

# Section 2 – Community Risk Assessments



## Unified Fire Authority



## Section 2 – Unified Fire Authority

### **Part 1 – UFA Information and Coverage Areas**

#### Legal Existence

On November 21, 1921, the Salt Lake County Fire Department was formed pursuant to Utah Code 11-7-1 (amended 2016), outlining that all municipalities shall provide fire protection within their jurisdiction and/or contract for said services. In 2004, Salt Lake County Fire Department split from Salt Lake County becoming a Special Service District (SSD) and taxing entity and rebranding itself as Unified Fire Authority of Greater Salt Lake. This creation of an SSD falls under Utah Code 17B Part 2 and Utah Code 11-13-4. Additionally, Salt Lake County Ordinance 17-34-1 (effective 5/2019) outlines the services that a First-Class County will provide, including fire protection services, advanced life support and paramedic services — including in recreational areas.

In 2004, when UFA separated from Salt Lake County Government, it did so with the establishment of an interlocal agreement (ILA). In 2019, through many discussions and meetings, UFA and its Board of Directors revisited the ILA and adjusted many portions of the ILA, keeping the legal authorities in place whereby UFA was providing the necessary fire suppression response and rescue services in place and redefining the various parameters whereby the municipalities fell into either a service area member or contracting entity. The revised ILA was signed by all parties at the end of 2019 or beginning of 2020.

## Unified Fire Authority's Vision, Mission, and Values

### Vision

To enhance and protect the safety and well-being of our community.

### Mission

To save lives, protect property, and strengthen community relationships with professionalism, courage, and dedication.

### Values

- Integrity
- Professionalism
- Respect
- Accountability
- Teamwork
- Dedication
- Courage



## Unified Fire Authority Board of Directors

Town of Alta – Mayor Roger Bourke

Town of Brighton – Mayor Dan Knopp

Copperton Township – Councilmember Kathleen Bailey

City of Cottonwood Heights – Mayor Mike Weichers

Eagle Mountain City – Mayor Tom Westmoreland

Emigration Township – Councilmember Catherine Harris

Herriman City – Councilmember Jared Henderson

Holladay City – Mayor Rob Dahle

Kearns Township – Councilmember Chrystal Butterfield

Magna Township – Councilmember Trish Hull

Midvale City – Mayor Marcus Stevenson

Millcreek City – Mayor Jeff Silvestrini

Riverton City – Councilmember Tish Buroker

City of Taylorsville – Mayor Kristie Overson

Salt Lake County – Deputy Mayor Catherine Kanter

Salt Lake County – Councilmember Sheldon Stewart

White City Township – Councilmember Allen Perry

## Unified Fire Authority Leadership

Fire Chief – Dominic Burchett

Assistant Chief, Administration & Planning – Riley Pilgrim

Assistant Chief, Emergency Services – Dusty Dern

Assistant Chief, Support Services – Zachary Robinson

Chief Financial Officer – Tony Hill

Chief Legal Officer – Brian Roberts

Information Outreach, Director of Communications – Nile Easton

## Standards of Cover Work Group

Assistant Chief Stephen Higgs

Assistant Chief Dusty Dern

Battalion Chief Embret Fossum

Battalion Chief Wade Russell

Captain Rob Ayres

Captain Matthew Call

Communications Supervisor Justin Watters

Emergency Management Division Chief Clint Mecham

Local1696 Representative Captain Michael Conn

Medical Division Chief Jay Torgersen

Operations Chief Dusty Dern

Special Operations Division Chief Bryan Case

# UFA Organizational Chart

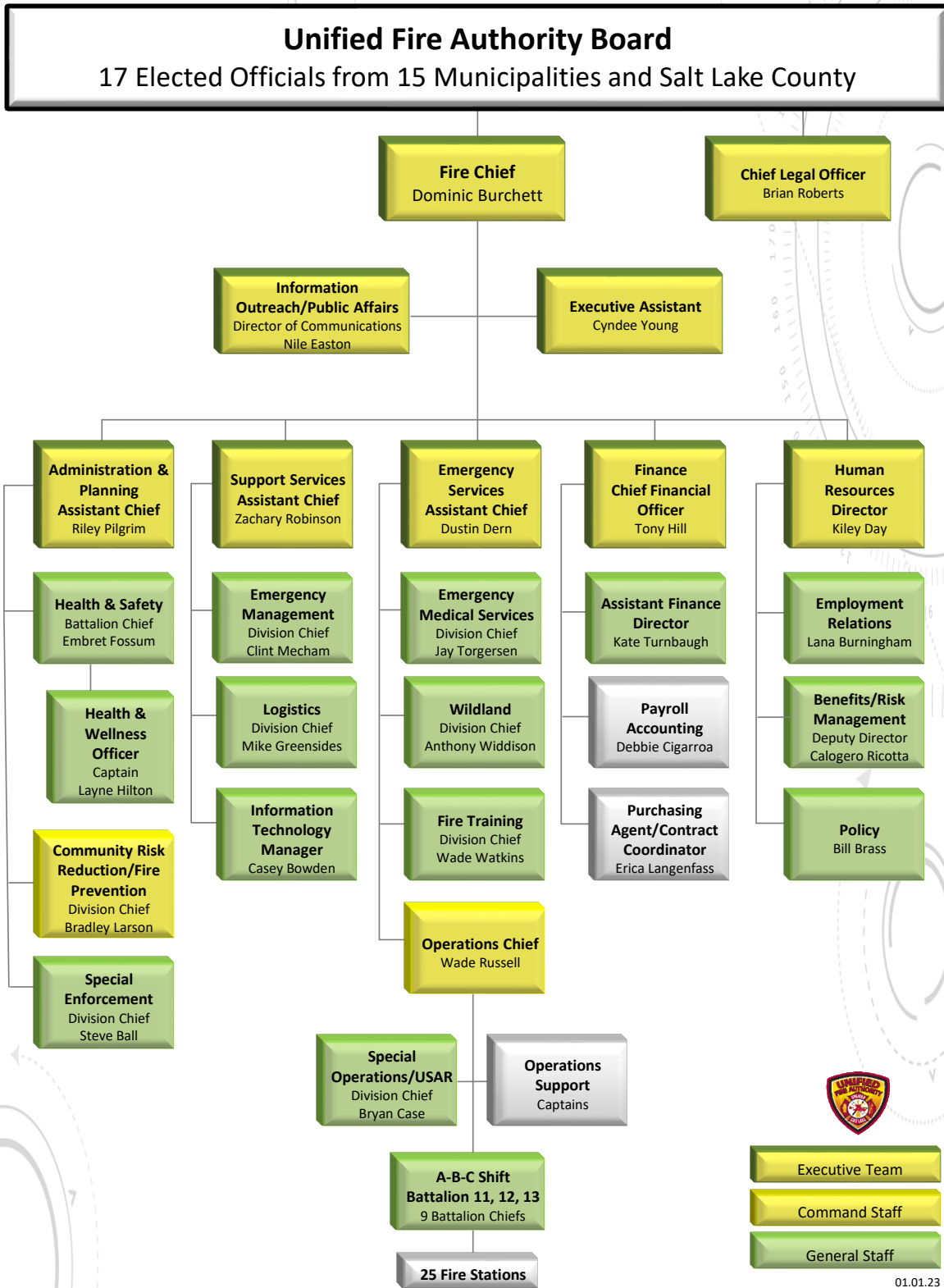


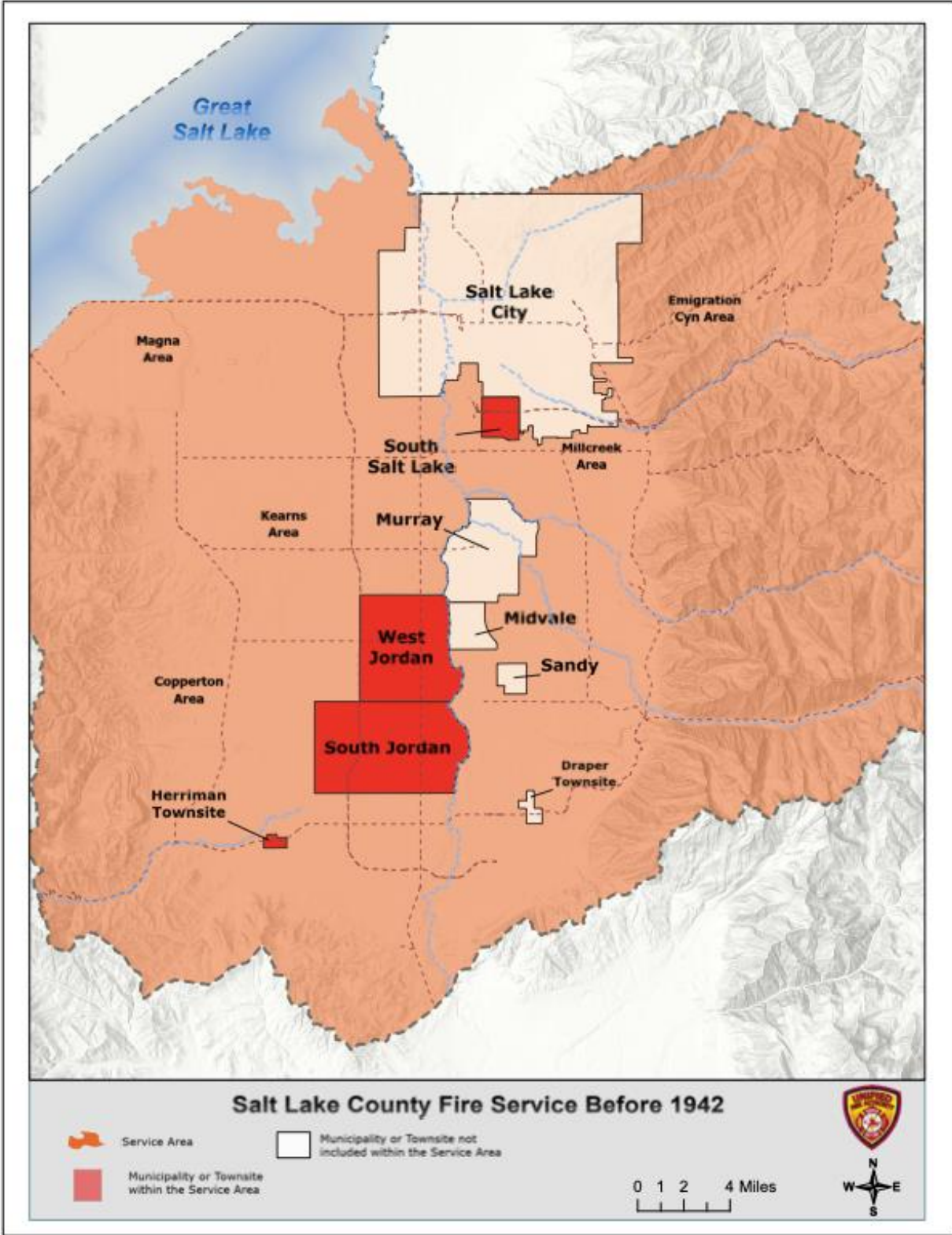
Image 2 - UFA Organizational Chart, 2023

## Organizational History

UFA is Utah's largest fire agency with nearly 700 employees serving an estimated 451,035 residents in 15 municipalities and Salt Lake County.

Unified Fire Authority (UFA), Utah's largest fire agency, provides fire protection, emergency medical services and other emergency responses for Alta, Brighton, Copperton Township, Cottonwood Heights, Eagle Mountain, Emigration Canyon Township, Herriman, Holladay, Kearns Township, Magna Township, Midvale, Riverton, Taylorsville, White City Township and the Unincorporated Areas of Salt Lake County. Unified Fire Authority was formally Salt Lake County Fire Department until forming the UFA in 2004. UFA, whose headquarters are located at 3380 South 900 West, in Salt Lake County, has a 2020 operating budget of approximately \$72 million.

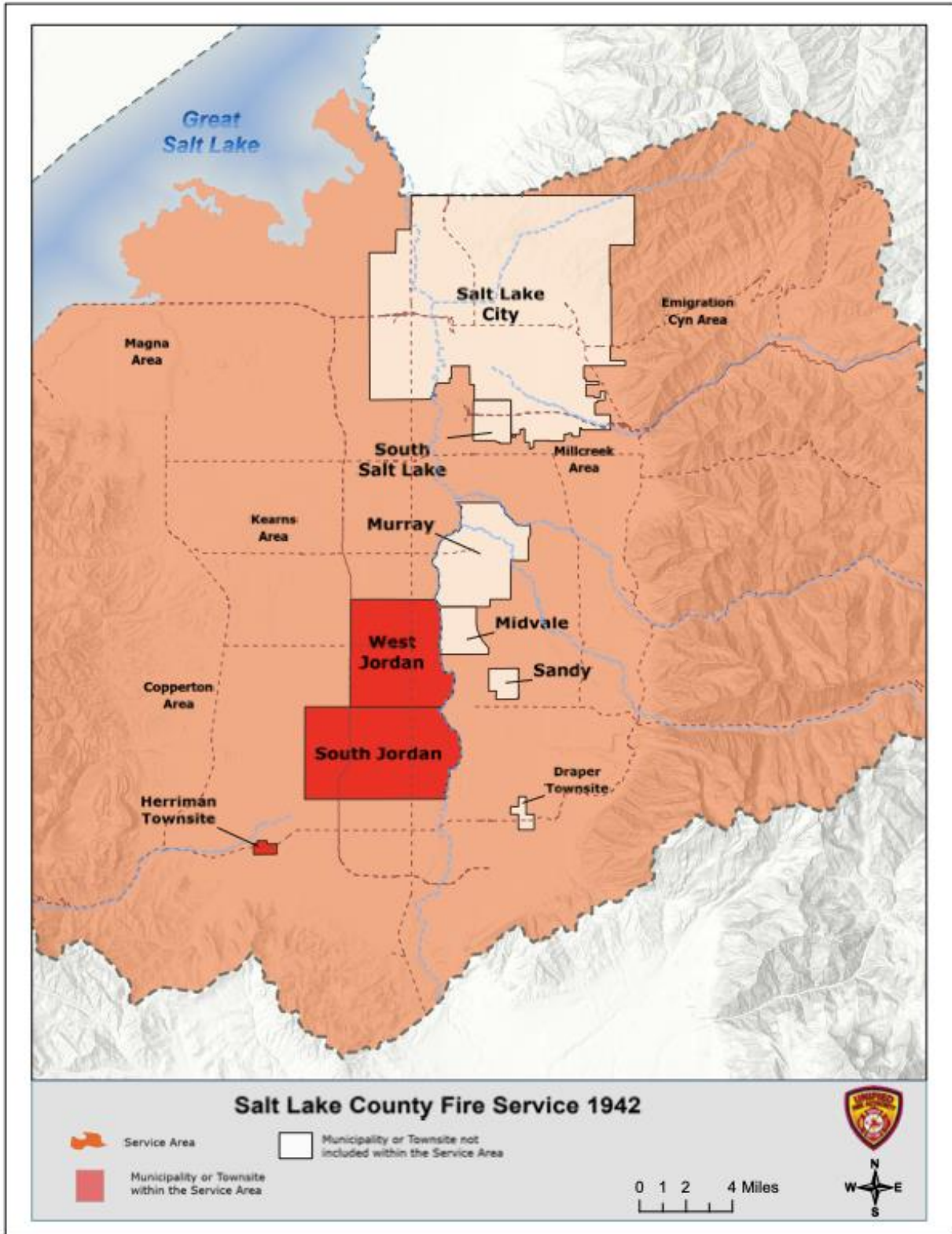
On November 21, 1921 Salt Lake County Fire Department was formed under the direction of Chief Albert Marriott. Throughout the department's history, members have worked to enhance fire service and improve service delivery to the residents of the Salt Lake Valley. The department was instrumental in helping with the development and design of the first water carrying engines to be used in the Midwest while also addressing the need for rapid transport to the hospital and starting an ambulance service. Salt Lake County Fire continued to grow, morph, and solidify through the decades. During the 1970's, the department certified all employees as EMT's. A few years later, the department participated in some of the first Paramedic training offered to Utah Firefighters by sending nine Firefighters to Los Angeles, helping pioneer the Paramedic program for the State of Utah. Over the next several years, the department started to create specialized response teams such as HazMat, Heavy Rescue and Wildland Teams.



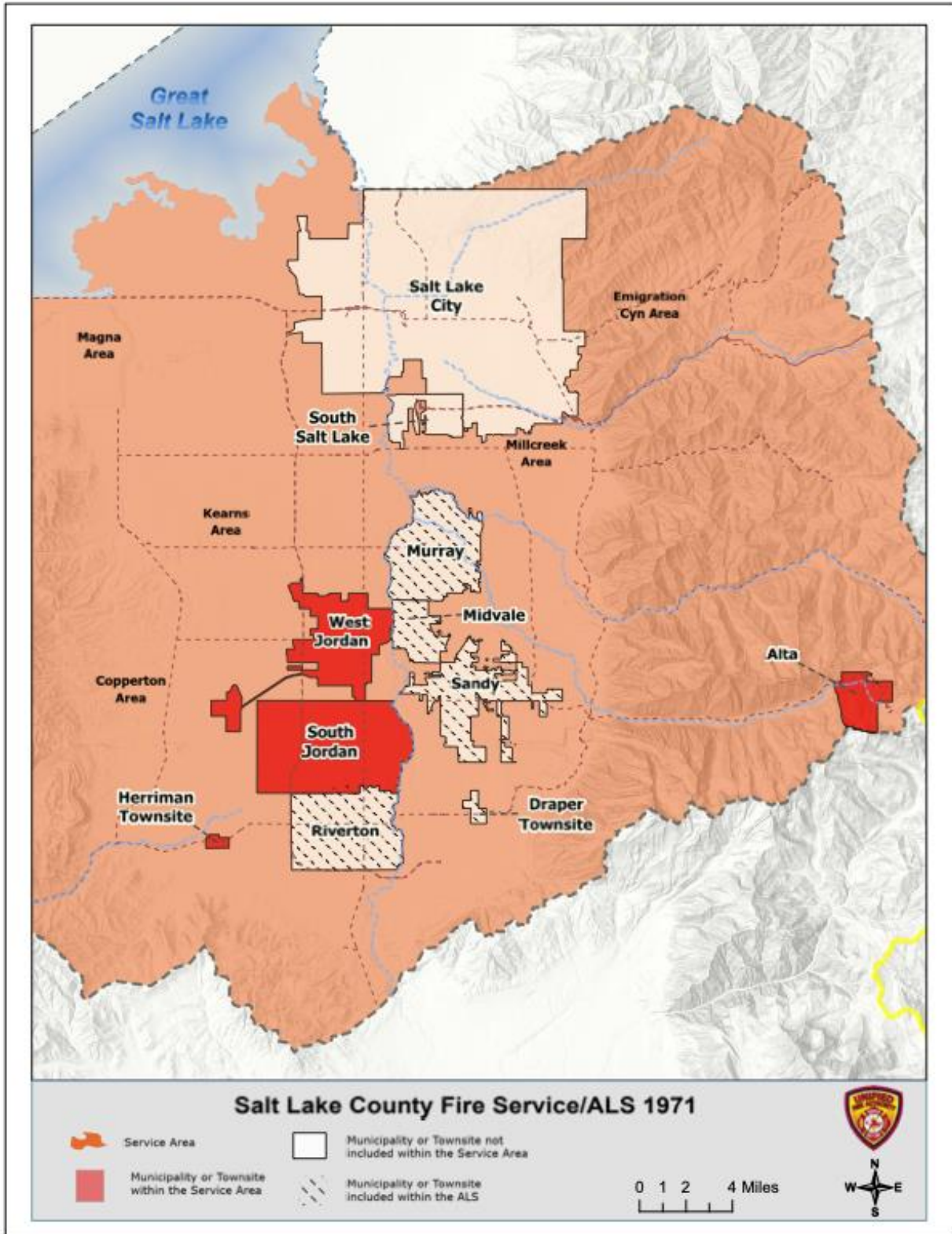
Map 21 - SLCo Fire 1921-1942



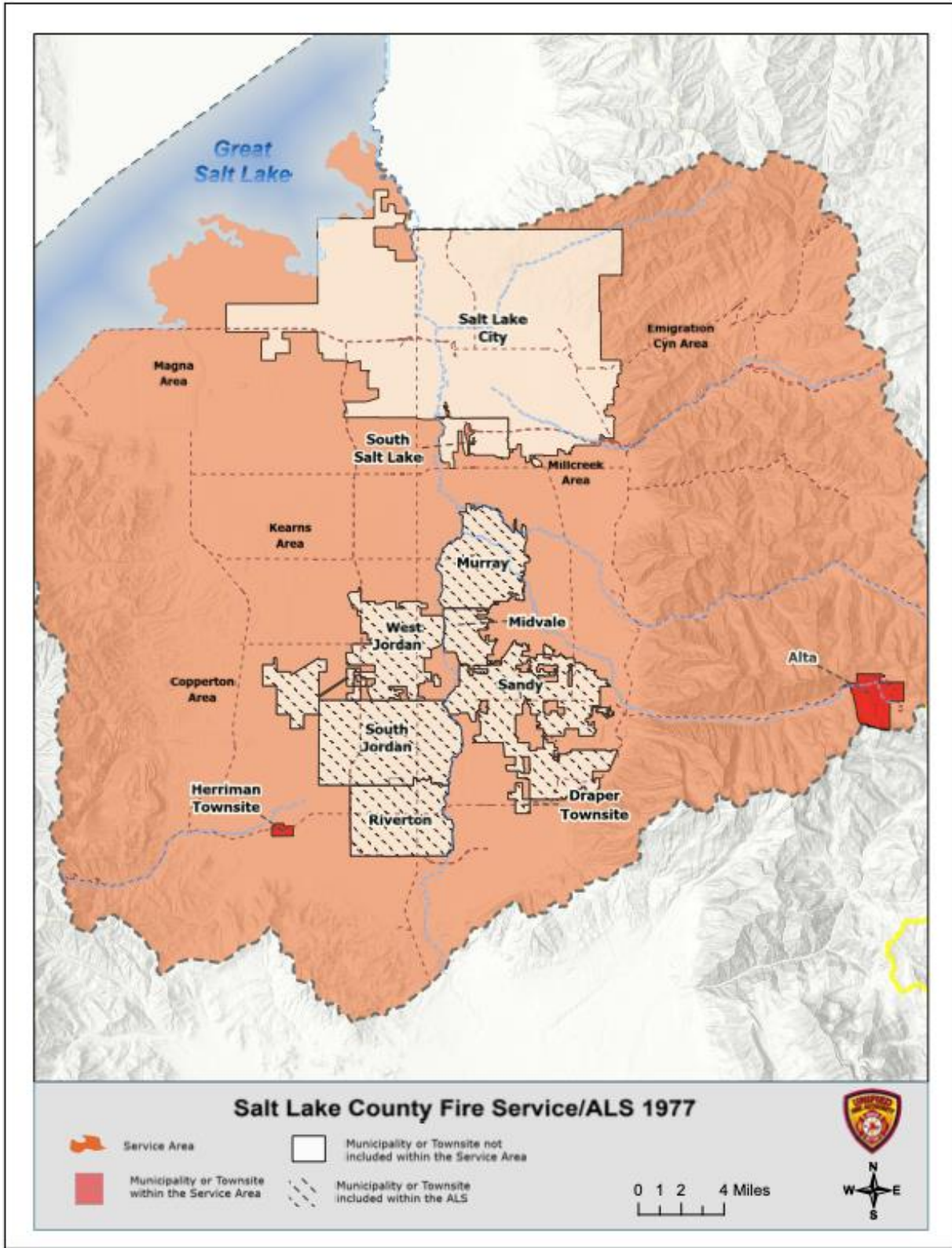
From this point on, Salt Lake County Fire was responsible for maintaining Advanced Life Support (ALS) services to all municipalities within the Salt Lake Valley. In 1977, both South Jordan and West Jordan Cities formulated their own fire response services at a municipal level and removed itself from Salt Lake County Fire services. In 1978, the City of Bluffdale formulated its own fire response, and in 1985 the West Valley City created its own fire service. In 1995, Draper City moved its fire services to Salt Lake County Fire, and in 1998 Riverton City followed suit.



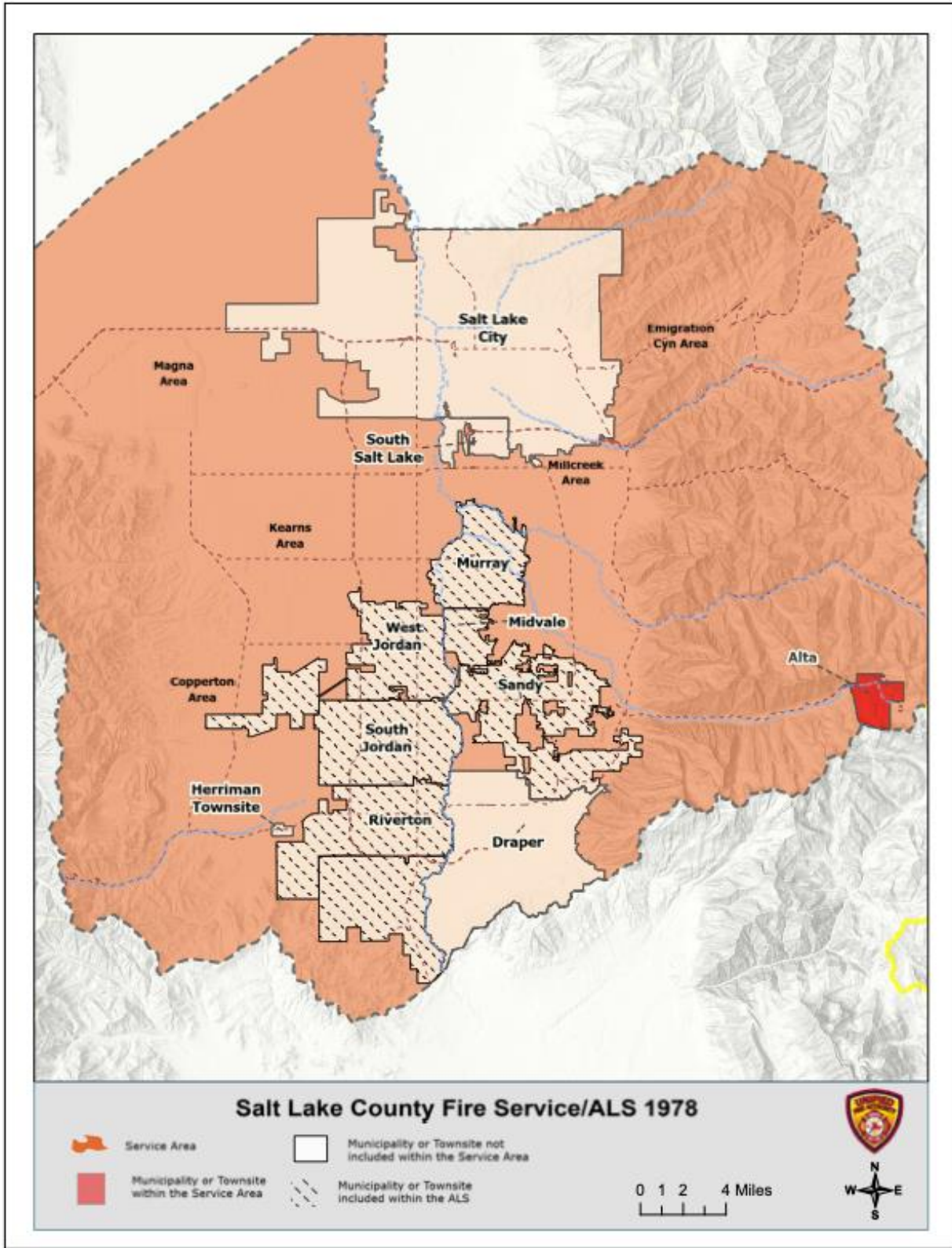
Map 22 - SLCo Fire 1942



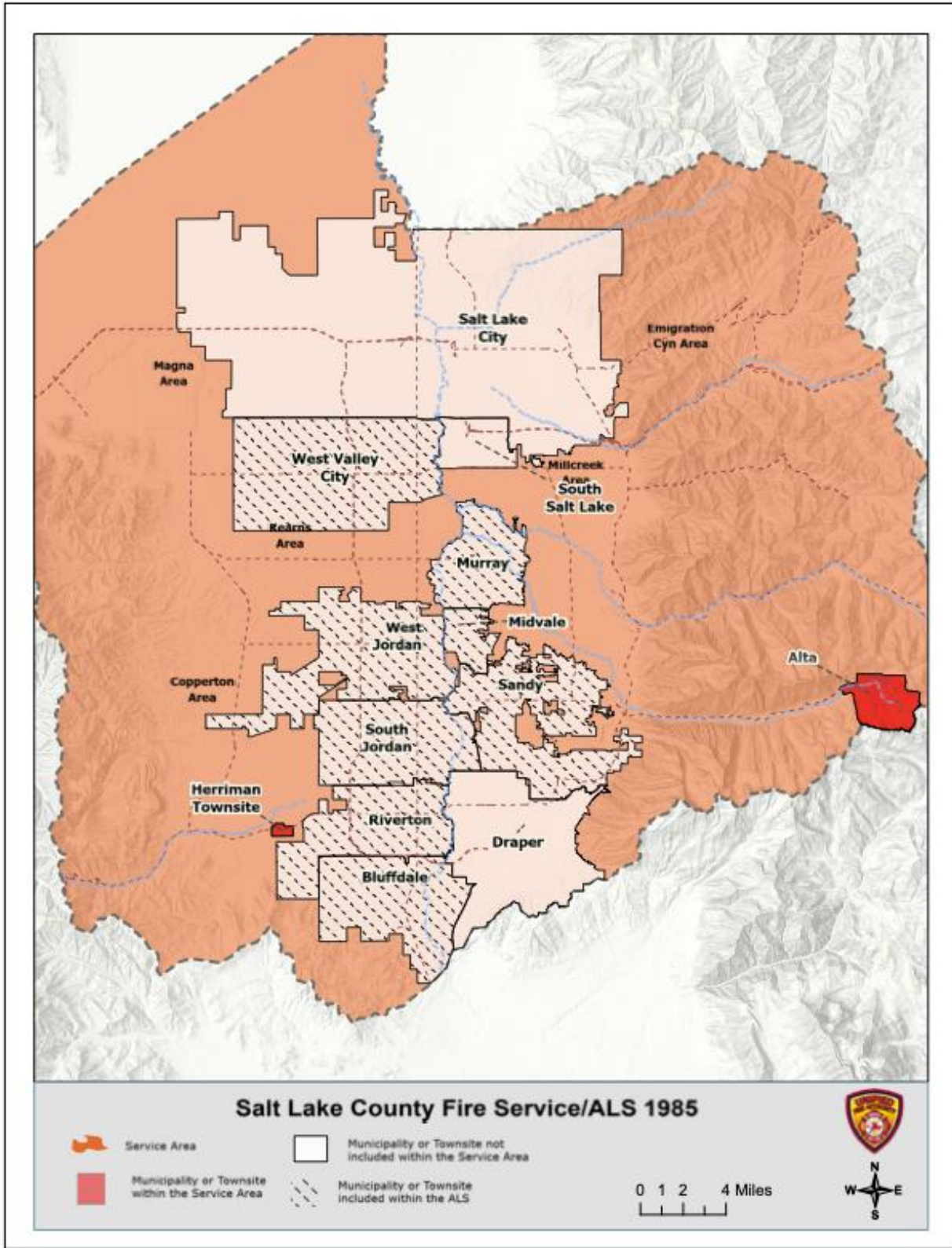
Map 23 - SLCo Fire and ALS 1971



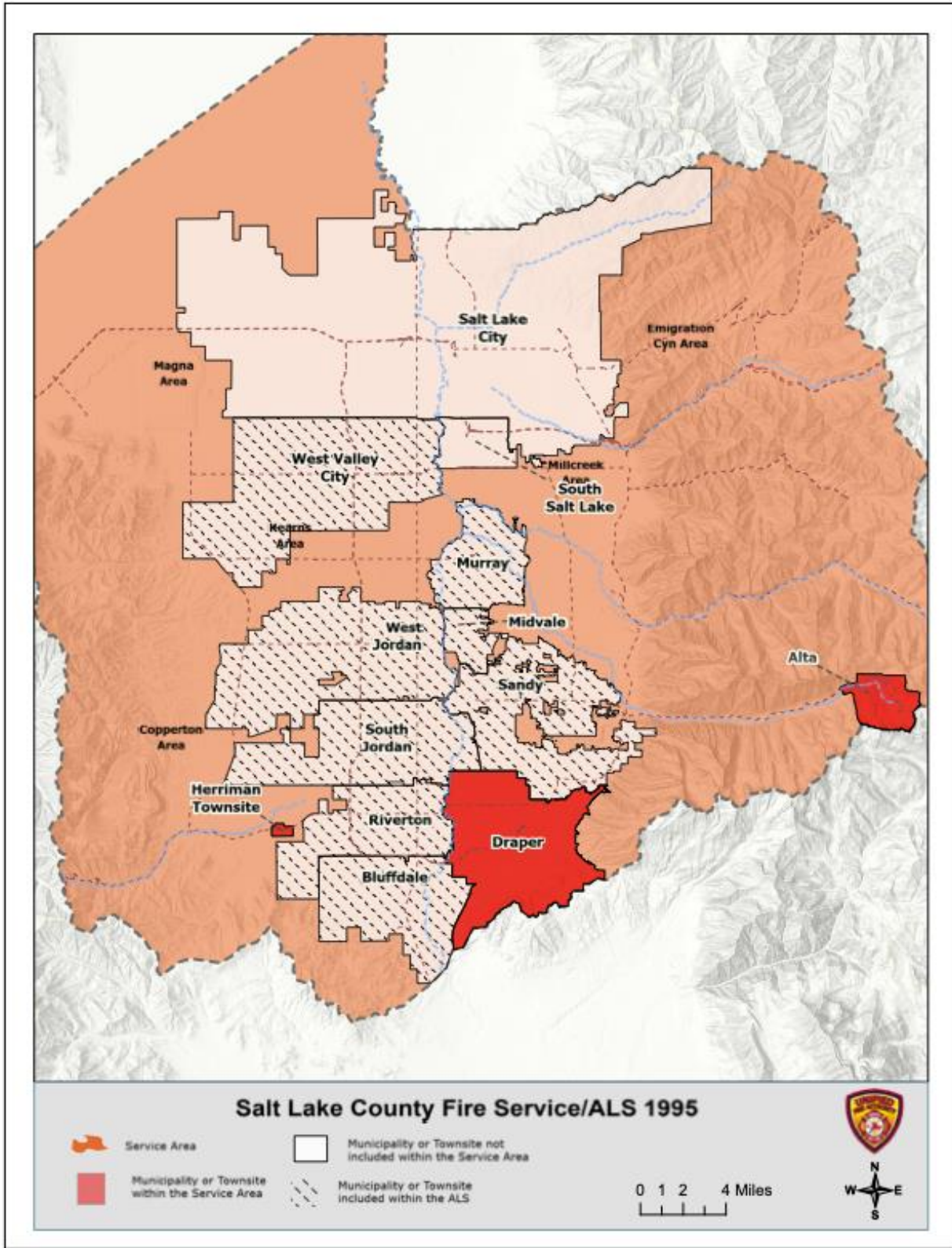
Map 24 - SLCo Fire and ALS 1977



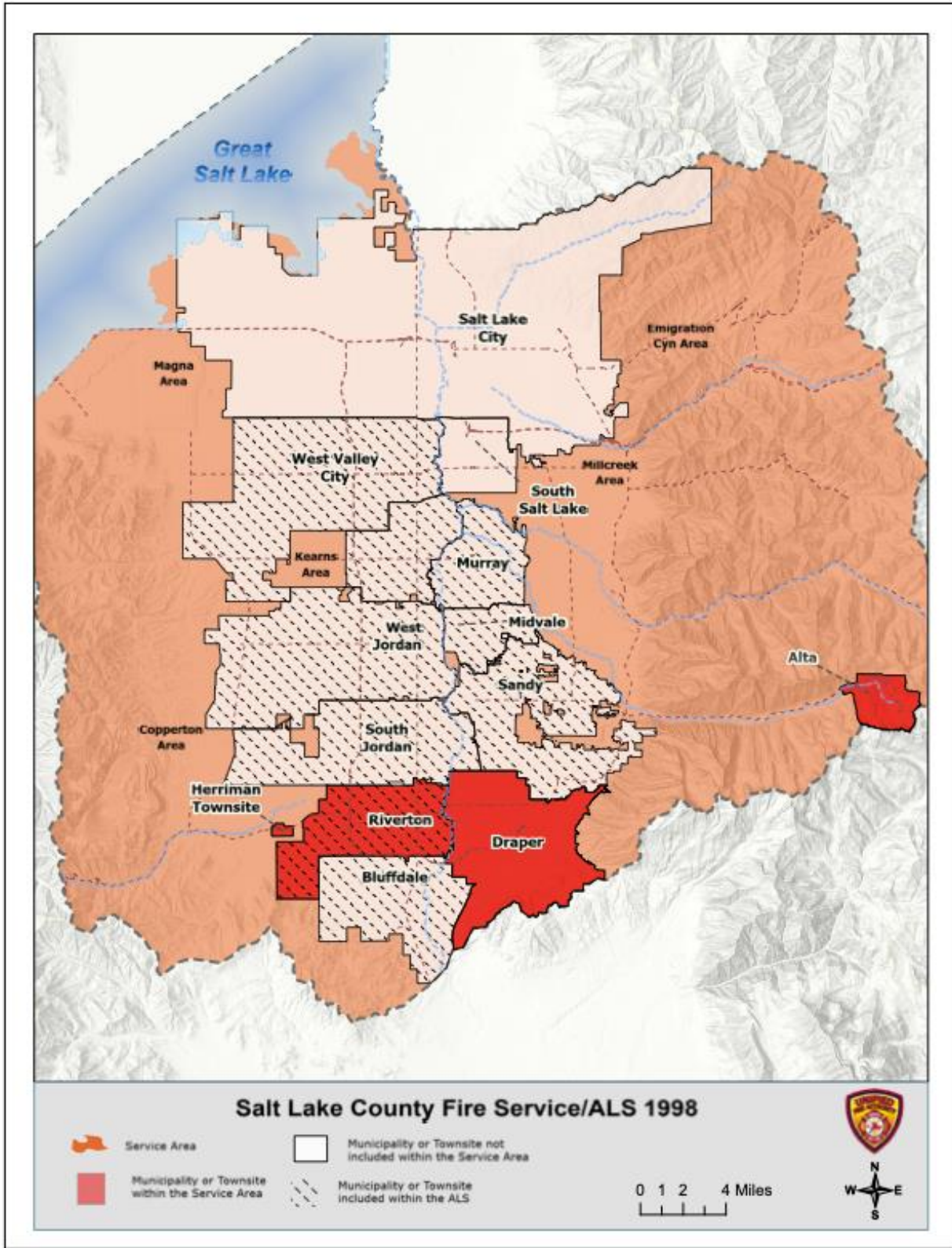
Map 25 - SLCo Fire and ALS 1978



Map 26 - SLCo Fire and ALS 1978



Map 27 - SLCo Fire and ALS 1985

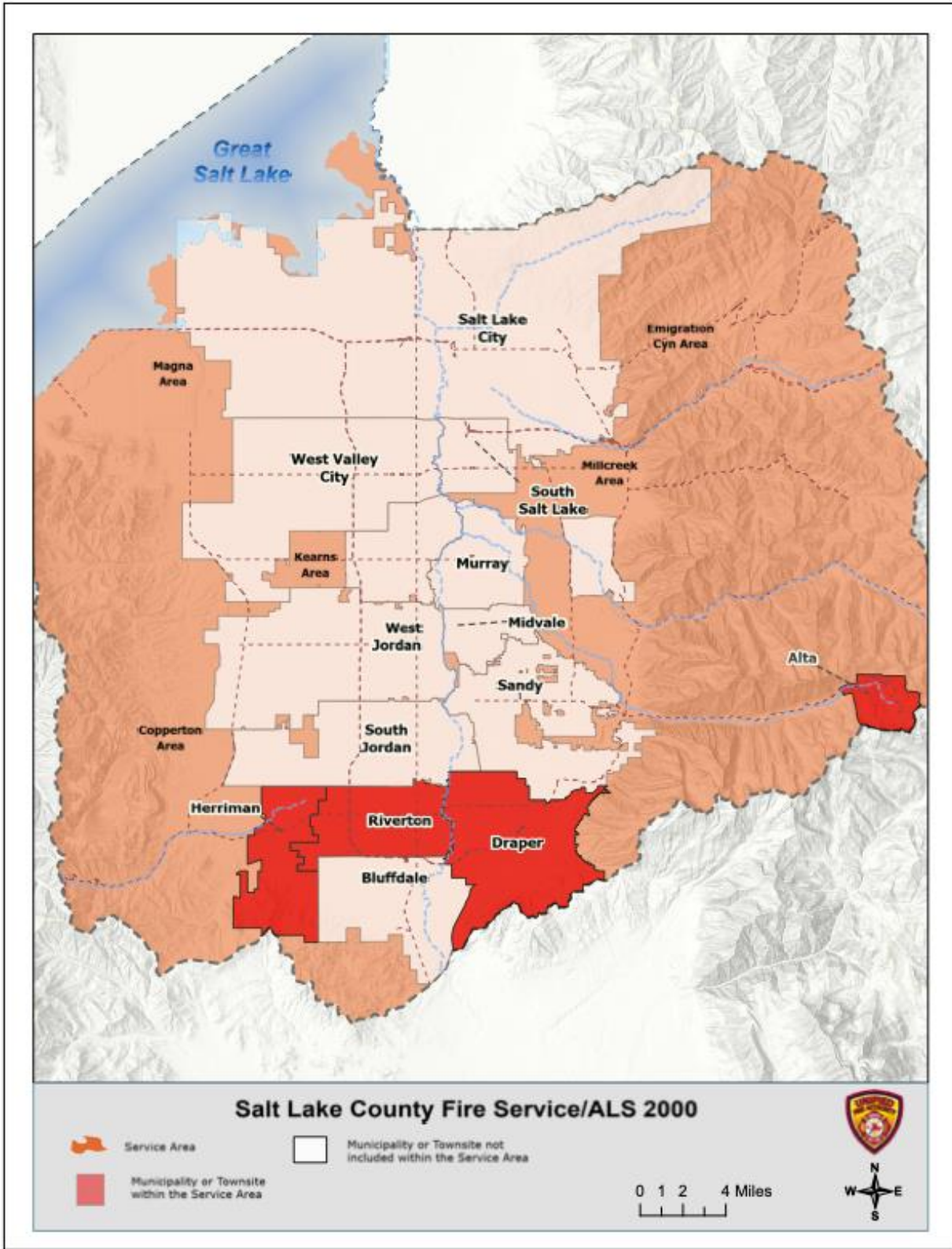


Map 28 - SLCo Fire and ALS 1998



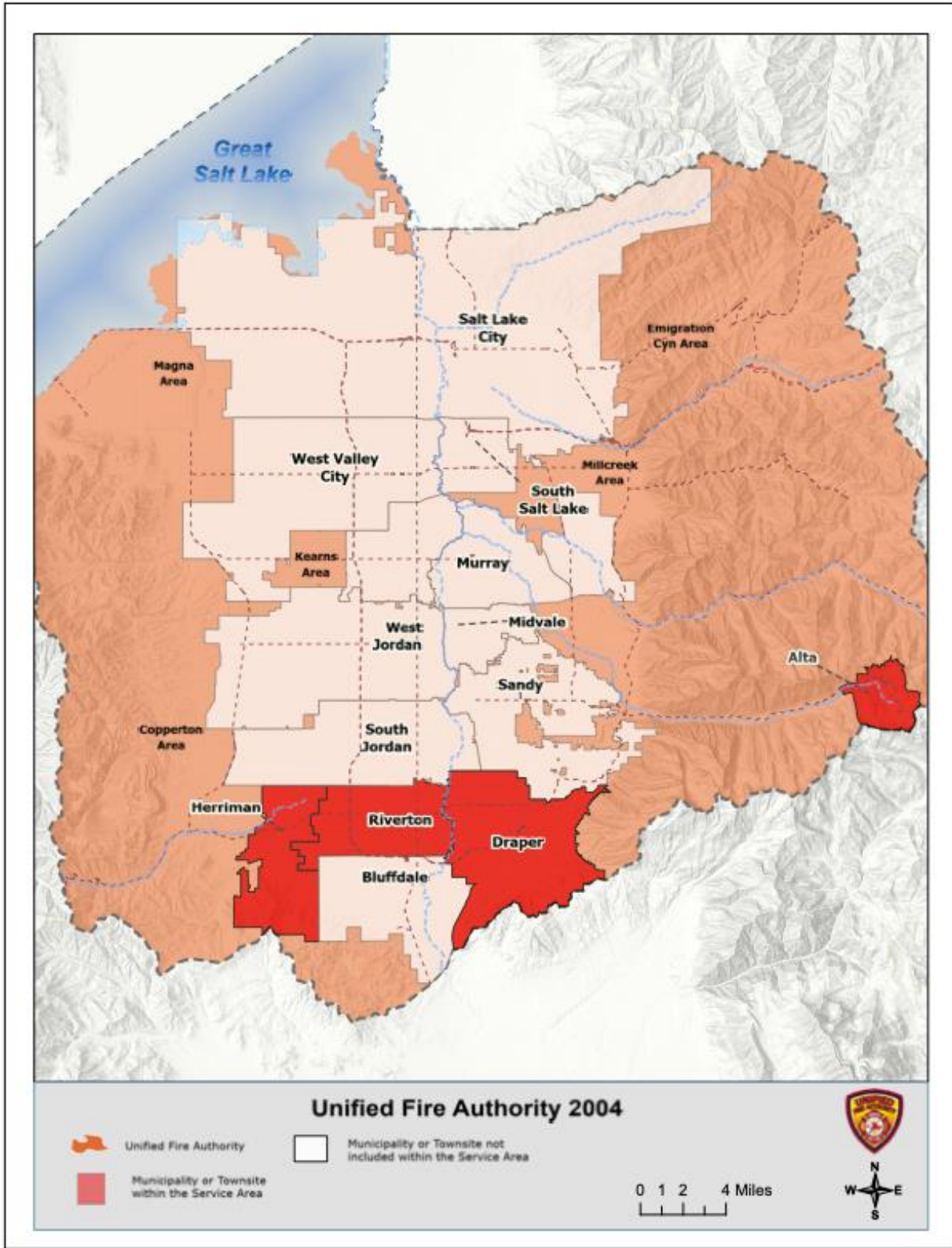
Discussions for the formation of a unified fire department within the Salt Lake Valley began in 1998. For many years, Salt Lake County Fire provided emergency services to several contract cities in addition to the Unincorporated Salt Lake County. While each city appreciated the service delivery of the County Fire Department and wanted to move forward with the relationship, they also recognized some problems with that relationship. There was no direct avenue for the elected officials of their respective cities to vote on current issues or budget proposals, also, changes in the service package for one city might affect another city detrimentally. These points, along with administrative concerns for the ability to develop and carry out long term planning, added to the need to move the department in a different direction.

Additionally, in the 2000 state legislative session, Senate Bill 259 (SB259) was passed, mandating that paramedic services move from being funded by the Salt Lake County general fund to each municipality. Even though some municipalities had begun funding and providing fire services within their communities, Salt Lake County was still paying for ALS services. With the implementation of SB259, the cities of Bluffdale, Midvale, Murray, Sandy, South Jordan, South Salt Lake, West Jordan, and West Valley all moved to maintain their own in-house EMS services.



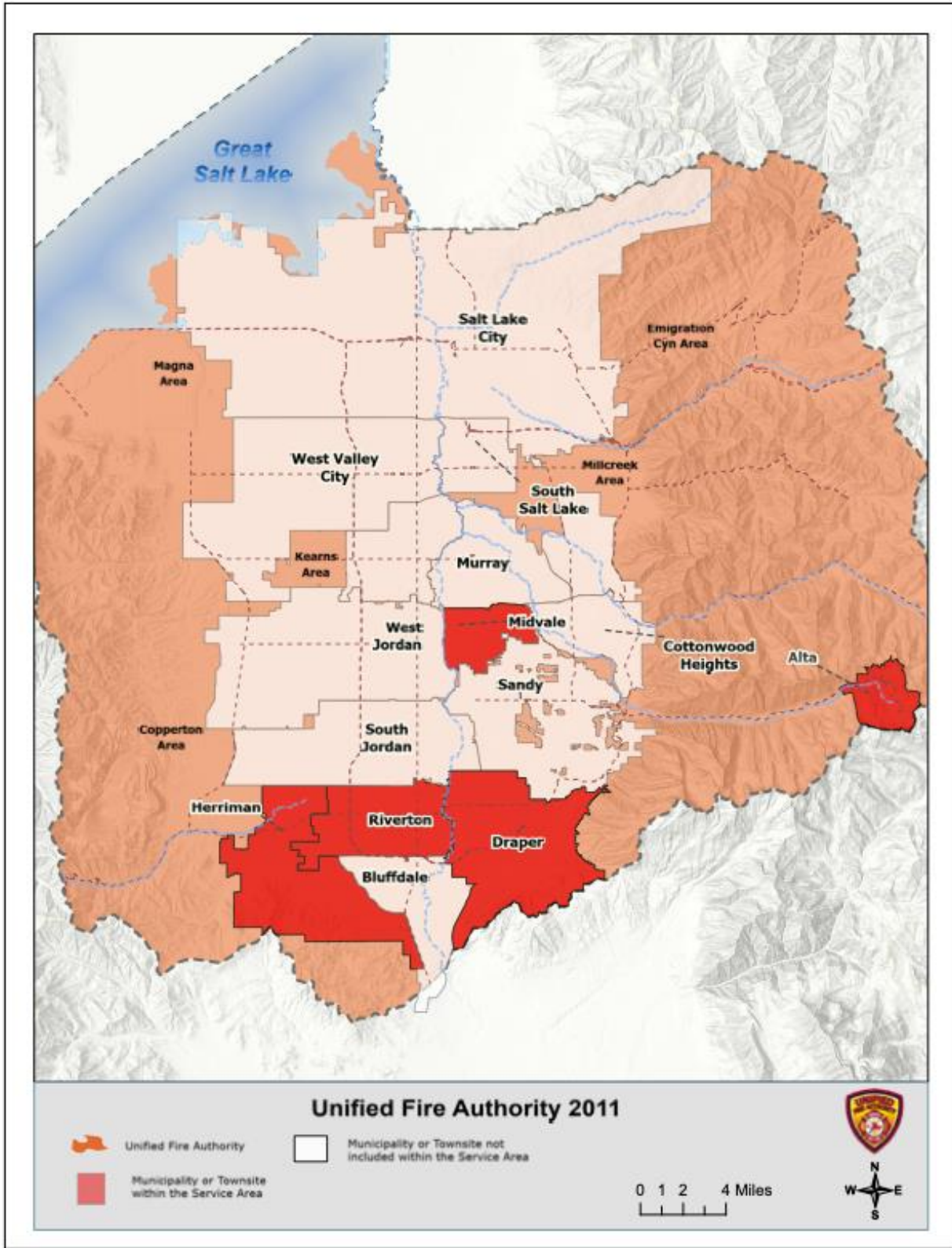
Map 29 - SLCo Fire and ALS 2000

In September 2003, each of the respective mayors came together with the voting approval of their councils and signed a 50-year agreement creating the Unified Fire Authority. In 2004, the Fire Department ceased operation as a county government entity and became the Unified Fire Authority (UFA), a quasi-governmental organization. At the same time, Salt Lake County leaders worked within the Utah State Legislature to make changes to laws regarding the creation of a Fire District. Once the legal issues were resolved, the County Council took steps to create a fire district for the Unincorporated areas of the County. Unified Fire Service Area (UFSA) was formed, and quickly joined the UFA. The UFSA is a Special Service Area that pays for its services with a property tax. Entities belonging to the UFA may choose whether to pay for services through their own funding or may choose to join the UFSA. Regardless of how an entity joins, they are an owner of the UFA. As an owner of the UFA, members have authority over the budget and local control over the agency.

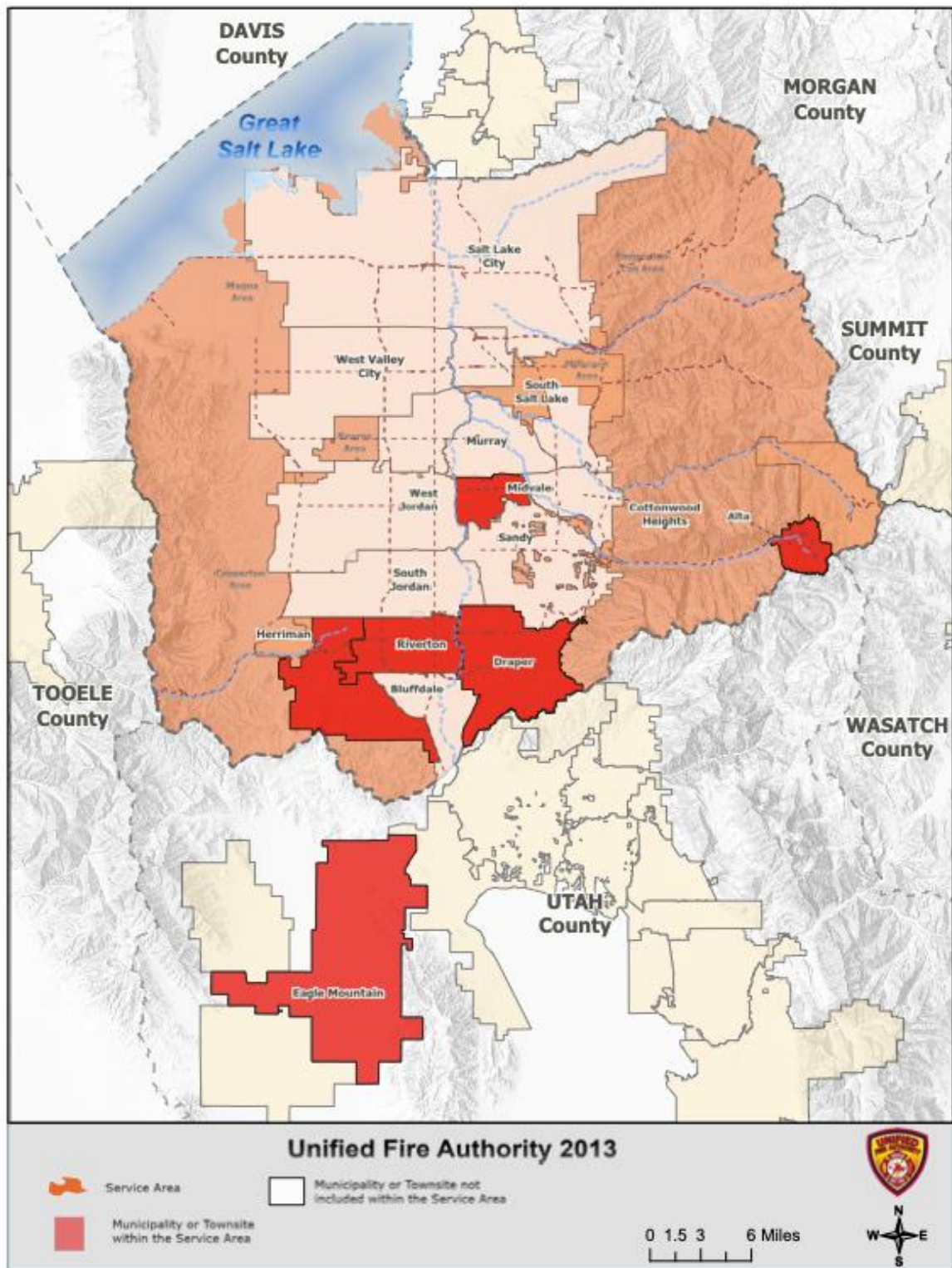


Map 30 - Unified Fire Authority, 2004

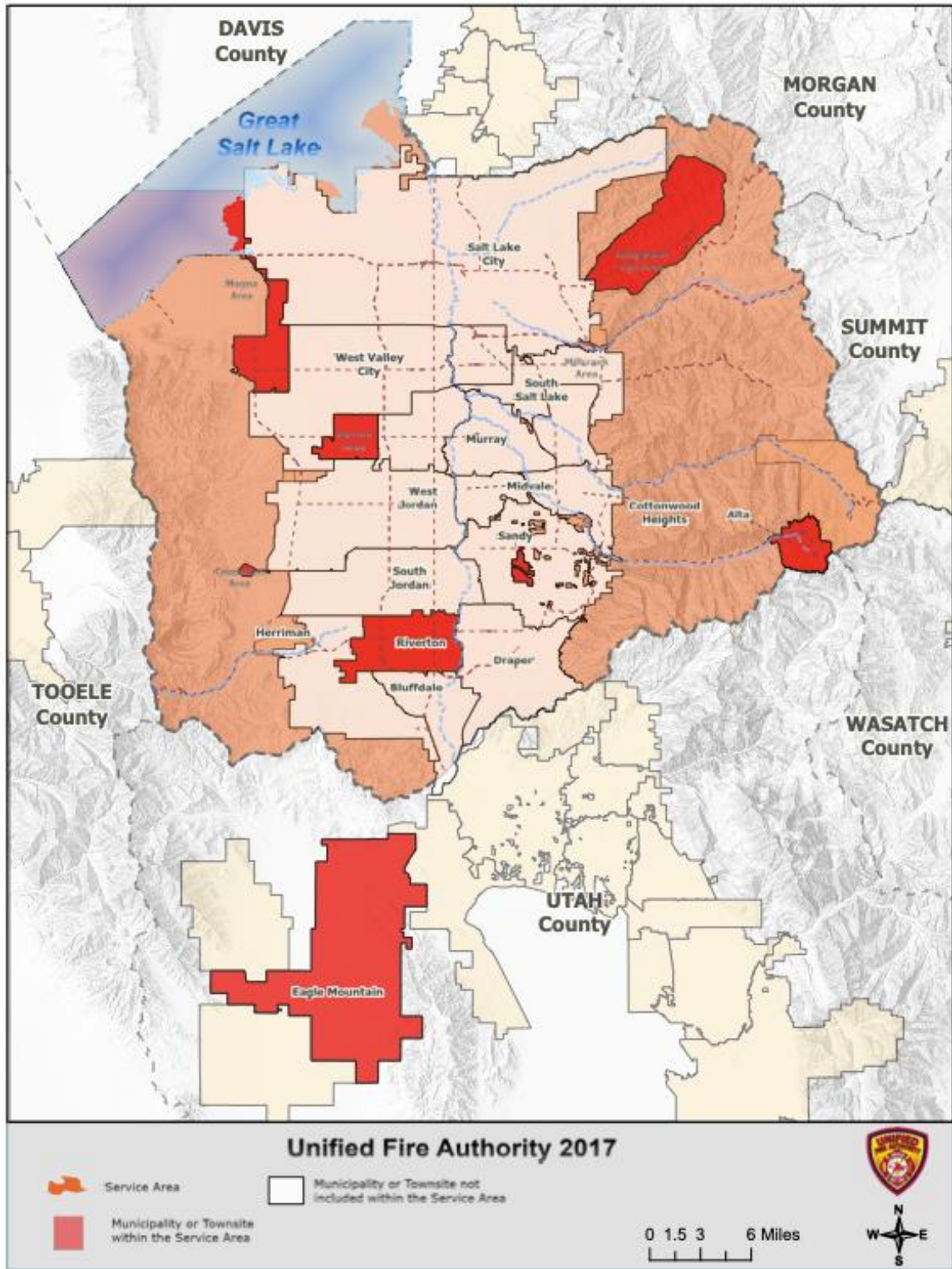
On July 1, 2011 Midvale Fire Department merged with UFA, bringing in two additional stations and 52 personnel. On January 1, 2013, Eagle Mountain City merged with UFA, adding two stations and 31 personnel. On July 1, 2017, Draper City left UFA through the Interlocal Agreement process, withdrawing three stations and six personnel from UFA.



Map 31 - UFA Response Area 2011



Map 32 - UFA Response Area, 2013



Map 33 - UFA Response Area, 2017



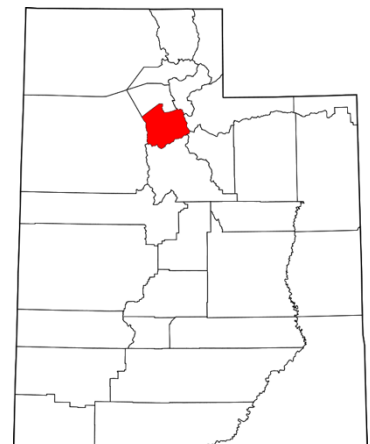
Today, Unified Fire Authority serves roughly 451,000 residents in the Greater Salt Lake Area. UFA operates under the direction of the UFA Board of Directors. These board members are directly appointed by the agency they represent, giving the agency local control. The Fire Chief as the Chief Executive Officer and is the highest-ranking officer at Unified Fire. The Assistant Chiefs are second in command and oversee all day-to-day operations of Unified Fire Authority.

UFA responds to over 30,000 calls per year from 24 fire stations throughout the valley, as well as four other facilities including the Salt Lake County Emergency Operations Center. UFA is also a co-sponsor of Utah Task Force 1, one of twenty-eight FEMA Urban Search and Rescue Teams. Other services provided include a Bomb Squad, a Wildland Fire Division, Water Rescue, Heavy Rescue and Hazardous Materials response. All of these services are accomplished with over 750 dedicated professionals with a variety of skills and experience.

### UFA Area Characteristics

The Unified Fire Authority (UFA) is one of 10 fire agencies in Salt Lake County (SLCo). UFA covers 13 communities within the Salt Lake Valley, with Unincorporated Salt Lake County and Eagle Mountain (a city in Utah County, south of Salt Lake County) making the 15 communities served, respectively.

SLCo sits in the middle of the northern half of Utah and currently accounts for just over 70% of the population with approximately 1.184 million residents—in addition to holding just over 75% of the businesses and infrastructure of the State of Utah. There are 23 jurisdictions located within SLCo ranging from townships to cities to unincorporated pockets owned by Salt Lake County.



Map 34 - Salt Lake County, Utah

UFA provides 911 fire and rescue response to the following jurisdictions in Salt Lake County: Town of Alta, Town of Brighton, Copperton Metro Township, City of Cottonwood Heights, Emigration Township, Herriman City, Holladay City, Kearns Metro Township, Magna Metro Township, Midvale

City, the City of Millcreek, Riverton City, the City of Taylorsville, and White City Township. Additionally, UFA covers Eagle Mountain City in Utah County, as well as contracts for 911 service response to Camp Williams, the Utah Data Center, and Kennecott Rio Tinto. Cities within Salt Lake County not covered by UFA are: Bluffdale City, Draper City, Murray City, Salt Lake City, Sandy City, City of South Salt Lake, South Jordan City, West Jordan City, and West Valley City—each of which provide their own municipal fire department.

Elevations within UFA's running district range from 4,280 ft in West Millcreek, to 8,760 ft (base of Brighton Ski Resort). UFA's running district has the Wasatch Mountain Range on the East, with the Oquirrh Mountain Range to the West and the valley floor in between. The climate classification of UFA's running district is considered dry, semi-arid and desert. The temperatures range from an average low of 24 °F in December and January, to an average high of 95 °F in June, with an average of over five days a year over 100 °F. The average precipitation is 1.42" per month, with winter months receiving snowfall regularly.

## UFA Data and Information

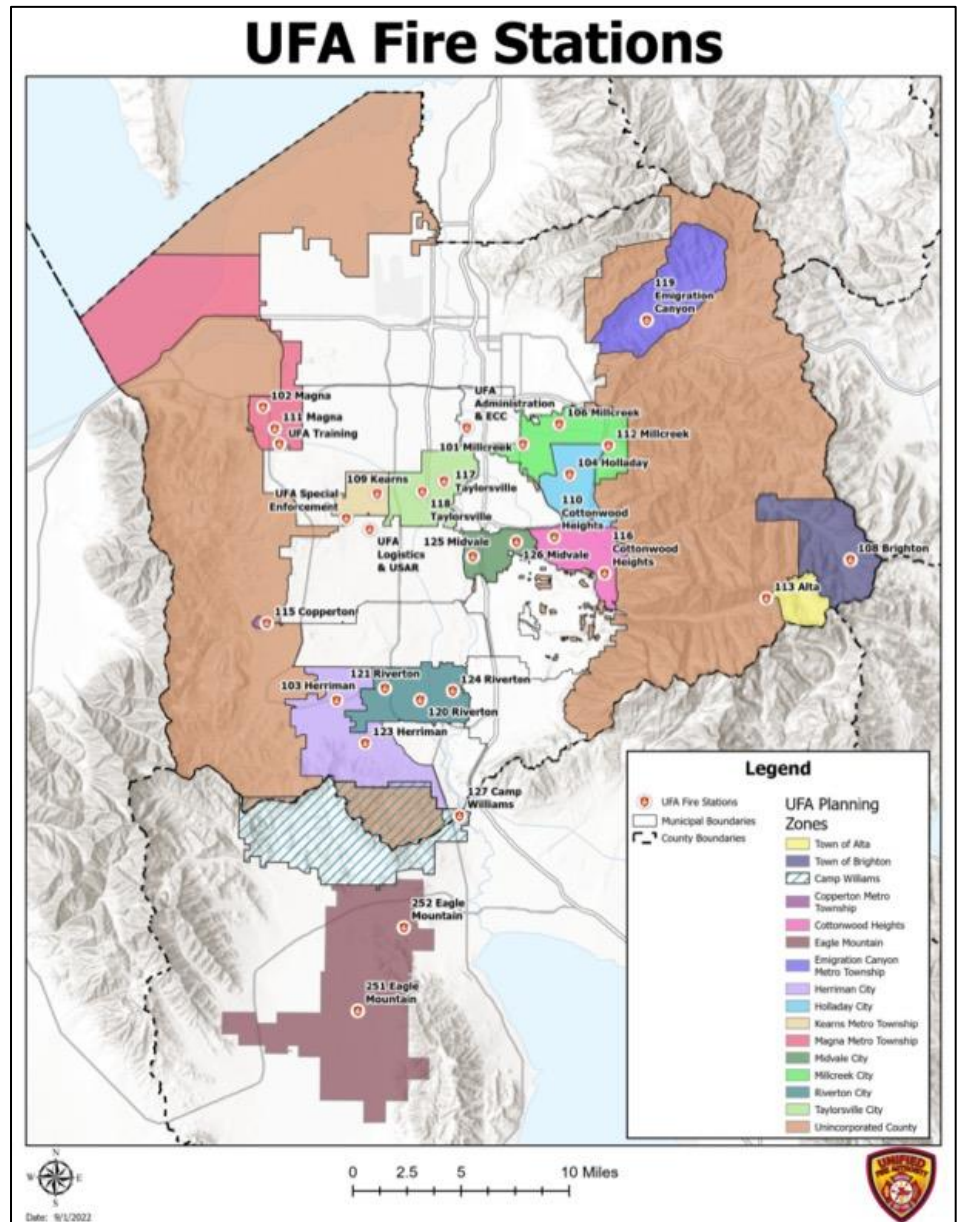
### UFA Station Locations

The Unified Fire Authority (UFA) divides its service area between two counties: Salt Lake County to the north and Utah County to the south. UFA covers 604 square miles overall, covering 527.5 square miles (out of 807) within Salt Lake County and 76.5 square miles in Utah County covering the city of Eagle Mountain. UFA divides that into 3 battalions, covering 15 communities and the unincorporated areas of Salt Lake County with 24 operational stations.

According to the 2019 Kem C. Gardner Policy Institute at the University

of Utah, the total population of UFA's running district increased by 51,144 from 2010 to 2019, with one municipality joining UFA (Midvale City in 2011) and one municipality leaving UFA (Draper City in 2017). With the municipality changes, the overall population was 374,435 in 2010 and 430,626 in 2019.

UFA maintains the following fire stations:



Map 35 - UFA Service Area and Stations

Station	Apparatus	Minimum Staffing	Address	Specialty
<b>Station 101</b>	Medic Engine 101 (Type 1) Medic Ambulance 101 Battalion Chief 11	4 2 1	790 E 3900 S, Millcreek	
<b>Station 102</b>	Medic Engine 102 (Type 1) Engine 6102 (Type 6)	4 Cross-Staffed	8609 W Magna Main Street, Magna	WUI Response
<b>Station 103</b>	Medic Engine 103 (Type 1/3) WLDO Supervisor Truck Peak Load Ambulance 203	4 Cross-Staffed 2 (Peak Load)	5916 W 13100 S, Herriman	Wildland Duty Officer & WUI
<b>Station 104</b>	Medic Engine 104 (Type 1) Medic Ambulance 204	4 2 (Peak Load)	2210 E Murray- Holladay Road, Holladay	
<b>Station 106</b>	Medic Ladder 106 (Type 1) Medic Ambulance 206 WTT 106 (Type 1) Engine 6106 (Type 6)	4 2 Cross-Staffed Cross-Staffed	1911 E 3300 S, Millcreek	WUI Response
<b>Station 108</b>	Medic Engine 108 (Type 1/3) Medic Ambulance 108 Engine 6108	3 Cross-Staffed Cross-Staffed	8036 Old Prospect Ave, Brighton	WUI Response
<b>Station 109</b>	Medic Ladder 109 (Type 1) Medic Ambulance 109	4 2	4444 W 5415 S, Kearns	
<b>Station 110</b>	Medic Ladder 110 (Type 1) Medic Ambulance 110 Engine 6110	4 2	1790 Fort Union Blvd, Cottonwood Heights	WUI Response
<b>Station 111</b>	Medic Ladder 111 (Type 1) Medic Ambulance 111 WTT 111 (Type 1) Engine 6111 (Type 6)	4 2 Cross-Staffed Cross-Staffed	8215 W 3500 S, Magna	WUI Response
<b>Station 112</b>	Medic Engine 112 (Type 1) Engine 6112	4 Cross-Staffed	3612 Jupiter Drive, Millcreek	WUI Response
<b>Station 113</b>	Medic Engine 113 (Type 1/3) Medic Ambulance 113	3 Cross-Staffed	9523 Bypass Road, Snowbird	
<b>Station 115</b>	Medic Engine 115 (Type 1) Engine 6115 (Type 6) Air & Light 115	4 Cross-Staffed Cross-Staffed	8495 W State Highway, Copperton	WUI Response Air & Light
<b>Station 116</b>	Medic Engine 116 (Type 1) Medic Ambulance 216	4 (Peak Load, Seasonal)	8303 Wasatch Blvd, Cottonwood Heights	Water Response
<b>Station 117</b>	Medic Ladder 117 (Type 1) Medic Engine 117 (Type 1) Medic Ambulance 217 Heavy Rescue 117	4 4 2 (Peak Load) Cross-Staffed	4965 S Redwood Road, Taylorsville	Heavy Rescue
<b>Station 118</b>	Medic Engine 118 (Type 1) Medic Ambulance 118 Engine 6118 (Type 6) Battalion Chief 13	4 2 Cross-Staffed 1	5317 S 2700 W, Taylorsville	WUI Response

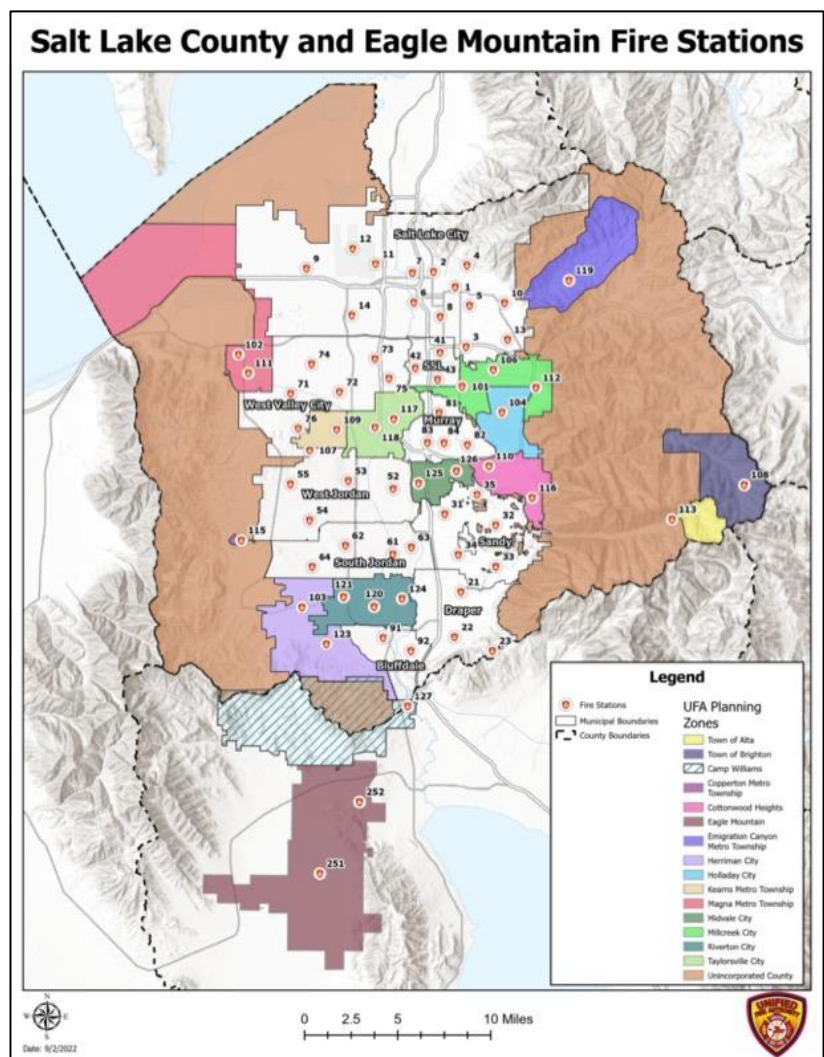
<b>Station 119</b>	Medic Engine 119 (Type 1/3) Engine 6119 (Type 6)	3 Cross-Staffed	5025 Emigration Canyon Rd, Salt Lake City	WUI Response
<b>Station 120</b>	Medic Ambulance 120 Wildland 1 WL Sup Truck 1 WL Sup Truck 2 WL Chase Truck 1 WL Chase Truck 2 SL1 (Type 6) Fuels Crew 1 (Type 6) Fuels Crew Carrier Crew Carrier 1 Crew Carrier 2 Engine 301 (Type 3) Engine 302 (Type 3)	2 1 1 (Seasonal) 1 (Seasonal) 2 (Seasonal) 2 (Seasonal) 4 (Seasonal) 4 (Seasonal) 8 (Seasonal) 10 (Seasonal) 10 (Seasonal) 4 (Seasonal) 4 (Seasonal)	13000 S 2700 W, Riverton	Wildland
<b>Station 121</b>	Medic Ladder 121 (Type 1) Medic Ambulance 121 Heavy Rescue 121 Battalion Chief 12	4 2 Cross-Staffed 1	4146 W 12600 S, Riverton	Heavy Rescue
<b>Station 123</b>	Medic Engine 123 (Type 1) Event Ambulance 223 Engine 6123 (Type 6) WTT 123 (Type 1)	4 2 (Event Only) Cross-Staffed Cross-Staffed	4850 Patriot Ridge Drive, Herriman	Surface Water Rescue WUI Response
<b>Station 124</b>	Medic Engine 124 (Type 1) HazMat 124	4 Cross-Staffed	12662 S 1300 W, Riverton	HazMat
<b>Station 125</b>	Medic Engine 125 (Type 1) Medic Ambulance 225 Engine 6125	4 2 (Peak Load) Cross-Staffed	655 W. Center Street, Midvale	WUI Response
<b>Station 126</b>	Medic Engine 126 (Type 1) Medic Ambulance 126 HazMat 126 Operations Chief	4 2 Cross-Staffed 1	607 E 7200 S, Midvale	HazMat
<b>Station 251</b>	Medic Engine 251 (Type 1/3) Medic Ambulance 251	4 Cross-Staffed	1680 Heritage Drive, Eagle Mountain	WUI Response
<b>Station 252</b>	Medic Ladder 252 (Type 1) Medic Ambulance 252 Engine 6252 (Type 6)	4 2 Cross-Staffed	3785 Pony Express Parkway, Eagle Mountain	WUI Response
<b>DAILY TOTALS</b>	Full Time Personnel		113 (Hard Floor)	
	Part Time Personnel (24 Hour)		4	
	Part Time Personnel (Peak Load)		6 (Peak Load)	
	Medic Engines, Type 1		12	
	Medic Engines, Type 1/3		5	
	Engines, Type 6 (Cross-Staffed)		12	
	Medic Ladders, Quint		2	
	Medic Ladders TDA, Type 1		5	
	Medic Ambulances, Full Time		10	
	Medic Ambulances, Peak Load		2	
	Medic Ambulances, 24-hour Part-Time		2	
	Tactical Water Tender, Type 1		3	

Table 4 - UFA Fire Stations and Staffing

## Mutual and Automatic Aid Locations

### Station Locations

The Unified Fire Authority (UFA) relies on mutual and automatic aid within both Salt Lake and Utah Counties for almost all moderate to high-risk responses to incidents. There are a total of nine municipal fire agencies within the Salt Lake Valley outside of UFA. Those are (respectively): Bluffdale City Fire Department, Draper City Fire Department, Murray City Fire Department, Salt Lake City Fire Department, Sandy City Fire Department, South Jordan City Fire Department, South Salt Lake City Fire Department, West Jordan City Fire Department, and West Valley City Fire Department. Collectively, they have a total of 44 stations, with a total of 67 stations within the Salt Lake Valley as a whole (including UFA but excluding Camp Williams). The mutual and automatic aid departments maintain the following fire stations:



Map 36 - Salt Lake Valley Fire Stations

**Salt Lake County Mutual and Automatic Aid**

**Bluffdale City Fire – Chief Matt Evans**

Station	Apparatus	Minimum Staffing	Address	Specialty
<b>Station 91</b>	Medic Engine 91 (Type 1) - Tandem	0	14350 S 2200 W, Bluffdale	WUI Response
	Ambulance 91 – Tandem	0		
	Engine 691 (Type 6)	Cross-Staffed		
	WTT93 Battalion Chief 91	Cross-Staffed 1		
<b>Station 92</b>	Engine 92 (Type 1)	3	14895 Noell Nelson Dr, Bluffdale	WUI Response
	Ambulance 92	2		
	Engine 692 (Type 6)	Cross-Staffed		
	Engine 693 (Type 6)	Seasonal		

**Draper City Fire – Chief Clint Smith**

<b>Station 21</b>	Medic Ladder 21	3	780 E 12300 S, Draper	WUI Response
	Medic Ambulance 21	2		
	Engine 621 (Type 6)	Cross-Staffed		
	WTT 21 (Type 1)	Cross-Staffed		
<b>Station 22</b>	Medic Engine 22 (Type 1)	3	14324 Fire House Rd, Draper	
	Medic Ambulance 22	2		
	Battalion Chief 21	1		
<b>Station 23</b>	Medic Engine 23 (Type 1)	3	14903 Deer Ridge Dr, Draper	
	Medic Ambulance 23	Cross-Staffed		

**Murray City Fire – Chief Joey Mittleman**

<b>Station 81</b>	Engine 81 (Type 1)	3	4848 Box Elder St, Murray	
	Medic Ambulance 81	2		
	Engine 681	Cross-Staffed		
	Battalion Chief 81	1		
<b>Station 82</b>	Engine 82 (Type 1)	3	996 Vine Street, Murray	
	Medic Ambulance 82	2		
<b>Station 83</b>	Engine 83 (Type 1)	3	484 W 5900 S, Murray	
	Medic Ambulance 83	2		

**Salt Lake City Fire\* – Chief Karl Lieb**

<b>Station 1</b>	Medic Engine 1 (Type 1)	4	211 S 500 E, Salt Lake City	
	Squad 1 (ALS Response Vehicle)	Part Time		
	Battalion Chief 1	1		
<b>Station 2</b>	Medic Engine 2 (Type 1)	4	270 W 300 N, Salt Lake City	
	Truck 2 (Type 1)	4		
<b>Station 3</b>	Medic Engine 3 (Type 1)	4	2425 S 900 E, Salt Lake City	
<b>Station 4</b>	Engine 4 (Type 1)	4	830 E 11 <sup>th</sup> Ave, Salt Lake City	WUI Response
	Engine 6041 (Type 6)	2		
	Engine 6042 (Type 6)	Cross-Staffed		
<b>Station 5</b>	Medic Engine 5 (Type 1)	4	1023 E 900 S, Salt Lake City	Heavy Rescue
	Truck 5 (Type 1)	4		

	Heavy Rescue 5	Cross-Staffed		
<b>Station 6</b>	Medic Engine 6 (Type 1) Engine 6061 (Type 6) Engine 6062 (Type 6)	4 Cross-Staffed Cross-Staffed	948 W 800 S, Salt Lake City	WUI Response
<b>Station 7</b>	Medic Engine 7 (Type 1) Water Rescue 7	4 Cross-Staffed	273 N 1000 W, Salt Lake City	Water Rescue
<b>Station 8</b>	Medic Engine 8 (Type 1) Truck 8	4 4	15 W 1300 S, Salt Lake City	
<b>Station 9</b>	Quint 9 (Type 1 Ladder) Engine 6091 (Type 6) Engine 6092 (Type 6) WT2909 (Type 1)	4 Cross-Staffed Cross-Staffed Cross-Staffed	5822 W Amelia Earhart Dr, Salt Lake City	WUI Response
<b>Station 10</b>	Engine 10 (Type 1) Hazmat 10 (Type 1) Utility 10 (Air & Light)	4 Cross-Staffed Cross-Staffed	785 S Arapeen Dr, Salt Lake City	HazMat
<b>Station 11</b>	Medic Engine 11 (Type 1) RED 2 (ARFF Command Vehicle) RED 3 (ARFF Crash Truck) RED 4 (ARFF Crash Truck) Battalion Chief 2	4 1 1 1 1	581 N 2360 W, Salt Lake City	Airport (ARFF) Response
<b>Station 12</b>	Medic Engine 12 (Type 1) RED 1 (ARFF Command Vehicle) RED 5 (ARFF Crash Truck) RED 6 (ARFF Crash Truck) RED 7 (ARFF Crash Truck)	4 1 1 1 Cross-Staffed	1085 N 4030 W, Salt Lake City	Airport (ARFF) Response
<b>Station 13</b>	Engine 13 (Type 1) Engine 6131 (Type 6) Engine 6132 (Type 6)	4 Cross-Staffed Cross-Staffed	2360 E Parleys Way, Salt Lake City	WUI Response
<b>Station 14</b>	Quint 14 (Type 1) Hazmat 14 Special Ops 14	4 Cross-Staffed Cross-Staffed	1285 S 3800 W, Salt Lake City	HazMat
<b>Sandy City Fire – Chief Jeff Bassett</b>				
<b>Station 31</b>	Medic Tower 31 (Type 1) Medic Ambulance 31 Battalion Chief 31	3 2 1	9010 S 150 E, Sandy	
<b>Station 32</b>	Medic Engine 32 (Type 1) Medic Ambulance 32 Engine 632 (Type 6)	3 2 Cross-Staffed	9475 S 2000 E, Sandy	Rope and Extrication WUI Response
<b>Station 33</b>	Medic Engine 33 (Type 1) Engine 633 (Type 6)	4 Cross-Staffed	2015 E 11270 S, Sandy	WUI Response
<b>Station 34</b>	Engine 34 (Type 1) Medic Ambulance 34 Engine 634 (Type 6)	3 2 Cross-Staffed	10765 S 700 E, Sandy	WUI Response
<b>Station 35</b>	Engine 35 (Type 1) Hazmat 35	4 Cross-Staffed	8186 S 1300 E, Sandy	HazMat
<b>South Jordan City Fire – Chief Chris Dawson</b>				
<b>Station 61</b>	Medic Ladder 61 (Type 1) Medic Ambulance 61 Battalion Chief 61	4 2 1	10758 S 1700 W, South Jordan	



<b>Station 62</b>	Medic Engine 62 (Type 1) Medic Ambulance 62 Engine 362 (Type 3)	3 2 Cross-Staffed	4022 S Jordan Parkway, South Jordan	WUI Response
<b>Station 63</b>	Medic Engine 63 (Type 1) Medic Ambulance 63 Engine 663 (Type 6)	3 2 Cross-Staffed	10451 S 1055 W, South Jordan	WUI Response
<b>Station 64</b>	Medic Engine 64 (Type 1) Medic Ambulance 64 Heavy Rescue 64	4 2 Cross-Staffed	5443 W Lake Ave, South Jordan	Heavy Rescue
<b>South Salt Lake City Fire – Chief Terry Addison</b>				
<b>Station 41</b>	Engine 41 (Type 1) Medic Ambulance 41 Battalion Chief 41	3 2 1	2600 S Main St, South Salt Lake	
<b>Station 42</b>	Engine 42 (Type 1) Medic Ambulance 42 Engine 642 (Type 6)	3 2 Cross-Staffed	3265 S 900 W, South Salt Lake	WUI Response
<b>Station 43</b>	Engine 43 (Type 1) Medic Ambulance 43	3 2	3620 SW Temple, South Salt Lake	
<b>West Jordan City Fire – Chief Derek Maxfield</b>				
<b>Station 52</b>	Engine 52 (Type 1) Medic Ambulance 52 Hazmat 52 Air & Light 52	3 2 Cross-Staffed Cross-Staffed	7950 S Redwood Rd, West Jordan	Hazmat Air & Light
<b>Station 53</b>	Engine 53 (Type 1) Medic Ambulance 53 Engine 653 (Type 6) Battalion Chief 51	3 2 Cross-Staffed 1	7602 Jordan Landing Blvd, West Jordan	WUI Response
<b>Station 54</b>	Ladder 54 (Type 1) Medic Ambulance 54 Heavy Rescue 54	3 2 Cross-Staffed	7602 Jordan Landing Blvd, West Jordan	Heavy Rescue
<b>Station 55</b>	Engine 55 (Type 1) Medic Ambulance 55 Engine 655 (Type 6)	3 2 Cross-Staffed	7750 S 6400 W, West Jordan	WUI Response
<b>West Valley City Fire – Chief John Evans</b>				
<b>Station 71</b>	Engine 71 (Type 1) Medic Ambulance 71 Engine 671 (Type 6) Battalion Chief 71	3 2 Cross-Staffed 1	4160 S 6400 W, West Valley	WUI Response
<b>Station 72</b>	Engine 72 (Type 1) Medic Ambulance 72	3 2	4314 W 4100 S, West Valley	
<b>Station 73</b>	Ladder 73 (Type 1) Medic Ambulance 73 HazMat 73 Engine 473 (Type 4)	3 2 Cross-Staffed Cross-Staffed	2834 S 2700 W, West Valley	HazMat WUI Response
<b>Station 74</b>	Tower 74 (Type 1) Medic Ambulance 74 Medic Ambulance 744 Heavy Rescue 74 Engine 674 (Type 6)	3 2 2 Cross-Staffed Cross-Staffed	5545 W 3100 S, West Valley	Heavy Rescue WUI Response

<b>Station 75</b>	Engine 75 (Type 1) Medic Ambulance 75	3 2	3660 S 1950 W, West Valley	
<b>Station 76</b>	Engine 76 (Type 1) Engine 676 (Type 6)	3 Cross-Staffed	5372 Upper Ridge Rd, West Valley	
<b>Salt Lake County Mutual and Automatic Aid Totals (Excluding Salt Lake City Fire)</b>				
<b>DAILY TOTALS</b>	Stations			24
	Full Time Personnel			124
	Engines, Type 1			19
	Engines, Type 3 (Cross-Staffed)			1
	Engines, Type 4 (Cross-Staffed)			1
	Engines, Type 6 (Cross-Staffed)			10
	Ladder Trucks			4
	Towers			1
	Medic Ambulances, Full Time			21
Medic Ambulances, Cross-Staffed			2	
<b>Salt Lake City Station Totals</b>				
*Salt Lake City Fire does not respond on medical calls into UFA areas due to a difference in response model. They do, however, respond in on mutual and automatic aid to fire suppression and specialty incidents				
<b>DAILY TOTALS</b>	Stations			14
	Full Time Personnel			76
	Engines, Type 1			12
	Engines, Type 6 (Cross-Staffed)			8
	Ladder Trucks			4
	ARFF Trucks			6

<b>Utah County Contiguous Border Mutual and Automatic Aid</b>				
<b>Saratoga Springs City Fire – Chief Jess Campbell</b>				
<b>Station</b>	<b>Apparatus</b>	<b>Minimum Staffing</b>	<b>Address</b>	<b>Specialty</b>
<b>Station 261</b>	Ladder 261 (Type 1) Medic Ambulance 261 Brush 261 (Type 6) A/L 261	2 2 Cross-Staffed Cross-Staffed	995 W 1200 N, Saratoga Springs	WUI Response
<b>Station 262</b>	Engine 262 (Type 1) Medic Ambulance 262 Brush 262 (Type 6) Brush 263 (Type 3)	2 2 Cross-Staffed Seasonal (Contract)	2015 S Ring Road, Saratoga Springs	WUI Response
<b>Utah County Mutual and Automatic Aid Totals</b>				
<b>DAILY TOTALS</b>	Stations			2
	Full Time Personnel			8
	Engines, Type 1			1
	Engines, Type 3 (Seasonal/Contract)			1
	Engines, Type 6 (Cross-Staffed)			2
	Ladder Trucks			1
	Medic Ambulances, Full Time			2

*Table 5 - UFA Fire Stations and Staffing*

## Other Service Responsibility Areas

UFA has bordering jurisdictions with nine other fire agencies within the Salt Lake Valley and one additional bordering jurisdiction in Utah County. Recently, all VECC agencies and Sandy City Fire within Salt Lake County agreed to move to an automated vehicle locater (AVL) response model for basic life support (BLS) units and transport vehicles with advanced life support (ALS) from within the jurisdictional boundaries. UFA currently runs a one-and-one model, meaning one paramedic with ALS capabilities on any heavy apparatus and one paramedic with ALS capabilities on a transport ambulance. This allows the nearest UFA unit to initiate ALS care in lieu of waiting for the nearest transport ambulance to arrive for ALS care.

UFA also has contract areas where service delivery is provided: Camp Williams, and the Utah Data Center.

## UFA Area Data

<b>UFA Running District Total</b>	<b>604 sq miles</b>
<b>UFA Running District Area in Utah County</b>	<b>76.5 sq miles</b>
<b>UFA Running District Area in Salt Lake County</b>	<b>527.5 sq miles</b>
<b>Resident Population</b>	<b>430,000 (est)</b>
<b>Number of Households</b>	<b>139,323</b>
<b>Average Household Income</b>	<b>\$76,762</b>
<b>Some College Degree or Higher</b>	<b>69,077 (est)</b>
<b>Bachelor's Degree or Higher</b>	<b>83,617 (est)</b>
<b>Median Single Family Home Value</b>	<b>\$325,500 (est)</b>
<b>Population Density</b>	<b>712 / mile</b>
<b>Residential Density</b>	<b>3.08 / mile</b>
<b>Roads, Freeways and Highways</b>	<b>2,141.6 linear miles</b>
<b>UFA General Fund Budget FY 2020-2021</b>	<b>\$72,611,447</b>
<b>Cost per Capita by Population Protected</b>	<b>\$168.86</b>
<b>Insurance Services Office Rating</b>	<b>2/2X</b>
<b>Number of Fire Stations</b>	<b>24</b>
<b>Minimum Staffing Level per Platoon (3 Platoons)</b>	<b>113</b>
<b>Number of Full-time Sworn Personnel</b>	<b>460</b>
<b>Number of Part-time Personnel</b>	<b>160</b>
<b>Number of Seasonal (Wildland) Employees</b>	<b>50</b>
<b>Number of Support Staff (non-sworn)</b>	<b>50</b>

*Table 6 - UFA Statistics*

## UFA Budget History

	FY 2020/21	FY 2019/20	FY 2018/19
<b>Personnel Numbers</b>	443 Sworn 58 Civilian	433 Sworn 55 Civilian	421 Sworn 55 Civilian
<b>Personnel</b>	\$59,223,490	\$57,386,415	\$54,730,855
<b>Non-Personnel</b>	\$9,596,850	\$9,169,647	\$8,309,339
<b>Debt Service</b>	\$3,659,367	\$3,708,762	\$3,696,267
<b>Capital Outlay</b>	\$131,740	\$189,000	\$211,995
<b>Total Expenditures</b>	\$72,611,447	\$70,453,824	\$66,958,456

*Table 7 - Budget History*

## UFA Single-Classification Identified Race

The following table and chart demonstrate the approximate single-classification race breakdown within UFA areas for 2020.

Single-Classification Race	Number	Percent of Population
<b>White alone, non-Hispanic</b>	314,851	62.8%
<b>Hispanic or Latino</b>	66,491	13.3%
<b>Black or African American</b>	5,980	1.2%
<b>Asian</b>	12,358	2.5%
<b>Hawaiian or Polynesian</b>	41,468	8.3%
<b>American Indian or Alaskan</b>	46,038	9.2%
<b>Two or more races</b>	14,464	2.9%

*Table 8 - Single Classification Identified Race*

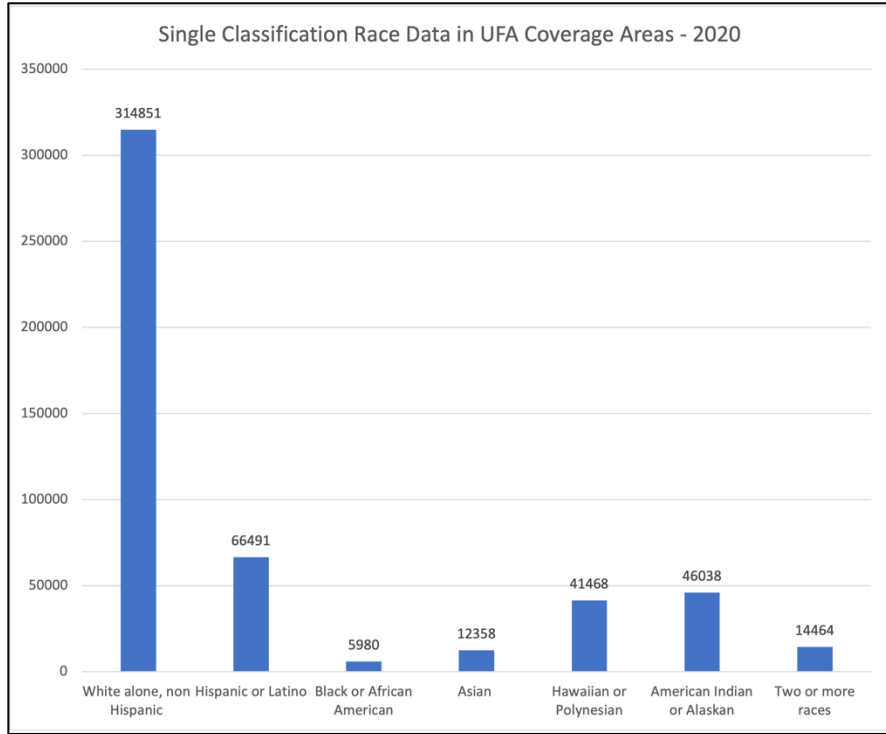


Chart 1 - Single Classification Identification Race

## UFA Transportation & Roadway Information

The following table and chart illustrate the total linear mileage of surface streets, U.S. Highways and State Highways within the UFA response areas.

Planning Zone	Interstates/U.S. Highways	State Highways	Total Linear Mileage
<b>Town of Alta</b>	0	2.17	12.2
<b>Town of Brighton</b>	0	9.97	37.6
<b>Camp Williams</b>	0	1.83	55.1
<b>Copperton Metro Township</b>	0	1.3	4.6
<b>City of Cottonwood Heights</b>	8.5	5.33	152.1
<b>Eagle Mountain</b>	0	6.82	226.5
<b>Emigration Township</b>	0	0	25.7
<b>Herriman City</b>	0	13.9	215.6
<b>Holladay City</b>	9.86	7.16	147.2
<b>Kearns Metro Township</b>	0	4.42	105
<b>Magna Metro Township</b>	12.7	9.4	123
<b>Midvale City</b>	10.65	3	114
<b>Millcreek City</b>	16	10.45	241.2
<b>Riverton City</b>	0	17.85	188.3
<b>Taylorsville City</b>	11.3	17.3	210
<b>Unincorporated Salt Lake County</b>	59.1	53	283.5

*Table 9 - UFA Roadway Information*

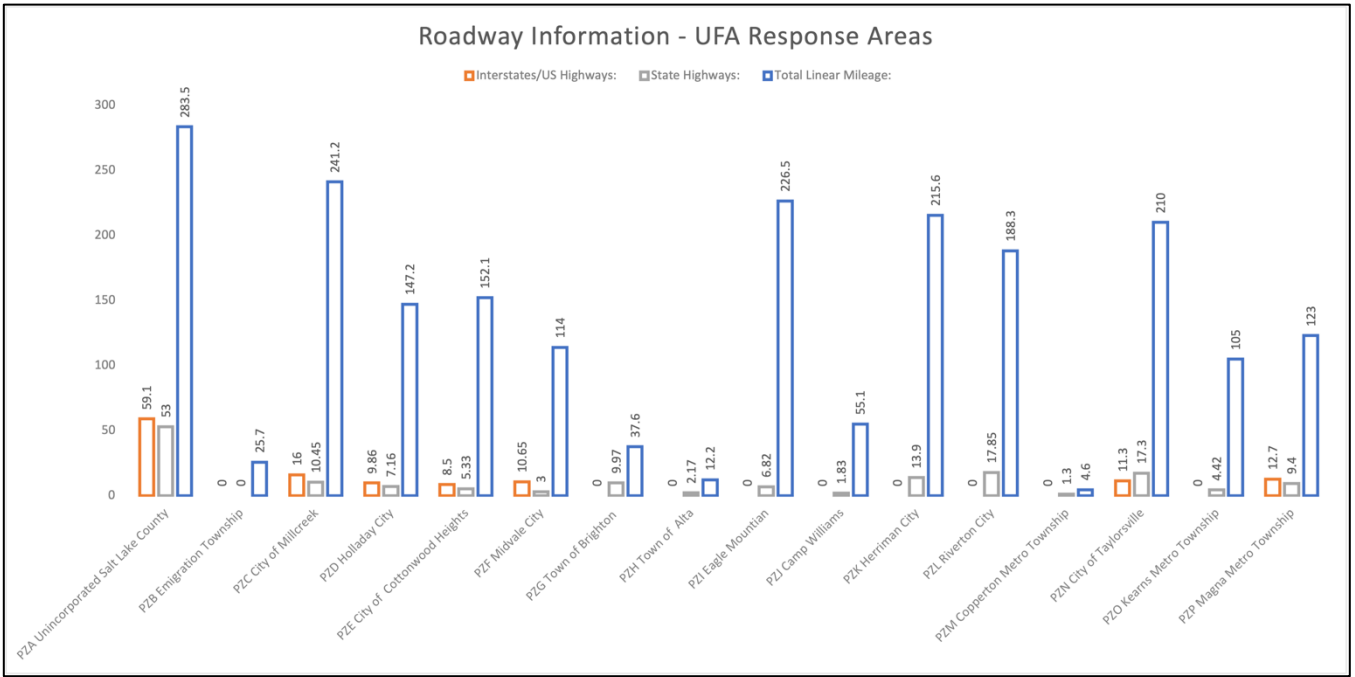
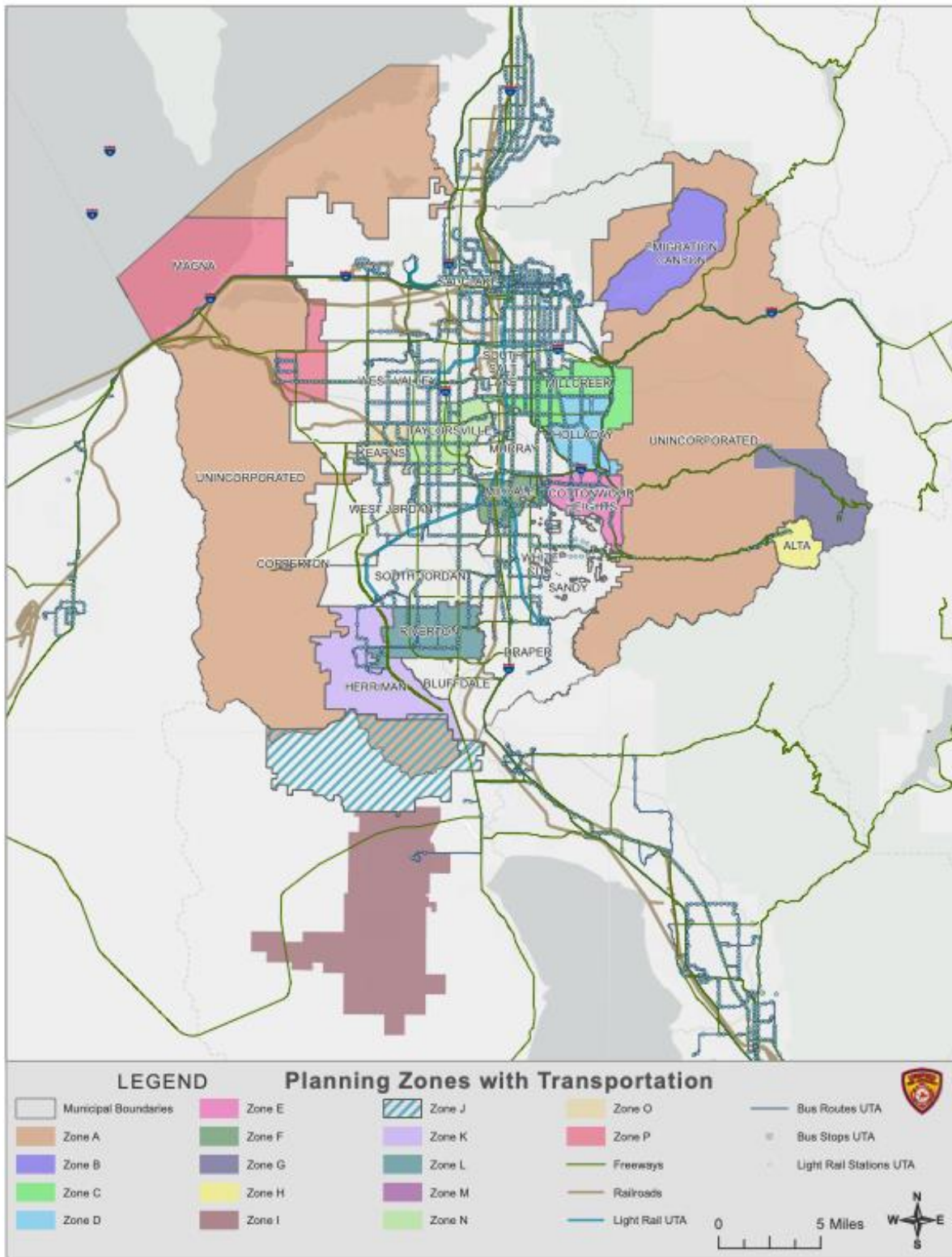


Chart 2 - UFA Roadway Information



Map 37 - Planning Zones with Transportation Corridors



## Public Protection Classification

The public protection classification rating by the Insurance Services Office (ISO) is important to a community. Many insurance companies base the fire risk portion of property insurance premiums on the community's ISO rating. ISO uses a 1 to 10 rating scale, with a Class 1 being the highest level of service — and the lowest fire insurance premium cost — and Class 10, representing no service at all. ISO last surveyed UFA in 2020 and provided UFA with a 2/2X rating. A 2/2X rating means that all properties within 2 road miles of the responding fire station and 1,000 feet of a creditable water supply, such as a fire hydrant, suction point, or dry hydrant. The 2X is the class that applies to properties within 2 road miles of a fire station but beyond 1,000 feet of a creditable water supply. A rating breakdown of the most recent UFA ISO survey is provided below.

ISO Criteria	Actual	Maximum
<b>Emergency Communications</b>	9.89	10.00
<b>Fire Department</b>	35.00	50.00
<b>Water Supply</b>	34.69	40.00
<b>Divergence</b>	-3.34	N/A
<b>Community Risk Reduction</b>	4.99	5.50
<b>Total Score</b>	81.23	105.50

*Table 10 - UFA ISO Rating Scores*

UFA received a total credit of 81.23 out of a possible 105.50. The table below is the fire department section of the Fire Suppression Rating Schedule, which reviews fire companies (engine and ladder), equipment carried, responses to fires, training, and the number of staffed firefighter positions.

Fire Department	Actual	Maximum
<b>Credit for:</b>		
<b>Engine Companies</b>	5.63	6.00
<b>Reserve Engines</b>	.40	.50
<b>Pumper Capacity</b>	3.00	3.00
<b>Ladder-Service Companies</b>	1.72	4.00
<b>Reserve Ladder-Service Companies</b>	.31	.50
<b>Deployment Analysis</b>	5.83	10.00
<b>Company Personnel</b>	9.17	15.00
<b>Training</b>	6.94	9.00
<b>Operational Considerations</b>	2.00	2.00
<b>Total Score</b>	35.00	50.00

*Table 11 - UFA's Fire Suppression Rating Schedule*

## Salt Lake Valley Emergency Communications Center (VECC)

The Salt Lake Valley Emergency Communications Center (VECC) is a 911 police, fire and medical emergency services dispatch agency located in West Valley City and is one of two primary public safety answering points (PSAP) for Salt Lake County. VECC was formed under Utah law by six Salt Lake area cities and Salt Lake County in 1988. VECC is one of 11 Tri-Accredited Elite Centers globally in meeting the International Academies of Emergency Dispatch (IAED) High Compliance Expectations in Emergency Medical Dispatching (EMD), Emergency Fire Dispatching (EFD), and Emergency Police Dispatching (EPD). VECC currently provides dispatch services for all UFA communities and 17 of the 19 valley fire agencies—with Sandy City and Salt Lake City being the exceptions. VECC dispatches approximately 2,800 calls for service daily and answers approximately 3,500,911 non-Emergency and police/fire emergency telephone calls annually.<sup>4</sup>

## Automatic and Mutual Aid

UFA maintains borders with every municipal fire agency within the Salt Lake Valley as well as two additional fire agencies within Utah County. UFA preserves and tries to cultivate operational relationships with all Salt Lake Valley fire agencies. UFA has mutual and automatic fire aid with all valley fire agencies and all agencies have “stacks” which are agreed upon automatic aid dispatches for all incidents, both fire and EMS. Additional resources exist with the United States Forest Service (USFS), and the Utah Division of Forestry, Fire & State Lands (FFSL) for Wildland Urban Interface (WUI) areas that UFA can contract with during an incident. UFA also participates in the State of Utah Statewide Mutual Aid Act, Utah Code § 53-2a-3 (2013), being available to both provide and receive mutual aid as needed or required through a formal request through dispatch centers. Additionally, there is the Management of Forest Lands and Fire Control Code, Utah Code § 65A-8-2 that provides an insurance policy for wildland suppression costs as long as certain criteria are met from the jurisdictional agencies. UFA also meets the outlined criteria within the code.

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<sup>4</sup> [https://en.wikipedia.org/wiki/Salt\\_Lake\\_Valley\\_Emergency\\_Communications\\_Center](https://en.wikipedia.org/wiki/Salt_Lake_Valley_Emergency_Communications_Center)

UFA’s automatic and mutual aid agreements allow all participating agencies to utilize dispatch centers, resource application and allocation, communication plans, and technology when mitigating large-scale fire, EMS and 911 responses following natural and man-made disasters.

The following table illustrates the automatic and mutual aid agreements that UFA has both sent and received with other agencies, both within and outside of Salt Lake County. This is measured in hour utilization both given and received.

Agency	Unit Hours Provided by UFA	Unit Hours Given to UFA	Personnel Hours Provided by UFA	Personnel Hours Given to UFA
<b>Bluffdale City</b>	13.97	47.75	42.58	63.52
<b>Draper City</b>	29.02	4.22	98.8	8.13
<b>Murray City</b>	93.35	163.87	336.92	307.68
<b>Salt Lake City</b>	15.73	42.07	27.57	76.97
<b>Sandy City</b>	79.05	83.48	255.55	173.6
<b>City of South Salt Lake</b>	75	69.37	264.22	214.43
<b>South Jordan City</b>	124.78	32.6	420.82	98.73
<b>West Jordan City</b>	82.3	49.75	305.0	140.33
<b>West Valley City</b>	110.28	196.28	374.28	572.45
<b>Total</b>	623.48	689.38	2,125.73	1,655.85

*Table 12 - UFA and Surrounding Agencies Hour Utilization*

## Community Loss and Save Information

### Cardiac Arrest Outcomes

UFA tracks all cardiac arrest outcomes. Those individuals that were reported to have cardiac arrests either witnessed or unwitnessed and later were reported with return of spontaneous circulation (ROSC) at the hospital. The numbers provided are from the cardiac arrest registry to enhance survival (CARES). CARES tracks twenty-eight participating states’ data and information and tracks them via two categories; the Utstein Criteria, which is defined as a witnessed cardiac arrest in which the initial cardiac rhythm was deemed shockable; and overall survival percentage. Of the twenty-eight participating states, the following averages vs UFA’s averages are below.

Year	CY 2020	CY 2019	CY 2018
<b>Number of Workable Cardiac/Respiratory Arrests</b>	295	235	478
<b>Cardiac/Respiratory Arrests – Declared Obvious Death</b>	222	237	53
<b>Total Arrests</b>	517	472	531
<b>Number of Saves</b>	26	22	Unknown
<b>Percentage of Saves (Number of Saves/Workable)</b>	8.81%	9.37%	Unknown

Table 13 - Cardiac Arrest Outcomes

Year	CY 2020	CY 2019	CY 2018
<b>CARES Cases Reported – UFA</b>	295	235	Not Reported
<b>Overall Survival to Hospital Discharge – UFA (%)</b>	8.81%	9.37%	Not Reported
<b>Utstein Survival – UFA (%)</b>	42.18%	45.47%	Not Reported
<b>CARES Cases Reported – State of Utah</b>	1,417	1,321	Not Reported
<b>Overall Survival to Hospital Discharge – State of Utah</b>	8.1%	8.6%	Not Reported
<b>Utstein Survival – State of Utah (%)</b>	34.5%	26.8%	Not Reported
<b>CARES Cases Reported – Nationally</b>	127,337	100,949	81,864
<b>Overall Survival to Hospital Discharge – Nationally (%)</b>	7.1%	10.5%	10.4%
<b>Utstein Survival – Nationally (%)</b>	29.2%	33.2%	33.3%

Table 14 - CARES Reported Metrics for Cardiac Arrests

### Life Safety Fire Outcomes

Life Safety outcomes is the tracking of both fatal fires and firefighter injuries due to fire suppression responses.

Year	CY 2020	CY 2019	CY 2018
<b>Civilian Fatal Fires</b>	1	2	0
<b>Civilian Injury Fires</b>	0	0	1
<b>Firefighter Fatal Fires</b>	0	0	0
<b>Firefighter Injury Fires – Structure</b>	12	14	10
<b>Firefighter Injury Fires – WUI</b>	2	3	2

Table 15 - Life Safety Fire Outcomes, UFA Areas

## Fire Loss – Property and Content

### Fire Loss – Property Loss

Planning Zone	CY 2020	CY 2019	CY 2018	Total by PZ
Town of Alta	\$1,000	\$3,001,000	\$0	\$3,002,000
Town of Brighton	\$0	\$3,500	\$5,000	\$8,500
Camp Williams	\$0	\$0	\$0	\$0
Copperton Metro Township	\$25,000	\$21,000	\$227,500	\$273,500
City of Cottonwood Heights	\$508,801	\$55,000	\$862,250	\$1,426,051
Eagle Mountain City	\$63,200	\$10,460	\$78,275	\$151,935
Emigration Township	\$1,010,000	\$205,000	\$280,000	\$1,495,000
Herriman City	\$869,740	\$390,700	\$633,401	\$1,893,841
Holladay City	\$303,000	\$2,017,600	\$338,625	\$2,659,225
Kearns Metro Township	\$152,450	\$467,150	\$288,900	\$908,500
Magna Metro Township	\$662,401	\$186,657	\$313,850	\$1,162,908
Midvale City	\$481,700	\$284,050	\$3,359,070	\$4,124,820
City of Millcreek	\$369,650	\$695,920	\$1,131,650	\$2,197,220
Riverton City	\$27,440	\$14,000	\$315,200	\$356,640
City of Taylorsville	\$557,750	\$360,549	\$618,165	\$1,536,464
Unincorporated Salt Lake County	Unknown	Unknown	Unknown	Unknown
<b>Total by CY</b>	<b>\$5,032,132</b>	<b>\$7,712,586</b>	<b>\$8,451,886</b>	<b>\$21,196,604</b>

### Fire Loss – Content Loss

Table 16: Fire Property Loss Data

Planning Zone	CY 2020	CY 2019	CY 2018	Total by PZ
Town of Alta	\$100	\$100,500	\$0	\$100,600
Town of Brighton	\$0	\$0	\$0	\$0
Camp Williams	\$0	\$0	\$0	\$0
Copperton Metro Township	\$20,300	\$105,000	\$150,020	\$275,320
City of Cottonwood Heights	\$131,901	\$23,030	\$169,670	\$324,601
Eagle Mountain City	\$318,500	\$3,460	\$43,050	\$365,010
Emigration Township	\$1,000,000	\$500	\$30,000	\$1,030,500
Herriman City	\$113,590	\$6,080	\$250,401	\$370,071
Holladay City	\$184,500	\$110,120	\$152,950	\$447,570
Kearns Metro Township	\$43,150	\$153,950	\$68,610	\$265,710
Magna Metro Township	\$73,625	\$47,505	\$67,700	\$188,830

<b>Midvale City</b>	\$313,090	\$139,250	\$186,401	\$638,741
<b>City of Millcreek</b>	\$73,010	\$159,122	\$511,400	\$743,532
<b>Riverton City</b>	\$19,660	\$500	\$163,400	\$183,560
<b>City of Taylorsville</b>	\$106,605	\$125,600	\$303,100	\$535,305
<b>Unincorporated Salt Lake County</b>	Unknown	Unknown	Unknown	Unknown
<b>Total by CY</b>	\$2,398,031	\$974,617	\$2,096,702	\$5,469,350

**Fire Loss – Total Loss**

<b>Planning Zone</b>	<b>CY 2020</b>	<b>CY 2019</b>	<b>CY 2018</b>	<b>Total by PZ</b>
<b>Town of Alta</b>	\$1,100	\$3,002,000	\$0	\$3,102,600
<b>Town of Brighton</b>	\$0	\$3,500	\$5,000	\$8,500
<b>Camp Williams</b>	\$0	\$0	\$0	\$0
<b>Copperton Metro Township</b>	\$45,300	\$126,000	\$377,520	\$548,820
<b>City of Cottonwood Heights</b>	\$640,702	\$78,030	\$1,031,920	\$1,750,652
<b>Eagle Mountain City</b>	\$381,700	\$13,920	\$121,325	\$516,945
<b>Emigration Township</b>	\$2,010,000	\$205,500	\$310,000	\$2,525,500
<b>Herriman City</b>	\$983,330	\$396,780	\$883,802	\$2,263,912
<b>Holladay City</b>	\$487,500	\$2,127,720	\$491,575	\$3,106,795
<b>Kearns Metro Township</b>	\$195,600	\$621,100	\$357,510	\$1,174,210
<b>Magna Metro Township</b>	\$736,026	\$234,162	\$381,550	\$1,251,738
<b>Midvale City</b>	\$794,790	\$423,300	\$3,545,471	\$4,763,561
<b>City of Millcreek</b>	\$442,660	\$855,042	\$1,643,050	\$2,940,752
<b>Riverton City</b>	\$47,100	\$14,500	\$478,600	\$540,200
<b>City of Taylorsville</b>	\$664,355	\$486,149	\$921,265	\$2,071,769
<b>Unincorporated Salt Lake County</b>	Unknown	Unknown	Unknown	Unknown
<b>Total by CY</b>	\$7,430,163	\$8,587,703	\$10,548,588	\$26,565,954

*Table 18 - Property and Content Loss Data*

## Community Priorities, Expectations and Performance Goals

UFA maintains a rolling three-year strategic plan that was recently just updated and adopted in January of 2021. As part of the strategic planning process, it is important to gather both internal and external stakeholder input and information of what is going well, and where priorities may need to shift. The strategic planning process allows us to ensure that the community expectations are being met and those items that may need to be addressed are addressed.

During the 2018-2021 process, UFA held in-person meetings with a broad reach of external stakeholders. Due to the restrictions of COVID-19 while the latest strategic plan, UFA held six stakeholder meetings, with four of them being community meetings, one being with our Salt Lake Valley law enforcement partners and one with our Salt Lake Valley fire department partners. These discussions allowed UFA to provide an overview of our current services provided to the communities. Then there was an open conversation about perceived strengths, weaknesses, opportunities and challenges. The stakeholder meetings also allowed attendees to outline their priorities and expectations. Many of these stakeholders are elected officials and members of the community, with fifty-five attendees spread across the six meetings.

Out of those meetings, the following goals and initiatives were identified. Key sustaining goals are: best practices, community and partner involvement, resilient culture, professional development and well-being of UFA personnel. The key identified initiatives are: enhanced leadership, improved emergency services delivery, improved community involvement and improved behavioral health.

Additional strategies falling from the initiatives are:

### Initiative 1 - Enhanced Leadership

Focused effort on providing the tools to effectively meet or exceed the expectations of leaders to provide for effective and sustained leadership.

- Establish programs for the development and preparation of personnel for leadership positions
- Continue delivering the Leadership Cohort with CenterPoint

- Introduce and institutionalize a Mission-Driven Culture
- Establish leadership competencies for selected positions
- Establish a formal mentorship and task book program for the positions of Captain and Battalion Chief that culminates in an assessment to qualify personnel to act in those positions
- Prepare interested Chief Officers for the position of Fire Chief and establish an effective transfer of command for the Unified Fire Authority

### Initiative 2 - Improved Emergency Services Delivery

Review and act on the initiatives in the Standards of Cover (SOC) to improve delivery of emergency services.

- Determine the right staffing and configuration of resources to effectively solve the problems identified in the SOC
- Adopt and work towards achieving a benchmark for call processing and turnout time
- Establish regional fire and medical protocols that allow Salt Lake Valley agencies to perform critical assignments in a consistent and effective manner
- Support Operations personnel with programs, tools and opportunities that will enhance and improve their ability to provide effective emergency service delivery

### Initiative 3 - Improved Community Involvement

Enhance engagement with our communities as their local fire department through the support and administration of community events and activities.

- Enhance the Liaison Program to improve UFA's availability to municipal administrations
- Engage with the public in an effective and proactive manner during community activities
- Foster partnerships with local law enforcement agencies operating in the municipalities we serve, bringing added value to the community
- Increase our municipalities awareness of the services available from UFA that may help their communities
- Strengthen UFA's social media efforts to support and inform our communities
- Improve outreach to the diverse populations within the UFA service area
- Support and improve recruitment efforts that reach diverse populations throughout our community

### Initiative 4 - Improve Behavioral Health



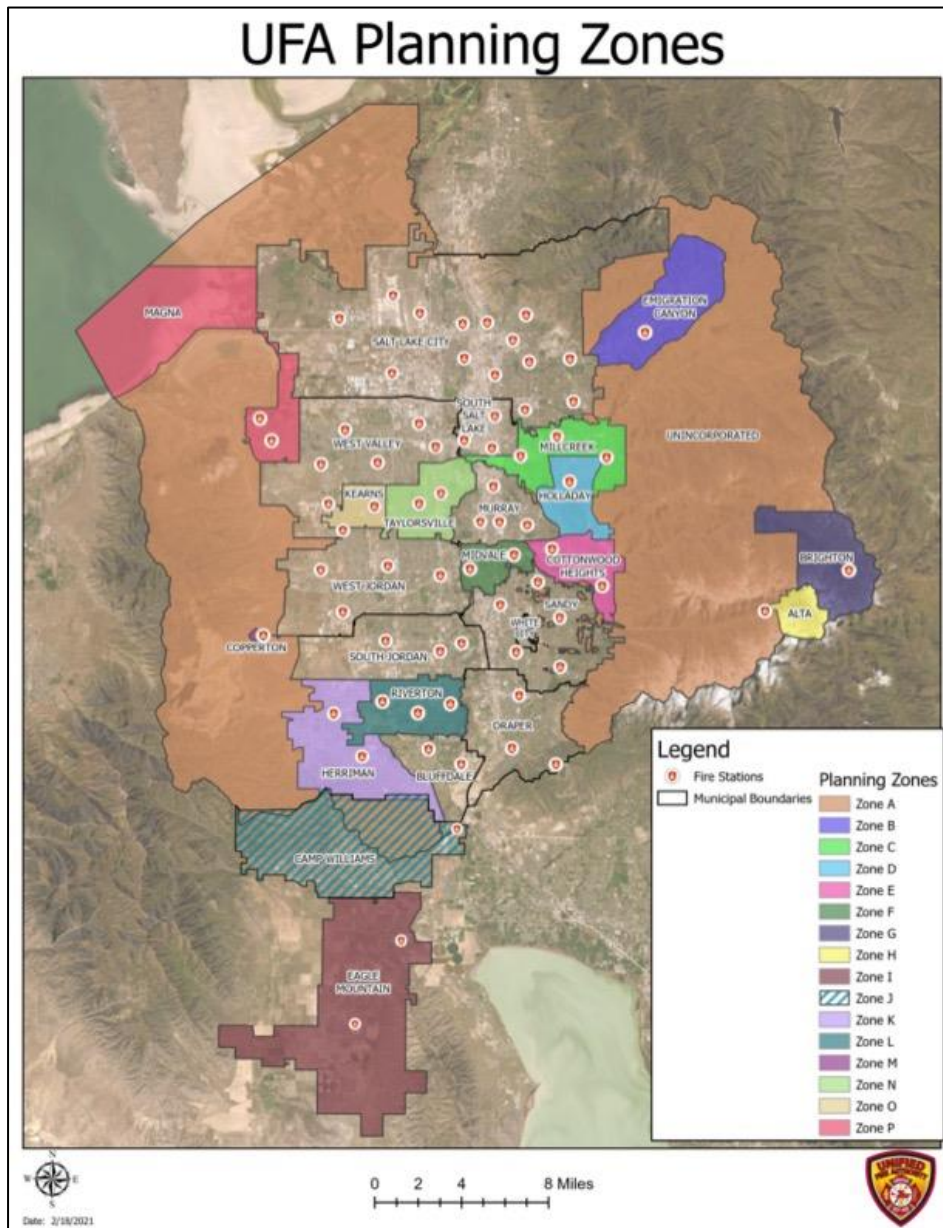
Taking care of our behavioral health and well-being to ensure UFA employees are mentally healthy and resilient throughout a career that often places them in stressful and traumatic situations.

- Fortify existing employee behavioral health programs that are available
- Expand the Peer Support Program
- Provide training to improve behavioral health resiliency for all employees
- Identify and reduce the number of barriers for employees to seek and receive routine wellness checkups before any sign of a problem
- Improve both access and willingness of employees to quickly receive treatment at the first sign of an issue
- Improve and expand access for employees to receive treatment for depression, anxiety and post-traumatic stress disorder (PTSD)
- Expand access for employees to receive treatment to overcome suicidal thoughts or the desire to turn to substance abuse
- Improve programs for all employees to be aware of co-workers' mental health struggles and provide resources to help
- Continue to review our practices looking for opportunities to reduce unnecessary stressors

For a more detailed outline of all of the goals and objectives, refer to UFA's Strategic Plan 2021-2023, which was adopted in January of 2021.

## UFA Geographic Planning Zones

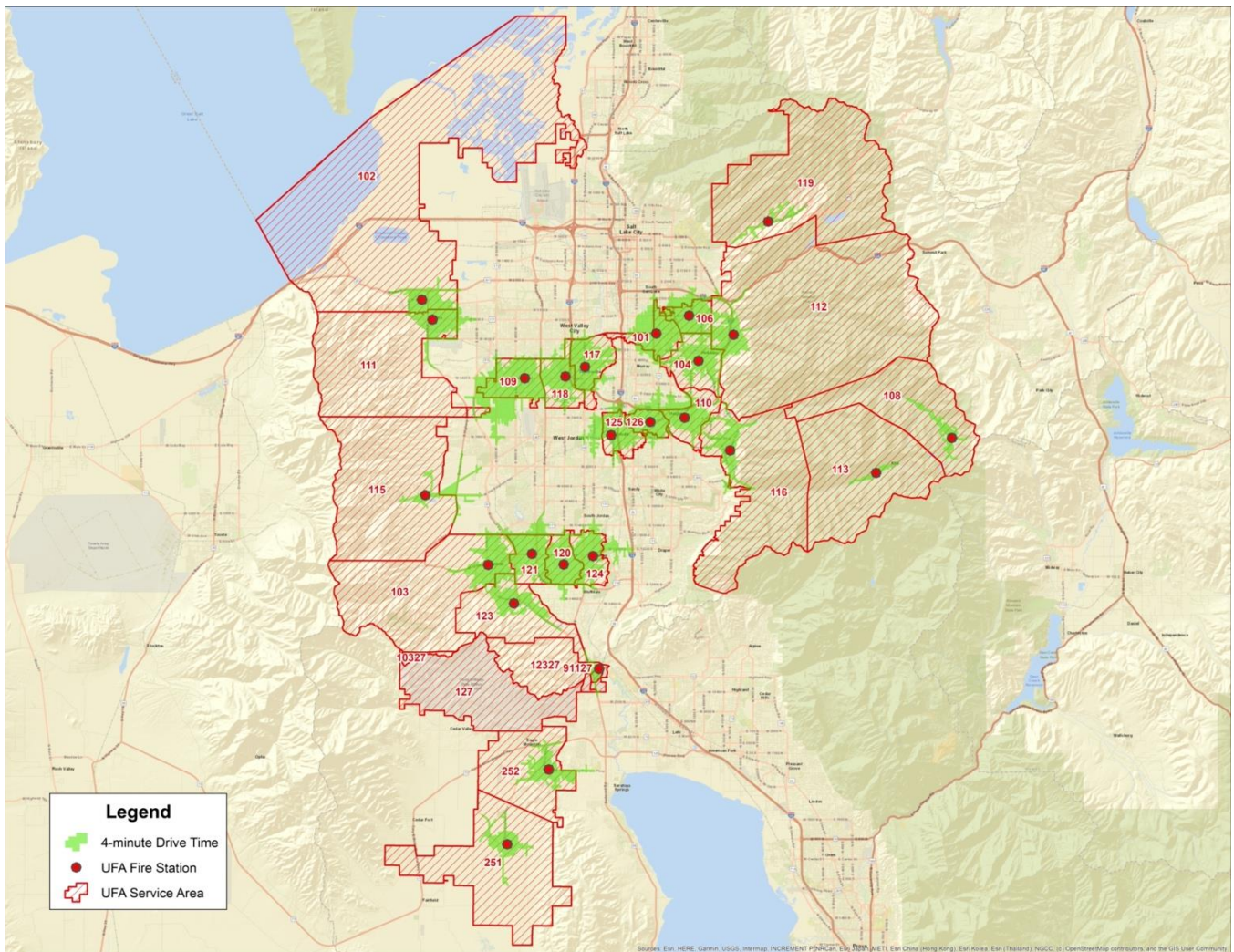
UFA is divided into sixteen geographic planning zones (PZ). Those PZs cover the fourteen municipal jurisdictions plus unincorporated Salt Lake County. Additionally, one zone covers Camp Williams as UFA has both contractual obligations and fire response within the Camp Williams boundary. Within the sixteen PZs, there are twenty-four operational stations, one station in the Camp Williams running area, and four additional structures that house UFA headquarters, UFA Investigations Division, UFA Logistics Division / Urban Search & Rescue, and UFA's Fire Training Division.



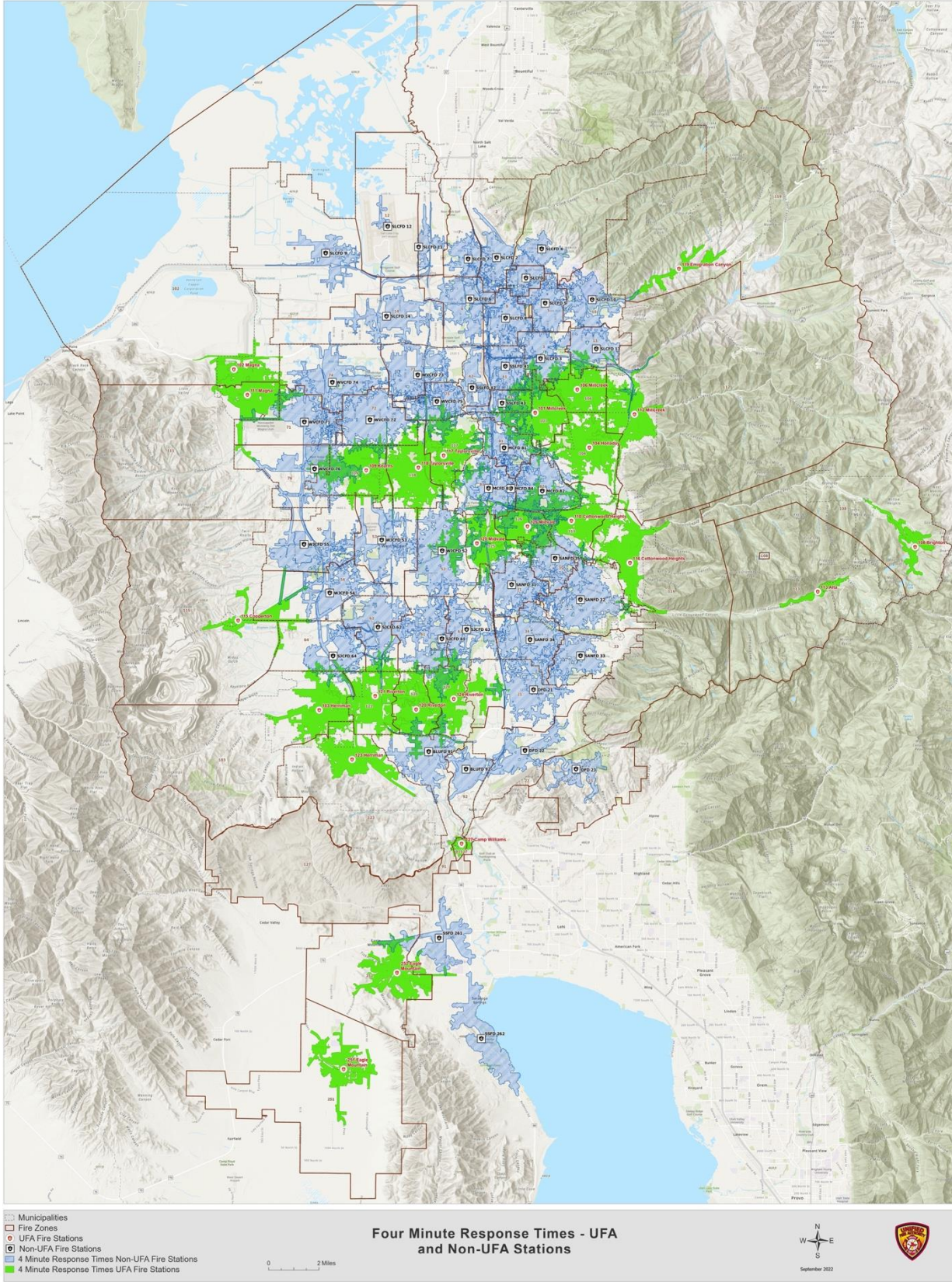
Planning Zone	Square Miles
Town of Alta	4.1
Town of Brighton	16
Camp Williams	47
City of Cottonwood Heights	9.23
Copperton Metro Township	0.31
Eagle Mountain City	50.43
Emigration Township	18.98
Herriman City	21.63
Holladay City	8.5
Kearns Metro Township	4.63
Magna Metro Township	37.48
Midvale City	5.92
City of Millcreek	12.77
Riverton City	12.58
City of Taylorsville	10.85
Unincorporated Salt Lake County	390.59

Map 38 - UFA Planning Zones

The following map shows UFA response areas with a four-minute travel time. One of the primary standards of the National Fire Protection Association (NFPA) 1710, which identifies many of the standards that full-time fire departments strive for, one of the primary standards is having the first arriving engine arrive on scene within four minutes of being turned out (i.e., dressed in PPE) with four-handed staffing for ninety percent of all responses. The two maps below shows UFA’s current areas for a four-minute travel time from each fire station, as well as automatic- and mutual-aid . There are several areas that are considered rural or canyon communities or are otherwise uninhabited so a four-minute response time may not be needed or warranted. To see individual four- and eight-minute response times per municipality, refer to each respective municipal section.



Map 39 - Four-Minute Travel Times for UFA



*Map 41 - 4-Minute Travel Times, UFA and Aid*

The following map shows the population density in UFA. The Kearns Metro Township planning zone has the highest population density at 7,847 per square mile, while the Town of Brighton planning zone has the lowest at 14 per square mile. Most of UFA's response and service areas have been built out, although there are several communities and pockets of Salt Lake County that are expanding, and annexation of unincorporated lands are still possible. UFA monitors these areas and if annexation is being proposed, UFA (in coordination with the communities), identifies the level of service appropriate for the community based off target hazards, properties, and population density.

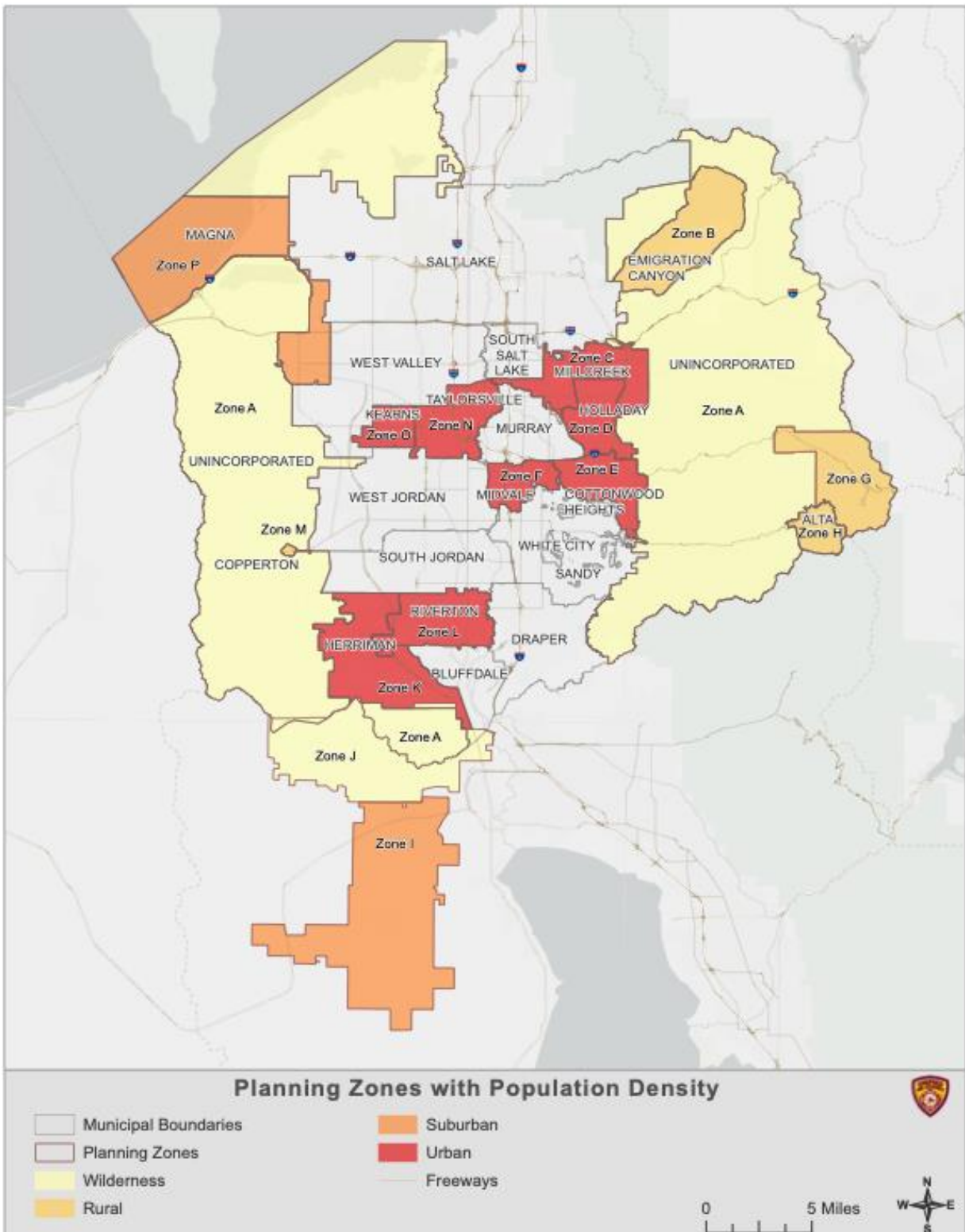
UFA defines population density by the following criteria, based off of the International City/County Management Association (ICMA) split between urban and rural. The following categories fall under each of those, respectively (for purposes of this categorization, if either of the population criteria are met, e.g., population per square mile or population over a certain number, that planning zone was accordingly categorized):

### Urban

- Dense Urban – An incorporated or unincorporated area describing dense, fully developed areas, with high density of permanent or transient population. Urban areas are identified by maintaining a density of greater than 3,000 persons per square mile and a population of over 200,000.
  - UFA does not have any PZs that currently fit into this category strictly based off the overall population measures.
- Urban – An incorporated or unincorporated area with a population of 30,000 to 199,999 and/or a population density over 1,000 people per square mile but less than 2,999.
  - Cottonwood Heights, Herriman, Holladay, Kearns, Midvale, Millcreek, Riverton, and Taylorsville fit into this category.
- Suburban – An incorporated or unincorporated area describing mixed occupancy areas, with average to high density populations, typically fringed around urban areas. Suburban areas are identified by maintaining a population density of 500-1,000 persons per square mile and/or a population of 20,000 to 29,999.
  - The City of Eagle Mountain and Magna Metro Township fit into this category

## Rural

- Rural – An incorporated or unincorporated area with a population of less than 19,999 people and/or a population density of less than 500 persons per square mile.
  - Town of Alta, Town of Brighton, Copperton Metro Township, and Emigration Township fit into this category
- Wilderness – Any rural area not readily accessible by publicly or privately maintained roads and remote from any significant development and with greatly delayed response times.
  - Camp Williams and Unincorporated Salt Lake County fit into this category



Map 42 - Planning Zones with Population Density

The following chart provides an overview of projected growth in both Salt Lake County and within UFA. The projection holds that currently about 34% of the population of Salt Lake County is covered by UFA and this projection holds. It is important to note that the majority of growth within Salt Lake County is anticipated to occur in the Southwest pocket of the county and so while the projections are only separated by counties within the state, it is anticipated that the rate of growth will actually occur primarily within UFA areas. Additionally, the tally also has Eagle Mountain added to the top but outside of the Salt Lake County total, as Eagle Mountain is located in Utah County.

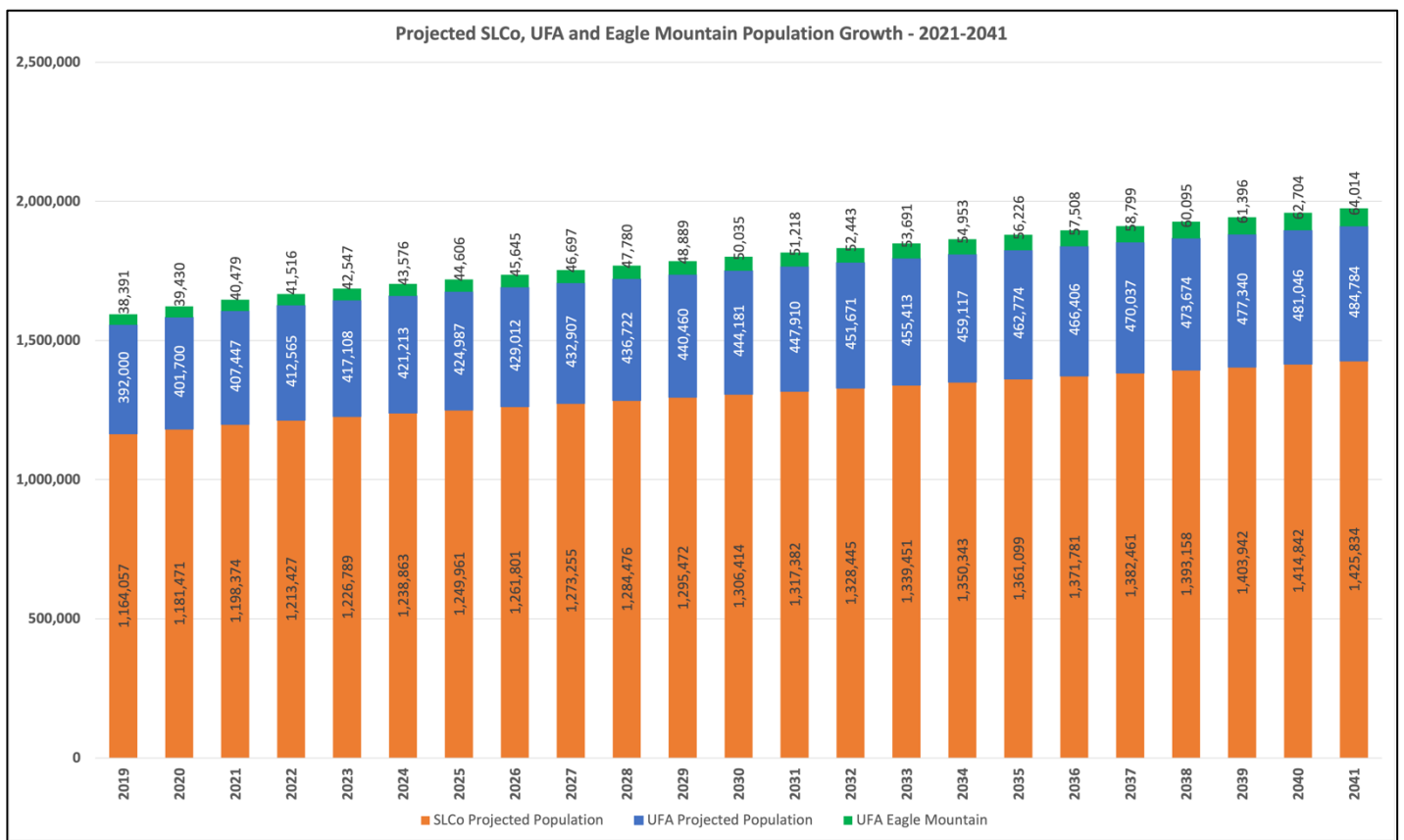
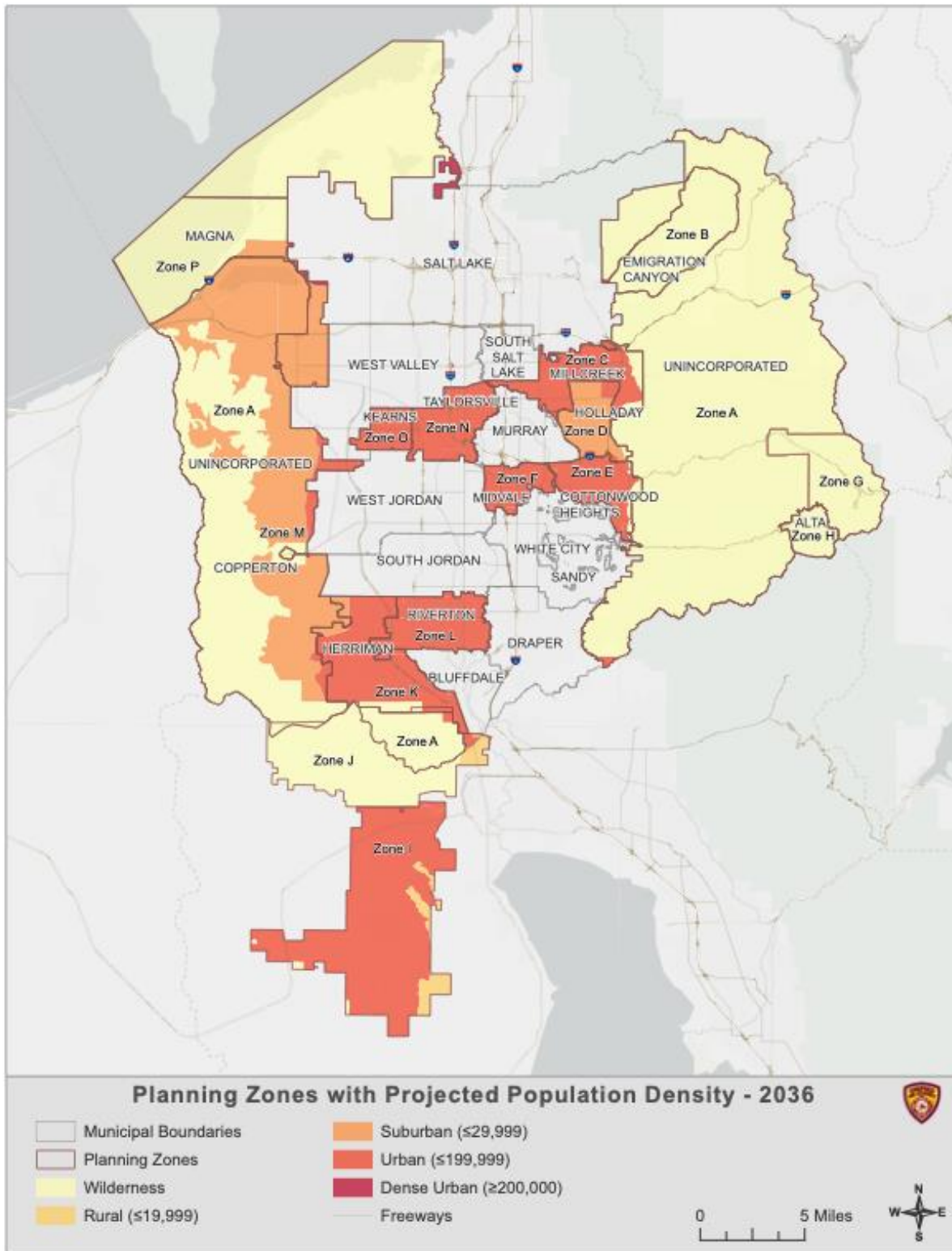


Chart 3 - Projected Growth 2021-2041





Map 43 - Planning Zones with 15-year Projected Population

The following table shows the breakdown of population by municipality planning zone and the density per square mile.

Planning Zone	Population	Population Percentage	Square Miles	Population Density per Square Mile	Classification
<b>Town of Alta</b>	228	0.05%	4.1	56	Rural
<b>Town of Brighton</b>	220	0.05%	16	14	Rural
<b>Camp Williams</b>	Temporary (Military)	N/A	47	N/A	Wilderness
<b>Copperton Metro Township</b>	835	0.19%	0.31	45	Rural
<b>City of Cottonwood Heights</b>	33,843	7.86%	9.23	3,667	Urban
<b>Eagle Mountain City</b>	38,391	8.92%	50.43	761	Suburban
<b>Emigration Township</b>	1,592	0.37%	18.98	84	Rural
<b>Herriman City</b>	51,438	11.92%	21.63	2,378	Urban
<b>Holladay City</b>	30,325	7.04%	8.5	3,568	Urban
<b>Kearns Metro Township</b>	36,330	8.44%	4.63	7,847	Urban
<b>Magna Metro Township</b>	26,949	6.26%	37.48	719	Suburban
<b>Midvale City</b>	34,124	7.92%	5.92	5,764	Urban
<b>City of Millcreek</b>	61,450	14.27%	12.77	4,812	Urban
<b>Riverton City</b>	44,440	10.32%	12.58	3,533	Urban
<b>City of Taylorsville</b>	59,805	13.89%	10.85	5,512	Urban
<b>Unincorporated Salt Lake County</b>	10,815	2.51%	390.59	28	Wilderness

Table 19 - UFA Population Information

### Incidents vs Responses

Any given incident will typically involve multiple responses from one or more agencies. For instance, when a house fire is reported in UFA, the initial dispatch includes three engines, one truck, a medic ambulance and a Battalion Chief. This is a total of six responding vehicles or unit responses. Each dispatched unit counts as one response, so any given incident may involve several responses, which may be UFA units or automatic/mutual aid units. The table below shows the number of incidents within UFA's running districts over the last three calendar years.

	CY 2020	CY 2019	CY 2018
<b>Fire Suppression</b>	995	745	850
<b>EMS</b>	20,293	18,942	19,558
<b>Hazardous Materials</b>	787	619	541
<b>Service Calls</b>	1,328	1,512	1,226
<b>Good Intent</b>	2,034	1,713	919
<b>False Calls</b>	1,596	1,723	1,535
<b>Other (Misc., Flood, Overpressure)</b>	77	57	66
<b>Total</b>	<b>27,110</b>	<b>25,311</b>	<b>24,695</b>

Table 20 - UFA Incident History 2018-2020

### Incidents per Capita for Each Planning Zone – 2020

Planning Zone	Population	Calls in 2020	Calls per Capita
<b>A – Unincorporated Salt Lake County</b>	10,815	705	0.065
<b>B – Emigration Township</b>	1,592	84	0.053
<b>C – City of Millcreek</b>	61,450	4,395	0.072
<b>D – Holladay City</b>	30,325	1,896	0.063
<b>E – City of Cottonwood Heights</b>	33,843	2,172	0.072
<b>F – Midvale City</b>	34,124	3,327	0.097
<b>G – Town of Brighton</b>	220	208	0.945
<b>H – Town of Alta</b>	379	231	0.609
<b>I – Eagle Mountain City</b>	38,391	1,103	0.029
<b>J – Camp Williams</b>	Temporary (Military)	9	N/A
<b>K – Herriman City</b>	51,438	1,390	0.027
<b>L – Riverton City</b>	44,440	1,588	0.036
<b>M – Copperton Metro Township</b>	835	75	0.090
<b>N – City of Taylorsville</b>	59,805	4,145	0.069
<b>O – Kearns Metro Township</b>	36,330	2,457	0.068
<b>P – Magna Metro Township</b>	26,949	1,887	0.070
<b>Mutual/Automatic Aid - 2020</b>		1,438	N/A

Table 21 - Calls per Capita, 2020

### Projected Incident Growth

Using an exponential growth projection model and based off the last five years of data (2015-2020), the chart below shows the current and anticipated trends out to 2031. With an exponential growth rate (and all items remaining the same), the highest projected

incidents in respective planning zones will be Taylorsville, with around 5,400 calls per year in 2031, followed by Millcreek, Eagle Mountain, and Herriman. This projection also identifies that UFA will increase their internal calls (excluding automatic and mutual aid) to nearly 38,000 calls by 2031.

### 2015-2020 Actual Call Volume, 10-Year Projected Call Volume

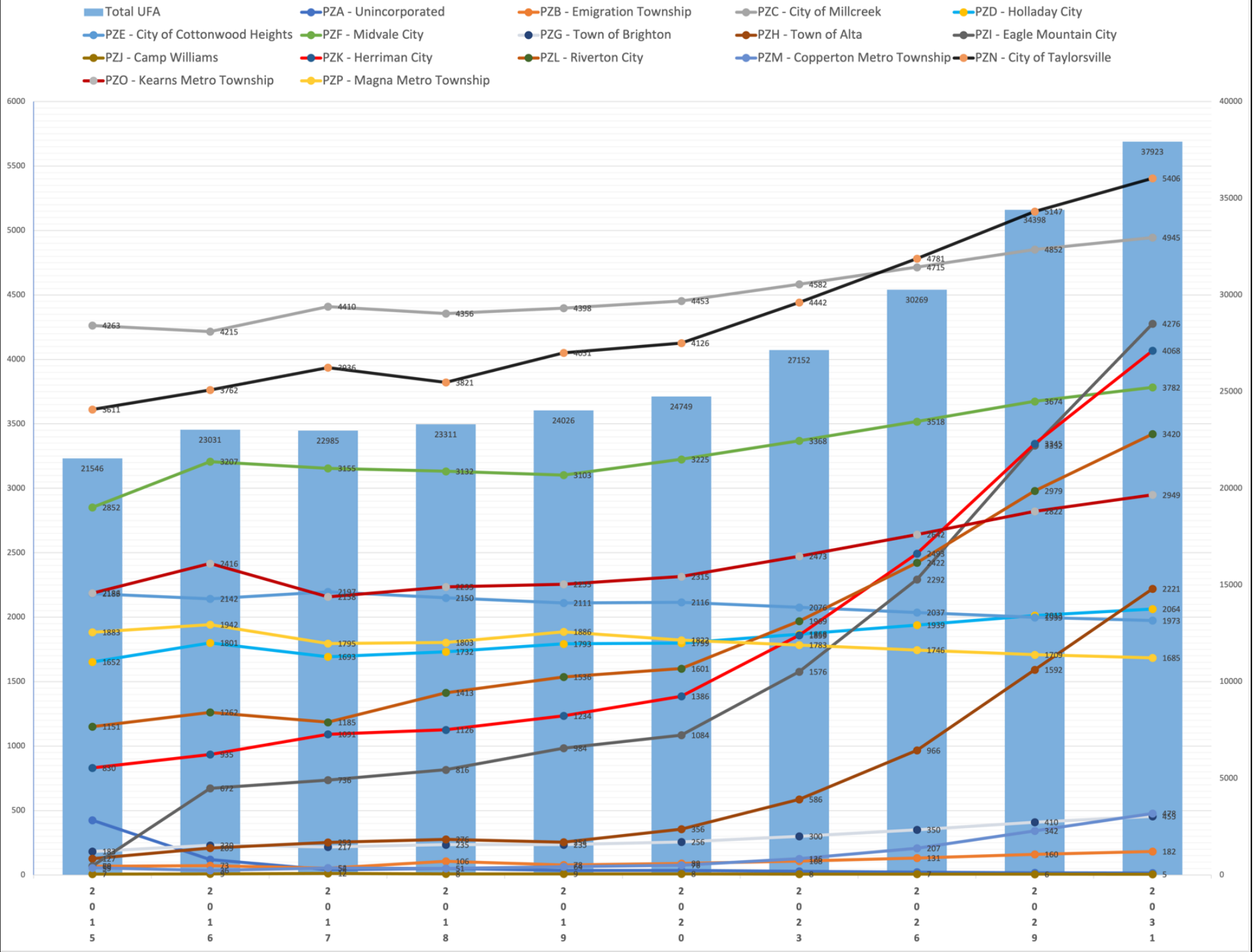


Chart 4 - Projected Incident Growth 2021-2031

To assist with projected growth, call volume, and station placement, UFA has identified and is utilizing software named Darkhorse that can identify and accurately project out the best placement of fire stations using projected community plans, road placement, population growth, etc. to help identify four- and eight-minute travel times and the best placement for future station development.

### Incidents by Time of Day & Day of Week

A review of incidents by time of day illustrates when the greatest service delivery demand occurs. The following chart shows the times of greatest demand for CY 2020, with 07:00 AM being the start of the increase and 07:00 PM being the start of the decline.

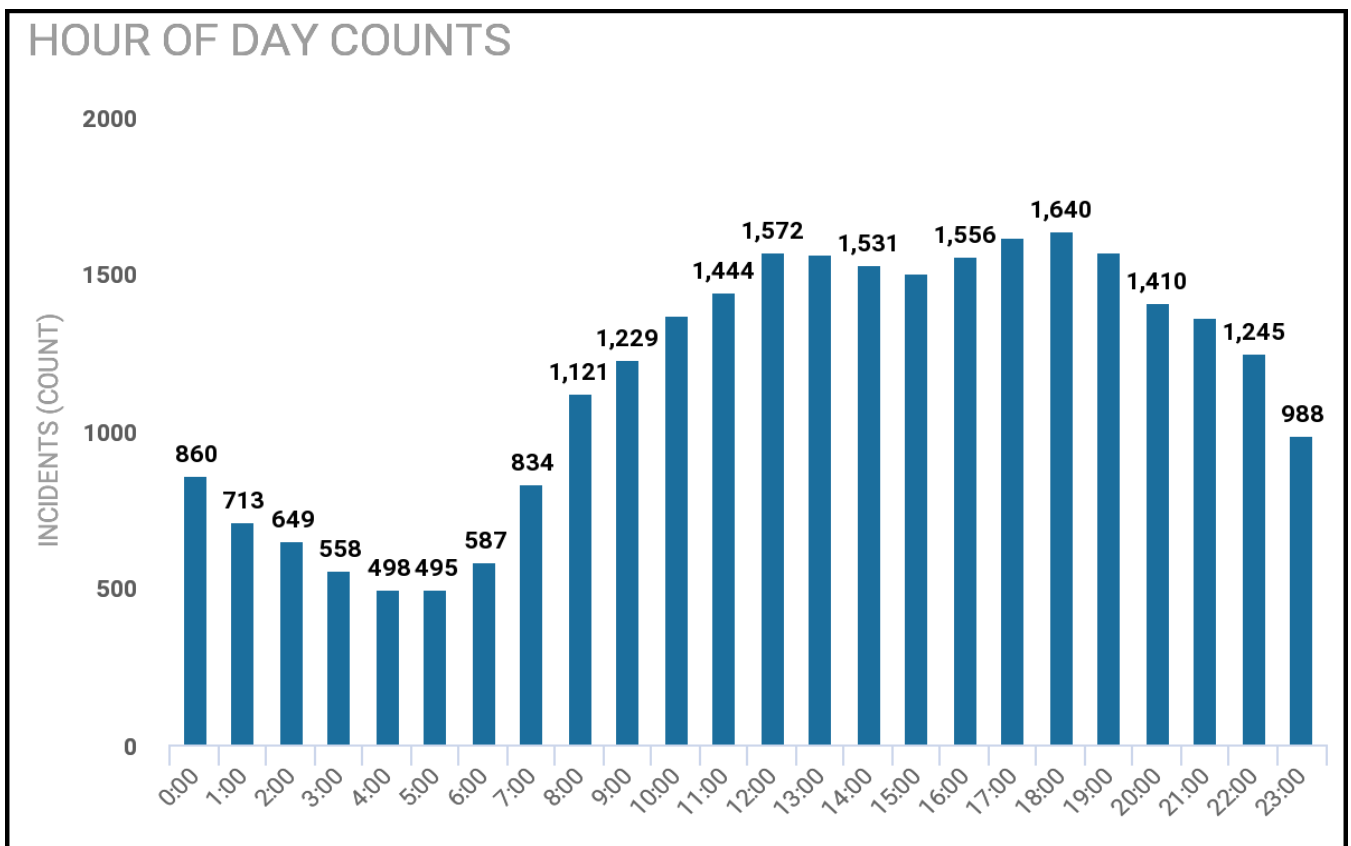


Chart 5 - CY 2020 UFA Incidents by Time of Day

The chart below illustrates the call volume by the day of the week. The days with the highest number of calls are Thursdays, followed by Saturdays, Wednesdays, and Tuesdays, respectively.

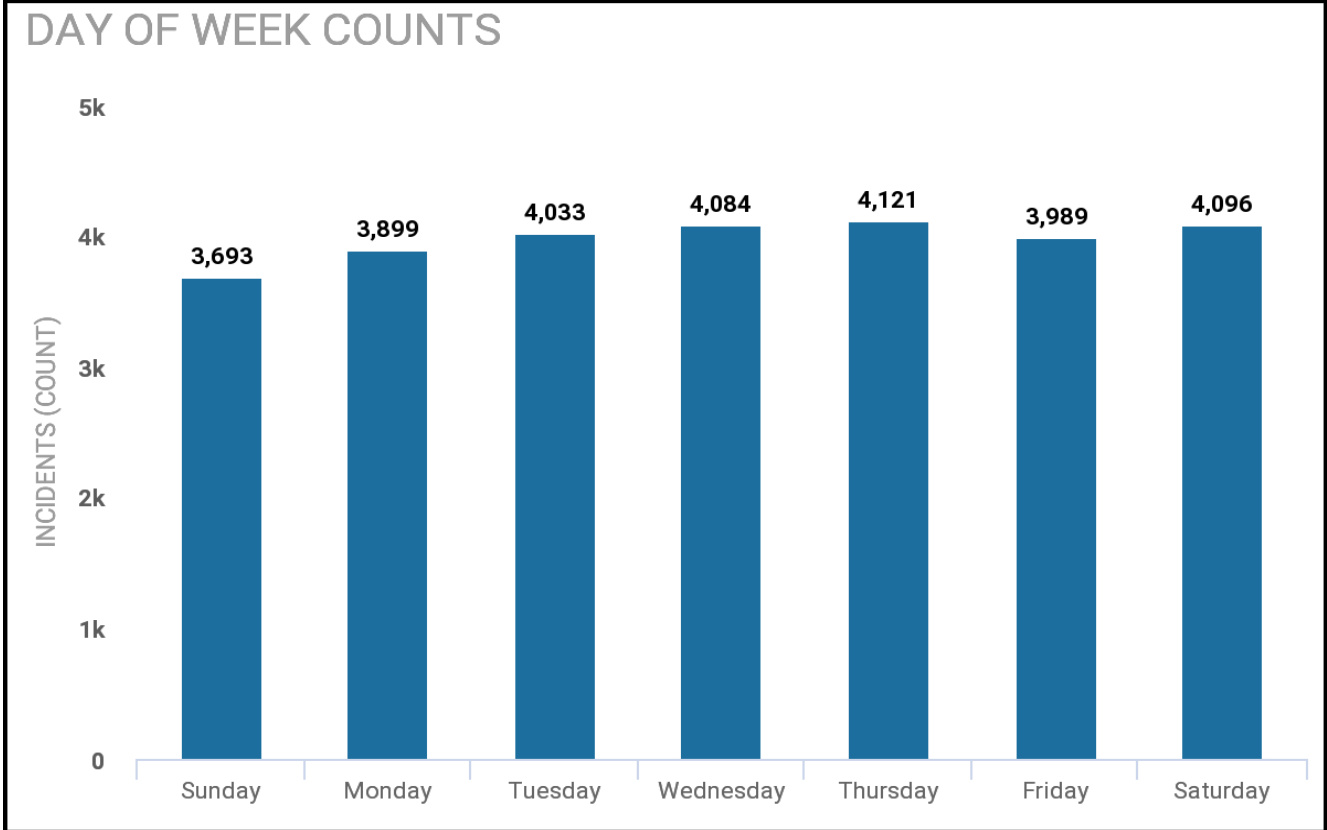


Chart 6 - Call Volume by Day of Week

### Planning Zones Values at Risk

Planning Zone	Values at Risk	Values at Risk Per Capita
<b>Town of Alta</b>	\$314,448,800	\$829,680.21
<b>Town of Brighton</b>	\$440,041,048	\$2,000,186.58
<b>Camp Williams</b>	Unknown	N/A
<b>Copperton Metro Township</b>	\$35,109,180	\$42,046.92
<b>City of Cottonwood Heights</b>	\$4,167,290,410	\$123,135.96
<b>Eagle Mountain City</b>	\$2,280,157,637	\$59,393.03
<b>Emigration Township</b>	\$276,092,678	\$173,425.05
<b>Herriman City</b>	\$2,902,806,086	\$56,433.11
<b>Holladay City</b>	\$3,905,294,360	\$128,781.35
<b>Kearns Metro Township</b>	\$1,453,476,363	\$40,007.61
<b>Magna Metro Township</b>	\$1,273,226,468	\$47,245.78
<b>Midvale City</b>	\$2,513,800,998	\$73,666.66
<b>City of Millcreek</b>	\$5,970,828,273	\$97,165.64
<b>Riverton City</b>	\$3,587,843,985	\$80,734.56
<b>City of Taylorsville</b>	\$3,684,548,074	\$61,609.37
<b>Unincorporated Salt Lake County</b>	\$3,973,715,545	\$367,426.31
<b>Total</b>	\$37,063,092,803	\$86,006.03

Table 22 - UFA Values at Risk

## Incidents by Type – Emergent and Non-Emergent

Incidents per Type	CY 2020	CY 2019	CY 2018	Total
<b>Fire Suppression</b>	995	745	850	2,590
<b>EMS</b>	20,295	18,942	19,558	58,793
<b>HazMat</b>	787	619	541	1,947
<b>Technical Rescue</b>	23	32	23	55
<b>Swiftwater Rescue</b>	2	1	3	6
<b>Wildland</b>	388	271	308	967

Table 23 - Emergent and Non-Emergent Incidents by Type

## Fire Suppression Incident Types

The following table illustrates the various fire suppression incident types based on NFIRS data following the close out of reports following an incident. There are eight basic categories of fire dispatches that UFA utilizes in a computer aided dispatch (DISPATCH). Rubbish fire, typically a dumpster fire; natural vegetation fire, which can be a small or large outside fire, normally associated with wildland incidents; structure fire; fire in mobile property such as a fixed structure; crop fire, normally a controlled burn; vehicle fire; special outside fire; and other.

NFIRS Description	Incident Count	% of Incidents
<b>Structure Fire</b>	454	45.6%
<b>Natural Vegetation Fire</b>	195	19.6%
<b>Outside Rubbish Fire</b>	155	15.6%
<b>Mobile Property (Vehicle) Fire</b>	93	9.35%
<b>Special Outside Fire</b>	39	3.92%
<b>Fire, Other</b>	37	3.72%
<b>Fire in Mobile Property Used as a Fixed Structure</b>	20	2.01%
<b>Cultivated Vegetation, Crop Fire</b>	2	0.002%
<b>Total</b>	995	100%

Table 24 - Fire Suppression Incident Types



## TOTAL FIRE DISPATCHES

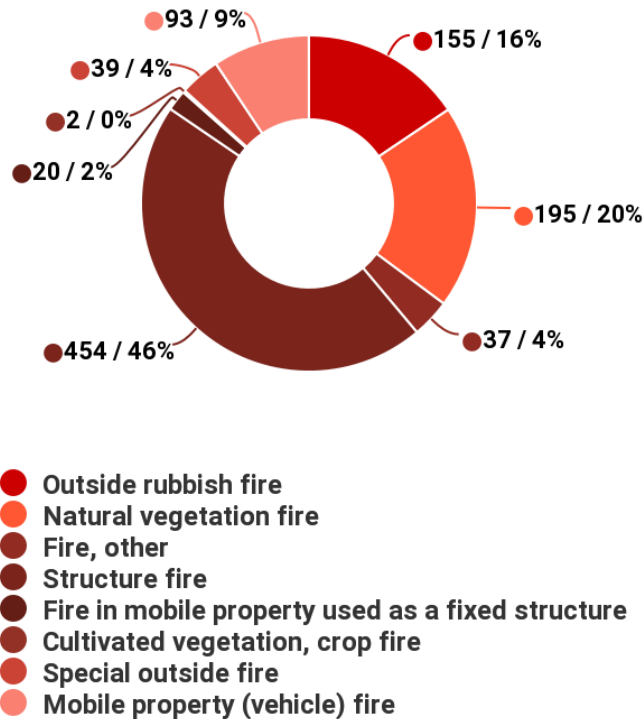


Chart 7 - Total UFA Fire Dispatches 2020

### EMS Transports and Non-Transports

The table below shows the breakdown of EMS calls that UFA responded on for the last three calendar years. In October of 2020, UFA and the surrounding Salt Lake Valley agencies moved to an automatic vehicle locator (AVL) dispatch, sending the nearest BLS based on AVL and the nearest jurisdictional unit based on AVL to any EMS call. Jurisdictional unit means that whichever municipal jurisdiction the EMS call originates from, that agency's ALS transport unit will be sent even though it may not be the absolute closest unit by AVL. The nearest BLS unit will always be dispatched as per AVL recommendations and the nearest ALS unit will be dispatched if it is determined to be a priority 1 call regardless of jurisdiction.

	CY 2020	CY 2019	CY 2018
<b>ALS Transports</b>	7,763	8,065	7,842
<b>BLS Transports</b>	11,496	10,087	9,687
<b>Scene Release</b>	1,314	1,271	3,666
<b>Public Assistance</b>	189	155	163
<b>EMS Total Calls</b>	20,573	19,423	21,195

*Note: There may be a slight difference if you were to add all calls. Public assistance calls will sometimes get duplicated with a scene release, depending on dispatch code, but those duplicates do not carry across to the total calls.*

Table 25 - EMS Call Volume by ALS/BLS

## EMS Incident Types

The dispatching system within VECC utilizes a coding system that falls alphabetically from “1 – Abdominal Pain” to “32 – Unknown Problem/Man Down”. With the recent issues with H1N1 and COVID-19, an additional code was created, with “36 – Fever/Flu-Like Symptoms”. With the additional coordination between Salt Lake City Dispatch Center and VECC, currently anything that does not fit within the 1-36 dispatch calls gets coded as a “38 – Send Protocol” so as to not delay dispatching units. Additionally, from the initial details, it gets coded as a Basic Life Support (BLS) call or an Advanced Life Support (ALS) call and they are differentiated upon dispatch as Alpha or Bravo for BLS and Charlie or Delta for ALS. Echo is usually an individual in full arrest.

## EMS Calls by Response Type - 2020

Code	Type	Number	Code	Type	Number
1	Abdominal Pain	316	19	Heart Problems	243
2	Allergic Reaction	122	20	Heat/Cold Problems	26
3	Animal Bite	32	21	Hemorrhage	529
4	Assault	492	22	Industrial/Machinery Accident	24
5	Back Pain	157	23	Overdose/Poisoning	931
6	Breathing Problems	1,454	24	Pregnancy Problem	78
7	Burns	16	25	Psychiatric/Behavioral Problems	787
8	Carbon Monoxide Poisoning/Inhalation	40	26	Sick Patient	2,526
9	Cardiac Problem	149	27	Stabbing/Gun Shot Wound	85
10	Chest Pain	945	28	Stroke/CVA	476
11	Choking	145	29	Traffic Accident	1,814
12	Convulsions/Seizures	936	30	Traumatic Injury	514

13	Diabetic Problem	402	31	Unconsciousness/Fainting	1,397
14	Drowning	10	32	Unknown Problem/Man Down	689
15	Electrocution	3	33	Interfacility	16
16	Eye Problem	15			
17	Falls	3,109	36	Fever/Flu-Like Symptoms	276
18	Headache	60	38	Send Protocol	427

Table 26 - 2020 EMS Call Type

## Other Call Types

### Heavy Rescue

UFA has two heavy rescue companies. 117 in Taylorsville is a dual-company station that takes turns shift-to-shift being the first up for any heavy rescue or technical rescue calls. 121 in Riverton is the second heavy rescue company within UFA. UFA heavy rescue companies respond on all technical rescue calls, entrapment calls, working fires (as our rapid intervention teams [RIT]), and extrication calls.

Unit	Staffing Level	Responses
HR 117	4 (Cross-Staffed)	255
HR 121	4 (Cross-Staffed)	67
<b>Total</b>		<b>322</b>

Table 27 - 2020 Heavy Rescue Calls

### Hazardous Materials

UFA has two hazardous material (HazMat) companies. 120/124 in Riverton, and 126 in Midvale. Station 109 in Kearns housed a HazMat company until December of 2022 when the HazMat program was modified

Unit	Staffing Level	Responses
HM 109	4 (Cross-Staffed)	24
HM 124	4 (Cross-Staffed)	19
HM 126	4 (Cross-Staffed)	24
<b>Total</b>		<b>67</b>

Table 28 – 2020 Hazardous Material Calls

### Wildland Urban Interface (WUI) Response

UFA has its own Wildland Division that is housed out of Station 120 in Riverton. UFA has a Wildland Division Chief, a Crew Supervisor, a twenty-one-person Type 1 Hotshot Handcrew (in trainee status as of 2022 WL season) — Salt Lake 1, an Initial Attack Crew,

two four-person Type 3 Engines available nationally. UFA also houses a ten-person initial attack handcrew, a Fire Management Officer (FMO) and an Assistant FMO (AFMO) in — and is responsible for all fire suppression on — Camp Williams, a military institution that houses and trains the Utah National Guard.

#### Wildland Division Data – Camp Williams

	2020	2019	2018
<b>Total Days in Status</b>	212	157	Unknown
<b>Fires on Camp Williams</b>	5	7	Unknown
<b>Total Acres Burned on Camp Williams</b>	30	182	5
<b>Fires off Camp Williams</b>	12	7	Unknown
<b>Personnel Hours Utilized in Mitigation Work</b>	N/A	N/A	1,042

Table 29 - Camp Williams Fire Data

#### Wildland Division Data – Fuels Crew / Initial Attack Crew

	2020	2019	2018
<b>Fires</b>	10	9	N/A
<b>Days Total on Fires</b>	21	12	N/A
<b>Days Total on Mitigation Projects</b>	84	90	N/A
<b>Personnel Hours Utilized</b>	5,697	1,305	N/A

Table 30 - Fuels Crew / Initial Attack Crew Data

#### Wildland Division Data – E 301

	2020	2019	2018
<b>Total Days in Status</b>	178	152	Unknown
<b>Fires</b>	16	8	4
<b>Days Total on Fires</b>	104	36	38
<b>Days Total on Mitigation Projects</b>	25	19	Unknown

Table 31 - Engine 301 Data

#### Wildland Division Data – E 302

	2020	2019	2018
<b>Total Days in Status</b>	178	167	Unknown
<b>Fires</b>	16	7	18
<b>Days Total on Fires</b>	103	35	124
<b>Days Total on Mitigation Projects</b>	10	29	Unknown

Table 32 - Engine 302 Data

## Wildland Division Data – Salt Lake 1

	2020	2019	2018
<b>Total Days in Status</b>	164	167	Unknown
<b>Fires</b>	20	13	15
<b>Days Total on Fires</b>	105	79	112
<b>Days on Fires in State</b>	69	66	48
<b>Days on Fires Out of State</b>	36	13	64
<b>Days Total on Mitigation Projects</b>	9	32	Unknown

Table 33 - Salt Lake 1 Data

## Wildland Incidents by Unit Response – 2020

Unit	Responses	Unit	Responses	Unit	Responses
BC11	11	MA206	2	ME124	9
BC12	14	MA211	1	ME125	24
BC13	23	MA225	1	ME126	18
E6102	2	MA253	7	ME251	34
E6106	10	ME101	16	ML106	6
E6111	9	ME102	10	ML109	22
E6112	8	ME103	20	ML110	15
E6115	3	ME104	12	ML111	13
E6116	4	ME108	6	ML117	16
E6118	13	ME109	5	ML121	11
E6123	6	ME112	13	ML252	6
E6125	7	ME113	2	OPS1	5
E6127	2	ME113	2	PIO4	1
E6251	1	ME113	2	SQUAD1	1
E6252	27	ME115	6	WILD1	7
EM1	1	ME116	8	WILD2	6
INV194	1	ME117	26	WILD7	2
MA101	1	ME118	20	WILD9	1
MA109	4	ME119	5	WT111	1
MA126	1	ME123	4	WT123	3

Note: These are those incidents within Central and VECC's DISPATCH. There are other incidents that wildland units may have been dispatched to within the NUIFC dispatch system or out-of-county responses

Table 34 - Wildland Incidents by Unit Response

## Responses by Unit

The table below illustrates responses by unit. This is based off dispatch information and only signifies dispatches, not necessarily that they arrived on scene, were cancelled, or part of a large, multi-unit response.

Unit	Responses	Unit	Responses	Unit	Responses
AL115	59	MA101	2898	ME115	122
BC11	539	MA108	1	ME116	941
BC12	297	MA109	2375	ME117	1398
BC13	643	MA110	1232	ME118	1915
DC14	56	MA118	1464	ME119	109
E6102	17	MA120	959	ME123	737
E6106	24	MA126	1267	ME124	983
E6108	2	MA204	1086	ME125	2210
E6111	17	MA206	1807	ME126	1910
E6112	40	MA210	891	ME251	399
E6115	4	MA211	1635	ML106	1276
E6116	13	MA217	1422	ML109	2214
E6118	25	MA218	1084	ML110	1714
E6119	2	MA220	2	ML111	1033
E6123	56	MA221	1320	ML117	1448
E6125	19	MA223	481	ML121	1300
E6127	3	MA225	457	ML252	718
E6252	44	MA226	1553	OPS1	27
EMS1	1	MA251	182	PIO2	2
EVENT4	1	MA252	176	PIO3	2
EVENT7	1	MA253	604	PIO4	9
HM109	33	ME101	2841	SAFE1	4
HM124	50	ME102	1108	WILD1	6
HM126	50	ME103	844	WILD2	6
HR117	228	ME104	1896	WILD4	1
HR121	62	ME108	235	WILD9	1
HV117	27	ME109	340	WT123	7
HV121	5	ME112	1130		
INV192	2	ME113	213		

Key					
AL	Air & Light	BC	Battalion Chief	DC	District Chief (No Longer Utilized)
E	Engine	EMS	EMS Support Staff	Event	Event Ambulances
HM	HazMat	HR/HV	Heavy Rescue	INV	Investigator
MA	Medic Ambulance	ME	Medic Engine	ML	Medic Ladder
OPS	Operations Chief	PIO	Public Information Officer	WT	Water Tender
SAFE	Safety Officer	WILD	Wildland Duty Officer		

Table 35 - UFA Unit Responses in CY2020

## Occupancy Types in UFA Planning Zones

The following table has all the occupancy types identified within UFA areas according to the risk matrix. Each planning zone has a breakdown specific to those areas.

Occupancy Classification	Low	Moderate	High	Maximum	Total
<b>Assembly</b>	236	20	98	25	379
<b>Commercial/Industrial</b>	93	81	163	37	374
<b>Educational</b>	90	3	43	13	149
<b>Government</b>	51	2	6	1	60
<b>Healthcare</b>	6	5	14	1	26
<b>Hazardous</b>	Unknown	Unknown	Unknown	Unknown	561
<b>Storage</b>	5	3	11	1	20
<b>Residential – Single Family</b>	27,045	46,201	17,011	2,448	92,705
<b>Residential – Multi Unit</b>	1,524	1,672	567	78	3,841
<b>High Rise</b>	0	10	6	17	33
<b>Total</b>	29,050	47,997	17,919	2,621	98,148

*Table 36 - Occupancy Types in UFA Planning Zones*

### Building Size / Considerations

For purposes of risk classification, UFA has outlined the following risk classifications for building size, regardless of occupancy type (except residential). Low risk = 1-4,999 square feet. Moderate risk = 5,000-9,999 square feet. High risk = 10,000-99,999 square feet. Maximum risk = >100,000 square feet.

For residential occupancies, the following classifications apply. Low risk = 1-1,999 square feet. Moderate risk = 2,000-3,999 square feet. High risk = 4,000-9,999 square feet. Maximum risk = ≥10,000 square feet.



## **Unified Fire Authority**

3380 South 900 West  
Salt Lake City, UT 84119



# Unified Fire Authority

## Community Risk Assessment



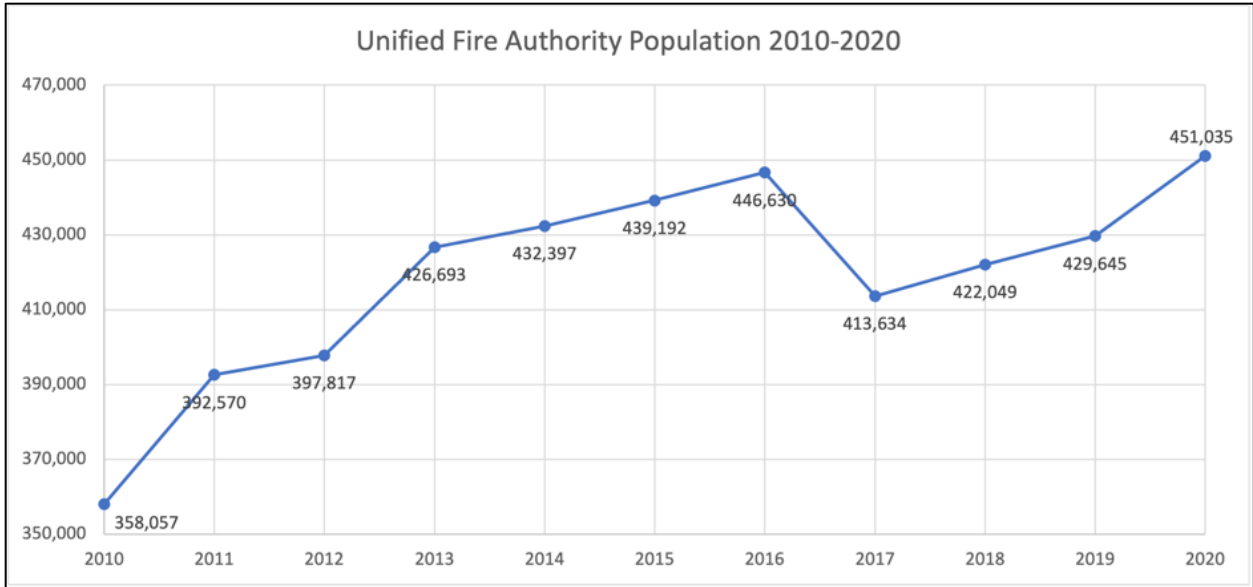
# Part 2 – UFA Community Risk Assessments

## Unified Fire Authority

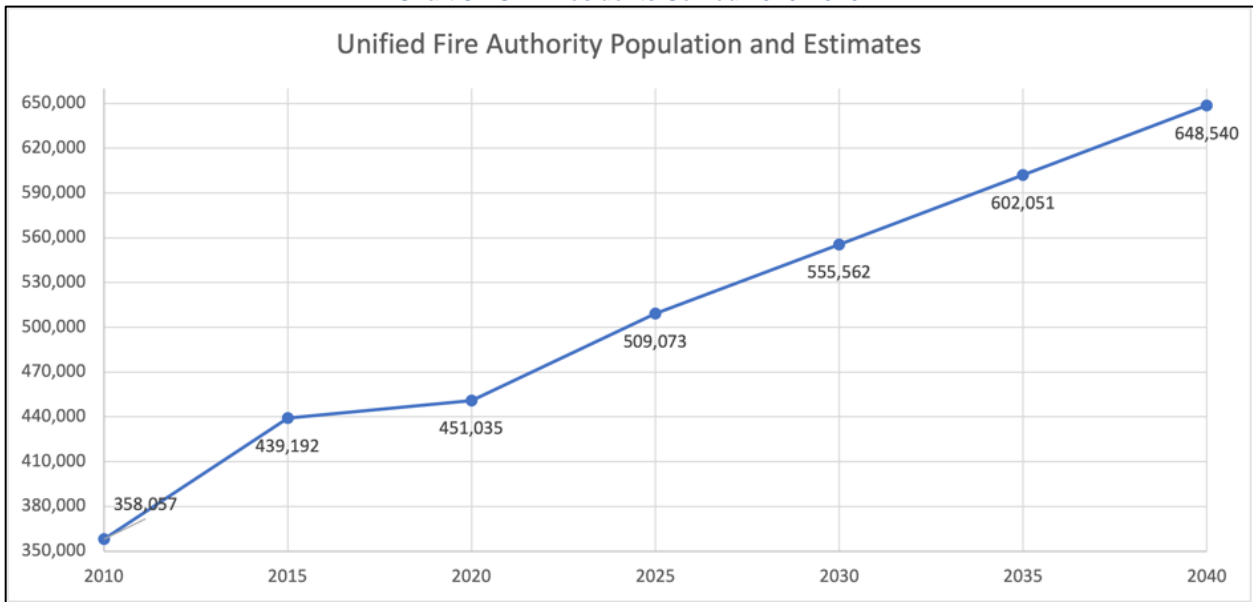
UFA has twenty-four fire operational stations—with two of them being utilized for different UFA divisions, a headquarters building, training grounds with a training tower and classrooms, and a building housing our Special Enforcement Division—within the 651 square miles serving a population of 451,035 and responded to 31,226 calls for service in 2020.

Planning Zone	Population	Square Miles	Population Density per Sq Mile
UFA	451,035	651	693

Unified Fire Authority’s response area has increased its residents served from 358,057 in 2010 to 451,035 in 2020, showing an increase of 20.61% over a ten-year timeframe. This includes the additions of Midvale City in 2011, Eagle Mountain City in 2013, and Draper City leaving in 2017. Providing an exponential growth pattern and if all things remain equal, chart 9 demonstrates that UFA’s residents served could grow to 648,540 by the year 2040.



*Chart 8 - UFA Residents Served 2010-2020*



*Chart 9 – Unified Fire Authority Population and Estimates 2010-2040*

## Unified Fire Authority Station Information

Station	Apparatus	Minimum Staffing	Address	Specialty
<b>Town of Alta</b>				
<b>Station 113</b>	Medic Engine 113 (Type 1/3) Medic Ambulance 113	3 Cross-Staffed	9523 Bypass Road, Snowbird	
<b>Town of Brighton</b>				
<b>Station 108</b>	Medic Engine 108 (Type 1/3) Medic Ambulance 108 Engine 6108	3 Cross-Staffed Cross-Staffed	8036 Old Prospect Ave, Brighton	WUI Response
<b>Copperton Metro Township</b>				
<b>Station 115</b>	Medic Engine 115 (Type 1) Engine 6115 (Type 6) Air & Light 115	3 Cross-Staffed Cross-Staffed	8495 W State Highway, Copperton	WUI Response Air & Light
<b>City of Cottonwood Heights</b>				
<b>Station 110</b>	Medic Ladder 110 (Type 1) Medic Ambulance 110	4 2	1790 Fort Union Blvd, Cottonwood Heights	
<b>Station 116</b>	Medic Engine 116 (Type 1) Medic Ambulance 116 Engine 6116 (Type 6)	4 Cross-Staffed Cross-Staffed	8303 Wasatch Blvd, Cottonwood Heights	WUI Response
<b>Eagle Mountain City</b>				
<b>Station 251</b>	Medic Engine 251 (Type 1/3) Medic Ambulance 251	4 Cross-Staffed	1680 Heritage Drive, Eagle Mountain	WUI Response
<b>Station 252</b>	Medic Ladder 252 (Type 1) Medic Ambulance 253 Engine 6252 (Type 6)	4 2 (Peak Load) Cross-Staffed	3785 Pony Express Parkway, Eagle Mountain	WUI Response
<b>Emigration Township</b>				
<b>Station 119</b>	Medic Engine 119 (Type 1/3) Engine 6119 (Type 6)	3 Cross-Staffed	5025 Emigration Canyon Rd, Salt Lake City	WUI Response
<b>Herriman City</b>				
<b>Station 103</b>	Medic Engine 103 (Type 1/3) WLDO Supervisor Truck Event Ambulance	4 Cross-Staffed 2 - Events Only	5916 W 13100 S, Herriman	Wildland Duty Officer & WUI
<b>Station 123</b>	Medic Engine 123 (Type 1) Medic Ambulance 223 Engine 6123 (Type 6) WTT 123 (Type 1) Water Rescue 123	4 2 (Peak Load) Cross-Staffed Cross-Staffed Cross-Staffed	4850 Patriot Ridge Drive, Herriman	Water Rescue WUI Response
<b>City of Holladay</b>				
<b>Station 104</b>	Medic Engine 104 (Type 1) Medic Ambulance	4 2 (Peak Load)	2210 E Murray- Holladay Road, Holladay	
<b>Kearns Metro Township</b>				
<b>Station 109</b>	Medic Ladder 109 (Type 1) Medic Ambulance 109	4 2	4444 W 5415 S, Kearns	

<b>Magna Metro Township</b>				
<b>Station 102</b>	Medic Engine 102 (Type 1) Engine 6102 (Type 6)	4 Cross-Staffed	8609 W Magna Main Street, Magna	WUI Response
<b>Station 111</b>	Medic Ladder 111 (Type 1) Medic Ambulance 211 WTT 111 (Type 1) Engine 6111 (Type 6)	4 2 Cross-Staffed Cross-Staffed	8215 W 3500 S, Magna	WUI Response
<b>Midvale City</b>				
<b>Station 125</b>	Medic Engine 125 (Type 1)	4	7683 Holden Street, Midvale	
<b>Station 126</b>	Medic Engine 126 (Type 1) Medic Ambulance 126 Medic Ambulance 225 HazMat 126 Operations Chief	4 2 2 (Peak Load) Cross-Staffed 1	607 E 7200 S, Midvale	HazMat
<b>Millcreek City</b>				
<b>Station 101</b>	Medic Engine 101 (Type 1) Medic Ambulance 101 Battalion Chief 11	4 2 1	790 E 3900 S, Millcreek	
<b>Station 106</b>	Medic Ladder 106 (Type 1) Medic Ambulance 206 WTT 106 (Type 1) Engine 6106 (Type 6)	4 2 Cross-Staffed Cross-Staffed	1911 E 3300 S, Millcreek	WUI Response
<b>Station 112</b>	Medic Engine 112 (Type 1) Engine 6112	4 Cross-Staffed	3612 Jupiter Drive, Millcreek	WUI Response
<b>Riverton City</b>				
<b>Station 120</b>	Medic Ambulance 120 Wildland 1 WL Sup Truck 1 WL Sup Truck 2 WL Chase Truck 1 WL Chase Truck 2 SL1 (Type 6) Fuels Crew 1 (Type 6) Fuels Crew Carrier Crew Carrier 1 Crew Carrier 2 Engine 301 (Type 3) Engine 302 (Type 3)	2 1 1 (Seasonal) 1 (Seasonal) 2 (Seasonal) 2 (Seasonal) 4 (Seasonal) 4 (Seasonal) 8 (Seasonal) 10 (Seasonal) 10 (Seasonal) 4 (Seasonal) 4 (Seasonal)	13000 S 2700 W, Riverton	Wildland Wildland Division Headquarters
<b>Station 121</b>	Medic Ladder 121 (Type 1) Medic Ambulance 221 Heavy Rescue 121 Battalion Chief 12	4 2 Cross-Staffed 1	4146 W 12600 S, Riverton	Heavy Rescue
<b>Station 124</b>	Medic Engine 124 (Type 1) HazMat 124	4 Cross-Staffed	12662 S 1300 W, Riverton	HazMat
<b>Taylorville City</b>				
<b>Station 117</b>	Medic Ladder 117 (Type 1) Medic Engine 117 (Type 1) Medic Ambulance 117 Heavy Rescue 117	4 4 2 (Peak Load) Cross-Staffed	4965 S Redwood Road, Taylorville	Heavy Rescue
<b>Station 118</b>	Medic Engine 118 (Type 1) Medic Ambulance 118	4 2	5317 S 2700 W, Taylorville	WUI Response

	Engine 6118 (Type 6) Battalion Chief 13	Cross-Staffed 1		
<b>Contract, Division Headquarters or Administrative Buildings</b>				
<b>Station 107</b>			6305 S 5600 W, West Jordan	Special Enforcement Division
<b>Station 127</b>	Wildland 2 Initial Attack Handcrew	1 10 (Seasonal)	17800 Camp Williams Road, Camp Williams	Wildland (Camp Williams)
<b>Fire Training</b>			3950 S 8000 W, Magna	Fire Training Division
<b>Headquarters</b>			3380 S 900 W, South Salt Lake	Headquarters
<b>Logistics</b>			6276 S Navigator Drive, West Jordan	Logistics Division
<b>DAILY TOTALS</b>	Full Time Personnel		108 (Hard Floor)	
	Part Time Personnel (24 Hour)		3	
	Part Time Personnel (Peak Load)		10 (Peak Load)	
	Medic Engines, Type 1		12	
	Medic Engines, Type 1/3		5	
	Engines, Type 6 (Cross-Staffed)		9	
	Medic Ladders, Quint		2	
	Medic Ladders TDA, Type 1		5	
	Medic Ambulances, Full Time		10	
	Medic Ambulances, Peak Load		5	

### Surrounding UFA and Automatic/Mutual Aid Response Departments

UFA has contiguous borders, as well as mutual and automatic aid agreements with the following fire departments in the Salt Lake Valley:

- Bluffdale Fire Department
- Draper City Fire Department
- Murray City Fire Department
- Salt Lake City Fire Department
- Sandy City Fire Department
- South Jordan Fire Department
- South Salt Lake Fire Department
- West Jordan Fire Department
- West Valley Fire Department

UFA has contiguous borders, as well as mutual and automatic aid agreements with the following fire departments in Utah County:

- City of Saratoga Springs Fire Department

## Unified Fire Authority – Incidents by Dispatch Type

	CY 2020	CY 2019	CY 2018
<b>Fire Suppression</b>	995	745	850
<b>EMS</b>	20,293	18,942	19,558
<b>Hazardous Materials</b>	787	619	541
<b>Service Calls</b>	1,328	1,512	1,226
<b>Good Intent</b>	2,034	1,713	919
<b>False Calls</b>	1,596	1,723	1,535
<b>Other (Misc., Flood, Overpressure)</b>	77	57	66
<b>Total</b>	<b>27,110</b>	<b>25,311</b>	<b>24,695</b>

Table 37 – UFA Call Type

## NFPA 1710

The National Fire Protection Association is an international nonprofit organization that is devoted to eliminating death, injury, property, and economic loss due to fire, electrical and related hazards. The NFPA makes recommendations on over 300 codes and standards. NFPA 1710 recommendations are based off 90<sup>th</sup> percentile times.

### – In Other Words...

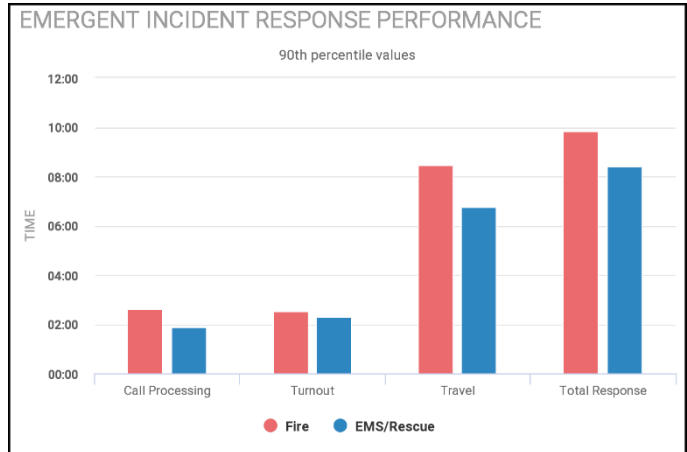
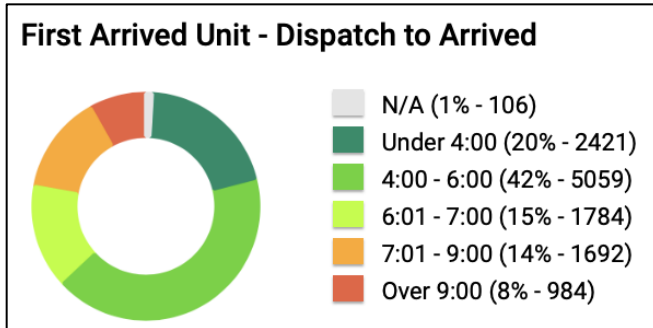
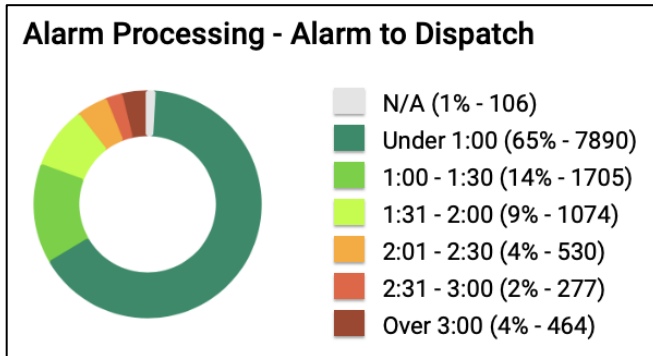
If a value is in the 90<sup>th</sup> percentile, it means the value is better than 90% of all other values in the dataset. In other words, it is within the top 10% of the values.

NFPA 1710 encompasses suggested standards for full-time fire departments and recommends the following times (all of which are at the 90<sup>th</sup> percentile): alarm processing – 64 seconds; turnout time for EMS responses – 60 seconds; turnout time for fire responses – 80 seconds; first arriver apparatus – 240 seconds (4 minutes); initial full-alarm assignment for low and medium hazard responses – 480 seconds (8 minutes); or initial full-alarm assignment for high hazard/high-rise responses – 610 seconds (10 minutes 10 seconds). The total response times are the cumulative totals of call processing time, turnout time, and travel time. NFPA 1710 recommends a total response time of 6:24 for the first arriving apparatus for fire and 6:00 for the first arriving apparatus for EMS.

📌 – Of Note...

NFPA 1710 response times have not been adopted by the UFA Board. One of the important elements of the community risk assessment and standards of cover is to identify current 90th percentile times (current baselines) within UFA and to identify realistic benchmarks for the UFA Board to consider for adoption.

### Unified Fire Authority – 2020 Dispatch and Response Times

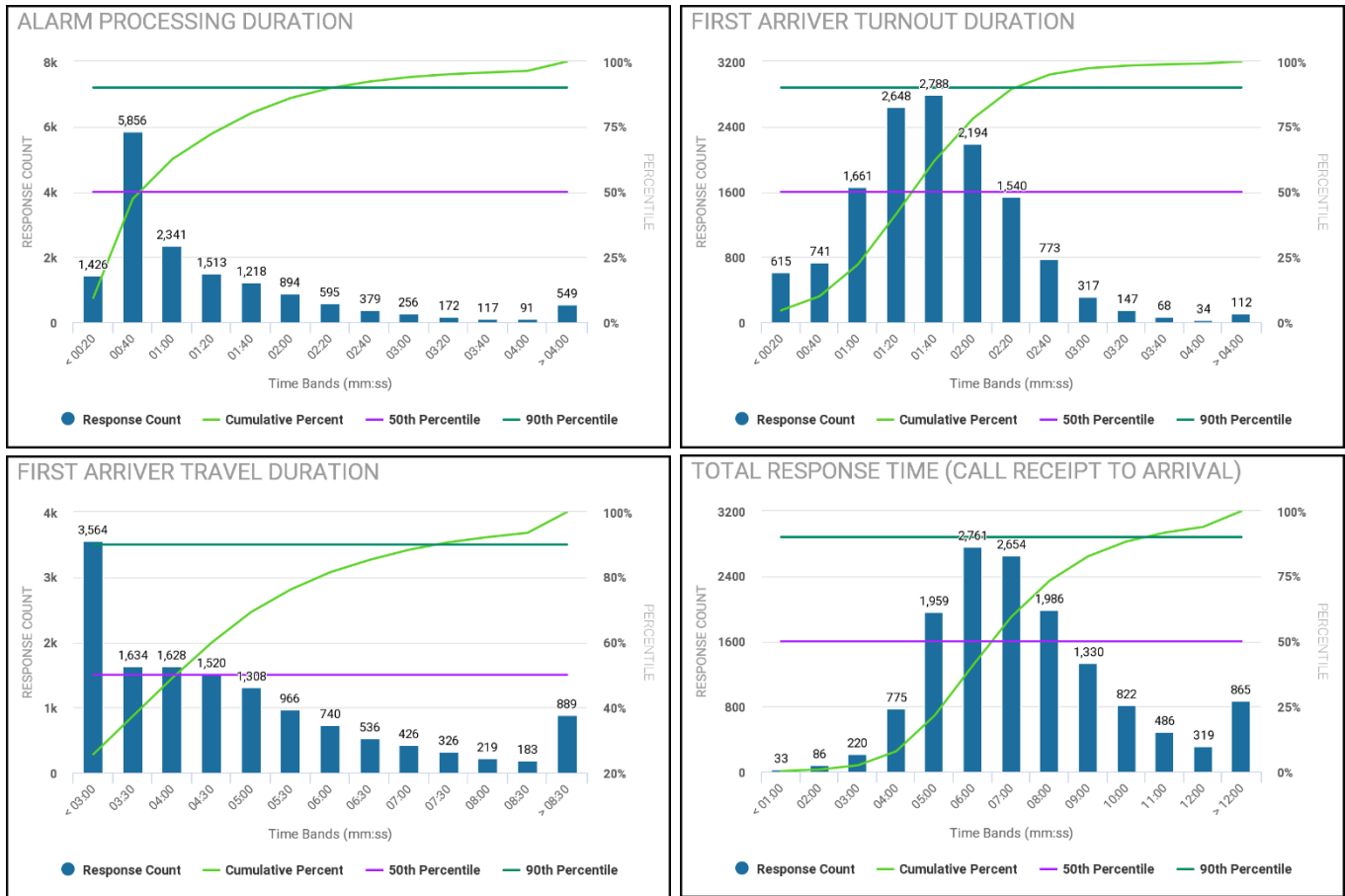


Urban	Call Processing: Fire	Turnout Time: Fire	Travel Time: Fire	Total Response: Fire	Call Processing: EMS	Turnout Time: EMS	Travel Time: EMS	Total Response: EMS
<b>UFA Urban 2018-2020</b>	2:16	2:39	7:36	10:34	1:47	2:32	6:29	9:18
<b>UFA Rural 2018-2020</b>	2:32	3:05	15:08	19:09	1:56	2:50	14:45	17:45
<b>NFPA 1710</b>	1:04	1:20	4:00	6:24	1:00	1:00	4:00	6:00

Table 38 – UFA 2018-2020 Response Times, 90<sup>th</sup> percentile values



## Unified Fire Authority – 2020 Turnout and Travel Times



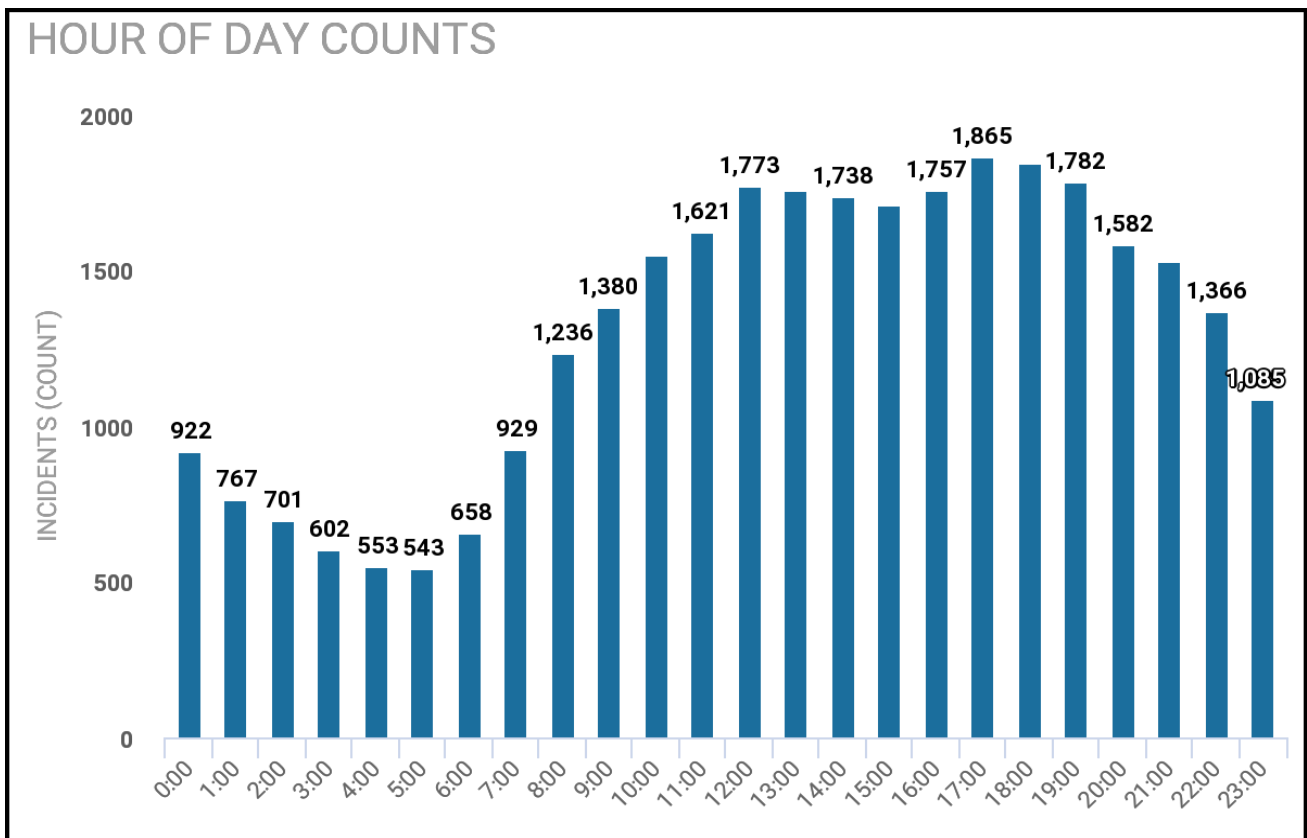
The charts above illustrate the alarm processing, turnout and travel times for all units responding to service calls within UFA's response area. The 90<sup>th</sup> percentile for alarm processing was 1:54. The 90<sup>th</sup> percentile turnout time was 2:34. The 90<sup>th</sup> percentile travel time was 7:02. The 90<sup>th</sup> percentile total response time was 9:55. This is further separated into fire and EMS response, as well as urban and rural response. For urban fire data, the 90<sup>th</sup> percentile for alarm processing was 2:16. The 90<sup>th</sup> percentile turnout time was 2:39. The 90<sup>th</sup> percentile travel time was 7:36. The 90<sup>th</sup> percentile total response time was 10:34. For rural fire data, the 90<sup>th</sup> percentile for alarm processing was 2:32. The 90<sup>th</sup> percentile turnout time was 3:05. The 90<sup>th</sup> percentile travel time was 15:08. The 90<sup>th</sup> percentile total response time was 19:09. For urban EMS data, the 90<sup>th</sup> percentile for alarm processing was 1:47. The 90<sup>th</sup> percentile turnout time was 2:32. The 90<sup>th</sup> percentile travel time was 6:29. The 90<sup>th</sup> percentile total response time was 9:18. For rural EMS data, the 90<sup>th</sup> percentile for alarm processing was 1:56. The 90<sup>th</sup>

percentile turnout time was 2:50. The 90<sup>th</sup> percentile travel time was 14:45. The 90<sup>th</sup> percentile total response time was 17:45. For the charts above, they show both fire and EMS response times together.

**📌 – Of Note...**

One item to note is that if you were to add the processing time, the turnout time, and the travel time, it will not necessarily (and often doesn't), sum the total response time. This is due to some of the limitations within the datasets and gaps within timestamps. Where there are missing timestamps, those particular key performance indicators (KPI) are excluded as they cannot accurately be calculated out.

**UFA – 2020 Incidents by Time of Day**



*Chart 10 – UFA 2020 Incidents by Time of Day*

The above table demonstrates the incidents by time of day and the time of greatest demand within UFA's response area for all service calls. This chart illustrates that the greatest demand for service delivery begins to increase at 6:00 AM and starts to decrease at 6:00 PM.

## Unified Fire Authority – 2020 Incidents by Day of Week

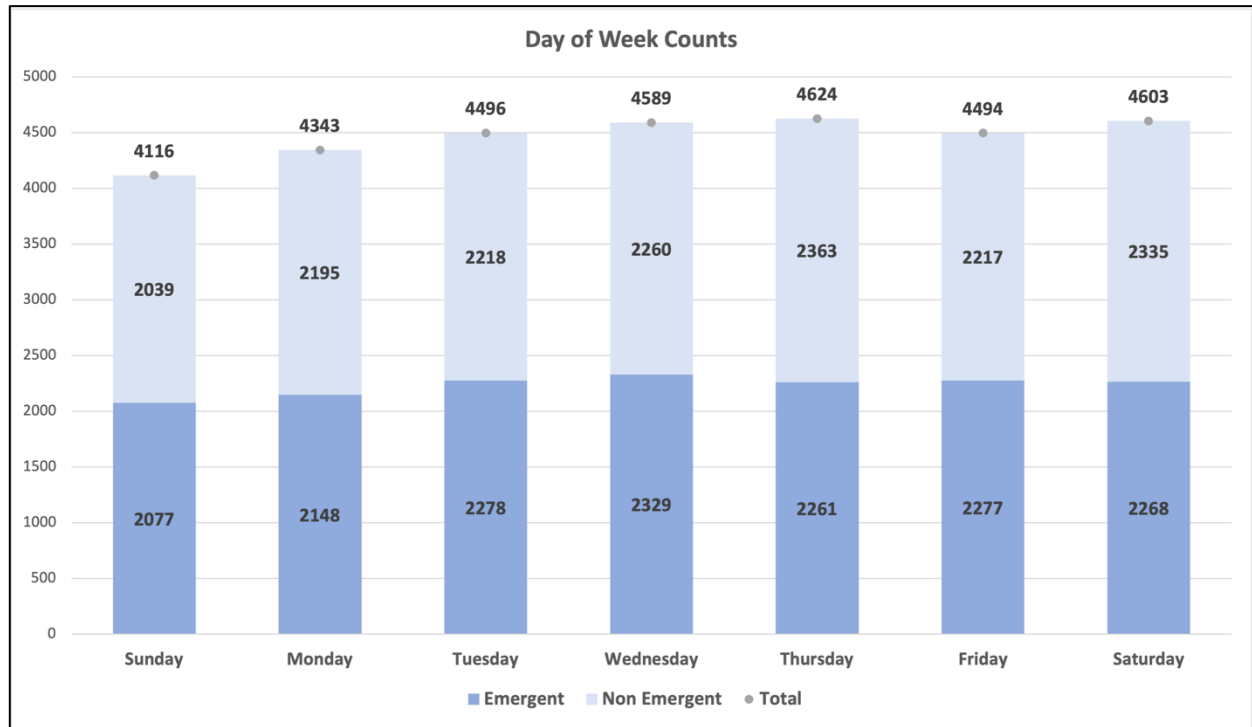


Chart 11 - UFA Incidents by Day of Week

This chart demonstrates the call volume based on the day of the week, with an increase in all calls beginning Monday. The peak volume for all calls in UFA’s response areas occurs on Thursday.

## Unified Fire Authority – EMS Calls

	CY 2020	CY 2019	CY 2018
<b>ALS Transports</b>	7,763	8,065	7,842
<b>BLS Transports</b>	11,496	10,087	9,687
<b>Scene Release</b>	1,314	1,271	3,666
<b>Public Assistance</b>	189	155	163
<b>EMS Total Calls</b>	20,573	19,423	21,195

Note: There may be a slight difference if you were to add all calls. Public assistance calls will sometimes get duplicated with a scene release, depending on dispatch code, but those duplicates do not carry across to the total calls.

Table 39 - EMS Call Volume

## Unified Fire Authority – 2020 Fire Incidents by Dispatch Type

NFIRS Description	Incident Count	% of Incidents	NFIRS Description	Incident Count	% of Incidents
Structure Fire	454	45.6%	Special Outside Fire	39	3.92%
Natural Vegetation Fire	195	19.6%	Fire, Other	37	3.72%
Outside Rubbish Fire	155	15.6%	Mobile Property Fire	20	2.01%
Vehicle Fire	93	9.35%	Cultivated Vegetation Fire	2	0.002%
			<b>Total</b>	<b>995</b>	<b>100%</b>

Table 40 – UFA 2020 Incidents by Dispatch Type

## Unified Fire Authority – Building Occupancy Classification and Risk Categories

Occupancy Classification	Low	Moderate	High	Maximum	Total
Assembly	236	20	98	25	379
Commercial/Industrial	93	81	163	37	374
Educational	90	3	43	13	149
Government	51	2	6	1	60
Healthcare	6	5	14	1	26
Hazardous	Unknown	Unknown	Unknown	Unknown	561*
Storage	5	3	11	1	20
Residential – Single Family	27,045	46,201	17,011	2,448	92,705
Residential – Multi Unit	1,524	1,672	567	78	3,841
High Rise	0	10	6	17	33
<b>Total</b>	<b>29,050</b>	<b>47,997</b>	<b>17,919</b>	<b>2,621</b>	<b>98,148</b>

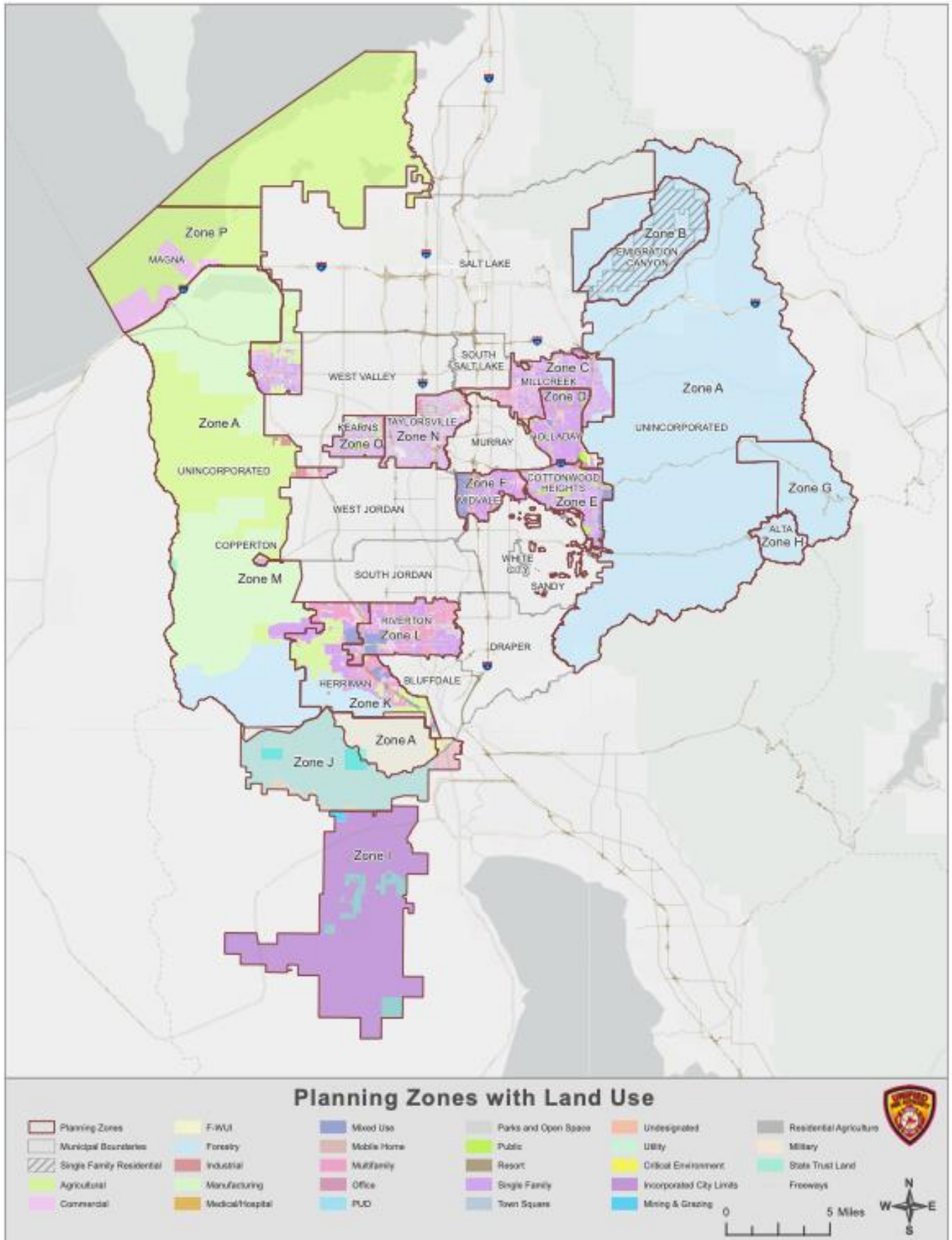
\*There is currently a gap within the identification of building size regarding hazardous materials sites. This is a gap that is being closed over the next several years as we collect the data and information.

Table 41 – UFA Building Occupancy and Risk Categories

### Building Size / Considerations

For purposes of risk classification, UFA has outlined the following risk classifications for building size, regardless of occupancy type (except residential). Low risk = 1-4,999 square feet. Moderate risk = 5,000-9,999 square feet. High risk = 10,000-99,999 square feet. Maximum risk = >100,000 square feet.

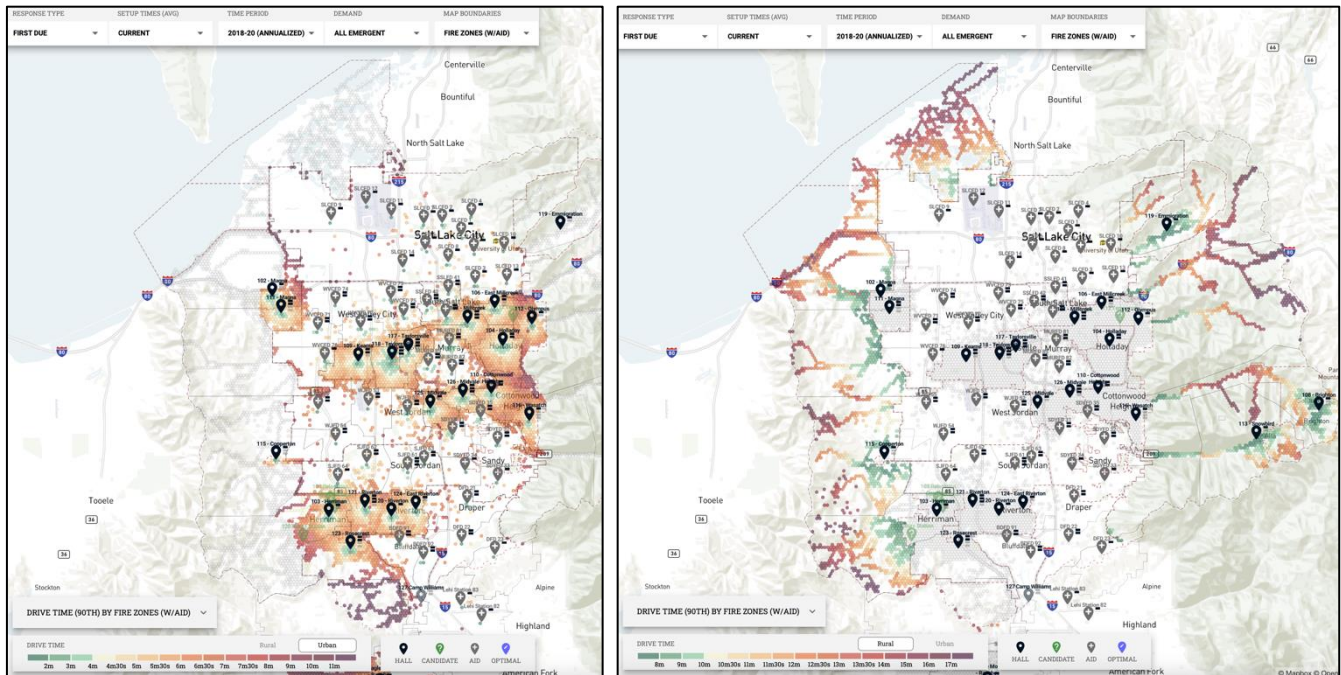
For residential occupancies, the following classifications apply. Low risk = 1-1,999 square feet. Moderate risk = 2,000-3,999 square feet. High risk = 4,000-9,999 square feet. Maximum risk =  $\geq 10,000$  square feet.



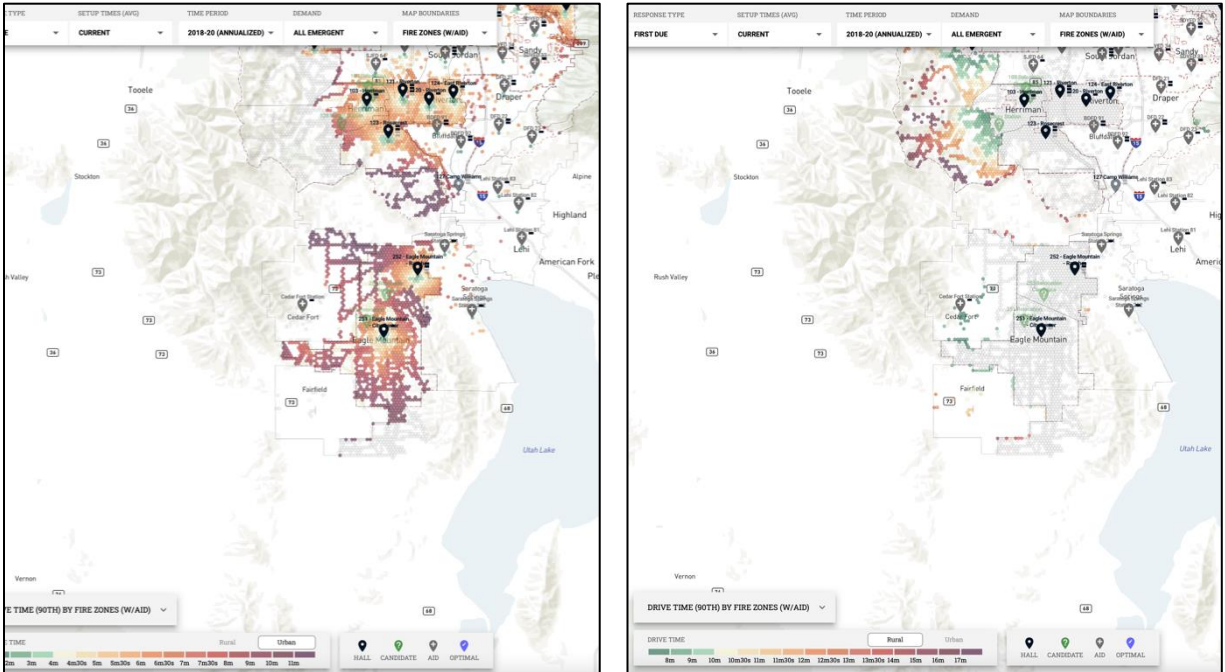
Map 44 – UFA Areas with Land Use

## Unified Fire Authority – First Arriver Travel Times

The following maps demonstrate the 90<sup>th</sup> percentile of travel times based off the last three years of historical data (2018-2020). The darker the color is, the more delayed the response, with the green and light colors demonstrating below or near target times, with 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 (90<sup>th</sup> percentile) from notification of the alarm to the arrival of the first arriving apparatus — not an adopted standard by UFA. UFA is currently in process of identifying benchmark and target standards to be adopted by the UFA Board of Directors. Currently, within UFA as a whole, the 90<sup>th</sup> percentile drive time is 8:31 (both urban and rural responses). There is a difference between travel times in urban areas and rural areas. In urban areas, the 90<sup>th</sup> percentile drive time for fire responses was 7:45 and 5:45 for EMS. In rural areas, the 90<sup>th</sup> percentile drive time for fire responses was 12:30 for fire responses and 10:30 for EMS responses.



Map 45 – UFA Salt Lake County Urban (Left) and Rural (Right) Response Times – All Aid

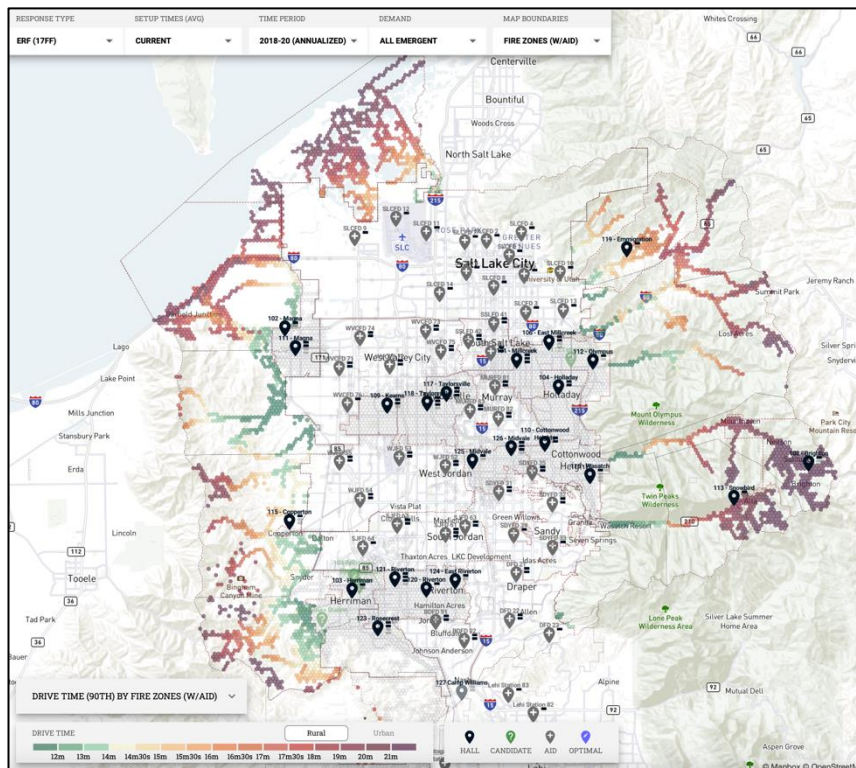
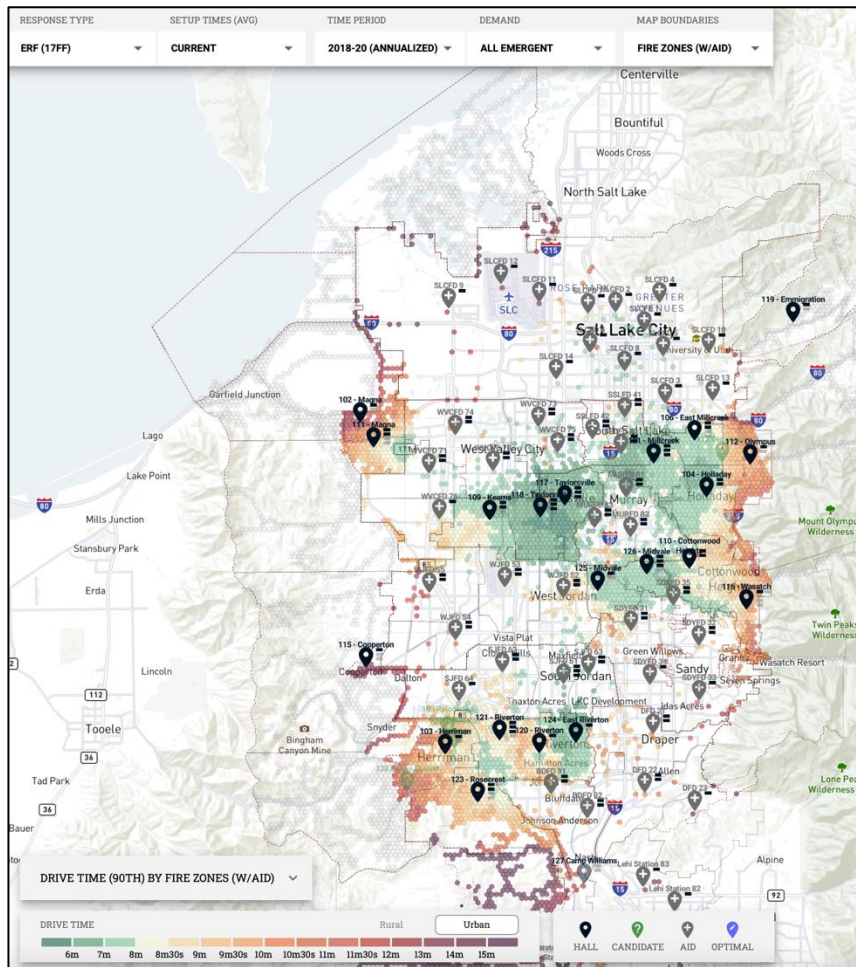


Map 46 – UFA Utah County Urban (Left) and Rural (Right) Response Times – All Aid

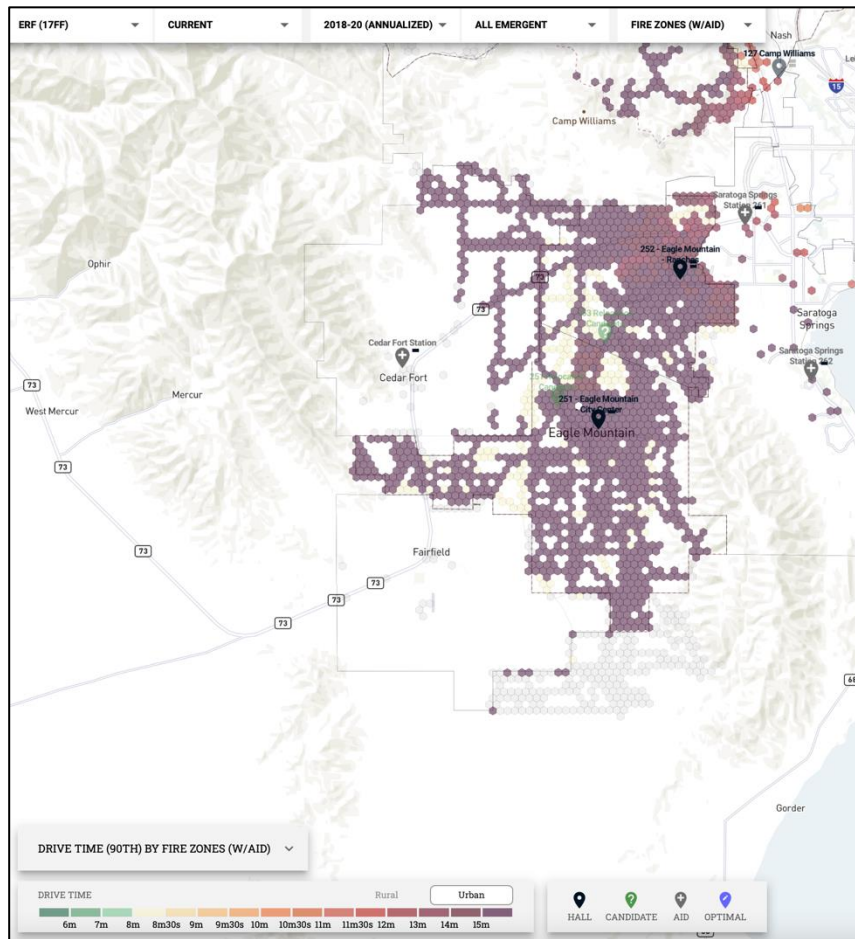
### Unified Fire Authority – Residential Fire Effective Response Force (17 FF)

The following maps demonstrate 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 (90<sup>th</sup> 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. UFA is currently in process of identifying benchmark and target standards to be adopted by the UFA Board of Directors. This is one of the gaps that is currently identified as there is no effective mechanism to capture units beyond the first arriving unit.





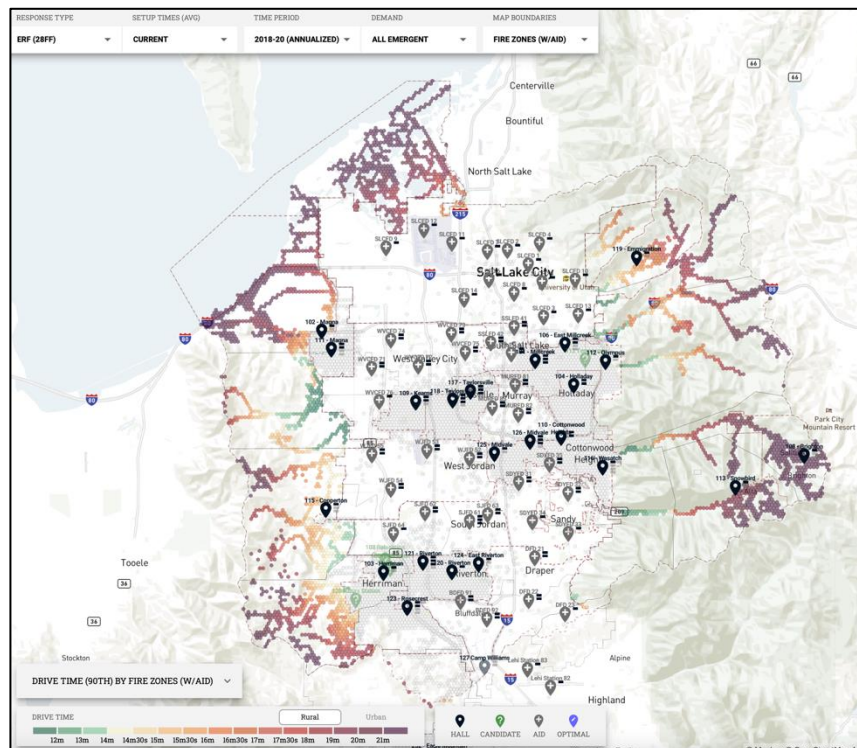
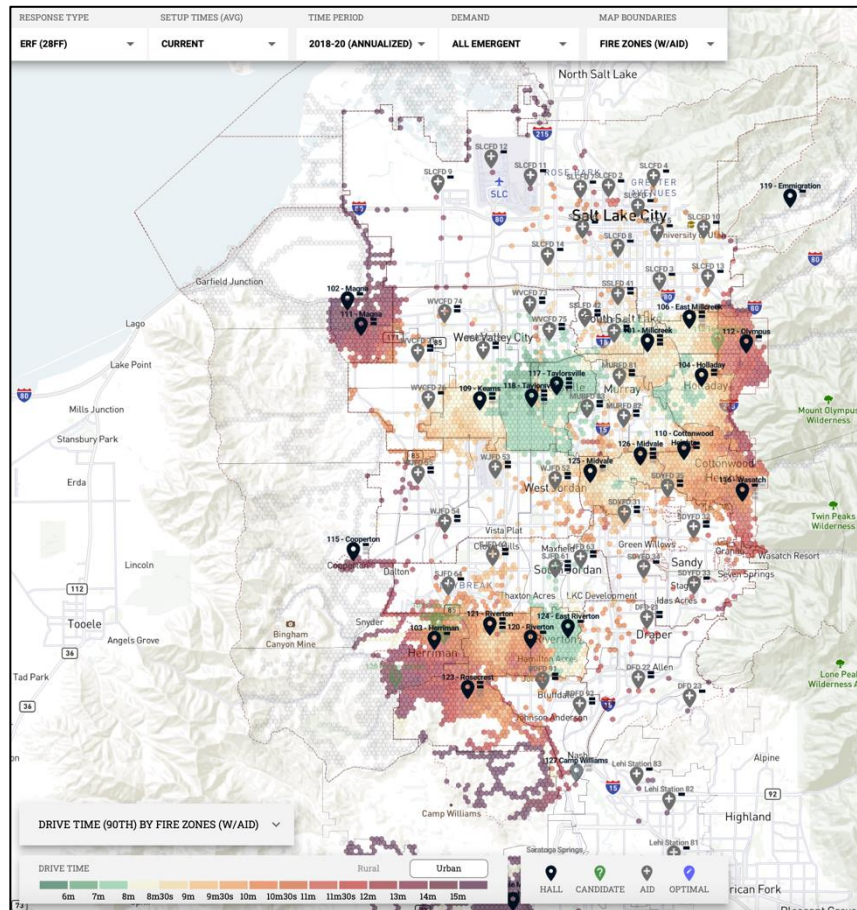
Map 47 – UFA Salt Lake County Response Times Urban (Top) and Rural (Bottom) – Residential Fire Effective Response Force (17 ERF)



*Map 48 – UFA Utah County Response Times Rural  
– Residential Fire Effective Response Force (17 ERF)*

### Unified Fire Authority – Commercial Fire Effective Response Force (28 FF)

These maps demonstrate 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 (90<sup>th</sup> 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. UFA is currently in process of identifying benchmark and target standards to be adopted by the UFA Board of Directors. This is one of the gaps that is currently identified as there is no effective mechanism to capture units beyond the first arriving unit.



Map 49 – UFA Salt Lake County Response Times Urban (Top) and Rural (Bottom) – Commercial Fire Effective Response Force (28 ERF)

## Unified Fire Authority 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
Town of Alta	Low	Low	Low	Low	High	Mod	High	Low	Low	Low	Low	Low
Town of Brighton	Low	Low	Low	Low	High	Mod	High	Low	Low	Low	Low	Low
Camp Williams	Low	Low	Low	Low	Low	Low	High	Low	Low	Low	Low	Low
Copperton Township	Low	Low	Low	Low	Low	Mod	Mod	Low	Low	Low	Low	Low
City of Cottonwood Heights	Mod	Mod	Mod	High	Low	High	Mod	Mod	Low	Mod	High	Mod
Eagle Mountain City	High	Mod	Low	Low	Low	Mod	High	Mod	Low	Mod	Low	Mod
Emigration Township	Low	Low	Low	Low	Low	Mod	High	Low	Low	Low	Low	Low
Herriman City	High	High	Low	Low	Low	Mod	Mod	Low	Low	High	Mod	High
Holladay City	Mod	Low	Mod	Mod	Low	High	Low	Low	Low	High	Mod	Mod
Kearns Township	Mod	Low	Low	Low	Low	Mod	Low	Low	Low	High	Low	Mod
Magna Township	Mod	High	High	High	Low	Mod	High	Low	Low	Mod	Mod	Mod
Midvale City	Mod	Low	High	Low	Low	Mod	Low	Mod	Low	Mod	High	Mod
Millcreek City	High	Mod	Mod	Mod	Low	High	Mod	Mod	Mod	High	High	High
Riverton City	Mod	Mod	Low	Low	Low	Mod	Low	Mod	Mod	High	Mod	High
City of Taylorsville	High	Mod	High	Low	Low	Mod	Low	Mod	Mod	High	High	High
Unincorporated Salt Lake County	High	High	Low	High	Mod	Mod (West) High (East)	High	Mod	Low	Low	Mod	Low

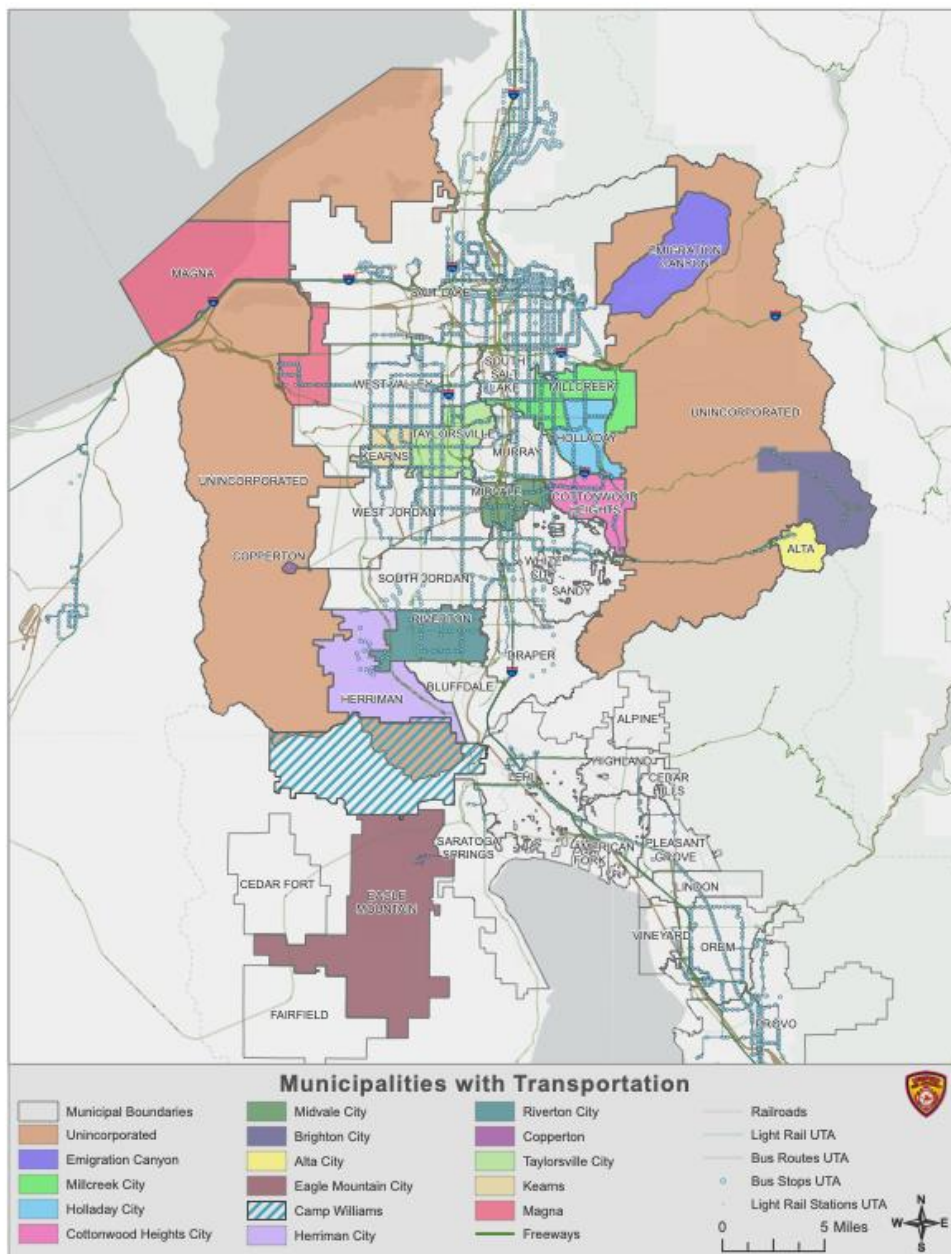
<b>Transportation: Low Risk = 0-99 Linear Miles; Moderate Risk = 100-199 Linear Miles; High Risk = &gt;200 Linear Miles</b>
<b>Dams: Low Risk = 0-3; Moderate Risk = 4-6; High Risk = ≥7</b>
<b>Liquefaction: The areas of liquefaction vary throughout the valley, with areas of high susceptibility running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

*Chart 12 - UFA Risk Assessments*

## Critical Infrastructure

### Infrastructure – Transportation

The Utah Transit Authority (UTA) is the primary provider of mass transit within the State of Utah and Salt Lake County. UTA provides commuter rail (FrontRunner), light rail (Transit Express or TRAX), and bus systems. There are also multiple freeways and highways that run through the Salt Lake Valley, and the State of Utah, providing critical transportation corridors with both a primary East/West Interstate (I-80) and a North/South Interstate (I-15).

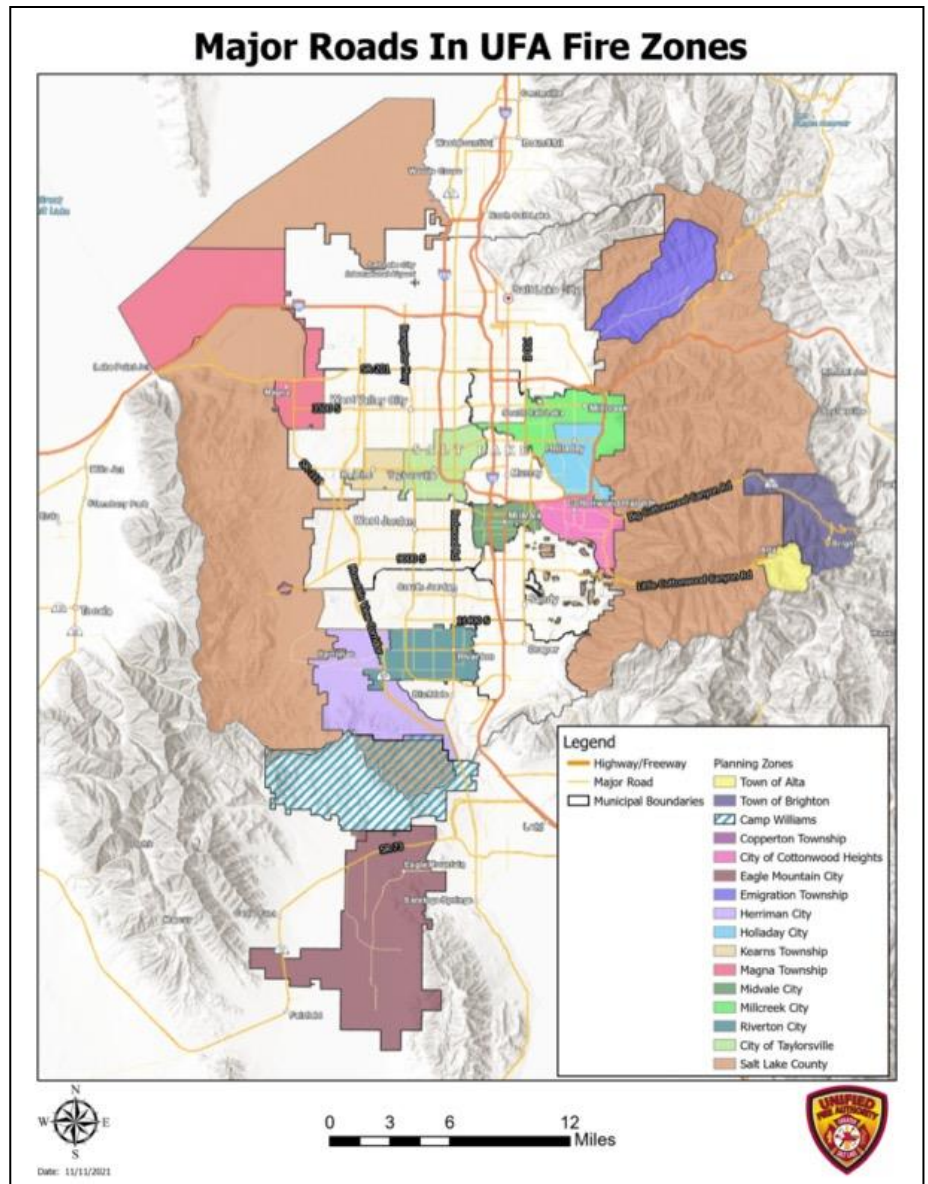


Map 50 - Municipalities with Transport Corridors

## Highways and Roads

The highways and roads within the Service Area are what provide the necessary access and egress for the Authority. These transportation corridors are intertwined and are a mix of surface streets, intersected highways and freeways all within the jurisdiction. Surface streets are most common.

These provide the main travel routes to emergency incidents. Bangerter Highway and Mountain View Corridor are intersected highways that are main routes north and south through the Service Area. The main interstate is I-15, which divides much of the area from east to west, and I-215 which is a belt route that provides access to interior areas of the jurisdiction.



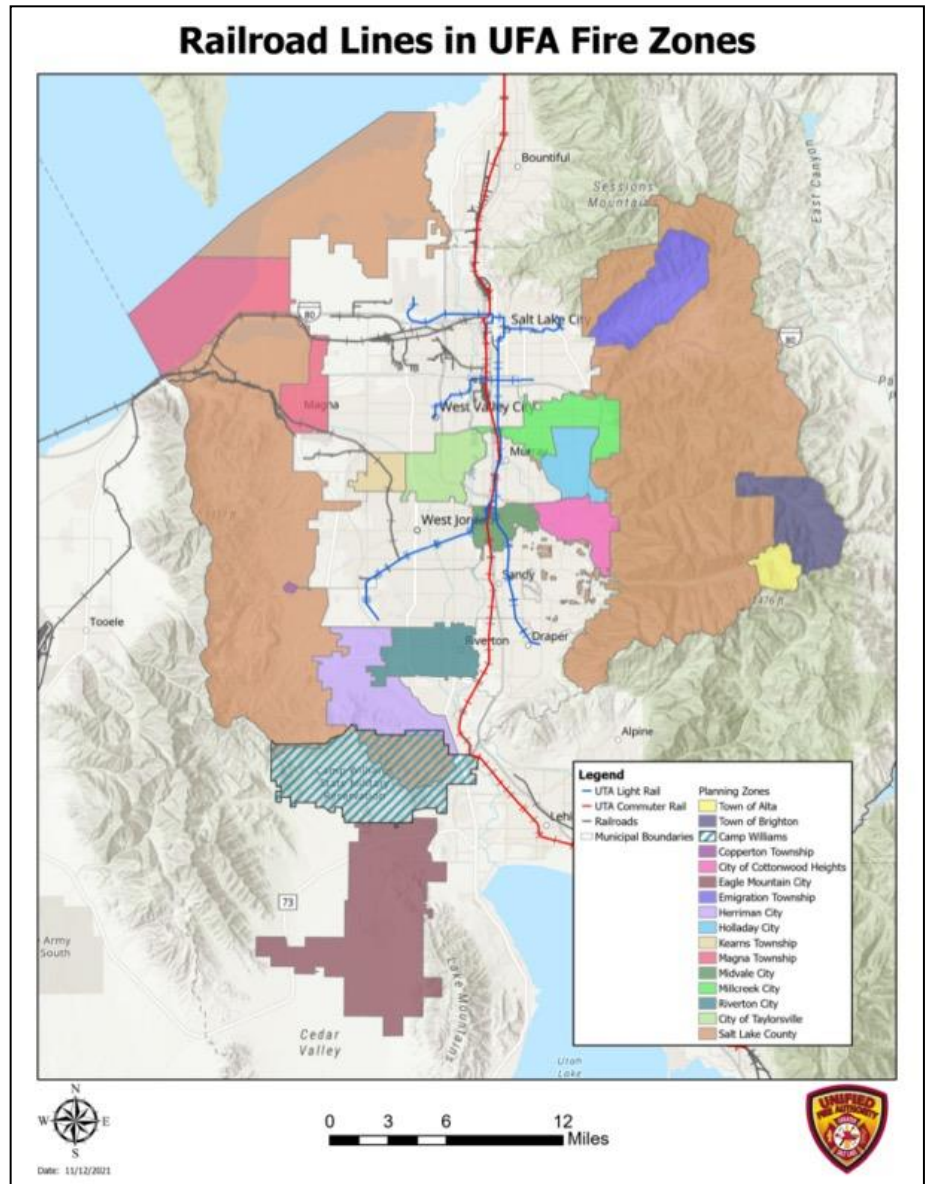
Map 51 - Location of Major Freeways/Highways Within the Service Area

## Railroad Lines

Several railroad lines traverse through Salt Lake County and the lines run through portions of the Unified Fire Authority service area.

The major rail lines carry various commodities which include hazardous materials and other dangerous cargo. One major rail yard operated by Union Pacific (Roper Yard) is located in Salt Lake County, just outside of the service area. Passenger rail which includes Amtrak and commuter rail from UTA also runs through the jurisdiction.

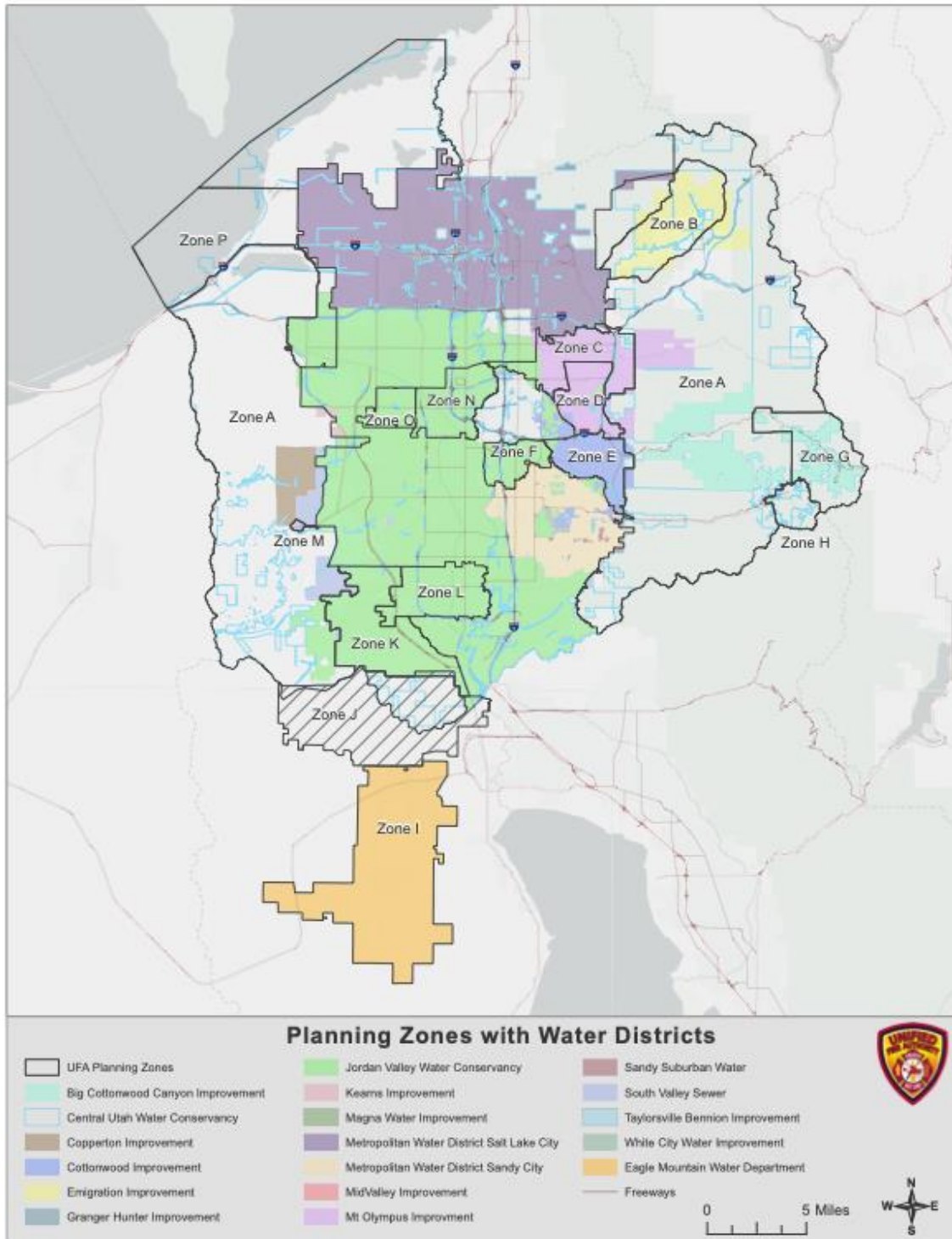
Several spur lines operated solely for industrial use are operated in the western section of the service area by the Bingham Canyon Mine (Rio Tinto).



Map 52 - Location of All Rail Lines Within the Service Area

## Infrastructure – Water Supply

Within the Salt Lake Valley, there are twenty-nine water districts, all either special service districts or municipally based water districts. Within UFA’s planning zones, there are eighteen water districts.

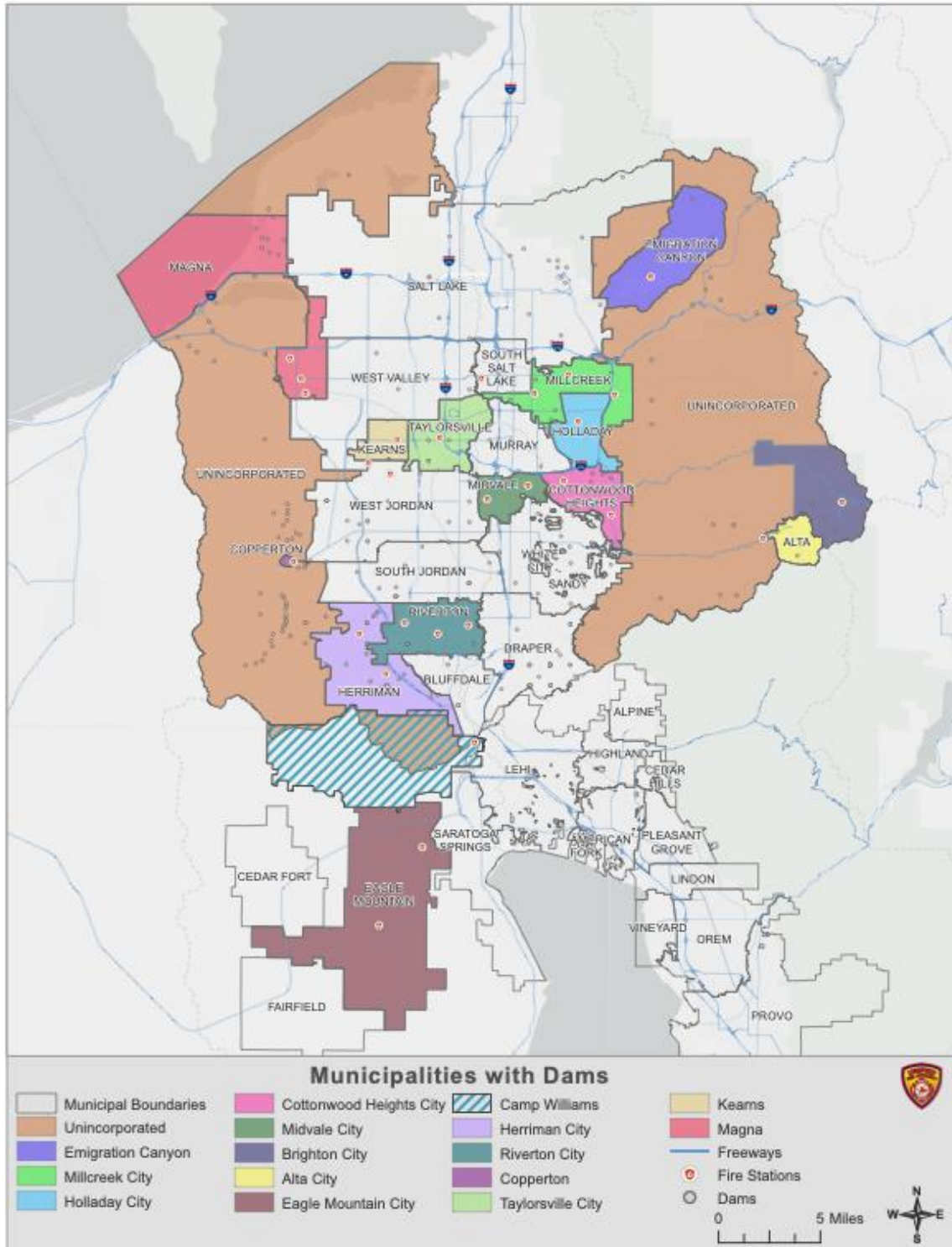


Map 53 – UFA Planning Zones with Water Districts



## Infrastructure – Dams

Within the Salt Lake Valley, there are 290 dams. Within UFA’s Planning Zones, there are 144 of those dams.

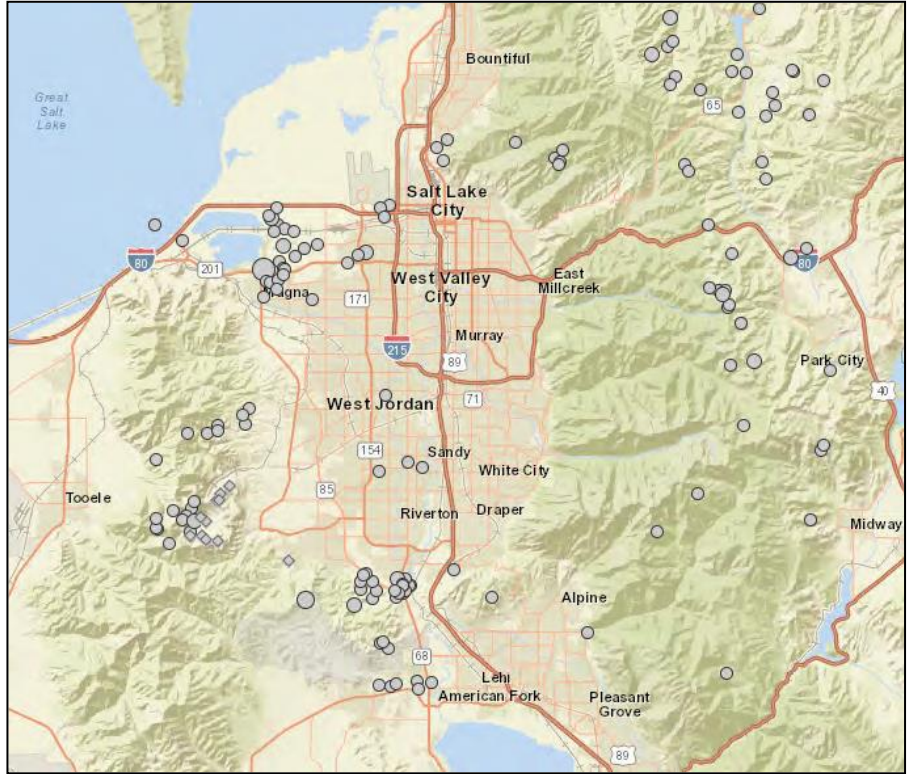


Map 54 - Dam locations within the Salt Lake Valley

# Salt Lake County Natural Hazards Risks

## Earthquake

Utah's earthquake hazard is greatest within the Intermountain Seismic Belt (ISB), which extends 800 miles from Montana to Nevada and Arizona, and trends from North to South through the center of Utah (The Wasatch Fault, UGS PIS 40). The Wasatch Fault traces along the base of the Wasatch Mountain Range. It is made up of 10 segments that act independently, meaning that a part of the fault ruptures separately as a unit during an earthquake.

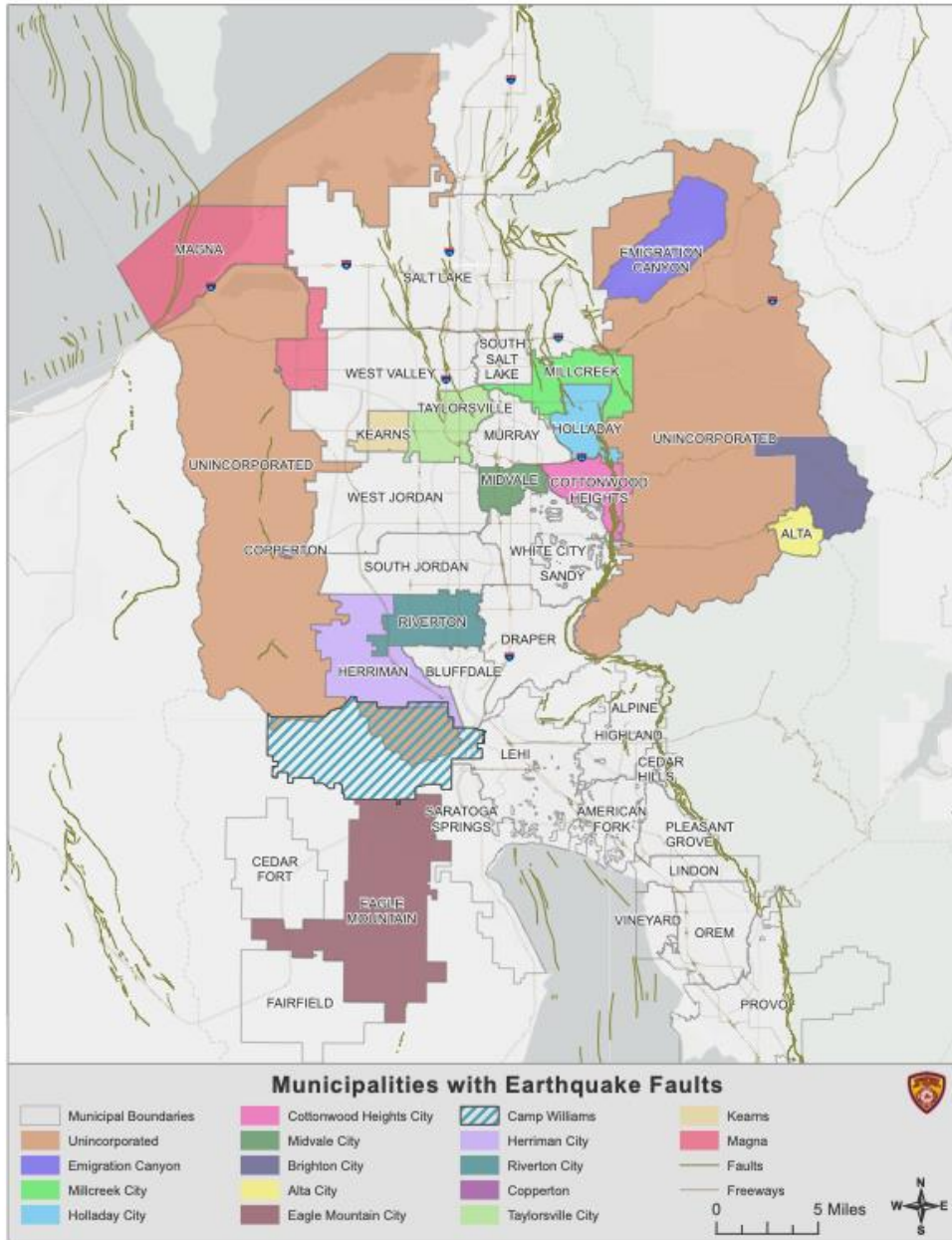


Map 55 - Earthquakes in Salt Lake County >2.0, 1962-July, 2019:  
Source: [www.earthquake.usgs.gov](http://www.earthquake.usgs.gov)

According to USGS records, there have been 152 recorded earthquakes of 2.0 magnitude or greater that occurred in or immediately around Salt Lake County from 1962 through July 2019.

Significant earthquakes have occurred in Salt Lake County within the last 50 years.

In 2020, a 5.7 earthquake occurred in Magna. In 1962, a 5.2 Richter magnitude quake also jolted the Magna area. In 1992, a magnitude 4.2 quake shook the southern portion of the County.

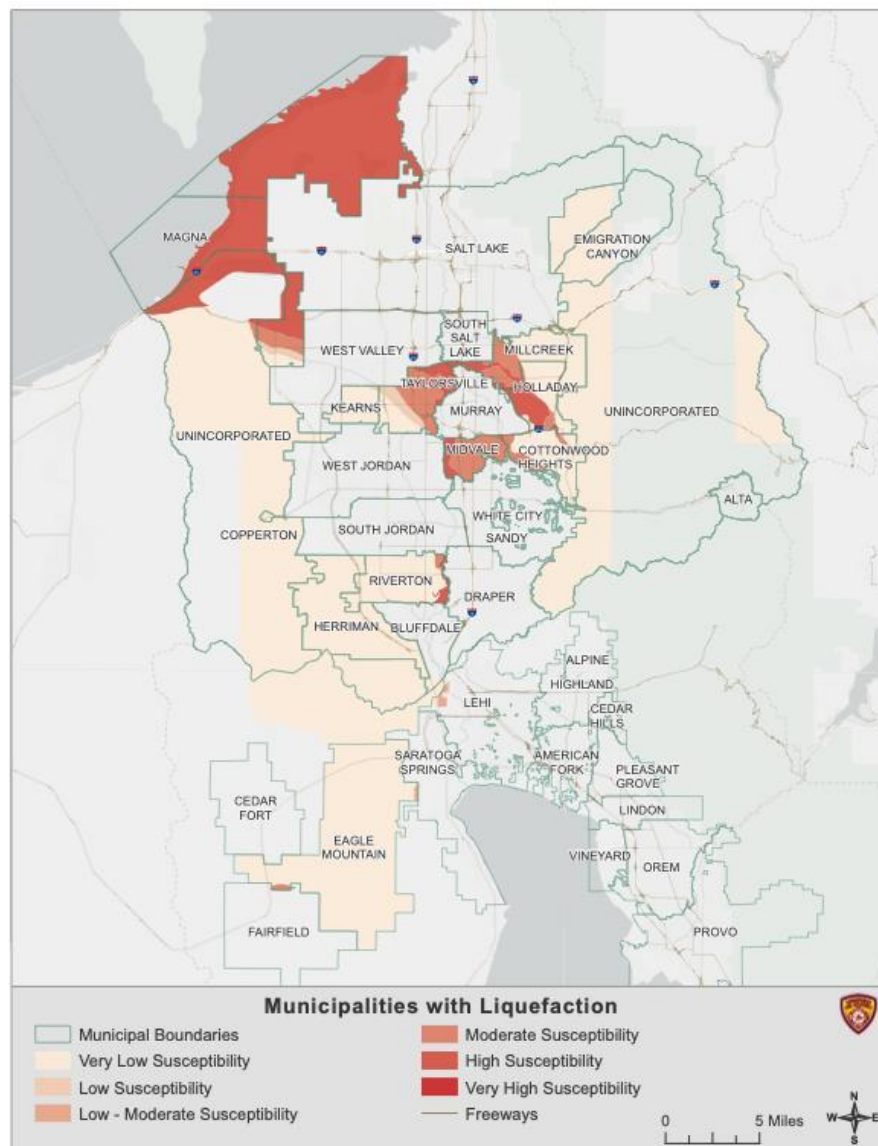


Map 56 - Earthquake Faults in the Salt Lake Valley

The faults illustrated in the above map include the following (see table below).

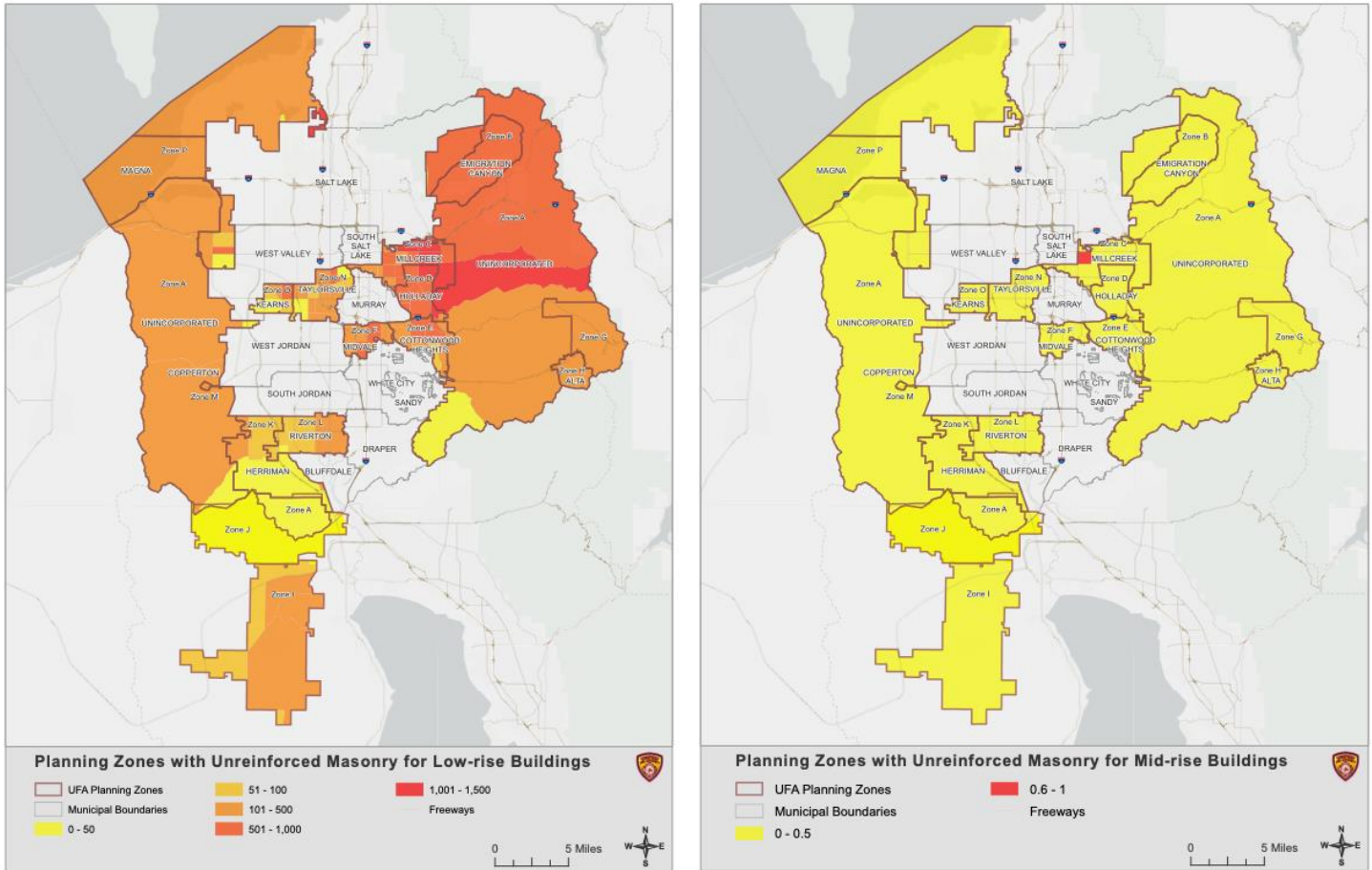
Name	Fault Type	Length (km)	Time of Most Recent Deformation	Recurrence Interval
East Great Salt Lake fault zone, Antelope Island section	Normal	35	586 201/-241 cal yr B.P.	4,200 years
Wasatch fault zone, Salt Lake segment	Normal	43	1,300 ± 650 cal yr B.P.	1,300 years
West Valley fault zone, Granger segment	Normal	16	1,500 ± 200 cal yr B.P.	2,600-6,500 years
West Valley fault zone, Taylorsville segment	Normal	15	2,200 ± 200 cal yr B.P.	6,000-12,000 years

Table 42 - Quaternary Faults, Salt Lake County  
Source: USGS Earthquake Catalogue



Map 57 - Liquefaction Areas

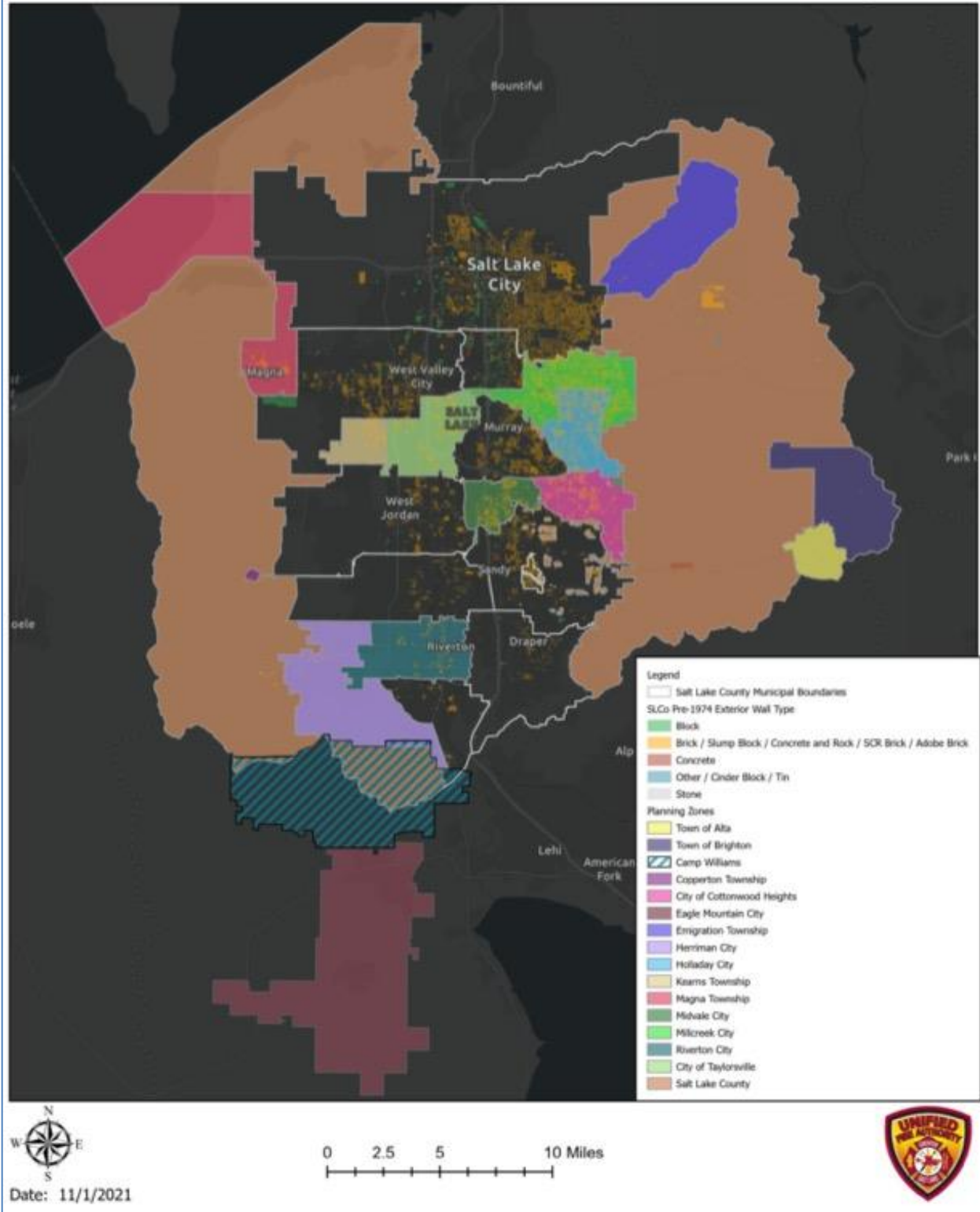
One of the primary risks that is inherent with any earthquake is the amount of unreinforced masonry (URM) structures in a given area. The associated maps show the primary locations of URM's in UFA's areas for both low and mid-rise buildings. This is based off of FEMA Hazus data and only shows areas by census tracts.



Map 58 – Unreinforced Masonry Building Locations

The map below shows structures within the municipalities that are most likely URM's based off of FEMA data.

# Potential URM Buildings in Salt Lake County



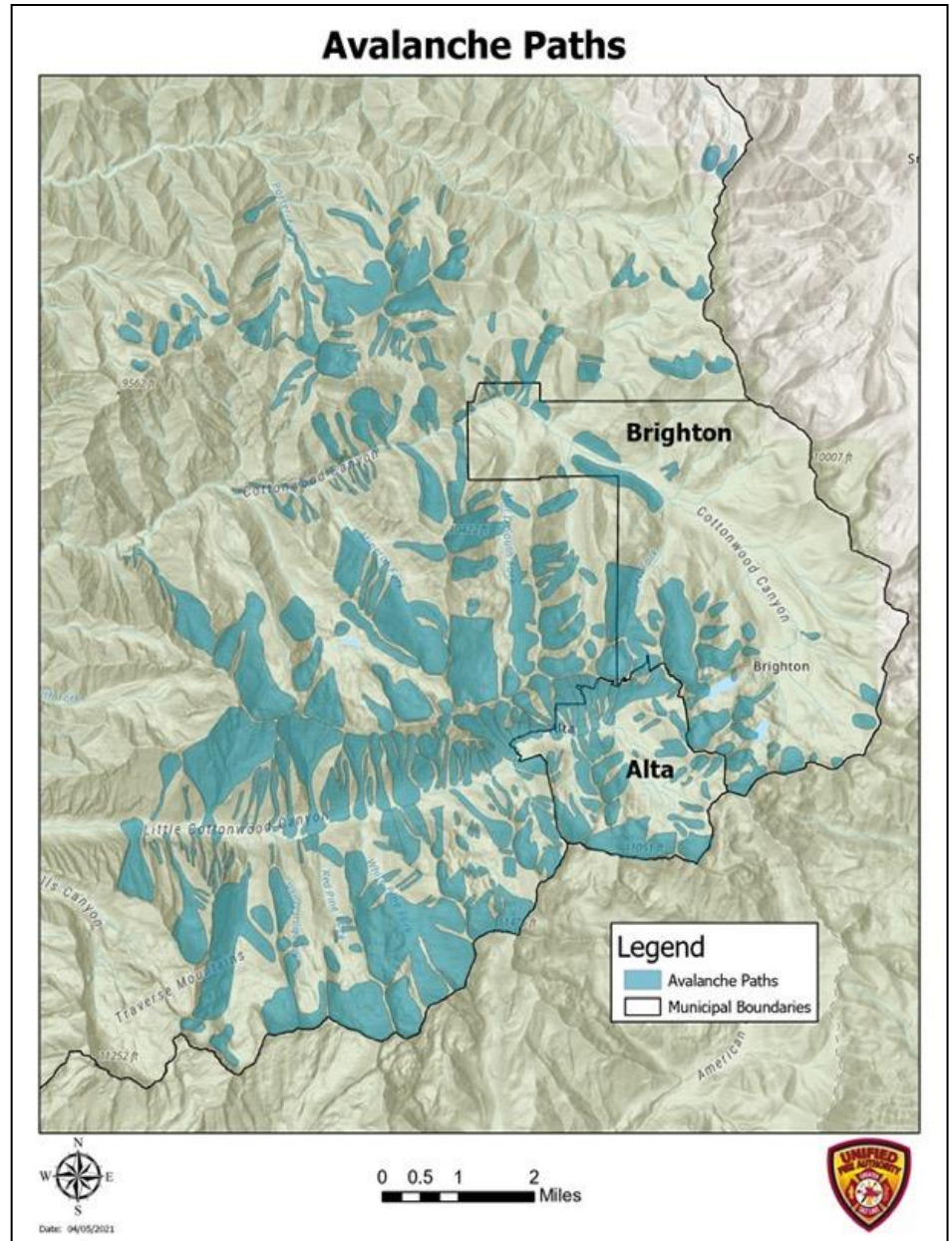
Map 59 - Potential URM Buildings in Salt Lake County

## Weather – Avalanche

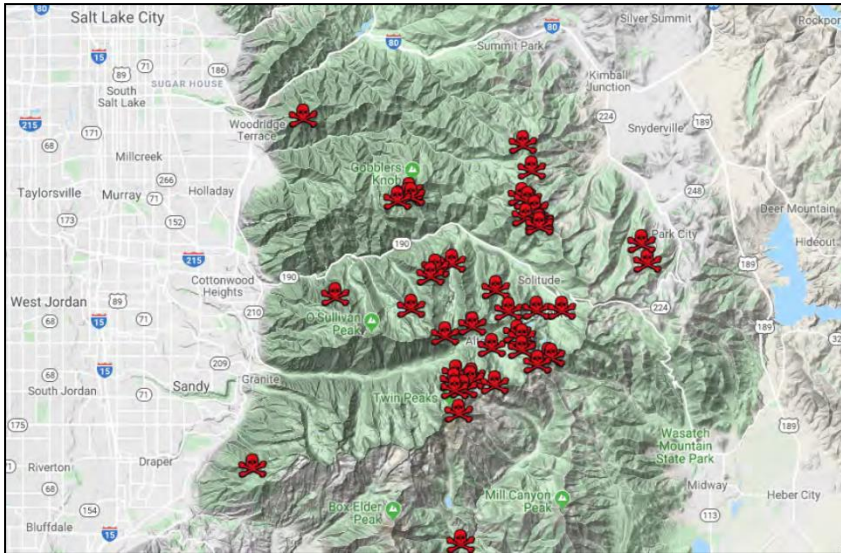
The risk for avalanches exists primarily in the Wasatch Range — due to the high recreation use and increasing development — although they do occur throughout Utah’s mountainous areas. Avalanche paths may not have a serious avalanche for years or even decades, but the potential is there especially during above average snowfall years (UNHH 2008).

In Utah, 100 avalanche deaths have occurred from 1958-2010. Avalanche risk is particularly centered around the Big and Little Cottonwood Canyons. The Town of Alta is especially at risk to the impacts of avalanches.

The following maps from the Utah Avalanche Center shows the locations of all reported avalanche events from 2015 to 2019, as well as the locations of all reported avalanche fatalities in the Salt Lake County Region.



Map 60 - Salt Lake County Region Avalanche Locations  
Source: <https://utahavalanchecenter.org/avalanches>



Map 61 - Salt Lake County Region Avalanche Fatality Locations:  
 Source: <https://utahavalanchecenter.org/avalanches>

Highway 210 (Little Cottonwood Canyon) also has the highest avalanche hazard-rating index of any major roadway in the country. At times when UDOT and Alta agree that conditions are unsafe, the town goes into an Interlodge Alert, meaning all occupants of the town (including both visitors and residents) must

remain indoors until conditions are deemed safe. At times, Interlodge can last days until the storm cycle is over and proper avalanche control work has been performed.

The Town’s General Plan (dated November 2005, Updated 2013) covers Highway 210 access and possible mitigation activities to keep this critical road open. It also provides background on the Little Cottonwood Canyon Road Committee, a group consisting of representatives from Alta, Snowbird, Salt Lake County, Unified Fire Authority, UDOT, UTA, and USFS, that meet monthly to discuss access, usage, and safety and security issues related to the canyon road. (SLCoHMP)

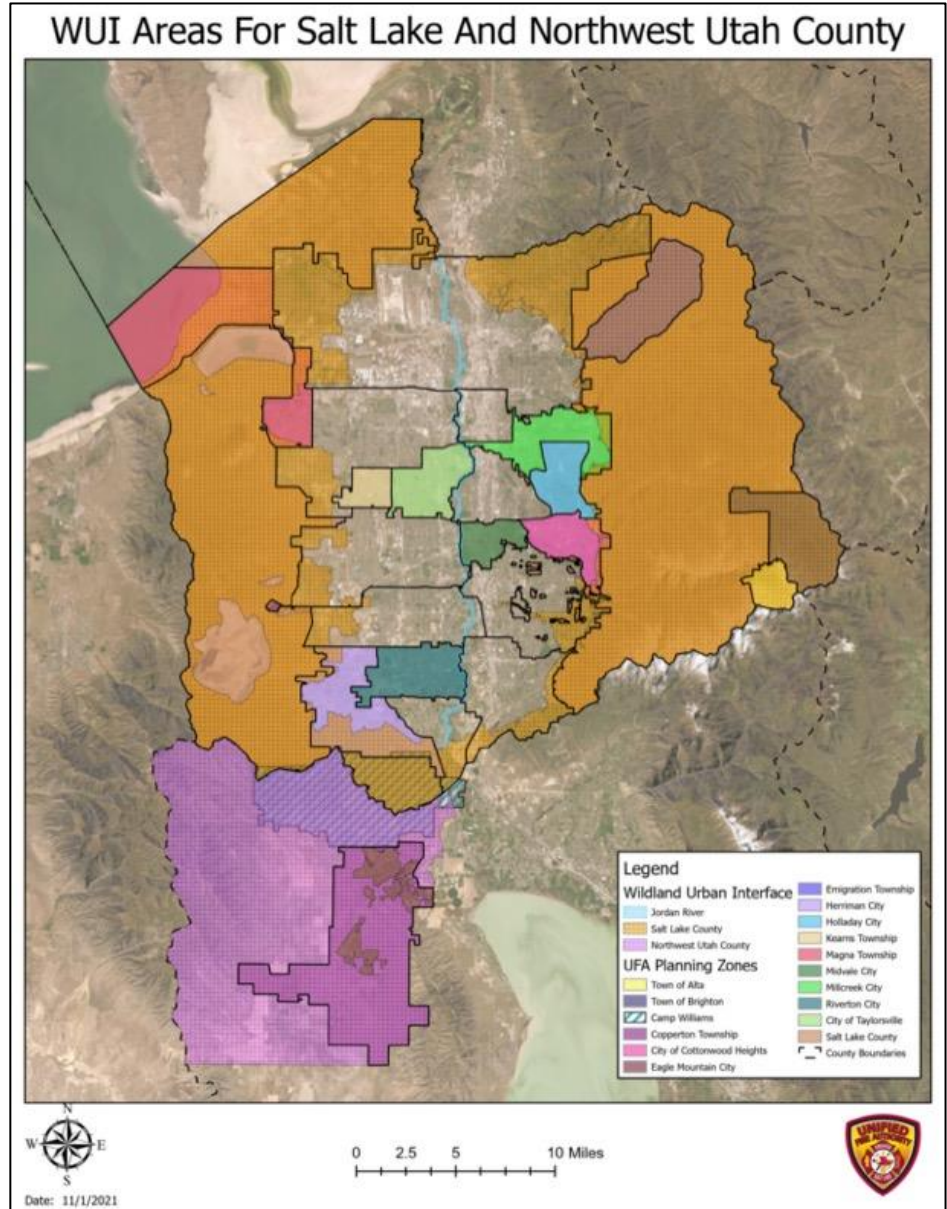
### Wildland Urban Interface (WUI)

Portions of Salt Lake County could experience a significant amount of destruction due to a wildland fire include the foothills and the bench areas on or near the Wasatch Range, Traverse Mountain and the Oquirrhs.



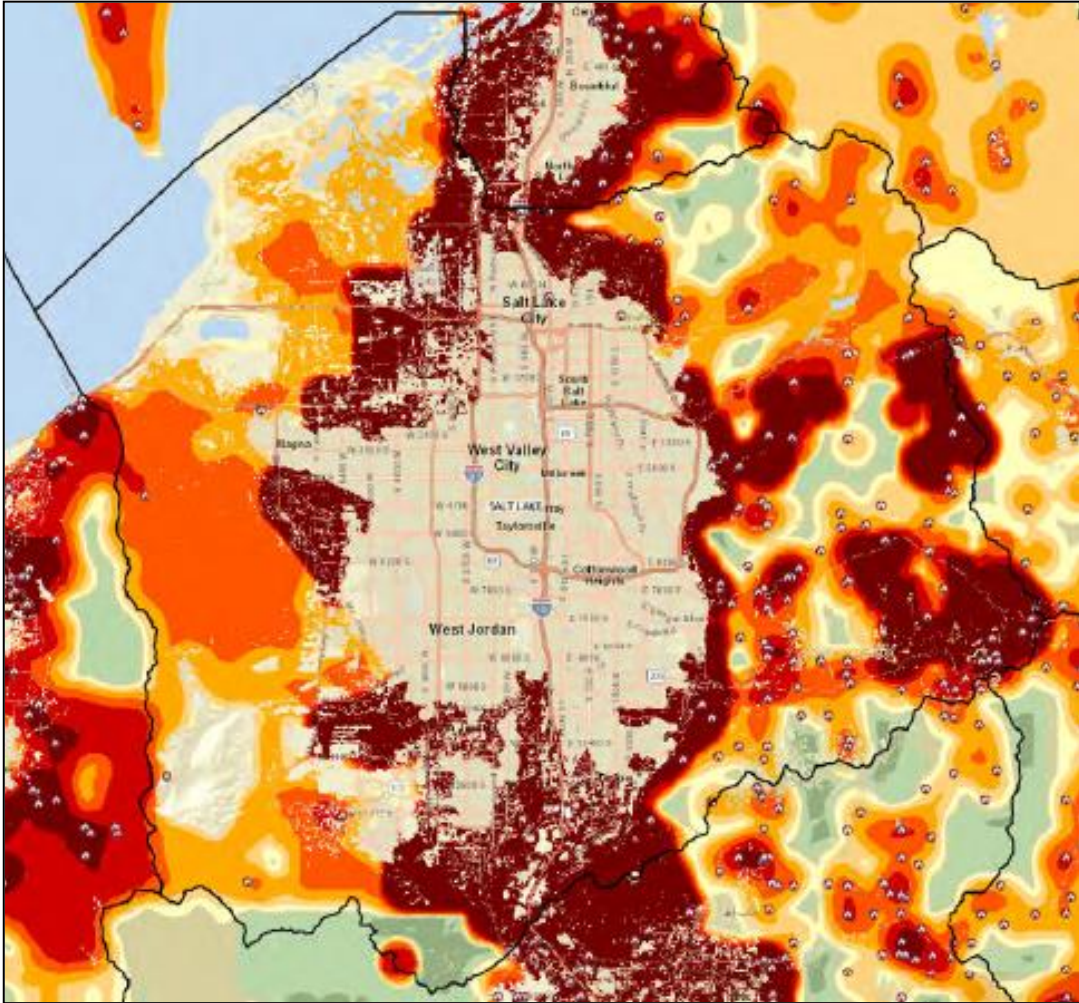
These WUI areas are threatened most because of the number of forested lands and the increasing population growth spreading into the foothills. Another concern is vegetation type in these areas such as sagebrush, mountain scrub oak, cheat grass, piñon and juniper trees, and rural and riparian vegetation.

Sagebrush and mountain shrub burn hot and fast, spreads easily and is found throughout the county. During prime burning conditions (hot, dry and windy) the piñon juniper class will burn. As can be seen in the map below, historical wildfire ignition points have been marked, and areas most likely to be the source of ignition based on historical patterns are darkly shaded.



Map 62 - Wildland Urban Interface Areas in Salt Lake County

areas most likely to be the source of ignition based on historical patterns are darkly shaded. (2019 Salt Lake County Multi-Jurisdictional Hazard Mitigation Plan)



*Map 63 - Historical Wildfire Ignition Points, SLCo*

As population growth continues, pressure to develop in WUI areas is likely to increase the threats associated with fire. Mitigation measures will need to be recognized and enforced to reduce these threats. Part of these mitigation efforts are the creation and implementation of Community Wildfire Protection Plans (CWPP) that is a local, community-level approach to code, development review, ordinances, and local authorities, enabling communities to address community risk of wildfire with respect to values at risk. Within Salt Lake County, the following communities have current or in-progress CWPPs.

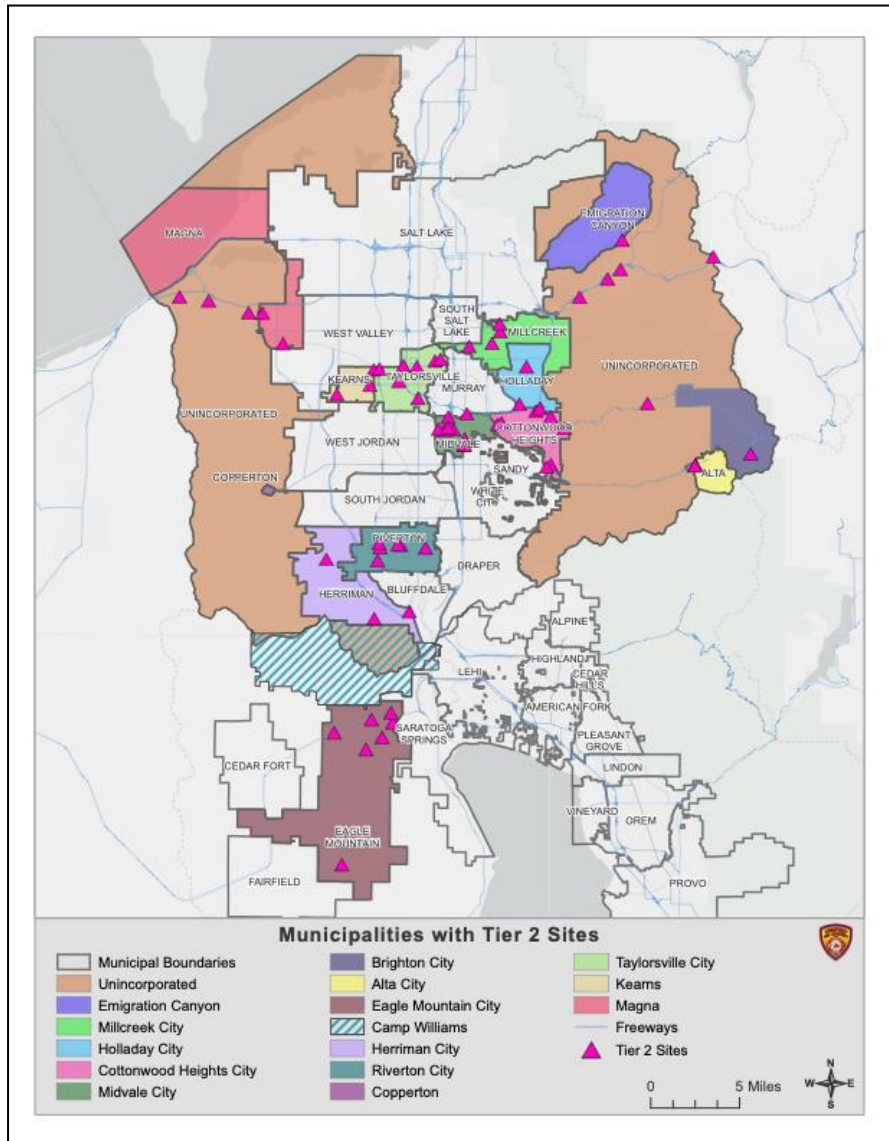
<b>Community</b>	<b>In Progress/Completed</b>	<b>Expiration</b>	<b>Firewise Community?</b>
<b>Alta</b>	Completed	2025	No
<b>Big Cottonwood Canyon / Brighton</b>	Completed	2025	No
<b>Copperton</b>	In Progress		No
<b>Cottonwood Heights</b>	Completed	2025	No
<b>Eagle Mountain</b>	In Progress		No
<b>Emigration Canyon</b>	Completed	2026	Yes
<b>Hi-Country 1 (Unincorporated SLCo)</b>	Completed	2025	Yes
<b>Hi-Country 2 (Unincorporated SLCo)</b>	In Progress		No
<b>Herriman</b>	Completed	2025	No
<b>Holladay</b>	In Progress		No
<b>Lamb's Canyon / Forest Home</b>	Completed	2025	Yes
<b>Magna</b>	In Progress		No
<b>Millcreek Canyon</b>	In Progress		No
<b>Mt. Aire</b>	Completed	2026	No
<b>Olympus Cove</b>	In Progress		No
<b>Salt Lake County</b>	Completed	2024	No
<b>White City</b>	In Progress		No

*Table 43 - Community Wildfire Protection Plans and Communities*

## Hazardous Materials

Occupancies which contain hazardous materials potentially pose a risk to the community and can create dangerous environments for firefighters when responding to a spill or fire. Specialized equipment, protective clothing and additional training is required to mitigate a hazmat incident.

Unified Fire Authority's Prevention Division conducts over 700 hazmat inspections each year. The associated map shows the location of Tier II sites within the service area.

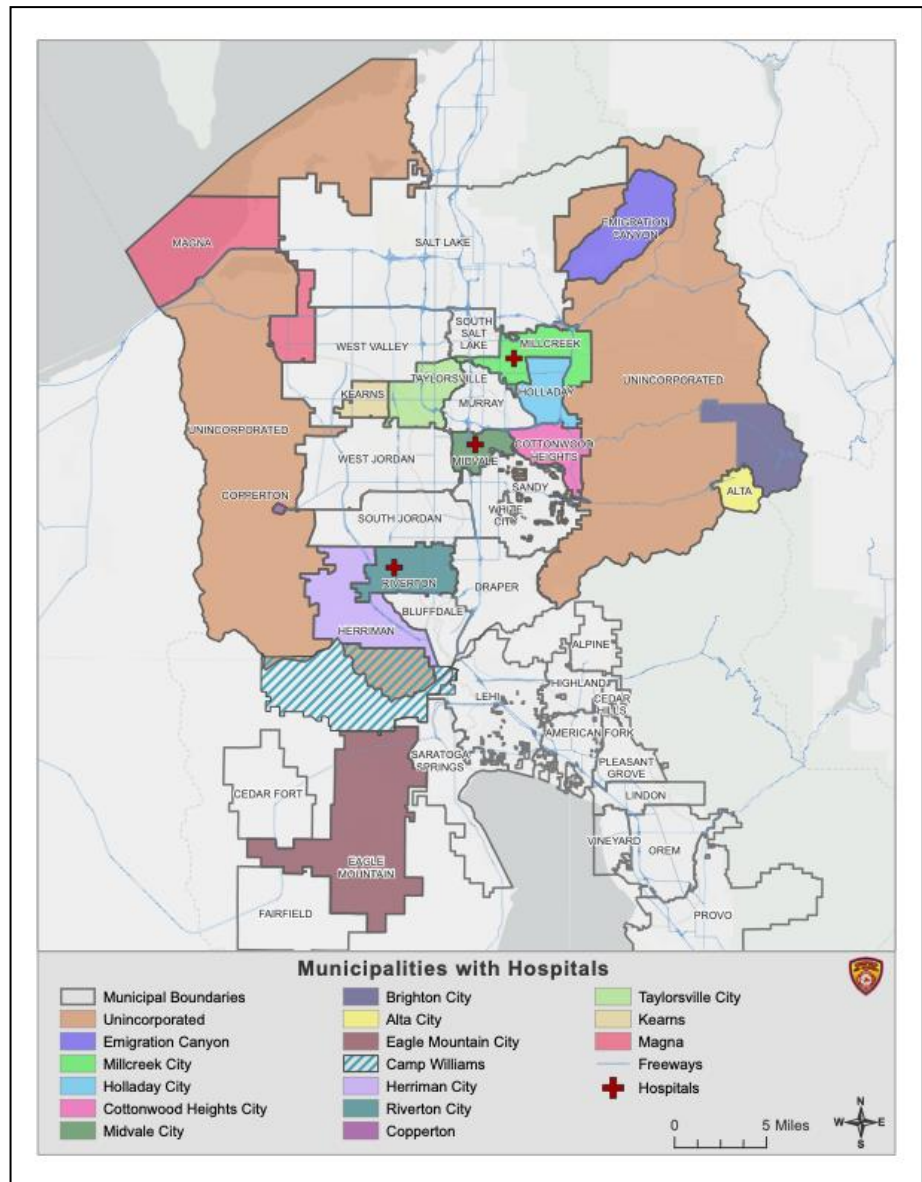


Map 64 - Tier II Sites in Salt Lake County

## Hospitals

Hospitals provide a critical service to injured, sick and vulnerable populations. These facilities are usually constructed of highly fire resistive construction with built in fire protection.

Emergencies which include but are not limited to fire incidents, may require emergency personnel to facilitate the rapid movement of patients away from the hazard.

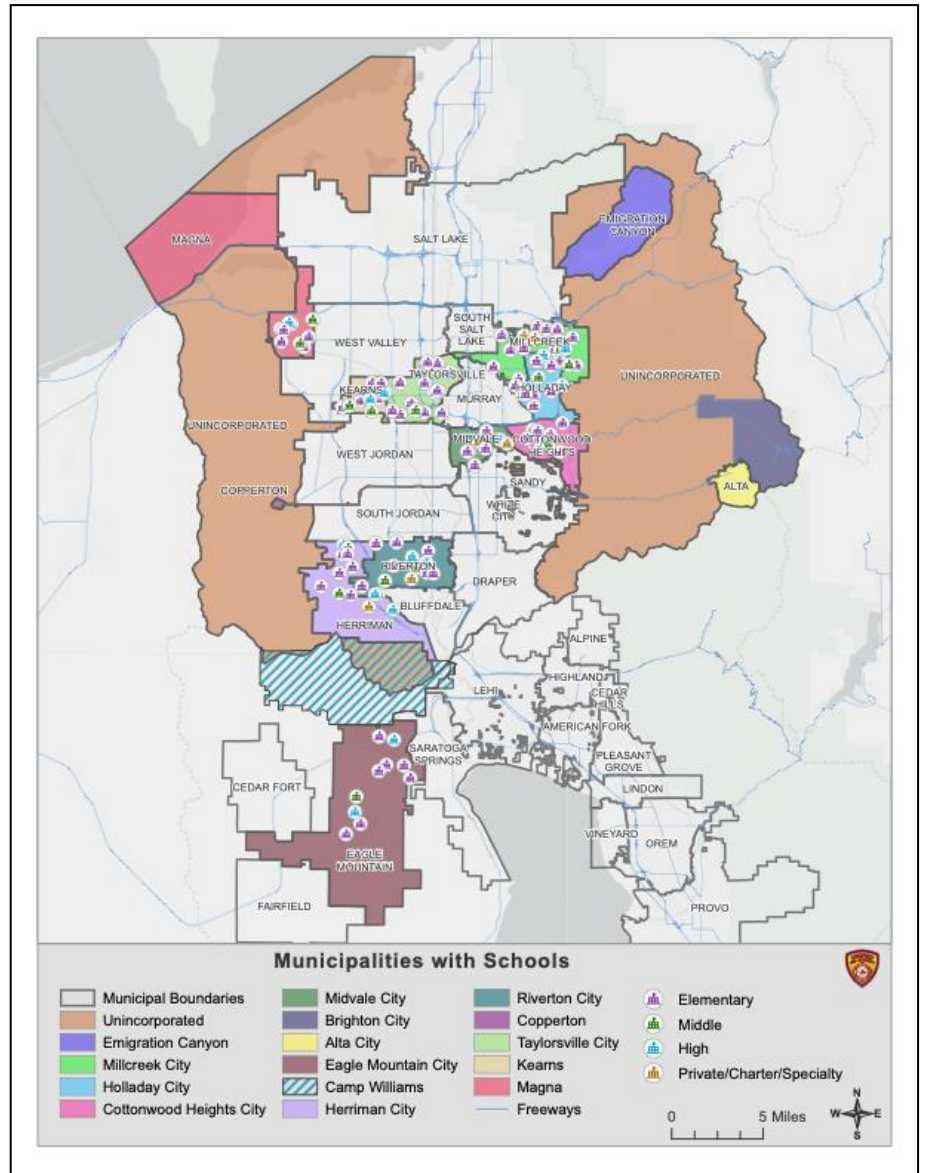


Map 65 - Location of All Hospitals Within the Service Area

## Schools (Public/Private)

Multiple school districts and private educational institutions operate within the service area. Unified Fire Authority provides protection to 62 elementary schools, 17 middle/junior high schools and 12 high schools. There are also 25 charter/private schools within the jurisdiction. This does not include the multitude of private and public pre-schools and day cares.

The number of school aged children protected is over 84,000.



Map 66 - Location of All Schools Within the Service Area

## Large Square Footage Buildings

Larger buildings such as warehouses, mall, big box stores present several risks to response. These buildings which are over 100,000 square feet of space will require more water, apparatus and personnel to effectively control fires.

Within Unified Fire Authority there are 169 buildings which meet the definition of a large square footage building.

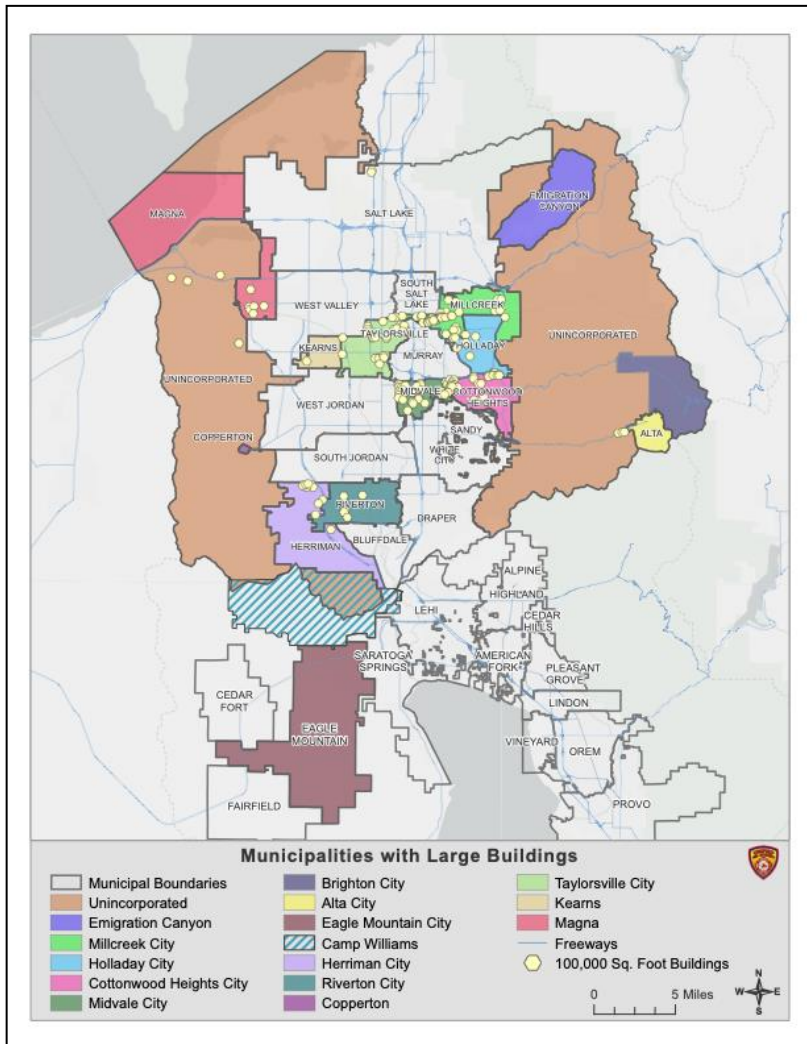
## Mid-Rise Buildings

Buildings which are three or more stories in height are often classified as mid-rise buildings.

These buildings have specific hazards which include building heights that will typically require the use of an aerial apparatus to access the upper floors and the roof.

The number and placement of aerial apparatus assists in response to mid-rise buildings and also accomplishes the desired requirement of the ISO which is that an aerial apparatus is within two and a half miles from buildings that are three or more stories in height.

UFA protects approximately 1544 mid-rise buildings.



Map 67 - Location of All Large Buildings Within the Service Area

### Life and Property Loss

From 2015-2020, there have been six fatalities attributed to fire (one of those occurred in Draper in 2016, which is no longer within UFA's service area). There has been a total estimate of \$5,032,132 of property loss and a total estimate of \$2,398,031 of content loss due to fire in 2020.

### Unified Fire Authority Shared Services

With a regional-response model, the Unified Fire Authority brings special services to bear when the situation calls for it, not relying on automatic or mutual aid which provides a quicker and more effective delivery of service to its residents.



## Battalion Chiefs

Unified Fire Authority staffs three operational battalion chiefs (BCs) daily, in addition to a 40-hour Operations Chief (OC). These BCs and OC respond to large, complex, or expanding incidents — providing incident command, safety, and operational direction. Each BC covers an area of UFA’s service area and respond to calls for service in any jurisdiction. Battalion 11 is housed out of Station 101 in Millcreek, Battalion 12 is housed out of Station 121 in Riverton, and Battalion 13 is housed out of Station 118 in Taylorsville.

Community	2018-2020 Battalion Chief or Operations Chief Responses
<b>Alta</b>	19
<b>Brighton</b>	64
<b>Camp Williams</b>	22
<b>Copperton</b>	19
<b>Cottonwood Heights</b>	267
<b>Eagle Mountain</b>	201
<b>Emigration Canyon</b>	36
<b>Herriman</b>	248
<b>Holladay</b>	254
<b>Kearns</b>	321
<b>Magna</b>	289
<b>Midvale</b>	416
<b>Millcreek</b>	632
<b>Riverton</b>	252
<b>Taylorsville</b>	698
<b>Salt Lake County - Unincorporated</b>	474
<b>Unknown Location</b>	1,233
<b>Total BC/OC Responses</b>	<b>5,445</b>

*Table 44 - Total Battalion Chief / Operations Chief Responses 2018-2020*

## Heavy Rescue Companies

Heavy Rescue specializes in structural collapse, confined space rescue, trench collapse rescue, vehicle extrication, machinery disentanglement, rope rescue (high angle, low angle, rigging) and rapid intervention (Firefighter Rescue). The UFA Heavy Rescue Program consists of two independent rescue companies strategically placed in UFA’s jurisdiction. Station 117 in Taylorsville, and Station 121 in Riverton house our Heavy Rescue Teams.

<b>Community</b>	<b>2018-2020 Heavy Rescue Company Responses</b>
<b>Alta</b>	6
<b>Brighton</b>	7
<b>Camp Williams</b>	Unknown
<b>Copperton</b>	7
<b>Cottonwood Heights</b>	76
<b>Eagle Mountain</b>	6
<b>Emigration Canyon</b>	5
<b>Herriman</b>	88
<b>Holladay</b>	73
<b>Kearns</b>	104
<b>Magna</b>	79
<b>Midvale</b>	112
<b>Millcreek</b>	146
<b>Riverton</b>	81
<b>Taylorsville</b>	240
<b>Salt Lake County - Unincorporated</b>	81
<b>Unknown Location</b>	96

<b>Total Heavy Rescue Company Responses</b>	<b>1,207</b>
---	--------------

*Table 45 - Heavy Rescue Company Responses 2018-2020*

## Hazardous Materials (HazMat) Companies

The Hazardous Materials Teams provide an efficient, effective, and professional Hazardous Material Mitigation response. HazMat Companies respond to hazardous material releases/spills for the purpose of mitigating the release/spill. They select and use proper specialized chemical personal protective equipment dependent on the nature of the incident. The HazMat Program consists of two independent HazMat companies strategically placed in UFA's jurisdiction. Station 124 in Riverton, and Station 126 in Midvale house our HazMat Teams.

Community	2018-2020 HazMat Company Responses
Alta	3
Brighton	3
Camp Williams	0
Copperton	0
Cottonwood Heights	16
Eagle Mountain	56
Emigration Canyon	2
Herriman	16
Holladay	9
Kearns	15
Magna	13
Midvale	36
Millcreek	34
Riverton	18
Taylorsville	48
Salt Lake County - Unincorporated	21
Unknown Location	87
<b>Total HazMat Team Responses</b>	<b>377</b>

*Table 46 - Hazardous Materials Company Responses 2018-2020*

## Water Rescue Teams

UFA has standing water, swift water and ice rescue capabilities. These companies respond to victims recreating in our swift canyon rivers and our lakes and reservoirs. Station 116 in Cottonwood Heights, Station 117 in Taylorsville, Station 121 in Riverton, and Station 123 in Herriman house companies with water rescue capabilities.

Community	2018-2020 Water Rescue Responses
<b>Salt Lake County - Unincorporated</b>	2
<b>Total Water Rescue Responses</b>	2

*Table 47 - Water Rescue Responses 2018-2020*

### **⚠ – Of Note...**

Water Rescues are often times dispatched as a medical call, a call for help, or a motor vehicle accident. UFA is aware there are more water rescue calls than what is captured within the data, and this is one of the gaps that has been identified throughout this process

## Wildland Division

UFA’s Wildland Division provides highly trained and experienced wildland fire and all-risk response resources to local, state and federal incidents. The Wildland Division oversees the training and certification of UFA personnel for response to wildland fires and all-hazard incidents. We also work with UFA Communities to educate residents on wildfire preparedness and provide mitigation services to reduce the risks of wildfire. UFA has a special capability where a Duty Officer is able to act as the Fire Warden within UFA’s jurisdictions, allowing the ordering of resources much more quickly than having to rely on a Fire Warden that may or may not be readily accessible. Station 103 in Herriman currently houses the Duty Officer.

Community	2018-2020 Wildland Responses From 103
Alta	0
Brighton	2
Camp Williams	12
Copperton	6
Cottonwood Heights	20
Eagle Mountain	41
Emigration Canyon	11
Herriman	20
Holladay	21
Kearns	17
Magna	61
Midvale	0
Millcreek	62
Riverton	13
Taylorsville	38
Salt Lake County - Unincorporated	65
Unknown Location	126

<b>Total Wildland Responses – From 103</b>	<b>515</b>
--	------------

*Table 48 - Wildland Responses from Station 103, 2018-2020*

## Investigations Division

Arson and Explosive related incidents are considered two of the most dangerous criminal activities that threaten our citizens. The need exists to protect the citizens of our jurisdiction from loss of life and property by reducing the crime of arson, arson-related crimes, improvised explosive devices (IEDS) and the prevention of future violent crimes.

The Investigations Division addresses this need by establishing a sound foundation of effective enforcement, focusing on the apprehension of the offender, while in partnership with other local, state, and federal law enforcement agencies. The team utilizes highly-trained Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) certified K-9's that assist with accelerant and explosives detection.

<b>Community</b>	<b>2018-2020 Investigations Responses</b>
<b>Alta</b>	2
<b>Brighton</b>	1
<b>Camp Williams</b>	1
<b>Copperton</b>	3
<b>Cottonwood Heights</b>	31
<b>Eagle Mountain</b>	10
<b>Emigration Canyon</b>	2
<b>Herriman</b>	22
<b>Holladay</b>	31
<b>Kearns</b>	42
<b>Magna</b>	42
<b>Midvale</b>	35
<b>Millcreek</b>	47
<b>Riverton</b>	46
<b>Taylorsville</b>	63
<b>Salt Lake County - Unincorporated</b>	17
<b>Unknown Location</b>	468
<b>Total Investigations Responses</b>	<b>863</b>

### Urban Search & Rescue

A FEMA Urban Search and Rescue Task Force is a team of individuals which serve as a resource for disaster response at local, state, and federal levels. It is comprised mainly of firefighters but includes structural engineers, medical professionals, canine/handler teams and emergency managers with highly specialized training in urban search and rescue environments.

Utah Task Force 1 (UT-TF1) is one of 28 Type I, Federal Urban Search & Rescue (US&R) Task Forces in the United States. This program brings a highly trained, multi-hazard Task Force that is especially designed to respond to a variety of emergencies/disasters including earthquakes, hurricanes, tornadoes, floods, terrorist acts and hazardous material releases. Fire department personnel that are task force

members receive specialized training and skills that directly benefit Unified Fire Authority.

### Salt Lake County Emergency Management

The Salt Lake County Division of Emergency Management serves our citizens by directing and coordinating resources for disasters and emergencies through preparation, planning, mitigation, response, and recovery. The Salt Lake County Emergency Coordination Center is activated and manned during any event—from small-scale to large-scale occurrences—to disasters both natural and man-made that can or have exceeded the resources of any particular jurisdiction. Currently, the Salt Lake County ECC assists and obtains resources for the 22 jurisdictions located within the Salt Lake Valley. Salt Lake County EM assists these jurisdictions through the activation of 15 Emergency Support Functions (ESFs) filled by employees from a multitude of backgrounds. The ESF employees have authority throughout Salt Lake County to fill and order additional support for the operations occurring in the field until the impacted jurisdiction can return to their normal operations and functions. The Emergency Management Division is committed to keeping the public safe through community outreach, training, dissemination of important public information, training of staff and the creation of a more resilient community through mitigation, preparation, response, and recovery. The ECC has been activated for many events such as Child Abduction Response Team (CART) Deployments, wildland fires such as the Rosecrest and Machine Gun fires, flooding, severe weather events, earthquakes, civil unrest, the COVID-19 pandemic, Line of Duty Deaths (LODD), and many other events.



## Unified Fire Authority

3380 South 900 West  
Salt Lake City, UT 84119



# Town of Alta

## Community Risk Assessment



## Town of Alta Planning Zone

UFA has one station within the Town of Alta Planning Zone covering a total of 4.1 square miles with a 2019 population of 261 and responded to 106 calls for service in 2020.

Planning Zone	Population	Population Percentage of UFA	Square Miles	Population Density per Sq Mile	Classification
<b>Town of Alta</b>	2019 - 261	0.05%	4.1	64	Rural

Alta has shown a slight decrease in its population from 270 in 2010 to 261 in 2019. In 2020, there was a decrease in its population to 228. It is noted that there were extenuating circumstances most likely due to the loss of typical residents during 2020 due to COVID-19 and the limitations placed on the skiing and recreation industry.

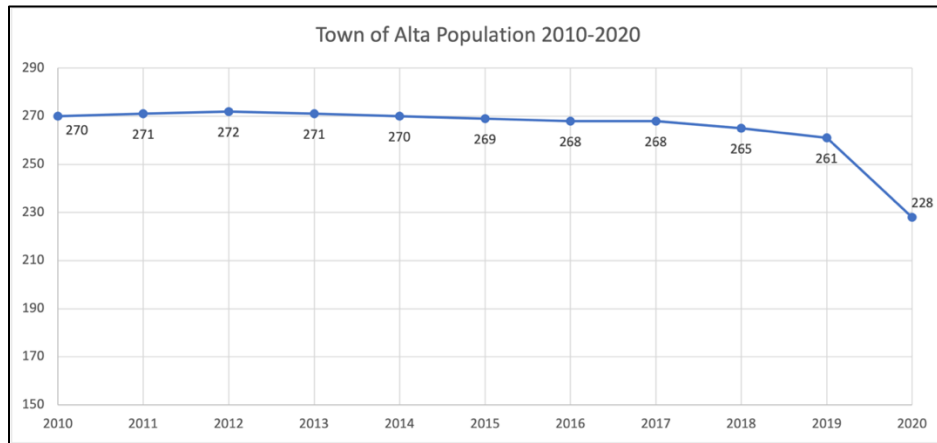


Chart 13 – Alta Population 2010-2020

## Town of Alta Station Information

### Station 113 information:

- Owner – UFSA
- Opened – 1985
- Address – 9523 E. Bypass Rd., Snowbird
- Staffing and Apparatus –
  - Type 1/3, ME 113 (3 persons)
  - MA 113 (cross-staffed)



*Image 3 – Alta Station 113*

## Surrounding UFA and Automatic/Mutual Aid Response Stations

Surrounding fire stations and fire departments that are within an eight-minute response to the Town of Alta are:

- UFA Station 116 (Cottonwood Heights), with a three-person medic engine

## Alta – Incidents by Dispatch Type Found

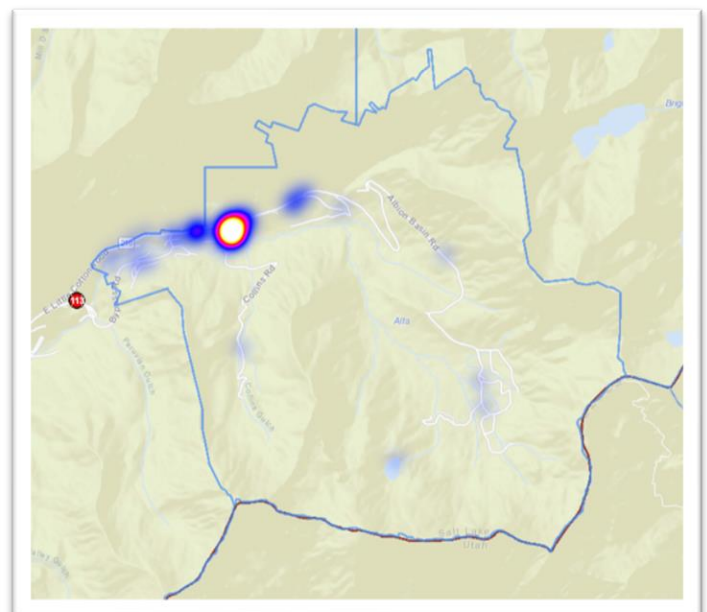
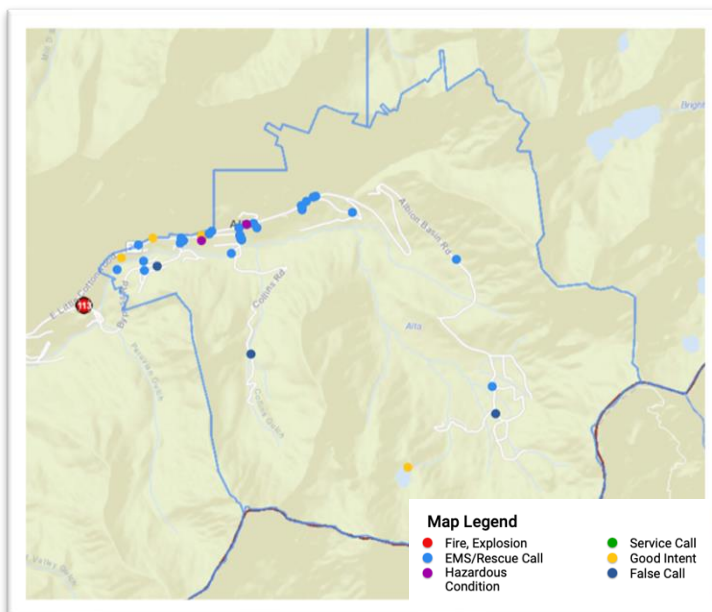
The following data is what the NFIRS type was when crews arrived on scene. This may be different than what was originally dispatched, including a reclassification of a call type from one to another. Cancelled calls occur if the company is cancelled en route to a call and never arrives on scene, which then changes the dispatch type to an NFIRS 611 call type.

	CY 2020	CY 2019	CY 2018
<b>Fire Suppression</b>	0	3	0
<b>EMS</b>	69	66	80
<b>Hazardous Materials</b>	3	5	1
<b>Service Calls</b>	0	2	0
<b>Good Intent</b>	31	26	24
<b>False Calls</b>	3	6	3
<b>Other (Misc., Flood, Overpressure)</b>	0	0	0
<b>Total</b>	106	108	108

<b>Cancelled</b>	23	23	22
<b>Overall Total</b>	129	131	130

Table 49 – Alta Call Types

## Alta – 2020 Incidents and Heat Map



Map 68 - Alta Incident Calls by Type

Map 69 – Alta Call Volume Heat Map

## NFPA 1710

The National Fire Protection Association is an international nonprofit organization that is devoted to eliminating death, injury, property, and economic loss due to fire, electrical and related hazards. The NFPA makes recommendations on over 300 codes and standards. NFPA 1710 recommendations are based off 90<sup>th</sup> percentile times.

### – In Other Words...

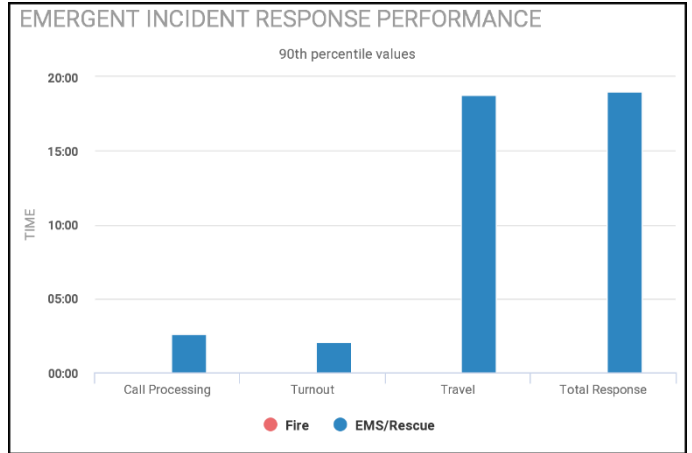
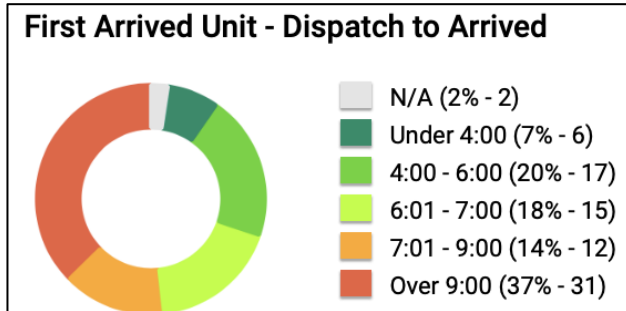
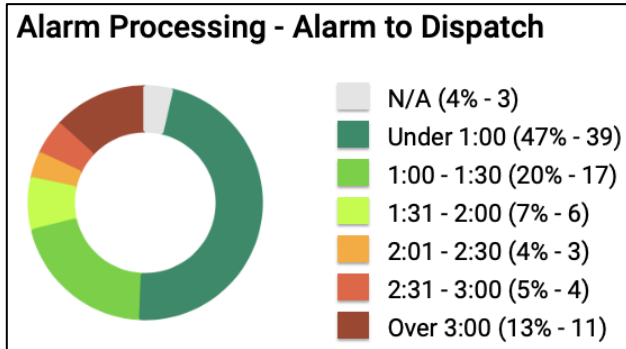
If a value is in the 90<sup>th</sup> percentile, it means the value is better than 90% of all other values in the dataset. In other words, it is within the top 10% of the values.

NFPA 1710 encompasses suggested standards for full-time fire departments and recommends the following times (all of which are at the 90<sup>th</sup> percentile): alarm processing – 64 seconds; turnout time for EMS responses – 60 seconds; turnout time for fire responses – 80 seconds; first arriver apparatus – 240 seconds (4 minutes); initial full-alarm assignment for low and medium hazard responses – 480 seconds (8 minutes); or initial full-alarm assignment for high hazard/high-rise responses – 610 seconds (10 minutes 10 seconds). The total response times are the cumulative totals of call processing time, turnout time, and travel time. NFPA 1710 recommends a total response time of 6:24 for the first arriving apparatus for fire and 6:00 for the first arriving apparatus for EMS.

### – Of Note...

NFPA 1710 response times have not been adopted by the UFA Board. One of the important elements of the community risk assessment and standards of cover is to identify current 90<sup>th</sup> percentile times (current baselines) within UFA and to identify realistic benchmarks for the UFA Board to consider for adoption.

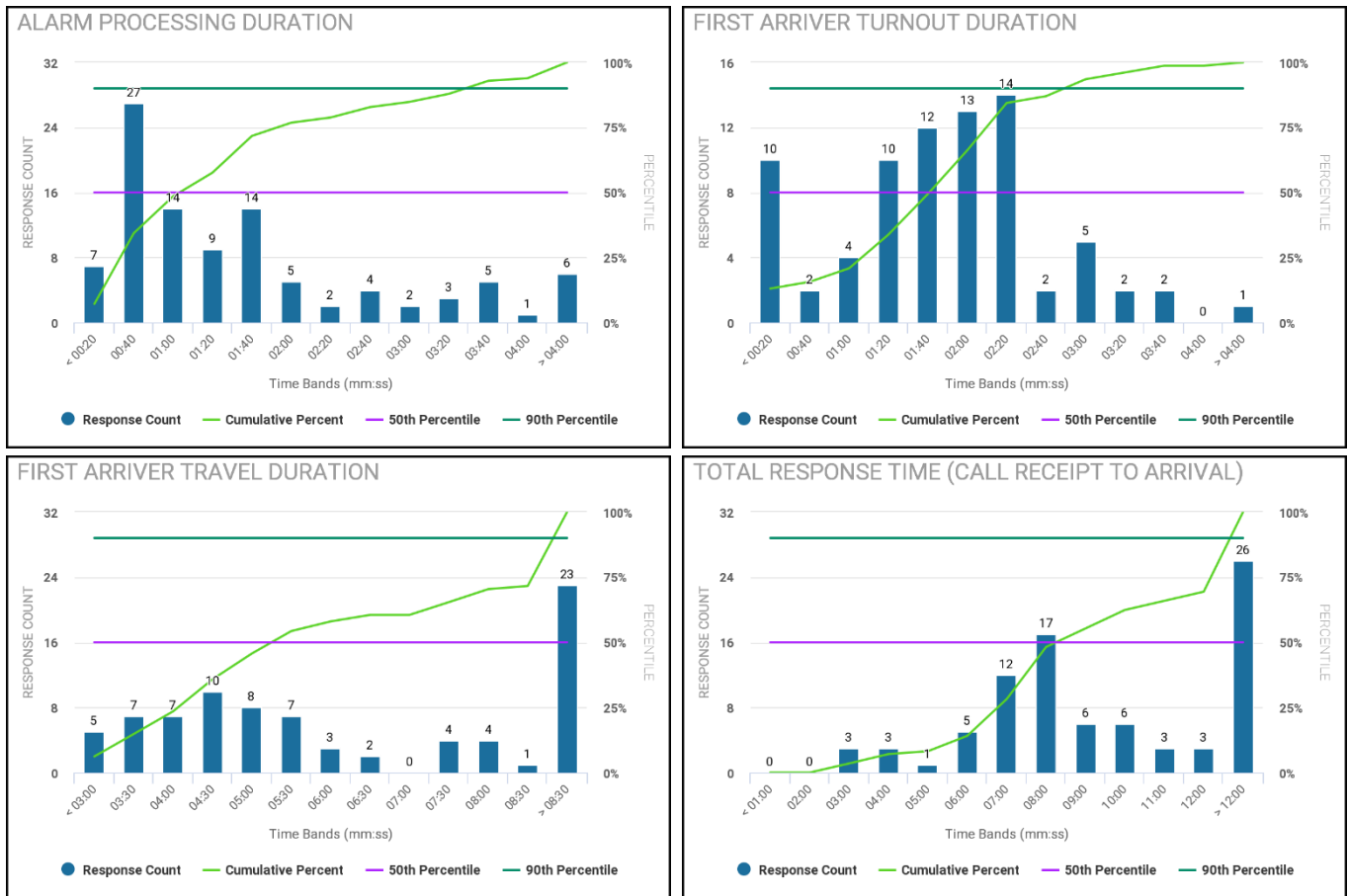
## Alta – 2020 Dispatch and Response Times



Rural	Call Processing: Fire	Turnout Time: Fire	Travel Time: Fire	Total Response: Fire	Call Processing: EMS	Turnout Time: EMS	Travel Time: EMS	Total Response: EMS
<b>Alta</b>	3:37	3:14	13:36	16:13	2:35	2:42	20:43	23:13
<b>UFA Urban 2018-2020</b>	2:16	2:39	7:36	10:34	1:47	2:32	6:29	9:18
<b>UFA Rural 2018-2020</b>	2:32	3:05	15:08	19:09	1:56	2:50	14:45	17:45
<b>NFPA 1710</b>	1:04	1:20	4:00	6:24	1:00	1:00	4:00	6:00

Table 50 – Alta 2020 Emergent Response Times, 90<sup>th</sup> percentile values

## Alta – 2020 Turnout and Travel Time



The charts above illustrate the alarm processing, turnout and travel times for all units responding to service calls within the Town of Alta (90<sup>th</sup> percentile). The alarm processing for fire was 3:37 and 2:35 for EMS; turnout time was 3:14 for fire responses and 2:42 for EMS responses; travel time was 13:36 for fire responses and 20:43 for EMS. The 90<sup>th</sup> percentile total response time was 16:13 for fire and 23:13 for EMS. For the charts above, they show both fire and EMS response times together.

### 🚩 – Of Note...

One item to note is that if you were to add the processing time, the turnout time, and the travel time, it will not necessarily (and often doesn't), sum the total response time. This is due to some of the limitations within the datasets and gaps within timestamps. Where there are missing timestamps, those particular key performance indicators (KPI) are excluded as they cannot accurately be calculated out.

## Alta – 2020 Incidents by Time of Day

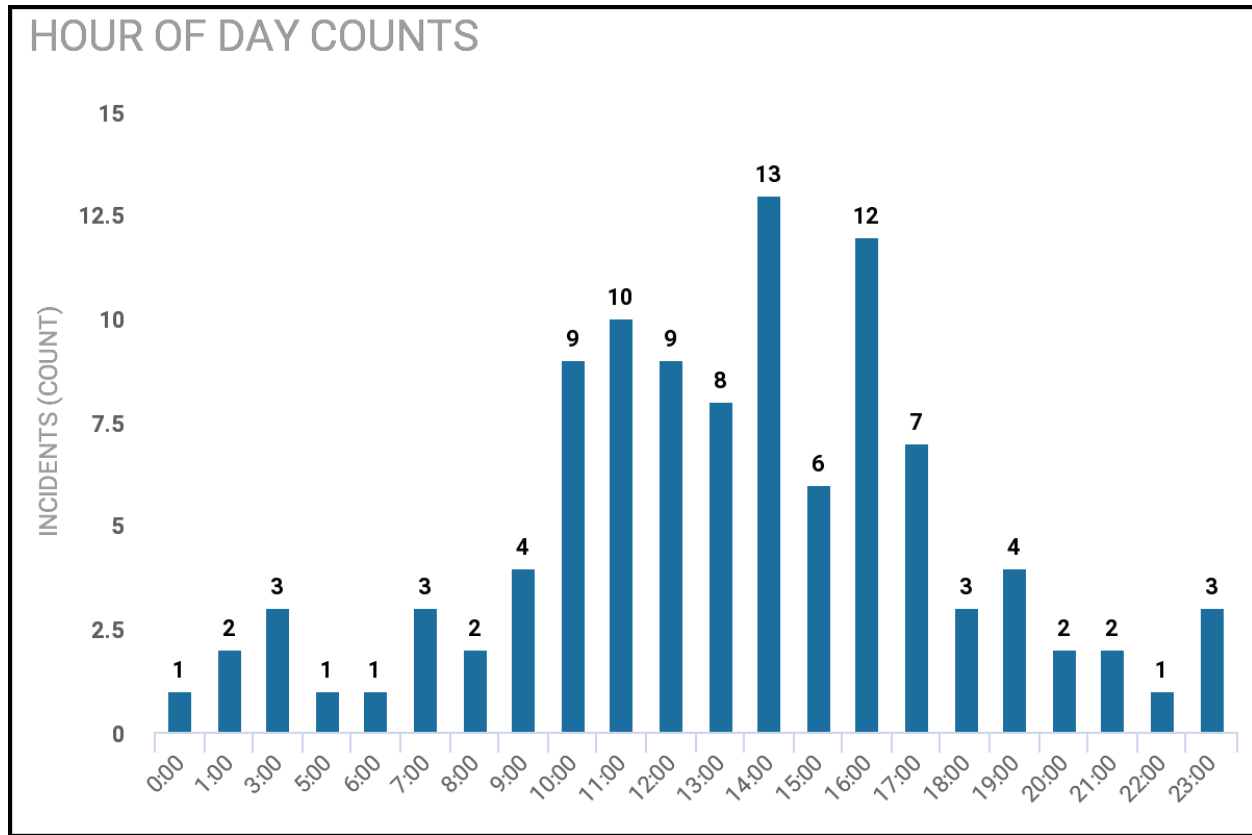


Chart 14 –Alta 2020 Incidents by Time of Day

The above table demonstrates the incidents by time of day and the time of greatest demand within the Town of Alta for all service calls. This chart illustrates that the greatest demand for service delivery begins at 10:00 AM and decreases by 5:00 PM.



## Alta – 2020 Incidents by Day of Week

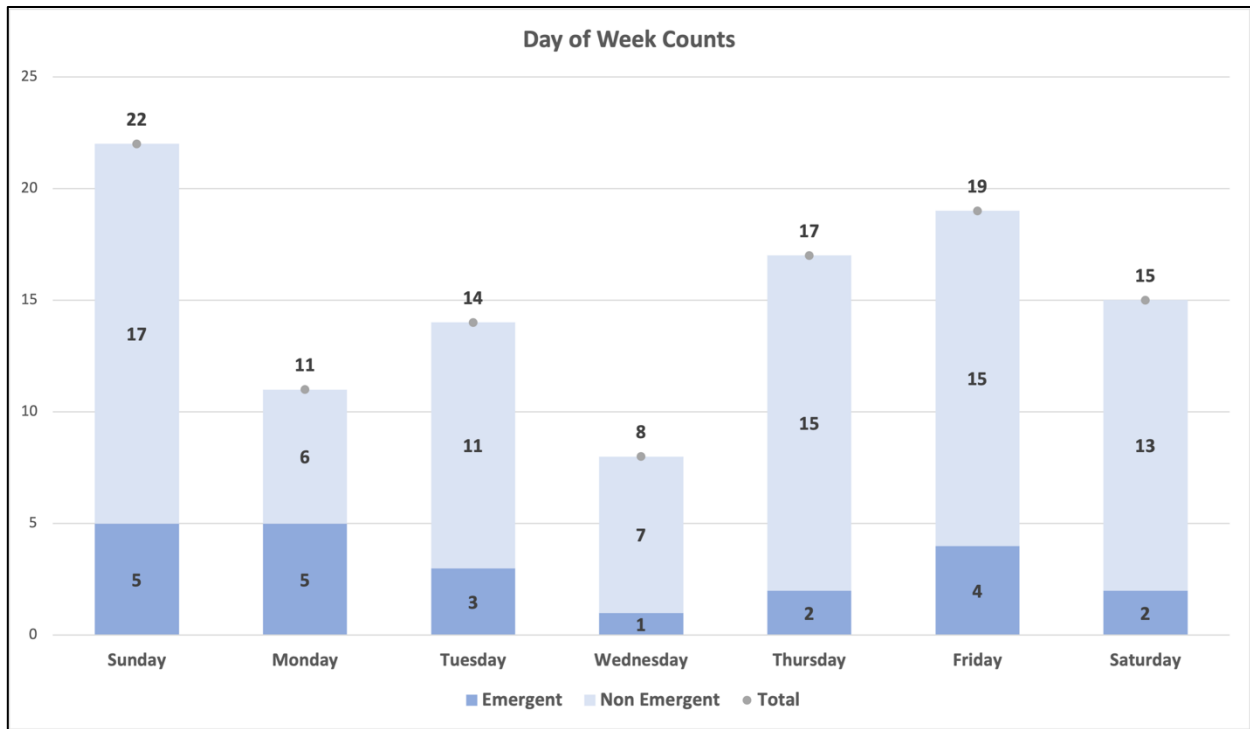


Chart 15 – Alta Incidents by Day of Week

This chart demonstrates the call volume based on the day of the week, with Sundays having the most overall calls in Alta.

## Alta – 2020 Incidents by Month

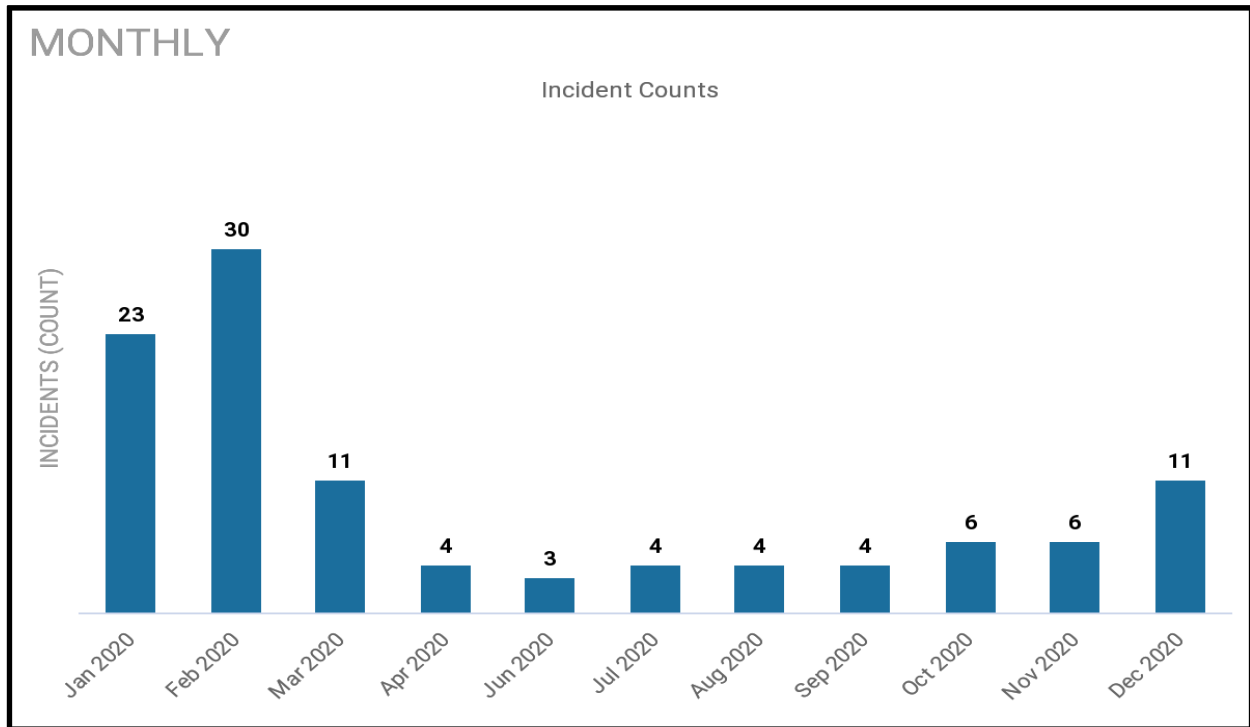


Chart 16 – Alta Incidents by Month

## Alta – EMS Calls

EMS calls are filtered by final disposition codes and this data is taken from VECC and determined by the patient acuity at the time of call termination. Often times the EMS calls identified from final disposition are different than the number of EMS calls that were initially dispatched due to one being the initial call type, and one being what call type the call was closed as by responding fire crews.

	CY 2020	CY 2019	CY 2018
<b>ALS Transports</b>	88	116	112
<b>BLS Transports</b>	58	72	76
<b>Scene Release</b>	3	1	16
<b>Public Assistance</b>	1	0	0
<b>EMS Total Calls</b>	149	189	204

Note: There is possibly a difference if you were to add all calls due to data reporting mechanisms. Public assistance calls will sometimes get duplicated with a scene release, depending on dispatch code, but those calls do not carry across to the total calls. Also, cancelled calls go into a different final disposition so the numbers in the 'Incidents by Dispatch Type' are reflective of this difference.

Table 51 –Alta EMS Calls

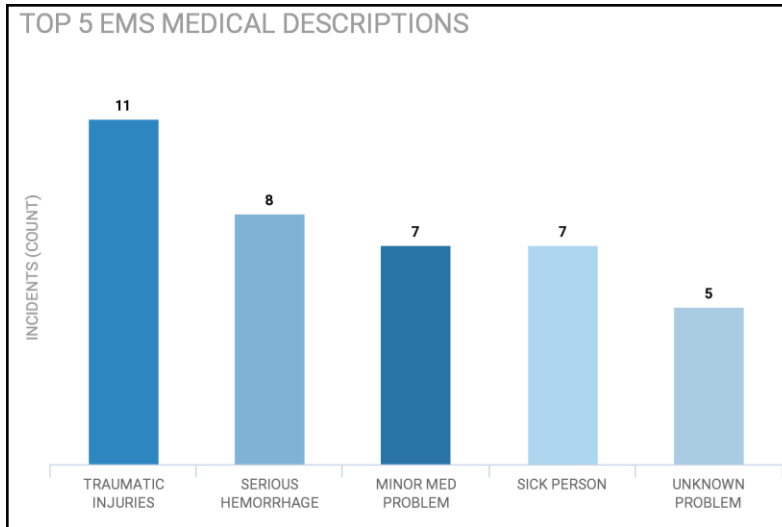


Chart 17 - Top 5 EMS Medical Calls – 2020

Alta – 2020 Fire Incidents by Dispatch Type

NFIRS Description	Incident Count	% of Incidents
<b>Structure Fire</b>	1	20%
<b>Vehicle Fire</b>	2	40%

NFIRS Description	Incident Count	% of Incidents
<b>Natural Vegetation Fire</b>	2	40%
<b>Total</b>	5	100%

Table 52 – Alta 2020 Incidents by Dispatch Type

## Alta – Building Occupancy Classification and Risk Categories

Occupancy Classification	Low	Moderate	High	Maximum	Total
<b>Assembly</b>	2	0	0	0	2
<b>Commercial/Industrial</b>	5	5	0	0	10
<b>Educational</b>	0	0	0	0	0
<b>Government</b>	0	0	0	0	0
<b>Healthcare</b>	0	0	0	0	0
<b>Hazardous</b>	Unknown	Unknown	Unknown	Unknown	5*
<b>Storage</b>	1	0	0	0	1
<b>Residential</b>	0	0	0	0	0
<b>Residential – Multi Unit</b>	10	0	2	0	12
<b>High Rise</b>	0	0	2	0	2
<b>Total</b>	18	5	4	0	32

\*There is currently a gap within the identification of building size regarding hazardous materials sites. This is a gap that is being closed over the next several years as we collect the data and information.

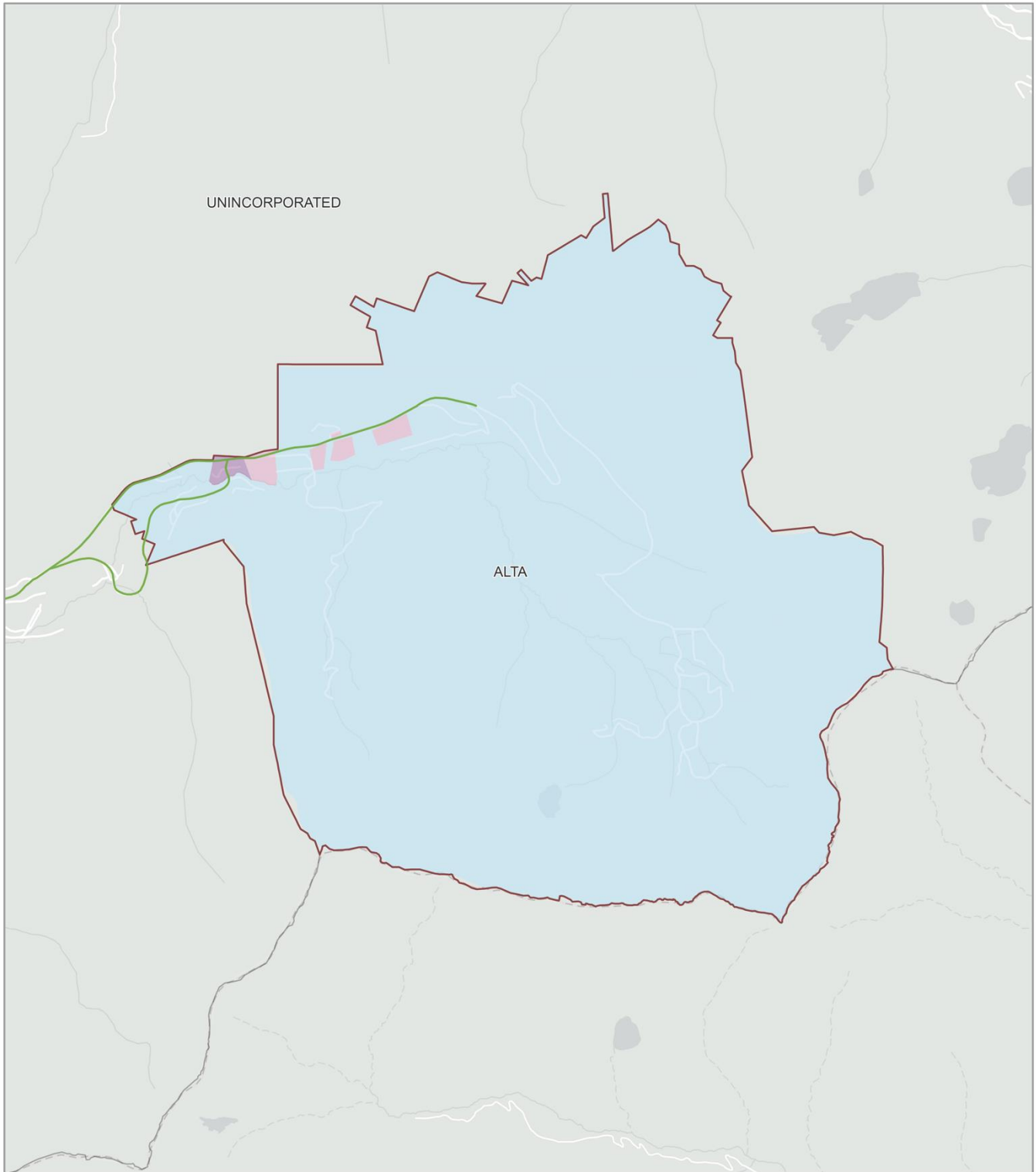
Also, it has been noted that these numbers that came from the Salt Lake County Surveyor's Office may be inaccurate and the Town of Alta is working on identifying the most accurate numbers of occupancy classification and risk categories.

*Table 53 – Alta Building Occupancy and Risk Categories*

### Building Size / Considerations

For purposes of risk classification, UFA has outlined the following risk classifications for building size, regardless of occupancy type (except residential). Low risk = 1-4,999 square feet. Moderate risk = 5,000-9,999 square feet. High risk = 10,000-99,999 square feet. Maximum risk = >100,000 square feet.

For residential occupancies, the following classifications apply. Low risk = 1-1,999 square feet. Moderate risk = 2,000-3,999 square feet. High risk = 4,000-9,999 square feet. Maximum risk = ≥10,000 square feet.

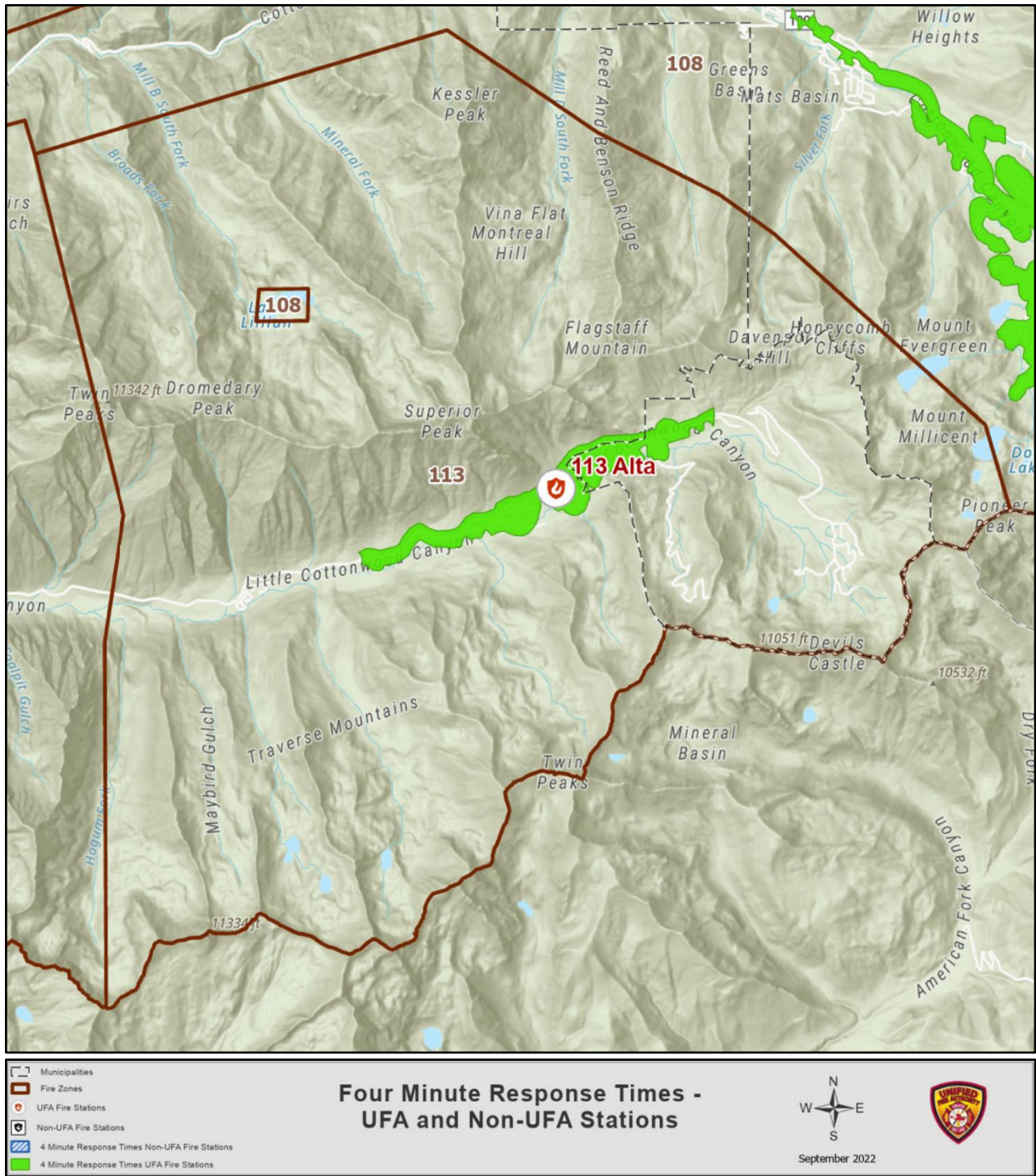


**TOWN OF ALTA WITH LAND USE**

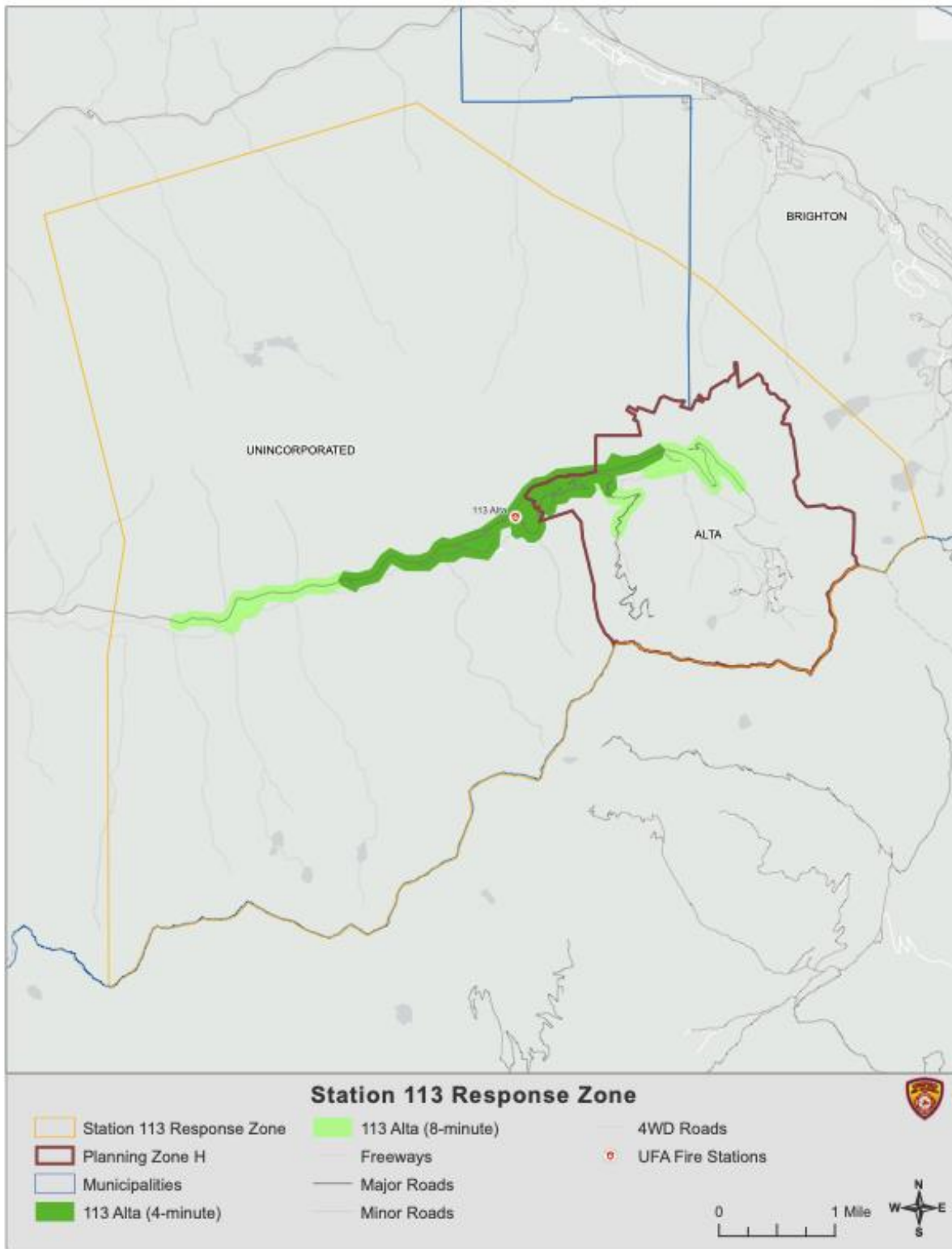
- |                      |               |
|----------------------|---------------|
| Planning Zones       | Forestry      |
| Municipal Boundaries | Single Family |
| Commercial           | Freeways      |



*Map 70 – Alta with Land Use*



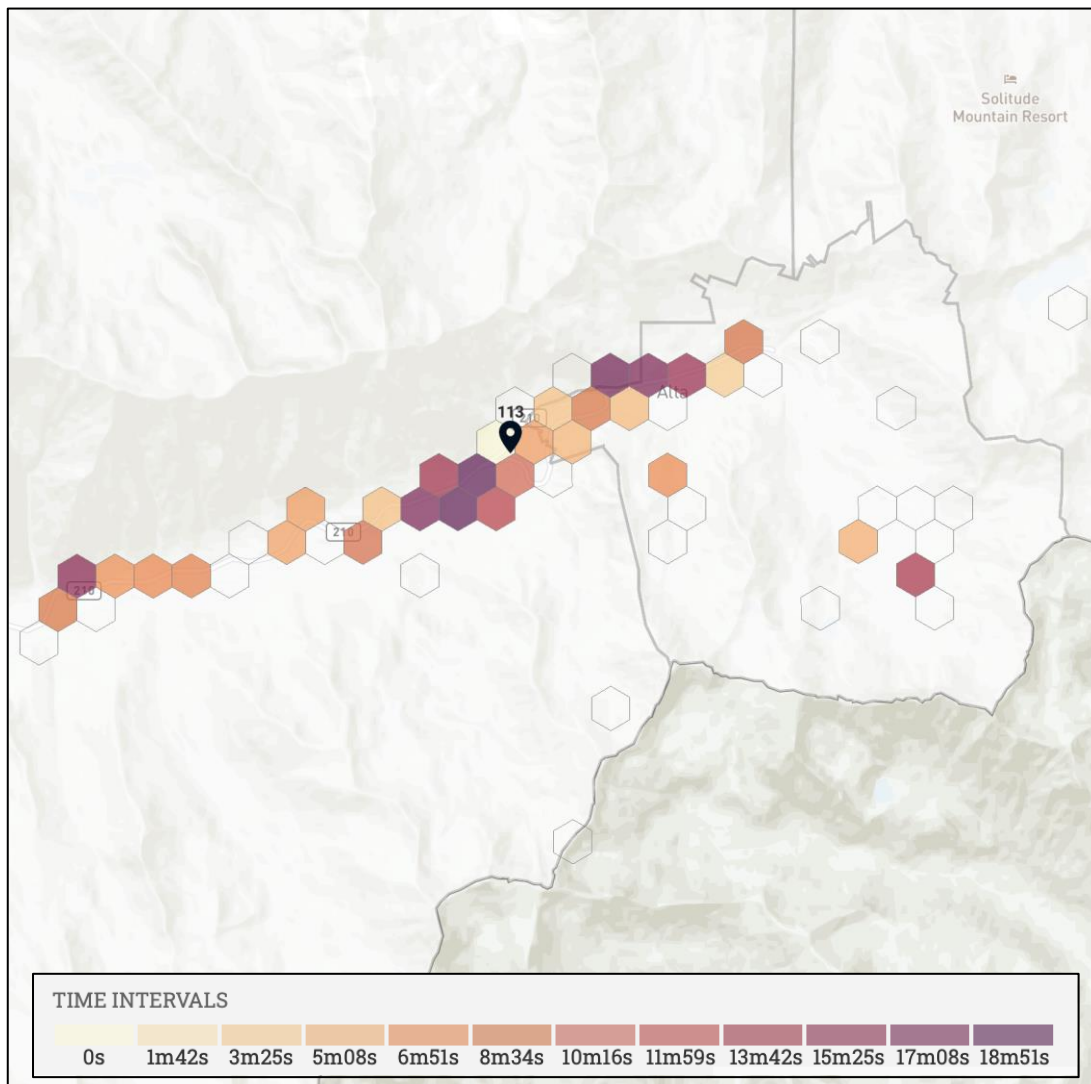
Map 71 - 4-Minute Travel Times, UFA and Aid



Map 72 - Station 113 4- and 8-minute Drive Times

## First Arriver Travel Times

The following maps demonstrate the 90<sup>th</sup> percentile of travel times based off the last three years of historical data (2018-2020). 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 (90<sup>th</sup> percentile) from notification of the alarm to the arrival of the first arriving apparatus — not an adopted standard by UFA. UFA is currently in process of identifying benchmark and target standards to be adopted by the UFA Board of Directors. Currently within Alta, the 90<sup>th</sup> percentile drive time is 13:36 for fire and 20:43 for EMS, or 16:11 overall.

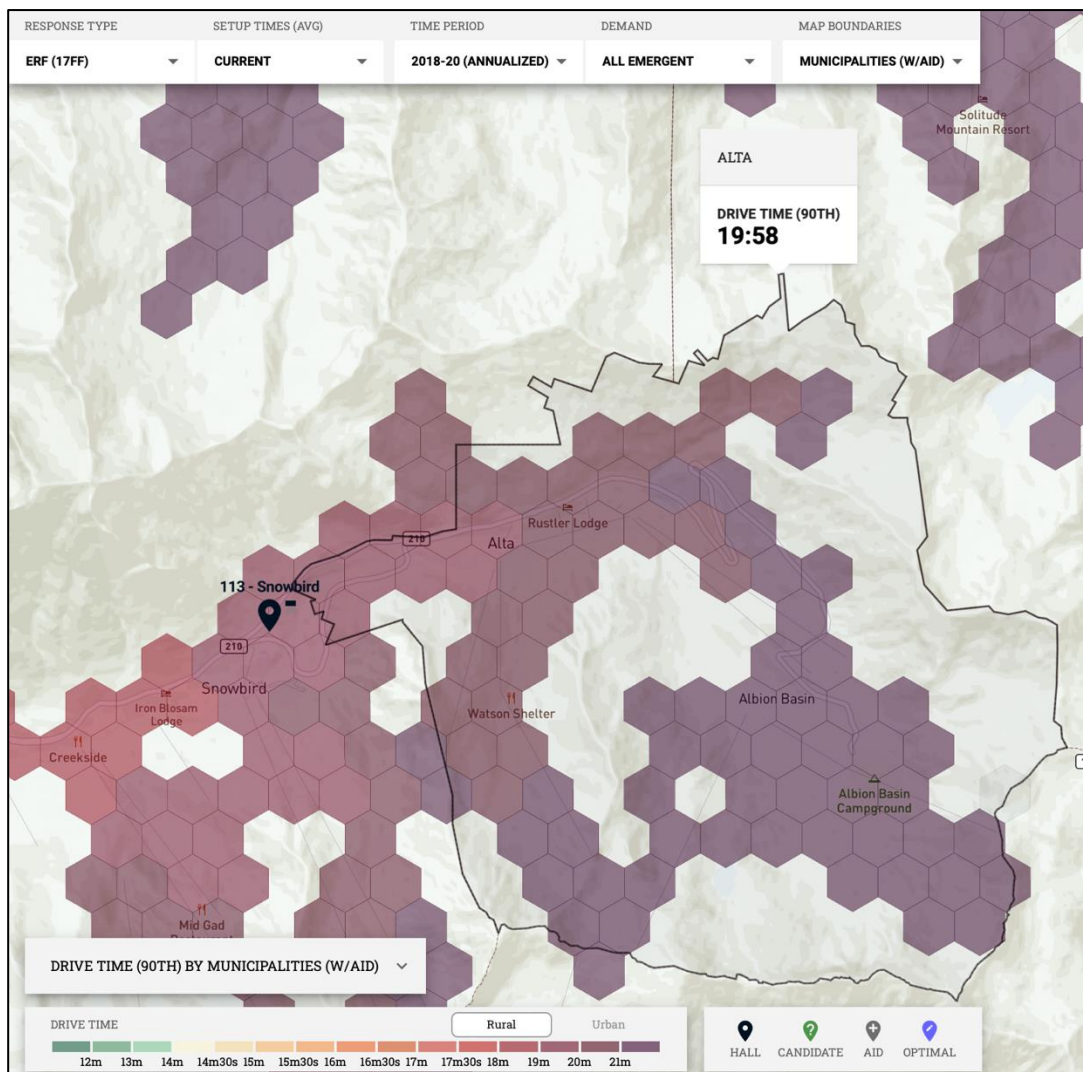


Map 73 – Alta Response Times – All Aid



## Alta – Residential Fire Effective Response Force (17 FF)

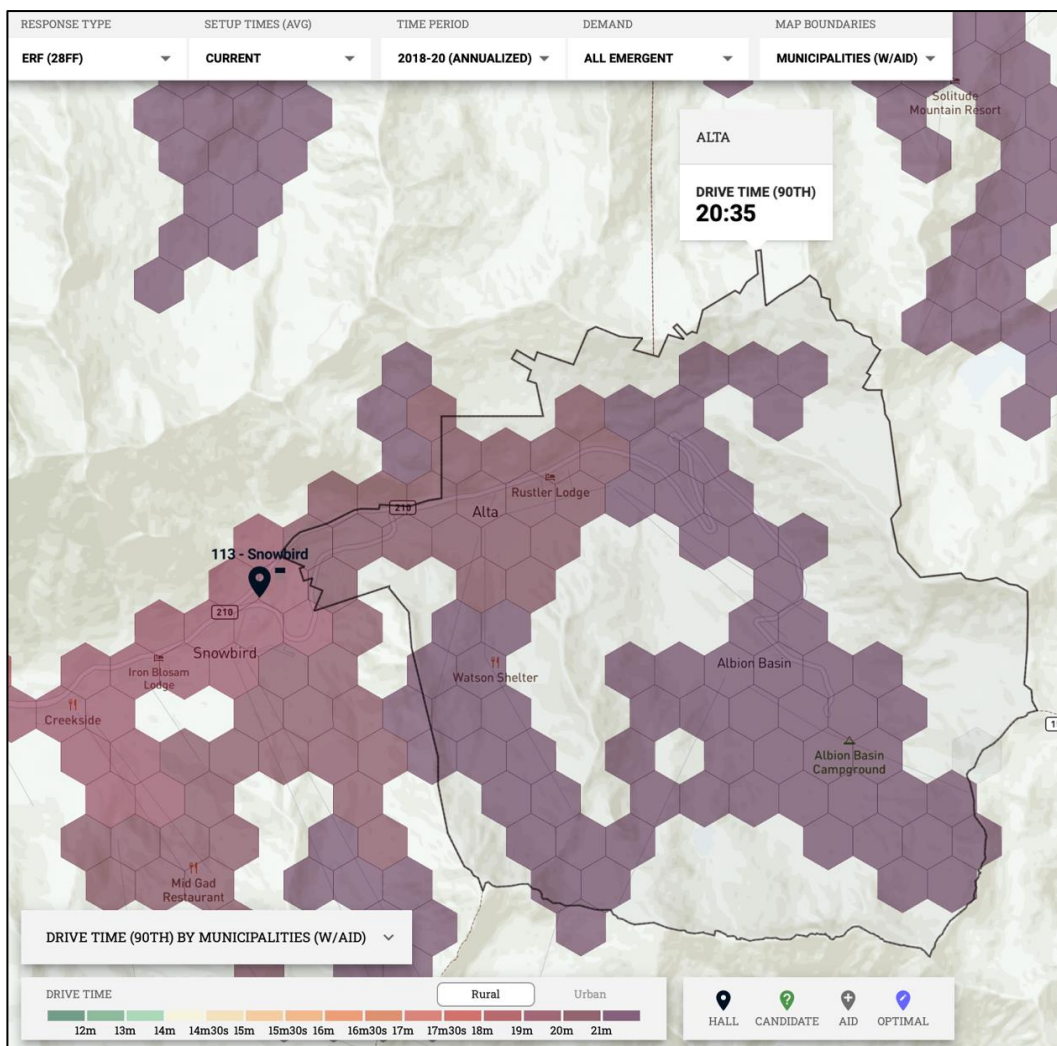
This map demonstrates the projected coverage of a multi-unit response to a residential fire based off all apparatus being within their station. The lighter the color demonstrates the ability to have seventeen firefighters (a residential fire effective response force) on scene based off a residential urban fire force response. This map's drive times (or travel times) are based off the current NFPA 1710 standard of eight minutes (90<sup>th</sup> 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. UFA is currently in process of identifying benchmark and target standards to be adopted by the UFA Board of Directors. Based off predictive data, it is projected that the 90<sup>th</sup> percentile for 17 firefighters to arrive on scene would be 19:58.



Map 74 – Alta Response Times – Residential Fire Effective Response Force (17 ERF)

## Alta – Commercial Fire Effective Response Force (28 FF)

This map demonstrates the projected coverage of a multi-unit response to a commercial fire based off all apparatus being within their station. The lighter color 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 (90<sup>th</sup> 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. UFA is currently in process of identifying benchmark and target standards to be adopted by the UFA Board of Directors. Based off predictive data, it is projected that the 90<sup>th</sup> percentile for 28 firefighters to arrive on scene would be 20:35.



Map 75 – Alta Response Times – Commercial Fire Effective Response Force (28 FF)

## Alta 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
Low	Low	Low	Low	High	Mod	High	Low	Low	Low	Low	Low

Table 54 – Alta Hazard Matrix

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

### Infrastructure – Transportation

The primary roadway that runs through Alta is State Road 210 which runs east/west from Wasatch Boulevard. There are 0 linear miles of Interstate/US Highway, 2.17 linear miles of State Highways, and 12.2 total linear miles of roadway. Alta is in the low-risk category for road infrastructure.

### Infrastructure – Water

There is one water district within the Town of Alta, the Salt Lake County Service Area #3.

### Infrastructure – Dams

There are two identified dams within the Town of Alta. Alta is in the low-risk category for dam infrastructure.

### Natural Hazards

Within the Town of Alta, there are high concerns with avalanche areas, placing it in the high-risk category for avalanche. There are no identified fault lines that run through the city (see Map 8). Alta is in the low-risk category for liquefaction and low-risk category for

fault lines. One of the biggest hazards that occur within an earthquake scenario is the number of unreinforced masonry (URM) buildings. Within the Town of Alta, there are an estimated 3 URM's, which constitutes about 0.01% of the overall URM's within UFA's response areas. Alta is in the moderate-risk category for unreinforced masonry.

#### Wildland Urban Interface

There is high risk of urban interface fires within the Town of Alta and within Little Cottonwood Canyon. One of the primary hazards is the lack of egress routes going out of the canyon. Alta is in the high-risk category for Wildland Urban Interface.

#### Hazardous Materials / Tier II Sites

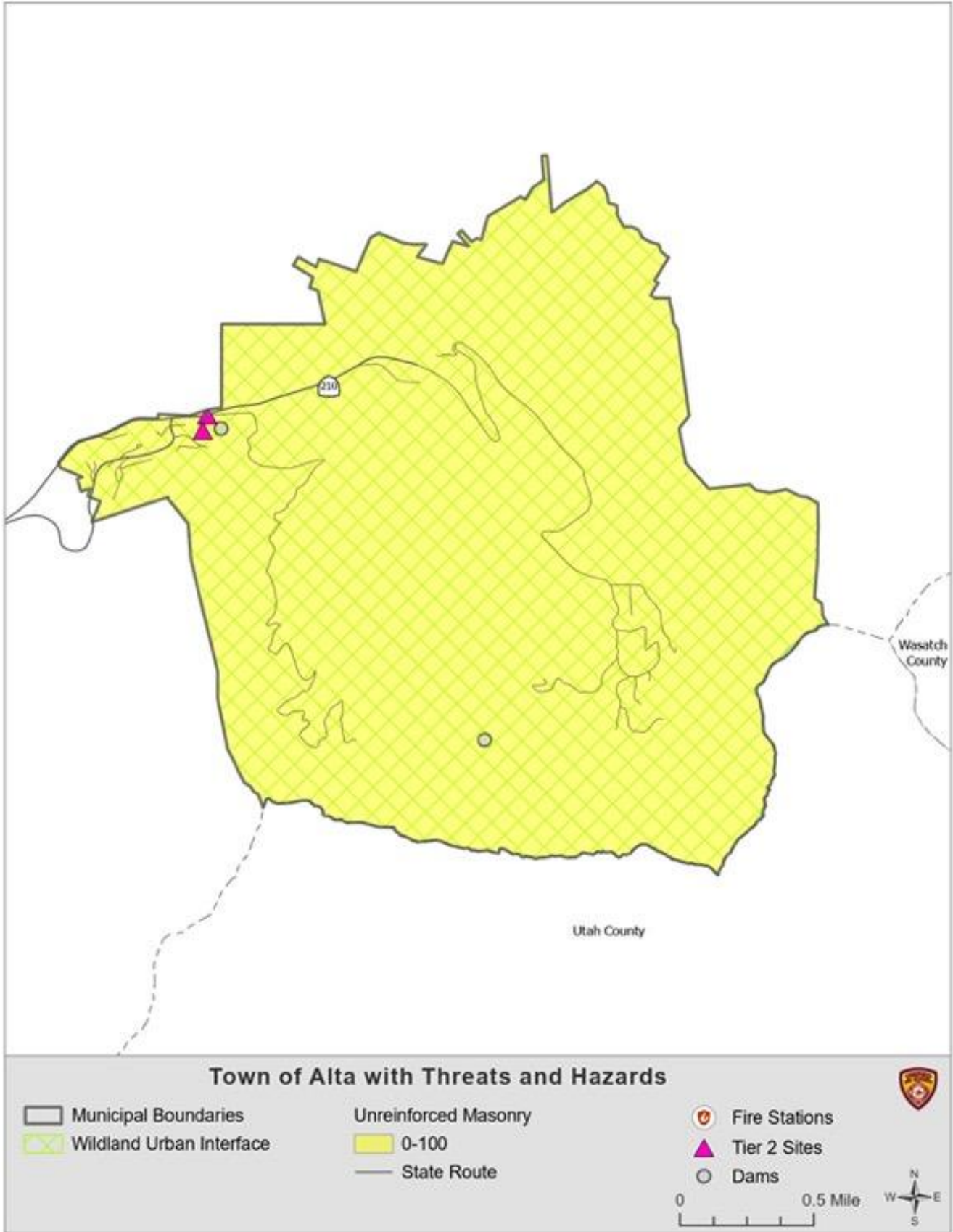
There are two identified HazMat/Tier II Sites within the Town of Alta, which is in the low-risk category.

#### Hospitals

The Town of Alta has no hospitals. This places Alta in the low-risk category for hospitals.

#### Schools

The Town of Alta has a one-room multi-grade Elementary School housed in the Goldminer's Daughter Lodge. This places Alta in the low-risk category for schools.



Map 76 – Emigration Township with Combined Hazards

## Life and Property Loss

From 2015-2020, there have been zero fatalities attributed to fire. There has been a total estimate of \$3,012,500.00 of property loss and a total estimate of \$101,600.00 of content loss due to fire.

## Unified Fire Shared Services

With a regional-response model, the Unified Fire Authority brings special services to bear when the situation calls for it, not relying on automatic or mutual aid which provides a quicker and more effective delivery of service to its residents.

### Battalion Chiefs

Unified Fire Authority staffs three operational battalion chiefs (BCs) daily, in addition to a 40-hour Operations Chief (OC). These BCs and OC respond to large, complex, or expanding incidents — providing incident command, safety, and operational direction. Each BC covers an area of UFA's service area and respond to calls for service in any jurisdiction. Battalion 11 is housed out of Station 101 in Millcreek, Battalion 12 is housed out of Station 121 in Riverton, and Battalion 13 is housed out of Station 118 in Taylorsville.

### Heavy Rescue Companies

Heavy Rescue specializes in structural collapse, confined space rescue, trench collapse rescue, vehicle extrication, machinery disentanglement, rope rescue (high angle, low angle, rigging) and rapid intervention (Firefighter Rescue). The UFA Heavy Rescue Program consists of two independent rescue companies strategically placed in UFA's jurisdiction. Station 117 in Taylorsville, and Station 121 in Riverton house our Heavy Rescue Teams.

### Hazardous Materials (HazMat) Companies

The Hazardous Materials Teams provide an efficient, effective, and professional Hazardous Material Mitigation response. HazMat Companies respond to hazardous material releases/spills for the purpose of mitigating the release/spill. They select and use proper specialized chemical personal protective equipment dependent on the nature of the incident. The HazMat Program consists of two independent HazMat

companies strategically placed in UFA's jurisdiction. Station 124 in Riverton, and Station 126 in Midvale house our HazMat Teams.

### Water Rescue Teams

UFA has swift water and ice rescue capabilities. These companies respond to victims recreating in our swift canyon rivers and our lakes and reservoirs. Station 116 in Cottonwood Heights, Station 117 in Taylorsville, Station 121 in Riverton, and Station 123 in Herriman house companies with water rescue capabilities.

### Wildland Division

UFA's Wildland Division provides highly trained and experienced wildland fire and all-risk response resources to local, state, and federal incidents. The Wildland Division oversees the training and certification of UFA personnel for response to wildland fires and all-hazard incidents. We also work with UFA Communities to educate residents on wildfire preparedness and provide mitigation services to reduce the risks of wildfire. UFA has a special capability where a Duty Officer is able to act as the Fire Warden within UFA's jurisdictions, allowing the ordering of resources much more quickly than having to rely on a Fire Warden that may or may not be readily accessible. Station 103 in Herriman currently houses the Duty Officer.

### Investigations Division

Arson and Explosive related incidents are considered two of the most dangerous criminal activities that threaten our citizens. The need exists to protect the citizens of our jurisdiction from loss of life and property by reducing the crime of arson, arson-related crimes, improvised explosive devices (IEDS) and the prevention of future violent crimes. The Investigations Division addresses this need by establishing a sound foundation of effective enforcement, focusing on the apprehension of the offender, while in partnership with other Local, state and federal law enforcement agencies. The team utilizes highly-trained Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) certified K-9's that assist with accelerant and explosives detection.

### Urban Search & Rescue

A FEMA Urban Search and Rescue Task Force is a team of individuals which serve as a resource for disaster response at local, state, and federal levels. It is comprised mainly of firefighters but includes structural engineers, medical professionals,

canine/handler teams and emergency managers with highly specialized training in urban search and rescue environments.

Utah Task Force 1 (UT-TF1) is one of 28 Type I, Federal Urban Search & Rescue (US&R) Task Forces in the United States. This program brings a highly trained, multi-hazard Task Force that is especially designed to respond to a variety of emergencies/disasters including earthquakes, hurricanes, tornadoes, floods, terrorist acts and hazardous material releases. Fire department personnel that are task force members receive specialized training and skills that directly benefit Unified Fire Authority.

### [Salt Lake County Emergency Management](#)

The Salt Lake County Division of Emergency Management serves our citizens by directing and coordinating resources for disasters and emergencies through preparation, planning, mitigation, response, and recovery. The Salt Lake County Emergency Coordination Center is activated and manned during any event—from small-scale to large-scale occurrences—to disasters both natural and man-made that can or have exceeded the resources of any particular jurisdiction. Currently, the Salt Lake County ECC assists and obtains resources for the 22 jurisdictions located within the Salt Lake Valley. Salt Lake County EM assists these jurisdictions through the activation of 15 Emergency Support Functions (ESFs) filled by employees from a multitude of backgrounds. The ESF employees have authority throughout Salt Lake County to fill and order additional support for the operations occurring in the field until the impacted jurisdiction can return to their normal operations and functions. The Emergency Management Division is committed to keeping the public safe through community outreach, training, dissemination of important public information, training of staff and the creation of a more resilient community through mitigation, preparation, response, and recovery. The ECC has been activated for many events such as Child Abduction Response Team (CART) Deployments, wildland fires such as the Rosecrest and Machine Gun fires, flooding, severe weather events, earthquakes, civil unrest, the COVID-19 pandemic, Line of Duty Deaths (LODD), and many other events.



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## Unified Fire Authority

3380 South 900 West  
Salt Lake City, UT 84119

# Town of Brighton

## Community Risk Assessment



## Town of Brighton Planning Zone

UFA has one station within the Town of Brighton Planning Zone covering a total of 16 square miles with a population of 432 and responded to 225 calls for service in 2020.

Planning Zone	Population	Population Percentage of UFA	Square Miles	Population Density per Sq Mile	Classification
Brighton	432	0.10%	16	27	Rural

### 📌 – Of Note...

Brighton incorporated as a town Jan 1, 2020. Because of this, the population estimates were previously under the Unincorporated Salt Lake County population totals and not able to be separated out prior to Jan 1, 2020.

## Brighton Station Information

### Station 108 information:

- Owner – UFSA
- Opened – 2012
- Address – 7688 S. Big Cottonwood Canyon
- Staffing and Apparatus –
  - Type 1/3, ME 108 (3 persons)
  - MA 108 (cross-staffed)
  - Type 6, Brush Truck (cross-staffed)



Image 4 – Brighton Station 108

## Surrounding UFA and Automatic/Mutual Aid Response Stations

Due to the rural location of Big Cottonwood Canyon as well as the long response times, there are currently no UFA stations, automatic or mutual aid stations within an eight-minute response time.

## Brighton – Incidents by Dispatch Type

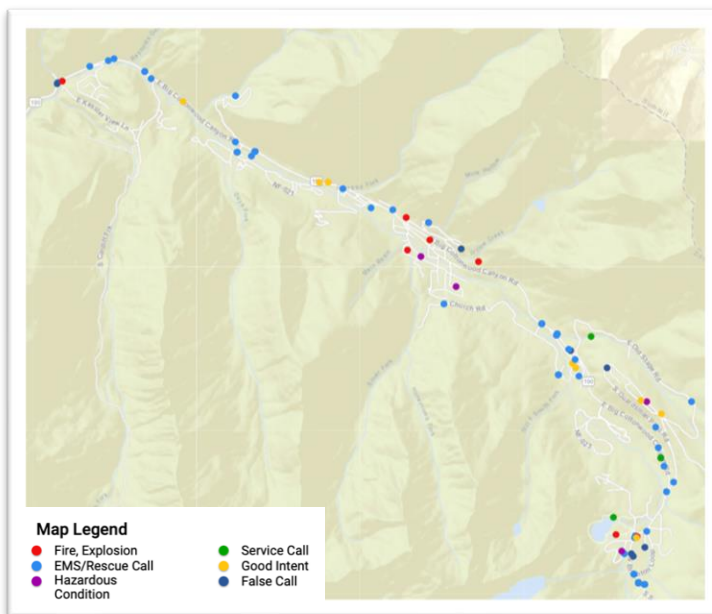
The following data is what the NFIRS type was when crews arrived on scene. This may be different than what was originally dispatched, including a reclassification of a call type from one to another. Cancelled calls occur if the company is cancelled en route to a call and never arrives on scene, which then changes the dispatch type to an NFIRS 611 call type.

	CY 2020	CY 2019	CY 2018
<b>Fire Suppression</b>	8	3	3
<b>EMS</b>	145	163	178
<b>Hazardous Materials</b>	10	7	3
<b>Service Calls</b>	6	3	3
<b>Good Intent</b>	48	58	39
<b>False Calls</b>	8	14	12
<b>Other (Misc., Flood, Overpressure)</b>	0	0	0
<b>Total</b>	225	248	238

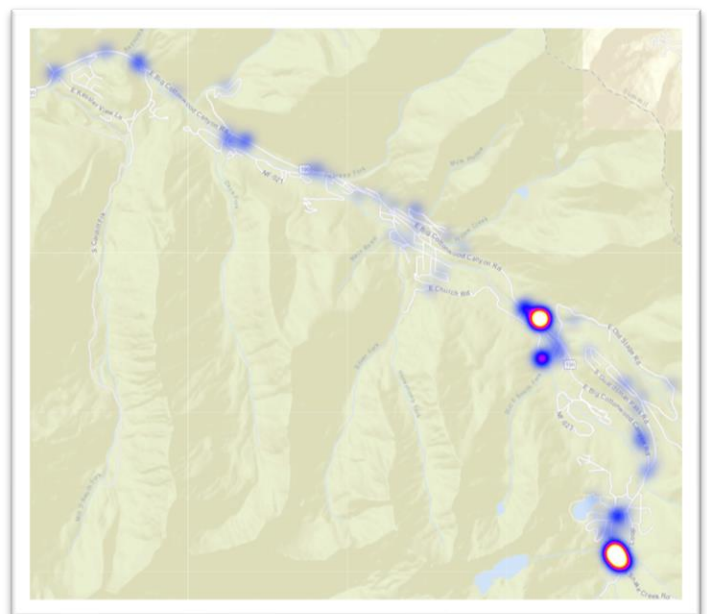
<b>Cancelled</b>	30	33	30
<b>Overall Total</b>	255	281	268

Table 55 – Brighton Call Types

## Brighton – 2020 Incidents and Heat Map



Map 78 - Brighton Incident Calls by Type



Map 77 – Brighton Call Volume Heat Map

## NFPA 1710

The National Fire Protection Association is an international nonprofit organization that is devoted to eliminating death, injury, property, and economic loss due to fire, electrical and related hazards. The NFPA makes recommendations on over 300 codes and standards. NFPA 1710 recommendations are based off 90<sup>th</sup> percentile times.

### – In Other Words...

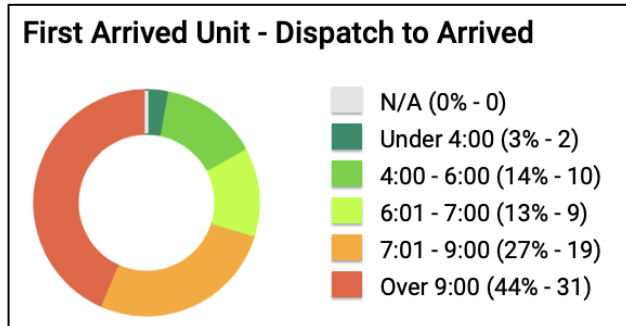
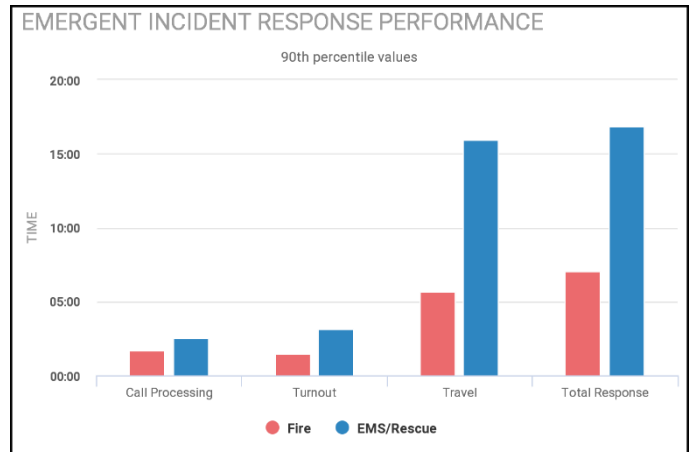
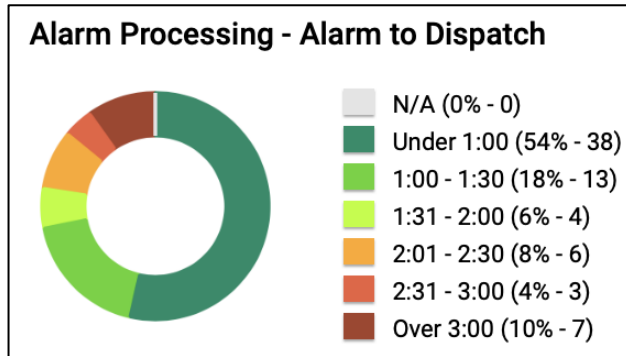
If a value is in the 90<sup>th</sup> percentile, it means the value is better than 90% of all other values in the dataset. In other words, it is within the top 10% of the values.

NFPA 1710 encompasses suggested standards for full-time fire departments and recommends the following times (all of which are at the 90<sup>th</sup> percentile): alarm processing – 64 seconds; turnout time for EMS responses – 60 seconds; turnout time for fire responses – 80 seconds; first arriver apparatus – 240 seconds (4 minutes); initial full-alarm assignment for low and medium hazard responses – 480 seconds (8 minutes); or initial full-alarm assignment for high hazard/high-rise responses – 610 seconds (10 minutes 10 seconds). The total response times are the cumulative totals of call processing time, turnout time, and travel time. NFPA 1710 recommends a total response time of 6:24 for the first arriving apparatus for fire and 6:00 for the first arriving apparatus for EMS.

### – Of Note...

NFPA 1710 response times have not been adopted by the UFA Board. One of the important elements of the community risk assessment and standards of cover is to identify current 90<sup>th</sup> percentile times (current baselines) within UFA and to identify realistic benchmarks for the UFA Board to consider for adoption.

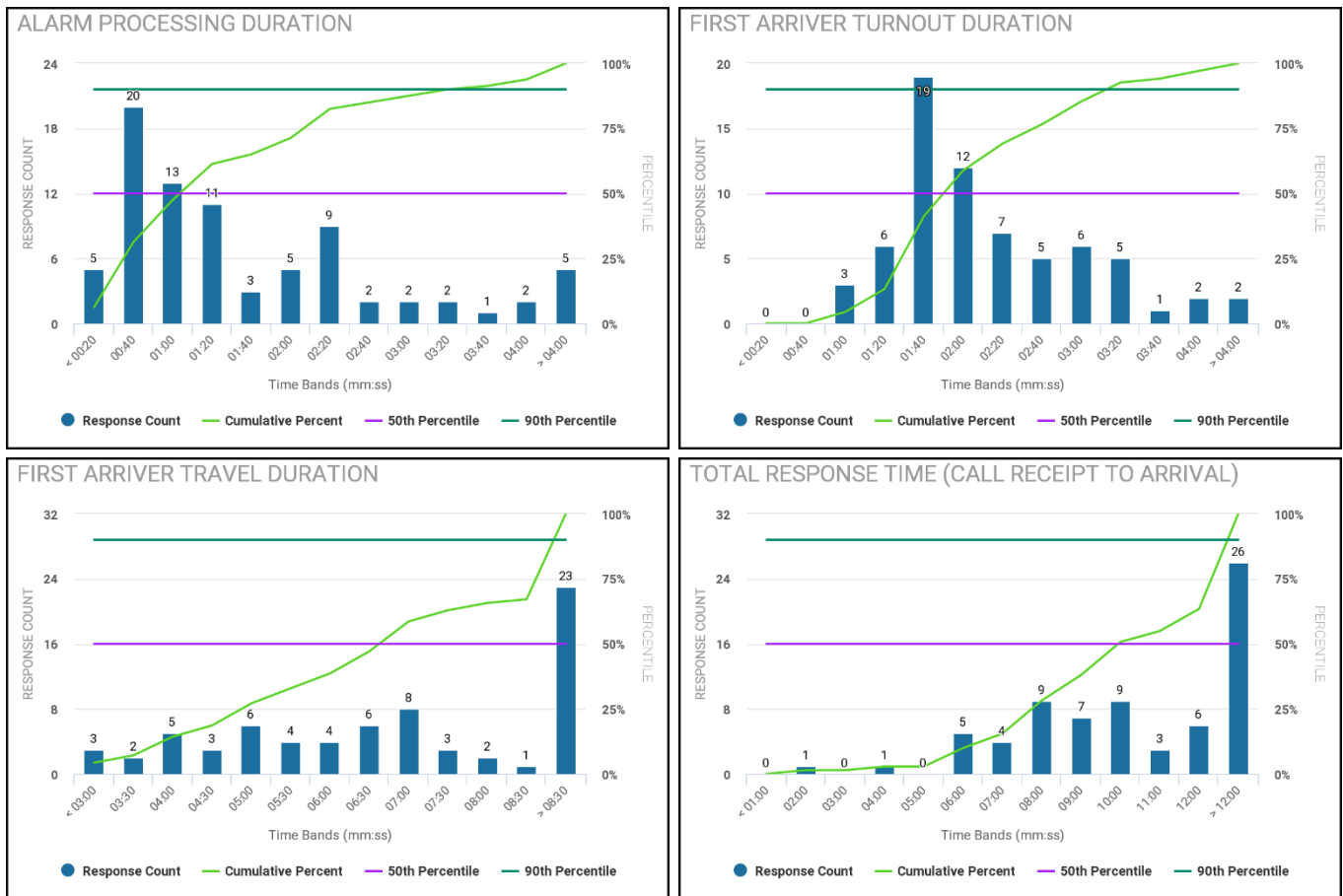
## Brighton – 2020 Dispatch and Response Times



Rural	Call Processing: Fire	Turnout Time: Fire	Travel Time: Fire	Total Response: Fire	Call Processing: EMS	Turnout Time: EMS	Travel Time: EMS	Total Response: EMS
<b>Brighton</b>	2:50	3:11	18:40	28:04	2:10	3:09	17:24	20:20
<b>UFA Urban 2018-2020</b>	2:16	2:39	7:36	10:34	1:47	2:32	6:29	9:18
<b>UFA Rural 2018-2020</b>	2:32	3:05	15:08	19:09	1:56	2:50	14:45	17:45
<b>NFPA 1710</b>	1:04	1:20	4:00	6:24	1:00	1:00	4:00	6:00

Table 56 – Brighton 2020 Emergent Response Times, 90<sup>th</sup> percentile values

## Brighton – 2020 Turnout and Travel Time



The charts above illustrate the alarm processing, turnout and travel times for all units responding to service calls within Brighton (90<sup>th</sup> percentile). The alarm processing for fire was 2:50 and 2:10 for EMS; turnout time was 3:11 for fire responses and 3:09 for EMS responses; travel time was 18:40 for fire responses and 17:24 for EMS. The 90<sup>th</sup> percentile total response time was 28:04 for fire and 20:20 for EMS. For the charts above, they show both fire and EMS response times together.

### 🚩 – Of Note...

One item to note is that if you were to add the processing time, the turnout time, and the travel time, it will not necessarily (and often doesn't), sum the total response time. This is due to some of the limitations within the datasets and gaps within timestamps. Where there are missing timestamps, those particular key performance indicators (KPI) are excluded as they cannot accurately be calculated out.



## Brighton – 2020 Incidents by Time of Day

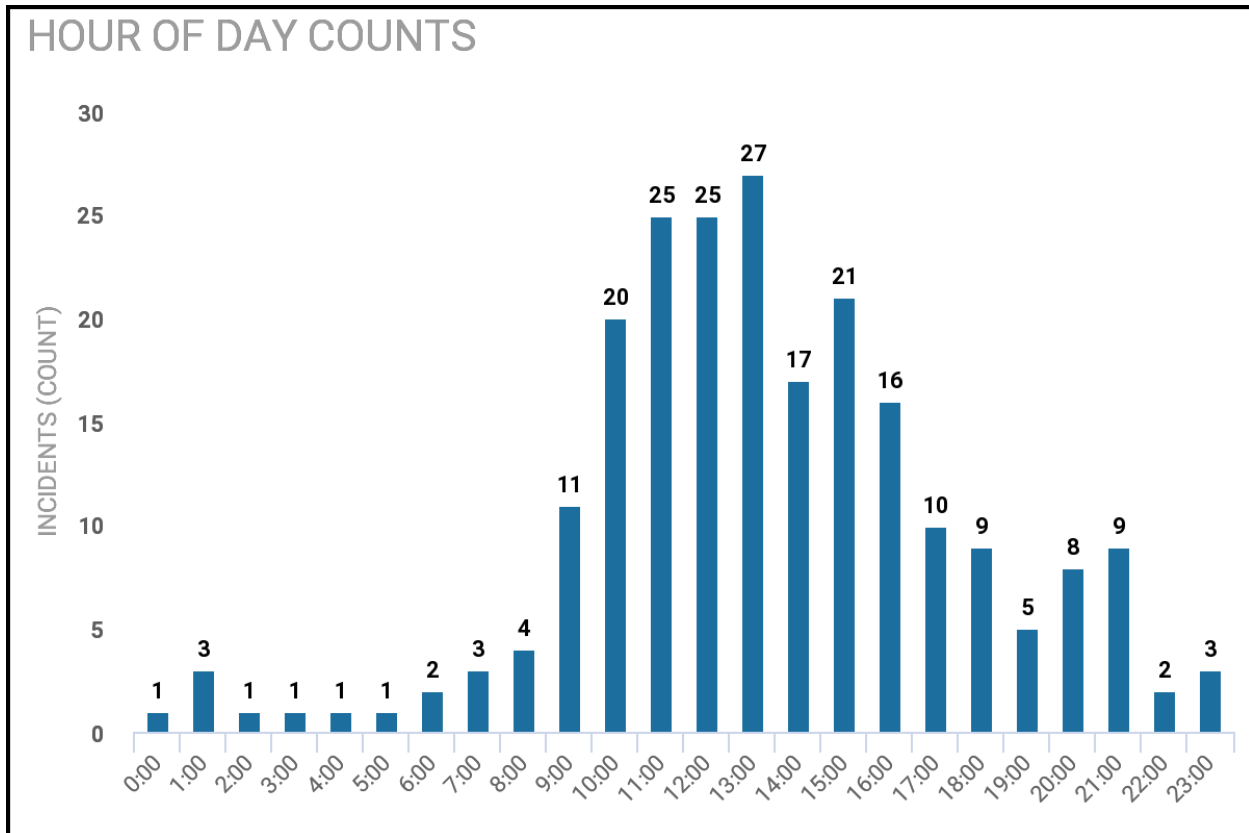
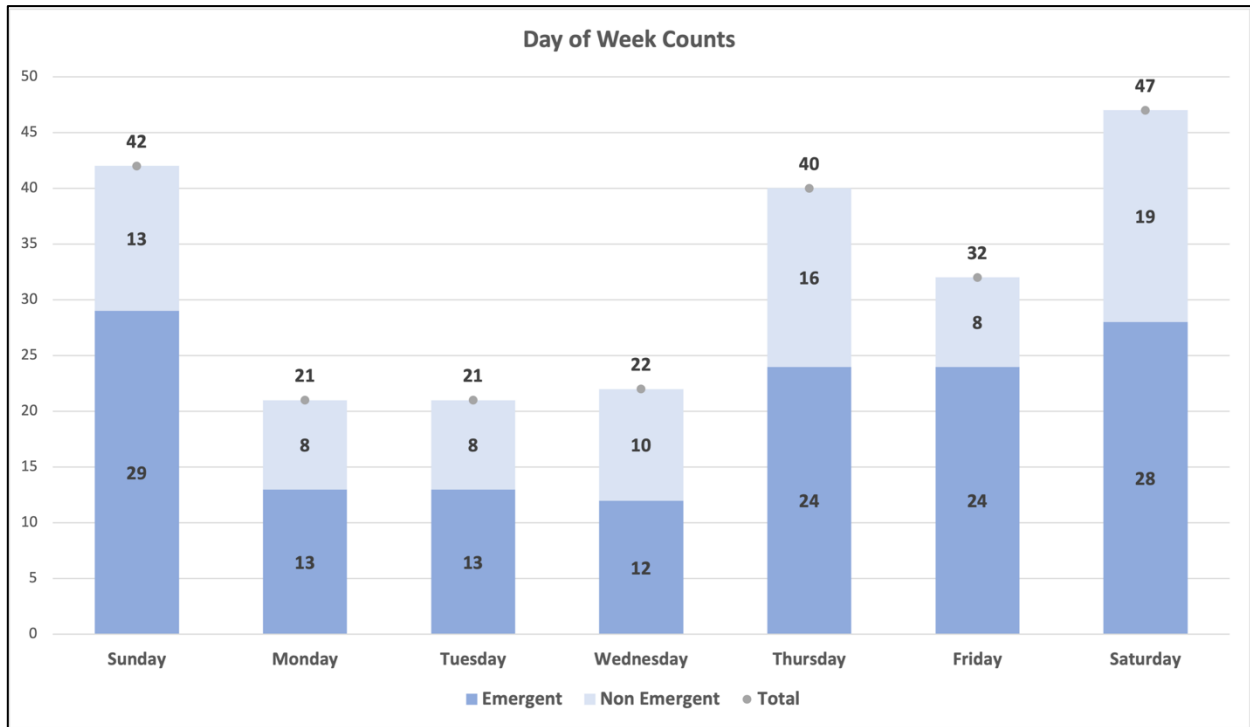


Chart 18 – Brighton 2020 Incidents by Time of Day

The above table demonstrates the incidents by time of day and the time of greatest demand within Brighton for all service calls. This chart illustrates that the greatest demand for service delivery begins at 9:00 AM and starts to decrease at 4:00 PM.

## Brighton – 2020 Incidents by Day of Week



*Chart 19 – Brighton Incidents by Day of Week*

This chart demonstrates the call volume based on the day of the week, with an increase in all calls occurring over the weekend as well as the peak volume for all calls in Brighton occurring on Saturday.

## Brighton – 2020 Incidents by Month

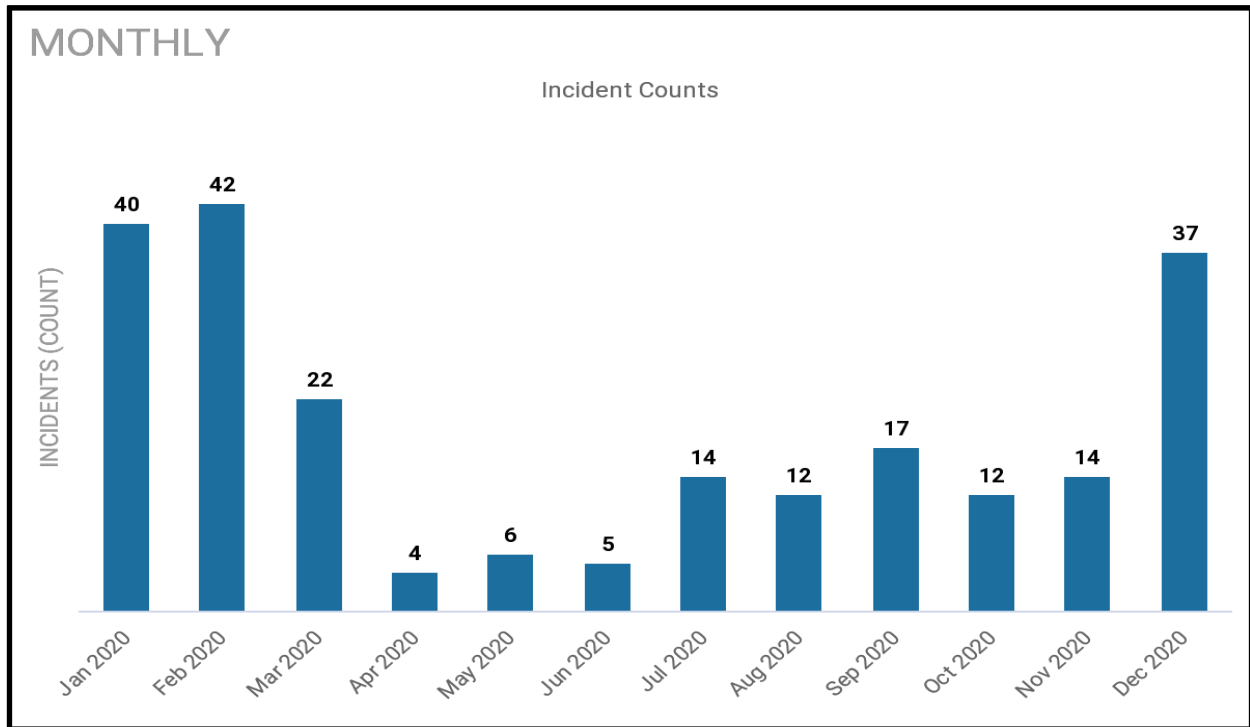


Chart 20 – Brighton Incidents by Month

This chart demonstrates the call volume based on the month, showing a large increase during the winter months within Brighton.

## Brighton – EMS Calls

EMS calls are filtered by final disposition codes and this data is taken from VECC and determined by the patient acuity at the time of call termination. Often times the EMS calls identified from final disposition are different than the number of EMS calls that were initially dispatched due to one being the initial call type, and one being what call type the call was closed as by responding fire crews.

	CY 2020	CY 2019	CY 2018
<b>ALS Transports</b>	87	95	95
<b>BLS Transports</b>	70	53	51
<b>Scene Release</b>	10	5	7
<b>Public Assistance</b>	0	0	0
<b>EMS Total Calls</b>	167	153	153

Note: There is possibly a difference if you were to add all calls due to data reporting mechanisms. Public assistance calls will sometimes get duplicated with a scene release, depending on dispatch code, but those calls do not carry across to the total calls. Also, cancelled calls go into a different final disposition so the numbers in the 'Incidents by Dispatch Type' are reflective of this difference.

Table 57 – Brighton EMS Calls

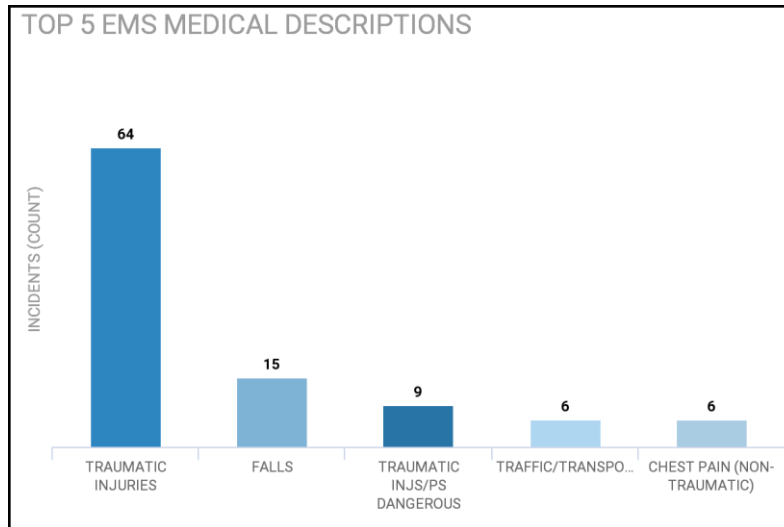


Chart 21 - Top 5 EMS Medical Calls - 2020

### Brighton – 2020 Fire Incidents by Dispatch Type

NFIRS Description	Incident Count	% of Incidents
Natural Vegetation Fire	2	25%
Outside Rubbish Fire	3	38%
Special Outside Fire	1	13%
Fire, Other	2	25%
<b>Total</b>	<b>8</b>	<b>100%</b>

Table 58 – Brighton 2020 Incidents by Dispatch Type

### Brighton – Building Occupancy Classification and Risk Categories

Occupancy Classification	Low	Moderate	High	Maximum	Total
Assembly	2	0	0	0	2
Commercial/Industrial	1	1	0	0	2
Educational	0	0	0	0	0
Government	1	0	0	0	1
Healthcare	0	0	0	0	0
Hazardous	Unknown	Unknown	Unknown	Unknown	2*
Storage	0	0	0	0	0
Residential	3	0	0	0	3
Residential – Multi Unit	2	0	2	1	5
High Rise	N/A	N/A	0	1	1
<b>Total</b>	<b>9</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>16</b>

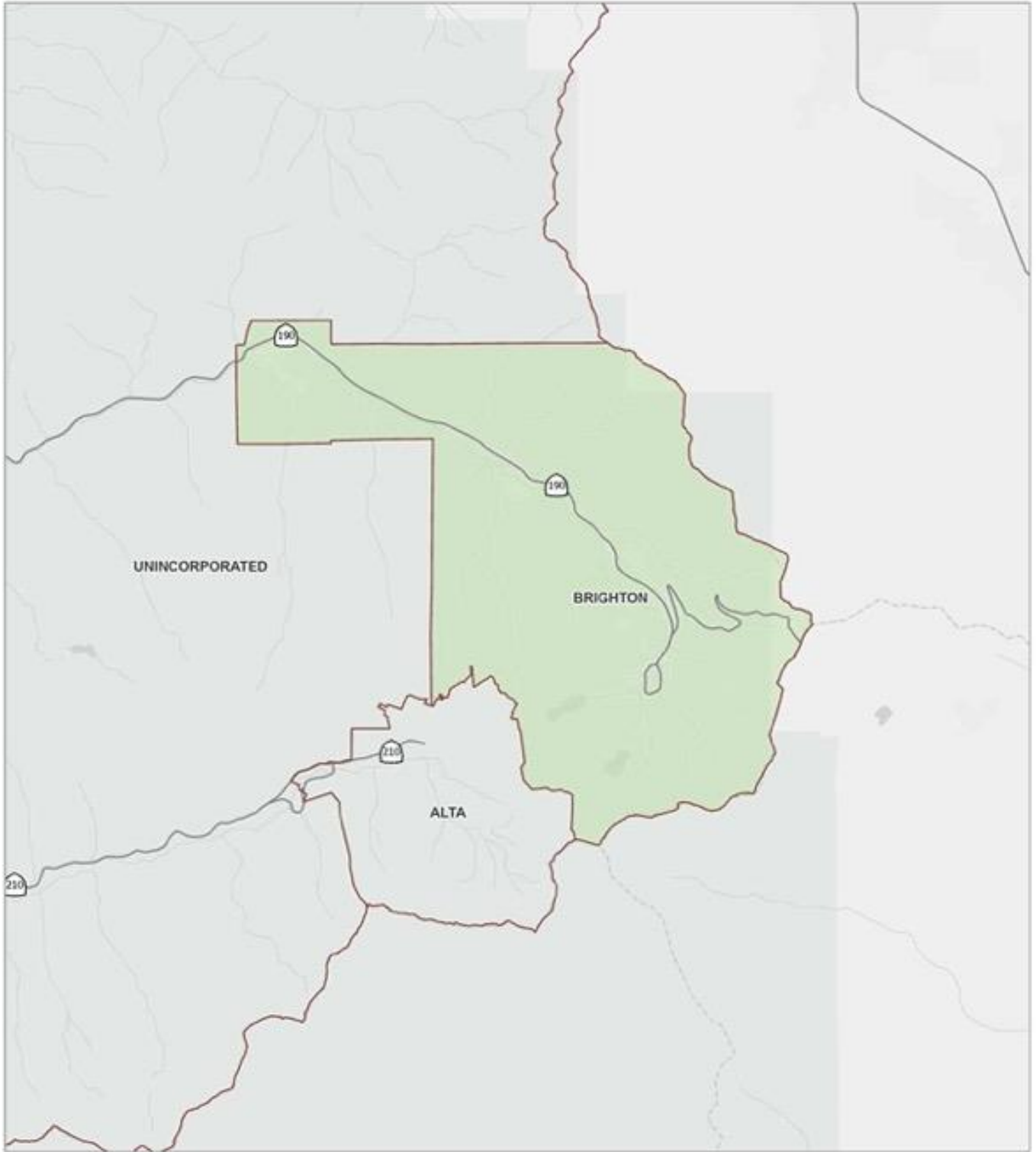
\*There is currently a gap within the identification of building size regarding hazardous materials sites. This is a gap that is being closed over the next several years as we collect the data and information.

Table 59 – Brighton Building Occupancy and Risk Categories

### Building Size / Considerations

For purposes of risk classification, UFA has outlined the following risk classifications for building size, regardless of occupancy type (except residential). Low risk = 1-4,999 square feet. Moderate risk = 5,000-9,999 square feet. High risk = 10,000-99,999 square feet. Maximum risk = >100,000 square feet.

For residential occupancies, the following classifications apply. Low risk = 1-1,999 square feet. Moderate risk = 2,000-3,999 square feet. High risk = 4,000-9,999 square feet. Maximum risk =  $\geq$ 10,000 square feet.

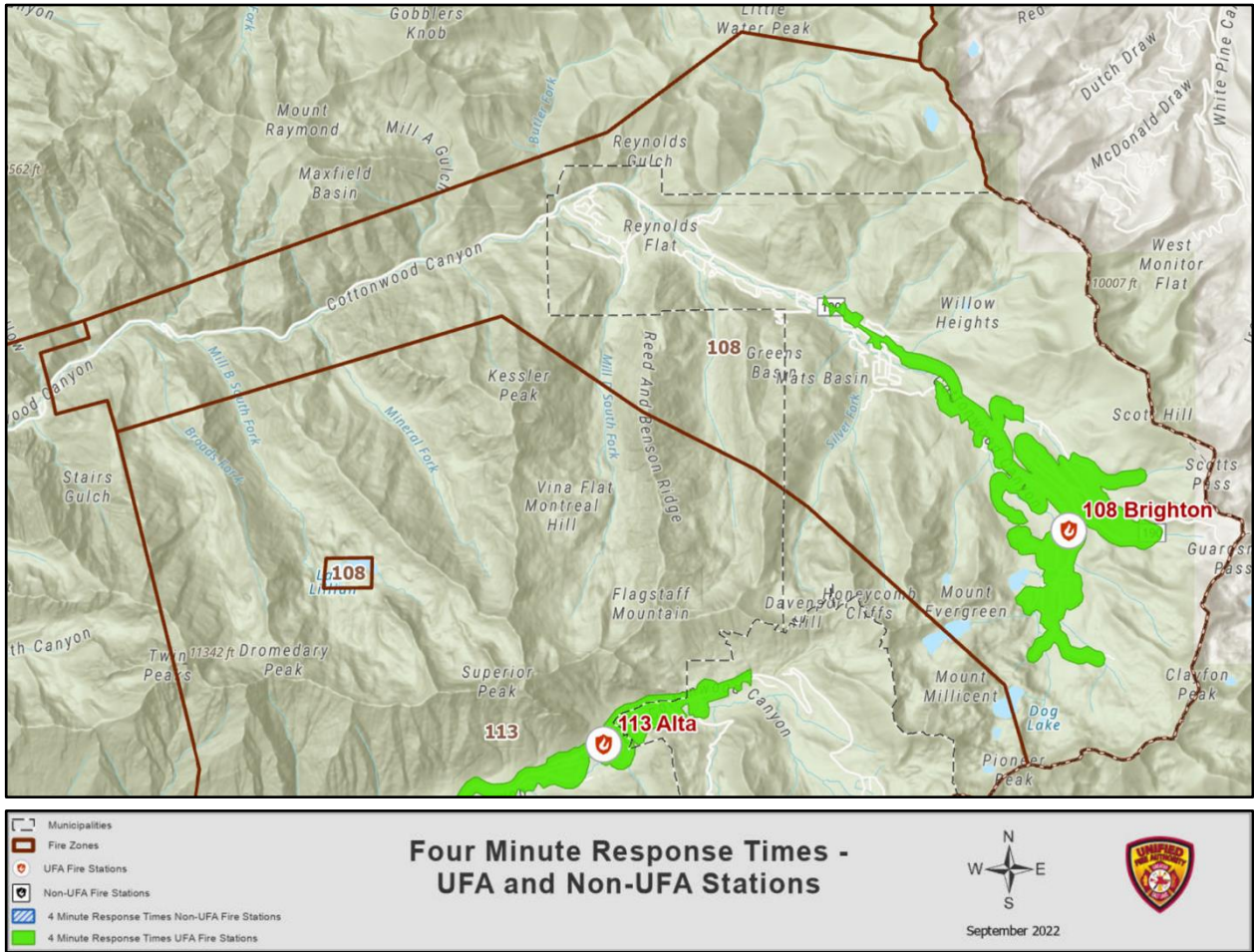


-  Municipal Boundaries
-  State Route
-  Commercial
-  Forestry

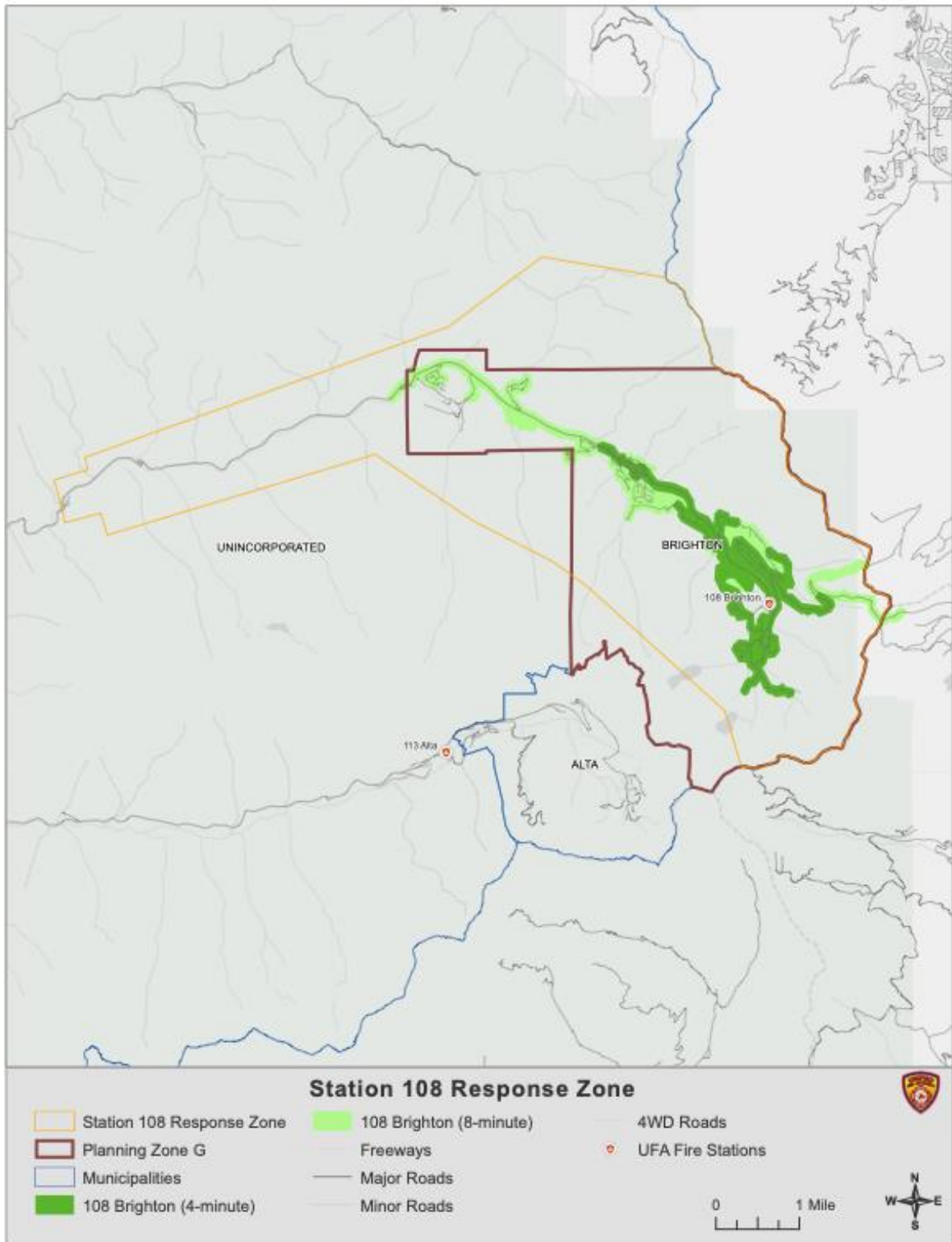
**Town of Brighton**



Map 79 – Brighton with Land Use



Map 80 - 4-Minute Travel Time, UFA and Aid



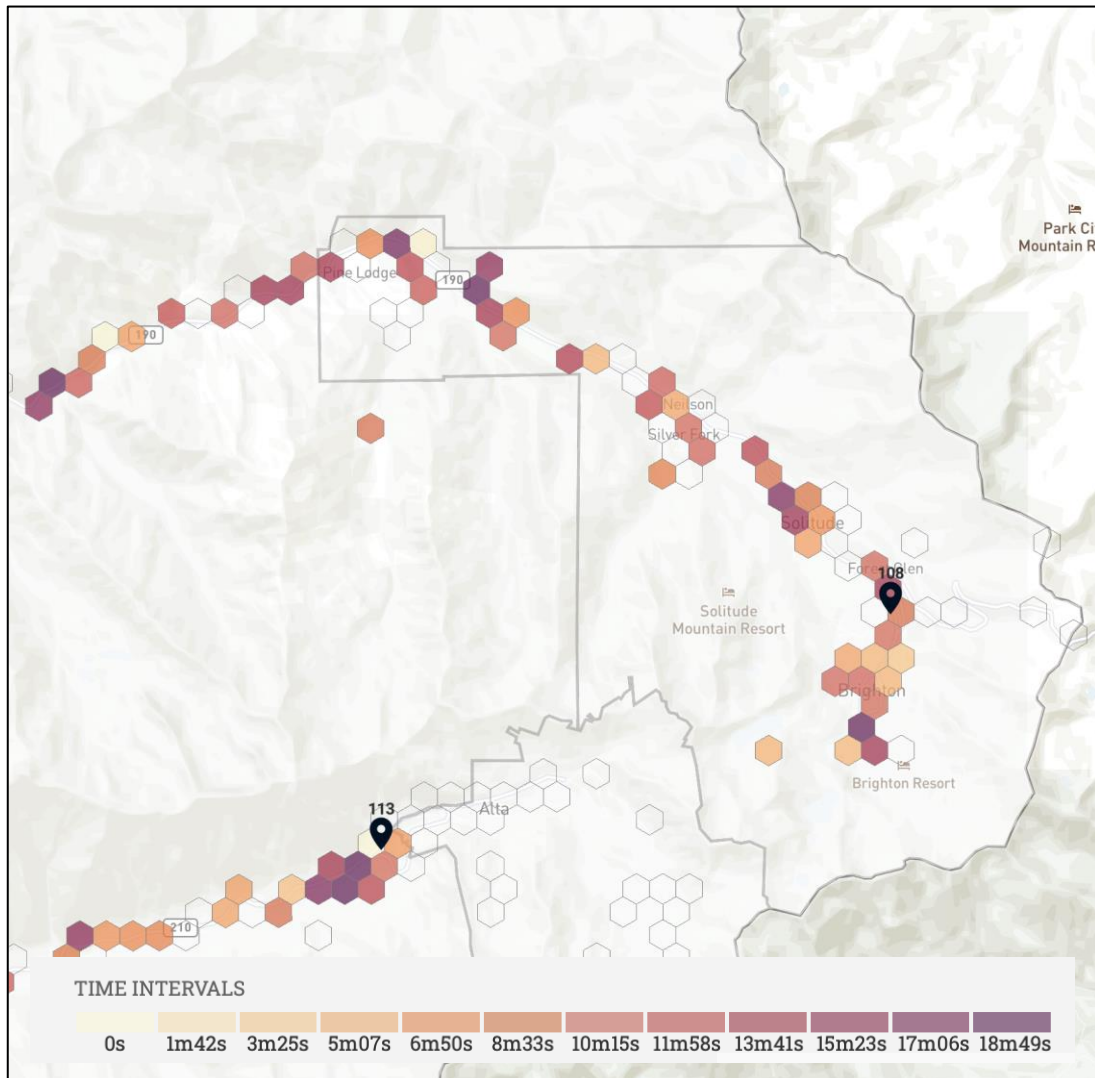
Map 81 - Station 108 4- and 8-Minute Travel Times



## Brighton – First Arriver Travel Times

The following maps demonstrate the 90<sup>th</sup> percentile of travel times based off the last three years of historical data (2018-2020). The darker the color is, the more delayed the response, with the green and light colors demonstrating below or near target times.

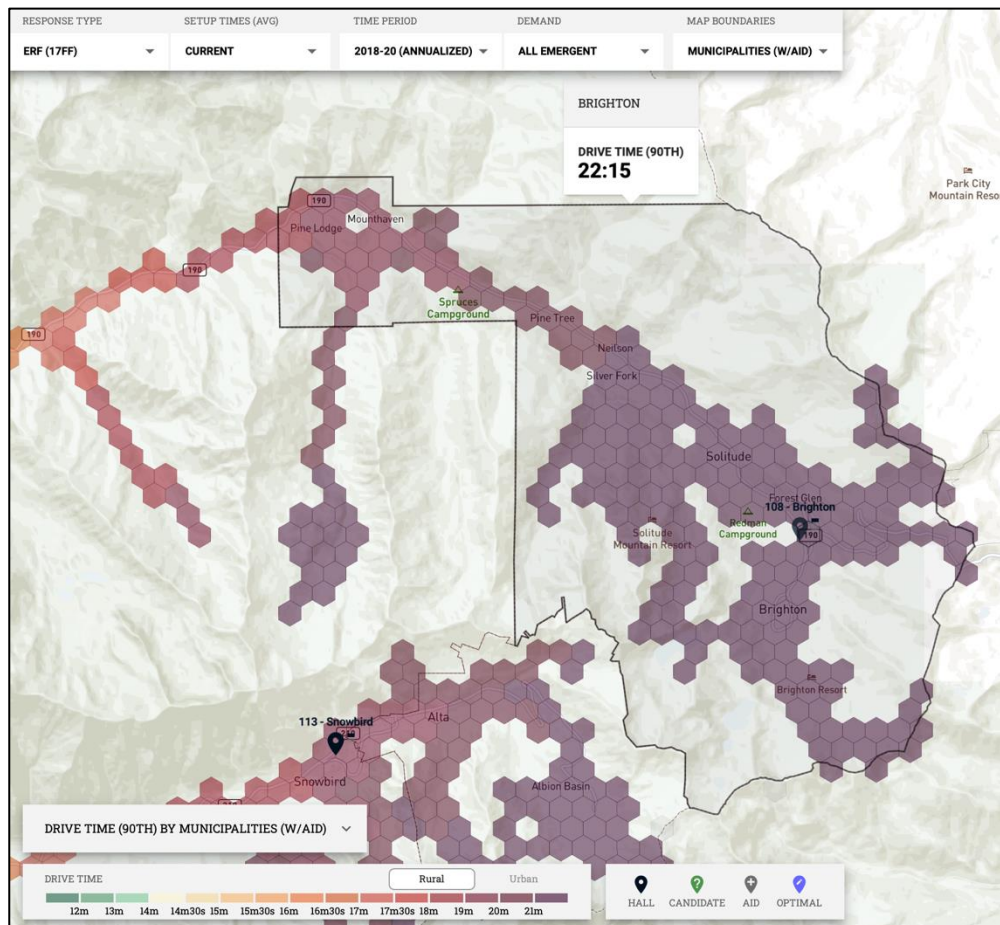
The darker colors on the bar within the key demonstrating longer travel times by apparatus. This map's drive times (or travel times) are based off the current NFPA 1710 standard of four minutes (90<sup>th</sup> percentile) from notification of the alarm to the arrival of the first arriving apparatus — not an adopted standard by UFA. UFA is currently in process of identifying benchmark and target standards to be adopted by the UFA Board of Directors. Currently within Brighton, the 90<sup>th</sup> percentile drive time is 18:40 for fire and 17:24 for EMS.



Map 82 – Brighton Response Times – All Aid

## Brighton – Residential Fire Effective Response Force (17 FF)

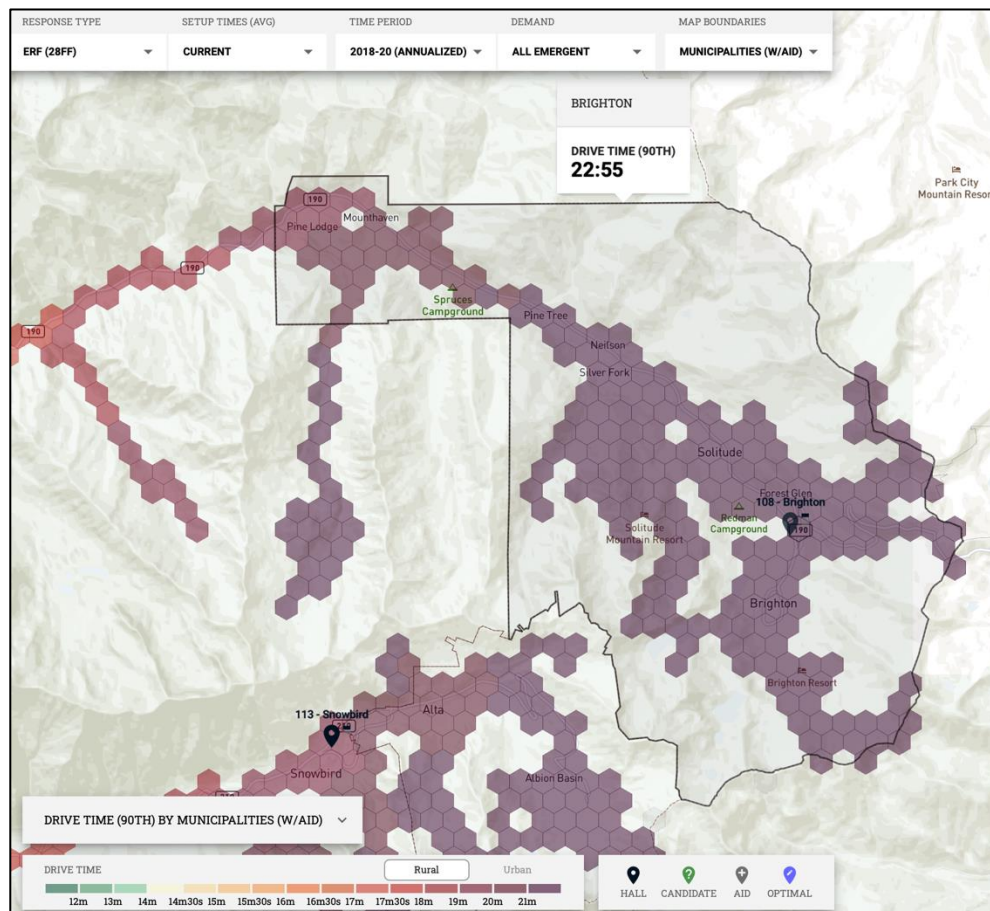
This map demonstrates the projected coverage of a multi-unit response to a residential fire based off all apparatus being within their station. The green to light yellow demonstrates the ability to have seventeen firefighters (a residential fire effective response force) on scene based off a residential urban fire force response. This map's drive times (or travel times) are based off the current NFPA 1710 standard of eight minutes (90<sup>th</sup> 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. UFA is currently in process of identifying benchmark and target standards to be adopted by the UFA Board of Directors. Based off predictive data, it is projected that the 90th percentile for 17 firefighters to arrive on scene would be 22:15.



Map 83 – Brighton Response Times – Residential Fire Effective Response Force (17 ERF)

## Brighton – Commercial Fire Effective Response Force (28 FF)

This map demonstrates the projected 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 (90<sup>th</sup> 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. UFA is currently in process of identifying benchmark and target standards to be adopted by the UFA Board of Directors. Based off predictive data, it is projected that the 90th percentile for 28 firefighters to arrive on scene would be 22:55.



Map 84 – Brighton Response Times – Commercial Fire Effective Response Force (28 FF)

## Brighton 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
Low	Low	Low	Low	High	Low	High	Low	Low	Low	Low	Low

Table 60 – Brighton Hazard Matrix

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

### Infrastructure – Transportation

The primary roadway that runs to the Town of Brighton is State Road 190 which runs east/west from Wasatch Boulevard. There are 0 linear miles of Interstate/US Highway, 9.97 linear miles of State Highways, and 37.6 total linear miles of roadway. UTA also runs bus routes to Brighton. Brighton is in the low-risk category for road infrastructure.

### Infrastructure – Water

There is no independent water district within Brighton, however there are twenty-five separate water purveyors within Brighton.

### Infrastructure – Dams

There are three identified dams within Brighton. Brighton is in the low-risk category for dam infrastructure.

### Natural Hazards

Within Brighton, there are high concerns with avalanche areas and over 140 avalanche slide pathways in Big Cottonwood Canyon. Brighton is in the high-risk category for

avalanche. There are no identified fault lines that run through the city (see Map 8). Brighton is in the low-risk category for liquefaction and low-risk category for fault lines. One of the biggest hazards that occur within an earthquake scenario is the number of unreinforced masonry (URM) buildings. Within Brighton, there are an estimated 20 URM's, which constitutes about 0.08% of the overall URM's within UFA's response areas. Brighton is in the low-risk category for unreinforced masonry.

#### Wildland Urban Interface

There is high risk of urban interface fires within Brighton and within Big Cottonwood Canyon. One of the primary hazards is the lack of egress routes going out of the canyon. Brighton is in the high-risk category for Wildland Urban Interface.

#### Hazardous Materials / Tier II Sites

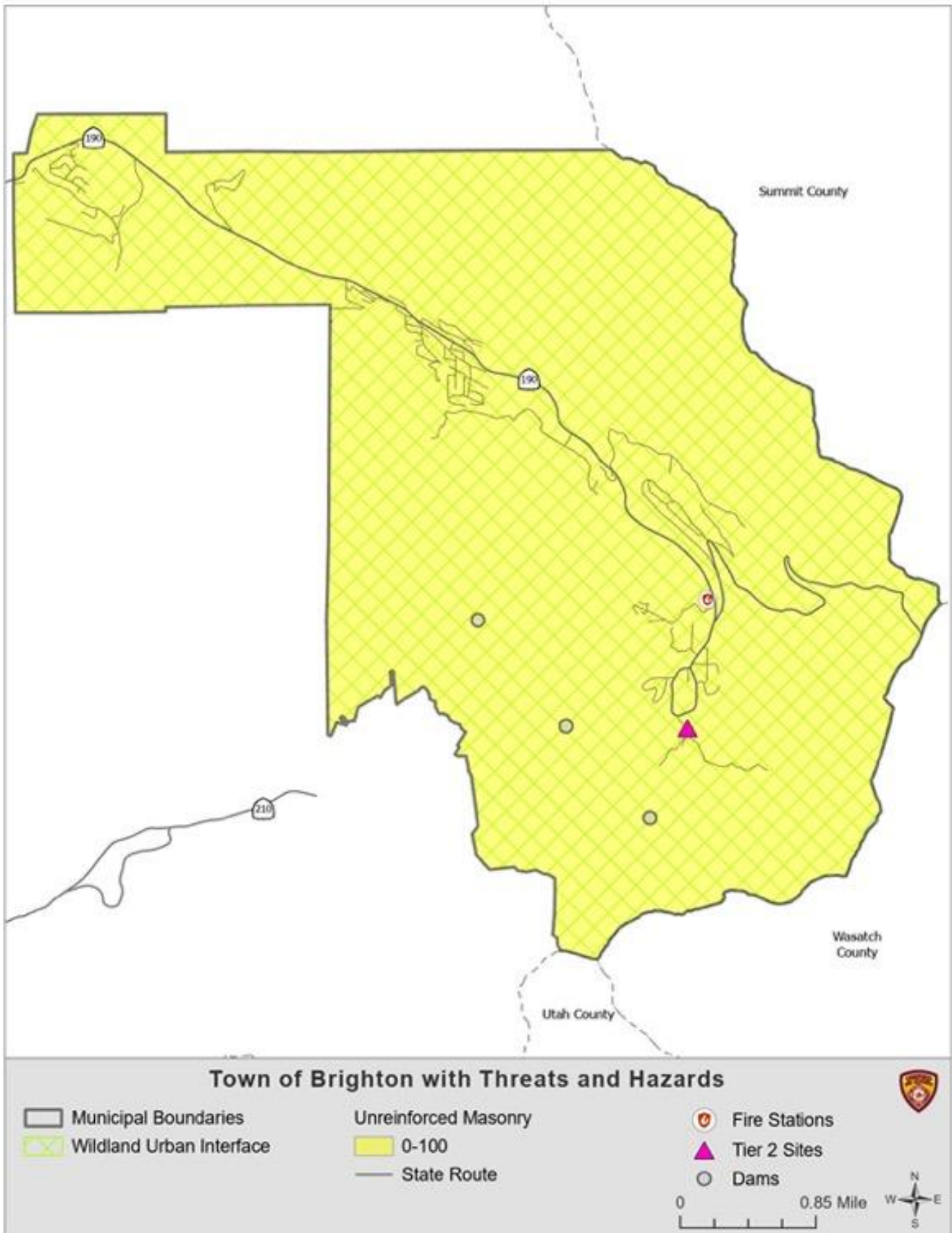
There is one identified HazMat/Tier II Sites within Brighton, which is in the moderate-risk category.

#### Hospitals

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

#### Schools

Brighton has zero elementary schools, zero middle schools, and zero high school within city boundaries, which places it in the low-risk category.



Map 85 – Brighton with Combined Hazards

## Life and Property Loss

From 2015-2020, there have been zero fatalities attributed to fire. There has been a total estimate of \$18,000.00 of property loss and a total estimate of \$1,800.00 of content loss due to fire.

## Unified Fire Shared Services

With a regional-response model, the Unified Fire Authority brings special services to bear when the situation calls for it, not relying on automatic or mutual aid which provides a quicker and more effective delivery of service to its residents.

### Battalion Chiefs

Unified Fire Authority staffs three operational battalion chiefs (BCs) daily, in addition to a 40-hour Operations Chief (OC). These BCs and OC respond to large, complex, or expanding incidents — providing incident command, safety, and operational direction. Each BC covers an area of UFA's service area and respond to calls for service in any jurisdiction. Battalion 11 is housed out of Station 101 in Millcreek, Battalion 12 is housed out of Station 121 in Riverton, and Battalion 13 is housed out of Station 118 in Taylorsville.

### Heavy Rescue Companies

Heavy Rescue specializes in structural collapse, confined space rescue, trench collapse rescue, vehicle extrication, machinery disentanglement, rope rescue (high angle, low angle, rigging) and rapid intervention (Firefighter Rescue). The UFA Heavy Rescue Program consists of two independent rescue companies strategically placed in UFA's jurisdiction. Station 117 in Taylorsville, and Station 121 in Riverton house our Heavy Rescue Teams.

### Hazardous Materials (HazMat) Companies

The Hazardous Materials Teams provide an efficient, effective, and professional Hazardous Material Mitigation response. HazMat Companies respond to hazardous material releases/spills for the purpose of mitigating the release/spill. They select and use proper specialized chemical personal protective equipment dependent on the nature of the incident. The HazMat Program consists of two independent HazMat

companies strategically placed in UFA's jurisdiction. Station 124 in Riverton, and Station 126 in Midvale house our HazMat Teams.

### Water Rescue Teams

UFA has swift water and ice rescue capabilities. These companies respond to victims recreating in our swift canyon rivers and our lakes and reservoirs. Station 116 in Cottonwood Heights, Station 117 in Taylorsville, Station 121 in Riverton, and Station 123 in Herriman house companies with water rescue capabilities.

### Wildland Division

UFA's Wildland Division provides highly trained and experienced wildland fire and all-risk response resources to local, state, and federal incidents. The Wildland Division oversees the training and certification of UFA personnel for response to wildland fires and all-hazard incidents. We also work with UFA Communities to educate residents on wildfire preparedness and provide mitigation services to reduce the risks of wildfire. UFA has a special capability where a Duty Officer is able to act as the Fire Warden within UFA's jurisdictions, allowing the ordering of resources much more quickly than having to rely on a Fire Warden that may or may not be readily accessible. Station 103 in Herriman currently houses the Duty Officer.

### Investigations Division

Arson and Explosive related incidents are considered two of the most dangerous criminal activities that threaten our citizens. The need exists to protect the citizens of our jurisdiction from loss of life and property by reducing the crime of arson, arson-related crimes, improvised explosive devices (IEDS) and the prevention of future violent crimes. The Investigations Division addresses this need by establishing a sound foundation of effective enforcement, focusing on the apprehension of the offender, while in partnership with other Local, state and federal law enforcement agencies. The team utilizes highly-trained Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) certified K-9's that assist with accelerant and explosives detection.

### Urban Search & Rescue

A FEMA Urban Search and Rescue Task Force is a team of individuals which serve as a resource for disaster response at local, state, and federal levels. It is comprised mainly of firefighters but includes structural engineers, medical professionals,



canine/handler teams and emergency managers with highly specialized training in urban search and rescue environments.

Utah Task Force 1 (UT-TF1) is one of 28 Type I, Federal Urban Search & Rescue (US&R) Task Forces in the United States. This program brings a highly trained, multi-hazard Task Force that is especially designed to respond to a variety of emergencies/disasters including earthquakes, hurricanes, tornadoes, floods, terrorist acts and hazardous material releases. Fire department personnel that are task force members receive specialized training and skills that directly benefit Unified Fire Authority.

### [Salt Lake County Emergency Management](#)

The Salt Lake County Division of Emergency Management serves our citizens by directing and coordinating resources for disasters and emergencies through preparation, planning, mitigation, response, and recovery. The Salt Lake County Emergency Coordination Center is activated and manned during any event—from small-scale to large-scale occurrences—to disasters both natural and man-made that can or have exceeded the resources of any particular jurisdiction. Currently, the Salt Lake County ECC assists and obtains resources for the 22 jurisdictions located within the Salt Lake Valley. Salt Lake County EM assists these jurisdictions through the activation of 15 Emergency Support Functions (ESFs) filled by employees from a multitude of backgrounds. The ESF employees have authority throughout Salt Lake County to fill and order additional support for the operations occurring in the field until the impacted jurisdiction can return to their normal operations and functions. The Emergency Management Division is committed to keeping the public safe through community outreach, training, dissemination of important public information, training of staff and the creation of a more resilient community through mitigation, preparation, response, and recovery. The ECC has been activated for many events such as Child Abduction Response Team (CART) Deployments, wildland fires such as the Rosecrest and Machine Gun fires, flooding, severe weather events, earthquakes, civil unrest, the COVID-19 pandemic, Line of Duty Deaths (LODD), and many other events.



## Unified Fire Authority

3380 South 900 West  
Salt Lake City, UT 84119

# Camp Williams

## Risk Assessment

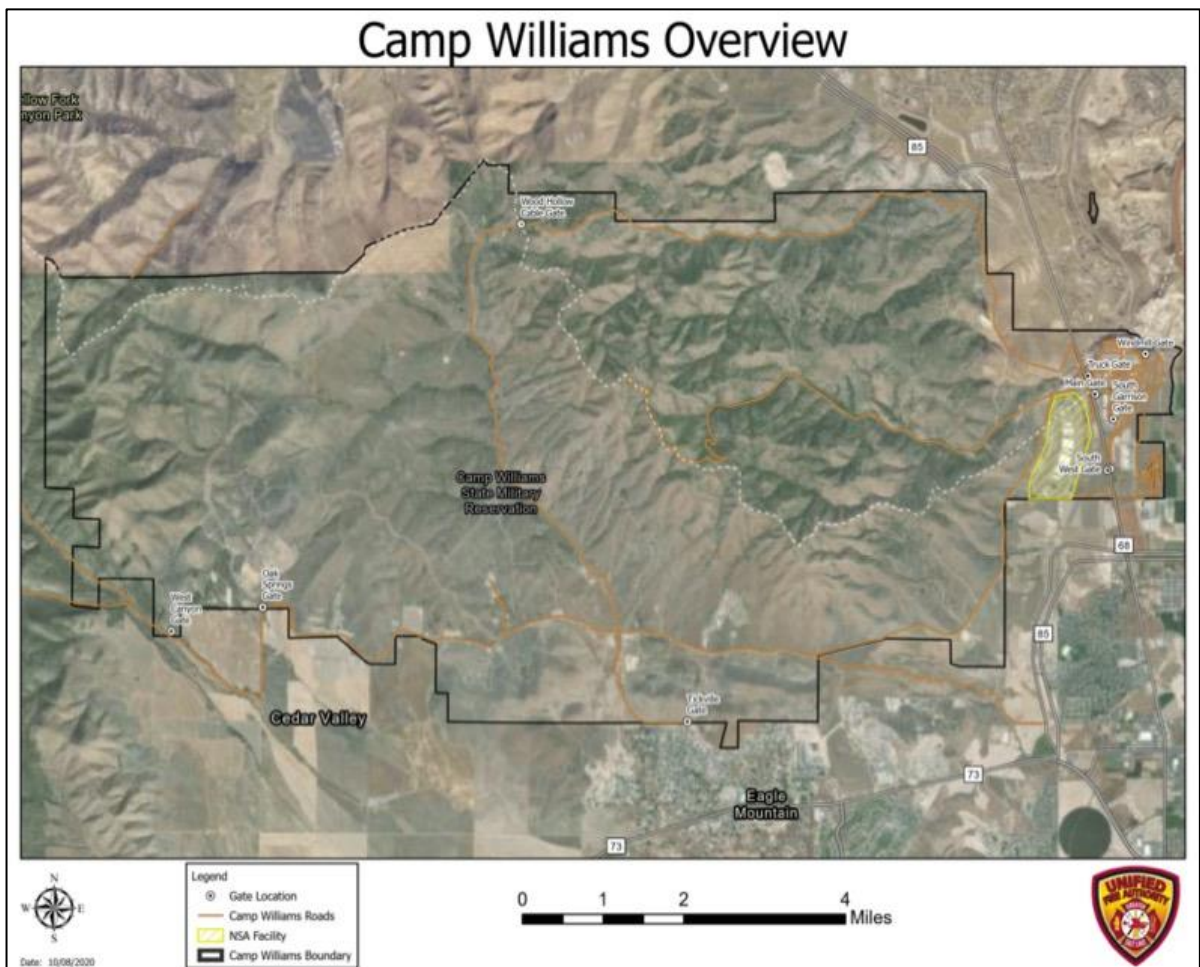


Photo Courtesy of: UTNG



## Camp Williams Planning Zone

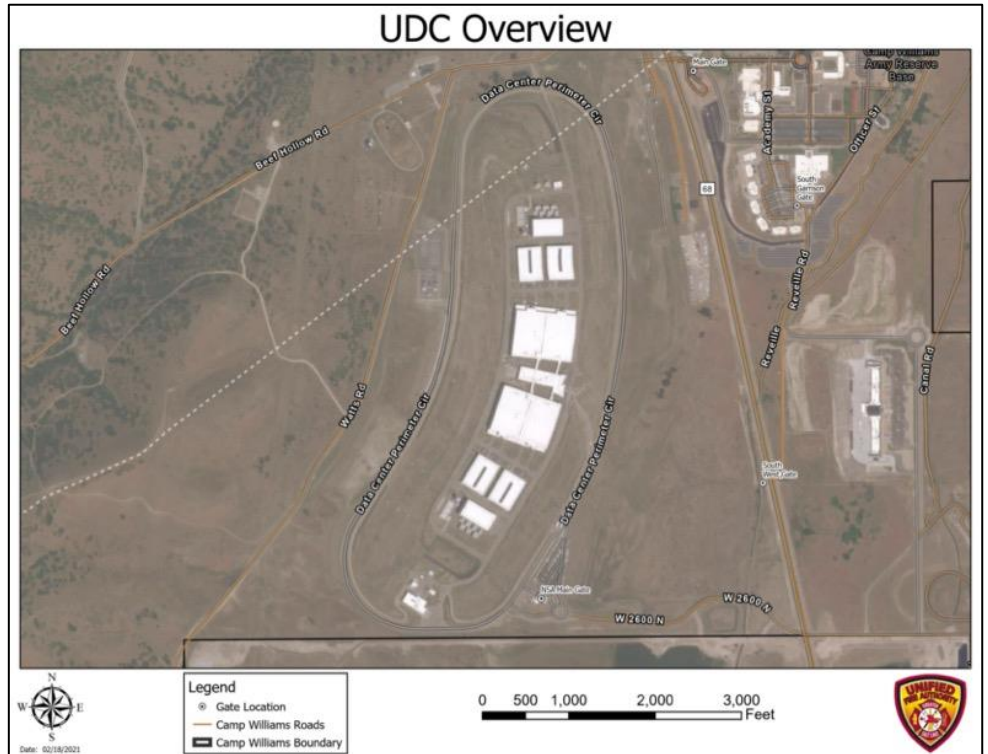
UFA has one wildland response station within Camp Williams (CW). Camp Williams is a military installation for the Utah National Guard that splits across both Salt Lake and Utah Counties and is over 47 square miles in area. CW contracted with UFA after a large fire started on CW property and extended into the City of Herriman. Station 127 is located at 17800 Camp Williams Road, Camp Williams and houses the Camp Williams Fire Management Officer (FMO), the Assistant FMO (AFMO) and a seasonal handcrew. Camp Williams is located in Battalion 12. CW generally works closely with CW Range Control for any on-base wildland fire responses. Camp Williams also includes administration buildings, mess halls, classrooms, and a complex of warehouses, workshops, and maintenance facilities and is a national training center that hosts over 25 active munition ranges.



Map 86 - Camp Williams Overview

## Utah Data Center Overview

The Utah Data Center is a one million square-foot building which contains a 100,000 square foot Tier III data center. The remaining 900,000 square feet is used for technical support and administrative space. The entire complex has over 20 buildings and includes water treatment facilities, chiller plants, electric



Map 87 - Utah Data Center Overview

substation, fire pump house, warehouse, vehicle inspection facility, visitor control center, and 60 diesel-fueled emergency standby generators and fuel facility for a three-day power backup capability. This occupancy poses significant response risks and includes fire, medical, hazmat and technical rescue potential.

UFA has one station within the Camp Williams Planning Zone covering a total of 47 square miles with a transient population due to it being a military installation. UFA responded to 29 calls for service in 2020.

Planning Zone	Population	Population Percentage of UFA	Square Miles	Population Density per Sq Mile	Classification
<b>Camp Williams</b>	Transient (Military Installation)	0	47	N/A	Wilderness

## Camp Williams Station Information

### Station 127 information:

- Owner – UFSA
- Address – 17800 Camp Williams Road, Building 2200
- Staffing and Apparatus –
  - Wildland Fire Management Officer (1 person, Full Time)
  - Assistant Fire Management Officer (1 person, Full Time)
  - Type 3 Engine (4 handed, seasonal)
  - Type 4 Engine (4 handed, seasonal)
  - Type 6 Engine (2 handed, seasonal)
  - Type 1 Water Tender (cross-staffed)
  - Type 1 Tactical Water Tender (cross-staffed)
  - Type 6 Engine (2 handed – fuels crew)
  - Crew Carrier (6 handed – fuels crew)



*Image 5 – Camp Williams Station 127*

## Surrounding UFA and Automatic/Mutual Aid Response Stations

Surrounding fire stations and fire departments that are within an eight-minute response to Camp Williams are:

- UFA Station 251 (Eagle Mountain), with a three-person medic engine and a jump medic ambulance
- UFA Station 252 (Eagle Mountain), with a four-person medic ladder and a two-person peak load medic ambulance
- Bluffdale Station 91, with a two-person medic engine and a two-person medic ambulance
- Bluffdale Station 92, with a two-person medic engine and a two-person medic ambulance
- Saratoga Springs Station 261, with a two-person ladder and a two-person medic ambulance

### Camp Williams – Incidents by Dispatch Type Found

The following data is what the initial dispatch type was. When fire companies arrive on scene, the final situation found could be different than what was originally dispatched, including a reclassification of a call type from one to another. Cancelled calls occur if the company is cancelled en route to a call and never arrives on scene, which then changes the dispatch type to an NFIRS 611 call type.

	CY 2020	CY 2019	CY 2018
<b>Fire Suppression</b>	3	6	1
<b>WL Fire Suppression</b>	6	7	5
<b>EMS</b>	6	0	5
<b>Hazardous Materials</b>	0	1	0
<b>Service Calls</b>	0	0	0
<b>Good Intent</b>	14	6	12
<b>False Calls</b>	0	0	1
<b>Other (Misc., Flood, Overpressure)</b>	0	0	0
<b>Total</b>	29	20	24
<b>Cancelled</b>	17	4	11
<b>Overall Total</b>	46	24	35

Table 61 – Camp Williams Call Types

## NFPA 1710

The National Fire Protection Association is an international nonprofit organization that is devoted to eliminating death, injury, property, and economic loss due to fire, electrical and related hazards. The NFPA makes recommendations on over 300 codes and standards. NFPA 1710 recommendations are based off 90<sup>th</sup> percentile times.

### 💡 – In Other Words...

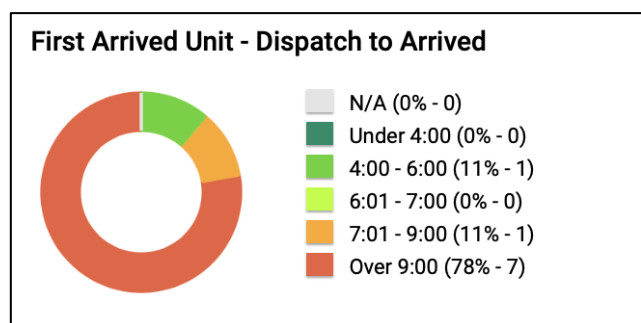
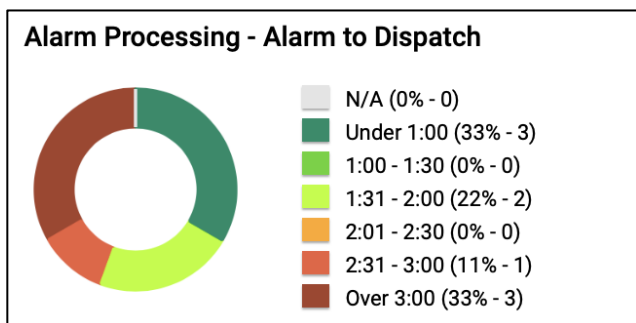
If a value is in the 90<sup>th</sup> percentile, it means the value is better than 90% of all other values in the dataset. In other words, it is within the top 10% of the values.

NFPA 1710 encompasses suggested standards for full-time fire departments and recommends the following times (all of which are at the 90<sup>th</sup> percentile): alarm processing – 64 seconds; turnout time for EMS responses – 60 seconds; turnout time for fire responses – 80 seconds; first arriver apparatus – 240 seconds (4 minutes); initial full-alarm assignment for low and medium hazard responses – 480 seconds (8 minutes); or initial full-alarm assignment for high hazard/high-rise responses – 610 seconds (10 minutes 10 seconds). The total response times are the cumulative totals of call processing time, turnout time, and travel time. NFPA 1710 recommends a total response time of 6:24 for the first arriving apparatus for fire and 6:00 for the first arriving apparatus for EMS.

### 📌 – Of Note...

NFPA 1710 response times have not been adopted by the UFA Board. One of the important elements of the community risk assessment and standards of cover is to identify current 90th percentile times (current baselines) within UFA and to identify realistic benchmarks for the UFA Board to consider for adoption.

## Camp Williams – 2020 Dispatch and Response Times





## Camp Williams – 2020 Total Response Time

Rural	Call Processing: Fire	Turnout Time: Fire	Travel Time: Fire	Total Response: Fire	Call Processing: EMS	Turnout Time: EMS	Travel Time: EMS	Total Response: EMS
<b>Camp Williams</b>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>UFA Urban 2018-2020</b>	2:16	2:39	7:36	10:34	1:47	2:32	6:29	9:18
<b>UFA Rural 2018-2020</b>	2:32	3:05	15:08	19:09	1:56	2:50	14:45	17:45
<b>NFPA 1710</b>	1:04	1:20	4:00	6:24	1:00	1:00	4:00	6:00

*Table 62 – Camp Williams 2020 Response Times, 90<sup>th</sup> percentile values*

Of note: There were not enough incidents within VECC to identify 90<sup>th</sup> percentile times. Most of Camp Williams’ call volumes are split between calls to the Utah Data Center and Wildland incidents out on Camp Williams property.

## Camp Williams – 2020 Incidents by Time of Day

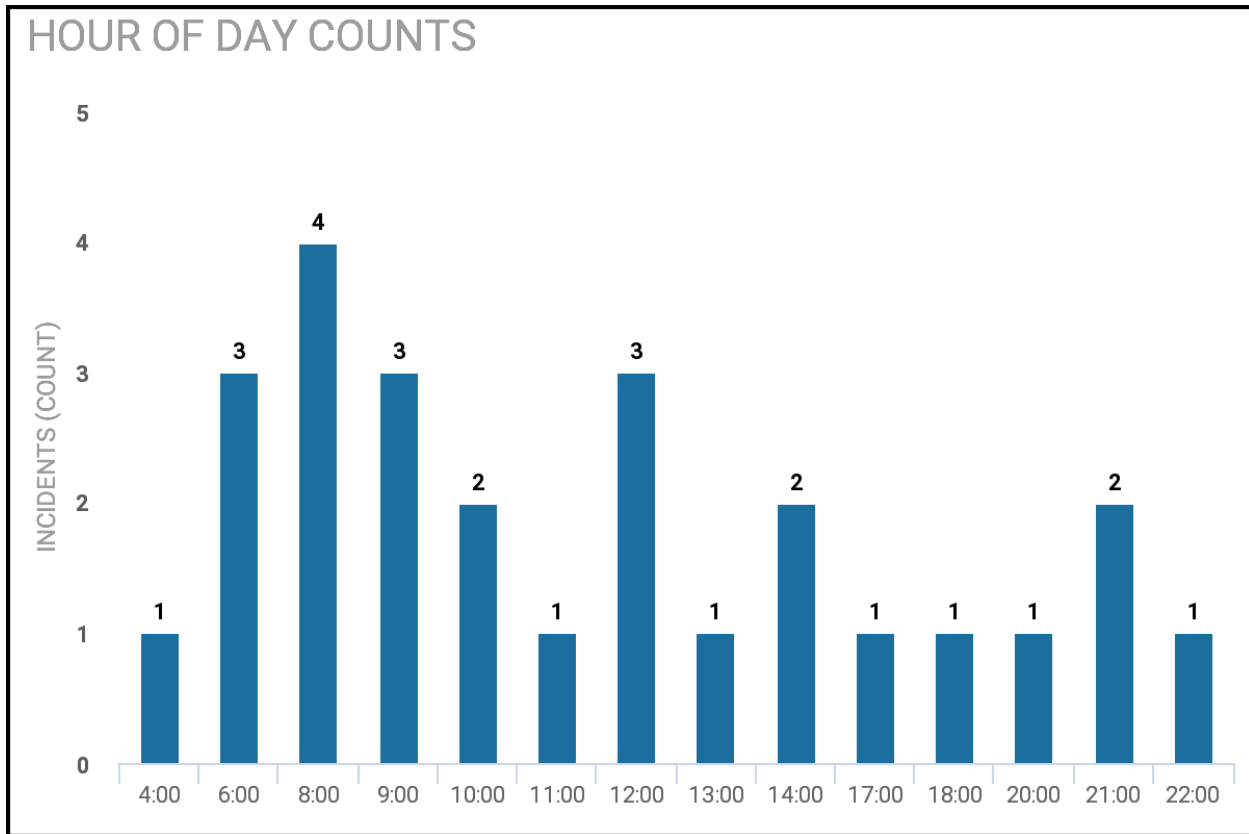


Chart 22 –Brighton 2020 Incidents by Time of Day

The above table demonstrates the incidents by time of day and the time of greatest demand within Camp Williams for all service calls. This chart illustrates that the greatest demand for service delivery is at 8:00 AM and is steady throughout the day.

## Camp Williams – 2020 Incidents by Day of Week

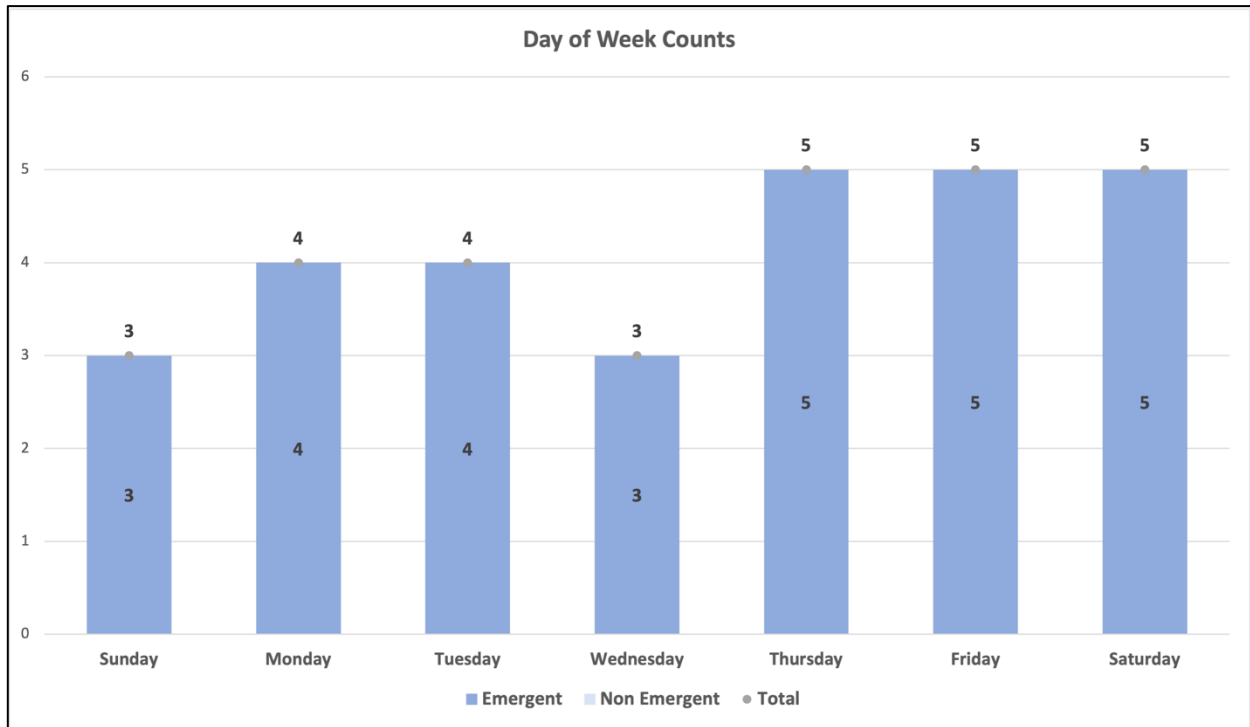


Chart 23 – Camp Williams Incidents by Day of Week

This chart demonstrates the call volume based on the day of the week, with the peak volume for all calls in Camp Williams occurring towards the weekends.

## Camp Williams – EMS Calls

EMS calls are filtered by final disposition codes and this data is taken from VECC and determined by the patient acuity at the time of call termination. Often times the EMS calls identified from final disposition are different than the number of EMS calls that were initially dispatched due to one being the initial call type, and one being what call type the call was closed as by responding fire crews.

	CY 2020	CY 2019	CY 2018
<b>ALS Transports</b>	4	0	0
<b>BLS Transports</b>	1	0	0
<b>Scene Release</b>	0	2	0
<b>Public Assistance</b>	0	0	0
<b>EMS Total Calls</b>	5	2	0

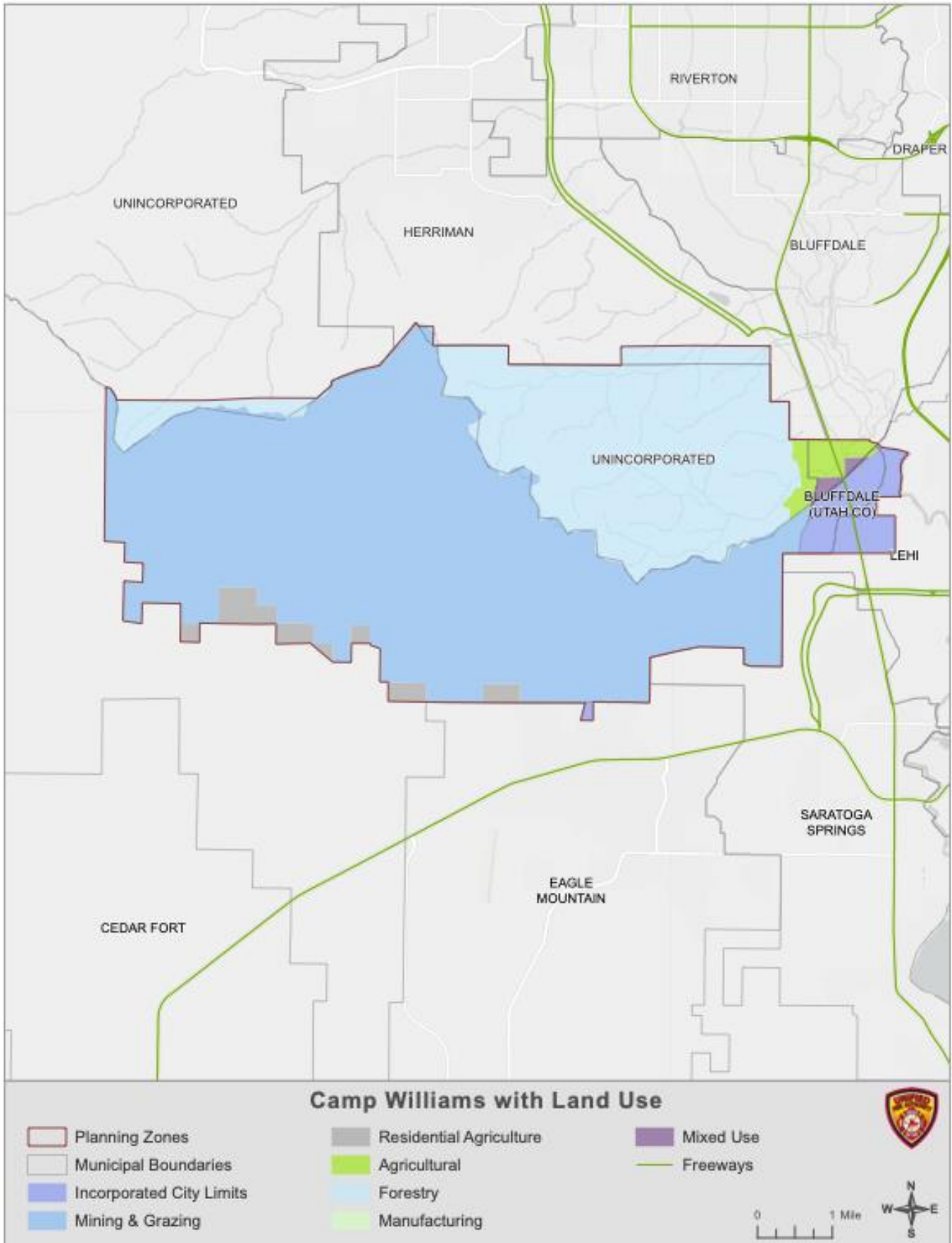
Note: There is possibly a difference if you were to add all calls due to data reporting mechanisms. Public assistance calls will sometimes get duplicated with a scene release, depending on dispatch code, but those calls do not carry across to the total calls. Also, cancelled calls go into a different final disposition so the numbers in the 'Incidents by Dispatch Type' are reflective of this difference.

Table 63 – Camp Williams EMS Calls

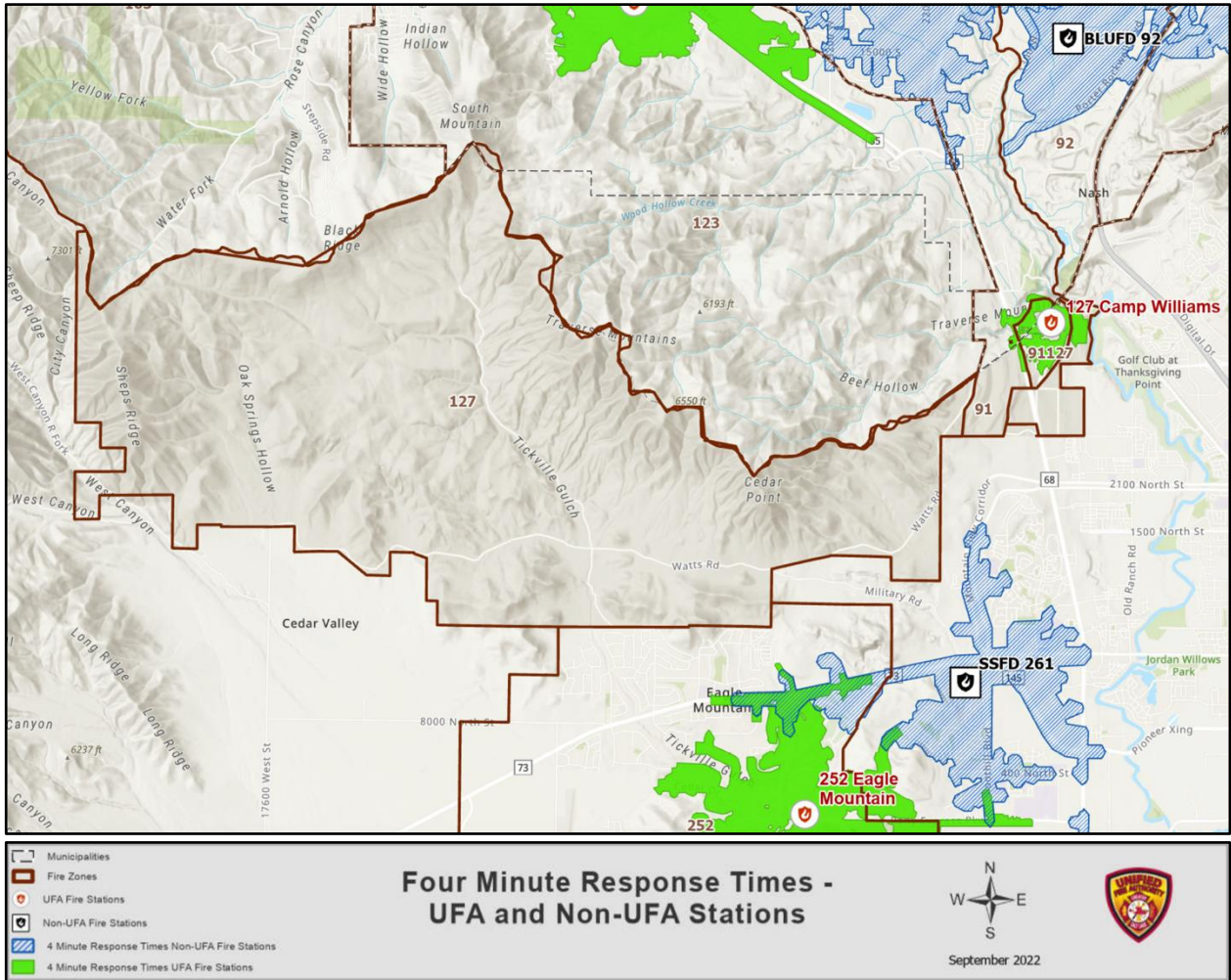
Camp Williams – 2020 Fire Incidents by Dispatch Type

NFIRS Description	Incident Count	% of Incidents	NFIRS Description	Incident Count	% of Incidents
<b>Structure Fire</b>	3	33.3%	<b>Natural Vegetation Fire</b>	6	66.6%
			<b>Total</b>	<b>7</b>	<b>100%</b>

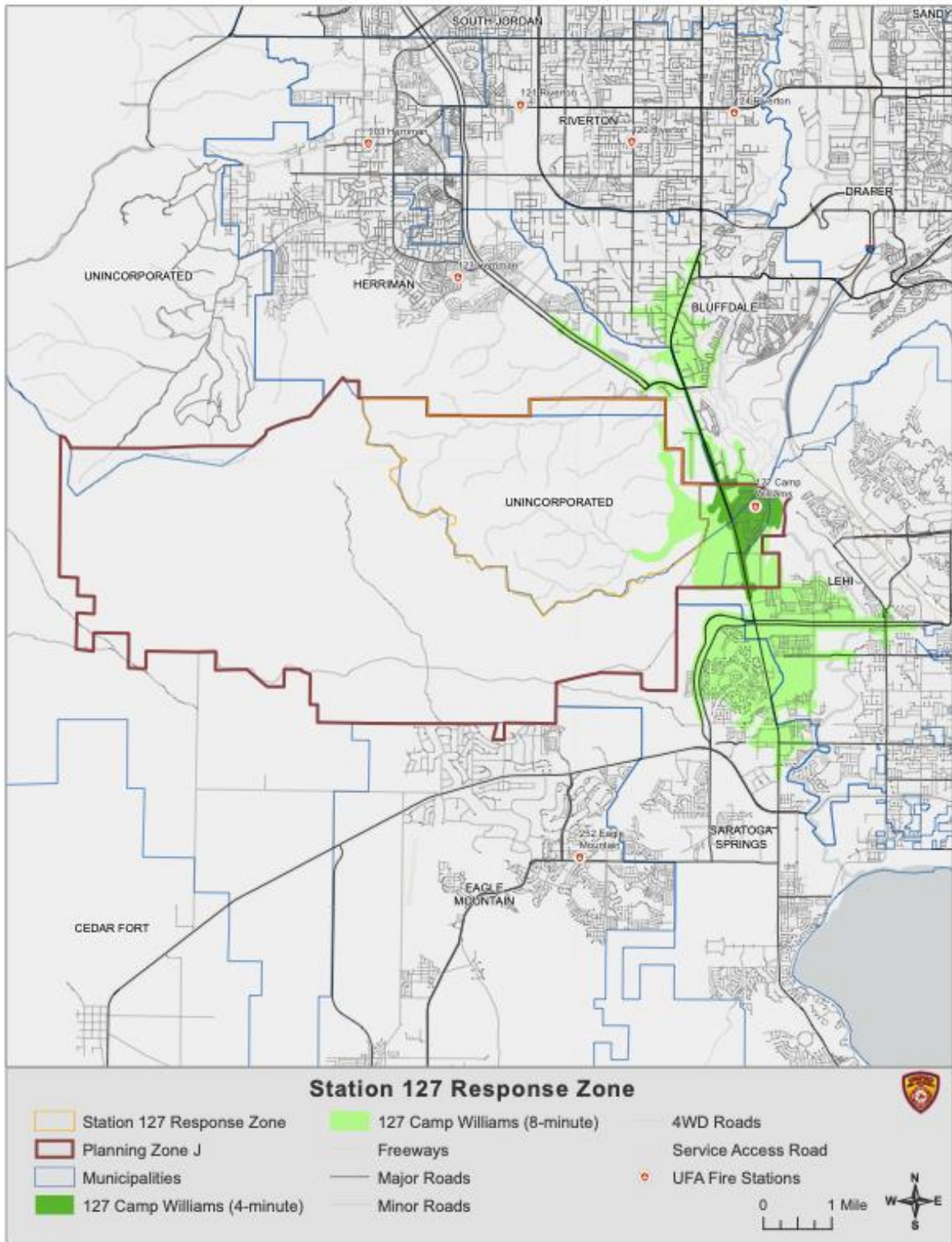
Table 64– Camp Williams 2020 Incidents by Dispatch Type



Map 88 – Camp Williams with Land Use



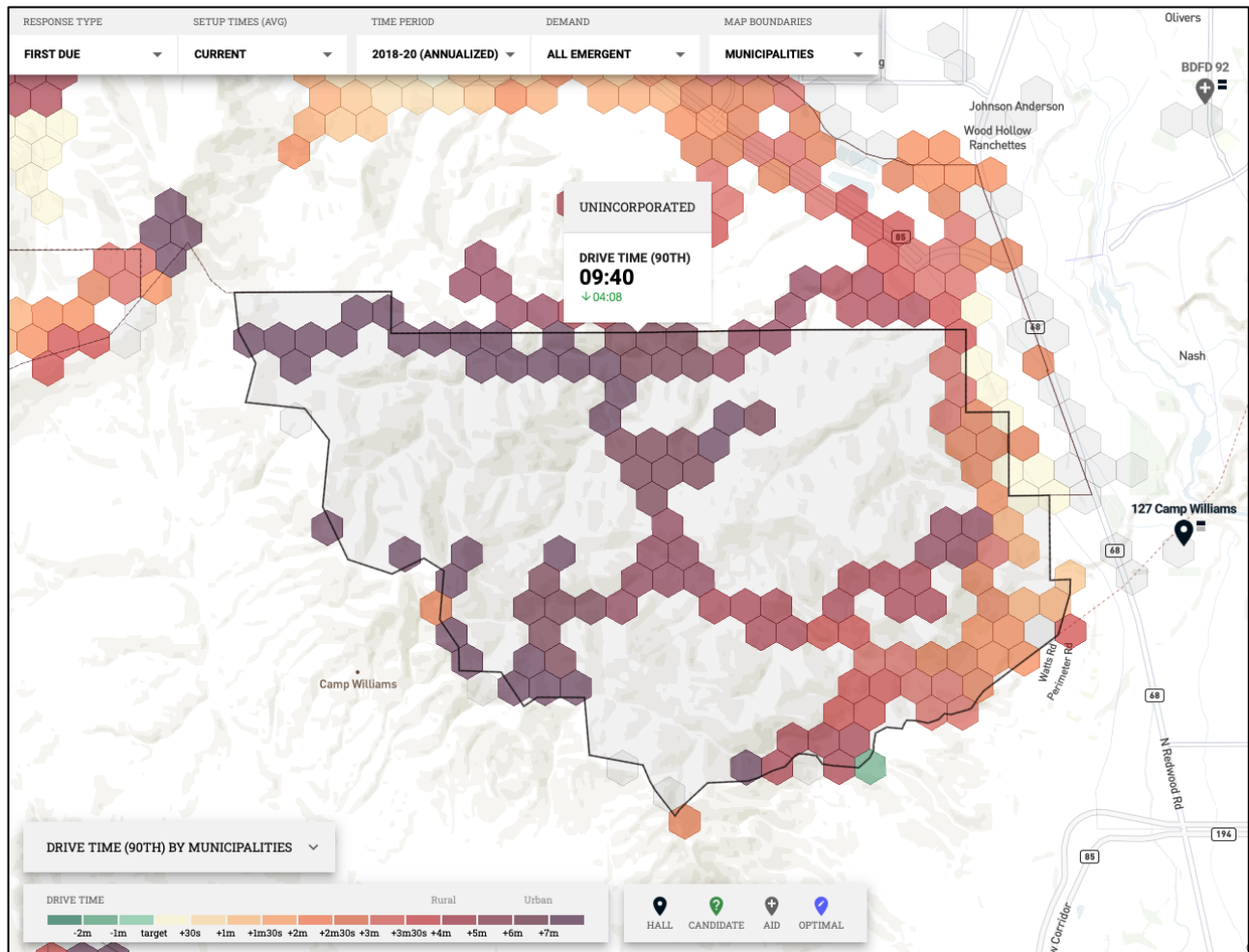
Map 89 - 4-Minute Travel Time, UFA and Aid



Map 90 - Camp Williams 4- and 8-Minute Travel Time

## Camp Williams – First Arriver Travel Times

The following maps demonstrate the 90<sup>th</sup> percentile of travel times based off the last three years of historical data (2018-2020). 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 (90<sup>th</sup> percentile) from notification of the alarm to the arrival of the first arriving apparatus — not an adopted standard by UFA. UFA is currently in process of identifying benchmark and target standards to be adopted by the UFA Board of Directors. Based off predictive data, it is projected that the 90<sup>th</sup> percentile for a first arriver to arrive on scene would be 9:40.

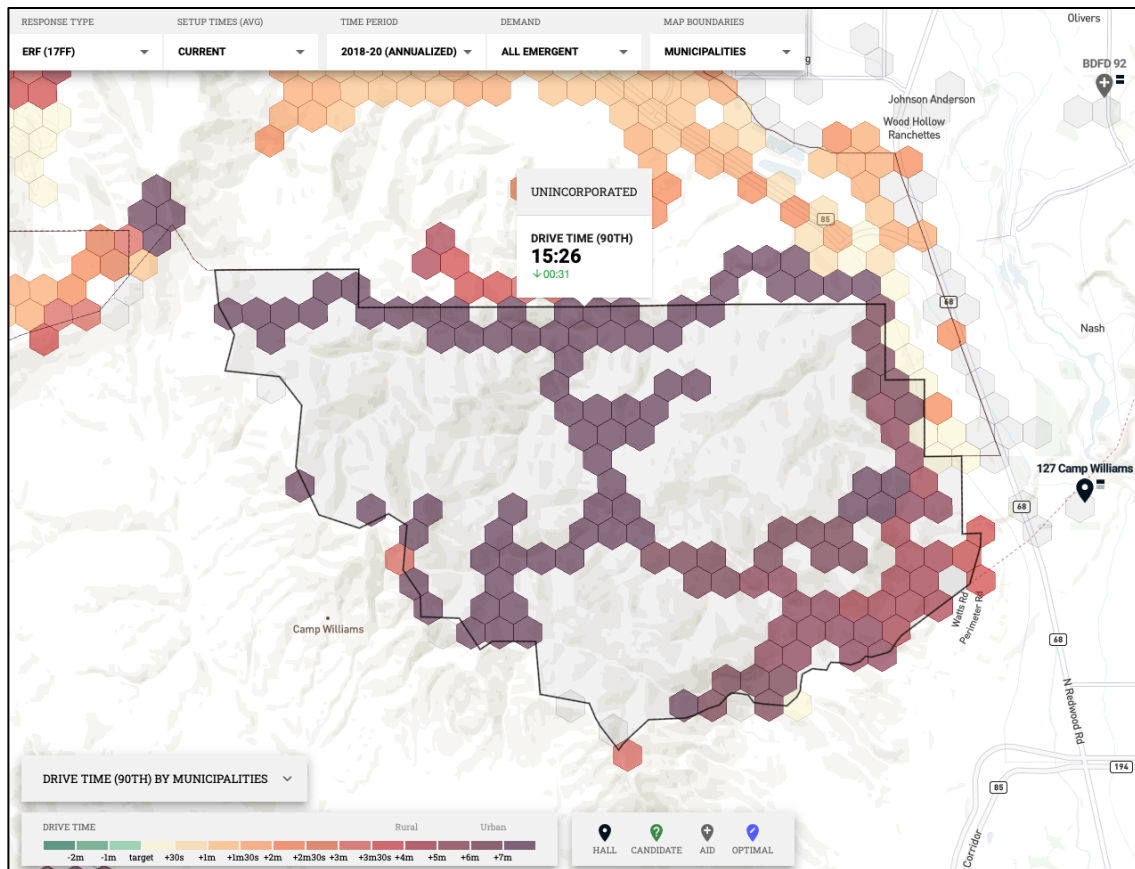


Map 91 – Camp Williams Response Times – All Aid



## Camp Williams – Residential Fire Effective Response Force (17 FF)

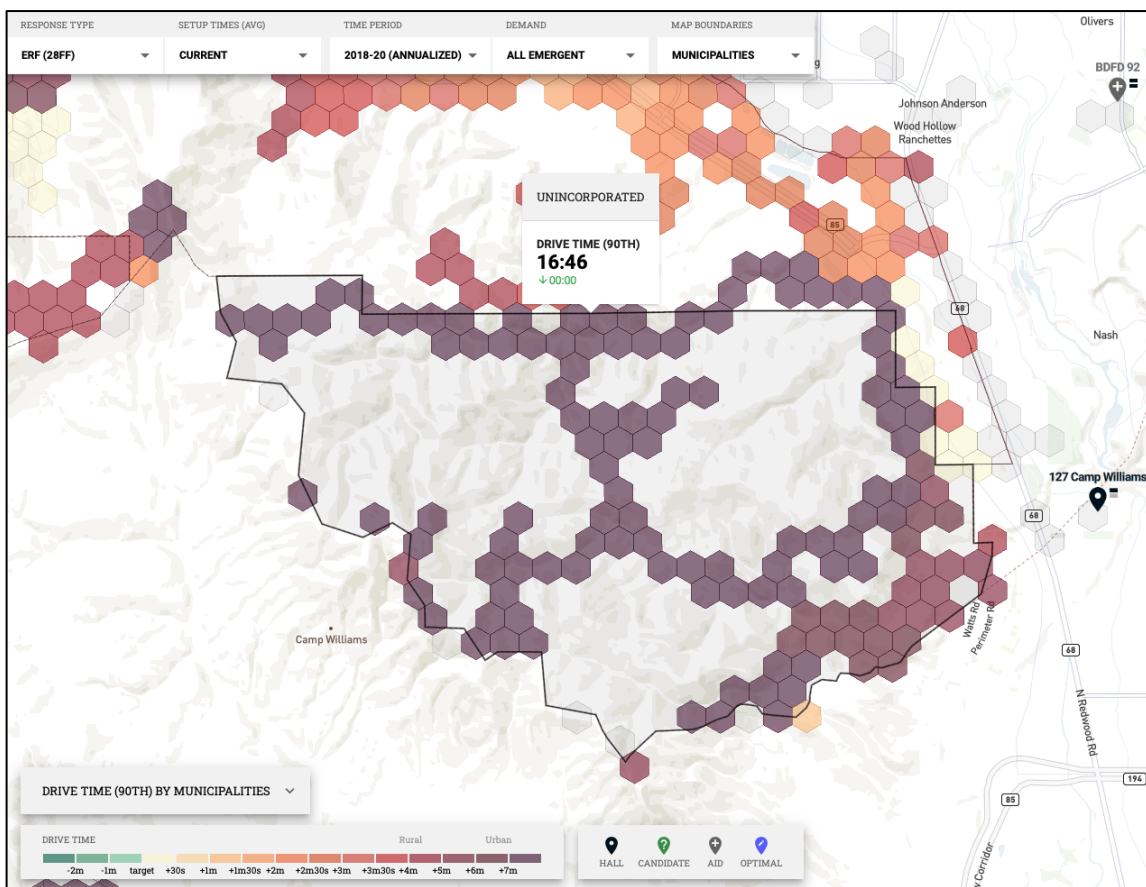
This map demonstrates the coverage of a multi-unit response to a residential fire based off all apparatus being within their station. The green to light yellow demonstrates the ability to have seventeen firefighters (a residential fire effective response force) on scene based off a residential urban fire force response. This map's drive times (or travel times) are based off the current NFPA 1710 standard of eight minutes (90<sup>th</sup> 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. UFA is currently in process of identifying benchmark and target standards to be adopted by the UFA Board of Directors. Based off predictive data, it is projected that the 90th percentile for 17 firefighters to arrive on scene would be 15:26.



Map 92 – Camp Williams Response Times – Residential Fire Effective Response Force (17 ERF)

## Camp Williams – 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 (90<sup>th</sup> 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. UFA is currently in process of identifying benchmark and target standards to be adopted by the UFA Board of Directors. Based off predictive data, it is projected that the 90th percentile for 28 firefighters to arrive on scene would be 16:46.



Map 93 – Camp Williams Response Times – Commercial Fire Effective Response Force (28 FF)

## Camp Williams 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
Low	Low	Low	Low	Low	Low	High	Low	Low	Low	Low	Low

Table 65 – Copperton Hazard Matrix

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

### Infrastructure – Transportation

The primary roadway that runs through Camp Williams is State Road 68 (Redwood Road) which runs north/south from Bangerter Highway to Saratoga Springs. There are 0 linear miles of Interstate/US Highway, 1.83 linear miles of State Highways, and 55.1 total linear miles of roadway. Camp Williams is in the low-risk category for road infrastructure.

### Infrastructure – Water

There are no water districts within Camp Williams although Camp Williams maintains its own water supply and system as well as solar and wind power generating plants.

### Infrastructure – Dams

There are zero identified dams within Camp Williams. Camp Williams is in the low-risk category for dam infrastructure.

### Natural Hazards

Within Camp Williams, there are no concerns with avalanche areas, which is in the low-risk category for avalanche. There are no identified fault lines that run through the city

(see Map 8). Camp Williams is in the low-risk category for liquefaction and low-risk category for fault lines. One of the biggest hazards that occur within an earthquake scenario is the number of unreinforced masonry (URM) buildings. Within Camp Williams, there are an estimated 0 URM's. Camp Williams is in the low-risk category for unreinforced masonry.

#### Wildland Urban Interface

There is high risk of urban interface fires within Camp Williams and within the surrounding Unincorporated Salt Lake County and Utah County areas directly adjacent to the municipal boundaries. One of the primary hazards is the lack of egress routes going out of Camp Williams. Camp Williams is in the high-risk category for Wildland Urban Interface.

#### Hazardous Materials / Tier II Sites

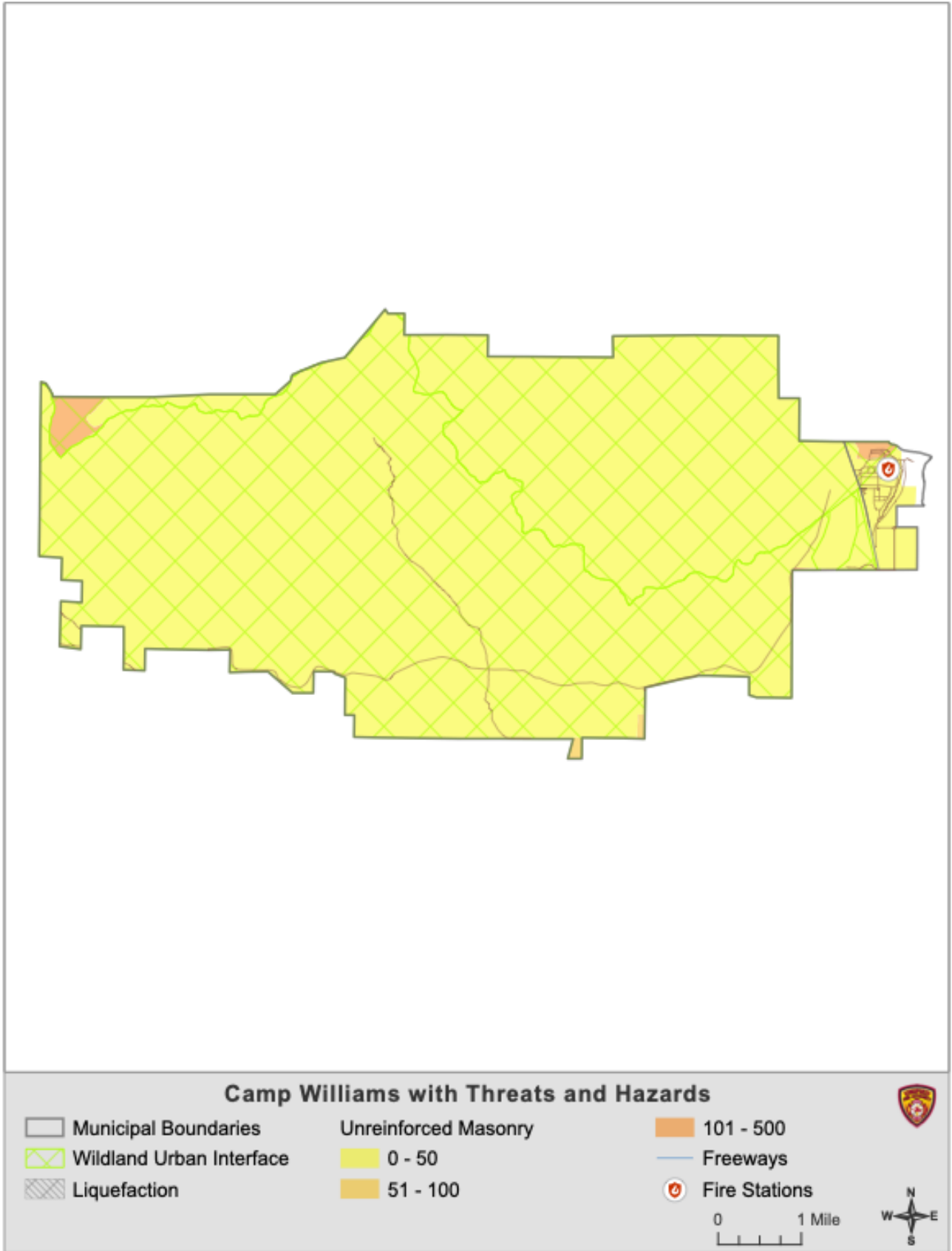
There are no identified HazMat/Tier II Sites within Camp Williams, which is in the low-risk category.

#### Hospitals

Camp Williams has no hospitals. This places Camp Williams in the low-risk category for hospitals.

#### Schools

Camp Williams has zero elementary schools, zero middle schools, and zero high school within city boundaries, which places it in the low-risk category.



Map 94 – Camp Williams with Combined Hazards

## Life and Property Loss

From 2015-2020, there have been zero fatalities attributed to fire. There has been a total estimate of \$0.00 of property loss and a total estimate of \$0.00 of content loss due to fire.

## Unified Fire Shared Services

With a regional-response model, the Unified Fire Authority brings special services to bear when the situation calls for it, not relying on automatic or mutual aid which provides a quicker and more effective delivery of service to its residents.

## Battalion Chiefs

Unified Fire Authority staffs three operational battalion chiefs (BCs) daily, in addition to a 40-hour Operations Chief (OC). These BCs and OC respond to large, complex, or expanding incidents — providing incident command, safety, and operational direction. Each BC covers an area of UFA's service area and respond to calls for service in any jurisdiction. Battalion 11 is housed out of Station 101 in Millcreek, Battalion 12 is housed out of Station 121 in Riverton, and Battalion 13 is housed out of Station 118 in Taylorsville.

## Heavy Rescue Companies

Heavy Rescue specializes in structural collapse, confined space rescue, trench collapse rescue, vehicle extrication, machinery disentanglement, rope rescue (high angle, low angle, rigging) and rapid intervention (Firefighter Rescue). The UFA Heavy Rescue Program consists of two independent rescue companies strategically placed in UFA's jurisdiction. Station 117 in Taylorsville, and Station 121 in Riverton house our Heavy Rescue Teams.

## Hazardous Materials (HazMat) Companies

The Hazardous Materials Teams provide an efficient, effective, and professional Hazardous Material Mitigation response. HazMat Companies respond to hazardous material releases/spills for the purpose of mitigating the release/spill. They select and use proper specialized chemical personal protective equipment dependent on the nature of the incident. The HazMat Program consists of two independent HazMat companies strategically placed in UFA's jurisdiction. Station 124 in Riverton, and Station 126 in Midvale house our HazMat Teams.

### Water Rescue Teams

UFA has swift water and ice rescue capabilities. These companies respond to victims recreating in our swift canyon rivers and our lakes and reservoirs. Station 116 in Cottonwood Heights, Station 117 in Taylorsville, Station 121 in Riverton, and Station 123 in Herriman house companies with water rescue capabilities.

### Wildland Division

UFA's Wildland Division provides highly trained and experienced wildland fire and all-risk response resources to local, state, and federal incidents. The Wildland Division oversees the training and certification of UFA personnel for response to wildland fires and all-hazard incidents. We also work with UFA Communities to educate residents on wildfire preparedness and provide mitigation services to reduce the risks of wildfire. UFA has a special capability where a Duty Officer is able to act as the Fire Warden within UFA's jurisdictions, allowing the ordering of resources much more quickly than having to rely on a Fire Warden that may or may not be readily accessible. Station 103 in Herriman currently houses the Duty Officer.

### Investigations Division

Arson and Explosive related incidents are considered two of the most dangerous criminal activities that threaten our citizens. The need exists to protect the citizens of our jurisdiction from loss of life and property by reducing the crime of arson, arson-related crimes, improvised explosive devices (IEDS) and the prevention of future violent crimes. The Investigations Division addresses this need by establishing a sound foundation of effective enforcement, focusing on the apprehension of the offender, while in partnership with other Local, state and federal law enforcement agencies. The team utilizes highly-trained Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) certified K-9's that assist with accelerant and explosives detection.

### Urban Search & Rescue

A FEMA Urban Search and Rescue Task Force is a team of individuals which serve as a resource for disaster response at local, state, and federal levels. It is comprised mainly of firefighters but includes structural engineers, medical professionals, canine/handler teams and emergency managers with highly specialized training in urban search and rescue environments.

Utah Task Force 1 (UT-TF1) is one of 28 Type I, Federal Urban Search & Rescue (US&R) Task Forces in the United States. This program brings a highly trained, multi-hazard Task Force that is especially designed to respond to a variety of emergencies/disasters including earthquakes, hurricanes, tornadoes, floods, terrorist acts and hazardous material releases. Fire department personnel that are task force members receive specialized training and skills that directly benefit Unified Fire Authority.

### [Salt Lake County Emergency Management](#)

The Salt Lake County Division of Emergency Management serves our citizens by directing and coordinating resources for disasters and emergencies through preparation, planning, mitigation, response, and recovery. The Salt Lake County Emergency Coordination Center is activated and manned during any event—from small-scale to large-scale occurrences—to disasters both natural and man-made that can or have exceeded the resources of any particular jurisdiction. Currently, the Salt Lake County ECC assists and obtains resources for the 22 jurisdictions located within the Salt Lake Valley. Salt Lake County EM assists these jurisdictions through the activation of 15 Emergency Support Functions (ESFs) filled by employees from a multitude of backgrounds. The ESF employees have authority throughout Salt Lake County to fill and order additional support for the operations occurring in the field until the impacted jurisdiction can return to their normal operations and functions. The Emergency Management Division is committed to keeping the public safe through community outreach, training, dissemination of important public information, training of staff and the creation of a more resilient community through mitigation, preparation, response, and recovery. The ECC has been activated for many events such as Child Abduction Response Team (CART) Deployments, wildland fires such as the Rosecrest and Machine Gun fires, flooding, severe weather events, earthquakes, civil unrest, the COVID-19 pandemic, Line of Duty Deaths (LODD), and many other events.



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## Unified Fire Authority

3380 South 900 West  
Salt Lake City, UT 84119

# Copperton Township

## Community Risk Assessment



Photo Courtesy of: KUTV



## Copperton Metro Township Planning Zone

UFA has one station within the Copperton Metro Township Planning Zone covering a total of 0.3125 square miles with a population of 829 and responded to 57 calls for service in 2020.

Planning Zone	Population	Population Percentage of UFA	Square Miles	Population Density per Sq Mile	Classification
<b>Copperton</b>	829	0.18%	0.31	2,674	Rural

Copperton has increased its population from 826 in 2010 to 829 in 2020, showing an increase of 0.36% over a ten-year timeframe. Providing an exponential growth pattern and if all things remain equal, chart 20 demonstrates that Copperton will remain stable at 834 by the year 2040.

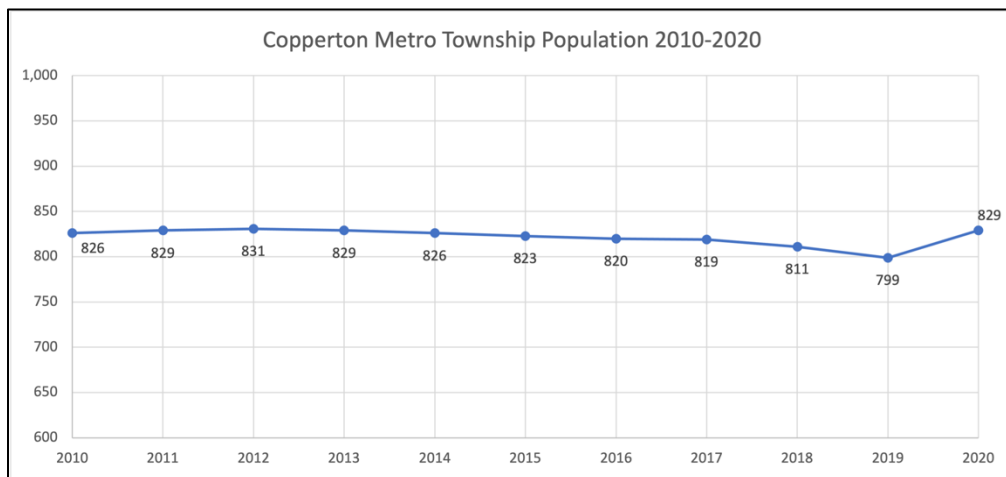


Chart 24 – Copperton Population 2010-2020

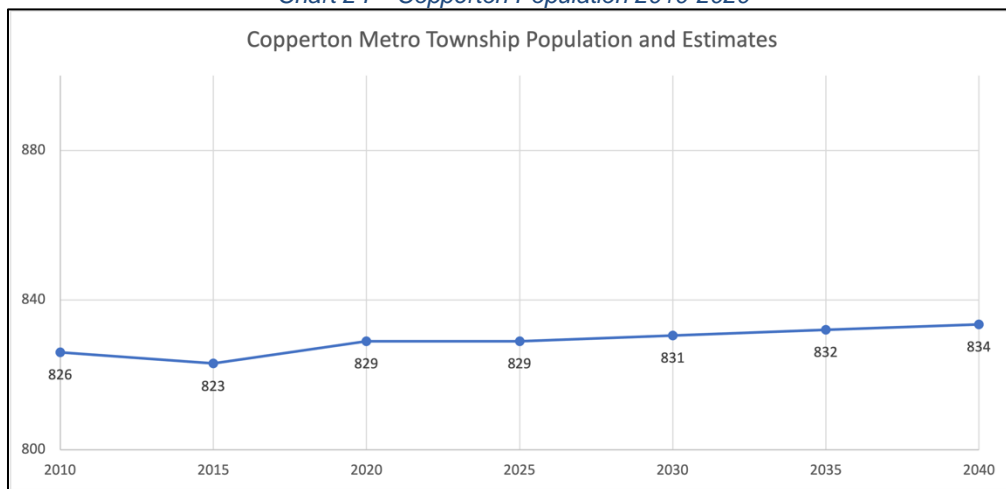


Chart 25 – Copperton Population and Estimates 2010-2040

## Copperton Station Information

### Station 115 information:

- Owner – UFSA
- Opened – 1983
- Address – 8495 West State Highway
- Staffing and Apparatus –
  - Type 1, ME 115 (3 persons)
  - Type 6, Brush Truck (cross-staffed)
  - Air & Light Utility Truck (cross-staffed)



*Image 6 – Copperton Station 115*

### Surrounding UFA and Automatic/Mutual Aid Response Stations

Due to the rural location of Copperton as well as the long response times, there are currently no UFA, automatic or mutual-aid stations within an eight-minute response time.

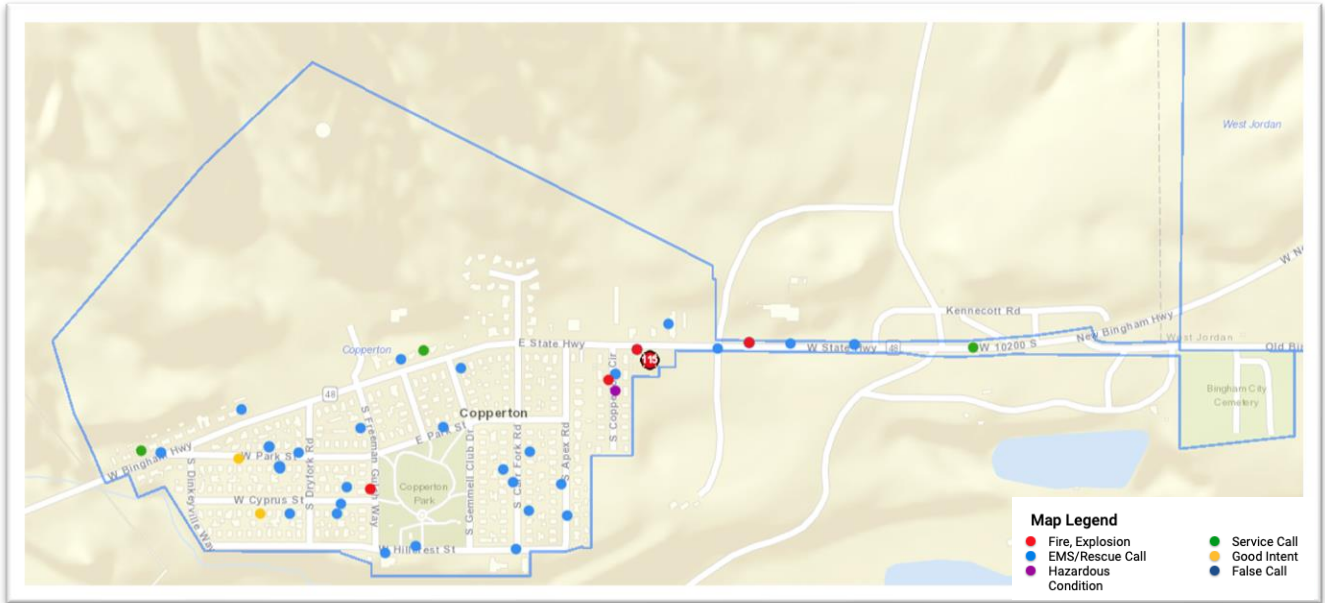
## Copperton – Incidents by Dispatch Type Found

The following data is what the NFIRS type was when crews arrived on scene. This may be different than what was originally dispatched, including a reclassification of a call type from one to another. Cancelled calls occur if the company is cancelled en route to a call and never arrives on scene, which then changes the dispatch type to an NFIRS 611 call type.

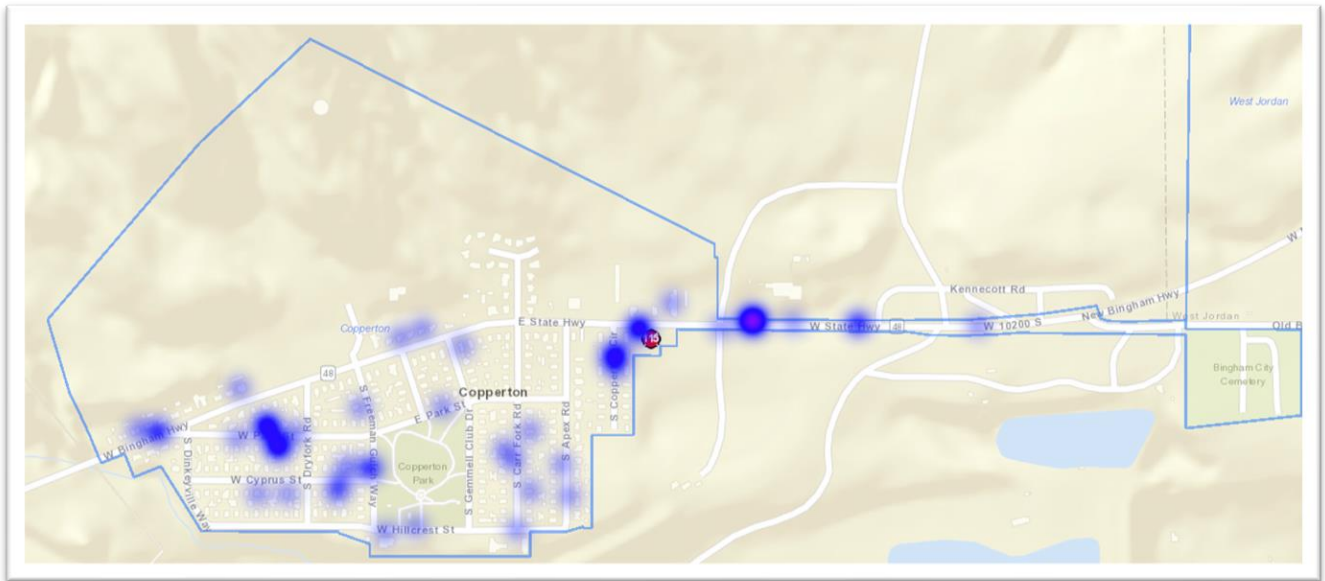
	CY 2020	CY 2019	CY 2018
<b>Fire Suppression</b>	6	6	2
<b>EMS</b>	39	43	34
<b>Hazardous Materials</b>	1	1	1
<b>Service Calls</b>	3	2	2
<b>Good Intent</b>	4	5	5
<b>False Calls</b>	1	3	1
<b>Other (Misc., Flood, Overpressure)</b>	0	0	0
<b>Total</b>	54	60	45
<b>Cancelled</b>	3	1	4
<b>Overall Total</b>	57	61	49

*Table 66 – Copperton Call Types*

## Copperton – 2020 Incidents and Heat Map



Map 95 – Copperton Incident Calls by Type



Map 96 - Copperton Call Volume Heat Map

## NFPA 1710

The National Fire Protection Association is an international nonprofit organization that is devoted to eliminating death, injury, property, and economic loss due to fire, electrical and related hazards. The NFPA makes recommendations on over 300 codes and standards. NFPA 1710 recommendations are based off 90<sup>th</sup> percentile times.

### – In Other Words...

If a value is in the 90<sup>th</sup> percentile, it means the value is better than 90% of all other values in the dataset. In other words, it is within the top 10% of the values.

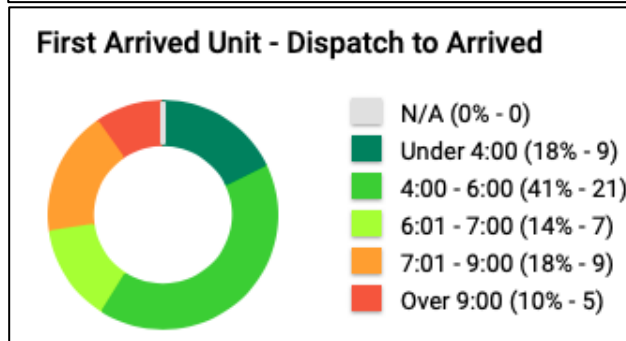
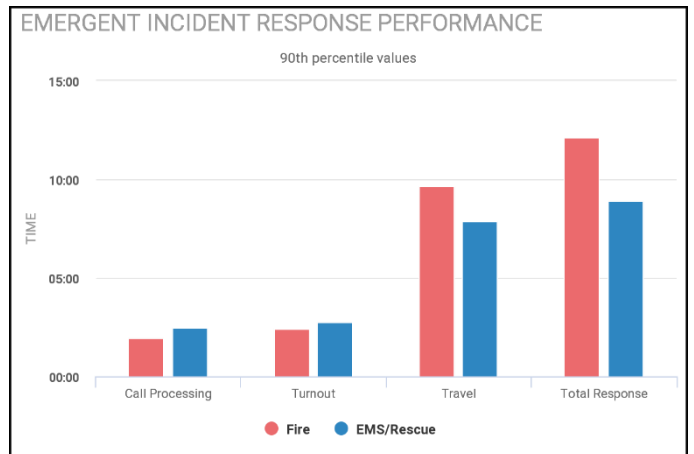
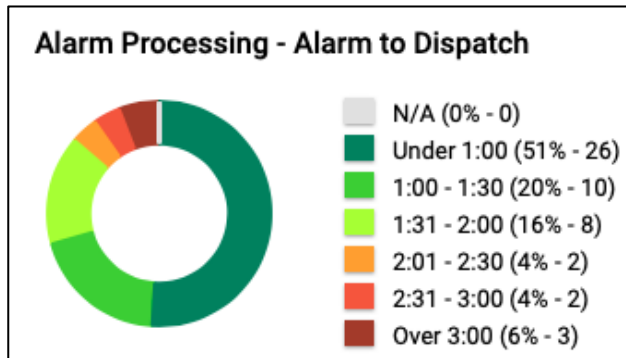
NFPA 1710 encompasses suggested standards for full-time fire departments and recommends the following times (all of which are at the 90<sup>th</sup> percentile): alarm processing – 64 seconds; turnout time for EMS responses – 60 seconds; turnout time for fire responses – 80 seconds; first arriver apparatus – 240 seconds (4 minutes); initial full-alarm assignment for low and medium hazard responses – 480 seconds (8 minutes); or initial full-alarm assignment for high hazard/high-rise responses – 610 seconds (10 minutes 10 seconds). The total response times are the cumulative totals of call processing time, turnout time, and travel time. NFPA 1710 recommends a total response time of 6:24 for the first arriving apparatus for fire and 6:00 for the first arriving apparatus for EMS.

### – Of Note...

NFPA 1710 response times have not been adopted by the UFA Board. One of the important elements of the community risk assessment and standards of cover is to identify current 90<sup>th</sup> percentile times (current baselines) within UFA and to identify realistic benchmarks for the UFA Board to consider for adoption.



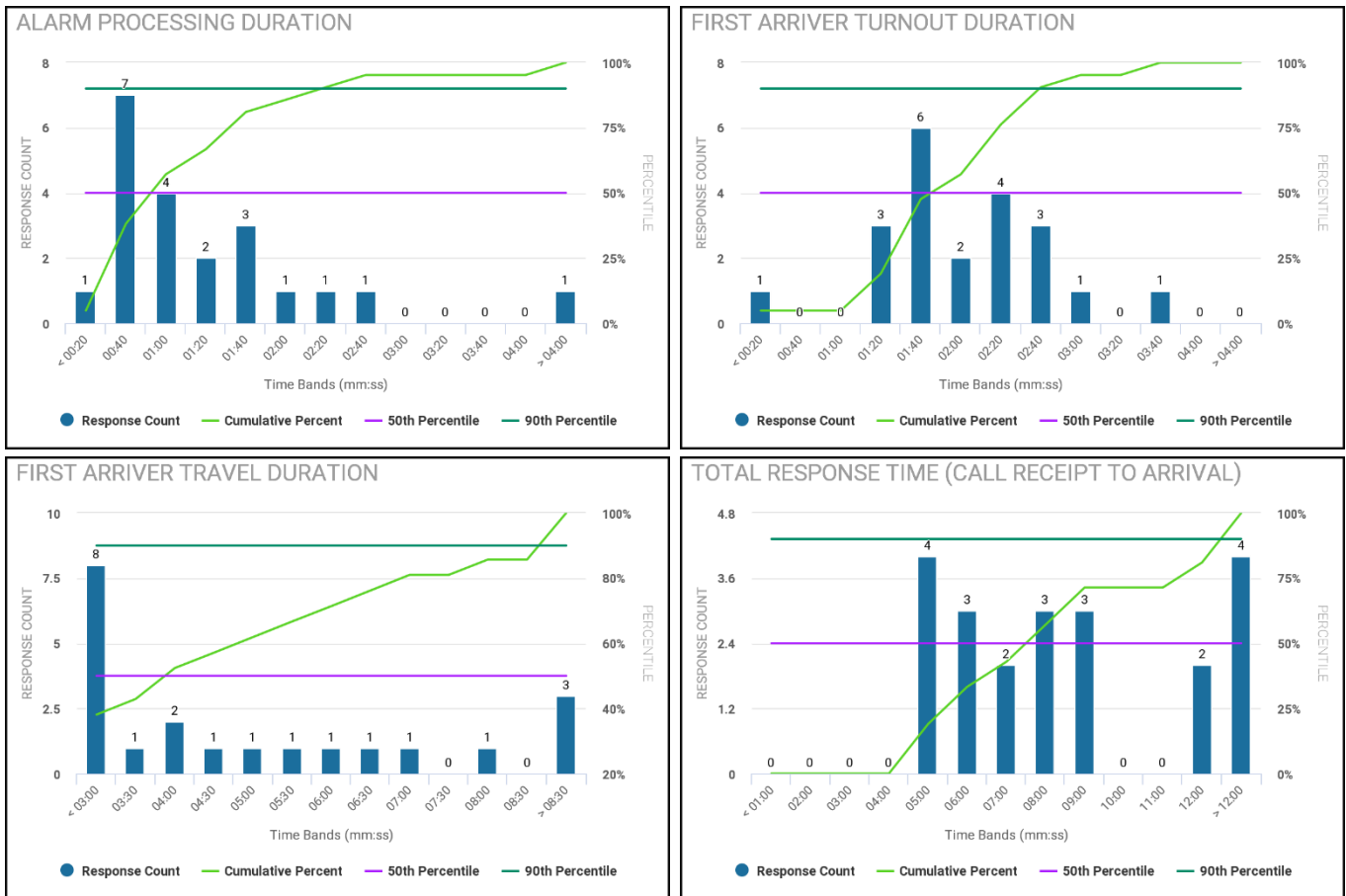
## Copperton – 2020 Dispatch and Response Times



Rural	Call Processing: Fire	Turnout Time: Fire	Travel Time: Fire	Total Response: Fire	Call Processing: EMS	Turnout Time: EMS	Travel Time: EMS	Total Response: EMS
<b>Copperton</b>	1:58	2:25	9:41	12:57	2:19	2:47	7:15	11:15
<b>UFA Urban 2018-2020</b>	2:16	2:39	7:36	10:34	1:47	2:32	6:29	9:18
<b>UFA Rural 2018-2020</b>	2:32	3:05	15:08	19:09	1:56	2:50	14:45	17:45
<b>NFPA 1710</b>	1:04	1:20	4:00	6:24	1:00	1:00	4:00	6:00

Table 67 – Copperton 2020 Emergent Response Times, 90<sup>th</sup> percentile values

## Copperton – 2020 Turnout and Travel Time



The charts above illustrate the alarm processing, turnout and travel times for all units responding to service calls within Copperton (90<sup>th</sup> percentile). The alarm processing for fire was 1:58 and 2:19 for EMS; turnout time was 2:25 for fire responses and 2:47 for EMS responses; travel time was 9:41 for fire responses and 7:15 for EMS. The 90<sup>th</sup> percentile total response time was 12:57 for fire and 11:15 for EMS. For the charts above, they show both fire and EMS response times together.

### 📌 – Of Note...

One item to note is that if you were to add the processing time, the turnout time, and the travel time, it will not necessarily (and often doesn't), sum the total response time. This is due to some of the limitations within the datasets and gaps within timestamps. Where there are missing timestamps, those particular key performance indicators (KPI) are excluded as they cannot accurately be calculated out.

## Copperton – 2020 Incidents by Time of Day

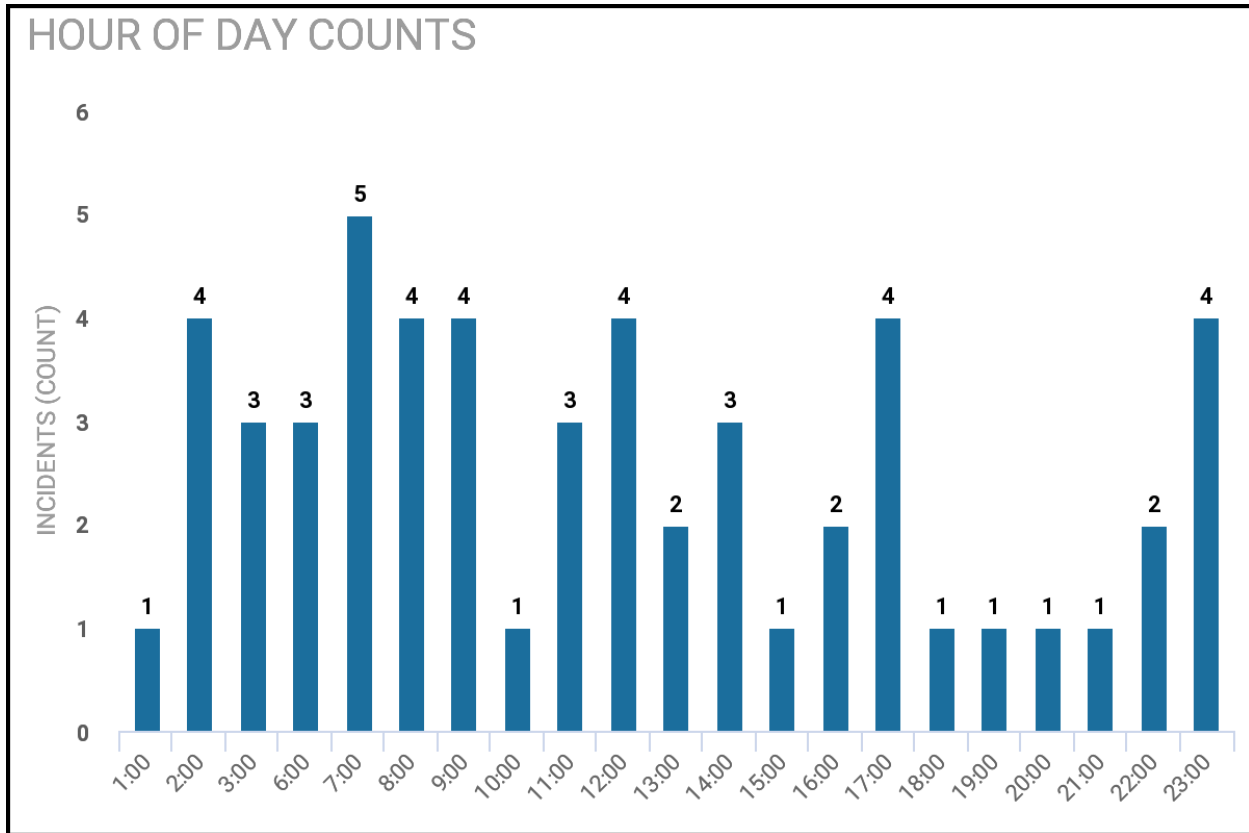


Chart 26 – Copperton 2020 Incidents by Time of Day

The above table demonstrates the incidents by time of day and the time of greatest demand within Copperton for all service calls. This chart illustrates that there is no discernable pattern of calls throughout the day.

## Copperton – 2020 Incidents by Day of Week

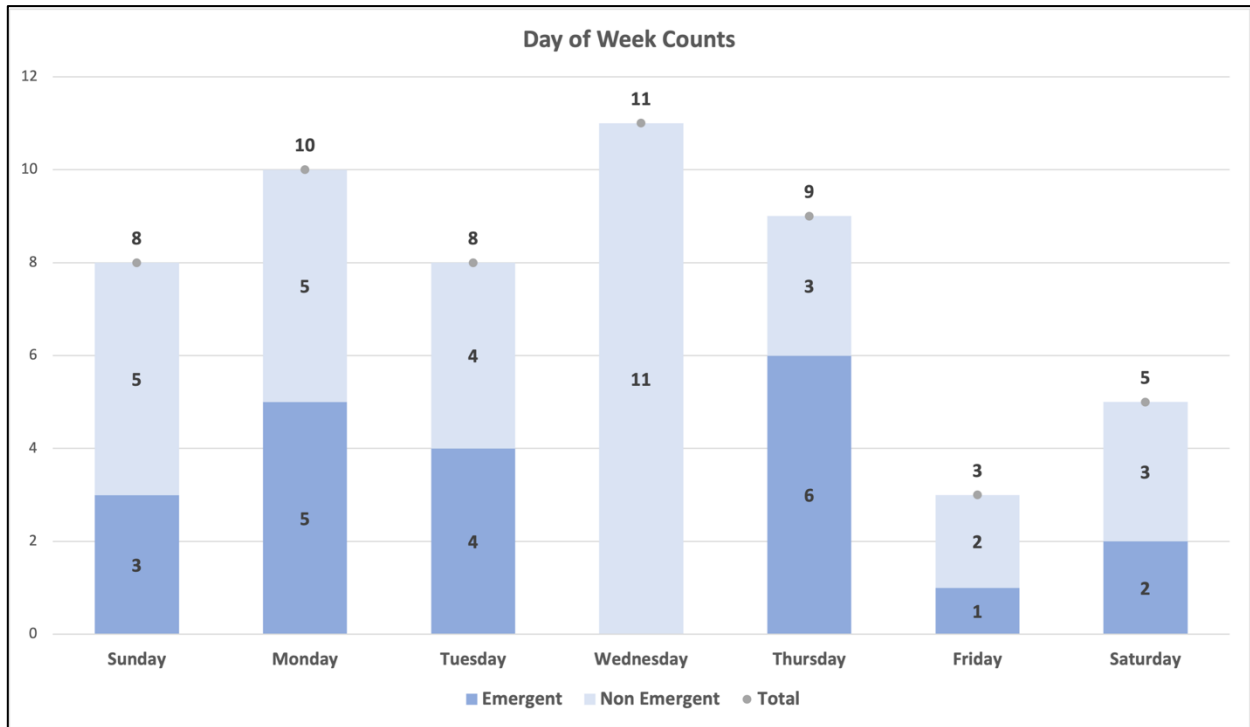


Chart 27 – Copperton Incidents by Day of Week

This chart demonstrates the call volume based on the day of the week, with the peak volume for all calls in Copperton occurring on Wednesday.

## Copperton – EMS Calls

	CY 2020	CY 2019	CY 2018
<b>ALS Transports</b>	19	21	23
<b>BLS Transports</b>	18	14	12
<b>Scene Release</b>	1	1	3
<b>Public Assistance</b>	1	0	0
<b>EMS Total Calls</b>	38	36	38

Note: There is possibly a difference if you were to add all calls due to data reporting mechanisms. Public assistance calls will sometimes get duplicated with a scene release, depending on dispatch code, but those calls do not carry across to the total calls. Also, cancelled calls go into a different final disposition so the numbers in the 'Incidents by Dispatch Type' are reflective of this difference.

Table 68 – Copperton EMS Calls

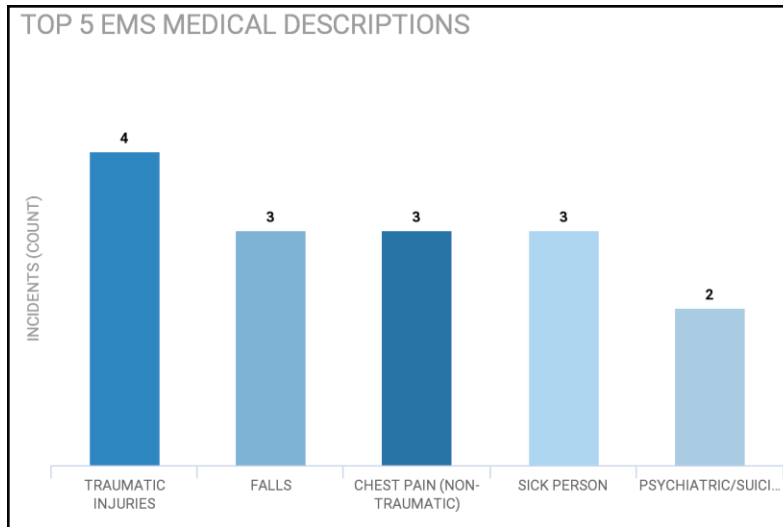


Chart 28 - Top 5 EMS Medical Calls - 2020

### Copperton – 2020 Fire Incidents by Dispatch Type

NFIRS Description	Incident Count	% of Incidents	NFIRS Description	Incident Count	% of Incidents
<b>Structure Fire</b>	4	57.1%	<b>Natural Vegetation Fire</b>	3	42.9%
<b>Total</b>	<b>7</b>	<b>100%</b>			

Table 69 – Copperton 2020 Incidents by Dispatch Type

### Copperton – Building Occupancy Classification and Risk Categories

Occupancy Classification	Low	Moderate	High	Maximum	Total
<b>Assembly</b>	0	2	0	0	2
<b>Commercial/Industrial</b>	0	0	0	0	0
<b>Educational</b>	0	0	0	0	0
<b>Government</b>	0	0	0	0	0
<b>Healthcare</b>	0	0	0	0	0
<b>Hazardous</b>	Unknown	Unknown	Unknown	Unknown	5*
<b>Storage</b>	0	0	0	0	0
<b>Residential</b>	162	76	5	0	243
<b>Residential – Multi Unit</b>	1	10	0	0	11
<b>High Rise</b>	N/A	N/A	0	0	0
<b>Total</b>	<b>163</b>	<b>88</b>	<b>5</b>	<b>0</b>	<b>261</b>

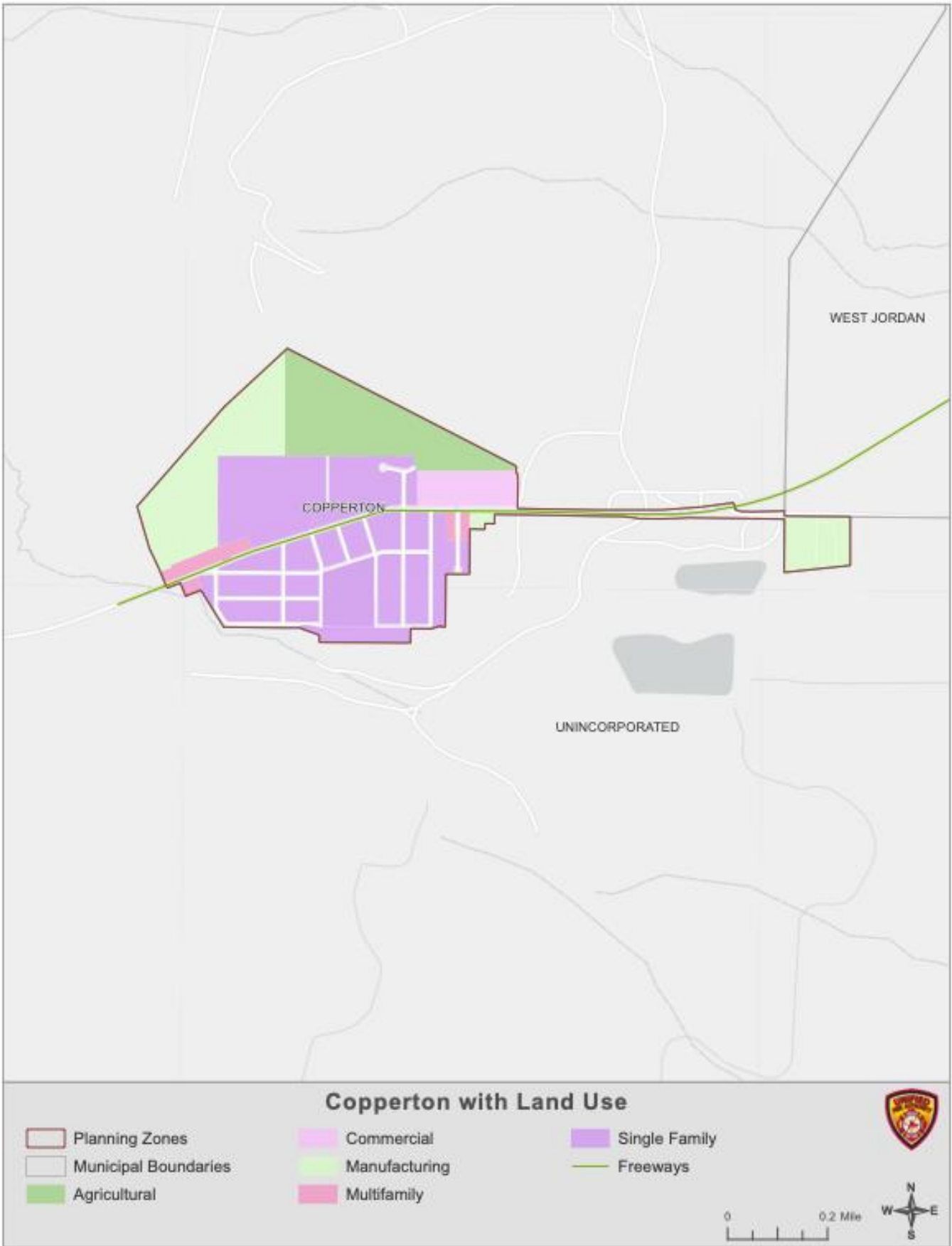
\*There is currently a gap within the identification of building size regarding hazardous materials sites. This is a gap that is being closed over the next several years as we collect the data and information.

Table 70 – Copperton Building Occupancy and Risk Categories

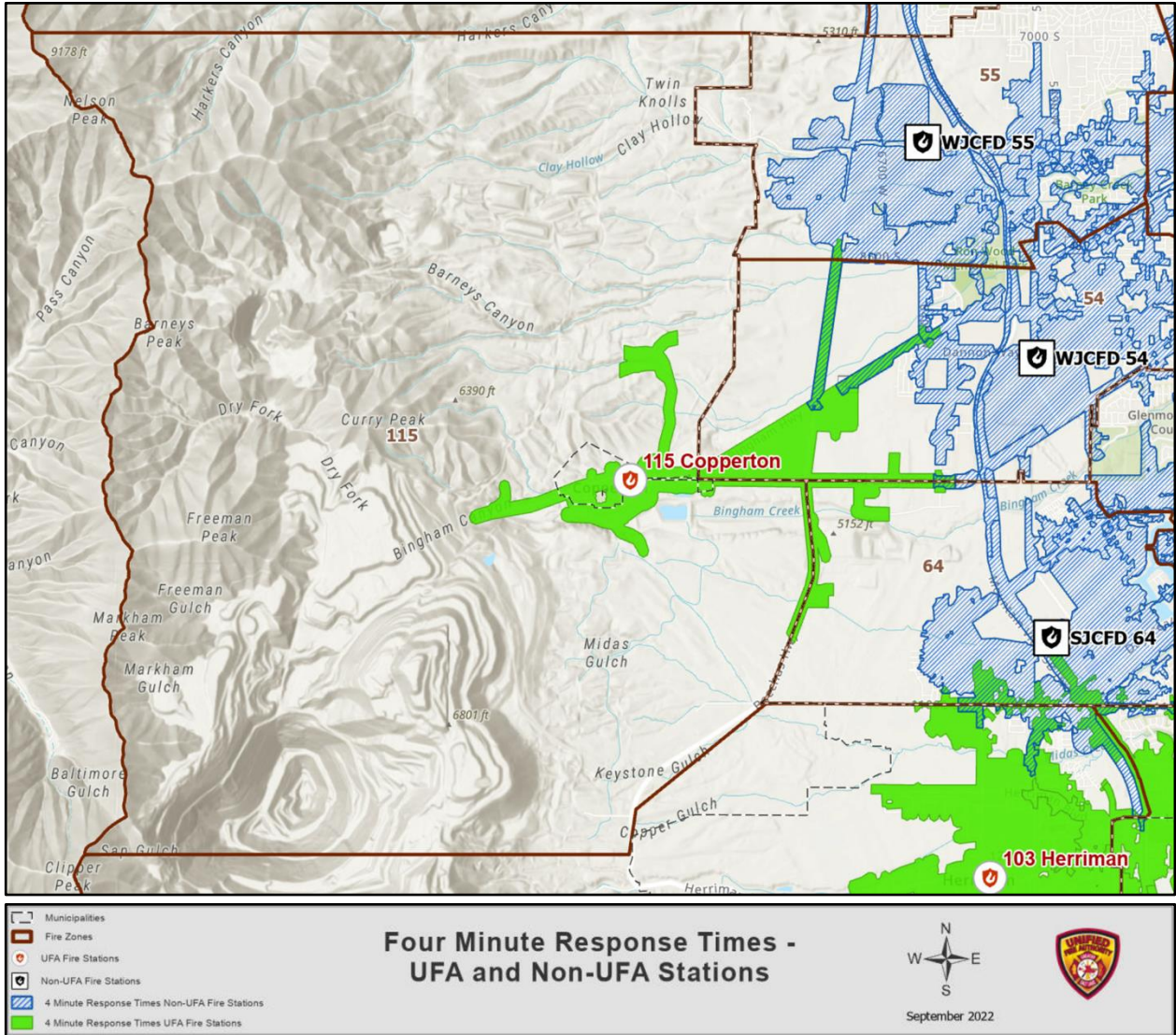
### Building Size / Considerations

For purposes of risk classification, UFA has outlined the following risk classifications for building size, regardless of occupancy type (except residential). Low risk = 1-4,999 square feet. Moderate risk = 5,000-9,999 square feet. High risk = 10,000-99,999 square feet. Maximum risk = >100,000 square feet.

For residential occupancies, the following classifications apply. Low risk = 1-1,999 square feet. Moderate risk = 2,000-3,999 square feet. High risk = 4,000-9,999 square feet. Maximum risk =  $\geq$ 10,000 square feet.

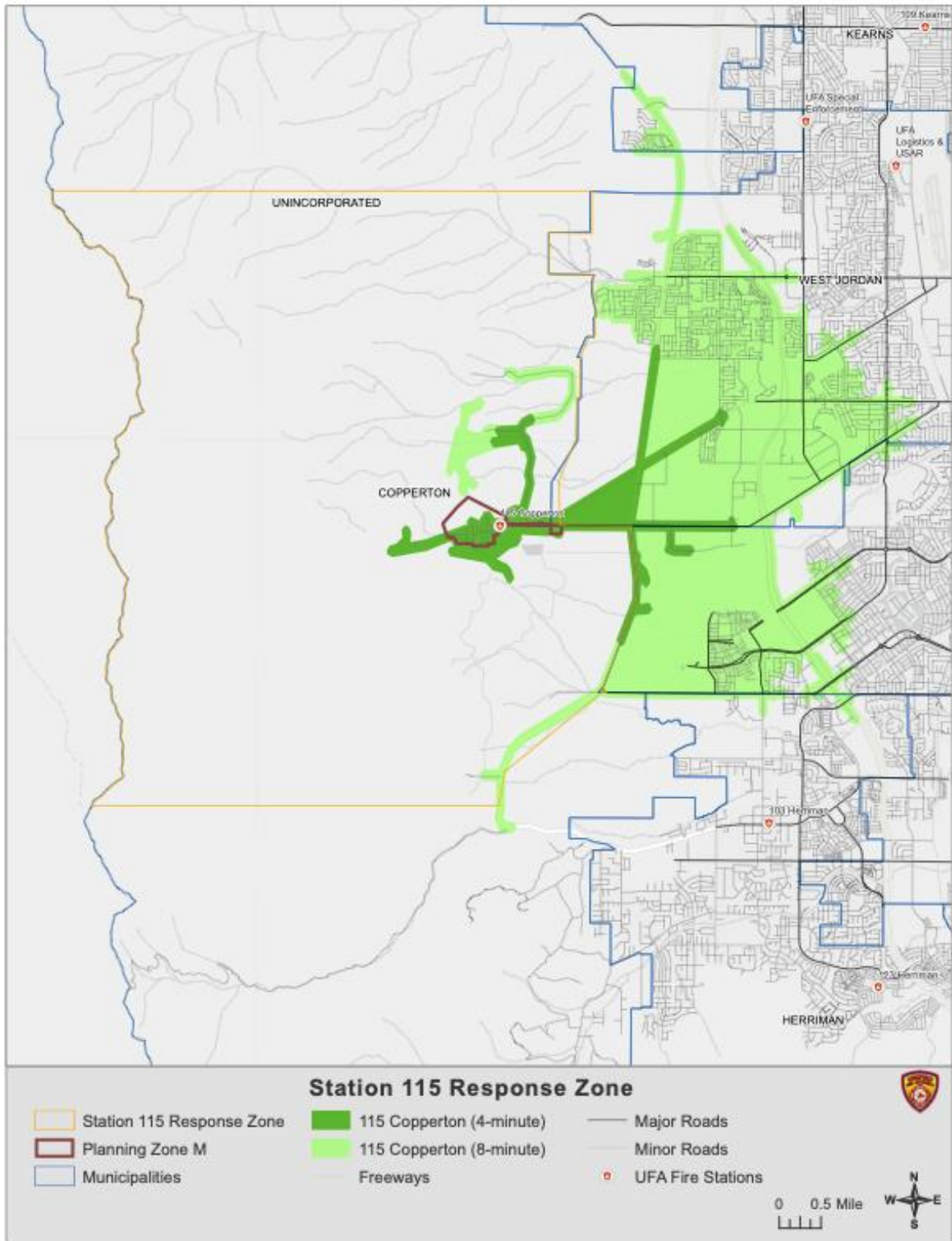


Map 97 – Copperton with Land Use



Map 98 - 4-Minute Travel Times, UFA and Aid

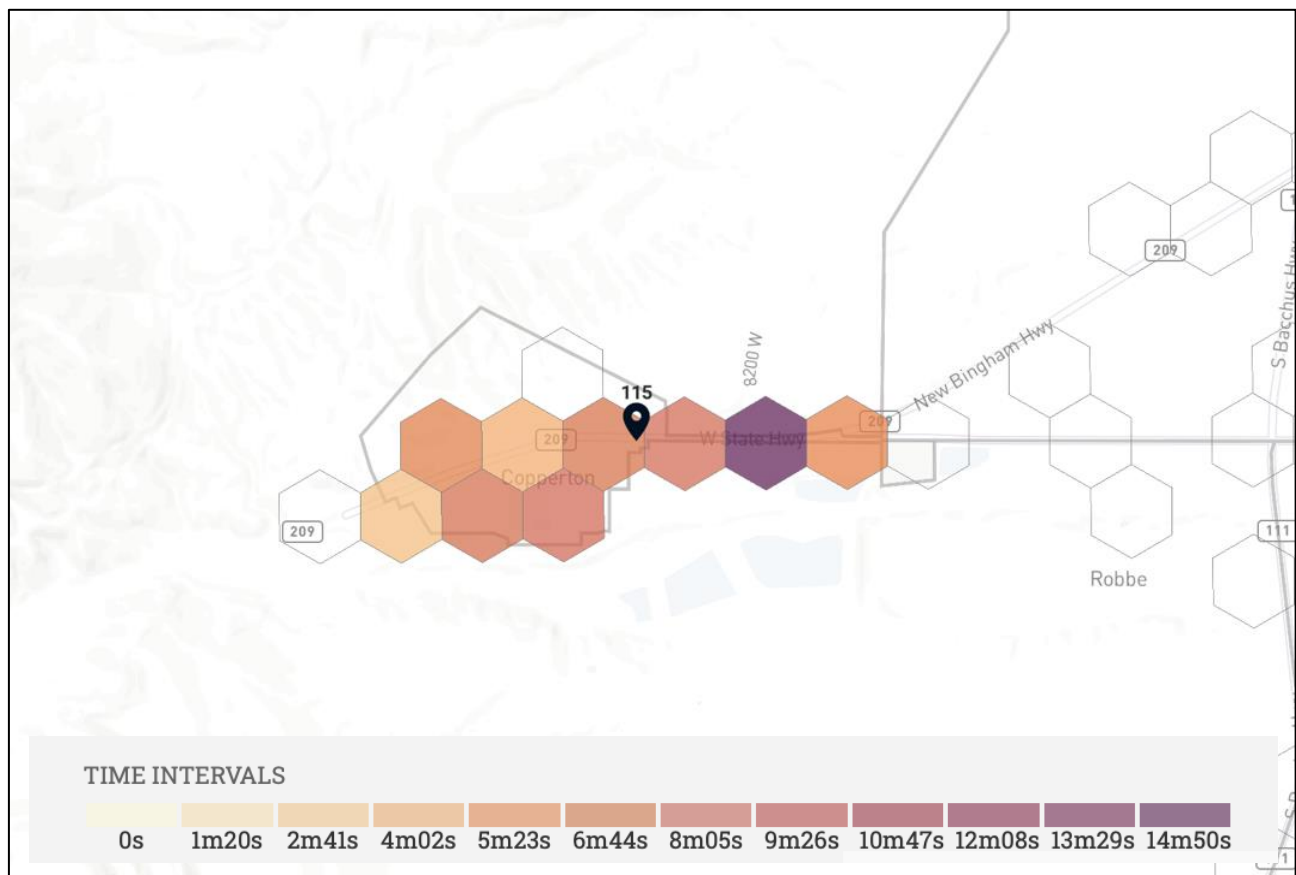




Map 99 - Station 115 4- and 8-Minute Travel Times

## Copperton – First Arriver Travel Times

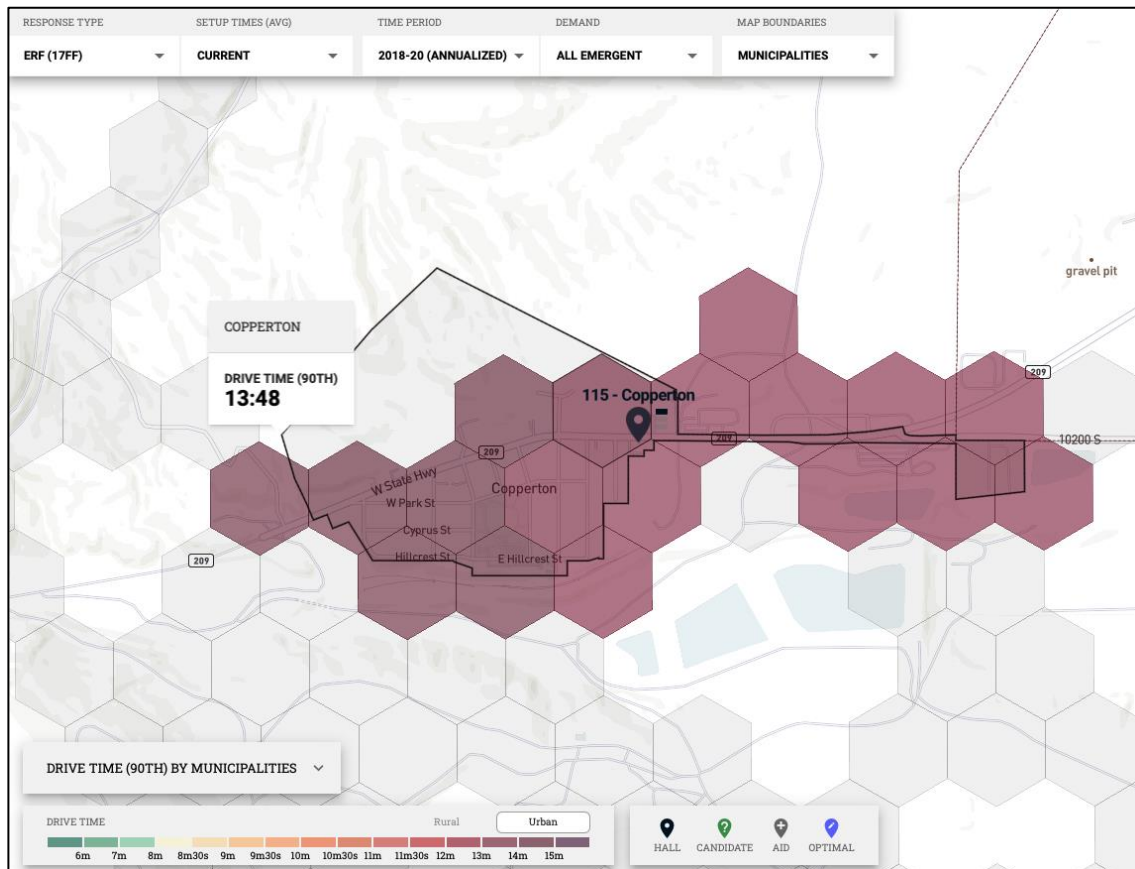
The following maps demonstrate the 90<sup>th</sup> percentile of travel times based off the last three years of historical data (2018-2020). The darker the color is, the more delayed the response, with the lighter colors demonstrating below or near target times. The darker colors on the bar within the 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 (90<sup>th</sup> percentile) from notification of the alarm to the arrival of the first arriving apparatus — not an adopted standard by UFA. UFA is currently in process of identifying benchmark and target standards to be adopted by the UFA Board of Directors. Currently, within Copperton, the 90<sup>th</sup> percentile drive time is 9:41 for fire and 7:15 for EMS, or a combined 90<sup>th</sup> percentile drive time of 8:01.



Map 100 – Copperton Response Times – All Aid

## Copperton – Residential Fire Effective Response Force (17 FF)

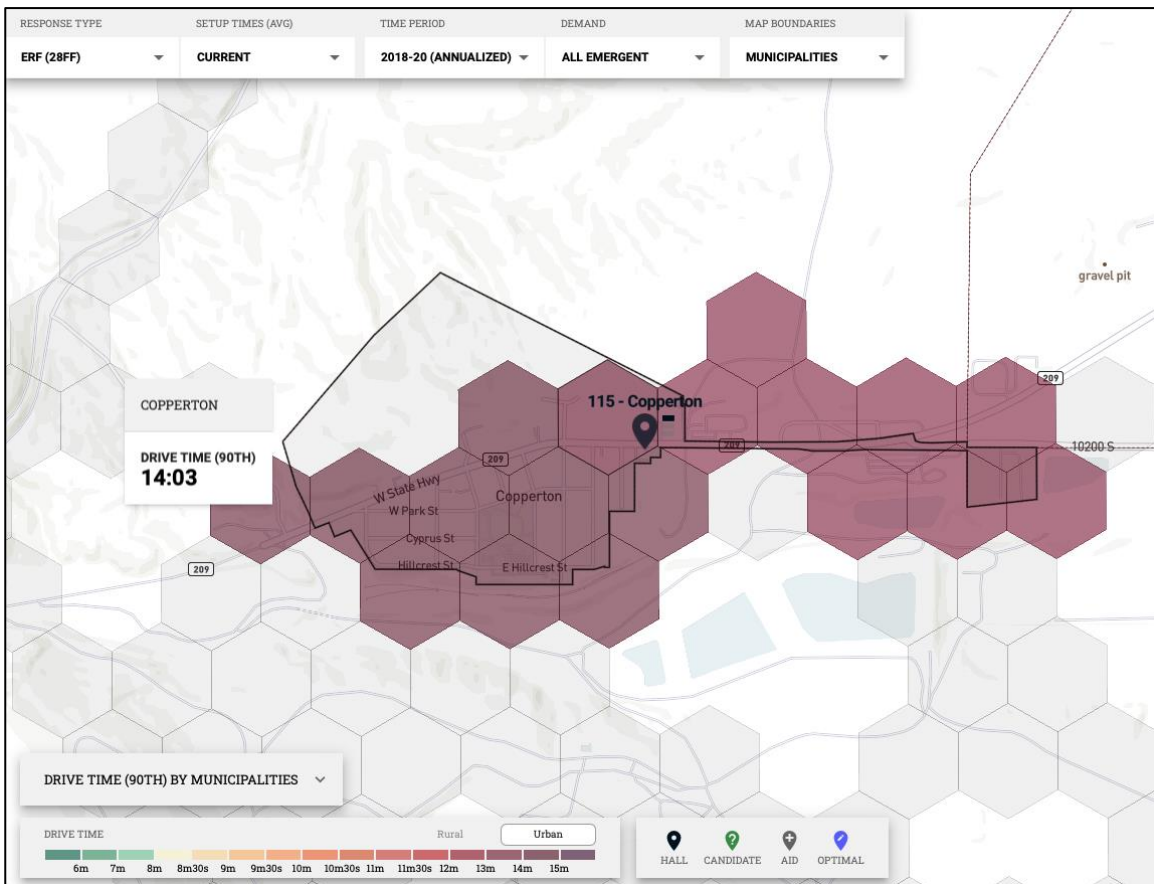
This map demonstrates the coverage of a multi-unit response to a residential fire based off all apparatus being within their station. The green to light yellow demonstrates the ability to have seventeen firefighters (a residential fire effective response force) on scene based off a residential urban fire force response. This map's drive times (or travel times) are based off the current NFPA 1710 standard of eight minutes (90<sup>th</sup> 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. UFA is currently in process of identifying benchmark and target standards to be adopted by the UFA Board of Directors. Based off predictive data, it is projected that the 90<sup>th</sup> percentile for 17 firefighters to arrive on scene would be 13:48.



Map 101 – Copperton Response Times – Residential Fire Effective Response Force (17 ERF)

## Copperton – 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 (90<sup>th</sup> 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. UFA is currently in process of identifying benchmark and target standards to be adopted by the UFA Board of Directors. Based off predictive data, it is projected that the 90th percentile for 28 firefighters to arrive on scene would be 14:03.



Map 102 – Copperton Response Times – Commercial Fire Effective Response Force (28 FF)

## Copperton 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
Low	Low	Low	Low	Low	Mod	Mod	Low	Low	Low	Low	Low

Table 71 – Copperton Hazard Matrix

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

### Infrastructure – Transportation

The primary roadway that runs to the Copperton Township is State Road 209 which runs east/west from Mountain View Corridor and Bacchus Highway. There are 0 linear miles of Interstate/US Highway, 1.3 linear miles of State Highways, and 4.6 total linear miles of roadway. UTA also runs bus routes to Copperton. Copperton is in the low-risk category for road infrastructure.

### Infrastructure – Water

There are two water districts within Copperton, the Copperton Improvement District and the South Valley Sewer District.

### Infrastructure – Dams

There are zero identified dams within Copperton. Copperton is in the low-risk category for dam infrastructure.

### Natural Hazards

Within Copperton, there are no concerns with avalanche areas. Copperton is in the low-risk category for avalanche. There are no identified fault lines that run through the city (see Map 8), although there is a fault line directly west of the township. Copperton is in the low-risk category for liquefaction and low-risk category for fault lines. One of the biggest hazards that occur within an earthquake scenario is the number of unreinforced masonry (URM) buildings. Within Copperton, there are an estimated 95 URM's, which constitutes about 0.39% of the overall URM's within UFA's response areas. Copperton is in the moderate-risk category for unreinforced masonry.

### Wildland Urban Interface

There is moderate risk of urban interface fires within Copperton Township and within the surrounding Unincorporated Salt Lake County areas directly adjacent to the municipal boundaries. One of the primary hazards is the lack of egress routes going out of Copperton. Copperton is in the moderate-risk category for Wildland Urban Interface.

### Hazardous Materials / Tier II Sites

There are no identified HazMat/Tier II Sites within Copperton, which is in the low-risk category.

### Hospitals

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

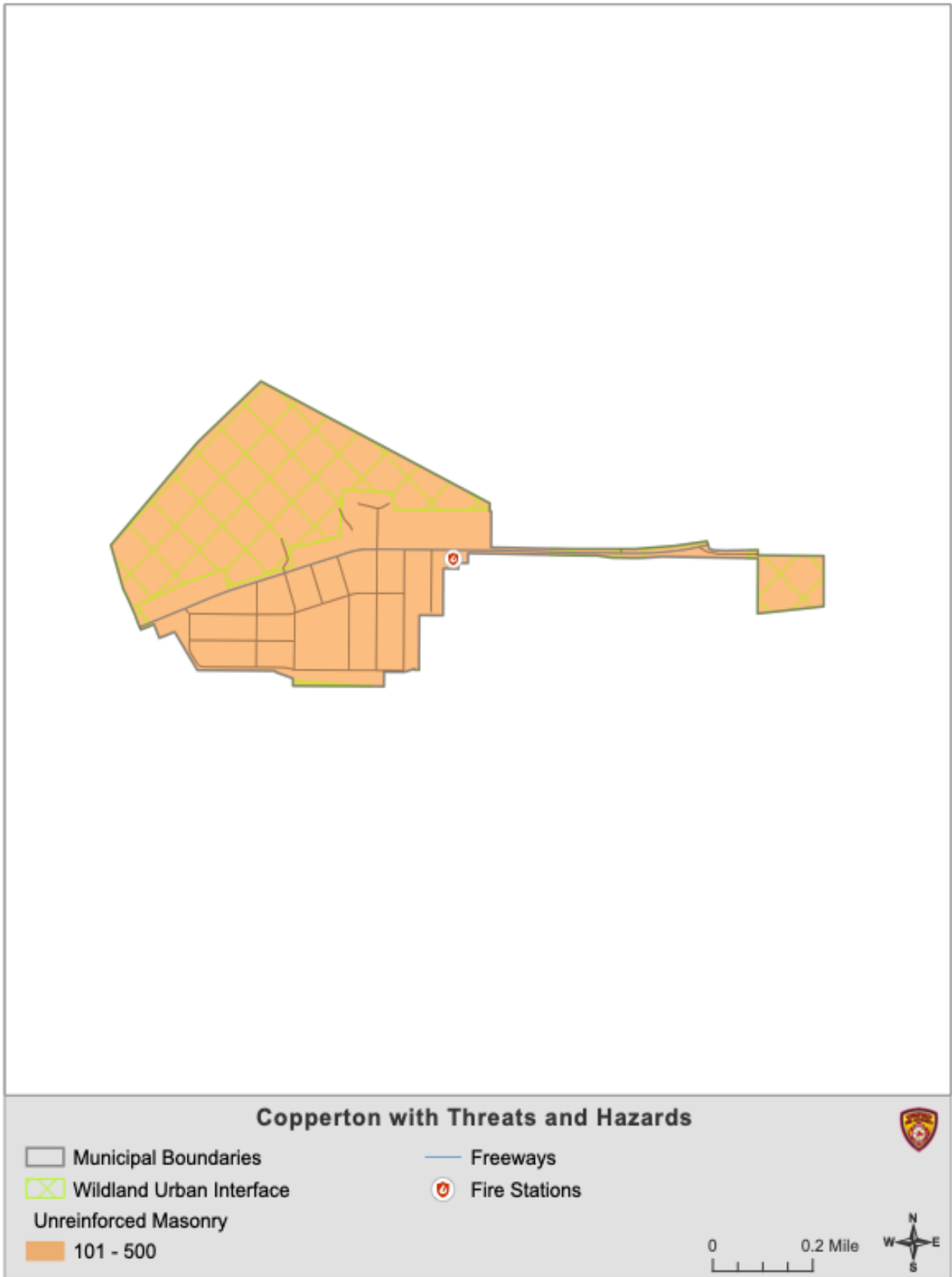
### Schools

Copperton has zero elementary schools, zero middle schools, and zero high school within city boundaries, which places it in the low-risk category.

### Target Hazards – Structures

Some of the target-hazard occupancies in Copperton include:

- Rio Tinto Kennecott Copper Mine



Map 103 – Copperton with Combined Hazards

## Life and Property Loss

From 2015-2020, there have been zero fatalities attributed to fire. There has been a total estimate of \$324,000.00 of property loss and a total estimate of \$305,520.00 of content loss due to fire.

## Unified Fire Shared Services

With a regional-response model, the Unified Fire Authority brings special services to bear when the situation calls for it, not relying on automatic or mutual aid which provides a quicker and more effective delivery of service to its residents.

### Battalion Chiefs

Unified Fire Authority staffs three operational battalion chiefs (BCs) daily, in addition to a 40-hour Operations Chief (OC). These BCs and OC respond to large, complex, or expanding incidents — providing incident command, safety, and operational direction. Each BC covers an area of UFA's service area and respond to calls for service in any jurisdiction. Battalion 11 is housed out of Station 101 in Millcreek, Battalion 12 is housed out of Station 121 in Riverton, and Battalion 13 is housed out of Station 118 in Taylorsville.

### Heavy Rescue Companies

Heavy Rescue specializes in structural collapse, confined space rescue, trench collapse rescue, vehicle extrication, machinery disentanglement, rope rescue (high angle, low angle, rigging) and rapid intervention (Firefighter Rescue). The UFA Heavy Rescue Program consists of two independent rescue companies strategically placed in UFA's jurisdiction. Station 117 in Taylorsville, and Station 121 in Riverton house our Heavy Rescue Teams.

### Hazardous Materials (HazMat) Companies

The Hazardous Materials Teams provide an efficient, effective, and professional Hazardous Material Mitigation response. HazMat Companies respond to hazardous material releases/spills for the purpose of mitigating the release/spill. They select and use proper specialized chemical personal protective equipment dependent on the nature of the incident. The HazMat Program consists of two independent HazMat



companies strategically placed in UFA's jurisdiction. Station 124 in Riverton, and Station 126 in Midvale house our HazMat Teams.

### Water Rescue Teams

UFA has swift water and ice rescue capabilities. These companies respond to victims recreating in our swift canyon rivers and our lakes and reservoirs. Station 116 in Cottonwood Heights, Station 117 in Taylorsville, Station 121 in Riverton, and Station 123 in Herriman house companies with water rescue capabilities.

### Wildland Division

UFA's Wildland Division provides highly trained and experienced wildland fire and all-risk response resources to local, state, and federal incidents. The Wildland Division oversees the training and certification of UFA personnel for response to wildland fires and all-hazard incidents. We also work with UFA Communities to educate residents on wildfire preparedness and provide mitigation services to reduce the risks of wildfire. UFA has a special capability where a Duty Officer is able to act as the Fire Warden within UFA's jurisdictions, allowing the ordering of resources much more quickly than having to rely on a Fire Warden that may or may not be readily accessible. Station 103 in Herriman currently houses the Duty Officer.

### Investigations Division

Arson and Explosive related incidents are considered two of the most dangerous criminal activities that threaten our citizens. The need exists to protect the citizens of our jurisdiction from loss of life and property by reducing the crime of arson, arson-related crimes, improvised explosive devices (IEDS) and the prevention of future violent crimes. The Investigations Division addresses this need by establishing a sound foundation of effective enforcement, focusing on the apprehension of the offender, while in partnership with other Local, state and federal law enforcement agencies. The team utilizes highly-trained Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) certified K-9's that assist with accelerant and explosives detection.

### Urban Search & Rescue

A FEMA Urban Search and Rescue Task Force is a team of individuals which serve as a resource for disaster response at local, state, and federal levels. It is comprised mainly of firefighters but includes structural engineers, medical professionals,

canine/handler teams and emergency managers with highly specialized training in urban search and rescue environments.

Utah Task Force 1 (UT-TF1) is one of 28 Type I, Federal Urban Search & Rescue (US&R) Task Forces in the United States. This program brings a highly trained, multi-hazard Task Force that is especially designed to respond to a variety of emergencies/disasters including earthquakes, hurricanes, tornadoes, floods, terrorist acts and hazardous material releases. Fire department personnel that are task force members receive specialized training and skills that directly benefit Unified Fire Authority.

### [Salt Lake County Emergency Management](#)

The Salt Lake County Division of Emergency Management serves our citizens by directing and coordinating resources for disasters and emergencies through preparation, planning, mitigation, response, and recovery. The Salt Lake County Emergency Coordination Center is activated and manned during any event—from small-scale to large-scale occurrences—to disasters both natural and man-made that can or have exceeded the resources of any particular jurisdiction. Currently, the Salt Lake County ECC assists and obtains resources for the 22 jurisdictions located within the Salt Lake Valley. Salt Lake County EM assists these jurisdictions through the activation of 15 Emergency Support Functions (ESFs) filled by employees from a multitude of backgrounds. The ESF employees have authority throughout Salt Lake County to fill and order additional support for the operations occurring in the field until the impacted jurisdiction can return to their normal operations and functions. The Emergency Management Division is committed to keeping the public safe through community outreach, training, dissemination of important public information, training of staff and the creation of a more resilient community through mitigation, preparation, response, and recovery. The ECC has been activated for many events such as Child Abduction Response Team (CART) Deployments, wildland fires such as the Rosecrest and Machine Gun fires, flooding, severe weather events, earthquakes, civil unrest, the COVID-19 pandemic, Line of Duty Deaths (LODD), and many other events.

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## Unified Fire Authority

3380 South 900 West  
Salt Lake City, UT 84119

# Cottonwood Heights

## Community Risk Assessment



## City of Cottonwood Heights Planning Zone

UFA has two stations within the Cottonwood Heights Planning Zone covering a total of 9.23 square miles with a population of 33,617 and responded to 2,294 calls for service in 2020.

Planning Zone	Population	Population Percentage of UFA	Square Miles	Population Density per Sq Mile	Classification
<b>Cottonwood Heights</b>	33,617	7.45%	8.5	3,955	Urban

The City of Cottonwood Heights has decreased its population from 33,624 in 2010 to 33,617 in 2020, showing a decrease of 0.02% over a ten-year timeframe. Providing an decay growth pattern and if all things remain equal, chart 20 demonstrates that Cottonwood Heights will remain stable at 33,678 by the year 2040.

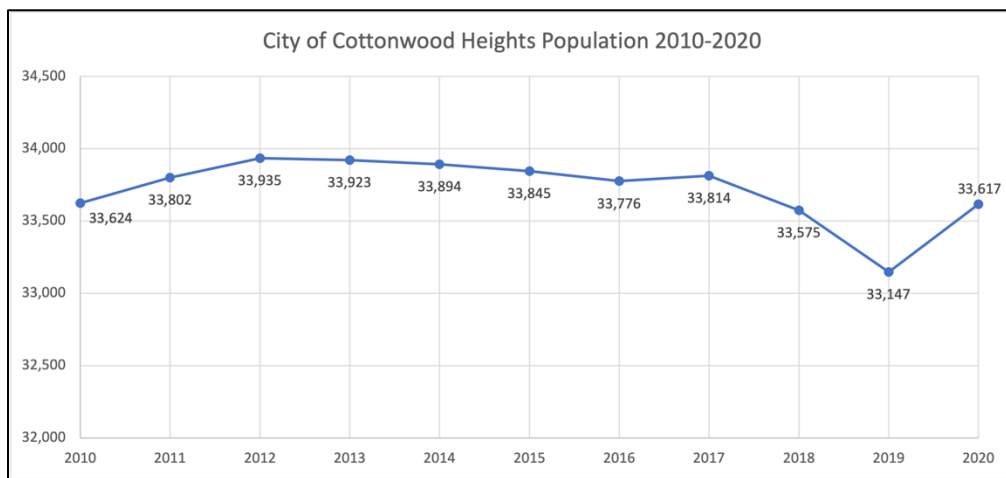


Chart 29 – Cottonwood Heights Population 2010-2020

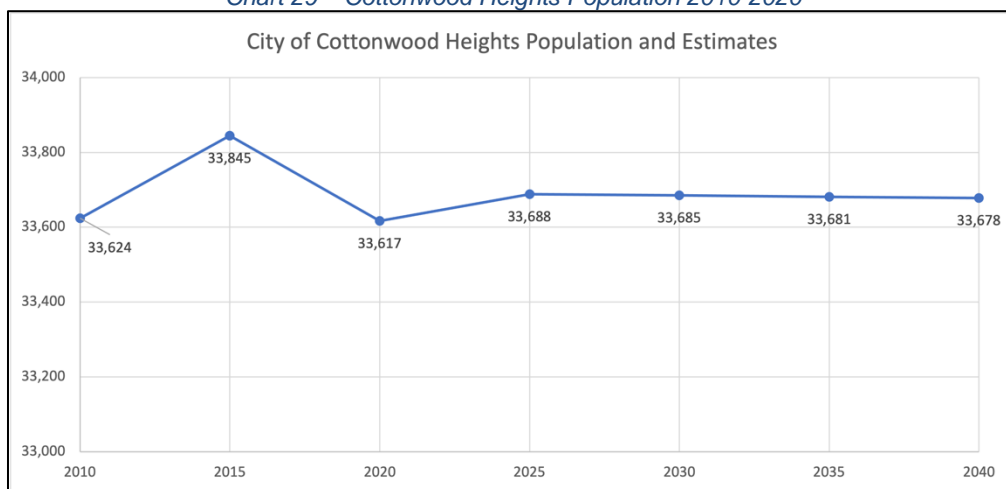


Chart 30 – Cottonwood Heights Population and Estimates 2010-2040

## Cottonwood Heights Station Information

### Station 110 information:

- Owner – Cottonwood Heights
- Opened – 1998
- Address – 1790 E. Fort Union Boulevard
- Staffing and Apparatus –
  - Type 1, ML 110 (4 persons)
  - MA 110 (2 persons)
  - Type 6, Brush Truck (cross-staffed)



Image 7 – Cottonwood Heights Station 110

### Station 116 information:

- Owner – Cottonwood Heights
- Opened – 1999
- Address – 8303 S. Wasatch Boulevard
- Staffing and Apparatus –
  - Type 1, ME 116 (3 persons)
  - MA 216 (peak load/seasonal)
  - Water Rescue (cross-staffed)



Image 8 – Cottonwood Heights Station 116

## Surrounding UFA and Automatic/Mutual Aid Response Stations

Surrounding fire stations and fire departments that are within an eight-minute response to the City of Cottonwood Heights are:

- UFA Station 104 (Holladay City), with a four-person medic engine and a two-person peak-load medic ambulance

- UFA Station 125 (Midvale City), with a four-person medic engine and a two-person peak load medic ambulance
- UFA Station 126 (Midvale City), with a four-person medic engine and a two-person medic ambulance
- Sandy City Station 32, with a two-person medic engine and a two-person medic ambulance
- Sandy City Station 35, with a two-person medic engine and a two-person medic ambulance
- Murray City Station 82, with a three-person medic engine and a two-person medic ambulance

### Cottonwood Heights – Incidents by Dispatch Type

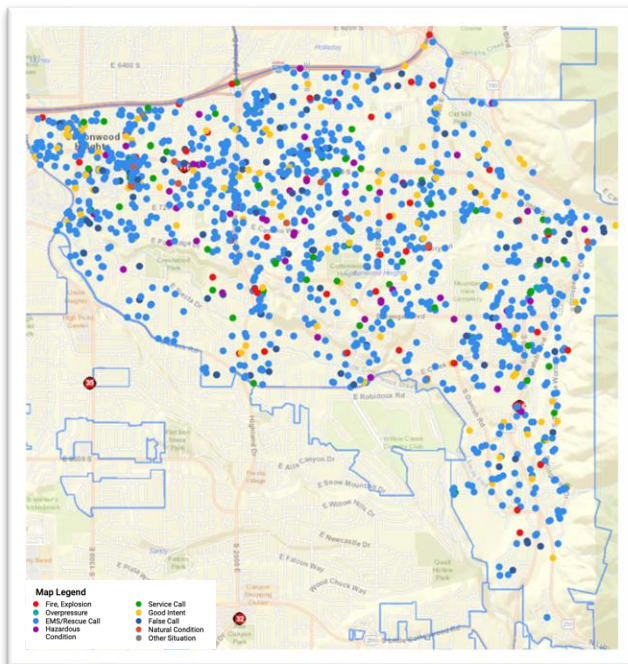
The following data is what the NFIRS type was when crews arrived on scene. This may be different than what was originally dispatched, including a reclassification of a call type from one to another. Cancelled calls occur if the company is cancelled en route to a call and never arrives on scene, which then changes the dispatch type to an NFIRS 611 call type.

	CY 2020	CY 2019	CY 2018
<b>Fire Suppression</b>	51	30	44
<b>EMS</b>	1,444	1,368	1,474
<b>Hazardous Materials</b>	55	60	41
<b>Service Calls</b>	97	129	95
<b>Good Intent</b>	326	283	228
<b>False Calls</b>	109	155	128
<b>Other (Misc., Flood, Overpressure)</b>	14	6	7
<b>Total</b>	2,096	2,031	2,017
<b>Cancelled</b>	198	169	156
<b>Overall Total</b>	2,294	2,200	2,173

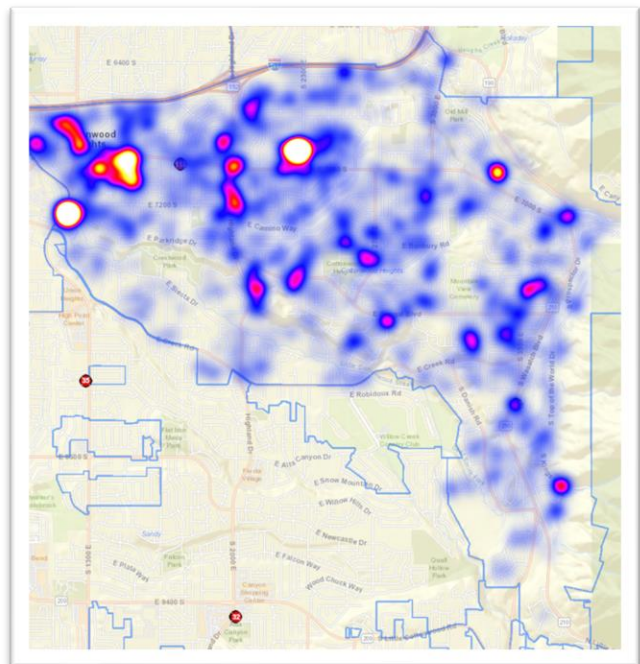
*Table 72 – Cottonwood Heights Call Type*



## Cottonwood Heights – 2020 Incidents and Heat Map



Map 104 – Cottonwood Heights Incident Calls by Type



Map 105 – Cottonwood Heights Call Volume Heat Map

## NFPA 1710

The National Fire Protection Association is an international nonprofit organization that is devoted to eliminating death, injury, property, and economic loss due to fire, electrical and related hazards. The NFPA makes recommendations on over 300 codes and standards. NFPA 1710 recommendations are based off 90<sup>th</sup> percentile times.

### 💡 – In Other Words...

If a value is in the 90<sup>th</sup> percentile, it means the value is better than 90% of all other values in the dataset. In other words, it is within the top 10% of the values.

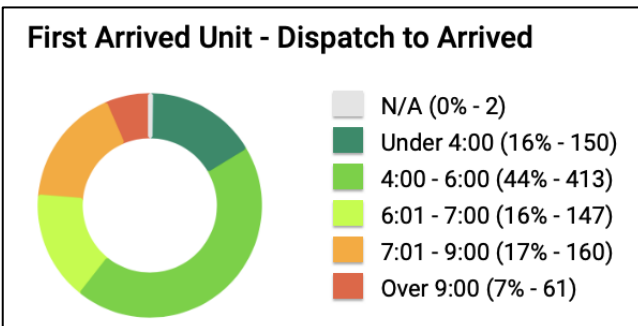
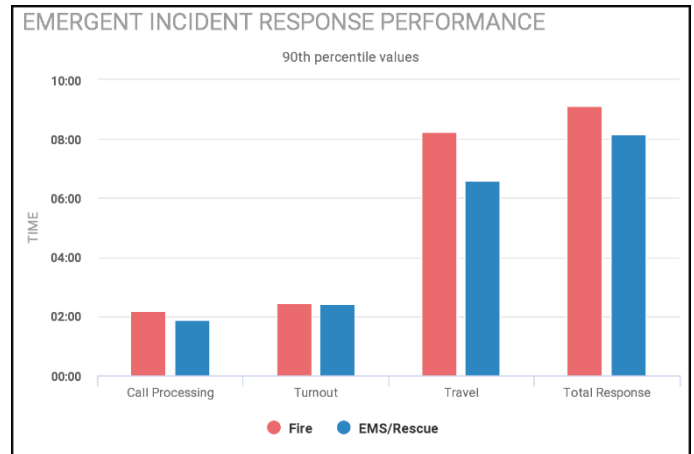
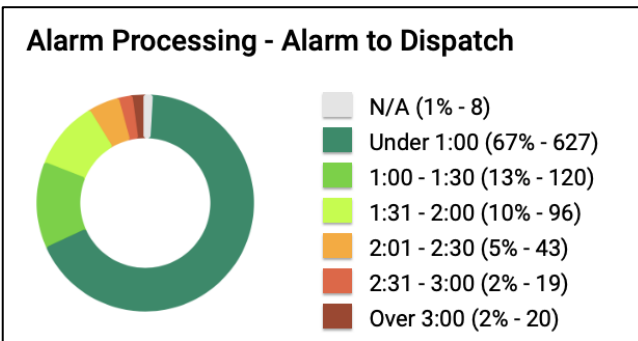
NFPA 1710 encompasses suggested standards for full-time fire departments and recommends the following times (all of which are at the 90<sup>th</sup> percentile): alarm processing – 64 seconds; turnout time for EMS responses – 60 seconds; turnout time for fire responses – 80 seconds; first arriver apparatus – 240 seconds (4 minutes); initial full-alarm assignment for low and medium hazard responses – 480 seconds (8 minutes); or initial full-alarm assignment for high hazard/high-rise responses – 610 seconds (10 minutes 10 seconds). The total response times are the cumulative totals of call processing time, turnout time, and travel time. NFPA 1710 recommends a total

response time of 6:24 for the first arriving apparatus for fire and 6:00 for the first arriving apparatus for EMS.

**📌 – Of Note...**

NFPA 1710 response times have not been adopted by the UFA Board. One of the important elements of the community risk assessment and standards of cover is to identify current 90th percentile times (current baselines) within UFA and to identify realistic benchmarks for the UFA Board to consider for adoption.

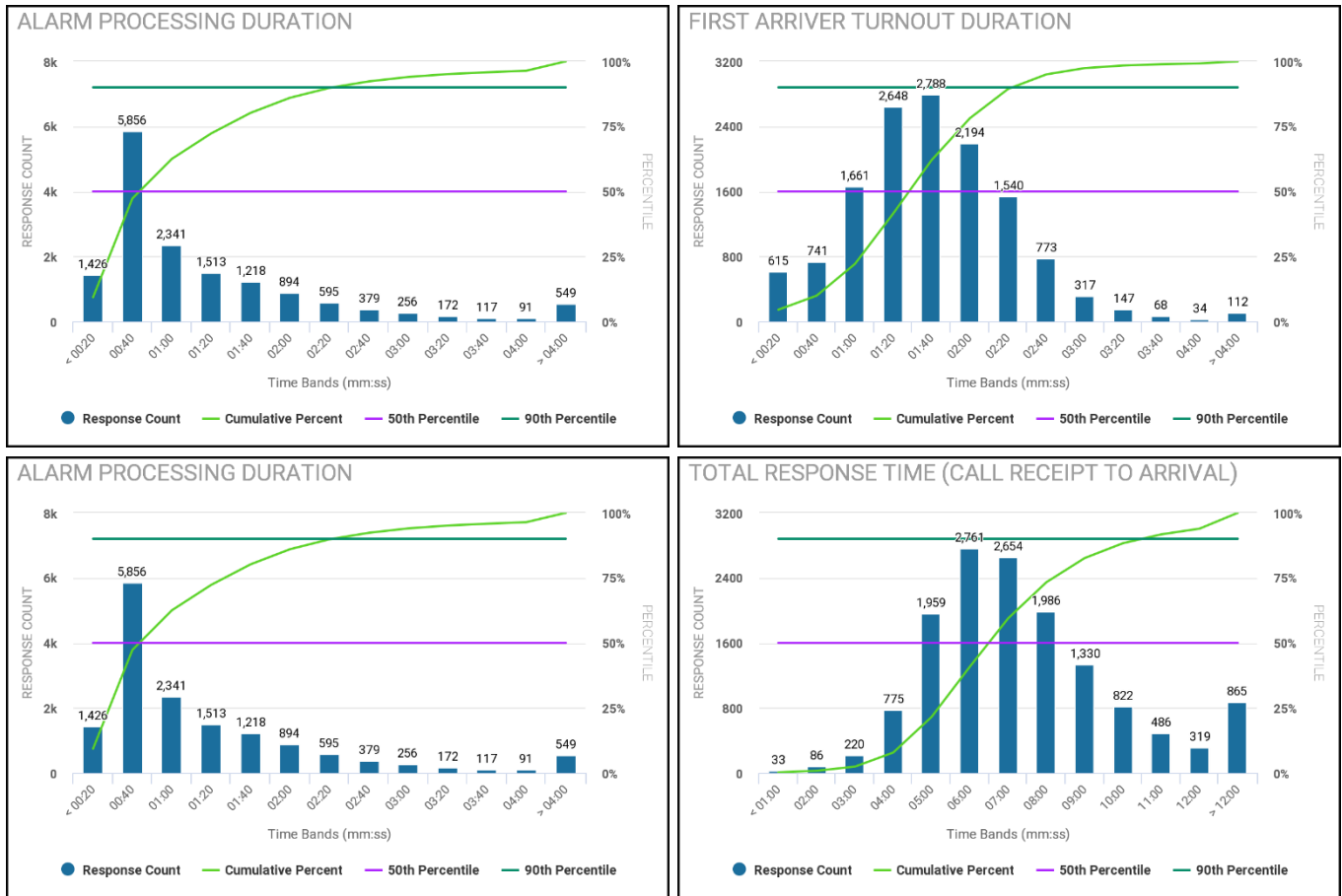
**Cottonwood Heights – 2020 Dispatch and Response Times**



Urban	Call Processing: Fire	Turnout Time: Fire	Travel Time: Fire	Total Response: Fire	Call Processing: EMS	Turnout Time: EMS	Travel Time: EMS	Total Response: EMS
<b>Cottonwood Heights</b>	2:10	2:36	8:18	11:25	1:53	2:25	6:30	9:16
<b>UFA Urban 2018-2020</b>	2:16	2:39	7:36	10:34	1:47	2:32	6:29	9:18
<b>UFA Rural 2018-2020</b>	2:32	3:05	15:08	19:09	1:56	2:50	14:45	17:45
<b>NFPA 1710</b>	1:04	1:20	4:00	6:24	1:00	1:00	4:00	6:00

Table 73 – Cottonwood Heights 2020 Emergent Response Times, 90<sup>th</sup> percentile values

## Cottonwood Heights – 2020 Turnout and Travel Time



The charts above illustrate the alarm processing, turnout and travel times for all units responding to service calls within Cottonwood Heights (90<sup>th</sup> percentile). The alarm processing for fire was 2:10 and 1:53 for EMS; turnout time was 2:36 for fire responses and 2:25 for EMS responses; travel time was 8:18 for fire responses and 6:30 for EMS. The 90<sup>th</sup> percentile total response time was 11:25 for fire and 9:16 for EMS. For the charts above, they show both fire and EMS response times together.

### 📌 – Of Note...

One item to note is that if you were to add the processing time, the turnout time, and the travel time, it will not necessarily (and often doesn't), sum the total response time. This is due to some of the limitations within the datasets and gaps within timestamps. Where there are missing timestamps, those particular key performance indicators (KPI) are excluded as they cannot accurately be calculated out.

## Cottonwood Heights – 2020 Incidents by Time of Day

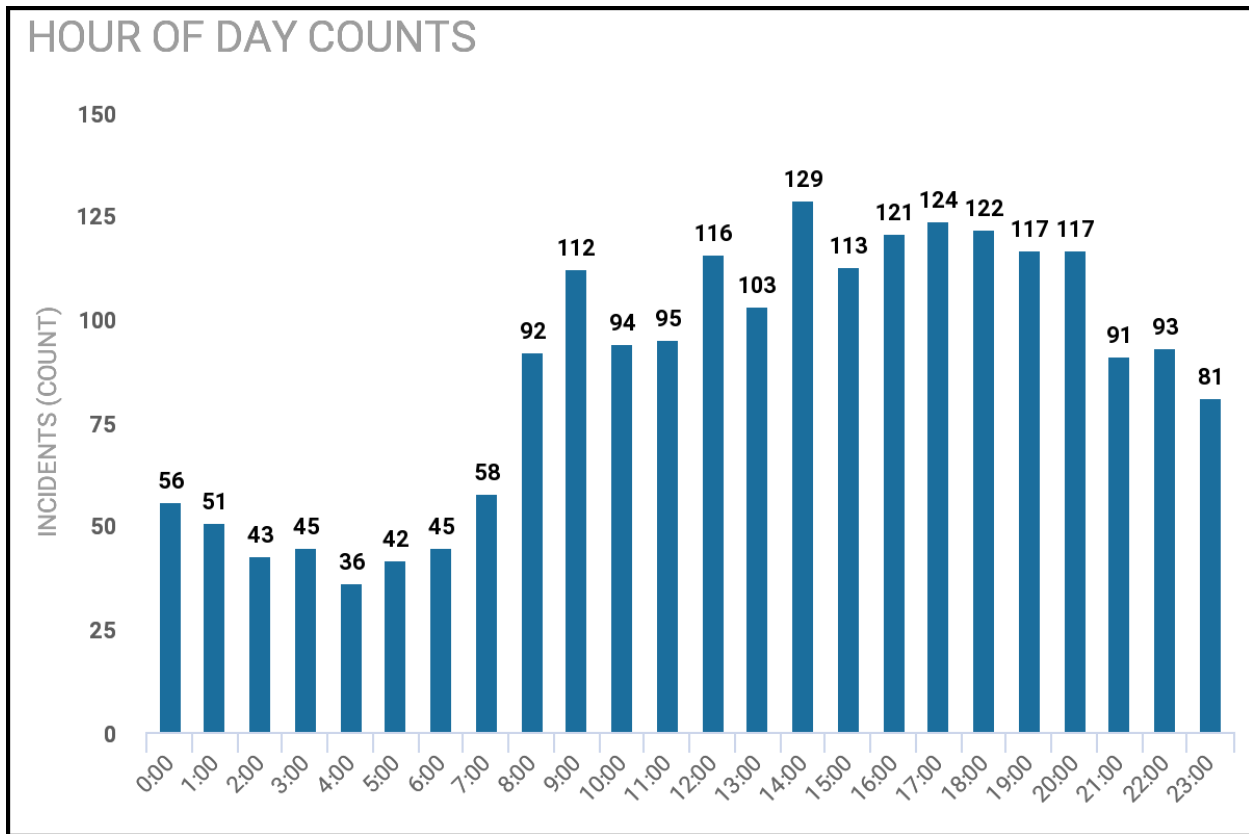


Chart 31 – Cottonwood Heights 2020 Incidents by Time of Day

The above table demonstrates the incidents by time of day and the time of greatest demand within Cottonwood Heights for all service calls. This chart illustrates that the greatest demand for service delivery begins at 07:00 AM and starts to decrease at 06:00 PM.

## Cottonwood Heights – 2020 Incidents by Day of Week

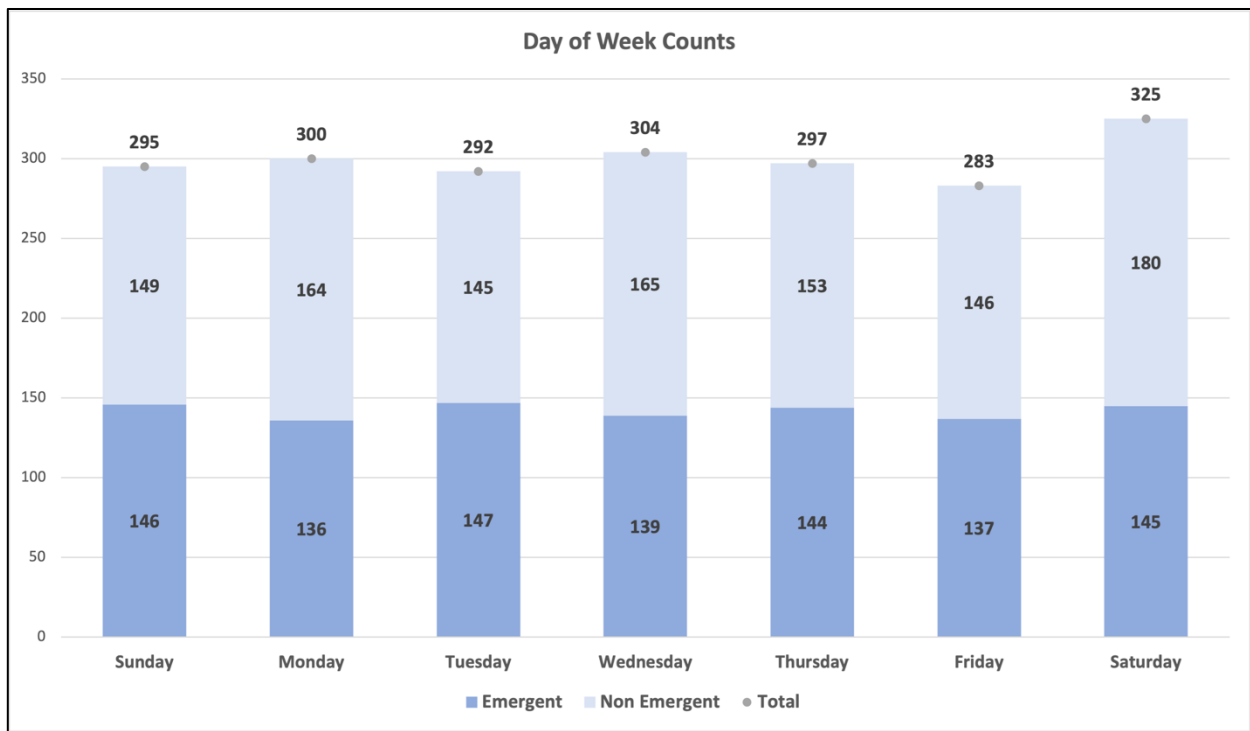


Chart 32 – Cottonwood Heights Incidents by Day of Week

This chart demonstrates the call volume based on the day of the week, with an increase in all calls as well as the peak volume for all calls in Cottonwood Heights occurring on Saturday.

## Cottonwood Heights – EMS Calls

EMS calls are filtered by final disposition codes and this data is taken from VECC and determined by the patient acuity at the time of call termination. Often times the EMS calls identified from final disposition are different than the number of EMS calls that were initially dispatched due to one being the initial call type, and one being what call type the call was closed as by responding fire crews.

	CY 2020	CY 2019	CY 2018
<b>ALS Transports</b>	704	650	761
<b>BLS Transports</b>	943	842	980
<b>Scene Release</b>	151	104	476
<b>Public Assistance</b>	28	16	12
<b>EMS Total Calls</b>	1,798	1,596	2,217

Note: There is possibly a difference if you were to add all calls due to data reporting mechanisms. Public assistance calls will sometimes get duplicated with a scene release, depending on dispatch code, but those calls do not carry across to the total calls. Also, cancelled calls go into a different final disposition so the numbers in the 'Incidents by Dispatch Type' are reflective of this difference.

Table 74 – Cottonwood Heights EMS Calls

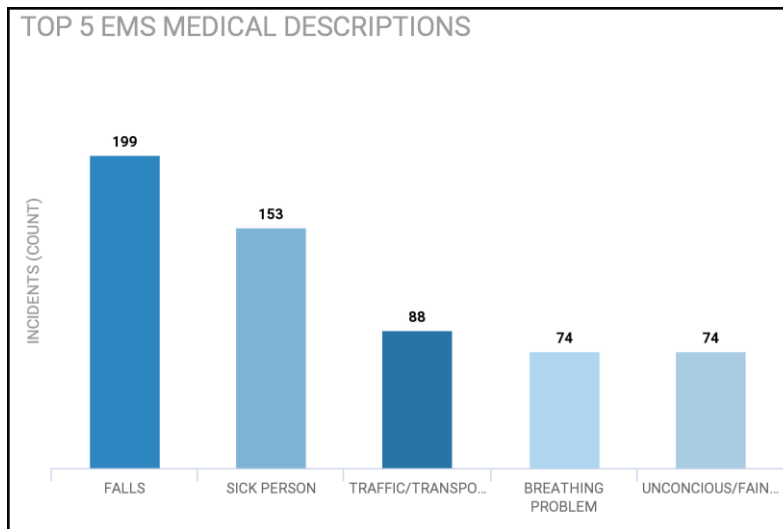


Chart 33 - Top 5 EMS Medical Calls - 2020

### Cottonwood Heights – 2020 Fire Incidents by Dispatch Type

NFIRS Description	Incident Count	% of Incidents
<b>Structure Fire</b>	24	47.1%
<b>Natural Vegetation Fire</b>	7	13.7%
<b>Outside Rubbish Fire</b>	13	25.5%
<b>Vehicle Fire</b>	2	3.9%
<b>Crop Fire</b>	1	2.0%
<b>Fire, Other</b>	3	5.9%
<b>Mobile Property Fire</b>	1	2.0%
<b>Total</b>	51	100%

Table 75 – Cottonwood Heights 2020 Incidents by Dispatch Type

## Cottonwood Heights – Building Occupancy Classification and Risk Categories

Occupancy Classification	Low	Moderate	High	Maximum	Total
<b>Assembly</b>	7	0	6	0	13
<b>Commercial/Industrial</b>	4	7	9	8	28
<b>Educational</b>	0	3	5	0	8
<b>Government</b>	2	0	0	0	2
<b>Healthcare</b>	1	2	3	0	6
<b>Hazardous</b>	Unknown	Unknown	Unknown	Unknown	65
<b>Storage</b>	0	0	0	0	0
<b>Residential</b>	1,473	5,456	1,988	22	8,939
<b>Residential – Multi Unit</b>	54	217	68	3	342
<b>High Rise</b>	N/A	N/A	1	4	5
<b>Total</b>	1,541	5,685	2,080	37	9,408

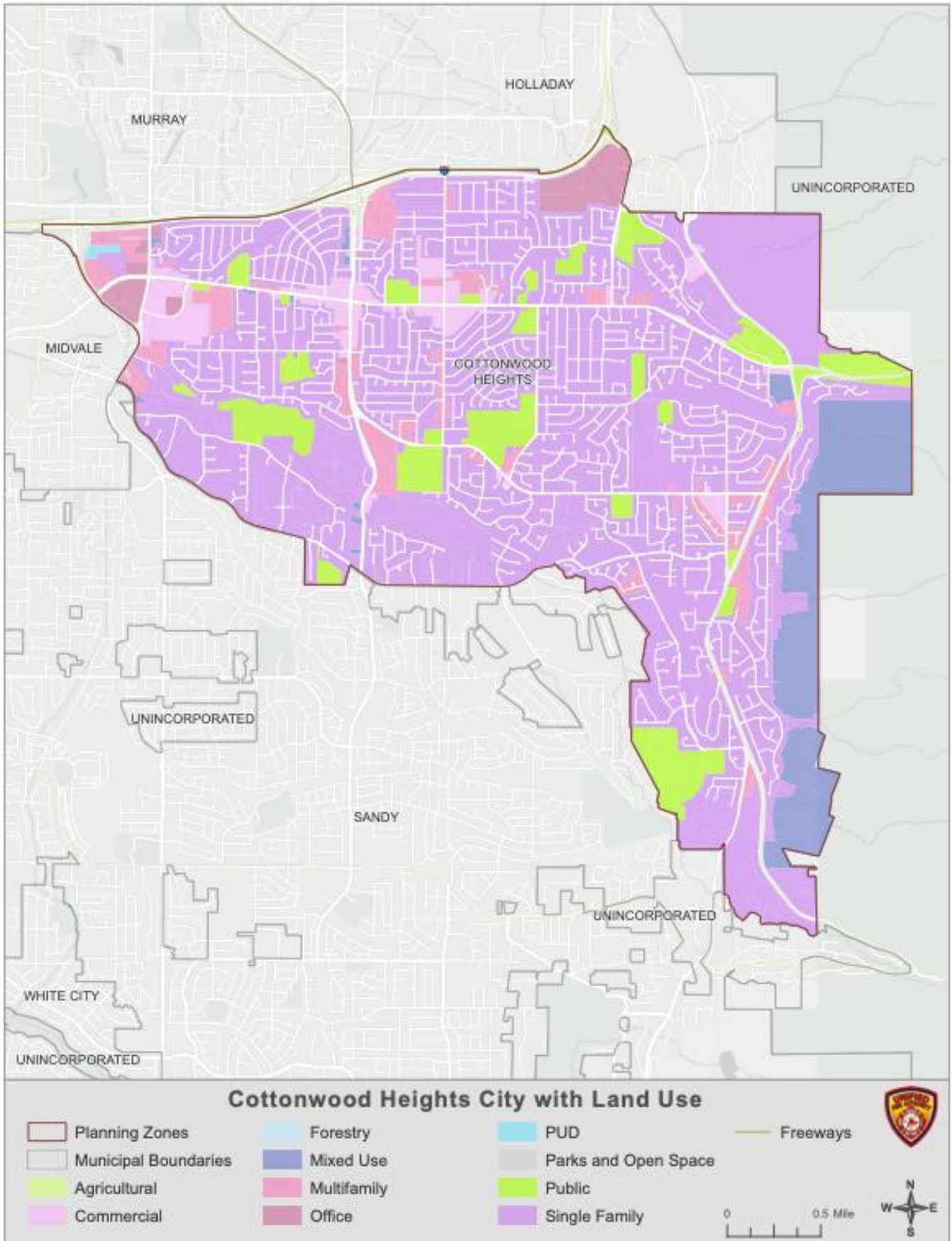
\*There is currently a gap within the identification of building size regarding hazardous materials sites. This is a gap that is being closed over the next several years as we collect the data and information.

*Table 76 – Cottonwood Heights Building Occupancy and Risk Categories*

### Building Size / Considerations

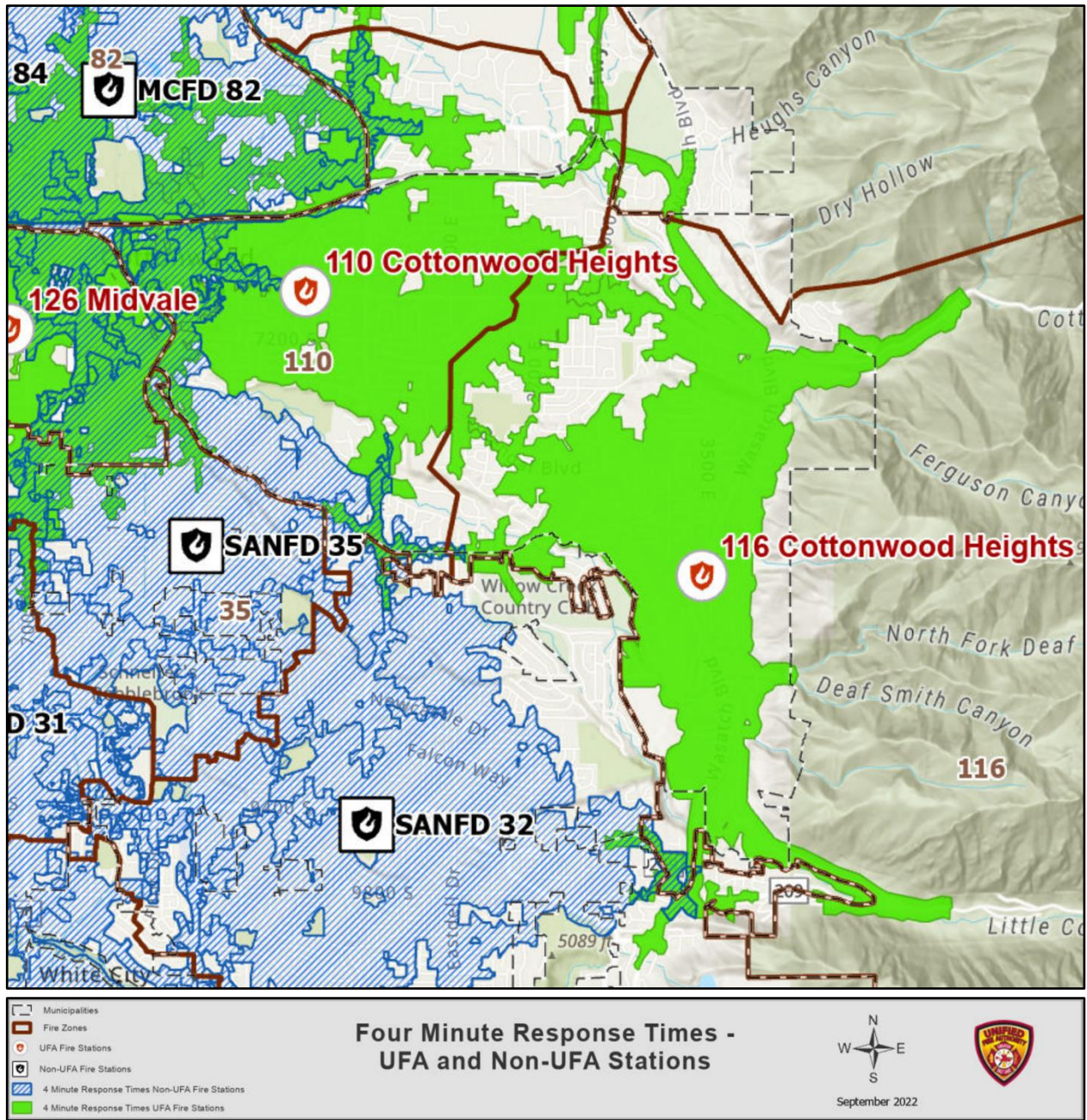
For purposes of risk classification, UFA has outlined the following risk classifications for building size, regardless of occupancy type (except residential). Low risk = 1-4,999 square feet. Moderate risk = 5,000-9,999 square feet. High risk = 10,000-99,999 square feet. Maximum risk = >100,000 square feet.

For residential occupancies, the following classifications apply. Low risk = 1-1,999 square feet. Moderate risk = 2,000-3,999 square feet. High risk = 4,000-9,999 square feet. Maximum risk = ≥10,000 square feet.

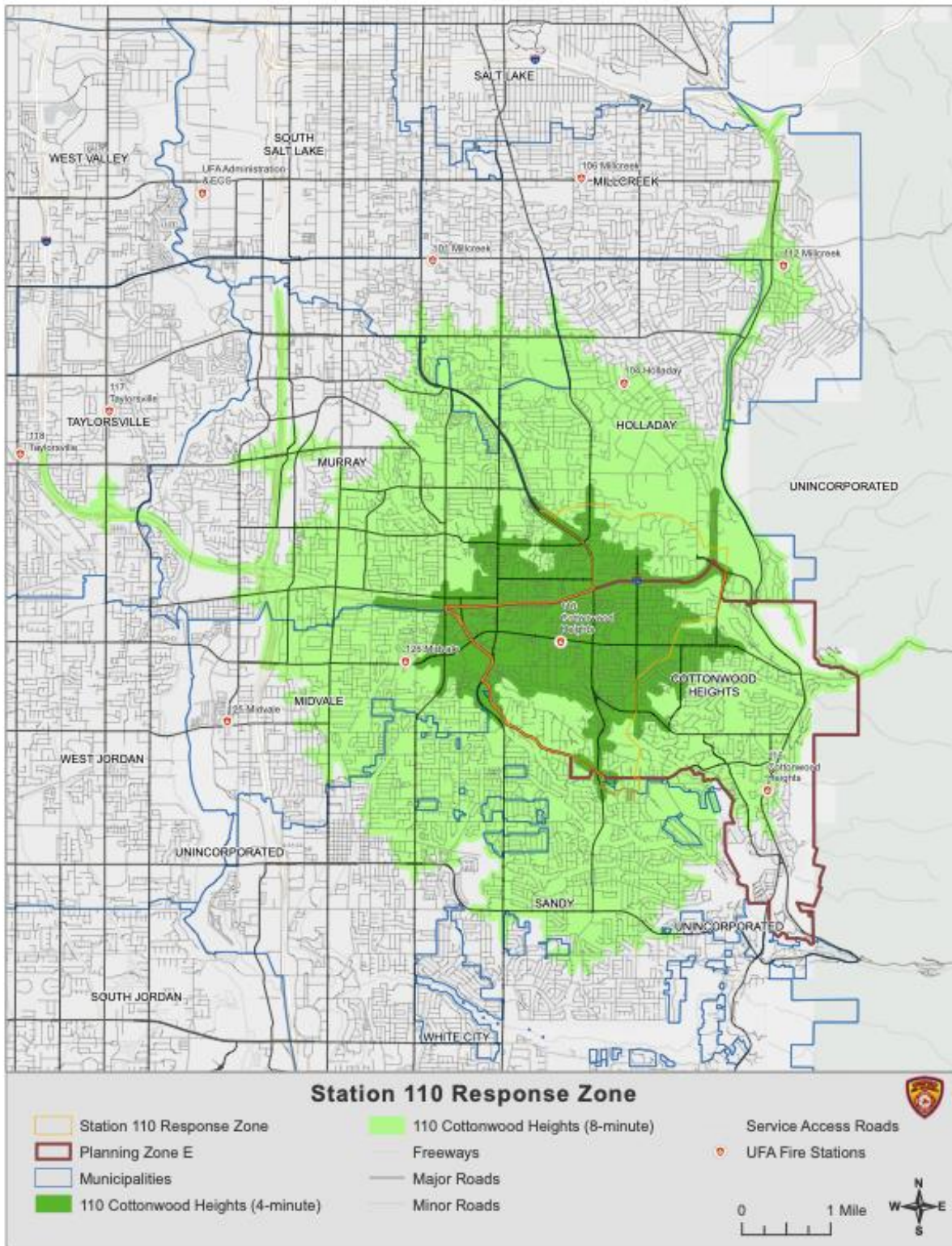


Map 106 – Cottonwood Heights with Land Use

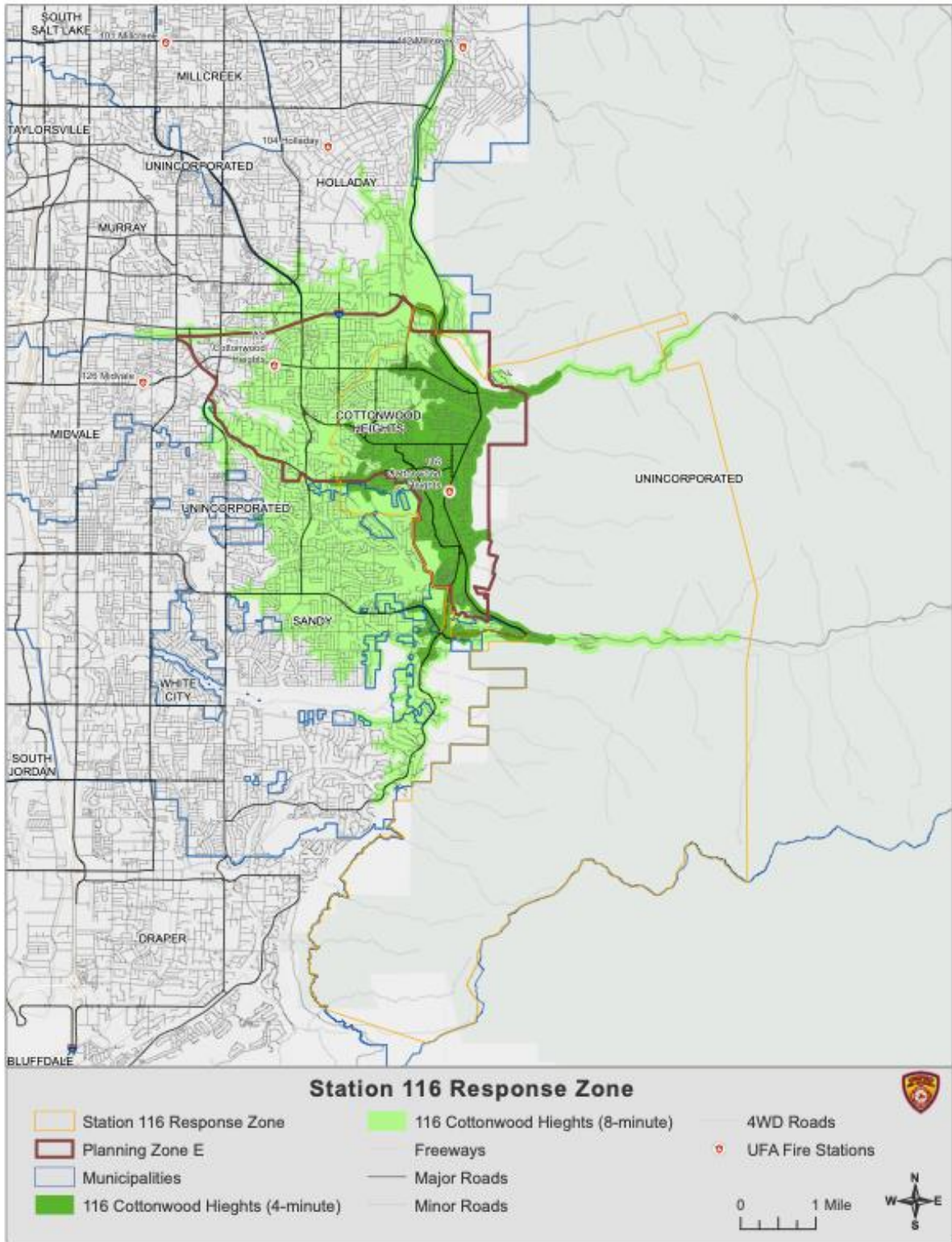




Map 107 - 4-Minute Travel Times, UFA and Aid



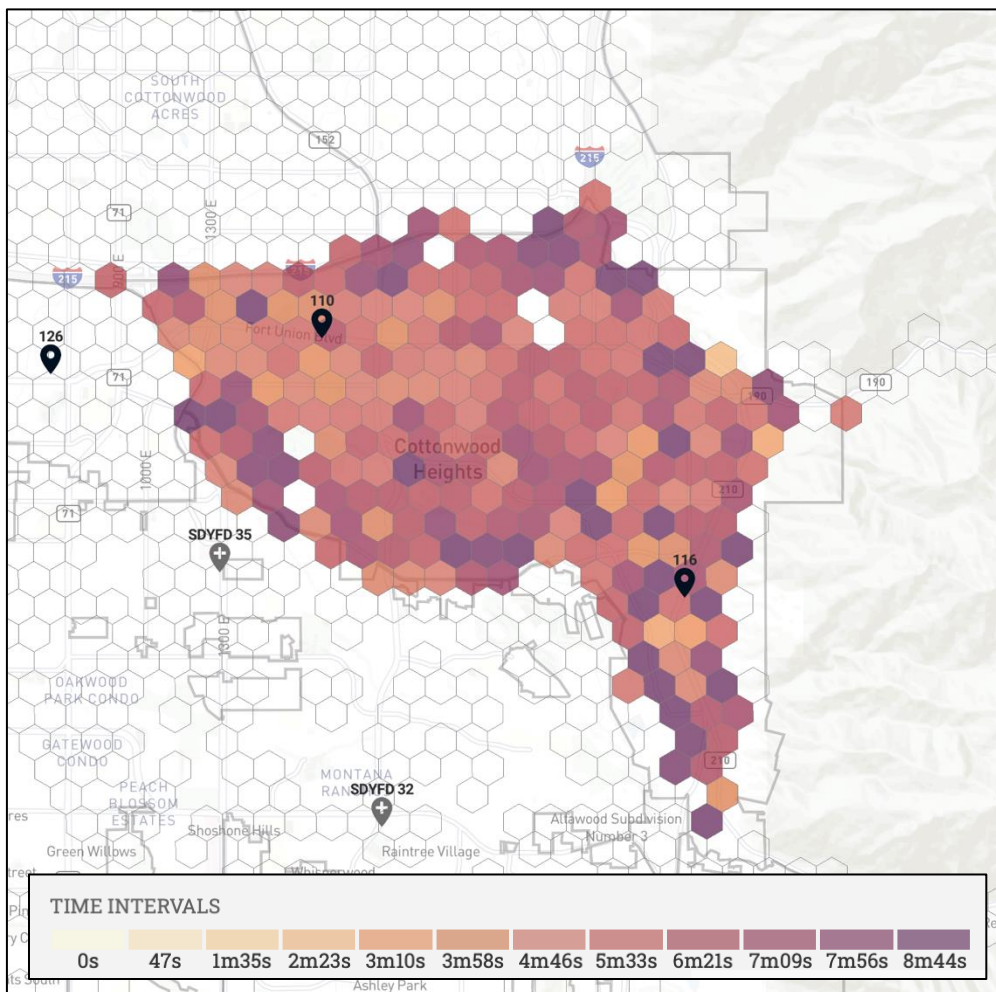
Map 108 - Station 110 4- and 8-Minute Travel Times



Map 109 - Station 116 4- and 8-Minute Travel Times

## Cottonwood Heights – First Arriver Travel Times

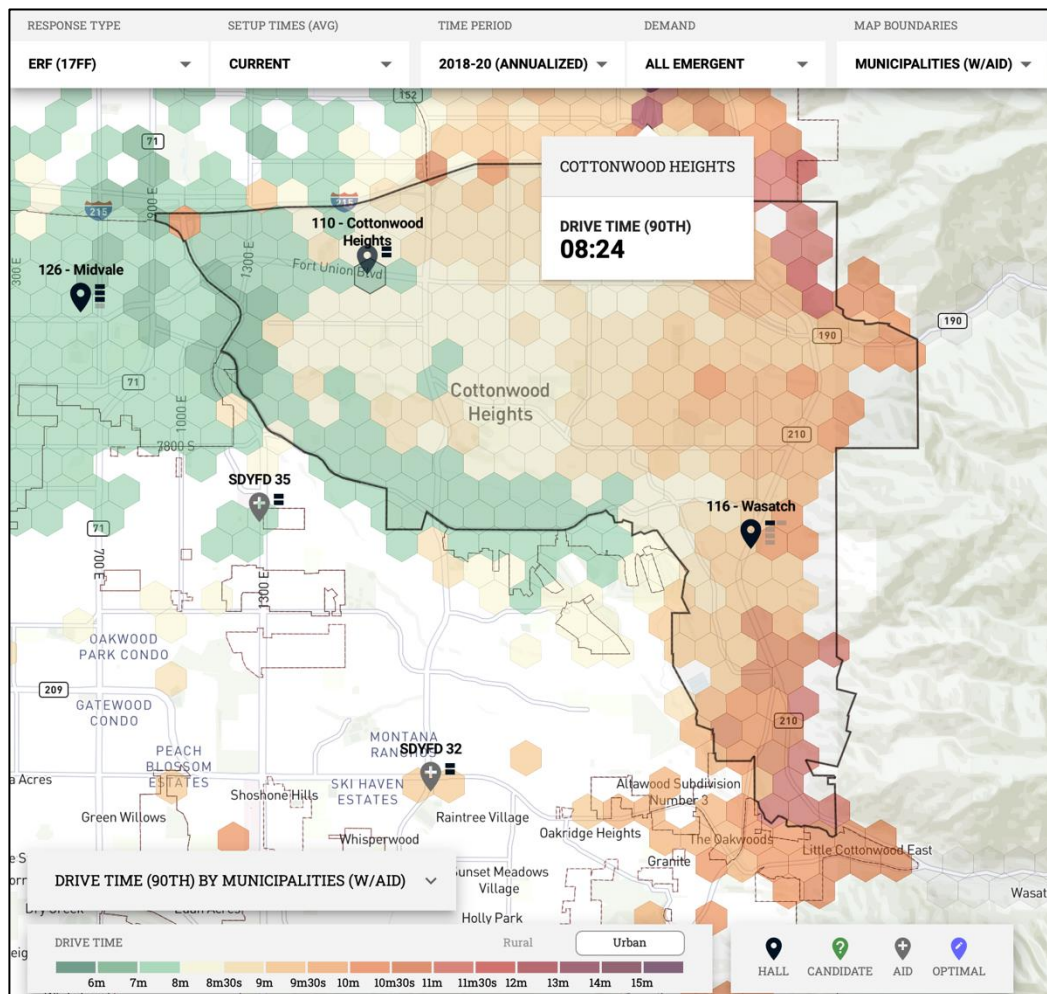
The following maps demonstrate the 90<sup>th</sup> percentile of travel times based off the last three years of historical data (2018-2020). The darker the color is, the more delayed the response, with the green and light colors demonstrating below or near target times. The darker colors on the bar within 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 (90<sup>th</sup> percentile) from notification of the alarm to the arrival of the first arriving apparatus — not an adopted standard by UFA. UFA is currently in process of identifying benchmark and target standards to be adopted by the UFA Board of Directors. Currently, within Cottonwood Heights, the 90<sup>th</sup> percentile drive time is 8:18 for fire and 6:30 for EMS, or a combined 90<sup>th</sup> percentile drive time of 6:36.



Map 110 – Cottonwood Heights Response Times – All Aid

## Cottonwood Heights – Residential Fire Effective Response Force (17 FF)

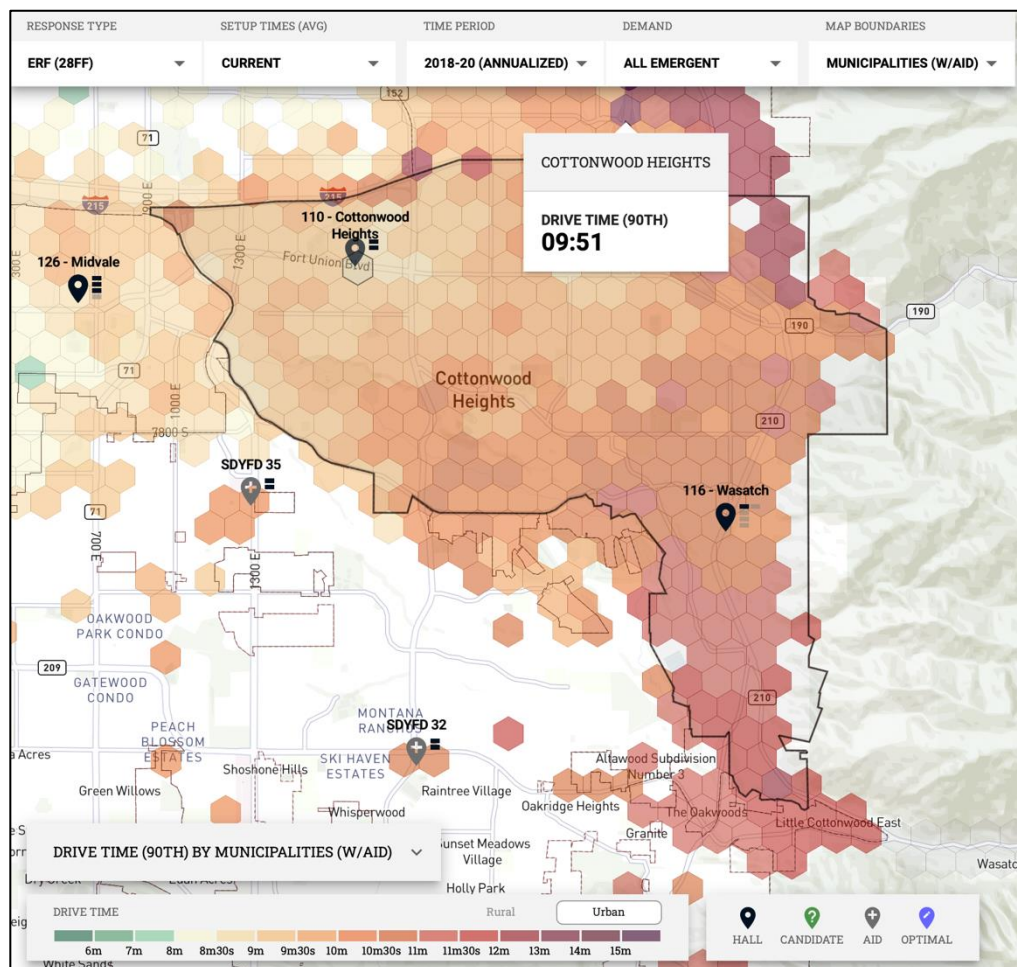
This map demonstrates the coverage of a multi-unit response to a residential fire based off all apparatus being within their station. The green to light yellow demonstrates the ability to have seventeen firefighters (a residential fire effective response force) on scene based off a residential urban fire force response. This map's drive times (or travel times) are based off the current NFPA 1710 standard of eight minutes (90<sup>th</sup> 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. UFA is currently in process of identifying benchmark and target standards to be adopted by the UFA Board of Directors. Based off predictive data, it is projected that the 90th percentile for 17 firefighters to arrive on scene would be 8:24.



Map 111 – Cottonwood Heights Response Times – Residential Fire Effective Response Force (17 ERF)

## Cottonwood Heights – 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 (90<sup>th</sup> 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. UFA is currently in process of identifying benchmark and target standards to be adopted by the UFA Board of Directors. Based off predictive data, it is projected that the 90th percentile for 28 firefighters to arrive on scene would be 09:51.



Map 112 – Cottonwood Heights Response Times – Commercial Fire Effective Response Force (28 FF)

## Cottonwood Heights 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	Mod	Mod	High	Low	High	Mod	Mod	Low	Mod	High	Mod

Table 77 – Cottonwood Heights Hazard Matrix

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

### Infrastructure – Transportation

There are several high-level transportation routes within Cottonwood Heights or directly bordering Cottonwood Heights. I-215 runs on the north border of the city. Several arterials and state roads also run through Cottonwood Heights, with Fort Union Blvd, Highland Drive, 2300 East, Bengal Blvd, Wasatch Blvd, and State Roads 190 (Big Cottonwood Canyon) and State Road 210 (Little Cottonwood Canyon). There are 8.5 linear miles of Interstate/US Highway, 5.33 linear miles of State Highways, and 152.1 total linear miles of roadway. UTA also runs bus routes through the city, with the main bus routes running on Fort Union Blvd, as well as routes into Big and Little Cottonwood Canyons. Cottonwood Heights is in the moderate-risk category for road infrastructure.

### Infrastructure – Water

There are several water districts within Cottonwood Heights, including the Cottonwood Improvement District, and the Jordan Valley Water Conservancy District.

### Infrastructure – Dams

There are six identified dams within Cottonwood Heights. Cottonwood Heights is in the moderate-risk category for dam infrastructure.

### Natural Hazards

Within Cottonwood Heights, there are no concerns with avalanche areas, however there are several areas that Cottonwood Heights units respond to that have avalanche as well as backcountry rescue potential within Unincorporated Salt Lake County. Cottonwood Heights is in the low-risk category for avalanche. There are several fault lines that run north-south through the city (see Map 8) and are components of the Wasatch Fault. Cottonwood Heights is in the moderate-risk category for liquefaction and high-risk category for fault lines. There is around 75,100 linear feet of fault lines in Cottonwood Heights. One of the biggest hazards that occur within an earthquake scenario is the number of unreinforced masonry (URM) buildings within Cottonwood Heights, with an estimated 2,902 URM's, which constitutes about 11.82% of the overall URM's within UFA's response areas. Cottonwood Heights is in the high-risk category for unreinforced masonry.

### Wildland Urban Interface

There is medium risk of urban interface fires within Cottonwood Heights, although on the eastern border of Cottonwood Heights, there is high risk of urban interface fires within Unincorporated Salt Lake County. Cottonwood Heights is in the moderate-risk category for Wildland Urban Interface.

### Hazardous Materials / Tier II Sites

There are eight identified HazMat/Tier II Sites within Cottonwood Heights, which is in the moderate-risk category.

### Hospitals

Cottonwood Heights has no standalone hospitals, which places it in the low-risk category.

### Schools

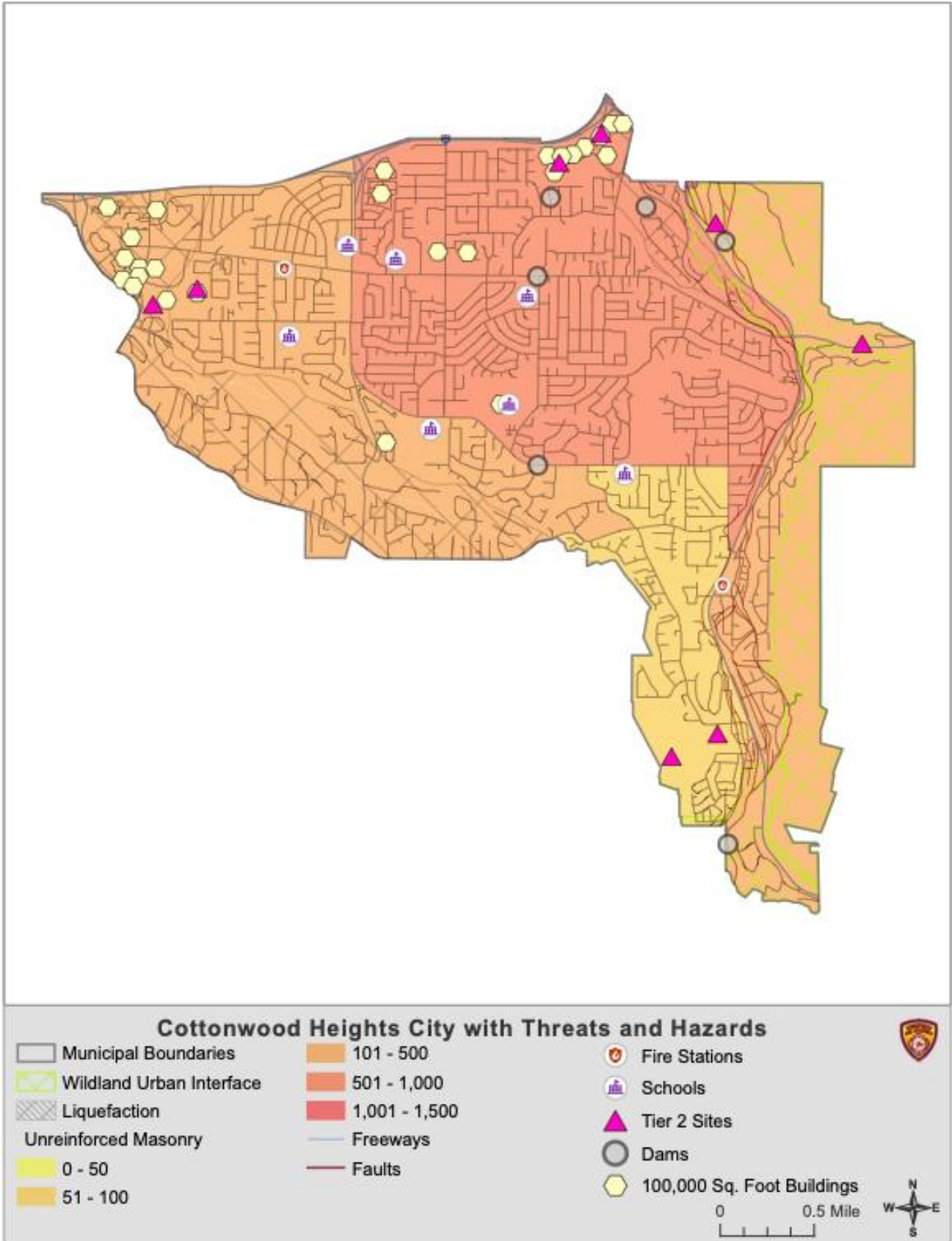
Cottonwood Heights has five elementary schools, one middle schools, and one high school within city boundaries, which places it in the moderate-risk category.



## Target Hazards – Structures

Some of the target hazard occupancies in Cottonwood Heights include:

- Metropolitan Water District of Sandy & Salt Lake – 3430 Danish Road
- Big Cottonwood Treatment Plant – 4101 E Big Cottonwood Canyon Road
- Praxair – 6880 S 2300 E



Map 113 – Cottonwood Heights with Combined Hazards

## Life and Property Loss

From 2015-2020, there have been zero fatalities attributed to fire. There has been a total estimate of \$2,068,827.00 of property loss and a total estimate of \$597,902.00 of content loss due to fire.

## Unified Fire Shared Services

With a regional-response model, the Unified Fire Authority brings special services to bear when the situation calls for it, not relying on automatic or mutual aid which provides a quicker and more effective delivery of service to its residents.

### Battalion Chiefs

Unified Fire Authority staffs three operational battalion chiefs (BCs) daily, in addition to a 40-hour Operations Chief (OC). These BCs and OC respond to large, complex, or expanding incidents — providing incident command, safety, and operational direction. Each BC covers an area of UFA's service area and respond to calls for service in any jurisdiction. Battalion 11 is housed out of Station 101 in Millcreek, Battalion 12 is housed out of Station 121 in Riverton, and Battalion 13 is housed out of Station 118 in Taylorsville.

### Heavy Rescue Companies

Heavy Rescue specializes in structural collapse, confined space rescue, trench collapse rescue, vehicle extrication, machinery disentanglement, rope rescue (high angle, low angle, rigging) and rapid intervention (Firefighter Rescue). The UFA Heavy Rescue Program consists of two independent rescue companies strategically placed in UFA's jurisdiction. Station 117 in Taylorsville, and Station 121 in Riverton house our Heavy Rescue Teams.

### Hazardous Materials (HazMat) Companies

The Hazardous Materials Teams provide an efficient, effective, and professional Hazardous Material Mitigation response. HazMat Companies respond to hazardous material releases/spills for the purpose of mitigating the release/spill. They select and use proper specialized chemical personal protective equipment dependent on the nature of the incident. The HazMat Program consists of two independent HazMat

companies strategically placed in UFA's jurisdiction. Station 124 in Riverton, and Station 126 in Midvale house our HazMat Teams.

### Water Rescue Teams

UFA has a swift water team, ice rescue team, as well as a dive rescue team. These companies respond to victims recreating in our swift canyon rivers and our lakes and reservoirs. Station 116 in Cottonwood Heights, Station 117 in Taylorsville, Station 121 in Riverton, and Station 123 in Herriman house Water Rescue Companies.

### Wildland Division

UFA's Wildland Division provides highly trained and experienced wildland fire and all-risk response resources to local, state, and federal incidents. The Wildland Division oversees the training and certification of UFA personnel for response to wildland fires and all-hazard incidents. We also work with UFA Communities to educate residents on wildfire preparedness and provide mitigation services to reduce the risks of wildfire. UFA has a special capability where a Duty Officer is able to act as the Fire Warden within UFA's jurisdictions, allowing the ordering of resources much more quickly than having to rely on a Fire Warden that may or may not be readily accessible. Station 103 in Herriman currently houses the Duty Officer.

### Investigations Division

Arson and Explosive related incidents are considered two of the most dangerous criminal activities that threaten our citizens. The need exists to protect the citizens of our jurisdiction from loss of life and property by reducing the crime of arson, arson-related crimes, improvised explosive devices (IEDS) and the prevention of future violent crimes. The Investigations Division addresses this need by establishing a sound foundation of effective enforcement, focusing on the apprehension of the offender, while in partnership with other Local, state and federal law enforcement agencies. The team utilizes highly-trained Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) certified K-9's that assist with accelerant and explosives detection.

### Urban Search & Rescue

A FEMA Urban Search and Rescue Task Force is a team of individuals which serve as a resource for disaster response at local, state, and federal levels. It is comprised mainly of firefighters but includes structural engineers, medical professionals,

canine/handler teams and emergency managers with highly specialized training in urban search and rescue environments.

Utah Task Force 1 (UT-TF1) is one of 28 Type I, Federal Urban Search & Rescue (US&R) Task Forces in the United States. This program brings a highly trained, multi-hazard Task Force that is especially designed to respond to a variety of emergencies/disasters including earthquakes, hurricanes, tornadoes, floods, terrorist acts and hazardous material releases. Fire department personnel that are task force members receive specialized training and skills that directly benefit Unified Fire Authority.

### [Salt Lake County Emergency Management](#)

The Salt Lake County Division of Emergency Management serves our citizens by directing and coordinating resources for disasters and emergencies through preparation, planning, mitigation, response, and recovery. The Salt Lake County Emergency Coordination Center is activated and manned during any event—from small-scale to large-scale occurrences—to disasters both natural and man-made that can or have exceeded the resources of any particular jurisdiction. Currently, the Salt Lake County ECC assists and obtains resources for the 22 jurisdictions located within the Salt Lake Valley. Salt Lake County EM assists these jurisdictions through the activation of 15 Emergency Support Functions (ESFs) filled by employees from a multitude of backgrounds. The ESF employees have authority throughout Salt Lake County to fill and order additional support for the operations occurring in the field until the impacted jurisdiction can return to their normal operations and functions. The Emergency Management Division is committed to keeping the public safe through community outreach, training, dissemination of important public information, training of staff and the creation of a more resilient community through mitigation, preparation, response, and recovery. The ECC has been activated for many events such as Child Abduction Response Team (CART) Deployments, wildland fires such as the Rosecrest and Machine Gun fires, flooding, severe weather events, earthquakes, civil unrest, the COVID-19 pandemic, Line of Duty Deaths (LODD), and many other events.

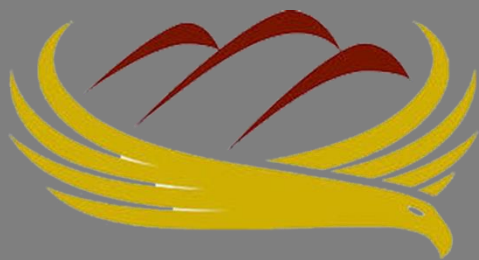


## Unified Fire Authority

3380 South 900 West  
Salt Lake City, UT 84119

# Eagle Mountain City

## Community Risk Assessment



**EAGLE**  
M O U N T A I N



## Eagle Mountain Planning Zone

UFA has two stations within the City of Eagle Mountain Planning Zone covering a total of 50.43 square miles with a population of 43,623 and responded to 1,455 calls for service in 2020.

Planning Zone	Population	Population Percentage of UFA	Square Miles	Population Density per Sq Mile	Classification
<b>Eagle Mountain</b>	43,623	9.67%	50.43	865	Urban

Eagle Mountain has increased its population from 21,931 in 2010 to 43,623 in 2020, showing an increase of 49.73% over a ten-year timeframe. Providing an exponential growth pattern and if all things remain equal, the following chart demonstrates that Eagle Mountain City could increase its population to 85,581 by the year 2040.

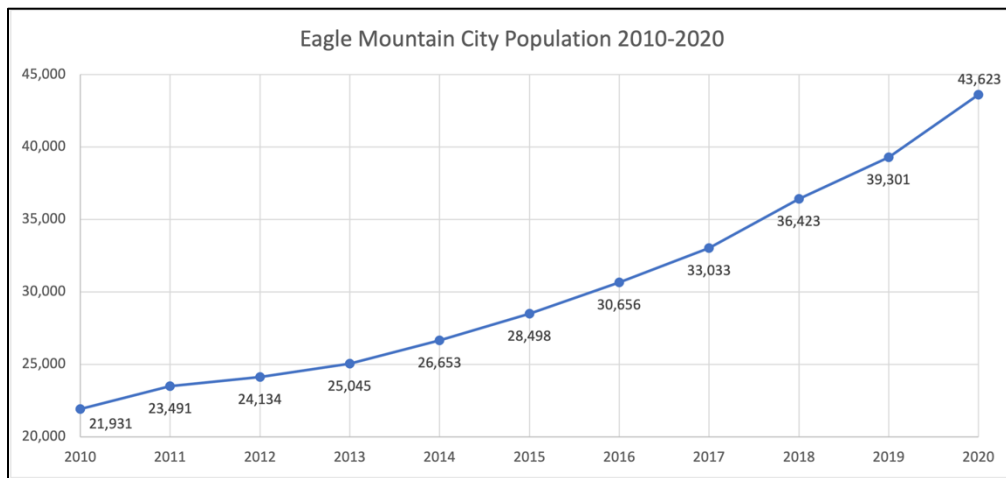


Chart 34 – Eagle Mountain Population 2010-2020

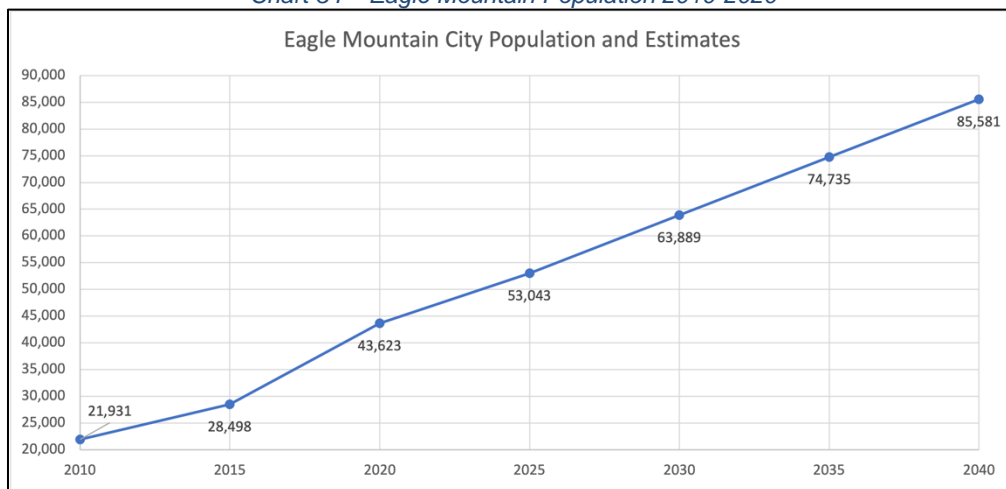


Chart 35 – Eagle Mountain Population and Estimates 2010-2040



## Eagle Mountain Station Information

### Station 251 information:

- Owner – UFSA
- Opened – 1997/2016
- Address – 1680 E. Heritage Drive
- Staffing and Apparatus –
  - Type 1/3, ME 251 (3 persons)
  - MA 251 (cross-staffed)



*Image 9 – Eagle Mountain Station 251*

### Station 252 information:

- Owner – UFSA
- Opened – 2002
- Address – 3785 E. Pony Express Parkway
- Staffing and Apparatus –
  - Type 1, ML 252 (4 persons)
  - MA 252 (2 persons)
  - Type 6, Brush Truck (cross-staffed)



*Image 10 – Eagle Mountain Station 252*

## Surrounding UFA and Automatic/Mutual Aid Response Stations

Surrounding fire stations and fire departments that are within an eight-minute response to Eagle Mountain are:

- Saratoga Springs Station 261, with a two-person ladder and a two-person medic ambulance

- Saratoga Springs Station 262, with a two-person engine and a two-person medic ambulance

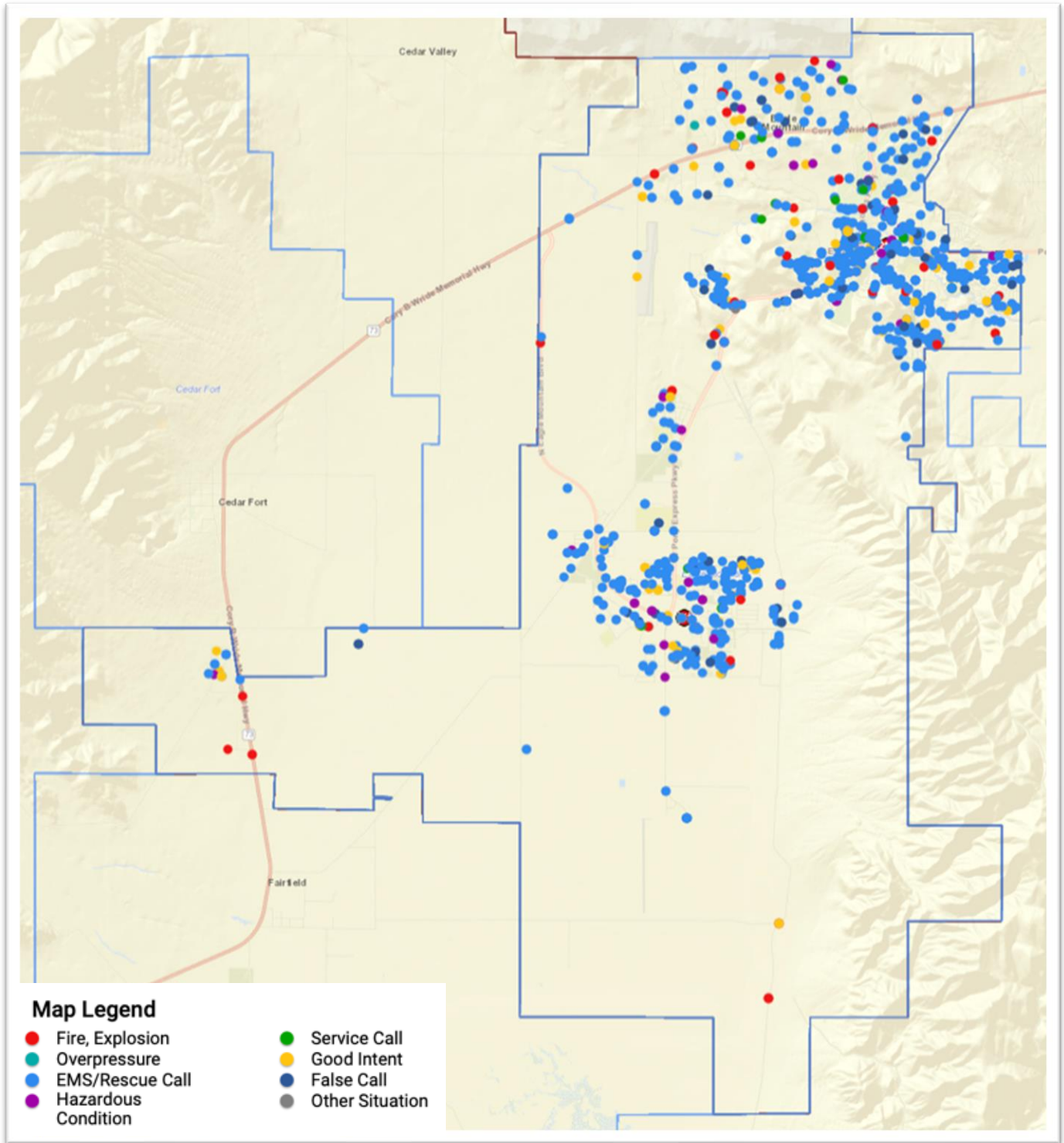
### Eagle Mountain – Incidents by Dispatch Type

The following data is what the NFIRS type was when crews arrived on scene. This may be different than what was originally dispatched, including a reclassification of a call type from one to another. Cancelled calls occur if the company is cancelled en route to a call and never arrives on scene, which then changes the dispatch type to an NFIRS 611 call type.

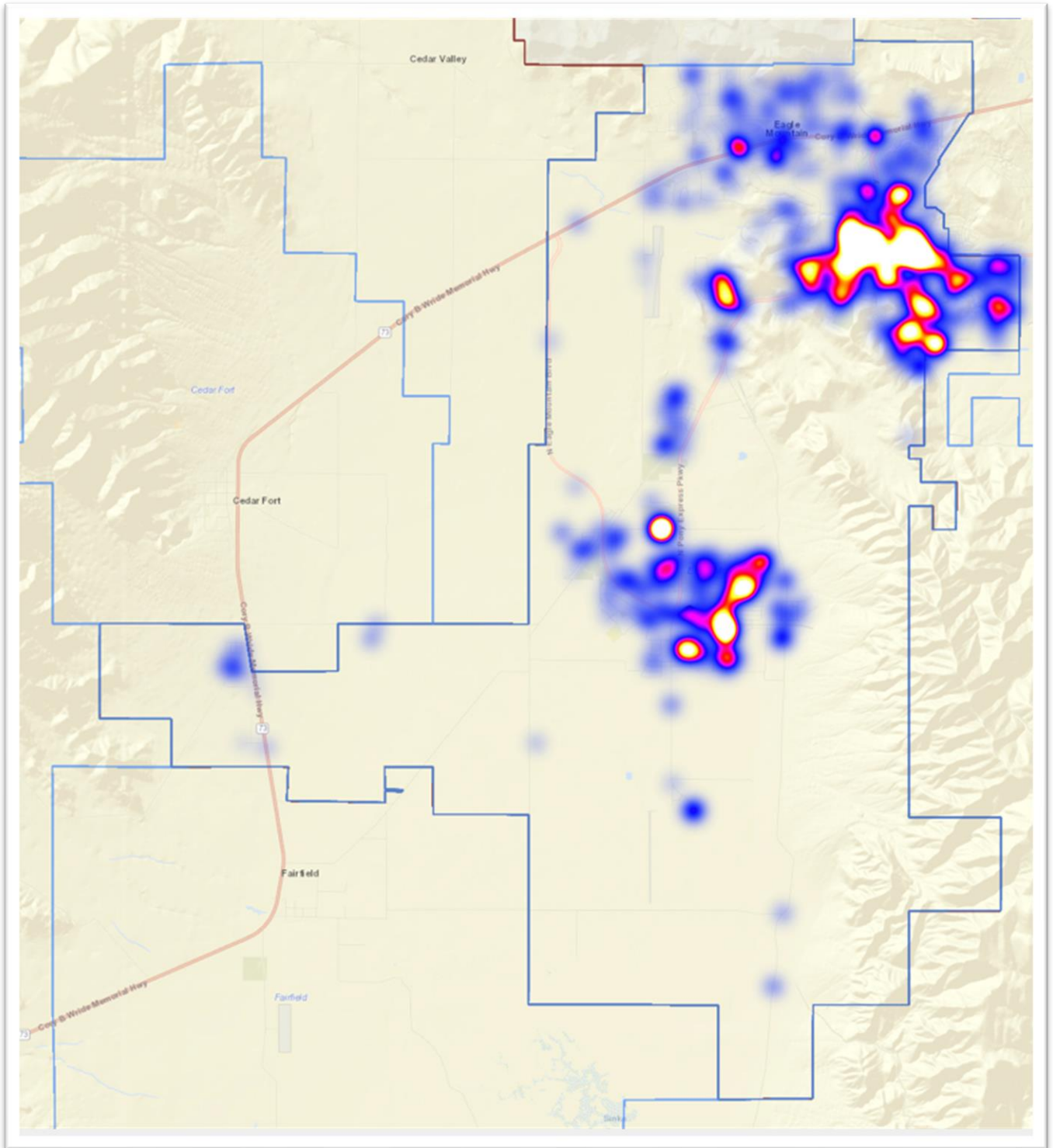
	CY 2020	CY 2019	CY 2018
<b>Fire Suppression</b>	51	35	54
<b>EMS</b>	833	720	569
<b>Hazardous Materials</b>	37	46	36
<b>Service Calls</b>	22	29	18
<b>Good Intent</b>	253	223	216
<b>False Calls</b>	81	116	110
<b>Other (Misc., Flood, Overpressure)</b>	2	5	2
<b>Total</b>	1,279	1,174	1,005
<b>Cancelled</b>	176	185	188
<b>Overall Total</b>	1,455	1,359	1,193

*Table 78 – Eagle Mountain Call Types*

# Eagle Mountain – 2020 Incidents and Heat Map



Map 114 – Eagle Mountain Incident Calls by Type



Map 115 – Eagle Mountain Incident Heat Map

## NFPA 1710

The National Fire Protection Association is an international nonprofit organization that is devoted to eliminating death, injury, property, and economic loss due to fire, electrical and related hazards. The NFPA makes recommendations on over 300 codes and standards. NFPA 1710 recommendations are based off 90<sup>th</sup> percentile times.

### – In Other Words...

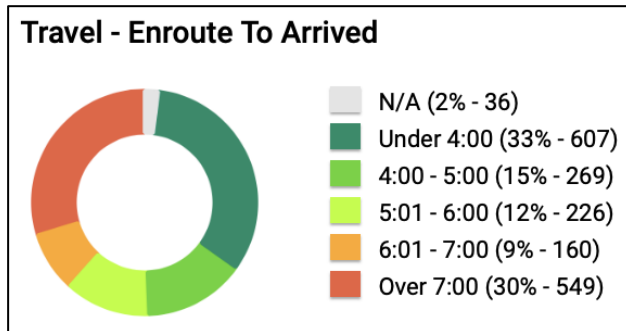
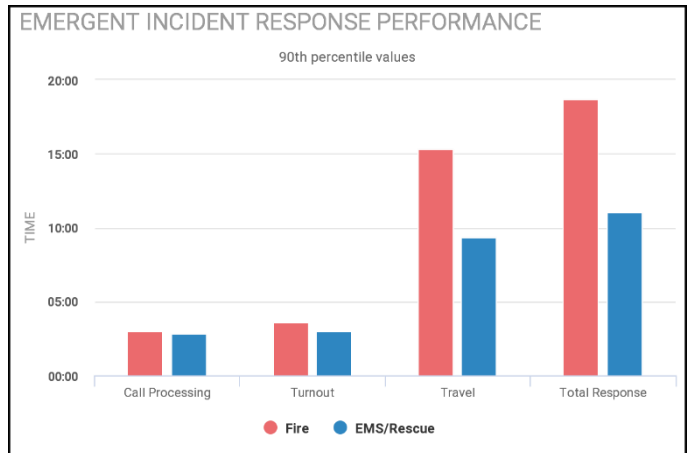
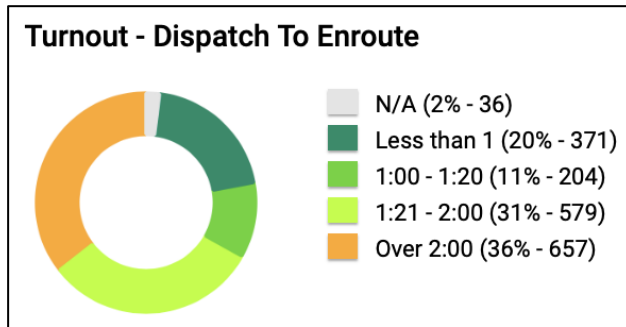
If a value is in the 90<sup>th</sup> percentile, it means the value is better than 90% of all other values in the dataset. In other words, it is within the top 10% of the values.

NFPA 1710 encompasses suggested standards for full-time fire departments and recommends the following times (all of which are at the 90<sup>th</sup> percentile): alarm processing – 64 seconds; turnout time for EMS responses – 60 seconds; turnout time for fire responses – 80 seconds; first arriver apparatus – 240 seconds (4 minutes); initial full-alarm assignment for low and medium hazard responses – 480 seconds (8 minutes); or initial full-alarm assignment for high hazard/high-rise responses – 610 seconds (10 minutes 10 seconds). The total response times are the cumulative totals of call processing time, turnout time, and travel time. NFPA 1710 recommends a total response time of 6:24 for the first arriving apparatus for fire and 6:00 for the first arriving apparatus for EMS.

### – Of Note...

NFPA 1710 response times have not been adopted by the UFA Board. One of the important elements of the community risk assessment and standards of cover is to identify current 90<sup>th</sup> percentile times (current baselines) within UFA and to identify realistic benchmarks for the UFA Board to consider for adoption.

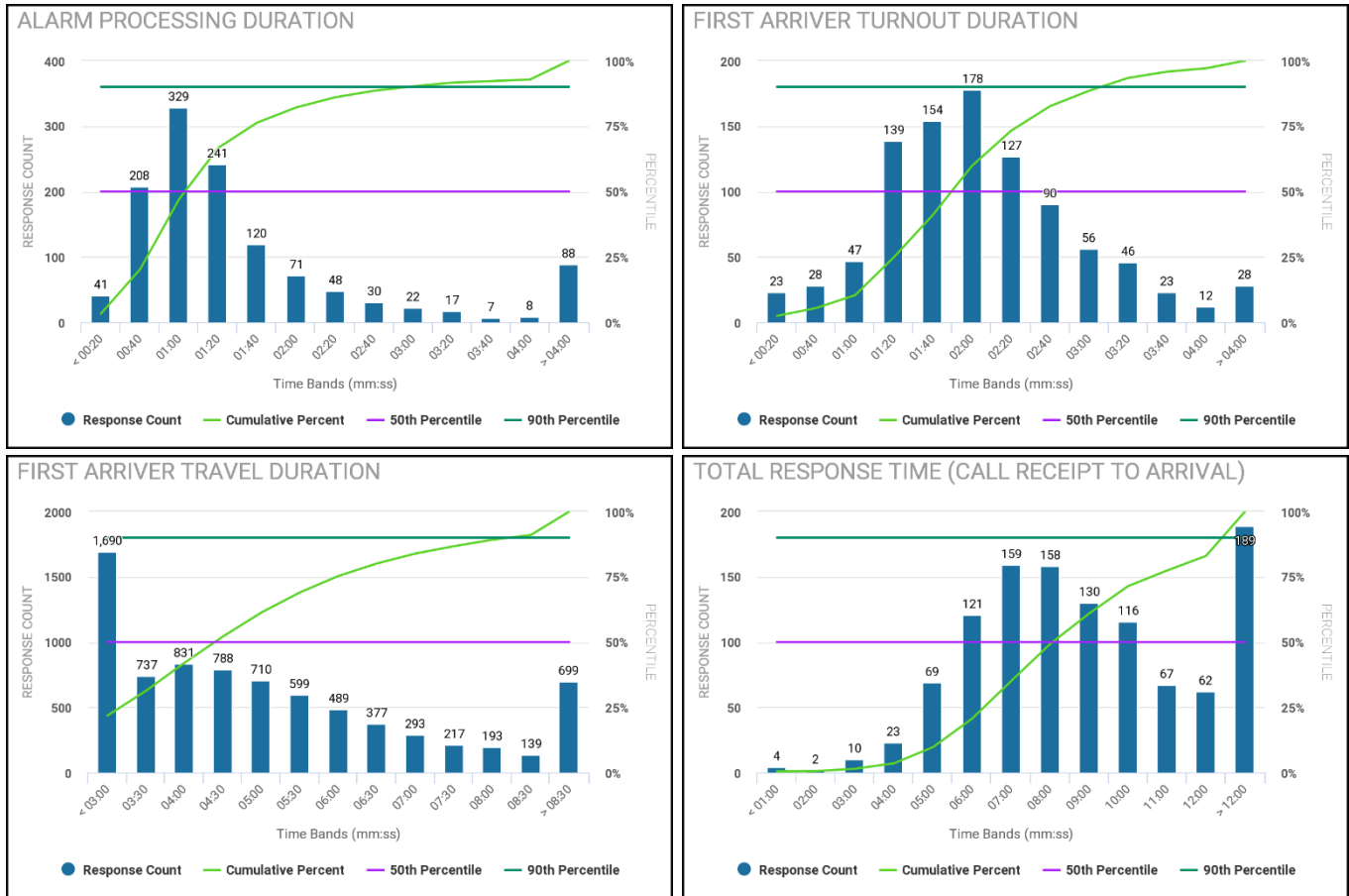
## Eagle Mountain – 2020 Dispatch and Response Times



Urban	Call Processing: Fire	Turnout Time: Fire	Travel Time: Fire	Total Response: Fire	Call Processing: EMS	Turnout Time: EMS	Travel Time: EMS	Total Response: EMS
<b>Eagle Mountain</b>	2:28	3:17	12:13	16:48	1:34	3:03	9:07	11:42
<b>UFA Urban 2018-2020</b>	2:16	2:39	7:36	10:34	1:47	2:32	6:29	9:18
<b>UFA Rural 2018-2020</b>	2:32	3:05	15:08	19:09	1:56	2:50	14:45	17:45
<b>NFPA 1710</b>	1:04	1:20	4:00	6:24	1:00	1:00	4:00	6:00

Table 79 – Eagle Mountain 2020 Emergent Response Times, 90<sup>th</sup> percentile values

## Eagle Mountain – 2020 Turnout and Travel Time



The charts above illustrate the alarm processing, turnout and travel times for all units responding to service calls within Eagle Mountain (90<sup>th</sup> percentile). The alarm processing for fire was 2:28 and 1:34 for EMS; turnout time was 3:17 for fire responses and 3:03 for EMS responses; travel time was 12:13 for fire responses and 9:07 for EMS. The 90<sup>th</sup> percentile total response time was 16:48 for fire and 11:42 for EMS. For the charts above, they show both fire and EMS response times together.

### 📌 – Of Note...

One item to note is that if you were to add the processing time, the turnout time, and the travel time, it will not necessarily (and often doesn't), sum the total response time. This is due to some of the limitations within the datasets and gaps within timestamps. Where there are missing timestamps, those particular key performance indicators (KPI) are excluded as they cannot accurately be calculated out.

## Eagle Mountain – 2020 Incidents by Time of Day

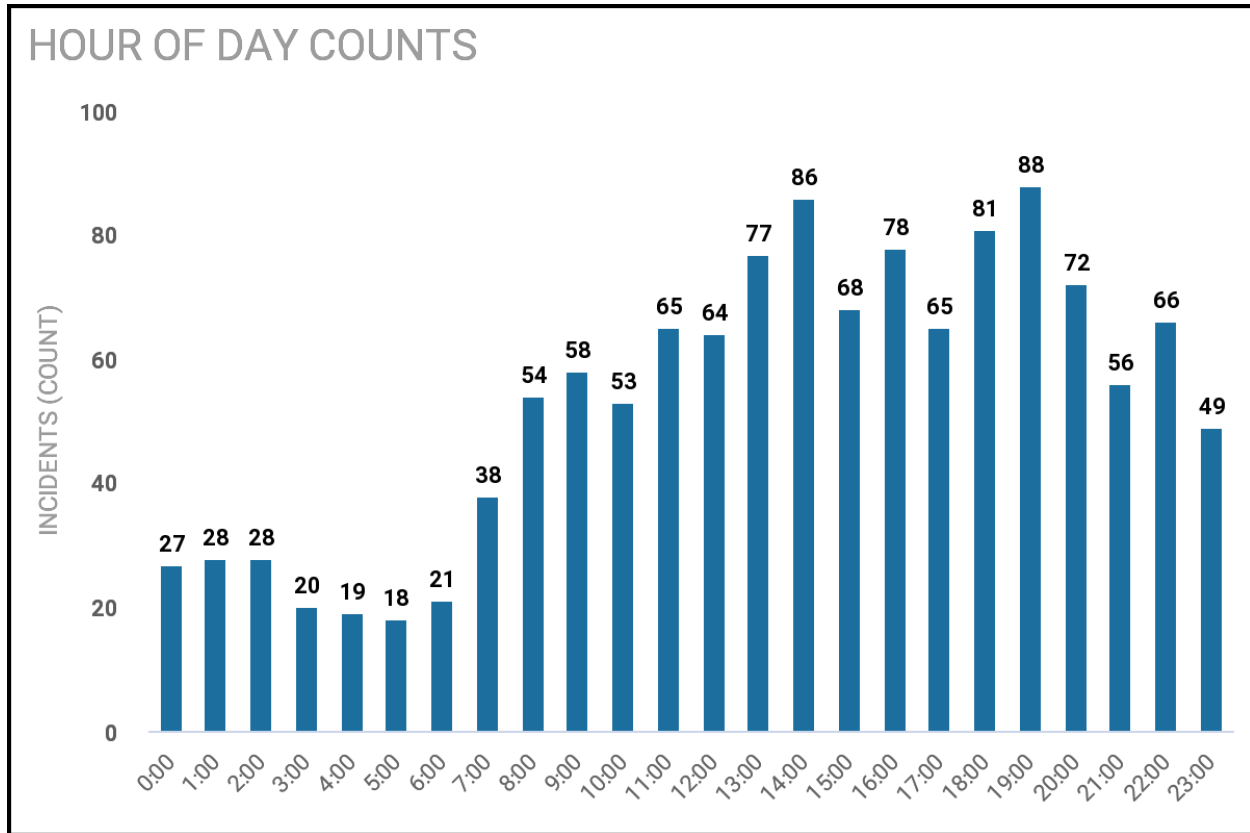


Chart 36 – Eagle Mountain 2020 Incidents by Time of Day

The above table demonstrates the incidents by time of day and the time of greatest demand within Eagle Mountain for all service calls. This chart illustrates that the greatest demand for service delivery begins to increase at 7:00 AM and starts to decrease at 7:00 PM.



## Eagle Mountain – 2020 Incidents by Day of Week

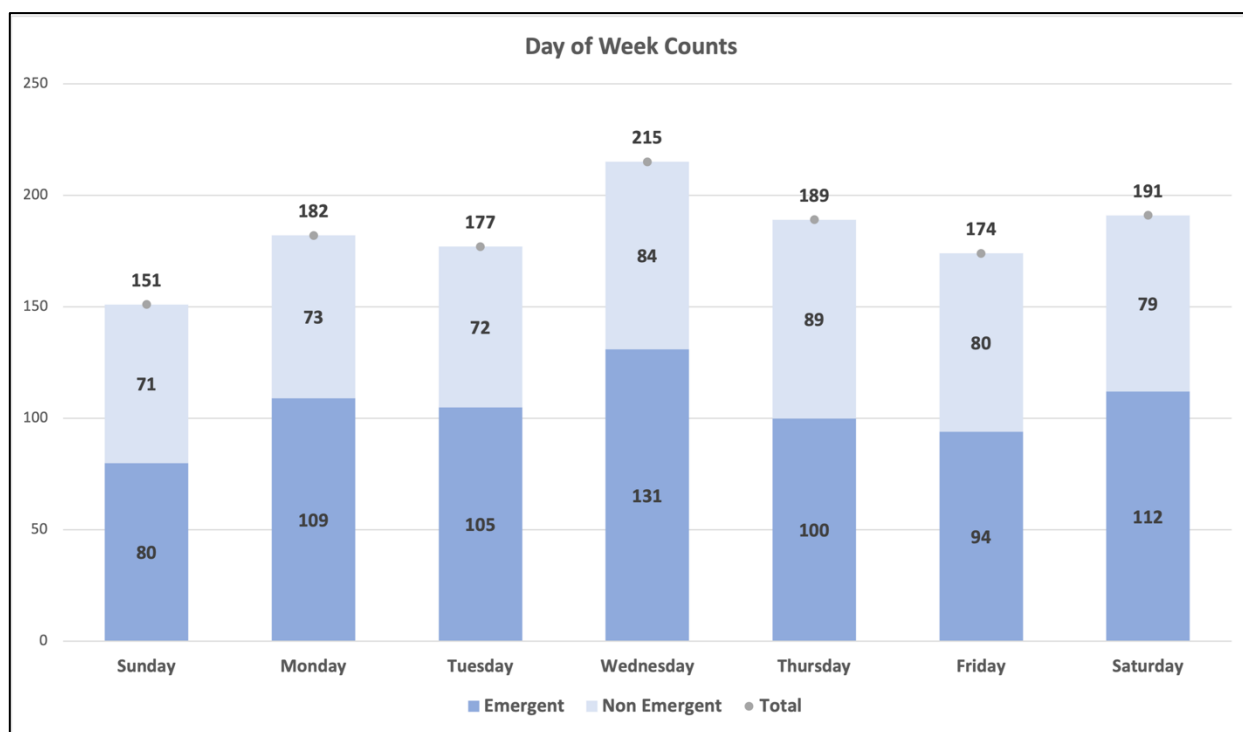


Chart 37 – Eagle Mountain Incidents by Day of Week

This chart demonstrates the call volume based on the day of the week, with Wednesdays having the most overall calls in Eagle Mountain.

## Eagle Mountain – EMS Calls

EMS calls are filtered by final disposition codes and this data is taken from VECC and determined by the patient acuity at the time of call termination. Often times the EMS calls identified from final disposition are different than the number of EMS calls that were initially dispatched due to one being the initial call type, and one being what call type the call was closed as by responding fire crews.

	CY 2020	CY 2019	CY 2018
<b>ALS Transports</b>	444	425	325
<b>BLS Transports</b>	417	317	212
<b>Scene Release</b>	24	15	48
<b>Public Assistance</b>	5	1	2
<b>EMS Total Calls</b>	885	757	585

Note: There is possibly a difference if you were to add all calls due to data reporting mechanisms. Public assistance calls will sometimes get duplicated with a scene release, depending on dispatch code, but those calls do not carry across to the total calls. Also, cancelled calls go into a different final disposition so the numbers in the 'Incidents by Dispatch Type' are reflective of this difference.

Table 80 – Eagle Mountain EMS Calls

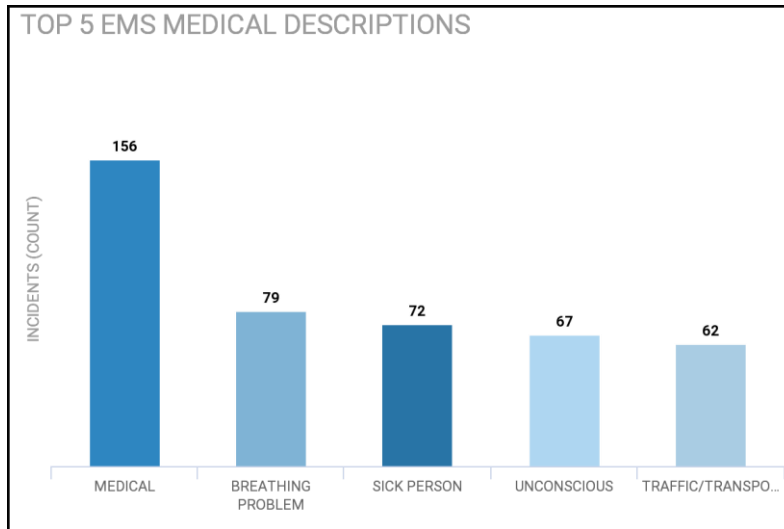


Chart 38 - Top 5 EMS Medical Calls - 2020

### Eagle Mountain – 2020 Fire Incidents by Dispatch Type

NFIRS Description	Incident Count	% of Incidents
<b>Structure Fire</b>	12	23.5%
<b>Outside Rubbish Fire</b>	5	9.8%
<b>Special Outside Fire</b>	4	7.8%
<b>Mobile Property Fire</b>	1	2.0%

NFIRS Description	Incident Count	% of Incidents
<b>Natural Vegetation Fire</b>	22	43.1%
<b>Vehicle Fire</b>	3	5.9%
<b>Fire, Other</b>	4	7.8%
<b>Total</b>	51	100%

Table 81 – Eagle Mountain 2020 Incidents by Dispatch Type

## Eagle Mountain – Building Occupancy Classification and Risk Categories

Occupancy Classification	Low	Moderate	High	Maximum	Total
<b>Assembly</b>	0	0	1	24	25
<b>Commercial/Industrial</b>	14	0	28	11	53
<b>Educational</b>	0	0	7	1	8
<b>Government</b>	0	0	0	0	0
<b>Healthcare</b>	0	1	0	0	1
<b>Hazardous</b>	Unknown	Unknown	Unknown	Unknown	30*
<b>Storage</b>	0	0	0	1	1
<b>Residential</b>	498	6,747	1,167	10	8,422
<b>Residential – Multi Unit</b>	600	41	11	4	656
<b>High Rise</b>	N/A	N/A	0	0	0
<b>Total</b>	1,122	6,789	1,214	51	9,196

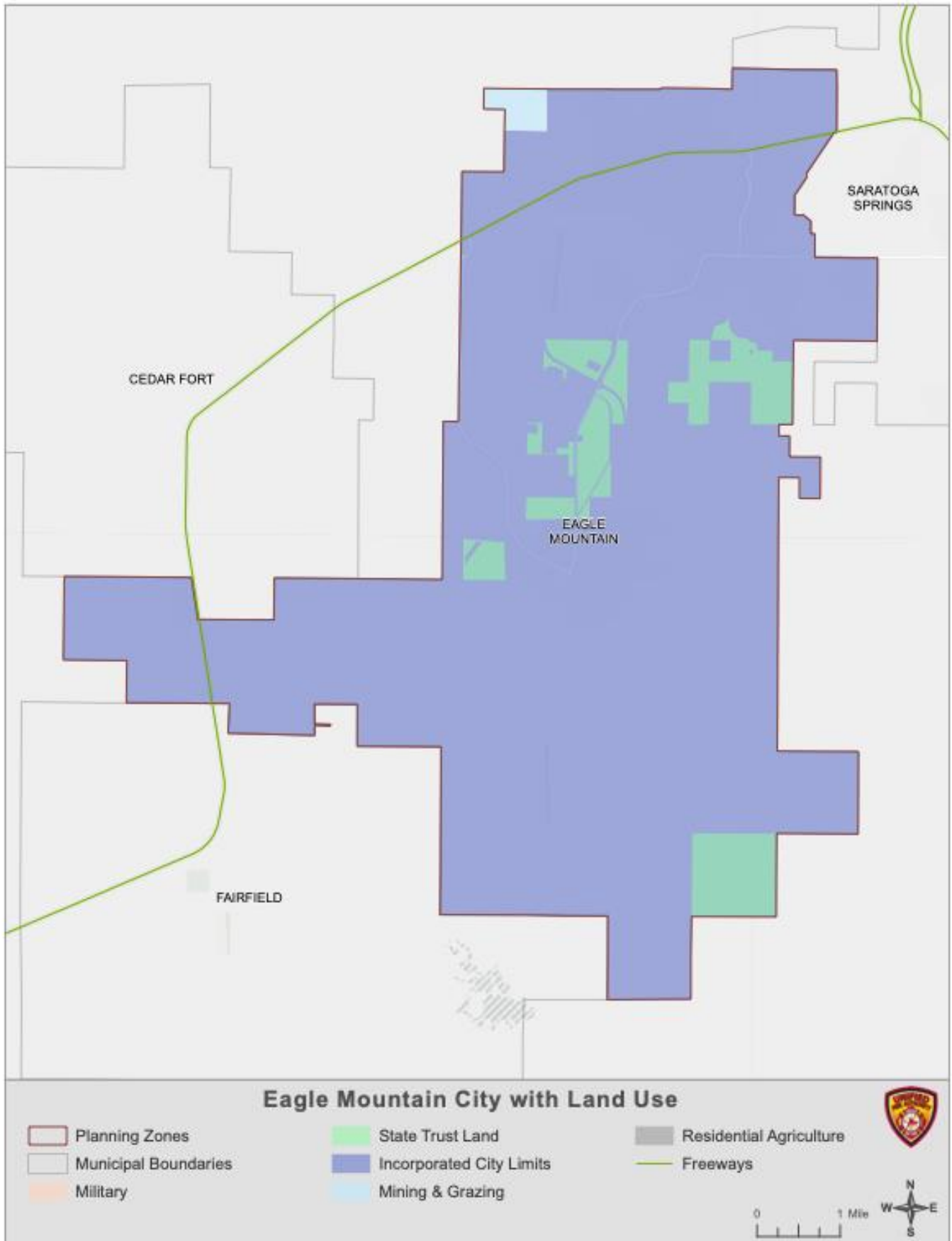
\*There is currently a gap within the identification of building size regarding hazardous materials sites. This is a gap that is being closed over the next several years as we collect the data and information.

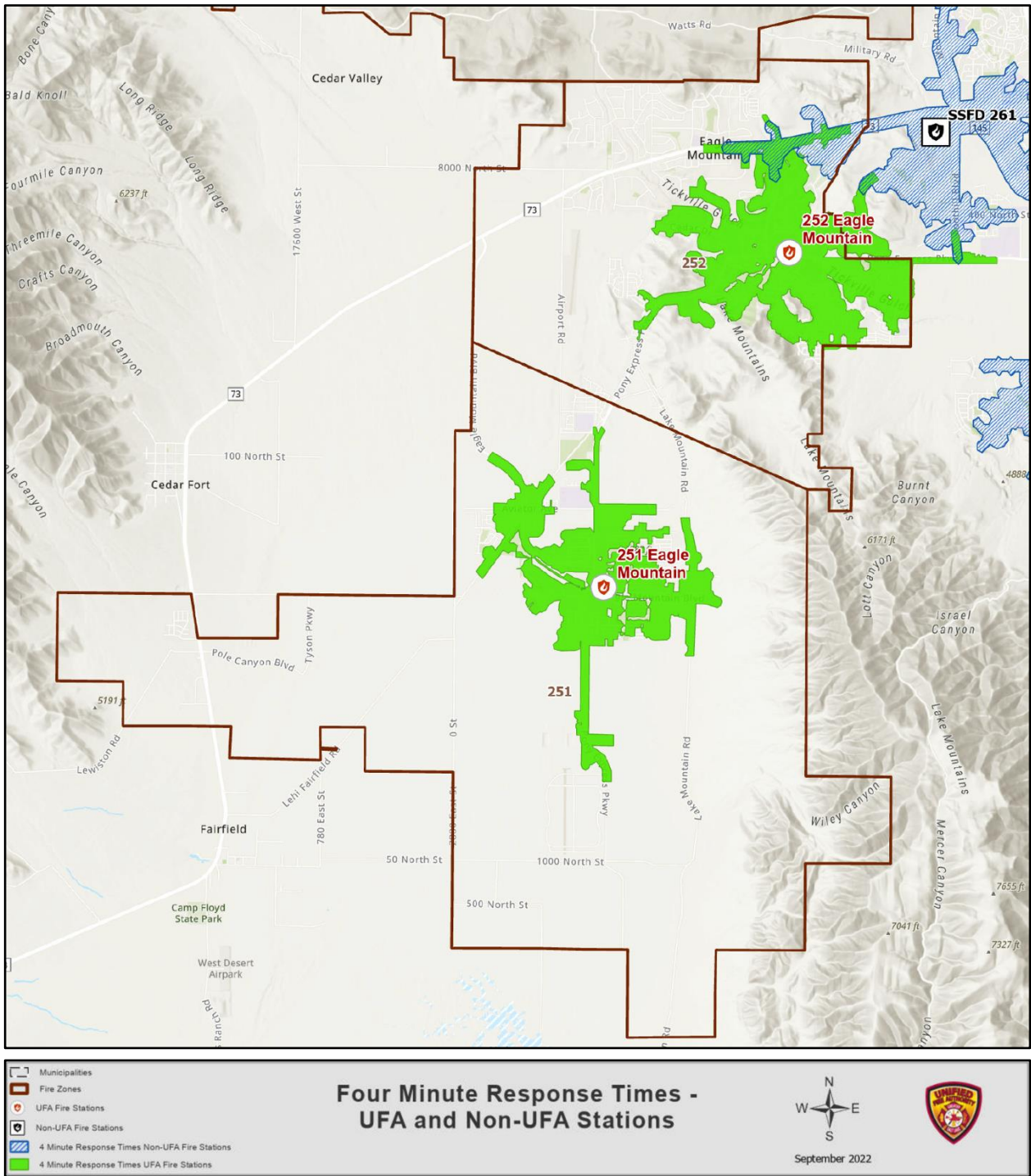
*Table 82 – Eagle Mountain Building Occupancy and Risk Categories*

### Building Size / Considerations

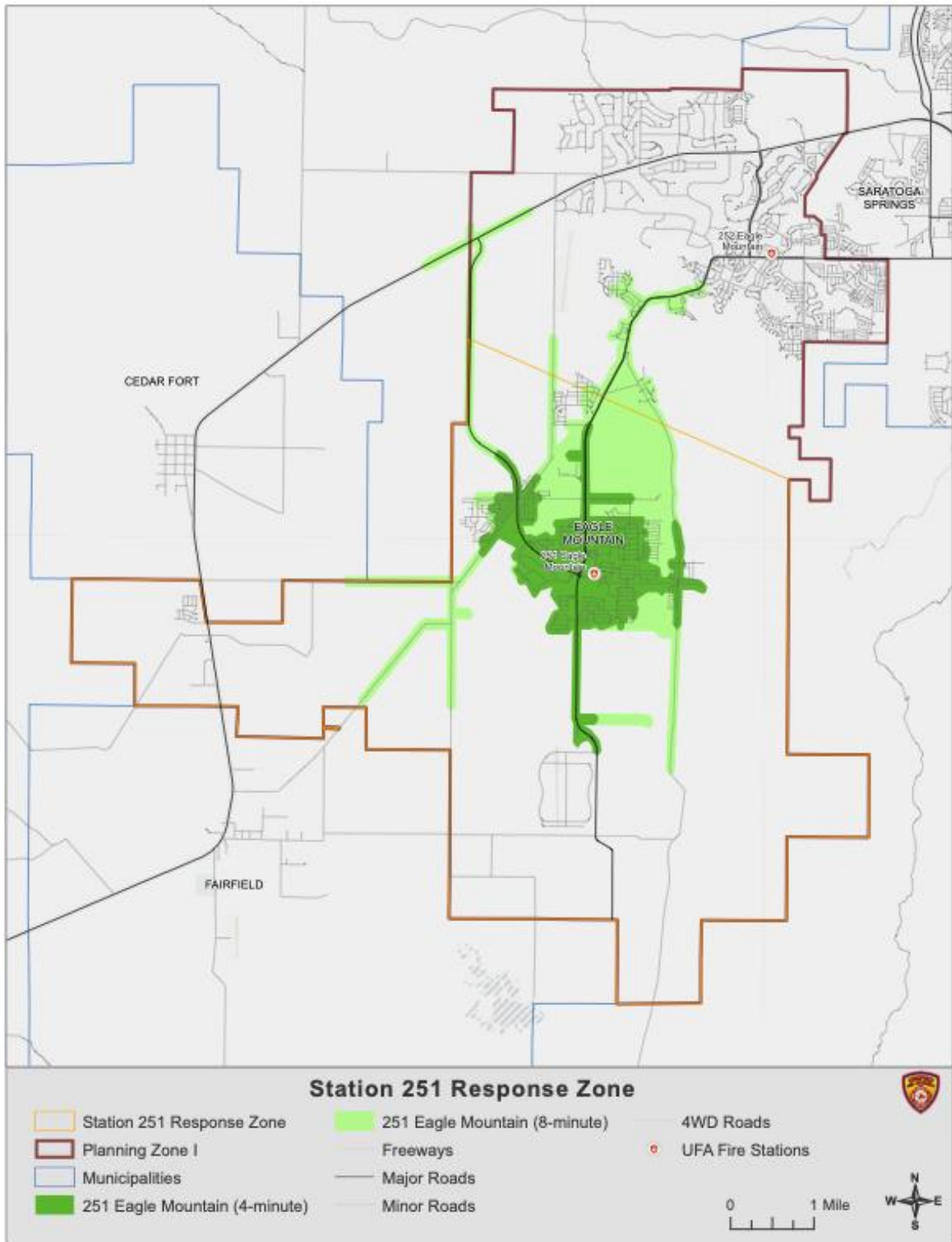
For purposes of risk classification, UFA has outlined the following risk classifications for building size, regardless of occupancy type (except residential). Low risk = 1-4,999 square feet. Moderate risk = 5,000-9,999 square feet. High risk = 10,000-99,999 square feet. Maximum risk = >100,000 square feet.

For residential occupancies, the following classifications apply. Low risk = 1-1,999 square feet. Moderate risk = 2,000-3,999 square feet. High risk = 4,000-9,999 square feet. Maximum risk = ≥10,000 square feet.

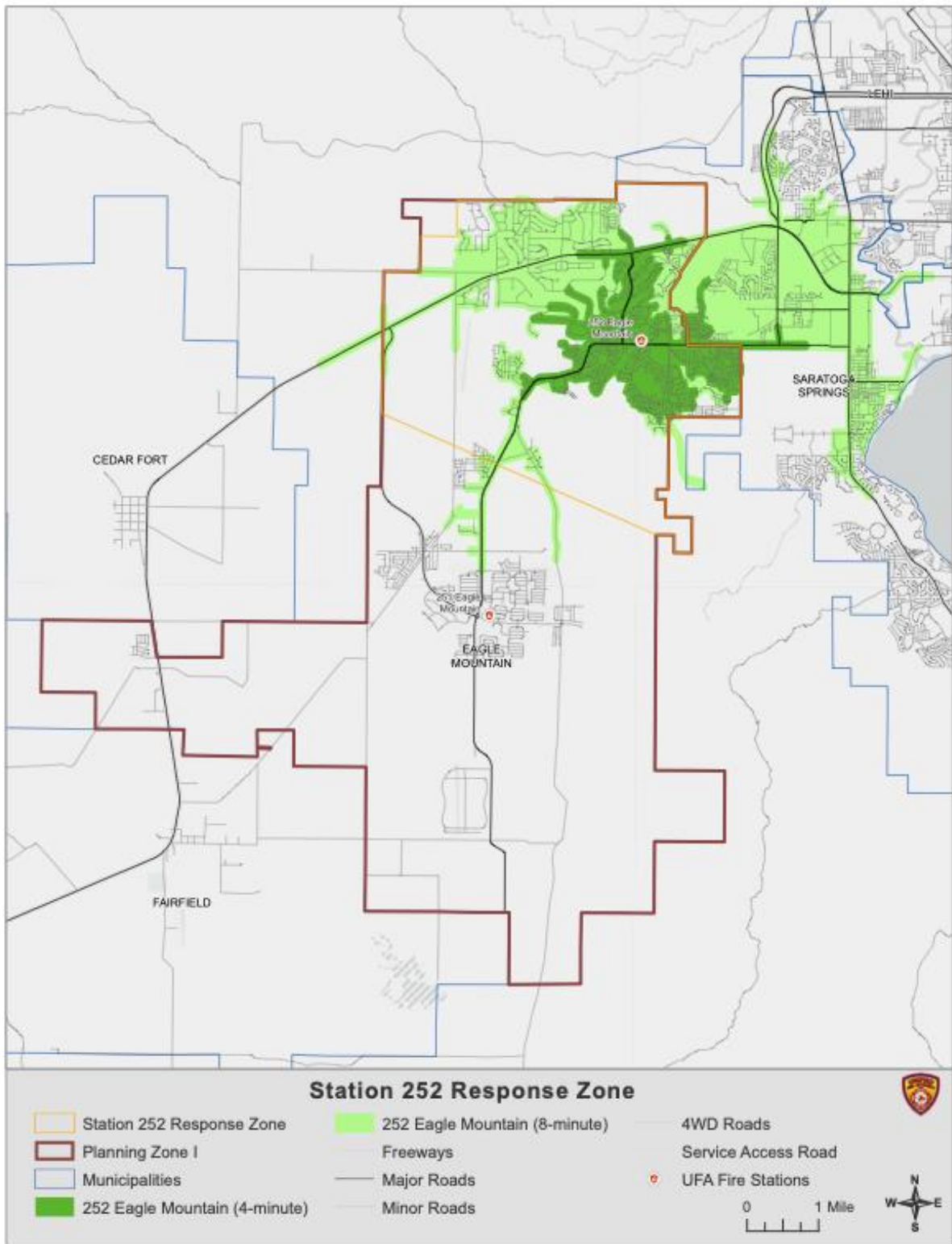




Map 117 - 4-Minute Travel Times, UFA and Aid



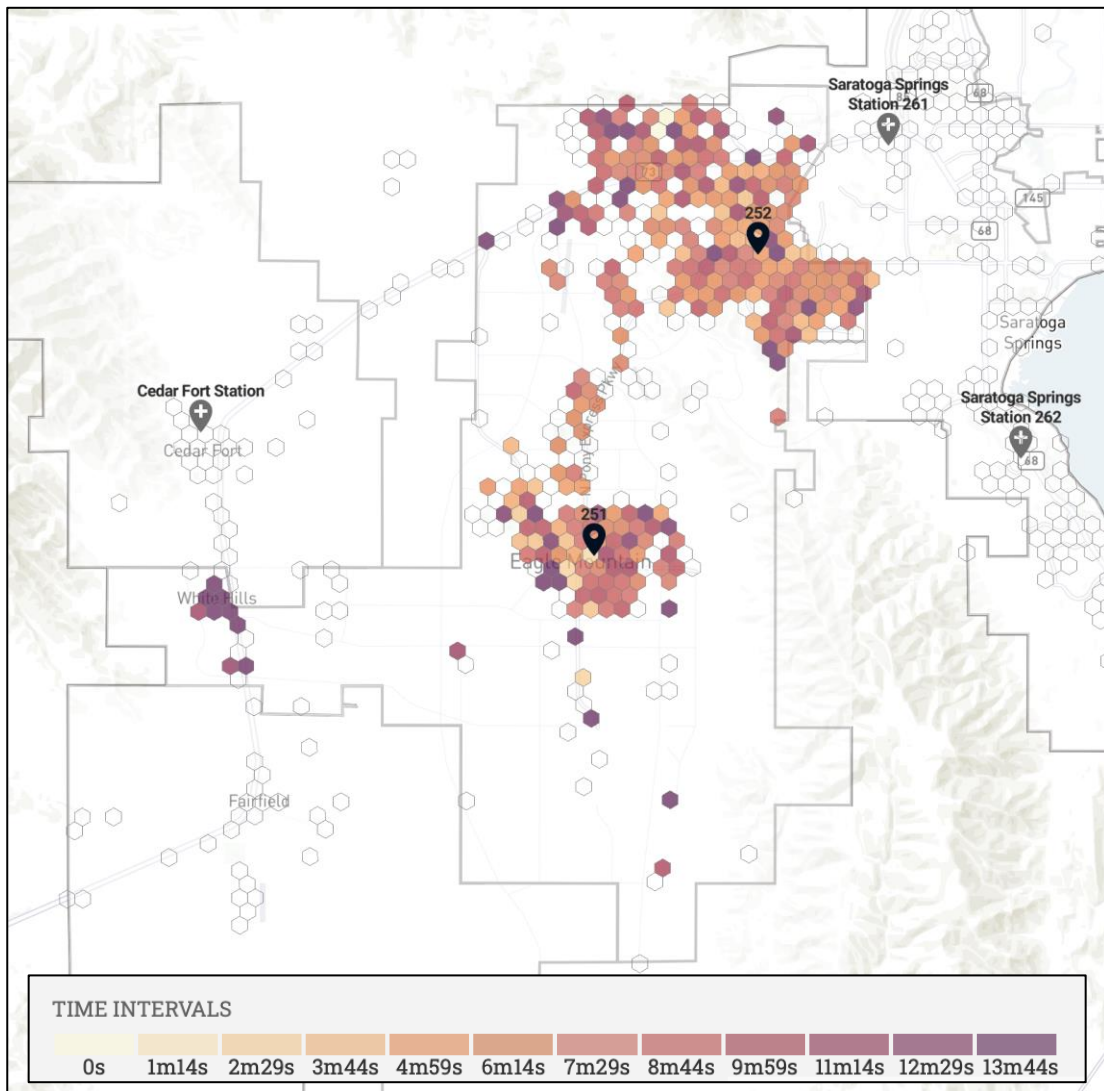
Map 118 - Station 251 4- and 8-Minute Travel Times



Map 119 - Station 252 4- and 8-Minute Travel Times

## Eagle Mountain – First Arriver Travel Times

The following maps demonstrate the 90<sup>th</sup> percentile of travel times based off the last three years of historical data (2018-2020). 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 (90<sup>th</sup> percentile) from notification of the alarm to the arrival of the first arriving apparatus — not an adopted standard by UFA. UFA is currently in process of identifying benchmark and target standards to be adopted by the UFA Board of Directors. Currently, within Eagle Mountain, the 90<sup>th</sup> percentile drive time is 12:13 for fire and 9:07 for EMS, or a combined 90<sup>th</sup> percentile drive time of 9:53.

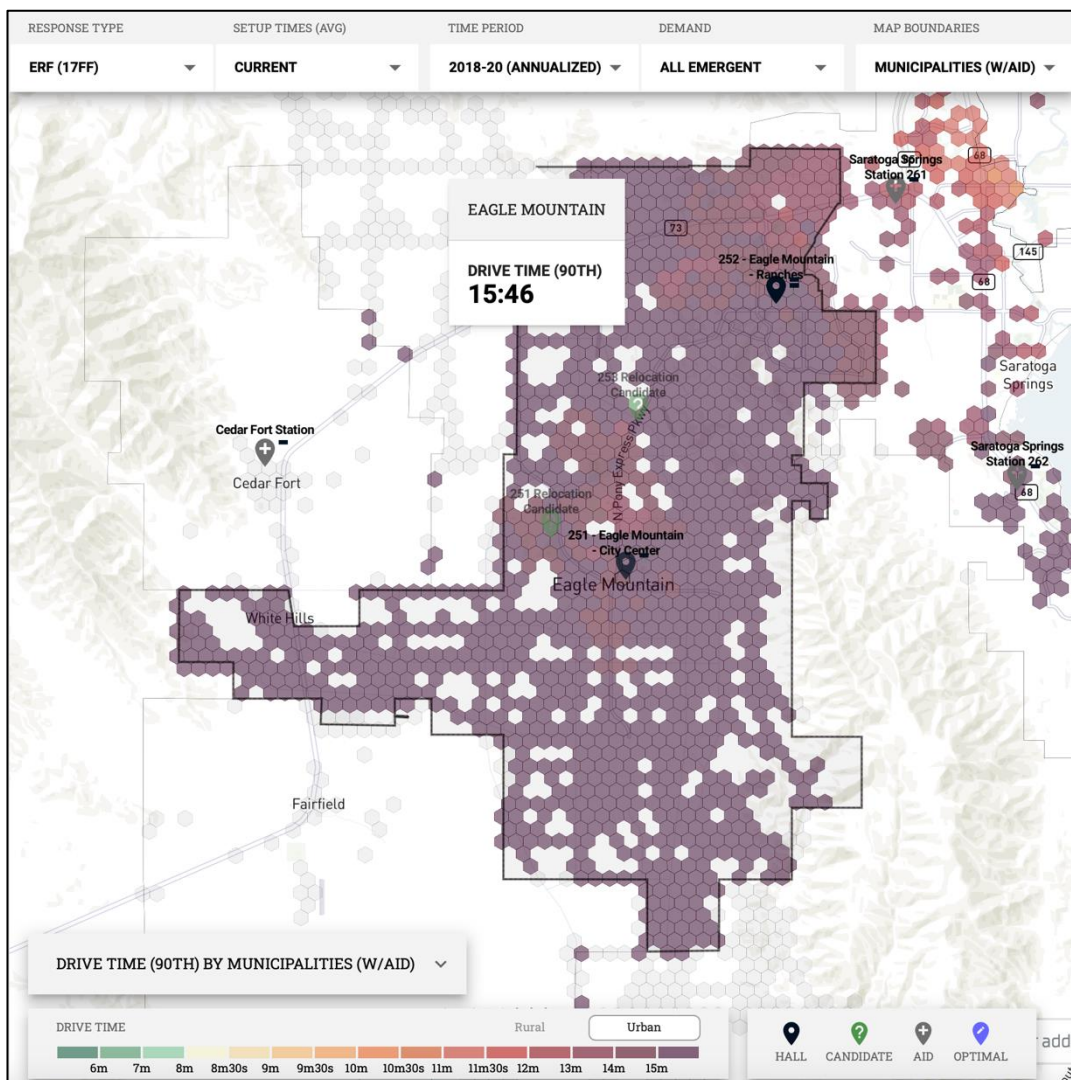


Map 120 – Eagle Mountain Response Times – All Aid



## Eagle Mountain – Residential Fire Effective Response Force (17 FF)

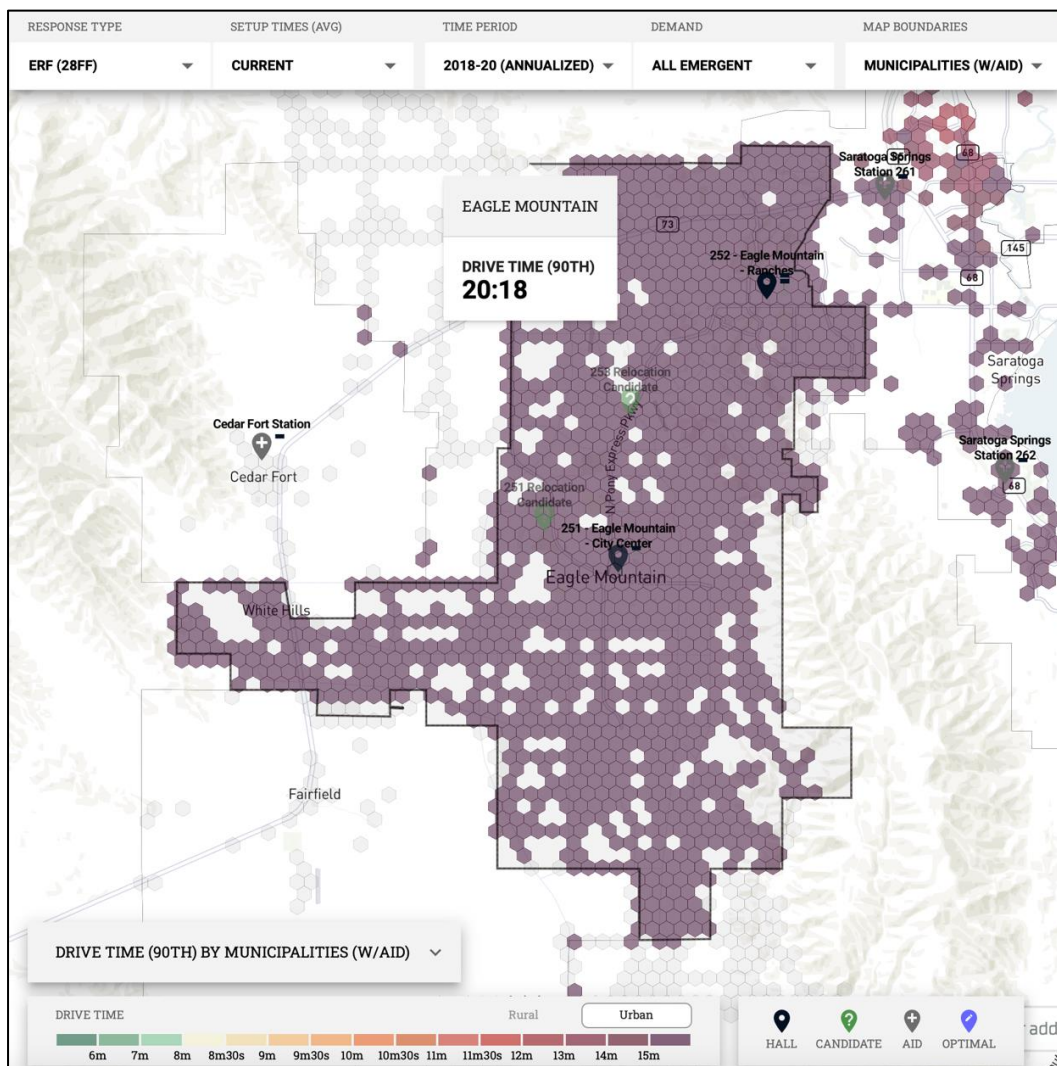
This map demonstrates the coverage of a multi-unit response to a residential fire based off all apparatus being within their station. The green to light yellow demonstrates the ability to have seventeen firefighters (a residential fire effective response force) on scene based off a residential urban fire force response. This map's drive times (or travel times) are based off the current NFPA 1710 standard of eight minutes (90<sup>th</sup> 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. UFA is currently in process of identifying benchmark and target standards to be adopted by the UFA Board of Directors. Based off predictive data, it is projected that the 90th percentile for 17 firefighters to arrive on scene would be 15:46.



Map 121 – Eagle Mountain Response Times – Residential Fire Effective Response Force (17 ERF)

## Eagle Mountain – 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 (90<sup>th</sup> 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. UFA is currently in process of identifying benchmark and target standards to be adopted by the UFA Board of Directors. Based off predictive data, it is projected that the 90th percentile for 28 firefighters to arrive on scene would be 20:18.



Map 122 – Eagle Mountain Response Times – Commercial Fire Effective Response Force (28 FF)

## Eagle Mountain 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
High	Mod	Low	Low	Low	Mod	High	Mod	Low	Mod	Low	Mod

Table 83 – Eagle Mountain Hazard Matrix

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

### Infrastructure – Transportation

The primary roadway that runs through Eagle Mountain City is State Road 73 which runs east/west between Redwood Road and the Tooele County border. There are 0 linear miles of Interstate/US Highway, 6.82 linear miles of State Highways, and 226.5 total linear miles of roadway. Eagle Mountain is in the high-risk category for road infrastructure.

### Infrastructure – Water

There is one water district within Eagle Mountain City, the Eagle Mountain Water Department.

### Infrastructure – Dams

There are four identified dams within Eagle Mountain City. Eagle Mountain is in the moderate-risk category for dam infrastructure.

### Natural Hazards

Within Eagle Mountain City, there are low concerns with avalanche areas, placing it in the low-risk category for avalanche. There are no identified fault lines that run through the

city (see Map 8). Eagle Mountain is in the low-risk category for liquefaction and low-risk category for fault lines.

#### Wildland Urban Interface

There is high risk of urban interface fires within Eagle Mountain. Eagle Mountain is in the high-risk category for Wildland Urban Interface.

#### Hazardous Materials / Tier II Sites

There are six identified HazMat/Tier II Sites within Eagle Mountain City, which is in the moderate-risk category.

#### Hospitals

Eagle Mountain has no hospitals. This places Eagle Mountain in the low-risk category for hospitals.

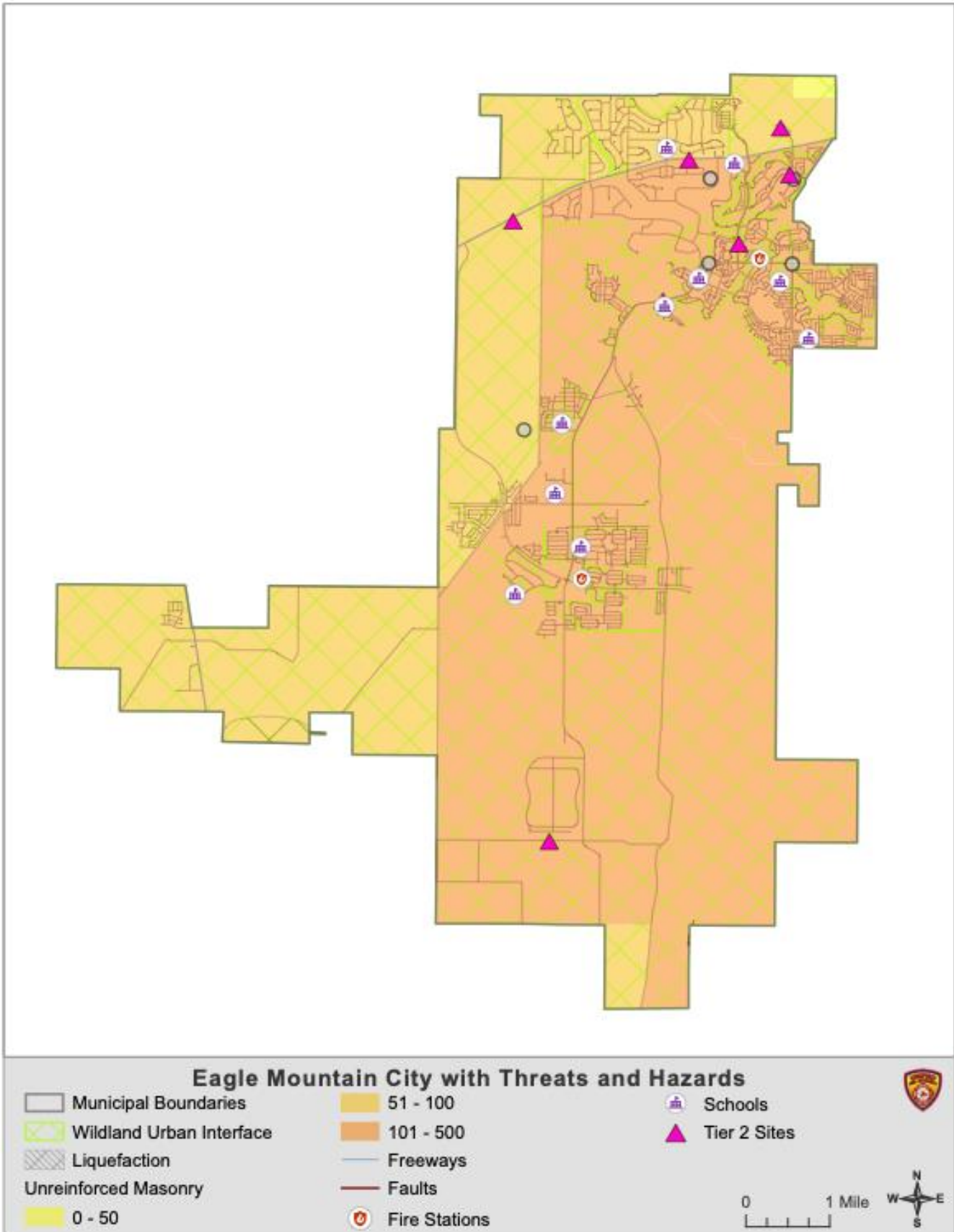
#### Schools

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

#### Target Hazards – Structures

Some of the target-hazard occupancies in Eagle Mountain include:

- Tyson Foods – 3817 N Tyson Pkwy
- Facebook Eagle Mountain Data Center – 1275 North Community Circle



Map 123 – Eagle Mountain with Combined Hazards

## Life and Property Loss

From 2015-2020, there have been zero fatalities attributed to fire. There has been a total estimate of \$450,936.00 of property loss and a total estimate of \$501,592.00 of content loss due to fire.

## Unified Fire Shared Services

With a regional-response model, the Unified Fire Authority brings special services to bear when the situation calls for it, not relying on automatic or mutual aid which provides a quicker and more effective delivery of service to its residents.

### Battalion Chiefs

Unified Fire Authority staffs three operational battalion chiefs (BCs) daily, in addition to a 40-hour Operations Chief (OC). These BCs and OC respond to large, complex, or expanding incidents — providing incident command, safety, and operational direction. Each BC covers an area of UFA's service area and respond to calls for service in any jurisdiction. Battalion 11 is housed out of Station 101 in Millcreek, Battalion 12 is housed out of Station 121 in Riverton, and Battalion 13 is housed out of Station 118 in Taylorsville.

### Heavy Rescue Companies

Heavy Rescue specializes in structural collapse, confined space rescue, trench collapse rescue, vehicle extrication, machinery disentanglement, rope rescue (high angle, low angle, rigging) and rapid intervention (Firefighter Rescue). The UFA Heavy Rescue Program consists of two independent rescue companies strategically placed in UFA's jurisdiction. Station 117 in Taylorsville, and Station 121 in Riverton house our Heavy Rescue Teams.

### Hazardous Materials (HazMat) Companies

The Hazardous Materials Teams provide an efficient, effective, and professional Hazardous Material Mitigation response. HazMat Companies respond to hazardous material releases/spills for the purpose of mitigating the release/spill. They select and use proper specialized chemical personal protective equipment dependent on the nature of the incident. The HazMat Program consists of two independent HazMat

companies strategically placed in UFA's jurisdiction. Station 124 in Riverton, and Station 126 in Midvale house our HazMat Teams.

### Water Rescue Teams

UFA has swift water and ice rescue capabilities. These companies respond to victims recreating in our swift canyon rivers and our lakes and reservoirs. Station 116 in Cottonwood Heights, Station 117 in Taylorsville, Station 121 in Riverton, and Station 123 in Herriman house companies with water rescue capabilities.

### Wildland Division

UFA's Wildland Division provides highly trained and experienced wildland fire and all-risk response resources to local, state, and federal incidents. The Wildland Division oversees the training and certification of UFA personnel for response to wildland fires and all-hazard incidents. We also work with UFA Communities to educate residents on wildfire preparedness and provide mitigation services to reduce the risks of wildfire. UFA has a special capability where a Duty Officer is able to act as the Fire Warden within UFA's jurisdictions, allowing the ordering of resources much more quickly than having to rely on a Fire Warden that may or may not be readily accessible. Station 103 in Herriman currently houses the Duty Officer.

### Investigations Division

Arson and Explosive related incidents are considered two of the most dangerous criminal activities that threaten our citizens. The need exists to protect the citizens of our jurisdiction from loss of life and property by reducing the crime of arson, arson-related crimes, improvised explosive devices (IEDS) and the prevention of future violent crimes. The Investigations Division addresses this need by establishing a sound foundation of effective enforcement, focusing on the apprehension of the offender, while in partnership with other Local, state and federal law enforcement agencies. The team utilizes highly-trained Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) certified K-9's that assist with accelerant and explosives detection.

### Urban Search & Rescue

A FEMA Urban Search and Rescue Task Force is a team of individuals which serve as a resource for disaster response at local, state, and federal levels. It is comprised mainly of firefighters but includes structural engineers, medical professionals,

canine/handler teams and emergency managers with highly specialized training in urban search and rescue environments.

Utah Task Force 1 (UT-TF1) is one of 28 Type I, Federal Urban Search & Rescue (US&R) Task Forces in the United States. This program brings a highly trained, multi-hazard Task Force that is especially designed to respond to a variety of emergencies/disasters including earthquakes, hurricanes, tornadoes, floods, terrorist acts and hazardous material releases. Fire department personnel that are task force members receive specialized training and skills that directly benefit Unified Fire Authority.

### [Salt Lake County Emergency Management](#)

The Salt Lake County Division of Emergency Management serves our citizens by directing and coordinating resources for disasters and emergencies through preparation, planning, mitigation, response, and recovery. The Salt Lake County Emergency Coordination Center is activated and manned during any event—from small-scale to large-scale occurrences—to disasters both natural and man-made that can or have exceeded the resources of any particular jurisdiction. Currently, the Salt Lake County ECC assists and obtains resources for the 22 jurisdictions located within the Salt Lake Valley. Salt Lake County EM assists these jurisdictions through the activation of 15 Emergency Support Functions (ESFs) filled by employees from a multitude of backgrounds. The ESF employees have authority throughout Salt Lake County to fill and order additional support for the operations occurring in the field until the impacted jurisdiction can return to their normal operations and functions. The Emergency Management Division is committed to keeping the public safe through community outreach, training, dissemination of important public information, training of staff and the creation of a more resilient community through mitigation, preparation, response, and recovery. The ECC has been activated for many events such as Child Abduction Response Team (CART) Deployments, wildland fires such as the Rosecrest and Machine Gun fires, flooding, severe weather events, earthquakes, civil unrest, the COVID-19 pandemic, Line of Duty Deaths (LODD), and many other events.



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## Unified Fire Authority

3380 South 900 West  
Salt Lake City, UT 84119

# Emigration Township

## Community Risk Assessment



Photo Courtesy of: SLTrib.com



## Emigration Township Planning Zone

UFA has one station within the Emigration Township Planning Zone covering a total of 18.98 square miles with a population of 1,466 and responded to 103 calls for service in 2020.

Planning Zone	Population	Population Percentage of UFA	Square Miles	Population Density per Sq Mile	Classification
<b>Emigration Township</b>	1,466	0.33%	18.98	77	Rural

Emigration Township has decreased its population from 1,567 in 2010 to 1,466 in 2020, showing a decrease of 6.89% over a ten-year timeframe. Providing an exponential growth pattern and if all things remain equal, the following chart demonstrates that Emigration Township could decrease its population to 1,292 by the year 2040.

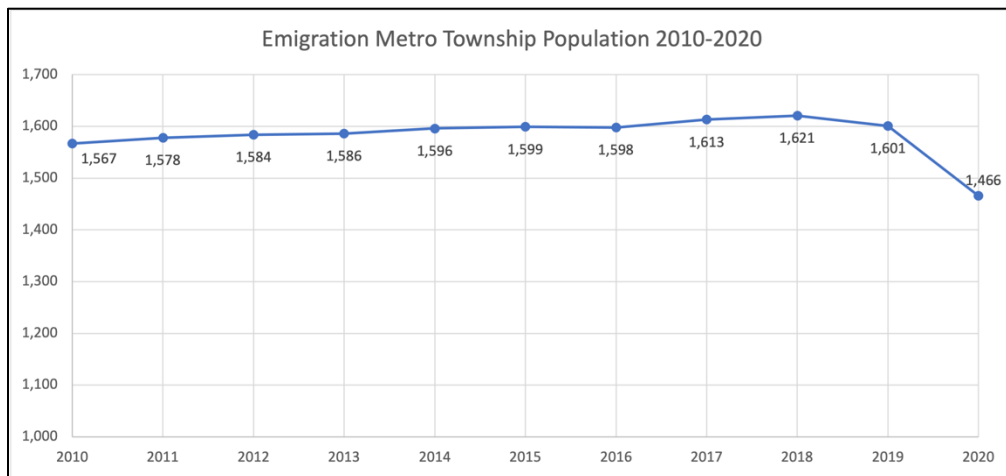


Chart 39 – Emigration Township Population 2010-2020

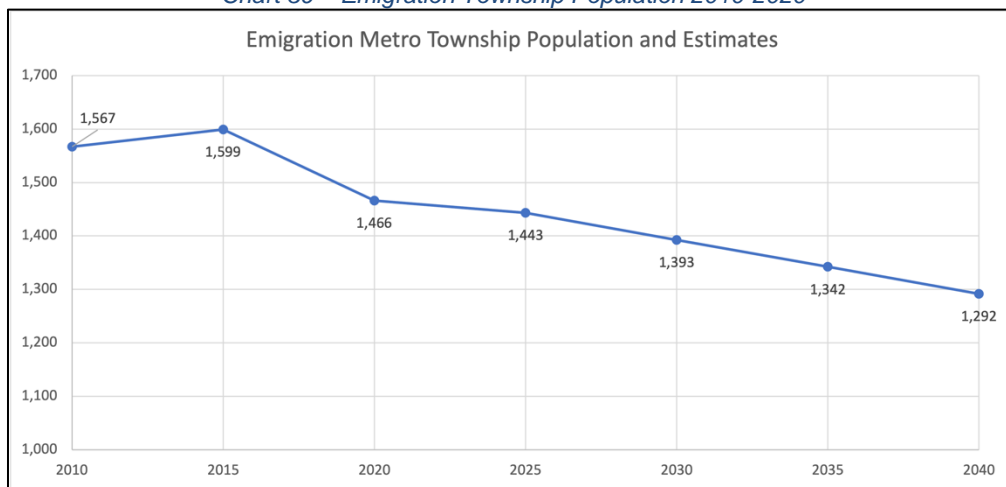


Chart 40 – Emigration Township Population and Estimates 2010-2040

## Emigration Township Station Information

### Station 119 information:

- Owner – UFSA
- Opened – 2007
- Address – 5025 Emigration Canyon Road
- Staffing and Apparatus –
  - Type 1/3, ME 119 (3 persons)
  - Type 6, Brush Truck (cross-staffed)



Image 11 – Emigration Station 119

## Surrounding UFA and Automatic/Mutual Aid Response Stations

Surrounding fire stations and fire departments that are within an eight-minute response to Emigration Township are:

- Salt Lake City\* Station 3, with a four-person medic engine
- Salt Lake City\* Station 5, with a four-person medic engine
- Salt Lake City\* Station 10, with a four-person engine
- Salt Lake City\* Station 13, with a four-person engine
- UFA Station 106 (Millcreek City), with a four-person medic ladder and a two-person medic ambulance
- UFA Station 112 (Millcreek City), with a four-person medic engine

### \* – Of Note...

UFA only relies on Salt Lake City for fire response on mutual and automatic aid and does not currently have Salt Lake City units respond on medical calls

## Emigration Township – Incidents by Dispatch Type

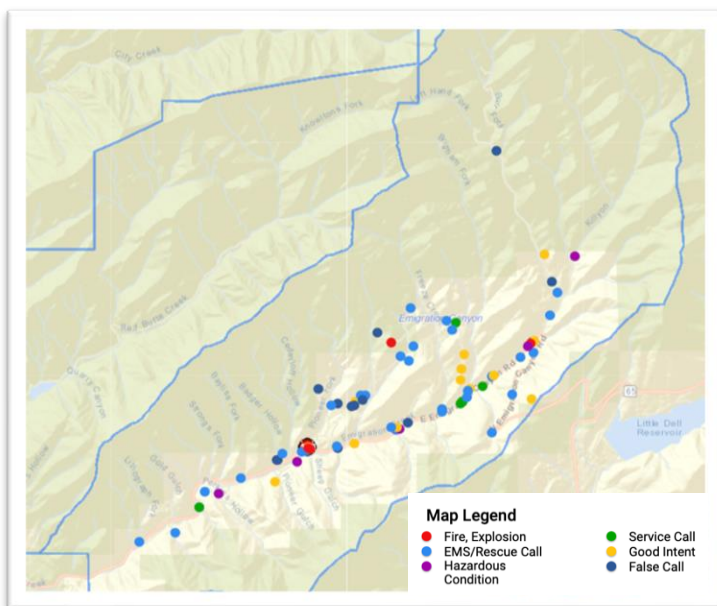
The following data is what the NFIRS type was when crews arrived on scene. This may be different than what was originally dispatched, including a reclassification of a call type from one to another. Cancelled calls occur if the company is cancelled en route to a call and never arrives on scene, which then changes the dispatch type to an NFIRS 611 call type.

	CY 2020	CY 2019	CY 2018
<b>Fire Suppression</b>	4	4	5
<b>EMS</b>	32	39	50
<b>Hazardous Materials</b>	5	4	7
<b>Service Calls</b>	9	8	3
<b>Good Intent</b>	27	13	18
<b>False Calls</b>	13	9	16
<b>Other (Misc., Flood, Overpressure)</b>	0	0	1
<b>Total</b>	90	77	100

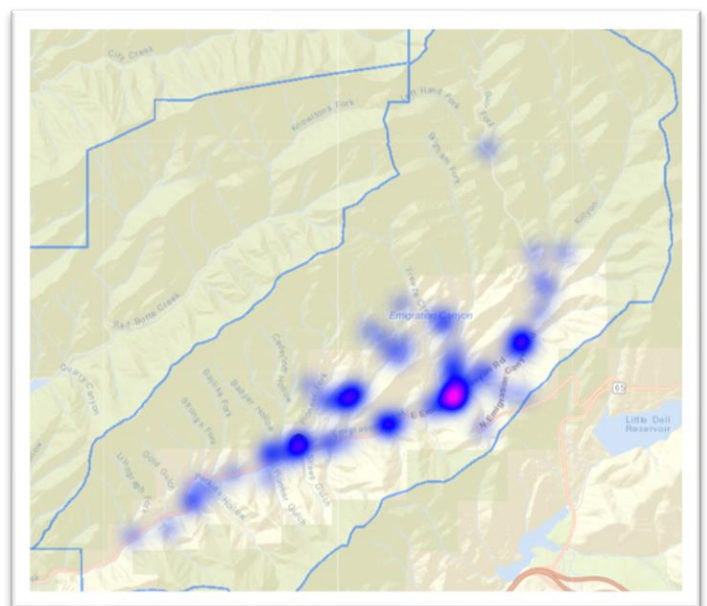
<b>Cancelled</b>	13	6	6
<b>Overall Total</b>	103	83	106

Table 84 – Emigration Township Call Types

## Emigration Township – 2020 Incidents and Heat Map



Map 124 - Emigration Incident Calls by Type



Map 125 – Emigration Call Volume Heat Map

## NFPA 1710

The National Fire Protection Association is an international nonprofit organization that is devoted to eliminating death, injury, property, and economic loss due to fire, electrical and related hazards. The NFPA makes recommendations on over 300 codes and standards. NFPA 1710 recommendations are based off 90<sup>th</sup> percentile times.

### – In Other Words...

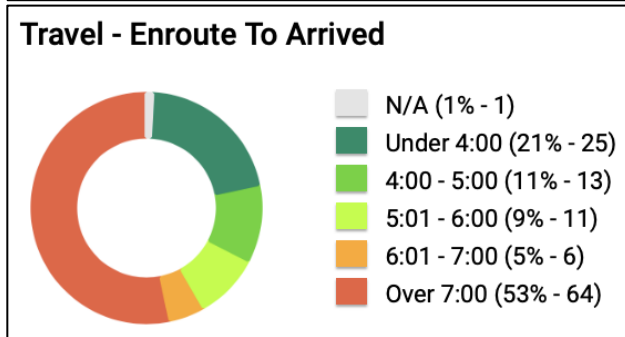
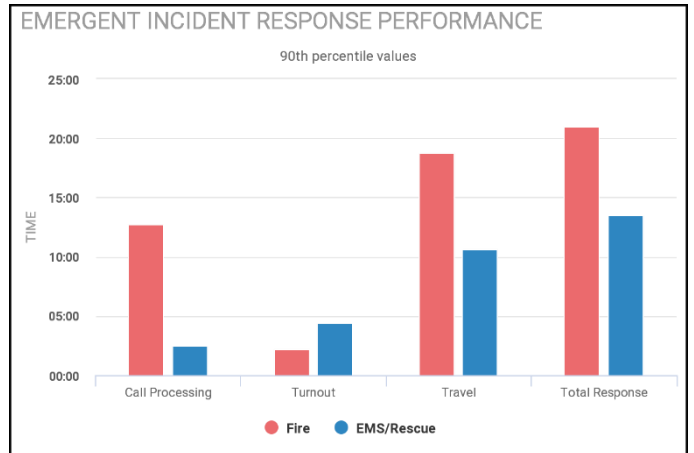
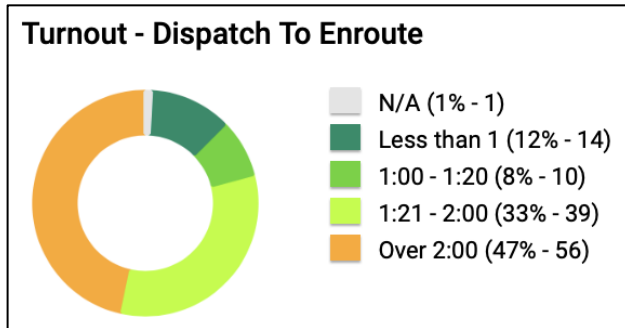
If a value is in the 90<sup>th</sup> percentile, it means the value is better than 90% of all other values in the dataset. In other words, it is within the top 10% of the values.

NFPA 1710 encompasses suggested standards for full-time fire departments and recommends the following times (all of which are at the 90<sup>th</sup> percentile): alarm processing – 64 seconds; turnout time for EMS responses – 60 seconds; turnout time for fire responses – 80 seconds; first arriver apparatus – 240 seconds (4 minutes); initial full-alarm assignment for low and medium hazard responses – 480 seconds (8 minutes); or initial full-alarm assignment for high hazard/high-rise responses – 610 seconds (10 minutes 10 seconds). The total response times are the cumulative totals of call processing time, turnout time, and travel time. NFPA 1710 recommends a total response time of 6:24 for the first arriving apparatus for fire and 6:00 for the first arriving apparatus for EMS.

### – Of Note...

NFPA 1710 response times have not been adopted by the UFA Board. One of the important elements of the community risk assessment and standards of cover is to identify current 90<sup>th</sup> percentile times (current baselines) within UFA and to identify realistic benchmarks for the UFA Board to consider for adoption.

## Emigration Township – 2020 Dispatch and Response Times

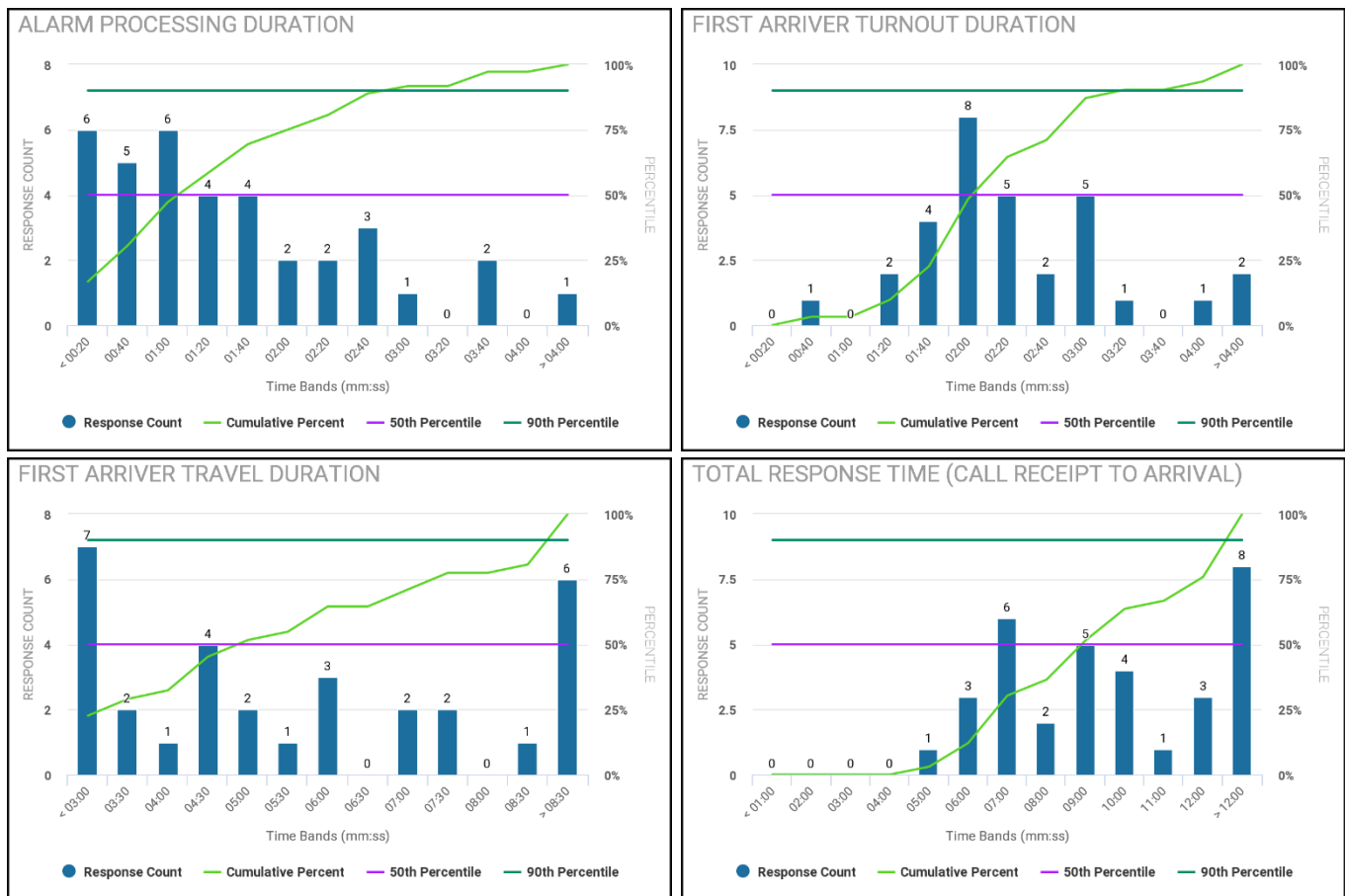


Rural	Call Processing: Fire	Turnout Time: Fire	Travel Time: Fire	Total Response: Fire	Call Processing: EMS	Turnout Time: EMS	Travel Time: EMS	Total Response: EMS
<b>Emigration</b>	2:36	3:04	13:50	16:56	2:27	4:23	10:37	13:50
<b>UFA Urban 2018-2020</b>	2:16	2:39	7:36	10:34	1:47	2:32	6:29	9:18
<b>UFA Rural 2018-2020</b>	2:32	3:05	15:08	19:09	1:56	2:50	14:45	17:45
<b>NFPA 1710</b>	1:04	1:20	4:00	6:24	1:00	1:00	4:00	6:00

Table 85 – Emigration 2020 Emergent Response Times, 90<sup>th</sup> percentile values



## Emigration Township – 2020 Turnout and Travel Time



The charts above illustrate the alarm processing, turnout and travel times for all units responding to service calls within Emigration Township (90<sup>th</sup> percentile). The alarm processing for fire was 2:36 and 2:27 for EMS; turnout time was 3:04 for fire responses and 4:23 for EMS responses; travel time was 13:50 for fire responses and 10:37 for EMS. The 90<sup>th</sup> percentile total response time was 16:56 for fire and 10:37 for EMS. For the charts above, they show both fire and EMS response times together.

### 🚩 – Of Note...

One item to note is that if you were to add the processing time, the turnout time, and the travel time, it will not necessarily (and often doesn't), sum the total response time. This is due to some of the limitations within the datasets and gaps within timestamps. Where there are missing timestamps, those particular key performance indicators (KPI) are excluded as they cannot accurately be calculated out.

## Emigration Township – 2020 Incidents by Time of Day

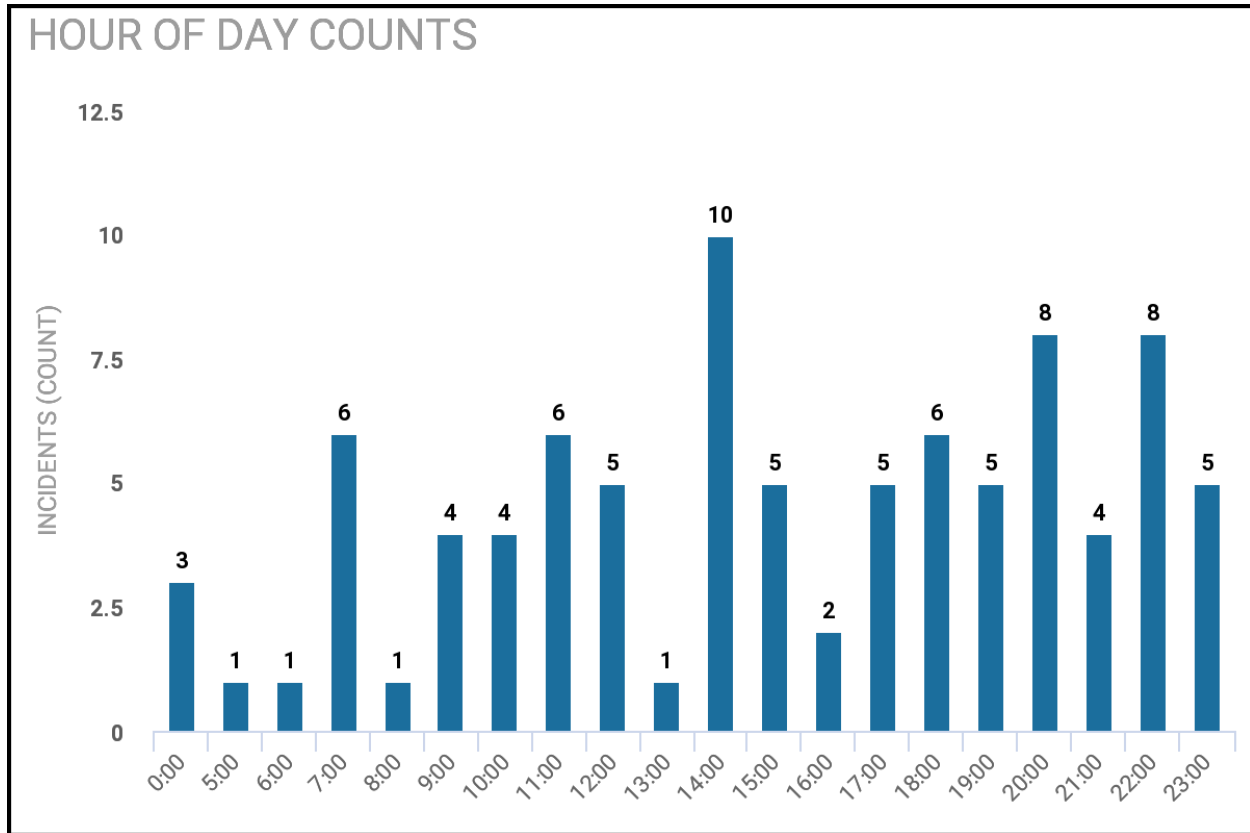


Chart 41 – Emigration 2020 Incidents by Time of Day

The above table demonstrates the incidents by time of day and the time of greatest demand within Emigration Township for all service calls. This chart illustrates that the greatest demand for service delivery is at 2:00 PM.

## Emigration – 2020 Incidents by Day of Week

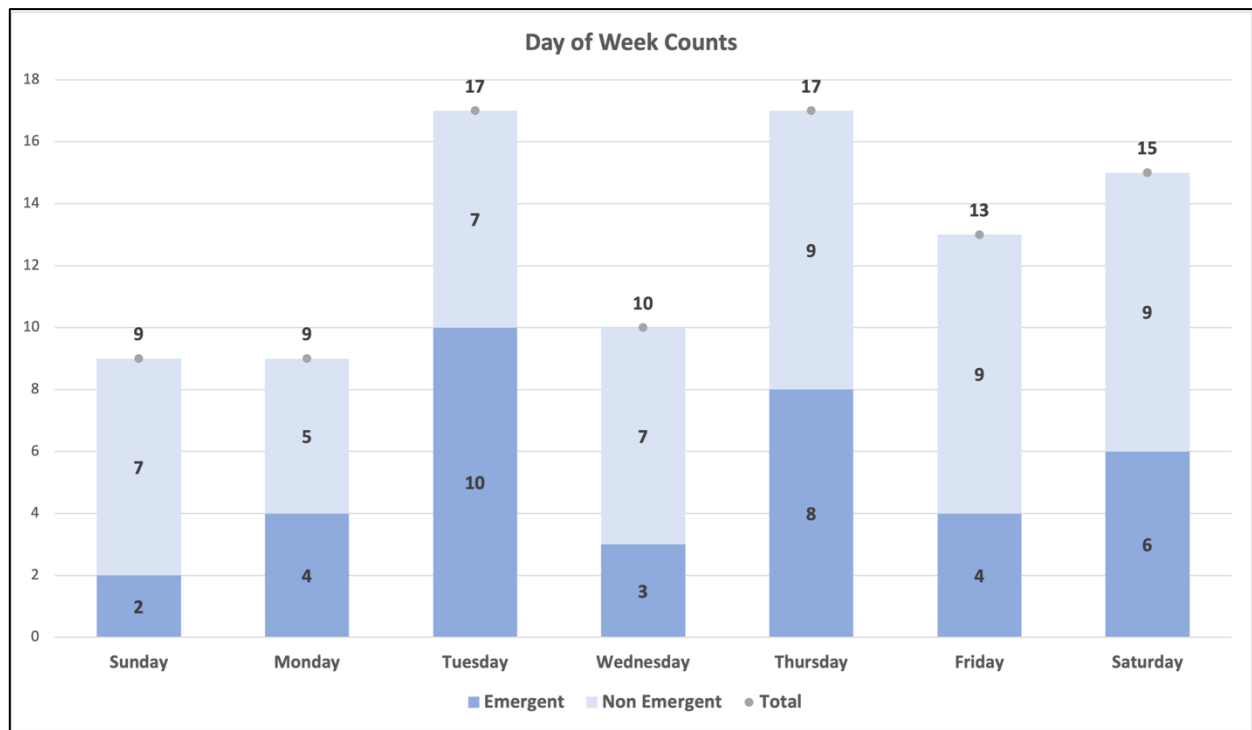


Chart 42 – Emigration Incidents by Day of Week

This chart demonstrates the call volume based on the day of the week, with Tuesdays and Thursdays having the most overall calls in Emigration Township.

## Emigration – EMS Calls

EMS calls are filtered by final disposition codes and this data is taken from VECC and determined by the patient acuity at the time of call termination. Often times the EMS calls identified from final disposition are different than the number of EMS calls that were initially dispatched due to one being the initial call type, and one being what call type the call was closed as by responding fire crews.

	CY 2020	CY 2019	CY 2018
<b>ALS Transports</b>	12	15	33
<b>BLS Transports</b>	14	20	14
<b>Scene Release</b>	9	2	2
<b>Public Assistance</b>	4	2	0
<b>EMS Total Calls</b>	35	37	49

Note: There is possibly a difference if you were to add all calls due to data reporting mechanisms. Public assistance calls will sometimes get duplicated with a scene release, depending on dispatch code, but those calls do not carry across to the total calls. Also, cancelled calls go into a different final disposition so the numbers in the 'Incidents by Dispatch Type' are reflective of this difference.

Table 86 – Emigration Township EMS Calls

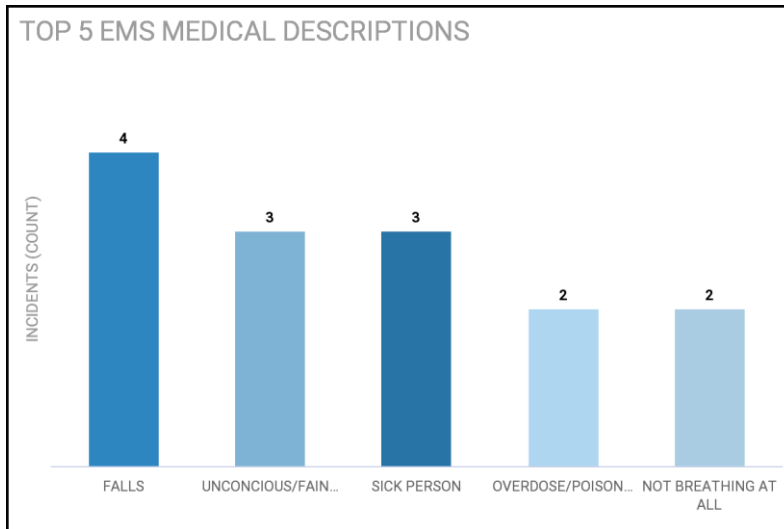


Chart 43 - Top 5 EMS Medical Calls - 2020

### Emigration Township – 2020 Fire Incidents by Dispatch Type

NFIRS Description	Incident Count	% of Incidents
<b>Structure Fire</b>	2	50%
<b>Mobile Property Fire</b>	1	25%

NFIRS Description	Incident Count	% of Incidents
<b>Outside Rubbish Fire</b>	1	25%
<b>Total</b>	4	100%

Table 87 – Emigration 2020 Incidents by Dispatch Type

## Emigration Township – Building Occupancy Classification and Risk Categories

Occupancy Classification	Low	Moderate	High	Maximum	Total
<b>Assembly</b>	1	0	0	0	1
<b>Commercial/Industrial</b>	1	1	0	0	2
<b>Educational</b>	0	0	0	0	0
<b>Government</b>	0	0	0	0	0
<b>Healthcare</b>	0	0	0	0	0
<b>Hazardous</b>	Unknown	Unknown	Unknown	Unknown	0*
<b>Storage</b>	0	0	0	0	0
<b>Residential</b>	0	14	12	1	27
<b>Residential – Multi Unit</b>	10	3	1	0	14
<b>High Rise</b>	N/A	N/A	0	0	0
<b>Total</b>	12	18	13	1	44

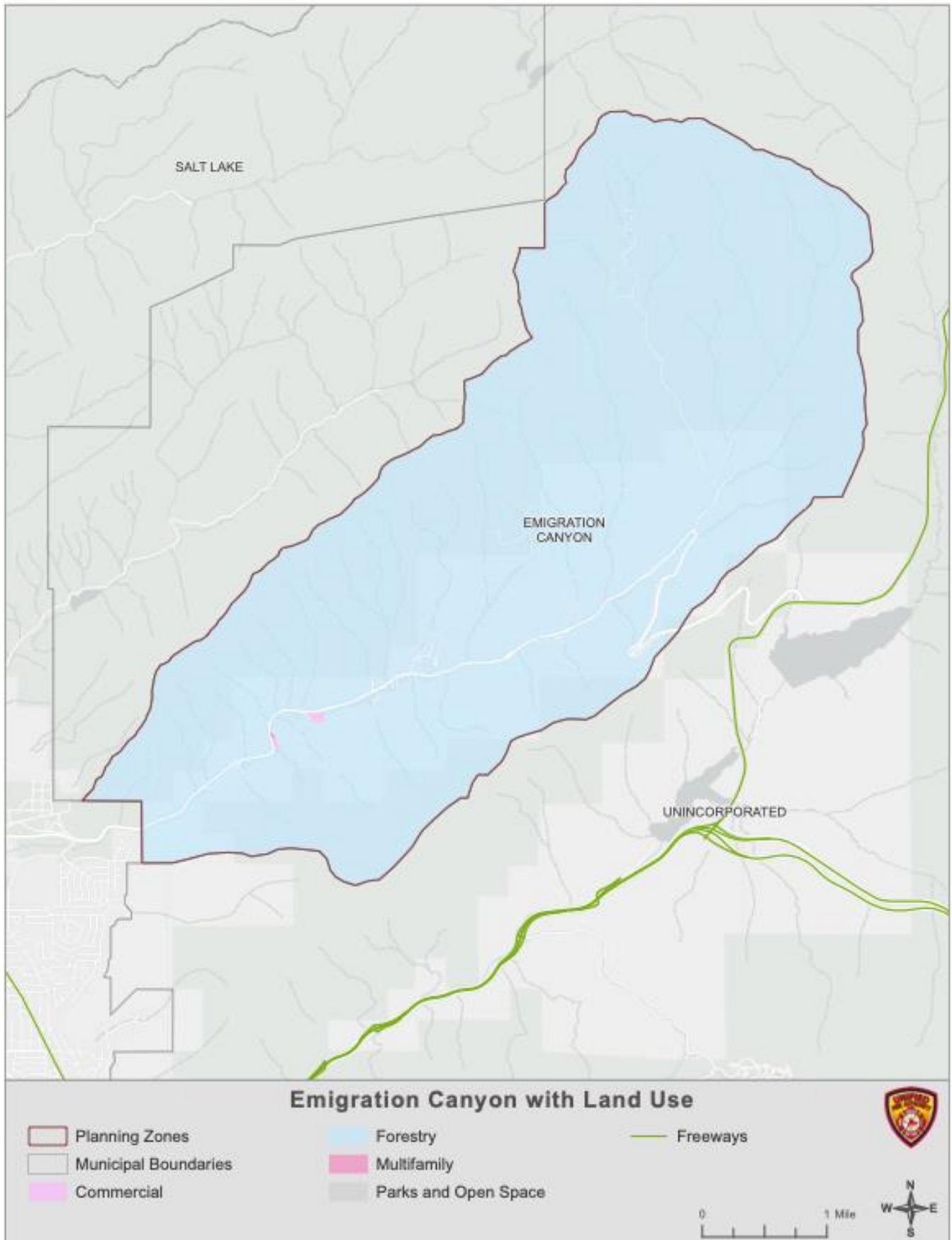
\*There is currently a gap within the identification of building size regarding hazardous materials sites. This is a gap that is being closed over the next several years as we collect the data and information.

*Table 88 – Emigration Building Occupancy and Risk Categories*

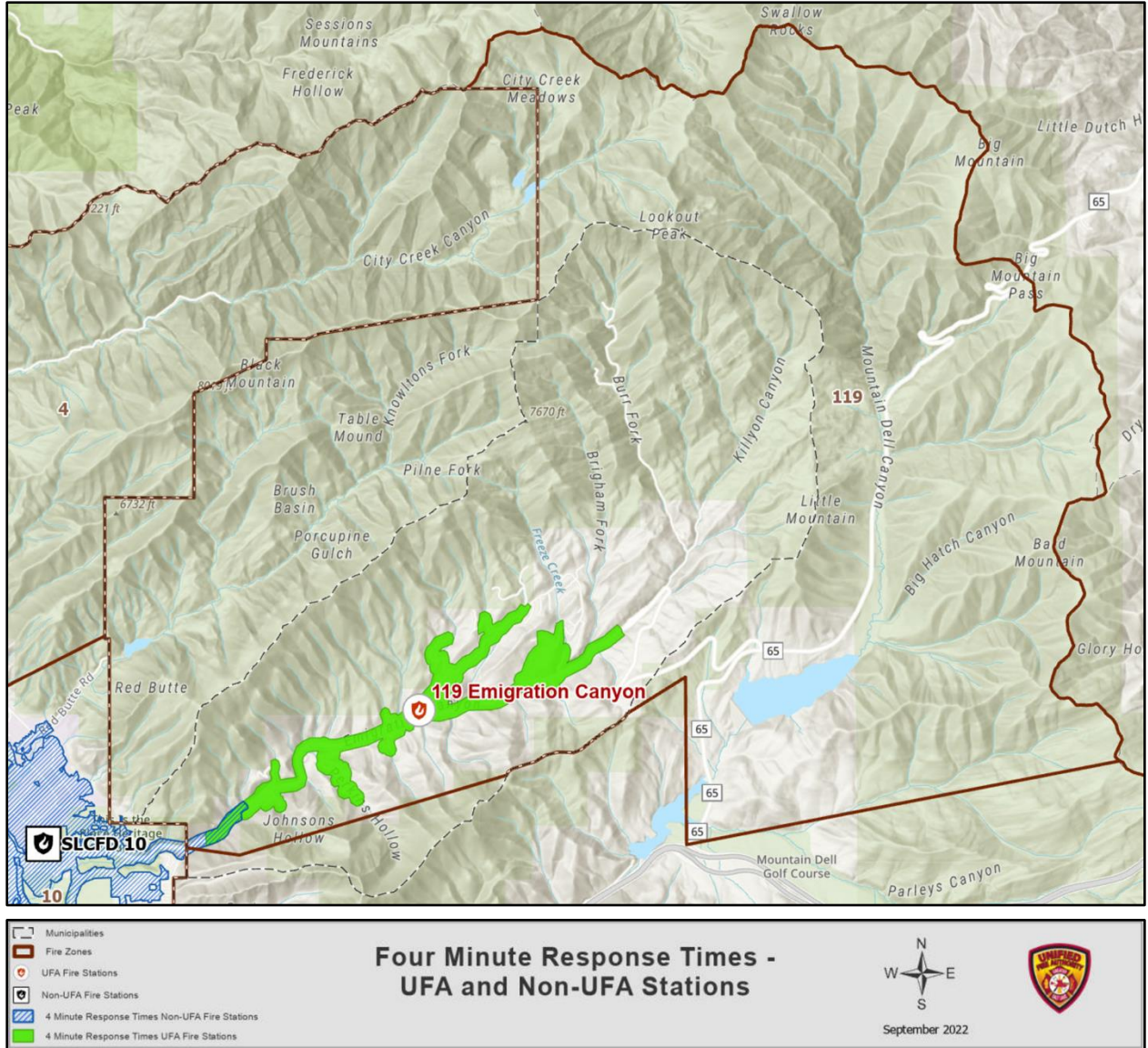
### Building Size / Considerations

For purposes of risk classification, UFA has outlined the following risk classifications for building size, regardless of occupancy type (except residential). Low risk = 1-4,999 square feet. Moderate risk = 5,000-9,999 square feet. High risk = 10,000-99,999 square feet. Maximum risk = >100,000 square feet.

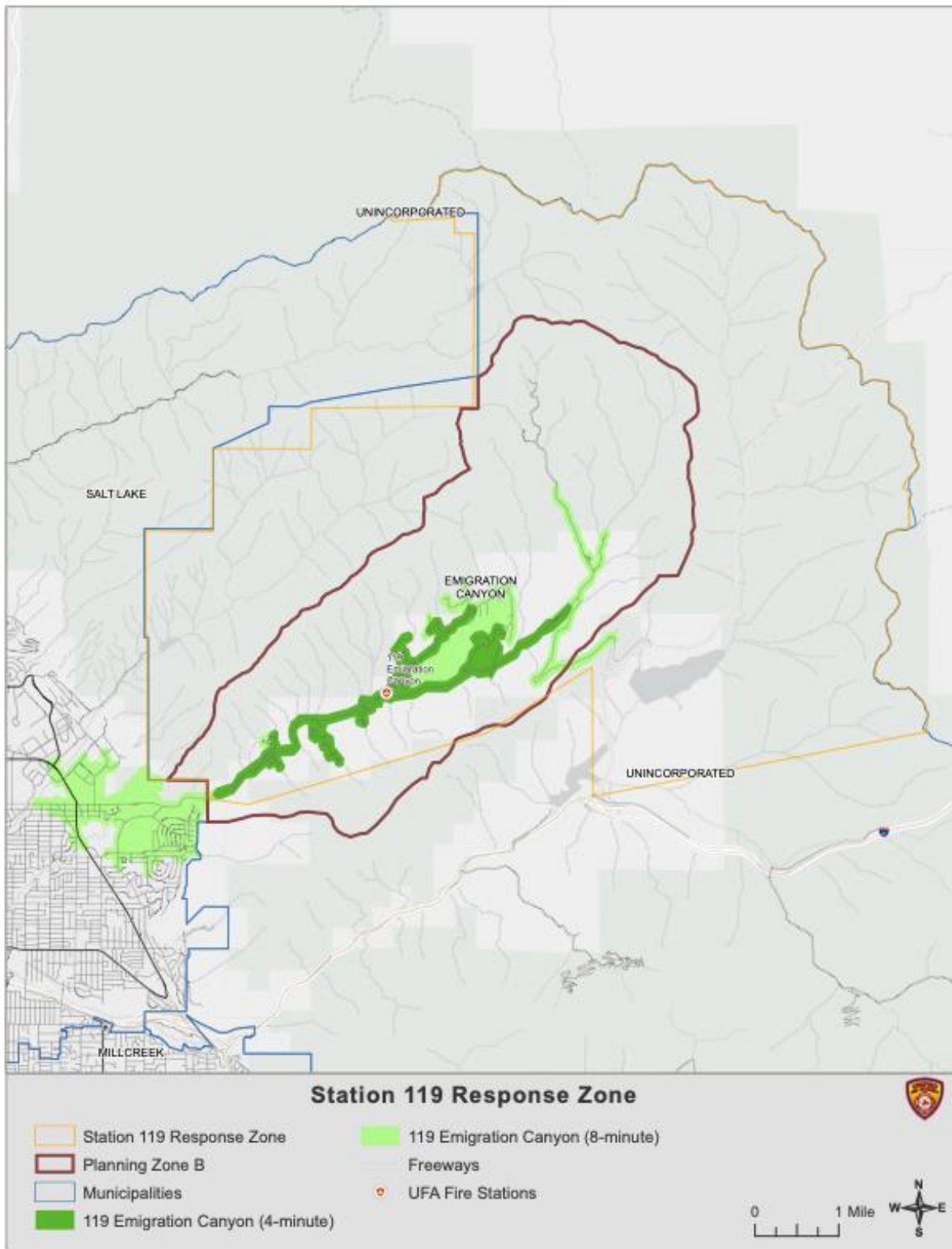
For residential occupancies, the following classifications apply. Low risk = 1-1,999 square feet. Moderate risk = 2,000-3,999 square feet. High risk = 4,000-9,999 square feet. Maximum risk = ≥10,000 square feet.



Map 126 – Emigration with Land Use



Map 127 - 4-Minute Travel Time, UFA and Aid

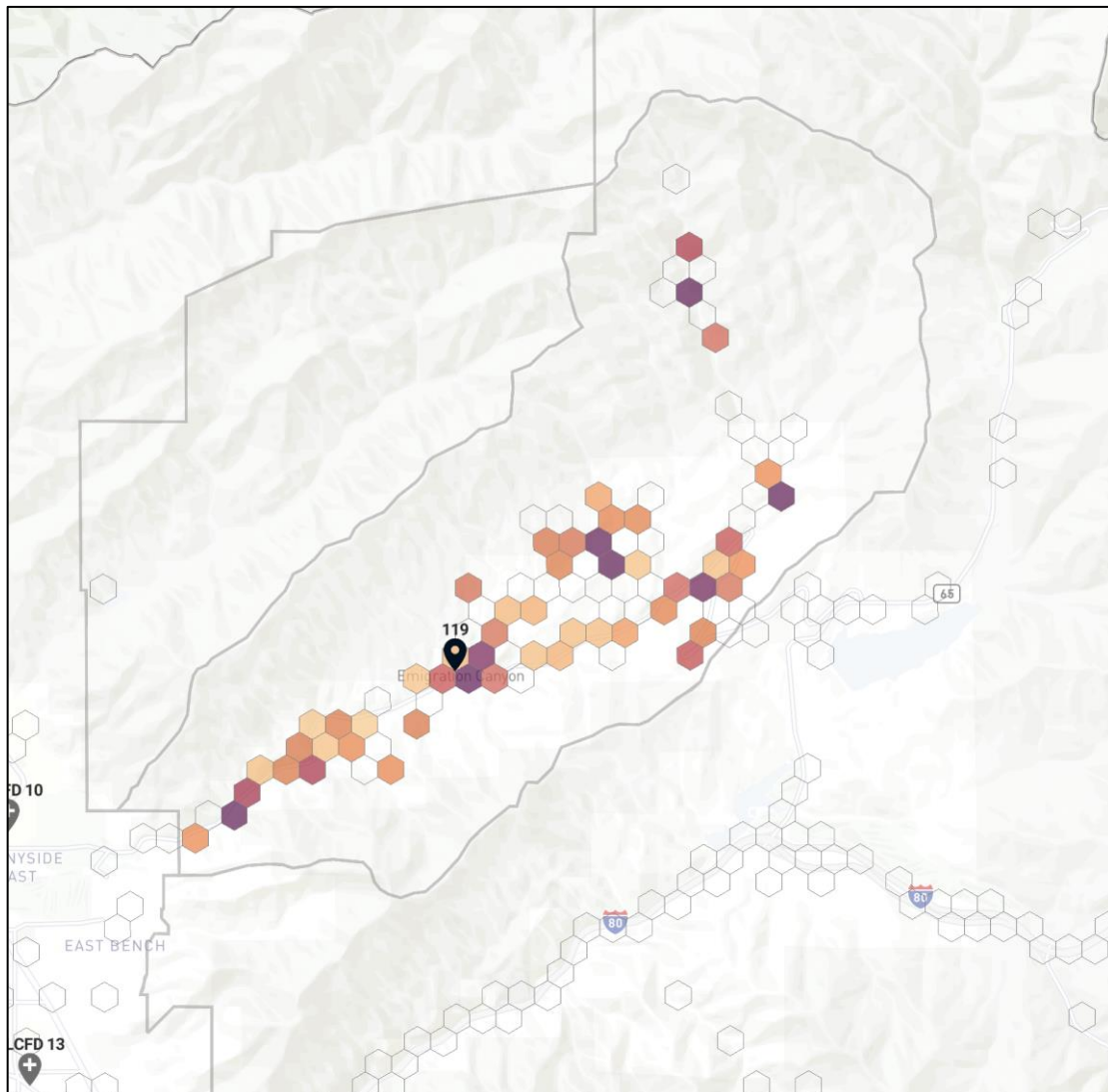


Map 128 - Station 119 4- and 8-Minute Travel Times



## Emigration Township – First Arriver Travel Times

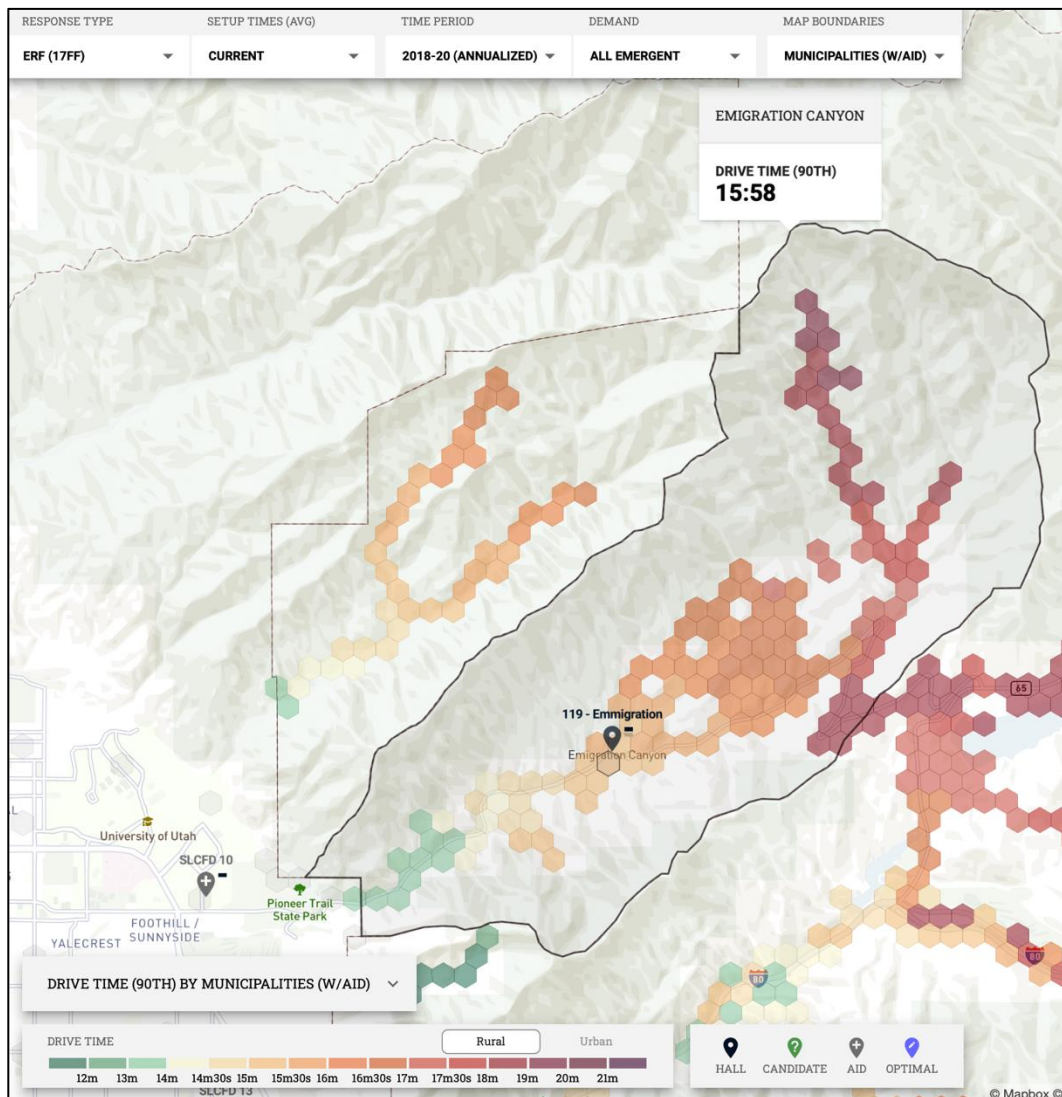
The following maps demonstrate the 90<sup>th</sup> percentile of travel times based off the last three years of historical data (2018-2020). The darker the color is, the more delayed the response, with the green and light colors demonstrating below or near target times. The darker colors on the bar within 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 (90<sup>th</sup> percentile) from notification of the alarm to the arrival of the first arriving apparatus — not an adopted standard by UFA. UFA is currently in process of identifying benchmark and target standards to be adopted by the UFA Board of Directors. Currently, within Emigration, the 90<sup>th</sup> percentile drive time is 13:50 for fire and 10:37 for EMS, or a combined 90<sup>th</sup> percentile drive time of 11:48.



Map 129 – Emigration Response Times – All Aid

## Emigration Township – Residential Fire Effective Response Force (17 FF)

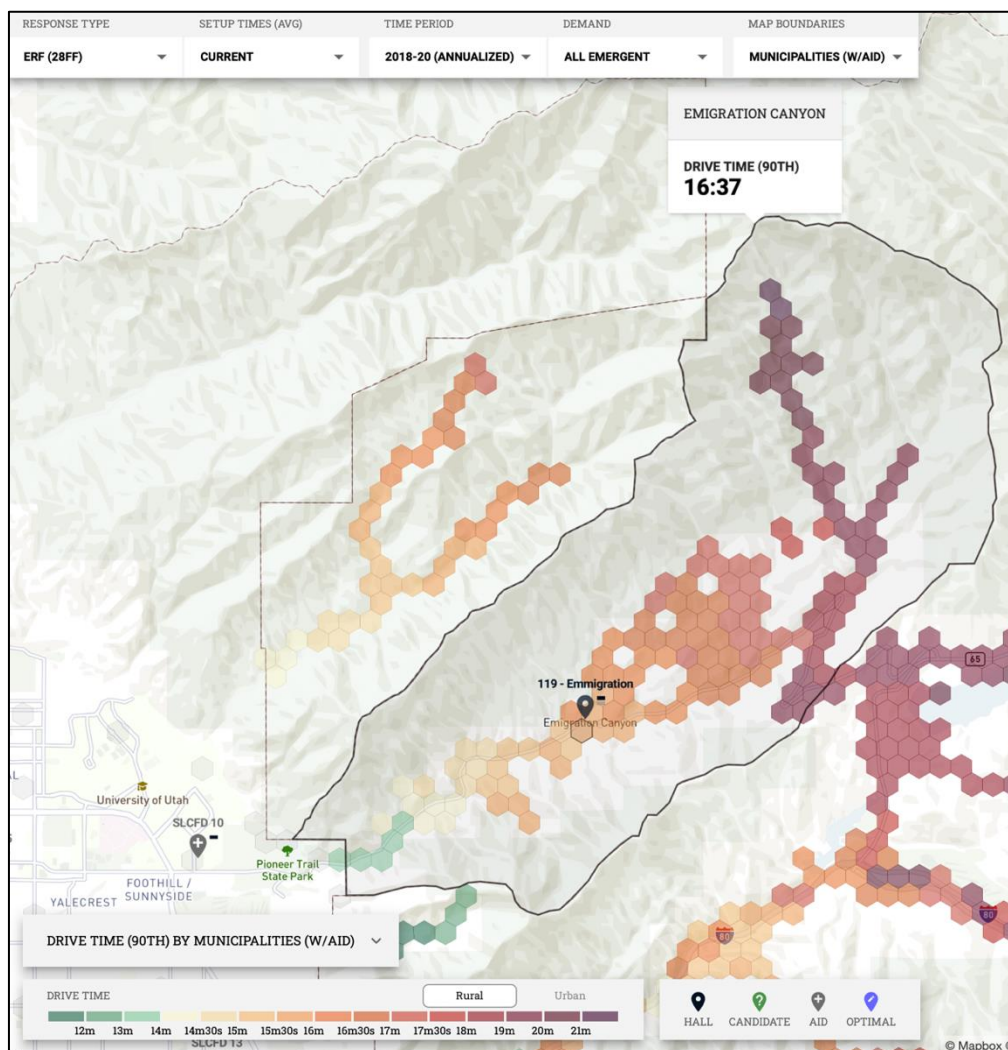
This map demonstrates the coverage of a multi-unit response to a residential fire based off all apparatus being within their station. The green to light yellow demonstrates the ability to have seventeen firefighters (a residential fire effective response force) on scene based off a residential urban fire force response. This map's drive times (or travel times) are based off the current NFPA 1710 standard of eight minutes (90<sup>th</sup> 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. UFA is currently in process of identifying benchmark and target standards to be adopted by the UFA Board of Directors. Based off predictive data, it is projected that the 90th percentile for 17 firefighters to arrive on scene would be 15:58.



Map 130 – Emigration Response Times – Residential Fire Effective Response Force (17 ERF)

## Emigration Township – 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 (90<sup>th</sup> 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. UFA is currently in process of identifying benchmark and target standards to be adopted by the UFA Board of Directors. Based off predictive data, it is projected that the 90th percentile for 28 firefighters to arrive on scene would be 16:37.



Map 131 – Emigration Response Times – Commercial Fire Effective Response Force (28 FF)

## Emigration Township 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
Low	Low	Low	Low	Low	Mod	High	Low	Low	Low	Low	Low

Table 89 – Emigration Hazard Matrix

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

### Infrastructure – Transportation

The primary roadway that runs through Emigration Township is Emigration Canyon Road which runs east/west between State Road 186 and I-80. There are 0 linear miles of Interstate/US Highway, 0 linear miles of State Highways, and 25.7 total linear miles of roadway. Emigration Township is in the low-risk category for road infrastructure.

### Infrastructure – Water

There are two water districts within Emigration Township. The Emigration Improvement District, and the Salt Lake City Water Department. The Salt Lake City Water Department that covers from the west end of the canyon up to the Maryfield Drive area and the Emigration Improvement District covers the rest of the canyon.

### Infrastructure – Dams

There are two identified dams within Emigration Township. Emigration is in the low-risk category for dam infrastructure.

## Natural Hazards

Within Emigration Township, there are low concerns with avalanche areas, placing it in the low-risk category for avalanche. There are no identified fault lines that run through the city (see Map 8). Emigration is in the low-risk category for liquefaction and low-risk category for fault lines. One of the biggest hazards that occur within an earthquake scenario is the number of unreinforced masonry (URM) buildings. Within Emigration Township, there are an estimated 44 URM's, which constitutes about 0.18% of the overall URM's within UFA's response areas. Emigration is in the moderate-risk category for unreinforced masonry.

## Wildland Urban Interface

There is high risk of urban interface fires within Emigration Township and within Emigration Canyon. One of the primary hazards is the lack of egress routes going out of the canyon. Emigration is in the high-risk category for Wildland Urban Interface.

## Hazardous Materials / Tier II Sites

There are no identified HazMat/Tier II Sites within Emigration Township, which is in the low-risk category.

## Hospitals

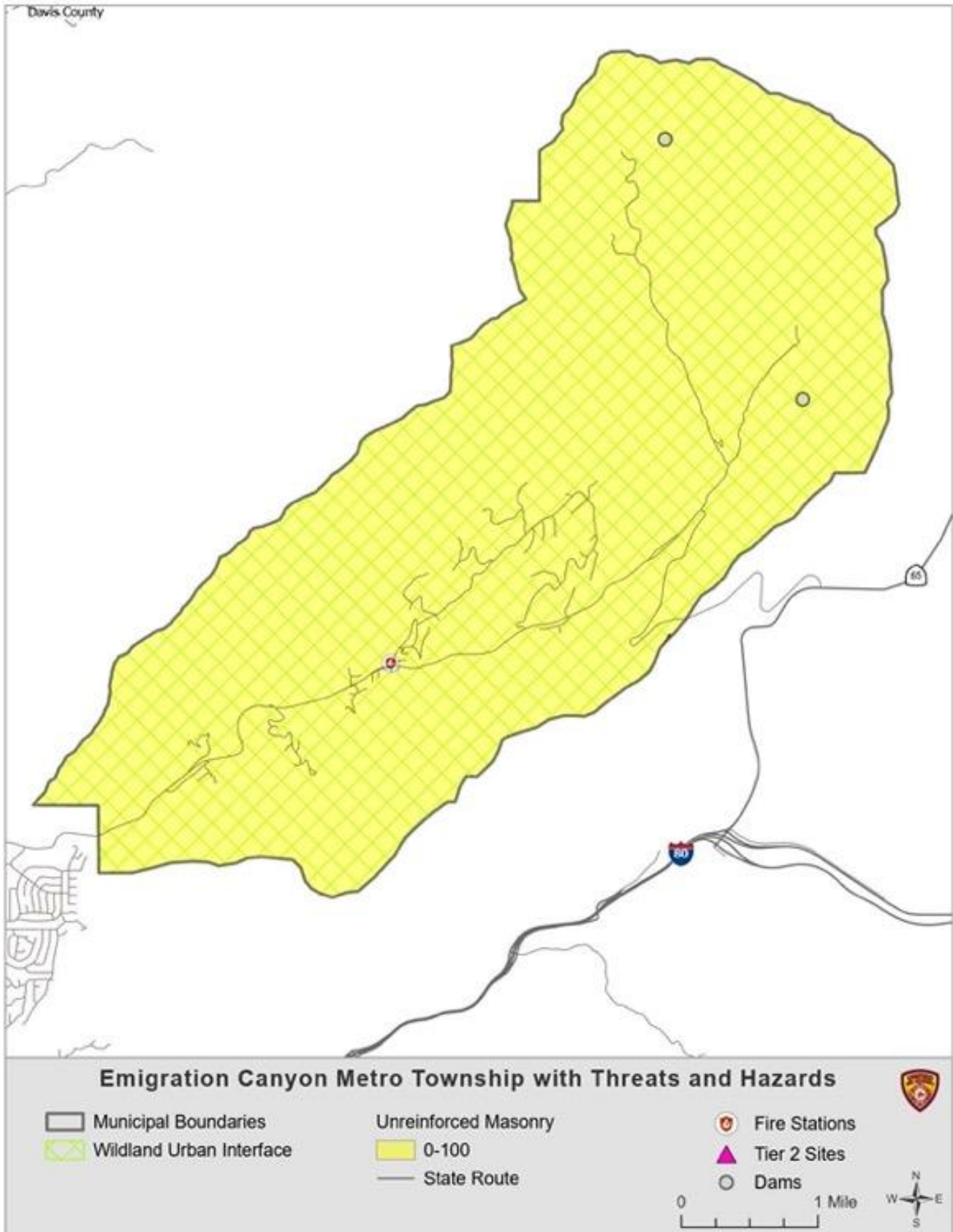
Emigration Township has no hospitals. This places Emigration in the low-risk category for hospitals.

## Schools

Emigration Township has zero elementary schools, zero middle schools, and zero high school within city boundaries, which places it in the low-risk category.

## Target Hazards

- Pinecrest Community – Access/Egress
- Killion Canyon Community – Access/Egress
- Sunnydale Community – Access/Egress
- Chevron Pipeline
- Citygate Pipeline
- Emigration Canyon Road is an alternative to I-80 when I-80 is closed for various reasons



Map 132 – Emigration Township with Combined Hazards

## Life and Property Loss

From 2015-2020, there have been zero fatalities attributed to fire. There has been a total estimate of \$1,914,700.00 of property loss and a total estimate of \$1,203,500.00 of content loss due to fire.

## Unified Fire Shared Services

With a regional-response model, the Unified Fire Authority brings special services to bear when the situation calls for it, not relying on automatic or mutual aid which provides a quicker and more effective delivery of service to its residents.

## Battalion Chiefs

Unified Fire Authority staffs three operational battalion chiefs (BCs) daily, in addition to a 40-hour Operations Chief (OC). These BCs and OC respond to large, complex, or expanding incidents — providing incident command, safety, and operational direction. Each BC covers an area of UFA's service area and respond to calls for service in any jurisdiction. Battalion 11 is housed out of Station 101 in Millcreek, Battalion 12 is housed out of Station 121 in Riverton, and Battalion 13 is housed out of Station 118 in Taylorsville.

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A FEMA Urban Search and Rescue Task Force is a team of individuals which serve as a resource for disaster response at local, state, and federal levels. It is comprised mainly of firefighters but includes structural engineers, medical professionals,



canine/handler teams and emergency managers with highly specialized training in urban search and rescue environments.

Utah Task Force 1 (UT-TF1) is one of 28 Type I, Federal Urban Search & Rescue (US&R) Task Forces in the United States. This program brings a highly trained, multi-hazard Task Force that is especially designed to respond to a variety of emergencies/disasters including earthquakes, hurricanes, tornadoes, floods, terrorist acts and hazardous material releases. Fire department personnel that are task force members receive specialized training and skills that directly benefit Unified Fire Authority.

### [Salt Lake County Emergency Management](#)

The Salt Lake County Division of Emergency Management serves our citizens by directing and coordinating resources for disasters and emergencies through preparation, planning, mitigation, response, and recovery. The Salt Lake County Emergency Coordination Center is activated and manned during any event—from small-scale to large-scale occurrences—to disasters both natural and man-made that can or have exceeded the resources of any particular jurisdiction. Currently, the Salt Lake County ECC assists and obtains resources for the 22 jurisdictions located within the Salt Lake Valley. Salt Lake County EM assists these jurisdictions through the activation of 15 Emergency Support Functions (ESFs) filled by employees from a multitude of backgrounds. The ESF employees have authority throughout Salt Lake County to fill and order additional support for the operations occurring in the field until the impacted jurisdiction can return to their normal operations and functions. The Emergency Management Division is committed to keeping the public safe through community outreach, training, dissemination of important public information, training of staff and the creation of a more resilient community through mitigation, preparation, response, and recovery. The ECC has been activated for many events such as Child Abduction Response Team (CART) Deployments, wildland fires such as the Rosecrest and Machine Gun fires, flooding, severe weather events, earthquakes, civil unrest, the COVID-19 pandemic, Line of Duty Deaths (LODD), and many other events.



## Unified Fire Authority

3380 South 900 West  
Salt Lake City, UT 84119

# Herriman City

## Community Risk Assessment



## Herriman City Planning Zone

UFA has two stations within the Herriman City Planning Zone covering a total of 8.5 square miles with a population of 55,144 and responded to 1,655 calls for service in 2020.

Planning Zone	Population	Population Percentage of UFA	Square Miles	Population Density per Sq Mile	Classification
<b>Herriman City</b>	55,144	12.23 %	21.63	2,549	Urban

Herriman City has increased its population from 21,825 in 2010 to 55,144 in 2020, showing an increase of 60.42% over a ten-year timeframe. Providing an exponential growth pattern and if all things remain equal, chart 44 demonstrates that Herriman could grow to 119,523 by the year 2040.

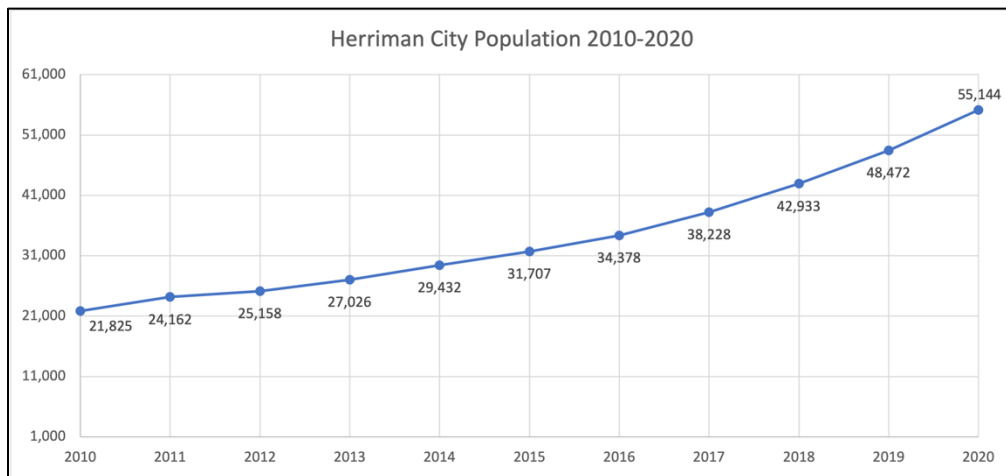


Chart 44 - Herriman City Population 2010-2020

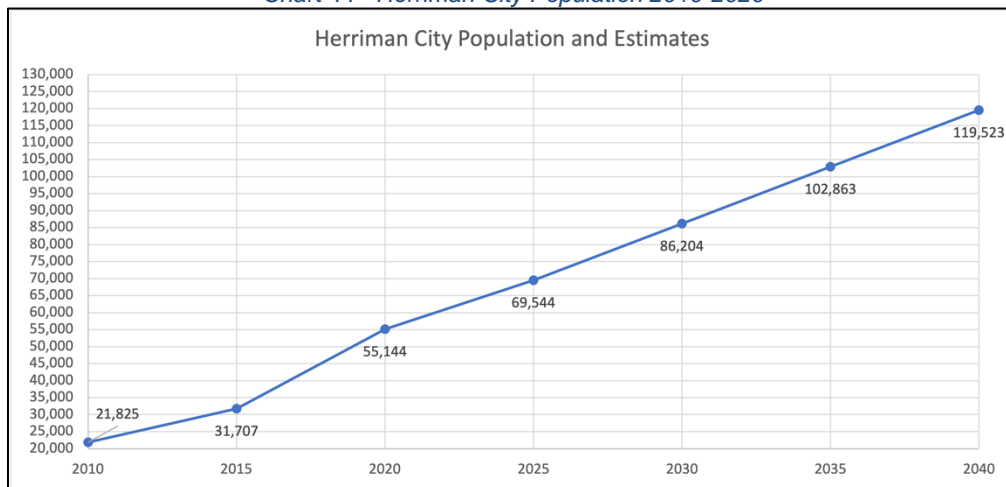




Chart 45 - Herriman City Population and Estimates 2010-2040

## Herriman City Station Information

<p><b>Station 103 information:</b></p> <ul style="list-style-type: none"><li>• Owner – Herriman City</li><li>• Opened – 1978</li><li>• Address – 5916 West 13100 South</li><li>• Staffing and Apparatus –<ul style="list-style-type: none"><li>○ Type 1/3, ME 103 (4 persons)</li><li>○ Wildland Duty Officer Truck (cross-staffed)</li><li>○ PL MA 203 (2 persons – 0900-2100)</li></ul></li></ul>	 <p><i>Image 12 – Herriman City Station 103</i></p>
<p><b>Station 123 information:</b></p> <ul style="list-style-type: none"><li>• Owner – UFSA</li><li>• Opened – 2010</li><li>• Address – 4850 Patriot Ridge Drive</li><li>• Staffing and Apparatus –<ul style="list-style-type: none"><li>○ Type 1, ME 123 (4 persons)</li><li>○ Type 6 Brush Truck (cross-staffed)</li><li>○ Type 1, WTT 123 (cross-staffed)</li></ul></li></ul>	 <p><i>Image 13 – Herriman City Station 123</i></p>

## Surrounding UFA and Automatic/Mutual Aid Response Stations

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

- UFA Station 121 (Riverton City), with a four-person medic ladder and a two-person medic ambulance
- UFA Station 120 (Riverton City), with a two-person medic ambulance
- UFA Station 124 (Riverton City), with a four-person medic engine

- Bluffdale Station 91, with a two-person medic engine and a two-person medic ambulance
- Bluffdale Station 92, with a two-person medic engine and a two-person medic ambulance
- South Jordan Station 62, with a four-person engine and a two-person medic ambulance
- South Jordan Station 63, with a four-person engine and a two-person medic ambulance
- South Jordan Station 64, with a four-person engine and a two-person medic ambulance
- West Jordan Station 54, with a three-person engine and a two-person medic ambulance

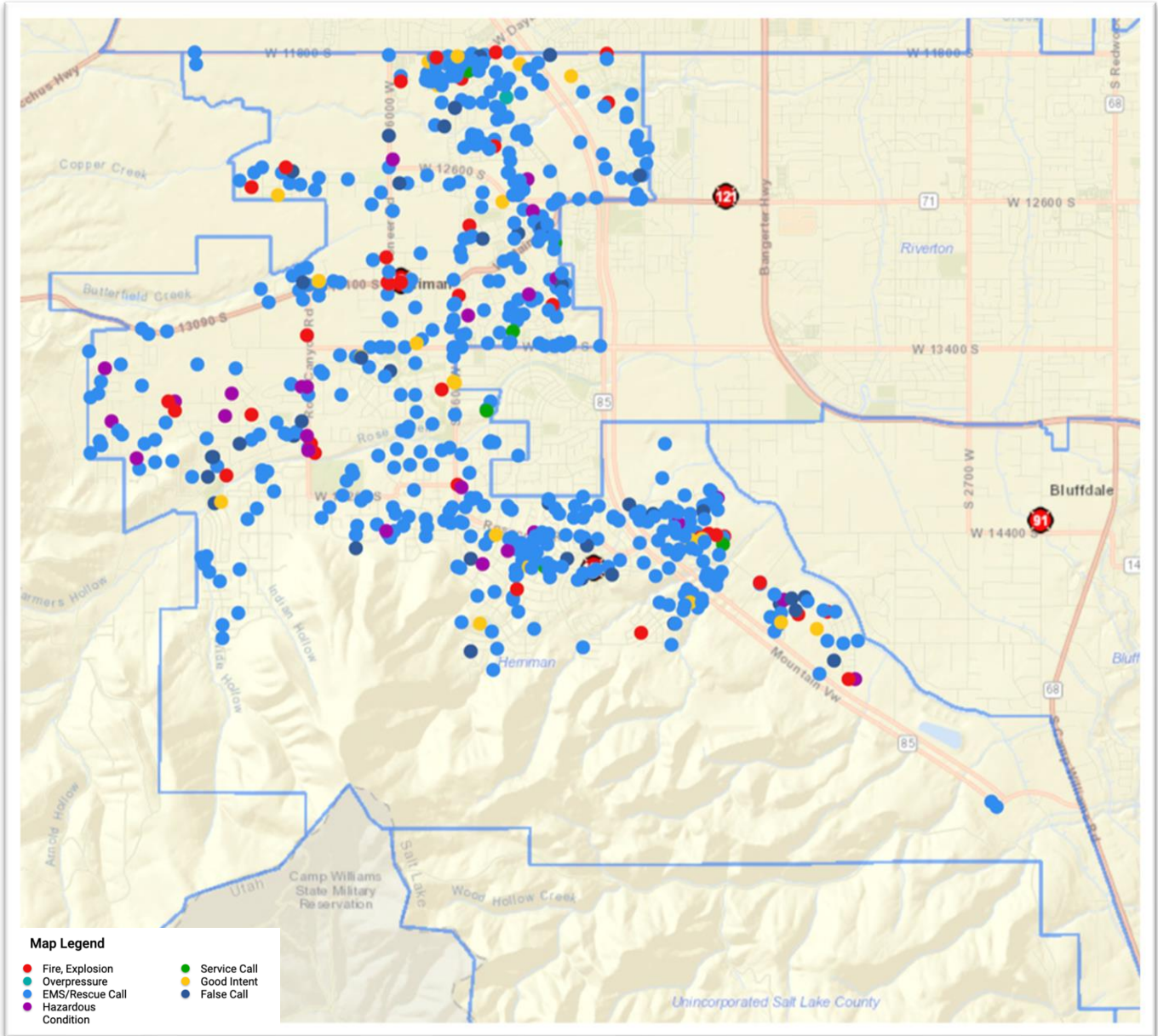
### Herriman City – Incidents by Dispatch Type

The following data is what the NFIRS type was when crews arrived on scene. This may be different than what was originally dispatched, including a reclassification of a call type from one to another. Cancelled calls occur if the company is cancelled en route to a call and never arrives on scene, which then changes the dispatch type to an NFIRS 611 call type.

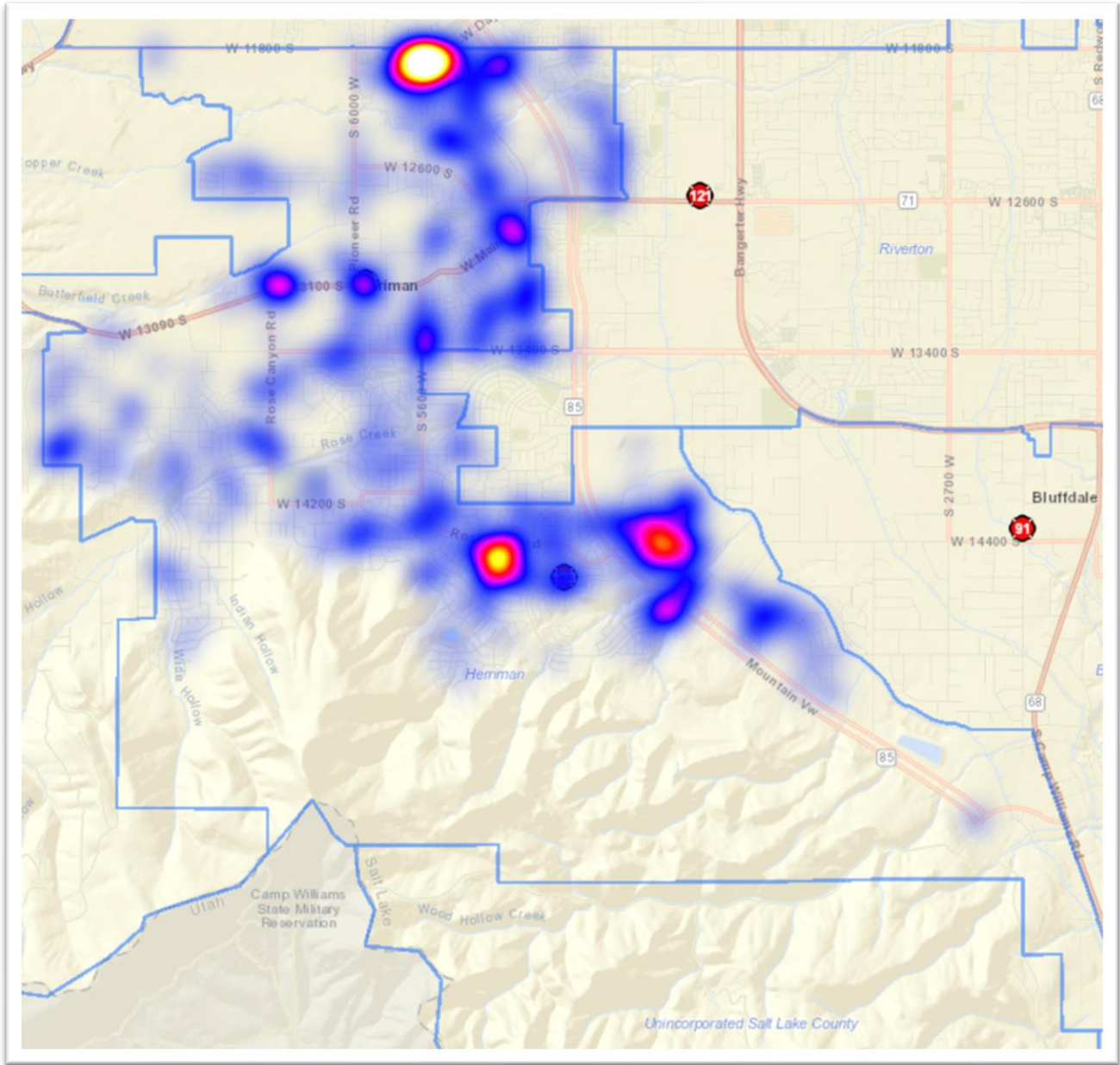
	CY 2020	CY 2019	CY 2018
<b>Fire Suppression</b>	51	23	36
<b>EMS</b>	910	781	689
<b>Hazardous Materials</b>	59	35	34
<b>Service Calls</b>	64	51	48
<b>Good Intent</b>	259	198	106
<b>False Calls</b>	132	142	129
<b>Other (Misc., Flood, Overpressure)</b>	3	3	3
<b>Total</b>	1,478	1,233	1,045
<b>Cancelled</b>	177	113	77
<b>Overall Total</b>	1,655	1,346	1,122

Table 90 – Herriman City Call Type

## Herriman City – 2020 Incidents and Heat Map



Map 133 - Herriman City Incident Calls by Call Type



Map 134 - Herriman City Call Volume Heat Map



## NFPA 1710

The National Fire Protection Association is an international nonprofit organization that is devoted to eliminating death, injury, property, and economic loss due to fire, electrical and related hazards. The NFPA makes recommendations on over 300 codes and standards. NFPA 1710 recommendations are based off 90<sup>th</sup> percentile times.

### – In Other Words...

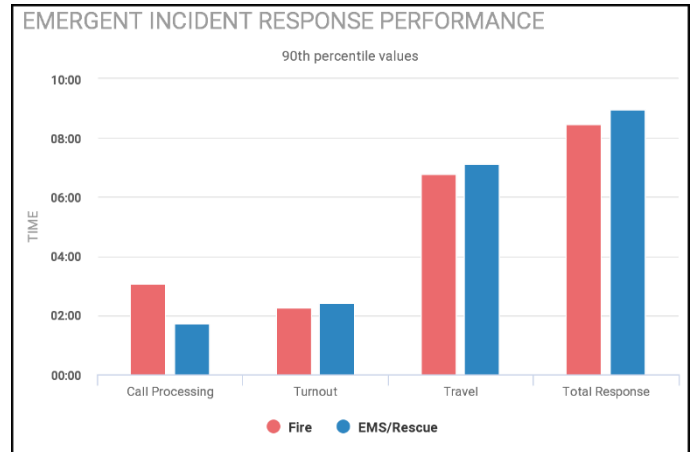
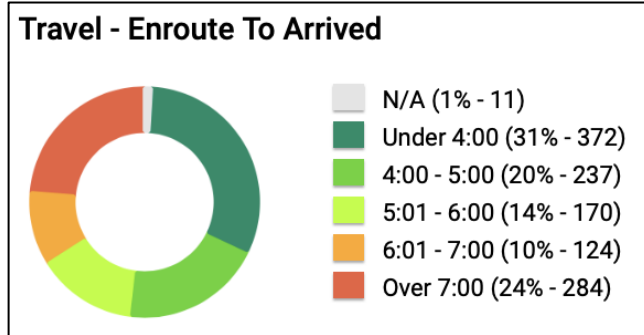
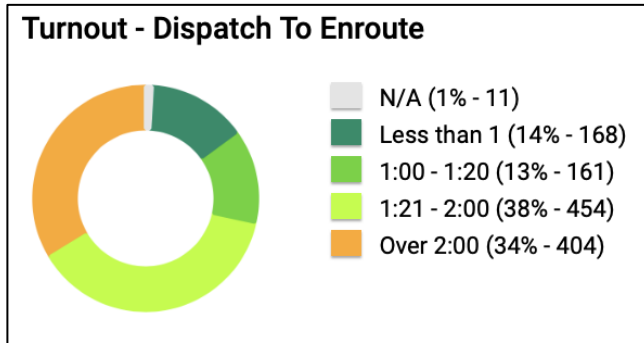
If a value is in the 90<sup>th</sup> percentile, it means the value is better than 90% of all other values in the dataset. In other words, it is within the top 10% of the values.

NFPA 1710 encompasses suggested standards for full-time fire departments and recommends the following times (all of which are at the 90<sup>th</sup> percentile): alarm processing – 64 seconds; turnout time for EMS responses – 60 seconds; turnout time for fire responses – 80 seconds; first arriver apparatus – 240 seconds (4 minutes); initial full-alarm assignment for low and medium hazard responses – 480 seconds (8 minutes); or initial full-alarm assignment for high hazard/high-rise responses – 610 seconds (10 minutes 10 seconds). The total response times are the cumulative totals of call processing time, turnout time, and travel time. NFPA 1710 recommends a total response time of 6:24 for the first arriving apparatus for fire and 6:00 for the first arriving apparatus for EMS.

### – Of Note...

NFPA 1710 response times have not been adopted by the UFA Board. One of the important elements of the community risk assessment and standards of cover is to identify current 90<sup>th</sup> percentile times (current baselines) within UFA and to identify realistic benchmarks for the UFA Board to consider for adoption.

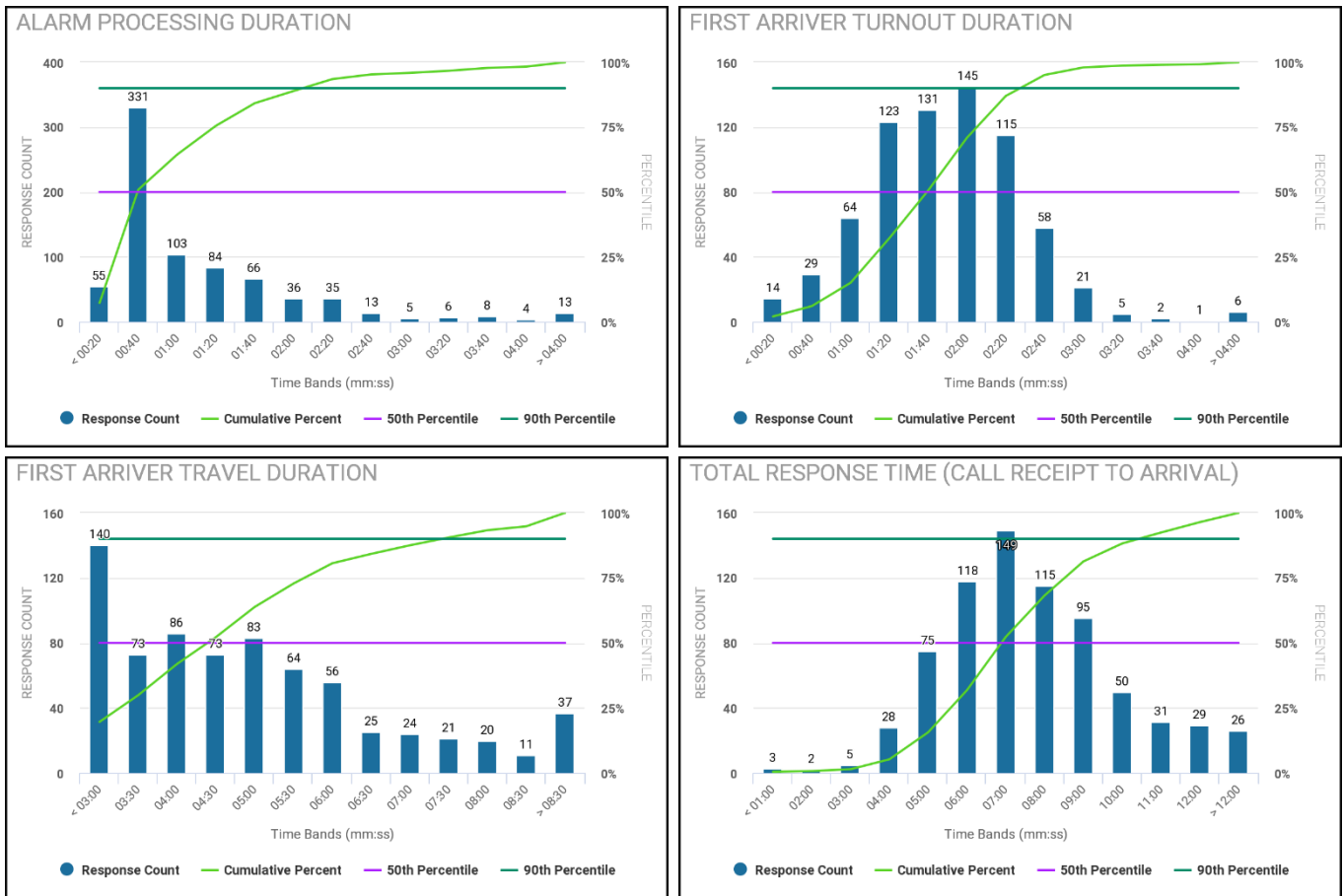
## Herriman City – 2020 Dispatch and Response Times



Urban	Call Processing: Fire	Turnout Time: Fire	Travel Time: Fire	Total Response: Fire	Call Processing: EMS	Turnout Time: EMS	Travel Time: EMS	Total Response: EMS
<b>Herriman</b>	2:26	2:22	7:57	11:41	1:44	2:25	7:11	9:56
<b>UFA Urban 2018-2020</b>	2:16	2:39	7:36	10:34	1:47	2:32	6:29	9:18
<b>UFA Rural 2018-2020</b>	2:32	3:05	15:08	19:09	1:56	2:50	14:45	17:45
<b>NFPA 1710</b>	1:04	1:20	4:00	6:24	1:00	1:00	4:00	6:00

Table 91 – Herriman City 2020 Emergent Response Times, 90<sup>th</sup> percentile values

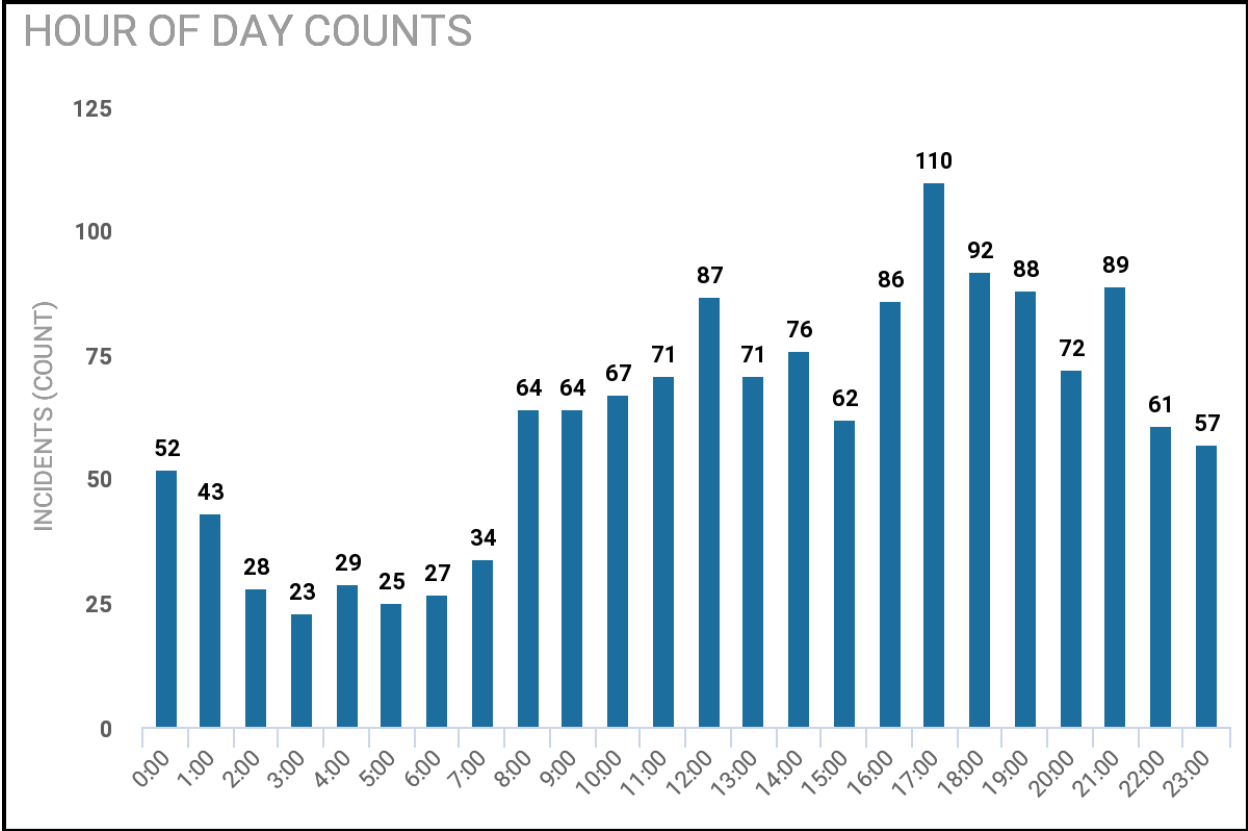
## Herriman City – 2020 Turnout and Travel Time



The charts above illustrate the alarm processing, turnout and travel times for all units responding to service calls within Herriman City (90<sup>th</sup> percentile). The alarm processing for fire was 2:26 and 1:44 for EMS; turnout time was 2:22 for fire responses and 2:25 for EMS responses; travel time was 11:41 for fire responses and 7:11 for EMS. The 90<sup>th</sup> percentile total response time was 11:41 for fire and 9:56 for EMS. For the charts above, they show both fire and EMS response times together.

### 📌 – Of Note...

One item to note is that if you were to add the processing time, the turnout time, and the travel time, it will not necessarily (and often doesn't), sum the total response time. This is due to some of the limitations within the datasets and gaps within timestamps. Where there are missing timestamps, those particular key performance indicators (KPI) are excluded as they cannot accurately be calculated out.



*Chart 46 - Herriman City 2020 Incidents by Time of Day*

**Herriman City – 2020 Incidents by Time of Day**

The above table demonstrates the incidents by time of day and the time of greatest demand within Herriman City for all service calls. This chart illustrates that the greatest demand for service delivery begins at 08:00 AM and starts to decrease at 09:00 PM.

## Herriman City – 2020 Incidents by Day of Week

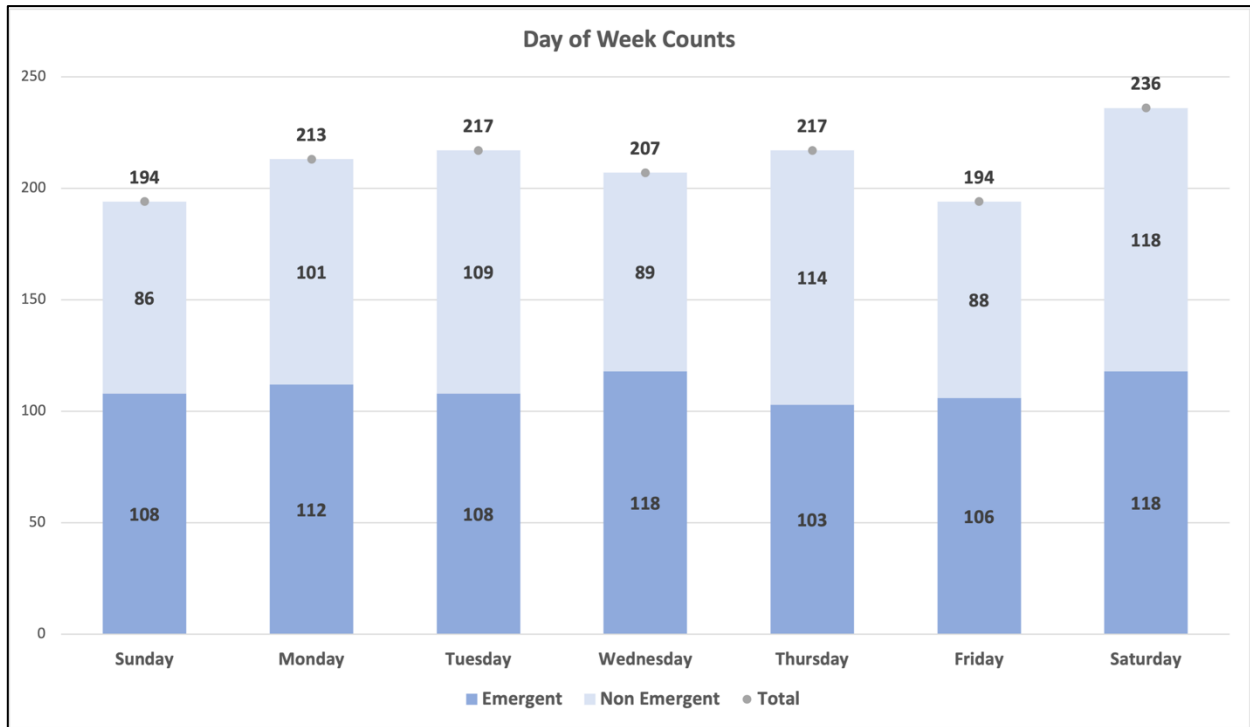


Chart 47 – Herriman City Incidents by Day of Week

This chart demonstrates the call volume based on the day of the week, with an increase in all calls as well as the peak volume for all calls in Herriman City occurring on Saturday.

## Herriman City – EMS Calls

EMS calls are filtered by final disposition codes and this data is taken from VECC and determined by the patient acuity at the time of call termination. Often times the EMS calls identified from final disposition are different than the number of EMS calls that were initially dispatched due to one being the initial call type, and one being what call type the call was closed as by responding fire crews.

	CY 2020	CY 2019	CY 2018
<b>ALS Transports</b>	350	240	248
<b>BLS Transports</b>	402	338	236
<b>Scene Release</b>	41	36	55
<b>Public Assistance</b>	4	7	11
<b>EMS Total Calls</b>	793	614	539

Note: There is possibly a difference if you were to add all calls due to data reporting mechanisms. Public assistance calls will sometimes get duplicated with a scene release, depending on dispatch code, but those calls do not carry across to the total calls. Also, cancelled calls go into a different final disposition so the numbers in the 'Incidents by Dispatch Type' are reflective of this difference.

Table 92 – Herriman City EMS Calls

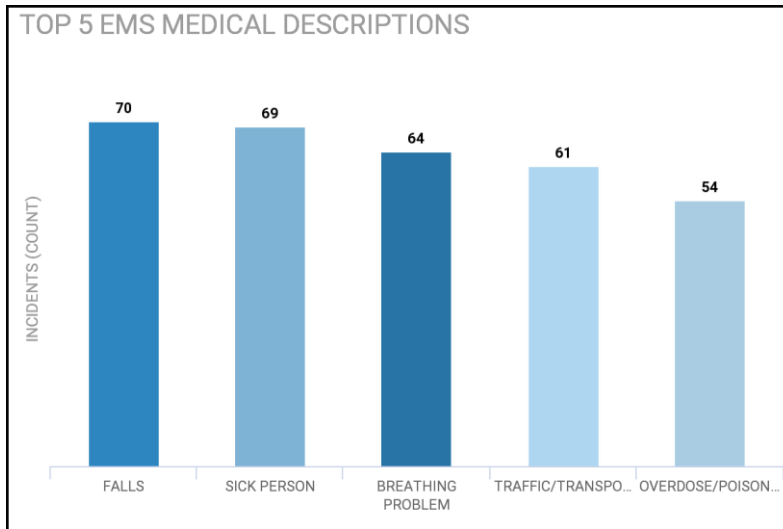


Chart 48 - Top 5 EMS Medical Calls - 2020

### Herriman City – 2020 Fire Incidents by Dispatch Type

NFIRS Description	Incident Count	% of Incidents
Structure Fire	19	37.3%
Natural Vegetation Fire	9	17.6%
Outside Rubbish Fire	11	21.6%
Special Outside Fire	3	5.9%
Fire, Other	5	9.8%
Vehicle Fire	4	7.8%
<b>Total</b>	<b>51</b>	<b>100%</b>

Table 93 – Herriman City 2020 Incidents by Dispatch Type

## Herriman City – Building Occupancy Classification and Risk Categories

Occupancy Classification	Low	Moderate	High	Maximum	Total
<b>Assembly</b>	17	0	11	0	28
<b>Commercial/Industrial</b>	4	1	0	0	5
<b>Educational</b>	0	11	2	3	16
<b>Government</b>	1	0	0	0	1
<b>Healthcare</b>	0	0	0	0	0
<b>Hazardous</b>	Unknown	Unknown	Unknown	Unknown	30*
<b>Storage</b>	0	0	0	0	0
<b>Residential</b>	286	5,217	2,363	6	7,872
<b>Residential – Multi Unit</b>	160	28	101	3	292
<b>High Rise</b>	N/A	N/A	0	0	0
<b>Total</b>	468	5,257	2,376	12	8,216

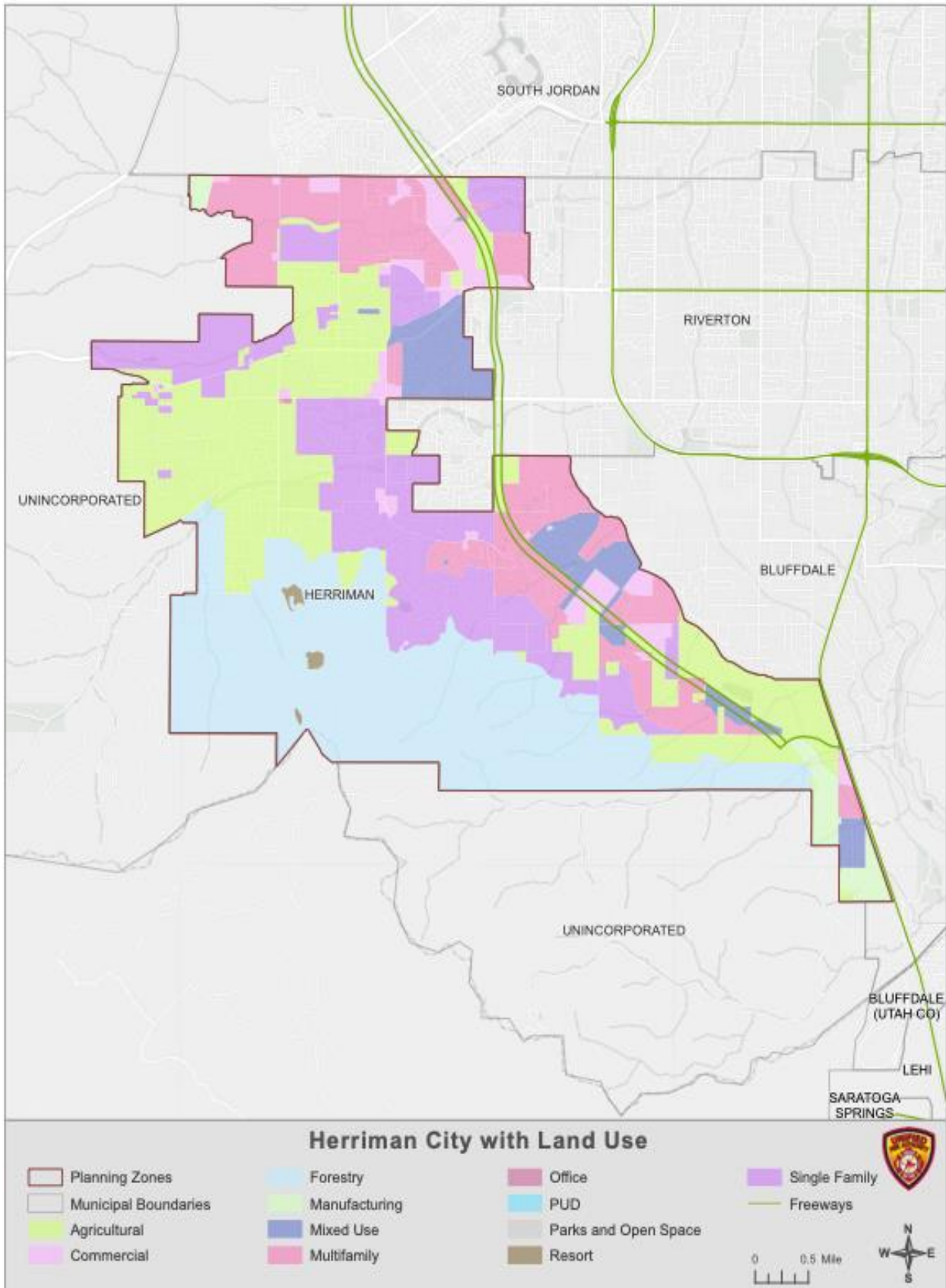
\*There is currently a gap within the identification of building size regarding hazardous materials sites. This is a gap that is being closed over the next several years as we collect the data and information.

*Table 94 – Herriman City Building Occupancy and Risk Categories*

### Building Size / Considerations

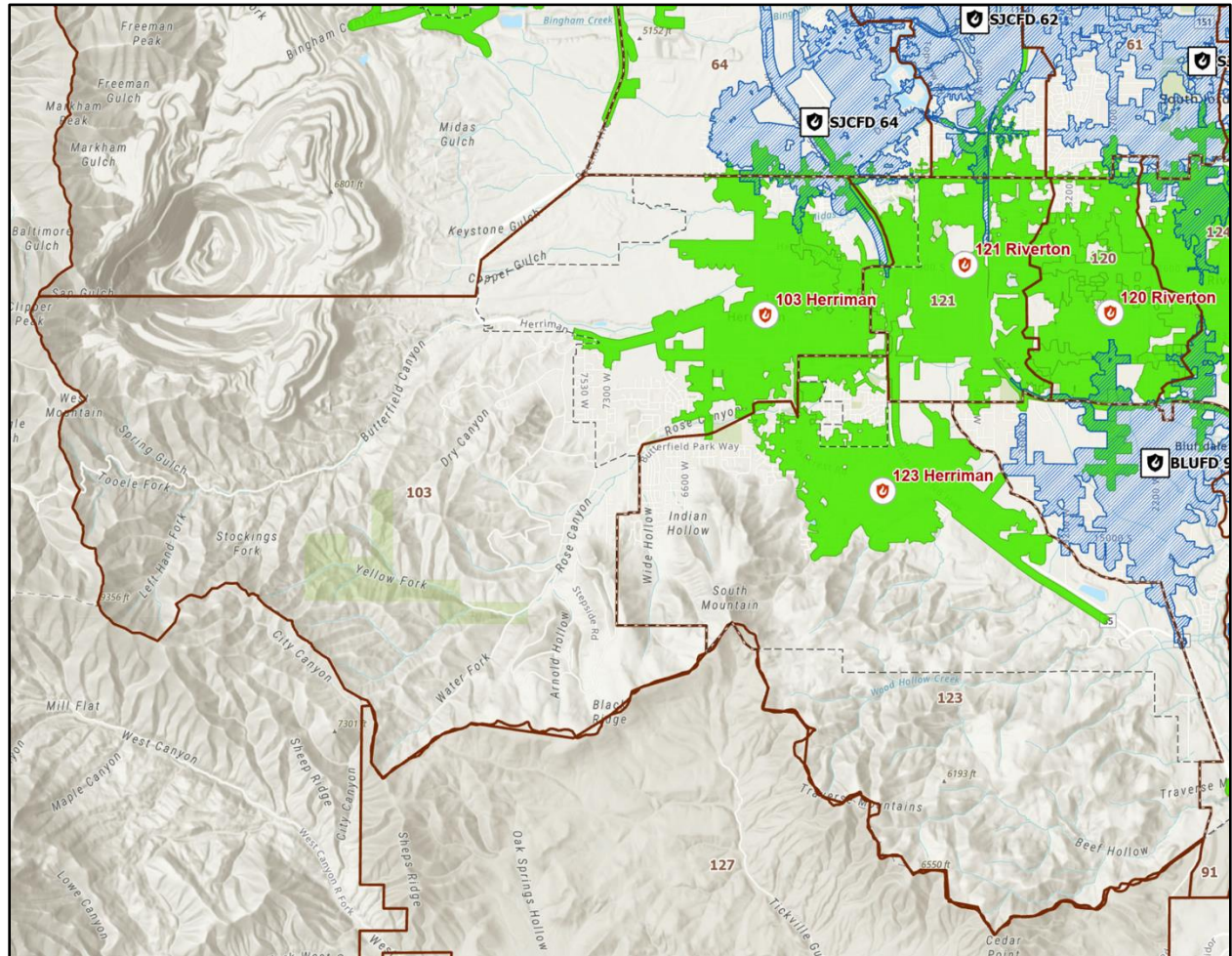
For purposes of risk classification, UFA has outlined the following risk classifications for building size, regardless of occupancy type (except residential). Low risk = 1-4,999 square feet. Moderate risk = 5,000-9,999 square feet. High risk = 10,000-99,999 square feet. Maximum risk = >100,000 square feet.

For residential occupancies, the following classifications apply. Low risk = 1-1,999 square feet. Moderate risk = 2,000-3,999 square feet. High risk = 4,000-9,999 square feet. Maximum risk = ≥10,000 square feet.



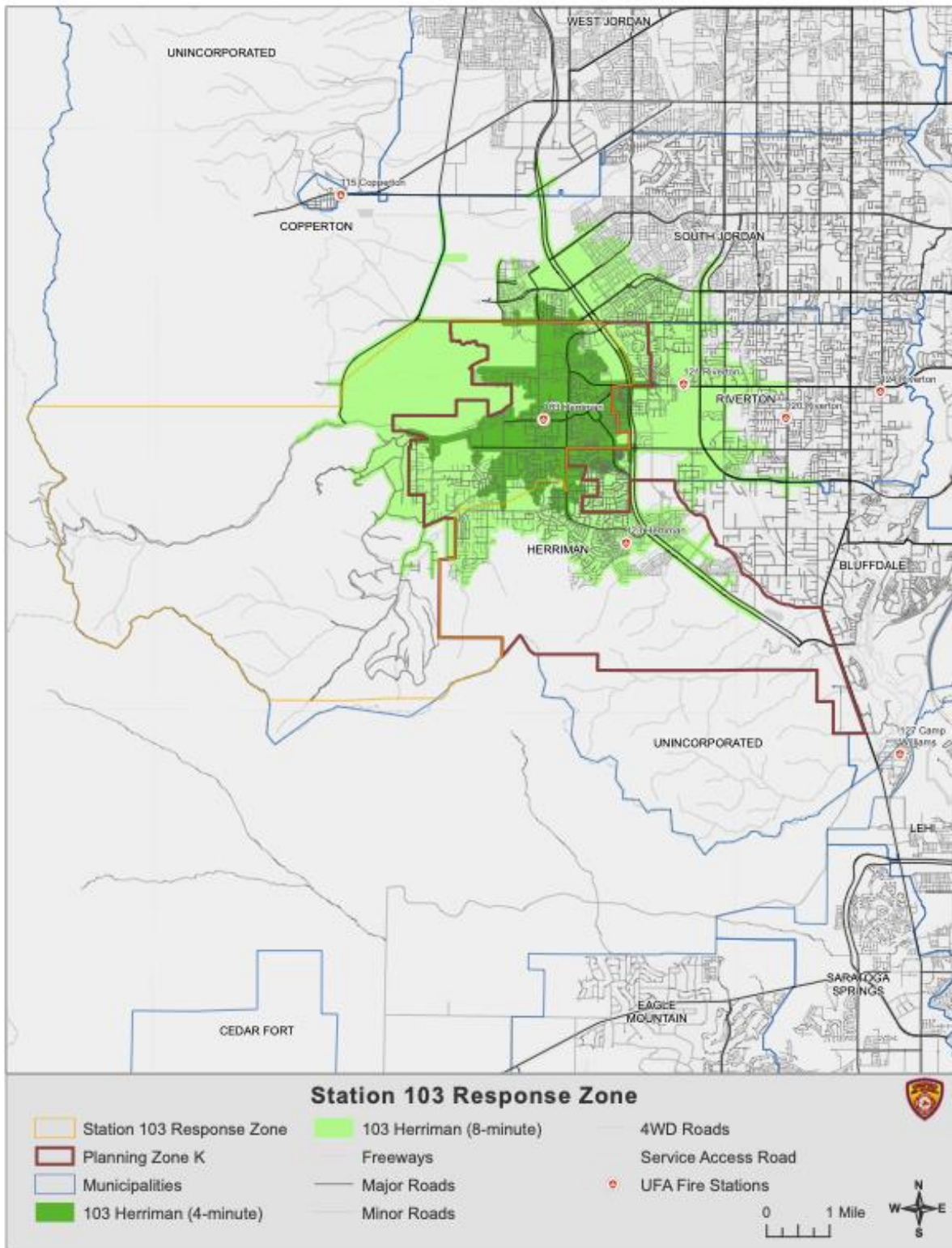
Map 135 - Herriman City with Land Use



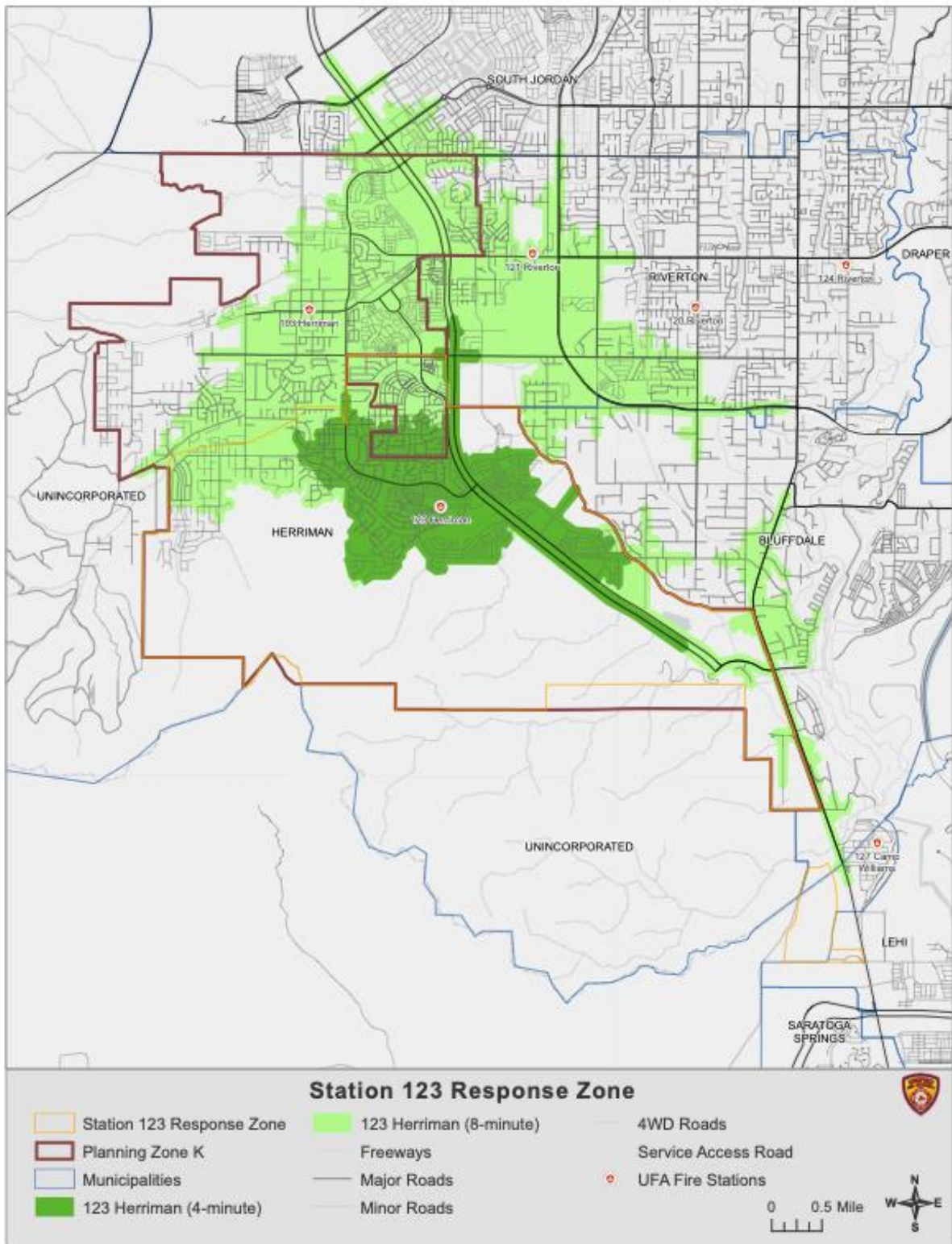


	Municipalities	<h3>Four Minute Response Times - UFA and Non-UFA Stations</h3> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">               N W E S           </div> </div> <p>September 2022</p>
	Fire Zones	
	UFA Fire Stations	
	Non-UFA Fire Stations	
	4 Minute Response Times Non-UFA Fire Stations	
	4 Minute Response Times UFA Fire Stations	

Map 136 - 4-Minute Travel Time, UFA and Aid



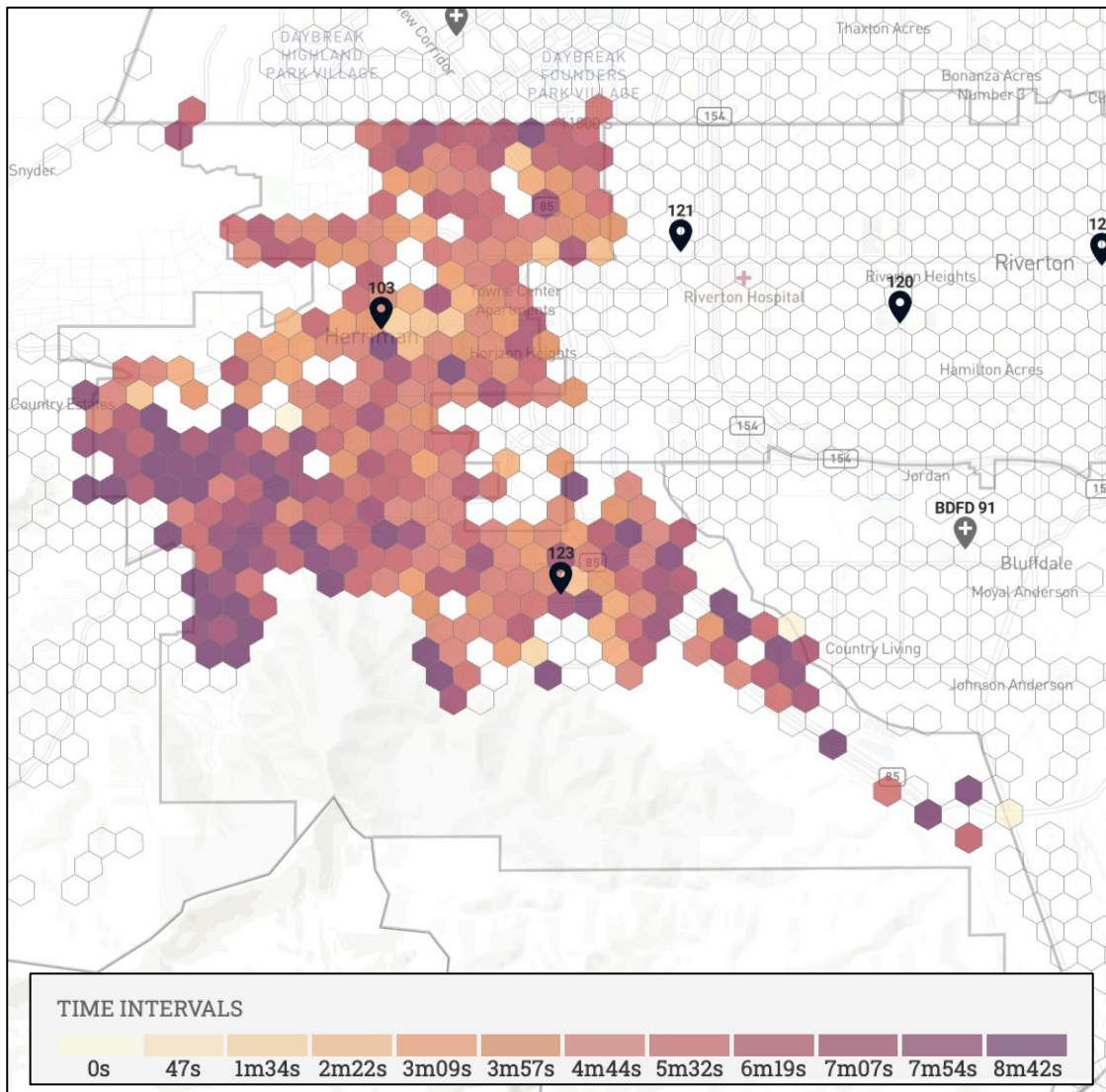
Map 137 - Station 103 4- and 8-Minute Travel Times



Map 138 - Station 123 4- and 8-Minute Travel Times

## Herriman City – First Arriver Travel Times

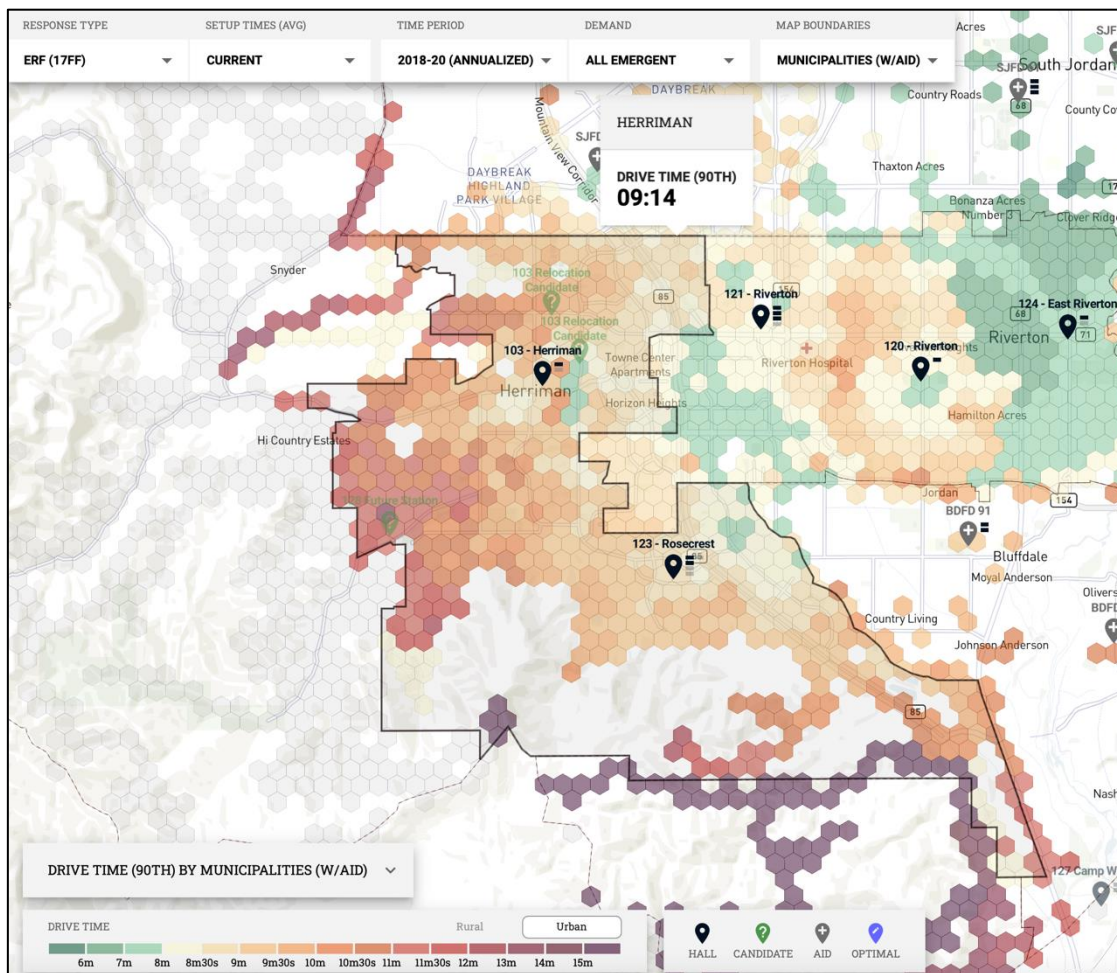
The following maps demonstrate the 90<sup>th</sup> percentile of travel times based off the last three years of historical data (2018-2020). The darker the color, the more delayed the response with the lighter colors demonstrating below or near target times. The darker colors on the bar within the key 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 (90<sup>th</sup> percentile) from notification of the alarm to the arrival of the first arriving apparatus — not an adopted standard by UFA. UFA is currently in process of identifying benchmark and target standards to be adopted by the UFA Board of Directors. Currently, within Herriman City, the 90<sup>th</sup> percentile drive time is 7:57 for fire and 7:11 for EMS.



Map 139 – Herriman City Response Times – All Aid

## Herriman City – Residential Fire Effective Response Force (17 FF)

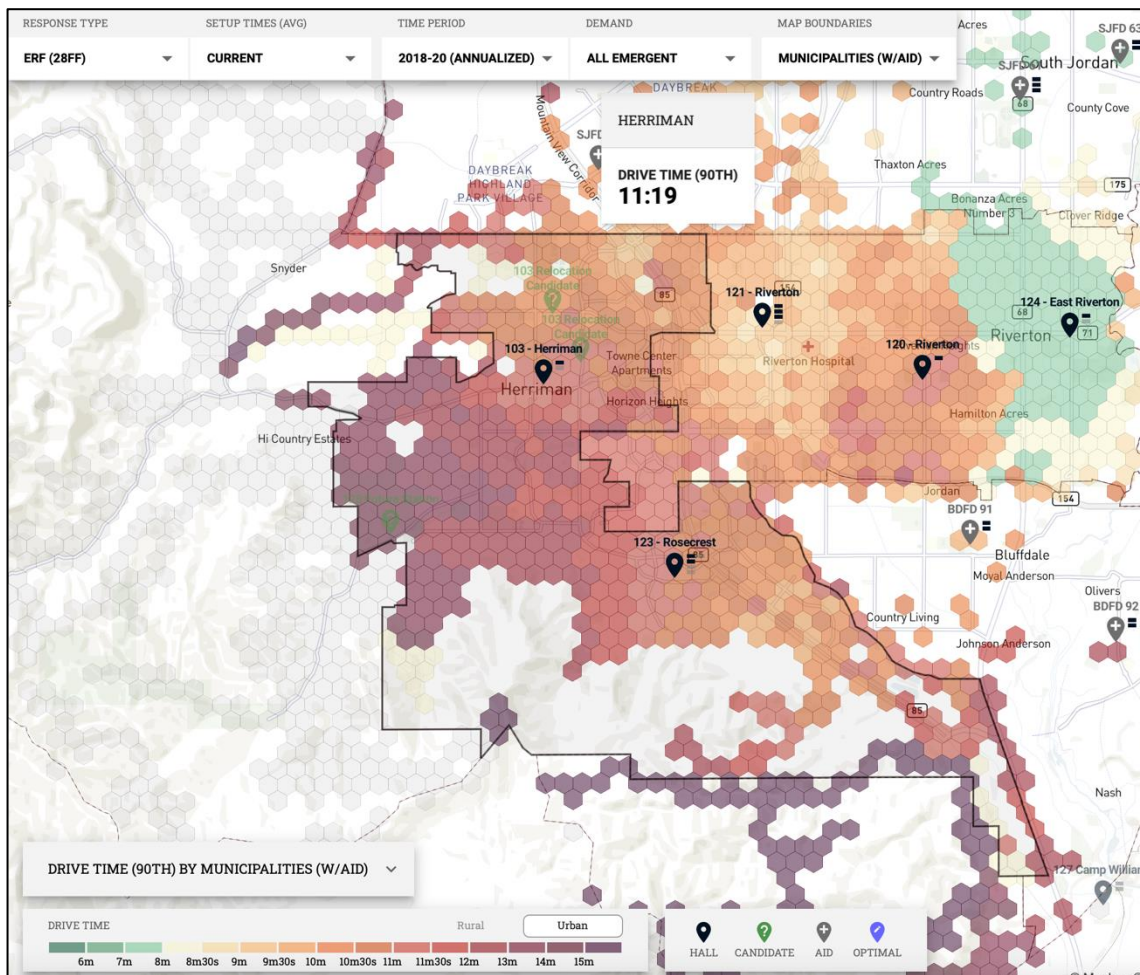
This map demonstrates the coverage of a multi-unit response to a residential fire based off all apparatus being within their station. The green to light yellow demonstrates the ability to have seventeen firefighters (a residential fire effective response force) on scene based off a residential urban fire force response. This map's drive times (or travel times) are based off the current NFPA 1710 standard of eight minutes (90<sup>th</sup> 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. UFA is currently in process of identifying benchmark and target standards to be adopted by the UFA Board of Directors. Based off predictive data, it is projected that the 90th percentile for 17 firefighters to arrive on scene would be 9:14.



Map 140 – Herriman City Response Times – Residential Fire Effective Response Force (17 ERF)

## Herriman City – 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 ten seconds (90<sup>th</sup> 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. UFA is currently in process of identifying benchmark and target standards to be adopted by the UFA Board of Directors. Based off predictive data, it is projected that the 90th percentile for 28 firefighters to arrive on scene would be 11:19.



## Herriman 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
High	High	Low	Low	Low	Low	Mod	Low	Low	High	Mod	High

Table 95 - Herriman City Hazard Matrix

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

### Infrastructure – Transportation

There are several high-level transportation routes within Herriman City or directly bordering Herriman City. The Mountain View Corridor (SR85) runs north and south on the East side of the city. Several arterials and state roads also run through Herriman, with 13400 South, 12600 South and Rosecrest Road. There are 0 linear miles of Interstate/US Highway, 13.9 linear miles of State Highways, and 215.6 total linear miles of roadway. Herriman City is in the high-risk category for road infrastructure.

### Infrastructure – Water

There are two water districts within Herriman City, including the Jordan Valley Water Conservancy District, and the South Valley Sewer District.

### Infrastructure – Dams

There are twenty identified dams within Herriman City. Herriman City is in the high-risk category for dam infrastructure.

## Natural Hazards

Within Herriman City, there are no concerns with avalanche areas, however there are several areas that Herriman units respond to that have avalanche as well as backcountry rescue potential within Unincorporated Salt Lake County. Holladay is in the low-risk category for avalanche. There are no identified fault lines that run through the city (see Map 8). Herriman City is in the low-risk category for both liquefaction and fault lines. Herriman City has 0 linear feet of fault lines. One of the biggest hazards that occur within an earthquake scenario is the number of unreinforced masonry (URM) buildings within Herriman City, with an estimated 37 URM's, which constitutes about 0.15% of the overall URM's within UFA's response areas. Herriman City is in the low-risk category for unreinforced masonry.

## Wildland Urban Interface

There is moderate risk of urban interface fires within Herriman City, although on the western border of Herriman, there is high risk of urban interface fires within Unincorporated Salt Lake County.

## Hazardous Materials / Tier II Sites

There are three identified HazMat/Tier II Sites within Herriman City, which is in the low-risk category.

## Hospitals

Herriman City has no standalone hospitals, which places it in the low-risk category.

## Schools

Herriman City has seven elementary schools, two middle schools, three high schools and one private/charter schools within city boundaries, which places it in the high-risk category.

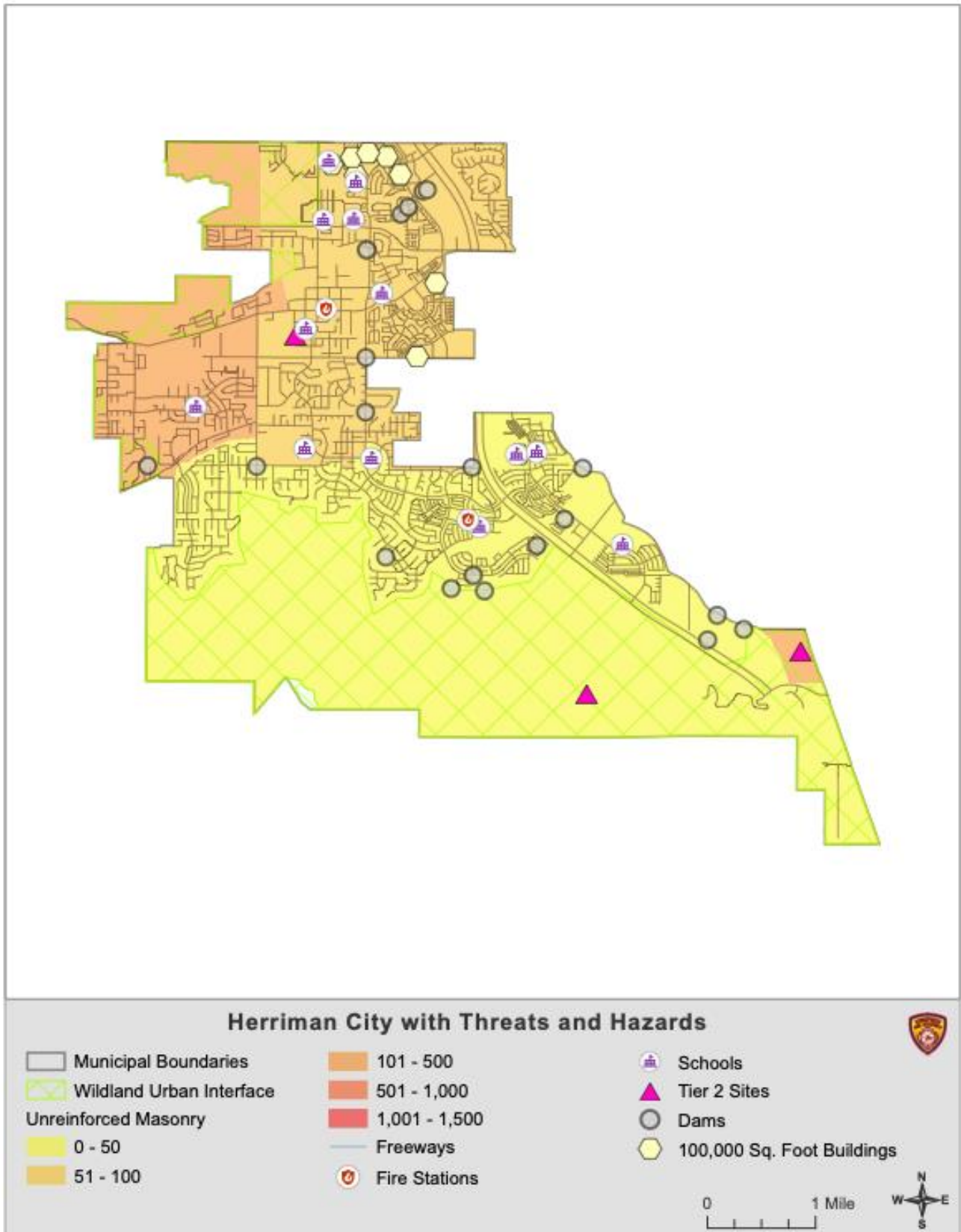
## Target Hazards – Structures

Some of the target hazard occupancies in Herriman City include:

- Herriman City Ice Ribbon – 5355 W Herriman Main Street
- Bullfrog Spa Factory - 7017 W 11800 S
- J.L Sorenson Rec Center - 5350 W Main Street
- Ace Hardware - 13342 S 5600 W



- Jordan Valley Water Treatment Facility - 15305 S 3200 W



Map 142 - Herriman City with Combined Hazards

## Life and Property Loss

From 2015-2020, there have been zero fatalities attributed to fire. There has been a total estimate of \$2,829,642.00 of property loss and a total estimate of \$604,522.00 of content loss due to fire.

## Unified Fire Shared Services

With a regional-response model, the Unified Fire Authority brings special services to bear when the situation calls for it, not relying on automatic or mutual aid which provides a quicker and more effective delivery of service to its residents.

### Battalion Chiefs

Unified Fire Authority staffs three operational battalion chiefs (BCs) daily, in addition to a 40-hour Operations Chief (OC). These BCs and OC respond to large, complex, or expanding incidents — providing incident command, safety, and operational direction. Each BC covers an area of UFA's service area and respond to calls for service in any jurisdiction. Battalion 11 is housed out of Station 101 in Millcreek, Battalion 12 is housed out of Station 121 in Riverton, and Battalion 13 is housed out of Station 118 in Taylorsville.

### Heavy Rescue Companies

Heavy Rescue specializes in structural collapse, confined space rescue, trench collapse rescue, vehicle extrication, machinery disentanglement, rope rescue (high angle, low angle, rigging) and rapid intervention (Firefighter Rescue). The UFA Heavy Rescue Program consists of two independent rescue companies strategically placed in UFA's jurisdiction. Station 117 in Taylorsville, and Station 121 in Riverton house our Heavy Rescue Teams.

### Hazardous Materials (HazMat) Companies

The Hazardous Materials Teams provide an efficient, effective, and professional Hazardous Material Mitigation response. HazMat Companies respond to hazardous material releases/spills for the purpose of mitigating the release/spill. They select and use proper specialized chemical personal protective equipment dependent on the nature of the incident. The HazMat Program consists of two independent HazMat

companies strategically placed in UFA's jurisdiction. Station 124 in Riverton, and Station 126 in Midvale house our HazMat Teams.

### Water Rescue Teams

UFA has swift water and ice rescue capabilities. These companies respond to victims recreating in our swift canyon rivers and our lakes and reservoirs. Station 116 in Cottonwood Heights, Station 117 in Taylorsville, Station 121 in Riverton, and Station 123 in Herriman house companies with water rescue capabilities.

### Wildland Division

UFA's Wildland Division provides highly trained and experienced wildland fire and all-risk response resources to local, state, and federal incidents. The Wildland Division oversees the training and certification of UFA personnel for response to wildland fires and all-hazard incidents. We also work with UFA Communities to educate residents on wildfire preparedness and provide mitigation services to reduce the risks of wildfire. UFA has a special capability where a Duty Officer is able to act as the Fire Warden within UFA's jurisdictions, allowing the ordering of resources much more quickly than having to rely on a Fire Warden that may or may not be readily accessible. Station 103 in Herriman currently houses the Duty Officer.

### Investigations Division

Arson and Explosive related incidents are considered two of the most dangerous criminal activities that threaten our citizens. The need exists to protect the citizens of our jurisdiction from loss of life and property by reducing the crime of arson, arson-related crimes, improvised explosive devices (IEDS) and the prevention of future violent crimes. The Investigations Division addresses this need by establishing a sound foundation of effective enforcement, focusing on the apprehension of the offender, while in partnership with other Local, state and federal law enforcement agencies. The team utilizes highly-trained Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) certified K-9's that assist with accelerant and explosives detection.

### Urban Search & Rescue

A FEMA Urban Search and Rescue Task Force is a team of individuals which serve as a resource for disaster response at local, state, and federal levels. It is comprised mainly of firefighters but includes structural engineers, medical professionals,

canine/handler teams and emergency managers with highly specialized training in urban search and rescue environments.

Utah Task Force 1 (UT-TF1) is one of 28 Type I, Federal Urban Search & Rescue (US&R) Task Forces in the United States. This program brings a highly trained, multi-hazard Task Force that is especially designed to respond to a variety of emergencies/disasters including earthquakes, hurricanes, tornadoes, floods, terrorist acts and hazardous material releases. Fire department personnel that are task force members receive specialized training and skills that directly benefit Unified Fire Authority.

### [Salt Lake County Emergency Management](#)

The Salt Lake County Division of Emergency Management serves our citizens by directing and coordinating resources for disasters and emergencies through preparation, planning, mitigation, response, and recovery. The Salt Lake County Emergency Coordination Center is activated and manned during any event—from small-scale to large-scale occurrences—to disasters both natural and man-made that can or have exceeded the resources of any particular jurisdiction. Currently, the Salt Lake County ECC assists and obtains resources for the 22 jurisdictions located within the Salt Lake Valley. Salt Lake County EM assists these jurisdictions through the activation of 15 Emergency Support Functions (ESFs) filled by employees from a multitude of backgrounds. The ESF employees have authority throughout Salt Lake County to fill and order additional support for the operations occurring in the field until the impacted jurisdiction can return to their normal operations and functions. The Emergency Management Division is committed to keeping the public safe through community outreach, training, dissemination of important public information, training of staff and the creation of a more resilient community through mitigation, preparation, response, and recovery. The ECC has been activated for many events such as Child Abduction Response Team (CART) Deployments, wildland fires such as the Rosecrest and Machine Gun fires, flooding, severe weather events, earthquakes, civil unrest, the COVID-19 pandemic, Line of Duty Deaths (LODD), and many other events.

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## Unified Fire Authority

3380 South 900 West  
Salt Lake City, UT 84119

# Holladay City

## Community Risk Assessment



## Holladay City Planning Zone

UFA has one station within the Holladay City Planning Zone covering a total of 8.5 square miles with a population of 31,965 and responded to 2,056 calls for service in 2020.

Planning Zone	Population	Population Percentage of UFA	Square Miles	Population Density per Sq Mile	Classification
<b>Holladay City</b>	31,965	7.09%	8.5	3,761	Urban

Holladay City has increased its population from 26,472 in 2010 to 31,965 in 2020, showing an increase of 17.18% over a ten-year timeframe. Providing an exponential growth pattern and if all things remain equal, chart 20 demonstrates that Holladay could grow to 43,457 by the year 2040. This growth from 2010-2011 may be due in part to an annexation of a pocket of Unincorporated Salt Lake County and the population associated with that annexation.

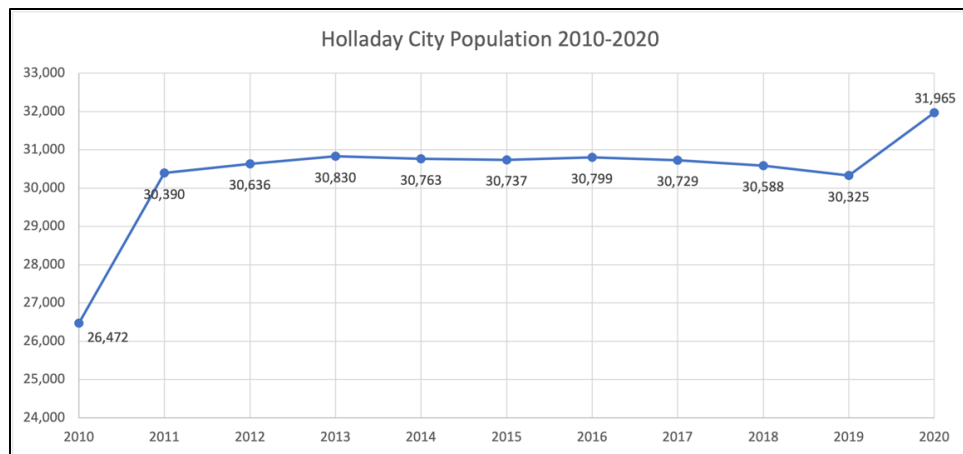


Chart 49 - Holladay City Population 2010-2020

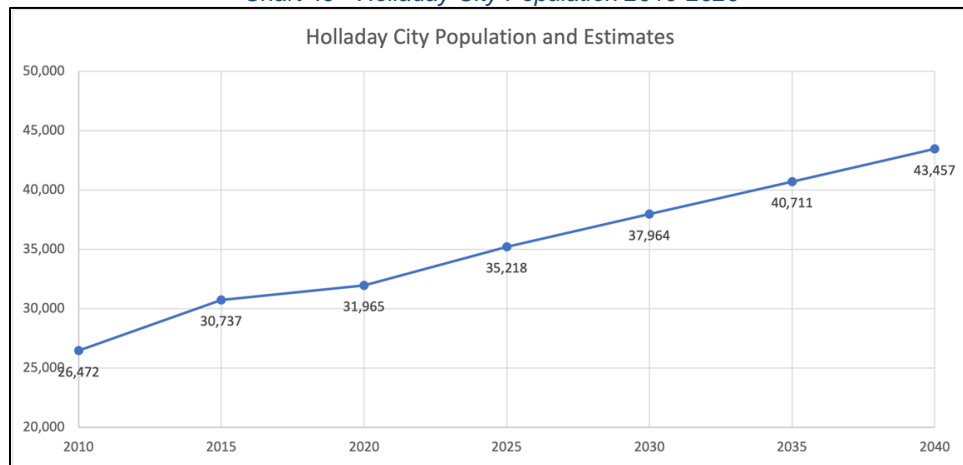


Chart 50 - Holladay City Population and Estimates 2010-2040



## Holladay City Station Information

### Station 104 information:

- Owner – Holladay City
- Opened – 2013
- Address – 2210 East Murray-Holladay Road
- Staffing and Apparatus –
  - Type 1, ME 104 (4 persons)
  - PL MA 104 (2 persons – 0900-2100)



*Image 14 – Holladay City Station 104*

## Surrounding UFA and Automatic/Mutual Aid Response Stations

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

- UFA Station 101 (Millcreek City), with a four-person medic engine and a two-person medic ambulance
- UFA Station 106 (Millcreek City), with a four-person medic ladder and a two-person medic ambulance
- UFA Station 112 (Millcreek City), with a four-person medic engine
- UFA Station 110 (City of Cottonwood Heights), with a four-person medic ladder and a two-person medic ambulance
- UFA Station 116 (City of Cottonwood Heights), with a three-person medic engine
- UFA Station 126 (Midvale City), with a four-person medic engine and a two-person medic ambulance
- Murray City Station 81, with a three-person medic engine and a two-person medic ambulance
- Murray City Station 82, with a three-person medic engine and a two-person medic ambulance

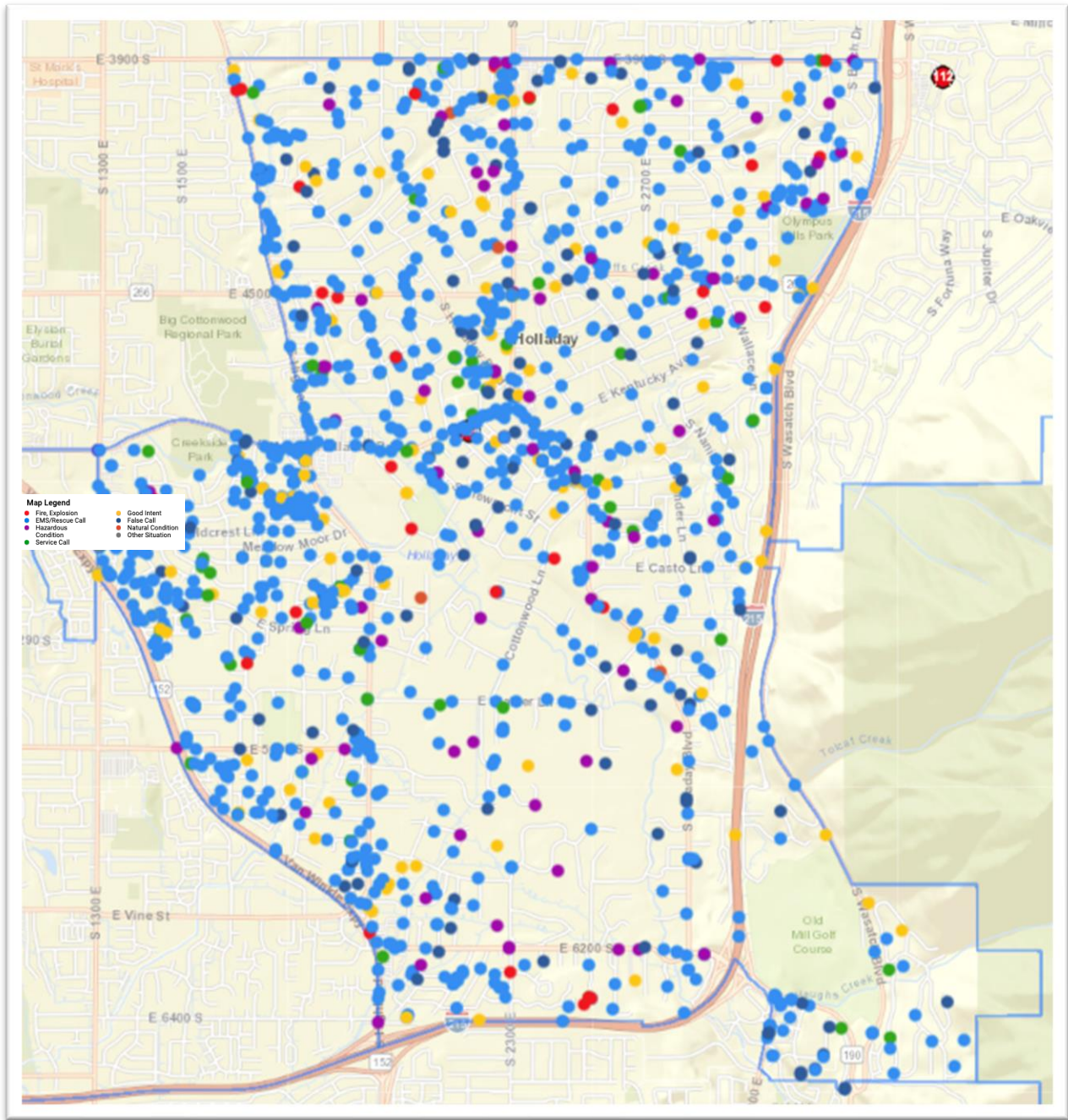
## Holladay City – Incidents by Dispatch Type

The following data is what the NFIRS type was when crews arrived on scene. This may be different than what was originally dispatched, including a reclassification of a call type from one to another. Cancelled calls occur if the company is cancelled en route to a call and never arrives on scene, which then changes the dispatch type to an NFIRS 611 call type.

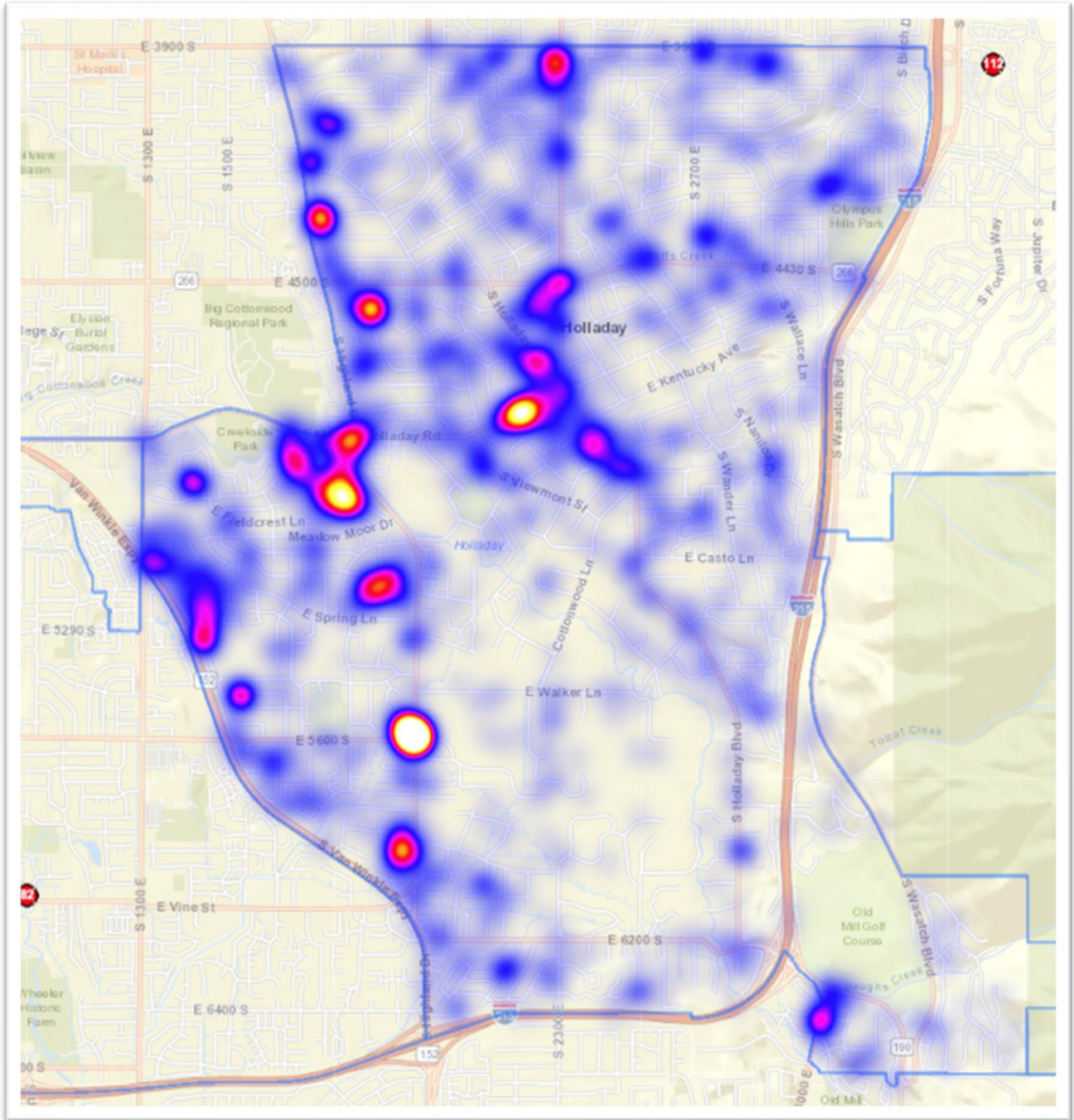
	CY 2020	CY 2019	CY 2018
<b>Fire Suppression</b>	32	46	44
<b>EMS</b>	1,185	1,138	1,262
<b>Hazardous Materials</b>	76	67	45
<b>Service Calls</b>	73	93	94
<b>Good Intent</b>	336	274	227
<b>False Calls</b>	134	154	132
<b>Other (Misc., Flood, Overpressure)</b>	6	6	5
<b>Total</b>	1,845	1,778	1,809
<b>Cancelled</b>	211	164	178
<b>Overall Total</b>	2,056	1,942	1,987

*Table 96 – Holladay City Call Type*

# Holladay City – 2020 Incidents and Heat Map



Map 143 - Holladay City Incident Calls by Call Type



Map 144 - Holladay City Calls by Call Type

## NFPA 1710

The National Fire Protection Association is an international nonprofit organization that is devoted to eliminating death, injury, property, and economic loss due to fire, electrical and related hazards. The NFPA makes recommendations on over 300 codes and standards. NFPA 1710 recommendations are based off 90<sup>th</sup> percentile times.

### – In Other Words...

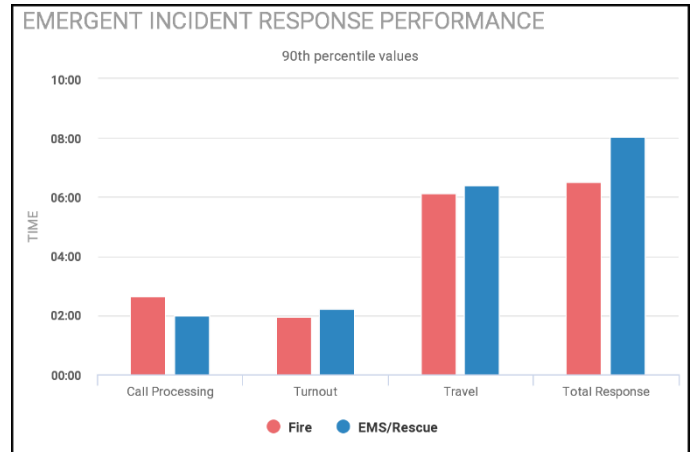
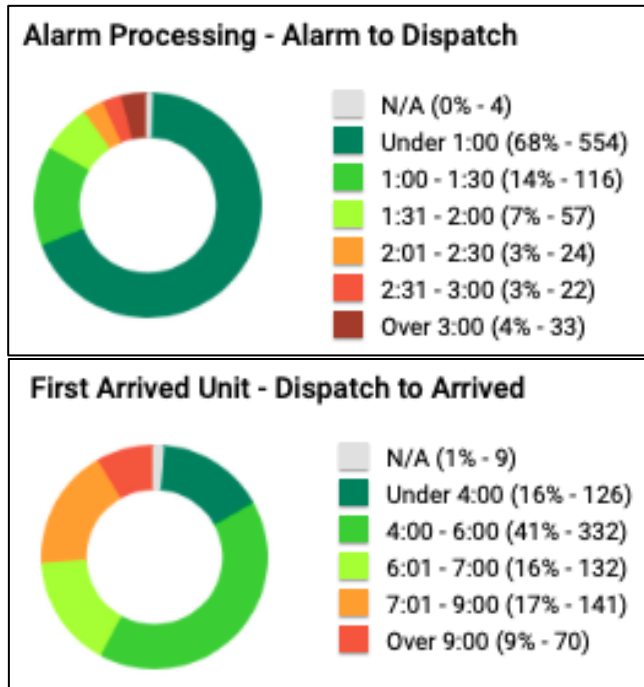
If a value is in the 90<sup>th</sup> percentile, it means the value is better than 90% of all other values in the dataset. In other words, it is within the top 10% of the values.

NFPA 1710 encompasses suggested standards for full-time fire departments and recommends the following times (all of which are at the 90<sup>th</sup> percentile): alarm processing – 64 seconds; turnout time for EMS responses – 60 seconds; turnout time for fire responses – 80 seconds; first arriver apparatus – 240 seconds (4 minutes); initial full-alarm assignment for low and medium hazard responses – 480 seconds (8 minutes); or initial full-alarm assignment for high hazard/high-rise responses – 610 seconds (10 minutes 10 seconds). The total response times are the cumulative totals of call processing time, turnout time, and travel time. NFPA 1710 recommends a total response time of 6:24 for the first arriving apparatus for fire and 6:00 for the first arriving apparatus for EMS.

### – Of Note...

NFPA 1710 response times have not been adopted by the UFA Board. One of the important elements of the community risk assessment and standards of cover is to identify current 90<sup>th</sup> percentile times (current baselines) within UFA and to identify realistic benchmarks for the UFA Board to consider for adoption.

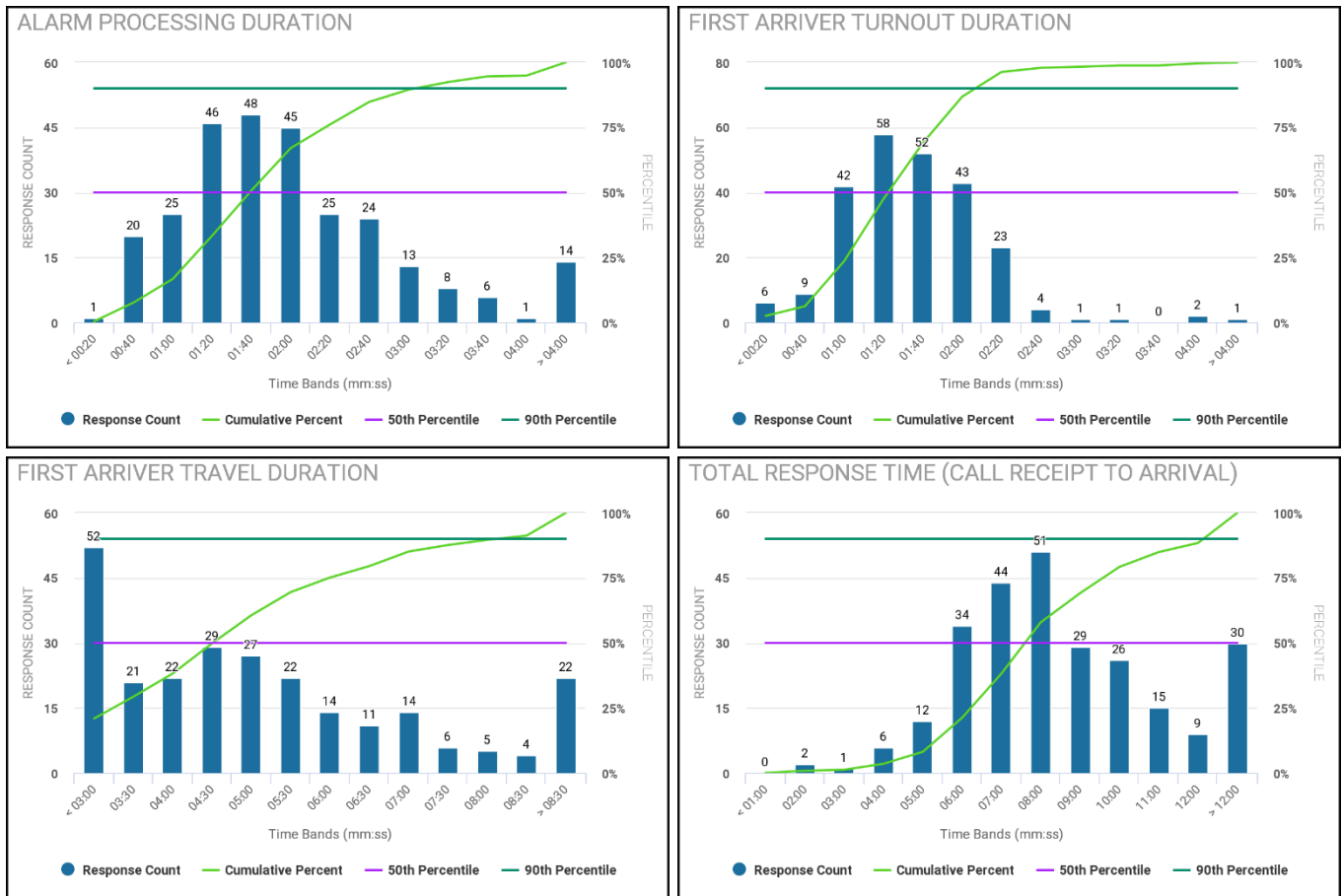
## Holladay City – 2020 Dispatch and Response Times



Urban	Call Processing: Fire	Turnout Time: Fire	Travel Time: Fire	Total Response: Fire	Call Processing: EMS	Turnout Time: EMS	Travel Time: EMS	Total Response: EMS
<b>Holladay</b>	2:35	2:17	7:47	11:04	1:49	2:16	7:05	9:48
<b>UFA Urban 2018-2020</b>	2:16	2:39	7:36	10:34	1:47	2:32	6:29	9:18
<b>UFA Rural 2018-2020</b>	2:32	3:05	15:08	19:09	1:56	2:50	14:45	17:45
<b>NFPA 1710</b>	1:04	1:20	4:00	6:24	1:00	1:00	4:00	6:00

Table 97 – Holladay City 2020 Emergent Response Times, 90<sup>th</sup> percentile values

## Holladay City – 2020 Turnout and Travel Time



The charts above illustrate the alarm processing, turnout and travel times for all units responding to service calls within Holladay City (90<sup>th</sup> percentile). The alarm processing for fire was 2:35 and 1:49 for EMS; turnout time was 2:17 for fire responses and 2:16 for EMS responses; travel time was 7:47 for fire responses and 7:05 for EMS. The 90<sup>th</sup> percentile total response time was 11:04 for fire and 9:48 for EMS. For the charts above, they show both fire and EMS response times together.

### 📌 – Of Note...

One item to note is that if you were to add the processing time, the turnout time, and the travel time, it will not necessarily (and often doesn't), sum the total response time. This is due to some of the limitations within the datasets and gaps within timestamps. Where there are missing timestamps, those particular key performance indicators (KPI) are excluded as they cannot accurately be calculated out.

## Holladay City – 2020 Incidents by Time of Day

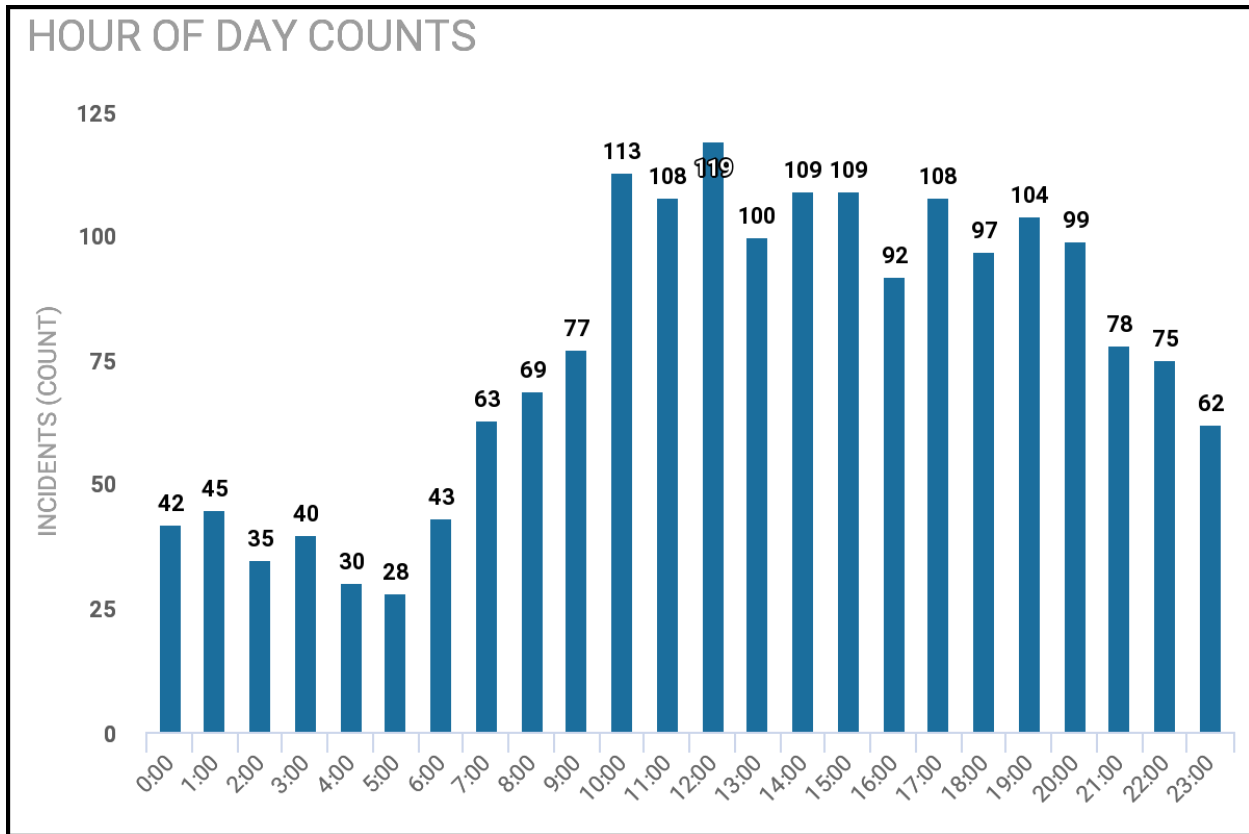


Chart 51 - Holladay City 2020 Incidents by Time of Day

The above table demonstrates the incidents by time of day and the time of greatest demand within Holladay City for all service calls. This chart illustrates that the greatest demand for service delivery begins at 10:00 AM and starts to decrease at 09:00 PM.



## Holladay City – 2020 Incidents by Day of Week

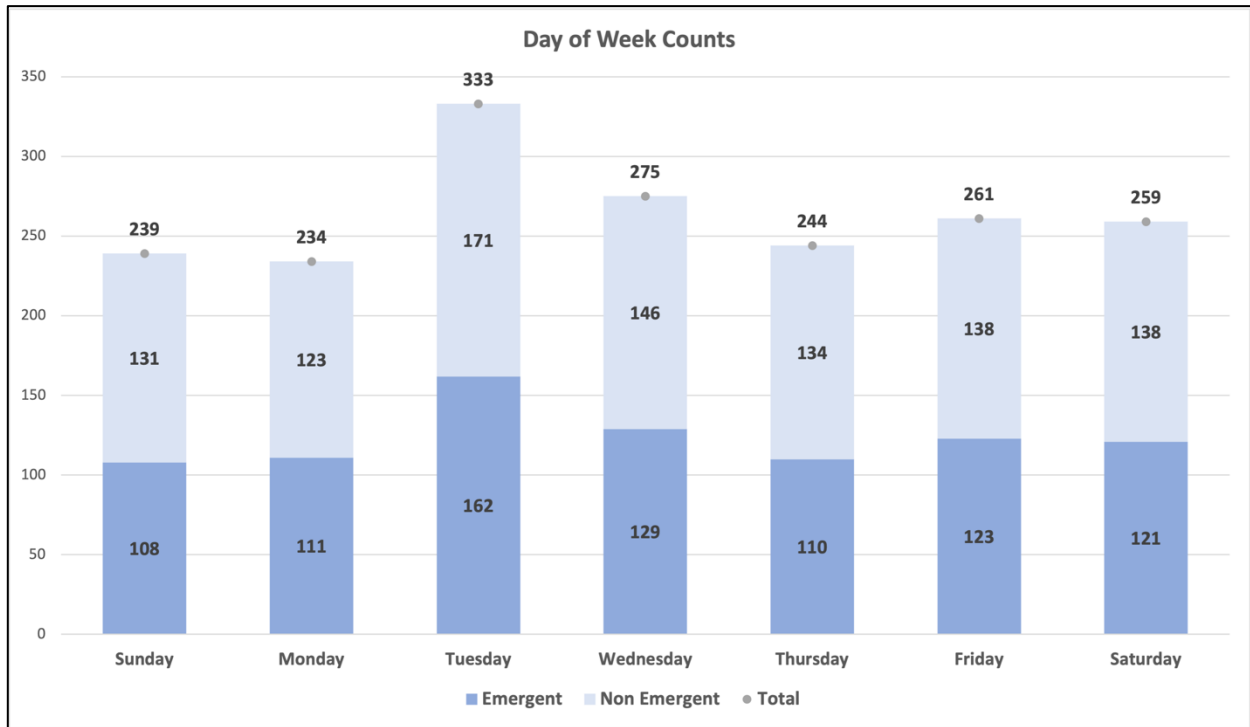


Chart 52 - Holladay City Incidents by Day of Week

This chart demonstrates the call volume based on the day of the week, with an increase in all calls as well as the peak volume for all calls in Holladay City occurring on Tuesday.

## Holladay City – EMS Calls

EMS calls are filtered by final disposition codes and this data is taken from VECC and determined by the patient acuity at the time of call termination. Often times the EMS calls identified from final disposition are different than the number of EMS calls that were initially dispatched due to one being the initial call type, and one being what call type the call was closed as by responding fire crews.

	CY 2020	CY 2019	CY 2018
<b>ALS Transports</b>	543	520	507
<b>BLS Transports</b>	625	607	417
<b>Scene Release</b>	95	93	154
<b>Public Assistance</b>	22	13	22
<b>EMS Total Calls</b>	1,263	1,220	1,078

Note: There is possibly a difference if you were to add all calls due to data reporting mechanisms. Public assistance calls will sometimes get duplicated with a scene release, depending on dispatch code, but those calls do not carry across to the total calls. Also, cancelled calls go into a different final disposition so the numbers in the 'Incidents by Dispatch Type' are reflective of this difference.

Table 98 – Holladay City EMS Calls

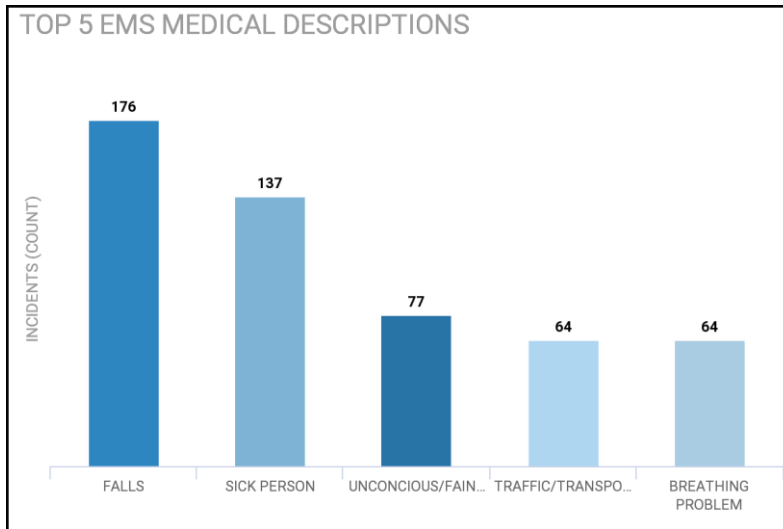


Chart 53 - Top 5 EMS Medical Calls - 2020

Holladay City – 2020 Fire Incidents by Dispatch Type

NFIRS Description	Incident Count	% of Incidents
<b>Structure Fire</b>	15	46.9%
<b>Natural Vegetation Fire</b>	6	18.8%
<b>Outside Rubbish Fire</b>	2	6.3%
<b>Vehicle Fire</b>	1	3.1%

NFIRS Description	Incident Count	% of Incidents
<b>Special Outside Fire</b>	4	12.5%
<b>Fire, Other</b>	3	9.4%
<b>Mobile Property Fire</b>	1	3.1%
<b>Total</b>	32	100%

Table 99 – Holladay City 2020 Incidents by Dispatch Type

## Holladay City – Building Occupancy Classification and Risk Categories

Occupancy Classification	Low	Moderate	High	Maximum	Total
<b>Assembly</b>	14	1	18	0	33
<b>Commercial/Industrial</b>	6	9	19	3	37
<b>Educational</b>	13	0	4	1	18
<b>Government</b>	2	0	1	0	3
<b>Healthcare</b>	1	0	1	0	2
<b>Hazardous</b>	Unknown	Unknown	Unknown	Unknown	47*
<b>Storage</b>	0	0	0	0	0
<b>Residential</b>	1,188	4,675	1,957	111	7,931
<b>Residential – Multi Unit</b>	126	182	61	12	381
<b>High Rise</b>	N/A	N/A	2	3	5
<b>Total</b>	1,350	4,867	2,063	130	8,457

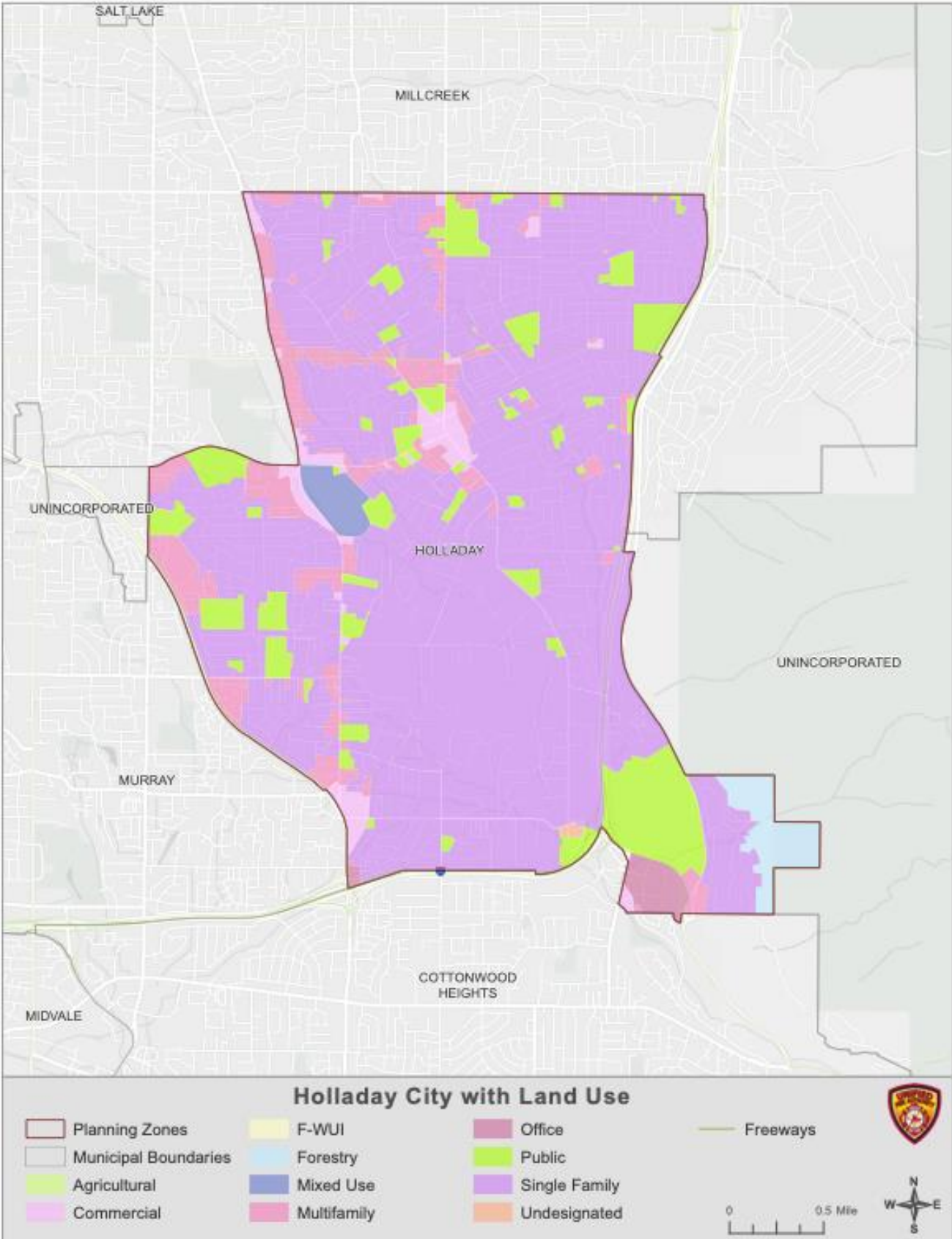
\*There is currently a gap within the identification of building size regarding hazardous materials sites. This is a gap that is being closed over the next several years as we collect the data and information.

*Table 100 – Holladay City Building Occupancy and Risk Categories*

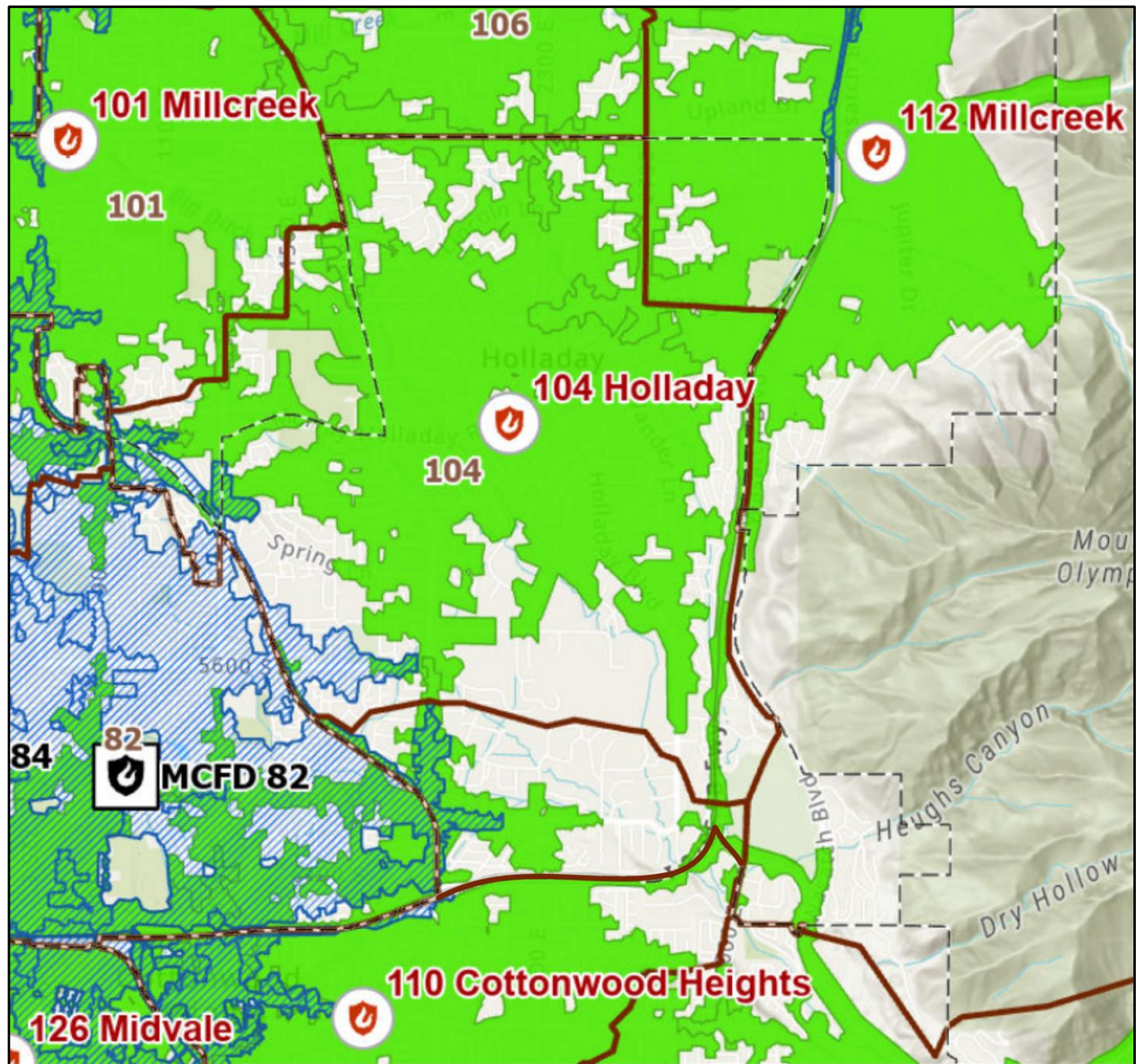
### Building Size / Considerations

For purposes of risk classification, UFA has outlined the following risk classifications for building size, regardless of occupancy type (except residential). Low risk = 1-4,999 square feet. Moderate risk = 5,000-9,999 square feet. High risk = 10,000-99,999 square feet. Maximum risk = >100,000 square feet.

For residential occupancies, the following classifications apply. Low risk = 1-1,999 square feet. Moderate risk = 2,000-3,999 square feet. High risk = 4,000-9,999 square feet. Maximum risk = ≥10,000 square feet.

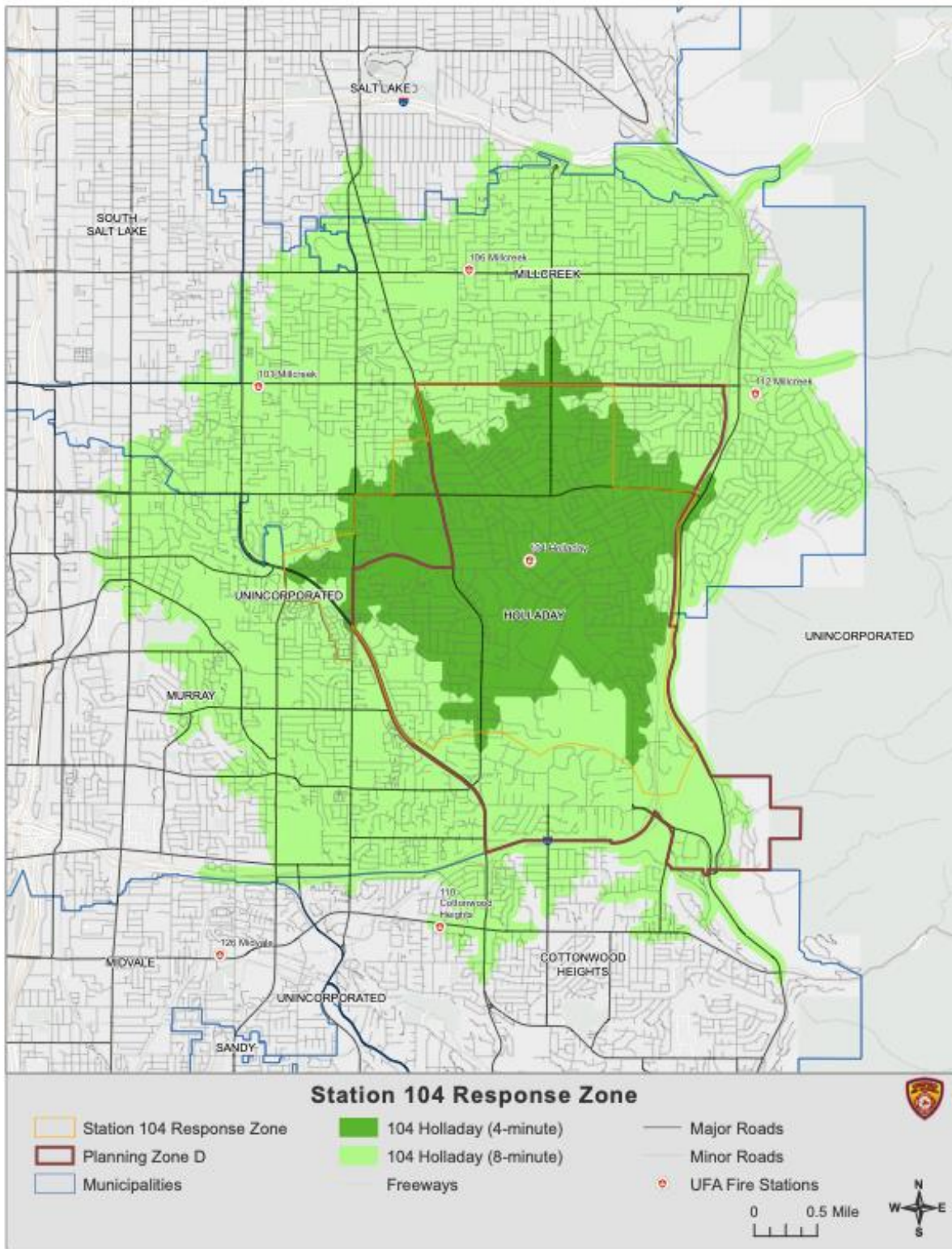


Map 145 - Holladay City with Land Use



	Municipalities	<b>Four Minute Response Times - UFA and Non-UFA Stations</b>	 September 2022	
	Fire Zones			
	UFA Fire Stations			
	Non-UFA Fire Stations			
	4 Minute Response Times Non-UFA Fire Stations			
	4 Minute Response Times UFA Fire Stations			

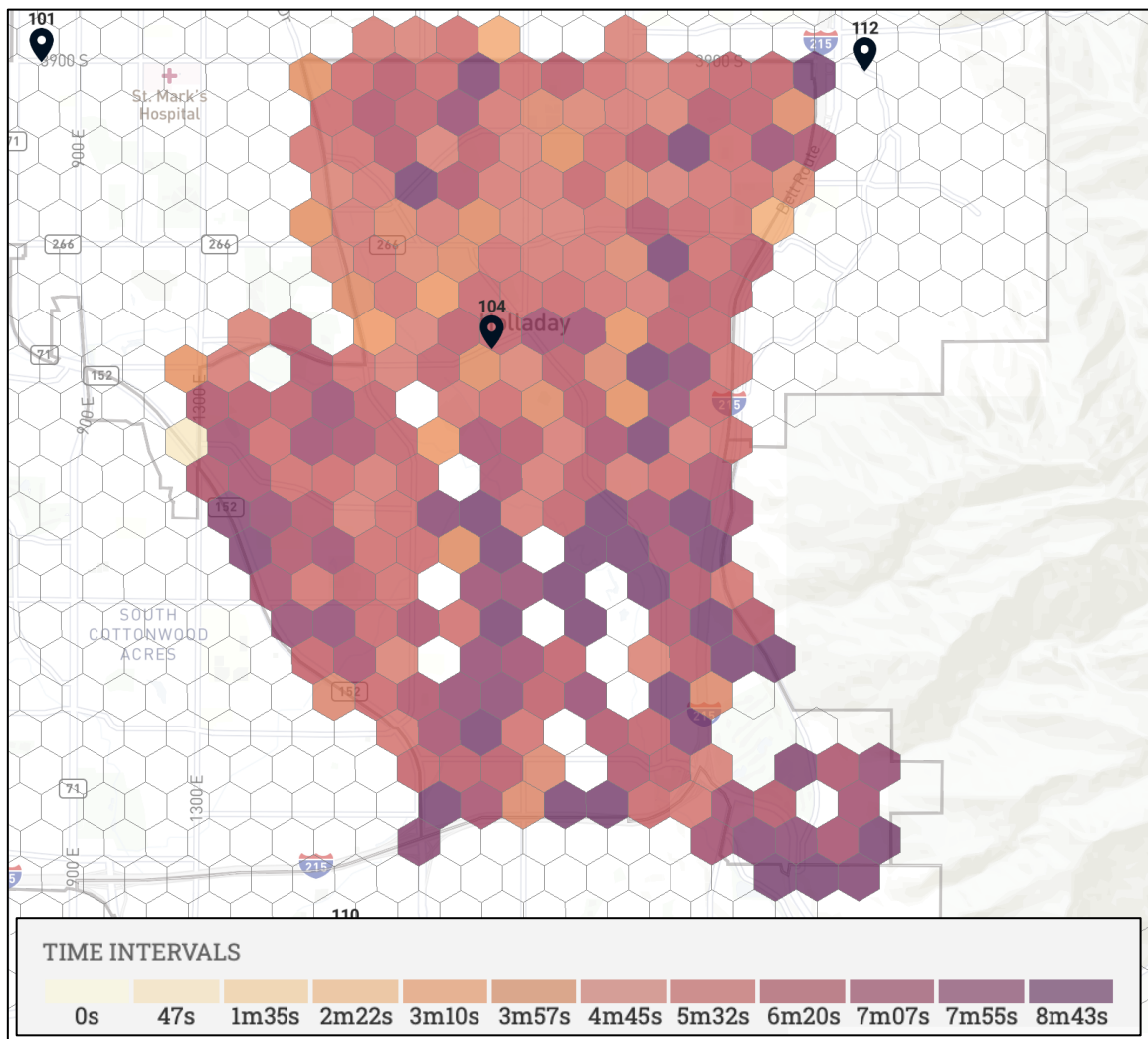
Map 146 - 4-Minute Travel Time, UFA and Aid



Map 147 - Station 104 4- and 8-Minute Travel Times

## Holladay City – First Arriver Travel Times

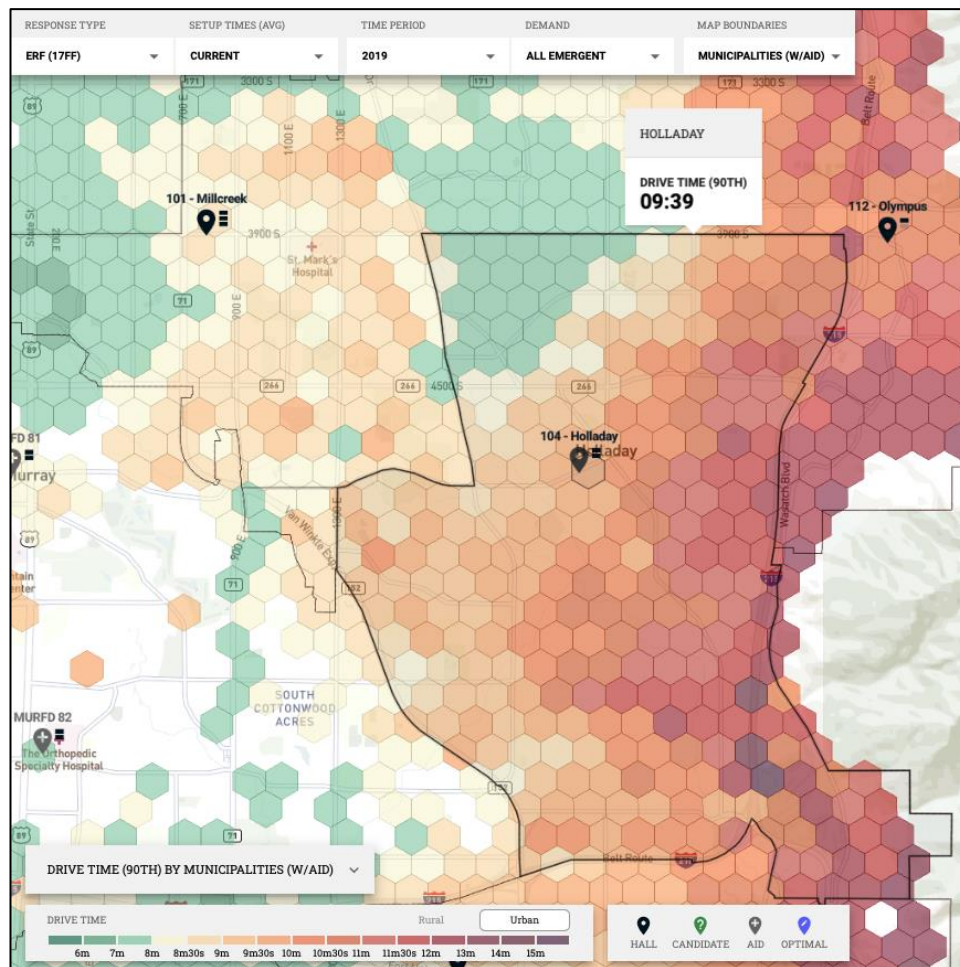
The following maps demonstrate the 90<sup>th</sup> percentile of travel times based off the last three years of historical data (2018-2020). The darker the color is, the more delayed the response, with the green and light colors demonstrating below or near target times. The darker colors on the bar within 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 (90<sup>th</sup> percentile) from notification of the alarm to the arrival of the first arriving apparatus — not an adopted standard by UFA. UFA is currently in process of identifying benchmark and target standards to be adopted by the UFA Board of Directors. Currently, within Holladay City, the 90<sup>th</sup> percentile drive time is 7:47 for fire and 7:05 for EMS.



Map 148 – Holladay City Response Times – All Aid

## Holladay City – 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 (90<sup>th</sup> 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. UFA is currently in process of identifying benchmark and target standards to be adopted by the UFA Board of Directors. Based off predictive data, it is projected that the 90th percentile for 17 firefighters to arrive on scene would be 9:39.

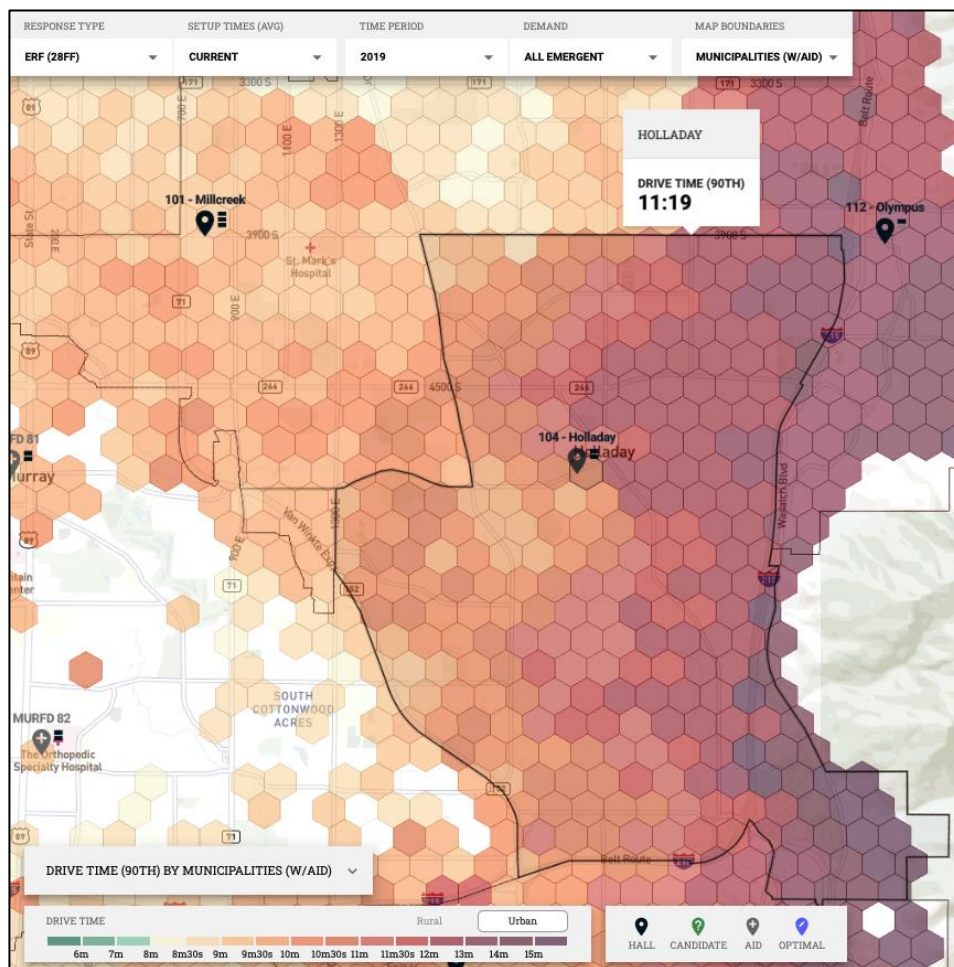


Map 149 – Holladay City Response Times – Residential Fire Effective Response Force (17 ERF)



## Holladay City – 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 (90<sup>th</sup> 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. UFA is currently in process of identifying benchmark and target standards to be adopted by the UFA Board of Directors. Based off predictive data, it is projected that the 90th percentile for 28 firefighters to arrive on scene would be 11:19.



Map 150 – Holladay City Response Times – Commercial Fire Effective Response Force (28 FF)

## Holladay 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	Low	Mod	Mod	Low	High	Low	Low	Low	High	Mod	Mod

Table 101 - Holladay City Hazard Matrix

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

### Infrastructure – Transportation

There are several high-level transportation routes within Holladay City or directly bordering Holladay City. I-215 runs on the south and east borders of the city. Several arterials and state roads also run through Holladay, with 4500 South, 1300 East, Murray-Holladay Road, Holladay Boulevard, and Highland Drive. There are 9.86 linear miles of Interstate/US Highway, 7.16 linear miles of State Highways, and 147.2 total linear miles of roadway. UTA also runs bus routes through the city, with the main bus routes running on 4500 South and down Holladay Boulevard. Holladay City is in the moderate-risk category for road infrastructure.

### Infrastructure – Water

There are several water districts within Holladay City, including the Holladay Water District, the Jordan Valley Water Conservancy District, and Salt Lake City Public Utilities.

### Infrastructure – Dams

There are two identified dams within Holladay City. Holladay City is in the low-risk category for dam infrastructure.

### Natural Hazards

Within Holladay City, there are no concerns with avalanche areas, however there are several areas that Holladay units respond to that have avalanche as well as backcountry rescue potential within Unincorporated Salt Lake County. Holladay is in the low-risk category for avalanche. There are several fault lines that run north-south through the city (see Map 8) and are components of the Wasatch Fault. Holladay City is in the moderate-risk category for both liquefaction and fault lines. Holladay City has roughly 51,600 linear feet of fault lines. One of the biggest hazards that occur within an earthquake scenario is the number of unreinforced masonry (URM) buildings within Holladay City, with an estimated 4,590 URM's, which constitutes about 18.7% of the overall URM's within UFA's response areas. Holladay City is in the high-risk category for unreinforced masonry.

### Wildland Urban Interface

There is little risk of urban interface fires within Holladay City, although on the eastern border of Holladay, there is high risk of urban interface fires within Unincorporated Salt Lake County. Holladay City is in the low-risk category for Wildland Urban Interface.

### Hazardous Materials / Tier II Sites

There are two identified HazMat/Tier II Sites within Holladay City, which is in the low-risk category.

### Hospitals

Holladay City has no standalone hospitals, which places it in the low-risk category.

### Schools

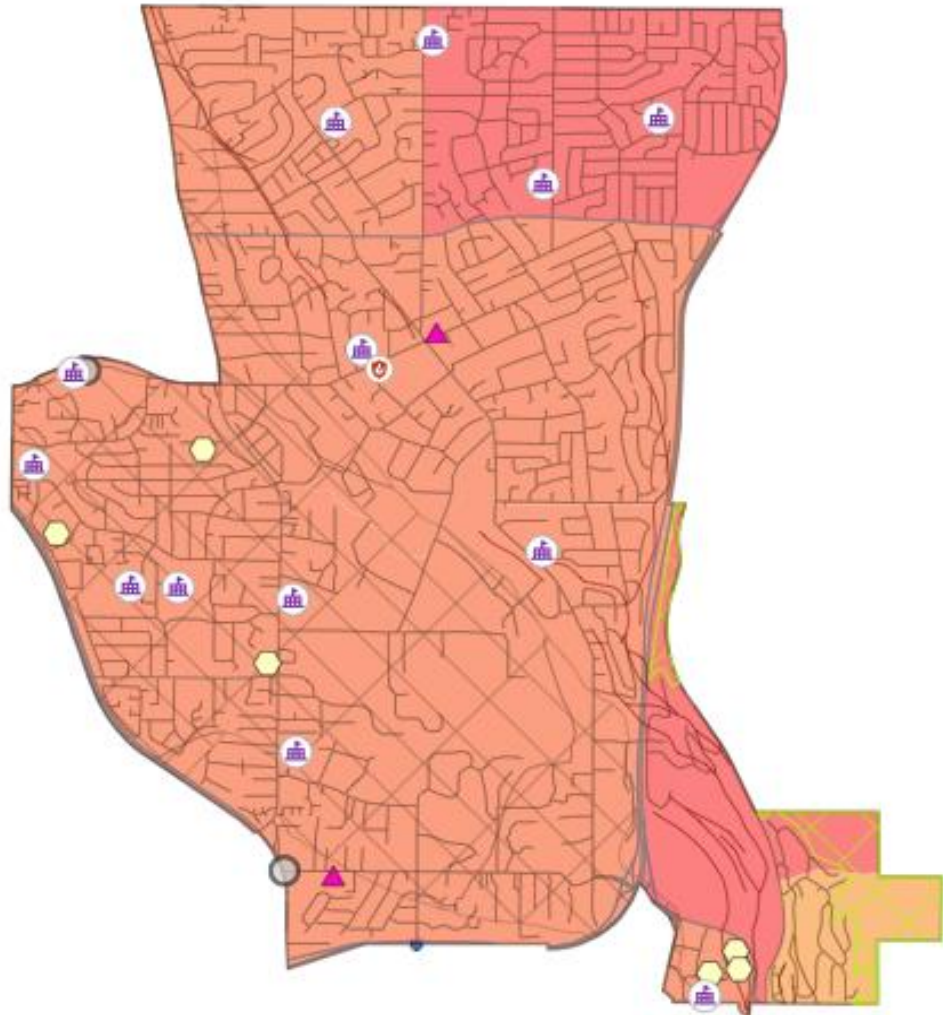
Holladay City has five elementary schools, two middle schools, one high school, and three private/charter schools within city boundaries, which places it in the high-risk category.

### Target Hazards – Structures

Some of the target hazard occupancies in Holladay City include:

- Spring Garden Senior Living at- 2728 E 3900 S

- The Ridge Cottonwood Care – 5600 S Highland Dr.
- Holladay Health Care Center – 4782 S Holladay Blvd.
- Highland Health Care Center – 4782 S Highland Dr.
- Megaplex Movie Theatre/Mall – 1945 E Murray Holladay Rd.



### Holladay with Threats and Hazards

- |                          |                      |               |                            |
|--------------------------|----------------------|---------------|----------------------------|
| Municipal Boundaries     | Unreinforced Masonry | Freeways      | Hospitals                  |
| Wildland Urban Interface | 101 - 500            | Faults        | Tier 2 Sites               |
| Liquefaction             | 501 - 1,000          | Fire Stations | Dams                       |
|                          | 1,001 - 1,500        | Schools       | 100,000 Sq. Foot Buildings |



Map 151 - Holladay City with Combined Hazards

## Life and Property Loss

From 2015-2020, there have been zero fatalities attributed to fire. There has been a total estimate of \$7,992,800.00 of property loss and a total estimate of \$1,520,757.00 of content loss due to fire.

## Unified Fire Shared Services

With a regional-response model, the Unified Fire Authority brings special services to bear when the situation calls for it, not relying on automatic or mutual aid which provides a quicker and more effective delivery of service to its residents.

## Battalion Chiefs

Unified Fire Authority staffs three operational battalion chiefs (BCs) daily, in addition to a 40-hour Operations Chief (OC). These BCs and OC respond to large, complex, or expanding incidents — providing incident command, safety, and operational direction. Each BC covers an area of UFA's service area and respond to calls for service in any jurisdiction. Battalion 11 is housed out of Station 101 in Millcreek, Battalion 12 is housed out of Station 121 in Riverton, and Battalion 13 is housed out of Station 118 in Taylorsville.

## Heavy Rescue Companies

Heavy Rescue specializes in structural collapse, confined space rescue, trench collapse rescue, vehicle extrication, machinery disentanglement, rope rescue (high angle, low angle, rigging) and rapid intervention (Firefighter Rescue). The UFA Heavy Rescue Program consists of two independent rescue companies strategically placed in UFA's jurisdiction. Station 117 in Taylorsville, and Station 121 in Riverton house our Heavy Rescue Teams.

## Hazardous Materials (HazMat) Companies

The Hazardous Materials Teams provide an efficient, effective, and professional Hazardous Material Mitigation response. HazMat Companies respond to hazardous material releases/spills for the purpose of mitigating the release/spill. They select and use proper specialized chemical personal protective equipment dependent on the nature of the incident. The HazMat Program consists of two independent HazMat

companies strategically placed in UFA's jurisdiction. Station 124 in Riverton, and Station 126 in Midvale house our HazMat Teams.

### Water Rescue Teams

UFA has a swift water team, ice rescue team, as well as a dive rescue team. These companies respond to victims recreating in our swift canyon rivers and our lakes and reservoirs. Station 116 in Cottonwood Heights, Station 117 in Taylorsville, Station 121 in Riverton, and Station 123 in Herriman house Water Rescue Companies.

### Wildland Division

UFA's Wildland Division provides highly trained and experienced wildland fire and all-risk response resources to local, state, and federal incidents. The Wildland Division oversees the training and certification of UFA personnel for response to wildland fires and all-hazard incidents. We also work with UFA Communities to educate residents on wildfire preparedness and provide mitigation services to reduce the risks of wildfire. UFA has a special capability where a Duty Officer is able to act as the Fire Warden within UFA's jurisdictions, allowing the ordering of resources much more quickly than having to rely on a Fire Warden that may or may not be readily accessible. Station 103 in Herriman currently houses the Duty Officer.

### Investigations Division

Arson and Explosive related incidents are considered two of the most dangerous criminal activities that threaten our citizens. The need exists to protect the citizens of our jurisdiction from loss of life and property by reducing the crime of arson, arson-related crimes, improvised explosive devices (IEDS) and the prevention of future violent crimes. The Investigations Division addresses this need by establishing a sound foundation of effective enforcement, focusing on the apprehension of the offender, while in partnership with other Local, state and federal law enforcement agencies. The team utilizes highly-trained Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) certified K-9's that assist with accelerant and explosives detection.

### Urban Search & Rescue

A FEMA Urban Search and Rescue Task Force is a team of individuals which serve as a resource for disaster response at local, state, and federal levels. It is comprised mainly of firefighters but includes structural engineers, medical professionals,

canine/handler teams and emergency managers with highly specialized training in urban search and rescue environments.

Utah Task Force 1 (UT-TF1) is one of 28 Type I, Federal Urban Search & Rescue (US&R) Task Forces in the United States. This program brings a highly trained, multi-hazard Task Force that is especially designed to respond to a variety of emergencies/disasters including earthquakes, hurricanes, tornadoes, floods, terrorist acts and hazardous material releases. Fire department personnel that are task force members receive specialized training and skills that directly benefit Unified Fire Authority.

### [Salt Lake County Emergency Management](#)

The Salt Lake County Division of Emergency Management serves our citizens by directing and coordinating resources for disasters and emergencies through preparation, planning, mitigation, response, and recovery. The Salt Lake County Emergency Coordination Center is activated and manned during any event—from small-scale to large-scale occurrences—to disasters both natural and man-made that can or have exceeded the resources of any particular jurisdiction. Currently, the Salt Lake County ECC assists and obtains resources for the 22 jurisdictions located within the Salt Lake Valley. Salt Lake County EM assists these jurisdictions through the activation of 15 Emergency Support Functions (ESFs) filled by employees from a multitude of backgrounds. The ESF employees have authority throughout Salt Lake County to fill and order additional support for the operations occurring in the field until the impacted jurisdiction can return to their normal operations and functions. The Emergency Management Division is committed to keeping the public safe through community outreach, training, dissemination of important public information, training of staff and the creation of a more resilient community through mitigation, preparation, response, and recovery. The ECC has been activated for many events such as Child Abduction Response Team (CART) Deployments, wildland fires such as the Rosecrest and Machine Gun fires, flooding, severe weather events, earthquakes, civil unrest, the COVID-19 pandemic, Line of Duty Deaths (LODD), and many other events.



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## Unified Fire Authority

3380 South 900 West  
Salt Lake City, UT 84119

# Kearns Metro Township

## Community Risk Assessment



## Kearns Metro Township Planning Zone

UFA has one station within the Kearns Metro Township Planning Zone covering a total of 4.63 square miles with a population of 36,723 and responded to 2,476 calls for service in 2020.

Planning Zone	Population	Population Percentage of UFA	Square Miles	Population Density per Sq Mile	Classification
<b>Kearns</b>	36,723	8.14%	4.63	7,932	Urban

Kearns has increased its population from 35,773 in 2010 to 36,723 in 2020, showing an increase of 2.59% over a ten-year timeframe. Providing an exponential growth pattern and if all things remain equal, chart 54 demonstrates that Kearns could possibly grow to 38,437 by the year 2040.

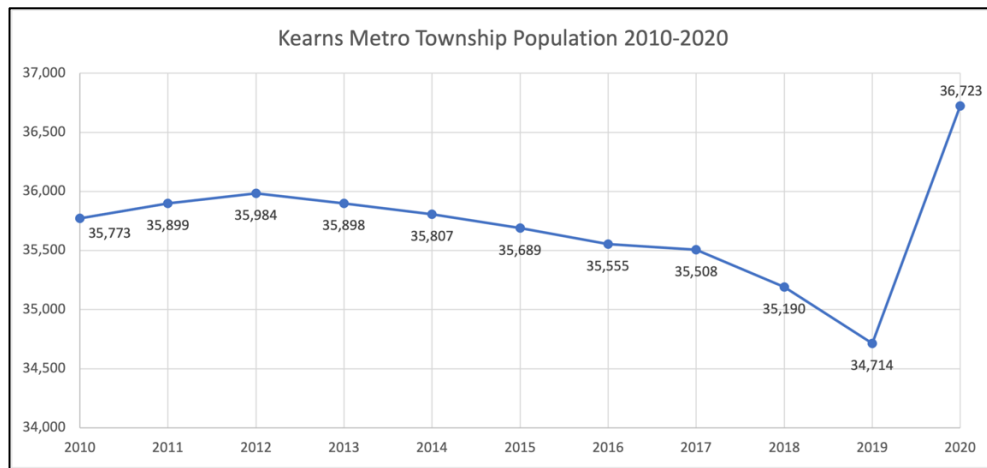


Chart 54 – Kearns Population 2010-2020

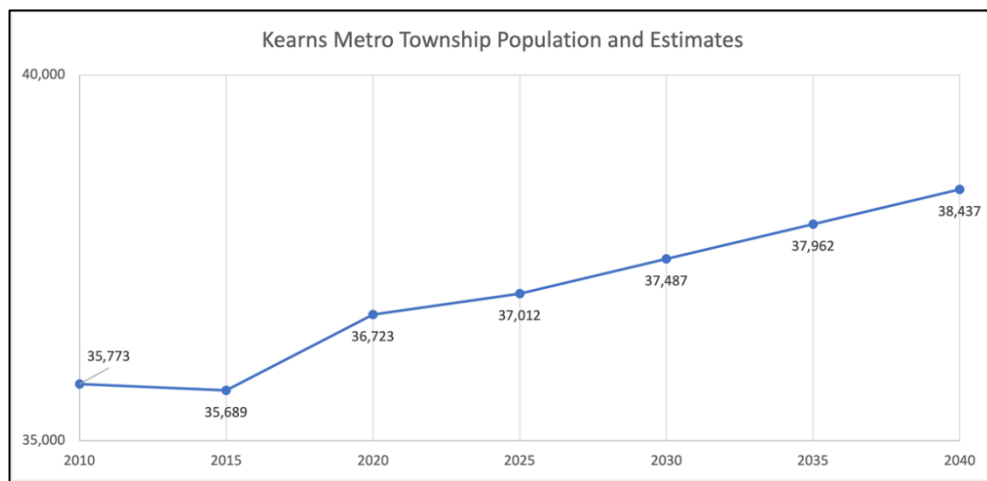


Chart 55 – Kearns Population and Estimates 2010-2040

## Kearns Station Information

### Station 109 information:

- Owner – UFSA
- Opened – 1991
- Address – 4444 West 5415 South
- Staffing and Apparatus –
  - Type 1, ML 109 (4 persons)
  - MA 109 (2 persons)



*Image 15 – Kearns Station 109*

## Surrounding UFA and Automatic/Mutual Aid Response Stations

Surrounding fire stations and fire departments that are within an eight-minute response to the Kearns are:

- UFA Station 101 (Millcreek), with a four-person medic engine and a two-person medic ambulance
- UFA Station 111 (Magna), with a four-person medic ladder and a two-person medic ambulance
- UFA Station 117 (Taylorsville), with a four-person medic engine, a four-person medic ladder and a two-person medic ambulance
- UFA Station 118 (Taylorsville), with a four-person medic engine and a two-person medic ambulance
- UFA Station 125 (Midvale City), with a four-person medic engine and a two-person peak-load medic ambulance
- Murray Station 81, with a three-person medic engine and a two-person medic ambulance
- Murray Station 83, with a three-person medic engine and a two-person medic ambulance

- South Salt Lake Station 42, with a three-person engine and a two-person medic ambulance
- West Jordan Station 52, with a three-person engine and a two-person medic ambulance
- West Jordan Station 53, with a three-person engine and a two-person medic ambulance
- West Jordan Station 54, with a three-person engine and a two-person medic ambulance
- West Jordan Station 55, with a three-person engine and a two-person medic ambulance
- West Valley Station 71, with a three-person medic engine and a two-person medic ambulance
- West Valley Station 72, with a three-person engine and a two-person medic ambulance
- West Valley Station 73, with a three-person engine and a two-person medic ambulance
- West Valley Station 74, with a three-person ladder and a two-person medic ambulance
- West Valley Station 75, with a three-person engine and a two-person medic ambulance
- West Valley Station 76, with a three-person engine

### Kearns – Incidents by Dispatch Type

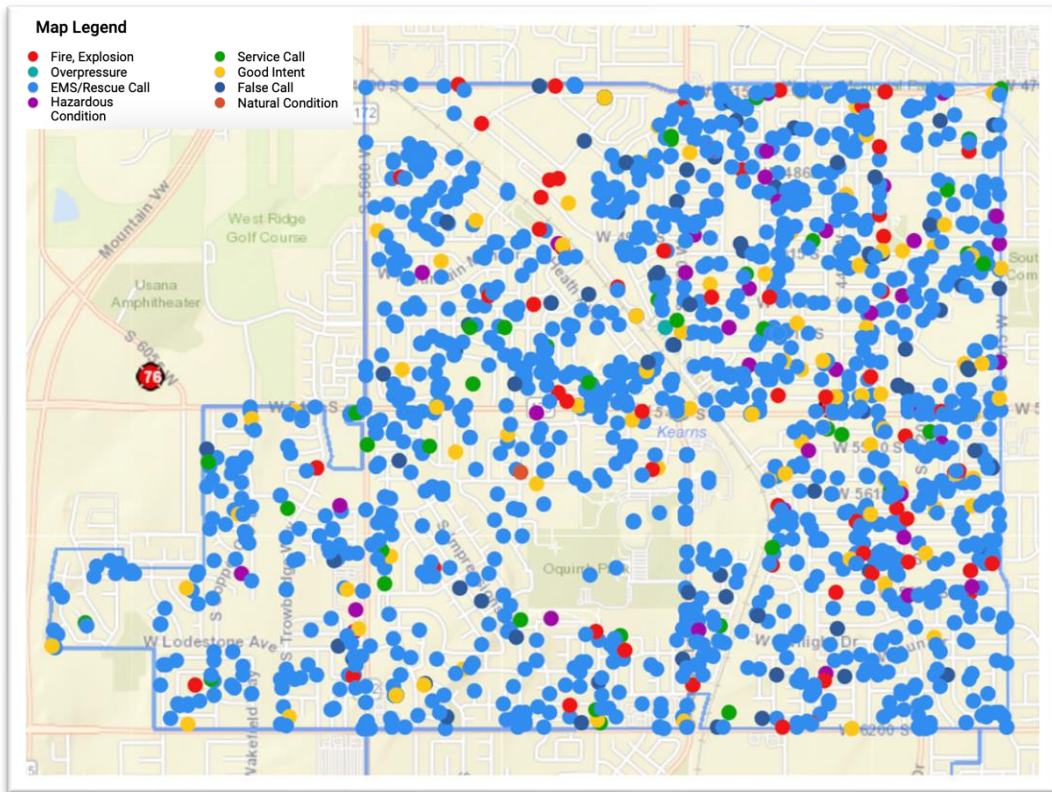
The following data is what the NFIRS type was when crews arrived on scene. This may be different than what was originally dispatched, including a reclassification of a call type from one to another. Cancelled calls occur if the company is cancelled en route to a call and never arrives on scene, which then changes the dispatch type to an NFIRS 611 call type.

	<b>CY 2020</b>	<b>CY 2019</b>	<b>CY 2018</b>
<b>Fire Suppression</b>	72	53	43
<b>EMS</b>	1,649	1,536	1,596
<b>Hazardous Materials</b>	43	28	28
<b>Service Calls</b>	76	92	96
<b>Good Intent</b>	328	226	246
<b>False Calls</b>	83	76	65
<b>Other (Misc., Flood, Overpressure)</b>	2	3	1
<b>Total</b>	2,253	2,014	2,075

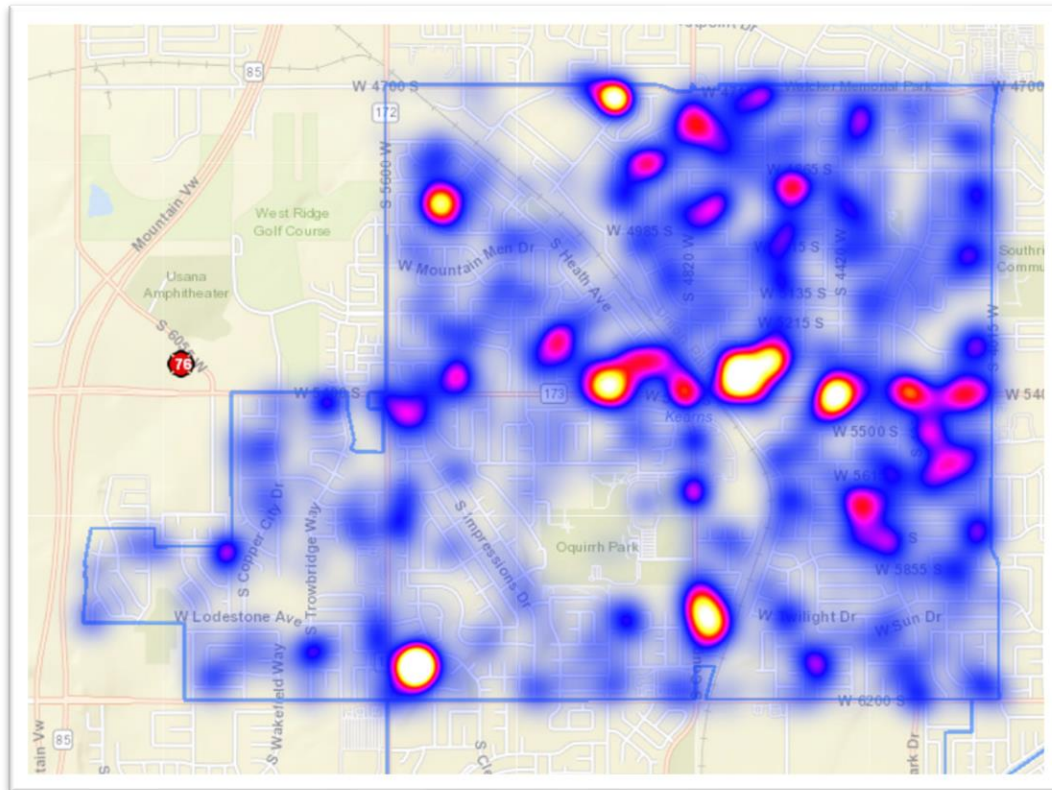
<b>Cancelled</b>	223	130	169
<b>Overall Total</b>	2,476	2,144	2,244

*Table 102 – Kearns Call Type*

# Kearns – 2020 Incidents and Heat Map



Map 152 – Kearns Incident Calls by Type





## NFPA 1710

The National Fire Protection Association is an international nonprofit organization that is devoted to eliminating death, injury, property, and economic loss due to fire, electrical and related hazards. The NFPA makes recommendations on over 300 codes and standards. NFPA 1710 recommendations are based off 90<sup>th</sup> percentile times.

### – In Other Words...

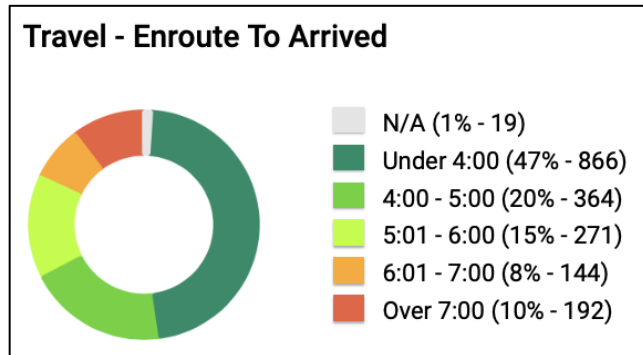
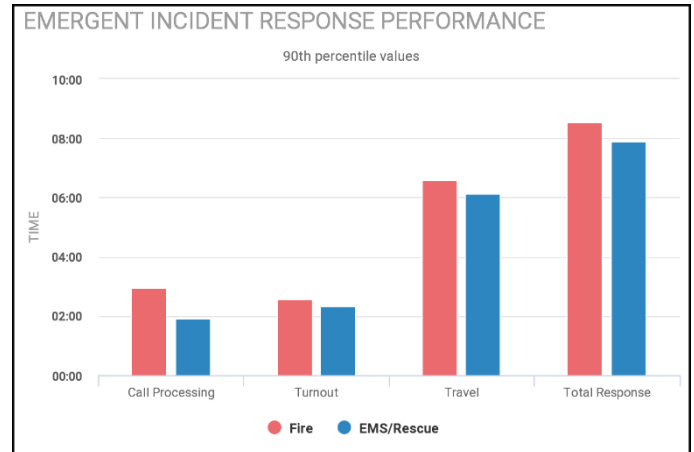
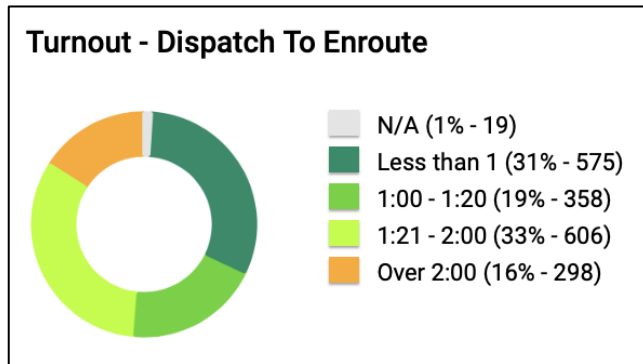
If a value is in the 90<sup>th</sup> percentile, it means the value is better than 90% of all other values in the dataset. In other words, it is within the top 10% of the values.

NFPA 1710 encompasses suggested standards for full-time fire departments and recommends the following times (all of which are at the 90<sup>th</sup> percentile): alarm processing – 64 seconds; turnout time for EMS responses – 60 seconds; turnout time for fire responses – 80 seconds; first arriver apparatus – 240 seconds (4 minutes); initial full-alarm assignment for low and medium hazard responses – 480 seconds (8 minutes); or initial full-alarm assignment for high hazard/high-rise responses – 610 seconds (10 minutes 10 seconds). The total response times are the cumulative totals of call processing time, turnout time, and travel time. NFPA 1710 recommends a total response time of 6:24 for the first arriving apparatus for fire and 6:00 for the first arriving apparatus for EMS.

### – Of Note...

NFPA 1710 response times have not been adopted by the UFA Board. One of the important elements of the community risk assessment and standards of cover is to identify current 90<sup>th</sup> percentile times (current baselines) within UFA and to identify realistic benchmarks for the UFA Board to consider for adoption.

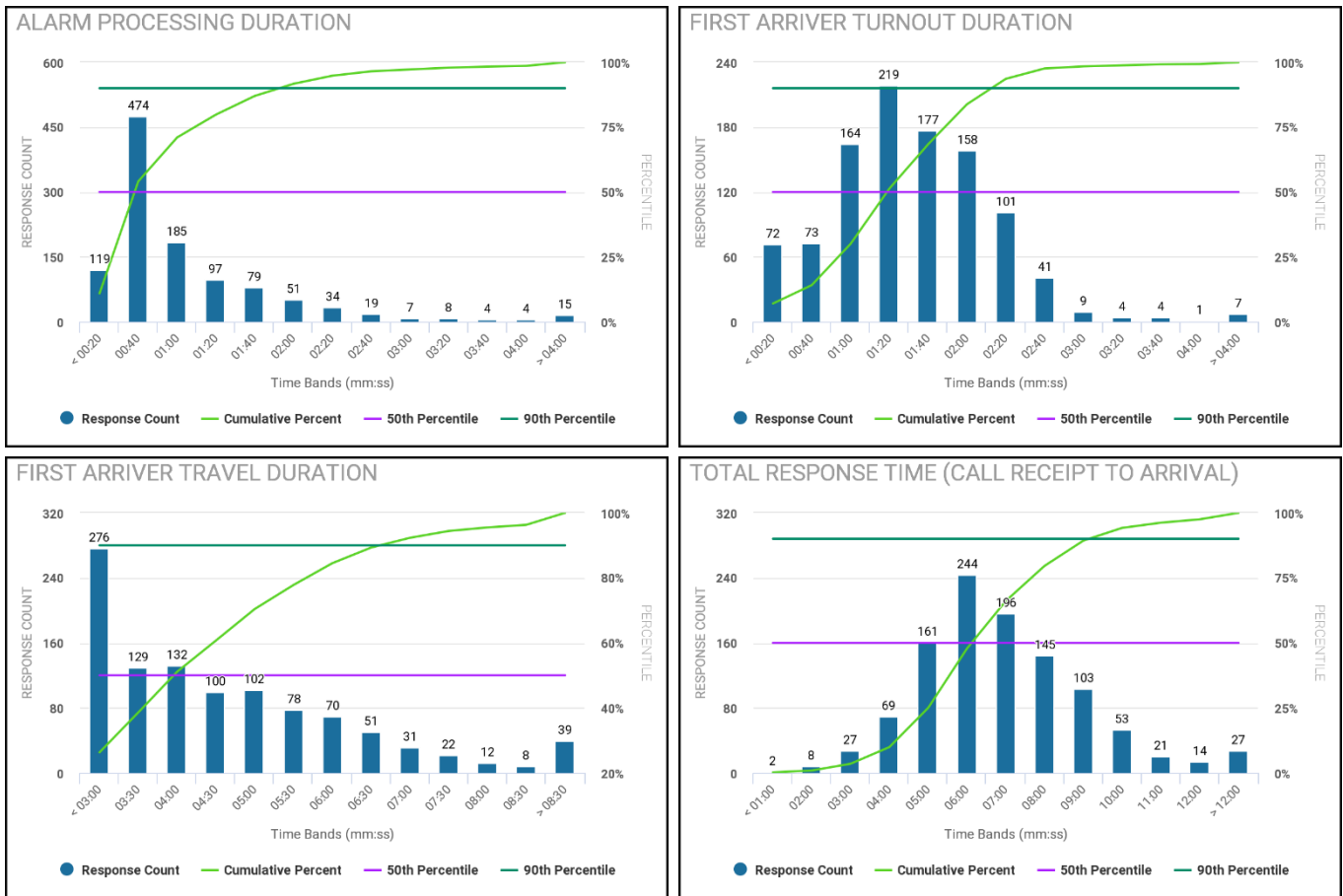
## Kearns – 2020 Dispatch and Response Times



Urban	Call Processing: Fire	Turnout Time: Fire	Travel Time: Fire	Total Response: Fire	Call Processing: EMS	Turnout Time: EMS	Travel Time: EMS	Total Response: EMS
<b>Kearns</b>	2:02	2:10	6:23	9:06	1:47	2:10	6:37	9:03
<b>UFA Urban 2018-2020</b>	2:16	2:39	7:36	10:34	1:47	2:32	6:29	9:18
<b>UFA Rural 2018-2020</b>	2:32	3:05	15:08	19:09	1:56	2:50	14:45	17:45
<b>NFPA 1710</b>	1:04	1:20	4:00	6:24	1:00	1:00	4:00	6:00

Table 103 – Kearns 2020 Emergent Response Times, 90<sup>th</sup> percentile values

## Kearns – 2020 Turnout and Travel Time



The charts above illustrate the alarm processing, turnout and travel times for all units responding to service calls within Kearns (90<sup>th</sup> percentile). The alarm processing for fire was 2:02 and 1:47 for EMS; turnout time was 2:10 for fire responses and 2:10 for EMS responses; travel time was 6:23 for fire responses and 6:37 for EMS. The 90<sup>th</sup> percentile total response time was 9:06 for fire and 9:03 for EMS. For the charts above, they show both fire and EMS response times together.

### 📌 – Of Note...

One item to note is that if you were to add the processing time, the turnout time, and the travel time, it will not necessarily (and often doesn't), sum the total response time. This is due to some of the limitations within the datasets and gaps within timestamps. Where there are missing timestamps, those particular key performance indicators (KPI) are excluded as they cannot accurately be calculated out.

## Kearns – 2020 Incidents by Time of Day

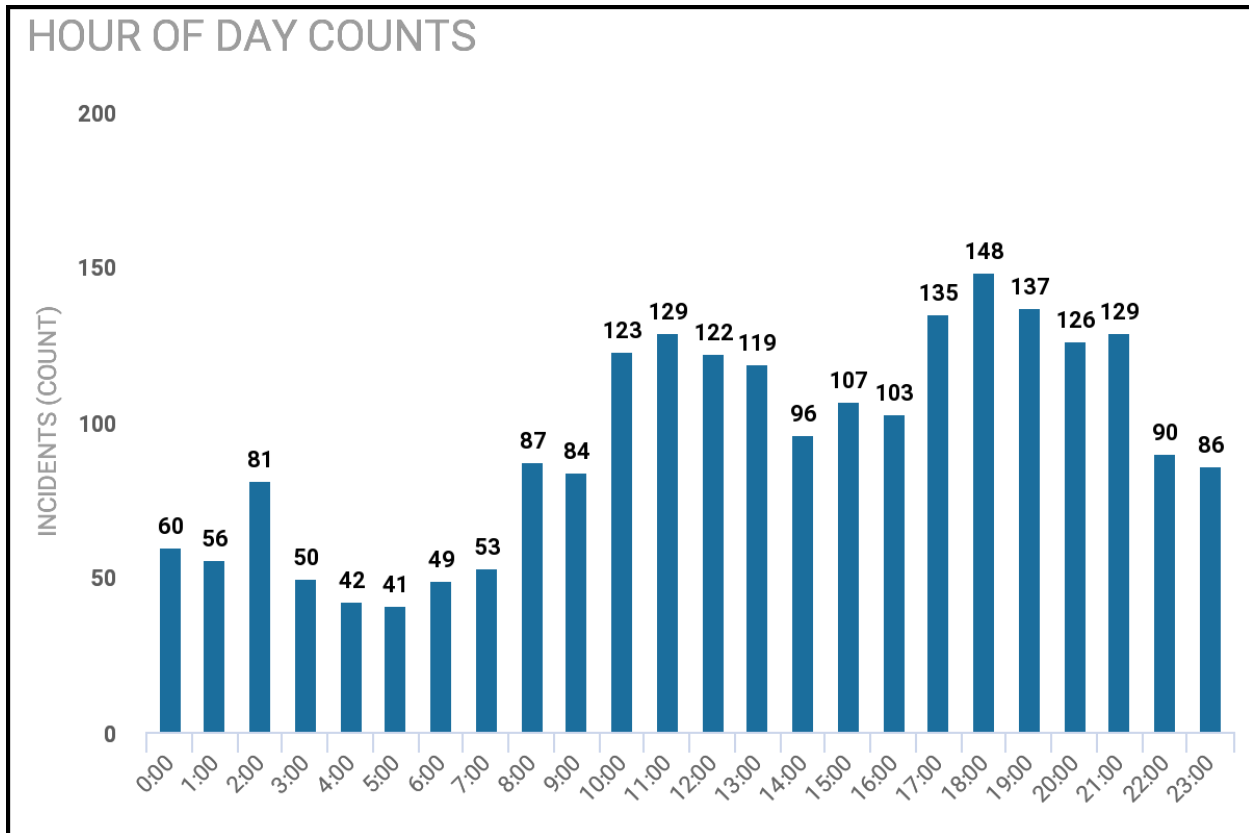


Chart 56 – Kearns 2020 Incidents by Time of Day

The above table demonstrates the incidents by time of day and the time of greatest demand within Kearns for all service calls. This chart illustrates that the greatest demand for service delivery begins to increase at 08:00 AM and starts to decrease at 7:00 PM.

## Kearns – 2020 Incidents by Day of Week

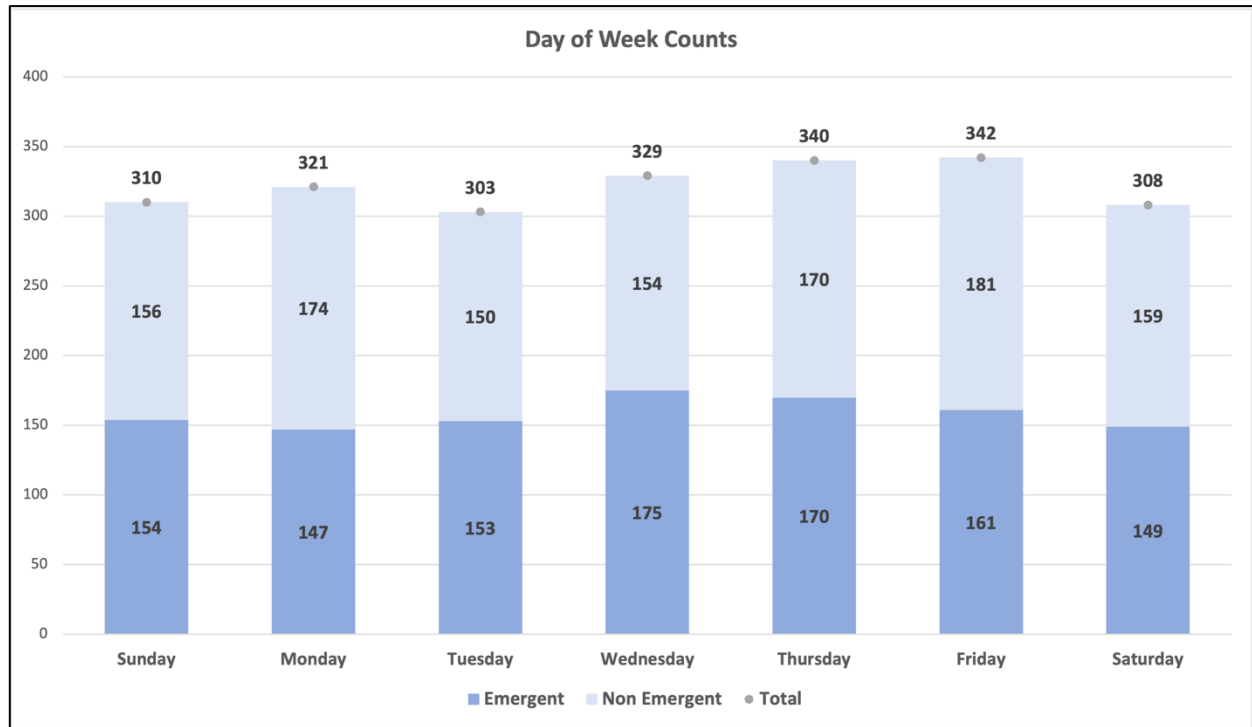


Chart 57 – Kearns Incidents by Day of Week

This chart demonstrates the call volume based on the day of the week, with an increase in all calls as well as the peak volume for all calls in Kearns occurring on Friday.

## Kearns – EMS Calls

EMS calls are filtered by final disposition codes and this data is taken from VECC and determined by the patient acuity at the time of call termination. Often times the EMS calls identified from final disposition are different than the number of EMS calls that were initially dispatched due to one being the initial call type, and one being what call type the call was closed as by responding fire crews.

	CY 2020	CY 2019	CY 2018
<b>ALS Transports</b>	813	790	705
<b>BLS Transports</b>	1,173	979	1,050
<b>Scene Release</b>	118	95	309
<b>Public Assistance</b>	10	9	10
<b>EMS Total Calls</b>	2,104	1,864	2,064

Note: There is possibly a difference if you were to add all calls due to data reporting mechanisms. Public assistance calls will sometimes get duplicated with a scene release, depending on dispatch code, but those calls do not carry across to the total calls. Also, cancelled calls go into a different final disposition so the numbers in the 'Incidents by Dispatch Type' are reflective of this difference.

Table 104 – Kearns EMS Calls

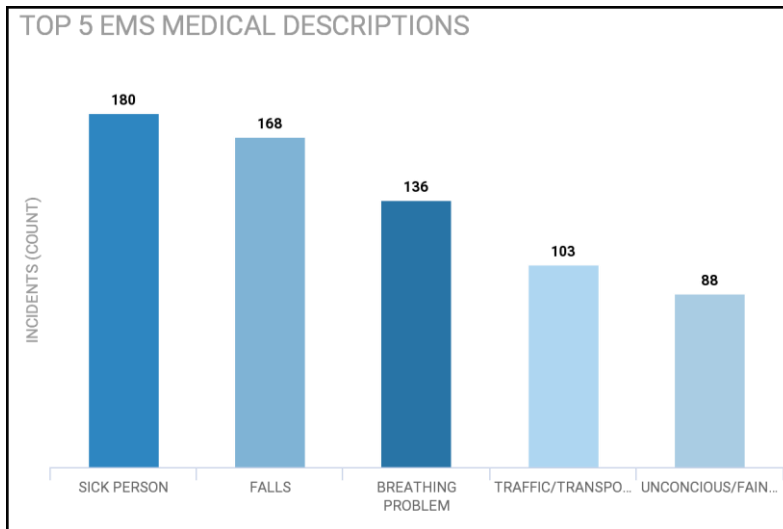


Chart 58 - Top 5 EMS Medical Calls – 2020

### Kearns – 2020 Fire Incidents by Dispatch Type

NFIRS Description	Incident Count	% of Incidents
<b>Structure Fire</b>	34	41.0%
<b>Natural Vegetation Fire</b>	15	18.1%
<b>Outside Rubbish Fire</b>	18	21.7%
<b>Vehicle Fire</b>	10	12.0%

NFIRS Description	Incident Count	% of Incidents
<b>Special Outside Fire</b>	1	1.2%
<b>Fire, Other</b>	3	3.6%
<b>Mobile Property Fire</b>	2	2.4%
<b>Total</b>	83	100%

Table 105 – Kearns 2020 Incidents by Dispatch Type

## Kearns – Building Occupancy Classification and Risk Categories

Occupancy Classification	Low	Moderate	High	Maximum	Total
<b>Assembly</b>	15	2	7	0	24
<b>Commercial/Industrial</b>	2	1	4	1	8
<b>Educational</b>	0	0	0	0	0
<b>Government</b>	15	0	0	0	15
<b>Healthcare</b>	0	0	0	0	0
<b>Hazardous</b>	Unknown	Unknown	Unknown	Unknown	37*
<b>Storage</b>	1	1	0	0	2
<b>Residential</b>	7,009	2,349	8	0	9,366
<b>Residential – Multi Unit</b>	35	24	1	1	61
<b>High Rise</b>	N/A	N/A	0	0	0
<b>Total</b>	<b>7,077</b>	<b>2,377</b>	<b>20</b>	<b>2</b>	<b>9,513</b>

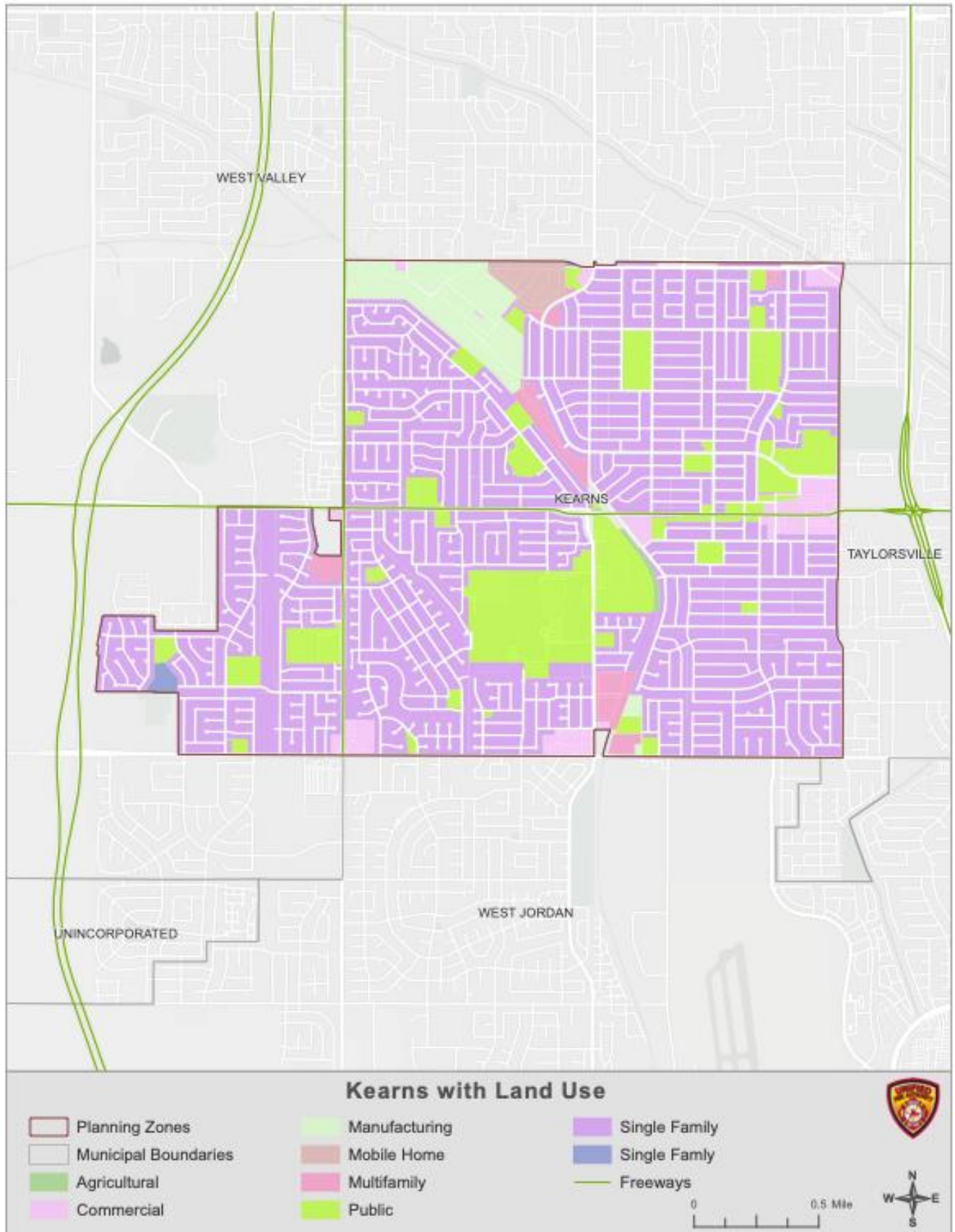
\*There is currently a gap within the identification of building size regarding hazardous materials sites. This is a gap that is being closed over the next several years as we collect the data and information.

*Table 106 – Kearns Building Occupancy and Risk Categories*

### Building Size / Considerations

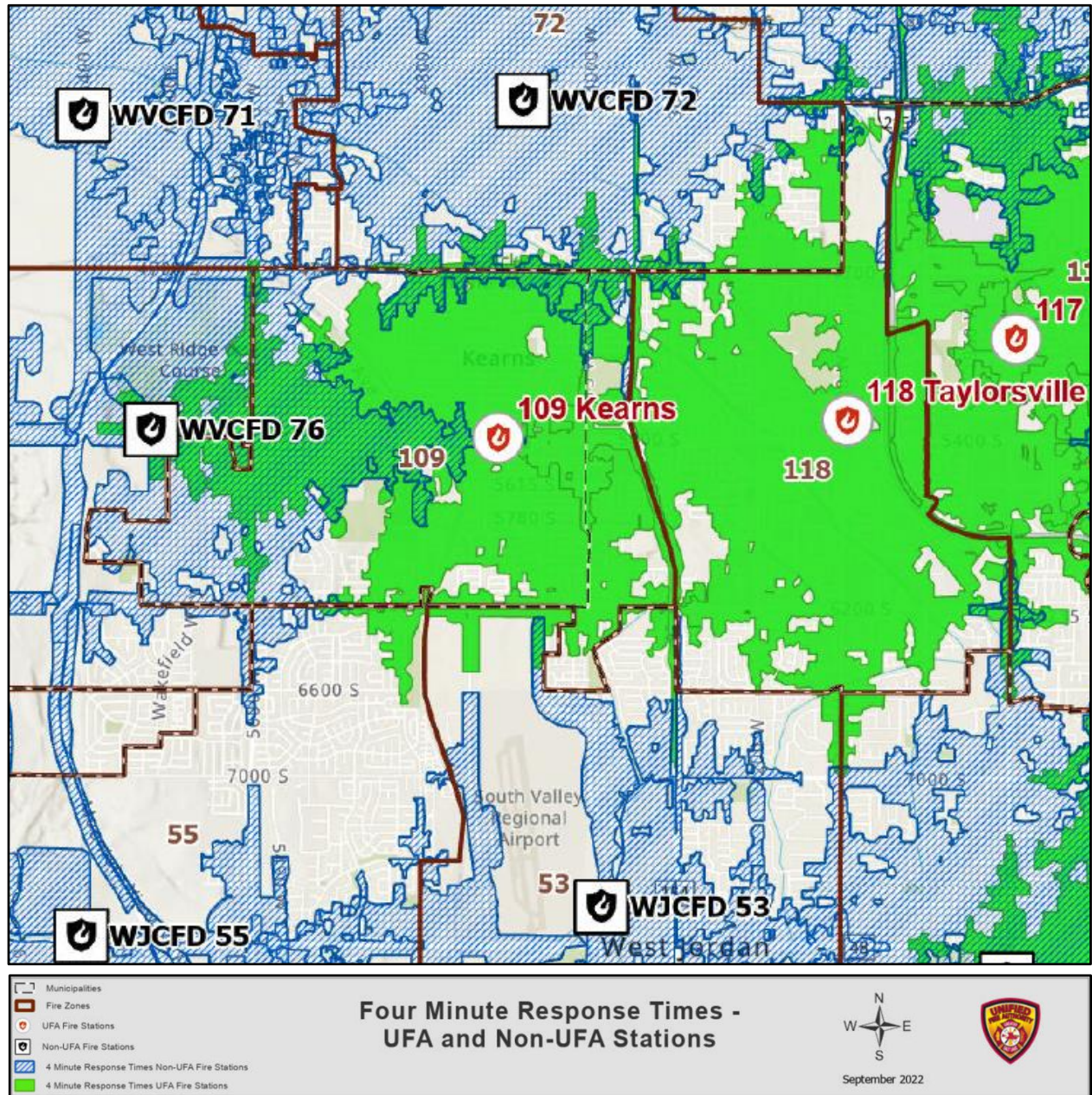
For purposes of risk classification, UFA has outlined the following risk classifications for building size, regardless of occupancy type (except residential). Low risk = 1-4,999 square feet. Moderate risk = 5,000-9,999 square feet. High risk = 10,000-99,999 square feet. Maximum risk = >100,000 square feet.

For residential occupancies, the following classifications apply. Low risk = 1-1,999 square feet. Moderate risk = 2,000-3,999 square feet. High risk = 4,000-9,999 square feet. Maximum risk = ≥10,000 square feet.

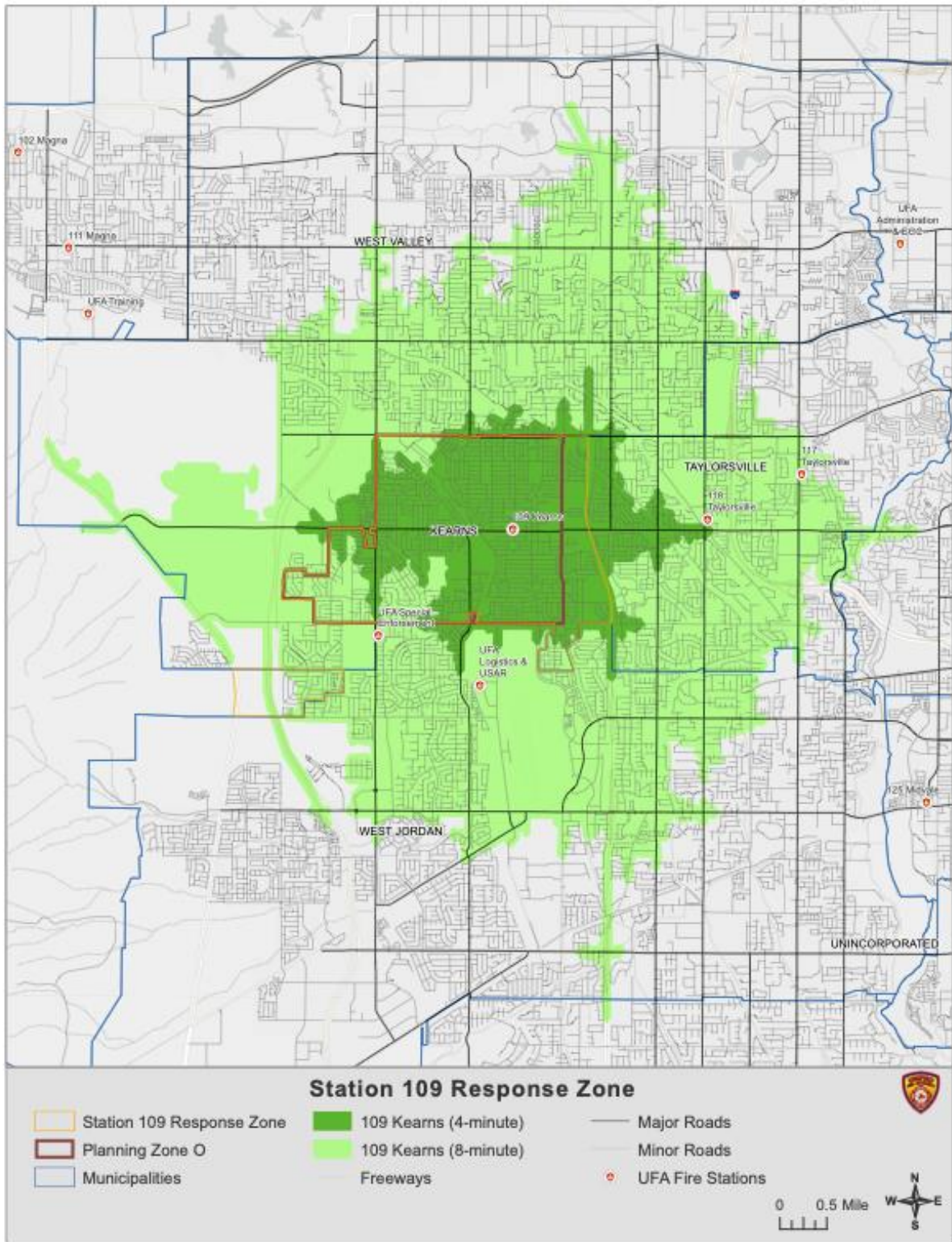


Map 154 – Kearns with Land Use





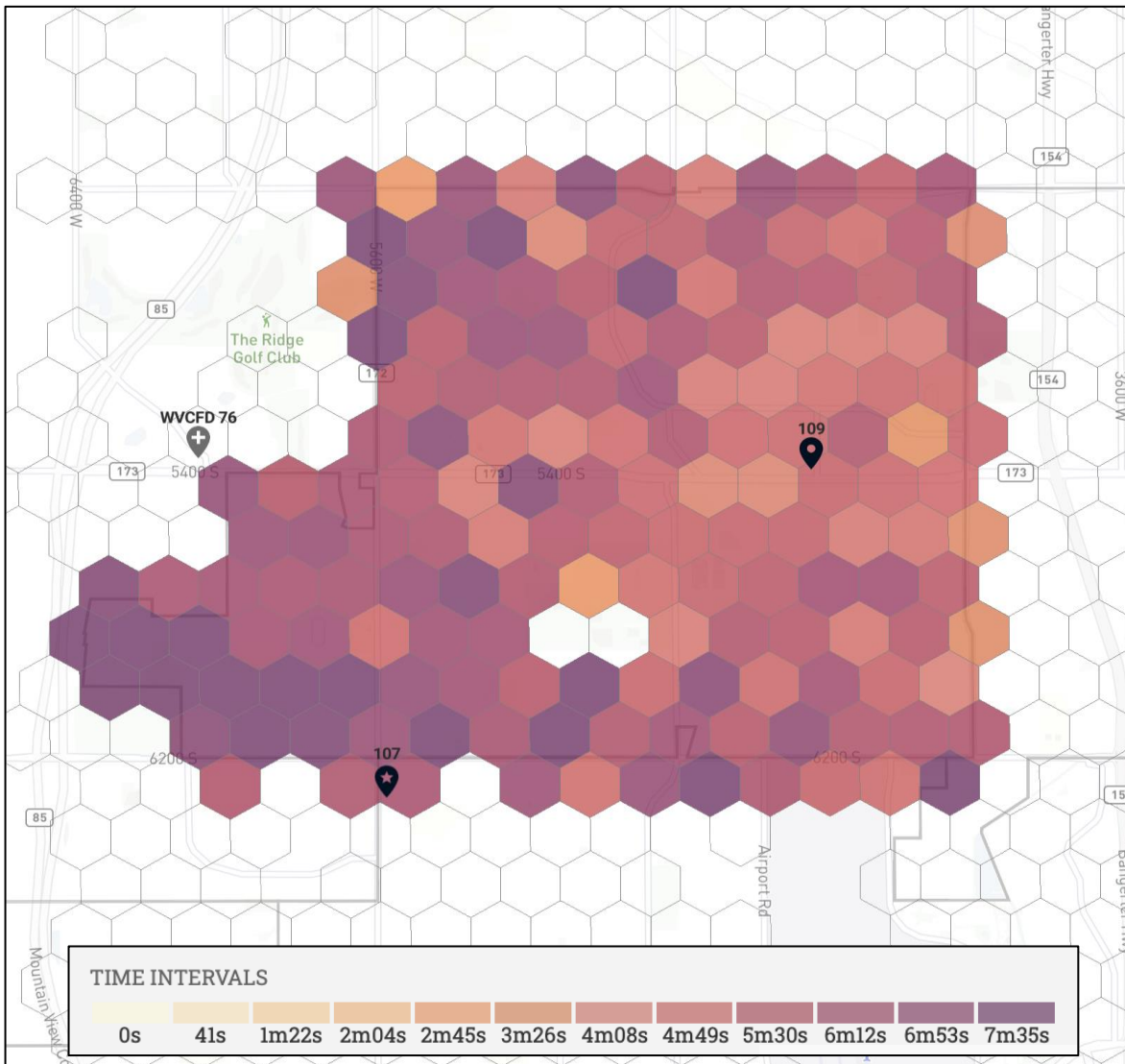
Map 155 - 4-Minute Travel Time, UFA and Aid



Map 156 - Station 109 4- and 8-Minute Travel Times

## Kearns – First Arriver Travel Times

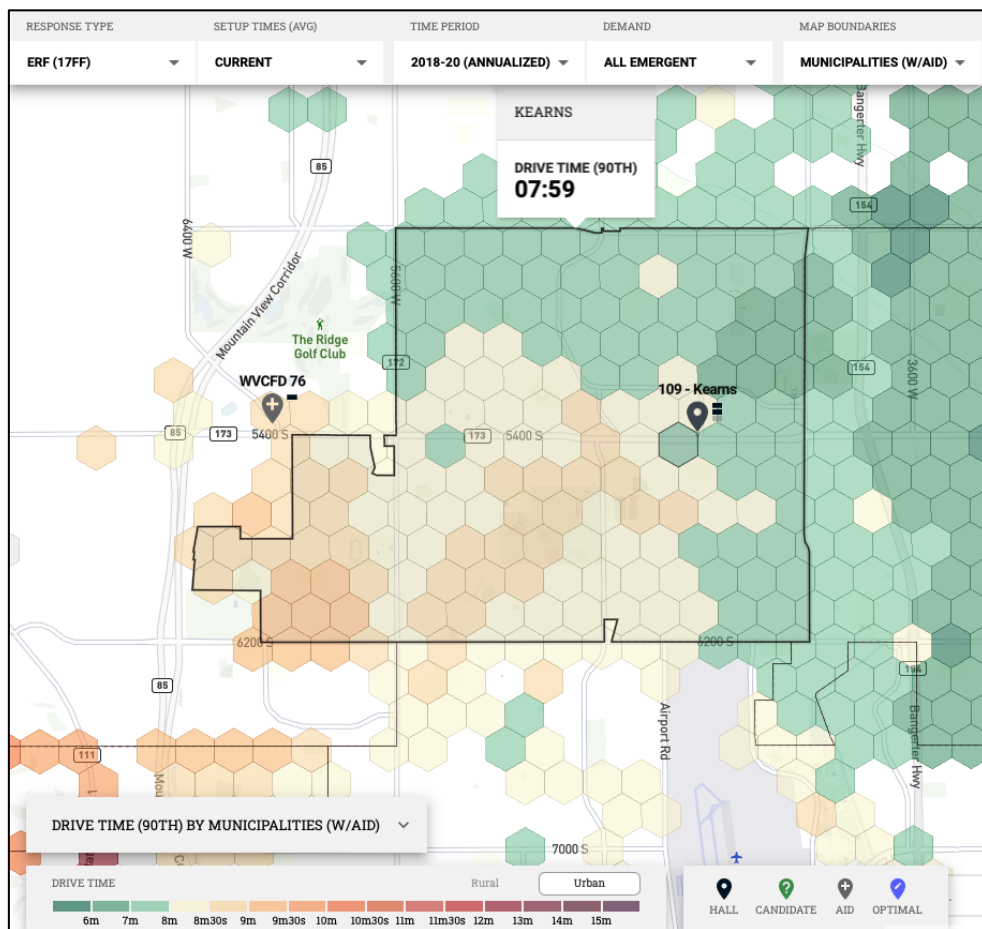
The following maps demonstrate the 90<sup>th</sup> percentile of travel times based off the last three years of historical data (2018-2020). The darker the color is, the more delayed the response, with the lighter colors demonstrating below or near target times. The darker colors on the bar within the 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 (90<sup>th</sup> percentile) from notification of the alarm to the arrival of the first arriving apparatus — not an adopted standard by UFA. UFA is currently in process of identifying benchmark and target standards to be adopted by the UFA Board of Directors. Currently, within Kearns, the 90<sup>th</sup> percentile drive time is 6:23 for fire and 6:37 for EMS, or a combined 90<sup>th</sup> percentile drive time of 6:23.



Map 157 – Kearns Response Times – All Aid

## Kearns – Residential Fire Effective Response Force (17 FF)

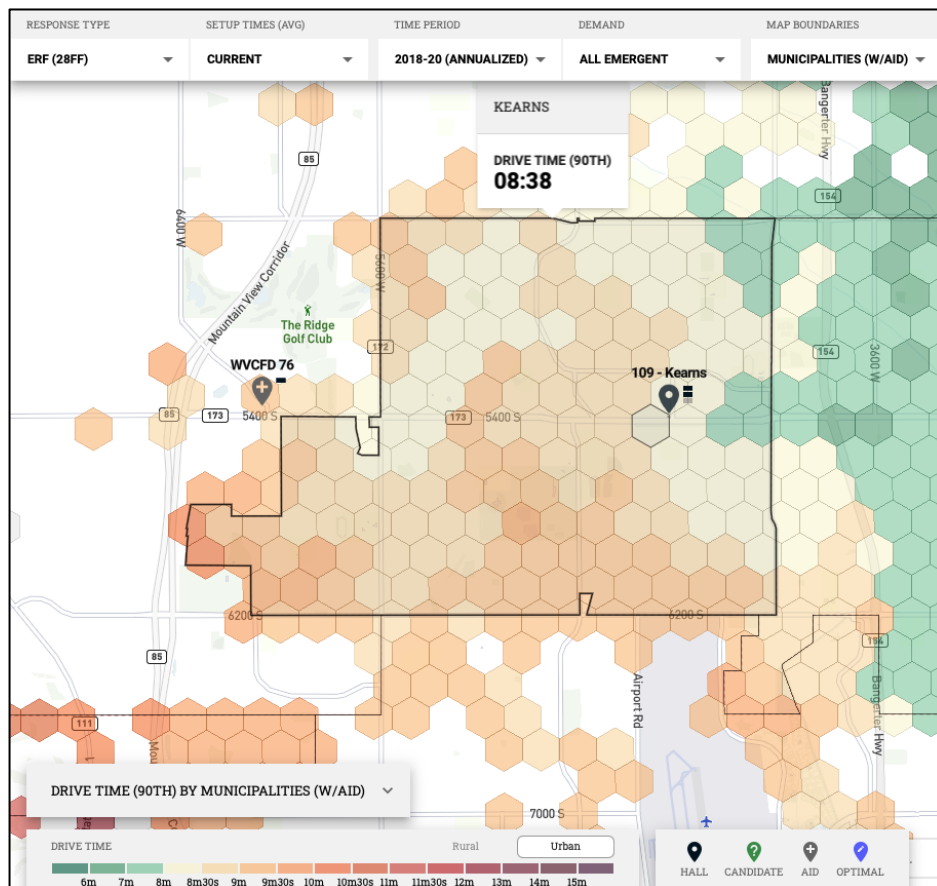
This map demonstrates the coverage of a multi-unit response to a residential fire based off all apparatus being within their station. The green to light yellow demonstrates the ability to have seventeen firefighters (a residential fire effective response force) on scene based off a residential urban fire force response. This map's drive times (or travel times) are based off the current NFPA 1710 standard of eight minutes (90<sup>th</sup> 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. UFA is currently in process of identifying benchmark and target standards to be adopted by the UFA Board of Directors. Based off predictive data, it is projected that the 90th percentile for 17 firefighters to arrive on scene would be 7:59.



Map 158 – Kearns Response Times – Residential Fire Effective Response Force (17 ERF)

## Kearns – 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 (90<sup>th</sup> 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. UFA is currently in process of identifying benchmark and target standards to be adopted by the UFA Board of Directors. Based off predictive data, it is projected that the 90th percentile for 28 firefighters to arrive on scene would be 08:38.



Map 159 – Kearns Response Times – Commercial Fire Effective Response Force (28 FF)

## Kearns 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	Low	Low	Low	Low	Mod	Low	Low	Low	High	Low	Mod

Table 107 – Kearns Hazard Matrix

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

### Infrastructure – Transportation

There are several high-level transportation routes within Kearns or directly bordering the city. Bangerter Highway runs directly on the east side of the township and the Mountain View Corridor runs directly on the west side of the township. Several arterials and state roads also run through Kearns, with 4700 South, 5415 South and 6200 S as well as 5600 West. There are 0 linear miles of Interstate/US Highway, 4.42 linear miles of State Highways, and 105 total linear miles of roadway. UTA also runs bus routes through the township, with the main bus routes running on 6200 S, 5400 S and 4700 S. There is a rail line that runs the length of the township from 4700 S to 6200 S near 4800 W. Kearns is in the moderate-risk category for road infrastructure.

### Infrastructure – Water

There is one water district within Kearns, the Kearns Improvement District.

### Infrastructure – Dams

There are no identified dams within Kearns. Kearns is in the low-risk category for dam infrastructure.

### Natural Hazards

Within Kearns, there are no concerns with avalanche areas. Kearns is in the low-risk category for avalanche. There are no identified fault lines that run through the city, although there are several faults on either side of the city (see Map 8). Kearns is in the low-risk category for liquefaction and low-risk category for fault lines. One of the biggest hazards that occur within an earthquake scenario is the number of unreinforced masonry (URM) buildings within Kearns, with an estimated 1,024 URM's, which constitutes about 4.17% of the overall URM's within UFA's response areas. Kearns is in the moderate-risk category for unreinforced masonry.

### Wildland Urban Interface

There is low risk of urban interface fires within Kearns. Kearns is in the low-risk category for Wildland Urban Interface.

### Hazardous Materials / Tier II Sites

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

### Hospitals

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

### Schools

Kearns has eleven elementary schools, two middle schools, one high school, one public charter school K-9, and a private K-8 school within city boundaries which places it in the high-risk category.

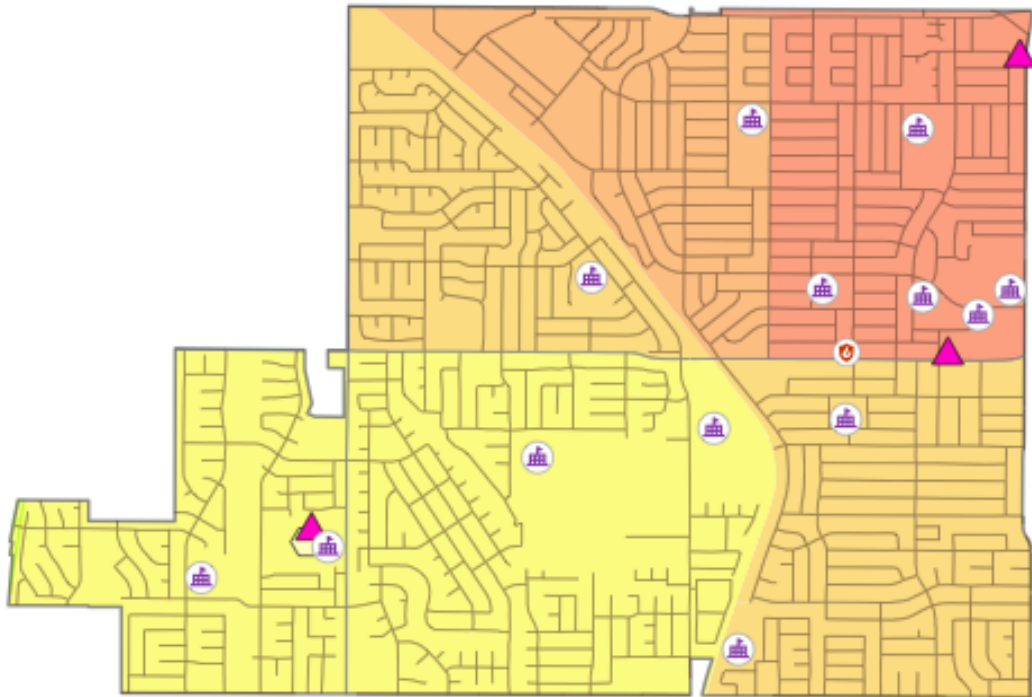
### Target Hazards – Structures

Some of the target-hazard occupancies in Kearns include:

- Apartments – 4866 West 4780 South
- Carrington Apartments – 5959 South 4800 West

- Children Center – 5242 South 4820 West
- Kearns Oquirrh Park Fitness Center – 5624 S Cougar Lane
- Kearns Warehouse District – 4950 South 5200 West
- Builder Supply – 5367 West 4700 South
- Summit Senior – 5525 West 6200 South
- Salt Lake County Recreation Center – 5600 South 4800 West
- Strip Mall – 5500 South 4015 West
- Utah Olympic Oval – 5662 Cougar Lane

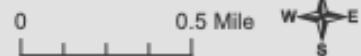




### Kearns with Threats and Hazards



- |                          |             |                            |
|--------------------------|-------------|----------------------------|
| Municipal Boundaries     | 51 - 100    | Fire Stations              |
| Wildland Urban Interface | 101 - 500   | Schools                    |
| Unreinforced Masonry     | 501 - 1,000 | Tier 2 Sites               |
| 0 - 50                   | Freeways    | 100,000 Sq. Foot Buildings |



Map 160 – Kearns with Combined Hazards

## Life and Property Loss

From 2015-2020, there have been two fatalities attributed to fire. There has been a total estimate of \$1,756,823.00 of property loss and a total estimate of \$473,681.00 of content loss due to fire.

## Unified Fire Shared Services

With a regional-response model, the Unified Fire Authority brings special services to bear when the situation calls for it, not relying on automatic or mutual aid which provides a quicker and more effective delivery of service to its residents.

### Battalion Chiefs

Unified Fire Authority staffs three operational battalion chiefs (BCs) daily, in addition to a 40-hour Operations Chief (OC). These BCs and OC respond to large, complex, or expanding incidents — providing incident command, safety, and operational direction. Each BC covers an area of UFA's service area and respond to calls for service in any jurisdiction. Battalion 11 is housed out of Station 101 in Millcreek, Battalion 12 is housed out of Station 121 in Riverton, and Battalion 13 is housed out of Station 118 in Taylorsville.

### Heavy Rescue Companies

Heavy Rescue specializes in structural collapse, confined space rescue, trench collapse rescue, vehicle extrication, machinery disentanglement, rope rescue (high angle, low angle, rigging) and rapid intervention (Firefighter Rescue). The UFA Heavy Rescue Program consists of two independent rescue companies strategically placed in UFA's jurisdiction. Station 117 in Taylorsville, and Station 121 in Riverton house our Heavy Rescue Teams.

### Hazardous Materials (HazMat) Companies

The Hazardous Materials Teams provide an efficient, effective, and professional Hazardous Material Mitigation response. HazMat Companies respond to hazardous material releases/spills for the purpose of mitigating the release/spill. They select and use proper specialized chemical personal protective equipment dependent on the nature of the incident. The HazMat Program consists of two independent HazMat

companies strategically placed in UFA's jurisdiction. Station 124 in Riverton, and Station 126 in Midvale house our HazMat Teams.

### Water Rescue Teams

UFA has swift water, standing water and ice rescue capabilities. These companies respond to victims recreating in our swift canyon rivers and our lakes and reservoirs. Station 116 in Cottonwood Heights, Station 117 in Taylorsville, Station 121 in Riverton, and Station 123 in Herriman house companies with water rescue capabilities.

### Wildland Division

UFA's Wildland Division provides highly trained and experienced wildland fire and all-risk response resources to local, state, and federal incidents. The Wildland Division oversees the training and certification of UFA personnel for response to wildland fires and all-hazard incidents. We also work with UFA Communities to educate residents on wildfire preparedness and provide mitigation services to reduce the risks of wildfire. UFA has a special capability where a Duty Officer is able to act as the Fire Warden within UFA's jurisdictions, allowing the ordering of resources much more quickly than having to rely on a Fire Warden that may or may not be readily accessible. Station 103 in Herriman currently houses the Duty Officer.

### Investigations Division

Arson and Explosive related incidents are considered two of the most dangerous criminal activities that threaten our citizens. The need exists to protect the citizens of our jurisdiction from loss of life and property by reducing the crime of arson, arson-related crimes, improvised explosive devices (IEDS) and the prevention of future violent crimes. The Investigations Division addresses this need by establishing a sound foundation of effective enforcement, focusing on the apprehension of the offender, while in partnership with other Local, state and federal law enforcement agencies. The team utilizes highly-trained Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) certified K-9's that assist with accelerant and explosives detection.

### Urban Search & Rescue

A FEMA Urban Search and Rescue Task Force is a team of individuals which serve as a resource for disaster response at local, state, and federal levels. It is comprised mainly of firefighters but includes structural engineers, medical professionals,

canine/handler teams and emergency managers with highly specialized training in urban search and rescue environments.

Utah Task Force 1 (UT-TF1) is one of 28 Type I, Federal Urban Search & Rescue (US&R) Task Forces in the United States. This program brings a highly trained, multi-hazard Task Force that is especially designed to respond to a variety of emergencies/disasters including earthquakes, hurricanes, tornadoes, floods, terrorist acts and hazardous material releases. Fire department personnel that are task force members receive specialized training and skills that directly benefit Unified Fire Authority.

### [Salt Lake County Emergency Management](#)

The Salt Lake County Division of Emergency Management serves our citizens by directing and coordinating resources for disasters and emergencies through preparation, planning, mitigation, response, and recovery. The Salt Lake County Emergency Coordination Center is activated and manned during any event—from small-scale to large-scale occurrences—to disasters both natural and man-made that can or have exceeded the resources of any particular jurisdiction. Currently, the Salt Lake County ECC assists and obtains resources for the 22 jurisdictions located within the Salt Lake Valley. Salt Lake County EM assists these jurisdictions through the activation of 15 Emergency Support Functions (ESFs) filled by employees from a multitude of backgrounds. The ESF employees have authority throughout Salt Lake County to fill and order additional support for the operations occurring in the field until the impacted jurisdiction can return to their normal operations and functions. The Emergency Management Division is committed to keeping the public safe through community outreach, training, dissemination of important public information, training of staff and the creation of a more resilient community through mitigation, preparation, response, and recovery. The ECC has been activated for many events such as Child Abduction Response Team (CART) Deployments, wildland fires such as the Rosecrest and Machine Gun fires, flooding, severe weather events, earthquakes, civil unrest, the COVID-19 pandemic, Line of Duty Deaths (LODD), and many other events.

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## Unified Fire Authority

3380 South 900 West  
Salt Lake City, UT 84119

# Magna Metro Township

## Community Risk Assessment



## Magna Metro Township Planning Zone

UFA has two stations within the Magna Metro Township Planning Zone covering a total of 37.48 square miles with a population of 29,251 and responded to 2,182 calls for service in 2020. Although Magna currently has an area of 37.48 square miles, much of that includes the Great Salt Lake and uninhabitable area. Because of this, there is roughly 15 miles of habitable area, which places the population density into the urban classification although with all area calculated it would be rural. For planning purposes, UFA will base the population per square mile off of the habitable area in Magna and utilize the urban classification for Magna.

Planning Zone	Population	Population Percentage of UFA	Square Miles	Population Density per Sq Mile	Classification
<b>Magna</b>	29,251	6.49%	37.48	780	Rural
<b>Magna – Habitable</b>	29,251	6.49%	15.0	1,950	Urban

Magna has increased its population from 26,459 in 2010 to 29,251 in 2020, showing an increase of 9.54% over a ten-year timeframe. Providing an exponential growth pattern and if all things remain equal, chart 59 demonstrates that Magna could possibly grow to 34,445 by the year 2040.



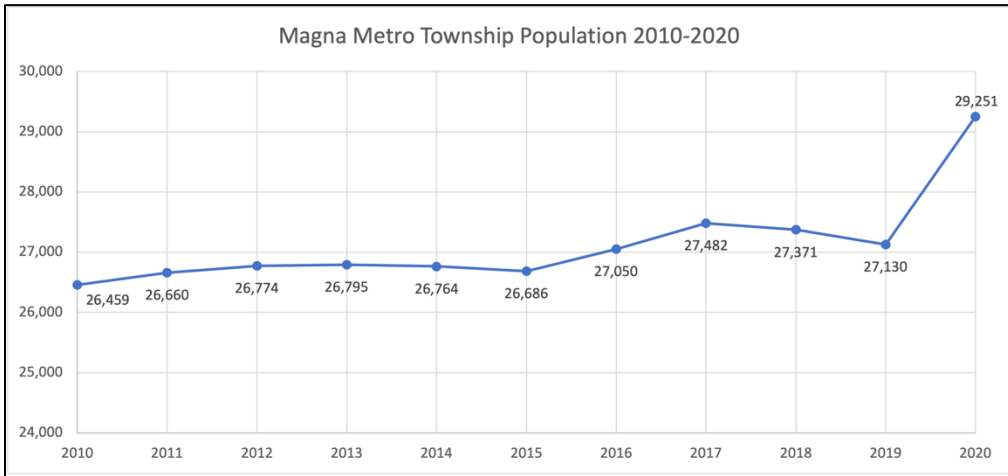


Chart 59 – Magna Population 2010-2020

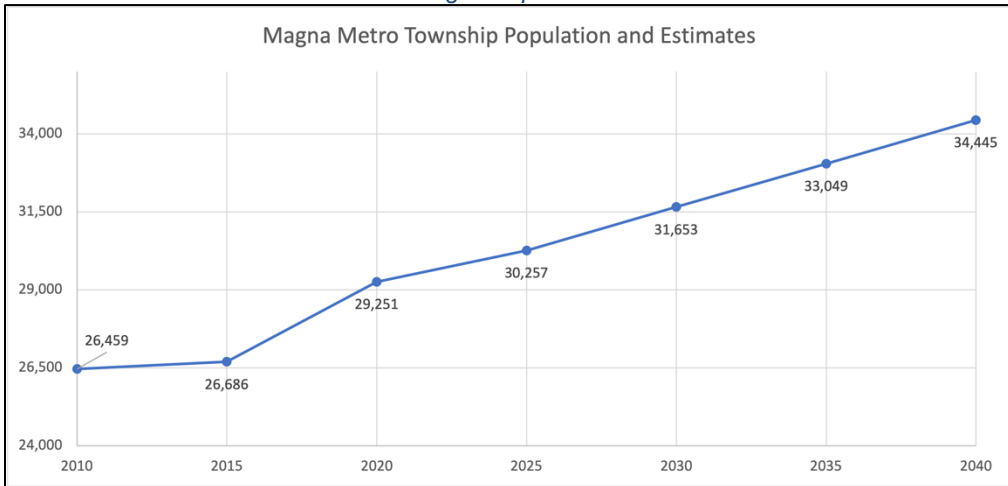




Chart 60 – Magna Population and Estimates 2010-2040

## Magna Station Information

<p><b>Station 102 information:</b></p> <ul style="list-style-type: none"><li>• Owner – UFSA</li><li>• Opened – 1979 (Currently being rebuilt)</li><li>• Address – 8609 West Magna Main Street</li><li>• Staffing and Apparatus –<ul style="list-style-type: none"><li>○ Type 1, ME 102 (4 persons)</li><li>○ Type 6 Brush Truck (cross-staffed)</li></ul></li></ul>	 <p><i>Image 16 – Magna Station 102</i></p>
<p><b>Station 111 information:</b></p> <ul style="list-style-type: none"><li>• Owner – UFSA</li><li>• Opened – 2011</li><li>• Address – 8215 West 3500 South</li><li>• Staffing and Apparatus –<ul style="list-style-type: none"><li>○ Type 1, ML 111 (4 persons)</li><li>○ Type 6, Brush Truck (cross-staffed)</li><li>○ Type 1, Tactical Water Tender (WTT) (cross-staffed)</li><li>○ MA 111, (2 persons)</li></ul></li></ul>	 <p><i>Image 17 - Magna Station 111</i></p>

## Surrounding UFA and Automatic/Mutual Aid Response Stations

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

- UFA Station 109 (Kearns), with a four-person medic ladder and a two-person medic ambulance

- West Valley Station 71, with a three-person medic engine and a two-person medic ambulance
- West Valley Station 72, with a three-person engine and a two-person medic ambulance
- West Valley Station 74, with a three-person ladder and a two-person medic ambulance
- West Valley Station 76, with a three-person engine

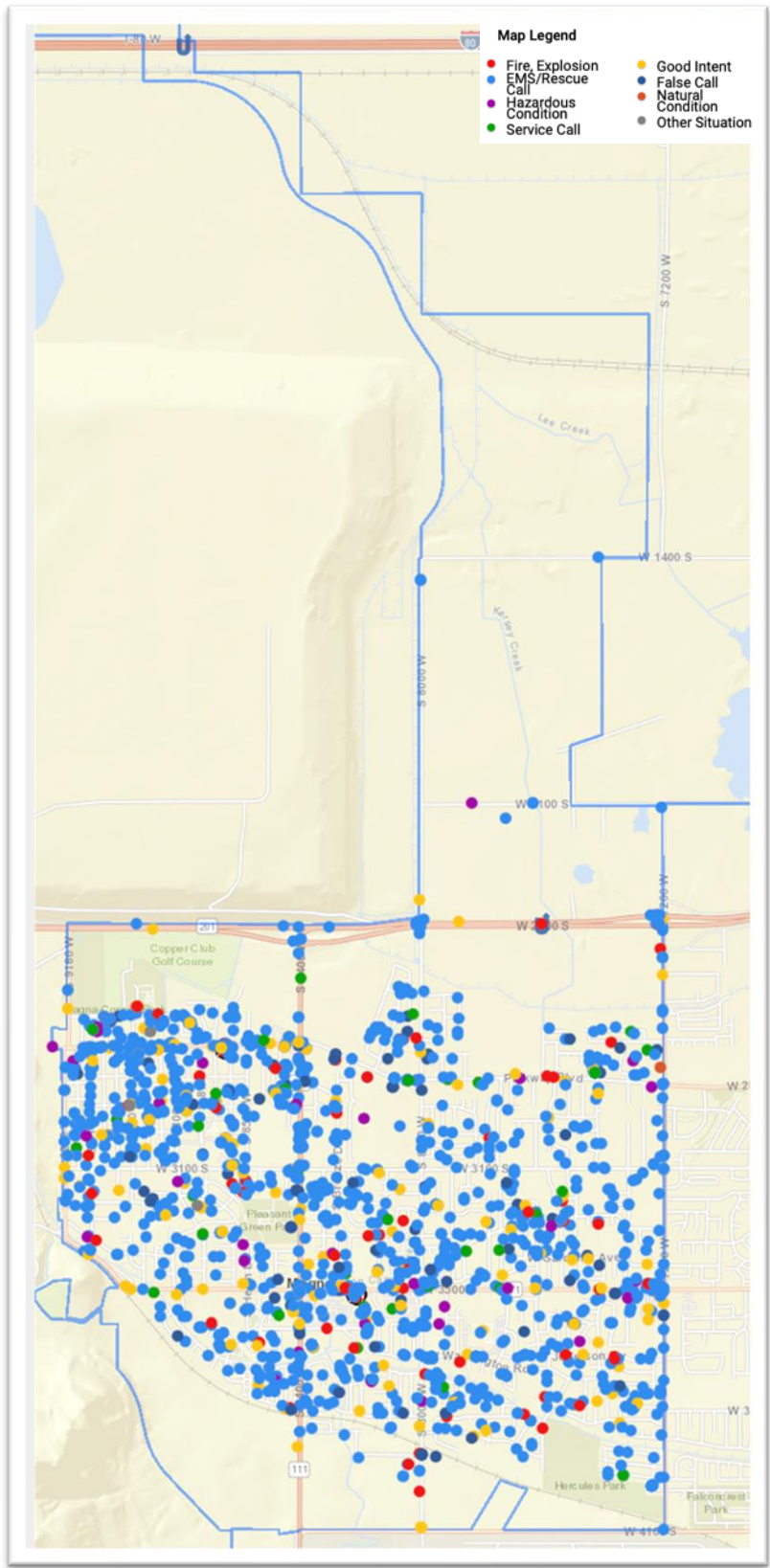
### Magna – Incidents by Dispatch Type

The following data is what the NFIRS type was when crews arrived on scene. This may be different than what was originally dispatched, including a reclassification of a call type from one to another. Cancelled calls occur if the company is cancelled en route to a call and never arrives on scene, which then changes the dispatch type to an NFIRS 611 call type.

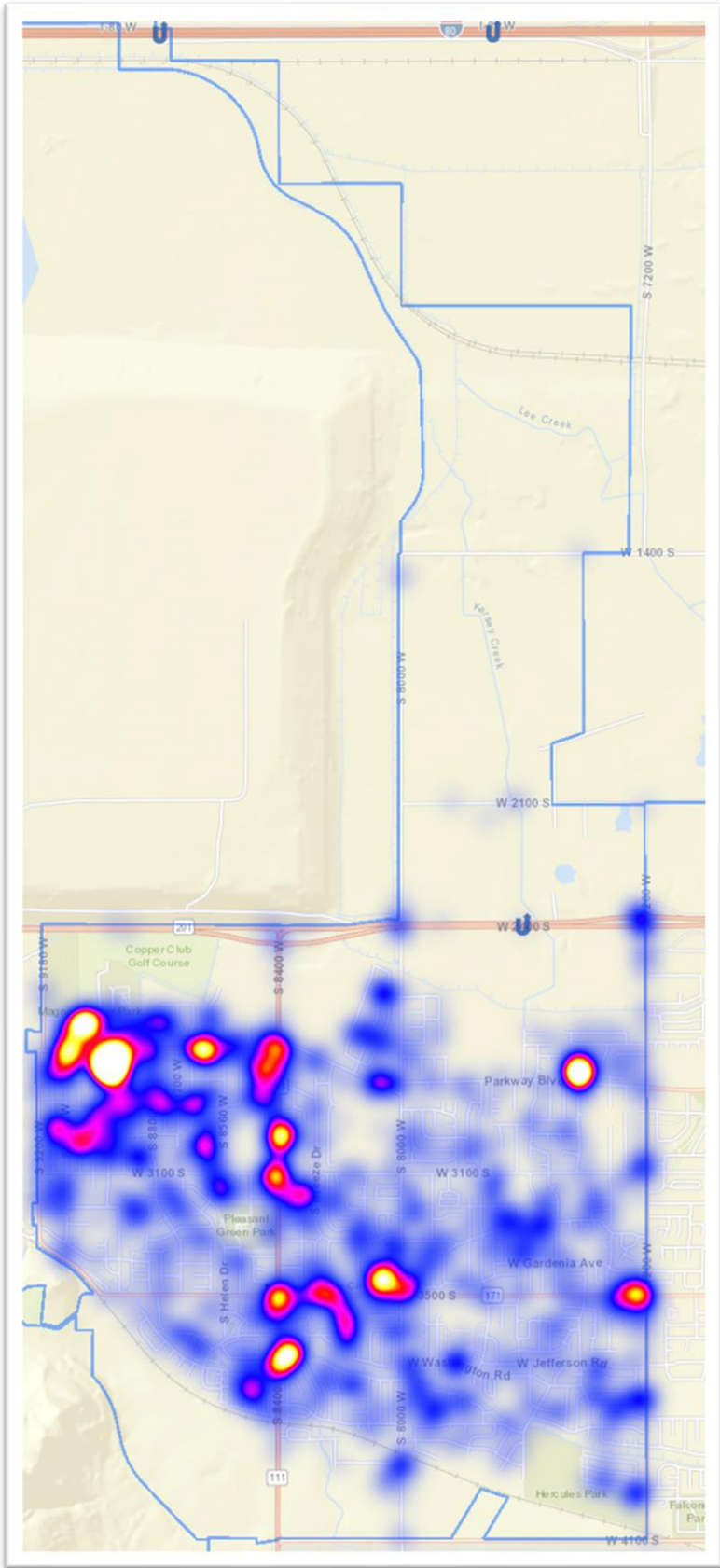
	CY 2020	CY 2019	CY 2018
<b>Fire Suppression</b>	65	49	58
<b>EMS</b>	1,418	1,381	1,398
<b>Hazardous Materials</b>	41	53	39
<b>Service Calls</b>	50	88	84
<b>Good Intent</b>	338	230	172
<b>False Calls</b>	83	112	84
<b>Other (Misc., Flood, Overpressure)</b>	5	6	5
<b>Total</b>	2,000	1,919	1,840
<b>Cancelled</b>	182	120	115
<b>Overall Total</b>	2,182	2,039	1,955

*Table 108 – Magna Call Type*

# Magna – 2020 Incidents and Heat Map



Map 161 – Magna Incident Calls by Type



Map 162 – Magna Call Volume Heat Map

## NFPA 1710

The National Fire Protection Association is an international nonprofit organization that is devoted to eliminating death, injury, property, and economic loss due to fire, electrical and related hazards. The NFPA makes recommendations on over 300 codes and standards. NFPA 1710 recommendations are based off 90<sup>th</sup> percentile times.

### – In Other Words...

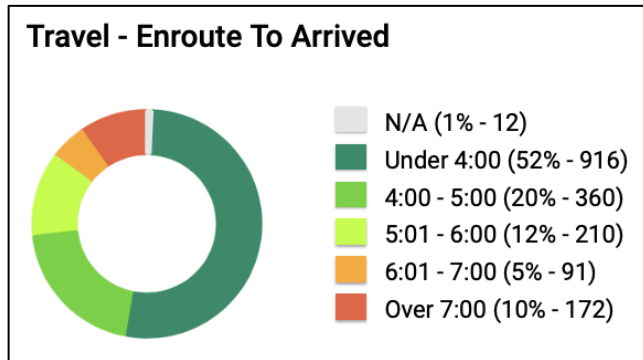
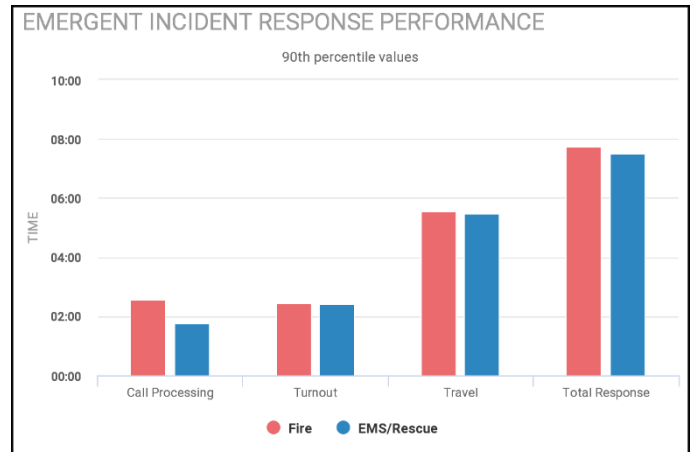
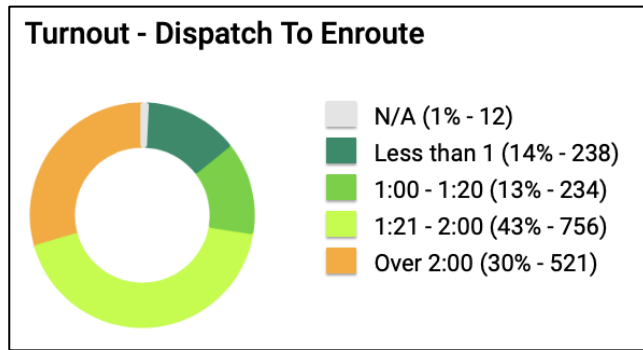
If a value is in the 90<sup>th</sup> percentile, it means the value is better than 90% of all other values in the dataset. In other words, it is within the top 10% of the values.

NFPA 1710 encompasses suggested standards for full-time fire departments and recommends the following times (all of which are at the 90<sup>th</sup> percentile): alarm processing – 64 seconds; turnout time for EMS responses – 60 seconds; turnout time for fire responses – 80 seconds; first arriver apparatus – 240 seconds (4 minutes); initial full-alarm assignment for low and medium hazard responses – 480 seconds (8 minutes); or initial full-alarm assignment for high hazard/high-rise responses – 610 seconds (10 minutes 10 seconds). The total response times are the cumulative totals of call processing time, turnout time, and travel time. NFPA 1710 recommends a total response time of 6:24 for the first arriving apparatus for fire and 6:00 for the first arriving apparatus for EMS.

### – Of Note...

NFPA 1710 response times have not been adopted by the UFA Board. One of the important elements of the community risk assessment and standards of cover is to identify current 90<sup>th</sup> percentile times (current baselines) within UFA and to identify realistic benchmarks for the UFA Board to consider for adoption.

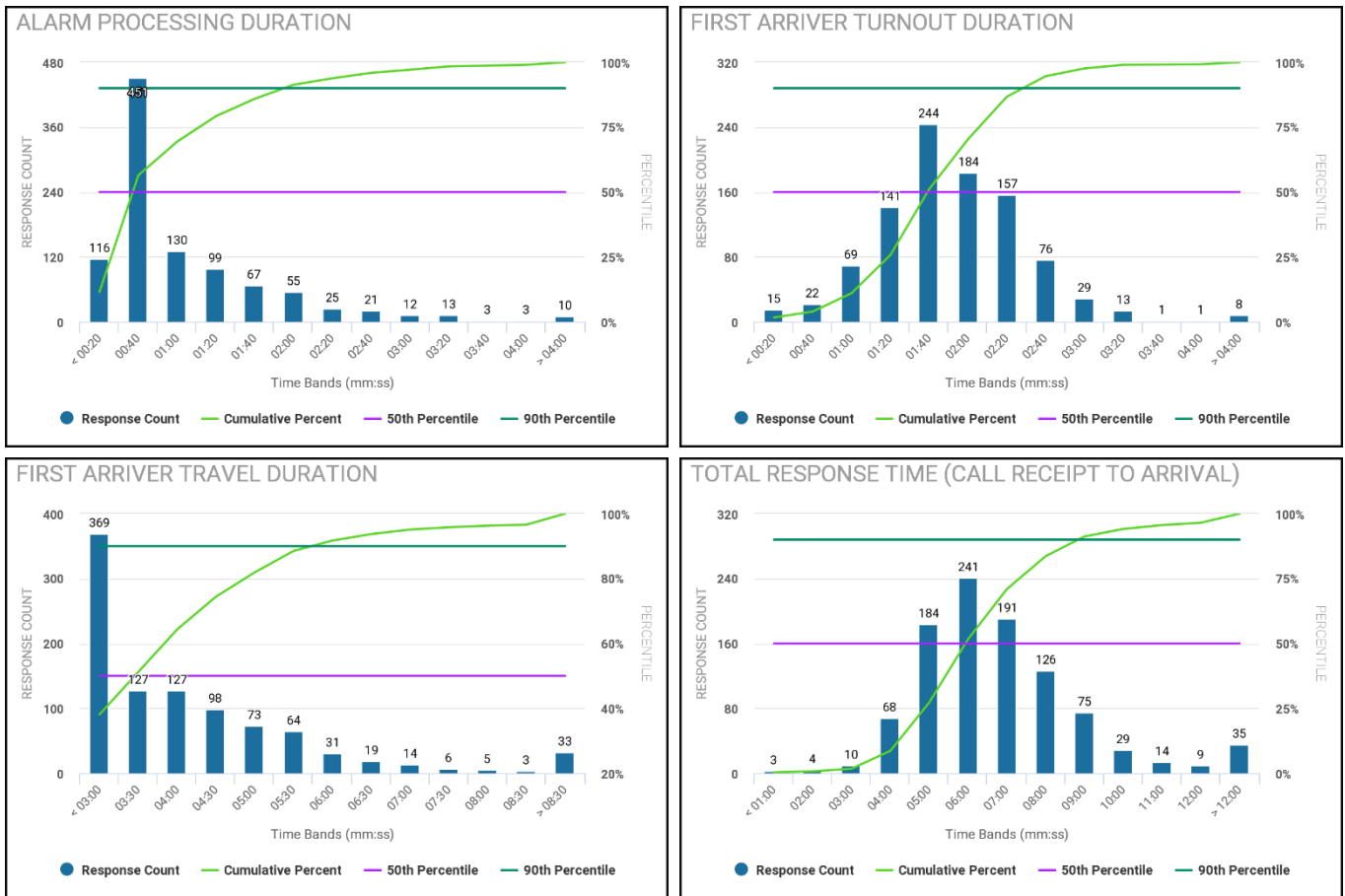
## Magna – 2020 Dispatch and Response Times



Urban	Call Processing: Fire	Turnout Time: Fire	Travel Time: Fire	Total Response: Fire	Call Processing: EMS	Turnout Time: EMS	Travel Time: EMS	Total Response: EMS
<b>Magna</b>	2:07	2:26	6:27	10:00	1:46	2:25	5:30	8:31
<b>UFA Urban 2018-2020</b>	2:16	2:39	7:36	10:34	1:47	2:32	6:29	9:18
<b>UFA Rural 2018-2020</b>	2:32	3:05	15:08	19:09	1:56	2:50	14:45	17:45
<b>NFPA 1710</b>	1:04	1:20	4:00	6:24	1:00	1:00	4:00	6:00

Table 109 – Magna 2020 Emergent Response Times, 90<sup>th</sup> percentile values

## Magna – 2020 Turnout and Travel Time



The charts above illustrate the alarm processing, turnout and travel times for all units responding to service calls within Magna (90<sup>th</sup> percentile). The alarm processing for fire was 2:07 and 1:46 for EMS; turnout time was 2:26 for fire responses and 2:25 for EMS responses; travel time was 6:27 for fire responses and 5:30 for EMS. The 90<sup>th</sup> percentile total response time was 10:00 for fire and 8:31 for EMS. For the charts above, they show both fire and EMS response times together.

### 📌 – Of Note...

One item to note is that if you were to add the processing time, the turnout time, and the travel time, it will not necessarily (and often doesn't), sum the total response time. This is due to some of the limitations within the datasets and gaps within timestamps. Where there are missing timestamps, those particular key performance indicators (KPI) are excluded as they cannot accurately be calculated out.



## Magna – 2020 Incidents by Time of Day

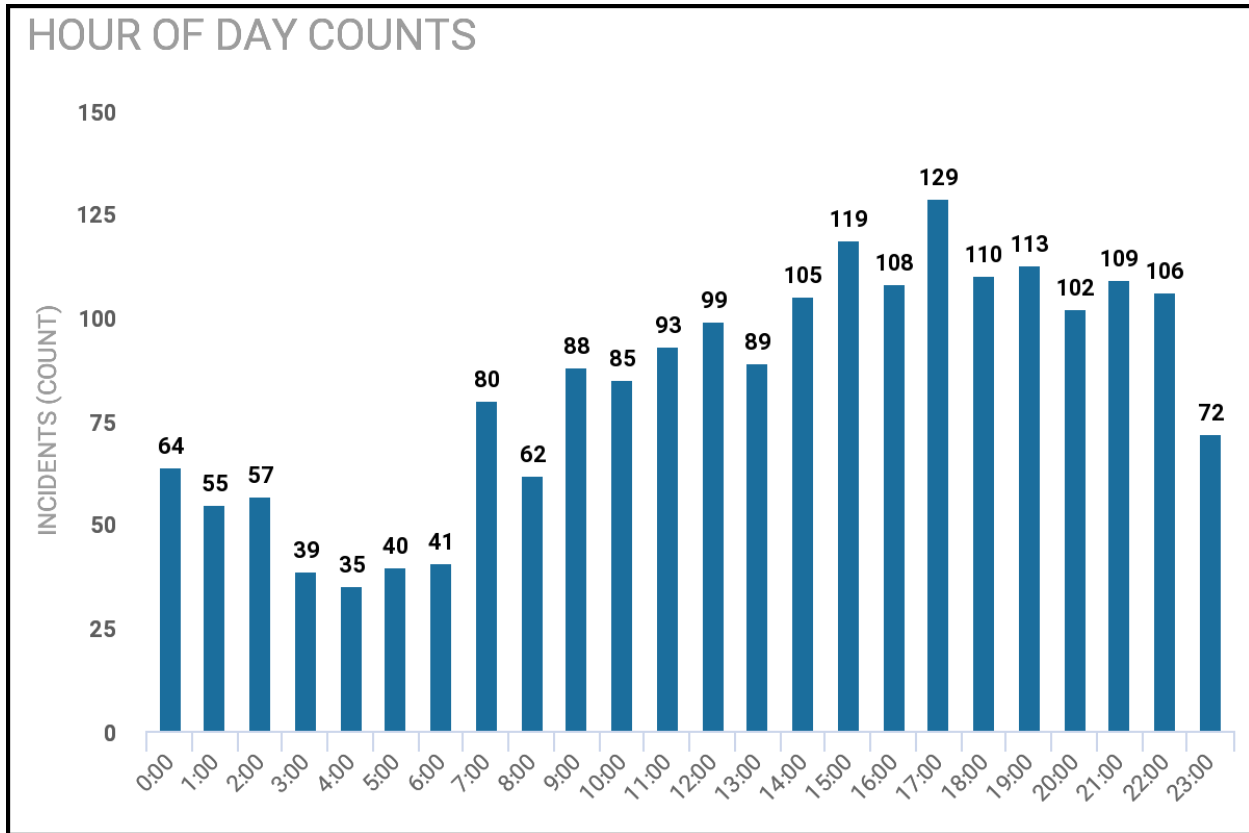


Chart 61 – Magna 2020 Incidents by Time of Day

The above table demonstrates the incidents by time of day and the time of greatest demand within Magna for all service calls. This chart illustrates that the greatest demand for service delivery begins to increase at 07:00 AM and starts to decrease at 05:00 PM.

## Magna – 2020 Incidents by Day of Week

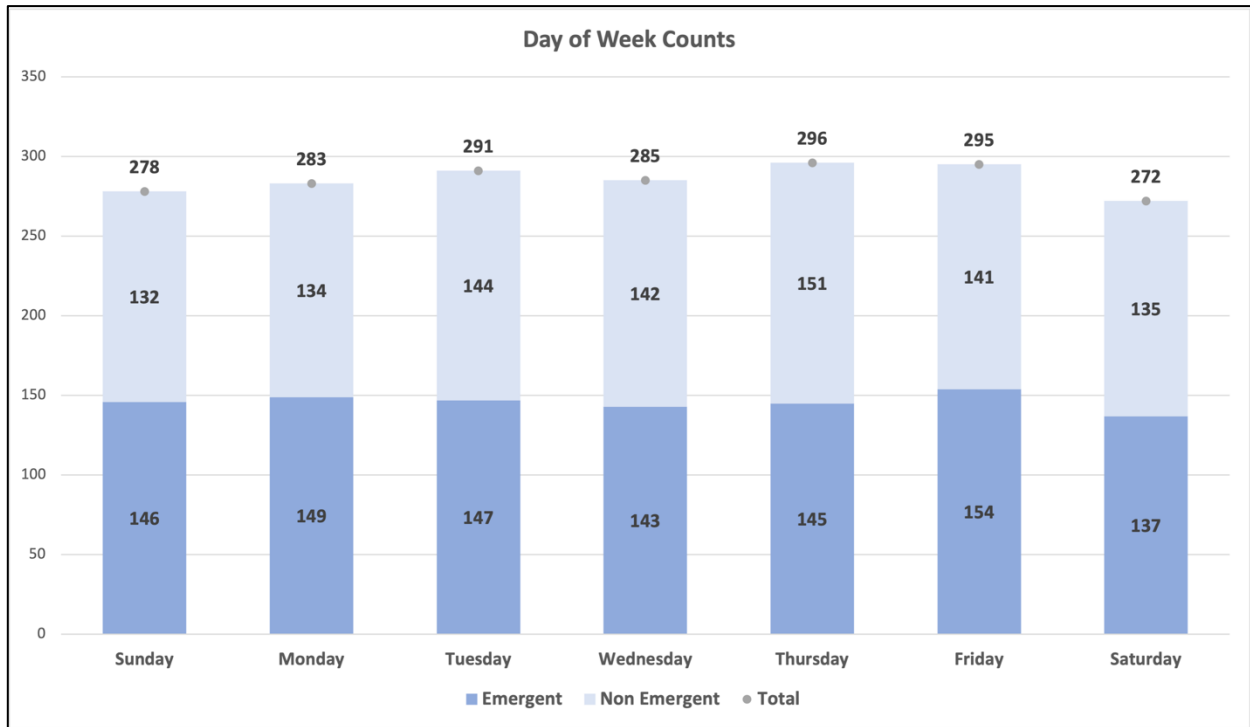


Chart 62 – Magna Incidents by Day of Week

This chart demonstrates the call volume based on the day of the week, with an increase in all calls as well as the peak volume for all calls in Magna occurring on Thursday.

## Magna – EMS Calls

EMS calls are filtered by final disposition codes and this data is taken from VECC and determined by the patient acuity at the time of call termination. Often times the EMS calls identified from final disposition are different than the number of EMS calls that were initially dispatched due to one being the initial call type, and one being what call type the call was closed as by responding fire crews.

	CY 2020	CY 2019	CY 2018
<b>ALS Transports</b>	517	512	530
<b>BLS Transports</b>	883	848	820
<b>Scene Release</b>	79	105	357
<b>Public Assistance</b>	6	5	10
<b>EMS Total Calls</b>	1,479	1,465	1,707

Note: There is possibly a difference if you were to add all calls due to data reporting mechanisms. Public assistance calls will sometimes get duplicated with a scene release, depending on dispatch code, but those calls do not carry across to the total calls. Also, cancelled calls go into a different final disposition so the numbers in the 'Incidents by Dispatch Type' are reflective of this difference.

Table 110 – Magna EMS Calls

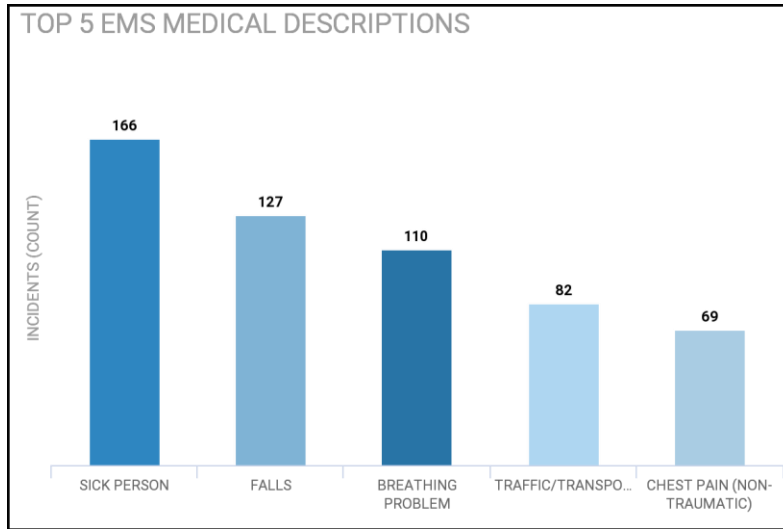


Chart 63 - Top 5 EMS Medical Calls – 2020

### Magna – 2020 Fire Incidents by Dispatch Type

NFIRS Description	Incident Count	% of Incidents
<b>Structure Fire</b>	34	44.7%
<b>Natural Vegetation Fire</b>	15	19.7%
<b>Outside Rubbish Fire</b>	11	14.5%
<b>Vehicle Fire</b>	10	13.2%

NFIRS Description	Incident Count	% of Incidents
<b>Special Outside Fire</b>	6	7.9%
<b>Fire, Other</b>	0	0%
<b>Mobile Property Fire</b>	0	0%
<b>Total</b>	76	100%

Table 111 – Magna 2020 Incidents by Dispatch Type

## Magna – Building Occupancy Classification and Risk Categories

Occupancy Classification	Low	Moderate	High	Maximum	Total
<b>Assembly</b>	8	3	5	0	16
<b>Commercial/Industrial</b>	7	0	6	0	13
<b>Educational</b>	0	0	5	1	6
<b>Government</b>	2	0	1	0	3
<b>Healthcare</b>	0	1	1	0	2
<b>Hazardous</b>	Unknown	Unknown	Unknown	Unknown	48*
<b>Storage</b>	0	0	0	0	0
<b>Residential</b>	4,180	2,453	57	0	6,690
<b>Residential – Multi Unit</b>	96	49	3	2	150
<b>High Rise</b>	N/A	N/A	0	0	0
<b>Total</b>	4,293	2,506	78	3	6,928

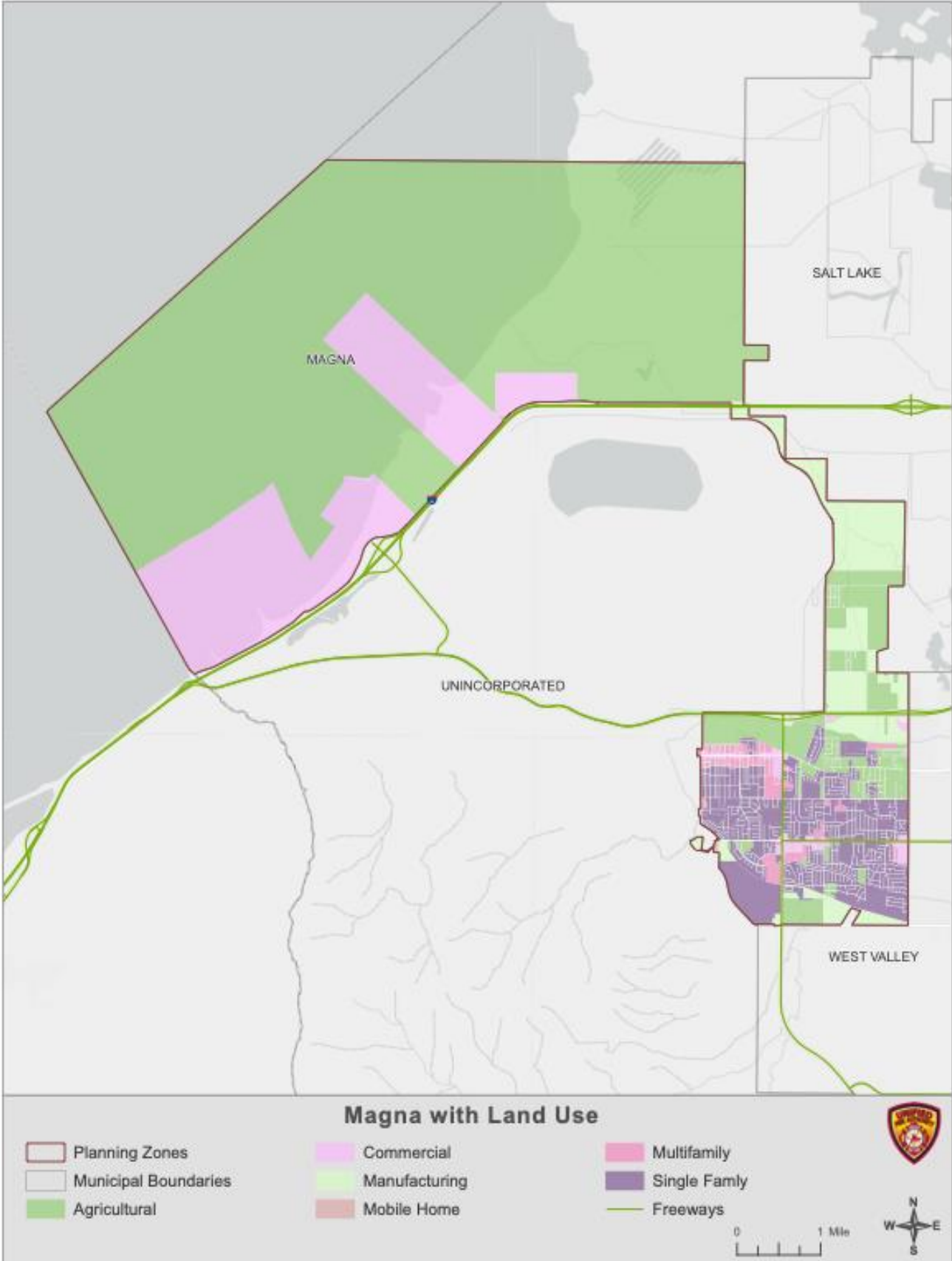
\*There is currently a gap within the identification of building size regarding hazardous materials sites. This is a gap that is being closed over the next several years as we collect the data and information.

*Table 112 – Magna Building Occupancy and Risk Categories*

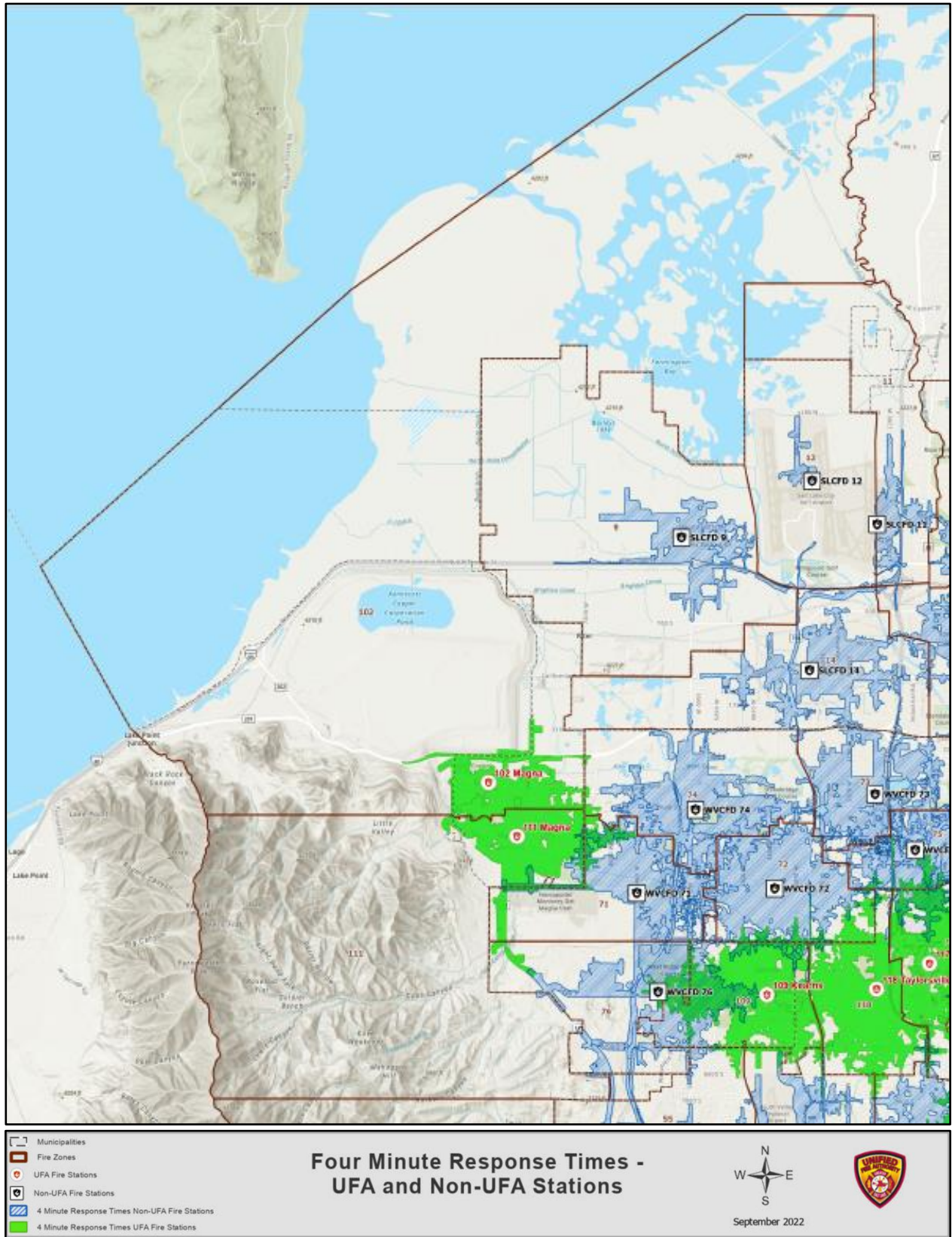
### Building Size / Considerations

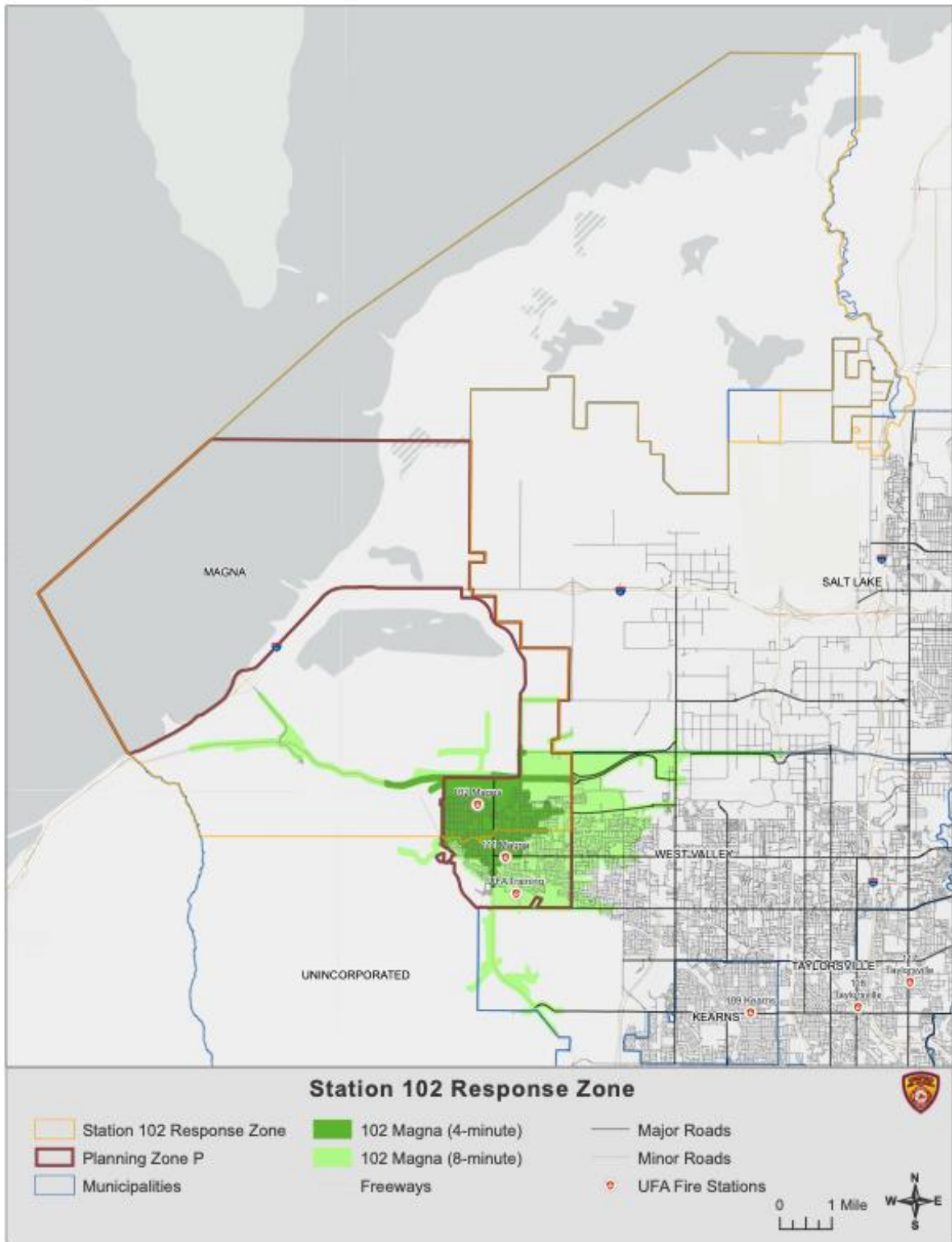
For purposes of risk classification, UFA has outlined the following risk classifications for building size, regardless of occupancy type (except residential). Low risk = 1-4,999 square feet. Moderate risk = 5,000-9,999 square feet. High risk = 10,000-99,999 square feet. Maximum risk = >100,000 square feet.

For residential occupancies, the following classifications apply. Low risk = 1-1,999 square feet. Moderate risk = 2,000-3,999 square feet. High risk = 4,000-9,999 square feet. Maximum risk = ≥10,000 square feet.

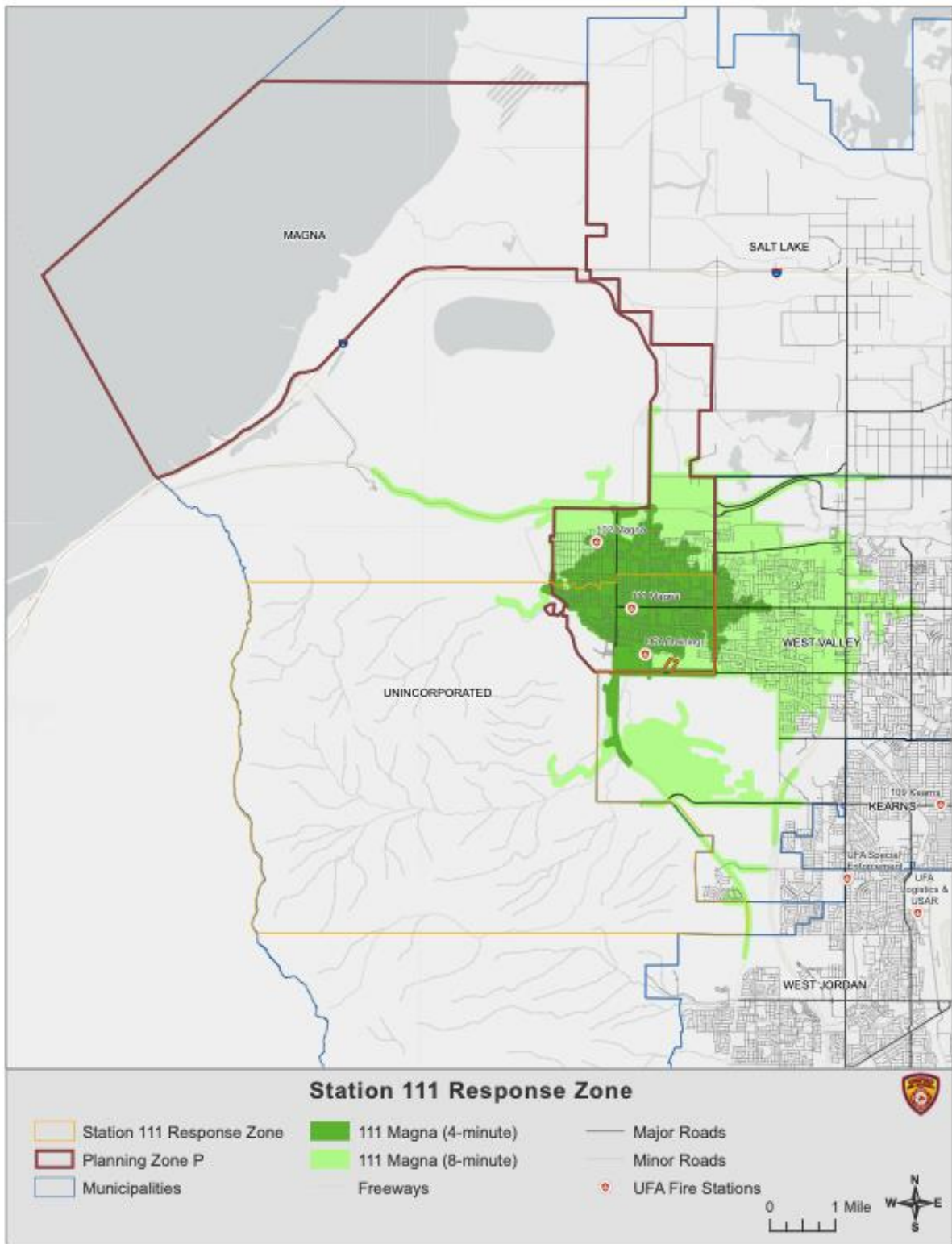


Map 163 – Magna with Land Use





Map 165 - Station 102 4- and 8-Minute Travel Times

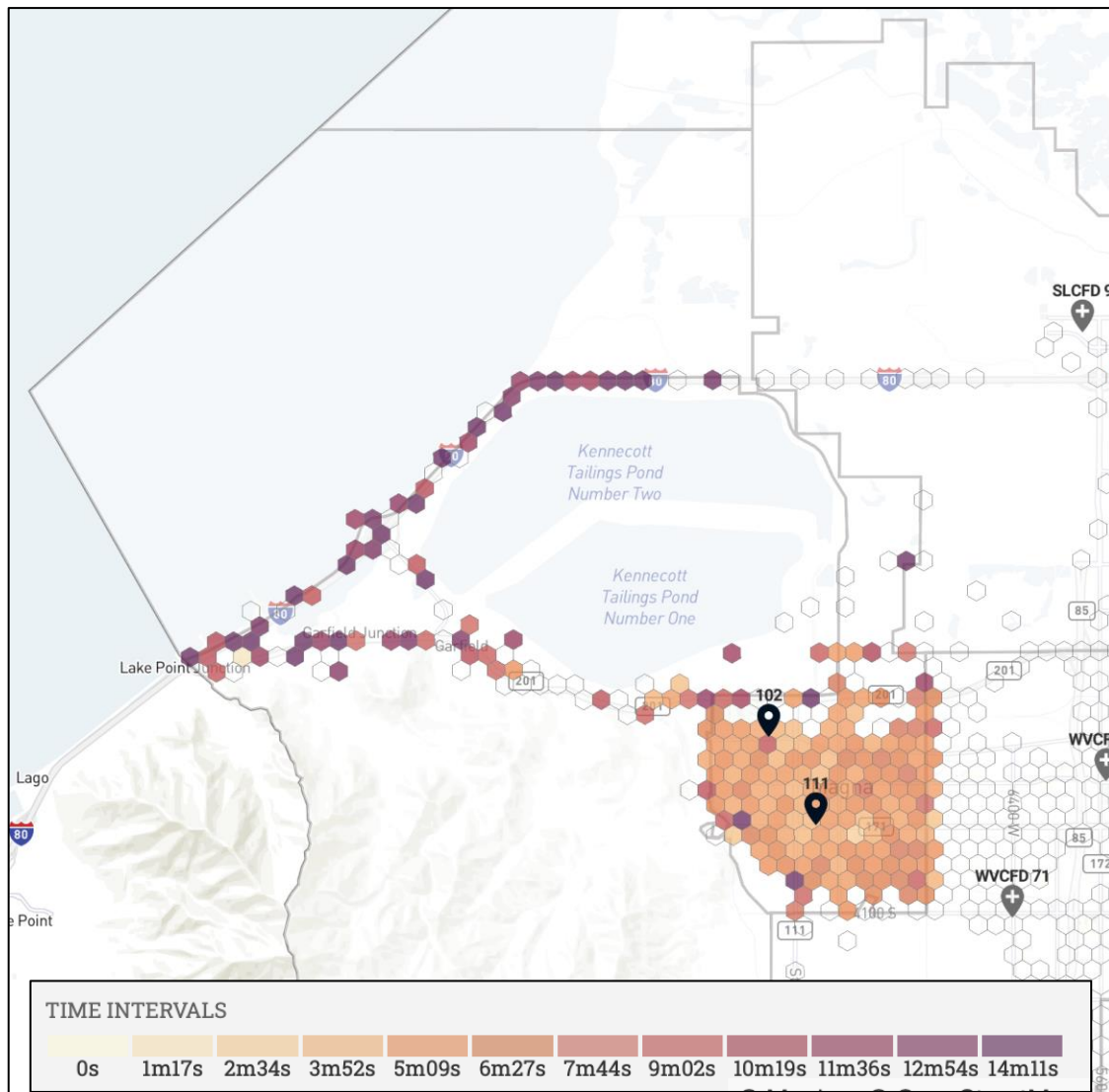


Map 166 - Station 111 4- and 8-Minute Travel Times



## Magna – First Arriver Travel Times

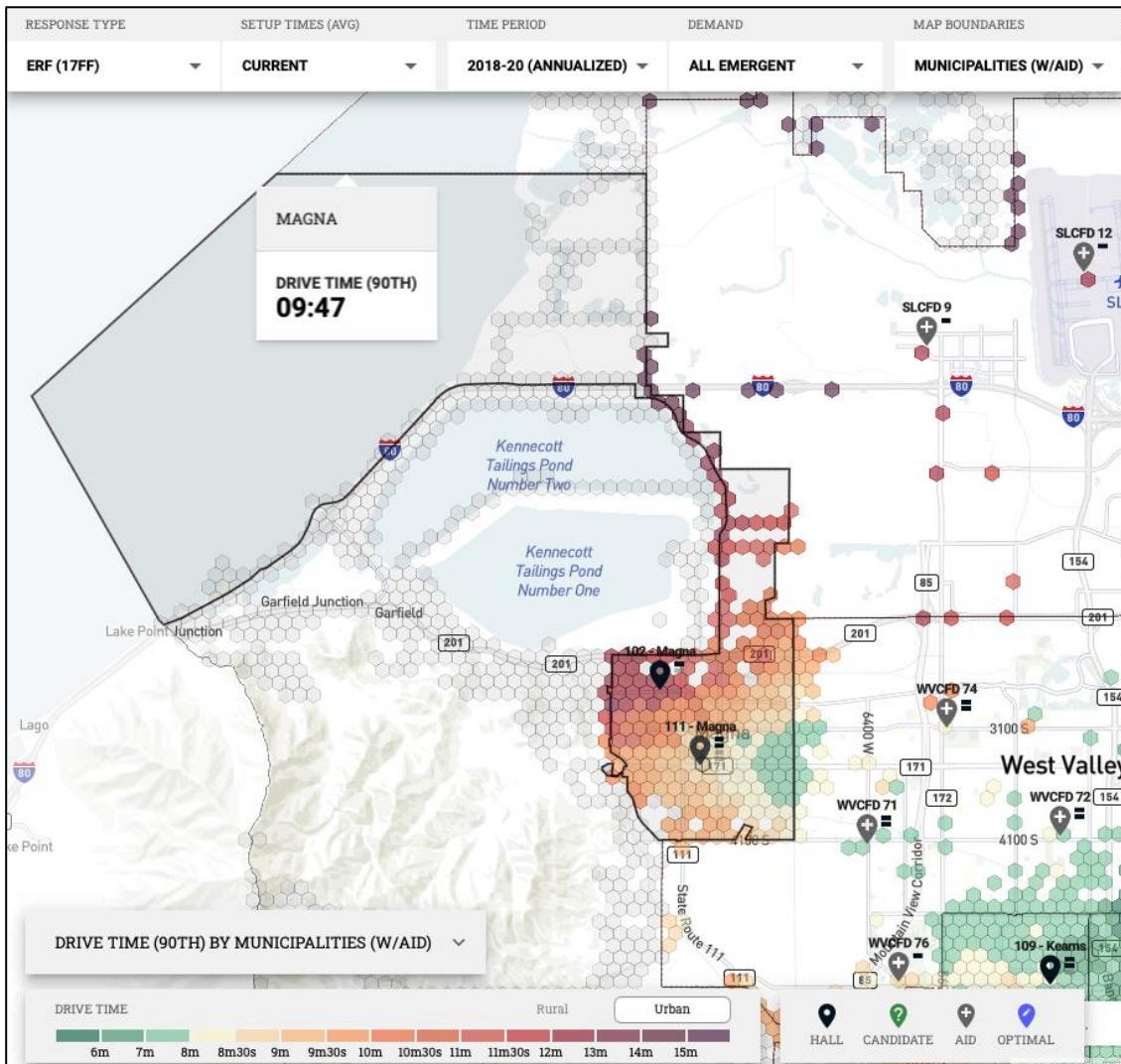
The following maps demonstrate the 90<sup>th</sup> percentile of travel times based off the last three years of historical data (2018-2020). The darker the color is, the more delayed the response, with the green and light colors demonstrating below or near target times. The darker colors on the bar within 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 (90<sup>th</sup> percentile) from notification of the alarm to the arrival of the first arriving apparatus — not an adopted standard by UFA. UFA is currently in process of identifying benchmark and target standards to be adopted by the UFA Board of Directors. Currently within Magna, the 90<sup>th</sup> percentile drive time is 6:27 for fire and 5:30 for EMS.



Map 167 – Magna Response Times – All Aid

## Magna – Residential Fire Effective Response Force (17 FF)

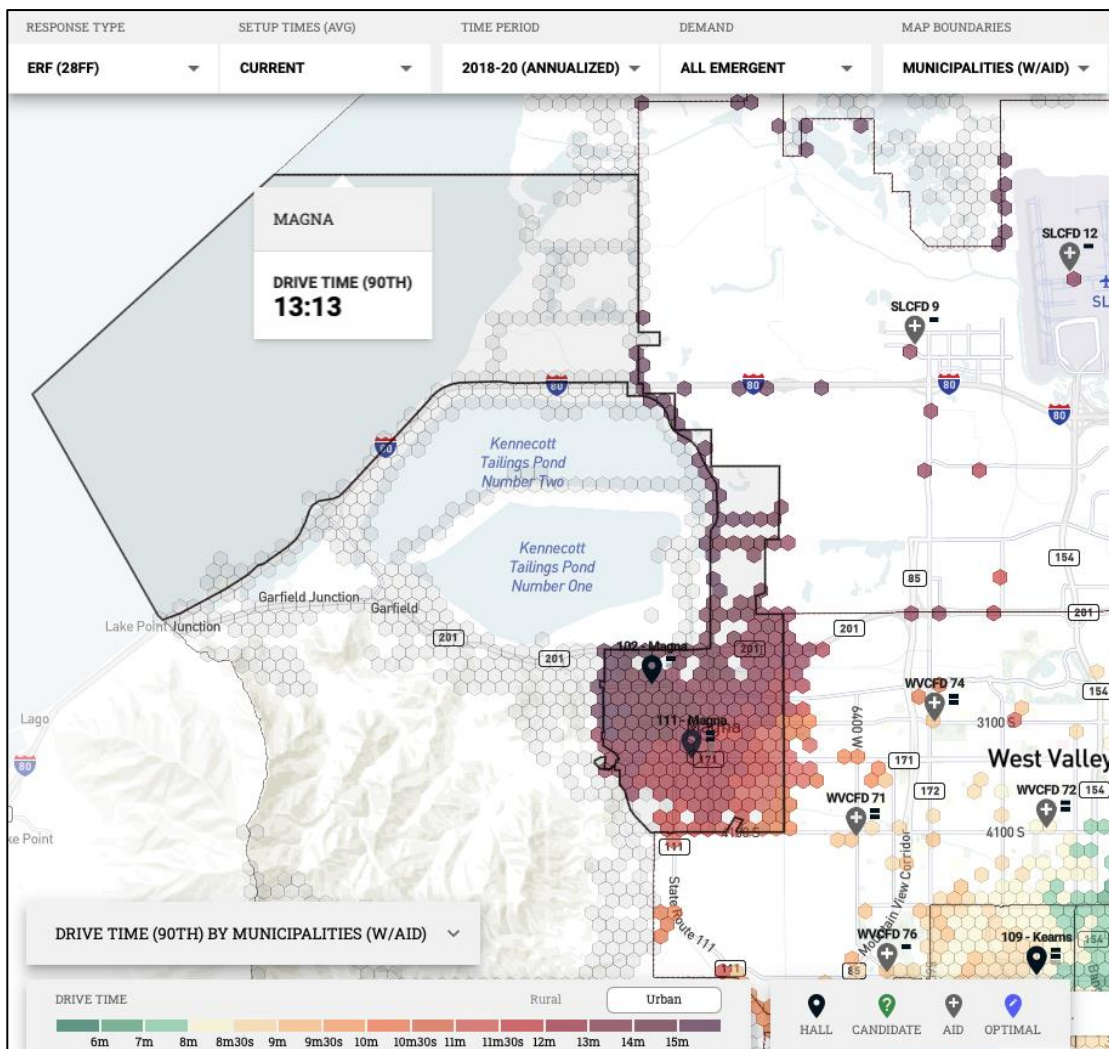
This map demonstrates the coverage of a multi-unit response to a residential fire based off all apparatus being within their station. The green to light yellow demonstrates the ability to have seventeen firefighters (a residential fire effective response force) on scene based off a residential urban fire force response. This map's drive times (or travel times) are based off the current NFPA 1710 standard of eight minutes (90<sup>th</sup> 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. UFA is currently in process of identifying benchmark and target standards to be adopted by the UFA Board of Directors. Based off predictive data, it is projected that the 90th percentile for 17 firefighters to arrive on scene would be 9:47.



Map 168 – Magna 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 (90<sup>th</sup> 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. UFA is currently in process of identifying benchmark and target standards to be adopted by the UFA Board of Directors. Based off predictive data, it is projected that the 90th percentile for 28 firefighters to arrive on scene would be 13:13.



Map 169 – Magna Response Times – Commercial Fire Effective Response Force (28 FF)

## Magna 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	Mod	Mod

Table 113 – Kearns Hazard Matrix

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

### Infrastructure – Transportation

There are several high-level transportation routes within Magna or directly bordering the city. SR201 runs directly on the west side of the city and I-80 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 12.7 linear miles of Interstate/US Highway, 9.4 linear miles of State Highways, and 123 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 nine 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 (see Map 8), 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 1,138 URM's, which constitutes about 4.63% 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 also 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 two 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

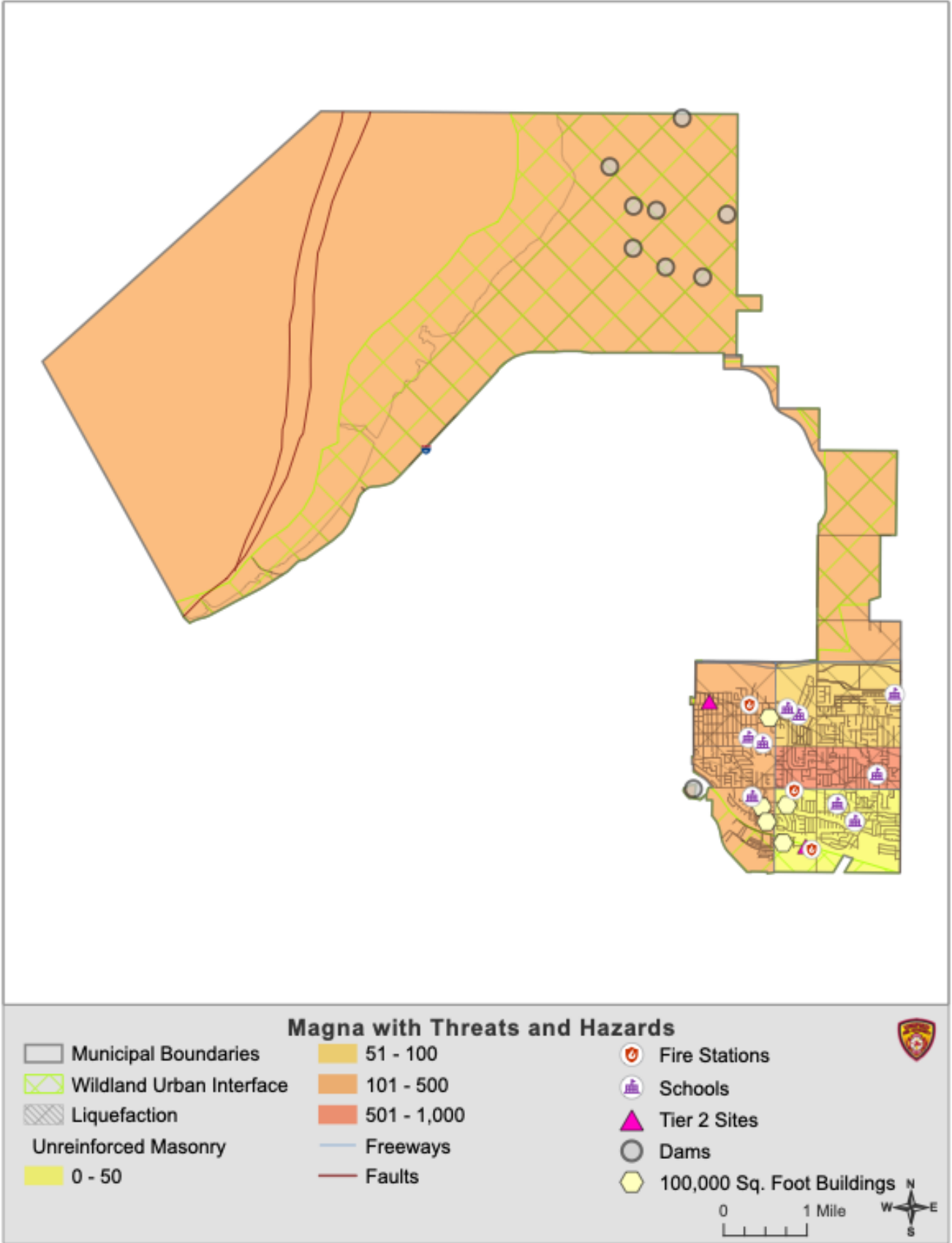
Magna has six elementary schools, two middle schools, and one high schools within city boundaries which places it in the moderate-risk category.

## 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
- FedEx Warehouse – 2490 S 7600 W

- G-L Industries – 3909 S 8000 W
- Kennecott/Rio Tinto, Smelter / Refinery / Powerhouse – Kennecott Property
- Magna Medical – 3665 S 8400 W
- Oquirrh Hill Apts – 2850 S 8400 W
- Saltair Venue – 12408 W Saltair Dr



Map 170 – Magna with Combined Hazards

## Life and Property Loss

From 2015-2020, there has been one fatality attributed to fire. There has been a total estimate of \$2,316,619.00 of property loss and a total estimate of \$776,081.00 of content loss due to fire.

## Unified Fire Shared Services

With a regional-response model, the Unified Fire Authority brings special services to bear when the situation calls for it, not relying on automatic or mutual aid which provides a quicker and more effective delivery of service to its residents.

## Battalion Chiefs

Unified Fire Authority staffs three operational battalion chiefs (BCs) daily, in addition to a 40-hour Operations Chief (OC). These BCs and OC respond to large, complex, or expanding incidents — providing incident command, safety, and operational direction. Each BC covers an area of UFA's service area and respond to calls for service in any jurisdiction. Battalion 11 is housed out of Station 101 in Millcreek, Battalion 12 is housed out of Station 121 in Riverton, and Battalion 13 is housed out of Station 118 in Taylorsville.

## Heavy Rescue Companies

Heavy Rescue specializes in structural collapse, confined space rescue, trench collapse rescue, vehicle extrication, machinery disentanglement, rope rescue (high angle, low angle, rigging) and rapid intervention (Firefighter Rescue). The UFA Heavy Rescue Program consists of two independent rescue companies strategically placed in UFA's jurisdiction. Station 117 in Taylorsville, and Station 121 in Riverton house our Heavy Rescue Teams.

## Hazardous Materials (HazMat) Companies

The Hazardous Materials Teams provide an efficient, effective, and professional Hazardous Material Mitigation response. HazMat Companies respond to hazardous material releases/spills for the purpose of mitigating the release/spill. They select and use proper specialized chemical personal protective equipment dependent on the nature of the incident. The HazMat Program consists of two independent HazMat



companies strategically placed in UFA's jurisdiction. Station 124 in Riverton, and Station 126 in Midvale house our HazMat Teams.

### Water Rescue Teams

UFA has surface water capability, swift water capability, and ice rescue capability. These companies respond to victims recreating in our swift canyon rivers and our lakes and reservoirs. Station 116 in Cottonwood Heights, Station 117 in Taylorsville, Station 121 in Riverton, and Station 123 in Herriman house Water Rescue Companies.

### Wildland Division

UFA's Wildland Division provides highly trained and experienced wildland fire and all-risk response resources to local, state, and federal incidents. The Wildland Division oversees the training and certification of UFA personnel for response to wildland fires and all-hazard incidents. We also work with UFA Communities to educate residents on wildfire preparedness and provide mitigation services to reduce the risks of wildfire. UFA has a special capability where a Duty Officer is able to act as the Fire Warden within UFA's jurisdictions, allowing the ordering of resources much more quickly than having to rely on a Fire Warden that may or may not be readily accessible. Station 103 in Herriman currently houses the Duty Officer.

### Investigations Division

Arson and Explosive related incidents are considered two of the most dangerous criminal activities that threaten our citizens. The need exists to protect the citizens of our jurisdiction from loss of life and property by reducing the crime of arson, arson-related crimes, improvised explosive devices (IEDS) and the prevention of future violent crimes. The Investigations Division addresses this need by establishing a sound foundation of effective enforcement, focusing on the apprehension of the offender, while in partnership with other Local, state and federal law enforcement agencies. The team utilizes highly-trained Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) certified K-9's that assist with accelerant and explosives detection.

### Urban Search & Rescue

A FEMA Urban Search and Rescue Task Force is a team of individuals which serve as a resource for disaster response at local, state, and federal levels. It is comprised mainly of firefighters but includes structural engineers, medical professionals,

canine/handler teams and emergency managers with highly specialized training in urban search and rescue environments.

Utah Task Force 1 (UT-TF1) is one of 28 Type I, Federal Urban Search & Rescue (US&R) Task Forces in the United States. This program brings a highly trained, multi-hazard Task Force that is especially designed to respond to a variety of emergencies/disasters including earthquakes, hurricanes, tornadoes, floods, terrorist acts and hazardous material releases. Fire department personnel that are task force members receive specialized training and skills that directly benefit Unified Fire Authority.

### [Salt Lake County Emergency Management](#)

The Salt Lake County Division of Emergency Management serves our citizens by directing and coordinating resources for disasters and emergencies through preparation, planning, mitigation, response, and recovery. The Salt Lake County Emergency Coordination Center is activated and manned during any event—from small-scale to large-scale occurrences—to disasters both natural and man-made that can or have exceeded the resources of any particular jurisdiction. Currently, the Salt Lake County ECC assists and obtains resources for the 22 jurisdictions located within the Salt Lake Valley. Salt Lake County EM assists these jurisdictions through the activation of 15 Emergency Support Functions (ESFs) filled by employees from a multitude of backgrounds. The ESF employees have authority throughout Salt Lake County to fill and order additional support for the operations occurring in the field until the impacted jurisdiction can return to their normal operations and functions. The Emergency Management Division is committed to keeping the public safe through community outreach, training, dissemination of important public information, training of staff and the creation of a more resilient community through mitigation, preparation, response, and recovery. The ECC has been activated for many events such as Child Abduction Response Team (CART) Deployments, wildland fires such as the Rosecrest and Machine Gun fires, flooding, severe weather events, earthquakes, civil unrest, the COVID-19 pandemic, Line of Duty Deaths (LODD), and many other events.

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## Unified Fire Authority

3380 South 900 West  
Salt Lake City, UT 84119

# Midvale City

## Community Risk Assessment



Photo Courtesy of: Steve Milner/Gephardt Daily



## Midvale City Planning Zone

UFA has two stations within the Midvale City Planning Zone covering a total of 5.92 square miles with a population of 36,028 and responded to 4,031 calls for service in 2020.

Planning Zone	Population	Population Percentage of UFA	Square Miles	Population Density per Sq Mile	Classification
<b>Midvale City</b>	36,028	7.99%	5.92	6,086	Urban

Midvale City has increased its population from 27,909 in 2010 to 36,028 in 2020, showing an increase of 22.54% over a ten-year timeframe. Providing an exponential growth pattern and if all things remain equal, chart 35 demonstrates that Midvale City could possibly grow to 52,584 by the year 2040.

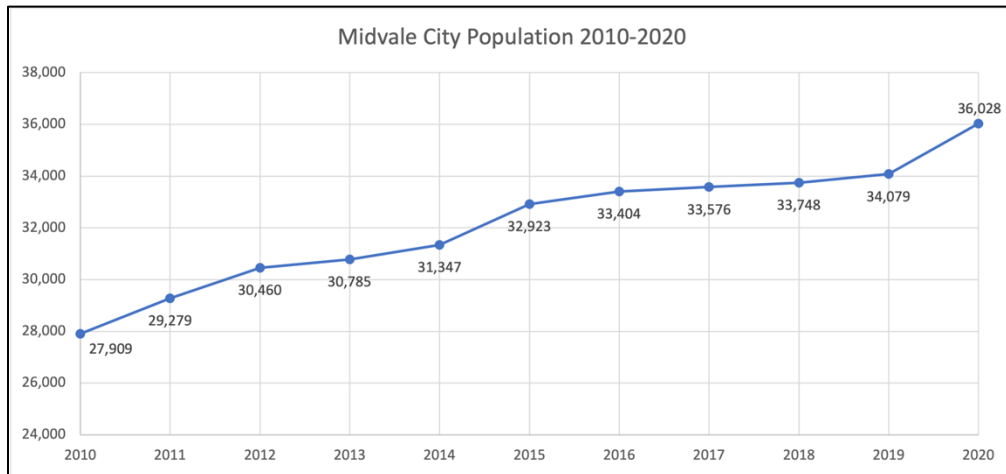


Chart 64 – Midvale City Population 2010-2020

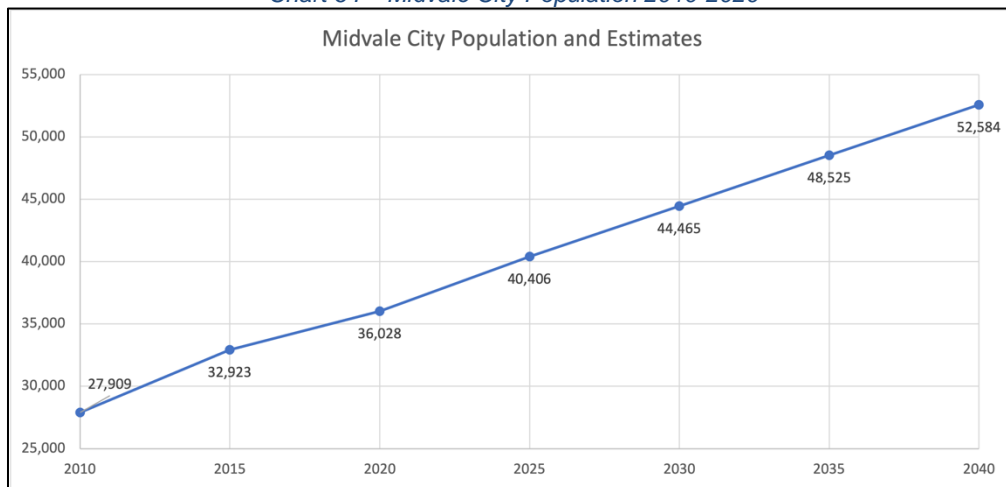




Chart 65 – Midvale City Population and Estimates 2010-2040

## Midvale City Station Information

<p><b>Station 125 information:</b></p> <ul style="list-style-type: none"><li>• Owner – Midvale City</li><li>• Opened – 1988 (Currently being rebuilt)</li><li>• Address – 7683 S. Holden Street</li><li>• Staffing and Apparatus –<ul style="list-style-type: none"><li>○ Type 1, ME 125 (4 persons)</li><li>○ MA 225 (2 part-time persons – 24 hour)</li><li>○ Type 6, Brush Truck (cross-staffed)</li></ul></li></ul>	 <p><i>Image 18 – Midvale City Station 125</i></p>
<p><b>Station 126 information:</b></p> <ul style="list-style-type: none"><li>• Owner – UFSA</li><li>• Opened – 2000</li><li>• Address – 607 E 7200 S</li><li>• Staffing and Apparatus –<ul style="list-style-type: none"><li>○ Type 1, ME 126 (4 persons)</li><li>○ MA 126 (2 persons)</li><li>○ Hazardous Material (cross-staffed)</li><li>○ Operations Chief (1 person)</li></ul></li></ul>	 <p><i>Image 19 – Midvale City Station 126</i></p>

## Surrounding UFA and Automatic/Mutual Aid Response Stations

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

- UFA Station 110 (Cottonwood Heights), with a four-person medic ladder and a two-person medic ambulance
- UFA Station 116 (Cottonwood Heights), with a three-person medic engine

- UFA Station 117 (Taylorsville City), with a four-person medic ladder, a four-person medic engine and a two-person medic ambulance
- UFA Station 118 (Taylorsville City), with a four-person medic engine and a two-person medic ambulance
- Sandy City Station 31, with a three-person medic engine and a two-person medic ambulance
- Sandy City Station 32, with a three-person medic engine and a two-person medic ambulance
- Sandy City Station 34, with a three-person medic engine
- Sandy City Station 35, with a three-person medic engine and a two-person medic ambulance
- South Jordan City Station 61, with a five-person ladder truck, a two-person medic ambulance
- South Jordan City Station 63, with a three-person medic engine and a two-person medic ambulance
- West Jordan City Station 52, with a three-person engine and a two-person medic ambulance
- West Jordan City Station 53, with a three-person medic engine and a two-person medic ambulance
- Murray City Station 81, with a three-person medic engine and a two-person medic ambulance
- Murray City Station 82, with a three-person medic engine and a two-person medic ambulance
- Murray City Station 83, with a three-person medic engine and a two-person medic ambulance



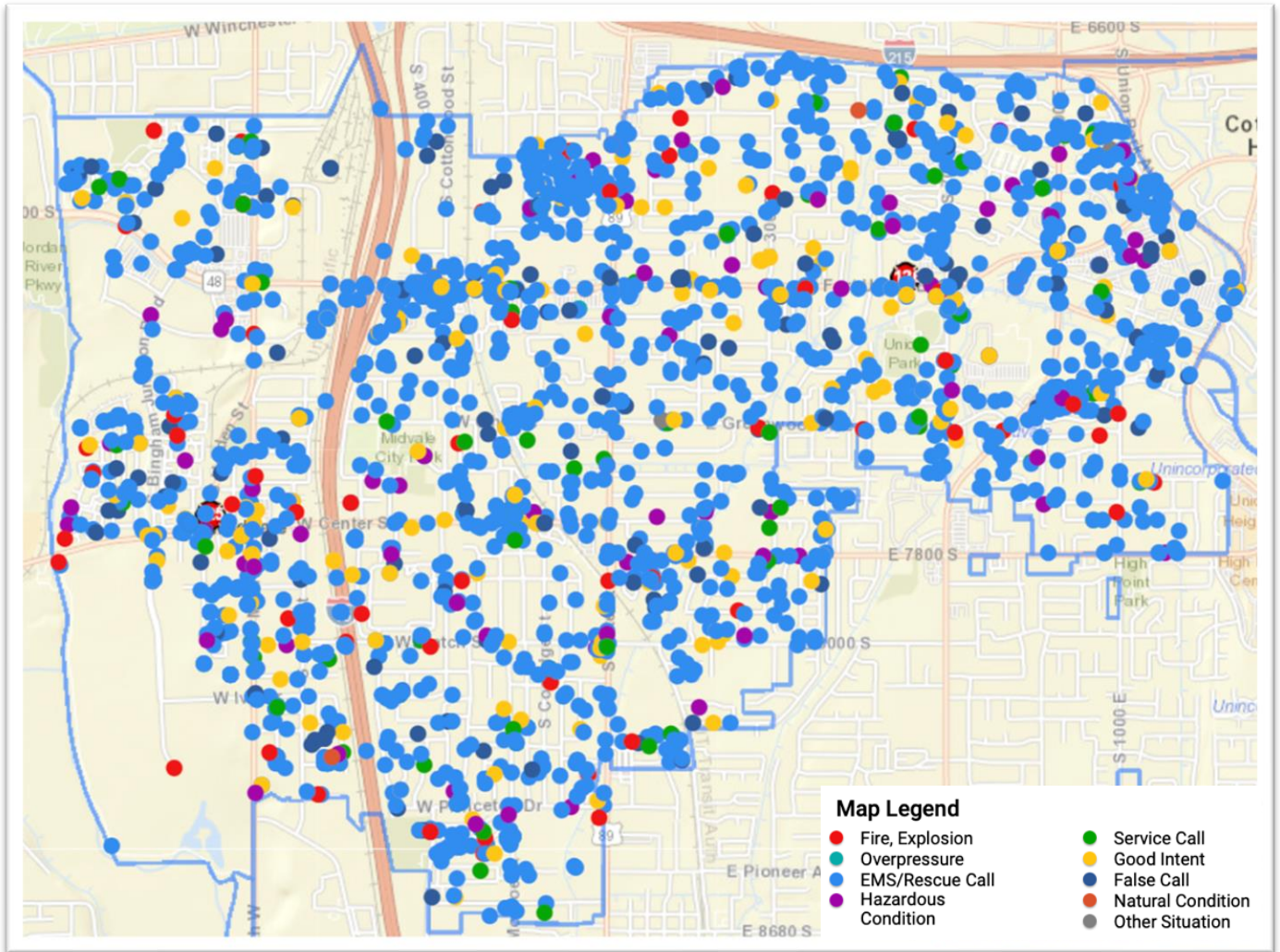
## Midvale – Incidents by Dispatch Type

The following data is what the NFIRS type was when crews arrived on scene. This may be different than what was originally dispatched, including a reclassification of a call type from one to another. Cancelled calls occur if the company is cancelled en route to a call and never arrives on scene, which then changes the dispatch type to an NFIRS 611 call type.

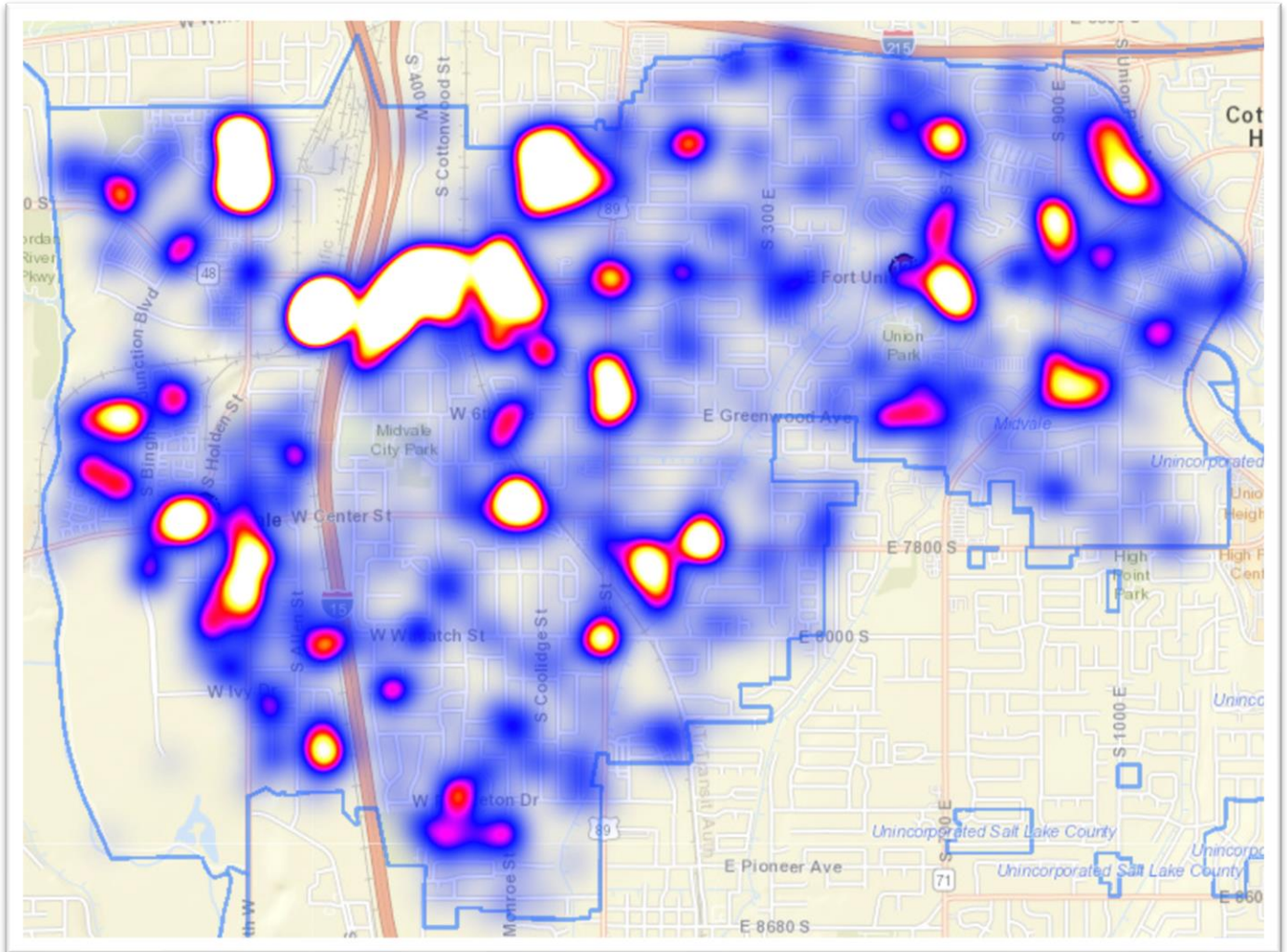
	CY 2020	CY 2019	CY 2018
<b>Fire Suppression</b>	77	52	59
<b>EMS</b>	2,583	2,434	2,622
<b>Hazardous Materials</b>	81	47	51
<b>Service Calls</b>	117	128	105
<b>Good Intent</b>	607	492	352
<b>False Calls</b>	208	203	172
<b>Other (Misc., Flood, Overpressure)</b>	5	2	6
<b>Total</b>	<b>3,679</b>	<b>3,358</b>	<b>3,367</b>
<b>Cancelled</b>	352	258	242
<b>Overall Total</b>	<b>4,031</b>	<b>3,616</b>	<b>3,609</b>

*Table 114 – Midvale City Call Type*

# Midvale City – 2020 Incidents and Heat Map



Map 171 – Midvale City Incident Calls by Type



Map 172 – Midvale City Call Volume Heat Map

## NFPA 1710

The National Fire Protection Association is an international nonprofit organization that is devoted to eliminating death, injury, property, and economic loss due to fire, electrical and related hazards. The NFPA makes recommendations on over 300 codes and standards. NFPA 1710 recommendations are based off 90<sup>th</sup> percentile times.

### 💡 – In Other Words...

If a value is in the 90<sup>th</sup> percentile, it means the value is better than 90% of all other values in the dataset. In other words, it is within the top 10% of the values.

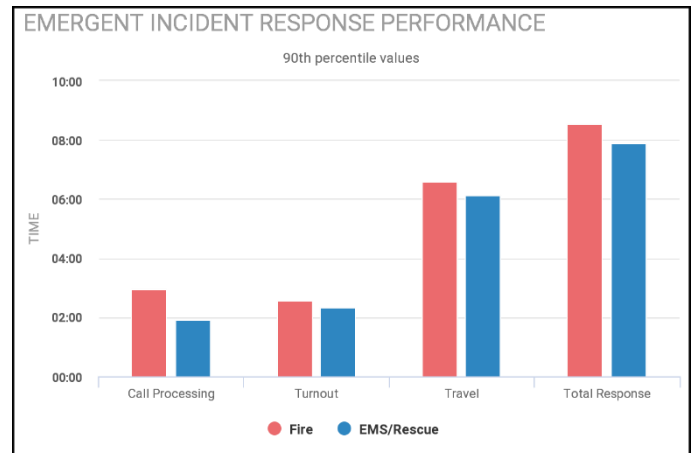
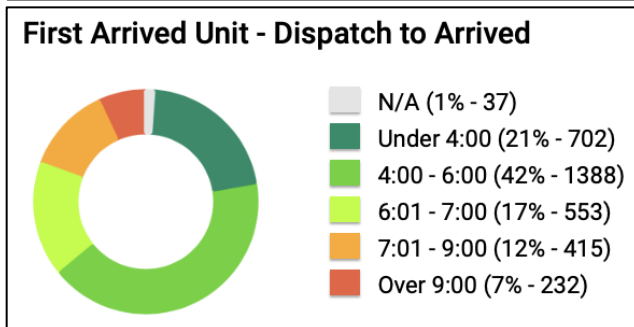
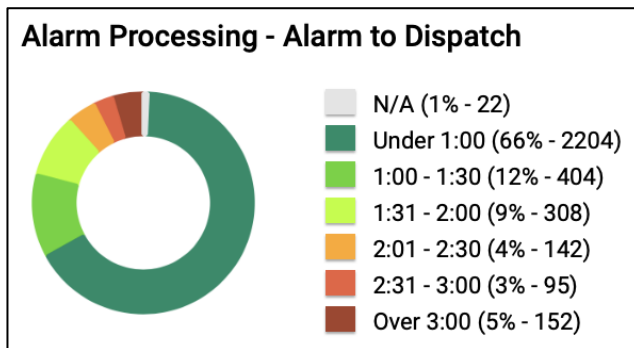
NFPA 1710 encompasses suggested standards for full-time fire departments and recommends the following times (all of which are at the 90<sup>th</sup> percentile): alarm processing – 64 seconds; turnout time for EMS responses – 60 seconds; turnout time

for fire responses – 80 seconds; first arriver apparatus – 240 seconds (4 minutes); initial full-alarm assignment for low and medium hazard responses – 480 seconds (8 minutes); or initial full-alarm assignment for high hazard/high-rise responses – 610 seconds (10 minutes 10 seconds). The total response times are the cumulative totals of call processing time, turnout time, and travel time. NFPA 1710 recommends a total response time of 6:24 for the first arriving apparatus for fire and 6:00 for the first arriving apparatus for EMS.

**📌 – Of Note...**

NFPA 1710 response times have not been adopted by the UFA Board. One of the important elements of the community risk assessment and standards of cover is to identify current 90th percentile times (current baselines) within UFA and to identify realistic benchmarks for the UFA Board to consider for adoption.

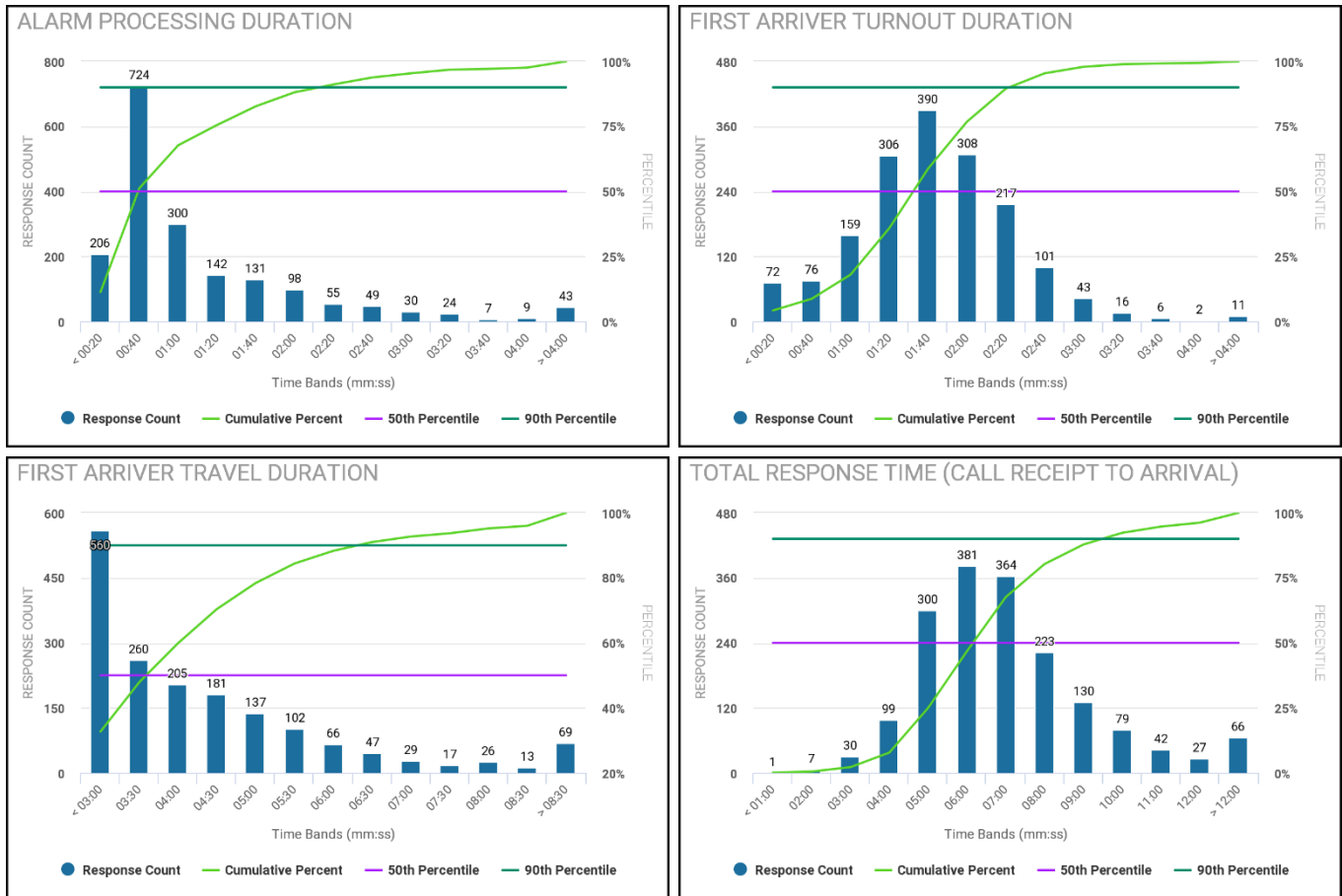
**Midvale City – 2020 Dispatch and Response Times**



Urban	Call Processing: Fire	Turnout Time: Fire	Travel Time: Fire	Total Response: Fire	Call Processing: EMS	Turnout Time: EMS	Travel Time: EMS	Total Response: EMS
Midvale	2:40	2:22	7:32	10:07	1:51	2:21	6:19	9:04
UFA Urban 2018-2020	2:16	2:39	7:36	10:34	1:47	2:32	6:29	9:18
UFA Rural 2018-2020	2:32	3:05	15:08	19:09	1:56	2:50	14:45	17:45
NFPA 1710	1:04	1:20	4:00	6:24	1:00	1:00	4:00	6:00

Table 115 – Midvale City 2020 Emergent Response Times, 90<sup>th</sup> percentile values

### Midvale City – 2020 Turnout and Travel Time



The charts above illustrate the alarm processing, turnout and travel times for all units responding to service calls within Midvale City (90<sup>th</sup> percentile). The alarm processing for fire was 2:40 and 1:51 for EMS; turnout time was 2:22 for fire responses and 2:21 for EMS responses; travel time was 7:32 for fire responses and 6:19 for EMS. The 90<sup>th</sup> percentile total response time was 10:07 for fire and 9:04 for EMS. For the charts above, they show both fire and EMS response times together.

### 🚩 – Of Note...

One item to note is that if you were to add the processing time, the turnout time, and the travel time, it will not necessarily (and often doesn't), sum the total response time. This is due to some of the limitations within the datasets and gaps within timestamps. Where there are missing timestamps, those particular key performance indicators (KPI) are excluded as they cannot accurately be calculated out.

### Midvale City – 2020 Incidents by Time of Day

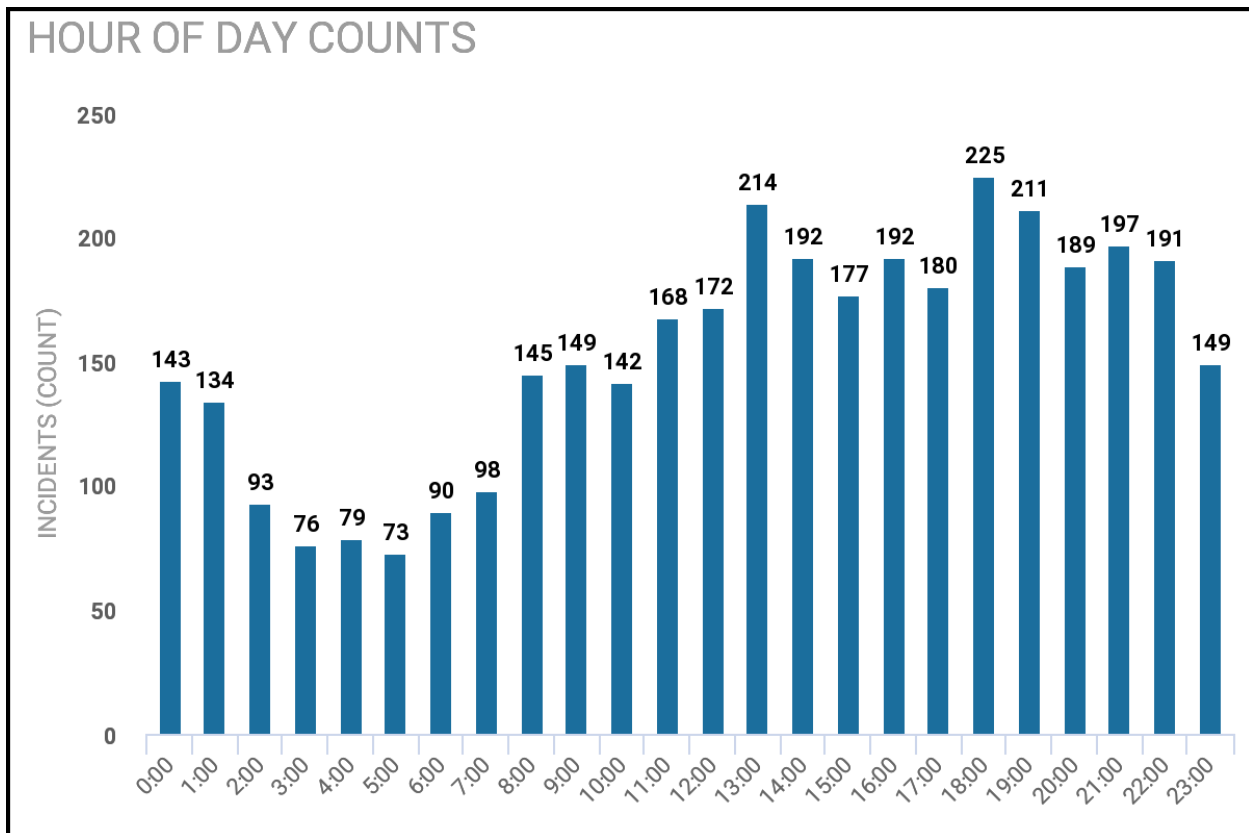


Chart 66 – Midvale City 2020 Incidents by Time of Day

The above table demonstrates the incidents by time of day and the time of greatest demand within Midvale City for all service calls. This chart illustrates that the greatest demand for service delivery begins at 08:00 AM and starts to decrease at 10:00 PM.

## Midvale City – 2020 Incidents by Day of Week

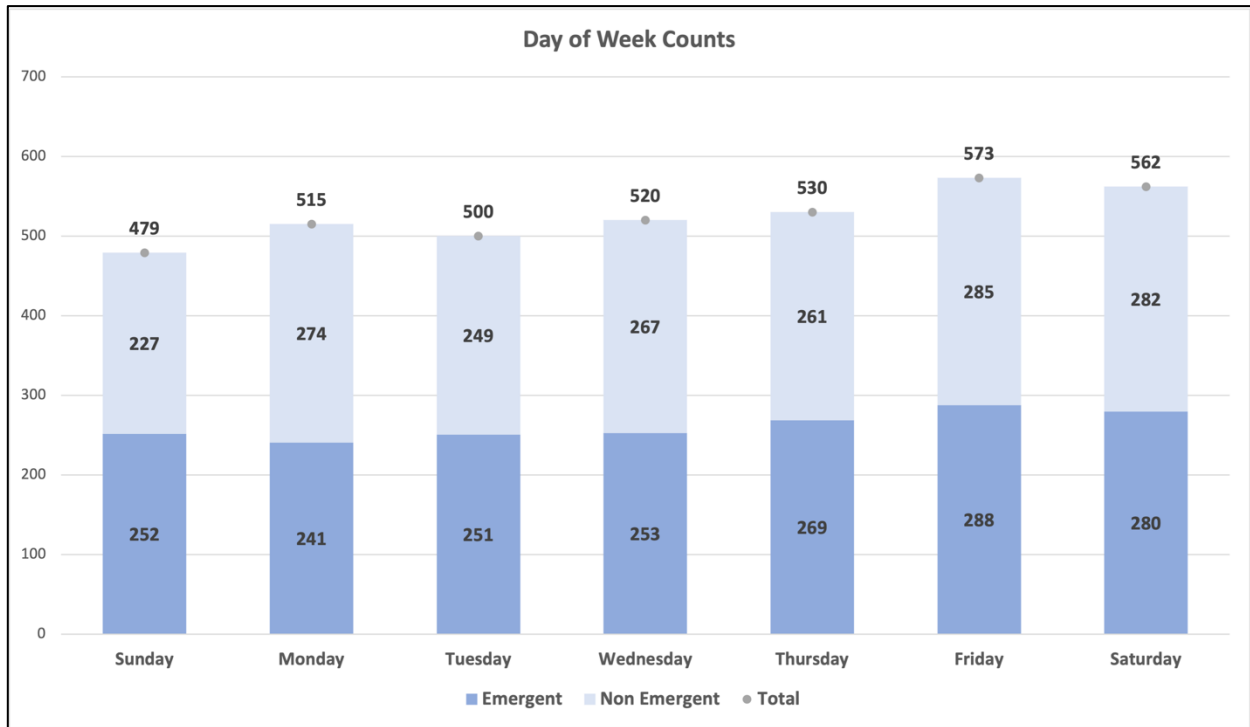


Chart 67 – Midvale Incidents by Day of Week

This chart demonstrates the call volume based on the day of the week, with an increase in all calls as well as the peak volume for all calls in Midvale City occurring on Friday.

## Midvale City – EMS Calls

EMS calls are filtered by final disposition codes and this data is taken from VECC and determined by the patient acuity at the time of call termination. Often times the EMS calls identified from final disposition are different than the number of EMS calls that were initially dispatched due to one being the initial call type, and one being what call type the call was closed as by responding fire crews.

	CY 2020	CY 2019	CY 2018
<b>ALS Transports</b>	957	993	1,145
<b>BLS Transports</b>	1,772	1,478	1,425
<b>Scene Release</b>	159	152	438
<b>Public Assistance</b>	24	21	12
<b>EMS Total Calls</b>	2,888	2,623	3,008

Note: There is possibly a difference if you were to add all calls due to data reporting mechanisms. Public assistance calls will sometimes get duplicated with a scene release, depending on dispatch code, but those calls do not carry across to the total calls. Also, cancelled calls go into a different final disposition so the numbers in the 'Incidents by Dispatch Type' are reflective of this difference.

Table 116 – Midvale City EMS Calls

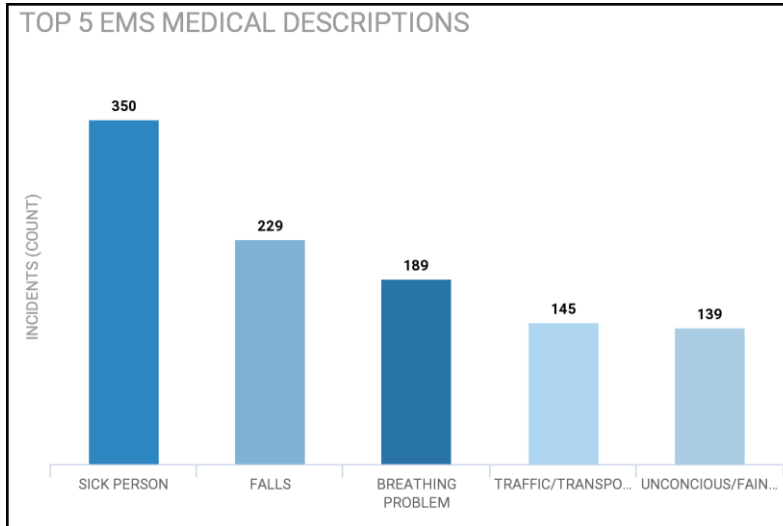


Chart 68 - Top 5 EMS Medical Calls - 2020

### Midvale City – 2020 Fire Incidents by Dispatch Type

NFIRS Description	Incident Count	% of Incidents
Structure Fire	122	44.53%
Natural Vegetation Fire	48	17.52%
Outside Rubbish Fire	38	13.87%
Vehicle Fire	43	15.69%

NFIRS Description	Incident Count	% of Incidents
Special Outside Fire	8	2.92%
Fire, Other	7	2.55%
Mobile Property Fire	8	2.92%
<b>Total</b>	<b>274</b>	<b>100%</b>

Table 117 – Midvale City 2020 Incidents by Dispatch Type



## Midvale City – Building Occupancy Classification and Risk Categories

Occupancy Classification	Low	Moderate	High	Maximum	Total
<b>Assembly</b>	21	2	3	0	26
<b>Commercial/Industrial</b>	12	15	33	2	62
<b>Educational</b>	0	1	2	3	6
<b>Government</b>	5	0	0	0	5
<b>Healthcare</b>	1	0	1	0	2
<b>Hazardous</b>	Unknown	Unknown	Unknown	Unknown	94*
<b>Storage</b>	0	1	3	0	4
<b>Residential</b>	1,916	2,580	10	2	4,508
<b>Residential – Multi Unit</b>	108	357	42	23	530
<b>High Rise</b>	N/A	N/A	1	3	4
<b>Total</b>	2,063	2,956	95	33	5,241

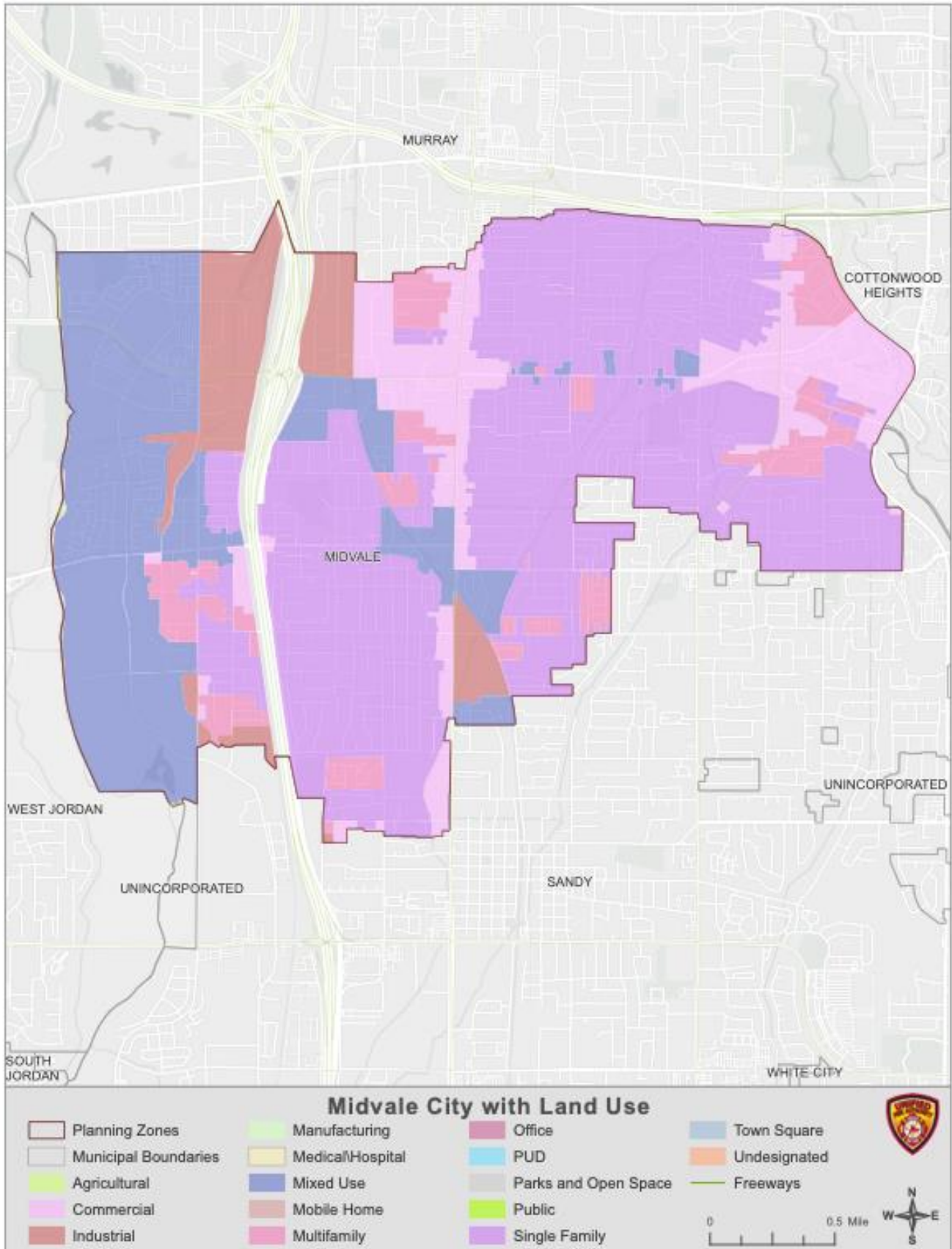
\*There is currently a gap within the identification of building size regarding hazardous materials sites. This is a gap that is being closed over the next several years as we collect the data and information.

*Table 118 – Midvale City Building Occupancy and Risk Categories*

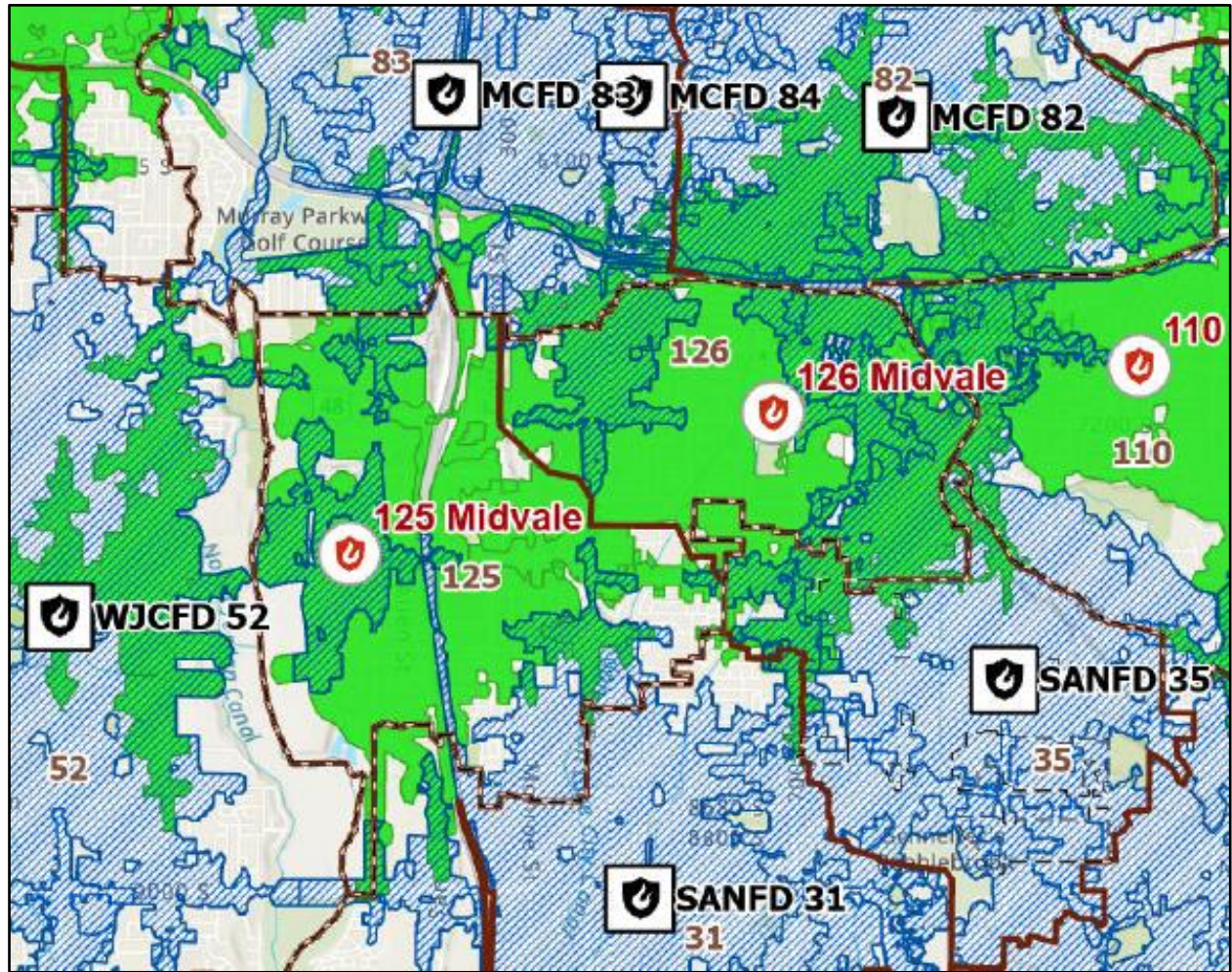
### Building Size / Considerations

For purposes of risk classification, UFA has outlined the following risk classifications for building size, regardless of occupancy type (except residential). Low risk = 1-4,999 square feet. Moderate risk = 5,000-9,999 square feet. High risk = 10,000-99,999 square feet. Maximum risk = >100,000 square feet.

For residential occupancies, the following classifications apply. Low risk = 1-1,999 square feet. Moderate risk = 2,000-3,999 square feet. High risk = 4,000-9,999 square feet. Maximum risk = ≥10,000 square feet.



Map 173 – Midvale City with Land Use



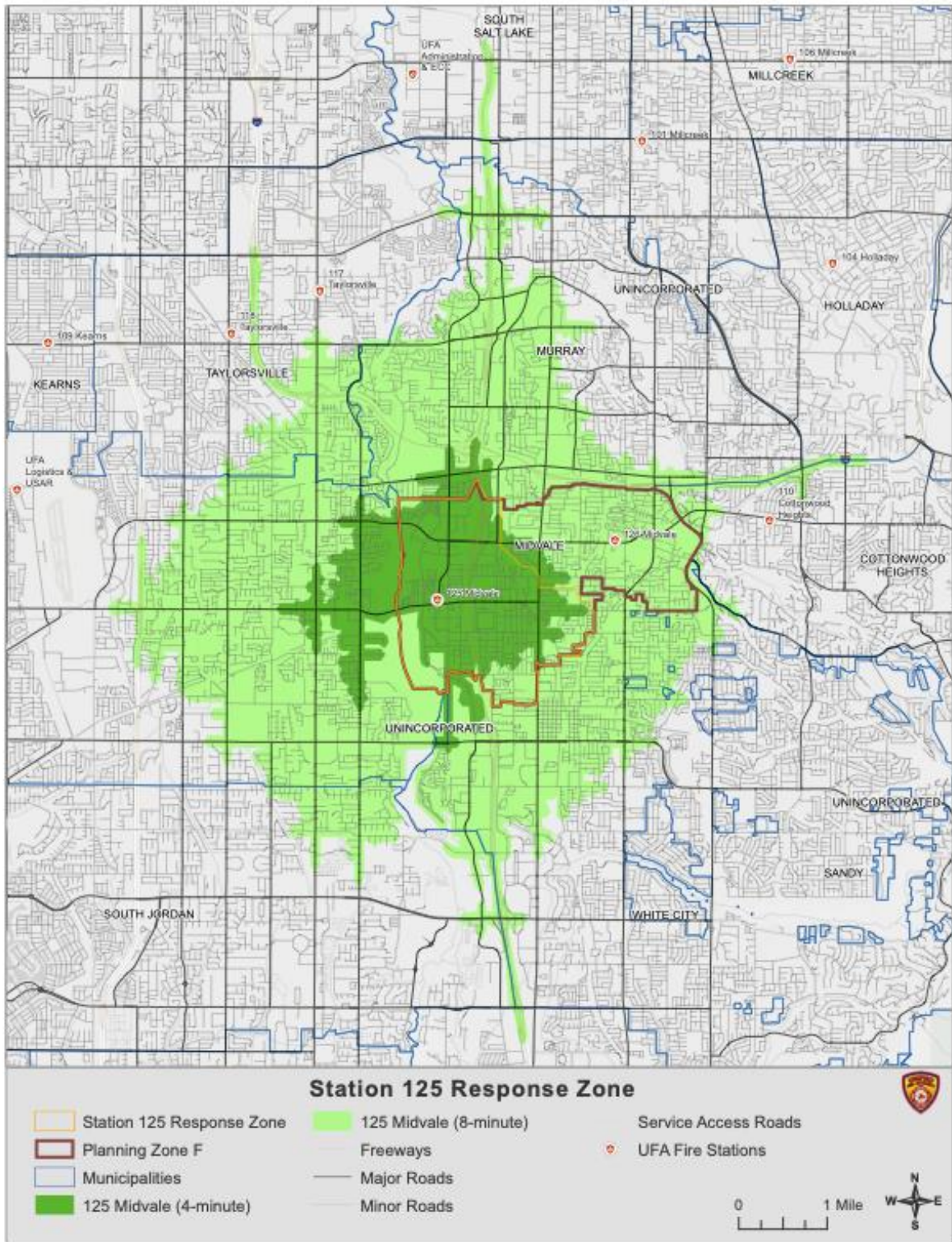
**Four Minute Response Times - UFA and Non-UFA Stations**

- Municipalities
- Fire Zones
- UFA Fire Stations
- Non-UFA Fire Stations
- 4 Minute Response Times Non-UFA Fire Stations
- 4 Minute Response Times UFA Fire Stations

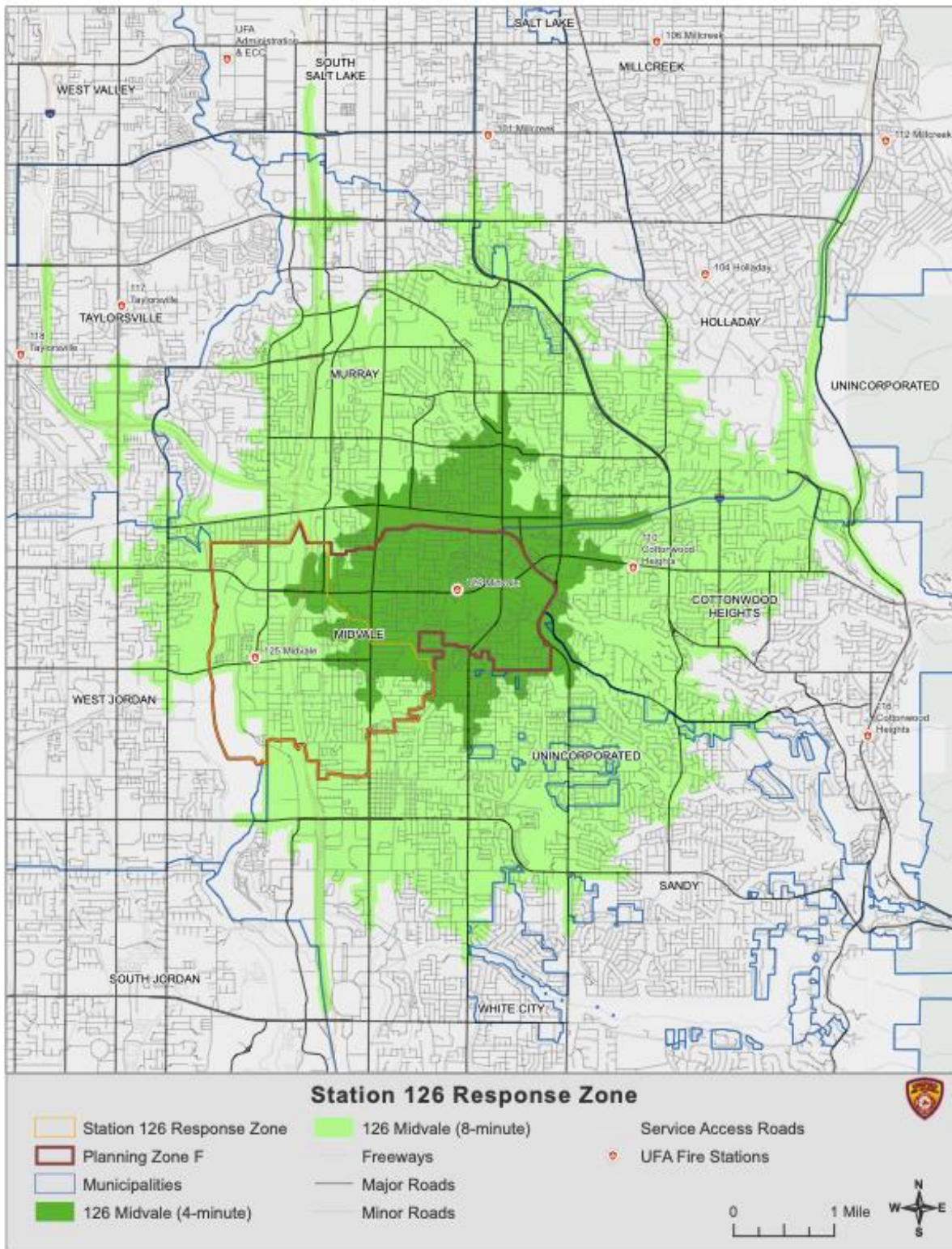
N  
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Map 174 - 4-Minute Travel Time, UFA and Aid



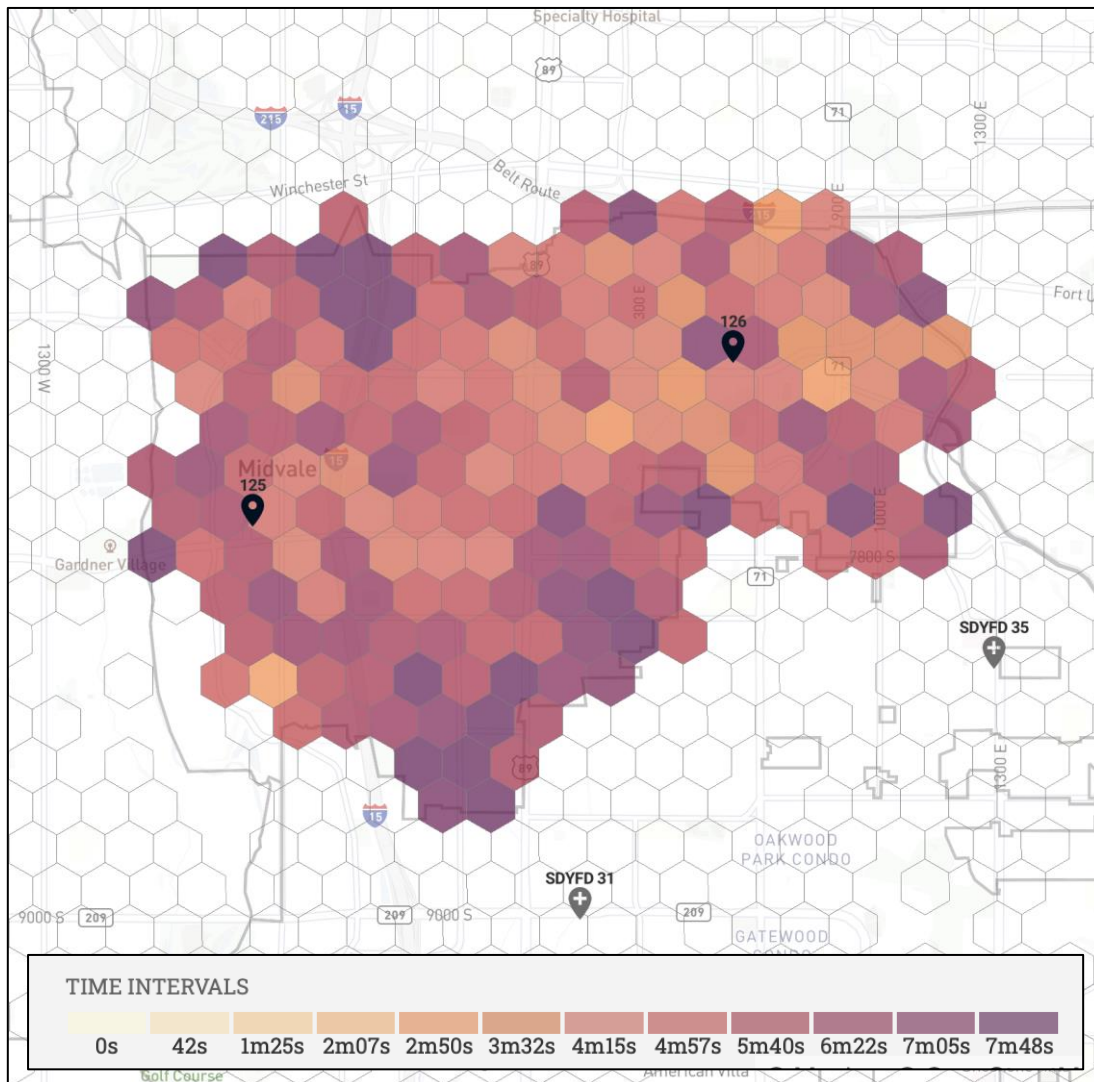
Map 175 - Station 125 4- and 8-Minute Travel Times



Map 176 - Station 126 4- and 8-Minute Travel Times

## Midvale City – First Arriver Travel Times

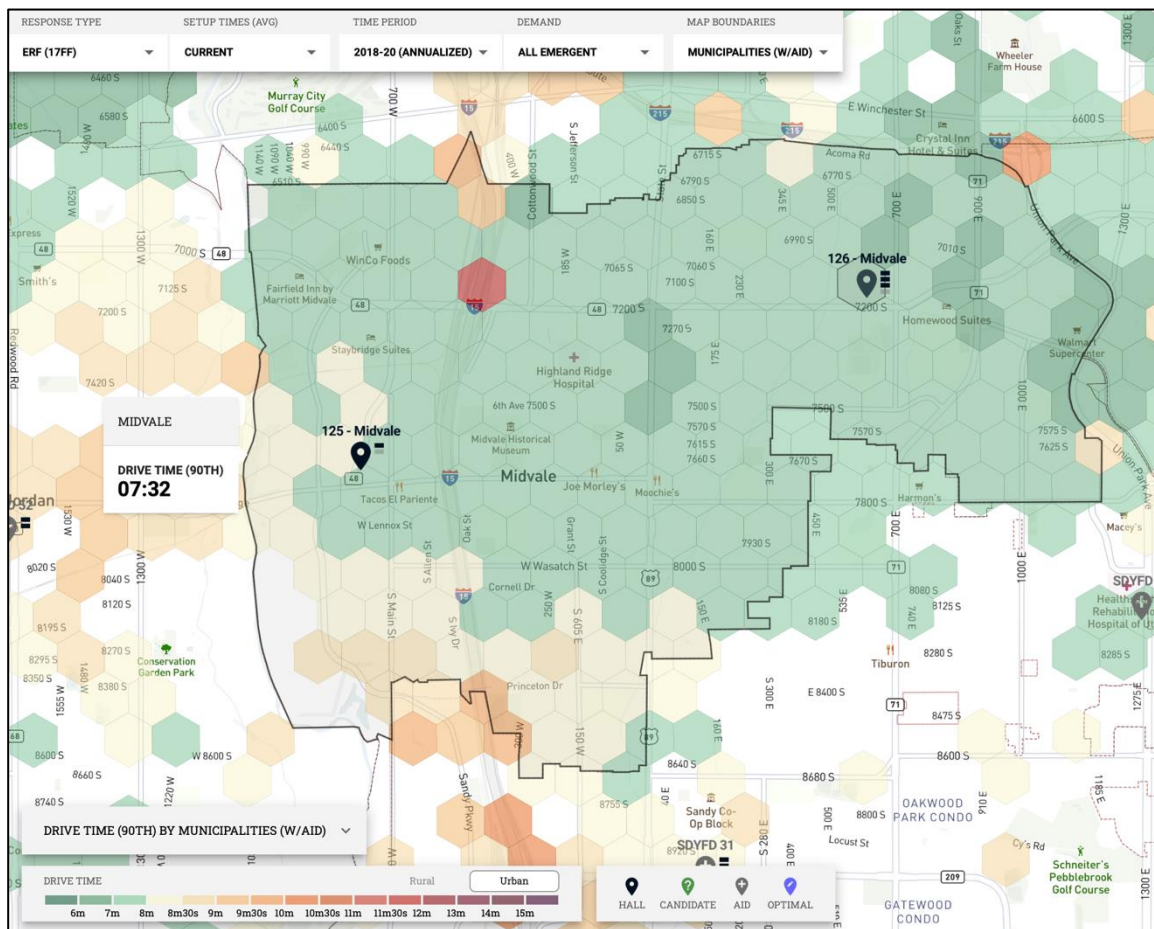
The following maps demonstrate the 90<sup>th</sup> percentile of travel times based off the last three years of historical data (2018-2020). The darker the color is, the more delayed the response, with the lighter colors demonstrating below or near target times. The darker colors on the bar within the 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 (90<sup>th</sup> percentile) from notification of the alarm to the arrival of the first arriving apparatus — not an adopted standard by UFA. UFA is currently in process of identifying benchmark and target standards to be adopted by the UFA Board of Directors. Currently within Midvale City, the 90<sup>th</sup> percentile drive time is 7:32 for fire and 6:19 for EMS.



Map 177 – Midvale City Response Times – All Aid

## Midvale City – Residential Fire Effective Response Force (17 FF)

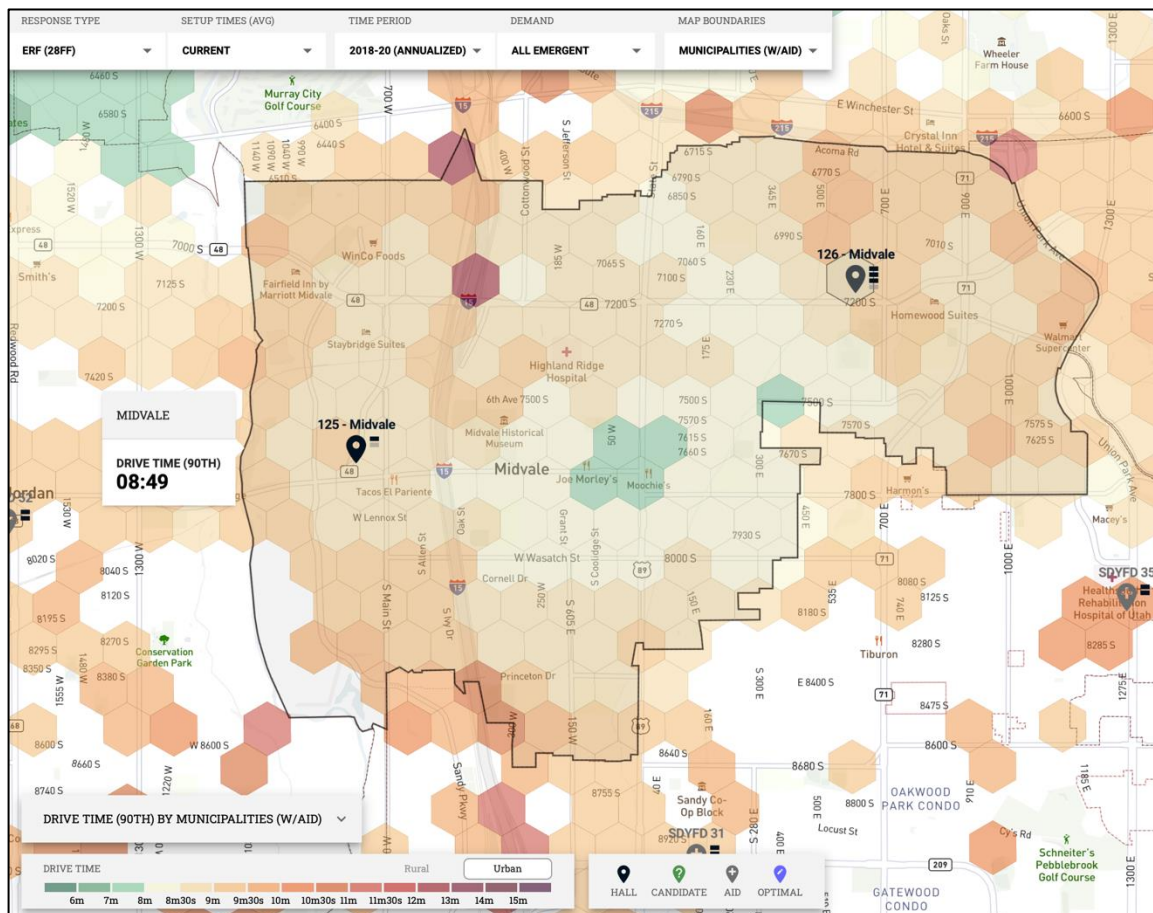
This map demonstrates the coverage of a multi-unit response to a residential fire based off all apparatus being within their station. The green to light yellow demonstrates the ability to have seventeen firefighters (a residential fire effective response force) on scene based off a residential urban fire response. This map's drive times (or travel times) are based off the current NFPA 1710 standard of eight minutes (90<sup>th</sup> 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. UFA is currently in process of identifying benchmark and target standards to be adopted by the UFA Board of Directors. Based off predictive data, it is projected that the 90th percentile for 17 firefighters to arrive on scene would be 7:32.



Map 178 – Midvale City Response Times – Residential Fire Effective Response Force (17 ERF)

## Midvale City – 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 (90<sup>th</sup> 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. UFA is currently in process of identifying benchmark and target standards to be adopted by the UFA Board of Directors. Based off predictive data, it is projected that the 90th percentile for 28 firefighters to arrive on scene would be 08:49.



Map 179 – Midvale City Response Times – Commercial Fire Effective Response Force (28 FF)



## Midvale 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	Low	High	Low	Low	Mod	Low	Mod	Mod	Mod	High	Mod

Table 119 – Midvale City Hazard Matrix

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

### Infrastructure – Transportation

There are several high-level transportation routes within Midvale City or directly bordering the city. I-15 runs through the city itself and I-215 runs on the north border of the city. Several arterials and state roads also run through Midvale, with Fort Union Blvd, and State Street. There are 10.65 linear miles of Interstate/US Highway, 3 linear miles of State Highways, and 114 total linear miles of roadway. There is also heavy rail and UTA also has light rail and bus routes through the city, with the main bus routes running on Fort Union Blvd. Midvale City is in the moderate-risk category for road infrastructure.

### Infrastructure – Water

There are three water districts within Midvale City, Midvale City Water, Sandy City Water, and the Jordan Valley Water Conservancy District.

### Infrastructure – Dams

There are no identified dams within Midvale City. Midvale City is in the low-risk category for dam infrastructure.

## Natural Hazards

Within Cottonwood Heights, there are no concerns with avalanche areas. Midvale City is in the low-risk category for avalanche. There are no identified fault lines that run through the city (see Map 8). Cottonwood Heights is in the high-risk category for liquefaction and low-risk category for fault lines. One of the biggest hazards that occur within an earthquake scenario is the number of unreinforced masonry (URM) buildings within Midvale City, with an estimated 2,641 URM's, which constitutes about 10.76 % of the overall URM's within UFA's response areas. Midvale City is in the moderate-risk category for unreinforced masonry.

## Wildland Urban Interface

There is low risk of urban interface fires within Midvale City, although on the western border of Midvale City, there is moderate risk of urban interface fires within the Jordan River Parkway. Midvale City is in the low-risk category for Wildland Urban Interface.

## Hazardous Materials / Tier II Sites

There are eight identified HazMat/Tier II Sites within Midvale City, which is in the moderate-risk category.

## Hospitals

Midvale City has one standalone hospital that is an adult inpatient substance abuse and psychiatric treatment facility — not an emergent care hospital. This places Midvale in the moderate-risk category for hospitals.

## Schools

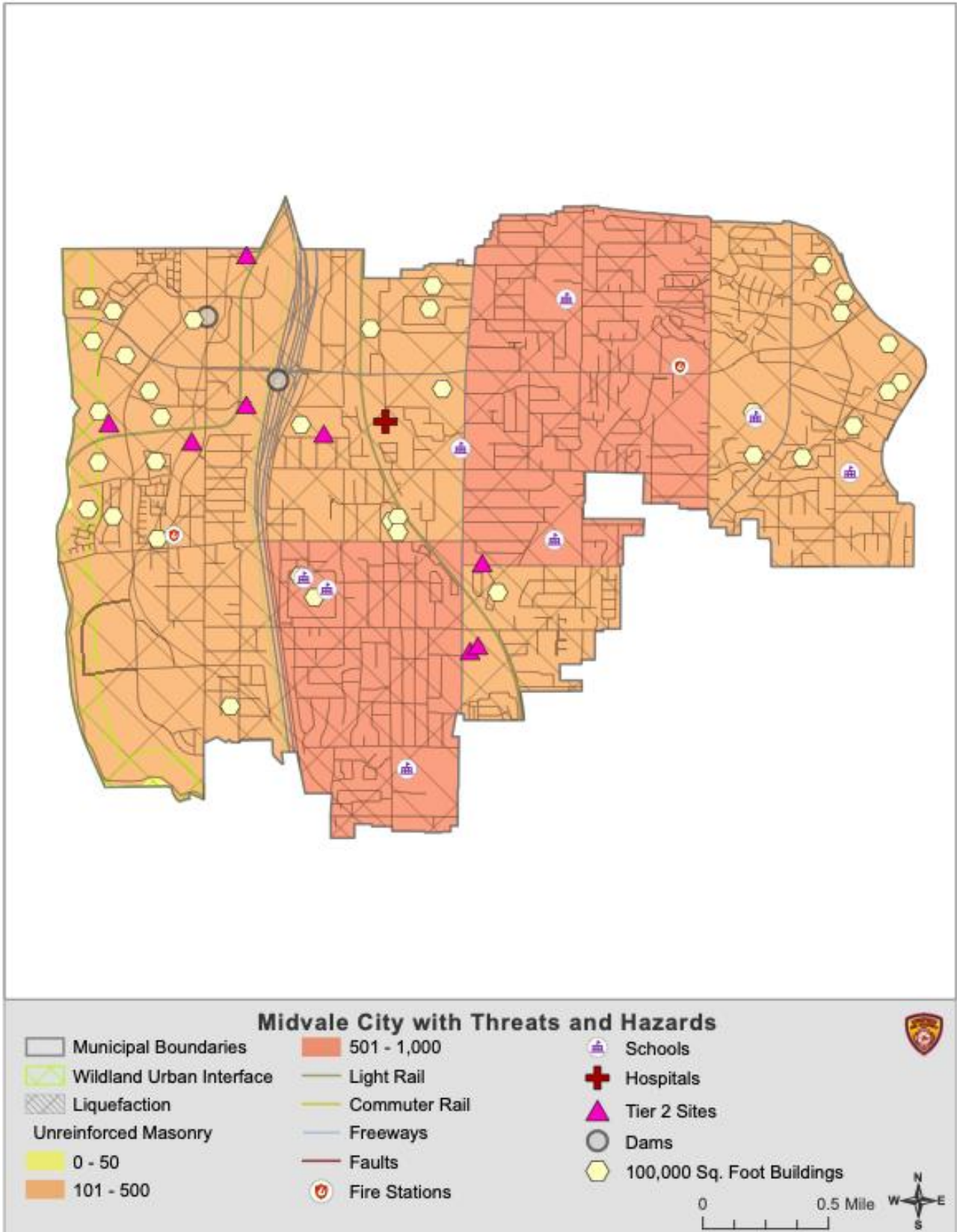
Midvale City has four elementary schools, one middle schools, and one high school within city boundaries — in addition to two special needs K-12 schools — which places it in the moderate-risk category.

## Target Hazards – Structures

Some of the target-hazard occupancies in Midvale City include:

- FL Smidth – 7158 S FL Smidth Drive
- IHC Supply Center – 7302 Bingham Junction Blvd
- Cardwell – 8000 S State Street
- Builders First Source – 7380 S 700 W

- Dal Soglio – 7398 S 700 W



Map 180 – Midvale City with Combined Hazards

## Life and Property Loss

From 2015-2020, there has been one fatality attributed to fire. There has been a total estimate of \$5,703,915.00 of property loss and a total estimate of \$1,222,829.00 of content loss due to fire.

## Unified Fire Shared Services

With a regional-response model, the Unified Fire Authority brings special services to bear when the situation calls for it, not relying on automatic or mutual aid which provides a quicker and more effective delivery of service to its residents.

## Battalion Chiefs

Unified Fire Authority staffs three operational battalion chiefs (BCs) daily, in addition to a 40-hour Operations Chief (OC). These BCs and OC respond to large, complex, or expanding incidents — providing incident command, safety, and operational direction. Each BC covers an area of UFA's service area and respond to calls for service in any jurisdiction. Battalion 11 is housed out of Station 101 in Millcreek, Battalion 12 is housed out of Station 121 in Riverton, and Battalion 13 is housed out of Station 118 in Taylorsville.

## Heavy Rescue Companies

Heavy Rescue specializes in structural collapse, confined space rescue, trench collapse rescue, vehicle extrication, machinery disentanglement, rope rescue (high angle, low angle, rigging) and rapid intervention (Firefighter Rescue). The UFA Heavy Rescue Program consists of two independent rescue companies strategically placed in UFA's jurisdiction. Station 117 in Taylorsville, and Station 121 in Riverton house our Heavy Rescue Teams.

## Hazardous Materials (HazMat) Companies

The Hazardous Materials Teams provide an efficient, effective, and professional Hazardous Material Mitigation response. HazMat Companies respond to hazardous material releases/spills for the purpose of mitigating the release/spill. They select and use proper specialized chemical personal protective equipment dependent on the nature of the incident. The HazMat Program consists of two independent HazMat

companies strategically placed in UFA's jurisdiction. Station 124 in Riverton, and Station 126 in Midvale house our HazMat Teams.

### Water Rescue Teams

UFA has swift water and ice rescue capabilities. These companies respond to victims recreating in our swift canyon rivers and our lakes and reservoirs. Station 116 in Cottonwood Heights, Station 117 in Taylorsville, Station 121 in Riverton, and Station 123 in Herriman house companies with water rescue capabilities.

### Wildland Division

UFA's Wildland Division provides highly trained and experienced wildland fire and all-risk response resources to local, state, and federal incidents. The Wildland Division oversees the training and certification of UFA personnel for response to wildland fires and all-hazard incidents. We also work with UFA Communities to educate residents on wildfire preparedness and provide mitigation services to reduce the risks of wildfire. UFA has a special capability where a Duty Officer is able to act as the Fire Warden within UFA's jurisdictions, allowing the ordering of resources much more quickly than having to rely on a Fire Warden that may or may not be readily accessible. Station 103 in Herriman currently houses the Duty Officer.

### Investigations Division

Arson and Explosive related incidents are considered two of the most dangerous criminal activities that threaten our citizens. The need exists to protect the citizens of our jurisdiction from loss of life and property by reducing the crime of arson, arson-related crimes, improvised explosive devices (IEDS) and the prevention of future violent crimes. The Investigations Division addresses this need by establishing a sound foundation of effective enforcement, focusing on the apprehension of the offender, while in partnership with other Local, state and federal law enforcement agencies. The team utilizes highly-trained Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) certified K-9's that assist with accelerant and explosives detection.

### Urban Search & Rescue

A FEMA Urban Search and Rescue Task Force is a team of individuals which serve as a resource for disaster response at local, state, and federal levels. It is comprised mainly of firefighters but includes structural engineers, medical professionals,

canine/handler teams and emergency managers with highly specialized training in urban search and rescue environments.

Utah Task Force 1 (UT-TF1) is one of 28 Type I, Federal Urban Search & Rescue (US&R) Task Forces in the United States. This program brings a highly trained, multi-hazard Task Force that is especially designed to respond to a variety of emergencies/disasters including earthquakes, hurricanes, tornadoes, floods, terrorist acts and hazardous material releases. Fire department personnel that are task force members receive specialized training and skills that directly benefit Unified Fire Authority.

### [Salt Lake County Emergency Management](#)

The Salt Lake County Division of Emergency Management serves our citizens by directing and coordinating resources for disasters and emergencies through preparation, planning, mitigation, response, and recovery. The Salt Lake County Emergency Coordination Center is activated and manned during any event—from small-scale to large-scale occurrences—to disasters both natural and man-made that can or have exceeded the resources of any particular jurisdiction. Currently, the Salt Lake County ECC assists and obtains resources for the 22 jurisdictions located within the Salt Lake Valley. Salt Lake County EM assists these jurisdictions through the activation of 15 Emergency Support Functions (ESFs) filled by employees from a multitude of backgrounds. The ESF employees have authority throughout Salt Lake County to fill and order additional support for the operations occurring in the field until the impacted jurisdiction can return to their normal operations and functions. The Emergency Management Division is committed to keeping the public safe through community outreach, training, dissemination of important public information, training of staff and the creation of a more resilient community through mitigation, preparation, response, and recovery. The ECC has been activated for many events such as Child Abduction Response Team (CART) Deployments, wildland fires such as the Rosecrest and Machine Gun fires, flooding, severe weather events, earthquakes, civil unrest, the COVID-19 pandemic, Line of Duty Deaths (LODD), and many other events.

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## Unified Fire Authority

3380 South 900 West  
Salt Lake City, UT 84119



# City of Millcreek

## Community Risk Assessment



## Millcreek City Planning Zone

UFA has three stations within the Millcreek City Planning Zone covering a total of 12.77 square miles with a population of 63,380 and responded to 5,676 calls for service in 2020.

Planning Zone	Population	Population Percentage of UFA	Square Miles	Population Density per Sq Mile	Classification
<b>City of Millcreek</b>	63,380	14.05%	12.77	4,963	Urban

Millcreek City has increased its population from 58,853 in 2010 to 63,380 in 2020, showing an increase of 7.14% over a ten-year timeframe. Providing an exponential growth pattern and if all things remain equal, chart 15 demonstrates that Millcreek could grow to 72,111 by the year 2040.

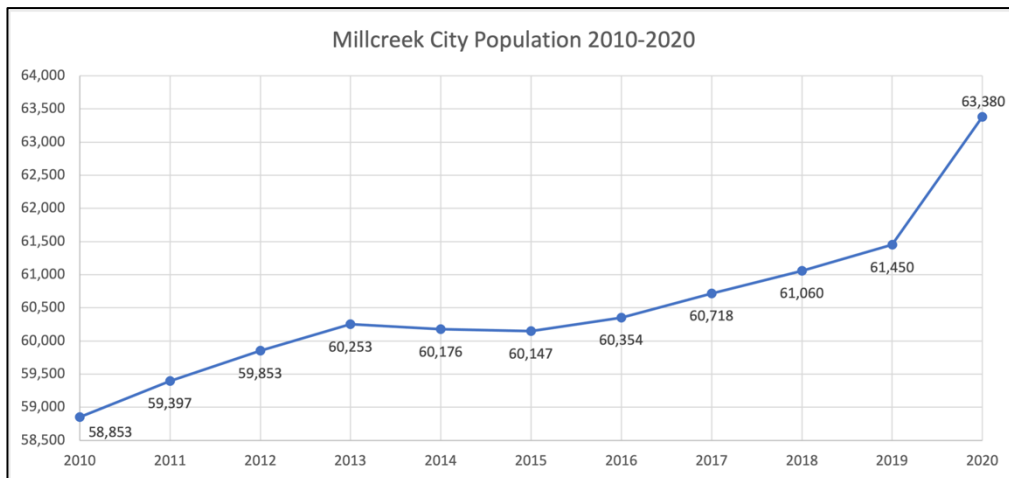


Chart 69 - Millcreek City Population 2010-2020

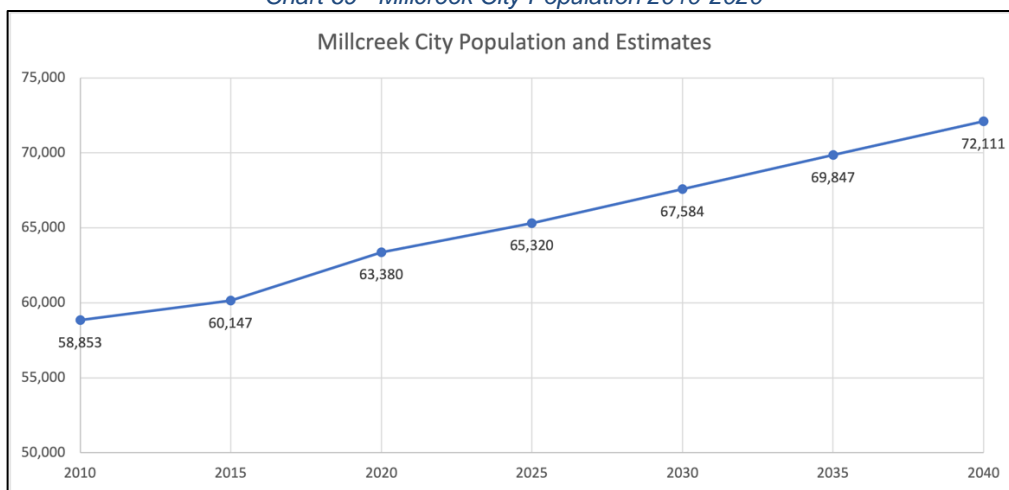





Chart 70 - Millcreek City Population and Estimates 2010-2040

## Millcreek City Station Information

<p><b>Station 101 information:</b></p> <ul style="list-style-type: none"><li>• Owner – UFSA</li><li>• Opened – 2010</li><li>• Address – 790 East 3900 South</li><li>• Staffing and Apparatus –<ul style="list-style-type: none"><li>○ Type 1, ME 101 (4 persons)</li><li>○ MA 101 (2 persons)</li><li>○ Battalion Chief 11 (1 person)</li></ul></li></ul>	 <p><i>Image 20 – Millcreek City Station 101</i></p>
<p><b>Station 106 information:</b></p> <ul style="list-style-type: none"><li>• Owner – UFSA</li><li>• Opened – 2010</li><li>• Address – 1911 East 3300 South</li><li>• Staffing and Apparatus –<ul style="list-style-type: none"><li>○ Type 1, ML 106 (4 persons)</li><li>○ MA 106 (2 persons)</li><li>○ Type 1, Water Tender (cross-staffed)</li><li>○ Type 6, Brush Truck (cross-staffed)</li></ul></li></ul>	 <p><i>Image 21 – Millcreek City Station 106</i></p>
<p><b>Station 112 information:</b></p> <ul style="list-style-type: none"><li>• Owner – UFSA</li><li>• Opened – 1965</li><li>• Address – 3612 Jupiter Drive</li><li>• Staffing and Apparatus –<ul style="list-style-type: none"><li>○ Type 1, ME 112 (4 persons)</li><li>○ Type 6, Brush Truck (cross-staffed)</li></ul></li></ul>	 <p><i>Image 22 – Millcreek City Station 112</i></p>

## Surrounding UFA and Automatic/Mutual Aid Response Stations

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

- UFA Station 104 (Holladay City), with a four-person medic engine and a two-person peak-load medic ambulance
- UFA Station 117 (Taylorsville City), with a four-person medic engine, a four-person medic ladder, and a two-person medic ambulance
- Murray City Station 81, with a three-person medic engine and a two-person medic ambulance
- Murray City Station 82, with a three-person medic engine and a two-person medic ambulance
- West Valley Station 75 with a three-person engine and a two-person medic ambulance
- South Salt Lake Station 41 with a three-person engine and a two-person medic ambulance
- South Salt Lake Station 42 with a three-person engine and a two-person medic ambulance
- South Salt Lake Station 43 with a three-person engine and a two-person medic ambulance.

## Millcreek City – Incidents by Dispatch Type

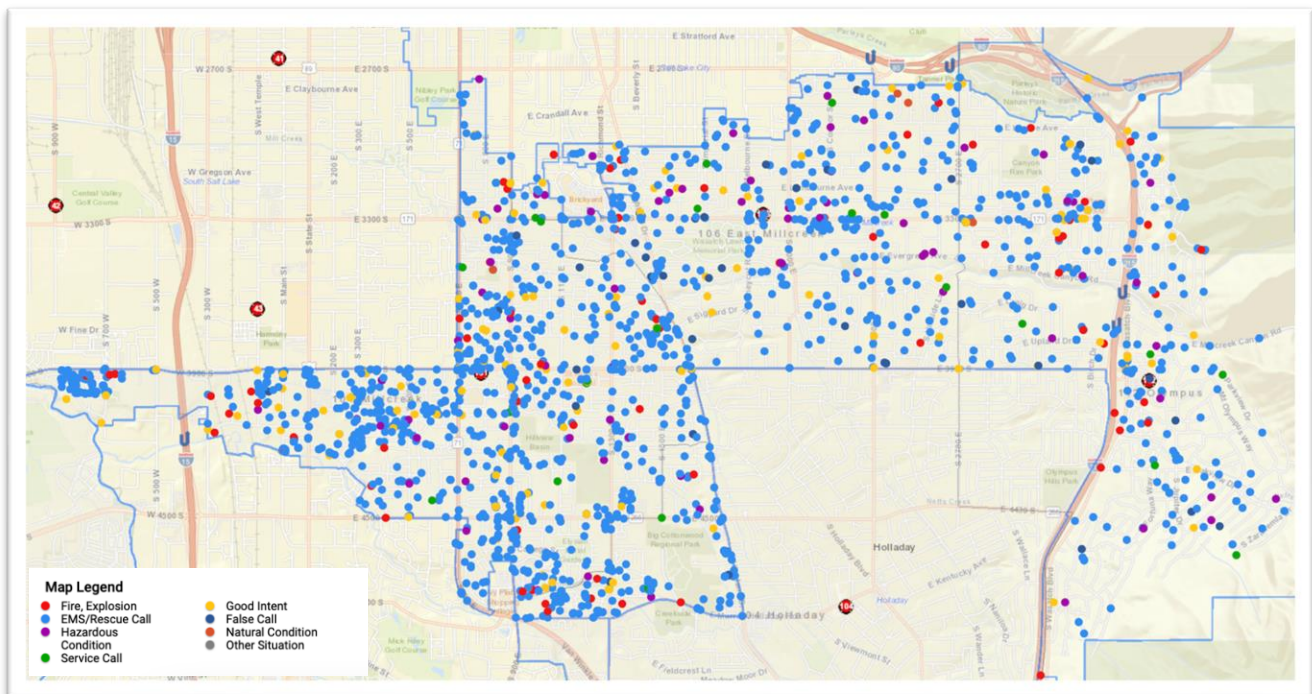
The following data is what the NFIRS type was when crews arrived on scene. This may be different than what was originally dispatched, including a reclassification of a call type from one to another. Cancelled calls occur if the company is cancelled en route to a call and never arrives on scene, which then changes the dispatch type to an NFIRS 611 call type.

	CY 2020	CY 2019	CY 2018
<b>Fire Suppression</b>	108	84	104
<b>EMS</b>	3,494	3,316	3,486
<b>Hazardous Materials</b>	169	103	106
<b>Service Calls</b>	156	355	270
<b>Good Intent</b>	930	731	585
<b>False Calls</b>	287	343	308
<b>Other (Misc., Flood, Overpressure)</b>	17	3	16
<b>Total</b>	5,163	4,935	4,875

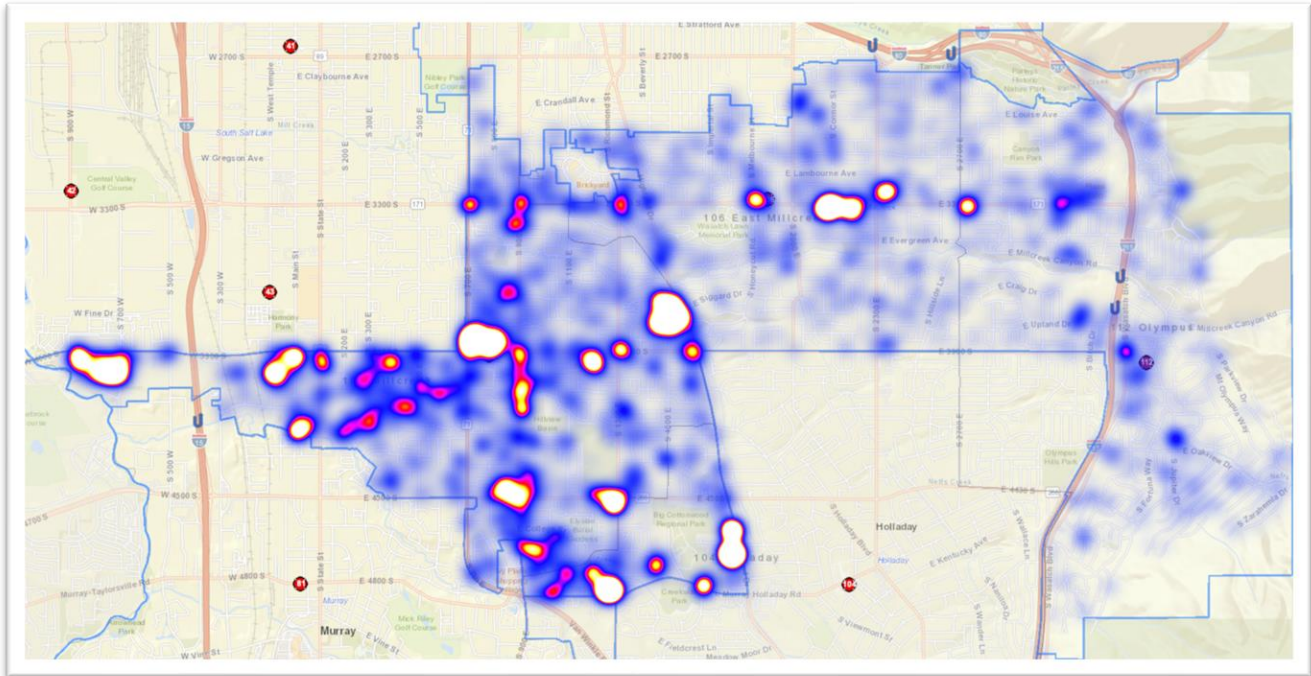
<b>Cancelled</b>	513	375	449
<b>Overall Total</b>	5,676	5,310	5,324

Table 120 – Millcreek City Call Type

### Millcreek City – 2020 Incidents and Heat Map



Map 181 - Millcreek City Incident Calls by Call Type



Map 182 - Millcreek City Call Volume Heat Map

## NFPA 1710

The National Fire Protection Association is an international nonprofit organization that is devoted to eliminating death, injury, property, and economic loss due to fire, electrical and related hazards. The NFPA makes recommendations on over 300 codes and standards. NFPA 1710 recommendations are based off 90<sup>th</sup> percentile times.

### 💡 – In Other Words...

If a value is in the 90<sup>th</sup> percentile, it means the value is better than 90% of all other values in the dataset. In other words, it is within the top 10% of the values.

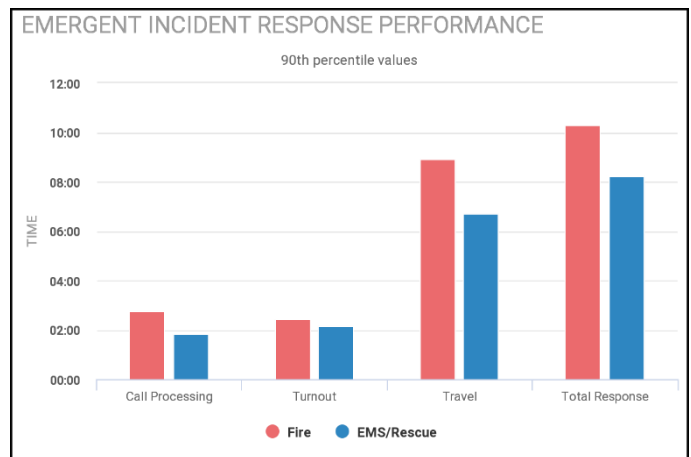
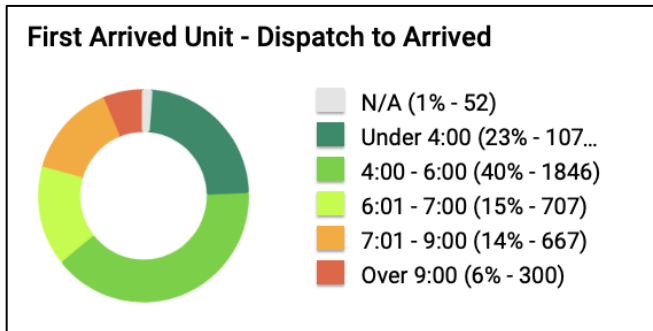
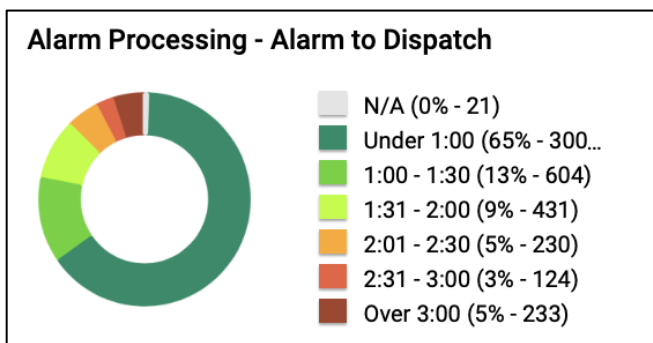
NFPA 1710 encompasses suggested standards for full-time fire departments and recommends the following times (all of which are at the 90<sup>th</sup> percentile): alarm processing – 64 seconds; turnout time for EMS responses – 60 seconds; turnout time for fire responses – 80 seconds; first arriver apparatus – 240 seconds (4 minutes); initial full-alarm assignment for low and medium hazard responses – 480 seconds (8 minutes); or initial full-alarm assignment for high hazard/high-rise responses – 610 seconds (10 minutes 10 seconds). The total response times are the cumulative totals of call processing time, turnout time, and travel time. NFPA 1710 recommends a total

response time of 6:24 for the first arriving apparatus for fire and 6:00 for the first arriving apparatus for EMS.

**⚡ – Of Note...**

NFPA 1710 response times have not been adopted by the UFA Board. One of the important elements of the community risk assessment and standards of cover is to identify current 90th percentile times (current baselines) within UFA and to identify realistic benchmarks for the UFA Board to consider for adoption.

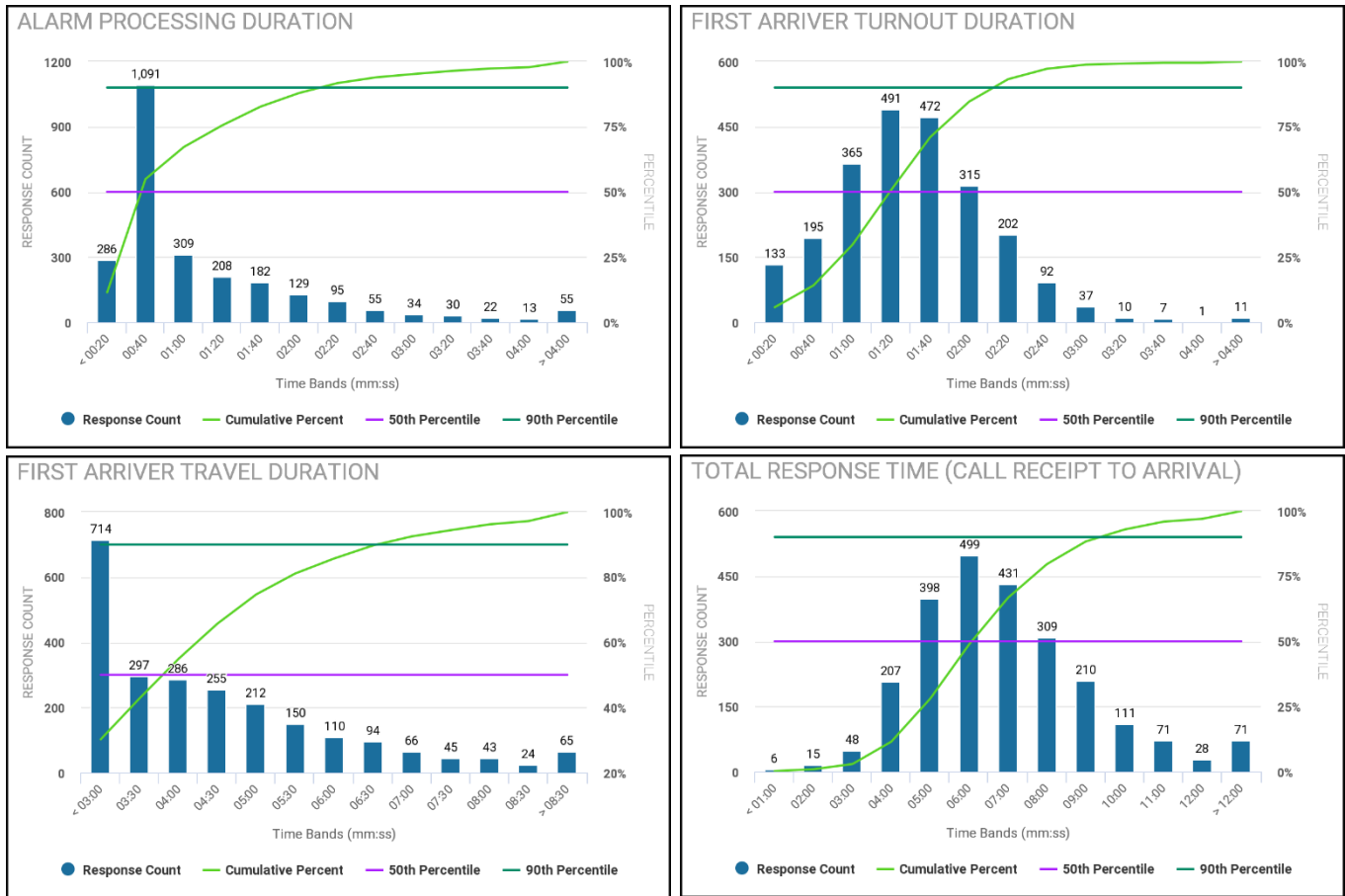
**Millcreek City – 2020 Dispatch and Response Times**



Urban	Call Processing: Fire	Turnout Time: Fire	Travel Time: Fire	Total Response: Fire	Call Processing: EMS	Turnout Time: EMS	Travel Time: EMS	Total Response: EMS
<b>Millcreek</b>	2:29	2:15	7:24	10:06	1:53	2:09	6:24	8:56
<b>UFA Urban 2018-2020</b>	2:16	2:39	7:36	10:34	1:47	2:32	6:29	9:18
<b>UFA Rural 2018-2020</b>	2:32	3:05	15:08	19:09	1:56	2:50	14:45	17:45
<b>NFPA 1710</b>	1:04	1:20	4:00	6:24	1:00	1:00	4:00	6:00

Table 121 – Millcreek City 2020 Emergent Response Times, 90<sup>th</sup> percentile values

## Millcreek City – 2020 Turnout and Travel Times



The charts above illustrate the alarm processing, turnout and travel times for all units responding to service calls within Millcreek City. The 90<sup>th</sup> percentile for alarm processing was 2:29 for fire and 1:53 for EMS, the 90<sup>th</sup> percentile turnout time was 2:15 for fire responses and 2:09 for EMS responses. The 90<sup>th</sup> percentile travel time was 7:24 for fire responses and 6:24 for EMS. The 90<sup>th</sup> percentile total response time was 10:06 for fire and 8:56 for EMS. For the charts above, they show both fire and EMS response times together.

### 📌 – Of Note...

One item to note is that if you were to add the processing time, the turnout time, and the travel time, it will not necessarily (and often doesn't), sum the total response time. This is due to some of the limitations within the datasets and gaps within timestamps. Where there are missing timestamps, those particular key performance indicators (KPI) are excluded as they cannot accurately be calculated out.



## Millcreek City – 2020 Incidents by Time of Day

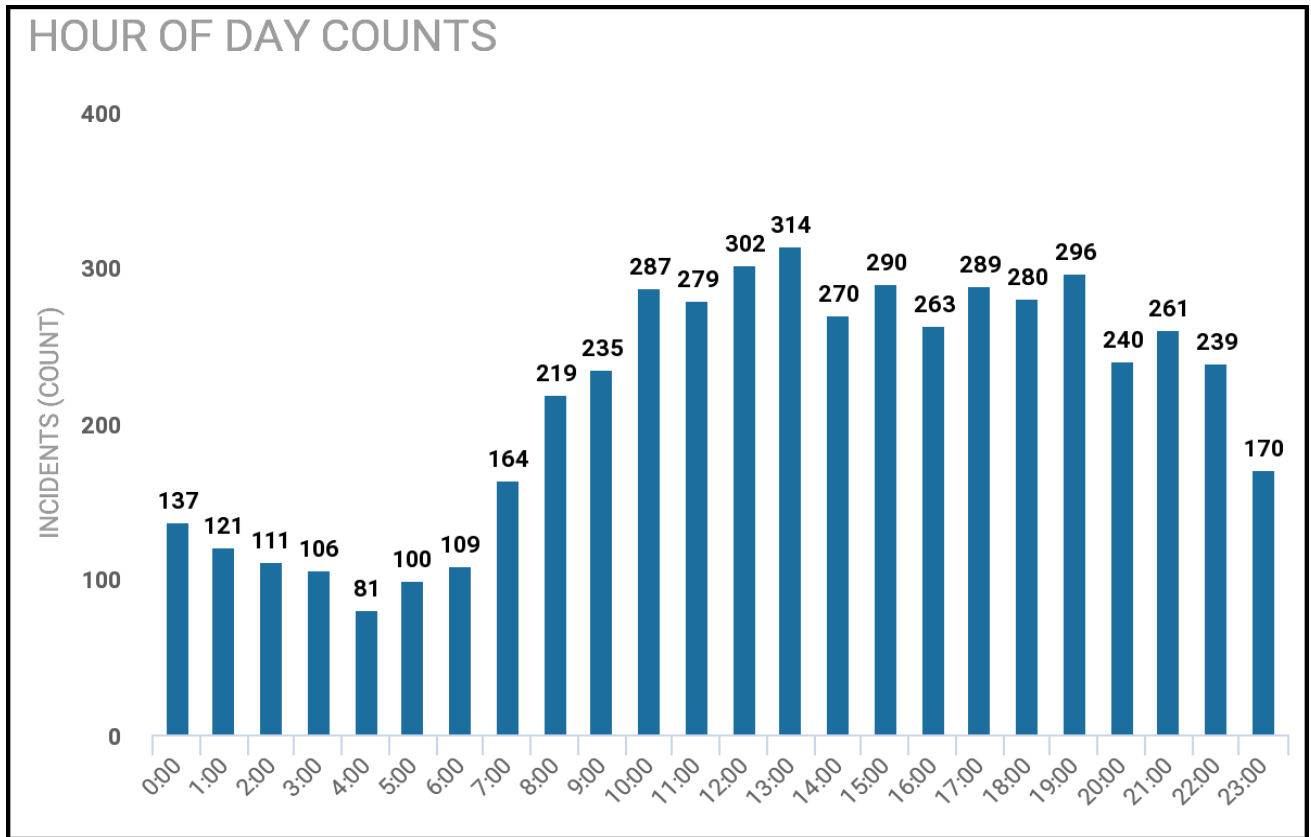


Chart 71 – Millcreek City 2020 Incidents by Time of Day

The above table demonstrates the incidents by time of day and the time of greatest demand within Millcreek City for all service calls. This chart illustrates that the greatest demand for service delivery begins to increase at 6:00 AM and starts to decrease at 7:00 PM.

## Millcreek City – 2020 Incidents by Day of Week

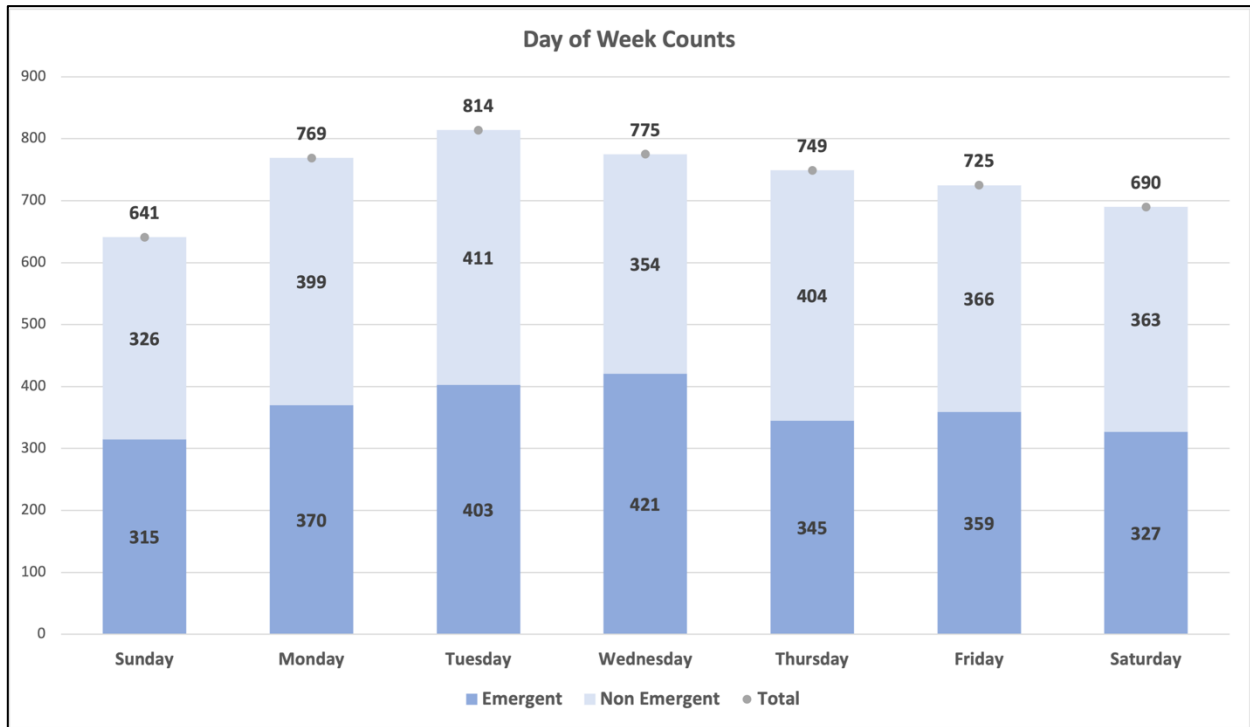


Chart 72 - Millcreek City Incidents by Day of Week

This chart demonstrates the call volume based on the day of the week, with an increase in all calls beginning Monday. The peak volume for all calls in Millcreek City occurs on Tuesday.

## Millcreek City – EMS Calls

EMS calls are filtered by final disposition codes and this data is taken from VECC and determined by the patient acuity at the time of call termination. Often times the EMS calls identified from final disposition are different than the number of EMS calls that were initially dispatched due to one being the initial call type, and one being what call type the call was closed as by responding fire crews.

	CY 2020	CY 2019	CY 2018
<b>ALS Transports</b>	1,216	1,228	1,535
<b>BLS Transports</b>	2,217	1,585	1,785
<b>Scene Release</b>	275	327	842
<b>Public Assistance</b>	8	39	31
<b>EMS Total Calls</b>	<b>3,716</b>	<b>3,179</b>	<b>4,193</b>

Note: There is possibly a difference if you were to add all calls due to data reporting mechanisms. Public assistance calls will sometimes get duplicated with a scene release, depending on dispatch code, but those calls do not carry across to the total calls. Also, cancelled calls go into a different final disposition so the numbers in the 'Incidents by Dispatch Type' are reflective of this difference.

Table 122 – Millcreek City EMS Calls

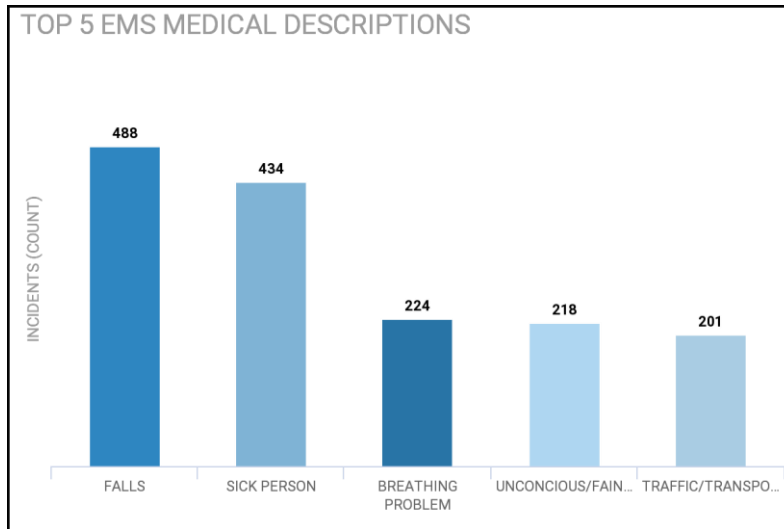


Chart 73 - Top 5 EMS Medical Calls

Millcreek City – 2020 Fire Incidents by Dispatch Type

NFIRS Description	Incident Count	% of Incidents
Structure Fire	51	41.8%
Natural Vegetation Fire	20	16.4%
Outside Rubbish Fire	22	18%
Vehicle Fire	21	17.2%

NFIRS Description	Incident Count	% of Incidents
Special Outside Fire	1	0.8%
Fire, Other	6	4.9%
Mobile Property Fire	1	0.8%
<b>Total</b>	<b>122</b>	<b>100%</b>

Table 123 – Millcreek City 2020 Incidents by Dispatch Type

## Millcreek City – Building Occupancy Classification and Risk Categories

Occupancy Classification	Low	Moderate	High	Maximum	Total
<b>Assembly</b>	31	2	18	1	52
<b>Commercial/Industrial</b>	15	27	46	7	95
<b>Educational</b>	0	12	5	2	19
<b>Government</b>	11	0	1	1	13
<b>Healthcare</b>	2	1	5	1	9
<b>Hazardous</b>	Unknown	Unknown	Unknown	Unknown	106*
<b>Storage</b>	3	1	8	0	12
<b>Residential</b>	3,761	7,555	1,541	25	12,882
<b>Residential – Multi Unit</b>	352	533	109	52	1,046
<b>High Rise</b>	N/A	N/A	3	4	7
<b>Total</b>	4,175	8,131	1,736	93	14,241

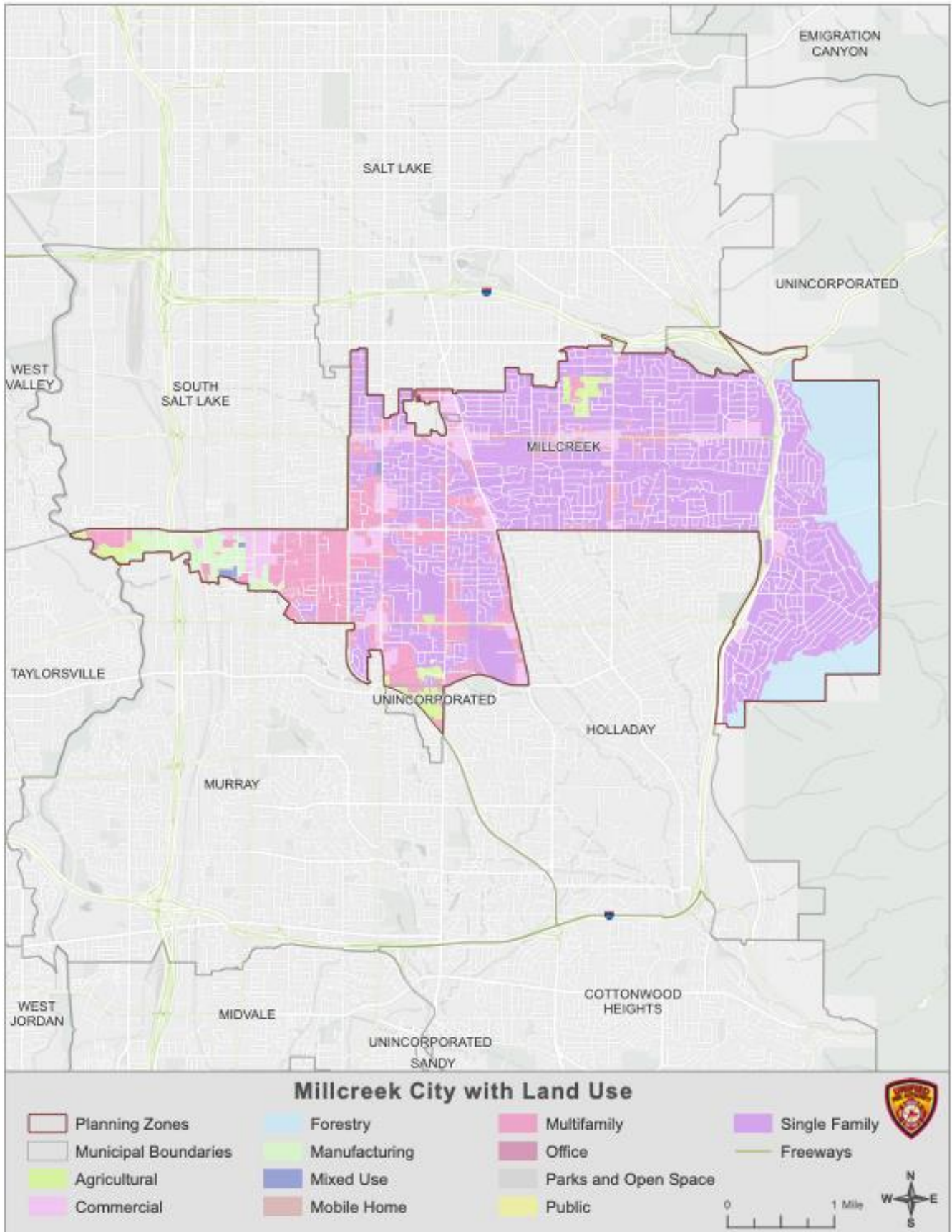
\*There is currently a gap within the identification of building size regarding hazardous materials sites. This is a gap that is being closed over the next several years as we collect the data and information.

*Table 124 – Millcreek City Building Occupancy and Risk Categories*

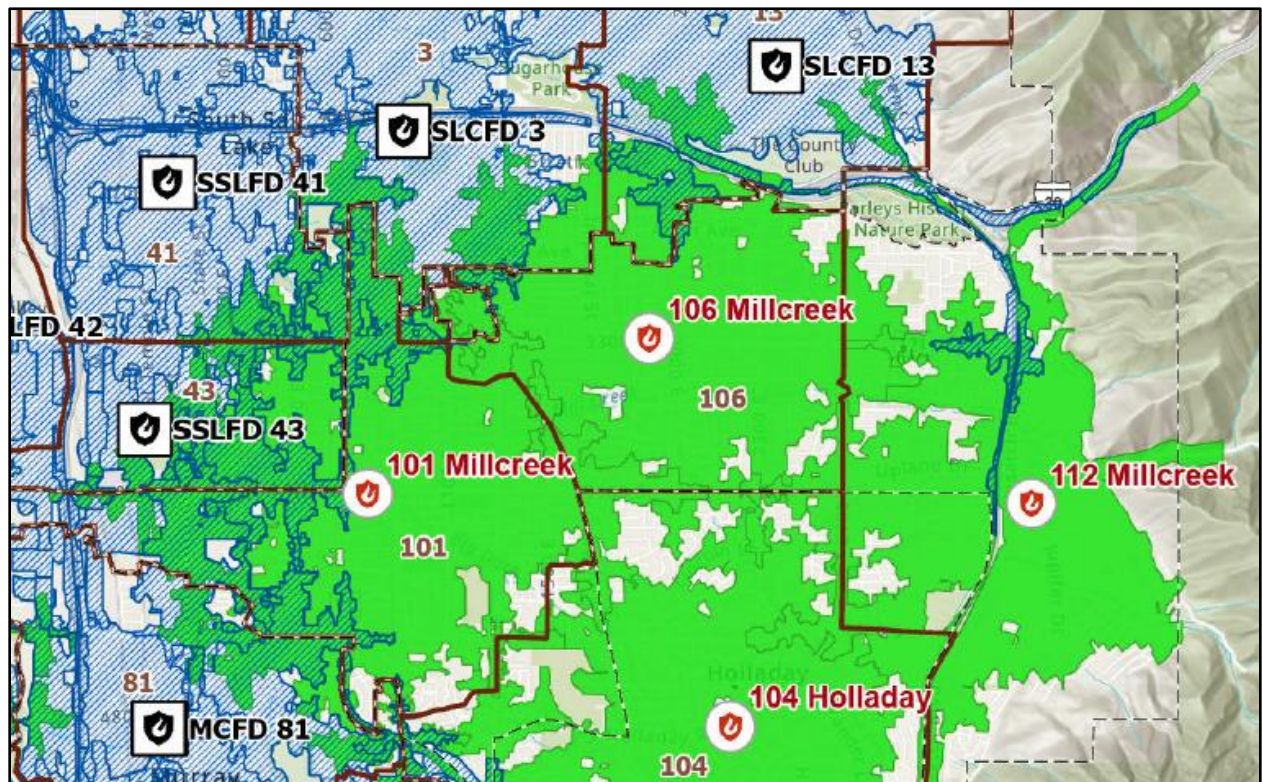
### Building Size / Considerations

For purposes of risk classification, UFA has outlined the following risk classifications for building size, regardless of occupancy type (except residential). Low risk = 1-4,999 square feet. Moderate risk = 5,000-9,999 square feet. High risk = 10,000-99,999 square feet. Maximum risk = >100,000 square feet.

For residential occupancies, the following classifications apply. Low risk = 1-1,999 square feet. Moderate risk = 2,000-3,999 square feet. High risk = 4,000-9,999 square feet. Maximum risk = ≥10,000 square feet.



Map 183 - Millcreek City with Land Use



**Four Minute Response Times - UFA and Non-UFA Stations**

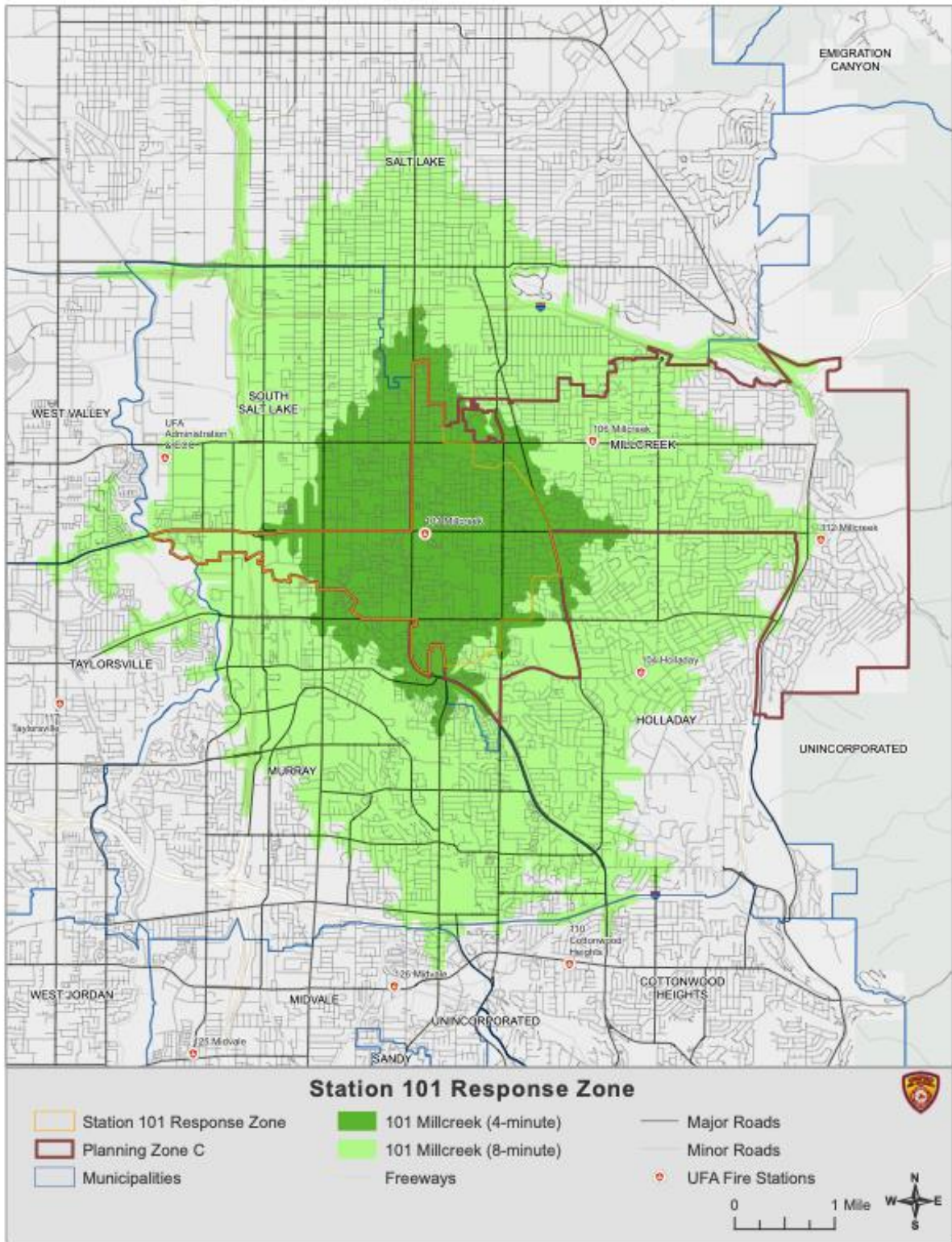
September 2022

Legend:

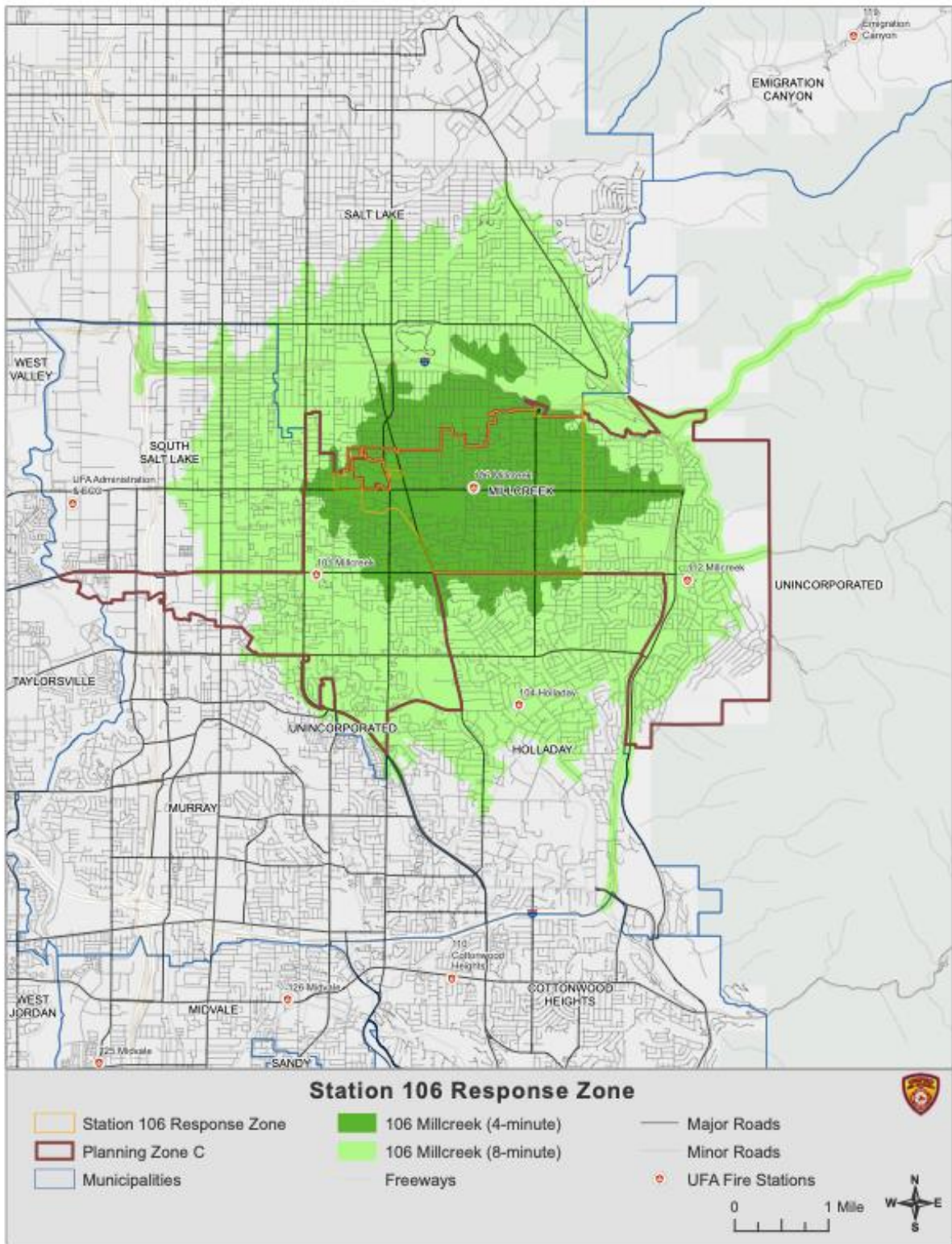
- Municipalities
- Fire Zones
- UFA Fire Stations
- Non-UFA Fire Stations
- 4 Minute Response Times Non-UFA Fire Stations
- 4 Minute Response Times UFA Fire Stations

North arrow and logo of the fire department.

Map 184 - 4-Minute Travel Time, UFA and Aid

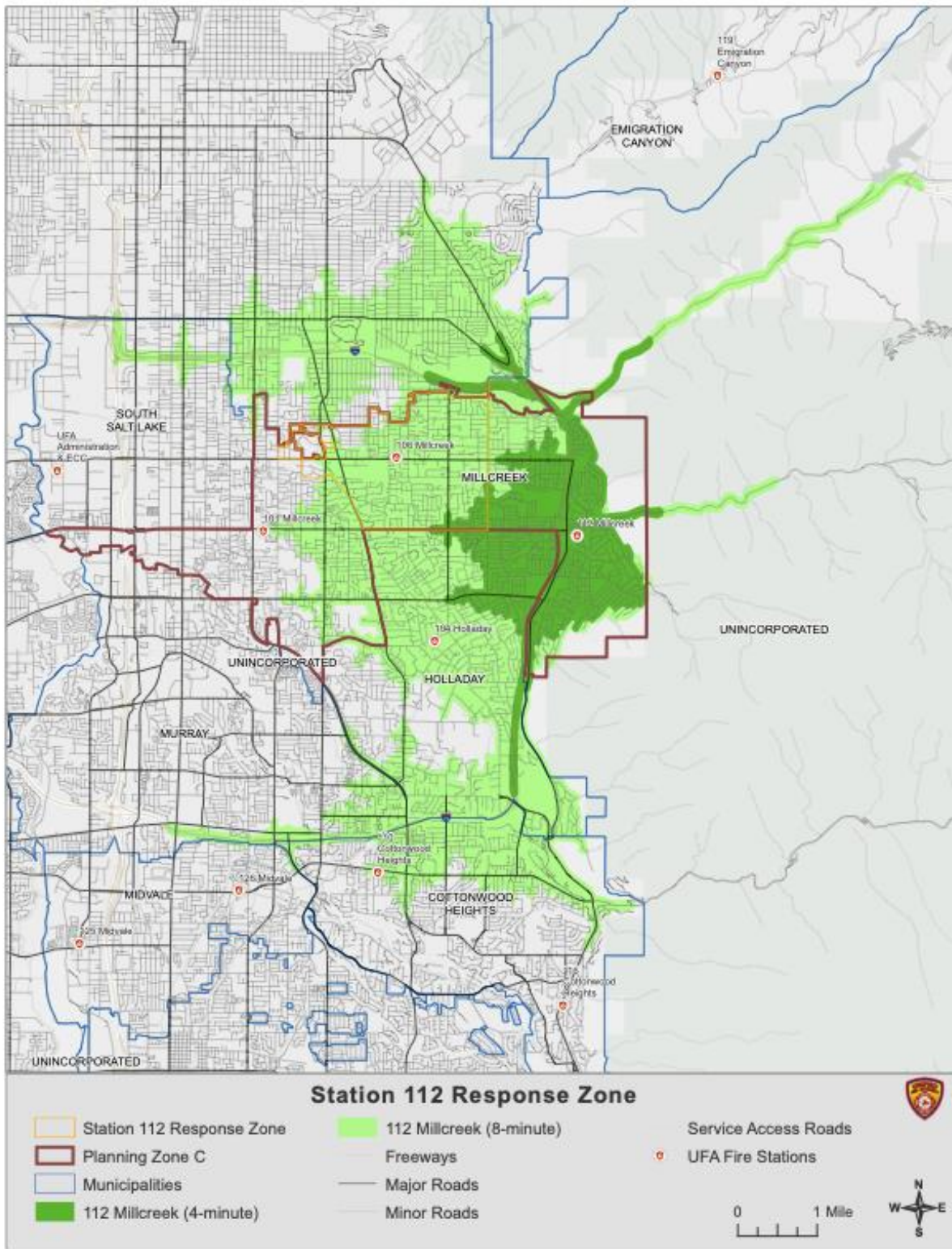


Map 185 - Station 101 4- and 8-Minute Travel Times



Map 186 - Station 106 4- and 8-Minute Travel Times

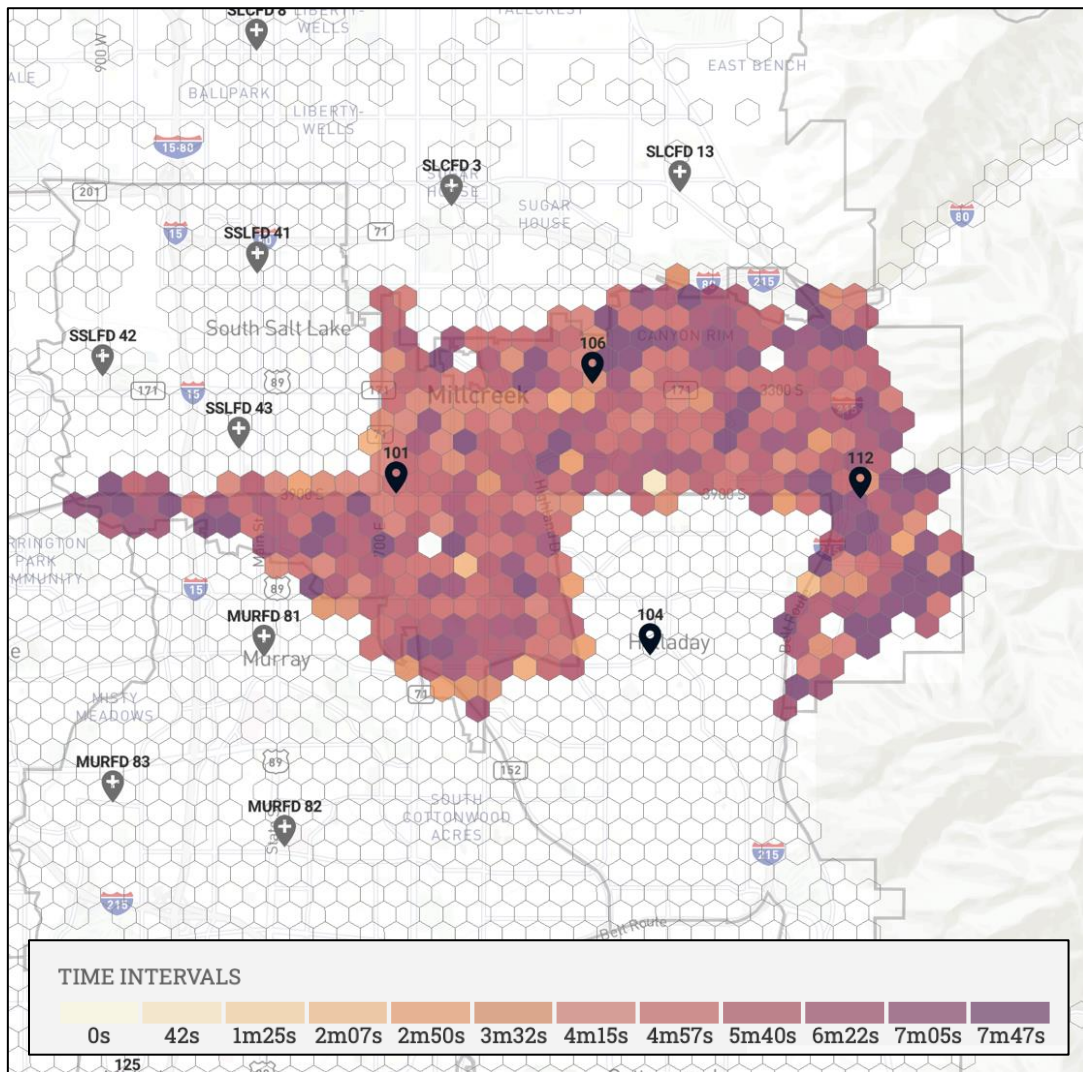




Map 187 - Station 112 4- and 8-Minute Travel Times

## Millcreek City – First Arriver Travel Times

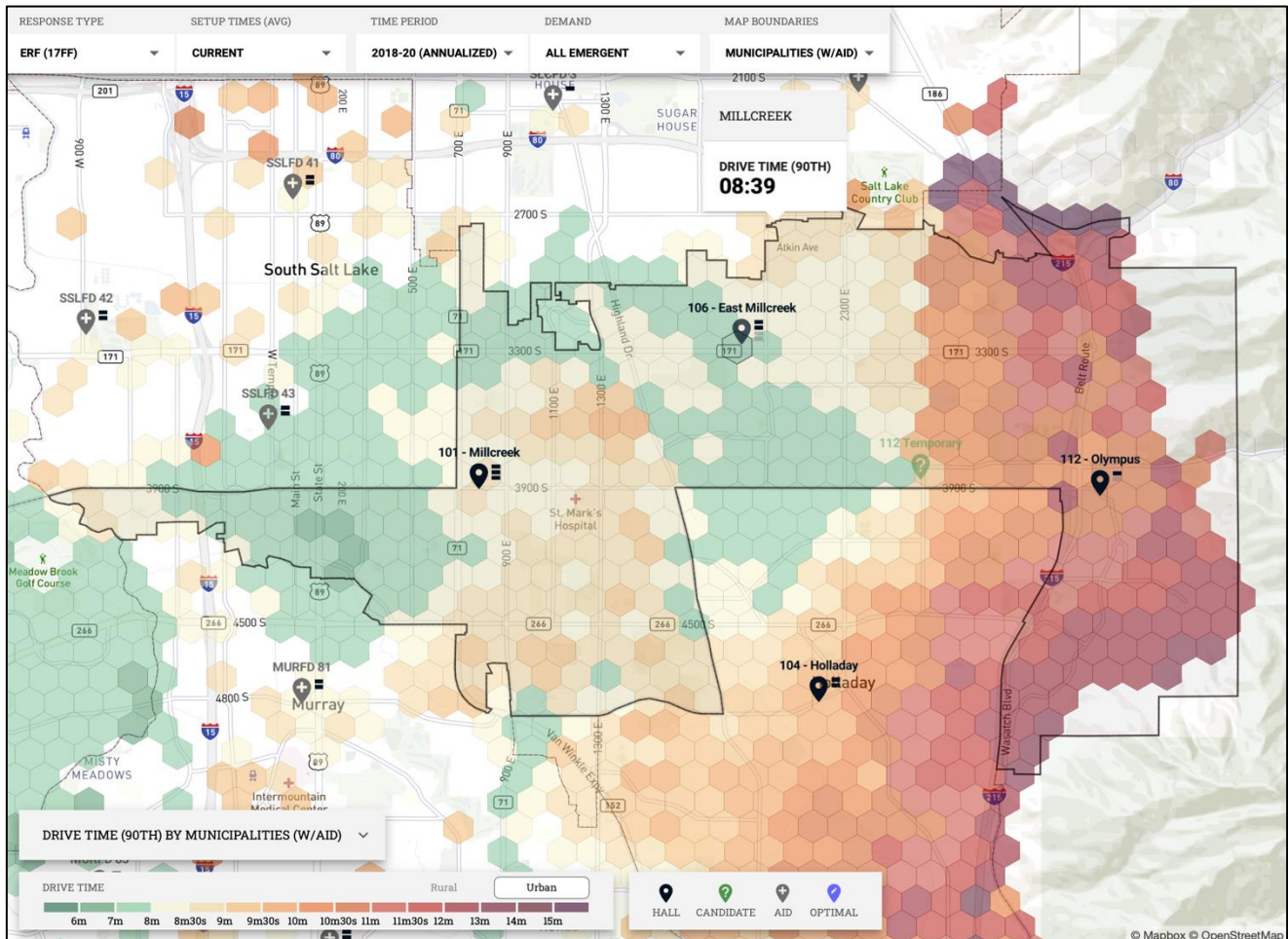
The following maps demonstrate the 90<sup>th</sup> percentile of travel times based off the last three years of historical data (2018-2020). The darker the color is, the more delayed the response, with the lighter colors demonstrating below or near target times. The darker colors on the bar within the 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 (90<sup>th</sup> percentile) from notification of the alarm to the arrival of the first arriving apparatus — not an adopted standard by UFA. UFA is currently in process of identifying benchmark and target standards to be adopted by the UFA Board of Directors. Currently within Millcreek City, the 90<sup>th</sup> percentile drive time for fire is 7:24 and 6:24 for EMS.



Map 188 – Millcreek City Response Times – All Aid

## Millcreek City – Residential Fire Effective Response Force (17 FF)

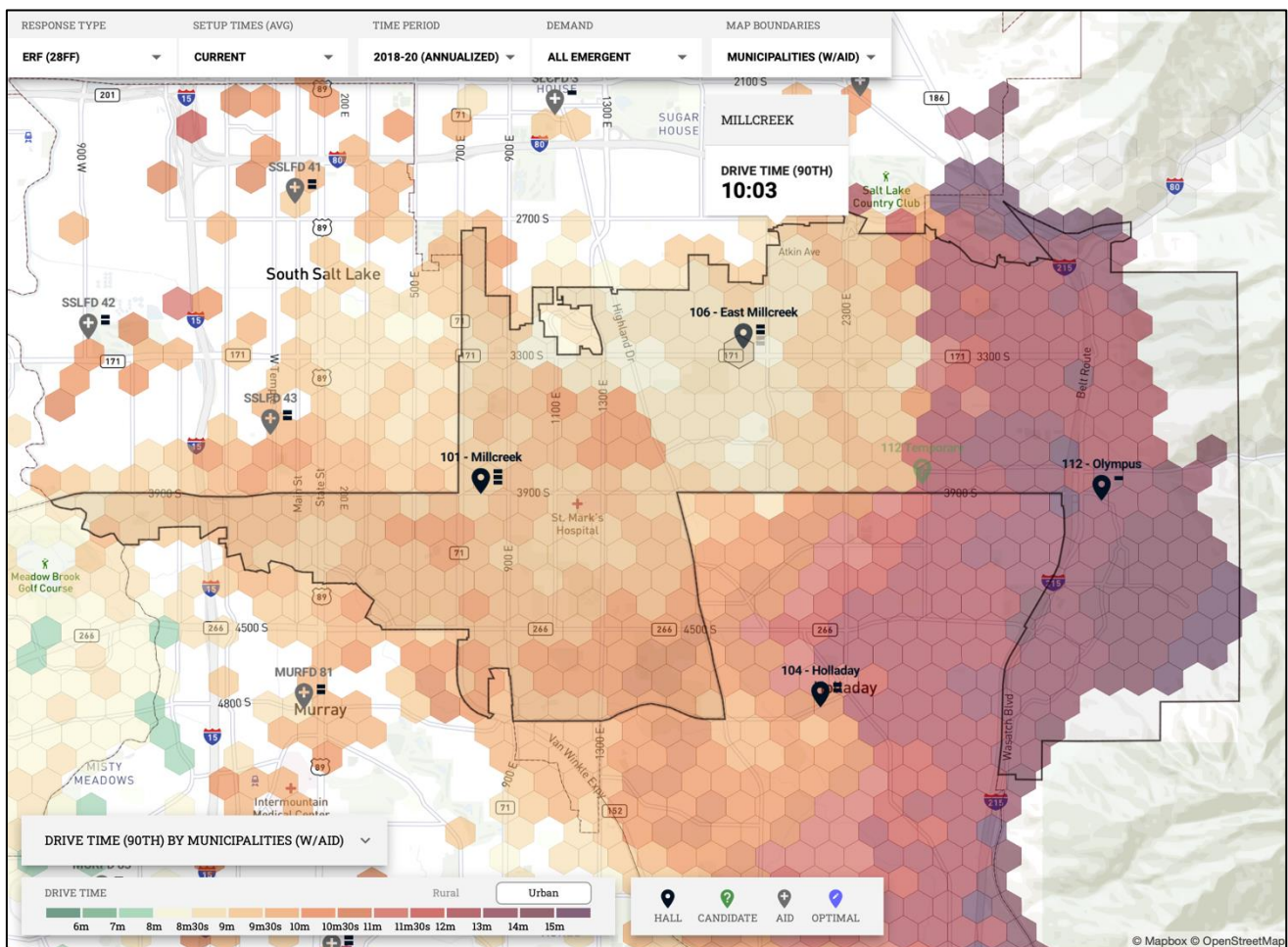
This map demonstrates the coverage of a multi-unit response to a residential fire based off all apparatus being within their station. The green to light yellow demonstrates the ability to have seventeen firefighters (a residential fire effective response force) on scene based off a residential urban fire force response. This map's drive times (or travel times) are based off the current NFPA 1710 standard of eight minutes (90<sup>th</sup> 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. UFA is currently in process of identifying benchmark and target standards to be adopted by the UFA Board of Directors. Based off predictive data, it is projected that the 90th percentile for 17 firefighters to arrive on scene would be 8:39.



Map 189 – Millcreek City Response Times – Residential Fire Effective Response Force (17 ERF)

## Millcreek City – 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 (90<sup>th</sup> 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. UFA is currently in process of identifying benchmark and target standards to be adopted by the UFA Board of Directors. Based off predictive data, it is projected that the 90th percentile for 28 firefighters to arrive on scene would be 10:03.



Map 190 – Millcreek City Response Times – Commercial Fire Effective Response Force (28 FF)

## Millcreek 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
High	Mod	Mod	Mod	Low	High	Mod	Mod	Mod	High	High	High

Table 125 - Millcreek City Hazard Matrix

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

### Infrastructure – Transportation

There are several high-level transportation routes within Millcreek City or directly bordering Millcreek City. I-15 runs through the west side of the city, I-80 runs on the northeast side, and I-215 runs on the west side. Several arterials and state roads also run through Millcreek, with 3300 South, 700 East and State Street. There are sixteen linear miles of Interstate/US Highway, 10.45 linear miles of State Highways, and 241.2 total linear miles of roadway. UTA also runs bus routes and light rail through the city, with the main light rail running on the west side of the city. Millcreek City is in the high-risk category for road infrastructure.

### Infrastructure – Water

There are several water districts within Millcreek City, including the Jordan Valley Water Conservancy District and the Mt Olympus Improvement Water District.

### Infrastructure – Dams

There are five identified dams within Millcreek City. Millcreek City is in the moderate-risk category for dam infrastructure.

### Natural Hazards

Within Millcreek City, Millcreek Canyon begins and extends into Unincorporated Salt Lake County. Within Millcreek City, there are no concerns with avalanche areas, however there are several areas that Millcreek units respond to that have avalanche as well as backcountry rescue potential within Unincorporated Salt Lake County. Millcreek is in the low-risk category for avalanche. There are several fault lines that run north-south through the city (see Map 8) and are components of the Wasatch Fault. Millcreek City is in the moderate-risk category for both liquefaction and fault lines. There is roughly 44,200 linear feet of fault lines in Millcreek City. One of the biggest hazards that occur within an earthquake scenario is the number of unreinforced masonry (URM) buildings within Millcreek City, with an estimated 8,718 URM's, which constitutes about 35% of the overall URM's within UFA's response areas. Millcreek City is in the high-risk category for unreinforced masonry.

### Wildland Urban Interface

On the eastern side of Millcreek City, there is risk due to urban interface fires, particularly in the Olympus Cove and East Millcreek areas. Also, there are structures and residences within Millcreek Canyon, which is a concern due to access and egress from Millcreek Canyon through Millcreek City. Millcreek City is in the moderate-risk category for Wildland Urban Interface.

### Hazardous Materials / Tier II Sites

There are four identified HazMat/Tier II Sites within Millcreek City, which is in the moderate-risk category.

### Hospitals

Millcreek City has one hospital, St Marks, located at 1200 E 3900 S, which is a full-service Level II Trauma Hospital with over 300 beds and is considered a short-term acute care facility. Millcreek City is in the moderate-risk category for hospitals.

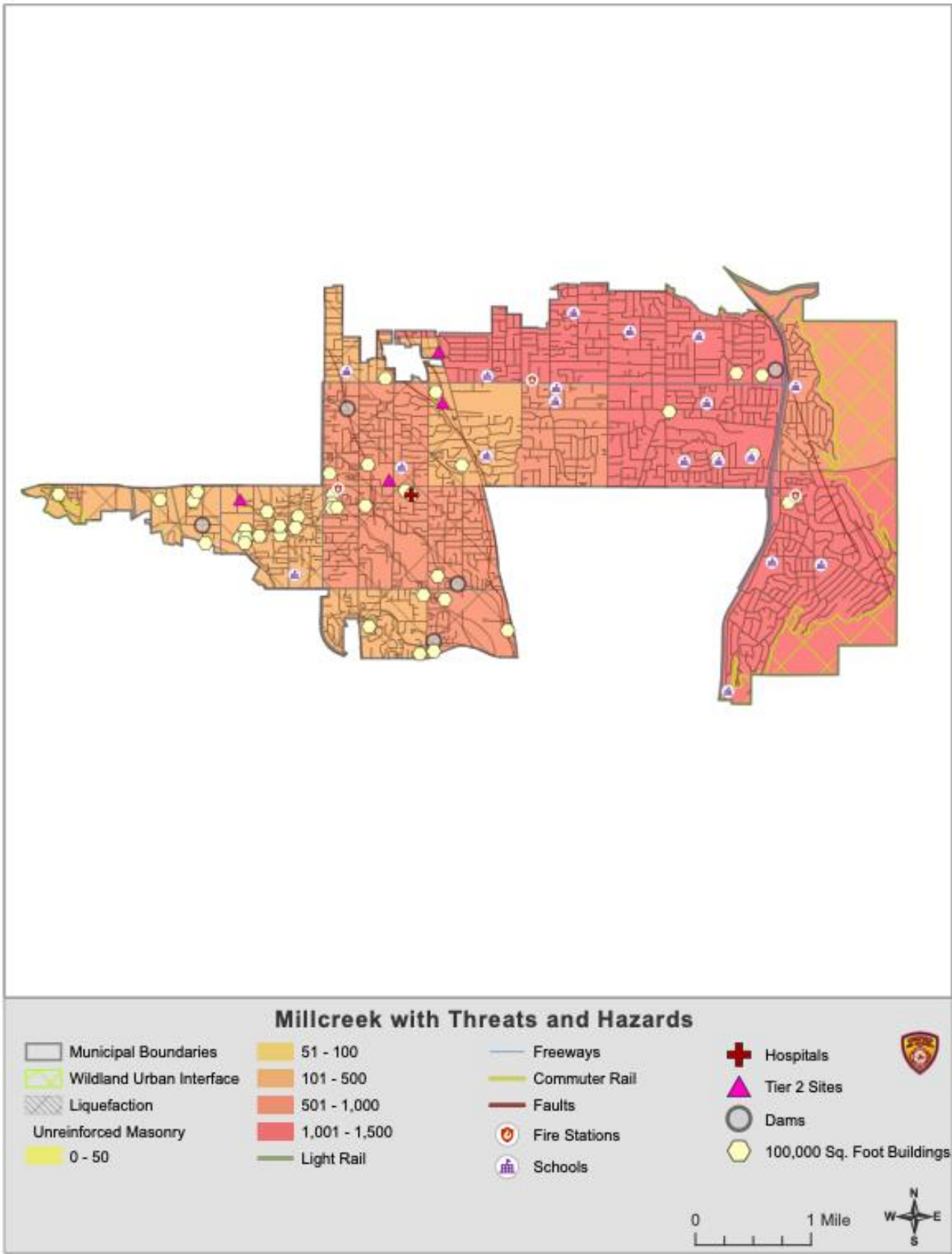
## Schools

Millcreek City has nine elementary schools, three middle schools, one high school, and two private/charter schools within city boundaries, which places it in the high-risk category.

## Target Hazards – Structures

Some of the target hazard occupancies in Millcreek include:

- St. Marks Hospital at 1200 East 3900 South
- Home Depot at 3398 South Highland Drive
- Specialty Lens at 3955 South Howick Street
- Morgro at 145 West Central Avenue
- Canyon Rim Care Center at 2730 East 3300 South



Map 191 - Millcreek City with Combined Hazards



## Life and Property Loss

From 2015-2020, there have been zero fatalities attributed to fire. There has been a total estimate of \$3,254,602.00 of property loss and a total estimate of \$962,912.00 of content loss due to fire.

## Unified Fire Shared Services

With a regional-response model, the Unified Fire Authority brings special services to bear when the situation calls for it, not relying on automatic or mutual aid which provides a quicker and more effective delivery of service to its residents.

### Battalion Chiefs

Unified Fire Authority staffs three operational battalion chiefs (BCs) daily, in addition to a 40-hour Operations Chief (OC). These BCs and OC respond to large, complex, or expanding incidents — providing incident command, safety, and operational direction. Each BC covers an area of UFA's service area and respond to calls for service in any jurisdiction. Battalion 11 is housed out of Station 101 in Millcreek, Battalion 12 is housed out of Station 121 in Riverton, and Battalion 13 is housed out of Station 118 in Taylorsville.

### Heavy Rescue Companies

Heavy Rescue specializes in structural collapse, confined space rescue, trench collapse rescue, vehicle extrication, machinery disentanglement, rope rescue (high angle, low angle, rigging) and rapid intervention (Firefighter Rescue). The UFA Heavy Rescue Program consists of two independent rescue companies strategically placed in UFA's jurisdiction. Station 117 in Taylorsville, and Station 121 in Riverton house our Heavy Rescue Teams.

### Hazardous Materials (HazMat) Companies

The Hazardous Materials Teams provide an efficient, effective, and professional Hazardous Material Mitigation response. HazMat Companies respond to hazardous material releases/spills for the purpose of mitigating the release/spill. They select and use proper specialized chemical personal protective equipment dependent on the nature of the incident. The HazMat Program consists of two independent HazMat

companies strategically placed in UFA's jurisdiction. Station 124 in Riverton, and Station 126 in Midvale house our HazMat Teams.

### Water Rescue Teams

UFA has a swift water team, ice rescue team, as well as a dive rescue team. These companies respond to victims recreating in our swift canyon rivers and our lakes and reservoirs. Station 116 in Cottonwood Heights, Station 117 in Taylorsville, Station 121 in Riverton, and Station 123 in Herriman house Water Rescue Companies.

### Wildland Division

UFA's Wildland Division provides highly trained and experienced wildland fire and all-risk response resources to local, state and federal incidents. The Wildland Division oversees the training and certification of UFA personnel for response to wildland fires and all-hazard incidents. We also work with UFA Communities to educate residents on wildfire preparedness and provide mitigation services to reduce the risks of wildfire. UFA has a special capability where a Duty Officer is able to act as the Fire Warden within UFA's jurisdictions, allowing the ordering of resources much more quickly than having to rely on a Fire Warden that may or may not be readily accessible. Station 103 in Herriman currently houses the Duty Officer.

### Investigations Division

Arson and Explosive related incidents are considered two of the most dangerous criminal activities that threaten our citizens. The need exists to protect the citizens of our jurisdiction from loss of life and property by reducing the crime of arson, arson-related crimes, improvised explosive devices (IEDS) and the prevention of future violent crimes. The Investigations Division addresses this need by establishing a sound foundation of effective enforcement, focusing on the apprehension of the offender, while in partnership with other Local, state and federal law enforcement agencies. The team utilizes highly-trained Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) certified K-9's that assist with accelerant and explosives detection.

### Urban Search & Rescue

A FEMA Urban Search and Rescue Task Force is a team of individuals which serve as a resource for disaster response at local, state, and federal levels. It is comprised mainly of firefighters but includes structural engineers, medical professionals,

canine/handler teams and emergency managers with highly specialized training in urban search and rescue environments.

Utah Task Force 1 (UT-TF1) is one of 28 Type I, Federal Urban Search & Rescue (US&R) Task Forces in the United States. This program brings a highly trained, multi-hazard Task Force that is especially designed to respond to a variety of emergencies/disasters including earthquakes, hurricanes, tornadoes, floods, terrorist acts and hazardous material releases. Fire department personnel that are task force members receive specialized training and skills that directly benefit Unified Fire Authority.

### [Salt Lake County Emergency Management](#)

The Salt Lake County Division of Emergency Management serves our citizens by directing and coordinating resources for disasters and emergencies through preparation, planning, mitigation, response, and recovery. The Salt Lake County Emergency Coordination Center is activated and manned during any event—from small-scale to large-scale occurrences—to disasters both natural and man-made that can or have exceeded the resources of any particular jurisdiction. Currently, the Salt Lake County ECC assists and obtains resources for the 22 jurisdictions located within the Salt Lake Valley. Salt Lake County EM assists these jurisdictions through the activation of 15 Emergency Support Functions (ESFs) filled by employees from a multitude of backgrounds. The ESF employees have authority throughout Salt Lake County to fill and order additional support for the operations occurring in the field until the impacted jurisdiction can return to their normal operations and functions. The Emergency Management Division is committed to keeping the public safe through community outreach, training, dissemination of important public information, training of staff and the creation of a more resilient community through mitigation, preparation, response, and recovery. The ECC has been activated for many events such as Child Abduction Response Team (CART) Deployments, wildland fires such as the Rosecrest and Machine Gun fires, flooding, severe weather events, earthquakes, civil unrest, the COVID-19 pandemic, Line of Duty Deaths (LODD), and many other events.



## Unified Fire Authority

3380 South 900 West  
Salt Lake City, UT 84119

# Riverton City

## Community Risk Assessment



## Riverton City Planning Zone

UFA has three stations within the Riverton City Planning Zone covering a total of 12.58 square miles with a population of 45,285 and responded to 2,088 calls for service in 2020.

Planning Zone	Population	Population Percentage of UFA	Square Miles	Population Density per Sq Mile	Classification
<b>Riverton City</b>	45,285	10.04%	12.58	3,600	Urban

Riverton City has increased its population from 38,752 in 2010 to 55,144 in 2020, showing an increase of 14.43% over a ten-year timeframe. Providing an exponential growth pattern and if all things remain equal, chart 74 demonstrates that Riverton could grow to 58,036 by the year 2040.

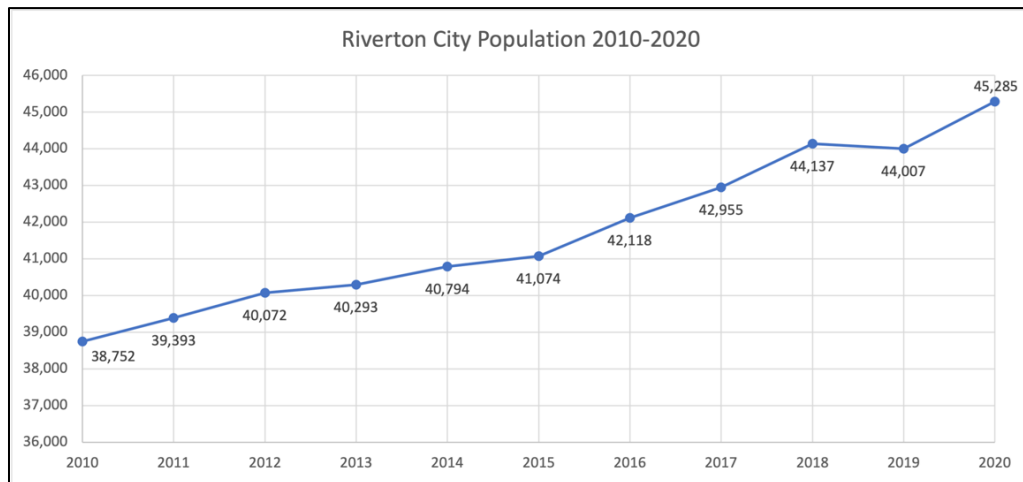


Chart 74 - Riverton City Population 2010-2020

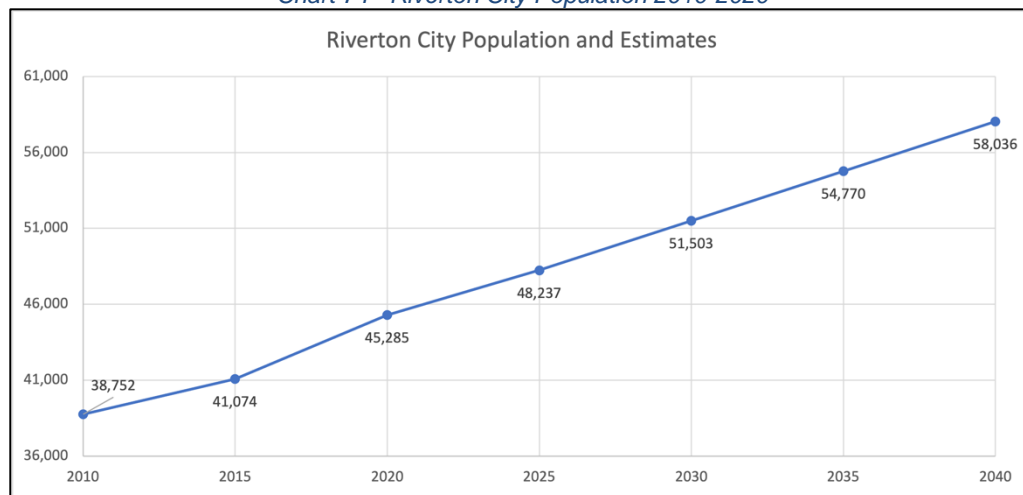


Chart 75 - Riverton City Population and Estimates 2010-2040

## Riverton City Station Information

### Station 120 information:

- Owner – Riverton City
- Opened – 1988/1999
- Address – 13000 South 2700 West
- Staffing and Apparatus –
  - MA 120 (2 persons)
  - Wildland Division Headquarters



Image 23 – Riverton City Station 120

### Station 121 information:

- Owner – Riverton City
- Opened – 2006
- Address – 4146 West 12600 South
- Staffing and Apparatus –
  - Type 1, ML 121 (4 persons)
  - MA 121 (2 persons)
  - Heavy Rescue (cross-staffed)
  - Battalion Chief 12 (1 person)



Image 24 – Riverton City Station 121

### Station 124 information:

- Owner – Riverton City
- Opened – 2013
- Address – 12662 South 1300 West
- Staffing and Apparatus –
  - Type 1, ME 124 (4 persons)
  - HazMat 124 (cross-staffed)



Image 25 – Riverton City Station 124

## Surrounding UFA and Automatic/Mutual Aid Response Stations

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

- UFA Station 103 (Herriman City), with a four-person medic engine and a two-person peak-load medic ambulance
- UFA Station 123 (Herriman City), with a four-person medic engine
- Bluffdale Station 91, with a two-person medic engine and a two-person medic ambulance
- Bluffdale Station 92, with a two-person medic engine and a two-person medic ambulance
- South Jordan Station 61, with a four-person medic ladder and a two-person medic ambulance
- South Jordan Station 62, with a four-person engine and a two-person medic ambulance
- South Jordan Station 63, with a four-person engine and a two-person medic ambulance
- South Jordan Station 64, with a four-person engine and a two-person medic ambulance
- West Jordan Station 52, with a three-person engine and a two-person medic ambulance
- West Jordan Station 53, with a three-person engine and a two-person medic ambulance
- West Jordan Station 54, with a three-person engine and a two-person medic ambulance
- West Jordan Station 55, with a three-person engine and a two-person medic ambulance



## Riverton City – Incidents by Dispatch Type

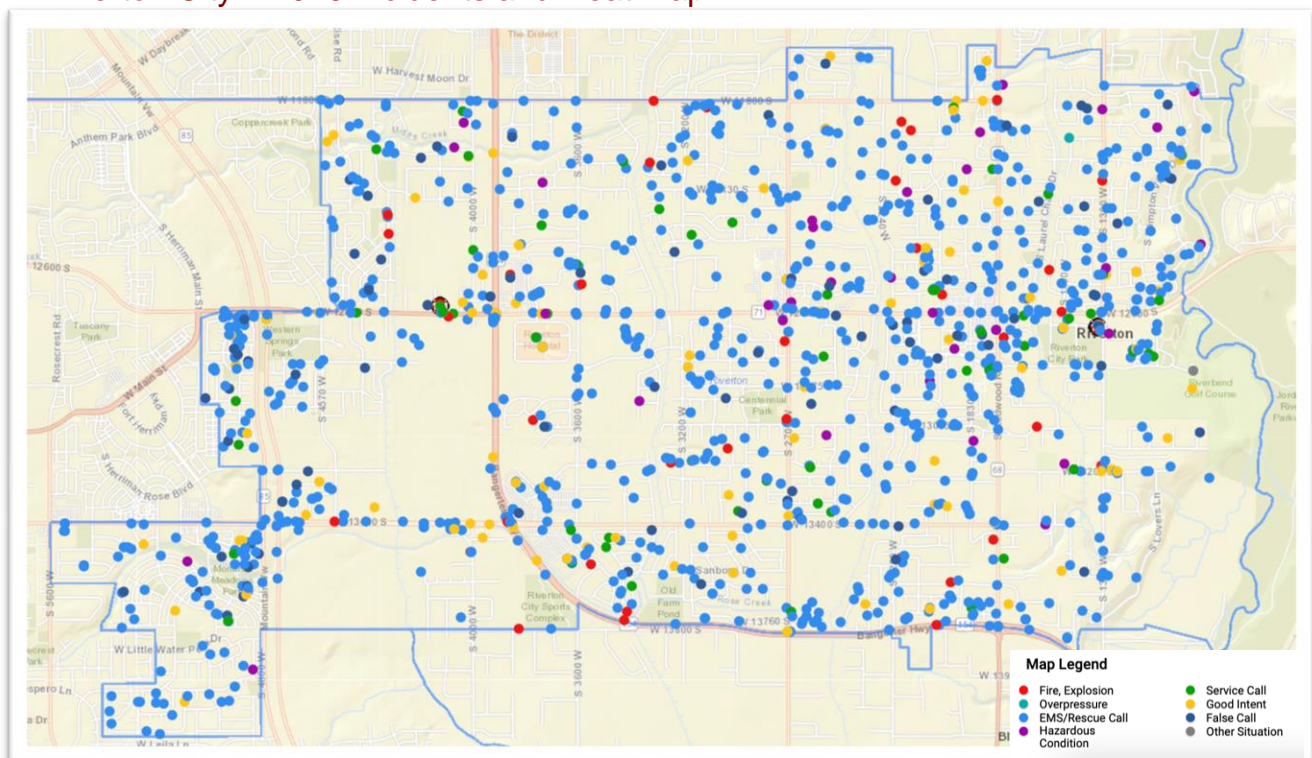
The following data is what the NFIRS type was when crews arrived on scene. This may be different than what was originally dispatched, including a reclassification of a call type from one to another. Cancelled calls occur if the company is cancelled en route to a call and never arrives on scene, which then changes the dispatch type to an NFIRS 611 call type.

	CY 2020	CY 2019	CY 2018
<b>Fire Suppression</b>	41	26	35
<b>EMS</b>	1,222	1,205	1,176
<b>Hazardous Materials</b>	36	34	32
<b>Service Calls</b>	105	106	76
<b>Good Intent</b>	350	222	184
<b>False Calls</b>	102	128	122
<b>Other (Misc., Flood, Overpressure)</b>	3	6	5
<b>Total</b>	1,860	1,727	1,630

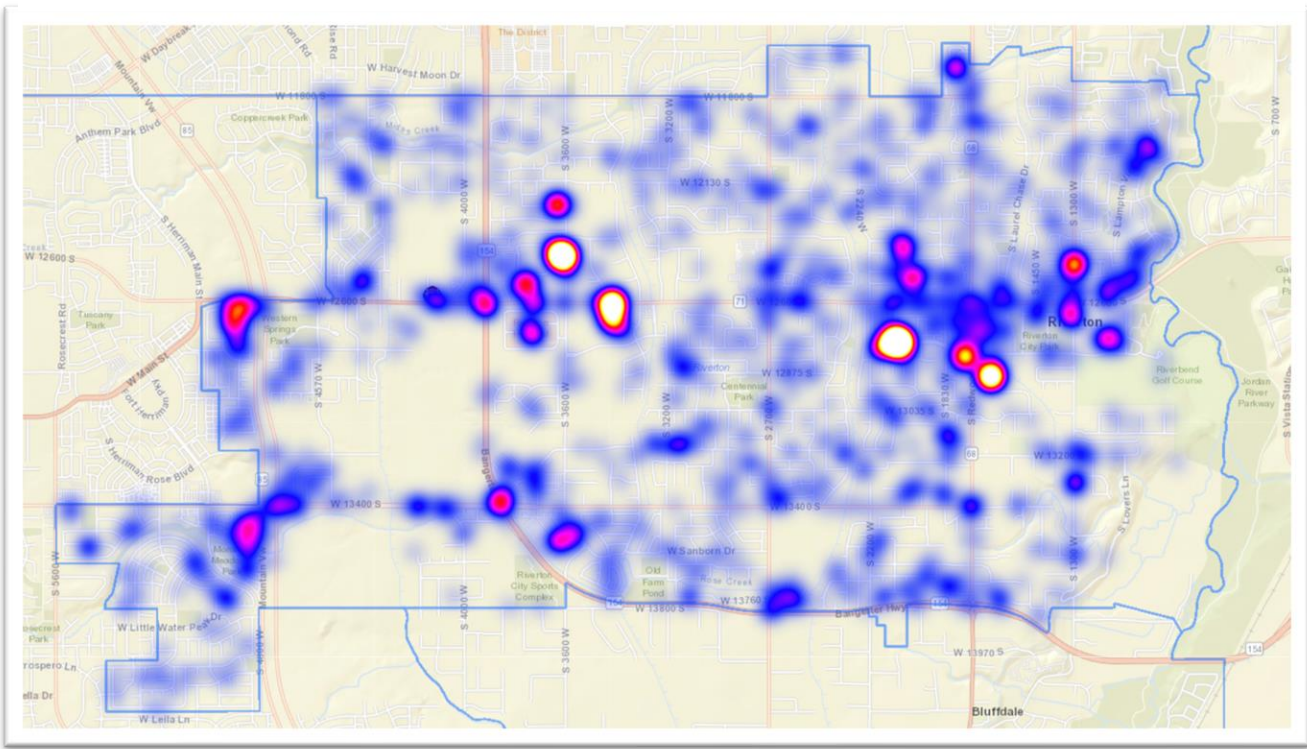
<b>Cancelled</b>	228	126	126
<b>Overall Total</b>	2,088	1,853	1,756

Table 126 – Riverton City Call Type

## Riverton City – 2020 Incidents and Heat Map



Map 192 - Riverton City Incident Calls by Call Type



Map 193 - Riverton City Call Volume Heat Map

## NFPA 1710

The National Fire Protection Association is an international nonprofit organization that is devoted to eliminating death, injury, property, and economic loss due to fire, electrical and related hazards. The NFPA makes recommendations on over 300 codes and standards. NFPA 1710 recommendations are based off 90<sup>th</sup> percentile times.

### 💡 – In Other Words...

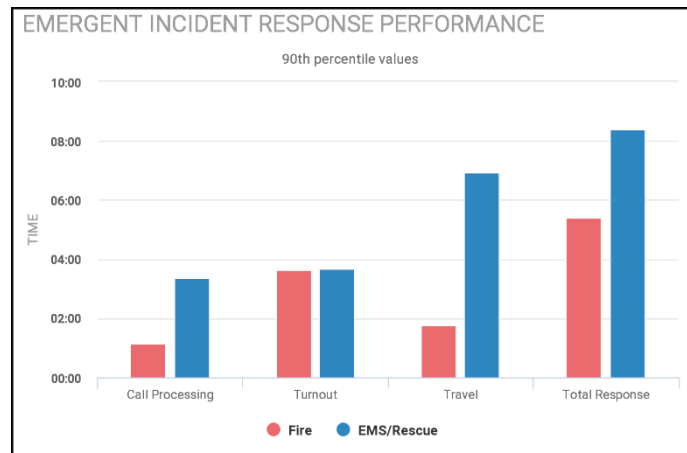
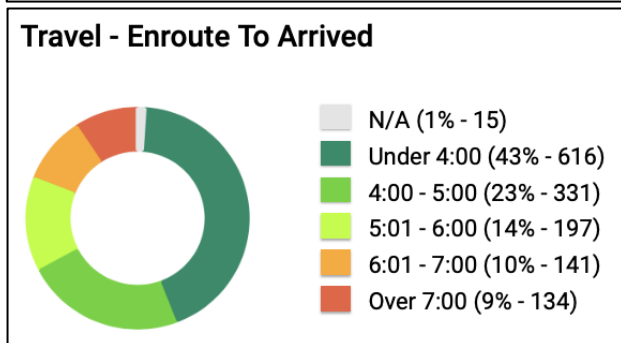
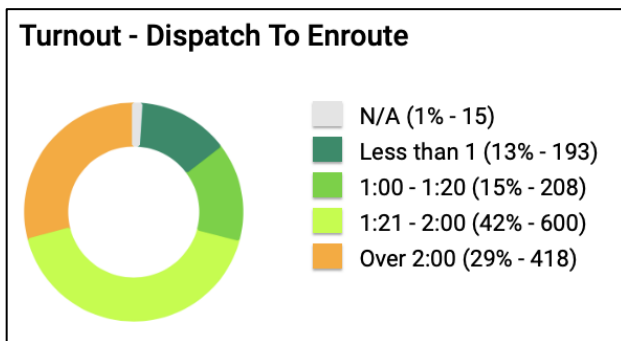
If a value is in the 90<sup>th</sup> percentile, it means the value is better than 90% of all other values in the dataset. In other words, it is within the top 10% of the values.

NFPA 1710 encompasses suggested standards for full-time fire departments and recommends the following times (all of which are at the 90<sup>th</sup> percentile): alarm processing – 64 seconds; turnout time for EMS responses – 60 seconds; turnout time for fire responses – 80 seconds; first arriver apparatus – 240 seconds (4 minutes); initial full-alarm assignment for low and medium hazard responses – 480 seconds (8

minutes); or initial full-alarm assignment for high hazard/high-rise responses – 610 seconds (10 minutes 10 seconds). The total response times are the cumulative totals of call processing time, turnout time, and travel time. NFPA 1710 recommends a total response time of 6:24 for the first arriving apparatus for fire and 6:00 for the first arriving apparatus for EMS.

**📌 – Of Note...**  
 NFPA 1710 response times have not been adopted by the UFA Board. One of the important elements of the community risk assessment and standards of cover is to identify current 90th percentile times (current baselines) within UFA and to identify realistic benchmarks for the UFA Board to consider for adoption.

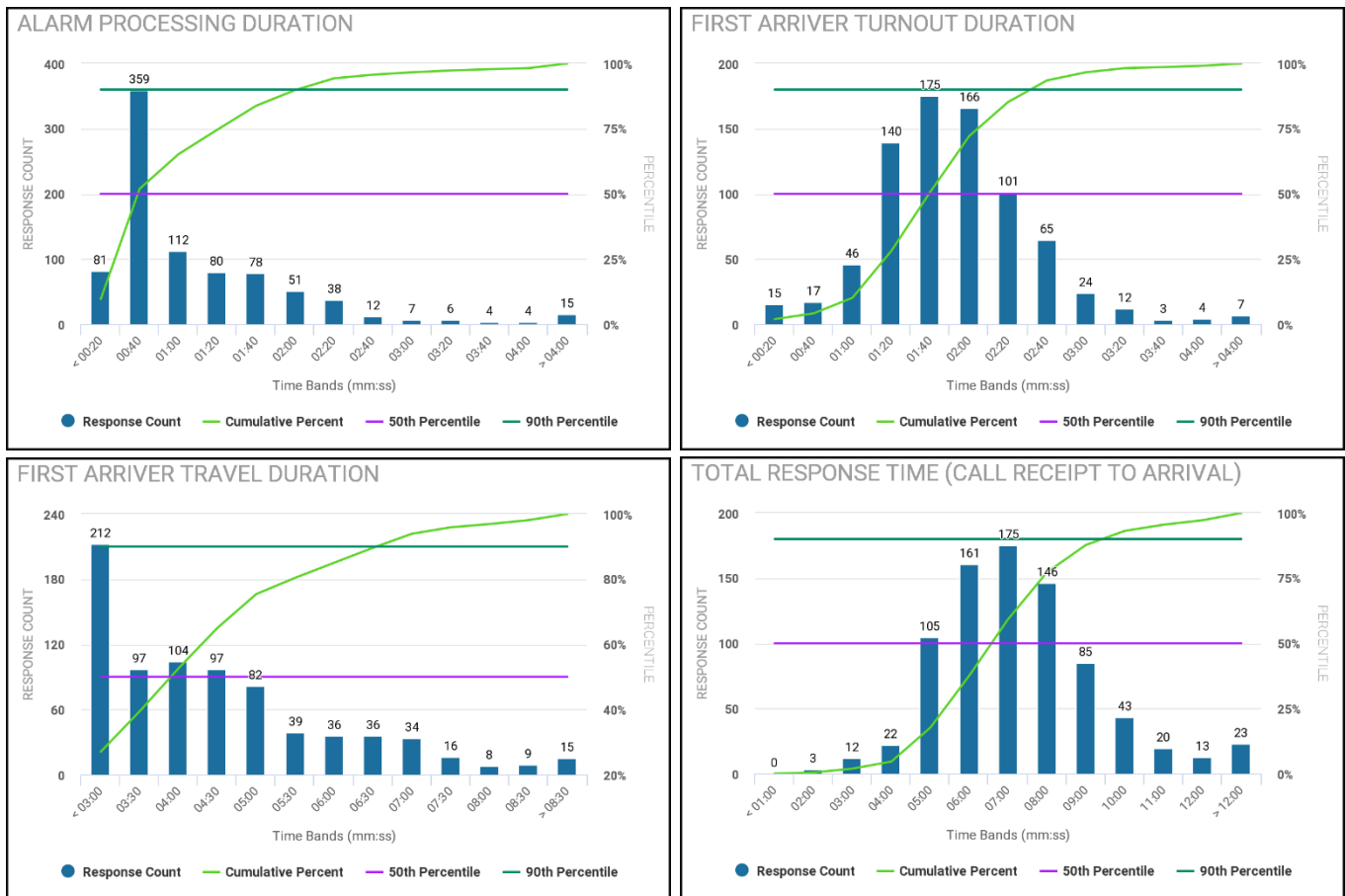
### Riverton City – 2020 Dispatch and Response Times



Urban	Call Processing: Fire	Turnout Time: Fire	Travel Time: Fire	Total Response: Fire	Call Processing: EMS	Turnout Time: EMS	Travel Time: EMS	Total Response: EMS
<b>Riverton</b>	2:06	2:36	7:38	10:12	2:00	2:26	6:25	8:57
<b>UFA Urban 2018-2020</b>	2:16	2:39	7:36	10:34	1:47	2:32	6:29	9:18
<b>UFA Rural 2018-2020</b>	2:32	3:05	15:08	19:09	1:56	2:50	14:45	17:45
<b>NFPA 1710</b>	1:04	1:20	4:00	6:24	1:00	1:00	4:00	6:00

Table 127 – Riverton City 2020 Emergent Response Times, 90<sup>th</sup> percentile values

## Riverton City – 2020 Turnout and Travel Times



The charts above illustrate the alarm processing, turnout and travel times for all units responding to service calls within Riverton City. The 90<sup>th</sup> percentile for alarm processing for fire responses was 2:06 and 2:00 for EMS, the 90<sup>th</sup> percentile turnout time was 2:36 for fire responses and 2:26 for EMS responses. The 90<sup>th</sup> percentile travel time was 7:38 for fire responses and 6:25 for EMS. The 90<sup>th</sup> percentile total response time was 10:12 for fire and 8:57 for EMS. For the charts above, they show both fire and EMS response times together.

### 📌 – Of Note...

One item to note is that if you were to add the processing time, the turnout time, and the travel time, it will not necessarily (and often doesn't), sum the total response time. This is due to some of the limitations within the datasets and gaps within timestamps. Where there are missing timestamps, those particular key performance indicators (KPI) are excluded as they cannot accurately be calculated out.

## Riverton City – 2020 Incidents by Time of Day

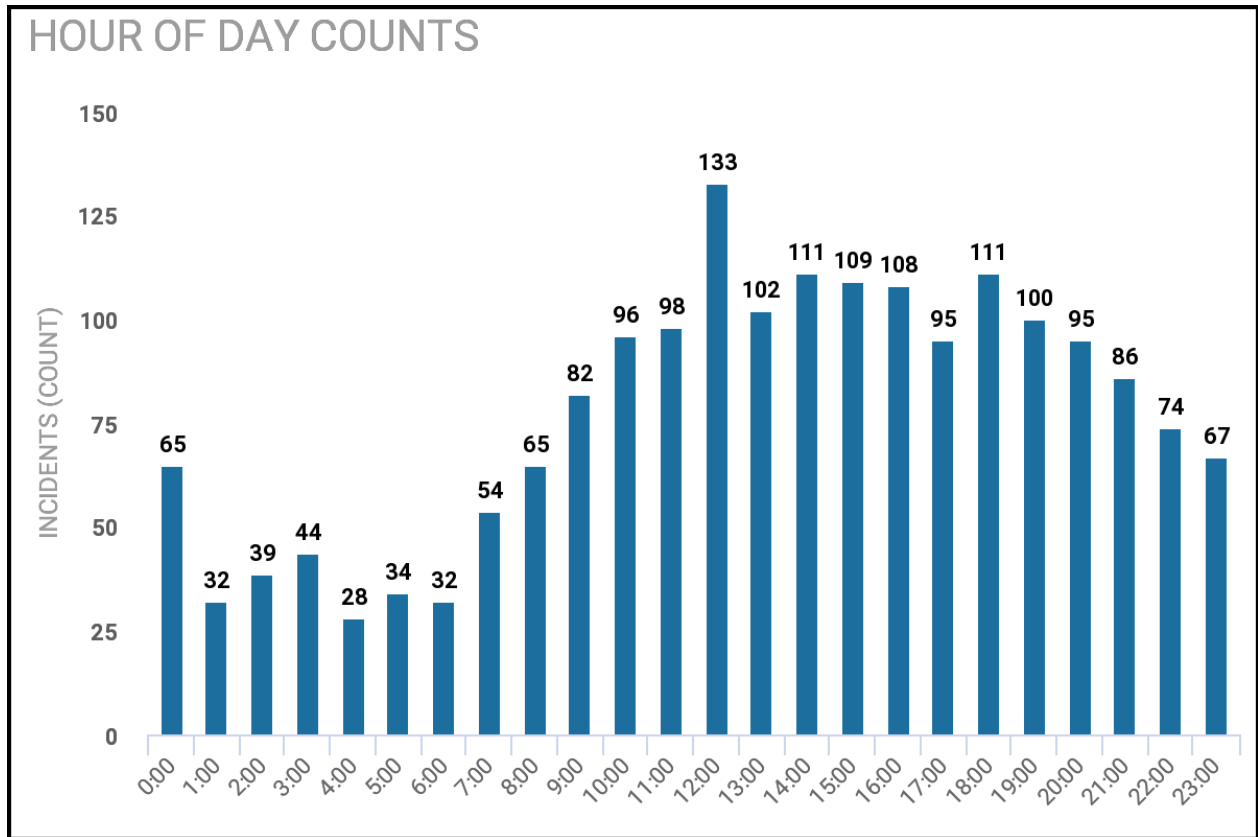


Chart 76 – Riverton City 2020 Incidents by Time of Day

The above table demonstrates the incidents by time of day and the time of greatest demand within Riverton City for all service calls. This chart illustrates that the greatest demand for service delivery begins to increase at 7:00 AM and starts to decrease at 8:00 PM.

## Riverton City – 2020 Incidents by Day of Week

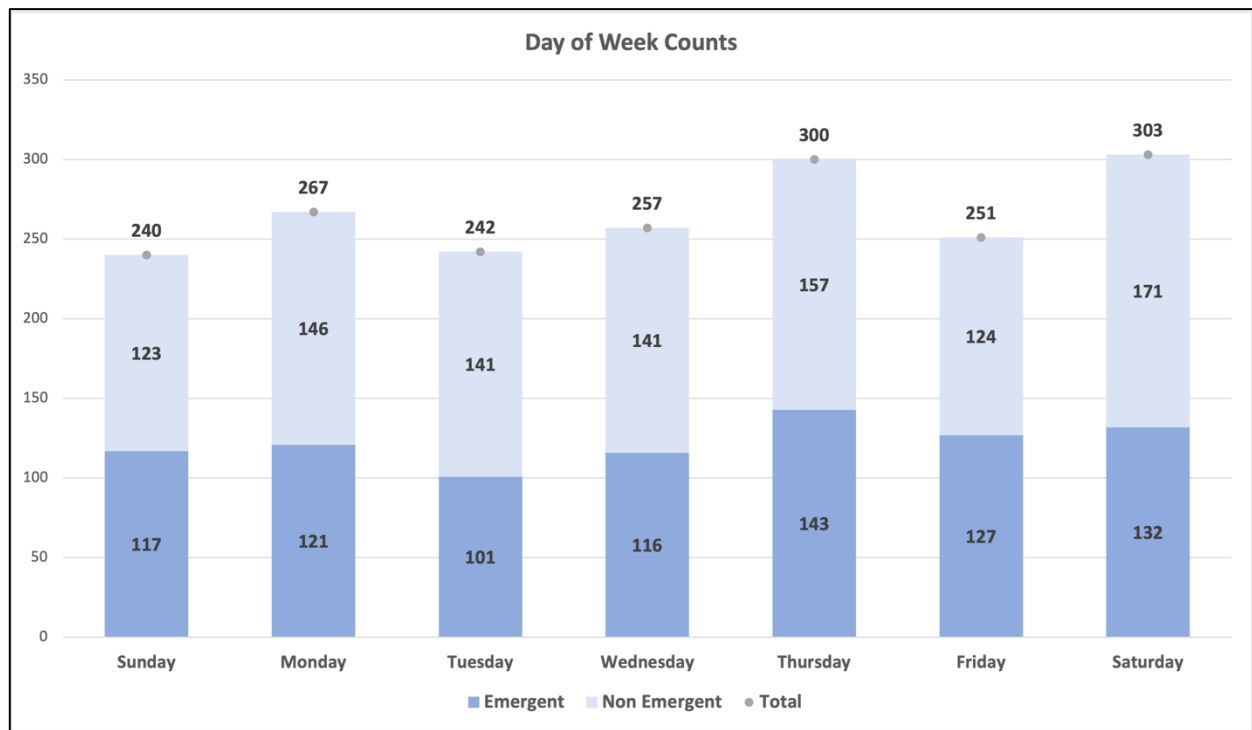


Chart 77 - Riverton City Incidents by Day of Week

This chart demonstrates the call volume based on the day of the week, with an increase in all calls beginning Thursday. The peak volume for all calls in Riverton City occurs on Saturday.

## Riverton City – EMS Calls

EMS calls are filtered by final disposition codes and this data is taken from VECC and determined by the patient acuity at the time of call termination. Often times the EMS calls identified from final disposition are different than the number of EMS calls that were initially dispatched due to one being the initial call type, and one being what call type the call was closed as by responding fire crews.

	CY 2020	CY 2019	CY 2018
<b>ALS Transports</b>	664	705	584
<b>BLS Transports</b>	800	732	808
<b>Scene Release</b>	99	72	309
<b>Public Assistance</b>	22	5	16
<b>EMS Total Calls</b>	1,563	1,509	1,701

Note: There is possibly a difference if you were to add all calls due to data reporting mechanisms. Public assistance calls will sometimes get duplicated with a scene release, depending on dispatch code, but those calls do not carry across to the total calls. Also, cancelled calls go into a different final disposition so the numbers in the 'Incidents by Dispatch Type' are reflective of this difference.

Table 128 – Riverton City EMS Calls

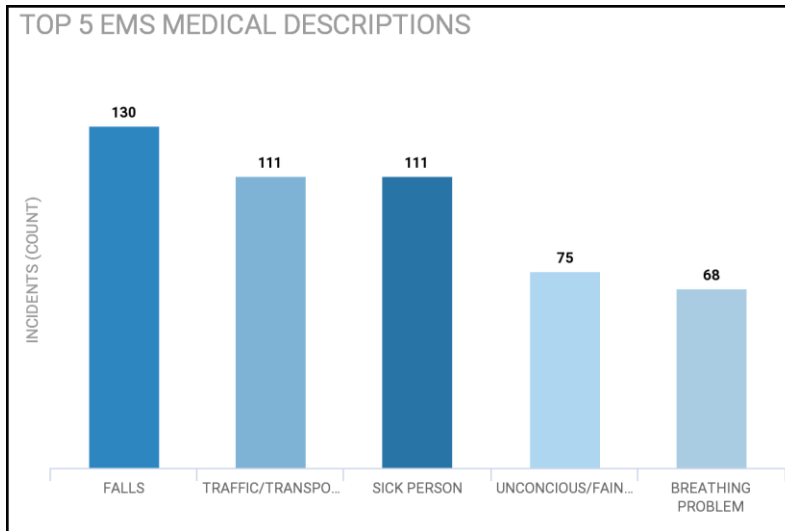


Chart 78 - Top 5 EMS Medical Calls

Riverton City – 2020 Fire Incidents by Dispatch Type

NFIRS Description	Incident Count	% of Incidents
<b>Structure Fire</b>	22	51.2%
<b>Natural Vegetation Fire</b>	9	20.9%
<b>Outside Rubbish Fire</b>	7	16.3%

NFIRS Description	Incident Count	% of Incidents
<b>Vehicle Fire</b>	2	4.7%
<b>Special Outside Fire</b>	2	4.7%
<b>Fire, Other</b>	1	2.3%
<b>Total</b>	43	100%

Table 129 – Riverton City 2020 Incidents by Dispatch Type

## Riverton City – Building Occupancy Classification and Risk Categories

Occupancy Classification	Low	Moderate	High	Maximum	Total
<b>Assembly</b>	13	2	11	0	26
<b>Commercial/Industrial</b>	5	5	6	2	18
<b>Educational</b>	6	1	5	1	13
<b>Government</b>	0	0	1	0	1
<b>Healthcare</b>	1	0	2	0	3
<b>Hazardous</b>	Unknown	Unknown	Unknown	Unknown	77*
<b>Storage</b>	0	0	0	0	0
<b>Residential</b>	951	7,080	2,069	7	10,107
<b>Residential – Multi Unit</b>	20	16	12	3	51
<b>High Rise</b>	N/A	N/A	0	1	1
<b>Total</b>	996	7,104	2,106	14	10,297

\*There is currently a gap within the identification of building size regarding hazardous materials sites. This is a gap that is being closed over the next several years as we collect the data and information.

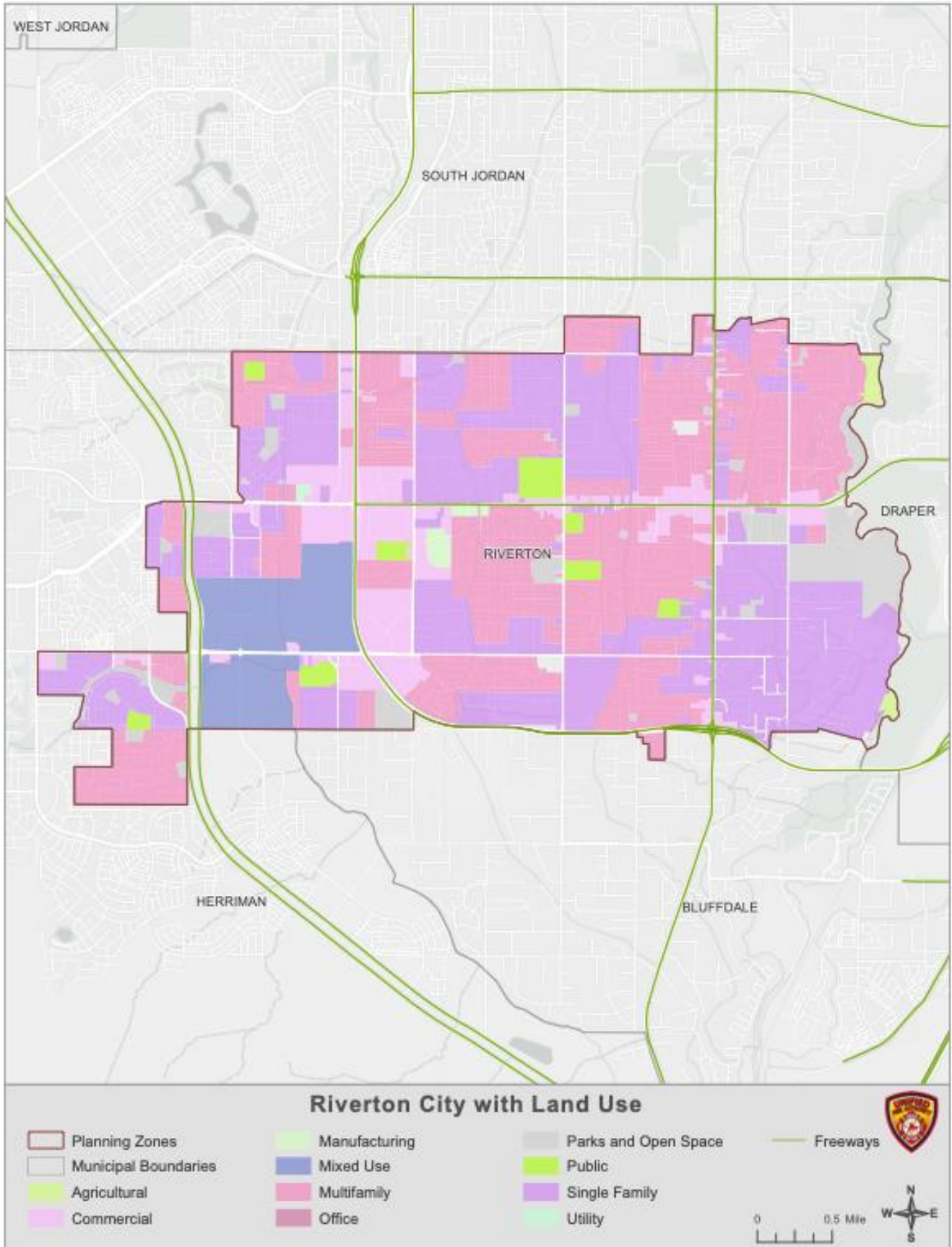
*Table 130 – Riverton City Building Occupancy and Risk Categories*

### Building Size / Considerations

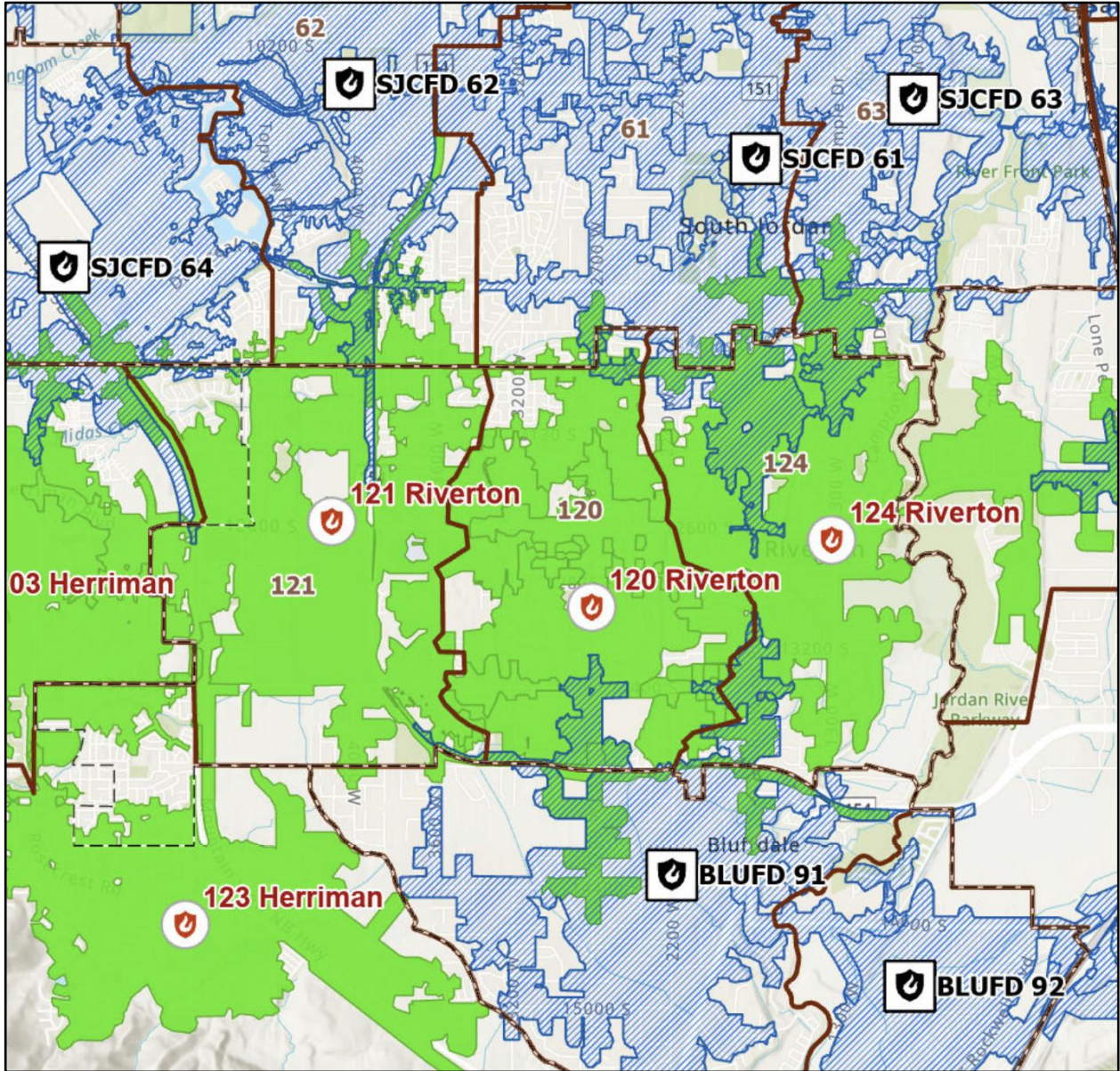
For purposes of risk classification, UFA has outlined the following risk classifications for building size, regardless of occupancy type (except residential). Low risk = 1-4,999 square feet. Moderate risk = 5,000-9,999 square feet. High risk = 10,000-99,999 square feet. Maximum risk = >100,000 square feet.

For residential occupancies, the following classifications apply. Low risk = 1-1,999 square feet. Moderate risk = 2,000-3,999 square feet. High risk = 4,000-9,999 square feet. Maximum risk = ≥10,000 square feet.





Map 194 - Riverton City with Land Use



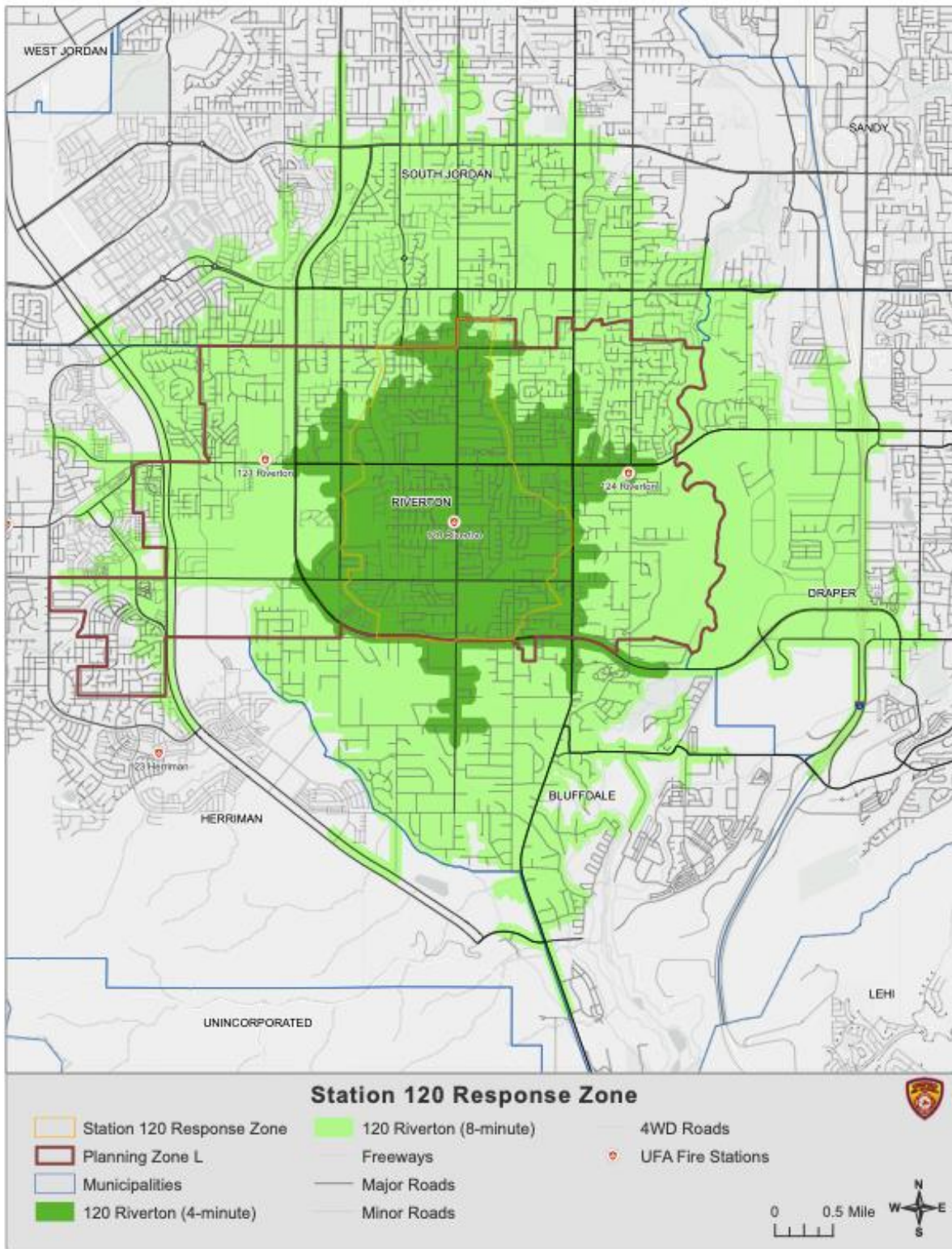
**Four Minute Response Times - UFA and Non-UFA Stations**

September 2022

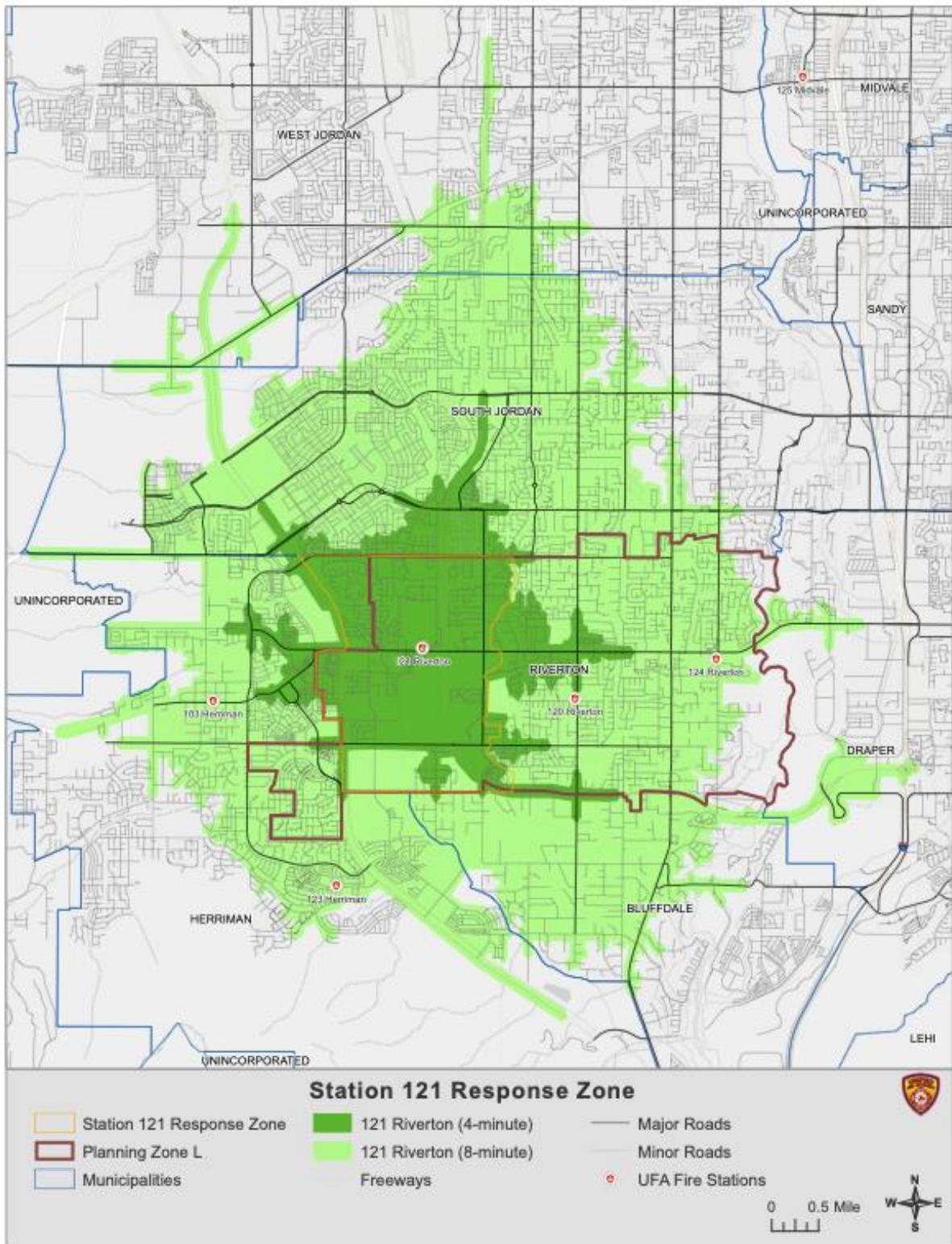
Legend:

- Municipalities
- Fire Zones
- UFA Fire Stations
- Non-UFA Fire Stations
- 4 Minute Response Times Non-UFA Fire Stations
- 4 Minute Response Times UFA Fire Stations

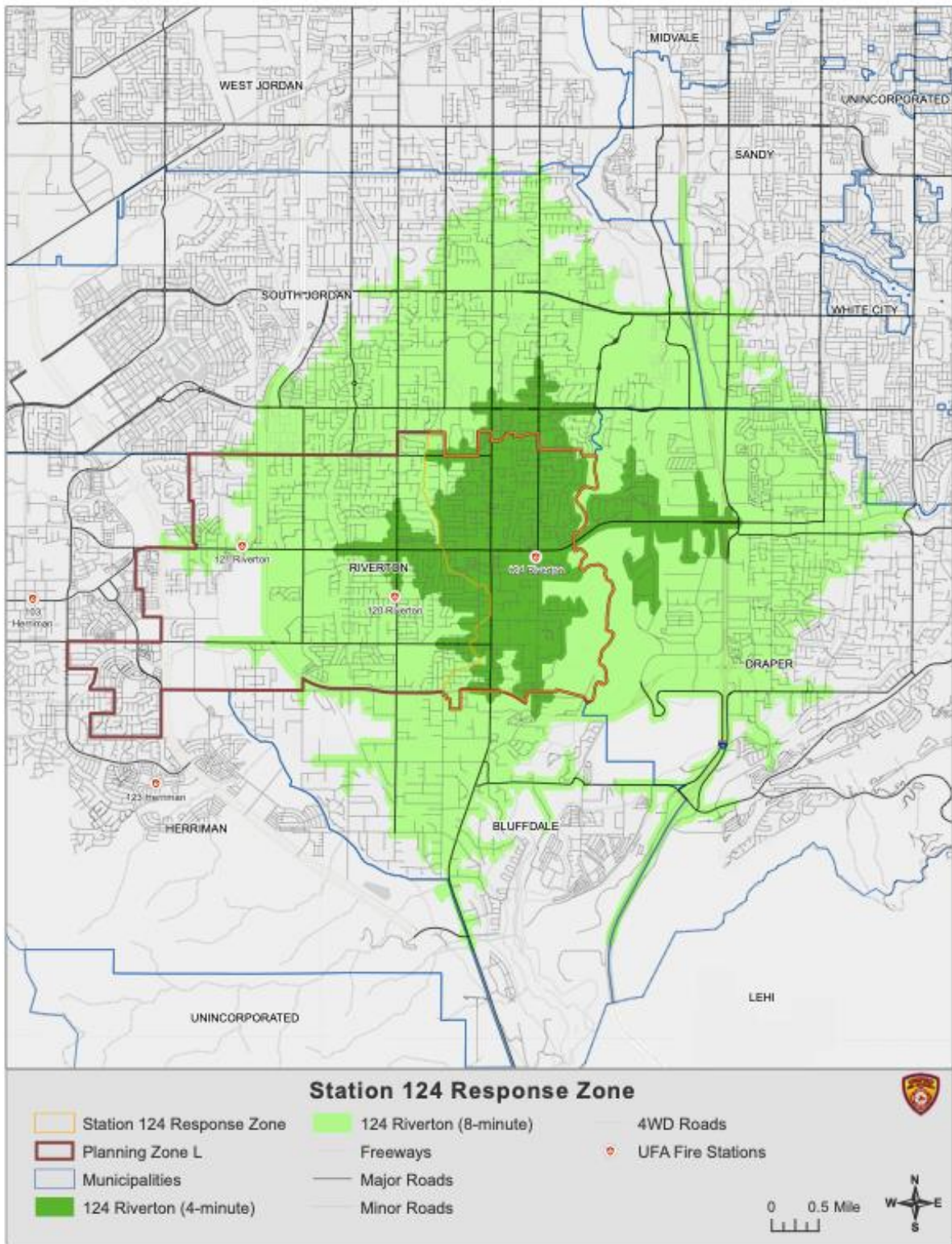
Map 195 - 4-Minute Travel Time, UFA and Aid



Map 196 - Station 120 4- and 8-Minute Travel Times



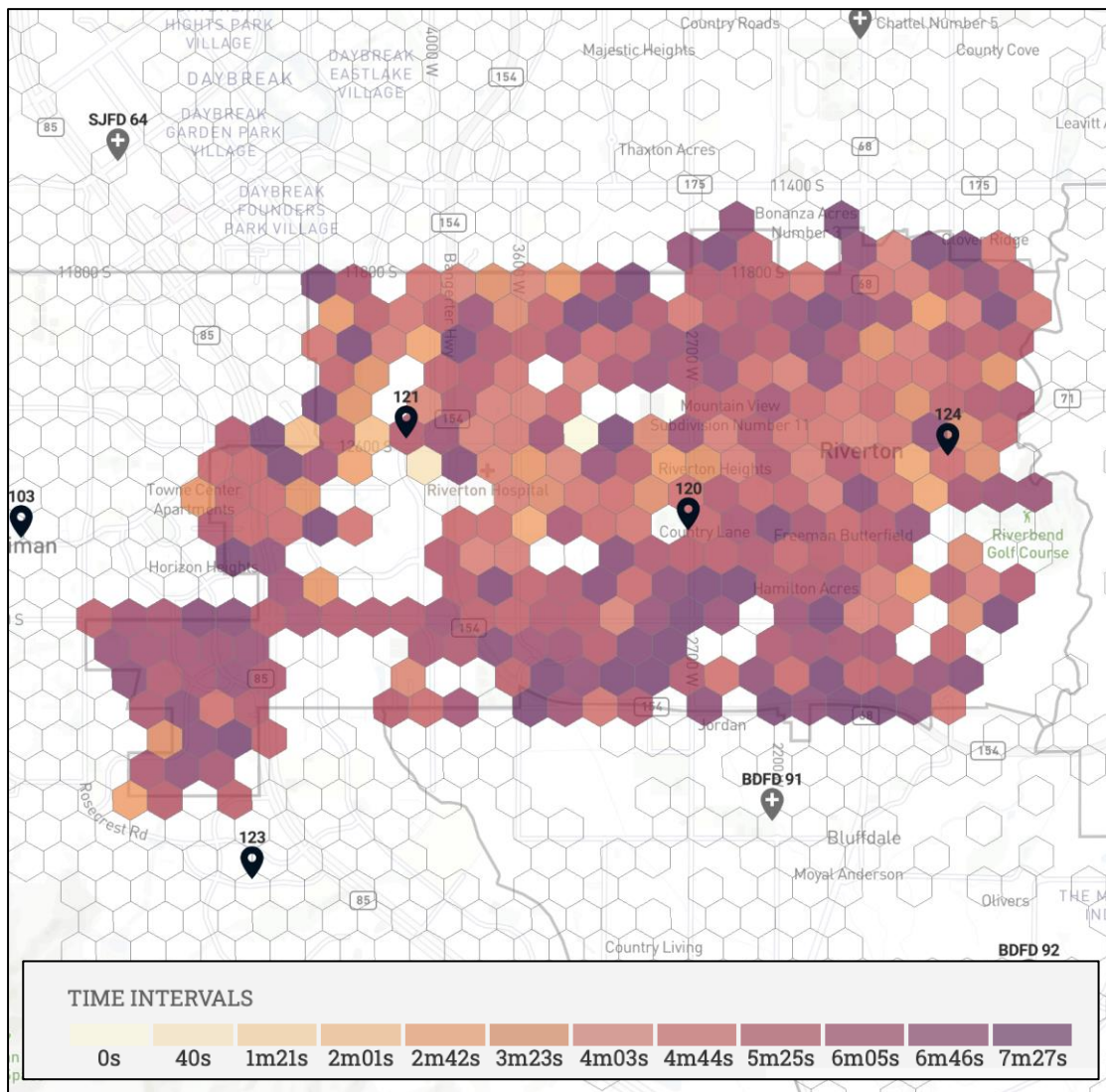
Map 197 - Station 121 4- and 8-Minute Travel Times



Map 198 - Station 124 4- and 8-Minute Travel Times

## Riverton City – First Arriver Travel Times

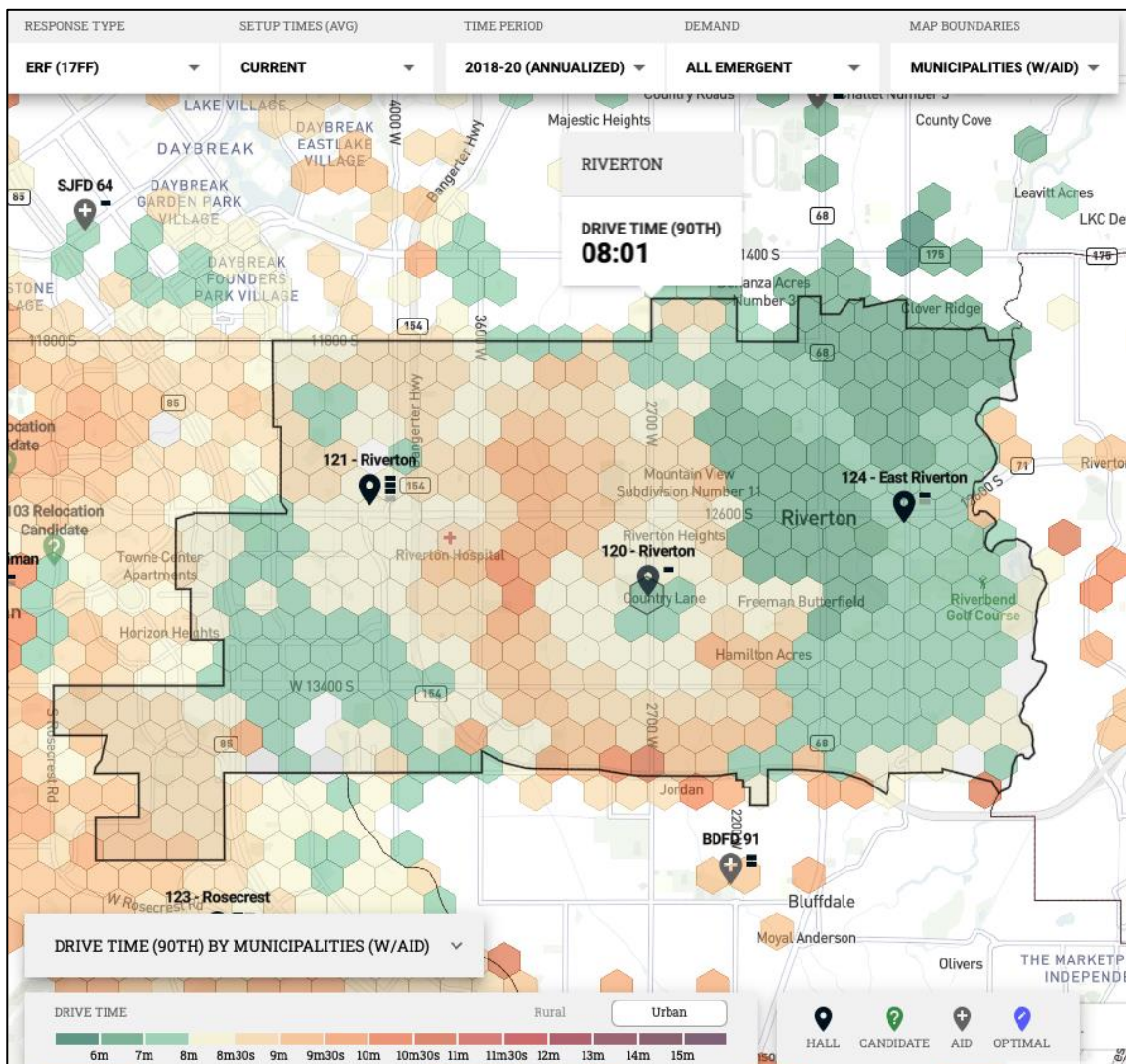
The following maps demonstrate the 90<sup>th</sup> percentile of travel times based off the last three years of historical data (2018-2020). The darker the color is, the more delayed the response, with the lighter colors demonstrating below or near target times. The darker colors on the bar within the 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 (90<sup>th</sup> percentile) from notification of the alarm to the arrival of the first arriving apparatus — not an adopted standard by UFA. UFA is currently in process of identifying benchmark and target standards to be adopted by the UFA Board of Directors. Currently within Riverton City, the 90<sup>th</sup> percentile drive time is 7:38 for fire and 6:25 for EMS.



Map 199 – Riverton City Response Times – All Aid

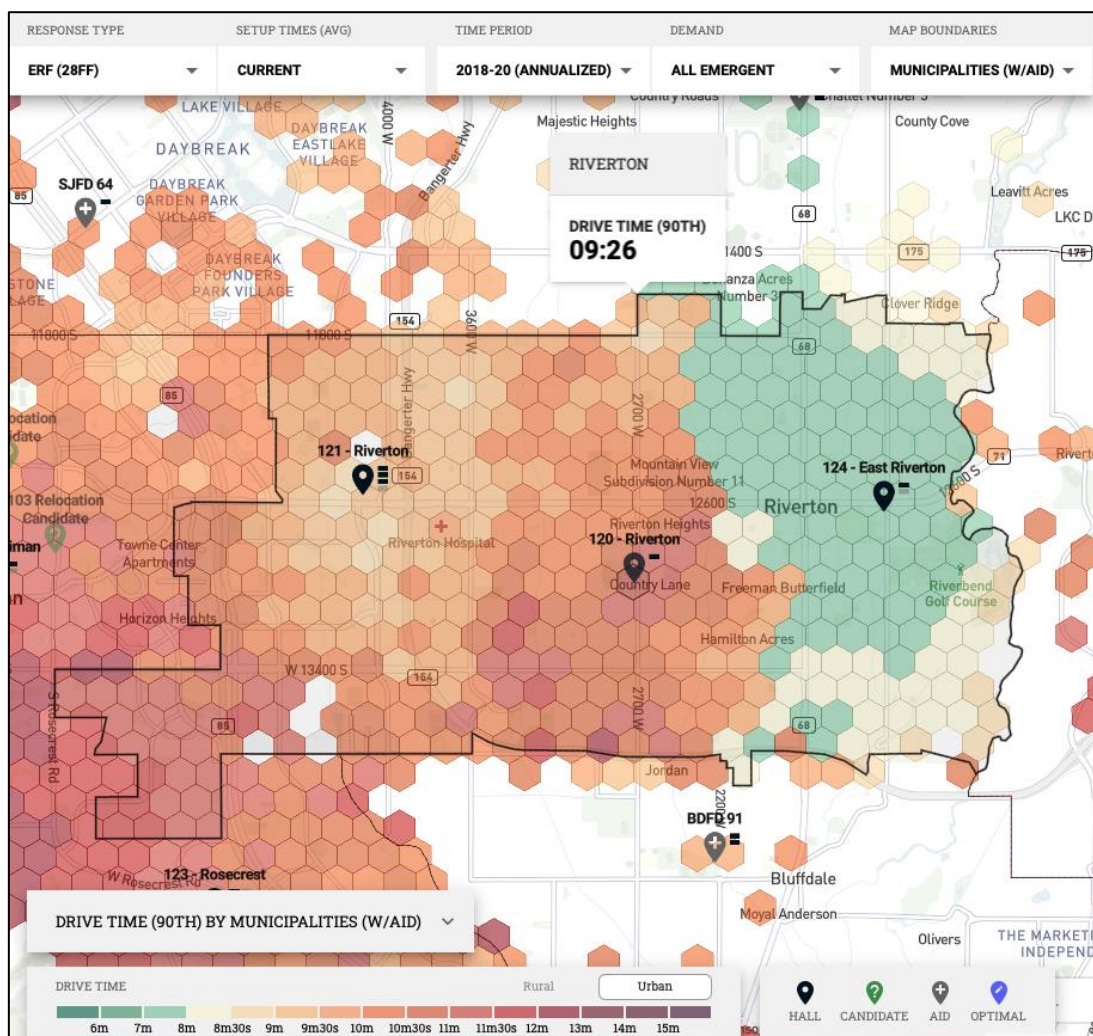
## Riverton City – Residential Fire Effective Response Force (17 FF)

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 (90<sup>th</sup> 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. UFA is currently in process of identifying benchmark and target standards to be adopted by the UFA Board of Directors. Based off predictive data, it is projected that the 90th percentile for 17 firefighters to arrive on scene would be 8:01.



## Riverton City – 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 (90<sup>th</sup> 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. UFA is currently in process of identifying benchmark and target standards to be adopted by the UFA Board of Directors. Based off predictive data, it is projected that the 90th percentile for 28 firefighters to arrive on scene would be 09:26.



Map 201 – Riverton City Response Times – Commercial Fire Effective Response Force (28 FF)



## Riverton 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	Mod	Low	Low	Low	Mod	Low	Mod	Mod	High	Mod	High

Table 131 - Riverton City Hazard Matrix

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

### Infrastructure – Transportation

There are several high-level transportation routes within Riverton City. Bangerter Highway (SR154) runs north-south through the city and on the south border of the east-side of the city, the Mountain View Corridor (SR85) runs on the north-south on the west side, and SR71 runs through the middle of the city. Several arterials and state roads also run through Riverton, with 13400 South, 12600 South, 3600 West, 2700 West and Redwood Road. There are zero linear miles of Interstate/US Highway, 17.85 linear miles of State Highways, and 188.3 total linear miles of roadway. Millcreek City is in the moderate-risk category for road infrastructure.

### Infrastructure – Water

There is one water district within Riverton City, the Jordan Valley Water Conservancy District.

### Infrastructure – Dams

There are four identified dams within Riverton City. Riverton City is in the moderate-risk category for dam infrastructure.

### Natural Hazards

Within Riverton City, there are no concerns with avalanche areas. Riverton is in the low-risk category for avalanche. There are no identified fault lines that run through the city (see Map 8) and are components of the Wasatch Fault. Riverton City is in the low-risk category for both liquefaction and fault lines. One of the biggest hazards that occur within an earthquake scenario is the number of unreinforced masonry (URM) buildings within Riverton City, with an estimated 441 URM's, which constitutes about 1.8% of the overall URM's within UFA's response areas. Riverton City is in the low-risk category for unreinforced masonry.

### Wildland Urban Interface

The largest concern of a Wildland Urban Interface area within Riverton City is in the river bottoms along the Jordan River. Riverton City is in the moderate-risk category for Wildland Urban Interface.

### Hazardous Materials / Tier II Sites

There are six identified HazMat/Tier II Sites within Riverton City, which is in the moderate-risk category.

### Hospitals

Riverton City has one hospital, Riverton Hospital, located at 3741 W 12600 S. Riverton City is in the moderate-risk category for hospitals.

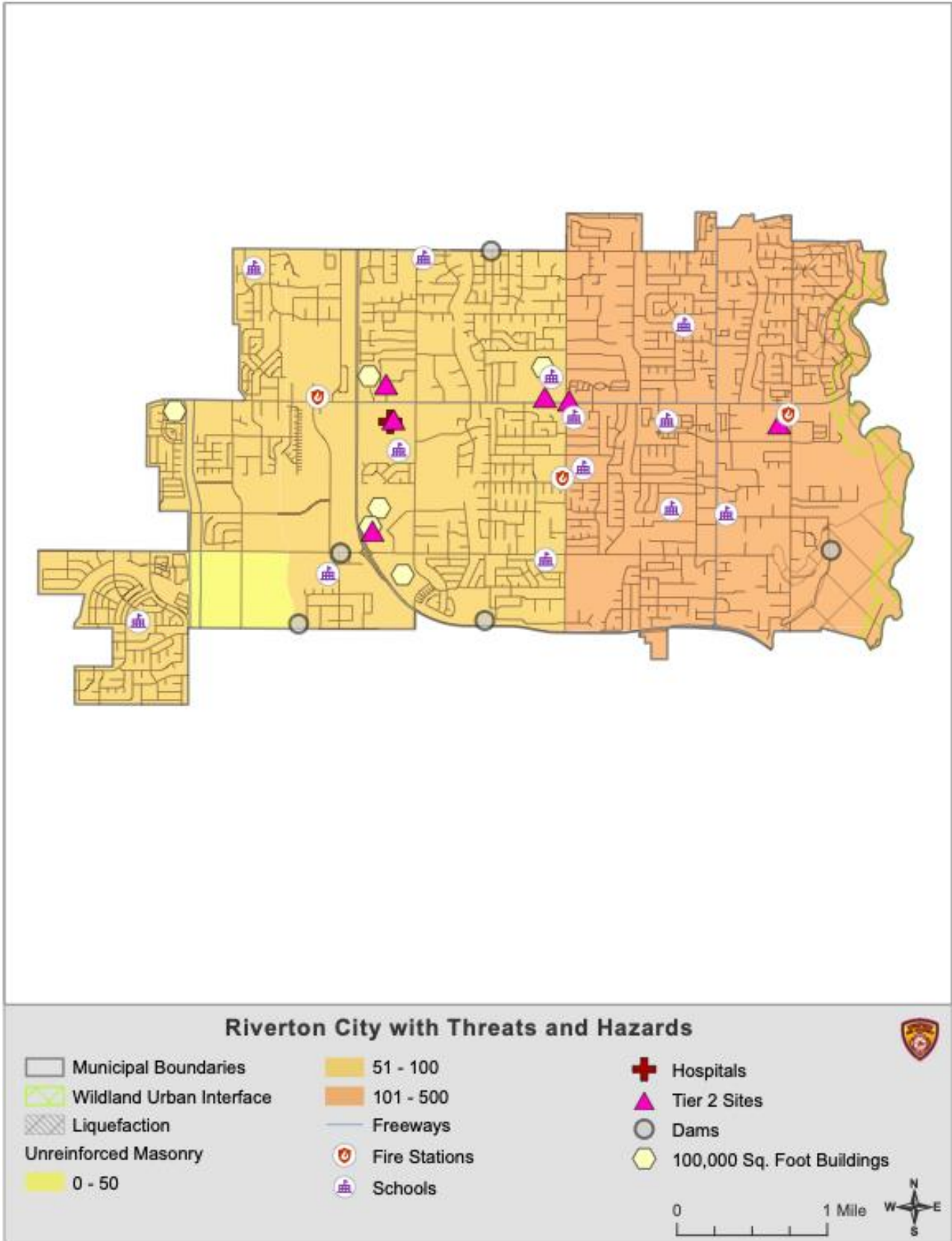
### Schools

Riverton City has eight elementary schools, two middle schools, two high schools, and one private/charter schools within city boundaries, which places it in the high-risk category.

### Target Hazards – Structures

Some of the target hazard occupancies in Riverton include:

- Riverton City Hall -12830 S Redwood Rd
- Riverton Hardware - 12773 S Redwood Rd
- IHC Riverton Hospital - 3741 W 12600 S
- IFA 1926 W 12600 S
- Home Depot 3852 W 13400 S
- Lowe's 12462 S Creek Meadow Rd
- Neuro restorative/ Country Life Care Center -13747 & 13757 S Redwood Rd
- Stamp It Up - 12907 S 3600 W
- Costco - 13126 S. Eagles Flight Rd



Map 202 - Riverton City with Combined Hazards

## Life and Property Loss

From 2015-2020, there have been zero fatalities attributed to fire. There has been a total estimate of \$415,491.00 of property loss and a total estimate of \$204,841.00 of content loss due to fire.

## Unified Fire Shared Services

With a regional-response model, the Unified Fire Authority brings special services to bear when the situation calls for it, not relying on automatic or mutual aid which provides a quicker and more effective delivery of service to its residents.

### Battalion Chiefs

Unified Fire Authority staffs three operational battalion chiefs (BCs) daily, in addition to a 40-hour Operations Chief (OC). These BCs and OC respond to large, complex, or expanding incidents — providing incident command, safety, and operational direction. Each BC covers an area of UFA's service area and respond to calls for service in any jurisdiction. Battalion 11 is housed out of Station 101 in Millcreek, Battalion 12 is housed out of Station 121 in Riverton, and Battalion 13 is housed out of Station 118 in Taylorsville.

### Heavy Rescue Companies

Heavy Rescue specializes in structural collapse, confined space rescue, trench collapse rescue, vehicle extrication, machinery disentanglement, rope rescue (high angle, low angle, rigging) and rapid intervention (Firefighter Rescue). The UFA Heavy Rescue Program consists of two independent rescue companies strategically placed in UFA's jurisdiction. Station 117 in Taylorsville, and Station 121 in Riverton house our Heavy Rescue Teams.

### Hazardous Materials (HazMat) Companies

The Hazardous Materials Teams provide an efficient, effective, and professional Hazardous Material Mitigation response. HazMat Companies respond to hazardous material releases/spills for the purpose of mitigating the release/spill. They select and use proper specialized chemical personal protective equipment dependent on the nature of the incident. The HazMat Program consists of two independent HazMat

companies strategically placed in UFA's jurisdiction. Station 124 in Riverton, and Station 126 in Midvale house our HazMat Teams.

### Water Rescue Teams

UFA has swift water and ice rescue capabilities. These companies respond to victims recreating in our swift canyon rivers and our lakes and reservoirs. Station 116 in Cottonwood Heights, Station 117 in Taylorsville, Station 121 in Riverton, and Station 123 in Herriman house companies with water rescue capabilities.

### Wildland Division

UFA's Wildland Division provides highly trained and experienced wildland fire and all-risk response resources to local, state and federal incidents. The Wildland Division oversees the training and certification of UFA personnel for response to wildland fires and all-hazard incidents. We also work with UFA Communities to educate residents on wildfire preparedness and provide mitigation services to reduce the risks of wildfire. UFA has a special capability where a Duty Officer is able to act as the Fire Warden within UFA's jurisdictions, allowing the ordering of resources much more quickly than having to rely on a Fire Warden that may or may not be readily accessible. Station 103 in Herriman currently houses the Duty Officer.

### Investigations Division

Arson and Explosive related incidents are considered two of the most dangerous criminal activities that threaten our citizens. The need exists to protect the citizens of our jurisdiction from loss of life and property by reducing the crime of arson, arson-related crimes, improvised explosive devices (IEDS) and the prevention of future violent crimes. The Investigations Division addresses this need by establishing a sound foundation of effective enforcement, focusing on the apprehension of the offender, while in partnership with other Local, state and federal law enforcement agencies. The team utilizes highly-trained Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) certified K-9's that assist with accelerant and explosives detection.

### Urban Search & Rescue

A FEMA Urban Search and Rescue Task Force is a team of individuals which serve as a resource for disaster response at local, state, and federal levels. It is comprised mainly of firefighters but includes structural engineers, medical professionals,

canine/handler teams and emergency managers with highly specialized training in urban search and rescue environments.

Utah Task Force 1 (UT-TF1) is one of 28 Type I, Federal Urban Search & Rescue (US&R) Task Forces in the United States. This program brings a highly trained, multi-hazard Task Force that is especially designed to respond to a variety of emergencies/disasters including earthquakes, hurricanes, tornadoes, floods, terrorist acts and hazardous material releases. Fire department personnel that are task force members receive specialized training and skills that directly benefit Unified Fire Authority.

### [Salt Lake County Emergency Management](#)

The Salt Lake County Division of Emergency Management serves our citizens by directing and coordinating resources for disasters and emergencies through preparation, planning, mitigation, response, and recovery. The Salt Lake County Emergency Coordination Center is activated and manned during any event—from small-scale to large-scale occurrences—to disasters both natural and man-made that can or have exceeded the resources of any particular jurisdiction. Currently, the Salt Lake County ECC assists and obtains resources for the 22 jurisdictions located within the Salt Lake Valley. Salt Lake County EM assists these jurisdictions through the activation of 15 Emergency Support Functions (ESFs) filled by employees from a multitude of backgrounds. The ESF employees have authority throughout Salt Lake County to fill and order additional support for the operations occurring in the field until the impacted jurisdiction can return to their normal operations and functions. The Emergency Management Division is committed to keeping the public safe through community outreach, training, dissemination of important public information, training of staff and the creation of a more resilient community through mitigation, preparation, response, and recovery. The ECC has been activated for many events such as Child Abduction Response Team (CART) Deployments, wildland fires such as the Rosecrest and Machine Gun fires, flooding, severe weather events, earthquakes, civil unrest, the COVID-19 pandemic, Line of Duty Deaths (LODD), and many other events.



## Unified Fire Authority

3380 South 900 West  
Salt Lake City, UT 84119



# City of Taylorsville

## Community Risk Assessment



## City of Taylorsville Planning Zone

UFA has two stations within the City of Taylorsville Planning Zone covering a total of 10.85 square miles with a population of 60,448 and responded to 5,425 calls for service in 2020.

Planning Zone	Population	Population Percentage of UFA	Square Miles	Population Density per Sq Mile	Classification
<b>City of Taylorsville</b>	60,448	13.40%	10.85	5,768	Urban

The City of Taylorsville has increased its population from 58,584 in 2010 to 60,448 in 2020, showing an increase of 3.08% over a ten-year timeframe. Providing an exponential growth pattern and if all things remain equal, chart 79 demonstrates that Taylorsville could grow to 64,356 by the year 2040.

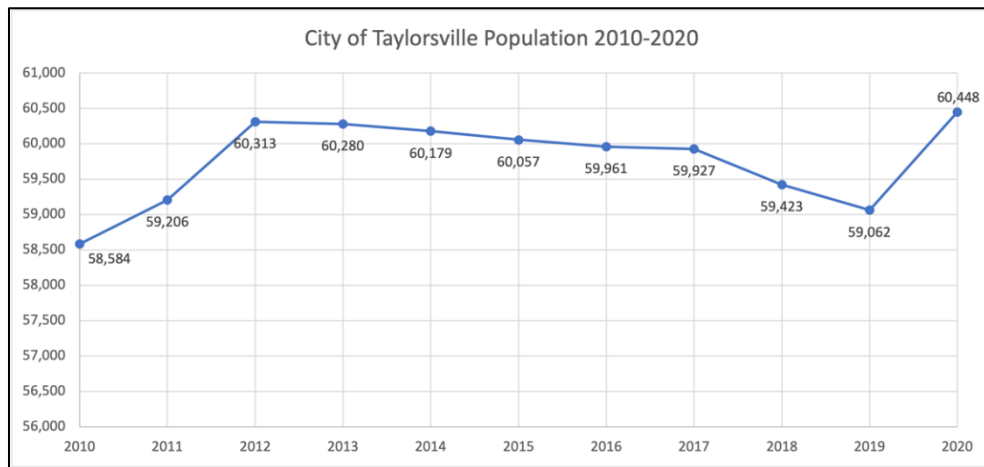


Chart 79 - Taylorsville Population 2010-2020

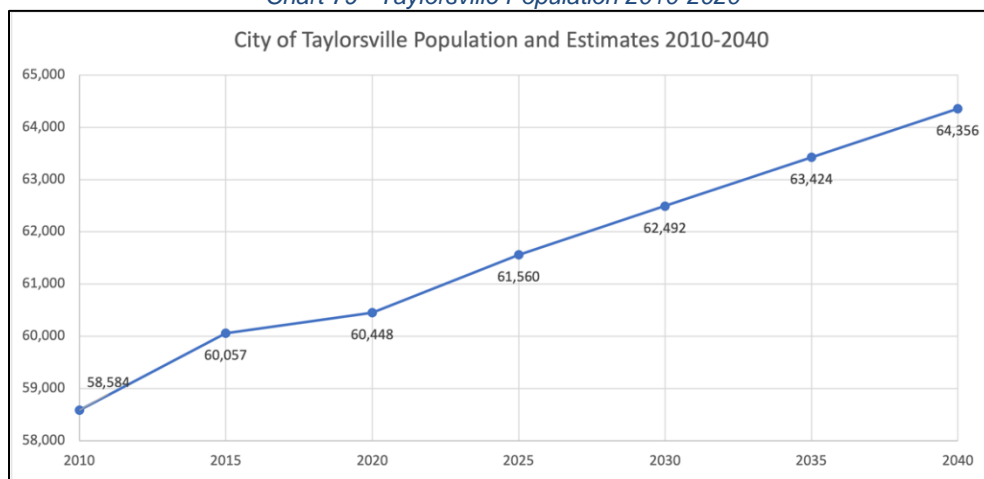




Chart 80 - Taylorsville Population and Estimates 2010-2040

## City of Taylorsville Station Information

<p><b>Station 117 information:</b></p> <ul style="list-style-type: none"><li>• Owner – UFSA</li><li>• Opened – 2017</li><li>• Address – 4965 South Redwood Road</li><li>• Staffing and Apparatus –<ul style="list-style-type: none"><li>○ Type 1, ME 117 (4 persons)</li><li>○ Type 1, ML 117 (4 persons)</li><li>○ MA 217 (2 persons, part-time 24 hour)</li><li>○ Heavy Rescue (cross-staffed)</li></ul></li></ul>	 <p><i>Image 26 – Taylorsville Station 117</i></p>
<p><b>Station 118 information:</b></p> <ul style="list-style-type: none"><li>• Owner – Taylorsville</li><li>• Opened – 1999</li><li>• Address – 5317 South 2700 West</li><li>• Staffing and Apparatus –<ul style="list-style-type: none"><li>○ Type 1, ME 118 (4 persons)</li><li>○ MA 118 (2 persons)</li><li>○ Battalion Chief 13 (1 person)</li></ul></li></ul>	 <p><i>Image 27 – Taylorsville Station 118</i></p>

## Surrounding UFA and Automatic/Mutual Aid Response Stations

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

- UFA Station 101 (Millcreek), with a four-person medic engine and a two-person medic ambulance

- UFA Station 109 (Kearns), with a four-person medic ladder and a two-person medic ambulance
- UFA Station 125 (Midvale City), with a four-person medic engine and a two-person peak-load medic ambulance
- UFA Station 126 (Midvale City), with a four-person medic engine and a two-person medic ambulance
- Murray Station 81, with a three-person medic engine and a two-person medic ambulance
- Murray Station 82, with a three-person medic engine and a two-person medic ambulance
- Murray Station 83, with a three-person medic engine and a two-person medic ambulance
- South Salt Lake Station 41, with a three-person engine and a two-person medic ambulance
- South Salt Lake Station 42, with a three-person engine and a two-person medic ambulance
- South Salt Lake Station 43, with a three-person engine and a two-person medic ambulance
- West Jordan Station 52, with a three-person engine and a two-person medic ambulance
- West Jordan Station 53, with a three-person engine and a two-person medic ambulance
- West Jordan Station 54, with a three-person engine and a two-person medic ambulance
- West Jordan Station 55, with a three-person engine and a two-person medic ambulance
- West Valley Station 71, with a three-person medic engine and a two-person medic ambulance
- West Valley Station 72, with a three-person engine and a two-person medic ambulance

- West Valley Station 73, with a three-person engine and a two-person medic ambulance
- West Valley Station 74, with a three-person ladder and a two-person medic ambulance
- West Valley Station 75, with a three-person engine and a two-person medic ambulance
- West Valley Station 76, with a three-person engine

### City of Taylorsville – Incidents by Dispatch Type

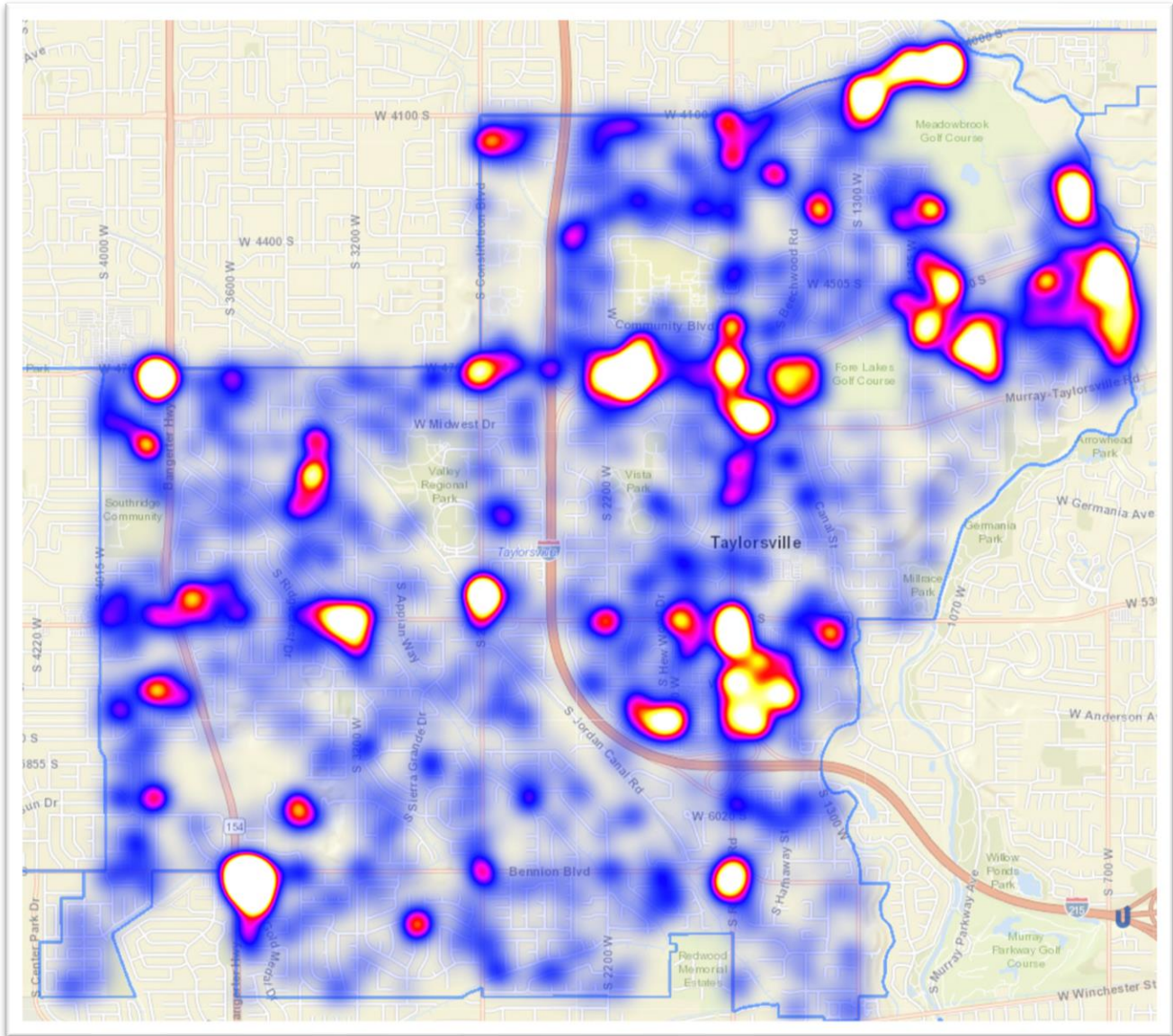
The following data is what the NFIRS type was when crews arrived on scene. This may be different than what was originally dispatched, including a reclassification of a call type from one to another. Cancelled calls occur if the company is cancelled en route to a call and never arrives on scene, which then changes the dispatch type to an NFIRS 611 call type.

	CY 2020	CY 2019	CY 2018
<b>Fire Suppression</b>	122	101	99
<b>EMS</b>	3,736	3,551	3,499
<b>Hazardous Materials</b>	69	74	53
<b>Service Calls</b>	134	207	139
<b>Good Intent</b>	708	496	419
<b>False Calls</b>	204	196	162
<b>Other (Misc., Flood, Overpressure)</b>	4	9	6
<b>Total</b>	4,977	4,634	4,377

<b>Cancelled</b>	448	257	279
<b>Overall Total</b>	5,425	4,891	4,656

*Table 132 – Taylorsville City Call Type*





Map 204 - Taylorsville Call Volume Heat Map

## NFPA 1710

The National Fire Protection Association is an international nonprofit organization that is devoted to eliminating death, injury, property, and economic loss due to fire, electrical and related hazards. The NFPA makes recommendations on over 300 codes and standards. NFPA 1710 recommendations are based off 90<sup>th</sup> percentile times.

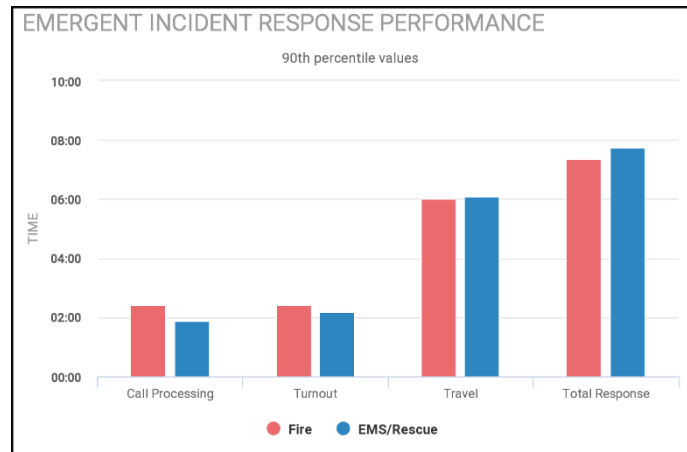
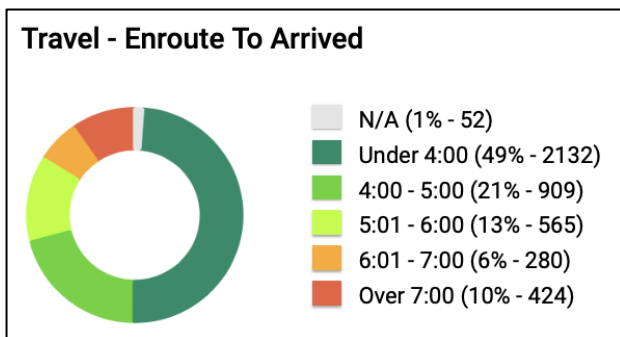
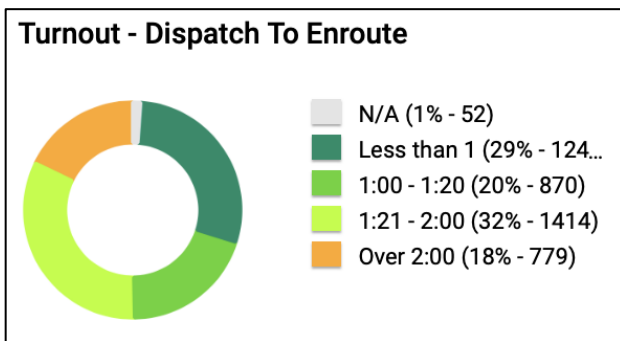
### 💡 – In Other Words...

If a value is in the 90<sup>th</sup> percentile, it means the value is better than 90% of all other values in the dataset. In other words, it is within the top 10% of the values.

NFPA 1710 encompasses suggested standards for full-time fire departments and recommends the following times (all of which are at the 90<sup>th</sup> percentile): alarm processing – 64 seconds; turnout time for EMS responses – 60 seconds; turnout time for fire responses – 80 seconds; first arriver apparatus – 240 seconds (4 minutes); initial full-alarm assignment for low and medium hazard responses – 480 seconds (8 minutes); or initial full-alarm assignment for high hazard/high-rise responses – 610 seconds (10 minutes 10 seconds). The total response times are the cumulative totals of call processing time, turnout time, and travel time. NFPA 1710 recommends a total response time of 6:24 for the first arriving apparatus for fire and 6:00 for the first arriving apparatus for EMS.

**📌 – Of Note...**  
 NFPA 1710 response times have not been adopted by the UFA Board. One of the important elements of the community risk assessment and standards of cover is to identify current 90th percentile times (current baselines) within UFA and to identify realistic benchmarks for the UFA Board to consider for adoption.

### City of Taylorsville – 2020 Dispatch and Response Times

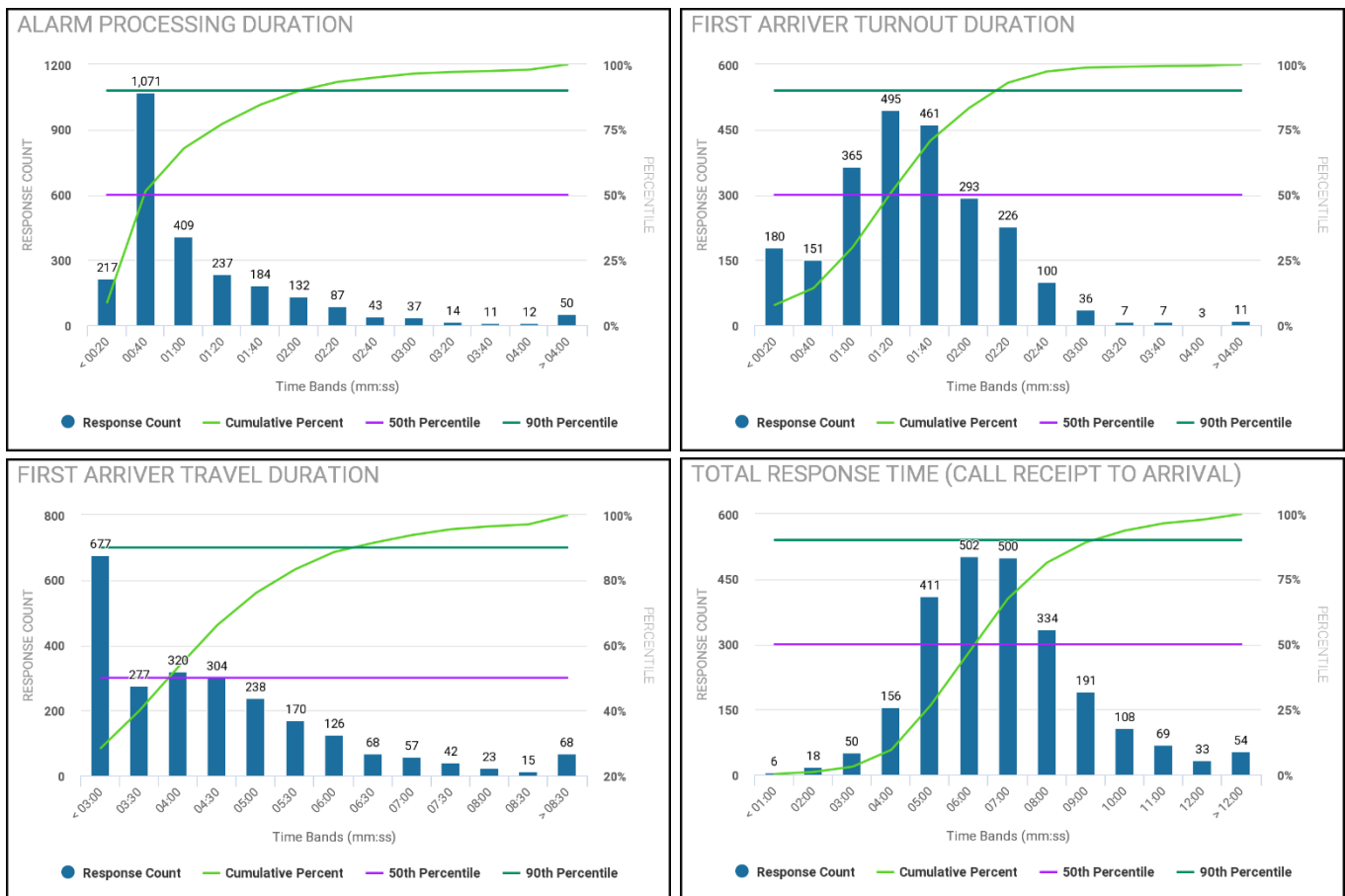




Urban	Call Processing: Fire	Turnout Time: Fire	Travel Time: Fire	Total Response: Fire	Call Processing: EMS	Turnout Time: EMS	Travel Time: EMS	Total Response: EMS
<b>Taylorsville</b>	2:17	2:19	7:03	9:44	1:52	2:12	6:16	9:03
<b>UFA Urban 2018-2020</b>	2:16	2:39	7:36	10:34	1:47	2:32	6:29	9:18
<b>UFA Rural 2018-2020</b>	2:32	3:05	15:08	19:09	1:56	2:50	14:45	17:45
<b>NFPA 1710</b>	1:04	1:20	4:00	6:24	1:00	1:00	4:00	6:00

Table 133 – Taylorsville 2020 Emergent Response Times, 90<sup>th</sup> percentile values

### City of Taylorsville – 2020 Turnout and Travel Times



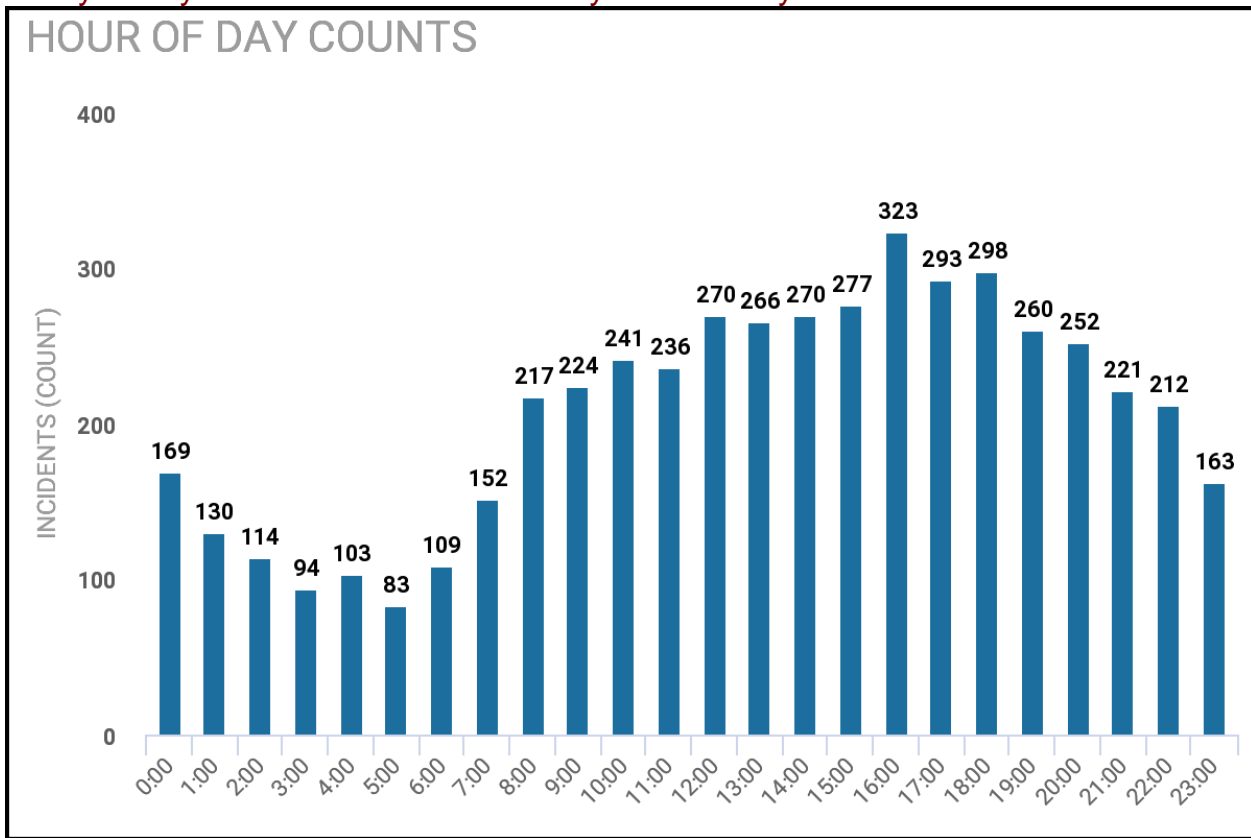
The charts above illustrate the alarm processing, turnout and travel times for all units responding to service calls within the City of Taylorsville. The 90<sup>th</sup> percentile for alarm processing for fire responses was 2:17 and 1:52 for EMS, the 90<sup>th</sup> percentile turnout time was 2:19 for fire responses and 2:12 for EMS responses. The 90<sup>th</sup> percentile travel time was 7:03 for fire responses and 6:16 for EMS. The 90<sup>th</sup> percentile total response

time was 9:44 for fire and 9:03 for EMS. For the charts above, they show both fire and EMS response times together.

**⚡ – Of Note...**

One item to note is that if you were to add the processing time, the turnout time, and the travel time, it will not necessarily (and often doesn't), sum the total response time. This is due to some of the limitations within the datasets and gaps within timestamps. Where there are missing timestamps, those particular key performance indicators (KPI) are excluded as they cannot accurately be calculated out.

**City of Taylorsville – 2020 Incidents by Time of Day**



*Chart 81 – Taylorsville 2020 Incidents by Time of Day*

The above table demonstrates the incidents by time of day and the time of greatest demand within Taylorsville for all service calls. This chart illustrates that the greatest demand for service delivery begins to increase at 6:00 AM and starts to decrease at 7:00 PM.

## City of Taylorsville – 2020 Incidents by Day of Week

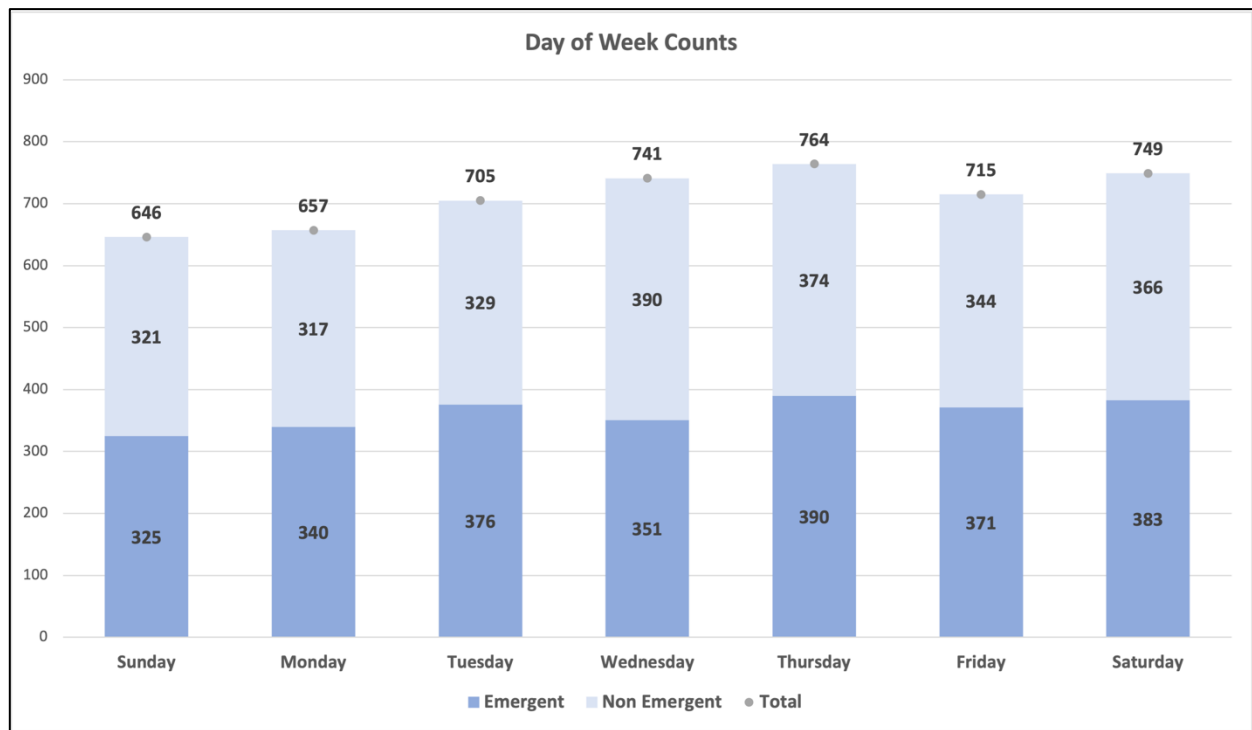


Chart 82 - Taylorsville Incidents by Day of Week

This chart demonstrates the call volume based on the day of the week, with an increase in all calls beginning Tuesday. The peak volume for all calls in Taylorsville occurs on Thursday.

## City of Taylorsville – EMS Calls

EMS calls are filtered by final disposition codes and this data is taken from VECC and determined by the patient acuity at the time of call termination. Often times the EMS calls identified from final disposition are different than the number of EMS calls that were initially dispatched due to one being the initial call type, and one being what call type the call was closed as by responding fire crews.

	CY 2020	CY 2019	CY 2018
<b>ALS Transports</b>	1,347	1,527	1,228
<b>BLS Transports</b>	2,098	1,870	1,719
<b>Scene Release</b>	232	237	607
<b>Public Assistance</b>	34	34	21
<b>EMS Total Calls</b>	<b>3,677</b>	<b>3,634</b>	<b>3,554</b>

Note: There is possibly a difference if you were to add all calls due to data reporting mechanisms. Public assistance calls will sometimes get duplicated with a scene release, depending on dispatch code, but those calls do not carry across to the total calls. Also, cancelled calls go into a different final disposition so the numbers in the 'Incidents by Dispatch Type' are reflective of this difference.

Table 134 – Taylorsville EMS Calls

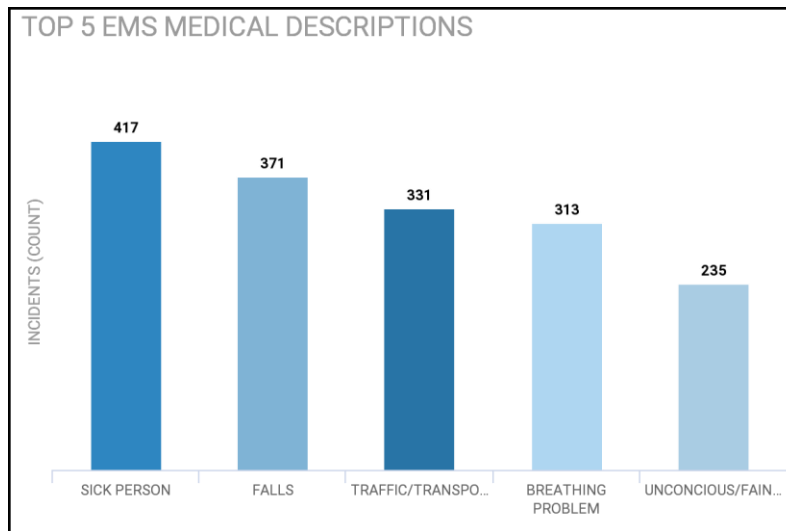


Chart 83 - Top 5 EMS Medical Calls

### City of Taylorsville – 2020 Fire Incidents by Dispatch Type

NFIRS Description	Incident Count	% of Incidents
<b>Structure Fire</b>	49	43.8%
<b>Natural Vegetation Fire</b>	13	11.6%
<b>Outside Rubbish Fire</b>	25	22.3%

NFIRS Description	Incident Count	% of Incidents
<b>Vehicle Fire</b>	10	8.9%
<b>Special Outside Fire</b>	8	7.1%
<b>Fire, Other</b>	5	4.5%
<b>Mobile Property Fire</b>	2	1.8%
<b>Total</b>	112	100%

Table 135 – Taylorsville 2020 Incidents by Dispatch Type

## City of Taylorsville – Building Occupancy Classification and Risk Categories

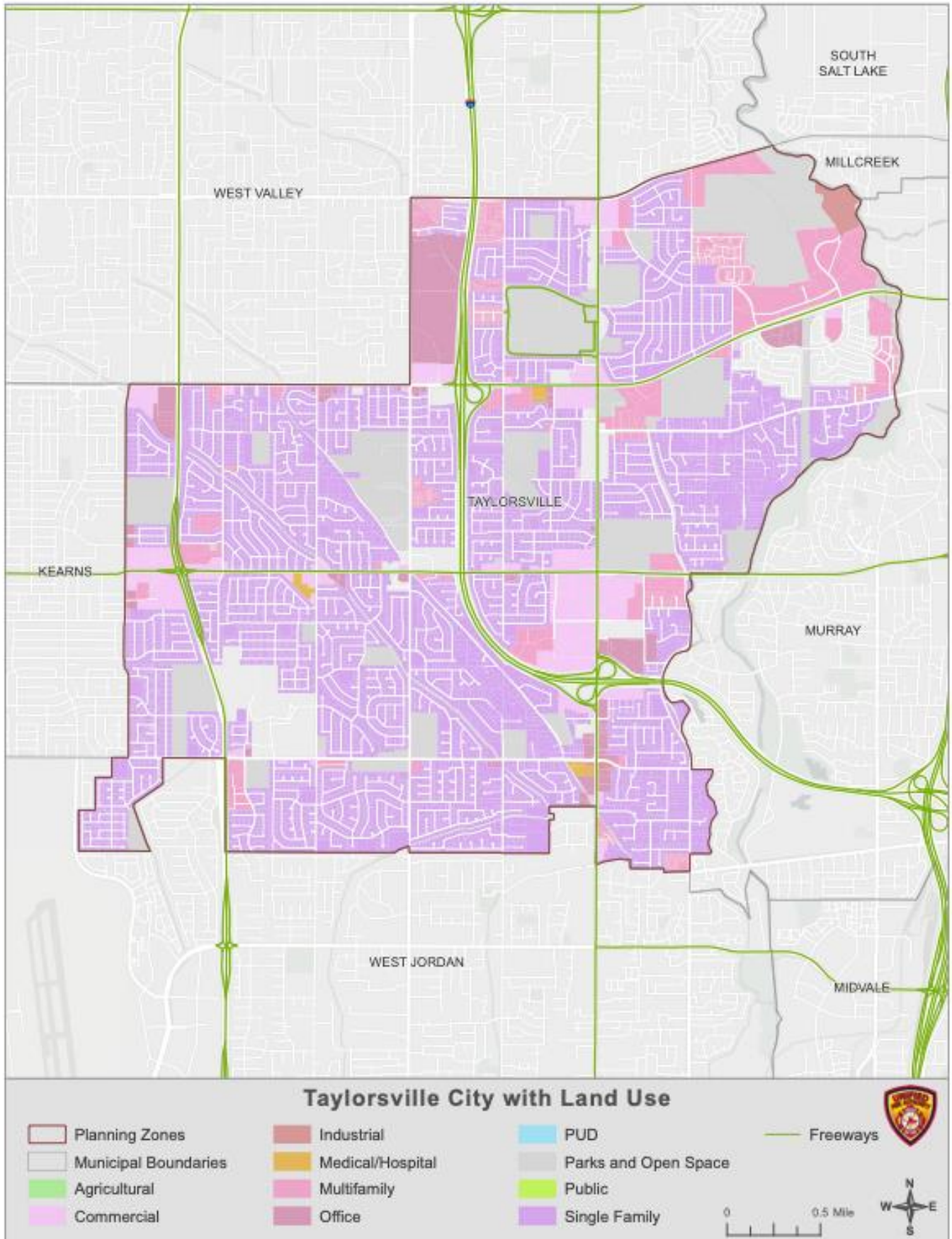
Occupancy Classification	Low	Moderate	High	Maximum	Total
<b>Assembly</b>	44	3	5	0	52
<b>Commercial/Industrial</b>	4	4	9	3	21
<b>Educational</b>	0	16	1	0	17
<b>Government</b>	9	0	2	1	12
<b>Healthcare</b>	0	0	1	0	1
<b>Hazardous</b>	Unknown	Unknown	Unknown	Unknown	100*
<b>Storage</b>	0	0	0	0	0
<b>Residential</b>	5,003	6,927	483	1	12,414
<b>Residential – Multi Unit</b>	63	159	23	6	251
<b>High Rise</b>	N/A	N/A	0	0	0
<b>Total</b>	5,123	7,109	524	11	12,868

\*There is currently a gap within the identification of building size regarding hazardous materials sites. This is a gap that is being closed over the next several years as we collect the data and information.  
*Table 136 – Taylorsville Building Occupancy and Risk Categories*

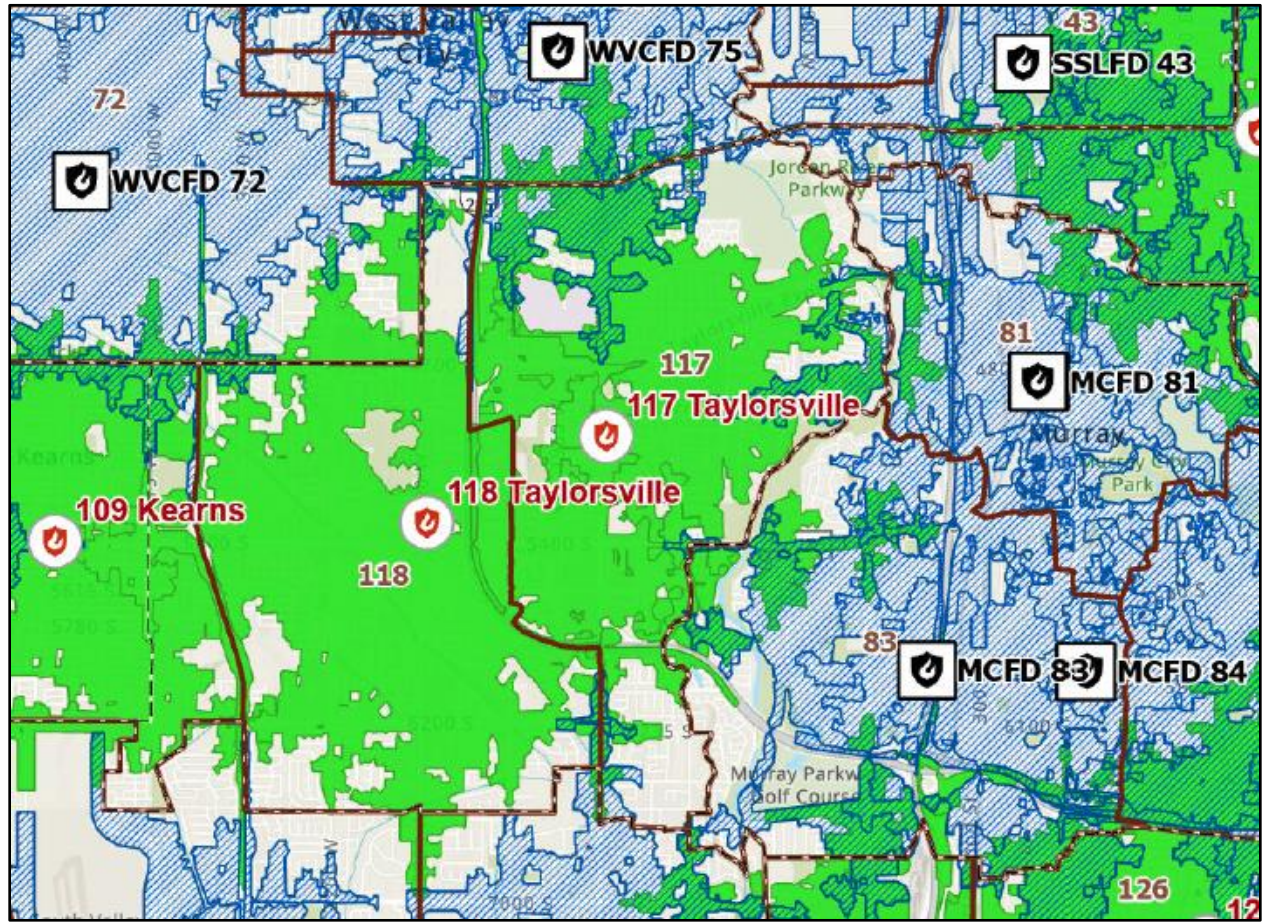
### Building Size / Considerations

For purposes of risk classification, UFA has outlined the following risk classifications for building size, regardless of occupancy type (except residential). Low risk = 1-4,999 square feet. Moderate risk = 5,000-9,999 square feet. High risk = 10,000-99,999 square feet. Maximum risk = >100,000 square feet.

For residential occupancies, the following classifications apply. Low risk = 1-1,999 square feet. Moderate risk = 2,000-3,999 square feet. High risk = 4,000-9,999 square feet. Maximum risk = ≥10,000 square feet.

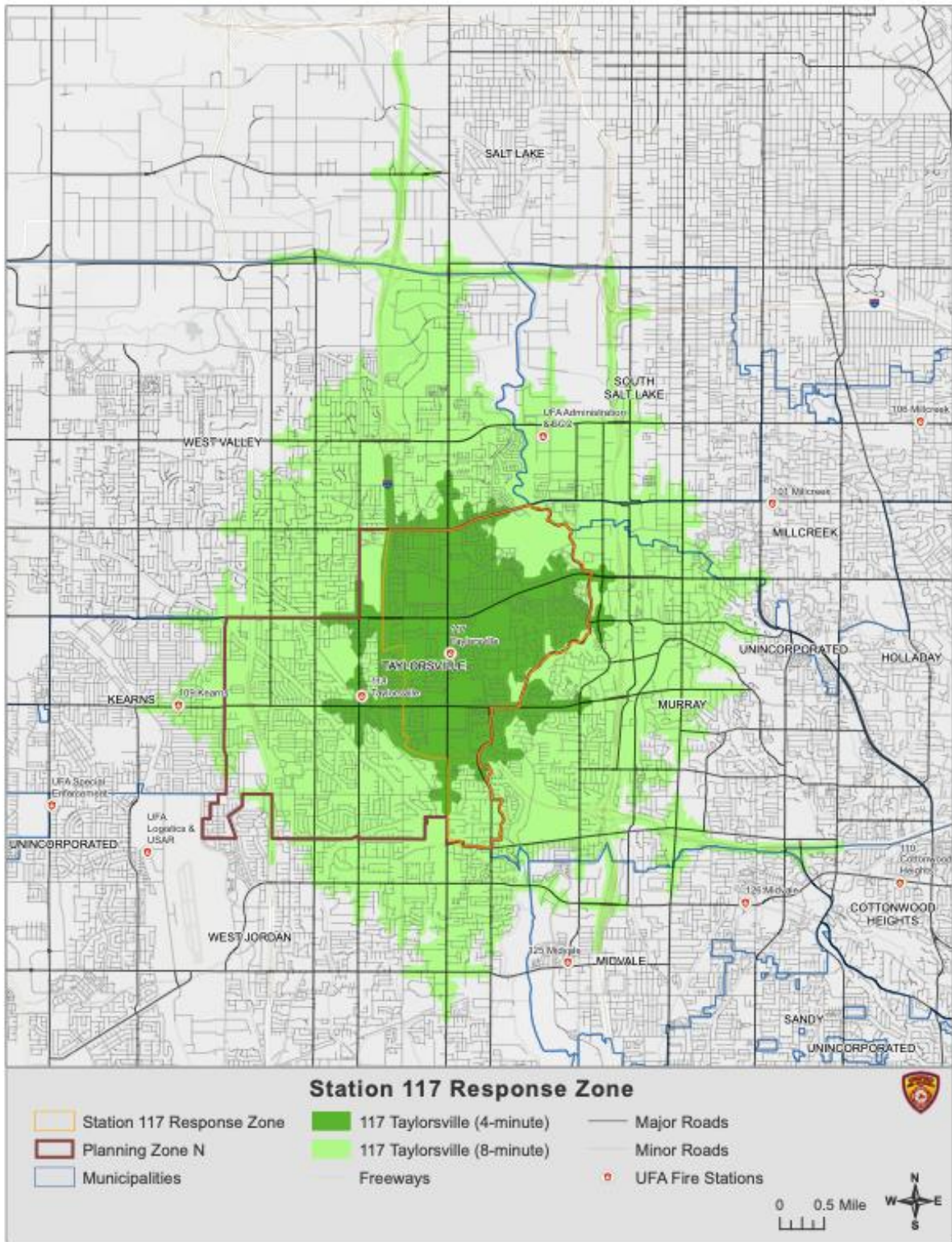


Map 205 - Taylorsville with Land Use



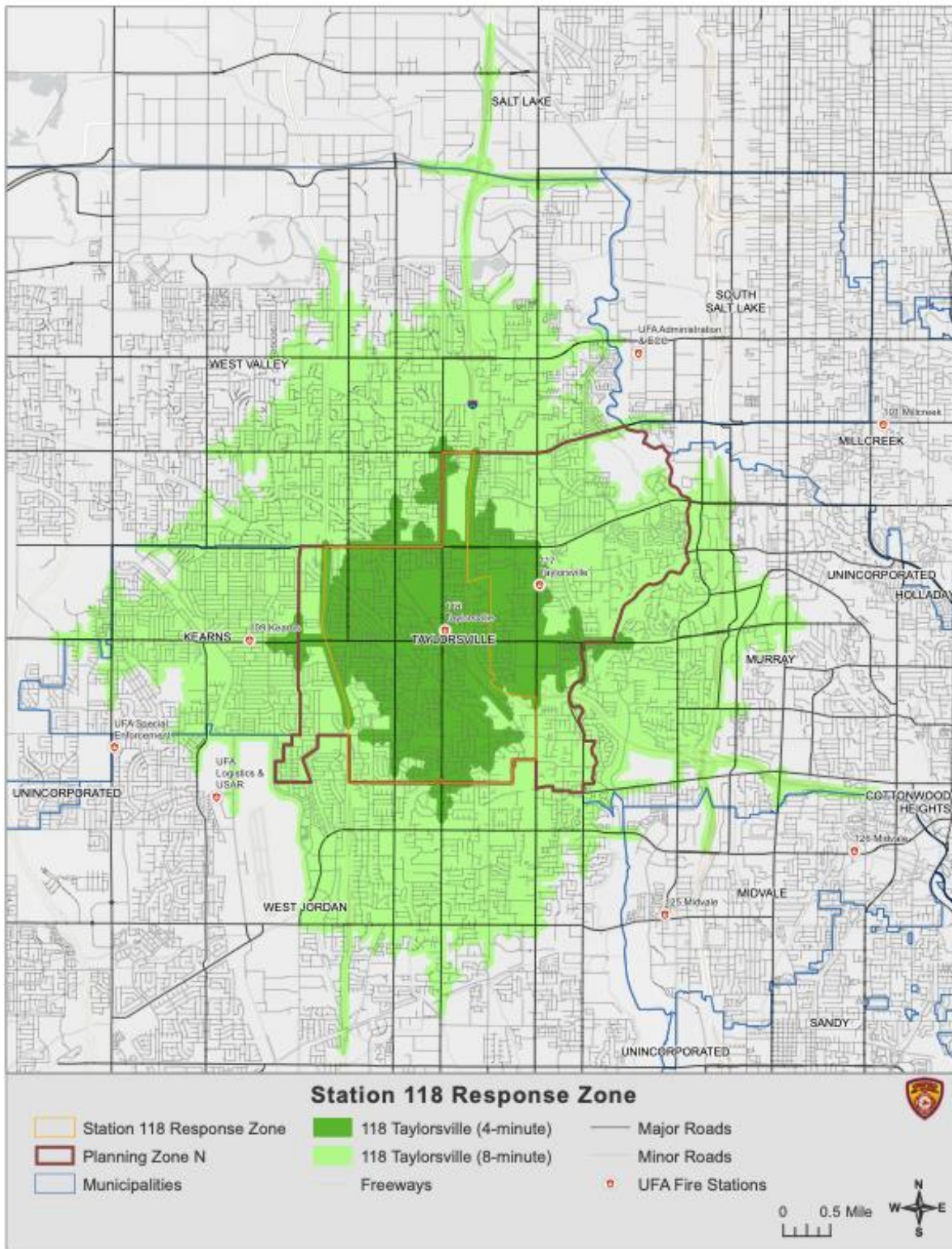
<ul style="list-style-type: none"> <li> Municipalities</li> <li> Fire Zones</li> <li> UFA Fire Stations</li> <li> Non-UFA Fire Stations</li> <li> 4 Minute Response Times Non-UFA Fire Stations</li> <li> 4 Minute Response Times UFA Fire Stations</li> </ul>	<h3>Four Minute Response Times - UFA and Non-UFA Stations</h3>	<p>September 2022</p>
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*Map 206 - 4-Minute Travel Time, UFA and Aid*



Map 207 - Station 117 4- and 8-Minute Travel Times

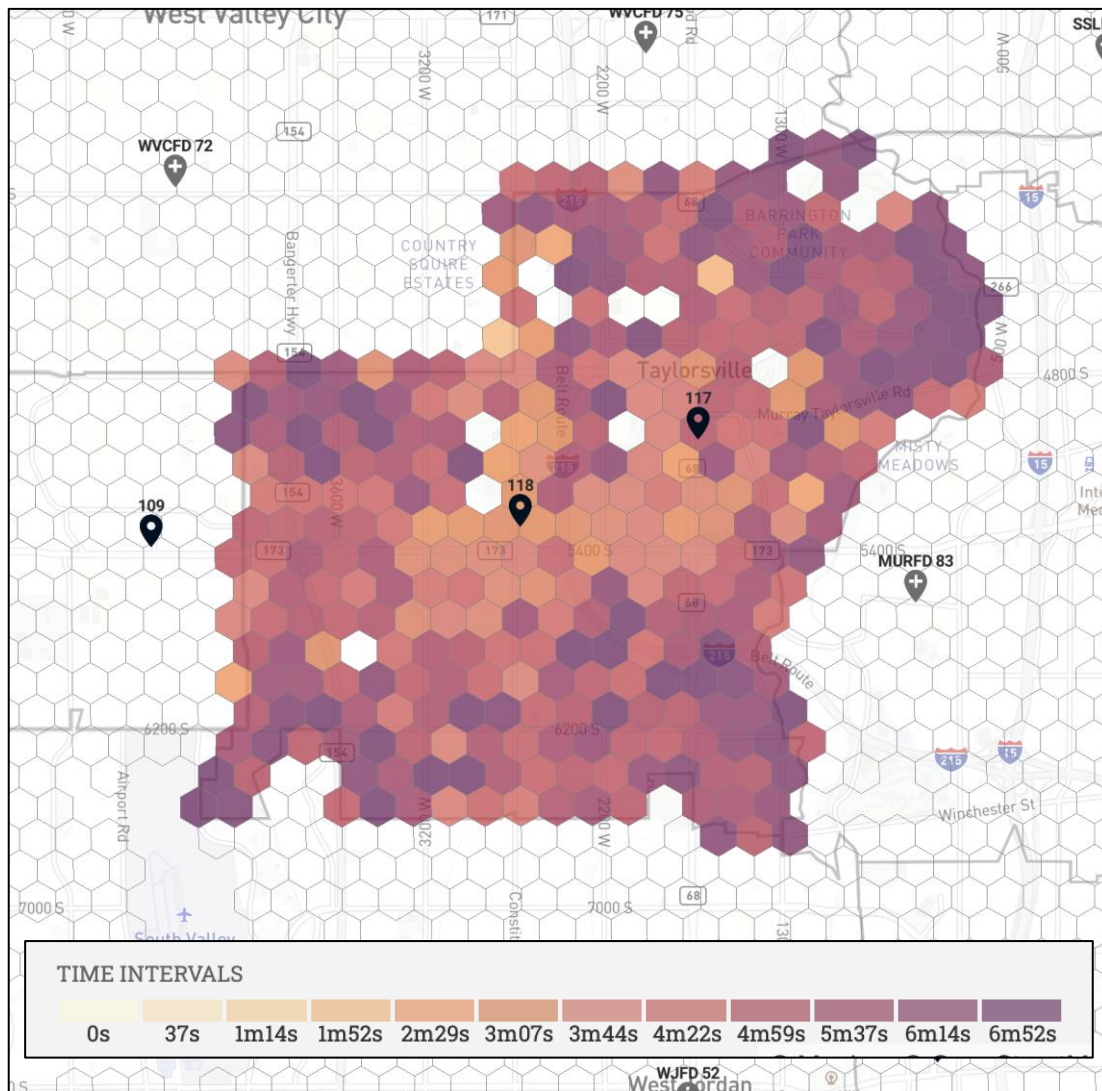




Map 208 - Station 118 4- and 8-Minute Travel Times

## City of Taylorsville – First Arriver Travel Times

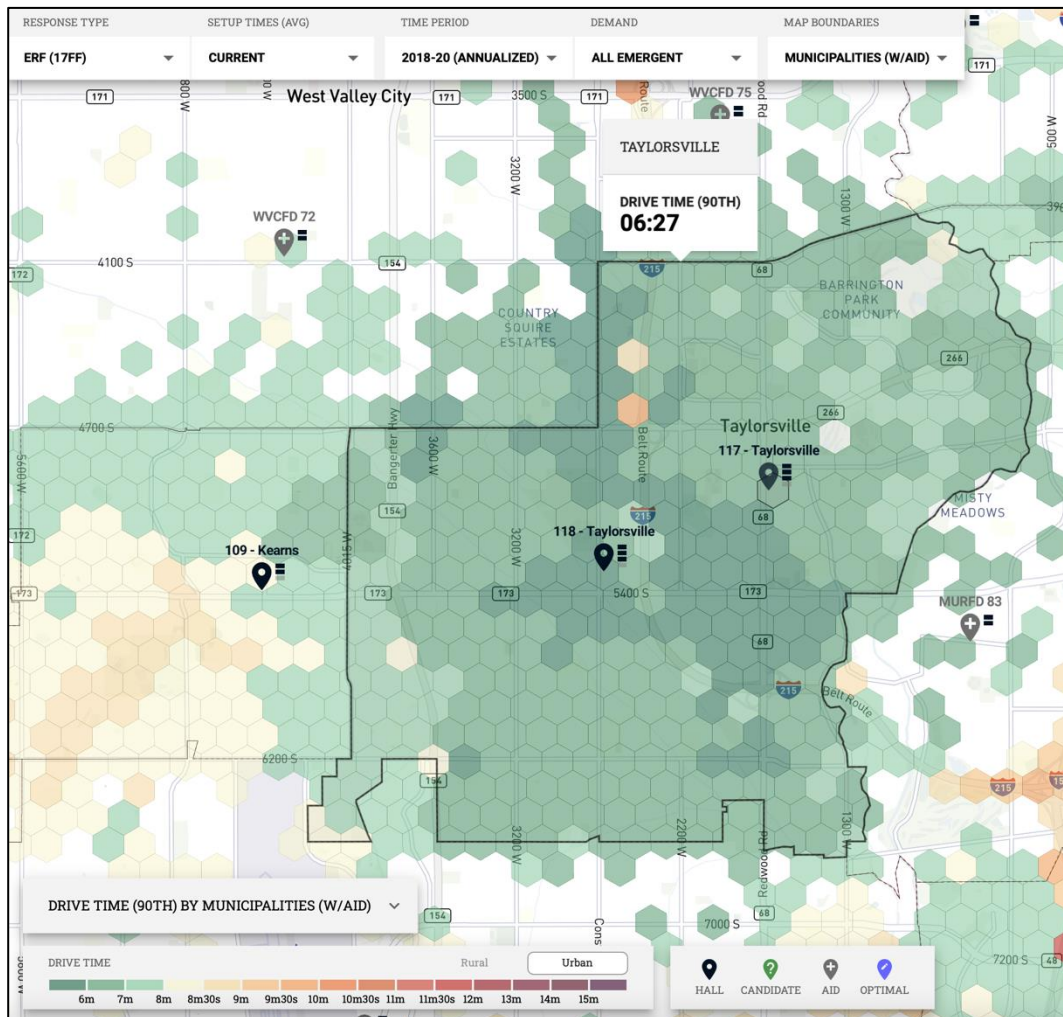
The following maps demonstrate the 90<sup>th</sup> percentile of travel times based off the last three years of historical data (2018-2020). The darker the color is, the more delayed the response, with the lighter colors demonstrating below or near target times. The darker colors on the bar within the 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 (90<sup>th</sup> percentile) from notification of the alarm to the arrival of the first arriving apparatus — not an adopted standard by UFA. UFA is currently in process of identifying benchmark and target standards to be adopted by the UFA Board of Directors. Currently within Taylorsville, the 90<sup>th</sup> percentile drive time is 7:03 for fire and 6:16 for EMS.



Map 209 – Taylorsville Response Times – All Aid

## City of Taylorsville – Residential Fire Effective Response Force (17 FF)

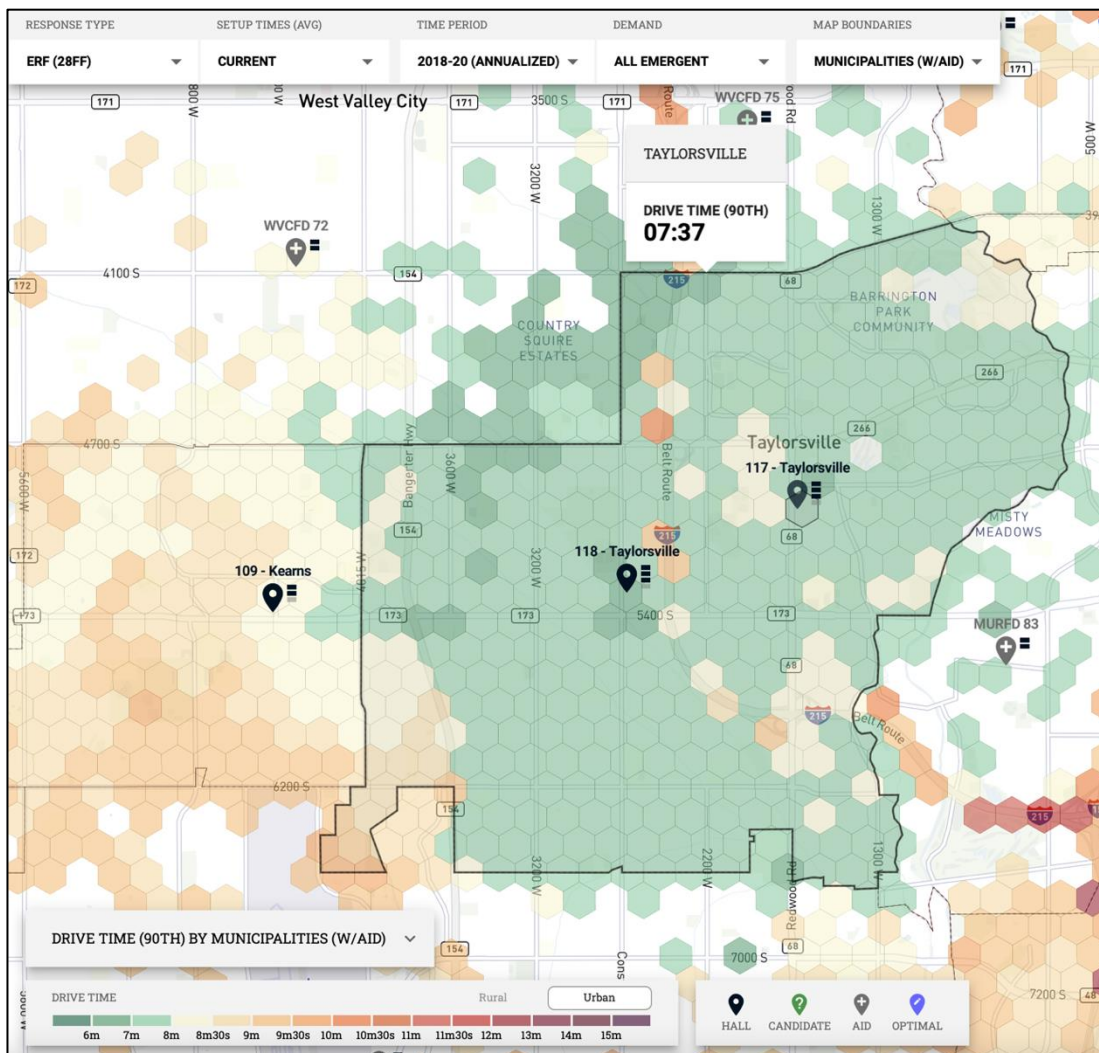
This map demonstrates the coverage of a multi-unit response to a residential fire based off all apparatus being within their station. The green to light yellow demonstrates the ability to have seventeen firefighters (a residential fire effective response force) on scene based off a residential urban fire force response. This map's drive times (or travel times) are based off the current NFPA 1710 standard of eight minutes (90<sup>th</sup> 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. UFA is currently in process of identifying benchmark and target standards to be adopted by the UFA Board of Directors. Based off predictive data, it is projected that the 90th percentile for 17 firefighters to arrive on scene would be 6:27.



Map 210 – Taylorsville Response Times – Residential Fire Effective Response Force (17 ERF)

## City of Taylorsville – 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 (90<sup>th</sup> 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. UFA is currently in process of identifying benchmark and target standards to be adopted by the UFA Board of Directors. Based off predictive data, it is projected that the 90th percentile for 28 firefighters to arrive on scene would be 07:37.



Map 211 – Taylorsville Response Times – Commercial Fire Effective Response Force (28 FF)

## City of Taylorsville 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
High	Mod	High	Low	Low	Mod	Low	Mod	Mod	High	High	High

Table 137 - Riverton City Hazard Matrix

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

### Infrastructure – Transportation

There are several high-level transportation routes within Taylorsville. I-215 runs north-south through the city and turns east-west on the south border of the city. State Road 154 runs north-south through the city. Several arterials and state roads also run through Taylorsville, with 4700 South, 5400 South, and 6200 South running east-west and Redwood Road, 2700 West and 3200 West running north-south through the city. There are 11.3 linear miles of Interstate/US Highway, 17.3 linear miles of State Highways, and 210 total linear miles of roadway. Taylorsville is in the high-risk category for road infrastructure.

### Infrastructure – Water

There is one water districts within Taylorsville, the Taylorsville-Bennion Improvement District.

### Infrastructure – Dams

There are three identified dams within Taylorsville, which is in the moderate-risk category for dam infrastructure.

### Natural Hazards

Within Taylorsville City, there are no concerns with avalanche areas. Taylorsville is in the low-risk category for avalanche. There are several identified fault lines that run north/south through the city (see Map 8) and are components of the Wasatch Fault. Taylorsville is in the high-risk category for both liquefaction and the low-risk category for fault lines. There are roughly 14,547 linear feet of fault lines within Taylorsville. One of the biggest hazards that occur within an earthquake scenario is the number of unreinforced masonry (URM) buildings within Taylorsville, with an estimated 2,147 URM's, which constitutes about 8.74% of the overall URM's within UFA's response areas. Taylorsville is in the moderate-risk category for unreinforced masonry.

### Wildland Urban Interface

The largest concern of a Wildland Urban Interface area within Taylorsville is in the river bottoms along the Jordan River. Taylorsville is in the low-risk category for Wildland Urban Interface.

### Hazardous Materials / Tier II Sites

There are seven identified HazMat/Tier II Sites within Taylorsville, which is in the moderate-risk category.

### Hospitals

Taylorsville has one free-standing Emergency Room, the Taylorsville Emergency Room, located at 2675 West Taylorsville Blvd. Taylorsville is in the moderate-risk category for hospitals.

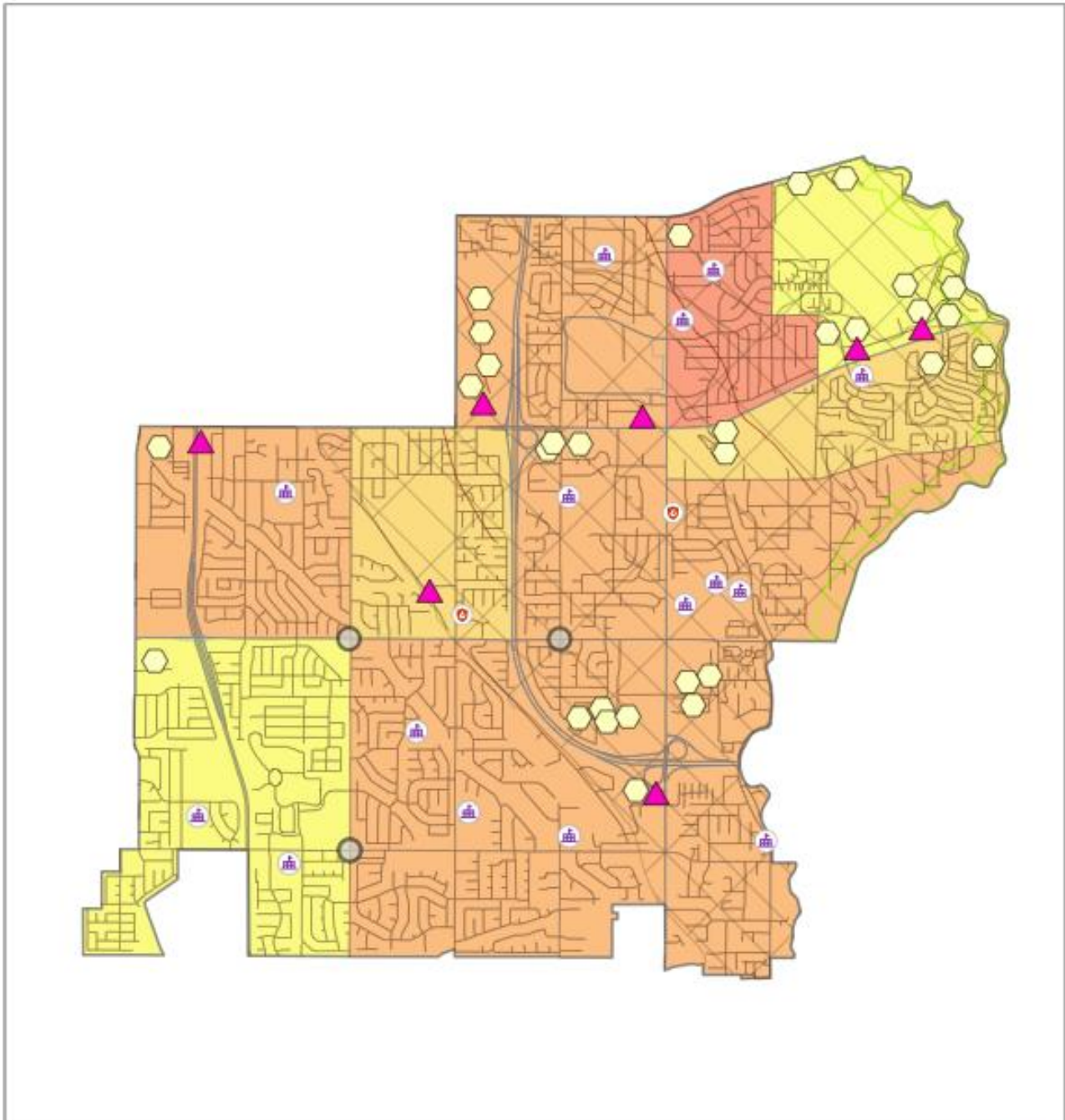
### Schools

Taylorsville City has seven elementary schools, two middle schools, and one high school, within city boundaries, which places it in the high-risk category.

### Target Hazards – Structures

Some of the target hazard occupancies in Taylorsville include:

- Golden Living Center – 2011 W 4700 S
- Silver Crest Apartments – 2099 W 4700 S
- Legacy Village – 3251 W 5400 S
- Legacy House – 6302 S Gold Medal Dr
- Bristol Apartments – 6218 S Gold Medal Dr
- Avalon West – 6246 S Redwood Rd
- Summit Vista – 3390 W Signal Peak Dr



**Taylorsville City with Threats and Hazards**

Municipal Boundaries	51 - 100	Fire Stations
Wildland Urban Interface	101 - 500	Schools
Liquefaction	501 - 1,000	Tier 2 Sites
Unreinforced Masonry	Freeways	Dams
0 - 50	Faults	100,000 Sq. Foot Buildings

Map 212 - Taylorsville with Combined Hazards



## Life and Property Loss

From 2015-2020, there have been two fatalities attributed to fire. There has been a total estimate of \$4,419,732.00 of property loss and a total estimate of \$1,283,026.00 of content loss due to fire.

## Unified Fire Shared Services

With a regional-response model, the Unified Fire Authority brings special services to bear when the situation calls for it, not relying on automatic or mutual aid which provides a quicker and more effective delivery of service to its residents.

### Battalion Chiefs

Unified Fire Authority staffs three operational battalion chiefs (BCs) daily, in addition to a 40-hour Operations Chief (OC). These BCs and OC respond to large, complex, or expanding incidents — providing incident command, safety, and operational direction. Each BC covers an area of UFA's service area and respond to calls for service in any jurisdiction. Battalion 11 is housed out of Station 101 in Millcreek, Battalion 12 is housed out of Station 121 in Riverton, and Battalion 13 is housed out of Station 118 in Taylorsville.

### Heavy Rescue Companies

Heavy Rescue specializes in structural collapse, confined space rescue, trench collapse rescue, vehicle extrication, machinery disentanglement, rope rescue (high angle, low angle, rigging) and rapid intervention (Firefighter Rescue). The UFA Heavy Rescue Program consists of two independent rescue companies strategically placed in UFA's jurisdiction. Station 117 in Taylorsville, and Station 121 in Riverton house our Heavy Rescue Teams.

### Hazardous Materials (HazMat) Companies

The Hazardous Materials Teams provide an efficient, effective, and professional Hazardous Material Mitigation response. HazMat Companies respond to hazardous material releases/spills for the purpose of mitigating the release/spill. They select and use proper specialized chemical personal protective equipment dependent on the nature of the incident. The HazMat Program consists of two independent HazMat

companies strategically placed in UFA's jurisdiction. Station 124 in Riverton, and Station 126 in Midvale house our HazMat Teams.

### Water Rescue Teams

UFA has swift water team, ice rescue team, as well as a dive rescue team. These companies respond to victims recreating in our swift canyon rivers and our lakes and reservoirs. Station 116 in Cottonwood Heights, Station 117 in Taylorsville, Station 121 in Riverton, and Station 123 in Herriman house Water Rescue Companies.

### Wildland Division

UFA's Wildland Division provides highly trained and experienced wildland fire and all-risk response resources to local, state and federal incidents. The Wildland Division oversees the training and certification of UFA personnel for response to wildland fires and all-hazard incidents. We also work with UFA Communities to educate residents on wildfire preparedness and provide mitigation services to reduce the risks of wildfire. UFA has a special capability where a Duty Officer is able to act as the Fire Warden within UFA's jurisdictions, allowing the ordering of resources much more quickly than having to rely on a Fire Warden that may or may not be readily accessible. Station 103 in Herriman currently houses the Duty Officer.

### Investigations Division

Arson and Explosive related incidents are considered two of the most dangerous criminal activities that threaten our citizens. The need exists to protect the citizens of our jurisdiction from loss of life and property by reducing the crime of arson, arson-related crimes, improvised explosive devices (IEDS) and the prevention of future violent crimes. The Investigations Division addresses this need by establishing a sound foundation of effective enforcement, focusing on the apprehension of the offender, while in partnership with other Local, state and federal law enforcement agencies. The team utilizes highly-trained Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) certified K-9's that assist with accelerant and explosives detection.

### Urban Search & Rescue

A FEMA Urban Search and Rescue Task Force is a team of individuals which serve as a resource for disaster response at local, state, and federal levels. It is comprised mainly of firefighters but includes structural engineers, medical professionals,

canine/handler teams and emergency managers with highly specialized training in urban search and rescue environments.

Utah Task Force 1 (UT-TF1) is one of 28 Type I, Federal Urban Search & Rescue (US&R) Task Forces in the United States. This program brings a highly trained, multi-hazard Task Force that is especially designed to respond to a variety of emergencies/disasters including earthquakes, hurricanes, tornadoes, floods, terrorist acts and hazardous material releases. Fire department personnel that are task force members receive specialized training and skills that directly benefit Unified Fire Authority.

### [Salt Lake County Emergency Management](#)

The Salt Lake County Division of Emergency Management serves our citizens by directing and coordinating resources for disasters and emergencies through preparation, planning, mitigation, response, and recovery. The Salt Lake County Emergency Coordination Center is activated and manned during any event—from small-scale to large-scale occurrences—to disasters both natural and man-made that can or have exceeded the resources of any particular jurisdiction. Currently, the Salt Lake County ECC assists and obtains resources for the 22 jurisdictions located within the Salt Lake Valley. Salt Lake County EM assists these jurisdictions through the activation of 15 Emergency Support Functions (ESFs) filled by employees from a multitude of backgrounds. The ESF employees have authority throughout Salt Lake County to fill and order additional support for the operations occurring in the field until the impacted jurisdiction can return to their normal operations and functions. The Emergency Management Division is committed to keeping the public safe through community outreach, training, dissemination of important public information, training of staff and the creation of a more resilient community through mitigation, preparation, response, and recovery. The ECC has been activated for many events such as Child Abduction Response Team (CART) Deployments, wildland fires such as the Rosecrest and Machine Gun fires, flooding, severe weather events, earthquakes, civil unrest, the COVID-19 pandemic, Line of Duty Deaths (LODD), and many other events.



## Unified Fire Authority

3380 South 900 West  
Salt Lake City, UT 84119

# Unincorporated Salt Lake County

## Community Risk Assessment



## Unincorporated Salt Lake County Planning Zone

UFA has no stations within Unincorporated Salt Lake County (SLCo) and responds to all Unincorporated areas from surrounding municipal fire stations. This includes the majority of the canyons within the Salt Lake Valley and is probably the most dynamic of our planning zones due to types of responses. Responses include technical rescues (including swift water rescues and high angle rescues), motor vehicle accidents, brush fires, and urban interface fires. Other areas of interest include Kennecott/Rio Tinto, the Utah Data Center, and Camp Williams. UFA covers a total of 390.59 square miles with a population of 7,094 and responded to 1,168 calls for service in 2020.

Planning Zone	Population	Population Percentage of UFA	Square Miles	Population Density per Sq Mile	Classification
<b>Unincorporated Salt Lake County</b>	7,094	1.57%	390.59	<1	Wilderness

## Surrounding UFA and Automatic/Mutual Aid Response Stations

Due to the unimproved and forested nature of much of Unincorporated Salt Lake County, as well as the various unincorporated pockets within the Salt Lake Valley, many of the remaining 9 fire agencies within the Salt Lake Valley have either contiguous borders with portions of Unincorporated Salt Lake County or are close to or provide service to pockets of Unincorporated Salt Lake County. Due to the nature of these unincorporated areas, it is difficult to accurately identify the agencies and stations within an eight-minute response time to Unincorporated Salt Lake County. While eight-minute response times can be determined to some degree along the major transportation routes and established communities, there are other areas within Unincorporated Salt Lake County with unimproved roads, or in some cases no roads, that make the collection of this data nearly impossible. The following table identifies the units and apparatus from UFA that responded into Unincorporated Salt Lake County on service calls.

Unit	Responses
AL115	1
BC11	114
BC12	8
BC13	27
DC14	10
E6102	3
E6106	6
E6111	4
E6112	14
E6116	3
E6125	1
HM109	3
HM124	1
HM126	7
HR117	16
HR121	5
HV117	3
MA101	54
MA109	53
MA110	73

Unit	Responses
MA118	3
MA120	5
MA126	12
MA204	78
MA206	91
MA210	28
MA211	61
MA221	41
MA223	17
MA225	4
MA226	18
ME101	15
ME102	71
ME103	57
ME104	106
ME108	34
ME112	185
ME113	131
ME115	19
ME116	152

Unit	Responses
ME117	4
ME118	1
ME119	25
ME123	4
ME125	1
ME126	6
ML106	34
ML109	43
ML110	49
ML111	24
ML117	10
ML121	2
OPS1	4
PIO2	1
PIO3	1
PIO4	1
SAFE1	1
WILD1	1
WILD2	1
WILD9	1

Table 138 - Apparatus Response in Unincorporated Salt Lake County - 2020

## Unincorporated SLCo – Incidents by Dispatch Type

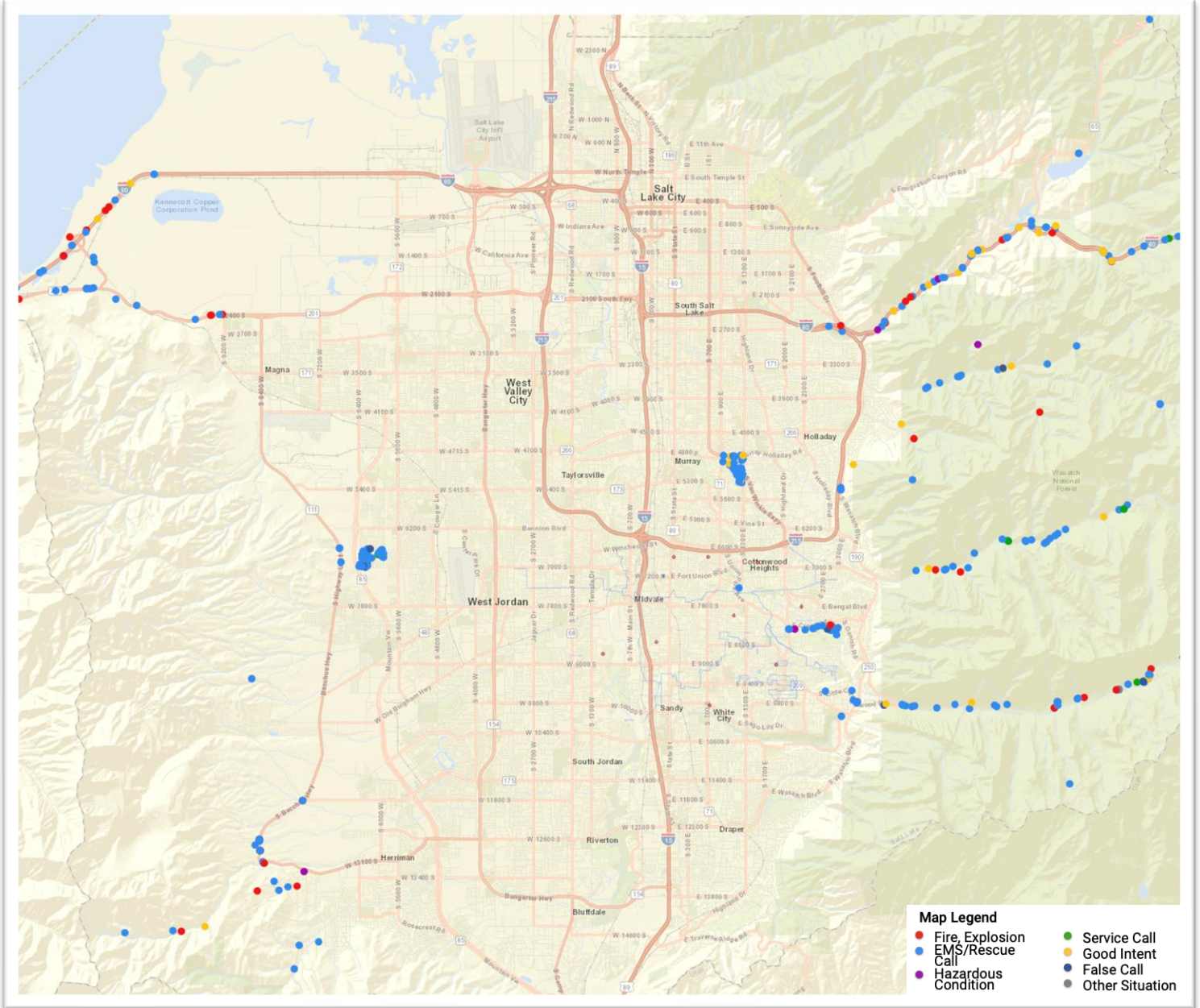
The following data is what the NFIRS type was when crews arrived on scene. This may be different than what was originally dispatched, including a reclassification of a call type from one to another. Cancelled calls occur if the company is cancelled en route to a call and never arrives on scene, which then changes the dispatch type to an NFIRS 611 call type.

	CY 2020	CY 2019	CY 2018
<b>Fire Suppression</b>	50	25	60
<b>EMS</b>	528	575	628
<b>Hazardous Materials</b>	21	17	24
<b>Service Calls</b>	24	34	24
<b>Good Intent</b>	293	233	216
<b>False Calls</b>	42	21	24
<b>Other (Misc., Flood, Overpressure)</b>	4	1	2
<b>Total</b>	962	906	978
<b>Cancelled</b>	206	153	155
<b>Overall Total</b>	1,168	1,059	1,133

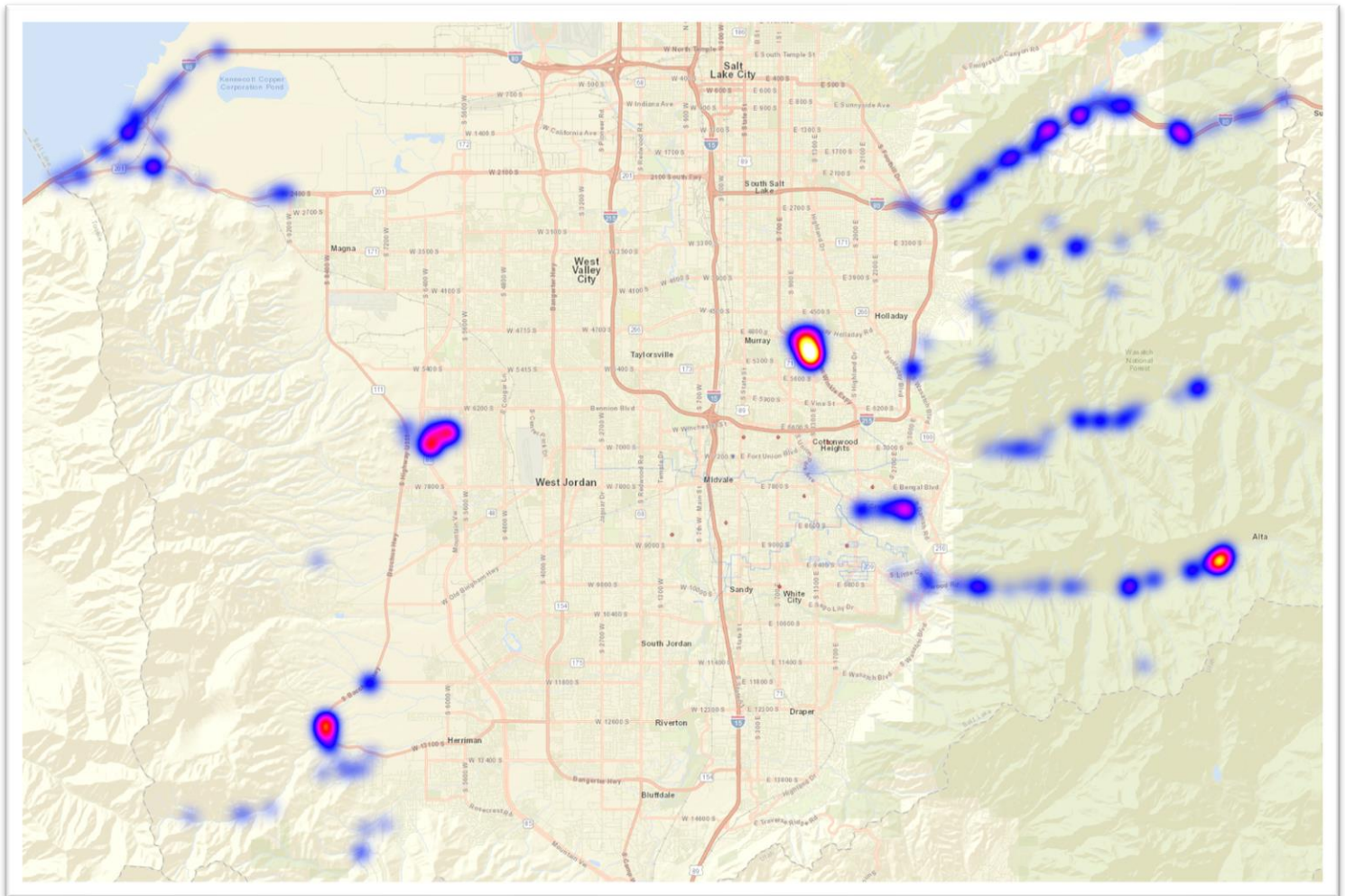
*Table 139 – Unincorporated Salt Lake County Call Types*



# Unincorporated SLCo – 2020 Incidents and Heat Map



Map 213 – Unincorporated Salt Lake County Incident Calls by Type



Map 214 – Unincorporated Salt Lake County Call Volume Heat Map

## NFPA 1710

The National Fire Protection Association is an international nonprofit organization that is devoted to eliminating death, injury, property, and economic loss due to fire, electrical and related hazards. The NFPA makes recommendations on over 300 codes and standards. NFPA 1710 recommendations are based off 90<sup>th</sup> percentile times.

### 💡 – In Other Words...

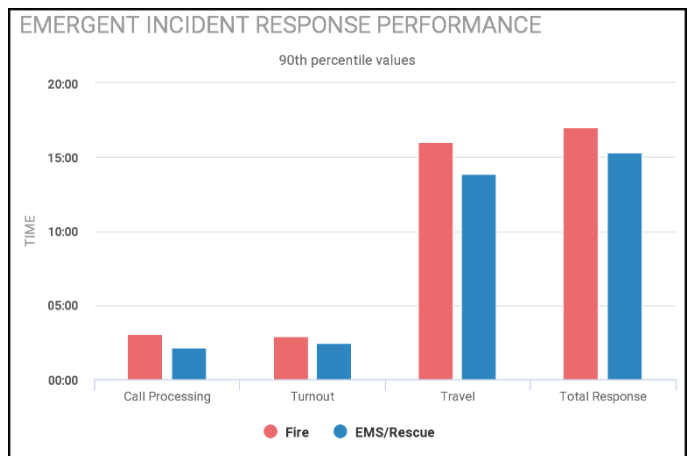
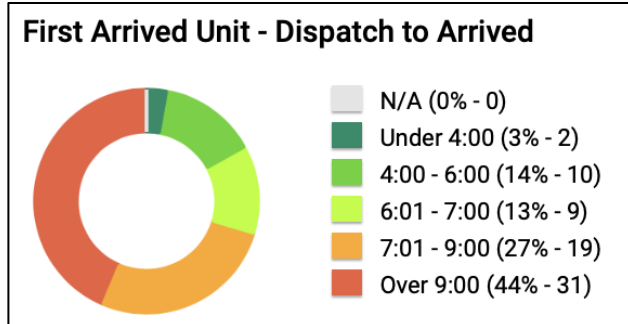
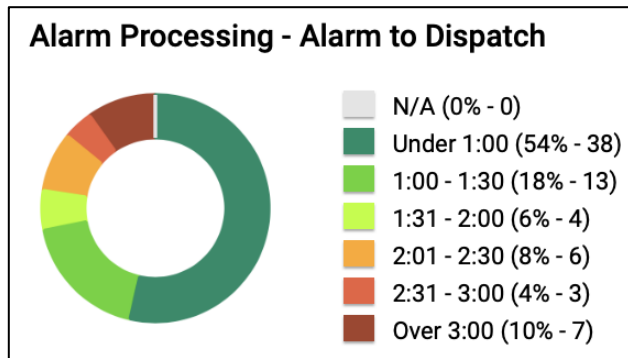
If a value is in the 90<sup>th</sup> percentile, it means the value is better than 90% of all other values in the dataset. In other words, it is within the top 10% of the values.

NFPA 1710 encompasses suggested standards for full-time fire departments and recommends the following times (all of which are at the 90<sup>th</sup> percentile): alarm

processing – 64 seconds; turnout time for EMS responses – 60 seconds; turnout time for fire responses – 80 seconds; first arriver apparatus – 240 seconds (4 minutes); initial full-alarm assignment for low and medium hazard responses – 480 seconds (8 minutes); or initial full-alarm assignment for high hazard/high-rise responses – 610 seconds (10 minutes 10 seconds). The total response times are the cumulative totals of call processing time, turnout time, and travel time. NFPA 1710 recommends a total response time of 6:24 for the first arriving apparatus for fire and 6:00 for the first arriving apparatus for EMS.

**📌 – Of Note...**  
 NFPA 1710 response times have not been adopted by the UFA Board. One of the important elements of the community risk assessment and standards of cover is to identify current 90th percentile times (current baselines) within UFA and to identify realistic benchmarks for the UFA Board to consider for adoption.

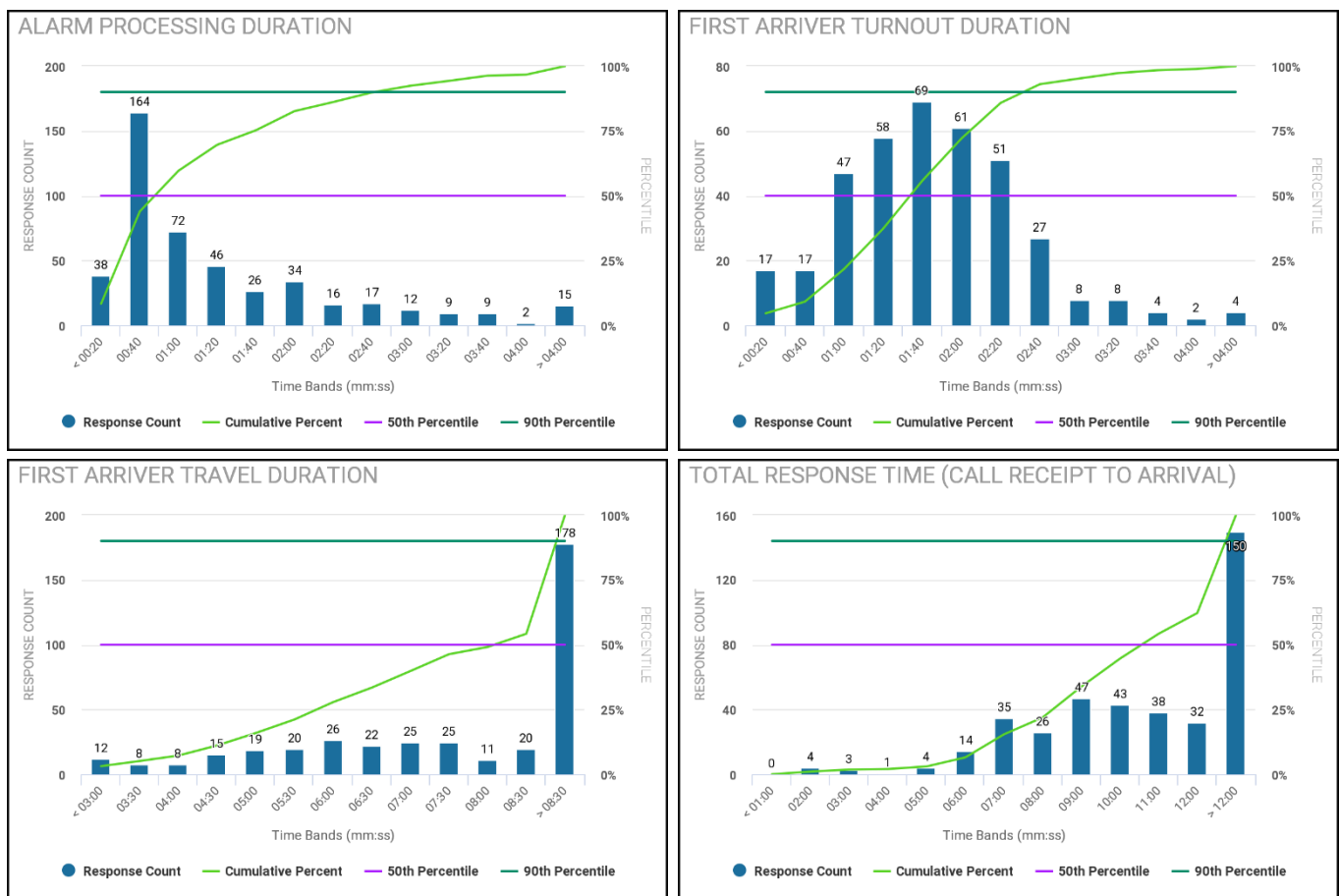
### Unincorporated SLCo – 2020 Dispatch and Response Times



Rural	Call Processing: Fire	Turnout Time: Fire	Travel Time: Fire	Total Response: Fire	Call Processing: EMS	Turnout Time: EMS	Travel Time: EMS	Total Response: EMS
<b>Unincorp SLCo</b>	2:45	2:35	15:16	18:38	1:58	2:27	14:26	16:30
<b>UFA Urban 2018-2020</b>	2:16	2:39	7:36	10:34	1:47	2:32	6:29	9:18
<b>UFA Rural 2018-2020</b>	2:32	3:05	15:08	19:09	1:56	2:50	14:45	17:45
<b>NFPA 1710</b>	1:04	1:20	4:00	6:24	1:00	1:00	4:00	6:00

Table 140 – Unincorporated SLCo 2020 Emergent Response Times, 90<sup>th</sup> percentile values

### Unincorporated SLCo – 2020 Turnout and Travel Time



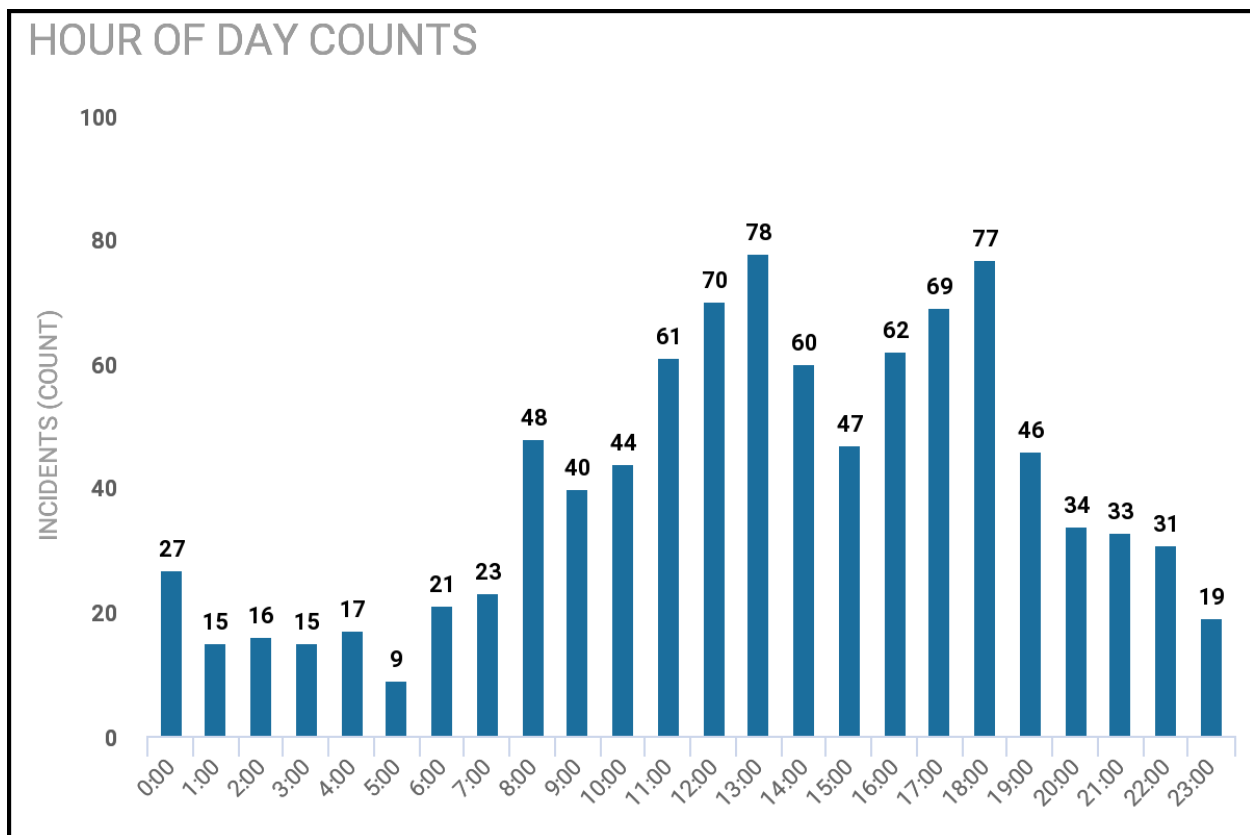
The charts above illustrate the alarm processing, turnout and travel times for all units responding to service calls within Unincorporated Salt Lake County with the teal-colored line representing the 90<sup>th</sup> percentile target goal. The alarm processing for fire was 2:45 and 1:58 for EMS; turnout time was 2:35 for fire responses and 2:27 for EMS responses; travel time was 15:16 for fire responses and 14:26 for EMS. The 90<sup>th</sup>

percentile total response time was 18:38 for fire and 16:30 for EMS. For the charts above, they show both fire and EMS response times together.

**⚡ – Of Note...**

One item to note is that if you were to add the processing time, the turnout time, and the travel time, it will not necessarily (and often doesn't), sum the total response time. This is due to some of the limitations within the datasets and gaps within timestamps. Where there are missing timestamps, those particular key performance indicators (KPI) are excluded as they cannot accurately be calculated out.

**Unincorporated SLCo – 2020 Incidents by Time of Day**



*Chart 84 – Unincorporated SLCo 2020 Incidents by Time of Day*

The above table demonstrates the incidents by time of day and the time of greatest demand within Unincorporated Salt Lake County for all service calls. This chart illustrates that the greatest demand for service delivery begins at 8:00 AM and starts to decrease at 6:00 PM.

## Unincorporated SLCo – 2020 Incidents by Day of Week

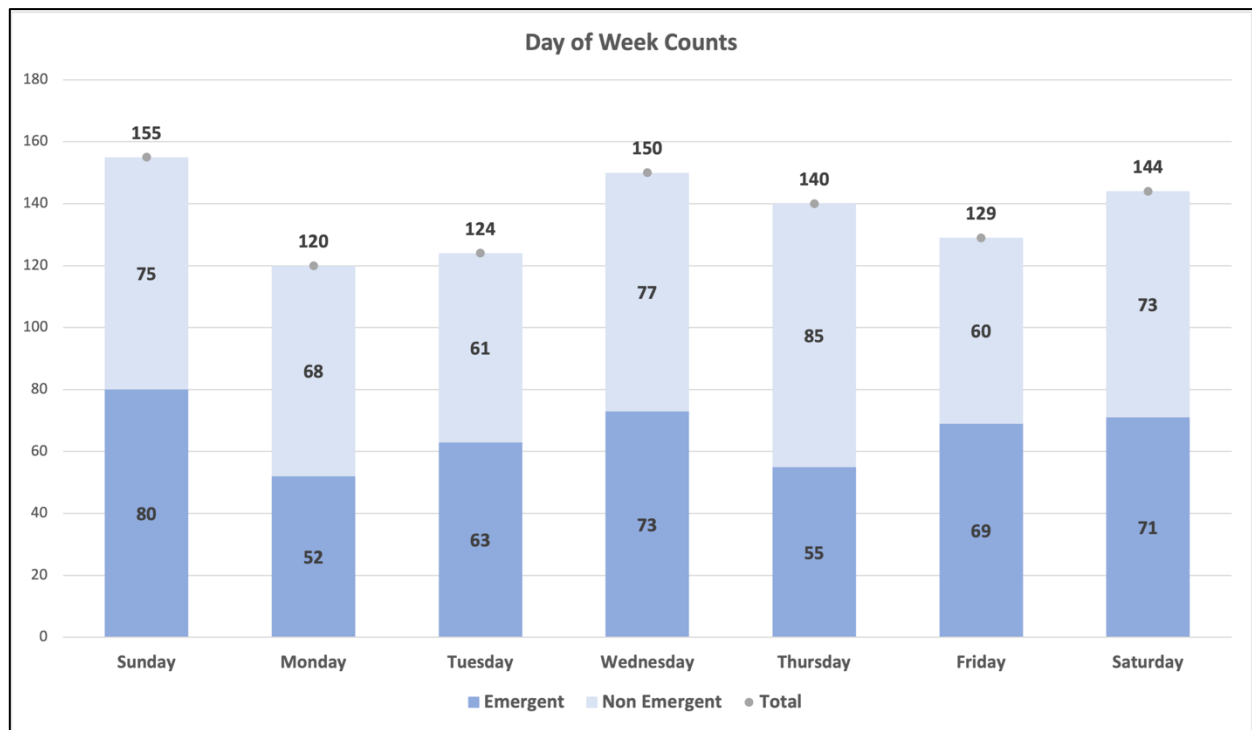


Chart 85 – Unincorporated SLCo Incidents by Day of Week

This chart demonstrates the call volume based on the day of the week, with an increase in all calls occurring on Sundays and Wednesdays and the peak volume for calls in Unincorporated Salt Lake County occurring on Sunday.

## Unincorporated SLCo – 2020 Fire Incidents by Dispatch Type

NFIRS Description	Incident Count	% of Incidents
Structure Fire	8	16%
Natural Vegetation Fire	17	34%
Outside Rubbish Fire	2	4%
Mobile Property Fire	1	2%
Vehicle Fire	20	40%
Special Outside Fire	1	2%
Fire, Other	1	2%
<b>Total</b>	<b>50</b>	<b>100%</b>

Table 141 – Unincorporated SLCo 2020 Incidents by Dispatch Type

## Unincorporated SLCo – Building Occupancy Classification and Risk Categories

Occupancy Classification	Low	Moderate	High	Maximum	Total
<b>Assembly</b>	39	2	3	0	44
<b>Commercial/Industrial</b>	13	4	3	0	20
<b>Educational</b>	0	0	5	0	5
<b>Government</b>	3	1	0	0	4
<b>Healthcare</b>	0	0	0	0	0
<b>Hazardous</b>	Unknown	Unknown	Unknown	Unknown	11*
<b>Storage</b>	0	0	0	0	0
<b>Residential</b>	542	1,702	559	15	2,818
<b>Residential – Multi Unit</b>	64	9	3	2	78
<b>High Rise</b>	N/A	N/A	0	3	3
<b>Total</b>	661	1,718	573	20	2,983

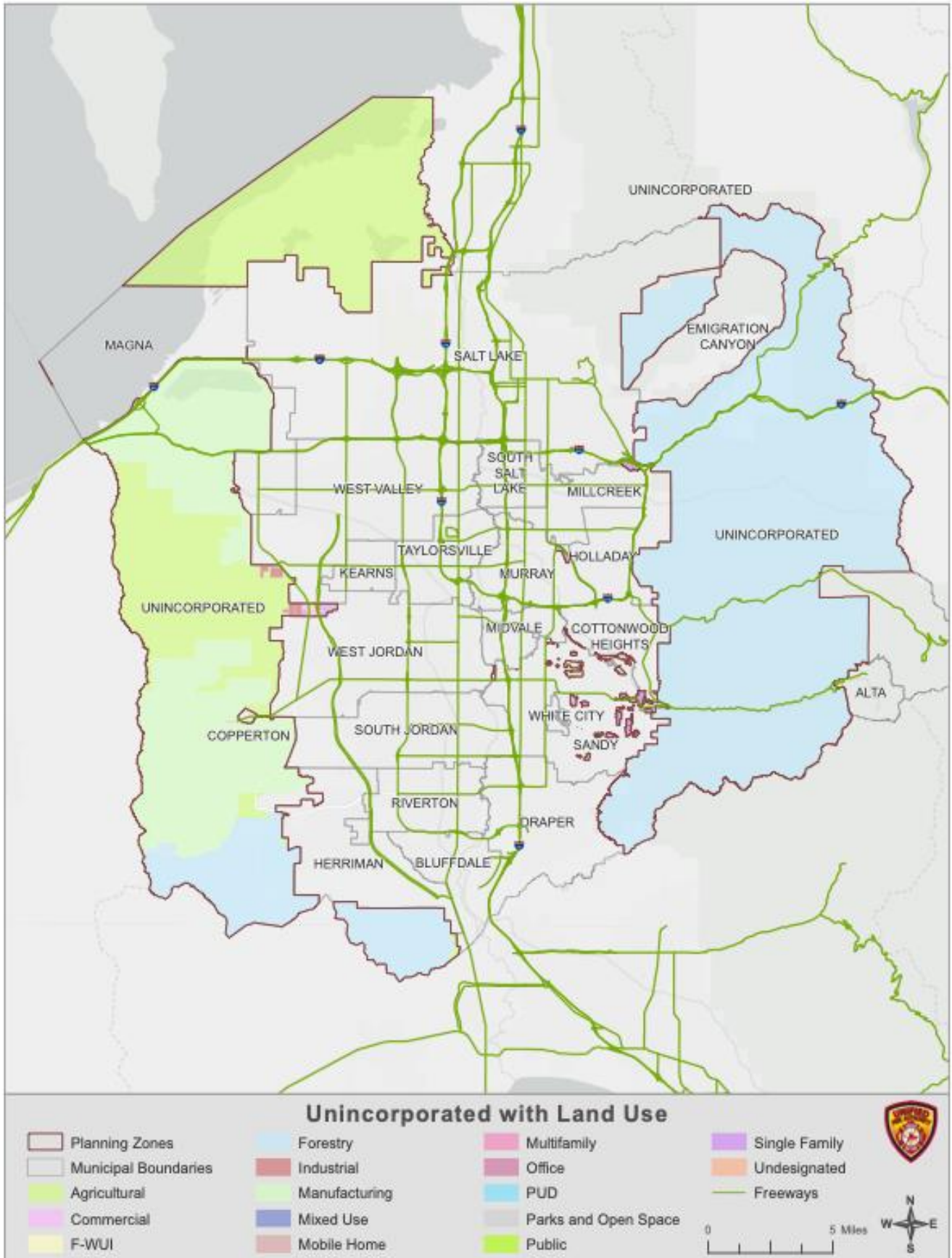
\*There is currently a gap within the identification of building size regarding hazardous materials sites. This is a gap that is being closed over the next several years as we collect the data and information.

*Table 142 – Unincorporated SLCo Building Occupancy and Risk Categories*

### Building Size / Considerations

For purposes of risk classification, UFA has outlined the following risk classifications for building size, regardless of occupancy type (except residential). Low risk = 1-4,999 square feet. Moderate risk = 5,000-9,999 square feet. High risk = 10,000-99,999 square feet. Maximum risk = >100,000 square feet.

For residential occupancies, the following classifications apply. Low risk = 1-1,999 square feet. Moderate risk = 2,000-3,999 square feet. High risk = 4,000-9,999 square feet. Maximum risk = ≥10,000 square feet.

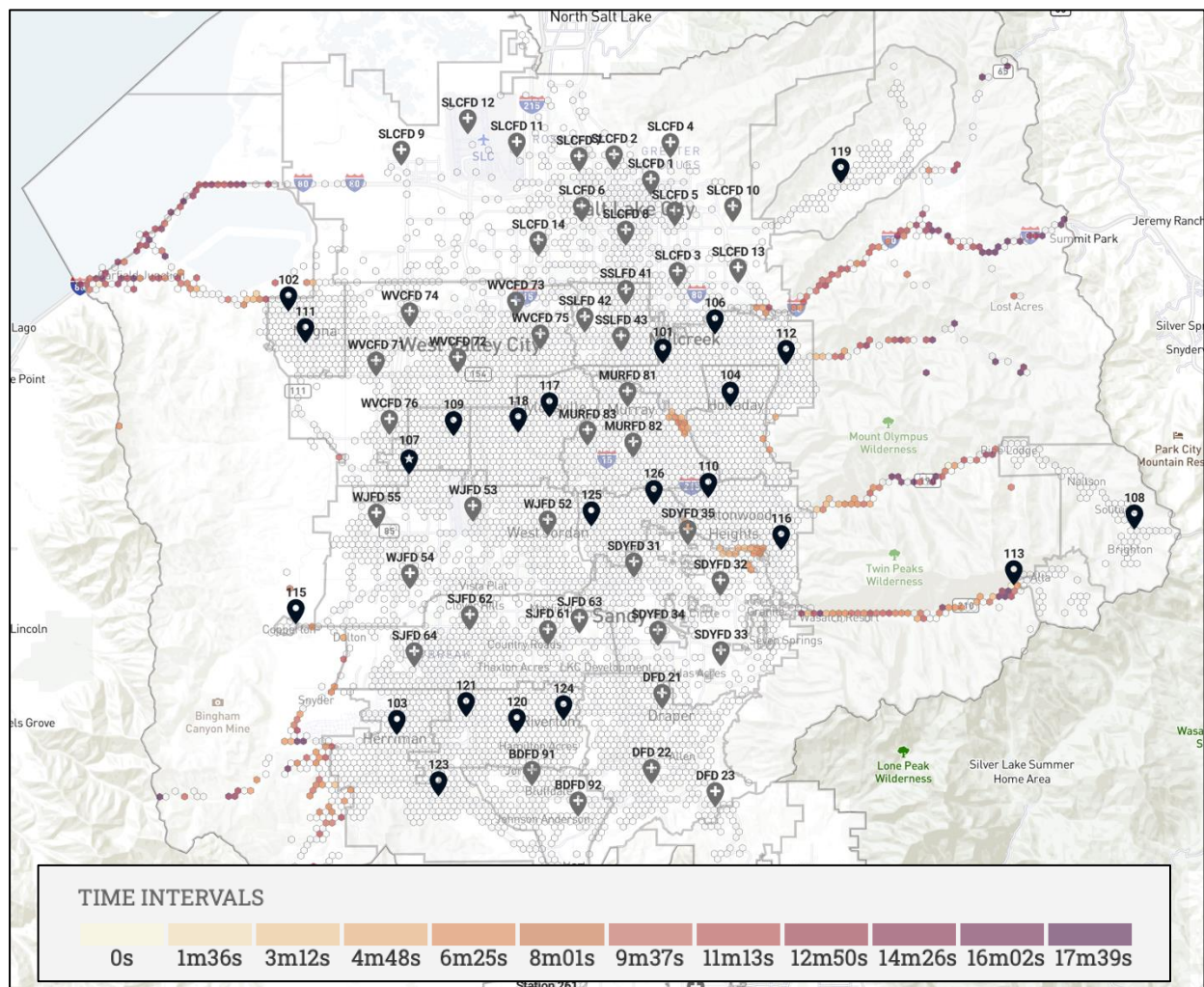


Map 215 - Unincorporated SLCo with Land Use



## Unincorporated SLCo – First Arriver Travel Times

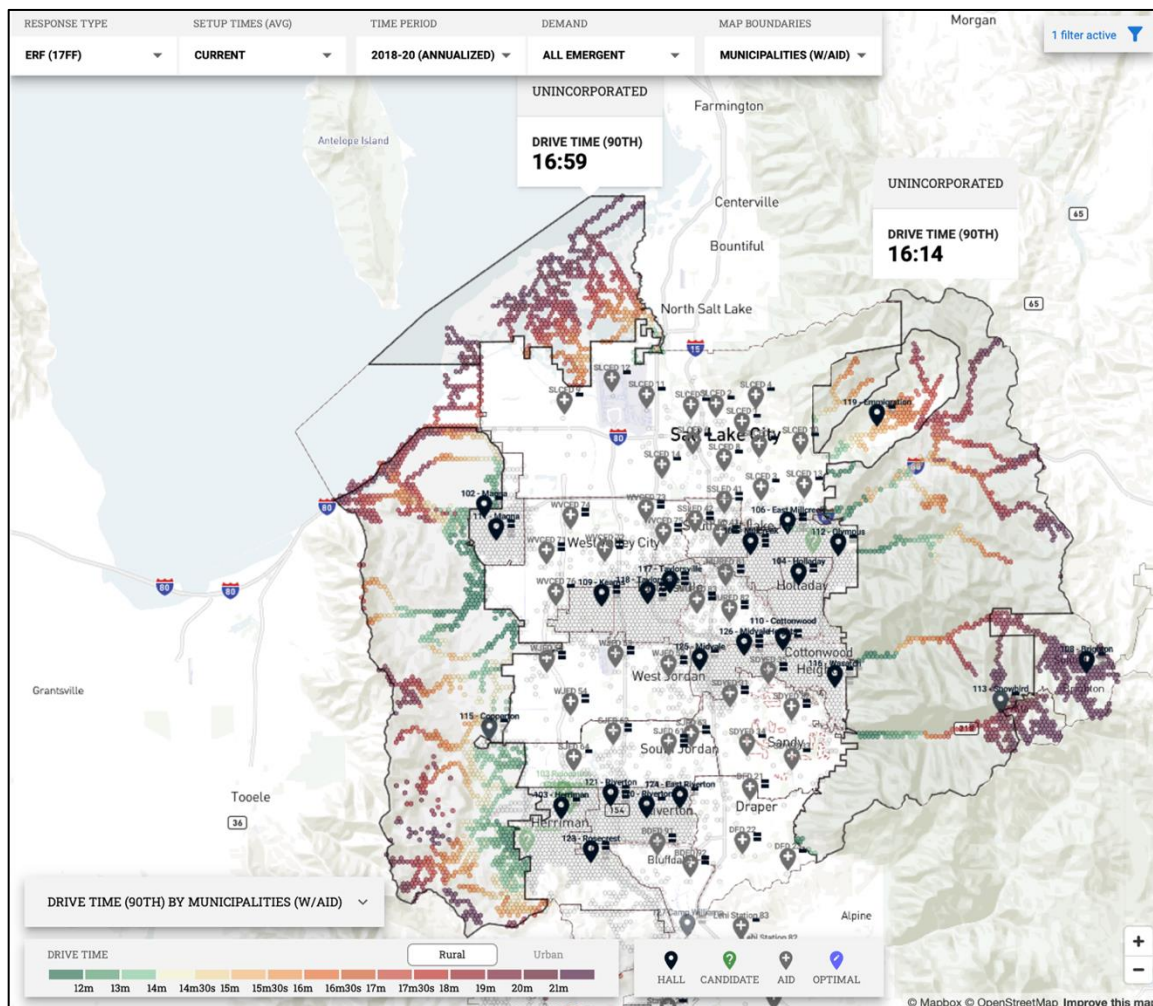
The following maps demonstrate the 90<sup>th</sup> percentile of travel times based off the last three years of historical data (2018-2020). The darker the color is, the more delayed the response, with the green and light colors demonstrating below or near target times. The darker colors on the bar within 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 (90<sup>th</sup> percentile) from notification of the alarm to the arrival of the first arriving apparatus — not an adopted standard by UFA. UFA is currently in process of identifying benchmark and target standards to be adopted by the UFA Board of Directors. Currently, within the west portion of Unincorporated Salt Lake County, the 90<sup>th</sup> percentile drive time is 15:16 for fire and 14:26 for EMS, or a combined 90<sup>th</sup> percentile drive time of 14:52.



Map 216 – Unincorporated SLCo Response Times – All Aid

## Unincorporated SLCo – Residential Fire Effective Response Force (17 FF)

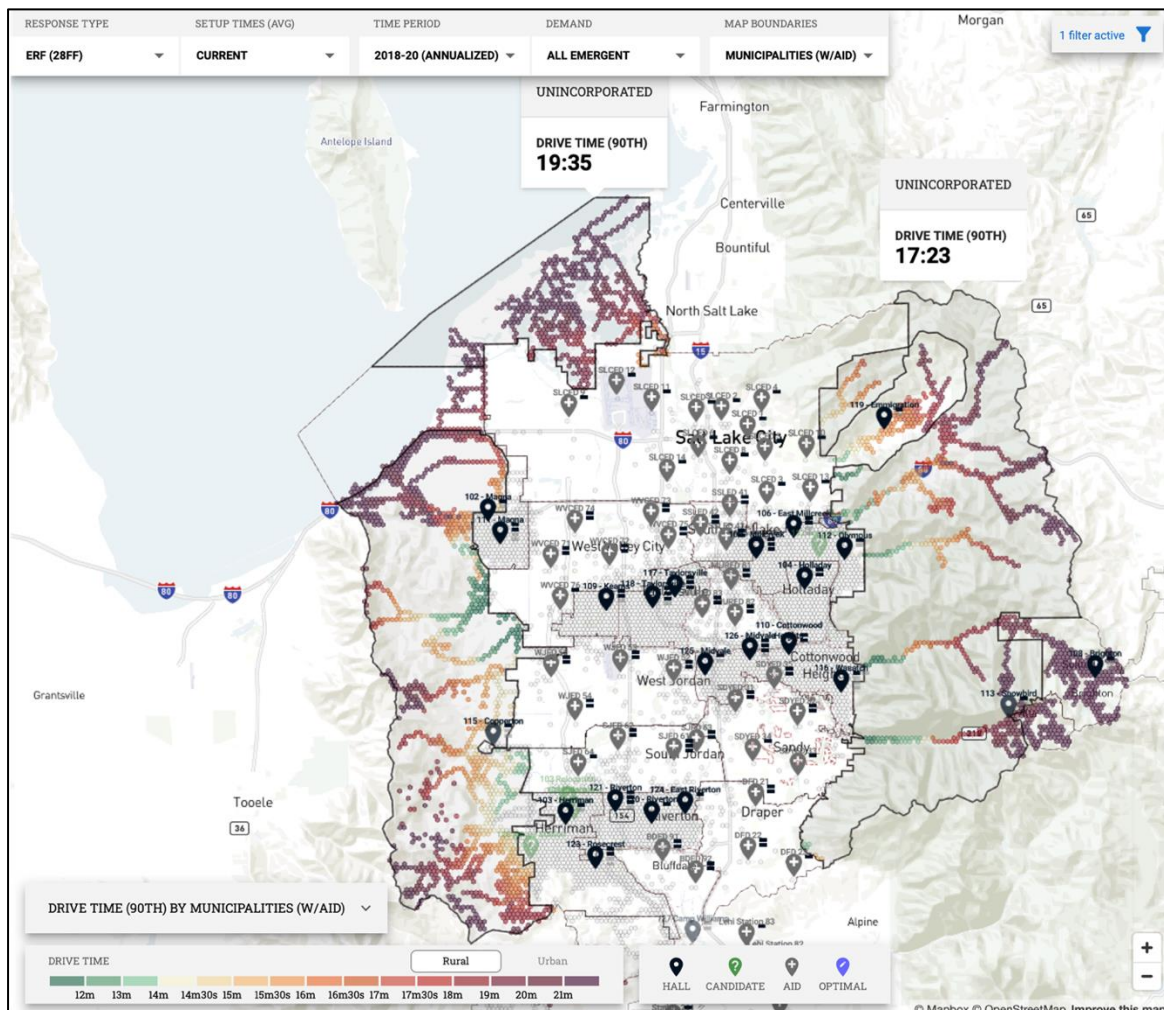
This map demonstrates the coverage of a multi-unit response to a residential fire based on all apparatus being located within their station at the time of dispatch. The green to light yellow demonstrates the ability to have seventeen firefighters (a residential fire effective response force) on scene 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 (90<sup>th</sup> 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 occupancy — not an adopted standard by UFA. UFA is currently in process of identifying benchmark and target standards to be adopted by the UFA Board of Directors. Based off predictive data, it is projected that the 90th percentile for 17 firefighters to arrive on scene would be 16:59 within the west area and 16:14 within the east area.



Map 217 – Unincorporated SLCo Response Times – Residential Fire Effective Response Force (17 ERF)

## Unincorporated SLCo – Commercial Fire Effective Response Force (28 FF)

The map below demonstrates the coverage of a multi-unit response to a commercial fire based off all apparatus being within their station at the time of dispatch. 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 (90<sup>th</sup> 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. UFA is currently in process of identifying benchmark and target standards to be adopted by the UFA Board of Directors. Based off predictive data, it is projected that the 90th percentile for 17 firefighters to arrive on scene would be 19:35 within the west area and 17:23 within the east area.



## Unincorporated SLCo 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
High	High	Low	High	Mod	Mod (West) High (East)	High	Mod	Low	Low	Mod	Low
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 143 – Unincorporated SLCo Hazard Matrix

### Infrastructure – Transportation

The primary roadways that run through Unincorporated Salt Lake County is I-80, which runs east/west on the northern side; U-201 which runs near parallel with I-80 on the west bench; State Road 190 up Big Cottonwood Canyon and State Road 210 up Little Cottonwood Canyon. There are 59.1 linear miles of Interstate/US Highway, 53 linear miles of State Highways, and 283.5 total linear miles of roadway. UTA also runs bus routes throughout Unincorporated Salt Lake County. Unincorporated Salt Lake County is in the high-risk category for road infrastructure.

### Infrastructure – Water

There are several water districts within Unincorporated Salt Lake County. Copperton Improvement Water District; South Valley Sewer District; Cottonwood Improvement District; the Jordan Valley Water Conservancy District; the Mt Olympus Improvement

District; the Emigration Improvement District; and the Big Cottonwood Canyon Improvement District.

### Infrastructure – Dams

There are sixty-eight identified dams of various types and sizes within Unincorporated Salt Lake County. Unincorporated SLCo is in the high-risk category for dam infrastructure.

### Natural Hazards

Within Unincorporated Salt Lake County, there are moderate concerns with avalanche areas, as most of the high-risk avalanche areas within this planning zone are in areas not close to any roads or traveled areas. There are several identified fault lines that run through the area, with roughly 118,913 linear miles of fault lines (see Map 8). Unincorporated SLCo is in the low-risk category for liquefaction and high-risk category for fault lines. One of the biggest hazards that occur within an earthquake scenario is the number of unreinforced masonry (URM) buildings. Within Unincorporated SLCo, there are an estimated 755 URM's, which constitutes about 3.07% of the overall URM's within UFA's response areas. Unincorporated Salt Lake County is in the moderate-risk category for unreinforced masonry on the west bench of the County and in the high-risk category for unreinforced masonry on the east bench of the County.

### Wildland Urban Interface

There is high risk of urban interface fires within Unincorporated Salt Lake County, with nearly all the Unincorporated Salt Lake County areas abutting residential structures and urban areas, particularly as building continues to occur within the unincorporated areas. Unincorporated Salt Lake County is in the high-risk category for Wildland Urban Interface.

### Hazardous Materials / Tier II Sites

There are ten identified HazMat/Tier II Sites within Unincorporated Salt Lake County, which places this threat in the moderate-risk category.

### Hospitals

Unincorporated Salt Lake County has no hospitals. This places Unincorporated SLCo in the low-risk category for hospitals.

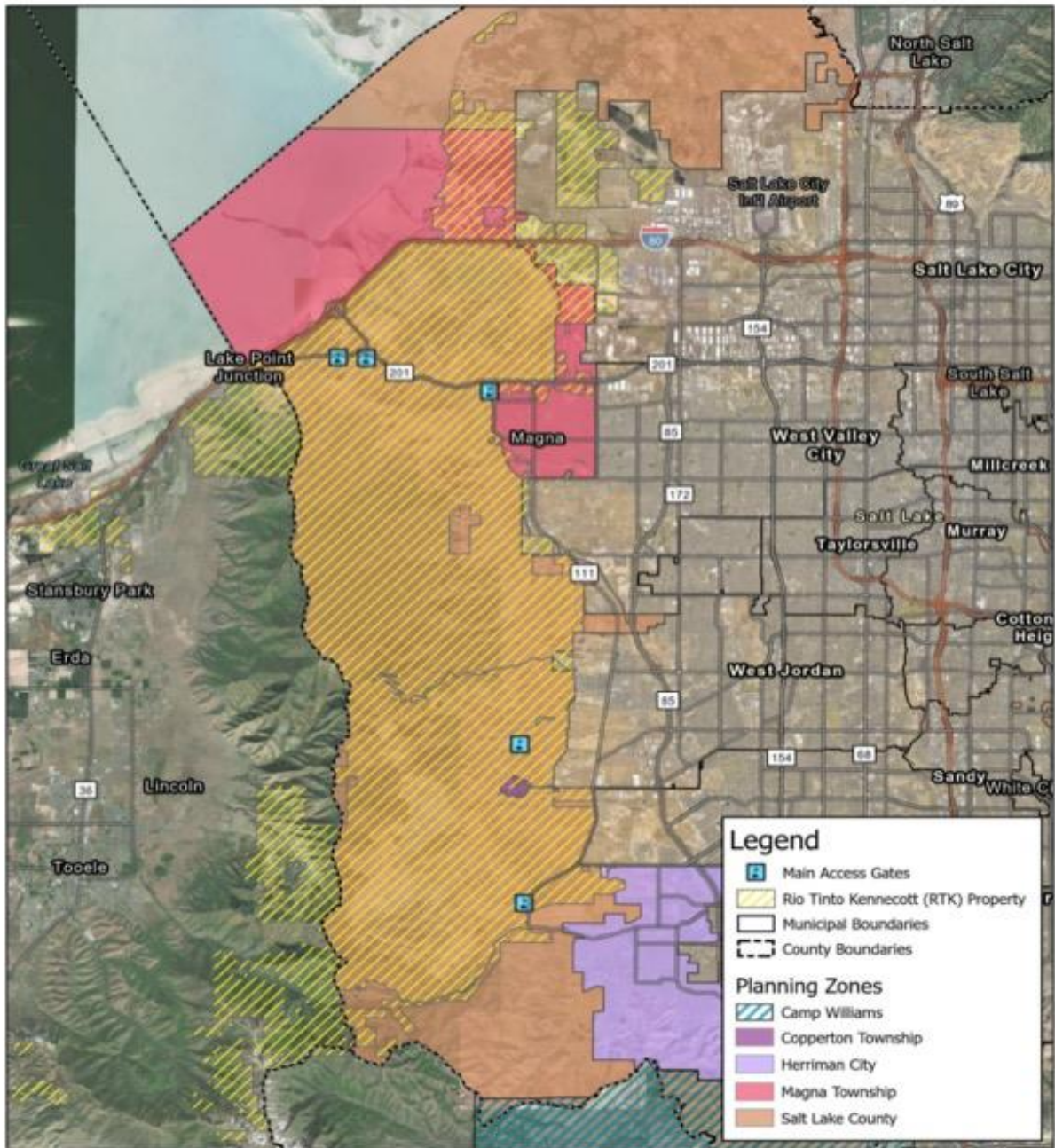
## Schools

Unincorporated Salt Lake County has zero elementary schools, zero middle schools, and zero high school within city boundaries, which places it in the low-risk category.

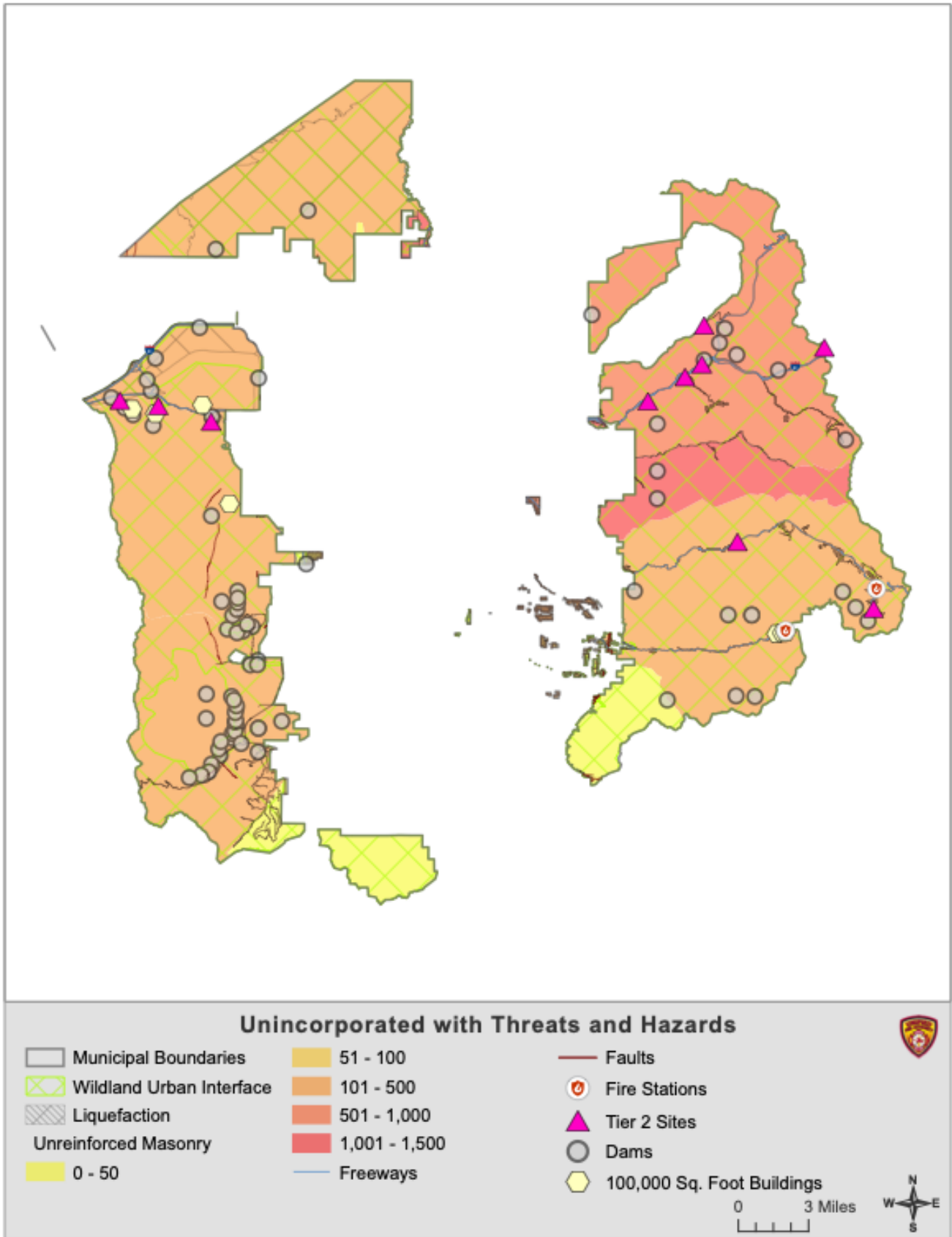
## Rio Tinto Kennecott

Kennecott's Bingham Canyon Mine is the largest man-made excavation, and deepest open pit mine in the world. The mine operates 24 hours a day, 365 days a year. The overall operation includes the mine, a concentrator plant, a smelter, and a refinery, which are spread out on the west side of the service area of Unincorporated Salt Lake County. Response to the operation includes medical, fire, hazmat and technical rescue incidents.

# RTK Overview



Map 219 - Rio Tinto Kennecott Property



Map 220 – Unincorporated SLCo with Combined Hazards



## Life and Property Loss

From 2015-2020, there have been zero fatalities attributed to fire. There is a gap in identifying both property and content loss, as all fires are assigned to the first arriving unit as well as the fire zone, as opposed to Unincorporated Salt Lake County, as there has not been a distinction made between response zones and a dedicated fire management zone for Unincorporated Salt Lake County. Additionally, the vast majority of fires in Unincorporated Salt Lake County are wildland incidents.

## Unified Fire Shared Services

With a regional-response model, the Unified Fire Authority brings special services to bear when the situation calls for it, not relying on automatic or mutual aid which provides a quicker and more effective delivery of service to its residents.

## Battalion Chiefs

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use proper specialized chemical personal protective equipment dependent on the nature of the incident. The HazMat Program consists of two independent HazMat companies strategically placed in UFA's jurisdiction. Station 124 in Riverton, and Station 126 in Midvale house our HazMat Teams.

### Water Rescue Teams

UFA has swift water and ice rescue capabilities. These companies respond to victims recreating in our swift canyon rivers and our lakes and reservoirs. Station 116 in Cottonwood Heights, Station 117 in Taylorsville, Station 121 in Riverton, and Station 123 in Herriman house companies with water rescue capabilities.

### Wildland Division

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### Other Locations and Services

#### UFA Logistics and Utah Task Force 1

UFA is the sponsoring agency for Utah Task Force 1 (UTTF1), is one of 28 federally funded Urban Search & Rescue (US&R) Teams. UTTF1's logistical cache is located in the same warehouse as UFA's Logistics Division, located at 6726 West Navigator Drive in West Jordan City. UFA's Logistics Division is responsible for maintaining all of UFA's facilities, stations, and apparatus.



Image 28 - UFA Logistics and UTTF1 Warehouse

## UFA Special Enforcement Division



*Image 29 - UFA Station 107, Special Enforcement Division*

UFA has its own bomb squad and arson investigators that do any warranted investigations into origin and cause of any fire. There are currently five full-time investigators and one part-time investigator, and they are housed at UFA's Fire Station 107, located at 6305 South 5600 West, a previous UFA fire station that was no longer in an ideal

response location. UFA's bomb technicians and arson investigators respond as requested throughout Salt Lake County as well as state-wide through a memorandum of understanding (MOU) within the State of Utah. UFA also participates in the FBI's Joint Terrorism Task Force (JTTF) with two investigators.

	CY 2020	CY 2019	CY 2018
<b>Arson Investigations in UFA</b>	197	156	214
<b>Bomb Responses</b>	65	45	55
<b>UFA Fatal Fires</b>	1	2	0
<b>Bomb Squad SWAT Assists</b>	4	11	6
<b>Explosive Detection K9 Deployments</b>	33	24	29
<b>Accelerant Detection K9 Deployments</b>	33	24	29
<b>Forensic Blood Draw</b>	18	11	N/A
<b>FBI JTIF/Counter IED Case</b>	3	2	0
<b>UFA SWAT PM Deployment</b>	104	77	54
<b>Multi-Jurisdictional Directed Enforcement Operation Support</b>	4	4	4

*Chart 86 - Special Enforcement Responses*

## Information Outreach

UFA has an Information Outreach Division that has six personnel, three civilian staff and three sworn staff. They have offices in both Station 126 and the Emergency Coordination Center (ECC). They coordinate all of UFA's external informational outreach, including public safety messaging, media releases and requests, and on-site incident PIO responsibilities.

## Fire Training Division



*Image 30 - UFA Training Tower*

UFA has a fire training division that is located at UFA's Fire Training Tower, located at 3900 South 8000 West, Magna. UFA's Fire Training Division provides all training for new firefighter hires as well as continued training for all full- and part-time UFA firefighters. The training division has a six-story training tower on a fourteen-acre site, which also houses Utah Task Force 1's US&R rubble pile.

## Medical Training Division

UFA has a medical training division that is located out of UFA headquarters and Salt Lake County's Emergency Communication Center (ECC). UFA provides basic life support (BLS) and advanced life support (ALS) functions. The medical training division provides all initial and ongoing training to its personnel that meet all standards from the Utah Bureau of Emergency Medical Services (BEMS) and national registry requirements.

## Salt Lake County Emergency Management

UFA has a charter from Salt Lake County Government whereby UFA provides emergency management (EM) within Salt Lake County. EM helps to manage risks within communities and the environment by putting plans into action and mitigating both perceived and real threats that communities face.

The Salt Lake County Emergency Coordination Center (ECC) and UFA's headquarters is



*Image 31 - SLCo Emergency Coordination Center and UFA Headquarters*

co-located at 3380 S 900 W.

The Salt Lake County Division of Emergency Management serves citizens by directing and coordinating resources for disasters and emergencies through preparation, planning, mitigation, response, and recovery. The Salt Lake County Emergency Coordination Center (ECC) is activated and manned during any event—from small-scale to large-scale occurrences—to disasters, both natural and man-made that can or have exceeded the resources of any jurisdiction. Currently, the Salt Lake County ECC

assists and obtains resources for the 23 jurisdictions located within the Salt Lake Valley. EM assists these jurisdictions through the activation of 15 Emergency Support Functions (ESFs) filled by employees from a multitude of backgrounds. The ESF employees have authority throughout Salt Lake County to fill and order additional support for the operations occurring in the field until the impacted jurisdiction can return to normal operations and functions. The Emergency Management Division is committed to keeping the public safe through community outreach, training, dissemination of important public information, training of staff, and the creation of a more resilient community through mitigation, preparation, response, and recovery. The ECC has activated for several events such as the COVID-19 pandemic response, Magna earthquake, straight-line windstorm, civil unrest, wildland fires such as the Rosecrest and Machine Gun fires, flooding, hurricanes, Line of Duty Deaths (LODD), and many other events.

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## Unified Fire Authority

3380 South 900 West  
Salt Lake City, UT 84119