



# Cottonwood Heights



## Community Risk Assessment

### City of Cottonwood Heights

UFA has two stations within the City of Cottonwood Heights covering a total of 9.23 square miles with a population of 33,118 as of 2024 and responded to 6,677 calls for service from 2022-2024.

Municipality	Population	Population Percentage of UFA	Square Miles	Population Density per Sq Mile	Classification	Value of Structures Protected
Cottonwood Heights	33,118	6.9 %	9.23	3,588	Urban	\$3.9B

The City of Cottonwood Heights has decreased its population from 33,617 in 2020 to 33,118 in 2024, showing a decrease of 1.48% over a four-year timeframe.

### City of Cottonwood Heights Station Information

Station 110	
Owner	Salt Lake County
Opened	1996
Address	1790 East Fort Union Boulevard
Staffing and Apparatus	<ul style="list-style-type: none"> <li>• 4 Person - Medic Ladder 110 (Type 1)</li> <li>• 2 Person - Medic Ambulance 110</li> <li>• Cross-Staffed - Engine 6110 (Type 6)</li> <li>• Battalion Chief 14</li> </ul>

Station 116	
Owner	Salt Lake County
Opened	1999
Address	8303 S Wasatch Blvd
Staffing and Apparatus	<ul style="list-style-type: none"> <li>• 3 Person - Medic Engine 116 (Type 1)</li> <li>• 2 Person - Medic Ambulance 216 (Seasonal PL)</li> </ul>

### 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:

Station Number	Station Location	Staffing
<b>UFA Station 104</b>	Holladay City	<ul style="list-style-type: none"> <li>• 4 Person - Medic Engine 104 (Type 1)</li> <li>• 2 Person - Medic Ambulance 104</li> </ul>
<b>UFA Station 125</b>	Midvale City	<ul style="list-style-type: none"> <li>• 4 Person - Medic Engine 125 (Type 1)</li> <li>• 2 Person - Medic Ambulance 225 (PL 24 Hour)</li> <li>• Cross-Staffed - Engine 6125 (Type 6)</li> </ul>
<b>UFA Station 126</b>	Midvale City	<ul style="list-style-type: none"> <li>• 4 Person - Medic Engine 126 (Type 1)</li> <li>• 2 Person - Medic Ambulance 126</li> <li>• Cross-Staffed - HazMat 126</li> <li>• Operations Chief</li> </ul>
<b>Station 32</b>	Sandy City	<ul style="list-style-type: none"> <li>• 3 Person - Medic Engine 32 (Type 1)</li> <li>• 2 Person - Medic Ambulance 32</li> <li>• Cross-Staffed - Engine 632 (Type 6)</li> </ul>
<b>Station 35</b>	Sandy City	<ul style="list-style-type: none"> <li>• 3 Person - Engine 35 (Type 1)</li> <li>• Cross-Staffed - Hazmat 35</li> </ul>
<b>Station 82</b>	Murray City	<ul style="list-style-type: none"> <li>• 3 Person - Medic Engine 82 (Type 1)</li> <li>• 2 Person - Medic Ambulance 82</li> </ul>

Table 1 - Response Stations

*City of Cottonwood Heights – Incidents by Dispatch Type*

	CY 2022	CY 2023	CY 2024
<b>Fire Suppression</b>	41   1.8%	45   2%	31   1.4%
<b>EMS</b>	1684   74.7%	1564   69.7%	1546   71%
<b>HazMat</b>	57   2.5%	66   2.9%	51   2.3%
<b>Service Call</b>	79   3.5%	166   7.4%	143   6.6%
<b>Good Intent</b>	189   8.4%	197   8.8%	231   10.6%
<b>False Call</b>	181   8%	191   8.5%	173   7.9%
<b>Natural Condition</b>	13   0.6%	12   0.5%	3   0.1%
<b>Other Situation</b>	6   0.3%	4   0.2%	0   0%
<b>Unknown</b>	4   0.2%	0   0%	0   0%
<b>Total</b>	2254   100%	2245   100%	2178   100%

Table 2 - Incidents by Dispatch Types

## City of Cottonwood Heights – 2022-2024 Dispatch and Response Times – Emergent First Due

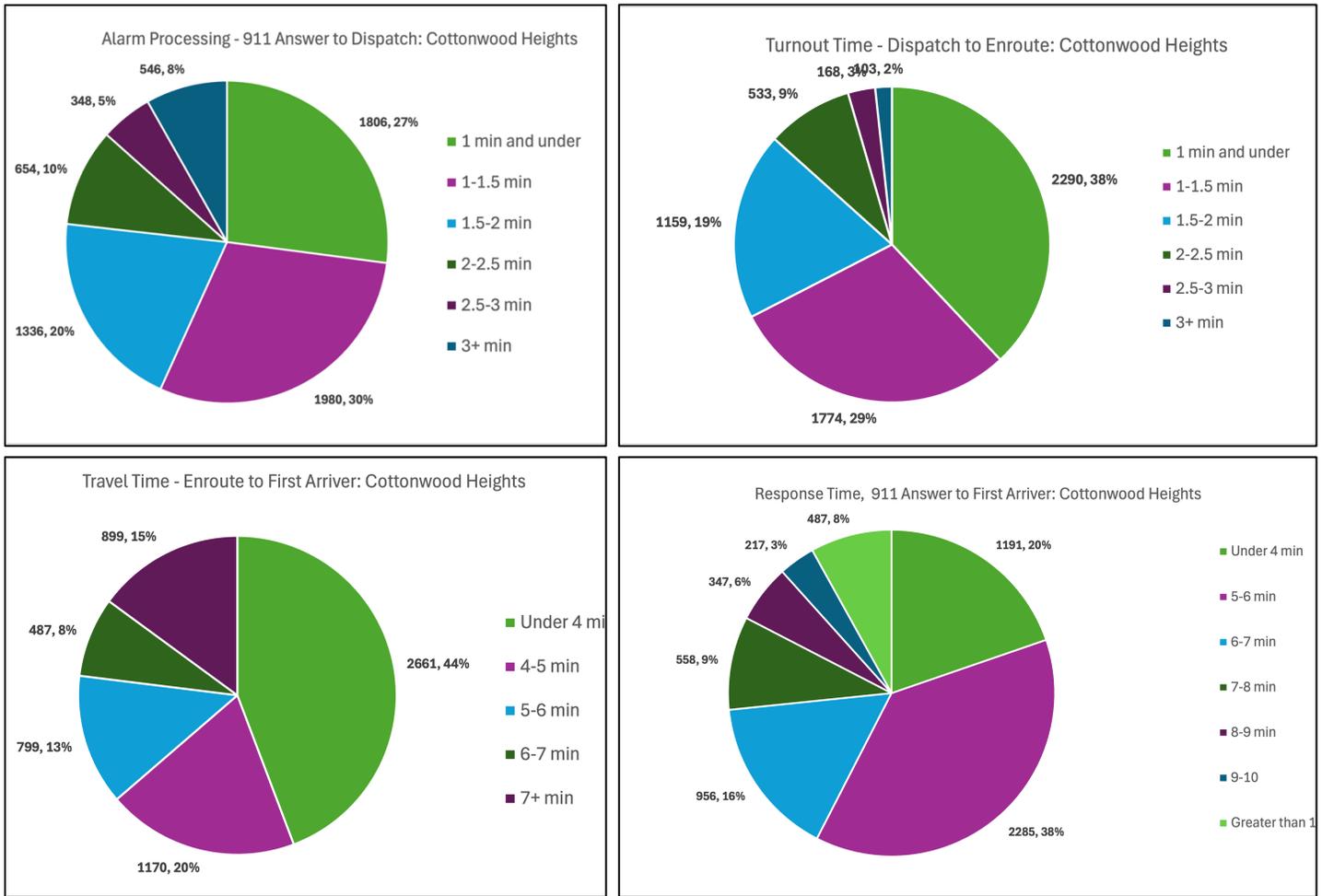


Chart 1 - Dispatch and Response Times

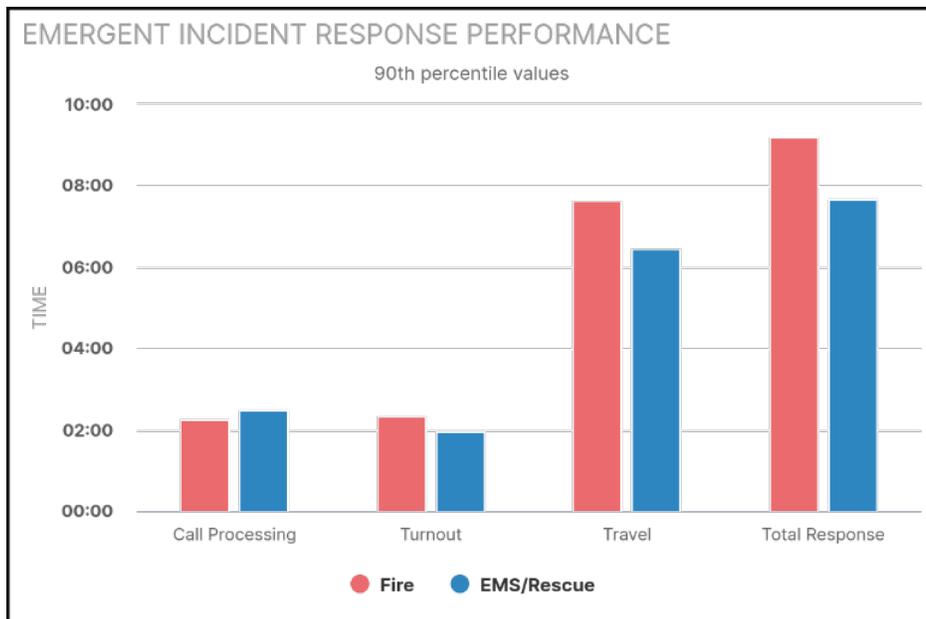


Chart 2 - Emergent Incident Response Performance

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
Cottonwood Heights 2022	2:51	2:00	7:34	10:48	2:28	2:03	6:41	9:56
Cottonwood Heights 2023	2:29	2:03	7:45	10:16	2:13	1:56	6:26	9:22
Cottonwood Heights 2024	2:41	2:25	8:37	11:28	2:08	1:51	6:22	9:02
UFA Urban 2022-2024	2:43	2:20	7:17	10:51	2:15	2:06	6:11	9:11
UFA Rural 2022-2024	2:59	2:22	14:56	17:48	2:51	2:18	14:29	18:22
NFPA 1710	1:04	1:20	4:00	6:24	1:00	1:00	4:00	6:00

Table 3 – Emergent Response Times, 90<sup>th</sup> percentile values

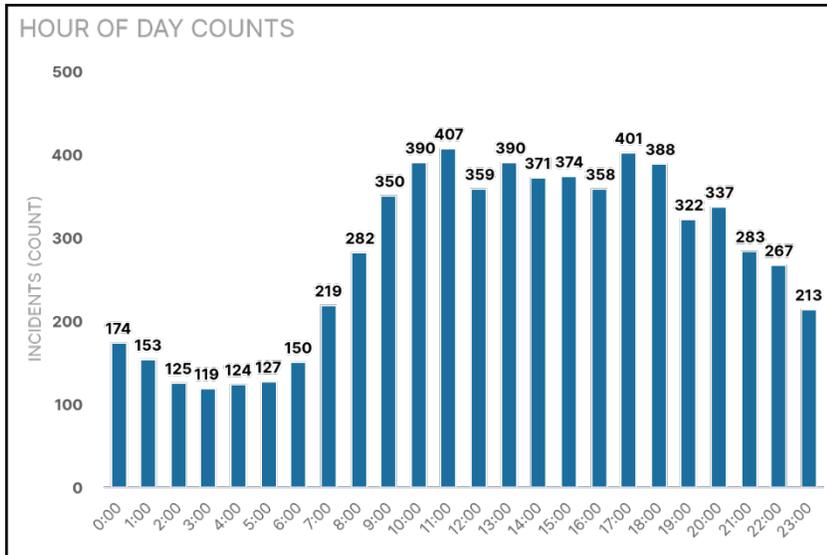
City of Cottonwood Heights – 2022-2024 Total Response Times



Chart 3 - Turnout and Travel Times

The charts above illustrate alarm processing, turnout, travel, and total response times for all units responding to service calls within Cottonwood Heights (90<sup>th</sup> percentile).

### City of Cottonwood Heights: 2022-2024 Incidents by Time of Day



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

Chart 4 – Incidents by Time of Day

### City of Cottonwood Heights City – 2022-2024 Incidents by Day of Week

This chart presents incident volume by day of the week in Cottonwood Heights, demonstrating that demand peaks on Monday and remains consistently elevated throughout the week.

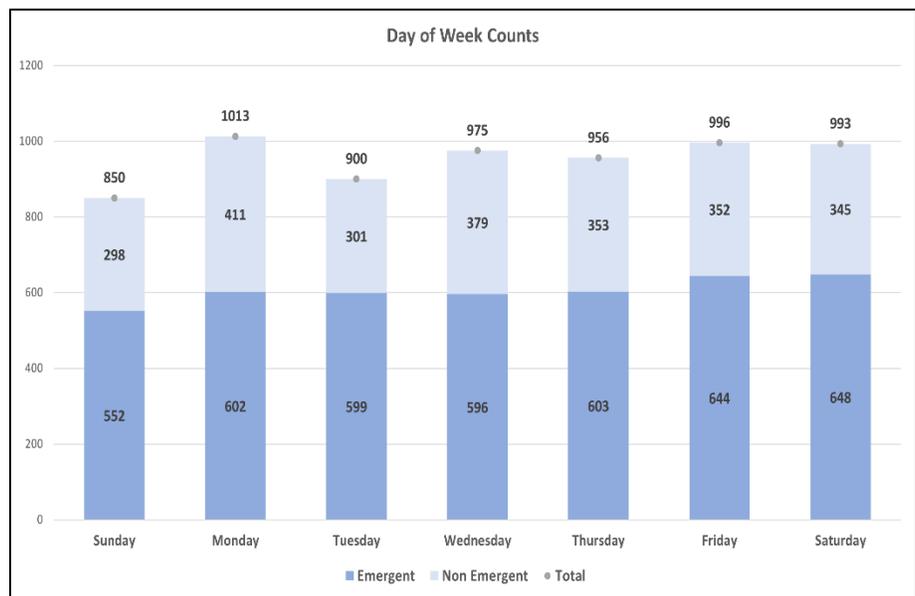


Chart 5 – Incidents by Day of Week

*City of Cottonwood Heights – 2022-2024 EMS Calls and Ambulance Transports*

Total EMS Calls	Total Ambulance Transports	% Of EMS Calls Requiring Transport
4,794	3,011	63%

*Table 4 - EMS Calls and Ambulance Transports*

*City of Cottonwood Heights – 2022-2024 EMS Incidents by Dispatch Type*

EMS Call Type	Incident Count
Fall	739
Sick Person	583
Unconscious	224
Head Injury	117
Breathing Problem	116

*Table 5 - Top 5 Medical Calls*

*City of Cottonwood Heights – 2022-2024 Fire Incidents by Dispatch Type*

NFIRS Description	Incident Count	% of Incidents	NFIRS Description	Incident Count	% of Incidents
Structure Fire	41	35.34%	Crop Fire	1	0.86%
Natural Vegetation Fire	17	14.66%	Fire, Other	10	8.62%
Outside Rubbish Fire	24	20.69%	Special Outside Fire	9	7.76%
Vehicle Fire	14	12.07%	Total	116	100%

*Table 6 - Incidents by Dispatch Type*

*City of Cottonwood Heights – Building Occupancy Classification and Risk Categories*

Occupancy Classification	Low	Moderate	High	Max	Total
<b>Agriculture</b>	0	1	0	0	<b>1</b>
<b>Assembly</b>	15	0	22	1	<b>38</b>
<b>Commercial</b>	246	53	47	2	<b>348</b>
<b>Education</b>	24	3	10	4	<b>41</b>
<b>Government</b>	47	3	5	1	<b>56</b>
<b>Hazardous</b>	2	1	4	1	<b>8</b>
<b>Healthcare</b>	1	1	4	0	<b>6</b>
<b>High Rise</b>	0	0	1	0	<b>1</b>
<b>Industrial</b>	4	3	6	1	<b>14</b>
<b>Mixed Use</b>	0	0	0	0	<b>0</b>
<b>Residential **</b>	10626	266	17	0	<b>10909</b>
<b>Single Family Residential</b>	4061	5322	347	8	<b>9738</b>
<b>Multi-family Residential</b>	364	542	232	4	<b>1142</b>
<b>Unclassified/Storage</b>	80	15	2	1	<b>98</b>
<b>Utility and Miscellaneous</b>	0	0	0	0	<b>0</b>
<b>Total</b>	<b>15470</b>	<b>6210</b>	<b>697</b>	<b>23</b>	<b>22400</b>

**\*\* Residential includes single family and multi-family. Breakdowns for those are in a separate row.**

**\*\* Residential includes manufactured homes and unclassified so multi-family and single family may not add up to residential.**

**Building Size / Considerations**

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

*Table 7 – Building Occupancy and Risk Categories*

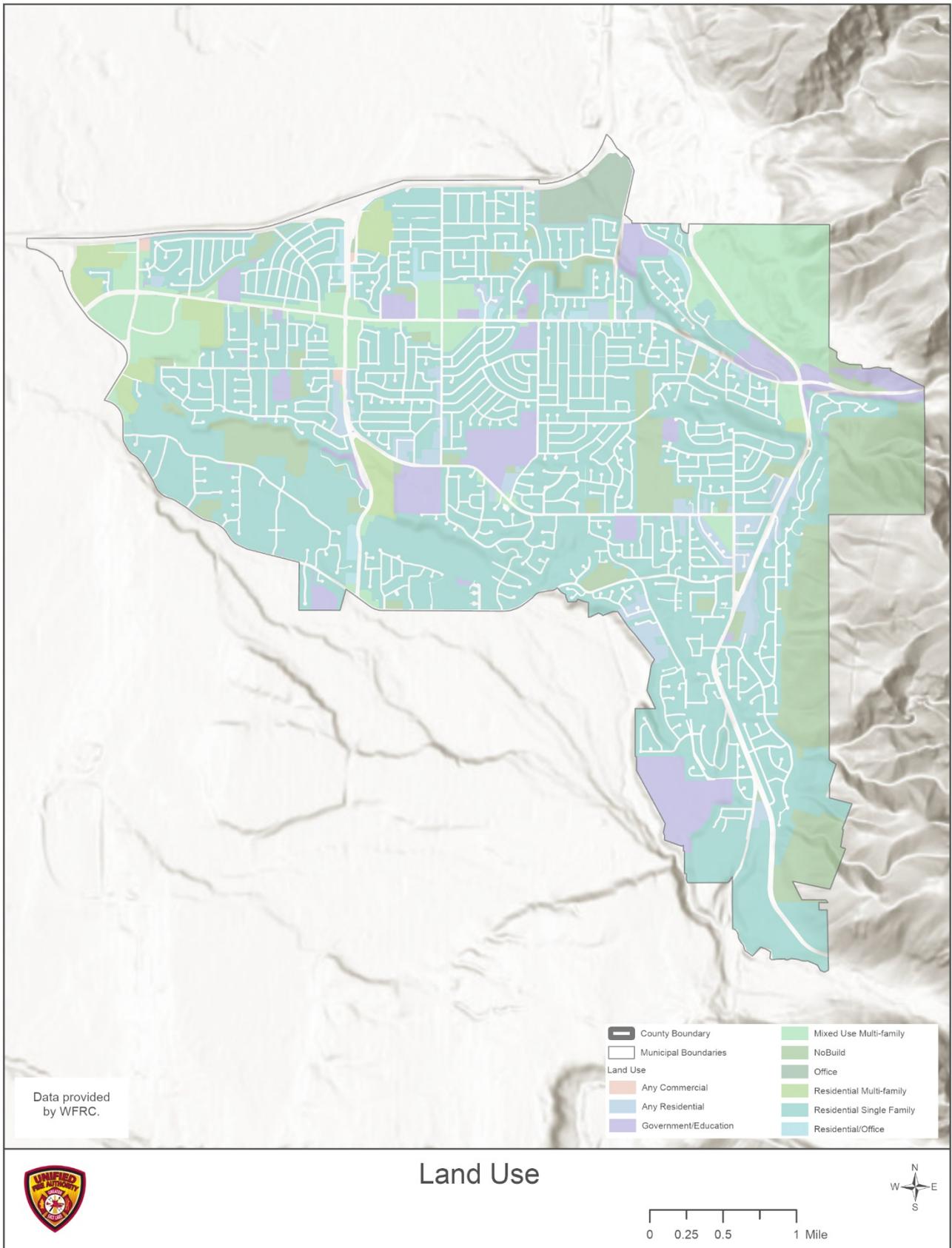


Image 1 - Land Use

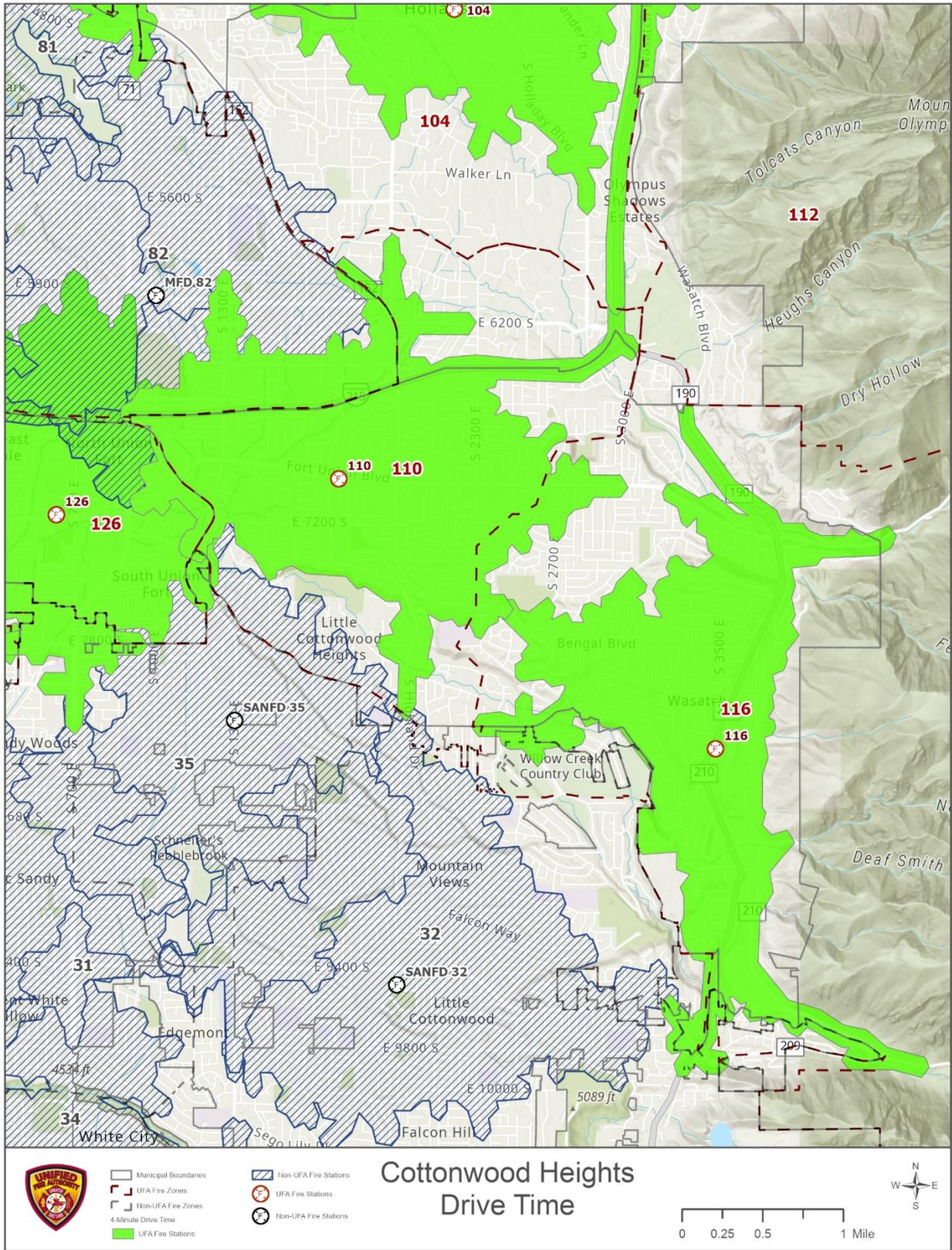
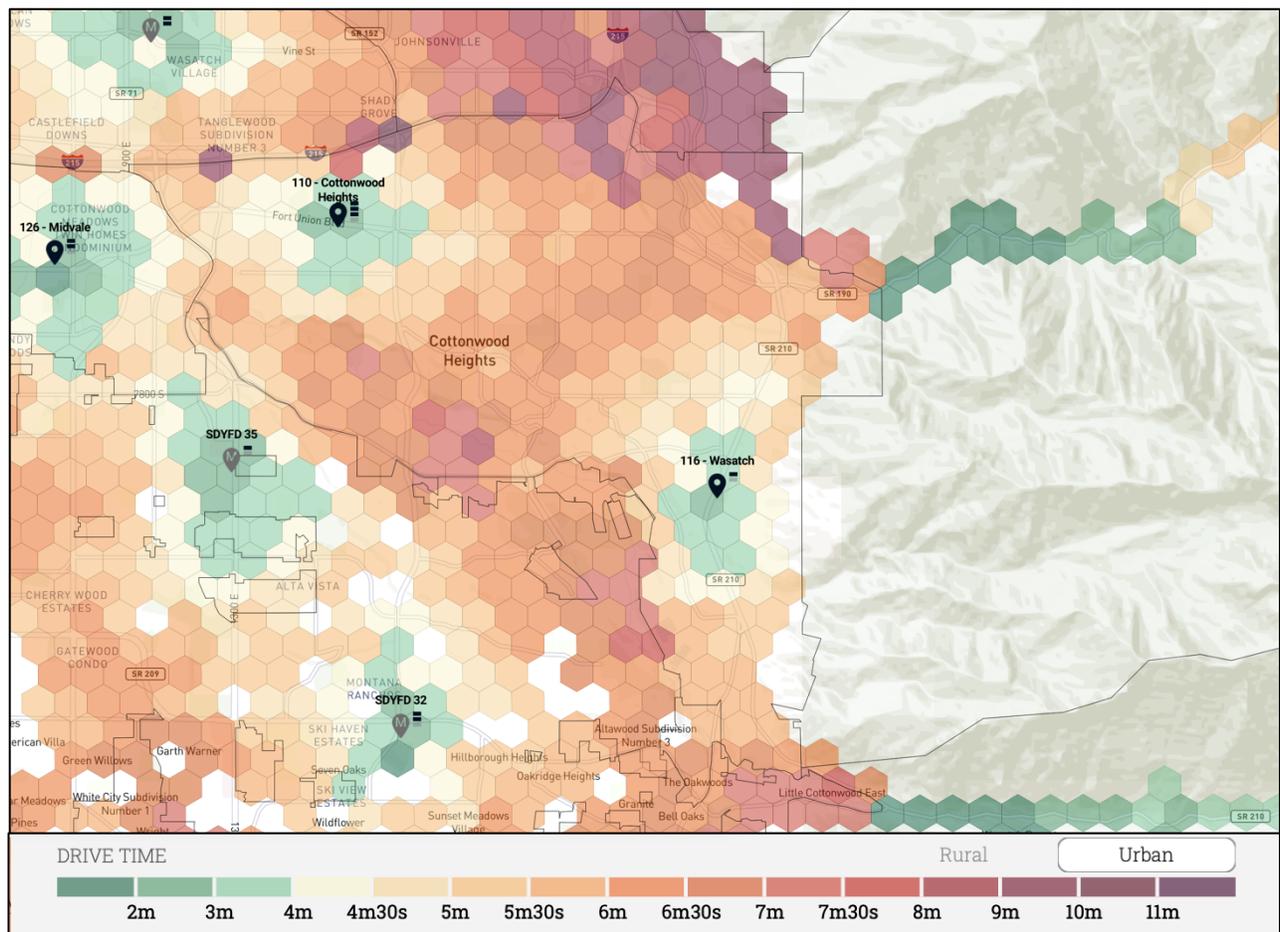


Image 2 - 4-Minute Travel Times, UFA and Aid

### *City of Cottonwood Heights – First Arriver Travel Times*

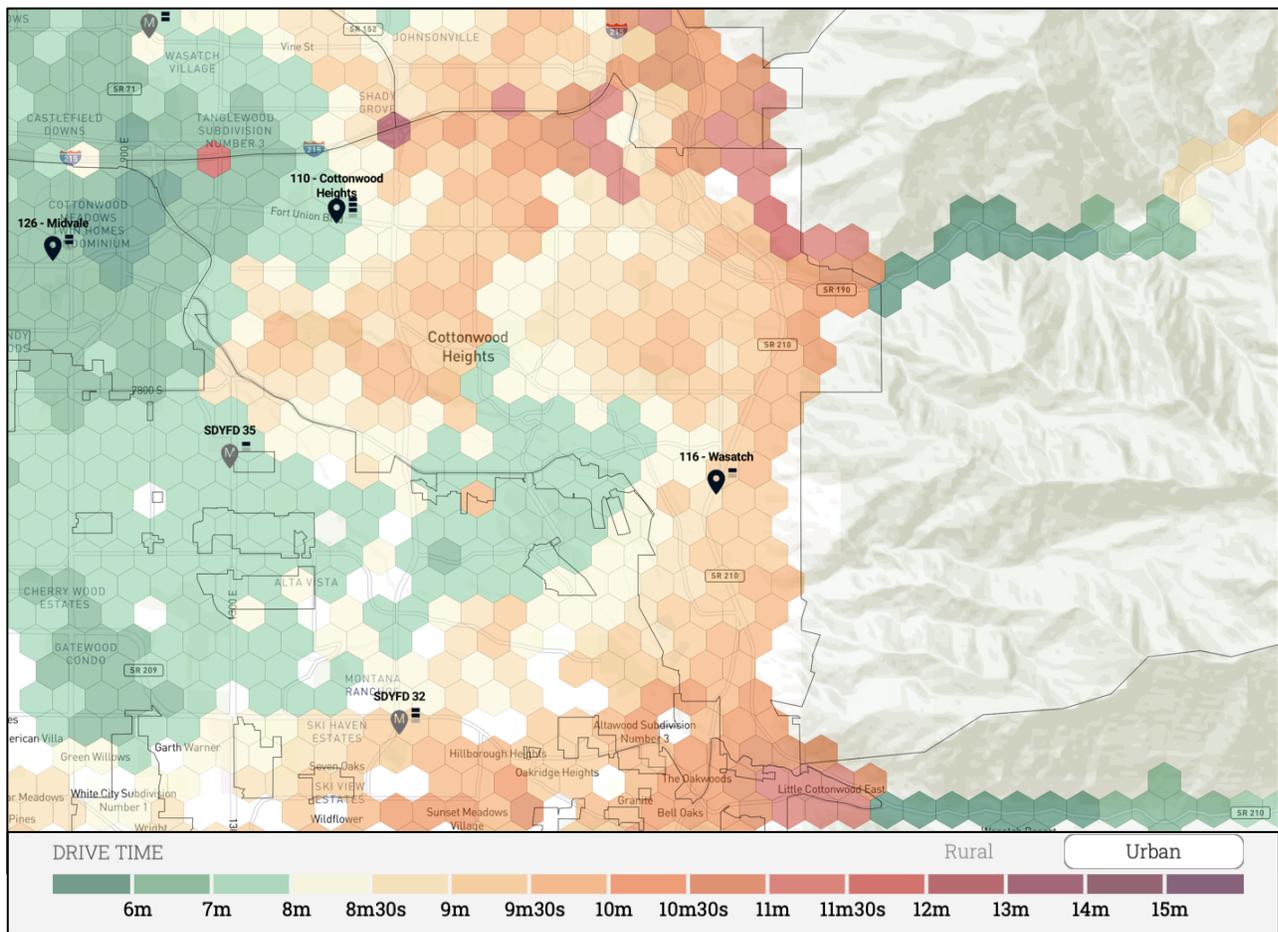
The following maps demonstrate the 90<sup>th</sup> percentile of travel times based off the last three years of historical data (2022-2024). The darker the color is, the more delayed the response, with the green and light colors demonstrating below or near target times. The darker colors on the bar within the key demonstrating longer travel times by apparatus. This map's drive times (or travel times) are based off the current NFPA 1710 standard of four minutes (90<sup>th</sup> percentile) from notification of the alarm to the arrival of the first arriving apparatus — not an adopted standard by UFA. In 2024, within Cottonwood Heights, the 90<sup>th</sup> percentile drive time is 7:50 for fire and 6:28 for EMS, or a combined 90<sup>th</sup> percentile drive time of 6:41.



*Image 3 - Emergent Response Times - All Aid*

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

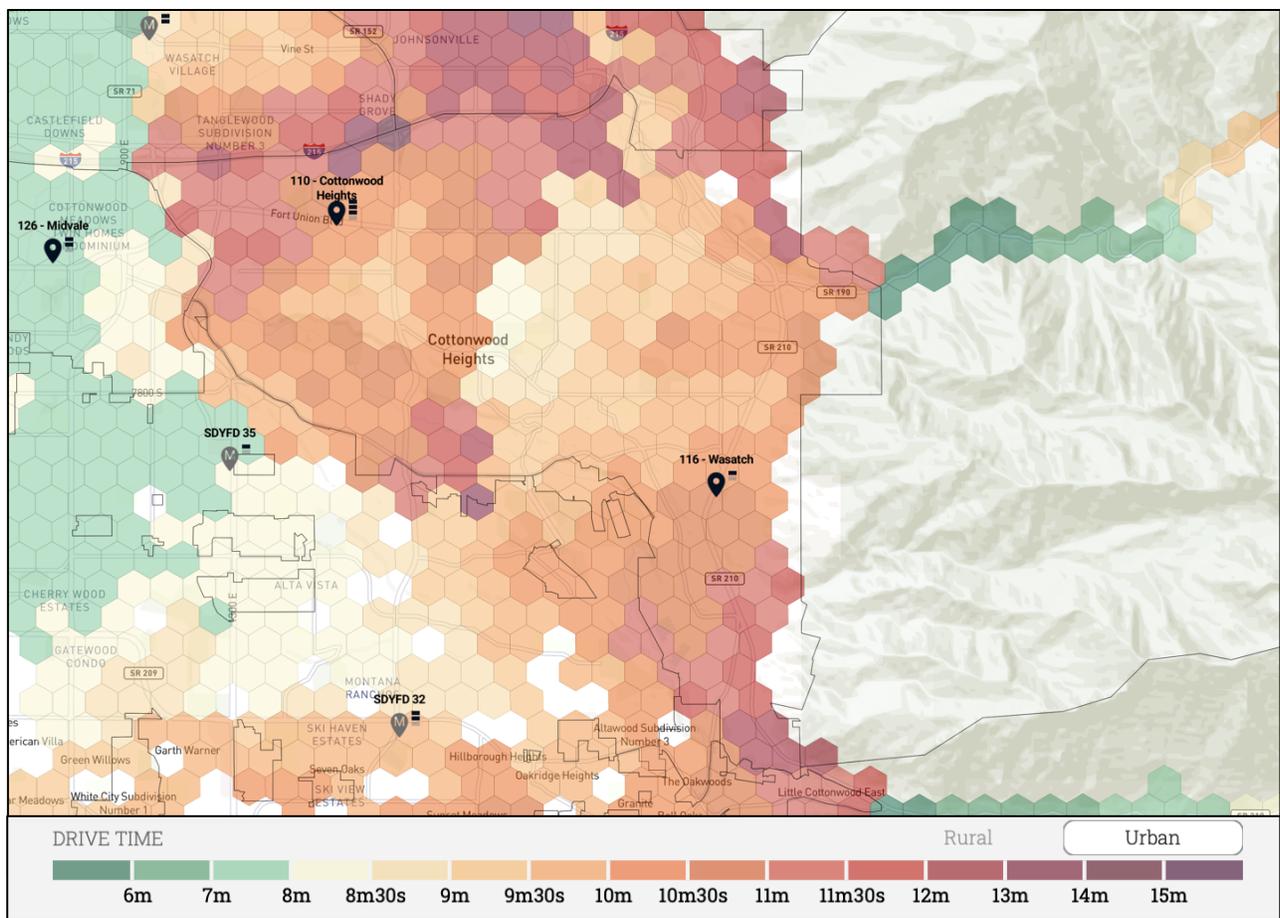
This map demonstrates the coverage of a multi-unit response to a residential fire based off all apparatus being within their stations. The green to light yellow demonstrates the ability to have seventeen firefighters (a residential fire effective response force) on scene based off a residential urban 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. Based off predictive data, it is projected that the 90th percentile for 17 firefighters to arrive on scene would be 8:32.



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

### *City of 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 stations. 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. Based off predictive data, it is projected that the 90th percentile for 28 firefighters to arrive on scene would be 10:24.



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

## City of 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	Mod	Mod

Table 8 - 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

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 5.1 linear miles of Interstate/US Highway, 4.95 linear miles of State Highways, and 145.28 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 two water districts within Cottonwood Heights, including the Salt Lake City Department of Public Utilities and 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 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 are around 75,100 linear 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 3,052 URM's, which constitutes about 11.95% 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 place it in the low-risk category.

### Schools

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

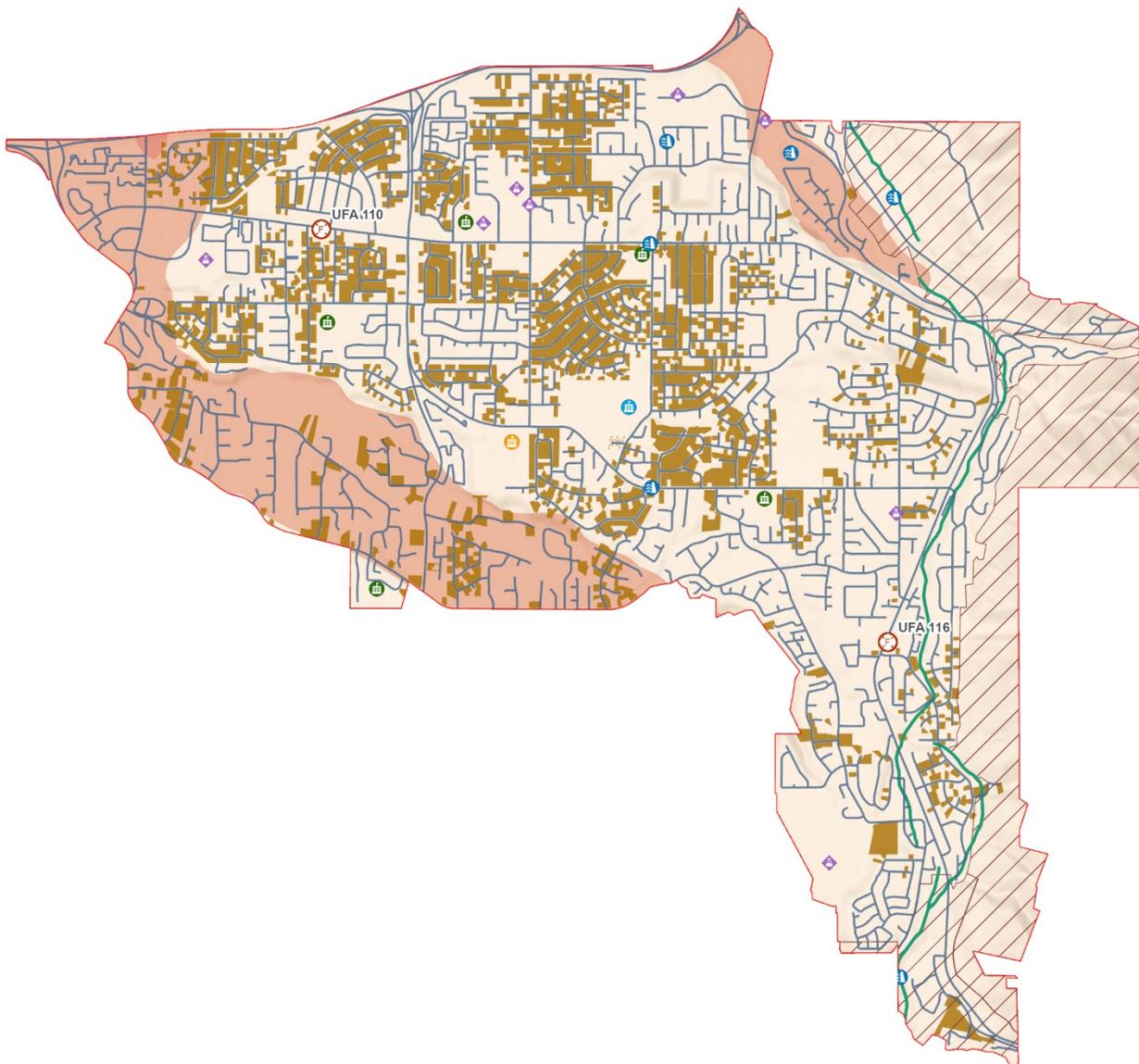
### Target Hazards – Structures

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
- UDOT Maintenance Shed – 6601 S 3000 East
- Cottonwood Heights Recreation Center – 7500 S 2700 E

### *Life and Property Loss*

From 2022-2024, there has been one fatality attributed to fire. There has been a total estimate of \$1,657,773.00 of property loss and a total estimate of \$461,340.00 of content loss due to fire.



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| <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 10px; height: 10px; background-color: gray; border: 1px solid black; margin-right: 5px;"></span> County Boundary</li> <li><span style="display: inline-block; width: 10px; height: 10px; border: 2px solid red; margin-right: 5px;"></span> Municipal Boundaries</li> <li><span style="display: inline-block; width: 10px; height: 10px; background-color: green; margin-right: 5px;"></span> Buildings &gt;= 100K Square Feet</li> </ul>                                | <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 10px; height: 10px; background-color: brown; margin-right: 5px;"></span> Unreinforced Masonry</li> <li><span style="display: inline-block; width: 10px; height: 10px; border: 1px dashed gray; margin-right: 5px;"></span> Wildland-Urban Interface</li> </ul>   | <ul style="list-style-type: none"> <li><b>Schools</b></li> <li><span style="display: inline-block; width: 10px; height: 10px; border: 1px solid green; border-radius: 50%; margin-right: 5px;"></span> Elementary</li> <li><span style="display: inline-block; width: 10px; height: 10px; border: 1px solid blue; border-radius: 50%; margin-right: 5px;"></span> Middle</li> <li><span style="display: inline-block; width: 10px; height: 10px; border: 1px solid orange; border-radius: 50%; margin-right: 5px;"></span> High</li> <li><span style="display: inline-block; width: 10px; height: 10px; border: 1px solid red; border-radius: 50%; margin-right: 5px;"></span> Charter/Private/Specialty</li> <li><span style="display: inline-block; width: 10px; height: 10px; border: 1px solid purple; border-radius: 50%; margin-right: 5px;"></span> Tier 2 Sites</li> </ul> |
| <ul style="list-style-type: none"> <li><b>Liquefaction Potential</b></li> <li><span style="display: inline-block; width: 10px; height: 10px; background-color: #f5deb3; margin-right: 5px;"></span> Very Low Susceptibility</li> <li><span style="display: inline-block; width: 10px; height: 10px; background-color: #f08080; margin-right: 5px;"></span> Low - Moderate Susceptibility</li> <li><span style="display: inline-block; width: 10px; height: 10px; background-color: #cd5c5c; margin-right: 5px;"></span> Moderate Susceptibility</li> </ul> | <ul style="list-style-type: none"> <li><b>Earthquake Faults and Folds</b></li> <li><span style="display: inline-block; width: 10px; height: 10px; border-bottom: 2px solid green; margin-right: 5px;"></span> Latest Quaternary</li> <li><span style="display: inline-block; width: 10px; height: 10px; border-bottom: 1px solid blue; margin-right: 5px;"></span> Roads</li> <li><span style="display: inline-block; width: 10px; height: 10px; border-left: 1px solid blue; margin-right: 5px;"></span> Dams</li> <li><span style="display: inline-block; width: 10px; height: 10px; border: 1px solid red; border-radius: 50%; margin-right: 5px;"></span> Fire Stations</li> </ul> |  |



### Threats and Hazards

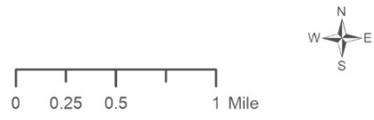


Image 6 – Threats and Hazards