Magna City

Community Risk Assessment

Magna City

UFA has two stations within the Magna City covering a total of 37.35 square miles with a population of 36,356 as of 2024 and responded to 6,966 calls for service from 2022-2024. Although Magna currently has an area of 37.35 square miles, much of that includes the Great Salt Lake and uninhabitable area. Because of this, there is roughly 15 square miles of habitable area, which places the population density into the urban classification, although with all areas calculated, it would be rural. For planning purposes, UFA will base the population per square mile off the habitable area in Magna and utilize the urban classification for Magna.

Municipality	Population	Population Percentage of UFA	Square Miles	Population Density per Sq Mile	Classification	Value of Structures Protected
Magna City Habitable	36,356	7.57%	15	2,092	Suburban	$1.8B
Magna City Total Area	36,356	7.57%	37.35	840	Rural/Suburban	$1.8B

Magna City has increased its population from 29,251 in 2020 to 36,356 in 2024, showing an increase of 24.29% over a four-year timeframe.

Magna City Station Information

Station 102	
Owner	UFSA
Opened	2024
Address	8609 West Magna Main Street
Staffing and Apparatus	• 4 Person - Medic Engine 102 (Type 1) • Cross-Staffed - Engine 6102 (Type 6)

Station 111	
Owner	UFSA

Opened	2011
Address	8215 West 3500 South
Staffing and Apparatus	• 4 Person - Medic Ladder 111 (Type 1) • 2 Person - Medic Ambulance 111 • Cross-Staffed - WTT 111 (Type 1) • Cross-Staffed - Engine 6111 (Type 6)

Surrounding UFA and Automatic/Mutual Aid Response Stations

Surrounding fire stations and fire departments that are within an eight-minute response to Magna City are:

Station Number	City Location	Staffing
UFA Station 107	Kearns	• 4 Person - Medic Engine 107 (Type 1) • 2 Person - Medic Ambulance 107
UFA Station 109	Kearns	• 4 Person - Medic Ladder 109 (Type 1) • 2 Person - Medic Ambulance 109 • Cross-Staffed - Engine 6109 (Type 6)
Station 71	West Valley	• 3 Person - Engine 71 (Type 1) • 2 Person - Medic Ambulance 71 • Cross-Staffed - HazMat 71
Station 72	West Valley	• 3 Person - Engine 72 (Type 1) • 2 Person - Medic Ambulance 72 • Battalion Chief 71
Station 74	West Valley	• 3 Person - Tower 74 (Type 1) • 2 Person - Medic Ambulance 74 • 2 Person - Medic Ambulance 744 • Cross-Staffed - Heavy Rescue 74 • Cross-Staffed - Engine 674 (Type 6)
Station 76	West Valley	• 3 Person - Ladder 76 (Type 1) • Cross-Staffed - Engine 376 (Type 3) • Cross-Staffed - Engine 676 (Type 6)

Magna City – Incidents by Dispatch Type

	CY 2022	CY 2023	CY 2024
Fire Suppression	59 | 2.6%	51 | 2.4%	51 | 2%
EMS	1759 | 76.6%	1604 | 74.3%	1863 | 74.2%
HazMat	63 | 2.7%	47 | 2.2%	63 | 2.5%
Service Call	56 | 2.4%	98 | 4.5%	111 | 4.4%
Good Intent	205 | 8.9%	206 | 9.5%	247 | 9.8%
False Call	147 | 6.4%	149 | 6.9%	168 | 6.7%
Natural Condition	3 | 0.1%	2 | 0.1%	3 | 0.1%
Other Situation	2 | 0.1%	3 | 0.1%	2 | 0.1%
Unknown	2 | 0.1%	0 | 0%	2 | 0.1%
Total	2296 | 100%	2160 | 100%	2510 | 100%

Table 1 - Incidents by Dispatch Type

Magna City – 2022-2024 Dispatch and Response Times – Emergent First Due

Chart 1 - Dispatch and Response Times

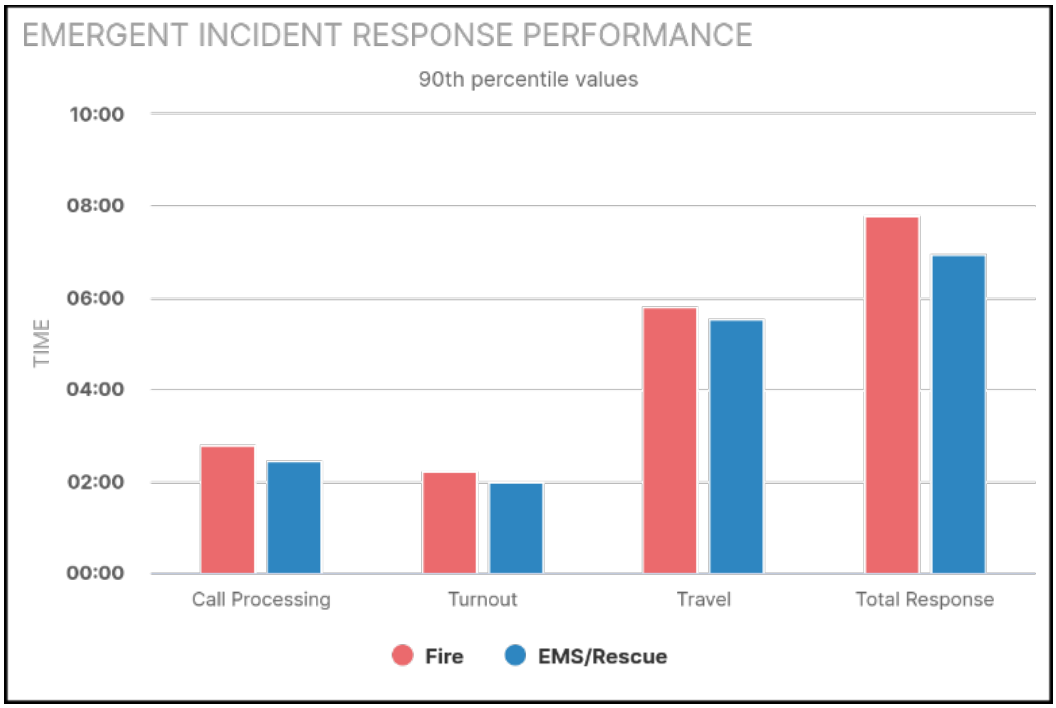

Chart 2 - Emergent Incident Response Performance

Suburban	Call Processing: Fire	Turnout Time: Fire	Travel Time: Fire	Total Response: Fire	Call Processing: EMS	Turnout Time: EMS	Travel Time: EMS	Total Response: EMS
Magna 2022	2:44	2:10	6:58	10:39	2:27	2:02	5:38	9:02
Magna 2023	2:32	2:16	6:21	10:01	2:06	2:00	5:28	8:31
Magna 2024	2:29	2:09	7:12	11:06	2:09	1:56	5:26	8:16
UFA Urban 2022-2024	2:43	2:20	7:17	10:51	2:15	2:06	6:11	9:11
UFA Rural 2022-2024	2:59	2:22	14:56	17:48	2:51	2:18	14:29	18:22
NFPA 1710	1:04	1:20	4:00	6:24	1:00	1:00	4:00	6:00

Table 2 – Emergent Response Times, 90th percentile values

Magna City – 2022-2024 Total Response Times

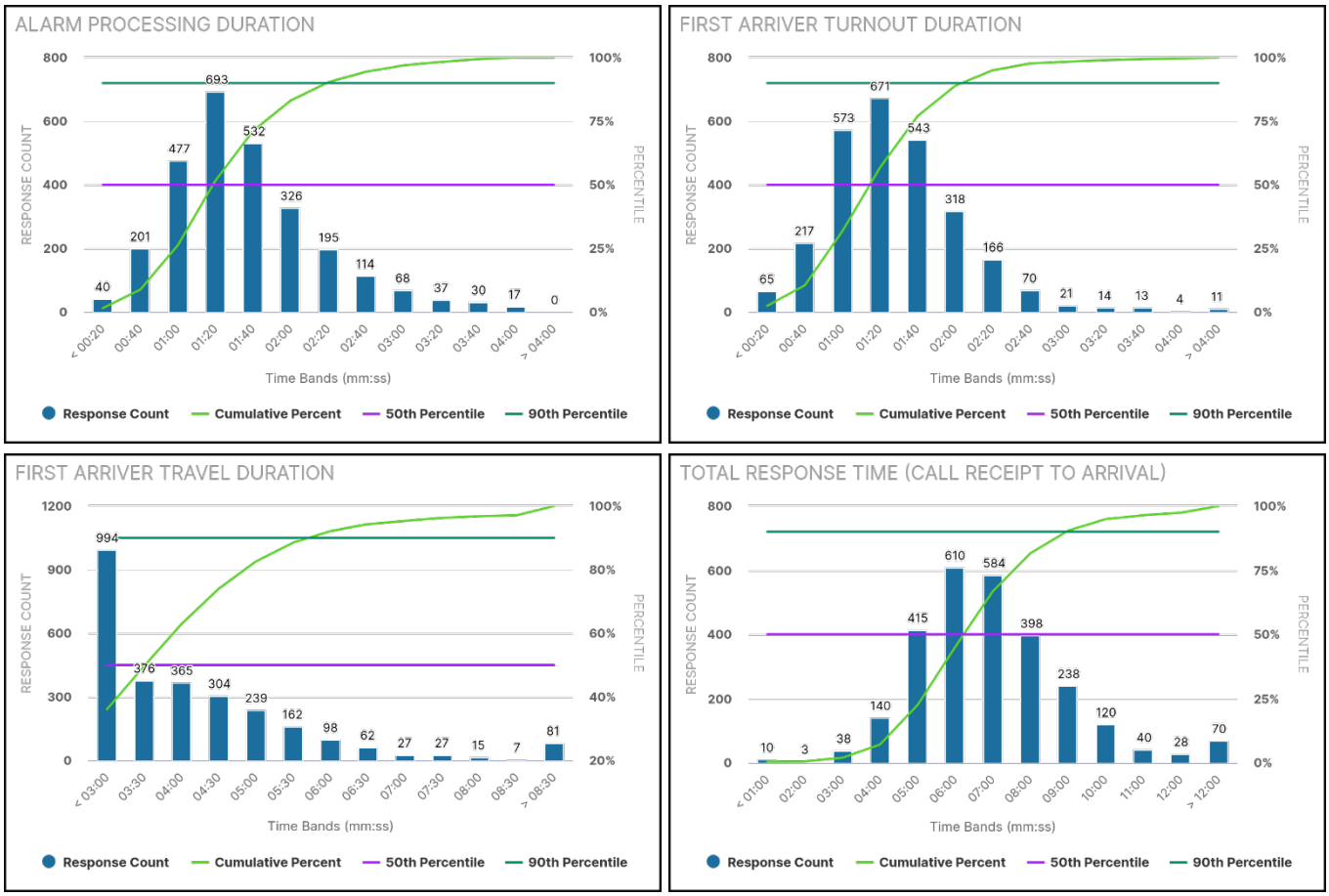

Chart 3 - Turnout and Travel Times

The charts above illustrate the alarm processing, turnout, travel, and total response times for all units responding to service calls within Magna City (90th percentile).

Magna City: 2022-2024 Incidents by Time of Day

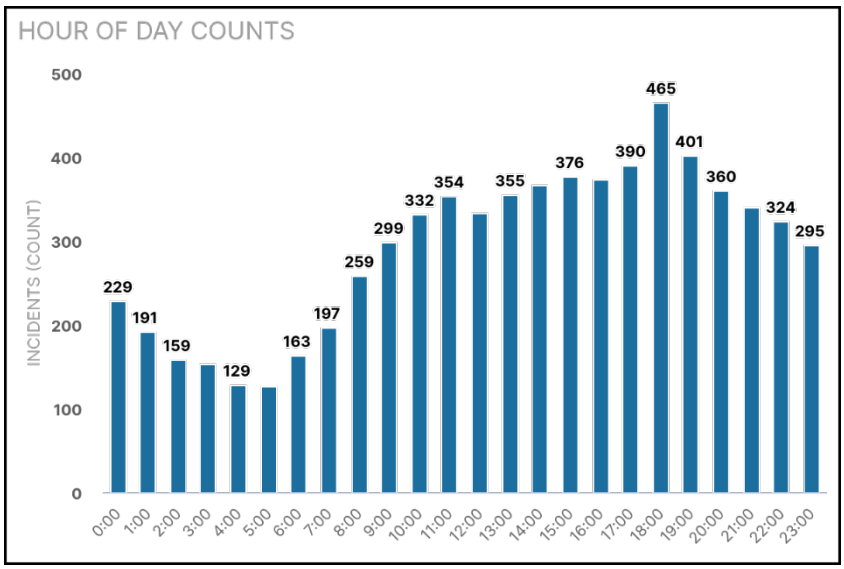

Chart 4 - Incidents by Time of Day

This table demonstrates the incidents by time of day and the time of greatest demand within Magna City for all service calls.

Magna City – 2022-2024 Incidents by Day of Week

This chart presents incident volume by day of the week and demonstrates that demand increases toward the end of the week, with the highest call volume occurring on Friday and elevated activity continuing into Saturday.

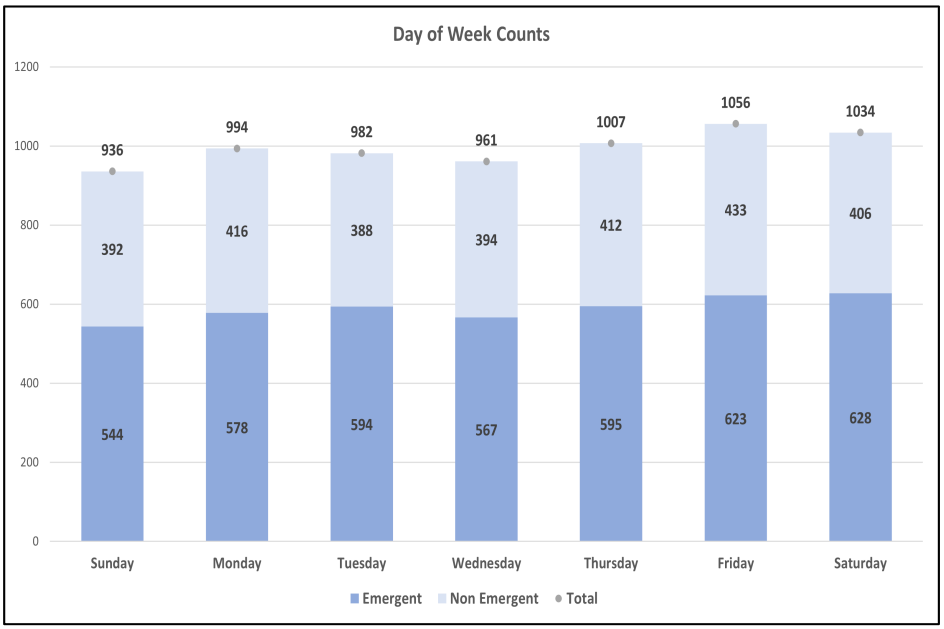

Chart 5 – Incidents by Day of Week

Magna City – 2022-2024 EMS Calls and Ambulance Transports

Total EMS Calls	Total Ambulance Transports	% Of EMS Calls Requiring Transport
5,226	2,886	55%

Table 3 - EMS Calls and Ambulance Transports

Magna City – 2022-2024 EMS Incidents by Dispatch Type

EMS Call Type	Incident Count
Sick Person	601
Fall	395
Breathing Problem	302
Unconscious	175
Seizure	160

Table 4 - Top 5 Medical Calls

Magna City – 2022-2024 Fire Incidents by Dispatch Type

NFIRS Description	Incident Count	% of Incidents
Structure Fire	62	38.51%

NFIRS Description	Incident Count	% of Incidents
Special Outside Fire	9	5.59%

Table 5 - Incidents by Dispatch Type

Natural Vegetation Fire	25	15.53%	**Fire, Other**	9	5.59%
Outside Rubbish Fire	38	23.60%	**Mobile Property Fire**	16	9.94%
Vehicle Fire	2	3.9%	**Total**	161	100%

Magna City – Building Occupancy Classification and Risk Categories

Occupancy Classification	Low	Moderate	High	Max	Total
Agriculture	5	0	0	0	**5**
Assembly	10	5	11	0	**26**
Commercial	108	57	19	0	**184**
Education	18	2	13	3	**36**
Government	34	3	3	0	**40**
Hazardous	5	0	0	0	**5**
Healthcare	0	1	2	0	**3**
High Rise	0	0	0	0	**0**
Industrial	48	9	12	0	**69**
Mixed Use	0	0	0	0	**0**
Residential **	8415	24	12	0	**8451**
Single Family Residential	6405	1151	33	1	**7590**
Multi-family Residential	373	133	44	11	**561**
Unclassified/Storage	82	4	5	0	**91**
Utility and Miscellaneous	0	0	0	0	**0**
Total	**15503**	**1389**	**154**	**15**	**17061**

***** Residential includes single family and multi-family. Breakdowns for those are in a separate row.***
***** Residential includes manufactured homes and unclassified so multi-family and single family may not add up to residential.***

Building Size / Considerations

Nonresidential low: 1 - 1-4,999 sq ft	Residential low: 1 – 1,999 sq ft.
Nonresidential moderate: 5,000 – 9,999 sq ft	Residential moderate: 2,000 – 3,999 sq ft.
Nonresidential high: 10,000 – 99,999 sq ft	Residential high: 4,000 – 9,999
Nonresidential max: ≥ 100,000 sq ft	Residential max: ≥ 10,000

Table 6 – Building Occupancy and Risk Categories

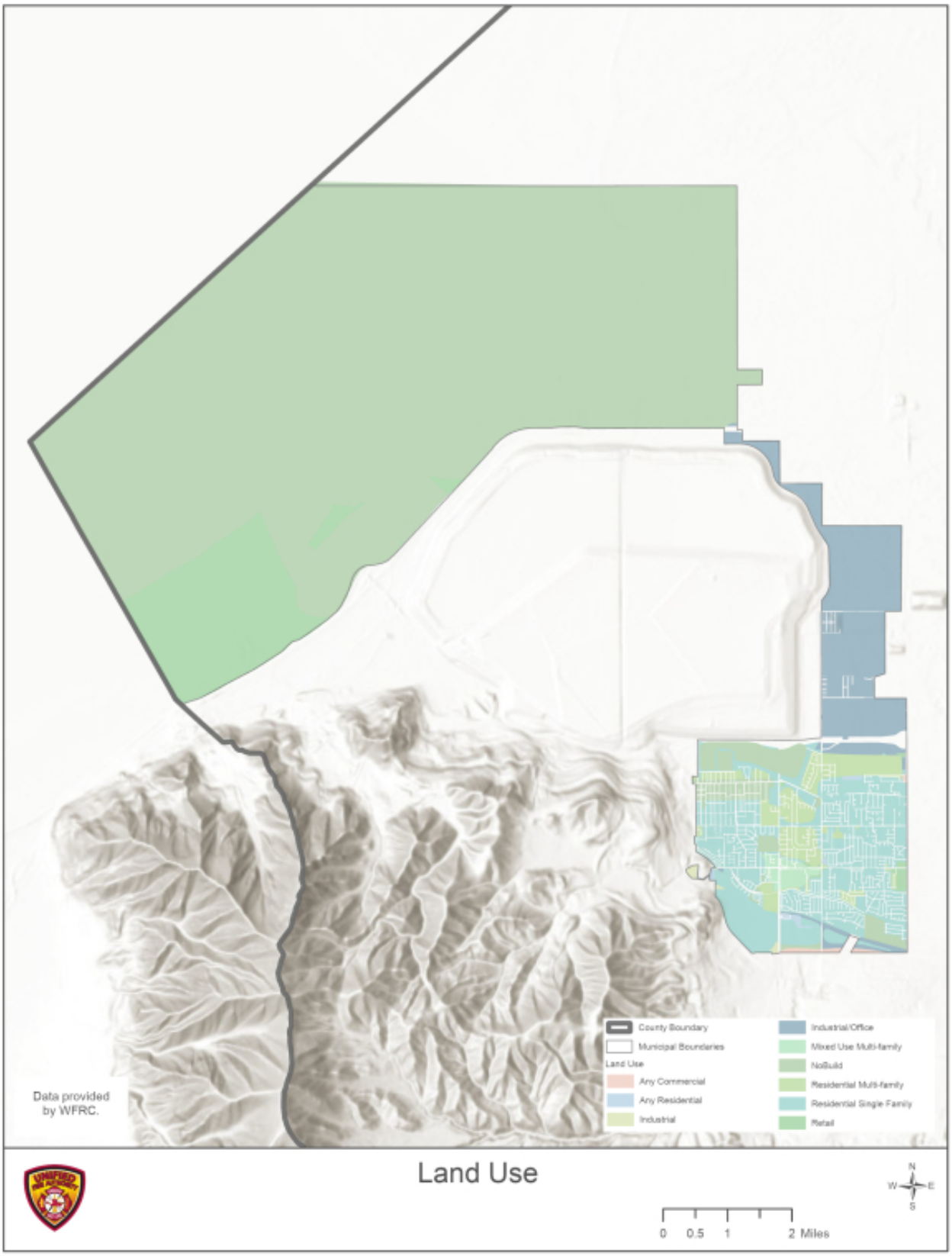

Image 1 - Land Use

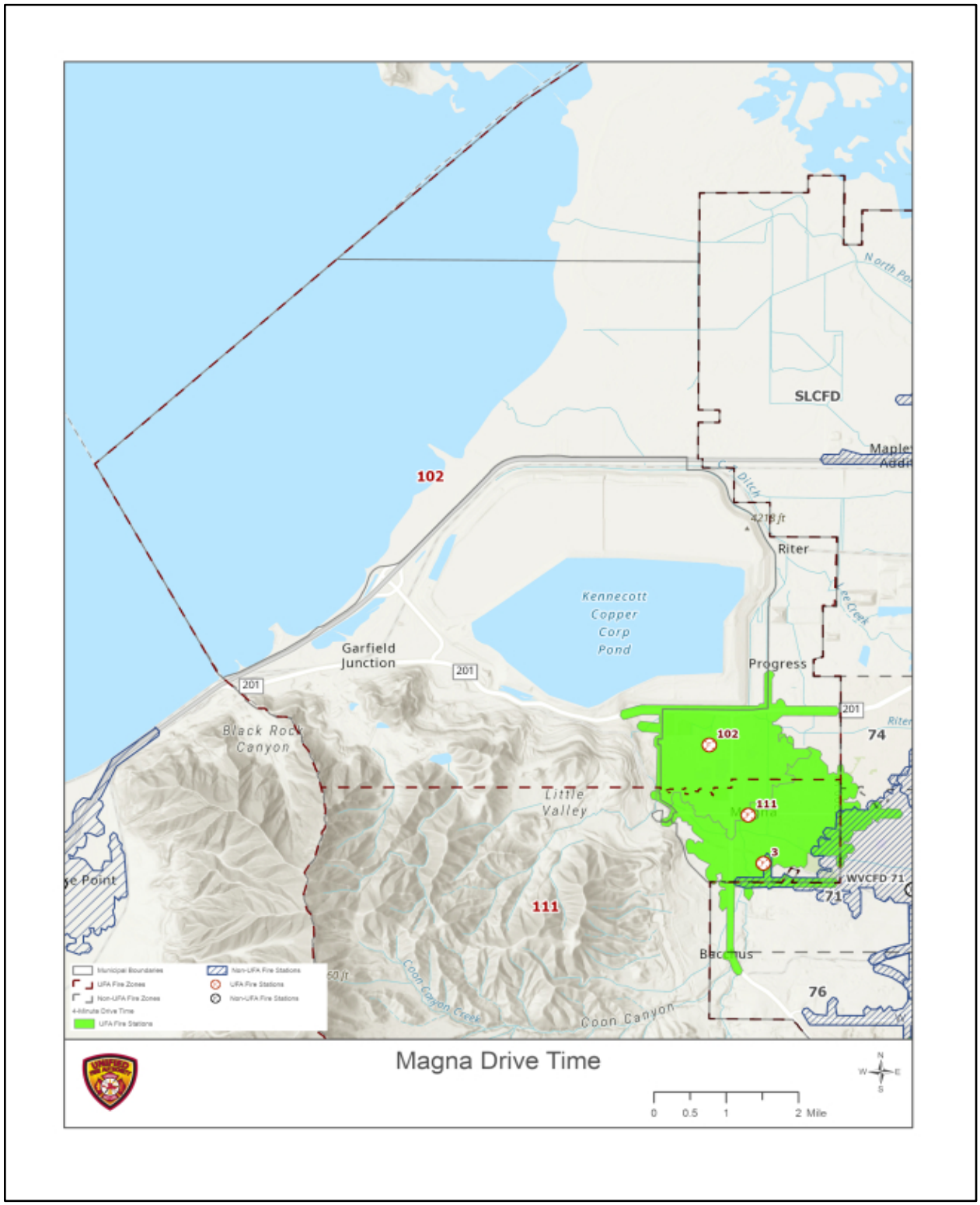

Image 2 - 4-Minute Response Times - UFA and Aid

Magna – First Arriver Travel Times

The following maps demonstrate the 90th percentile of travel times based off the last three years of historical data (2022-2024). The darker the color is, the more delayed the response, with the green and light colors demonstrating below or near target times. The darker colors on the bar within the key demonstrating longer travel times by apparatus. This map's drive times (or travel times) are based off the current NFPA 1710 standard of four minutes (90th percentile) from notification of the alarm to the arrival of the first arriving apparatus — not an adopted standard by UFA. In 2024, within the City of Magna, the 90th percentile drive time is 6:39 for fire and 5:34 for EMS, or a combined 90th percentile drive time of 5:40.

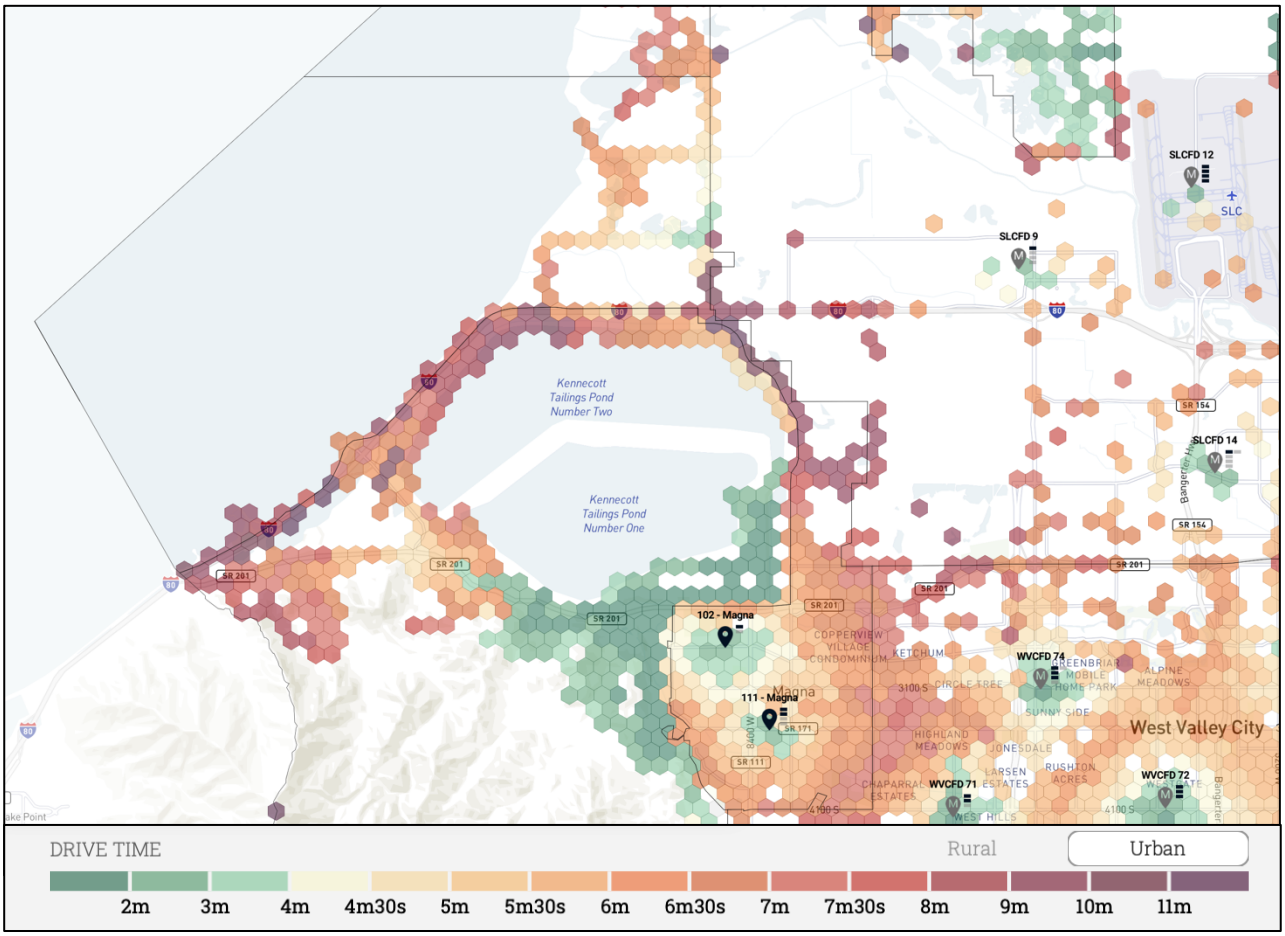

Image 3 - Emergent Response Times - All Aid

Magna – Residential Fire Effective Response Force (17 FF)

This map demonstrates the coverage of a multi-unit response to a residential fire based off all apparatus being within their station. The green to light yellow demonstrates the ability to have seventeen firefighters (a residential fire effective response force) on scene based off a residential urban fire force response. This map's drive times (or travel times) are based off the current NFPA 1710 standard of eight minutes (90th percentile) from notification of the alarm to the arrival of the initial full alarm assignment (a minimum of 17 firefighters) for a residential, low, or medium hazard assembly — not an adopted standard by UFA. Based off predictive data, the 90th percentile for 17 firefighters to arrive on scene is 10:14.

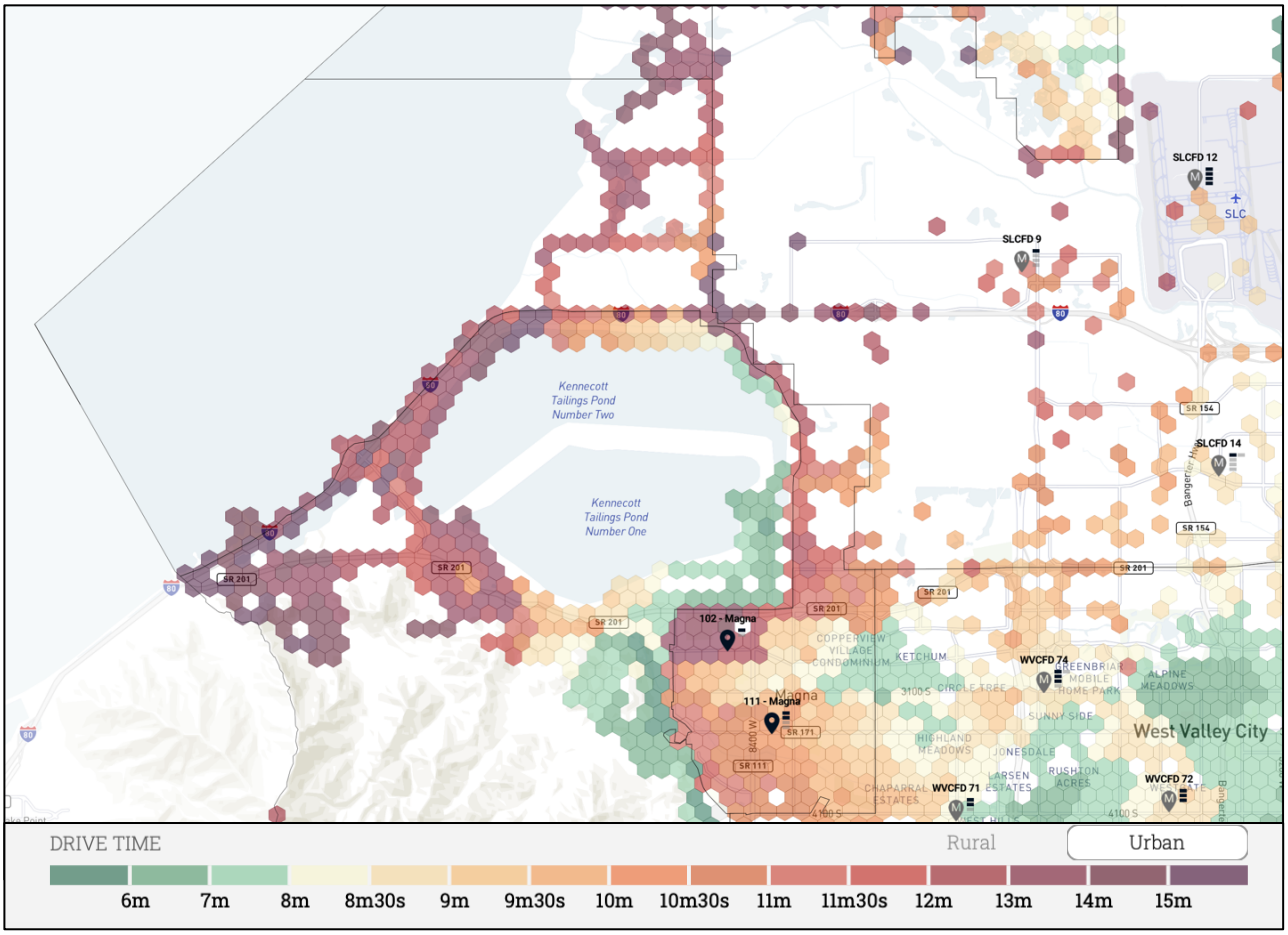

Image 4 - Response Times – Residential Fire Effective Response Force (17 ERF)

Magna – Commercial Fire Effective Response Force (28 FF)

This map demonstrates the coverage of a multi-unit response to a commercial fire based off all apparatus being within their station. The green to light yellow demonstrates the ability to have twenty-eight firefighters (a commercial fire effective response force) on scene based off a residential urban fire force response. This map's drive times (or travel times) are based off the current NFPA 1710 standard of ten minutes and 10 seconds (90th percentile) from notification of the alarm to the arrival of the initial full alarm assignment (a minimum of 28 firefighters) for a commercial, high hazard or high-rise assembly — not an adopted standard by UFA. Based off predictive data, the 90th percentile for 28 firefighters to arrive on scene is 12:33.

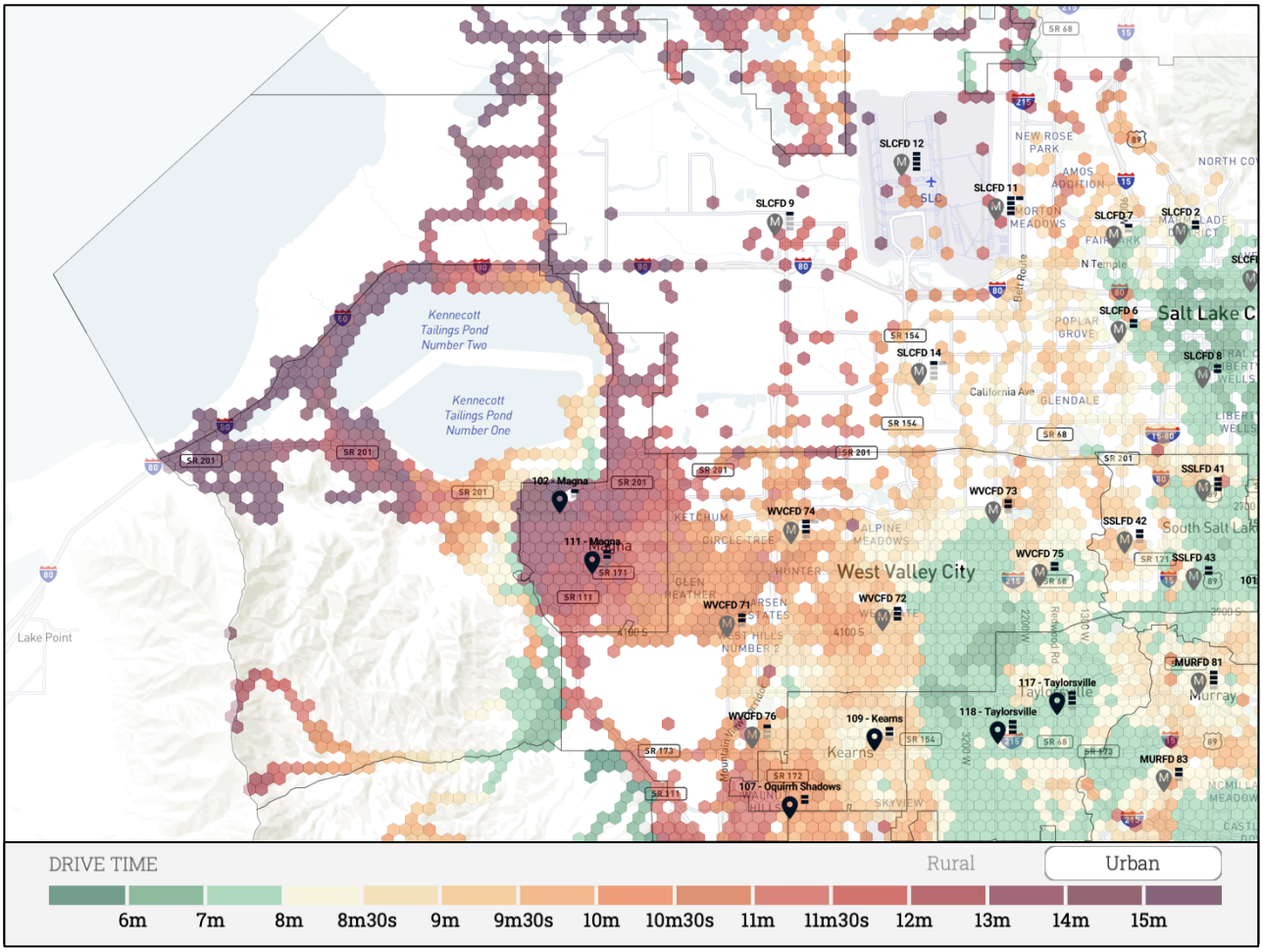

Image 5 - Response Times – Commercial Fire Effective Response Force (28 FF)

Magna City Risk Assessments

Infrastructure – Transportation	Infrastructure – Dams	Earthquake Liquefaction	Earthquake Faults	Avalanche	Unreinforced Masonry	Wildland Urban Interface	Tier II Sites	Hospitals	Schools	≥100,000 sq ft Structures	Residential Population
Mod	High	High	High	Low	Mod	High	Low	Low	Mod	Low	Mod

Transportation: Low Risk = 0-99 Linear Miles; Moderate Risk = 100-199 Linear Miles; High Risk = >200 Linear Miles
Dams: Low Risk = 0-3; Moderate Risk = 4-6; High Risk = ≥7
Liquefaction: The areas of liquefaction vary throughout the valley, with areas of high susceptibility running South and East from the Great Salt Lake
Earthquake Faults: Low Risk = 0-30,000 LF of fault line; Moderate Risk = 30,001-60,000 LF of fault line; High Risk = ≥60,001 LF of fault line
Unreinforced Masonry: Low Risk = 0-100; Moderate Risk = 101-1,000; High Risk = ≥1,001
Wildland Urban Interface: Low Risk = 0-25% WUI; Moderate Risk = 26-50% WUI; High Risk = ≥51% WUI
Tier II Sites: Low Risk = 1-5; Moderate Risk = 6-10; High Risk = ≥11
Hospitals: Low Risk = 0; Moderate Risk = 1; High Risk = ≥2
Schools: Low Risk = 0-5; Moderate Risk = 6-10; High Risk ≥11
100,000 sq ft Buildings: Low Risk = 0-5; Moderate Risk = 6-14; High Risk = ≥15
Population: Low Risk = 1-19,999; Moderate Risk = 20,000-39,999; High Risk = ≥40,000

Table 7 – Hazard Matrix

Infrastructure – Transportation

There are several high-level transportation routes within Magna or directly bordering the city. SR201 runs directly on the north side of the city and I-80 also runs on the north side of the city. Several arterials and other state roads also run through Magna, with U-111, 3500 South, and 4100 South. There are .45 linear miles of Interstate/US Highway, 8.87 linear miles of State Highways, and 123.7 total linear miles of roadway. UTA also runs bus routes through the city, with the main bus route running on 3500 South. Magna is in the moderate-risk category for road infrastructure.

Infrastructure – Water

There is one water district within Magna, the Magna Water Improvement District

Infrastructure – Dams

There are ten identified dams within Magna. Magna is in the high-risk category for dam infrastructure.

Natural Hazards

Within Magna, there are no concerns with avalanche areas. Magna is in the low-risk category for avalanche. There are several identified fault lines that run through the city, and on March 18, 2020, there was a 5.7 magnitude earthquake that's epicenter was in Magna. Magna is in the high-risk category for liquefaction and high-risk category for fault lines, with an estimated 64,921 linear miles of fault lines. One of the biggest hazards that occur within an earthquake scenario is the number of unreinforced masonry (URM) buildings within Magna, with an estimated 1,120 URM's, which constitutes about 4.38% of the overall URM's within UFA's response areas. Magna is in the moderate-risk category for unreinforced masonry.

Wildland Urban Interface

There is high risk of urban interface fires within Magna and directly to the north and west of the city in the Unincorporated areas. Magna is in the high-risk category for Wildland Urban Interface.

Hazardous Materials / Tier II Sites

There are five identified HazMat/Tier II Sites within Magna, which is in the low-risk category.

Hospitals

Magna has no standalone hospitals. This places Magna in the low-risk category for hospitals.

Schools

Magna has five elementary schools, two middle school, one high school, and one charter school within city boundaries which places it in the moderate-risk category.

Target Hazards – Structures

Some of the target-hazard occupancies in Magna include:

- ATK/Northrop Grumman – 5000 S 8400 W
- Copperview Apts – 3400 S Copperfield Place
- Deseret Soap – 3602 S 7200 W
- Elk Run Apts – 8525 W Elk Mountain Rd
- Fastenal Distribution Center – 4025 S 8000 W
- FedEx Warehouse – 2490 S 7600 W
- Kennecott/Rio Tinto, Smelter / Refinery / Powerhouse – Kennecott Property

- Magna Medical – 3665 S 8400 W
- Oquirrh Hill Apts – 2850 S 8400 W
- Questar Gas Bulk Storage – 1731 S 8000 W
- Saltair Venue – 12408 W Saltair Dr
- UFP Industries – 3909 S 8000 W

Life and Property Loss

From 2022-2024, there have been zero fatalities attributed to fire. There has been a total estimate of $1,381,821.00 of property loss and a total estimate of $492,830.00 of content loss due to fire.

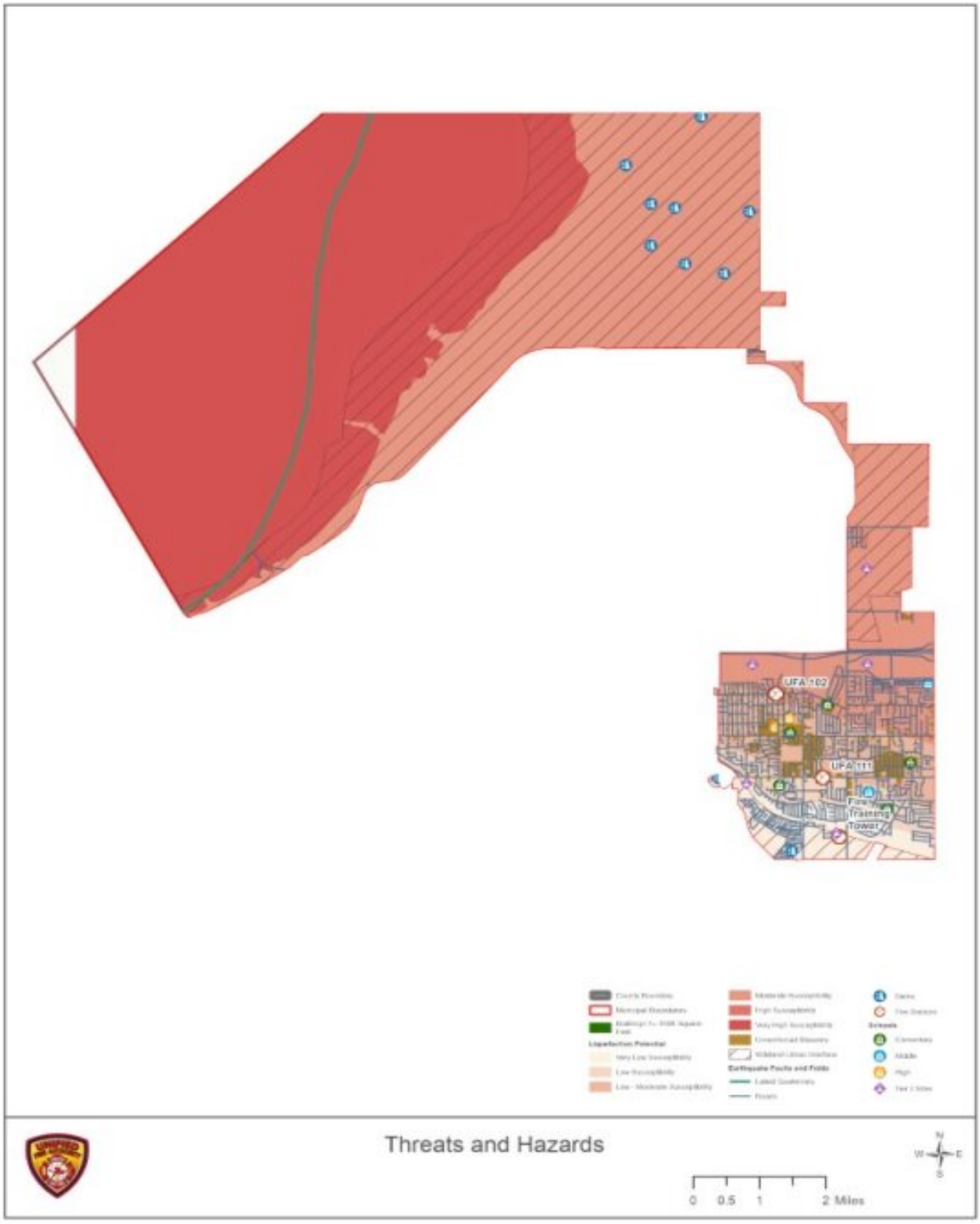

Image 6 - Threats and Hazards