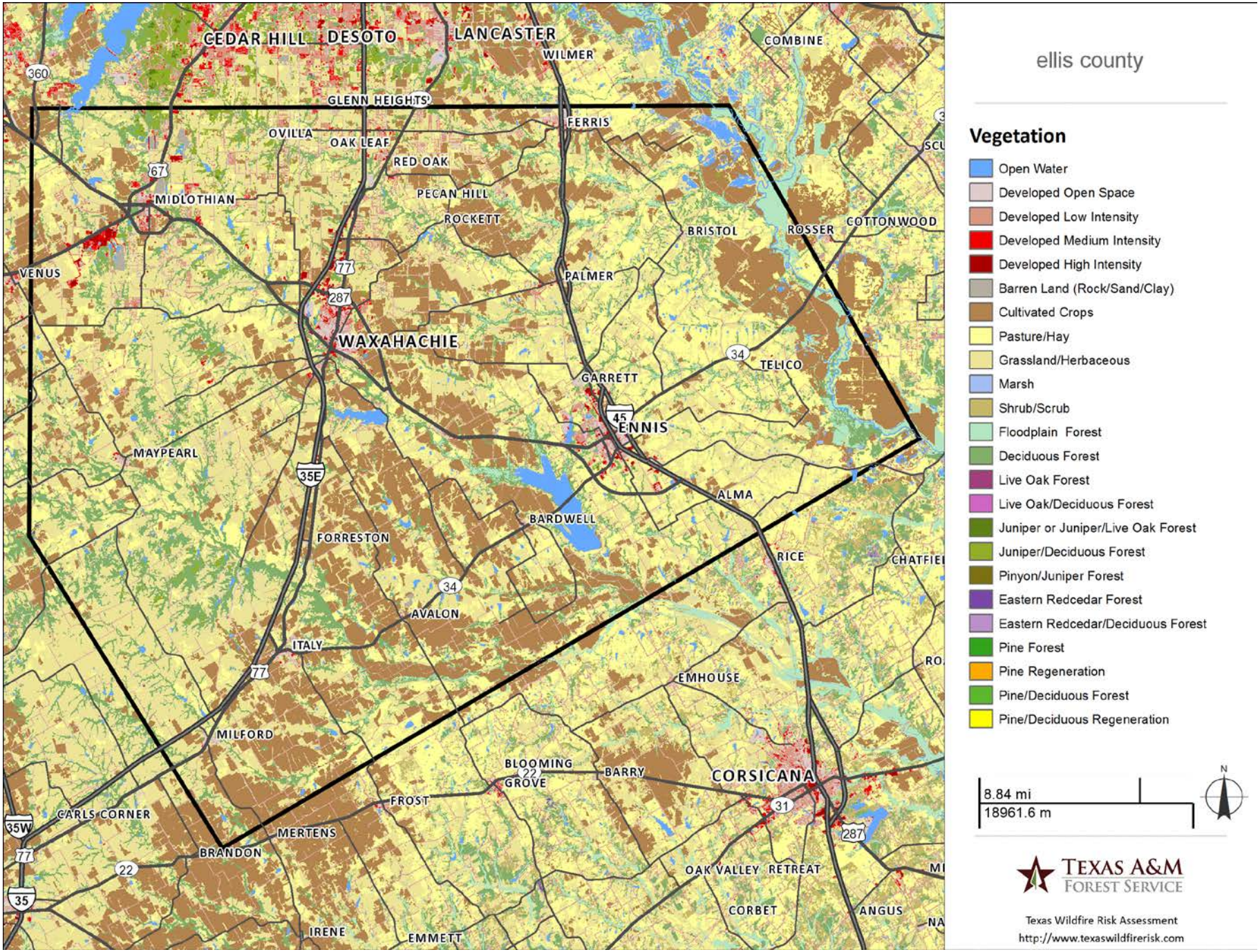
For the purposes of the TWRA, special consideration was given to mapping of evergreen forest types (i.e. pine, redcedar, juniper, live oak, and pinyon) due to their potential to support passive and active crowning.

Creation of the 30-meter statewide vegetation dataset was created from a compilation of three datasets:

1. National Landcover Dataset 2001, sponsored by the US Geological Survey (USGS), formed the foundation for the vegetation map. Satellite imagery used in the classification is circa 2001.
2. East Texas Fuels Classification Project, sponsored by Texas A&M Forest Service, supplied the vegetation data for 65 counties in East Texas. Satellite imagery used in the classification is circa 2007.
3. Specific evergreen vegetation classes (i.e. juniper, mixed juniper, and live oak) were extracted for Central Texas from the Texas Ecological Systems Classification Project - Phase 1 to enhance the vegetation map. This project is sponsored by Texas Parks and Wildlife and contracted to Missouri Resource Assessment Partnership. Satellite imagery used in the classification is circa 2007/2008.

Class	Description	Acres	Percent
Open Water	All areas of open water, generally with < 25% cover of vegetation or soil	10,500	1.7 %
Developed Open Space	Impervious surfaces account for < 20% of total cover (i.e. golf courses, parks, etc…)	29,397	4.7 %
Developed Low Intensity	Impervious surfaces account for 20-49% of total cover	31,022	5.0 %
Developed Medium Intensity	Impervious surfaces account for 50-79% of total cover	4,867	0.8 %
Developed High Intensity	Impervious surfaces account for 80-100%of total cover	2,392	0.4 %
Barren Land (Rock/Sand/Clay)	Vegetation generally accounts for <15% of total cover	1,795	0.3 %
Cultivated Crops	Areas used for the production of annual crops, includes land being actively tilled	135,916	21.7 %
Pasture/Hay	Areas of grasses and/or legumes planted for livestock grazing or hay production	97,302	15.5 %
Grassland/Herbaceous	Areas dominated (> 80%) by grammanoid or herbaceous vegetation, can be grazed	231,567	37.0 %
Marsh	Low wet areas dominated (>80%) by herbaceous vegetation	1,135	0.2 %
Shrub/Scrub	Areas dominated by shrubs/trees < 5 meters tall, shrub canopy > than 20% of total vegetation	1,031	0.2 %
Floodplain Forest	> 20% tree cover, the soil is periodically covered or saturated with water	9,949	1.6 %
Deciduous Forest	> 20% tree cover, >75% of tree species shed leaves in response to seasonal change	64,653	10.3 %
Live Oak Forest	> 20% tree cover, live oak species represent >75% of the total tree cover	373	0.1 %
Live Oak/Deciduous Forest	> 20% tree cover, neither live oak or deciduous species represent >75% of the total tree cover	2	0.0 %
Juniper or Juniper/Live Oak Forest	> 20% tree cover, juniper or juniper/live oak species represent > 75% of the total tree cover	183	0.0 %
Juniper/Deciduous Forest	> 20% tree cover, neither juniper or deciduous species represent > 75% of the total tree cover	4,027	0.6 %
Pinyon/Juniper Forest	> 20% tree cover, pinyon or juniper species represent > 75% of the total tree cover	0	0.0 %
Eastern Redcedar Forest	> 20% tree cover, eastern redcedar represents > 75% of the total tree cover	1	0.0 %
Eastern Redcedar/Deciduous Forest	> 20% tree cover, neither eastern redcedar or deciduous species represent > 75% of the total tree cover	0	0.0 %
Pine Forest	> 20% tree cover, pine species represent > 75% of the total tree cover	0	0.0 %
Pine Regeneration	Areas of pine forest in an early successional or transitional stage	0	0.0 %
Pine/Deciduous Forest	> 20% tree cover, neither pine or deciduous species represent > 75% of the total tree cover	0	0.0 %
Pine/Deciduous Regeneration	Areas of pine or pine/deciduous forest in an early successional or transitional stage	0	0.0 %
Total		**626,112**	**100.0 %**


ellis county
Vegetation
Acres
300,000
200,000
100,000
0
10,500
29,397
31,022
4,867
2,392
1,795
135,916
97,302
231,567
1,135
1,031
9,949
64,653
373
2
183
4,027
0
1
0
0
0
0
0
Open Water
Developed Open Space
Developed Low Instensity
Developed Medium Intensity
Developed High Intensity
Barren Land (Rock/Sand/Clay)
Cultivated Crops
Pasture/Hay
Grassland/Herbaceous
Marsh
Shrub/Scrub
Floodplain Forest
Deciduous Forest
Live Oak Forest
Live Oak/Deciduous Forest
Juniper or Juniper/Live Oak Forest
Juniper/Deciduous Forest
Pinyon/Juniper Forest
Eastern Redcedar Forest
Eastern Redcedar/Deciduous Forest
Pine Forest
Pine Regeneration
Pine/Deciduous Forest
Pine/Deciduous Regeneration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MIDLOTHIAN
BRISTOL
ROSSER
COTTONWOOD
VENUS
PALMER
WAXAHACHIE
TELICO
GARRETT
ENNIS
MAYPEARL
ALMA
BARDWELL
FORRESTON
RICE
AVALON
ITALY
EMHOUSE
MILFORD
BLOOMING GROVE
BARRY
CORSICANA
FROST
CARLS CORNER
MERTENS
BRANDON
OAK VALLEY
RETREAT
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ANGUS
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ellis county
Vegetation
Open Water
Developed Open Space
Developed Low Intensity
Developed Medium Intensity
Developed High Intensity
Barren Land (Rock/Sand/Clay)
Cultivated Crops
Pasture/Hay
Grassland/Herbaceous
Marsh
Shrub/Scrub
Floodplain Forest
Deciduous Forest
Live Oak Forest
Live Oak/Deciduous Forest
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Eastern Redcedar/Deciduous Forest
Pine Forest
Pine Regeneration
Pine/Deciduous Forest
Pine/Deciduous Regeneration
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TEXAS A&M FOREST SERVICE
Texas Wildfire Risk Assessment
http://www.texaswildfirerisk.com

Pine Age

Description

Pine Age is a map of pine and mixed pine/deciduous stands in 2007. Pine age is one the key inputs used to assist with the development of several fuel datasets including, surface fuels, canopy ceiling height/stand height, canopy base height and canopy bulk density. The age classes are as follows: 0-3 years, 4-6 years, 7-9 years, 10-12 years, 13-15 years, 16-18 years, 19-21 years, 22-30 years, and 30 + years.

In the pine forests of East Texas, pine stands are an important consideration in the overall wildfire management of the area. Many stands are planted and managed as a financial investment by private landowners, timber companies, timber management investment organizations (TIMOs), or real estate investment trusts (REITs). Other stands may be used for recreation and/or represent prime wildlife habitat for critical or endangered species.

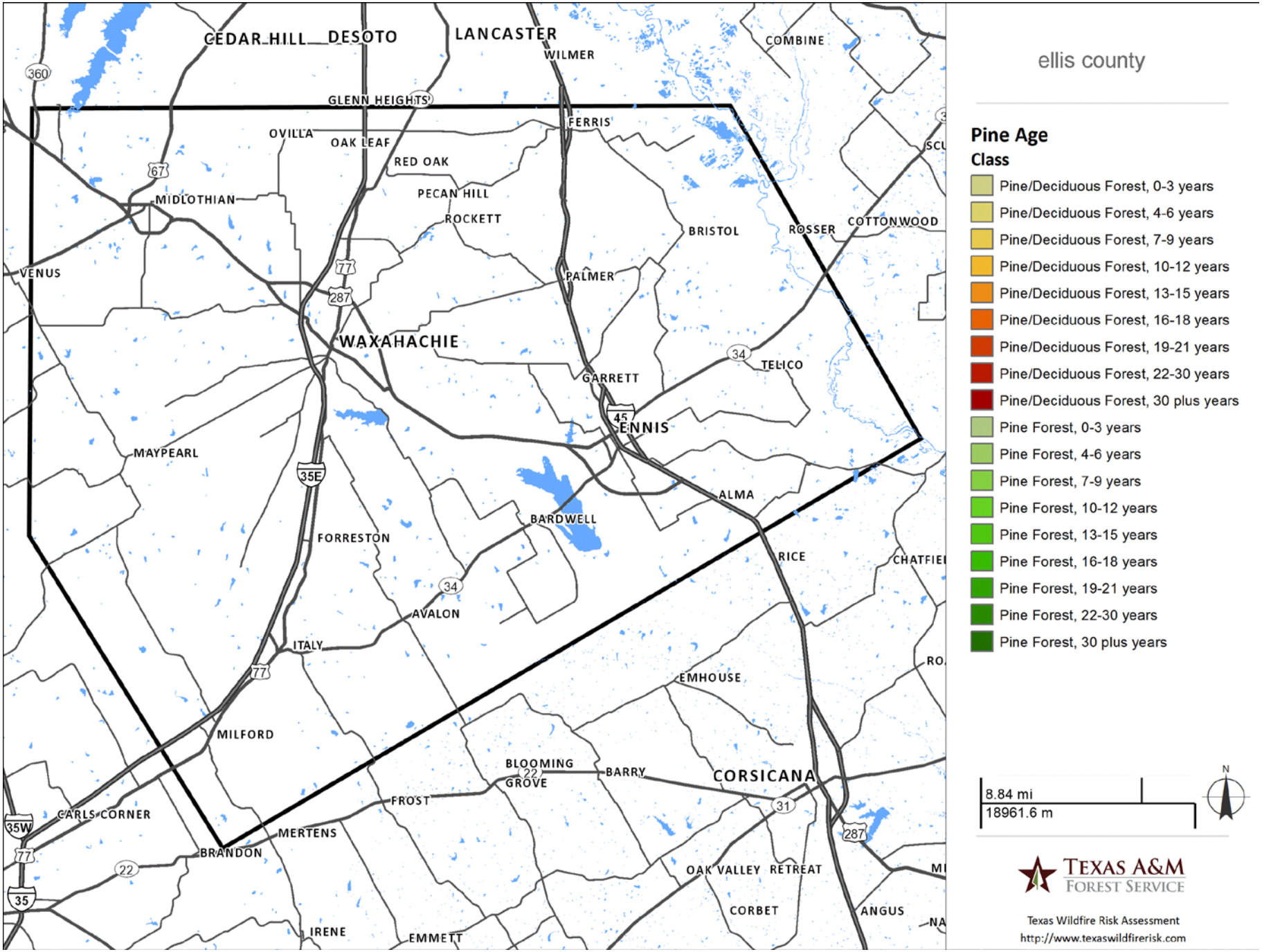
As wildland fire managers, it is our job to ensure these areas are properly protected from wildfires. Age is often a good indicator of the potential fire behavior and value associated with pine stands, as well as the susceptibility of the stand to be damaged from wildfire. For example, young stands mixed with grass and smaller-sized trees have the potential to exhibit extreme fire behavior and are very susceptible to damage. However, these young stands typically have less value associated with them as compared to more mature pine stands. As a pine stand ages it typically becomes less susceptible to damage from wildfires.

The pine age map is used to determine the age distribution and area for each age class, as well as their location on the landscape. Planners can quickly identify possible areas where these age classes of interest are located for further analysis.

Pine Age was produced as part the East Texas Fuels Classification Project sponsored by Texas A&M Forest Service. The Pine Age map was created by analyzing a time series of satellite images collected between 1972 and 2007. The process involves monitoring the growth and removal of timber stands on a three-year cycle. Once a timber stand is recorded as removed, it is tagged as zero to three years old. From this point, the stand is grown forward for each subsequent cycle in order to determine the age of the stand.

Discrimination between pine stands and mixed pine stands younger than 10 years of age is very difficult using 30-meter satellite imagery due to the lack of identifiable canopy at those ages. These stands are typically categorized as “transitional” forest, but for the purposes of the ETFCP, a distinction was made between the two. This distinction was made using probability algorithms based on previous vegetation and ownership patterns.

Class	Acres	Percent
Pine/Deciduous Forest, 0-3 years		
Pine/Deciduous Forest, 4-6 years		
Pine/Deciduous Forest, 7-9 years		
Pine/Deciduous Forest, 10-12 years		
Pine/Deciduous Forest, 13-15 years		
Pine/Deciduous Forest, 16-18 years		
Pine/Deciduous Forest, 19-21 years		
Pine/Deciduous Forest, 22-30 years		
Pine/Deciduous Forest, 30 plus years		
Pine Forest, 0-3 years		
Pine Forest, 4-6 years		
Pine Forest, 7-9 years		
Pine Forest, 10-12 years		
Pine Forest, 13-15 years		
Pine Forest, 16-18 years		
Pine Forest, 19-21 years		
Pine Forest, 22-30 years		
Pine Forest, 30 plus years		
Total	**No Data**	**No Data**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TELICO
GARRETT
ENNIS
MAYPEARL
ALMA
BARDWELL
FORRESTON
RICE
AVALON
ITALY
EMHOUSE
MILFORD
BLOOMING GROVE
BARRY
CORSICANA
FROST
CARLS CORNER
MERTENS
BRANDON
OAK VALLEY
RETREAT
CORBET
ANGUS
IRENE
EMMETT
ellis county
Pine Age
Class
Pine/Deciduous Forest, 0-3 years
Pine/Deciduous Forest, 4-6 years
Pine/Deciduous Forest, 7-9 years
Pine/Deciduous Forest, 10-12 years
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Pine/Deciduous Forest, 16-18 years
Pine/Deciduous Forest, 19-21 years
Pine/Deciduous Forest, 22-30 years
Pine/Deciduous Forest, 30 plus years
Pine Forest, 0-3 years
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TEXAS A&M FOREST SERVICE
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Pine Plantation

Description

Pine plantations are pine stands that are planted and actively managed for financial gain or other economic reasons. For the purpose of the Texas Wildfire Risk Assessment (TWRA), pine plantations are a key input to the Values Response Index. The Pine Plantation map represents conditions in 2007.

The forest sector in Texas has a major impact to the Texas economy. It is the 3rd most important agricultural commodity in Texas, and the most important in 28 out of the 43 East Texas counties. It produces $22 billion in industry outputs and employs 80,000 workers. Managed plantations have a significant role in the forest sector, because they supply the majority of the timber needed by the mills to produce paper and lumber products.

Plantations are planted by private landowners, timber companies, timber management investment organizations (TIMOs), and real estate investment trusts (REITs). As wildland fire managers, it is our job to ensure these investments are properly protected.
The Pine Plantation map is used to identify where plantations are located on the landscape. Planners can use this map to quickly determine where additional planning and analysis may be required to protect this valuable resource.

The Pine Plantation 2007 map was produced as part the East Texas Fuels Classification Project sponsored by Texas A&M Forest Service. It was created by analyzing satellite imagery, modeling the Pine Age 2007 dataset, and utilizing Forest Inventory and Analysis (FIA) statistics.

The Pine Plantation 2007 dataset is comprised of three classes, primarily based on age and canopy cover.

- **Pine Plantation (Established)** – These stands are less than 30 years old and can be detected as pine via satellite remote sensing techniques. FIA statistics indicate that stands 30 years old or less have an extremely good chance (greater than 75%) of being a plantation and that stands older than 30 years have a good chance (greater than 75%)of being a natural stand.

- **Pine Regeneration** – These stands are less than 10 years old and do not possess sufficient canopy to be detectable as pine plantation via satellite remote sensing techniques; however, the probability is high for this class to be considered pine plantation. This distinction is made using probability algorithms based on previous vegetation and ownership patterns. The typical age for this class is between 0 – 6 years.

- **Pine/Deciduous Regeneration** - These stands are less than 10 years old and do not possess sufficient canopy to be detectable as pine plantation via satellite remote sensing techniques; however, the probability is moderate for this class to be considered pine plantation. This distinction is made using probability algorithms based on previous vegetation and ownership patterns. The typical age for this class is between 0 – 6 years.

Discrimination between pine stands and mixed pine stands younger than 10 years of age is very difficult using 30-meter satellite imagery due to the lack of identifiable canopy at those ages. These stands are typically categorized as “transitional” or regeneration forest. For the purposes of the TWRA, however, a distinction is made between the two.

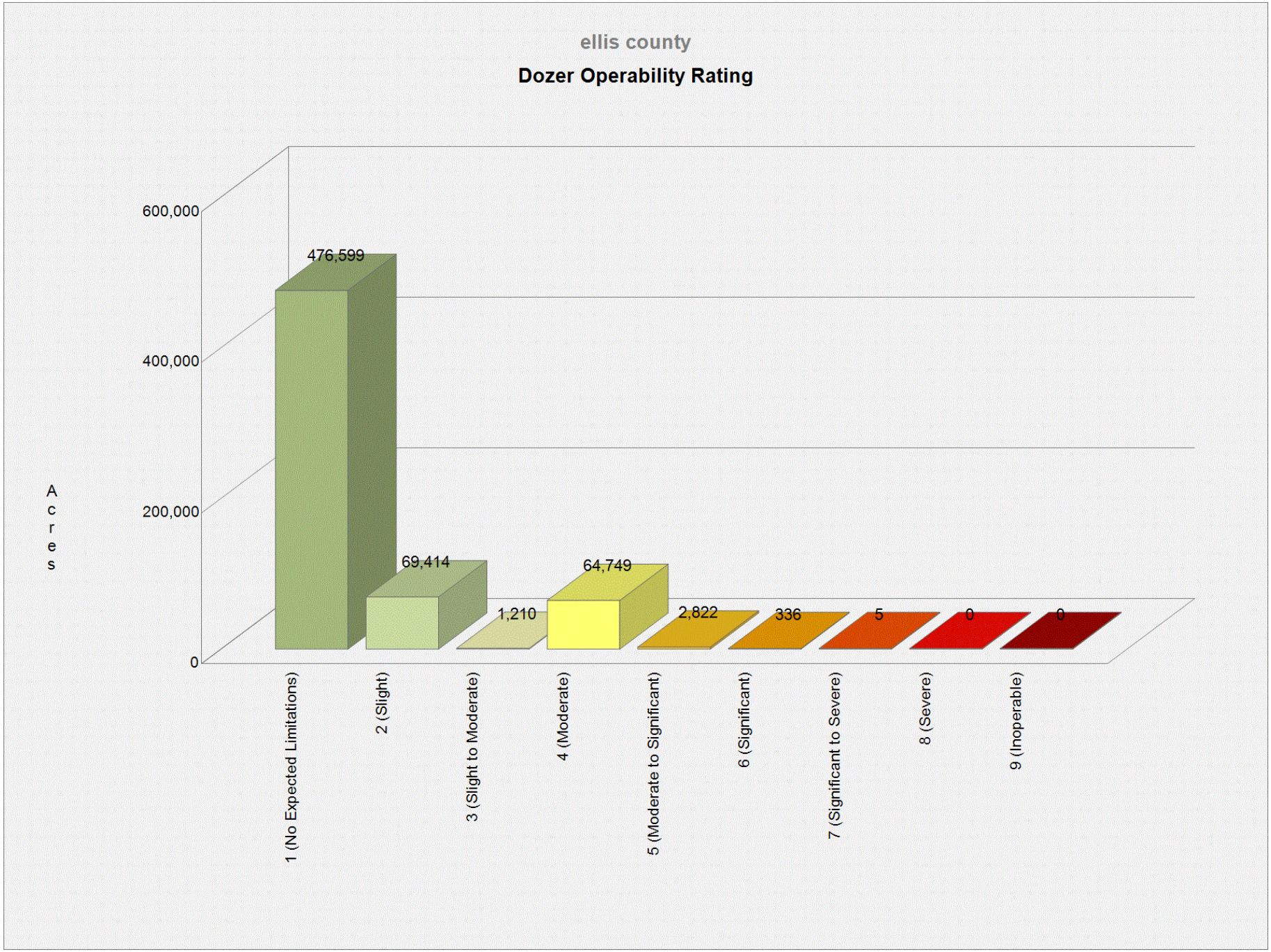
The designated project area does not contain Pine Plantation data

Dozer Operability Rating

Description

The Dozer Operability Rating (DOR) expresses how difficult it is to operate a dozer in an area based on limitations associated with slope and vegetation/fuel type. Using the fireline production rates published in the NWCG Fireline Handbook 3 (PMS 410-1) as a guide, operability values were assigned to a matrix based on 6 slope classes and 10 vegetation/fuels classes. The possible values range from 1 to 9, with 1 representing no limitations and 9 being inoperable.

Class	Acres	Percent
1 (No Expected Limitations)	476,599	77.5 %
2 (Slight)	69,414	11.3 %
3 (Slight to Moderate)	1,210	0.2 %
4 (Moderate)	64,749	10.5 %
5 (Moderate to Significant)	2,822	0.5 %
6 (Significant)	336	0.1 %
7 (Significant to Severe)	5	0.0 %
8 (Severe)	0	0.0 %
9 (Inoperable)	0	0.0 %
Total	**615,135**	**100.0 %**


ellis county
Dozer Operability Rating
Acres
600,000
400,000
200,000
0
476,599
69,414
1,210
64,749
2,822
336
5
0
0
1 (No Expected Limitations)
2 (Slight)
3 (Slight to Moderate)
4 (Moderate)
5 (Moderate to Significant)
6 (Significant)
7 (Significant to Severe)
8 (Severe)
9 (Inoperable)

References

Anderson, H. E. (1982). Aids to determining fuel models for estimating fire behavior. USDA For. Serv. Gen. Tech. Rep. INT-122.

Fire Program Solutions, L.L.C. (2005). *Users' Guide To Using the CrownMass® and Fuel Model Manager Programs.* Retrieved from Fire Program Solutions: http://www.fireps.com/software/ug_cm3.pdf

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Scott, J. H., & Burgan, R. E. (2005). Standard Fire Behavior Fuel Models: A Comprehensive Set for Use with Rothermel's Surface Fire Spread Model. Ft. Collins, CO, Rocky Mountain Research Station: USDA Forest Service, Gen. Tech. Rpt. RMRS-GTR-153.

Scott, J. H., & Reinhardt, E. D. (2001). Assessing the Crown Fire Potential by Linking Models of Surface and Crown Fire Behavior. Ft. Collins, CO, Rocky Mountain Research Station: USDA Forest Service, Research Paper RMRS-RP-29.

THE TEXAS A&M UNIVERSITY SYSTEM
1876
TEXAS A&M
FOREST SERVICE

HEADWATERS ECONOMICS

Neighborhoods at Risk

Selected Tracts

Selected Location(s):

Ellis County, TX

Comparison Location:

U.S.

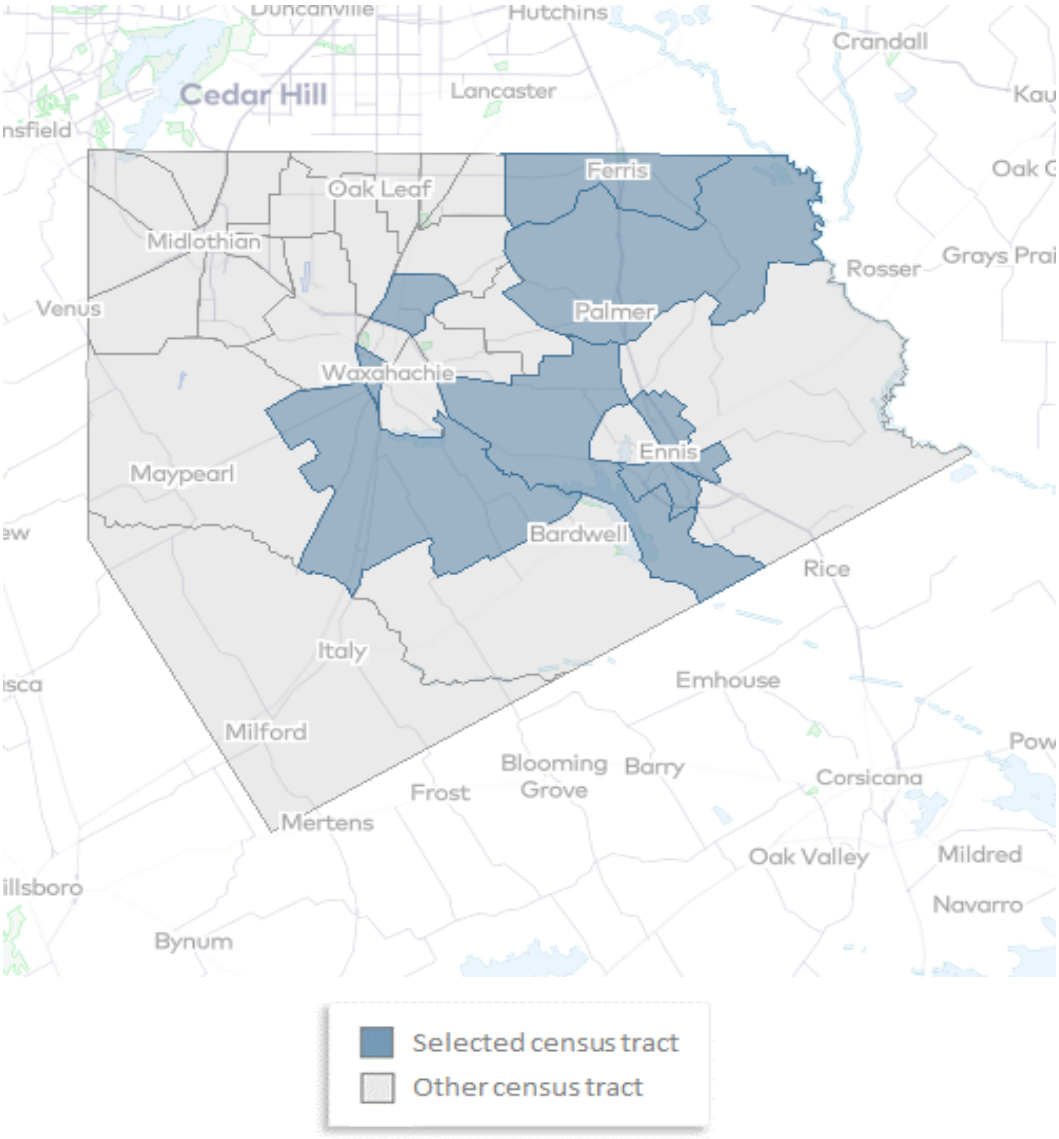
Produced by

Headwaters Economics'

Economic Profile System (EPS)

December 6, 2021

Area of Interest



Headwaters Economics

Headwaters Economics is an independent, nonprofit research group that works to improve community development and land management decisions: **headwaterseconomics.org**.

Neighborhoods at Risk

Neighborhoods at Risk is a free, web-based tool that provides cities with neighborhood-level information about at-risk populations and their vulnerability to the impacts of climate change.

Free and easy-to-use: Quickly create maps and reports of socioeconomic and climate data.

Available nation-wide: Explore socioeconomic and climate data for any community or county in the nation.

Updated continuously: Make use of the latest available, published government data.

headwaterseconomics.org/apps/neighborhoods-at-risk

Neighborhoods at Risk

Selected Tracts

Table of Contents

Summary: This front page shows a quick comparison for many of the indicators covered in this report.

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People of Color 10

Language Proficiency 12

Young & Elderly Populations 14

Educational Attainment 16

Potentially Vulnerable Households 18

Potentially Vulnerable People 20

Literature Cited 22

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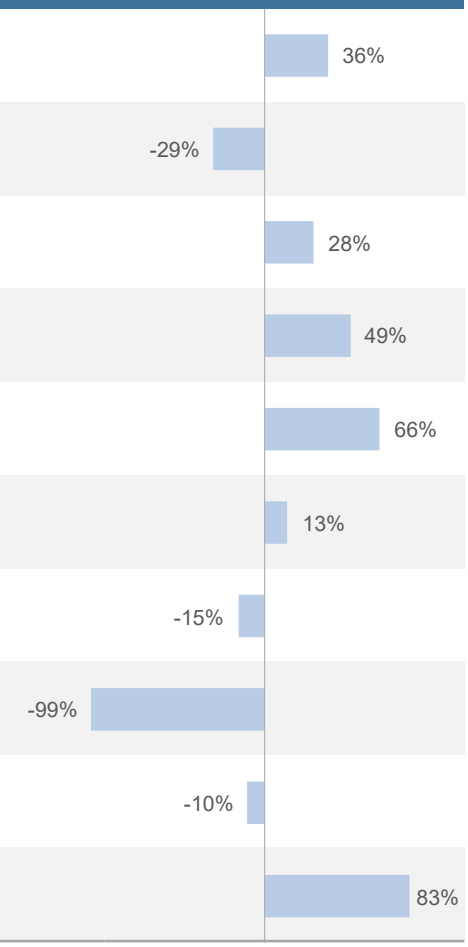
Neighborhoods at Risk

Selected Tracts

Summary

Indicators 2019*	Selected Tracts	U.S.	Percent Difference Selected Tracts vs. U.S.
People under 5 years	8.8%	6.1%	36%
People over 65 years	11.6%	15.6%	-29%
People of color (including Hispanic)	52.0%	39.3%	28%
People who don't speak English well	7.1%	4.3%	49%
People without a high school degree	23.7%	12.0%	66%
Families in poverty	10.8%	9.5%	13%
Housing units that are rentals	31.0%	36.0%	-15%
Households with no car	2.9%	8.6%	-99%
People with disabilities	11.4%	12.6%	-10%
People without health insurance	21.2%	8.8%	83%



High Reliability: Data with coefficients of variation (CVs) < 12% are in black to show that the sampling error is small.
Medium Reliability: Data with CVs between 12 & 40% are in orange. These values should be interpreted with caution.
Low Reliability: Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

* ACS 5-year estimates: 2019 represents average characteristics from 2015-2019.

CITATION: U.S. Department of Commerce. 2020. Census Bureau, American Community Survey Office, Washington, D.C., reported by Headwaters Economics' Neighborhoods at Risk, headwaterseconomics.org/par.

Neighborhoods at Risk

Selected Tracts

Summary

What do we measure on this page?

This page shows a quick comparison for many of the indicators covered in this report to highlight how the selected tracts differ from the United States as a whole.

The percent, or relative, difference between the selected tracts and the U.S. is calculated by dividing the difference between the values by the arithmetic mean of the values.

Why is it important?

These indicators are all measures of a population more likely to experience adverse outcomes from disruptions due to extreme weather events, climate change, pollution, or limited health care access.

Particularly high percentages for any of these indicators may highlight populations that are at higher risk and in need of outreach from disaster planning, public health, or social service organizations.

Neighborhoods at Risk

Selected Tracts

Families in Poverty

	Ellis County, TX	Selected Tracts	U.S.
Total families for whom poverty status is determined, 2019*	45,214	11,288	79,114,031
Families in poverty	3,095	1,223	7,541,196
Families with children in poverty	2,444	1,029	5,581,063
Single mother families in poverty	1,446	540	3,385,236
Percent of Total, 2019*			
Families in poverty	6.8%	10.8%	9.5%
Families with children in poverty	5.4%	9.1%	7.1%
Single mother families in poverty	3.2%	4.8%	4.3%
Change in Percentage Points, 2010*-2019*			
For example, if the value is 3% in 2010* and 4.5% in 2019*, the reported change in percentage points is 1.5.			
Families in poverty	-1.8	-2.2	-0.5
Families with children in poverty	-1.9	-1.6	-0.8
Single mother families in poverty	-0.3	0.9	-0.5

High Reliability: Data with coefficients of variation (CVs) < 12% are in black to indicate that the sampling error is relatively small.
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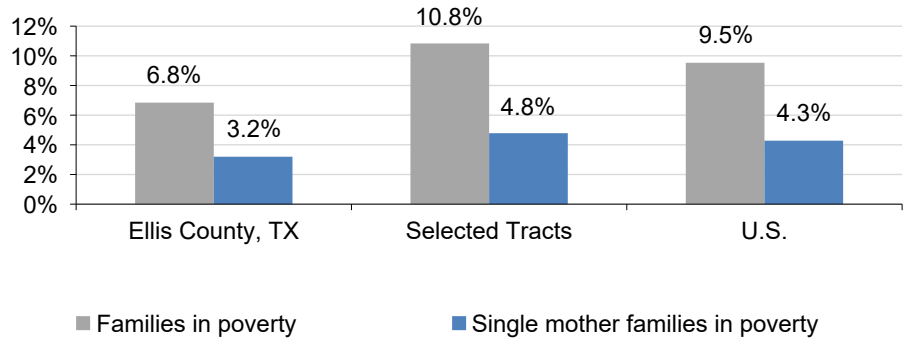
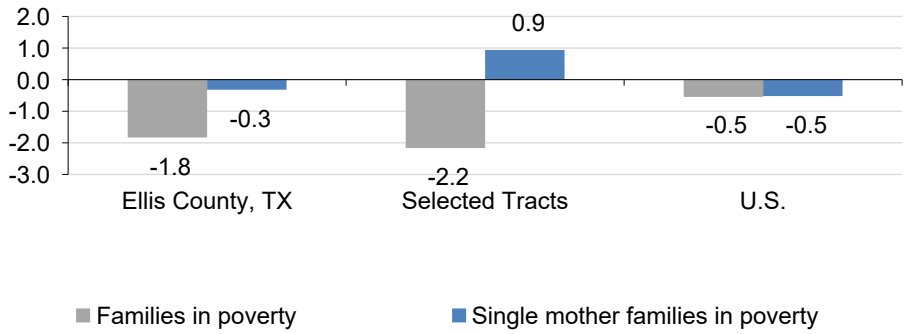
Families in Poverty, Percent of Total, 2019*

- Selected Tracts has the largest share of single mother families in poverty (4.8%).



Families in Poverty, Change in Percentage Points, 2010*-2019*

- The largest change in the share of single mother familes in poverty occurred in Selected Tracts, which went from 3.8% to 4.8%.



* ACS 5-year estimates used. 2019 represents average characteristics from 2015-2019; 2010 represents 2006-2010.

CITATION: U.S. Department of Commerce. 2020. Census Bureau, American Community Survey Office, Washington, D.C., reported by Headwaters Economics' Neighborhoods at Risk, headwaterseconomics.org/apps/neighborhoods-at-risk.

Neighborhoods at Risk

Selected Tracts

Families in Poverty

What do we measure on this page?

This page describes the number of families living below the poverty line, and separately reports families with children and single mother families with children.

The Census defines a family as a group of two or more people who reside together and who are related by birth, marriage, or adoption.

The Census Bureau uses a set of income thresholds that vary by family size and composition to define who is poor. If the total income for a family or an unrelated individual falls below the relevant poverty threshold, then the family or an unrelated individual is classified as being "below the poverty level."

Why is it important?

Families in poverty may lack the resources to meet their basic needs. Their challenges cross the spectrum of food, housing, health care, education, vulnerability to natural disasters, and emotional stress.

To save money, families with low incomes often have to make lifestyle compromises such as unhealthy foods, less food, substandard housing, or delayed medical care.[1]

Lack of financial resources makes families in poverty more vulnerable to natural disasters. This is due to inadequate housing, social exclusion, and an inability to re-locate or evacuate.[11, 2]

Inadequate shelter exposes occupants to increased risk from storms, floods, fire, and temperature extremes.[2] Households with low incomes are more likely to have unhealthy housing such as leaks, mold, or rodents.[5]

The expense of running fans, air conditioners, and heaters makes low-income people hesitant to mitigate the temperature of their living spaces.[1, 2] Furthermore, those in high-crime areas may not want to open their windows.[2]

Families in poverty are disproportionately affected by higher food prices, which are expected to rise in response to climate change.[1]

Children in poor families, on average, receive fewer years of education compared to children in wealthier families.[12]

Low-income residents are less likely to have adequate property insurance, so they may bear an even greater burden from property damage due to natural hazards.[2]

Living in poverty can lead to a lack of personal control over potentially hazardous situations such as increased air pollution or flooding. Impoverished families may be less likely to take proactive measures to prevent harm.[11]

Superscript numbers refer to references provided at the end of the report.

Neighborhoods at Risk

Selected Tracts

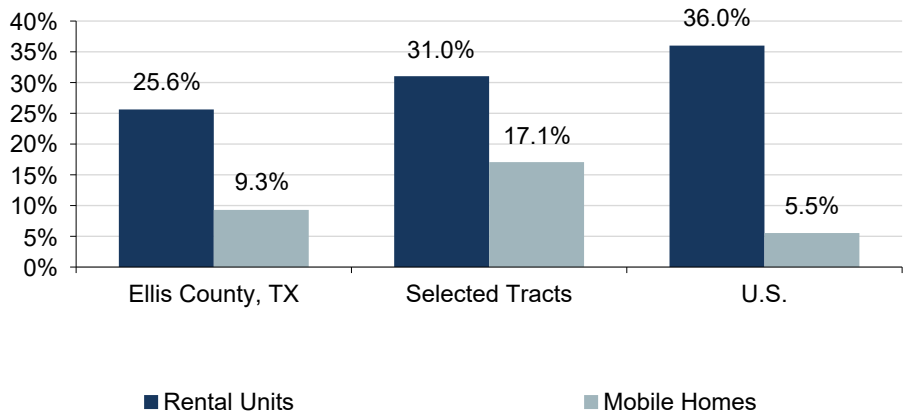
Rental & Mobile Homes

	Ellis County, TX	Selected Tracts	U.S.
Total Occupied Housing Units, 2019*	57,307	14,352	120,756,048
Rental Units	14,685	4,454	43,481,667
Mobile Homes	5,325	2,449	6,681,368
Percent of Total, 2019*			
Rental Units	25.6%	31.0%	36.0%
Mobile Homes	9.3%	17.1%	5.5%
Change in Percentage Points, 2010*-2019*			
For example, if the value is 3% in 2010* and 4.5% in 2019*, the reported change in percentage points is 1.5.			
Rental Units	5.5	3.3	4.4
Mobile Homes	0.0	1.1	-0.3
Median Home Value (MHV), 2019* (2020 $s)	$193,697	na	$220,110
Change in MHV, 2010*-2019* (2020 $s)	$32,146	na	-$3,521

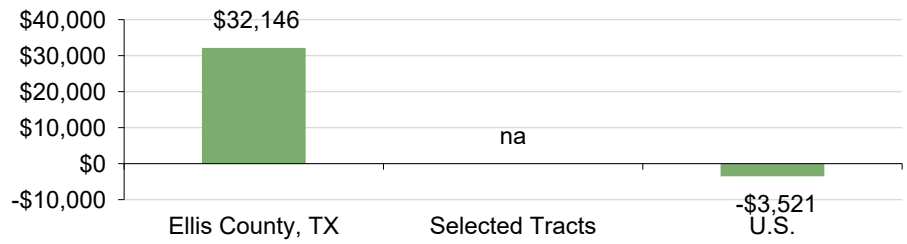
High Reliability: Data with coefficients of variation (CVs) < 12% are in black to indicate that the sampling error is relatively small.
Medium Reliability: Data with CVs between 12 & 40% are in orange to indicate that the values should be interpreted with caution.
Low Reliability: Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

Rental Units and Mobile Homes as a Percent of Total Housing Units, 2019*

- The U.S. has the largest share of rental units (36.0%).
- Selected Tracts has the largest share of mobile homes (17.1%).



Change in Median Home Value, 2010*-2019* (2020 $s)



* ACS 5-year estimates used. 2019 represents average characteristics from 2015-2019; 2010 represents 2006-2010.

CITATION: U.S. Department of Commerce. 2020. Census Bureau, American Community Survey Office, Washington, D.C., reported by Headwaters Economics' Neighborhoods at Risk, headwaterseconomics.org/apps/neighborhoods-at-risk.

Neighborhoods at Risk

Selected Tracts

Rental & Mobile Homes

What do we measure on this page?

This page reports the numbers of housing units that are either rental units or mobile homes, and provides median home value.

Why is it important?

In general, home ownership contributes to well-being and stability. However, each type of living situation has its own risks and health concerns.

Home ownership is often associated with mental health benefits such as high self-esteem, a sense of control over one's living situation, and financial stability.[13]

The financial stress associated with losing one's home is heightened by people's emotional attachment to their home and their neighborhood.[14]

Homeowners typically pay a greater overall housing cost, but renters pay a larger proportion of their income. The high proportion of household costs for renters has further increased over the past 25 years.[15]

Rental homes are generally not maintained as well as those that are owned. Substandard housing conditions like dampness, mold, and exposure to toxic substances or allergens are linked with compromised health outcomes.[13]

Areas with high-density residences, such as urban areas, tend to have a greater proportion of renters.[1] High density living conditions and large, multistory apartment buildings exacerbate heat-related health stresses.[4]

Mobile homes are more likely to be damaged in extreme weather, which poses a risk for both the structure and the occupants.[4,11]

Neighborhoods at Risk

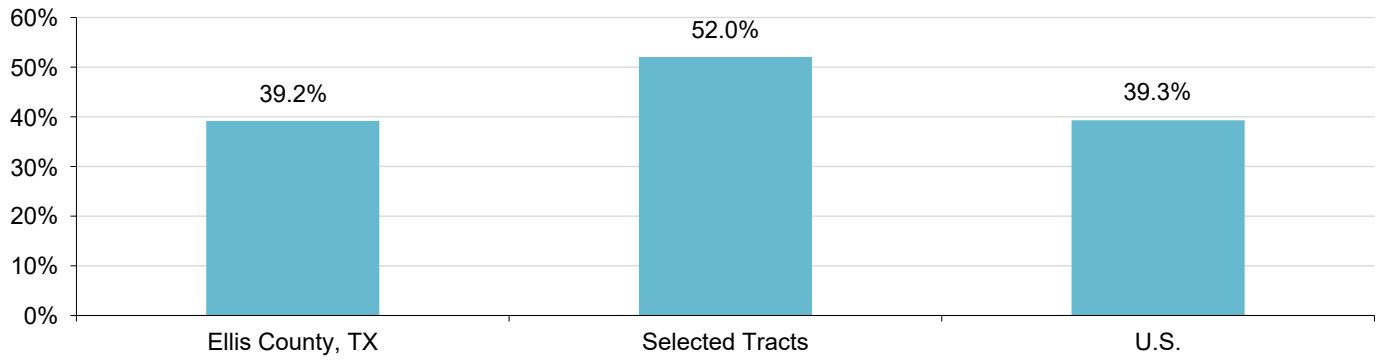
Selected Tracts

People of Color and Hispanics

	Ellis County, TX	Selected Tracts	U.S.
Total Population, 2019*	173,772	45,448	324,697,795
White alone	141,636	36,275	235,377,662
Black or African American alone	17,580	4,249	41,234,642
American Indian alone	˙1,386	˙638	2,750,143
Asian alone	1,120	˙106	17,924,209
Native Hawaii & Other Pacific Is. alone	˙85	¨**30**	599,868
Some other race alone	5,428	˙1,952	16,047,369
Two or more races	6,537	˙2,198	10,763,902
Hispanic or Latino (of any race)	45,577	18,648	58,479,370
Not Hispanic or Latino	128,195	26,800	266,218,425
Not Hispanic & White alone	105,705	21,796	197,100,373
People of Color and Hispanics	68,067	23,652	127,597,422
Percent of Total, 2019*			
White alone	81.5%	79.8%	72.5%
Black or African American alone	10.1%	9.3%	12.7%
American Indian alone	˙0.8%	˙1.4%	0.8%
Asian alone	0.6%	˙0.2%	5.5%
Native Hawaii & Other Pacific Is. alone	0.0%	¨**0.1%**	0.2%
Some other race alone	3.1%	˙4.3%	4.9%
Two or more races	3.8%	˙4.8%	3.3%
Hispanic or Latino (of any race)	26.2%	41.0%	18.0%
Not Hispanic or Latino	73.8%	59.0%	82.0%
Not Hispanic & White alone	60.8%	48.0%	60.7%
People of Color and Hispanics	39.2%	52.0%	39.3%

High Reliability: Data with coefficients of variation (CVs) < 12% are in black to indicate that the sampling error is relatively small.
Medium Reliability: Data with CVs between 12 & 40% are in orange to indicate that the values should be interpreted with caution.
Low Reliability: Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

People of Color and Hispanics, Percent of Total, 2019*



* ACS 5-year estimates used. 2019 represents average characteristics from 2015-2019; 2010 represents 2006-2010.

CITATION: U.S. Department of Commerce. 2020. Census Bureau, American Community Survey Office, Washington, D.C., reported by Headwaters Economics' Neighborhoods at Risk, headwaterseconomics.org/apps/neighborhoods-at-risk.

Neighborhoods at Risk

Selected Tracts

People of Color and Hispanics

What do we measure on this page?

Race is self-identified by Census respondents who choose the race or races with which they most closely identify. Included in "Other Races" are "Asian," "Native Hawaiian or Other Pacific Islander," and respondents providing write-in entries such as multiracial, mixed, or interracial.

Ethnicity has two categories: Hispanic or Latino, and Non-Hispanic or Latino. The federal government considers race and Hispanic origin to be two separate and distinct concepts. Hispanics and Latinos may be of any race.

"People of Color and Hispanics" is calculated by subtracting those who identify as both "Not Hispanic or Latino" and "White alone" from “Total Population.”

Why is it important?

Race and ethnicity are strongly correlated with disparities in health, exposure to environmental pollution, and vulnerability to natural hazards.[1]

Research consistently has found race-based environmental inequities, including the tendency for minority populations to live closer to noxious facilities and Superfund sites, and to be exposed to pollution at greater rates than whites.[7, 1]

Many health outcomes are closely related to the local environment. Minority communities often have less access to parks and nutritious food, and are more likely to live in substandard housing.[1]

Minorities tend to be particularly vulnerable to disasters and extreme heat events. This is due to language skills, housing patterns, quality of housing, community isolation, and cultural barriers.[8, 4]

Blacks and Hispanics, two segments of the population that are currently experiencing poorer health outcomes, are an increasing percentage of the US population.[1,9]

Research has identified measurable disparities in health outcomes between various minority and ethnic communities.

Across races, the rates of preventable hospitalizations are highest among black and Hispanic populations. Preventable hospital visits often reflect inadequate access to primary care. These types of hospital visits are also costly and inefficient for the health care system.[5]

Relative to other ethnicities and races, Hispanics and blacks are less likely to have health insurance, but rates of uninsured are dropping for both groups.[10]

Compared to other races, blacks have higher rates of infant mortality, homicide, heart disease, stroke, and heat-related deaths.[5]

Hispanics have higher rates of diabetes and asthma.[5]

American Indians have a distinct pattern of health effects different from blacks and Hispanics. Native populations are less likely to have electricity than the general population.[2] They have high rates of infant mortality, suicide and homicide, and nearly twice the rate of motor vehicle deaths than the U.S. average.[5]

CHANGES IN BOUNDARIES: Data describing change over time can be misleading when geographic boundaries have changed.
The Census provides documentation about changes in boundaries at this site: www.census.gov/geo/reference/boundary-changes.html

Neighborhoods at Risk

Selected Tracts

Language Proficiency

	Ellis County, TX	Selected Tracts	U.S.
Population 5 years or older, 2019*	162,107	41,429	304,930,125
Speak English "not well"***	5,800	2,944	13,193,113
Speak English "not well"***, percent	3.6%	7.1%	4.3%
Speak English "not well"***, change in percentage points**, 2010*-2019*	-0.6	-1.2	-0.4

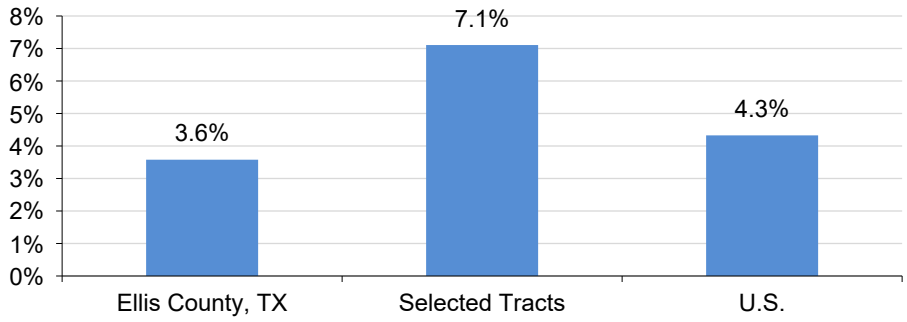
**For example, if the value is 3% in 2010* and 4.5% in 2015*, the reported change in percentage points is 1.5.

*** Includes "not well" and "not well at all".

High Reliability: Data with coefficients of variation (CVs) < 12% are in black to indicate that the sampling error is relatively small.
Medium Reliability: Data with CVs between 12 & 40% are in orange to indicate that the values should be interpreted with caution.
Low Reliability: Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

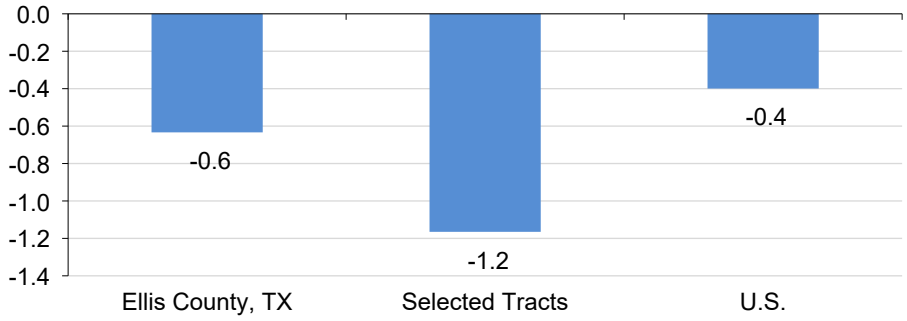
People Who Speak English "Not Well", Percent of Total, 2019*

- Selected Tracts has the largest share of people who speak English "not well" (7.1%).



People Who Speak English "Not Well", Change in Percentage Points, 2010*-2019*

- The largest change in the share of people who speak English "not well" occurred in Selected Tracts, which went from 8.3% to 7.1%.



* ACS 5-year estimates used. 2019 represents average characteristics from 2015-2019; 2010 represents 2006-2010.

CITATION: U.S. Department of Commerce. 2020. Census Bureau, American Community Survey Office, Washington, D.C., reported by Headwaters Economics' Neighborhoods at Risk, headwaterseconomics.org/apps/neighborhoods-at-risk.

Neighborhoods at Risk

Selected Tracts

Language Proficiency

What do we measure on this page?

This page reports the results of self-rated English-speaking ability questions in the American Community Survey.

Why is it important?

Many aspects of life in the US assume basic fluency in English. Thus, people with limited language skills are at risk for inadequate access to health care, social services, or emergency services.

A person's ability to take action during an emergency is compromised by language and cultural barriers.[4]

Poor English skills can make it harder to follow directions or interact with agencies.[4]

Lack of language skills can also instill lack of trust for government agencies.

In many industries, poor English skills can make it harder for people to get higher wage jobs.[1]

Language barriers make it harder to obtain medical or social services; and make it more difficult to interact with caregivers.[1]

Limited English skills may result in isolation from other segments of the US population, and social isolation is a health risk.[1] However some minority communities can be very tightly-knit and not isolated, so this risk factor cannot be generalized across all populations.

Neighborhoods at Risk

Selected Tracts

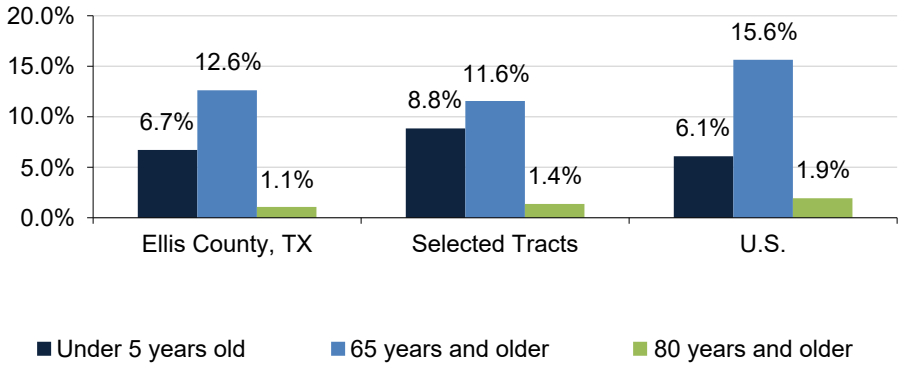
Young & Elderly Populations

	Ellis County, TX	Selected Tracts	U.S.
Total Population, 2019*	173,772	45,448	324,697,795
Under 5 years old	11,665	4,019	19,767,670
65 years and older	21,930	5,254	50,783,796
80 years and older	1,862	621	6,269,017
Percent of Total, 2019*			
Under 5 years old	6.7%	8.8%	6.1%
65 years and older	12.6%	11.6%	15.6%
80 years and older	1.1%	1.4%	1.9%
Change in Percentage Points, 2010*-2019*			
For example, if the value is 3% in 2010* and 4.5% in 2019*, the reported change in percentage points is 1.5.			
Under 5 years old	-0.8	0.9	-0.5
65 years and older	3.0	1.5	2.9
80 years and older	0.2	0.1	0.2

High Reliability: Data with coefficients of variation (CVs) < 12% are in black to indicate that the sampling error is relatively small.
Medium Reliability: Data with CVs between 12 & 40% are in orange to indicate that the values should be interpreted with caution.
Low Reliability: Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

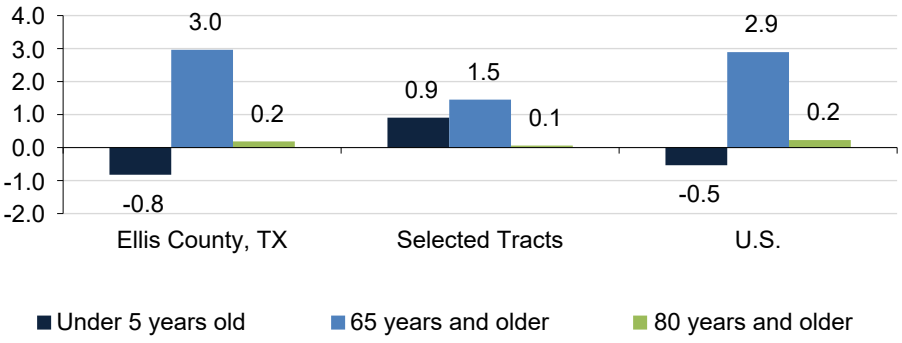
Population by Group, Percent of Total, 2019*

- Selected Tracts has the largest share of people under 5 years old (8.8%).
- The U.S. has the largest share of people 80 years and older (1.9%).



Population by Group, Change in Percentage Points, 2010*-2019*

- The largest change in the share of people under 5 years old occurred in Selected Tracts, which went from 7.9% to 6.1%.
- The largest change in the share of people 80 years and older occurred in the U.S., which went from 1.7% to 1.9%.



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Neighborhoods at Risk

Selected Tracts

Young & Elderly Populations

What do we measure on this page?

This page describes the number of people by specific age category.

The "Under 5 years old" category includes individuals younger than 5 years old. The "65 years and older" category includes individuals age 65 and older and the "80 years and older" category includes individuals age 80 and older. The "80 years and older" category is a subset of the "65 years and older" category.

Why is it important?

Young children and older adults both are vulnerable segments of the population. Understanding the age profile of a community can help users determine the types of services likely to be needed.[1]

Children's developing bodies makes them particularly sensitive to health problems and environmental stresses.[1]

Childhood lays the foundations for lifelong health. Poor health during childhood increases the likelihood of problems throughout adulthood.[2]

Because so many factors of a child's life are determined during pregnancy, infancy, and early childhood, children in poverty are an especially vulnerable population. Lack of adequate care through the early phases of life is more prevalent in poor populations.[2]

Children spend more time outside and have a faster breathing rate than adults, so they are more at risk for respiratory problems related to ground level ozone, airborne particulates, wildfire smoke, and allergens. Allergens are associated with climate change due to changing plant communities and longer pollen seasons.[3, 4]

Because their immune systems are not fully developed, children are more sensitive to infectious diseases. Natural disasters can breach public water supplies, compromise sanitation, and spread illness. Children are more vulnerable to these hazards compared to adults.[3]

Older adults also are at increased risk of compromised health related to environmental hazards and climate change.

Age is the single greatest risk factor related to illness or death from extreme heat.[4]

The elderly are more likely to have pre-existing medical conditions or compromised mobility, which reduces their ability to respond to natural disasters.[3]

The likelihood of chronic disease increases with age.[1, 5]

Older adults are more susceptible to air pollution such as ground level ozone, particulate matter, or dust. Increased dust is associated with drought, wildfires, and high wind events.[3, 6]

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Neighborhoods at Risk

Selected Tracts

Educational Attainment

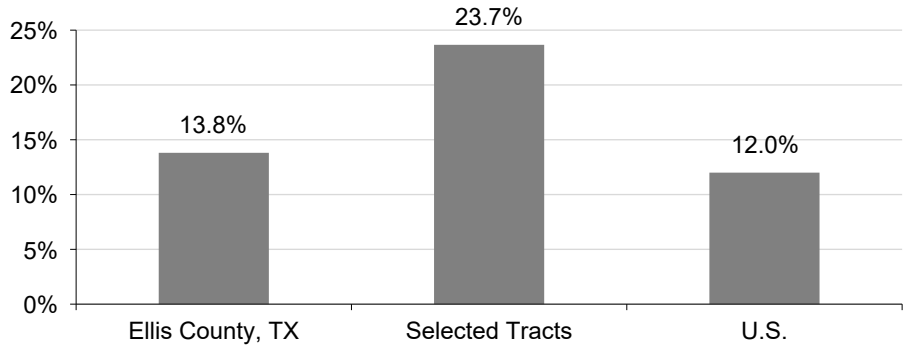
	Ellis County, TX	Selected Tracts	U.S.
Total Population 25 years or older, 2019*	111,737	27,771	220,622,076
No high school degree	15,428	6,571	26,472,261
No high school degree, percent	13.8%	23.7%	12.0%
No high school degree, change in percentage points**, 2010*-2019*	-3.3	-4.5	-3.0

**For example, if the value is 3% in 2010* and 4.5% in 2019*, the reported change in percentage points is 1.5.

High Reliability: Data with coefficients of variation (CVs) < 12% are in black to indicate that the sampling error is relatively small.
Medium Reliability: Data with CVs between 12 & 40% are in orange to indicate that the values should be interpreted with caution.
Low Reliability: Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

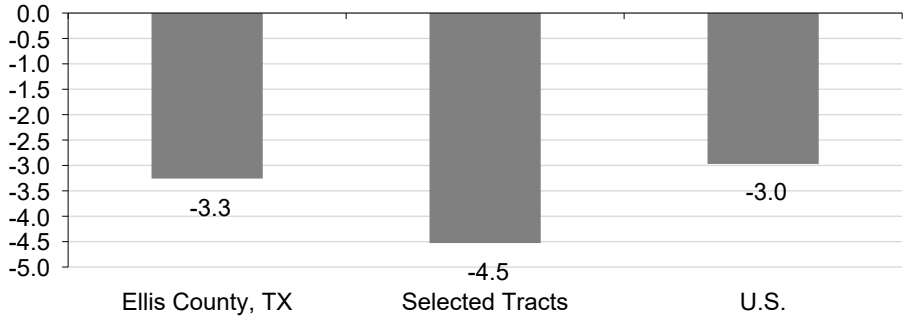
Population with Less than High School Education, Percent of Total, 2019*

- Selected Tracts has the largest share of people with less than a high school education (23.7%).



Population with Less than High School Education, Change in Percentage Points, 2010*-2019*

- The largest change in the share of people with less than a high school degree occurred in Selected Tracts, which went from 28.2% to 23.7%.



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Neighborhoods at Risk

Selected Tracts

Educational Attainment

What do we measure on this page?

This page describes levels of educational attainment, which refers to the highest degree or level of schooling completed by people 25 years and over.

Why is it important?

High school completion is used as a proxy for overall socioeconomic circumstances. Lack of education is strongly correlated with poverty and poor health.

People without a high school degree are more than twice as likely to live in inadequate housing compared to those with some college education.[5]

A study in California found the lack of a high school degree was the factor most closely related to social vulnerability to climate change.[4]

Thirty-eight percent of Americans without a high school degree do not have health insurance, compared to 10 percent with a college degree.[7]

The rate of diabetes is much greater for those without a high school degree. Incidence of this disease is more than double the rate of those who attended education beyond high school.[5]

Binge drinking is most severe among those without a high school degree. This demographic group had the highest risk of binge drinking across all measured categories (such as income, race, ethnicity, or disability status).[5]

Neighborhoods at Risk

Selected Tracts

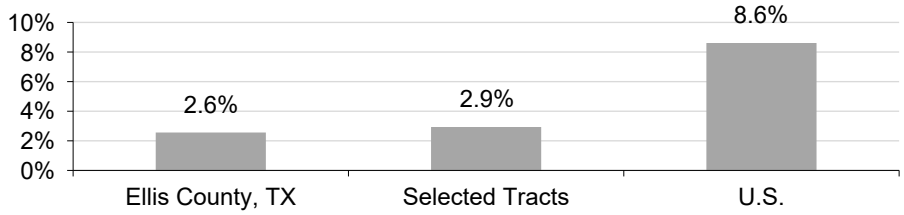
Potentially Vulnerable Households

	Ellis County, TX	Selected Tracts	U.S.
Total Occupied Households, 2019*	57,307	14,352	120,756,048
People > 65 years & living alone	1,087	291	4,527,381
Single female households	6,713	1,868	15,016,964
with children < 18 years	4,576	1,150	9,427,068
Households with no car	1,468	421	10,395,713
Percent of Total, 2019*			
People > 65 years & living alone	1.9%	2.0%	3.7%
Single female households	11.7%	13.0%	12.4%
with children < 18 years	8.0%	8.0%	7.8%
Households with no car	2.6%	2.9%	8.6%
Change in Percentage Points, 2010*-2019*			
For example, if the value is 3% in 2010* and 4.5% in 2019*, the reported change in percentage points is 1.5.			
People > 65 years & living alone	0.4	-0.8	-0.8
Single female households	-0.3	-1.3	-0.2
with children < 18 years	-1.0	-2.3	0.0
Households with no car	-0.7	-1.3	-77.3

High Reliability: Data with coefficients of variation (CVs) < 12% are in black to indicate that the sampling error is relatively small.
Medium Reliability: Data with CVs between 12 & 40% are in orange to indicate that the values should be interpreted with caution.
Low Reliability: Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

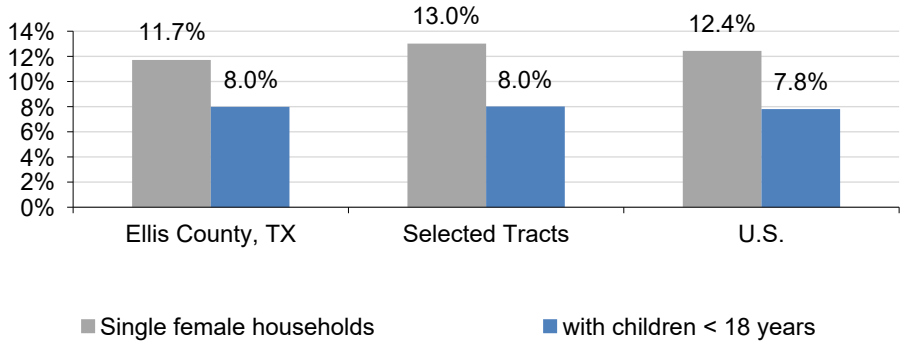
Households with No Car as a Percent of Total Households, 2019*

- The U.S. has the largest share of households with no car (3.7%).



Single Female Households as a Percent of Total Households, 2019*

- Selected Tracts has the largest share of single female households (13.0%).
- Selected Tracts has the largest share of single female households with children (8.0%).



* ACS 5-year estimates used. 2019 represents average characteristics from 2015-2019; 2010 represents 2006-2010.

CITATION: U.S. Department of Commerce. 2020. Census Bureau, American Community Survey Office, Washington, D.C., reported by Headwaters Economics' Neighborhoods at Risk, headwaterseconomics.org/apps/neighborhoods-at-risk.

Neighborhoods at Risk

Selected Tracts

Potentially Vulnerable Households

What do we measure on this page?

This page describes household types that are associated with increased hardship, including the elderly living alone, single female households, single female households with children, and households without a car.

Why is it important?

Older adults are more likely to have compromised health and are less able to overcome disease. Living alone exacerbates health risks, and many health outcomes are worsened by social isolation.

Social isolation is strongly linked to poor health such as premature death, smaller chances of survival after a heart attack, depression, and greater levels of disability from chronic diseases.[2]

People 65 and older are particularly vulnerable to heat-related illness,[4] which is exacerbated by social isolation.

Households headed by women face challenges related to income, education, and food security. These factors make it more difficult to respond to health, environmental, or climate risks.

Female-headed households are more likely to be living in poverty. This is most prevalent among black, Hispanic, and Native American households.[16]

In 2014, 35 percent of female-headed households were food insecure, compared to 14 percent of all households.[17]
Single mothers may be burdened by providing basic needs such as food and housing, which can make the urgency of other risks seem less important.[18]

Single-mother families are disproportionally exposed to hazardous levels of air pollution.[4]

Single mothers tend to be less educated and less affluent than the general population, which puts them at greater risk during natural disasters.[18]

Access to a car is linked with higher wages and more financial stability, and can help families relocate or evacuate in the event of emergencies.

People who own cars are more likely to be employed, work longer hours, and earn more than those who do not.[19]

Access to a car has measurable benefits for those receiving public assistance. Welfare recipients with access to a car were more likely to work more hours and get higher-paying jobs, and had a greater chance of leaving welfare.[20]

During emergencies, natural disasters, and extreme weather events, people who do not have a car are less likely to evacuate or have access to emergency response centers.[4]

During heat waves, people without a car are less able to go to community cooling centers or cooler areas.[4]

Pedestrian fatalities are more than twice as likely in poor urban neighborhoods than in wealthier parts of cities.[21]

Neighborhoods at Risk

Selected Tracts

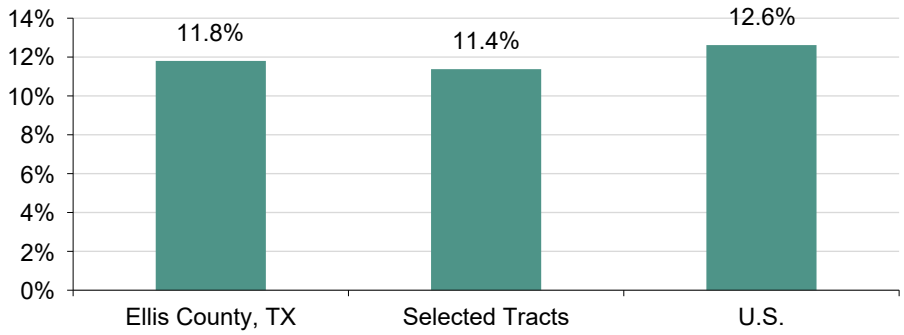
Potentially Vulnerable People

	Ellis County, TX	Selected Tracts	U.S.
Total civilian noninstitutionalized population, 2019*	172,528	45,019	319,706,872
People w/ disabilities	20,360	5,122	40,335,099
People w/o health insurance	25,985	9,555	28,248,613
Percent of Total, 2019*			
Percent of people w/ disabilities	11.8%	11.4%	12.6%
Percent of people w/o health insurance	15.1%	21.2%	8.8%

High Reliability: Data with coefficients of variation (CVs) < 12% are in black to indicate that the sampling error is relatively small.
Medium Reliability: Data with CVs between 12 & 40% are in orange to indicate that the values should be interpreted with caution.
Low Reliability: Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

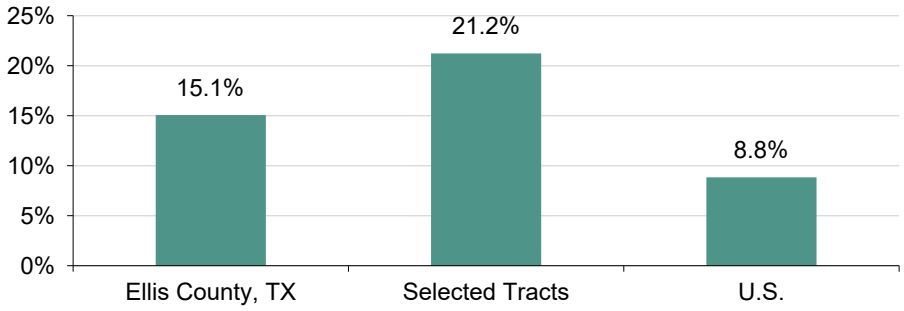
People with Disabilities, Percent of Total, 2019*

- The U.S. has the largest share of the noninstitutionalized population that is disabled (12.6%).



People without Health Insurance, Percent of Total, 2019*

- Selected Tracts has the largest share of the noninstitutionalized population without health insurance (21.2%).



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Neighborhoods at Risk

Selected Tracts

Potentially Vulnerable People

What do we measure on this page?

This page describes groups of people that are associated with increased hardship, including people with disabilities and people without health insurance.

Why is it important?

Disabled people are subject to health complications that make environmental risks more consequential.

Disabled people are less likely to have health insurance, compared to the non-disabled population.[5]

Being confined to a bed raises heat mortality.[2]

Extreme weather events or natural disasters may result in limited access to medical care. This is particularly consequential for those who already have compromised health.[3]

People who lack health insurance are disadvantaged by several different mechanisms. They may avoid or delay diagnoses, treatment, and/or medication and thus may increase their odds of poor health. They do not have a regular place of care, and they are not benefitting from the standard of care that is afforded many Americans.

Households living in poverty are more likely to be uninsured. More than one quarter of uninsured households live in poverty.[10]

People with lower educational attainment are more likely to be uninsured.[5]

People without health insurance are less likely to have a regular source of care, and less likely to receive preventive, primary, and specialty care services.[32,33] This risk is particularly evident among racial and ethnic minorities.[5]

People without health insurance are more likely to use the hospital emergency department for standard health care needs.[5]

About 25% of uninsured adults report having either delayed or gone without care in the past year because of costs.[23]

Uninsured people are more likely to skip medications due to the costs, and some providers are less likely to prescribe medications to uninsured patients.[24]

People who do not have health insurance suffer greater health consequences from air pollution compared to those with insurance.[4]

Neighborhoods at Risk

Selected Tracts

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Neighborhoods at Risk

Selected Tracts

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22 - Marsha Lillie-Blanton and Catherine Hoffman, “The role of health insurance coverage in reducing racial/ethnic disparities in health care,” Health Affairs 24, no. 2 (2005): 398-408.

23 - Karlen E. Luthy, N.E. Peterson, J. Wilkinson, “Cost-efficient treatment for uninsured or underinsured patients with hy pertension, depression, diabetes mellitus, insomnia, and gastroesophageal reflux,” Journal of the American Academ y of Nurse Practitioners 20, no. 3 (2008): 136-143.

24 - Edward P. Havranek, “Unseen consequences: The uninsured, foctors, and cardiovascular Disease,” Journal of the American College of Cardiology 61, no. 10 (2013): 1076-1077.

HEADWATERS ECONOMICS

A Profile of Wildfire Risk

Selected Geographies:

Ellis County, TX

Comparison Geographies:

Texas

Produced by
Headwaters Economics'
Economic Profile System (EPS)
https://headwaterseconomics.org/eps
December 6, 2021

Wildfire Risk

Ellis County, TX

About this report

This report presents data about wildfire risk, socioeconomic vulnerability, and land use to help communities understand their relative wildfire risk profile. It was created through a partnership between Headwaters Economics and the U.S. Forest Service through the Community Planning Assistance for Wildfire program using data from Wildfire Risk to Communities.

https://cpaw.headwaterseconomics.org

Community Planning Assistance for Wildfire (CPAW) works with communities to reduce wildfire risks through improved land use planning. CPAW provides communities with technical land use planning recommendations, hazard assessments, custom research, and training.

https://wildfirerisk.org

Wildfire Risk to Communities is a free, easy-to-use website with interactive maps, charts, and data to help communities in the United States understand, explore, and reduce wildfire risk. Wildfire Risk to Communities is a project of the USDA Forest Service, under the direction of Congress, in partnership with Rocky Mountain Research Station's Missoula Fire Sciences Laboratory, Pyrologix, and Headwaters Economics.

Project partners

https://headwaterseconomics.org

Headwaters Economics is an independent, nonprofit research group. Its mission is to improve community development and land management decisions.

Headwaters Economics provides original and effective research to help people and organizations develop solutions to some of the most urgent and important issues that communities face.

https://www.fs.usda.gov/

The Forest Service, an agency of the U.S. Department of Agriculture, administers national forests and grasslands encompassing 193 million acres.

The Forest Service's mission is to sustain the health, diversity, and productivity of the nation's forests and grasslands to meet the needs of present and future generations.

See https://headwaterseconomics.org/eps for more information about the capabilities of EPS. For technical questions, contact Patty Hernandez at eps@headwaterseconomics.org or telephone 406-599-7425.

Wildfire Risk

Ellis County, TX

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Note to Users:

This is one of 14 reports that can be created and downloaded from EPS. Topics include land use, demographics, specific industry sectors, the role of non-labor income, the wildland-urban interface, the role of amenities in economic development, and payments to county governments from federal lands. The EPS reports are downloadable as Excel or PDF documents. See https://headwaterseconomics.org/eps.

Wildfire Risk

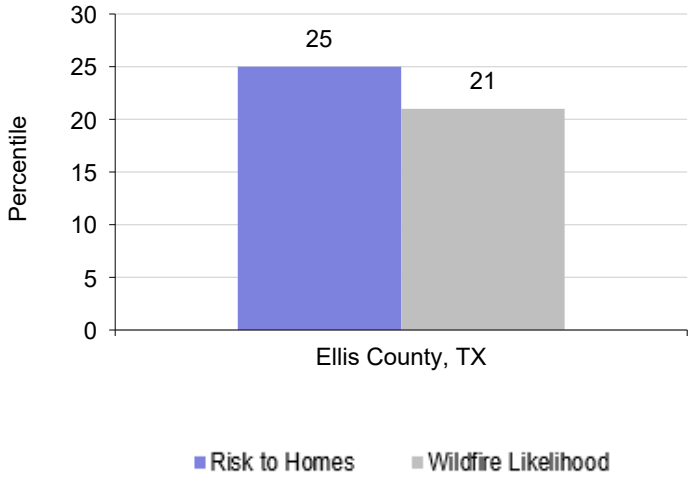
Ellis County, TX

Relative Wildfire Risk

	Ellis County, TX
Statewide Percentile Rank	
Risk to Homes	25
Wildfire Likelihood	21
Nationwide Percentile Rank	
Risk to Homes	65
Wildfire Likelihood	63

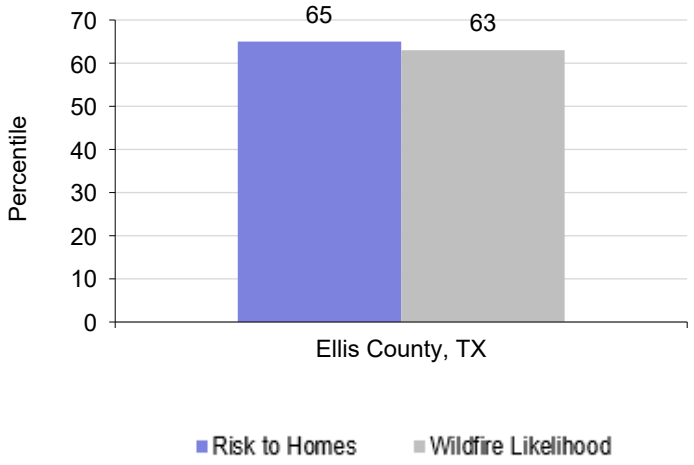
Relative Risk (0-100) Wthin State

- Populated areas in Ellis County, TX have, on average, greater risk than 25% of counties in the state.
- Populated areas in Ellis County, TX have, on average, greater wildfire likelihood than 21% of counties in the state.



Relative Risk (0-100) Within Nation

- Populated areas in Ellis County, TX have, on average, greater risk than 65% of counties in the nation.
- Populated areas in Ellis County, TX have, on average, greater wildfire likelihood than 63% of counties in the nation.



Data Sources: USDA Forest Service, Wildfire Risk to Communities. 2020. Washington, D.C., wildfirerisk.org.

Wildfire Risk

Ellis County, TX

Relative Wildfire Risk

What do we measure on this page?

Risk to Homes integrates wildfire likelihood (the probability of wildfire occurring) and wildfire intensity (the energy released by a wildfire) with expected consequences to homes if a fire occurs.

Wildfire Likelihood is the annual probability of a wildfire occurring in a specific location. At the community level, wildfire likelihood is averaged where housing units occur.

Both measures—Risk to Homes and Wildfire Likelihood—are shown as a percentile (or rank). If the place you selected is a community or county, the percentile is relative to all other communities or counties in the state (statewide rank) and the nation (nationwide rank). If the place you selected is a state, the percentile is relative to all other states in the nation.

Why is it important?

The Risk to Homes data pose the hypothetical question: "What would be the relative risk to a house if one existed here?" It asks that question whether a home actually exists at that location or not. This allows us to compare the wildfire risk in places where homes already exist to places where new construction may be proposed.

The Risk to Homes data integrate wildfire likelihood and wildfire intensity from simulation modeling. These two risk components represent wildfire hazard. To translate this into terms specific to the effect of fire on homes, this report uses a generalized concept of susceptibility for all homes as derived from *Wildfire Risk to Communities*.[1] In other words, it is assumed all homes that encounter wildfire will be damaged, and the degree of damage is directly related to wildfire intensity. The report does not account for homes that may have been mitigated.

In reality, an individual home's ability to survive wildfire is driven primarily by local conditions (known as the "home ignition zone"), including the construction materials and the vegetation in the immediate area. The only way to truly assess home susceptibility is through individual home assessments. Communities can reduce their risk to homes by reducing wildfire likelihood, wildfire intensity, exposure, and susceptibility. For example, fuel treatments may reduce wildfire likelihood or intensity, exposure may be reduced through land use planning tools, and susceptibility may be reduced by mitigating the home ignition zone, home hardening, and land use planning tools.

Wildfire Likelihood is based on fire behavior modeling across thousands of simulations of possible fire seasons. In each simulation, factors contributing to the probability of a fire occurring, including weather, topography, and ignitions are varied based on patterns derived from observations in recent decades. Wildfire likelihood is not predictive and does not reflect any currently forecasted weather or fire danger conditions.

Wildfire likelihood is simply a probability that any specific location may experience wildfire in any given year. It does not say anything about the wildfire intensity if it occurs. Wildfire likelihood is difficult to modify but can be reduced through fuel treatment projects and ignition-prevention efforts.

Wildfire Risk

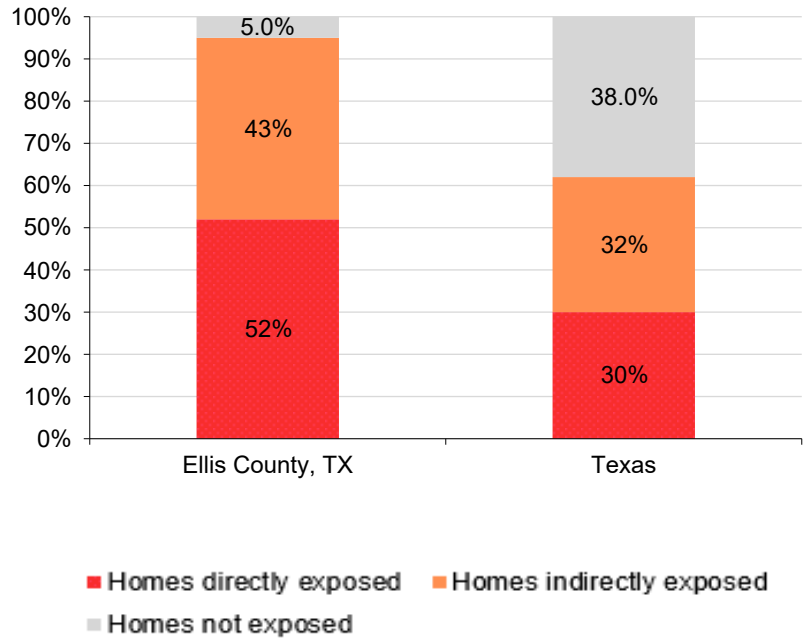
Ellis County, TX

Wildfire Exposure

	Ellis County, TX	Texas
Percent of Total		
Homes directly exposed	52.0%	30.0%
Homes indirectly exposed	43.0%	32.0%
Homes not exposed	5.0%	38.0%

Exposure of Homes to Wildfire

- 52% of homes in Ellis County, TX are exposed to wildfire from direct sources, such as adjacent flammable vegetation.
- 43% of homes in Ellis County, TX are exposed to wildfire from indirect sources, such as embers or home-to-home ignition.



Data Sources: USDA Forest Service, Wildfire Risk to Communities. 2020. Washington, D.C., wildfirerisk.org.

Wildfire Risk

Ellis County, TX

Wildfire Exposure

What do we measure on this page?

Wildfire Exposure is the spatial coincidence of wildfire likelihood (the probability of wildfire occurring) and wildfire intensity (the energy released by a wildfire) with communities.

Why is it important?

Any part of a community that is located where wildfire likelihood is greater than zero is exposed to wildfire. For example, a home in a flammable forest is exposed to wildfire. Locations within a community can be directly exposed to wildfire from adjacent wildland vegetation, or indirectly exposed to wildfire from embers (firebrands) and home-to-home ignition. Locations within a community that are not exposed are not likely to be subjected to wildfire from either direct or indirect sources.

Communities can reduce their exposure to wildfire with actions such as modifying the home ignition zone and using land use planning tools.

Wildfire Risk

Ellis County, TX

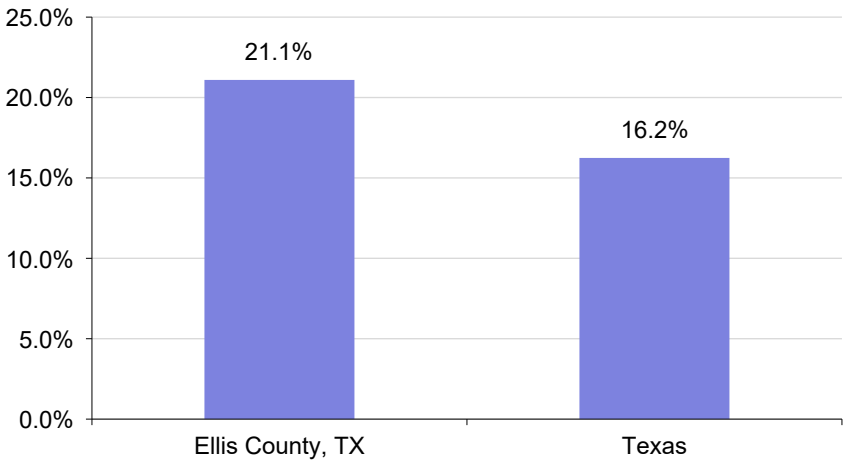
Population Change

	Ellis County, TX	Texas
Population (2019*)	173,772	28,260,856
Population (2010*)	143,502	24,311,891
Population Change (2010*-2019*)	30,270	3,948,965
Population Pct. Change (2010*-2019*)	21.1%	16.2%

High Reliability: Data with coefficients of variation (CVs) < 12% are in black to indicate that the sampling error is relatively small.
Medium Reliability: Data with CVs between 12 & 40% are in orange to indicate that the values should be interpreted with caution.
Low Reliability: Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

Percent Change in Population, 2010*-2019*

- From 2010* to 2019*, Ellis County, TX had the smallest estimated absolute change in population (30,270).
- From 2010* to 2019*, Ellis County, TX had the largest estimated relative change in population (21.1%), and Texas had the smallest (16.2%).



* ACS 5-year estimates used. 2019 represents average characteristics from 2015-2019; 2010 represents 2006-2010.

Data Sources: U.S. Department of Commerce. 2020. Census Bureau, American Community Survey Office, Washington, D.C.

Wildfire Risk

Ellis County, TX

Population Change

What do we measure on this page?

This page describes the total population and change in total population.[2, 3]

Data in this report comes from the U.S. Census Bureau's American Community Survey (ACS).[4] The ACS is conducted nationwide every year by the U.S. Census Bureau to collect demographic, social, economic, and housing information. For more information about ACS data and accuracy, see the Data Sources & Methods section at the end of this report.

Why is it important?

Population growth is generally an indication of a healthy economy. No growth or long-term decline generally occur when an area is struggling. However, as population grows, more and more people are building homes on fire-prone lands.

Since 2010, 34% of single-family homes are located in the wildland-urban interface (WUI). The WUI is the fastest-growing type of land use in the conterminous United States, increasing by 145% from 1990 to 2015. Today nearly half of the U.S. population lives in the WUI.[5]

Another consequence of population growth is the possibility of more fire ignitions. Almost all wildfires (97%) in the WUI are caused by people. Human-caused wildfires are responsible for 92% of the wildfires that threaten structures, which is 30 times more than lightning-caused wildfires.[6]

CHANGES IN BOUNDARIES: Data describing change over time can be misleading when geographic boundaries have changed.
The Census provides documentation about changes in boundaries at this site: www.census.gov/geo/reference/boundary-changes.html

Wildfire Risk

Ellis County, TX

Potentially Vulnerable Populations

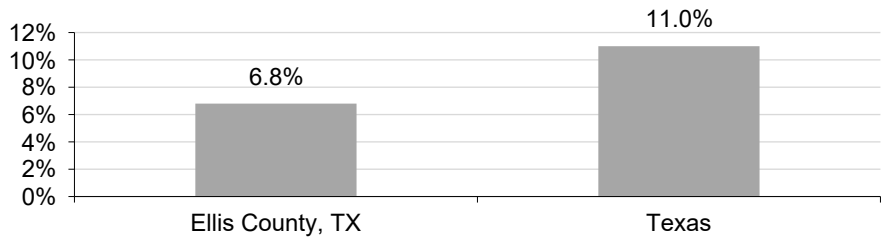
Populations, 2019*	Ellis County, TX	Texas
Families in poverty	3,095	759,269
Households with no car	1,468	512,411
People over 65	21,930	3,462,527
People with disabilities	20,360	3,187,623
People with language barriers	5,800	1,935,918
Percent of Total*		
Families in poverty	6.8%	11.0%
Households with no car	2.6%	5.0%
People over 65	12.6%	12.0%
People with disabilities	11.8%	11.0%
People with language barriers	3.6%	7.0%

* Each measure on this page comes from a different subset of the overall population. For example, “poverty status” is not determined for all families. “Households with no car” is determined only for occupied households. “People with disabilities” includes only those people in civilian, noninstitutionalized settings. “Language barriers” is determined only for people five years or older.

High Reliability: Data with coefficients of variation (CVs) < 12% are in black to indicate that the sampling error is relatively small.
Medium Reliability: Data with CVs between 12 & 40% are in orange to indicate that the values should be interpreted with caution.
Low Reliability: Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

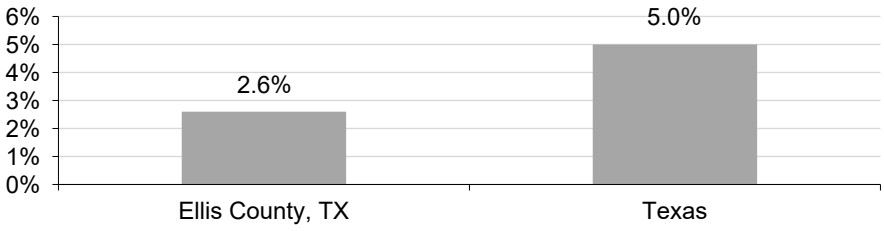
Families in Poverty, 2019*

- From 2010* to 2019*, Texas had the largest share of families in poverty (11%).



Households with No Car, 2019*

- From 2010* to 2019*, Texas had the largest share of households with no car (5%).



* ACS 5-year estimates used. 2019 represents average characteristics from 2015-2019; 2010 represents 2006-2010.

CITATION: U.S. Department of Commerce. 2020. Census Bureau, American Community Survey Office, Washington, D.C., reported by Headwaters Economics’ Populations at Risk, headwaterseconomics.org/par.

Wildfire Risk

Ellis County, TX

Potentially Vulnerable Populations

What do we measure on this page?

This page describes household types that are associated with increased hardship.○

Data in this report come from the U.S. Census Bureau's American Community Survey (ACS).[7] For more information about ACS, see the Data Sources & Methods section.

Why is it important?

People's susceptibility to wildfire is based on their ability to prepare for, respond to, and recover from a wildfire.[8] Vulnerable populations are more likely to be disproportionately affected by wildfire disasters because they lack resources, experience cultural and institutional barriers, have limited mobility, and/or have compromised physical health.

Low income is one of the strongest predictors for compromised health and ability to recover from disruptions.[9] Wildfires disproportionately affect the poor because of factors such as inadequate housing, social exclusion, diminished ability to evacuate or relocate, and more acute emotional stress. People with low incomes are also more likely to be overlooked during emergency response following disasters[10] and are less likely to have adequate property insurance, so they bear a greater burden from property damage following wildfires.[11] Due to a lack of financial resources and time, impoverished families may be less likely to take proactive measures to mitigate wildfire hazard in advance of an event.[10]

Older populations are more likely to have pre-existing medical conditions or compromised mobility, which can reduce their ability to respond to wildfire. Older adults are more susceptible to air pollution and particulates associated with wildfire smoke.[12]

During emergencies, people who do not have a car are less likely to evacuate or have access to emergency response centers.[13] Access to a car is also linked with higher wages and more financial stability.[14]

Populations with disabilities are subject to health complications that make wildfire more consequential because disasters often result in limited access to medical care.[12] Compromised mobility and medical conditions can reduce the ability to respond to natural disasters.

Language and cultural barriers can make it more difficult to follow directions or interact with agencies before, during, or after a wildfire disaster.[13]

CHANGES IN BOUNDARIES: Data describing change over time can be misleading when geographic boundaries have changed.
The Census provides documentation about changes in boundaries at this site: www.census.gov/geo/reference/boundary-changes.html

Wildfire Risk

Ellis County, TX

Housing Characteristics

	Ellis County, TX	Texas
Total Housing Units, 2019*	61,722	10,937,026
Occupied	57,307	9,691,647
Vacant	4,415	1,245,379
For rent	˙699	318,899
Rented, not occupied	˙278	57,141
For sale only	˙316	95,519
Sold, not occupied	˙236	52,601
Seasonal, recreational, occasional	˙315	247,358
For migrant workers	¨15	3,655
Other vacant	2,556	470,206
Year Built		
Built 2010 or later	8,039	1,133,697
Built 2000 to 2009	16,024	2,114,938
Built 1990 to 1999	10,071	1,658,756
Built 1980 to 1989	10,161	1,767,822
Built 1970 to 1979	7,083	1,667,231
Built 1940 to 1969	7,433	2,208,685
Median year structure built^	1993	1987

Percent of Total

Occupancy		
Occupied	92.8%	88.6%
Vacant	7.2%	11.4%
For rent	˙1.1%	2.9%
Rented, not occupied	˙0.5%	0.5%
For sale only	˙0.5%	0.9%
Sold, not occupied	˙0.4%	0.5%
Seasonal, recreational, occasional	˙0.5%	2.3%
For migrant workers	0.0%	0.0%
Other vacant	4.1%	4.3%
Year Built		
Built 2010 or later	13.0%	10.4%
Built 2000 to 2009	26.0%	19.3%
Built 1990 to 1999	16.3%	15.2%
Built 1980 to 1989	16.5%	16.2%
Built 1970 to 1979	11.5%	15.2%
Built 1940 to 1969	12.0%	20.2%

High Reliability: Data with coefficients of variation (CVs) < 12% are in black to indicate that the sampling error is relatively small.
Medium Reliability: Data with CVs between 12 & 40% are in orange to indicate that the values should be interpreted with caution.
Low Reliability: Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

Median year structure built, 2019*

- The median year of structures is newer (1993) in Texas and older (1987) in Ellis County, TX

* ACS 5-year estimates used. 2019 represents average characteristics from 2015-2019.

Data Sources: U.S. Department of Commerce. 2020. Census Bureau, American Community Survey Office, Washington, D.C.

Wildfire Risk

Ellis County, TX

Housing Characteristics

What do we measure on this page?

This page describes whether housing is occupied or vacant, for rent or seasonally occupied, and the year built.

Rent: The number of homes for rent was defined as occupied housing units that were for rent, vacant housing units that were for rent, and vacant units rented but not occupied at the time of interview.

Seasonal, Recreational, or Occasional Use: Refers to vacant units used or intended for use only in certain seasons or for weekends or other occasional use throughout the year.

For Migrant Workers: Refers to housing units intended for occupancy by migratory workers employed in farm work during the crop season.

Why is it important?

Efforts to reduce wildfire risk to homes center around the home ignition zone, an area 100-200 feet from the foundation. It includes vegetation, the home itself, and other structures or attachments like decks, furniture, fences, and outbuildings.

A majority of homes lost to wildfire are first ignited by embers. By reducing the susceptibility of the area immediately around the home and the home itself—the home ignition zone—the chances of a home surviving an ember storm or small spot-fire are greatly increased.

Housing characteristics are relevant to reducing the risk from wildfires in several ways. The year the home was built may convey information about the housing stock that was built before and after the passage of land use planning regulations to reduce exposure to homes (for example, a building code requiring the use of wildfire-resistant building materials). It may also be possible that newer homes incorporate improved building standards and materials that reduce susceptibility to wildfires.

The prevalence of rental properties, seasonal homes and recreational homes, vacant homes, and homes used for migrant workers may complicate landowner education efforts that are aimed at reducing risk in the home ignition zone. The presence of many non-owner-occupied homes may also make it difficult for community leaders to reach homeowners whose support is needed for the passage of land use planning tools, such as landscape ordinances or building codes, that reduce the risk from wildfires.

CHANGES IN BOUNDARIES: Data describing change over time can be misleading when geographic boundaries have changed.
The Census provides documentation about changes in boundaries at this site: www.census.gov/geo/reference/boundary-changes.html

Wildfire Risk

Ellis County, TX

Land Ownership

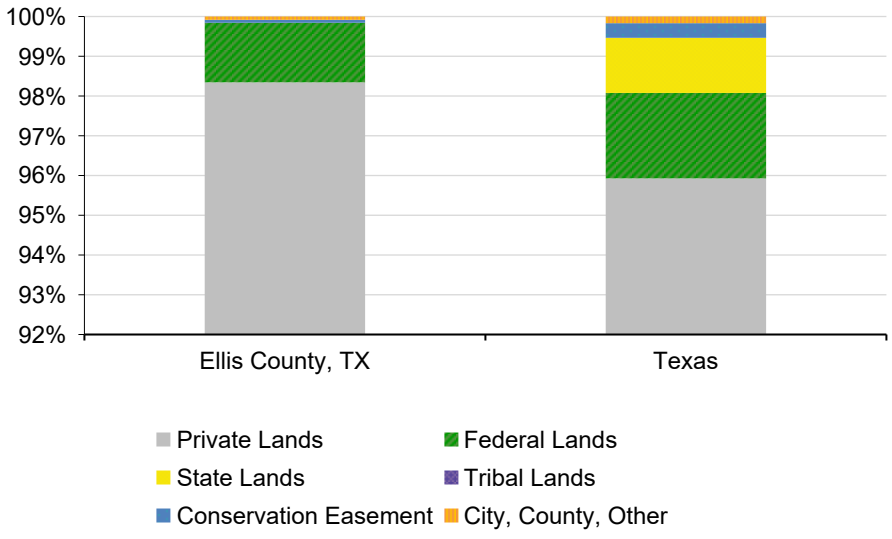
	Ellis County, TX	Texas
Total Acres	609,119	166,803,026
Private Lands	599,483	160,599,867
Conservation Easement	458	614,854
Federal Lands	9,130	3,598,397
Forest Service	0	757,224
BLM	0	11,859
National Park Service	0	1,144,563
Military	9,130	1,103,163
Other Federal	0	581,588
State Lands	0	2,318,922
State Trust Lands*	0	1,399,892
Other State	0	919,030
Tribal Lands	0	4,849
City, County, Other	506	280,680

Percent of Total

Private Lands	98.4%	96.3%
Conservation Easement	0.1%	0.4%
Federal Lands	1.5%	2.2%
Forest Service	0.0%	0.5%
BLM	0.0%	0.0%
National Park Service	0.0%	0.7%
Military	1.5%	0.7%
Other Federal	0.0%	0.3%
State Lands	0.0%	1.4%
State Trust Lands*	0.0%	0.8%
Other State	0.0%	0.6%
Tribal Lands	0.0%	0.0%
City, County, Other	0.1%	0.2%

Land Ownership, Percent of Land Area

- Texas has the largest share of federal public lands (2.2%), and Ellis County, TX has the smallest (1.5%).
- Texas has the largest share of state public lands (1.4%), and Ellis County, TX has the smallest (0%).
- Ellis County, TX has the largest share of private lands (98.4%), and Texas has the smallest (96.3%).



Data Sources: U.S. Geological Survey, Gap Analysis Program. 2012. Protected Areas Database of the United States (PADUS) version 1.3

Wildfire Risk

Ellis County, TX

Land Ownership

What do we measure on this page?

This page describes the share of the selected location that is private and the share that is managed by various public agencies.

The data presented in this report were calculated using Geographic Information System (GIS) tools. Two primary GIS datasets were used: U.S. Census Bureau's TIGER/Line County Boundaries[15] and U.S. Geological Survey's Protected Areas Database (PADUS).[16, 17]

Although every attempt was made to use the best available GIS land ownership dataset, the data sometimes have errors or become outdated. Please report any inaccuracies to eps@headwaterseconomics.org.

Why is it important?

Wildfires can occur on any lands—including private, state, tribal and federal lands—and fires also can spread across multiple land ownerships. Because of this, wildland firefighting is by necessity most often a multi-agency effort. Efforts to reduce the likelihood (probability) of a fire and the intensity of a fire (related to fuels and topography) can have important consequences on homeowner and firefighter safety and on the vulnerability of the built environment, especially homes.

Wildfires do not respect property boundaries and burn across a mosaic of land ownerships. Efforts to reduce the likelihood and intensity of wildfires can have important implications for neighboring lands and properties. For example, fuel treatments on U.S. Forest Service lands can lower the intensity of a wildfire and therefore reduce the risk to homes on nearby private lands.[18] At the same time, communities can reduce the susceptibility of homes to wildfire through land use planning and by focusing mitigation efforts on the “home ignition zone” to reduce a home’s vulnerability to embers.[19] Fire-adapted communities can live with the inevitability of wildfires. By being fire-adapted, communities make it more likely that managers of nearby lands—whether state, federal, or tribal—can use fires for their ecological role, allowing some to burn or setting controlled burns to reduce fuels.

Wildfire Risk

Ellis County, TX

Data Sources & Methods

This report uses statistics from public government sources and from the Wildfire Risk to Communities website. All data used can be verified with the original sources:

Wildfire Risk to Communities. 2020.
Scott JH, Gilbertson-Day JW, Moran C, Dillon GK, Short KC, Vogler KC. 2020. Wildfire Risk to Communities: Spatial datasets of landscape-wide wildfire risk components for the United States. Fort Collins, CO: Forest Service Research Data Archive. Updated 25 November 2020. https://doi.org/10.2737/RDS-2020-0016 and https://wildfirerisk.org

U.S. Geological Survey, Gap Analysis Program. 2012.
Protected Areas Database of the United States (PADUS) version 1.3
https://www.usgs.gov/core-science-systems/science-analytics-and-synthesis/gap/science/protected-areas

U.S. Department of Commerce. 2019.
Census Bureau, American Community Survey Office, Washington, D.C.
https://www.census.gov/programs-surveys/acs

Wildfire Risk

Ellis County, TX

Endnotes

1 - See *Wildfire Risk to Communities* website: https://wildfirerisk.org/understand-risk/. Also see Scott JH, Gilbertson-Day JW, Moran C, Dillon GK, Short KC, and Vogler KC. 2020. Wildfire Risk to Communities: Spatial datasets of landscape-wide wildfire risk components for the United States. Fort Collins, CO: Forest Service Research Data Archive. https://doi.org/10.2737/RDS-2020-0016.

2 - A useful resource on rural population change is the U.S. Department of Agriculture's Economic Research Service web page: https://www.ers.usda.gov/topics/rural-economy-population/population-migration/.

3 - William H. Frey's website provides links to publications, issues, media stories, data tools and resources on migration, population redistribution, and demography of both rural and urban populations in the U.S.: http://frey-demographer.org/.

4 - For a description of the U.S. Census Bureau's ACS methodology and data accuracy, see https://www.census.gov/programs-surveys/acs/methodology.html.

5 - Martinuzzi S, Stewart SI, Helmers DP, Mockrin MH, Hammer RB, and Radeloff VC. 2015. *The 2010 wildland-urban interface of the conterminous United States*. Research Map NRS-8. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northern Research Station. 124p. https://www.nrs.fs.fed.us/pubs/48642. Also Radeloff VC, et al. 2017. Rapid growth of the U.S. wildland-urban interface raises wildfire risk. *PNAS* 115(13): 3314-3319. www.pnas.org/cgi/doi/10.1073/pnas.1718850115. Mietkiewicz N, Balch J, Schoennagel T, Leyk S, Denis L, and Bradley B. 2020. In the line of fire: Consequences of human-ignited wildfires to homes in the U.S. (1992-2015). *Fire*. Available online: https://www.mdpi.com/2571-6255/3/3/50.

6 - Balch J, Bradley B, Abatzoglou J, Nagy C, Fusco E, and Mahood A. 2017. Human-started wildfires expand the fire niche across the US. *PNAS*. Available online: http://www.pnas.org/content/114/11/2946. Also Mietkiewicz N, Balch J, Schoennagel T, Leyk S, Denis L, and Bradley B. 2020. In the line of fire: Consequences of human-ignited wildfires to homes in the U.S. (1992-2015). *Fire*. Available online: https://www.mdpi.com/2571-6255/3/3/50

7 - https://www.census.gov/programs-surveys/acs

8 - Collins TW and Bolin B. 2008. Situating hazard vulnerability: People's negotiations with wildfire environments in the U.S. Southwest. *Environmental Management* 44: 441-455.

9 - County of Los Angeles Public Health. 2013. Health Atlas for the City of Los Angeles. Los Angeles, CA. https://wattscommunitystudio.files.wordpress.com/2013/06/healthatlas.pdf

10 - Fothergill A and Peek LA. 2004. Poverty and disasters in the United States: A review of recent sociological findings. *Natural Hazards* 32(1): 89-110.

City of Ovilla

Ovilla City Council

AGENDA ITEM REPORT

Item 2

Meeting Date: June 13, 2022 Department: Administration

☒Discussion ☒Action Budgeted Expense: ☐YES ☐NO ☒N/A

Submitted By: Staff

Reviewed By: ☒ City Manager ☒ City Secretary ☒City Attorney

☐ Finance Director ☐ Other:

AGENDA ITEM:

ITEM 2. DISCUSSION/ACTION - Consideration of and action on a request from Frank Blanchard to refund $900.00 paid to the City of Ovilla for annexation and zoning fees of the Stonewood Development

Attachments:

1. Petition for annexation
2. Letter requesting withdrawal of annexation petition
3. Code of Ordinances Fees **Sec. A8.001**

Discussion / Justification:

Background: Staff received a voluntary annexation petition signed by Mr. Blanchard on March 4, 2022. At this time staff began to work on the process of annexation which included having a development agreement drafted by our city attorney. The staff and council spent many hours preparing for annexation per Mr. Blanchard's petition, holding zoom meetings per his requests, multiple telephone conversations with staff and legal counsel, as well as many emails. Per section A8.001 of the code of ordinances, the fees are non-refundable. Mr. Blanchard requested that staff bring his refund to the city council for approval.

Recommendation / Staff Comments:

Staff Recommends: Denial of refund

Sample Motion(s):

I move to approve/deny a refund in the amount of $900.00 for annexation and zoning fees to Frank Blanchard with Stonewood Development.

CITY OF OVILLA, TEXAS
VOLUNTARY ANNEXATION PETITION

PETITION REQUESTING ANNEXATION BY AREA LANDOWNER(S)

TO THE MAYOR AND CITY COUNCIL OF THE CITY OF OVILLA, TEXAS:

Pursuant to Texas Local Government Code, Section 43.0671, the undersigned owner(s) of the hereinafter described tract of land, petition your honorable Governing Body to extend the present city limits so as to include as part of the City of Ovilla, Texas, the following described territory by metes and bounds in Exhibit A, attached hereto:

Attachment A

Insert or attach a legal description of the property, including the metes and bounds

I/We certify that the above-described tract of land is contiguous and adjacent to the City of Ovilla, Texas, is not more than one-half mile in width [only limited by Local Government Code Section 43.028], and that this petition is signed and duly acknowledged by each and every person having an interest in said land.

OWNER(S):

Frank Blanchard, Member

Printed: Frank Blanchard, Member

3-4-2022

Date

_____

Printed: _____

_____

Date

Agent Authorization

In lieu of representing this request myself as owner of the subject property, I hereby authorize the person designated as agent below to act in the capacity as my agent for the application, processing, representation and/or presentation of the request. The designated agent shall be the **principle contact** person with the City of Ovilla (and vice versa) in processing and responding to requirements, information, and/or issues relative to this case. I also understand that it is necessary for me or my authorized agent to be present at all Board meetings as well as City Council meetings.

Michael Westfall	1719 Angel Parkway, Suite 400-206	214-846-939	michael@westfallengineering.com
Authorized Agent	Address	Phone	Email

Michael Westfall	Michael Westfall	03/03/2022
Signature of Owner or Applicant	Name Printed or Typed	Date

Frank Blanchard, Member	Frank Blanchard, Member	3-4-2022
Signature of Owner or Applicant	Name Printed or Typed	Date

Notary Section

Signature: Frank Blanchard, Member

Printed Name: Frank Blanchard, Member

State of Texas
County of Dallas
and Ellis
Sworn and subscribed before me the undersigned notary public this the 4th day of March, 2022.

Notary Public, State of Texas
Commission Expires:

GLENDA WEBB
Notary ID #123974841
My Commission Expires
August 31, 2025

Signature:

Printed Name:

State of Texas
County of Dallas
and Ellis
Sworn and subscribed before me the undersigned notary public this the day of , 20 .

Notary Public, State of Texas
Commission Expires:

CITY OF OVILLA, TEXAS
VOLUNTARY ANNEXATION PETITION

ACKNOWLEDGMENT

THE STATE OF TEXAS

COUNTY OF Dallas

BEFORE ME, the undersigned authority, on this day personally appeared Frank Blanchard as Member of 3CH Development LLC known to me to be the persons whose names are subscribed to the foregoing instrument, and each acknowledged to me that he executed the same for the purposes and consideration therein expressed.

Given under my hand and seal of office, this 4th day of March, 2022

GLENDA WEBB
Notary ID #123974841
My Commission Expires
August 31, 2025

_____
Notary Public in and for
_____ County, Texas.

THE STATE OF TEXAS

COUNTY OF _____

BEFORE ME, the undersigned authority, on this day personally appeared _____ known to me to be the persons whose names are subscribed to the foregoing instrument, and each acknowledged to me that he executed the same for the purposes and consideration therein expressed.

Given under my hand and seal of office, this _____ day of _____, 20___.

_____
Notary Public in and for
_____ County, Texas.

BLANCHARD RANCH, LLC
145 Post Oak Way
Weatherford, TX 76087
972-841-3055

May 18, 2022

Via email: btaylor@cityofovilla.org
City of Ovilla, Texas
Attn: Ms. Bobbie Jo Taylor
City Secretary
105 Cockrell Hill
Ovilla, TX 75154

Re: Annexation Request dated March 4, 2022, for ±110.979 acres in the extraterritorial jurisdiction of Ovilla, Texas (the "Property").

Dear Ms. Taylor:

I previously submitted a request to have the Property annexed by the City in accordance with Chapter 43 of the Texas Local Government Code. Please allow this letter to serve as my *withdraw* of the request for annexation. If you need any further information in connection with the request, please let me know. If I don't hear from you, I will assume the request has been withdrawn.

I would also request any fees I paid in connection with the annexation request be refunded. Thank you for your attention to this matter.

Sincerely,

Member

Frank Blanchard, Member
Blanchard Ranch, LLC

Sec. A8.001 Generally

The following schedule of fees and charges shall be collected by the city secretary, or his or her designated representative, when any plat is tendered to the city for consideration. Each of the fees and charges provided for herein shall be paid in advance, and no action of the city council shall be valid until the fees herein provided shall have been paid. Application fees are nonrefundable regardless of the ruling of the city council or any board or commission of the city. (Ordinance 07-005, app. A, sec. 14.00, adopted 3/26/07)

City of Ovilla

Ovilla City Council

AGENDA ITEM REPORT
Item 3

Meeting Date: June 13, 2022 Department: Administration

☒Discussion ☒Action Budgeted Expense: ☐YES ☐NO ☒N/A

Submitted By: Staff

Reviewed By: ☒ City Manager ☒ City Secretary ☐ City Attorney

☐ Finance Director ☒ Other: Mayor

AGENDA ITEM:

ITEM 3. DISCUSSION/ACTION – Receive annual report from staff and recommendation from the Board Review Committee to consider and act on volunteer board appointment and/or reappointment(s) to serve a term on the Planning and Zoning Commission and/or direct staff to solicit for new applicants.

Attachments:

1. Annual Activity Report
2. Attendance Record
3. Current List of Members

Discussion / Justification:

EXCERPT: Pursuant to Chapter 14, Section 47.3 of the Ovilla Code of Ordinances:
The Planning and Zoning Commission shall consist of seven (7) members. The members shall be residents of the City and qualified voters. They shall be appointed by a majority vote of the members of the City Council at a regular or specially called meeting thereof.

47.3 TERMS OF OFFICE
Each member shall serve a term of office of two years. After the expiration of a two-year term of office, a member shall serve until a successor is appointed. The terms of four of the members shall expire on the first meeting in July of each odd-numbered year. The members of the commission shall be identified by place numbers one through seven. Newly appointed members shall be installed at the first regular commission meeting after their appointment.

This July, Places 2,4, and 6 will expire, Place 7 has resigned and will need an appointment for an unexpired one-year term:

Place 2 Josh Lewis – Resigned
Place 4 Alan Whittaker – voiced desire to serve another term.
Place 6 Fred Hart – voiced desire to serve another term
Place 7 Bill Zimmermann – Resigned (one-year term)

The Review Committee interviewed multiple applicants and offer the following recommendations:

Place 2 Rachel Huber
Place 4 Alan Whittaker
Place 6 Fred Hart

Place 7 Lindsey Pierce – One-year unexpired term
Recommendation / Staff Comments:
Staff Recommends: Approval
Sample Motion(s):
I move to appoint the following to the Planning and Zoning Commission with Place 7 being a one-year unexpired term. Place 2: Rachel Huber Place 4: Alan Whittaker Place 6: Fred Hart Place 7: Lindsey Pierce

06.13.2022

Annual Activity Update 2021-2022

To: **Honorable Mayor and Council**

From: **Cathy Gaeta, Planning and Development Coordinator**

CC: **Pam Woodall, City Manager**
Bobbie Jo Taylor, City Secretary

Re: **Planning and Zoning Commission Annual Activity**

Planning & Zoning Annual Activity:

P & Z Commission reviewed 7 requests: May 2021 – April 2022

1. Completed:
   - ***a.*** Site Plan Application: Ovilla Road Baptist Church – *Recommend approval to Council*
   - **b.** Zoning Ordinance: Special Events – *Recommend approval to Council*
   - **c.** Preliminary Plat: Forest Creek Estates – *Recommend approval to Council*
   - **d.** Final Plat Amendment: Bryson Manor Phase 3 – *Recommend approval to Council*
   - **e.** Zoning Ordinance: Building Code Regulations – *Recommend approval to Council*
   - **f.** Zoning Ordinance: Comprehensive Land Use Plan - *Recommend approval to Council*
   - **g.** Zoning Ordinance: Flag/Panhandle Lots - *Recommend approval to Council*

City of Ovilla

Tel 972-617-7262

105 S. Cockrell Hill Road
Ovilla, Texas 75154

www.cityofovilla.org
pwoodall@cityofovilla.org

June 2021 - May 2022

Planning and Zoning Attendance Record

			NO MTG	NO MTG		WITHDREW			NO MTG		NO MTG	
P&Z	2021.06.07	2021.07.06	2021.08.02	2021.09.07	2021.10.04	2021.11.01	2021.12.06	2022.01.03	2022.02.07	2022.03.07	2022.04.04	2022.05.02
PL1 Gray		√			√		√	A		√		√
PL2 Lewis		√			√		√	√		√		A
PL3 Lynch- C		√			√		√	√		√		√
PL4 Whittaker		√			√		√	√		√		√
PL5 Muckleroy		√			√		√	√		√		√
PL6 Hart		√			√		√	√		√		√
PL7 Hall		√			√		A	Resigned				
PL1 Jungman	√											
PL2 Sims												
PL3 Lynch	√											
PL4 Whittaker	√											
PL5 Alexander	A											
PL6 Hart	√											
PL7 Zimmerman	A											
CM	√	√			√					√		√
C-SEC	√	√			√					√		√
CODE ENF	√	√			√							
Board Sec	√	√			√					√		√
Other												

City of Ovilla
FOUNDED IN 1844
105 South Cockrell Hill Road
Ovilla, Texas 75154
Ph:(972) 617-7262 Fax: (972) 515-3221

INFORMATION SHEET

Administration Use Only

PLANNING AND ZONING

GRAY, Patrick 2023 PL1	**VACANT 2022 PL2**
[redacted]	
Ovilla, TX 75154	
Hm [redacted]	
Wk: N/A	
Cell: [redacted]	
E-Mail: [redacted]	
***LYNCH, Carol 2023 PL3 CHAIR**	**WHITTAKER, Alan 2022 PL4 VICE CHAIR**
[redacted]	[redacted]
Ovilla, TX 75154	Ovilla, TX 75154
Hm:	Hm: [redacted]
Wk: [redacted]	Wk: N/A
Cell: n/a	Cell: N/A
E-Mail: [redacted]	E-Mail: [redacted]
MUCKLEROY, Dani 2023 PL5	***HART, Fred 2022 PL6**
[redacted]	[redacted]
Ovilla, TX 75154	Ovilla, TX 75154
Hm: [redacted]	Hm: [redacted]
Wk: N/A	Wk: N/A
Cell: [redacted]	Cell: N/A
E-Mail: [redacted]	E-Mail: [redacted]
VACANT 2023 PL7	
Ovilla, TX 75154	
Hm: N/A	
Wk: N/A	
Cell:	
E-Mail:	
Effective 2022.03.15	

(*) DO NOT RELEASE INFORMATION

City of Ovilla

Ovilla City Council

AGENDA ITEM REPORT
Item 4

Meeting Date: June 13, 2022 Department: Administration

☒Discussion ☒Action Budgeted Expense: ☐YES ☐NO ☒N/A

Submitted By: Staff

Reviewed By: ☒ City Manager ☒ City Secretary ☐City Attorney

☐ Finance Director ☒ Other: Mayor

AGENDA ITEM:

ITEM 4. DISCUSSION/ACTION –Receive annual report from staff and recommendation from the Board Review Committee to consider and act on volunteer board appointment and/or reappointment(s) to serve a term on the Economic Development Corporation and/or direct staff to solicit for new applicants.

Attachments:

1. Annual Activity Report
2. Attendance Record
3. Current List of Members

Discussion / Justification:

Pursuant to the By-Laws of the Economic Development Corporation, the Board of Directors consists of a seven-member board and states that each member shall be appointed by the City Council for a two-year term. Expiring terms are Places 1,3,5, and 7. Staff is also recommending that Place 6 be filled for a one-year unexpired term due to poor attendance by the current board member.

Staff interviewed and confirmed commitments from current EDC members that wish to continue serving on the board of directors for the EDC. PL3 resigned from the board effective 5.31.22. New applicants that desire appointment(s) were also interviewed by the review committee. The Boards and Commissions Appointment Review Committee respectfully submits the following recommendations for appointments as the board of directors to the EDC:

1. PL1 William Garner – reappointment
2. PL3 Michael Mohan – new appointment
3. PL5 Brandon Collett – reappointment
4. PL7 Barbara Turner – reappointment
5. PL6 Tana Jimenez – new appointment

Recommendation / Staff Comments:

Staff Recommends: Approval

Sample Motion(s):

I move to appoint the following to the Economic Development Corporation with Place 6 being a one-year unexpired term.

Place 1: William Garner
Place 3: Michael Mohan
Place 5: Brandon Collett
Place 7: Barbara Turner
Place 6: Tana Jimenez

06.13.2022

Annual Activity Update 2021-2022

To
Honorable Mayor and Council

From
E. Starkey, DCS

CC P. Woodall, CM
B.J. Taylor, CS
C. Gaeta, PDC

Re
Annual Activity.

EDC ACTIVITY:

Economic Development Corporation:

1. Pending items:
    a. Founders Park pavilion and restrooms nearly finished.
    b. Continued discussion for improvements to the downtown area, following the Strategic Plan.
    c. Continued work defining and categorizing EDC's target business types.

2. Upcoming economic development and events:
    a. Continuing discussion around developing 708 W. Main for business opportunities.

3. Completed:
    a. Annual participation the BSW membership for the City.

City of Ovilla

Tel 972-617-7262

105 S. Cockrell Hill Road
Ovilla, Texas 75154

www.cityofovilla.org
pwoodall@cityofovilla.org

EDC	No Mtg		Joint Mtg		No Mtg	No Mtg	No Mtg	No Mtg	No Mtg	Canceled -weather		No Mtg No quorum
	May 2021	June 21, 2021	July 22, 2021	August 16, 2021	Sept. 20, 2021	Oct. 18, 2021	Nov. 15, 2021	Dec. 20, 2010	Jan.18, 2022	Feb. 2022	Mar. 21, 2022	April 2022
PL1 Garner		Absent	√	Absent							√	
Garner appointed 2019												
PL2 Betik		√	√	Absent							√	
PL3 Huntington		Absent	√	Absent							Absent	
PL4 Henderson		Absent	Absent	√							√	
PL5 Collett		√	√	√							√	
Collett appointed 08-2020												
PL6 McCloskey		√	Absent	√							Absent	
McCloskey appointed 04-2018												
PL7 Turner		√	Absent	√							√	
CM		√	√	√						√	√	
C-SEC		√	√	√						√	√	

Economic Development Corporation Com n Attendance May 2021 through April 2022

Ovilla Economic Development Corporation

(R) GARNER, William 2022 PL1	**BETIK, Bob 2023 PL2**
[redacted]	[redacted]
Ovilla, TX 75154	Red Oak, TX 75154
Hm: [redacted]	Hm: [redacted]
Business: [redacted]	Business:
E-Mail [redacted]	E-Mail [redacted]
(R) Vacant 2022 PL3	**GARRISON, Lyn 2023 PL4**
[redacted]	[redacted]
[redacted]	Ovilla, TX 75154
[redacted]	Hm: [redacted]
[redacted]	Cell:
[redacted]	E-Mail: [redacted]
COLLETT, Brandon 2022 PL5	**(R) MCCLOSKEY, Amanda 2023 PL6**
[redacted]	[redacted]
Ovilla, TX 75154	Ovilla, TX 75154
Hm: [redacted]	Hm: [redacted]
Business:	Business: [redacted]
Cell:	Cell:
E-Mail: [redacted]	E-Mail: [redacted]
(R) TURNER, Barbara 2022 PL7	
[redacted]	
Ovilla, TX 75154	
Hm: [redacted]	
Cell	
E-Mail: [redacted]	

(R) indicates restricted personal information not to be released to the public.

Last update 2022

City of Ovilla

Ovilla City Council

AGENDA ITEM REPORT

Item 5

Meeting Date: June 13, 2022 Department: Administration

☒Discussion ☒Action Budgeted Expense: ☐YES ☐NO ☒N/A

Submitted By: Staff

Reviewed By: ☒ City Manager ☒ City Secretary ☒City Attorney

☐ Finance Director ☐ Other:

AGENDA ITEM:

ITEM 5. DISCUSSION/ACTION – Consideration of and action on the City Council of the City of Ovilla serving as the Board of Adjustment as allowed by Section 211.008(g) of the Local Government Code.

Attachments:

1. Section 45- Board of Adjustment – current city code
2. Section 211.008(g) Texas Local Government Code

Discussion / Justification:

Background: Current city code allows the appointments of the board of adjustment to be done by the city council. The Texas Local Government Code allows for a city council to serve as the board of adjustment. Concerns have been raised by members of the council and members of the community regarding the approval of recent variances that have been approved by the current board. The current rate of approval of variances in recent years has been 100% of the variances presented. Staff is concerned with the board having a quorum to hold meetings. Four members of the board are required in order to hear a case brought to the board. The Board currently has three active members and one alternate who is seeking an appointment to the Planning and Zoning Commission.

Per the Code of Ordinances to remove members of the Board of Adjustment public hearings will need to be held by the Planning and Zoning Commission as well as the City Council. If the Council approves this action item staff will move forward with the publication of the public hearings and bring an ordinance to the next city council meeting for approval. City Staff has confirmed with legal counsel that this action would be appropriate. The BOA is scheduled to meet on a variance for a fence June 21st. Staff is hopeful that a quorum will be present.

Recommendation / Staff Comments:

Staff Recommends: That the council direct staff to draft an ordinance to allow for the city council to act as the authority of the board of adjustment.

Sample Motion(s):

I motion to direct staff to move forward with the publications of the public hearings and to draft an ordinance for the city council to review removing the current members of the Board of Adjustment and allowing the Council to serve as the Board of Adjustment.

Section 45 - Zoning Board of Adjustment

45.1 ESTABLISHMENT

A. Composition. A Zoning Board of Adjustment is hereby established and shall consist of five regular members and two alternate members to be appointed by the City Council. Each member shall be appointed for a term of two years by the City Council. Alternate members shall serve in the absence of regular member(s) in keeping with rules and procedures adopted by the Zoning Board of Adjustment.

(Ordinance 2010.013 adopted 6/14/10)

B. Removal. Members of the Zoning Board of Adjustment may be removed from office by the City Council for cause upon written charges and after public hearing. Vacancies shall be filled by appointment of the City Council for the unexpired term of the member affected. (Ordinance 2018-15 adopted 8/13/18)

C. Quorum. All cases to be heard by the Zoning Board of Adjustment must be heard by a minimum number of four members.

D. Cause for Removal. Cause for removal shall include missing more than two consecutive meetings or three meetings in any one twelve (12) month period or such other misconduct as the City Council may establish by resolution.

(Ordinance 2010.013 adopted 6/14/10)

Sec. 211.008. BOARD OF ADJUSTMENT. (a) The governing body of a municipality may provide for the appointment of a board of adjustment. In the regulations adopted under this subchapter, the governing body may authorize the board of adjustment, in appropriate cases and subject to appropriate conditions and safeguards, to make special exceptions to the terms of the zoning ordinance that are consistent with the general purpose and intent of the ordinance and in accordance with any applicable rules contained in the ordinance.

(g) The governing body of a Type A general-law municipality by ordinance may grant the members of the governing body the authority to act as a board of adjustment under this chapter.

Acts 1987, 70th Leg., ch. 149, Sec. 1, eff. Sept. 1, 1987. Amended by Acts 1993, 73rd Leg., ch. 126, Sec. 1, eff. Sept. 1, 1993; Acts 1995, 74th Leg., ch. 724, Sec. 1, eff. Aug. 28, 1995; Acts 1997, 75th Leg., ch. 363, Sec. 1, eff. Sept. 1, 1997.

City of Ovilla

Ovilla City Council

AGENDA ITEM REPORT
Item 6

Meeting Date: June 13, 2022 Department: Administration

☒Discussion ☒Action Budgeted Expense: ☒YES ☐NO ☐N/A

Submitted By: Staff

Reviewed By: ☒ City Manager ☒ City Secretary ☒City Attorney

☒ Finance Director ☐ Other:

AGENDA ITEM:

ITEM 6. DISCUSSION/ACTION – Consideration of and action on an Engineering Services Agreement by and between the City of Ovilla and Birkhoff, Hendricks and Carter, L.L.P., to complete an analysis of the Water and Wastewater Impact Fee Study update, authorizing payment of engineering services and authorizing the Mayor to execute said Agreement.

Attachments:

1. Agreement

Discussion / Justification:

Background:
The last update was completed by Birkhoff in March 2017. It is recommended to conduct an update every 5-years. This agreement authorizes Birkhoff, Hendricks & Carter, LLP to facilitate meetings and conduct the analysis and update of Ovilla's water and wastewater impact fees.

Water and Wastewater Impact Fees are an assessment in order to generate revenue for funding or recouping the costs of capital improvements or facility expansions necessitated by and attributable to new development. Any developer seeking a building permit for a new development (residential or commercial) that will generate additional use of utility resources will be responsible for paying impact fees. School districts are exempt from water and wastewater impact fees.

Recommendation / Staff Comments:

Staff Recommends: Approval
Legal Counsel has reviewed and approved the agreement.

Sample Motion(s):

I move to approve/deny the presented Engineering Services Agreement by and between the City of Ovilla and Birkhoff, Hendricks and Carter, L.L.P., to complete an analysis of the Water and Wastewater Impact Fee Study update, authorizing payment of engineering services and authorizing the Mayor to execute said Agreement.

PROFESSIONAL SERVICES AGREEMENT

This Professional Services Agreement (herein "Agreement") is made and entered into by and between the CITY OF OVILLA, a Texas general law municipality (hereinafter the "City"), and BIRKHOFF, HENDRICKS & CARTER, L.L.P. a Texas Limited Liability Partnership (hereinafter the "Consultant"), as of the date of execution set forth herein.

WITNESSETH

WHEREAS, the City desires to obtain professional engineering services from the Consultant to complete engineering analysis and reports for the **Water and Wastewater Impact Fee Update**,(herein referred to as the "Project"); and

WHEREAS, the Consultant represents that it is qualified and capable of performing the professional engineering services in connection with the Project as set forth herein and is willing to enter into this Agreement with the City to perform such services.

NOW, THEREFORE, in consideration of the premises, and the covenants and conditions herein, the City and the Consultant agree as follows:

I. SCOPE, SCHEDULE, AND DEFINITION OF SERVICES

The scope of services to be performed by Consultant are set forth in Exhibit "A" attached hereto and incorporated herein for all purposes. The parties understand and agree that the scope of services may change over time as authorized in writing and agreed to by the City and Consultant. Consultant agrees to commence its services immediately upon complete execution of this Agreement. Consultant further agrees to diligently complete its obligations hereunder in a timely manner and in conformity with the schedule in Exhibit B attached hereto and incorporated herein for all purposes. Consultant shall complete its work and duties under this Agreement as expeditiously as is prudent considering the ordinary professional skill and care of a competent engineer in North Texas.

II. EXCLUSIONS FROM SCOPE

It is understood and agreed that the scope of services set forth and described in this Agreement are the only services Consultant has agreed to perform and that only services for which compensation will be paid by the City, unless and until such scope is changed by agreement of the parties. The services specifically excluded from the scope of services set forth in this Agreement include, but are not necessarily limited to, the following:

A. Determination of the City Planning Boundary
B. Fiduciary responsibility to the Client.
C. Legal Services
D. Model Calibration
E. Preparation of Land Use Assumptions for the Water Master Plan and the Impact Fee Update Reports
F. Preparation of Ordinance

G. Public Notice Notifications

H. Scheduling of Advisory Committee and City Council Meetings

I. Water Quality Analysis

III. COMPLIANCE WITH CITY CODES, STANDARDS AND SPECIFICATIONS

Notwithstanding the exclusions set forth in Section II above, Consultant represents and agrees that all of its works and services provided under this Agreement shall conform to all of the applicable ordinances, codes, standards and specifications of the City.

IV. RETAINER AND COMPENSATION

The City agrees to retain Consultant, and Consultant agrees to perform the professional services set forth in this Agreement with all of the professional skill and care ordinarily provided by competent engineers in North Texas and subject to all of the terms and conditions herein. The City agrees to pay, and the Consultant agrees to accept, the fees specified in Exhibit C as full and final compensation for the work and services provided hereunder.

V. PROFESSIONAL LIABILITY

Approval by the City of the professional services performed by the Consultant hereunder shall not in any way relieve the Consultant of responsibility for the technical accuracy and quality of the Consultant's work. The City's review, approval, acceptance of, or payment for any of the Consultant's services shall not be construed to operate as a waiver of any of the City's rights under this Agreement or any cause of action arising out of the performance of this Agreement, and the Consultant shall be and remain liable in accordance with applicable law for all damages to the City caused by the Consultant's negligent performance of any of the services furnished under this Agreement.

VI. DOCUMENTS

Upon Consultant's completion of services and receipt of payment in full, Consultant shall grant to City a non-exclusive, irrevocable license to possess the final drawings and other instruments produced in connection with Consultant's performance of the work under this Agreement. Said drawings and instruments may be copied, duplicated, reproduced, and used by the City for the purpose of constructing, operating and maintaining improvement and infrastructure. The City agrees that such documents are not intended or represented to be suitable for reuse by the City or others for purposes outside the Scope of Services of this Agreement. Notwithstanding the foregoing, the City understands and agrees that any and all computer programs, GIS applications, proprietary data or processes, and other items related to the services performable under this Agreement are and shall remain the sole and exclusive property of Consultant and may not be used or reused, in any form, by the City without the express written authorization of Consultant. The City agrees that any reuse by the City, or by those who obtain said information from or through the City, without written verification or adaptation by the Consultant, will be at the City's sole risk and without liability or legal exposure to Consultant or its officers, employees, agents and representatives. Consultant may reuse all drawings, reports, data and other information developed in performing the services under this Agreement in Consultant's other professional activities and services.

VII. TERMINATION

In connection with all services outlined or contemplated herein, it is agreed that the City may cancel or terminate this Agreement upon thirty (30) days' written notice to the Consultant with the provision and understanding that immediately upon receipt of notice of such cancellation all work and labor then in progress shall be completed at the compensation rate provided under this Agreement, unless otherwise agreed to by the parties, and further provided that the Consultant shall be compensated in accordance with the terms of this Agreement for all work satisfactorily accomplished prior to the receipt of notice of such termination.

VIII. INDEMNIFICATION

To the extent permitted under Texas law, Consultant shall indemnify and hold harmless the City and its officials, officers, agents and employees with respect to claims or demands, actions, damages, costs and expenses, including reimbursement of reasonable and necessary attorney's fees and costs of litigation in proportion to the Consultant's liability, arising from the death or injury of any person, or the loss, damage or destruction of property, resulting from any negligence or intentional act, error or omission of the Consultant or other persons acting on Consultant's behalf and arising from and related to Consultant's performance under this Agreement.

IX. INSURANCE

Consultant agrees to maintain during the life of the Agreement the following minimum insurance:

A. Commercial general liability insurance, including personal injury liability, blanket contractual liability, and broad form property damage liability in an amount of not less than $2,000,000.

B. Automobile bodily injury and property damage liability insurance with a limit of not less than $2,000,000.

C. Statutory workers' compensation and employers' liability insurance as required by state law.

D. Professional liability insurance (Errors and Omissions) with a limit of $2,000,000 per claim/annual aggregate.

Consultant further agrees to name the City as an additional insured on the Commercial General Liability and Automobile Liability policies. Such insurance policies shall contain provisions to the effect that the naming of the City as an additional insured shall not affect any recovery to which the City would be entitled under the policy if it were not so named, and that the insurance is primary and shall be without contribution from any similar insurance available to the City.

X. INDEPENDENT CONTRACTOR

In the performance of work or services under this Agreement, the Consultant is and shall be deemed an independent contractor of the City, and any and all of Consultant's employees performing work or services hereunder shall be deemed to be employees of the Consultant or its contractors and not employees of the City. In no event shall this Agreement be deemed or interpreted as creating a

principal-agent or joint venture relationship between the parties hereto.

XI. NOTICES

All notices and communications under this Agreement to be mailed or delivered to the City shall be sent to the address of the City as follows, unless and until the Consultant is otherwise notified:

Pam Woodall
City Manager
City of Ovilla
105 S. Cockrell Hill Rd.
Ovilla, Texas 75154

All notices and communications under this Agreement to be mailed or emailed to the Consultant shall be sent to the address of the Consultant as follows, unless and until the City is otherwise notified:

Andrew Mata, Jr., P.E.
Birkhoff, Hendricks & Carter, L.L.P.
11910 Greenville Ave., Suite 600
Dallas, Texas 75243
amata@bhcllp.com

XII. ASSIGNMENT

This Agreement shall not be assignable in whole or in part without the written consent of the City.

XIII. SEVERABILITY

Should any word, phrase, sentence, paragraph or other provision or portion of this Agreement be construed to be unlawful or unenforceable by a court of competent jurisdiction, such circumstance shall not affect the validity of the remaining portions of this Agreement which shall remain in full force and effect.

XIV. BINDING EFFECT

This Agreement shall be binding upon and ensure to the benefit of the parties hereto and their respective permitted successors and permitted assigns.

XV. DISPUTE RESOLUTION AND WAIVER OF RIGHT TO TRIAL BY JURY

THE CITY AND CONSULTANT AGREE THAT ALL DISPUTES ARISING FROM OR RELATED TO THIS AGREEMENT, INCLUDING BUT NOT LIMITED TO ANY AND ALL REPRESENTATIONS OR WARRANTIES, IF ANY, EXPRESSED OR IMPLIED, WHICH CANNOT BE RESOLVED THROUGH INFORMAL NEGOTIATIONS SHALL BE RESOLVED BY WAY OF A TRIAL BEFORE A JUDGE OF A COURT OF COMPETENT JURISDICTION. THE CITY AND CONSULTANT EACH HEREBY WAIVE ANY AND ALL RIGHTS TO A TRIAL BY JURY. THE CITY AND CONSULTANT EACH HEREBY

ACKNOWLEDGE AND REPRESENT THAT THEY HAVE KNOWINGLY AND VOLUNTARILY WAIVED THEIR RESPECTIVE RIGHTS TO A JURY TRIAL WITH RESPECT TO ANY LEGAL MATTER OR DISPUTE ARISING FROM OR RELATED TO THIS AGREEMENT.

XVI. GOVERNING LAW AND VENUE

This Agreement shall be governed by, and its provisions construed in accordance with, the laws of the State of Texas. Venue for any action arising from or related to this Agreement shall be the State District Courts of Ellis County, Texas.

XVII. COMPLIANCE WITH TEXAS LOCAL GOV'T CODE CHAPTER 2270

In compliance with Chapter 2270 of the Texas Local Government Code, by executing this Agreement Consultant hereby certifies that: (1) Consultant does not boycott Israel currently; and (2) will not boycott Israel during the term of this Agreement.

XVIII. ENTIRE AGREEMENT

This Agreement constitutes the entire agreement between the parties, and there exist no written or oral understandings, agreements or assurances with respect to any matters except as set forth herein. Unless expressly stated, this Agreement confers no rights to or upon any person or entity that is not a party hereto.

[*Remainder of Page Intentionally Blank – Signature Page Follows*]

EXECUTED as of this _____ day of _____, 2022.

CITY OF OVILLA

By: _____
Richard Dormier, Mayor

ATTEST:

_____
Glennell Miller, City Secretary

APPROVED AS TO FORM:

_____
Ron G. MacFarlane, Jr., City Attorney

CONSULTANT:
BIRKHOFF, HENDRICK & CARTER, L.L.P.

By: _____
Andrew Mata, Jr., P.E., Partner

EXHIBIT A
SCOPE OF SERVICES

1. Basic Services

Part A: Water and Wastewater Impact Fee Update

Impact Fee update will include the City's waterlines, water pump station, ground storage reservoir and elevated storage tank, wastewater collection lines, and TRA wastewater treatment plant and trunk sewer lines, all in one (1) service area within the City's current ETJ area.

1. Utilize the current Water Distribution System hydraulic model and setup the existing 2022 and 2032 water models in the current release of InfoWater Pro(GIS-based) water modeling software. These models will be utilized in the impact fee model.

2. Add waterlines and facilities in model to reflect existing distribution system.

3. Update the demand and population spreadsheets, based on existing and projected water usage and land use assumptions as provided by the City.

4. Review, update, and add where necessary capital projects eligible for recovery in the impact fee program.

5. Update the water impact fee models for the years 2022 and 2032 based on population and land use absorption provided by the City. Water models will be 72-hour extended period simulation models for maximum hourly demand conditions.

6. Update wastewater impact fee map using the major trunk system in formulation of the wastewater impact fee update and update the wastewater demand spreadsheet.

7. Inventory new and existing water and wastewater projects eligible for the impact fee program.

8. Update the 10-year capital improvement program, including opinions of probable costs and implementation schedule. The 10-year Capital Improvement Program will be based on land use and growth assumptions provided by the City.

9. For each project identified, analyze the capacity currently utilized, total capacity available, and the capacity utilized over the impact fee period.

10. Review of the existing living unit equivalent (LUE) for the impact fee. Update water meter equivalency based on latest AWWA Standards.

11. Calculate the water and wastewater impact fee based on the list of projects eligible for recovery, actual construction cost of existing projects, projected cost of

projects on the 10-year C.I.P, living unit equivalent and the utilized capacity of the facilities during the 10-year period.

12. Complete the Water and Wastewater Impact Fee Update Report. The Updated Land Use Assumptions provided by the City and will be inserted in front of the report. The impact fee update report will also include schedules, opinions of probable costs, capacity tabulations, capital improvement program exhibits, and the calculation of the maximum water and wastewater impact fee.

13. Coordinate information and findings with City staff.

14. Attend up to four (4) meetings to discuss project approach, project identification, study findings, interim reports and final conclusions and recommendations.

15. Make presentation to the Impact Fee Advisory Committee.

16. Make presentation to the City Council for adoption of the Impact Fee Update.

17. Establish schedule for City staff for adoption of fee by Council.

Part B: <u>Deliverables</u>

Printing of reports, and maps for review by the City and for final use by the City.

1. Deliver two (2) hardcopies and one (1) electronic PDF file of the Preliminary Water and Wastewater Master Plan Reports, and Impact Fee Update Report for City review.

2. Deliver two (2) hardcopies and one (1) electronic PDF file of the Final Water and Wastewater Master Plan Reports, and Impact Fee Update Report for the City's use.

Part C: <u>Terms and Conditions for Electronic File Transfers</u>

Electronic files are transmitted on the terms and conditions below:
By opening, accessing, copying or otherwise using the transmitted electronic files, the user accepts these terms and conditions.

1. The electronic files are compatible with the following software packages operating on a PC using Windows operating systems:

    - AutoCAD 2014-2018 .dwg Format
    - Innovyze InfoWater Pro
    - Microsoft Office Product File Formats (Word, Excel, etc..)
    - Adobe Acrobat (PDF)
    - Arc GIS Pro

2. Birkhoff, Hendricks & Carter, L.L.P. does not make any warranty as to the compatibility of these files beyond the specified release of the above stated software.

3. Because data stored on electronic media can deteriorate undetected or be modified, Birkhoff, Hendricks & Carter, L.L.P. will not be held liable for completeness or correctness of electronic media.

4. The electronic files are instruments of our service. Where there is a conflict between the hard copy drawings and the electronic files, Birkhoff, Hendricks & Carter, L.L.P.'s hard copy file will govern in all cases.

5. Electronic files may only be modified in accordance with the Texas Engineering Practice Act for modifying another Engineer's design.

Part D: <u>Information to be provided by the City, if available</u>

The following information is to be provided by the City, if available

1. Current street right-of-way maps
2. Current parcels maps
3. Current water and wastewater system maps
4. Current 2-foot contours (from NCTCOG files)
5. Current aerial photographs of planning area (from NCTCOG files)
6. Current City limits, future land use plan and current zoning maps
7. Existing, 10-year and Buildout residential population and non-residential land use assumptions by Planning Areas / Traffic Survey Zones.
8. Hourly flow meter and elevated storage tank level records (SCADA in Excel) year 2020. This information is to be utilized in the Water Demand Analysis.
9. Monthly billing records for year 2021 identifying residential vs non-residential billings.
10. Provide construction, engineering, construction inspection and easement cost data for projects constructed since last update.
11. All meetings and publishing of public notices shall be completed by the City.

EXHIBIT B
SCHEDULE

Notice to Proceed (NTP).....To be Determined

Update Impact Fee Report.....5 Months after NTP

Presentations and Hearings.....6-8 Months after NTP

EXHIBIT C
COMPENSATION

Compensation for Engineering Services under Exhibit A shall be on a lump sum basis in the amount of $38,180.00. Invoices will be posted monthly based upon percent of work completed and payment is due within 30 calendar days of invoice.

The maximum overall fee established herein shall not be exceeded without written authorization from the City, based on increased scope of services.

City of Ovilla

Ovilla City Council

AGENDA ITEM REPORT

Item 7

Meeting Date: June 13, 2022 Department: Administration

☒Discussion ☒Action Budgeted Expense: ☐ YES ☐NO ☒N/A

Submitted By: Staff

Reviewed By: ☒ City Manager ☒ City Secretary ☒City Attorney

☒ Finance Director ☐ Other:

AGENDA ITEM:
ITEM 7. DISCUSSION/ACTION – Consideration of and action on the appointment of the Planning and Zoning Commission and one ad hoc member to serve as an Ovilla Impact Fee Advisory Committee to conduct the Water and Wastewater Impact Fee Study Update for the City of Ovilla in conjunction with Birkhoff, Hendricks and Carter, LLP and direct staff as necessary.
Attachments:
1. Excerpt of Chapter 395, Local Government Code
Discussion / Justification:
Background: The City's current Water and Wastewater Impact Fee Study last update was completed in March 2017 when the city entered into an agreement with Birkhoff, Hendricks & Carter, LLP, to review the last impact fee report and prepare updates based on capital projects, population and updated land use with the completion and approval of the Comprehensive Land Use Plan in May 2022 to develop a new impact fee review. Under Chapter 395 of the Local Government Code, the Ovilla City Council shall appoint an Advisory Committee for this update, which can permit the City's Planning & Zoning Commission to act in the Advisory Committee capacity. This also requires at least one representative of the real estate, development, or building industry who is not an employee or an official of a political subdivision or government entity. If no such representative is a member of the Planning and Zoning Commission, then one may be appointed as an ad hoc voting member of the Planning and Zoning Commission when acting as the Advisory Committee. Staff advises that MS Windy Zabojnik is willing to serve as the ad-hoc member to this committee if approved by Council.
Recommendation / Staff Comments:
Staff Recommends: Approval
Sample Motion(s):
I move to appoint the Planning and Zoning Commission and Windy Zabojnik (as the ad hoc member) to serve as an Ovilla Impact Fee Advisory Committee to conduct the Water and Wastewater Impact Fee Study Update for the City of Ovilla with the support of Birkhoff, Hendricks and Carter, LLP.

Sec. 395.055. NOTICE OF HEARING ON AMENDMENTS TO LAND USE ASSUMPTIONS, CAPITAL IMPROVEMENTS PLAN, OR IMPACT FEE. (a) The notice and hearing procedures prescribed by Sections 395.044(a) and (b) apply to a hearing on the amendment of land use assumptions, a capital improvements plan, or an impact fee.

(b) The notice of a hearing under this section must contain the following:

(1) a headline to read as follows:

"NOTICE OF PUBLIC HEARING ON AMENDMENT OF IMPACT FEES"

(2) the time, date, and location of the hearing;

(3) a statement that the purpose of the hearing is to consider the amendment of land use assumptions and a capital improvements plan and the imposition of an impact fee; and

(4) a statement that any member of the public has the right to appear at the hearing and present evidence for or against the update.

Added by Acts 1989, 71st Leg., ch. 1, Sec. 82(a), eff. Aug. 28, 1989. Amended by Acts 2001, 77th Leg., ch. 345, Sec. 7, eff. Sept. 1, 2001.

Sec. 395.056. ADVISORY COMMITTEE COMMENTS ON AMENDMENTS. The advisory committee created under Section 395.058 shall file its written comments on the proposed amendments to the land use assumptions, capital improvements plan, and impact fee before the fifth business day before the date of the public hearing on the amendments.

Added by Acts 1989, 71st Leg., ch. 1, Sec. 82(a), eff. Aug. 28, 1989.

Sec. 395.057. APPROVAL OF AMENDMENTS REQUIRED. (a) The political subdivision, within 30 days after the date of the public hearing on the amendments, shall approve or disapprove the amendments of the land use assumptions and the capital improvements plan and modification of an impact fee.

(b) An ordinance, order, or resolution approving the amendments to the land use assumptions, the capital improvements plan, and imposition of an impact fee may not be adopted as an emergency measure.

Added by Acts 1989, 71st Leg., ch. 1, Sec. 82(a), eff. Aug. 28, 1989.

Sec. 395.058. ADVISORY COMMITTEE. (a) On or before the date on which the order, ordinance, or resolution is adopted under Section 395.042, the political subdivision shall appoint a capital improvements advisory committee.

(b) The advisory committee is composed of not less than five members who shall be appointed by a majority vote of the governing body of the political subdivision. Not less than 40 percent of the membership of the advisory committee must be representatives of the real estate, development, or building industries who are not employees or officials of a political subdivision or governmental entity. If the political subdivision has a planning and zoning commission, the commission may act as the advisory committee if the commission includes at least one representative of the real estate, development, or building industry who is not an employee or official of a political subdivision or governmental entity. If no such representative is a member of the planning and zoning commission, the commission may still act as the advisory committee if at least one such representative is appointed by the political subdivision as an ad hoc voting member of the planning and zoning commission when it acts as the advisory committee. If the impact fee is to be applied in the extraterritorial jurisdiction of the political subdivision, the membership must include a representative from that area.

(c) The advisory committee serves in an advisory capacity and is established to:

(1) advise and assist the political subdivision in adopting land use assumptions;

(2) review the capital improvements plan and file written comments;

(3) monitor and evaluate implementation of the capital improvements plan;

(4) file semiannual reports with respect to the progress of the capital improvements plan and report to the political subdivision any perceived inequities in implementing the plan or imposing the impact fee; and

(5) advise the political subdivision of the need to update or revise the land use assumptions, capital improvements plan, and impact fee.

(d) The political subdivision shall make available to the advisory committee any professional reports with respect to developing and implementing the capital improvements plan.

(e) The governing body of the political subdivision shall adopt procedural rules for the advisory committee to follow in carrying out its duties.

City of Ovilla

Ovilla City Council

AGENDA ITEM REPORT

Item 8

Meeting Date: June 13, 2022 Department: Police Department

☒Discussion ☒Action Budgeted Expense: ☒YES ☐NO ☐N/A

Submitted By: Staff

Reviewed By: ☒ City Manager ☒ City Secretary ☐City Attorney

☐ Finance Director ☒ Other: Chief Bennett

AGENDA ITEM:
ITEM 8. DISCUSSION/ACTION - Consideration of and action on the police department renovation including the possibility of awarding a bid for the renovation or directing staff to move forward with drafting a new plan of action for the renovation project.
Attachments:
1. Bid for Police Renovation
Discussion / Justification:
Staff has gone out to bid for the Police Department twice. The first RFP received no responses. The second bid opening was held on Monday, June 6, 2022, at 2:00 p.m. The only bid turned into the city was from DSA Contractors for $424,496.00. This amount exceeds the $300,000.00 budget amount that has been approved by the MDD. Staff has reached out to the contractor who bid on the project for help with cost-cutting measures that can be done that could potentially bring the cost to or below the budgeted amount. Staff will present a change order to council as soon as possible.
Recommendation / Staff Comments:
Staff Recommends: Awarding the bid for renovation of the Police Department
Sample Motion(s):
I move to approve/deny a bid by DSA Contractors in the amount of $424,496.00 for renovations to the Police Department.

DSA CONTRACTORS
BUILIDING THE FUTURE WHILE RESTORING THE PAST

Cover Sheet

OVILLA POLICE DEPARTMENT

RENOVATION/ALTERATION

PROJECT 2022

RFP 22-03

105 S COCKRELL HILL ROAD

OVILLA, TEXAS 75154

DSA CONTRACTORS
BULIDING THE FUTURE WHILE RESTORING THE PAST

OVILLA POLICE DEPARTMENT

RENOVATION/ALTERATION

PROJECT 2022

RFP 22-03

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DSA CONTRACTORS
BULIDING THE FUTURE WHILE RESTORING THE PAST

OVILLA POLICE DEPARTMENT RENOVATION/ALTERATION

RFP 22-03

Cover Letter

DSA Contractors has taken exceptionally great care creating an estimate for the City of Ovilla RFP 22-03. We are proud to present the Ovilla Police Department RFP 22-03 itemized estimate for review and approval. The estimate is good for 60 calendar days (June 6, through August 5th, 2022).

Total Cost $ 424,496

Estimate Summary on next page.

Name Chuck Ehiobu

Signature Chukie Ehiobu (Jun 3, 2022 17:30 CDT)

Title President

Phone 469-449-3901

Email chuck@dsacontractors.net

Jun 3, 2022

SECTION 00 41 01
PROPOSAL

CITY OF OVILLA
POLICE DEPARTMENT IMPROVEMENTS

TO: City of Ovilla
105 Cockrell Hill
Ovilla, Texas 75154

Pursuant to the foregoing Bidding Requirements and General Requirements, the undersigned Bidder hereby proposes to do all the work and to furnish all necessary superintendence, labor, machinery, equipment, tools and materials and to complete all work upon which he bids as provided by the attached specifications and shown on the plans, and binds himself on the accompanying forms, for performing and completing the said work within the required time, and furnish all required guarantees, for the prices to-wit:

ITEM	QUANTITY	UNITS	DESCRIPTION	TOTAL
P.1	1	L.S.	For furnishing all insurance, bonds and warranties complete in place, the sum of: NA Dollars _____ Cents ($ _____) per lump sum	$ _____
P.2	1	L.S.	For furnishing all materials, labor, supervision, tools, equipment, and all incidentals to construct improvements to the police station, complete in place, the sum of: Three Hundred Fifty Nine Thousand One Hundred Fifty Two Dollars Zero Cents ($ 359,152.00) per lump sum	$ 359,152.00

ITEM	QUANTITY	UNITS	DESCRIPTION	TOTAL
P.3	1	L.S.	For furnishing all materials, labor, supervision, tools, equipment, and all incidentals to construct records retention room, complete in place, the sum of: Sixty Five Thousand Three Hundred Forty Four Dollars zero Cents ($ 65,344.00) per lump sum	$ 65,344.00
			TOTAL AMOUNT OF BID (Bid Item P.1-P.3)	$ 424,496.00

The undersigned bidder hereby declares that he has visited the site of the work and has carefully examined the Contract Documents pertaining to the work covered by the above bid, and he further agrees to commence work within ten (10) days after the date of the work order and that the number of consecutive calendar days after the date of the work order required to substantially complete the work on which he has bid is:

148

Calendar Days

The undersigned bidder understands and agrees that all work not provided for in the above proposal items but called for in the Contract Documents is subsidiary to these proposal items and that the cost of this subsidiary work and has been included in the above prices.

Enclosed with this proposal is a certified check for PLEASE SEE ATTACHED BID BOND dollar ($_____), or a proposal bond in the sum of _____, which it is agreed shall be collected and retained by the Owner as liquidated damages in the event this proposal is accepted by the Owner within sixty (60) days after the bids are received and the undersigned fails to execute the contract required bond for the Owner within ten (10) days after date said proposal is accepted. Otherwise, said check or bond will be returned to the undersigned.

Addenda Received:
None

Bidder: DSA Contractors
(Company)

By: Chuck Ehiobu
(Company Officer)

Office Held: President

Address: 2500 Texas Dr Suite 101

City: Irving

County: Dallas

State: Texas Zip: 75062

Phone: 469-449-3901

DSA CONTRACTORS

ESTIMATE SUMMARY

Project : **City of Ovilla PD Reno - RFP 22-03**
Address : 105 S Cockrell Hill RD
Ovilla TX 75154
Architect :

Date : June 6, 2022
Floor Level : 1
Square Footage : 224
RECORDS ROOM

NO.	AIA CAT	DESCRIPTION	Current Estimate AMOUNT	$ PER SF	REMARKS
1		Demolition	$0	$0.00	Demo per numbered notes A1.9
2		Concrete	$21,092	$94.16	
3		Structural Steel	$0	$0.00	
4		Masonry	$0	$0.00	
5		Roofing	$0	$0.00	
6		Carpentry	$15,291	$68.26	
7		Millwork	$0	$0.00	
8		Doors, Frames, Hdw	$0	$0.00	
9		Glass & Glazing	$0	$0.00	
10		Drywall & Acoustical	$0	$0.00	
11		Flooring & Base	$0	$0.00	
12		Painting & Wallcoverings	$1,293	$5.77	
13		Specialties	$0	$0.00	
14		Fire Sprinklers	$0	$0.00	
15		Plumbing	$0	$0.00	
16		Mechanical	$11,750	$52.46	
17		Electrical	$5,500	$24.55	
18		Fire Alarm	$0	$0.00	
19		Permit Fees	$0	$0.00	
20		Rubbish	$0	$0.00	
21		Final Clean	$0	$0.00	
22					
23	0.00%	Contingency Allowance	$0	$0.00	
24					
25		**Subtotal (Hard Costs)**	$54,926	$245.20	
26		General Conditions	$4,478	$19.99	
27					
28		**Subtotal**	$59,404	$265.19	
29	10.00%	Fee	$5,940	$26.52	
30					
31		**Subtotal**	$65,344	$291.71	
32	0.00%	Insurance	$0	$0.00	
33					
34		**Construction Total**	$65,344	$291.71	
35	0.00%	Sales Tax	$0	$0.00	
36					
		GRAND TOTAL	**$65,344**	**$291.71**	

Scope of Work:

Exclusions:

Plans & engineering, voice/data cabling, security wiring/devices.

DSA CONTRACTORS

ESTIMATE SUMMARY

Project : **City of Ovilla PD Reno - RFP 22-03**
Address : 105 S Cockrell Hill RD
Ovilla TX 75154
Architect :

Date : June 6, 2022
Floor Level : 1
Square Footage : 3,700

NO.	AIA CAT	DESCRIPTION	Current Estimate AMOUNT	$ PER SF	REMARKS
1		Demolition	$17,134	$4.63	Demo per numbered notes A1.9
2		Concrete	$9,040	$2.44	Asphalt patch and interior concrete trench cut and infill
3		Structural Steel	$0	$0.00	
4		Masonry	$11,800	$3.19	Infill Gar Doors and relocate (1) man door
5		Roofing	$1,800	$0.49	Roof patches as necessary
6		Carpentry	$13,775	$3.72	Misc Carpentry and Beam per note 12/A2.0 New attic access ladder rated to 350lbs and fire rated.
7		Millwork	$9,175	$2.48	Patrol room Cabinets
8		Doors, Frames, Hdw	$16,400	$4.43	New Doors, Frame and Hardware per door schedule
9		Glass & Glazing	$9,900	$2.68	level 3 bullet resistant transaction window (1) new ext window to match existing
10		Drywall & Acoustical	$24,880	$6.72	new walls, ceilings and level 3 ballistic wall in lobby.
11		Flooring & Base	$22,578	$6.10	Flooring per A4.1
12		Painting & Wallcoverings	$19,171	$5.18	Paint all walls, ceiling, door frames.
13		Specialties	$2,046	$0.55	All new toilet accessories and mop sink FRP
14		Fire Sprinklers	$0	$0.00	NA
15		Plumbing	$26,300	$7.11	Per P.01, P.1.1, P.2.1
16		Mechanical	$42,250	$11.42	Per M.01, M.1.1, M.2.1
17		Electrical	$64,500	$17.43	Per E0.1, E0.2, E1.1, E2.1, E3.1. EXCLUDES Oncor wire from transformer to new meter.
18		Fire Alarm	$0	$0.00	
19		Permit Fees	$1,930	$0.52	
20		Rubbish	$5,000	$1.35	
21		Final Clean	$1,620	$0.44	
22					
23	0.00%	Contingency Allowance	$0	$0.00	
24					
25		**Subtotal (Hard Costs)**	$299,299	$80.89	
26		General Conditions	$27,203	$7.35	
27					
28		**Subtotal**	$326,502	$88.24	
29	10.00%	Fee	$32,650	$8.82	
30					
31		**Subtotal**	$359,152	$97.07	
32	0.00%	Insurance	$0	$0.00	
33					
34		**Construction Total**	$359,152	$97.07	
35	0.00%	Sales Tax	$0	$0.00	
36					
		GRAND TOTAL	**$359,152**	**$97.07**	

Scope of Work:

Exclusions:

Plans & engineering, voice/data cabling, security wiring/devices.

DSA CONTRACTORS
BULIDING THE FUTURE WHILE RESTORING THE PAST

Qualification Summary

DSA Contractors specializes in Interior Renovations. Our leadership communicates well which excels in meeting our client's needs and expectations. We have outstanding resources to provide powerful people for the City of Ovilla Police Department Renovation.

Renovating the Ovilla Police Department can seem complicated, but with the right team this project will progress effortlessly.

Our Key Team Members are:

Chuck Ehiobu President

Tim Ebel Estimator / Project Manager

Salvador Ojeda Superintendent

Resumes enclosed.

DSA Contractors is the GC for this project because

1) We have experienced leadership to plan, procure and execute the work. Especially in occupied facilities.

2) Our sub contract base is skilled in these specific types of projects.

3) We follow through to bring the project to completion and successfully turn it over to satisfied customers.

We value our clients desire to create an interior space to fit their style. We furnish and install the highest end products and are also cognizant of budget if needed. Regardless of the finish schedule, we offer a great value in the complete project, Quality, Schedule, Cost and Safety.

DSA Contractors offers expertise as one would expect of an experienced General Contractor. We do very well in project planning, submittals, procurement, implementation and closeout. Thank you for considering DSA Contractors to be your City of Ovilla Police Department General Contractor. We are excited to earn your business.

Respectfully,

Tim Ebel,

Project Manager, DSA Contractors

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 04/01/2022

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Express Insurance Agency P.O. Box 850364 Mesquite TX 75185	**CONTACT NAME:** Tony Oyibo **PHONE (A/C, No, Ext):** (972) 840-3288 **FAX (A/C, No):** **E-MAIL ADDRESS:** tonyoyibo@expressinsurance1.com
INSURED COWBOYS ROOFING, LLC 7916 CALDELANA WAY FORT WORTH TX 76131	**INSURER(S) AFFORDING COVERAGE** — **NAIC #** INSURER A : ALIGN GENERAL INSURER B : INFINITY INS CO INSURER C : TEXAS MUTUAL INS CO INSURER D : NAVIGAROR INS CO INSURER E : INSURER F :

COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	[X] COMMERCIAL GENERAL LIABILITY [ ] CLAIMS-MADE [X] OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: [X] POLICY [ ] PRO-JECT [ ] LOC [ ] OTHER:	Y	Y	3027206A	06/21/2021	06/21/2022	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG [ ]	$ 1,000,000 $ 100,000 $ 5,000 $ 1,000,000 $ 2,000,000 $ 2,000,000 $
B	AUTOMOBILE LIABILITY [X] ANY AUTO [X] OWNED AUTOS ONLY [X] SCHEDULED AUTOS [X] HIRED AUTOS ONLY [X] NON-OWNED AUTOS ONLY	Y	Y	542-86002-3018-001	04/29/2021	04/29/2022	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) [ ]	$ 1,000,000 $ $ $ $
	[ ] UMBRELLA LIAB [ ] OCCUR [ ] EXCESS LIAB [ ] CLAIMS-MADE [ ] DED [ ] RETENTION $						EACH OCCURRENCE AGGREGATE [ ]	$ $ $
C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y/N [N] (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	N/A	Y	0001323359	04/23/2021	04/23/2022	[X] PER STATUTE [ ] OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ 1,000,000 $ 1,000,000 $ 1,000,000
D	RENTAL EQUIPMENT COVERAGE "SPECIAL FORM" REQUIRED	Y	Y	QN106468966	11/24720221	11/27/2022	LIMIT PER ITEM	$50,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

CERTIFICATE HOLDER

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

TONY OYIBO

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DSA CONTRACTORS
BUILIDING THE FUTURE WHILE RESTORING THE PAST

Qualification Summary

DSA Contractors is absolutely able and willing to provide all the services requested within RFP 22-03 in compliance with all applicable laws, rules, and regulations.

DSA CONTRACTORS
BULIDING THE FUTURE WHILE RESTORING THE PAST

EXPERIENCE

DSA Contractors Leadership has over 40 years commercial construction experience with 20 years specialized in commercial interiors and building renovations. Tim Ebel is our Project Manager who is well versed with each trade's responsibility and effective sequence of work. Our team has recently completed renovations for Unity One Bank and Tarrant County Community Development.

Throughout the years Tim Ebel has project managed several renovations with various projects value over $2M. Experienced projects listed on enclosed Resume.

DSA Contractors has successfully completed every contract. No contracts have been terminated and we have not been involved in any litigation.

4637 Gila Bend Lane
Fort Worth TX 76137
817.269.3437
Tim.ebel@att.net

TIM EBEL

WORK HISTORY

ESTIMATOR/PM, COWBOYS ROOFING LLC dba DSA Contractors, IRVING, TEXAS
December 2020 - Present

PROJECT MANAGER, TARRANT CONSTRUCTION SERVICES, LTD., FORT WORTH, TEXAS
October 2008 – March 2020

PROJECT MANAGER, NEW WORLD INDUSTRIES, FORT WORTH, TEXAS
July 2005 – August 2008

SUPERVISOR, ROBERTSON HAY & WALLACE, PORTLAND, OREGON
September 1999 – May 2005

PROFESSIONAL ACHIEVEMENTS

SUCCESSFUL PROJECT MANAGEMENT FOR:

DFW NEW BEGINNINGS, BEDFORD TEXAS
$5M, 50k sq. ft. transform movie theater into church

NORTH TEXAS NEUROSURGICAL, FORT WORTH TEXAS
$2M, 24k sq. ft. medical clinic interior renovation

XTO ENERGY, FORT WORTH TEXAS
$2M, 39k sq. ft. professional offices interior renovation

ORTHOPEDIC SPECIALTY ASSOCIATES, FORT WORTH TEXAS
$1.9M, 23k sq. ft. medical clinic interior renovation

BOSCO-MILLAGAN, OREGON
$3M, 21k sq. ft. restoration of 1880's Architectural Heritage Foundation

BONNEVILLE DAM, WASHINGTON
$30M, 2 miles of Juvenile Fish Bypass System

ST. VINCENT HOSPITAL, OREGON
$22M, 7-story parking structure

PORTLAND INTERNATIONAL AIRPORT, OREGON
$120M, Entrance and parking expansion

MOUNT RAINIER HIGHWAY, WASHINGTON

$45M, 10 miles Mountain road expansion

EIELSON AIR FORCE BASE, ALASKA

$28M, 588k sq. ft. Temporary housing

SKILLS

- Creative Problem Solver, Active Team Player, Excellent Communicator and Proven Leader
- Experienced in Blue Beam software
- Experienced in Microsoft Project
- Proficient in Microsoft Office Suite
- Specialized in Commercial, Health Care, Telecommunications, and Industrial construction
- Recognized and Prepared Meeting Facilitator

EDUCATION

PROJECT MANAGEMENT INSTITUTE (PMI)

Doulos Project Management Training (PMI Registered Education Provider), 2006

TURNER CONSTRUCTION COMPANY

Construction Management Educational Program, 2005

ASSOCIATED GENERAL CONTRACTORS OF AMERICA

Supervisory Training Program, 2001

PROFESSIONAL REFERENCES

TIM SCOTT

Owner, Tarrant Construction Services, LTD.
Office: 817.335.8274 Cell: 817.999.6290
tim@tarrantconstruction.com

MIKE MCPHERSON

Owner, TECS Electric
Office: 817.336.8327 Cell: 817.996.8603
mike@tecselectricltd.com

SHAWN MORGAN

Owner, 4M Drywall/Acoustical
Office: 817.831.7811 Cell: 817.343.6495
smorganfourm@yahoo.com

TECS Electric, Ltd

1836 Barnett Drive

Weatherford, Texas 76087

Re: Tim Ebel

TECS Electric has enjoyed working with Tim on several projects ranging from 20,000 sf tenant medical office building finish outs to a 47,000 sf ground up church project. His attention to detail in scheduling and scope verification makes his projects flow smooth from start to finish. TECS Electric profit margin is higher on projects that Tim manages.

Tim is fair and honest. He handles conflict with professionalism and integrity. He leads his team members to operate at a level of excellence. He is very knowledgeable and understands the importance to keep his team members informed. We have respected the way Tim manages projects. Tim is an asset and will be valued wherever he lands.

Please feel free to call if you have any questions.

Sincerely,

Mike McPherson

President

Office: 817-336-8327

Cell: 817-996-8603

ROBERTSON, HAY & WALLACE, CONTRACTORS
1801 S.E. GRAND AVENUE • PORTLAND, OREGON 97214
(503) 234-6497 • FAX (503) 234-1678

RHW

April 25, 2005

Re: Tim Ebel

Tim has been a union carpenter at Robertson, Hay & Wallace since August 1999, and has most recently served our firm as a Project Superintendent on updates to seven cell sites in Washington State. He was project superintendent on the $2.82 million Vancouver, WA telecommunications head-end hub we completed for Comcast in April 2001.

We have found him to be honest and conscientious. He works well with subcontractors and others on his crews. We have appreciated the ease with which Tim approaches management should he need clarification or information on project scope. He is attentive to detail and anxious to please.

Tim is organized and is always helpful in providing documentation for project closeout manuals on his jobs. He understands the importance of timely compliance with punch list items and works hard to complete his projects under budget. We have valued his service.

If you have any questions, please feel free to call.

Yours truly,

Ian F. Robertson, Jr.

Ian F. Robertson, Jr.
Owner/President
Phone: 503.234.6497

UNTHealth
Physician Group of UNT Health Science Center

February 23, 2011

Tim Scott
President
Tarrant Construction Services, LTD.
2225 W Petersmith St.
Fort Worth, TX 76102

Dear Mr. Scott,

I have worked with your company on two projects at Harris Hospital over the past year. Tarrant Construction built-out our OB/GYN clinic space in the Klabuza Tower and we are now in the final phase of construction of our Bone and Joint Institute in the Ben Hogan building.

I want you to know how pleased we are with the fit and finish of each of these projects. We are very proud of our spaces and feel that they support a positive image for UNT Health. We want our staff and providers to have very functional space and our patients to have comfortable space.

Actually there are two constants with these two projects. Tarrant Construction being the contractor, but maybe more importantly - as the face of your company, for both of our projects, we have been blessed to have Tim Ebel leading your construction teams. I have been part of several very large medical constructions project in various part of the country and in each I've worked with highly qualified building professionals. In my opinion Tim is at the top of that group. He is obviously knowledgeable and an experienced construction manager, but more importantly for me as a client, he absolutely understands our concerns about fit/finish; budget and project time-line.

Thank you for your commitment to excellence as a business owner, and thank you for providing us the opportunity to work with Tim on our two projects.

Best Regards,

Robert M. Carlson
Executive Administrative Director
Specialty Care Division

DSA CONTRACTORS
BULIDING THE FUTURE WHILE RESTORING THE PAST

Capability to Perform

DSA Contractors approach to the City of Ovilla Police Department Renovation involves exceptional project management, communication with City of Ovilla Secretary, timely submittals, material procurement, coordinated sequence of work, building inspections and closeout documents. We efficiently manage tasks to prepare for the next step. Our schedules are prepared with great care and sequenced so each trade is prepared to perform as efficiently as possible. Our superintendent is a maestro and is instrumental in coordinating the flow of work.

Attached is project schedule with a task list for the following three areas:

1) Records Room
2) Exterior Building New Service
3) Police Department Renovation

Ordering materials is key to maintain schedule so a quick submittal turnaround will be encouraged. Our electrician confirms Key materials (disconnects, panel, and meter base) are available within our scheduled time frame. The HVAC equipment is available with the exception of the (2) Carrier Condensing Units. They are 16-18 weeks lead time. This will be our challenge to complete within our 148-day calendar schedule.

DSA will provide City of Ovilla weekly status updates through onsite or virtual meetings. Our schedule includes City of Ovilla responsibilities ie. Moving into records room and submitting a request to Oncor for new service. Our electrician can assist if needed.

Building the Records room will require us to build the new Support room 108 to install the new L1 panel. Temp power will energize Panel L1 during the Records room construction phase. The building will be without power for about an hour during the temp power cut over. This scope to be clearly communicated with City of Ovilla PD and performed at a time approved by PD.

New Service will require a trench through the parking lot from the power pole along the South side of the building to the new service location. This too shall be clearly communicated as it will eliminate a few parking spaces and close off one entrance for about 2 weeks. Safety signs and barricades will be used to stop the flow of traffic in the parking lot. The new power cut over will be clearly communicated with ONCOR, City of Ovilla PD and DSA. A plan will be created to minimize loss of power to the building. This will allow PD to make any necessary precautions for loss of power.

DSA CONTRACTORS
BULIDING THE FUTURE WHILE RESTORING THE PAST

Police Department Renovation will require clear communication between DSA and PD. Our anticipation is to demo the restrooms and simultaneously build the new offices. Once the back of house is complete, we will address the new lobby. The patrol room will have to be discussed on how to work around work stations.

The noise impact will be kept to a minimum however, it wont always be office friendly. We will touch base with City Secretary to inform of disruptive noise.

It is our plan to adhere to our proposed schedule (start date can be adjusted) and keep the City of Ovilla PD informed on progress. Our team is skilled in each trade and is comfortable working in an occupied space. We also understand some areas are sensitive and will need to be well planned to work in such areas. IE Chief of Police office and evidence room, etc.

Respectfully,

Tim Ebel,

Project Manager, DSA Contractors

CITY OF OVILLA POLICE DEPT RENOVATION

ID	Task Name	Duration	Start	Finish	Predecessors	Resource Names	W
1	**City of Ovilla Police Dept**	**107 days**	**Thu 6/23/22**	**Fri 11/18/22**			
2	NTP	1 day	Thu 6/23/22	Thu 6/23/22			
3	CONTRACT	1 day	Thu 6/23/22	Thu 6/23/22			
4	**SUBMITTALS**	**15 days**	**Thu 6/23/22**	**Wed 7/13/22**			
14	**PROCURMENT**	**22 days**	**Thu 7/14/22**	**Fri 8/12/22**			
15	Elec	15 days	Thu 7/14/22	Wed 8/3/22	5		
16	HVAC	15 days	Thu 7/14/22	Wed 8/3/22	6		
17	Plumbing	15 days	Thu 7/14/22	Wed 8/3/22	7		
18	Doors	15 days	Thu 7/14/22	Wed 8/3/22	8		
19	Paint	15 days	Thu 7/14/22	Wed 8/3/22	9		
20	Flooring	15 days	Thu 7/14/22	Wed 8/3/22	10		
21	Millwork	22 days	Thu 7/14/22	Fri 8/12/22	11		
22	Ballistic wall sheets	20 days	Thu 7/14/22	Wed 8/10/22	12		
23	Ballistic window	20 days	Thu 7/14/22	Wed 8/10/22	13		
24	**Records Room**	**24 days**	**Thu 6/23/22**	**Tue 7/26/22**			
25	Sawcut excavate & concrete	5 days	Thu 6/23/22	Wed 6/29/22			
26	Frame incl room 108	7 days	Tue 6/28/22	Wed 7/6/22	25FS-2 days		
27	Mechanical / Electrical	2 days	Thu 7/7/22	Fri 7/8/22	26		
28	Drywall	2 days	Mon 7/11/22	Tue 7/12/22	27		
29	Siding/Roofing	4 days	Wed 7/13/22	Mon 7/18/22	28		
30	Paint	3 days	Tue 7/19/22	Thu 7/21/22	29		
31	lighting HVAC	3 days	Fri 7/22/22	Tue 7/26/22	30		
32	Move Records	4 days	Wed 7/27/22	Mon 8/1/22	31	Ovilla PD	
33	**EXTERIOR NEW ELEC SRVC**	**32 days**	**Thu 6/23/22**	**Fri 8/5/22**			
34	Schedule ONCOR to request New Service	0 days	Thu 6/23/22	Thu 6/23/22		Ovilla PD	
35	Schedule ONCOR to pull new wire.	30 days	Thu 6/23/22	Wed 8/3/22	34	Elec	
36	Trench new service conduit	5 days	Thu 6/23/22	Wed 6/29/22	34		
37	Inspection	2 days	Thu 6/30/22	Fri 7/1/22	36		
38	Backfill and patch parking lot	5 days	Mon 7/4/22	Fri 7/8/22	37		

Project: RFP 22-03
Date: 6-6-2022
Created by: Tim Ebel

Task		Inactive Summary	
Split		Manual Task	
Milestone		Duration-only	
Summary		Manual Summary Rollup	
Project Summary		Manual Summary	
External Tasks		Start-only	
External Milestone		Finish-only	
Inactive Task		Progress	
Inactive Milestone		Deadline	

CITY OF OVILLA POLICE DEPT RENOVATION

ID	Task Name	Duration	Start	Finish	Predecessors	Resource Names	W
39	Install new CT Enclosure & disconnects.	5 days	Mon 7/11/22	Fri 7/15/22	38		
40	ONCOR Pull wire for new service	1 day	Thu 8/4/22	Thu 8/4/22	35,39		
41	New power cut over - requires building loss of power.	1 day	Fri 8/5/22	Fri 8/5/22	40		
42	**OFFICE RENOVATION**	**79 days**	**Tue 8/2/22**	**Fri 11/18/22**			
43	Demo	10 days	Tue 8/2/22	Mon 8/15/22	32		
44	Frame walls, install door frames	9 days	Tue 8/16/22	Fri 8/26/22	43		
45	Bullet resistant wall panel	2 days	Thu 8/25/22	Fri 8/26/22	44FS-2 days,22		
46	Bullet resistant window	2 days	Mon 8/29/22	Tue 8/30/22	45,23		
47	MEP Wall Rough	12 days	Thu 8/25/22	Fri 9/9/22	44FS-2 days		
48	inspcetions	3 days	Mon 9/12/22	Wed 9/14/22	47		
49	Gyp board	4 days	Thu 9/15/22	Tue 9/20/22	48		
50	Tape and bed and paint 1 coat	6 days	Wed 9/21/22	Wed 9/28/22	49		
51	RR Tile	3 days	Tue 9/27/22	Thu 9/29/22	50FS-2 days		
52	Millwork	5 days	Thu 9/29/22	Wed 10/5/22	50		
53	Plumbing fixtures	3 days	Tue 10/4/22	Thu 10/6/22	50FS-2 days,51		
54	Electrical Fixtures	6 days	Tue 9/27/22	Tue 10/4/22	50FS-2 days		
55	2nd coat paint	7 days	Mon 10/3/22	Tue 10/11/22	50FS+2 days		
56	Flooring	4 days	Wed 10/12/22	Mon 10/17/22	55		
57	MEP Trim	3 days	Tue 10/18/22	Thu 10/20/22	56		
58	Building Final Inspections	3 days	Fri 10/21/22	Tue 10/25/22	57		
59	Substantial Completion	0 days	Tue 10/25/22	Tue 10/25/22	58		
60	Punchlist walk through	1 day	Wed 10/26/22	Wed 10/26/22	59		
61	Punchlist	7 days	Thu 10/27/22	Fri 11/4/22	60		
62	Closeout Docs and Warranties	10 days	Mon 11/7/22	Fri 11/18/22	61		
63	Final Completion	0 days	Fri 11/18/22	Fri 11/18/22	62		

Project: RFP 22-03
Date: 6-6-2022
Created by: Tim Ebel

Task		Inactive Summary	
Split		Manual Task	
Milestone		Duration-only	
Summary		Manual Summary Rollup	
Project Summary		Manual Summary	
External Tasks		Start-only	
External Milestone		Finish-only	
Inactive Task		Progress	
Inactive Milestone		Deadline	

City of Ovilla

Ovilla City Council

AGENDA ITEM REPORT

Item 9

Meeting Date: June 13, 2022 Department: Administration

☒Discussion ☒Action Budgeted Expense: ☐YES ☐NO ☒N/A

Submitted By: Staff

Reviewed By: ☒ City Manager ☒ City Secretary ☒City Attorney

☐ Finance Director ☐ Other:

AGENDA ITEM:

ITEM 9. DISCUSSION/ACTION – Consideration of and action on the fiscal year 2022/2023 City of Ovilla Budget Calendar.

Attachments:

1. Proposed Budget Calendar

Discussion / Justification:

To assure staff and Council meet target dates in compliance with Truth-N-Taxation law for the creation of the fiscal year budget and the tax rate, staff has prepared a proposed Fiscal Year 2021-2022 Budget Calendar for consideration.

Certified taxable values from Dallas and Ellis Counties are expected on July 25, 2022.

Key Dates:

Monday, July 18- (Special Meeting) – Budget Workshop #1- Review General Fund, W&S

Thursday, July 21- (Special Meeting) - Budget Workshop #2- Review the remainder of the Funds.

Monday, July 25- (Special Meeting) – Budget Workshop #3

Monday, August 8- Regular Council Meeting – Regular Council Meeting at 6:30 p.m. to review preliminary determination of tax rate (Dallas, Ellis) and revisions directed to staff from previous two workshops, discuss preliminary tax rate, take record vote and set public hearing for August 15th

Monday, August 15- (Special Meeting) – 1st Public hearing at 6:00 p.m. on tax rate (and any budget revisions to discuss)

Monday, September 12- Regular Council Meeting - 2nd Public hearing at 6:00 p.m. on tax rate (if necessary), adopt budget and adopt tax rate/ratify tax rate.

Recommendation / Staff Comments:

Staff Recommends: Approval

Sample Motion(s):

I move to approve the proposed Budget Calendar for Fiscal Year 2021-2022 budget preparations as presented *OR* with presented revisions as noted.

City of Ovilla

Budget Calendar for FY2023

Date	Day	Time	Action	Participants
13-Jun-22	Monday	6:30 PM	FY2022-2023 Budget Calendar Presented to Council	Council, CM, Finance, Dept. Heads
June 14 thru June 29, 2021			City Manager conducts budget meetings with Department Heads	CM, Finance, Dept. Heads
July 11, 2022	Monday	6:30 PM	City Council Meeting	Council, CM, Finance, Dept. Heads
July 11, 2022	Monday		Post Notices for Workshop #1 and Workshop #2	City Secretary
July 18, 2022	Monday	5:00 PM	Budget Workshop #1 Review General Fund, W&S	Council, CM, Finance, Dept. Heads
July 21, 2022	Thursday	5:00 PM	MDD Joint Board Meeting-Review of Proposed Budget	MDD Board, Council, CM, Finance, Dept. Heads
July 21, 2022	Thursday	5:30 PM	EDC Joint Board Meeting- Review of Proposed Budget	EDC Board, Council CM, Finance, Dept. Heads
July 21, 2022	Thursday	6:00 PM	Budget Workshop #2- Review the remainder of the Funds.	Council, CM, Finance, Dept. Heads
July 25 thru July 29, 2022			Revisions made to proposed budget and prepare preliminary Tax Rate	CM, Finance
July 21, 2022	Thursday		Post Notice of City Council Meeting on July 25th.	City Secretary
July 25, 2022	Monday		Chief Appraisers Certify the approved Appraisal roll to all taxing units	Ellis County Appraisal District
July 25, 2022	Monday	5:30 PM	Budget Workshop #3	Council, CM, Finance, Dept. Heads
August 4, 2022	Thursday		Post Notice of City Council Meeting & MDD Meeting	City Secretary
August 8, 2022	Monday	5:00 PM	MDD Board Meeting-to Approve Proposed Budget	MDD Board, CM, Finance
August 8, 2022	Monday	6:30 PM	Regular City Council Meeting- Discuss Preliminary Tax Rate and take a record Vote on proposed Tax Rate. Schedule a Public Hearing for August 15th	Council, CM, Finance, Dept. Heads
August 8, 2022	Monday		Send Notice of Public Hearing to the newspaper	City Secretary
August 9, 2022	Tuesday		Rate decided at Aug 8th meeting, notify newspaper to publish Effective and Rollback tax Rates	City Secretary
August 9, 2022	Tuesday		Proposed Budget Filed with City Secretary	CM, Finance
August 9, 2022	Tuesday		Deliver Proposed Budget to Council	City Secretary
August 15, 2022	Monday	5:00 PM	EDC Board Meeting- Approve Proposed Budget	EDC Board, CM, Finance
August 15, 2021	Monday	6:00 PM	Public Hearing on Tax Rate and Proposed Budget	Council, CM, Finance
August 15, 2021	Monday		Send Notice of Public Hearing to the newspaper	City Secretary
August 25,2022	Thursday		Publish Notice for Public Hearing for Budget and Tax Rate on Sept. 13th.	City Secretary and Ellis County
Sept. 8, 2022	Thursday		Post Notice for City Council Meeting	City Secretary
Sept. 12, 2022	Monday	6:30 PM	Open Public Hearing for Budget & Tax Rate. Then City Council Meeting to Adopt Budget, then Adopt 2021 Tax Rate & Ratify Tax Rate	Council, CM, Finance, Dept. Heads

City Council Meetings

EDC Board Meetings

MDD Board Meetings

City Secretary

City of Ovilla

Ovilla City Council

AGENDA ITEM REPORT
Item 10

Meeting Date: June 13, 2022
Department: Administration
☒Discussion ☒Action
Budgeted Expense: ☐YES ☐NO ☒N/A
Submitted By: Staff
Reviewed By: ☒ City Manager ☒ City Secretary ☐City Attorney
☒ Finance Director ☐ Other:

AGENDA ITEM:

ITEM 10. DISCUSSION/ACTION – Consideration of and action on Ordinance No. 2022-10 of the City Council of the City of Ovilla, Texas, amending Ordinance No. 2021-17 providing for budget amendments to the fiscal year 2021-2022 annual budget and program of services in accordance with Chapter 1, Article 1.05, Section 1.05.038 mid-year budget review and amendment, of the City of Ovilla; providing for budget amendments to the general fund and the water & utilities fund; providing for the incorporation of premises; providing a savings clause; providing a cumulative repealer clause; providing for severability; providing for engrossment and enrollment; and providing an effective date.

Attachments:

1. Ordinance No. 2022-10 with exhibits A and B

Discussion / Justification:

Chapter 1, Article 1.05, Sec. 1.05.038 Mid-year review and amendment of the Ovilla Code of Ordinances states:
Each year the budget officer or his designee shall present to the city council a mid-year budget review and amendment(s) to be considered and approved before May 31. Such review and amendment(s) will include information on the status of all funds and line items at the fiscal year's midway point and will include any recommended amendments to the annual budget. An amended budget will be filed with the city secretary's office and with the county clerk's office following the approval of the amendments.
The annual mid-year review of revenues and expenses has been completed with staff for the current fiscal year as well as a review of estimated amounts for the remainder of the fiscal year. Budget amendments are prepared and presented. Only a few amendments are requested. Submitted is detailed mid-year amendments of all revised items, with Attachments A & B, to the presented Ordinance.
Attachment A Budget Amendment:
All General Fund amendments.

1. $71,295.00 Roof Repairs Water Street Bridge (Budgeted)– Streets Note: The City received TML Insurance funds in Sept. 2021 that went into last year's fund balance in the amount of $58,157.56 leaving the City with a difference of $12,837.44.
2. $52,719.00 Right of Way Purchase of 664

3. $12,307.00 Asbestos Removal and Air Testing of City Hall/Old Public Works Offices
4. $11,700.00 Architect Plans for City Hall
5. $13,15100 TML Worker's Compensation Audit
6. $34,403.00 Water Damage to the Fire Department City has received payment from TML insurance for repairs to the building.
7. $60,000.00 EMS Services billing error – Pending acceptance by the City of Midlothian
8. $3,750.00 City Secretary Salary

General Fund Total Mid-Year Budget Adjustments $231,020.00.

Additionally, an annual mid-year budget amendment to the Water & Utilities Fund is included with Attachment B to the presented Ordinance.

Attachment B Water & Utilities Budget Amendment:

1. $11,711.00 Bond Refunding
2. $1,250.00 City Secretary Salary

Water & Utilities Total Mid-Year Budget Adjustments $12,960.00

Recommendation / Staff Comments:

Staff Recommends: Approval

Sample Motion(s):

I move to approve Ordinance No. 2022-10 of the City Council of the City of Ovilla, Texas, amending Ordinance No. 2021-17 providing for budget amendments to the fiscal year 2021-2022 annual budget and program of services in accordance with Chapter 1, Article 1.05, Section 1.05.038 mid-year budget review and amendment, of the City of Ovilla; providing for budget amendments to the general fund and the water & utilities fund.

CITY OF OVILLA, TEXAS

ORDINANCE NO. 2022-10

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF OVILLA, TEXAS, AMENDING ORDINANCE NO. 2021-17 PROVIDING FOR BUDGET AMENDMENTS TO THE FISCAL YEAR 2021-2022 ANNUAL BUDGET AND PROGRAM OF SERVICES IN ACCORDANCE WITH CHAPTER 1, ARTICLE 1.05, SECTION 1.05.038 MID-YEAR BUDGET REVIEW AND AMENDMENT, OF THE CITY OF OVILLA; PROVIDING FOR BUDGET AMENDMENTS TO THE GENERAL FUND AND THE WATER & UTILITIES FUND; PROVIDING FOR THE INCORPORATION OF PREMISES; PROVIDING A SAVINGS CLAUSE; PROVIDING A CUMULATIVE REPEALER CLAUSE; PROVIDING FOR SEVERABILITY; PROVIDING FOR ENGROSSMENT AND ENROLLMENT; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, an annual budget for the fiscal year beginning October 1, 2021, and ending September 30, 2022, has been duly created and adopted of the City of Ovilla, Texas, in accordance with Title Four (4), Chapter 102, Sections 102.001, 102.002 and 102.003 of the Local Government Code and in accordance with Article 1.05 of the Ovilla City Code of Ordinances;

WHEREAS, the City Manager filed the proposed budget in the office of the City Secretary on or before 30TH day of July, and the proposed budget was made available for public inspection by the taxpayers in accordance with Title Four (4), Chapter 102, Section 102.005 of the Local Government Code and Article 1.05 of the Ovilla City Code of Ordinances;

WHEREAS, the City Manager submitted the proposed budget to the City Council as required by Article 1.05 of the Ovilla City Code of Ordinances;

WHEREAS, notice of a public hearing was provided in the Ellis County Press newspaper and the public hearing was held by the City on September 13, 2021, in accordance with Title Four (4), Chapter 102, Section 102.006 of the Local Government Code and Article 1.05 of the Ovilla City Code of Ordinances, and at that time all citizens and parties of interest were given the opportunity to be heard regarding the proposed 2021-2022 fiscal year budget;

WHEREAS, the City Council approved the Proposed 2021-2022 Fiscal Year Budget on September 13, 2021 by adopting Ordinance No. 2021-17; and

WHEREAS, after full and final consideration, it is the consensus of the Ovilla City Council that the 2021-2022 Fiscal Year Budget as hereinafter set forth should be amended to further the goals of the City and the health safety and well being of citizens;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF OVILLA, TEXAS:

SECTION 1.
INCORPORATION OF PREMISES

The above and foregoing premises are true and correct and are incorporated herein and made a part hereof for all purposes.

CITY OF OVILLA, TEXAS

ORDINANCE NO. 2022-10

SECTION 2.
AMENDMENT OF 2020-2021 FISCAL YEAR BUDGET

Ordinance No. 2021-17 is hereby amended with Budget Amendments to the Fiscal Year 2021-2022 Budget to include additional revenues, expenditures and other changes outlined in Exhibit A and Exhibit B that is attached to and considered part of this ordinance.

SECTION 3.
CUMULATIVE REPEALER

This Ordinance shall be cumulative of all other Ordinances and shall not repeal any of the provisions of said Ordinances except those instances where there are direct conflicts with the provisions of this Ordinance. Ordinances or parts thereof in force at the time this Ordinance shall take effect and that are inconsistent with this Ordinance are hereby repealed to the extent that they are inconsistent with this Ordinance.

SECTION 4.
SEVERABILITY

If any section, article, paragraph, sentence, clause, phrase or word in this Ordinance, or application thereof to any person or circumstance, is held invalid or unconstitutional by a court of competent jurisdiction, such holding shall not affect the validity of the remaining portions of the Ordinance, and the City Council hereby declares it would have passed such remaining portions of the Ordinance despite such invalidity, which remaining portions shall remain in full force and effect.

SECTION 5.
SAVINGS CLAUSE

All previous budget ordinances shall remain in full force and effect, save and except as amended by this ordinance.

SECTION 6.
ENGROSSMENT AND ENROLLMENT

The City Secretary of the City of Ovilla is hereby directed to engross and enroll this Ordinance by copying the caption, publication clause, and effective date clause in the minutes of the City Council of the City of Ovilla and by filing this Ordinance in the ordinance records of the City and in accordance with the laws of the State of Texas.

SECTION 7.
PUBLICATION CLAUSE

The City Secretary of the City of Ovilla, Texas, is hereby directed to publish in the Official Newspaper of the City of Ovilla, the Caption, and Effective Date clause of this Ordinance as required by Section 52.013 of the Texas Local Government Code.

CITY OF OVILLA, TEXAS

ORDINANCE NO. 2022-10

SECTION 8.
EFFECTIVE DATE

The necessity for making and approving a budget for the fiscal year, as required by the laws of the State of Texas, requires that this ordinance shall take effect immediately from and after its passage, as the law in such case provides.

PASSED AND APPROVED by the City Council of the City of Ovilla, Texas this the 13th day of June 2022.

Richard Dormier, Mayor
City of Ovilla, Texas

ATTEST:

(seal)

Bobbie Jo Taylor, TRMC
City Secretary
City of Ovilla, Texas

Exhibit A

ORDINANCE 2022-10
City of Ovilla
Midyear Budget Amendments - Fiscal Year 2021-2022

General Fund - Fund 100

Project	Description	Account Number	2022 Budget Amendment	Increase (Decrease)	Adjusted 2022 Budget
Roof Repairs					
City Hall	Shingles, Decking & Gutters Replaced	100-10-55520	20,800.00	20,800.00	32,800.00
Police Dept.	Shingles & Gutters Replaced	100-20-55520	15,110.00	15,110.00	20,110.00
Fire Dept.	Shingles, Decking & Gutters Replaced	100-30-55520	35,385.00	35,385.00	42,938.00
	Reduction in Fund Balance	100-4000990		(71,295.00)	

Note: The City received TML Insurance funds in Sept. 2021 that went into last years fund balance in the amount of $58,157.56 leaving the City with a difference of $12,837.44.

664 Widening					
Right of Way Purchase for the Widening of 664	Requested funds from TxDot for right of way purchases for the widening of 664 increased from a total of $93,908.40 over 3 years, to 263,592.80 with payments over 5 years.	100-16-55756	52,719.00	21,414.00	52,719.00
	Reduction in Fund Balance	100-4000990		(21,414.00)	
City Hall Asbestos Removal & Air Testing					
Removal of Asbestos and related expenses	Hired a Contractor to remove asbestos from City Hall where the Public Works Offices used to be	100-10-55520	12,307.00	12,307.00	45,107.00
	Reduction in Fund Balance	100-4000990		(12,307.00)	
Architect Plans to Renovate City Hall Offices					
Architect Plans to Renovate City Hall Offices	The City hired an Architect to draw up plans to remodel the former Public Works offices after asbestos removal.	100-10-57420	11,700.00	11,700.00	56,807.00
	Reduction in Fund Balance	100-4000990		(11,700.00)	
TML Worker's Comp Audit 2021					
TML Worker's Comp Audit 2021	In November 2021 TML Audits our Payroll for the previous fiscal year to determine our Worker's comp Insurance Amount. This year due to wage increases and addition of positions they found that we owed an additional $13,151.	100-16-52160	13,151.00	13,151.00	53,801.00
	Reduction in Fund Balance	100-4000990		(13,151.00)	
Fire Station Repairs					
The Cities Fire Station received water damage from the Feb. 2021 winter storm when their indoor sprinkler system froze.	An insurance claim was filed with TML. In FY2021 the City rec'd a check from TML for $11.436.08. Once repair estimates were received the City went back to TML and they paid the City an additional $22,692.50 in February 2022. To date the repairs have totaled $20,402.54, with a final invoice estimated at $14,000 is expected soon.	100-30-55520	34,403.00	34,403.00	76,938.00
	Reduction in Fund Balance	100-4000990		(34,403.00)	

Project	Description	Account Number	Amendment	(Decrease)	2022 Budget
Emergency Dispatch Contract					
Agreement with Midlothian to pay additional adjusted cost for past EMS Service.	Midlothian failed to bill Ovilla for a percentage increase each year based on per capita on our EMS contract.	100-30-52385	60,000.00	60,000.00	156,803.00
	Reduction in Fund Balance	100-4000990		(60,000.00)	
Personnel Salary Increases					
City Secretary salary increase from Budgeted amount	The City Council approved an increase from $70,000 to $75,000 for the City Secretary position. 75% of this salary is from General Fund and the other 25% is from the W&S Fund.	100-10-51115 (75%)	3,750.00	3,750.00	62,000.00
	Reduction in Fund Balance	100-4000990		(3,750.00)	
City Accountant salary increase from budgeted amount.	The City Council approved increasing from $46,000 to $50,000 for the City Accountant position on their Nov. 8, 2021 meeting. 75% of this salary is from General Fund and the other 25% is from the W&S Fund.	100-10-51405 (75%)	3,000.00	3,000.00	40,500.00
	Reduction in Fund Balance	100-4000990		(3,000.00)	
	Total Mid Year Budget Amendments			(231,020.00)	

Note: To offset these expenses the City received insurance reimbursements of:

Fire Dept. Winter Storm	FY2022	22,692.50
Fire Dept. Winter Storm	FY2021	11,436.08
Roof Repairs	FY2021	$58,157.56
		69,593.64

Exhibit B

ORDINANCE 2022-10
City of Ovilla
Midyear Budget Amendments - Fiscal Year 2021-2022

Water and Utilities Fund - Fund 200

Project	Description	Account Number	2022 Budget Amendment	Increase (Decrease)	Adjusted 2022 Budget
Bond Refunding	Bond Refunding in December 2021. Bond Issuance Costs	200-95-57940	11,711.00	11,711.00	11,711.00
	Reduction in Fund Balance	200-4000990		(11,711.00)	
City Secretary salary increase from Budgeted amount	The City Council approved an increase from $70,000 to $75,000 for the City Secretary position.	200-70-51405 (25%)	1,000.00	1,250.00	12,000.00
	Reduction in Fund Balance	200-4000990		(1,250.00)	
		Total Amendments for W&S Fund		(12,961.00)	

City of Ovilla

Ovilla City Council

AGENDA ITEM REPORT
Item 11

Meeting Date: June 13, 2022 Department: Administration

☒Discussion ☐Action Budgeted Expense: ☐YES ☐NO ☒N/A

Submitted By: Staff

Reviewed By: ☒ City Manager ☒ City Secretary ☐City Attorney

☐ Finance Director ☐ Other:

AGENDA ITEM:
ITEM 11. DISCUSSION – Discussion an update on the planning and kick-off festivities for Heritage Day 2022.
Attachments:
1. Heritage Day Meeting Notes
Discussion / Justification:
N/A
Recommendation / Staff Comments:
Staff Recommends: N/A
Sample Motion(s):
Discussion Only

In attendance: Emily, Iris, Bobbie Jo, Doug, James, Ainsley, Chief Bennett, Mike, Daniel, Johnny, Mayor, Pam, Chief Kennedy, Sharon, and Brandon Collett.

Heritage Day Meeting #1

5/26/2022

- Theme: "A City to Adore Since 1844"
- Shirt with either a landscape picture of pavilion, water tower, and park or silhouette of the landscape.
- Figure out *new map* of 70-80 vendor spots then figure out pricing with Doug. James doesn't want anyone on the infield. Booths can on the grass inside of the fence and along the outside of the fence. Spot for food trucks.
- Vendors:
    - Texas Sumo~ $790 Roll Over
        - Want climbing wall, bounce house, obstacle course, and maybe sporting games including axe throwing and dunking booth.
    - Alexander Tent Rentals~ $1781.75 Roll Over
        - No longer need the tent. Pavilion is 44x60.
    - One of A Kind Pony~ Does not roll over
        - Went from 20 animals to 15 and is now $912.50
            - Look for other petting zoo vendors. Broken Road Farm.
    - Carter BloodDrive~ Has availability just needs to call Iris back for confirmation on date and time.
    - United Rentals~ Hand sanitizing stations. We have 2 public restrooms at the park so won't need to order as much from them.
- Food booths and Food Trucks
    - Food trucks are self-sustainable. Run on their own generators, usually.
    - Food court including booths and trucks possibly.
- Need to reach out to Trojan Phlyers about fly over.
- Parade starts at 9am so roads will be closed at 8am and vendors need to be done setting up at 8:30am.
    - If vendors want to leave their stuff over night to avoid the morning parade chaos, Chief Bennett mentioned potentially having an officer out there through the night.
- Music possibly by John Sims after Opry performs.
- Need to confirm that there is enough power for the band to perform in the pavilion.

Possible Event Activities:

- Cornhole Area
- Dunking Booth
- Portable Axe Throwing

- James mentioned potentially getting new banners for the event.
- Chief Kennedy will keep us updated on fire department festivities for the event.
- Charlie Morton as Grand Marshal
    - Mayor is reaching out.

NEXT MEETING IN 2 WEEKS

OVILLA POLICE DEPARTMENT

ACTIVITY REPORT / MAY 2022

J. Bennett, Chief of Police

OVILLA POLICE DEPARTMENT

MONTHLY REPORT / MAY 2022

PERSONNEL UPDATE:

Below is a list of our current staffing:

CHIEF OF POLICE	(BENNETT)
LIEUTENANT	(GEISER)
SERGEANT	(BREEDLOVE)
SERGEANT	(ORTEGON)
PATROL OFFICER / DETECTIVE	(KRETLOW)
PATROL OFFICER	(MALKE)
PATROL OFFICER	(HARTIN)
PATROL OFFICER	(FLORES)
PATROL OFFICER	(RAMIRES)
PATROL OFFICER	(BRAVO) Currently in field training.
PATROL OFFICER	(VACANT)
ADMINISTRATIVE ASSISTANT	(IRIS HARKENRIDER)

*Vacancy – No new applicants in May.

OVILLA POLICE DEPARTMENT

MONTHLY REPORT / MAY 2022

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0 – Felony Arrest

4 – Misdemeanor Arrests

NOTE: 2 of the misdemeanor arrests cleared 4 Ovilla traffic warrants.

282 - Total Traffic Stops.

145 - Pretextual or Minor Traffic Stops (Defective taillamp, No license plate light, etc.) No citations issued.

137 - Total: Non-Pretextual Traffic Stops. (Excessive Speeding, Ran Red Light, etc.)

104 - Total Citations issued.

Roughly 76% of the more serious traffic stops received a citation.

NOTE: Some numbers do not easily add up because certain stops result in more than one citation or a citation and a warning for the same stop.

May 2022	TO	June 2022	MILEAGE	MAINTENANCE PERFORMED
Police Unit #	Begin	End	Accrued	
116	114,480	114,986	**506**	
117	122,840	125,163	**2,323**	Cabin Filter & Fuel Treatment
216	38,349	38,435	**86**	
119	62,616	64,206	**1,590**	Oil Change
120	57,626	59,148	**1,522**	Oil Change
220	54,469	55,464	**995**	New Engine Mount, New Intake Lifter, New Damaged Camshaft, & Oil Change

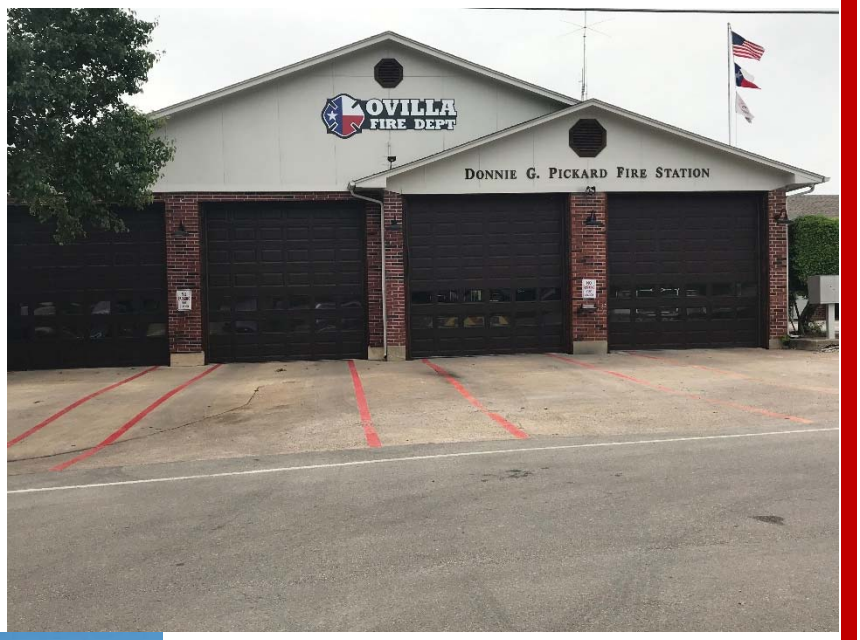
OVILLA POLICE DEPARTMENT

MONTHLY REPORT / MAY 2022

Calls For Service	May 2022	May 2022 YTD	May 2021	May 2021 YTD
Accident	7	26	4	27
Alarms	15	85	23	90
Arrest	4	22	2	13
Assault/Assault FV	2	2	0	3
Assists	66	424	123	364
Building / House Security Check	281	1700	390	2277
Burglary	1	2	0	0
Burglary of Motor Vehicle	0	3	0	0
Criminal Mischief	1	8	0	0
Disturbance	18	76	10	56
Neighborhood Check	673	3992	832	4773
Other Calls for Service	180	684	77	467
Suspicious Person	13	44	8	26
Suspicious Vehicle	20	88	26	94
Theft	0	9	0	1
Traffic Assignment/School Enforcement	16	102	45	309
TOTAL CALLS FOR SERVICE	**1297**	**7267**	**1540**	**8500**

Volunteer and Reserve Officer Hours	0	0	143	0
Average Response Time (Minutes)	4.39	4.13	3.928	4.05

Ovilla Fire Department May Monthly Report



Fire Chief Brandon Kennedy

105 S. Cockrell Hill Road
Ovilla Texas, 75154
cityofovilla.org

Mission Statement

The mission of the Ovilla Fire Department is to provide services designed to protect citizens and property of the City of Ovilla and outlying areas. All persons and or departments requesting assistance from the Ovilla Fire Department because of the adverse effects of fire, medical emergencies, or hazardous conditions created by man or nature will be dealt with in a professional manner, consistent with the economic capability of the community.

Summary of Staffing for the Department

- Currently the Department has 2 Firefighter Paramedic position open.
- Currently the Department has 0 Firefighter Basic position open.
- Currently the Department has 2 Volunteer Firefighter position open.

- Current Staffing
  - 2 Chiefs
  - 5 Captains
  - 22 Firefighter Paramedics
  - 6 Firefighter EMT-Basics
  - 10 Volunteer Firefighters
  - Total Staffing of 45 out of 50 positions

- Of the Volunteers on staff,
  - 5 of them are Dual Certified, meaning they have their Fire Certs and EMT Basic and or Paramedic
  - 0 have just their Fire Certs
  - 2 have just their EMT Basic or Paramedic
  - 3 Volunteers do not have any Certification currently.

Grants Report

- Have turned in four Texas Forestry Service Grants, waiting for notification of award and they will remain active until they are awarded without reapplying for them.
  - 10/14/2021 Received $20,000.00 for Personal Protective Equipment
  - 01/23/2018 applied for a Brush Truck Chassis grant that we are still waiting to hear if awarded
  - 08/29/2019 applied for a Skid Unit to be placed onto Brush Truck Chassis if awarded
  - 01/23/2018 applied for a Brush Truck grant that we are still waiting to hear if awarded
- Currently working on AFG paperwork to replace the station SCBA fill station. Projected cost of around 75K – 100K.

Summary of Events for the Department

- For the month of May, we made a total of 78 calls through dispatch, and several public service calls that were not dispatched. These public service calls come from a resident calling the station phone and needing assistance with smoke detector batteries. We are trying to reach out to the residents to let them know we can assist them with smoke detector batteries and installation. We will not purchase them but if they purchase the detector and or batteries, we will be happy to assist them.
- To date for this year, we have run 481 calls for service, an average of 96 per month, and projected to run over 1100 this year.
- Siren Testing complete, and all are working properly.

Summary of Staffing for the Month

- 7 days a week we have 3 - 24-hour part time positions (0800 – 0800)
- These positions were **100%** filled this month.
- 7 Days a week we have 2 – 12-hour shifts that are covered by volunteers (0800 – 2000) and (2000 – 0800)
- **59 / 62** Volunteer shifts were covered, and these **59** shifts we had 4 personnel on the Engine.

Monthly Call Summary

INCIDENT COUNT	
INCIDENT TYPE	**# INCIDENTS**
EMS	36
FIRE	42
TOTAL	78

MUTUAL AID	
Aid Type	**Total**
Aid Given	14
Aid Received	1

OVERLAPPING CALLS	
# OVERLAPPING	**% OVERLAPPING**
4	**5.13**

LIGHTS AND SIREN - AVERAGE RESPONSE TIME (Dispatch to Arrival)		
Station	**EMS**	**FIRE**
Station 701	0:06:46	0:06:27
	AVERAGE FOR ALL CALLS	0:06:36

LIGHTS AND SIREN - AVERAGE TURNOUT TIME (Dispatch to Enroute)		
Station	**EMS**	**FIRE**
Station 701	0:01:25	0:01:00
	AVERAGE FOR ALL CALLS	0:01:14

AGENCY	AVERAGE TIME ON SCENE (MM:SS)
Ovilla Fire Department	16:42

Fleet Report

Ovilla Fire Department Mileage, Fuel and Maintenance Report for May					
Apparatus	Beginning Mileage	Ending Mileage	Mileage for the Month	Fuel Expenses	Maintenance Expenditures
B701	60,648	60,662	14	$ 61.12	$ -
B702	-	-	0	$ -	$ -
C701	39,969	40,271	302	$ 97.00	$ -
C702	12,296	12,728	432	$ 112.50	$ -
S701	113,483	113,598	115	$ 48.91	$ -
E701	30,703	31,209	506	$ 904.12	$ -
E702	34,671	34,781	110	$ 129.76	$ 14,904.11
Training E703	-	-	0	$ -	$ -
R755	22,349	22,364	15	$ 108.24	$ 754.30
Station Supplies (Small Equipment Fuel, Propane, Other)				$ -	$ -
		Totals for the Month	1,494	$ 1,461.65	$ 15,658.41

PUBLIC WORKS DIRECTOR REPORT

TO: Honorable Mayor and City Council Members, City Manager-Pam Woodall,

FROM: James Kuykendall –Public Works Director

TOPIC: May 2022 Public Works Overview Report

Employee report

All positions are filled.

Public Works Project Overview

Construction on Founders Park is complete and we are waiting on the meter to be set for the electrical. The walkway and concrete around the restrooms are completed also.

All of the ditch work is done in preparation for the county to overlay the streets.

We will be cleaning on Cockrell hill to remove brush and trees from the right of way. We are installing a culvert to access this area so it can be maintained in a more timely manner.

The second week of June we will be starting on the patch repairs on Cockrell Hill Rd and will be there for two to three weeks.

Equipment

We are still waiting on a couple of pieces of equipment to be delivered, It is on delay due to the chip shortage.

Bobcat skid steer is still scheduled for June 2022

Parks vehicle is ordered but we are waiting on the new pricing to be made public.

The asphalt roller had to have a new water pump installed.

The john Deere backhoe had two hydraulic cylinders repaired.

Water Department

PUBLIC WORKS DIRECTOR REPORT

Total work orders entered 23 total work orders complete 20
All regulatory samples completed and tested negative

Water quality tested

Total Work Orders Entered 23
Total Work Order completed 20

Water Wholesale Purchased & Pumped
January ,2022

Gallons pumped – 16.172.000 MGD

Gallons Billed – 15.229.200 MGD

Gallons Unbilled – 38.1k
Builder billed _3.9K

Maintenance Flushing – 400 _k

Water main repairs ao 388 Johnson ln, 250 Westmoreland.

All state requirements were completed for the month of May.

CCR was completed and sent to print.

Sewer Department All sewer lift stations are functioning as they should.

All stations and wet wells were cleaned.

Construction Manager

58 building permits were issued for May.

PUBLIC WORKS DIRECTOR REPORT

Prime utility has completed installation of fiber conduit for AT&T.

Elite Landscaping has completed the work at the entrances of Broadmore Estates.

Spectrum has completed boring for electrical box on Seven Falls Rd.

Parks and Facilities Monthly Report

All Parks are maintained and inspected monthly. Below are highlights for the Park Department.

Heritage Park-trash taken out, and bathrooms cleaned
Small Baseball Field – The small baseball field is now complete for the work that was budgeted
Founder's Park – The pavilion is 100% complete and the restrooms are 100% complete.

Mowing of parks and city property is on a weekly schedule now to keep up appearances.

Playgrounds are being used more now that the kids are out of school so they will be inspected twice a week to assure there are now safety issues or debris in the play area.

Streets/Drainage

Patched Westmoreland, Red Oak Creek, Johnson Lane, Shiloh Road, Bryson, and Cockrell Hill Road, cardinal and meadowlark and cedar ridge ct

Drainage work is complete for the roadway rehab.

Ellis county precinct are starting on Shiloh rd rehab on county side working their way to the city limits starting June 2022.

Drainage easement on Thorn Tree mowed.

Removed fallen tree from drainage easement from behind 126 Suburban.

Read monthly water meters.

Code enforcement

cleaned up 2 illegal dumping in the right of way.

Animal control

10 feral cats have been removed from Bryson manor.

Transported 10 kittens to Waxahachie.

1 dog bite quarantine.

Multiple traps have been set in Ovilla Parc and Bryson Manor to reduce the feral cat population.

PUBLIC WORKS DIRECTOR REPORT

Subject:**Code Enforcement Monthly Report**

Calls For Service	Jan.22	Jan.22 YTD	Jan 21	
Complaint (Nuis 19 Permit 9 Parking 11)	39	39	23	
Follow up (Nuis 19 Permit 9 Park 11)	39	39	23	
Door Notice (Nui - 11 Permit 4 Parking 3)	17	17	7	
Mail Notice (Parking 2 nuisance 2 perm 2)	6	6	14	
Posted Property (nuisance 2 debris	2	2	4	
Court(3 FTA - 3 Public Nuis)	$0	$0	$211.00	
Citizen Contacts	57	57	51	
Permits Reviewed	10	10	0	
Permits Issued	5	5	0	
Inspections	11	11	0	
Nuisance Abated by City	3	3	5	
Nuisance Signs (Garage sale-8 business 26)	34	34	35	
BOA - 0	1	1	2	

Subject:**Animal Control Monthly Report**

Calls For Service	Jan.2022	Jan.22 YTD	Jan.2021	
Complaint (Regist-14 At Large 11 Bark 3)	28	28	21	
Follow up	28	28	26	
Door Notice (Regis-7, Bark 3 at large2	12	12	8	
Impounded Animal (Dog 8 cat 1)	9	9	3	
Animal welfare check	29	29	22	
Impound Results (Transport 7 Ret own 2)	11	11	4	
Impound fee collected	$0.00	$0.00	70	
Court	$0.00	$0.00	0	
Citizen Contacts	26	26	27	
Animal registration	2	2	17	
Registration Letter Mailed	0	0	18	
Nuisance letter - barking 3 at large 3	6	6	3	
Animals released 1 possum	1	1	1	
Deceased removed	22	22	27	
Oak Leaf - (1 bite)	1	1	2	
Traps Checked Out	4	4	3	

City of Ovilla

FOUNDED IN 1844

Date: June 13, 2022

To: Honorable Mayor and Council Members

Subject: Financial Statement Summaries for October 1, 2021, thru April 30, 2022

This period covers 58% of the FY2022 Budget.

From:

Sharon Jungman – Finance Director

CITY-WIDE OPERATING FUND TOTALS

For FY2022 Oct. 2021 Thru April 2022

	TOTAL REVENUES	2021 Actual To Date	2022 Actual To Date	2022 Adopted & Amended Budget	2022 % of Budget Used
100	General Fund	3,050,124	3,526,986	4,957,367	71%
110	Leose	-	940	1,100	85%
120	Street Improvement	60,807	57,286	204,292	28%
130	Court Technology	927	1,595	2,000	80%
140	Court Security	1,071	1,893	1,800	105%
200	Water & Utilities	944,075	1,249,588	2,582,287	48%
250	WWW Infrasturcture Improv.	38,476	39,703	65,000	61%
400	Debt Service Fund	564,159	580,121	562,950	103%
500	Muncipal Devel. District	59,189	64,239	303,234	21%
600	4B Economic Devel. Fund	124,290	118,654	433,152	27%
700	Park Impact Fund	-	35,125	11,708	300%
800	Water & Utilities Impact Fund	1	546,576	150,450	363%
	Total	$ 4,843,118	$ 6,222,707	$ 9,275,340	67%

	TOTAL EXPENDITURES	2021 Actual To Date	2022 Actual To Date	2022 Adopted & Amended Budget	2022 % of Budget Used
100	General Fund	2,486,026	2,637,282	4,957,367	53%
110	Leose	-	-	1,100	0%
120	Street Improvement	-	-	204,292	0%
130	Court Technology	-	-	2,000	0%
140	Court Security	480	480	1,800	27%
200	Water & Utilities	806,511	886,566	2,582,287	34%
250	WWW Infrasturcture Improv.	-	-	65,000	0%
400	Debt Service Fund	75,000	8,127	562,950	1%
500	Muncipal Devel. District	220,731	23,831	303,234	8%
600	4B Economic Devel. Fund	5,592	52,124	433,152	12%
700	Park Impact Fund	-	-	11,708	0%
800	Water & Utilities Impact Fund	-	-	150,450	0%
	Total	$ 3,594,339	$ 3,608,409	$ 9,275,340	39%

City of Ovilla
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100 - General Fund	Current Month Actual	Current Month Budget	Budget Variance	YTD Actual	Annual Budget	% of Budget	Budget Remaining
Revenue Summary							
Taxes	35,044.03	246,667.12	(211,623.09)	2,557,937.22	2,961,190.00	86.38%	403,252.78
Licenses-Permits-Fees	29,370.00	12,170.13	17,199.87	327,620.14	146,100.00	224.24%	(181,520.14)
Services	30,019.00	58,532.67	(28,513.67)	170,733.40	702,631.00	24.30%	531,897.60
Fines & Forfeitures	12,210.53	6,385.18	5,825.35	57,687.78	76,650.00	75.26%	18,962.22
Other Revenue	10,248.50	26,077.07	(15,828.57)	312,658.78	313,000.00	99.89%	341.22
Intergovernmental	0.00	0.00	0.00	100,348.77	0.00	0.00%	(100,348.77)
Transfers	0.00	63,212.17	(63,212.17)	0.00	757,796.00	0.00%	757,796.00
Revenue Totals	116,892.06	413,044.34	(296,152.28)	3,526,986.09	4,957,367.00	71.15%	1,430,380.91
Expense Summary							
Personnel	241,964.46	182,797.30	59,167.16	1,235,623.04	2,194,158.00	56.31%	958,534.96
Employee Benefits	49,670.01	38,789.21	10,880.80	268,625.40	471,535.00	56.97%	202,909.60
Special Services	11,760.00	14,051.34	(2,291.34)	49,094.58	168,632.00	29.11%	119,537.42
Contractual Services	58,651.17	22,906.55	35,744.62	259,152.82	274,588.00	94.38%	15,435.18
Operating Services	11,166.97	7,367.27	3,799.70	49,024.16	88,420.00	55.44%	39,395.84
Special Expenses	395.00	2,720.22	(2,325.22)	5,644.95	32,650.00	17.29%	27,005.05
Supplies	3,534.06	5,532.01	(1,997.95)	26,294.62	66,975.00	39.26%	40,680.38
Professional Development	1,062.84	2,446.97	(1,384.13)	12,441.48	29,075.00	42.79%	16,633.52
Software & Computer Equipment	2,009.19	6,839.48	(4,830.29)	59,213.86	82,100.00	72.12%	22,886.14
Printing Expense	2,873.23	1,687.08	1,186.15	9,449.48	18,950.00	49.87%	9,500.52
Utilities	64,792.14	34,145.07	30,647.07	182,627.34	409,855.00	44.56%	227,227.66
Repairs - Bldg & Machinery	25,681.59	12,562.36	13,119.23	169,601.16	150,803.00	112.47%	(18,798.16)
Other Expense	3,069.21	7,395.41	(4,326.20)	80,565.43	87,890.00	91.67%	7,324.57
Minor Capital Outlay	728.78	8,141.03	(7,412.25)	26,340.14	102,888.00	25.60%	76,547.86
Capital Outlay	0.00	57,174.84	(57,174.84)	133,415.04	677,350.00	19.70%	543,934.96
Insurance	10,939.92	4,199.83	6,740.09	33,103.72	50,398.00	65.68%	17,294.28
Vehicle Expenses	7,277.22	4,023.83	3,253.39	34,456.06	47,800.00	72.08%	13,343.94
Not Categorized	0.00	0.00	0.00	586.91	0.00	0.00%	(586.91)
Rentals	294.03	274.89	19.14	2,021.73	3,300.00	61.26%	1,278.27
Expense Totals	495,869.82	413,054.69	82,815.13	2,637,281.92	4,957,367.00	53.20%	2,320,085.08

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110 - LEOSE	Current Month Actual	Current Month Budget	Budget Variance	YTD Actual	Annual Budget	% of Budget	Budget Remaining
Revenue Summary							
Other Revenue	0.00	91.67	(91.67)	939.85	1,100.00	85.44%	160.15
Revenue Totals	0.00	91.67	(91.67)	939.85	1,100.00	85.44%	160.15
Expense Summary							
Professional Development	0.00	91.63	(91.63)	0.00	1,100.00	0.00%	1,100.00
Expense Totals	0.00	91.63	(91.63)	0.00	1,100.00	0.00%	1,100.00

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120 - Street Improvement Fund	Current Month Actual	Current Month Budget	Budget Variance	YTD Actual	Annual Budget	% of Budget	Budget Remaining
Revenue Summary							
Taxes	6,829.68	6,507.39	322.29	57,285.54	78,120.00	73.33%	20,834.46
Transfers	0.00	10,514.33	(10,514.33)	0.00	126,172.00	0.00%	126,172.00
Revenue Totals	6,829.68	17,021.72	(10,192.04)	57,285.54	204,292.00	28.04%	147,006.46
Expense Summary							
Capital Outlay	0.00	17,017.52	(17,017.52)	0.00	204,292.00	0.00%	204,292.00
Expense Totals	0.00	17,017.52	(17,017.52)	0.00	204,292.00	0.00%	204,292.00

City of Ovilla
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130 - Court Technology	Current Month Actual	Current Month Budget	Budget Variance	YTD Actual	Annual Budget	% of Budget	Budget Remaining
Revenue Summary							
Fines & Forfeitures	376.08	166.60	209.48	1,595.41	2,000.00	79.77%	404.59
Revenue Totals	376.08	166.60	209.48	1,595.41	2,000.00	79.77%	404.59
Expense Summary							
Software & Computer Equipment	0.00	166.67	(166.67)	0.00	2,000.00	0.00%	2,000.00
Expense Totals	0.00	166.67	(166.67)	0.00	2,000.00	0.00%	2,000.00

City of Ovilla
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140 - Court Security	Current Month Actual	Current Month Budget	Budget Variance	YTD Actual	Annual Budget	% of Budget	Budget Remaining
Revenue Summary							
Fines & Forfeitures	459.07	149.94	309.13	1,893.15	1,800.00	105.18%	(93.15)
Revenue Totals	459.07	149.94	309.13	1,893.15	1,800.00	105.18%	(93.15)
Expense Summary							
Other Expense	0.00	83.30	(83.30)	479.70	1,000.00	47.97%	520.30
Reserve	0.00	66.64	(66.64)	0.00	800.00	0.00%	800.00
Expense Totals	0.00	149.94	(149.94)	479.70	1,800.00	26.65%	1,320.30

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200 - Water And Utilities Fund	Current Month Actual	Current Month Budget	Budget Variance	YTD Actual	Annual Budget	% of Budget	Budget Remaining
Revenue Summary							
Services	145,135.23	114,856.12	30,279.11	978,047.19	1,378,825.00	70.93%	400,777.81
Other Revenue	91,402.88	6,668.16	84,734.72	96,540.58	80,050.00	120.60%	(16,490.58)
Transfers	17,500.00	93,601.14	(76,101.14)	175,000.00	1,123,412.00	15.58%	948,412.00
Revenue Totals	254,038.11	215,125.42	38,912.69	1,249,587.77	2,582,287.00	48.39%	1,332,699.23
Expense Summary							
Personnel	42,636.59	30,239.84	12,396.75	198,584.11	362,760.00	54.74%	164,175.89
Employee Benefits	11,735.01	8,875.41	2,859.60	55,893.10	106,544.00	52.46%	50,650.90
Special Services	8,100.00	16,312.60	(8,212.60)	19,897.00	195,752.00	10.16%	175,855.00
Contractual Services	9,568.00	1,124.50	8,443.50	12,703.00	19,000.00	66.86%	6,297.00
Operating Services	3,100.25	2,701.49	398.76	16,455.24	32,420.00	50.76%	15,964.76
Supplies	366.37	941.39	(575.02)	7,606.09	10,800.00	70.43%	3,193.91
Professional Development	1,060.47	458.15	602.32	2,084.27	5,500.00	37.90%	3,415.73
Software & Computer Equipment	923.09	1,083.02	(159.93)	11,318.24	13,000.00	87.06%	1,681.76
Printing Expense	0.00	316.67	(316.67)	1,601.18	3,800.00	42.14%	2,198.82
Other Expense	861.28	3,345.84	(2,484.56)	7,347.39	39,954.00	18.39%	32,606.61
Capital Outlay	2,854.65	55,876.16	(53,021.51)	45,036.35	665,562.00	6.77%	620,525.65
Rentals	0.00	124.95	(124.95)	0.00	1,500.00	0.00%	1,500.00
Special Expenses	0.00	0.00	0.00	128.01	0.00	0.00%	(128.01)
Vehicle Expenses	968.15	724.75	243.40	3,365.93	8,700.00	38.69%	5,334.07
Utilities	71,704.21	78,629.38	(6,925.17)	450,418.15	943,910.00	47.72%	493,491.85
Repairs - Bldg & Machinery	1,432.80	3,607.47	(2,174.67)	27,543.87	43,500.00	63.32%	15,956.13
Minor Capital Outlay	20.69	624.92	(604.23)	7,431.51	7,500.00	99.09%	68.49
Reserve	0.00	9,196.32	(9,196.32)	0.00	110,400.00	0.00%	110,400.00
Insurance	2,478.02	973.75	1,504.27	7,441.33	11,685.00	63.68%	4,243.67
Long Term Debt	0.00	0.00	0.00	11,710.93	0.00	0.00%	(11,710.93)
Expense Totals	157,809.58	215,156.61	(57,347.03)	886,565.70	2,582,287.00	34.33%	1,695,721.30

City of Ovilla
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250 - WWW Infrastructure Improvements	Current Month Actual	Current Month Budget	Budget Variance	YTD Actual	Annual Budget	% of Budget	Budget Remaining
Revenue Summary							
Services	6,040.73	5,414.50	626.23	39,703.00	65,000.00	61.08%	25,297.00
Revenue Totals	6,040.73	5,414.50	626.23	39,703.00	65,000.00	61.08%	25,297.00
Expense Summary							
Reserve	0.00	5,414.50	(5,414.50)	0.00	65,000.00	0.00%	65,000.00
Expense Totals	0.00	5,414.50	(5,414.50)	0.00	65,000.00	0.00%	65,000.00

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400 - Debt Service Fund	Current Month Actual	Current Month Budget	Budget Variance	YTD Actual	Annual Budget	% of Budget	Budget Remaining
Revenue Summary							
Other Revenue	0.00	8.33	(8.33)	1.73	100.00	1.73%	98.27
Transfers	0.00	9,196.32	(9,196.32)	0.00	110,400.00	0.00%	110,400.00
Taxes	1,686.34	37,689.08	(36,002.74)	580,119.75	452,450.00	128.22%	(127,669.75)
Revenue Totals	1,686.34	46,893.73	(45,207.39)	580,121.48	562,950.00	103.05%	(17,171.48)
Expense Summary							
Long Term Debt	0.00	46,893.73	(46,893.73)	8,126.54	562,950.00	1.44%	554,823.46
Expense Totals	0.00	46,893.73	(46,893.73)	8,126.54	562,950.00	1.44%	554,823.46

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500 - Municipal Development District Fund	Current Month Actual	Current Month Budget	Budget Variance	YTD Actual	Annual Budget	% of Budget	Budget Remaining
Revenue Summary							
Taxes	7,367.35	6,610.68	756.67	63,082.83	79,360.00	79.49%	16,277.17
Other Revenue	171.72	249.90	(78.18)	1,156.58	3,000.00	38.55%	1,843.42
Transfers	0.00	18,406.17	(18,406.17)	0.00	220,874.00	0.00%	220,874.00
Revenue Totals	7,539.07	25,266.75	(17,727.68)	64,239.41	303,234.00	21.18%	238,994.59
Expense Summary							
Special Services	0.00	181.92	(181.92)	2,184.00	2,184.00	100.00%	0.00
Supplies	0.00	8.33	(8.33)	0.00	100.00	0.00%	100.00
Insurance	48.82	37.48	11.34	147.14	450.00	32.70%	302.86
Reserve	0.00	41.67	(41.67)	0.00	500.00	0.00%	500.00
Capital Outlay	0.00	25,000.00	(25,000.00)	21,500.00	300,000.00	7.17%	278,500.00
Expense Totals	48.82	25,269.40	(25,220.58)	23,831.14	303,234.00	7.86%	279,402.86

City of Ovilla
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As of April 30, 2022

600 - 4B Economic Development Fund	Current Month Actual	Current Month Budget	Budget Variance	YTD Actual	Annual Budget	% of Budget	Budget Remaining
Revenue Summary							
Taxes	13,659.37	12,911.50	747.87	114,571.10	155,000.00	73.92%	40,428.90
Other Revenue	589.24	399.84	189.40	4,083.03	4,800.00	85.06%	716.97
Transfers	0.00	22,770.22	(22,770.22)	0.00	273,352.00	0.00%	273,352.00
Revenue Totals	14,248.61	36,081.56	(21,832.95)	118,654.13	433,152.00	27.39%	314,497.87
Expense Summary							
Grant Expense	0.00	416.67	(416.67)	0.00	5,000.00	0.00%	5,000.00
Reserve	0.00	624.75	(624.75)	0.00	7,500.00	0.00%	7,500.00
Special Services	0.00	587.45	(587.45)	6,552.00	7,052.00	92.91%	500.00
Supplies	0.00	16.66	(16.66)	0.00	200.00	0.00%	200.00
Professional Development	0.00	174.36	(174.36)	0.00	3,305.00	0.00%	3,305.00
Printing Expense	0.00	33.32	(33.32)	0.00	400.00	0.00%	400.00
Repairs - Bldg & Machinery	0.00	956.43	(956.43)	6,695.00	6,695.00	100.00%	0.00
Insurance	53.99	41.65	12.34	162.72	500.00	32.54%	337.28
Other Expense	0.00	(89.53)	89.53	0.00	2,500.00	0.00%	2,500.00
Capital Outlay	37,567.96	33,333.33	4,234.63	38,713.82	400,000.00	9.68%	361,286.18
Expense Totals	37,621.95	36,095.09	1,526.86	52,123.54	433,152.00	12.03%	381,028.46

City of Ovilla
Financial Statement
As of April 30, 2022

700 - Park Impact Fund	Current Month Actual	Current Month Budget	Budget Variance	YTD Actual	Annual Budget	% of Budget	Budget Remaining
Revenue Summary							
Services	3,010.68	975.27	2,035.41	35,124.60	11,708.00	300.01%	(23,416.60)
Revenue Totals	3,010.68	975.27	2,035.41	35,124.60	11,708.00	300.01%	(23,416.60)
Expense Summary							
Minor Capital Outlay	0.00	975.67	(975.67)	0.00	11,708.00	0.00%	11,708.00
Expense Totals	0.00	975.67	(975.67)	0.00	11,708.00	0.00%	11,708.00

City of Ovilla
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800 - Water And Utilities Impact Fee Fund	Current Month Actual	Current Month Budget	Budget Variance	YTD Actual	Annual Budget	% of Budget	Budget Remaining
Revenue Summary							
Services	62,475.63	12,524.15	49,951.48	546,575.27	150,350.00	363.54%	(396,225.27)
Other Revenue	0.89	8.33	(7.44)	1.16	100.00	1.16%	98.84
Revenue Totals	62,476.52	12,532.48	49,944.04	546,576.43	150,450.00	363.29%	(396,126.43)
Expense Summary							
Reserve	0.00	12,532.48	(12,532.48)	0.00	150,450.00	0.00%	150,450.00
Expense Totals	0.00	12,532.48	(12,532.48)	0.00	150,450.00	0.00%	150,450.00

Date: June 13, 2022

To: The Honorable Mayor and City Council Members

Subject – Cash Flow

For General Fund

As of April 30, 2022

From:

Sharon Jungman – Finance Director

Cash Flow as of 4-30-22 using Consolidated Cash Balances
Excluding Water & Utility(200), Leose (110), MDD (500) & EDC (600)

Bank Account Descriptions	Fund	Fundview Consol. Cash Balances as of 4-30-22
General Fund (Consolidated Cash) 100-1000000	100	1,366,346.00
Street Improvement	120	231,011.81
Court Technology	130	9,939.90
Court Security	140	27,222.55
Equipment Replacement Fund	150	(10,601.96)
Capital Projects	300	132,561.30
Debt Fund	400	1,118,803.91
Park Impact	700	84,097.87

Total Fundview Consol. Cash Balances as of 4-30-22 Without Water and Utilities funds, EDC & MDD	2,959,381.38

Estimated Budgeted Revenue Remaining in each Consol. Fund

General Fund - 100	1,430,380.91
Street Improvement - 120	147,006.46
Court Technology - 130	404.59
Court Security - 140	0.00
Debt Service Fund - 400	(17,171.48)
Park Impact Fund -700	(23,416.60)
Total of expected Revenue Budgeted	1,537,203.88

Budgeted Expenses Remaining in each Consol. Fund

General Fund - 100	2,320,085.08
Street Improvement - 120	204,292.00
Court Technology - 130	2,000.00
Court Security - 140	1,320.30
Debt Service Fund - 400	554,823.46
Park Impact Fund -700	11,708.00
Total of Budget Remaining	3,094,228.84

Consolidated Cash Balances plus Remaining Revenue Expected Less Remaining Budgeted Expenses	1,402,356.42
Total Budget for FY2022 for the General Fund	4,957,367.00

Less Capital Expenditures

664 Right of Way (100-16-57460)	31,305.00
Fire Truck (100-30-57450)	125,000.00
Bobcat Skid Loader (100-50-57440)	63,300.00
Dump Truck (100-50-57450)	86,000.00
Infrastructure (100-50-57460)	286,450.00
John Deere Bunker Rake (100-60-57440)	14,100.00
1 Ton Truck with Dump Bed (100-60-57450)	50,000.00
Zero Turn Mower (100-60-57440)	12,000.00
Playground Equipment (100-60-57440)	18,000.00
Workshop (100-60-57420)	5,000.00
Total of Capital Expenditures budgeted in Gen. Fund	691,155.00
Budget for FY2022 Less Capital Expenditures	4,266,212.00
Reserve Budget Percentage	0.25
Reserve Amount for FY2022	1,066,553.00
Estimated Balance Remaining after 25% Reserve Deducted	335,803.42

Note: This Cash Flow is based on expected budgeted revenue and expenses, any deviations from the budget will cause these numbers to change.

BUILDING PERMIT REPORT MAY 2022

Date Issued	Applicant First Name	Applicant Last Name	Property Address	Permit Number	Proposed Use	Valuation Bldg	Valuation Bldg w Land	Fees Due	Living Sq Ft	Total Sq Ft	Property County
5/11/2022	MIKE	DONATHAN	109 MEADOW GLEN LN	2022-0078	FENCE	0	0	25	0	0	ELLIS
5/13/2022	David	Bushdiecker	507 BRUCE CT	2022-0093	FLATWORK	0	0	40	0	0	ELLIS
5/13/2022	JASON	THOMPSON	507 BRUCE CT	2022-0101	ADD ON/REMODEL	45000	0	2400	0	0	ELLIS
5/17/2022	BILL	HILEMAN	7020 JUDY DR	2022-0116	ACCESSORY BUILDING	4500	0	40	0	0	ELLIS
5/17/2022	BILL	HILEMAN	7020 JUDY DR	2022-0117	SWIMMING POOL	50000	0	700.69	0	0	ELLIS
5/17/2022	BILL	HILEMAN	7020 JUDY DR	2022-0118	ELECTRIC	5000	0	100	0	0	ELLIS
5/17/2022	BILL	HILEMAN	7020 JUDY DR	2022-0129	ACCESSORY BUILDING	5500	0	40	0	0	ELLIS
5/20/2022	JUSTIN	FITE	700 SEVEN FALLS RD	2022-0135	RIGHT- OF -WAY	550	0	0	0	0	ELLIS
5/26/2022	LEONDARDO	CAMACHO	265 JOHNSON LN	2022-0145	FLAT WORK	100	0	40	0	0	ELLIS
5/11/2022	ADRIAN	GOMEZ	111 ROBIN GLEN LN	2022-0156	ACCESSORY BUILDING	4500	5000	40	0	1	ELLIS
5/12/2022	JOHNNY	ALVARDO	600 WILLIAM DR	2022-0161	ACCESSORY BUILDING	6000	0	40	0	0	ELLIS
5/3/2022	TIFFANY	CHAMBERLAIN	217 LARIAT TRL	2022-0168	IRRIGATION	7951	1	25	0	0	ELLIS
5/11/2022	JASMINE	O`BRIEN	404 THORNTREE DR	2022-0173	FENCE	8000	0	25	0	0	ELLIS
5/3/2022	JAVIER	ORNELAS	BEAR CREEK RD	2022-0174	RIGHT-OF-WAY	0	0	0	0	0	DALLAS
5/2/2022	ABRAHAM	SBYTI	122 MEADOW GLEN LN	2022-0175	MECHANICAL	7200	0	125	0	0	ELLIS
5/2/2022	LARRY	SORIA	220 WILLIAMSBURG LN	2022-0176	REPLACE WATER HEATER	3989.15	0	100	0	0	ELLIS
5/3/2022	DEAN	FERRELL	314 COCKRELL HILL RD	2022-0177	FENCE	7600	0	25	0	0	ELLIS
5/9/2022	CHRISTOPHER	VAN RIJSBERGEN	106 WINDING WAY CT	2022-0178	ACCESSORY BUILDING	1000	0	40	0	0	ELLIS
5/3/2022	NORMAN	PHILLIPS	222 WILLIAMSBURG LN	2022-0180	PLUMBING	2764	0	100	0	0	ELLIS
5/10/2022	MELISSA	CORNETT	307 JOHNSON LN	2022-0181	RIGHT-OF-WAY	0	0	0	0	0	ELLIS
5/5/2022	AARON	SIMS	102 ELMWOOD DR	2022-0182	FENCE	52500	0	25	0	0	ELLIS
5/10/2022	JOSHUA	SMITH	7040 ORANGE CT	2022-0184	ACCESSORY BUILDING	12215	0	40	0	0	ELLIS
5/12/2022	JOHNNY	ALVARADO	600 WILLIAM DR	2022-0186	FENCE	5000	0	50	0	0	ELLIS
5/9/2022	CAROL	WEBB	124 SUBURBAN DR	2022-0187	MECHANICAL	15700	0	125	1967	1967	ELLIS
5/13/2022	DONNA	MCDOWELL	319 COVINGTON LN	2022-0188	SWIMMING POOL	95782	0	1058.38	0	0	ELLIS
5/9/2022	DAJADT	AZAKYTU	135 MEADOW GLEN LN	2022-0189	PLUMBING	1950	0	100	0	0	ELLIS
5/10/2022	BROOKE	MILLER	707 BUCKBOARD ST	2022-0190	SOLAR PANELS	13585	0	325	0	0	ELLIS
5/10/2022	RYAN	KANE	7211 CHERRY LN	2022-0191	PLUMBING	2939	2939	125	0	0	ELLIS
5/27/2022	NATHIAN	CHANDLER	100 SILVERWOOD DR	2022-0192	ADD ON/REMODEL	20000	0	1200	0	0	ELLIS
5/12/2022	SHAWN	MOODY	OVILLA RD	2022-0193	RIGHT-OF-WAY	0	0	0	0	0	ELLIS
5/19/2022	SCOTT	MILLER	431 PENROSE DR	2022-0195	FENCE	4000	0	50	0	0	ELLIS
5/17/2022	SHAWN	MOODY	OVILLA RD	2022-0196	RIGHT-OF-WAY	0	0	0	0	0	ELLIS
5/24/2022	JUAN	SANTOYO	601 GEORGETOWN RD	2022-0197	FLATWORK	0	0	40	0	0	ELLIS
5/16/2022	ZAC	DUVICK	104 COPPERFIELD CT	2022-0200	MECHANICAL	23400	0	125	0	0	ELLIS
5/17/2022	RAYMOND	WIGGINS	3910 CYPRESS STUMP CT	2022-0201	IRRIGATION	4200	0	50	0	0	ELLIS
5/23/2022	DAVID	MYERS	7010 JUDY DR	2022-0202	FLATWORK	3867	0	40	0	0	ELLIS
5/18/2022	ANTHONY	CARVALHO	7430 DESERT WILLOW LN	2022-0203	FENCE	14000	0	50	0	0	ELLIS
5/19/2022	LEVI	HALL	911 COCKRELL HILL RD	2022-0204	ACCESSORY BUILDING	19200	0	40	0	0	DALLAS
5/19/2022	A OASIS LANDSCAPING		7430 DESERT WILLOW LN	2022-0206	IRRIGATION	4500	0	50	0	0	ELLIS
5/25/2022	RANDY	THORN	804 COCKRELL HILL RD	2022-0209	FENCE	6600	0	25	0	0	DALLAS
5/20/2022	VICTOR	MENDEZ	3921 MONTERREY OAK WAY	2022-0210	FENCE	1500	0	25	0	0	ELLIS
5/24/2022	STEPHEN	MARTIN	104 COPPERFIELD CT	2022-0211	ACCESSORY BUILDING	7592	0	40	0	0	ELLIS
5/25/2022	DANNY	CARVALHO	7420 DESERT WILLOW LN	2022-0212	FENCE	6000	0	50	0	0	ELLIS
5/20/2022	RAYMOND	WIGGINS	806 JOHNSON LN	2022-0213	IRRIGATION	6500	0	25	0	0	ELLIS
5/26/2022	JUSTIN	BINDER	3920 CHERRY LAUREL LN	2022-0215	FENCE	7000	7000	50	0	0	ELLIS
5/23/2022	DANIEL	JOHNSON	214 WILLOW CREEK LN	2022-0216	PLUMBING	2479	0	100	2626	2626	ELLIS
5/25/2022	JAY	BIRD	3921 MONTERREY OAK WAY	2022-0218	IRRIGATION	1100	0	25	0	0	ELLIS
5/25/2022	STACY	BRANSCUM	7420 DESERT WILLOW LN	2022-0220	IRRIGATION	5000	0	25	0	0	ELLIS
5/25/2022	Luana	Parker	721 WESTMORELAND RD	2022-0222	TEMPORARY DUMPSTER	0	0	0	0	0	ELLIS
5/24/2022	BFS	WARRANTY	108 BENT TREE LN	2022-0228	MECHANICAL	6000	40000	125	4261	5041	ELLIS
5/25/2022	BILLY	HUGGINS	911 COCKRELL HILL RD	2022-0229	ELECTRICAL	800	0	200	0	0	DALLAS
5/26/2022	JAKE	WHITE	101 CUMBERLAND DR	2022-0230	ROOF	37659	0	50	0	0	ELLIS
5/26/2022	CODY	BROWN	506 BRUCE CT	2022-0231	MECHANICAL	21000	0	125	0	0	ELLIS
5/31/2022	LYNDELL	HENSLEY	843 RED OAK CREEK DR	2022-0237	FLATWORK	1200	0	40	0	0	ELLIS
5/31/2022	DAVID	MONDAY	608 FOREST EDGE LN	2022-0246	PLUMBING	2000	0	100	0	0	ELLIS
5/31/2022	JOHN	DOBMEYER	609 CLINTON ST	2022-0251	MECHANICAL	7500	0	125	0	0	ELLIS

Ovilla Municipal Court Report

FY-2021-2022	Total Traffic Cases Filed	City Ordinance Filed	Total Revenue	Amount Kept by City	Amount sent to State	Warrants Issued	Warrants Cleared	Uncontested Disposition	Defensive Driving	Deferred Disposition	Compliance Dismissals	Trial
October	71	0	$13,069.50	$8,205.41	$4,864.09	28	14	19	8	36	1	0
November	55	0	$13,942.90	$8,659.64	$5,283.26	21	10	31	6	10	1	0
December	83	0	$9,407.90	$6,580.12	$2,827.78	58	5	12	17	22	0	0
January	60	0	$15,474.63	$10,349.82	$5,124.81	9	24	31	9	14	0	0
February	52	0	$10,913.50	$6,584.30	$4,329.20	33	20	15	8	16	1	1
March	110	0	$16,442.17	$11,145.06	$5,297.11	26	27	28	8	20	0	0
April	123	0	$21,950.83	$13,073.32	$8,877.51	46	12	26	4	24	0	0
May	105	0	$26,349.83	$16,891.26	$9,458.57	18	21	48	16	9	0	0
June												
July												
August												
September												
Totals	**659**	**0**	**$127,551.26**	**$81,488.93**	**$46,062.33**	**239**	**133**	**210**	**76**	**151**	**3**	**1**

2020-2021 FY

May	93	0	$15,578.80	$9,209.71	$6,369.09	19
FY Totals	380	11	$71,304.48	$42,603.50	$28,700.98	19

Staffing

Full Time Court Clerk	1
Full Time Deputy Court Clerk	2
Judge	1
Prosecutor	1
Alternate Judge	1

MONTHLY REPORT A CONCERN MAY 2022

Department Assigned	Concern Address	Concern Description	Date Entered	Date Closed
Administration	WESTMORELAND RD	We are Singer Association Management, Inc. and we manage the Community of Broadmoor Estates which is a HoA in your town. There is a Ditchwitch within the Common area easement which has been destroying installed irrigation and landscaping. We do not know which company this is or whether they have a permit to do so. We would like to officially report this so that we can find out who this company is and try to get in contact with them. We would like to know this information as we have taken over Management of this Community. We have reached out to the Public Works Department. After talking with a few people we have not received any word on who has a permit to big in the HoA easements.	5/26/2022	
Animal Services	3420 OVILLA RD	raccoon in dumpster	5/12/2022	5/12/2022
Animal Services	114 OVILLA CREEK CT	cat and kittens in garage stray	5/16/2022	5/18/2022
Animal Services	105 GREENWOOD DR	deceased possum in yard	5/20/2022	5/20/2022
Code Enforcement	105 COCKRELL HILL RD	RV and possible junk vehicles parked across te street from city hall, next door to the parsonage. Received a complaint.	5/4/2022	5/4/2022
Code Enforcement	417 SHADOWWOOD TRL	Received concern from Place 2 Oberg of high grass at this home.	5/5/2022	5/6/2022
Code Enforcement	3322 FM		5/9/2022	
Code Enforcement	3322 FM	PUBLIC NUISANCE	5/9/2022	
Code Enforcement	1715 S JOE WILSON RD	LOUD NOISE	5/9/2022	
Code Enforcement	607 WILLIAM DR	JUNK VEHICLE	5/16/2022	
Code Enforcement	616 TAYLOR ST	TRAILER PARKING LONGER THAN 48 HOURS	5/16/2022	

Department Assigned	Concern Address	Concern Description	Date Entered	Date Closed
Code Enforcement	3530 BRYSON MANOR DR	TRAILER PARKING IN DRIVEWAY LONGER THAN 48 HOURS	5/16/2022	
Code Enforcement	7031 JUDY DR	TRAILER PARKING LONGER THAN 48 HOURS IN DRIVEWAY	5/16/2022	
Code Enforcement	108 WESTLAWN DR	TRAILER PARKING IN DRIVE LONGER THAN 48 HOURS	5/16/2022	5/31/2022
Code Enforcement	106 WESTLAWN DR	TRAILER PARKED IN SIDE DRIVE LONGER THAN 48 HOURS	5/18/2022	
Code Enforcement	300 COCKRELL HILL RD	HIGH GRASS AND WEEDS	5/18/2022	
Code Enforcement	FM 664	HIGH GRASS AND WEEDS	5/18/2022	5/19/2022
Code Enforcement	101 OAKWOOD LN	PUBLIC NUISANCE OUTSIDE STORAGE	5/18/2022	
Code Enforcement	229 LARIAT TRL	VEHICLE PARKING IN YARD	5/18/2022	
Code Enforcement	745 COCKRELL HILL RD	NUISANCE OUTSIDE STORAGE	5/18/2022	5/24/2022
Code Enforcement	625 CARDINAL DR	TRUCK PARKING IN YARD	5/18/2022	
Code Enforcement	1204 RED OAK CREEK DR	FAILURE TO REGISTER AS CONTRACTOR	5/18/2022	
Code Enforcement	106 WESTLAWN DR	on the side of this house since they have lived there...years...and has not been moved, ever! As well as other structures that just do not have the drive up appeal we all look for when living here. We as next door neighbors have to look at this every single day and it is such an eye sore. We have lived in our house for the past 22 years and just tired of looking at this. Even my 91 year old grandmother came to visit us and made a comment about how untidy the whole side of this house is. Not a good look for our community. It is my understanding after talking with neighbors that there have been multiple complaints on this particular property and the upkeep on their side of the house, but NOTHING has been done about it yet! and it still looks horrible. Not acceptable. The photos that have been provided were taken from our kitchen window/our personal driveway.	5/19/2022	
Code Enforcement	401 SHADOWWOOD TRL	9 foot anaconda snake on porch	5/20/2022	5/20/2022

Department Assigned	Concern Address	Concern Description	Date Entered	Date Closed
Code Enforcement	2885 OVILLA RD	Multiple outside wire containers with trash/debris along the back and side of Dollar General.	5/23/2022	
Code Enforcement	203 BROOKWOOD CT	Complainant stated that the driveways all along Brookwood Court, including his, have some sort of orange color from the rain - he mentioned `agent orange`.	5/24/2022	
Code Enforcement	601 BUCKBOARD ST	Wants the r-o-w mowed at Hosford and Buckboard.	5/24/2022	
Code Enforcement	200 WINDING WAY CT	Ms. Trammell called the grass at this address needs to be cut	5/26/2022	
Garbage	305 SHADOWWOOD TRL	Customer called stating trash was missed & not collected. please collect & advise.	5/5/2022	5/5/2022
Garbage	827 RED OAK CREEK DR	CUSTOMER CALLED AND STATED TRASH WAS MISSED AGAIN. HAPPENS ALL THE TIME.	5/6/2022	5/6/2022
Garbage	318 FOUNTAIN CREEK CT	Customer called stating the whole neighborhood was missed and was calling regarding why It was not collected. Has it been collected since?	5/16/2022	5/16/2022
Garbage	300 WILLOW CREEK LN	Customer called who lives on Willow Creek Ln in the Brookwood edition and stated he saw trucks dumping trash & recycling in the same truck. Please advise. Customer called back stated truck came back by to collect the recycle that had already been collected earlier in trash truck. Please have supervisor contact him regarding his concern.	5/20/2022	5/20/2022
Garbage	3319 OVILLA RD	Customer called stated their trash was out at 7am and was the only trash on the street that was missed. Please collect & advise	5/23/2022	5/23/2022
Garbage	603 VALLEY VIEW ST	TRASH MISSED-PLEASE SEE NOTES REGARDING OTHER ADDRESSES MISSED THIS DAY.	5/27/2022	5/27/2022

Department Assigned	Concern Address	Concern Description	Date Entered	Date Closed
Parks	105 COCKRELL HILL RD	Please pick up EDC Packets for delivery.	5/19/2022	
Parks	105 COCKRELL HILL RD	Entrance door knob to the Council Chamber room is loose.	5/25/2022	
Street Department	126 SUBURBAN DR	Resident at 126 Suburban called and stated tree has fallen blocking drainage ditch behind property	5/2/2022	
Street Department	715 GEORGETOWN RD	Resident at 715 Georgetown stated tree limbs are hanging over his storage buildings from drainage easement	5/2/2022	
Street Department	105 COCKRELL HILL RD	Need to mow drainage easement ThornTree	5/17/2022	
Street Department	OVILLA OAKS DR	Email received from Pl3 Griffin reporting `I wanted to report that at the corner of Ovilla Oaks Dr. and Cedar Ridge Ct, the asphalt has deteriorated and 2 pot holes are forming. It is small right now but noticing it is growing so if repaired it will prevent more street damage.`	5/17/2022	
Street Department	105 COCKRELL HILL RD	Council member received multiple complaints on the area of Cockrell Hill Road just past the south entrance of overgrown trees, shrubs, high grass. Persons advised that after numerous contacts to city staff, that particular area is still overgrown and tacky.	5/23/2022	
Street Department	105 COCKRELL HILL RD	Need to install slow children at play signs on Westlawn	5/24/2022	
Street Department	105 COCKRELL HILL RD	Need to mow City ROW	6/1/2022	
Water/Wastewater	509 FOREST EDGE LN	CUSTOMER STATING HIGH BILL-PLEASE GET REREAD.	5/2/2022	
Water/Wastewater	101 NOB HILL LN	Please locate water utilities on the east side of Cockrell Hill Headed north to Suburban from Nob Hill. See map for highlighted area	5/4/2022	

Department Assigned	Concern Address	Concern Description	Date Entered	Date Closed
Water/Wastewater	100 BURTONWOOD CIR	FINAL OUT READING AS OF 5/5/22 DO NOT LOCK BOX	5/5/2022	
Water/Wastewater	417 SHADOWWOOD TRL	NEW CUSTOMER- PLEASE GET READING AND MAKE SURE WATER IS TURNED ON.	5/6/2022	
Water/Wastewater	361 CHEYENNE MOUNTAIN DR	EMAIL RECEIVED THAT WATER METER CONNECTING TO THE MAIN IS LEAKING WATER, SEEMS TO HAVE DEFECTIVE WASHER.	5/6/2022	
Water/Wastewater	123 MEADOW GLEN LN	CUSTOMER CALLED STATING STANDING WATER @ METER TO IRRIGATION	5/9/2022	
Water/Wastewater	105 COCKRELL HILL RD	METER BOOKS IN PW BASKET-PLEASE START READINGS ON MAY 16TH.	5/9/2022	5/18/2022
Water/Wastewater	341 CHEYENNE MOUNTAIN DR	THERE SEEMS TO BE A LEAK ON THE CITY SIDE OF THE METER	5/10/2022	5/10/2022
Water/Wastewater	705 W MAIN ST	BILL CROUCH CALLED STATING THE SEWER LINE WAS STOPPED UP/PLUMBER ON SITE STATED IT WAS THE CITY SIDE THAT WAS BACKING UP.	5/11/2022	5/11/2022
Water/Wastewater	280 JOHNSON LN	REREAD METER-CUSTOMER STATING HIGH BILL	5/11/2022	
Water/Wastewater	709 W MAIN ST	FINAL OUT READING DO NOT LOCK BOX APP/DEP REC`D	5/12/2022	
Water/Wastewater	639 JOHNSON LN	FINAL OUT READING ***MAY 18TH*** DO NOT LOCK BOX	5/13/2022	5/18/2022
Water/Wastewater	121 ASHBURNE GLEN LN	Please investigate possible meter box leak and make repairs as needed. Thank you	5/17/2022	5/24/2022
Water/Wastewater	105 COCKRELL HILL RD	SEE ATTACHED MAY 2022 REPAIR LIST	5/18/2022	
Water/Wastewater	105 COCKRELL HILL RD	SEE ATTACHED MAY 2022 REREAD LIST	5/18/2022	5/20/2022

Department Assigned	Concern Address	Concern Description	Date Entered	Date Closed
Water/Wastewater	107 MEADOWWOOD LN	Water leak near water meter. Unsure if it is on city side or home side. May also be neighbors water meter (They are side-by-side).	5/23/2022	
Water/Wastewater	371 BROADMOOR LN	WATER IS LEAKING FROM THE CITY SIDE ON THE METER	5/26/2022	
Water/Wastewater	625 MEADOW LARK DR	PLEASE REPLACE METER LID.	5/27/2022	
Water/Wastewater	613 WILLIAM DR	CUSTOMER STATING HIGH BILL-PLEASE GET REREAD.	5/31/2022	
Water/Wastewater	388 JOHNSON LN	Janetta Coats called , ditch at 388 Johnson lane is holding way too much water	5/31/2022	
Water/Wastewater	411 BROADMOOR LN	WATER LEAK ON THE CITY SIDE	5/31/2022	

HONORABLE MAYOR AND CITY COUNCIL OF OVILLA
Administration Monthly May Activity Report
Presented at the June 2022 Council Meeting
City Manager - City Secretary

ADMINISTRATION, Finance, front office, and HR –

1. Assistant Fire Chief/Fire Marshal Interviews.
2. City office staff and public works staff were provided lunch by the Service League, catered by Campuzano's.
3. Finance Department and directors worked on mid-year budget reviews and adjustments.
4. FY 2022-2023 Budget calendar prepared for consideration.
5. Beginning review of design manuals.

BOARDS AND COMMISSIONS –

Interviews for board appointments and reappointments were conducted by the Board Review Committee.

Board of Adjustment:

1. No BOA meeting in May 2022.

Planning and Zoning Commission:

1. No P&Z meeting in May 2022.
    - Stonewood Development sent notice of withdrawal.
    - Forest Creek Estates – no final plat documentation received to date.

Economic Development Corporation

1. May 2022 meeting.
    - Reviewed and approved mid-year budget.
    - Discussed future hopes for development at 708 Main Street.
    - Discussed potential projects for FY2022-2023 EDC Budget.

CURRENT AND PLANNED DEVELOPMENT PROJECTS-

- Cindy Jones access pathways and walking trails – A budget adjustment was approved at the May Council meeting to have 10' access pathways from Cindy Jones Park to the restrooms and pavilion.
- Broadmoor Estates Phase I
    - Permits issued in May 2022 - 0
        - Total issued to date - 34
- Bryson Manor III
    - Permits issued in May 2022 - 0
        - Total issued to date 69
- Total collected for May 2022 in residential permits: $111,781
    - Total collected to date: $1,048,588
- Stonewood Estates
    - Zoom meeting with counsel and Stonewood representatives on Friday, May 06.
    - Stonewood sent notice to withdraw zoning and annexation requests.
- Police Station renovation: Sealed bids due June 6th

- Staff is received two proposals for the city hall conference room renovation. Exceeds $50,000 therefore will need to be placed out for bids.