Copperton Township

Community Risk Assessment

Photo Courtesy of: KUTV

Copperton Metro Township

UNIFIED FIRE AUTHORITY
GREATER
SALT LAKE

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
Copperton	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.

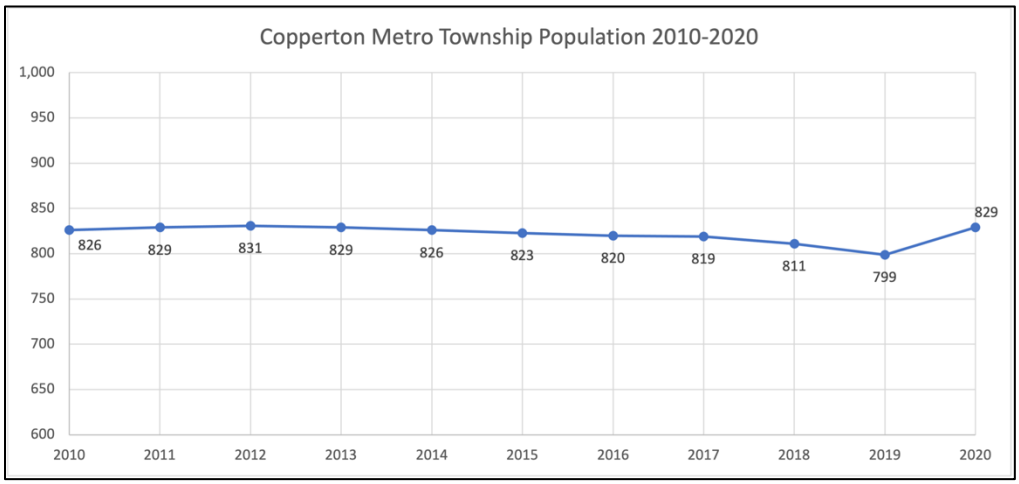


Chart 24 – Copperton Population 2010-2020

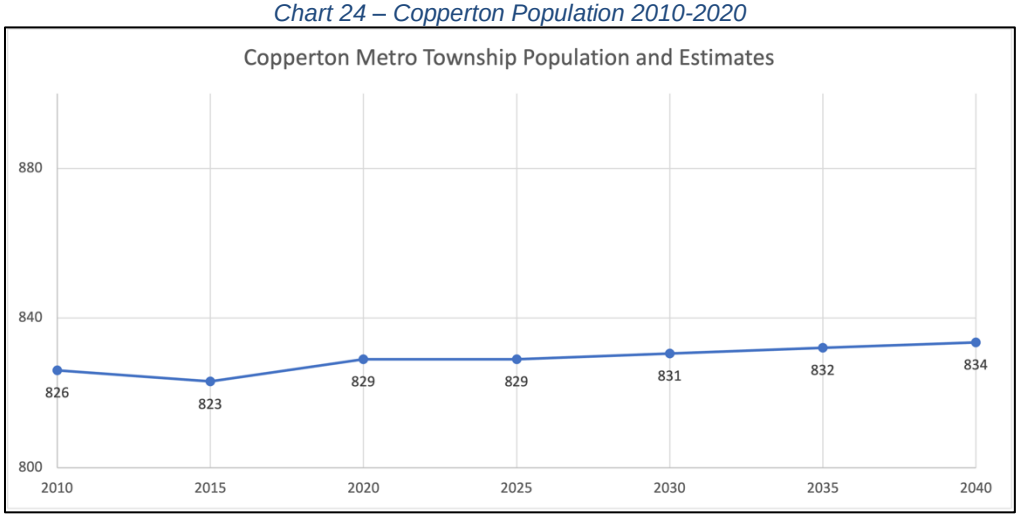


Chart 25 – Copperton Population and Estimates 2010-2040

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.

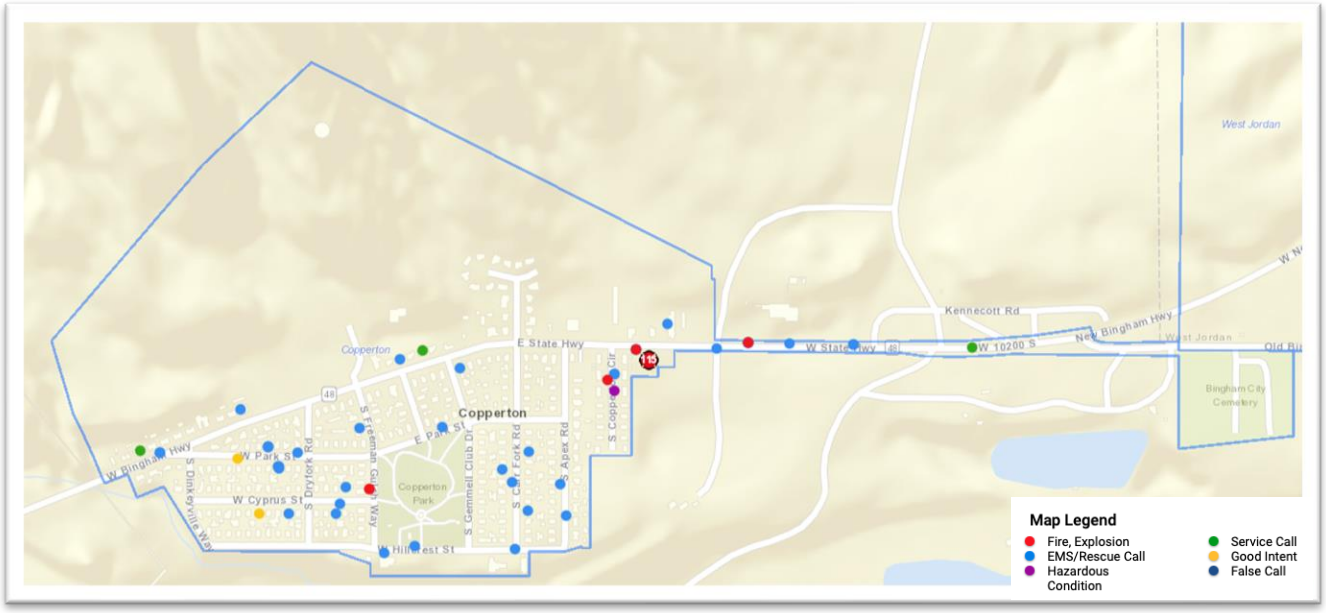
Copperton – Incidents by Dispatch Type Found

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.

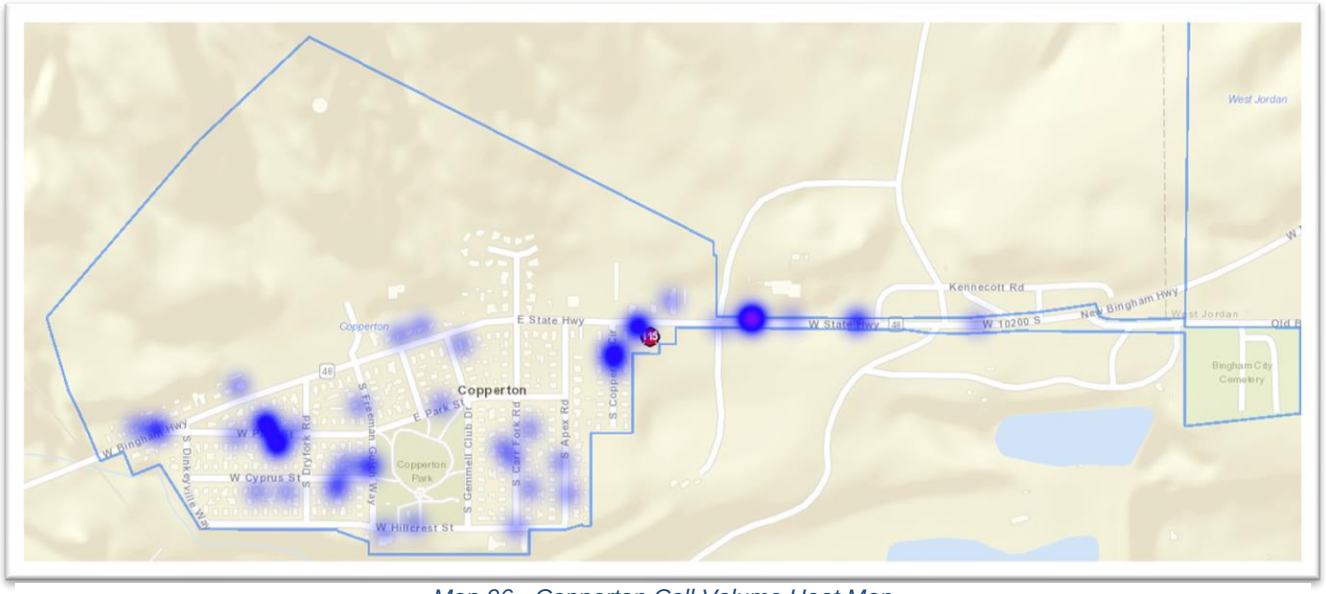
	CY 2020	CY 2019	CY 2018
Fire Suppression	6	6	2
EMS	39	43	34
Hazardous Materials	1	1	1
Service Calls	3	2	2
Good Intent	4	5	5
False Calls	1	3	1
Other (Misc., Flood, Overpressure)	0	0	0
Total	54	60	45
Cancelled	3	1	4
Overall Total	57	61	49

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 90th percentile times.

– In Other Words…

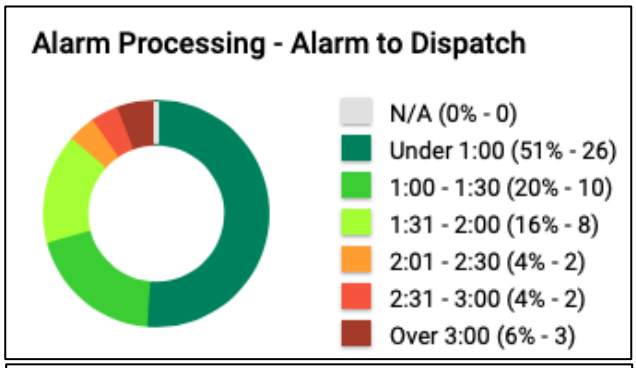
If a value is in the 90th percentile, it means the value is better than 90% of all other values in the dataset. In other words, it is within the top 10% of the values.

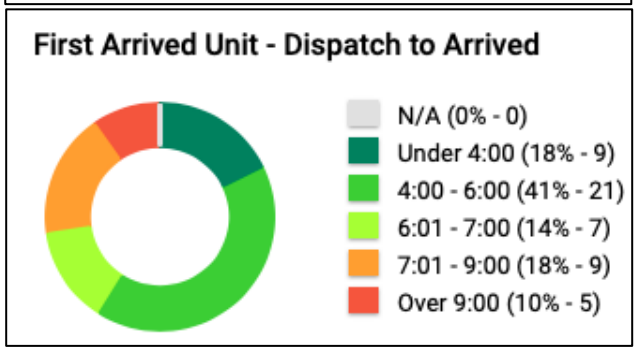
NFPA 1710 encompasses suggested standards for full-time fire departments and recommends the following times (all of which are at the 90th percentile): alarm processing – 64 seconds; turnout time for EMS responses – 60 seconds; turnout time for fire responses – 80 seconds; first arriver apparatus – 240 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.

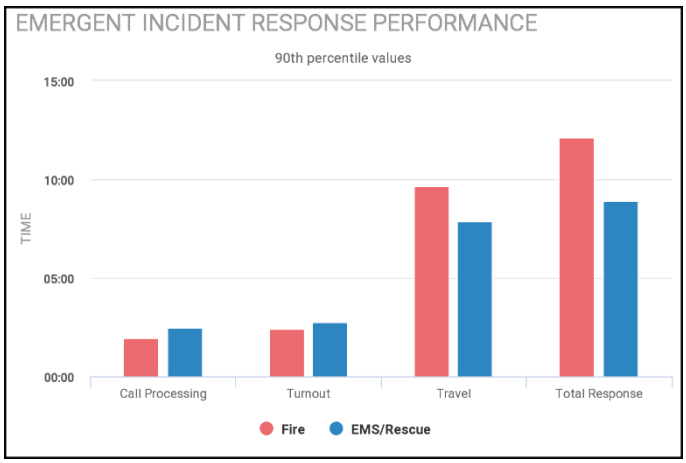
– Of Note…

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.

Copperton – 2020 Dispatch and Response Times



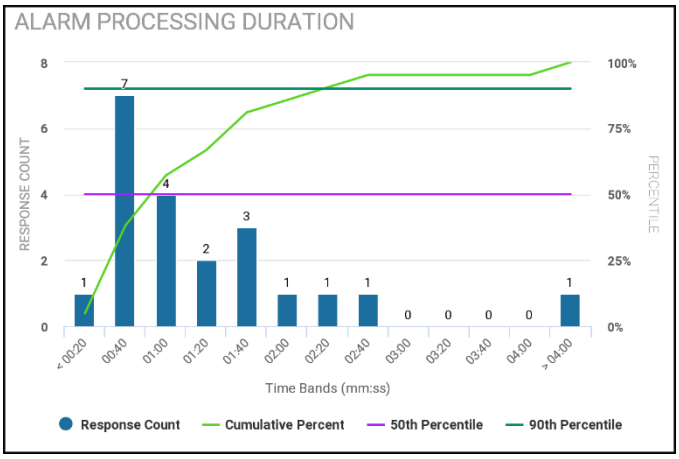


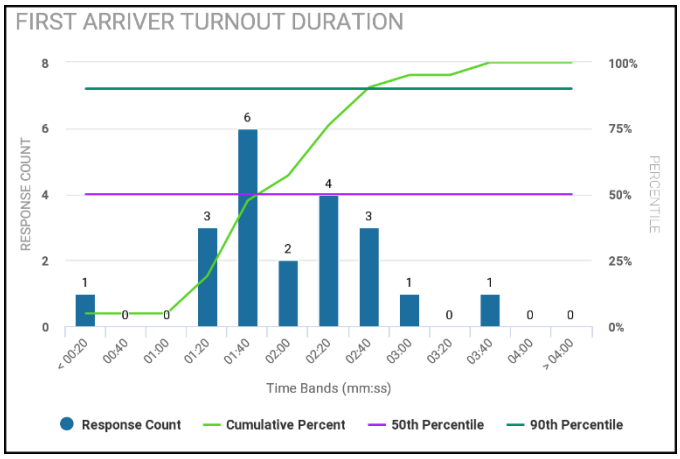


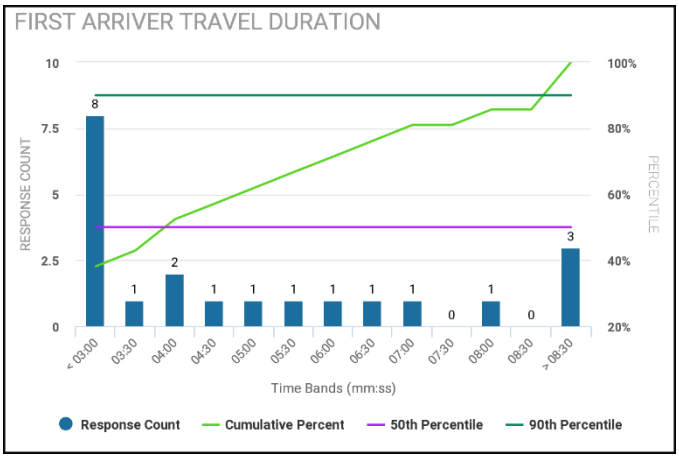
Rural	Call Processing: Fire	Turnout Time: Fire	Travel Time: Fire	Total Response: Fire	Call Processing: EMS	Turnout Time: EMS	Travel Time: EMS	Total Response: EMS
Copperton	1:58	2:25	9:41	12:57	2:19	2:47	7:15	11:15
UFA Urban 2018-2020	2:16	2:39	7:36	10:34	1:47	2:32	6:29	9:18
UFA Rural 2018-2020	2:32	3:05	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

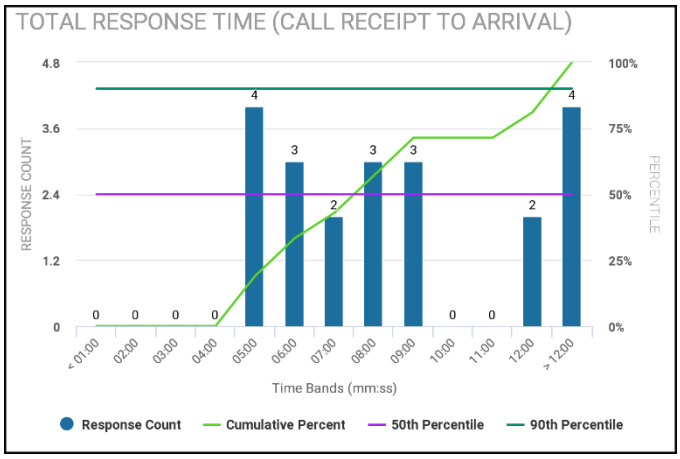
Table 67 – Copperton 2020 Emergent Response Times, 90th percentile values

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 (90th 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 90th 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

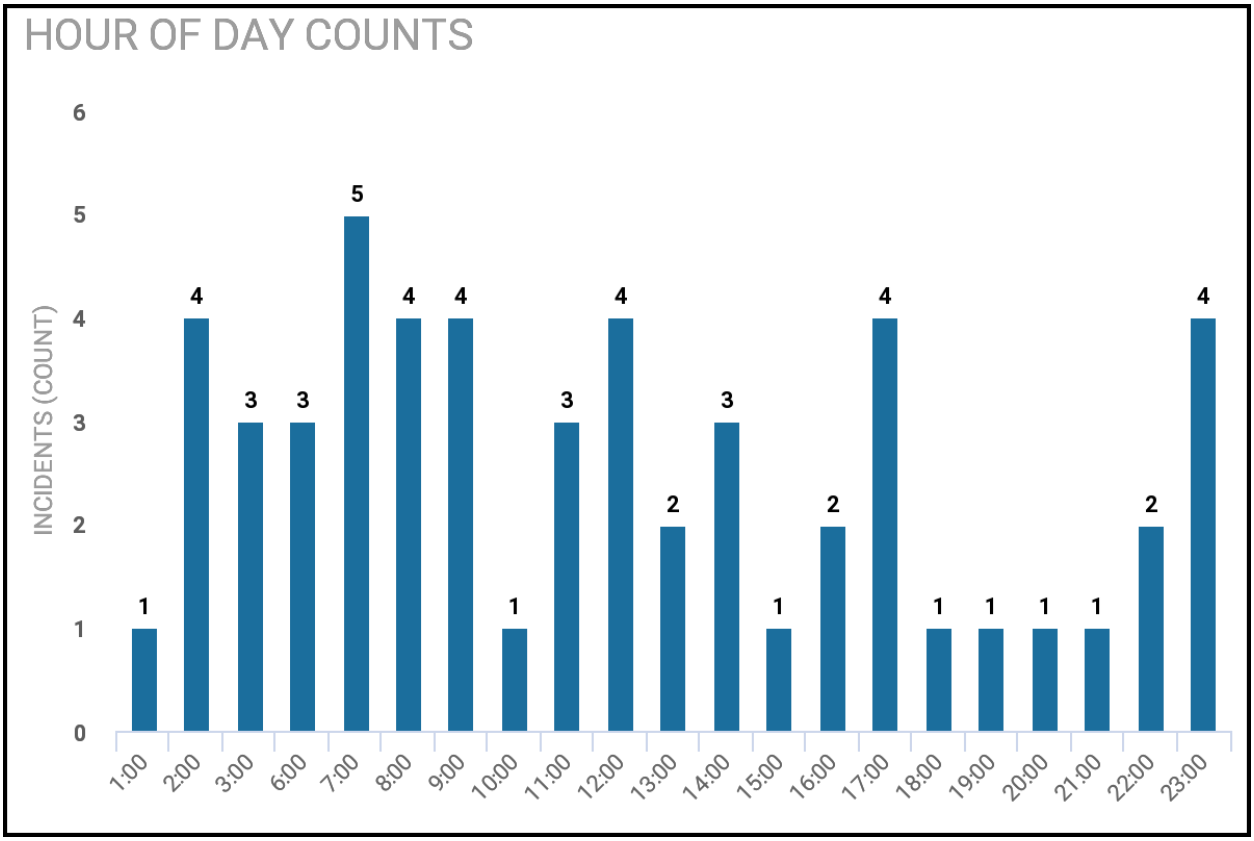


Chart 26 – Copperton 2020 Incidents by Time of Day

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

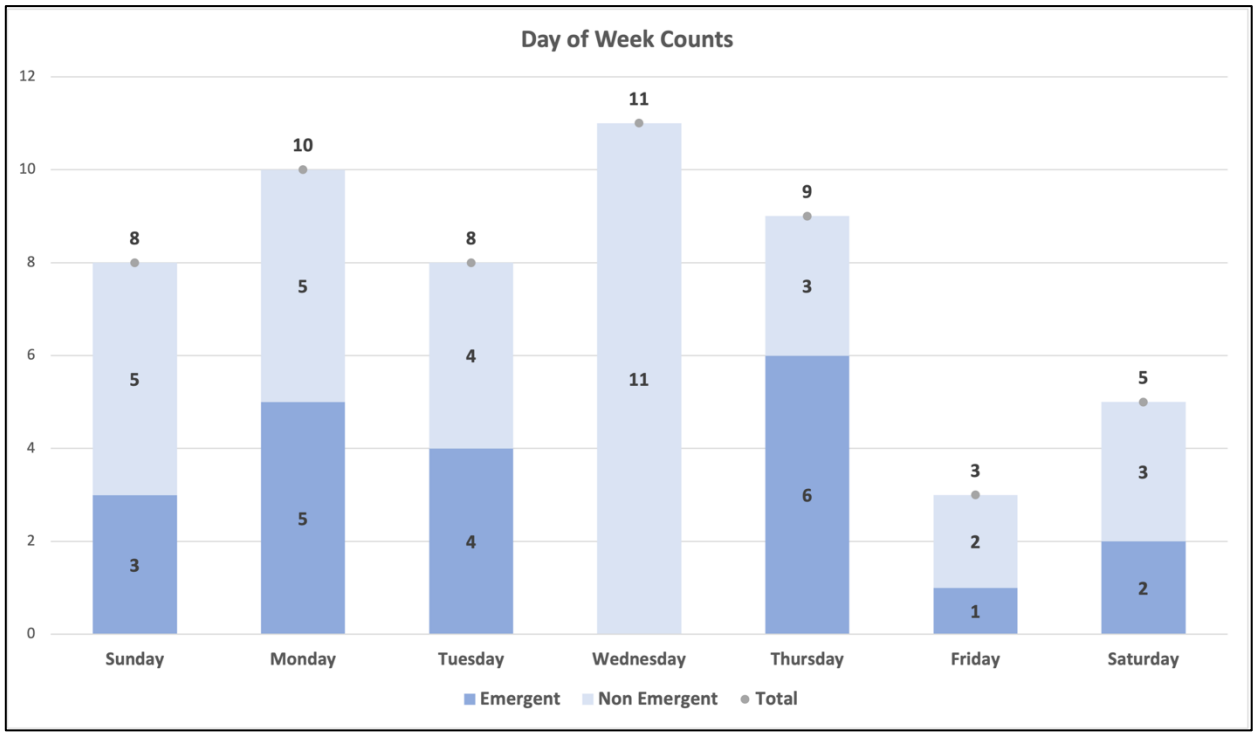


Chart 27 – Copperton Incidents by Day of Week

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
ALS Transports	19	21	23
BLS Transports	18	14	12
Scene Release	1	1	3
Public Assistance	1	0	0
EMS Total Calls	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

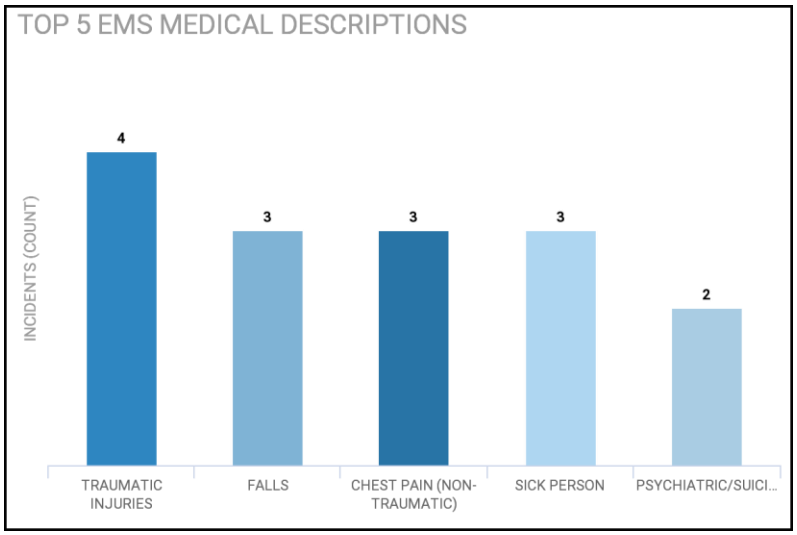


Chart 28 - Top 5 EMS Medical Calls - 2020

Copperton – 2020 Fire Incidents by Dispatch Type

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

Table 69 – Copperton 2020 Incidents by Dispatch Type

Copperton – Building Occupancy Classification and Risk Categories

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

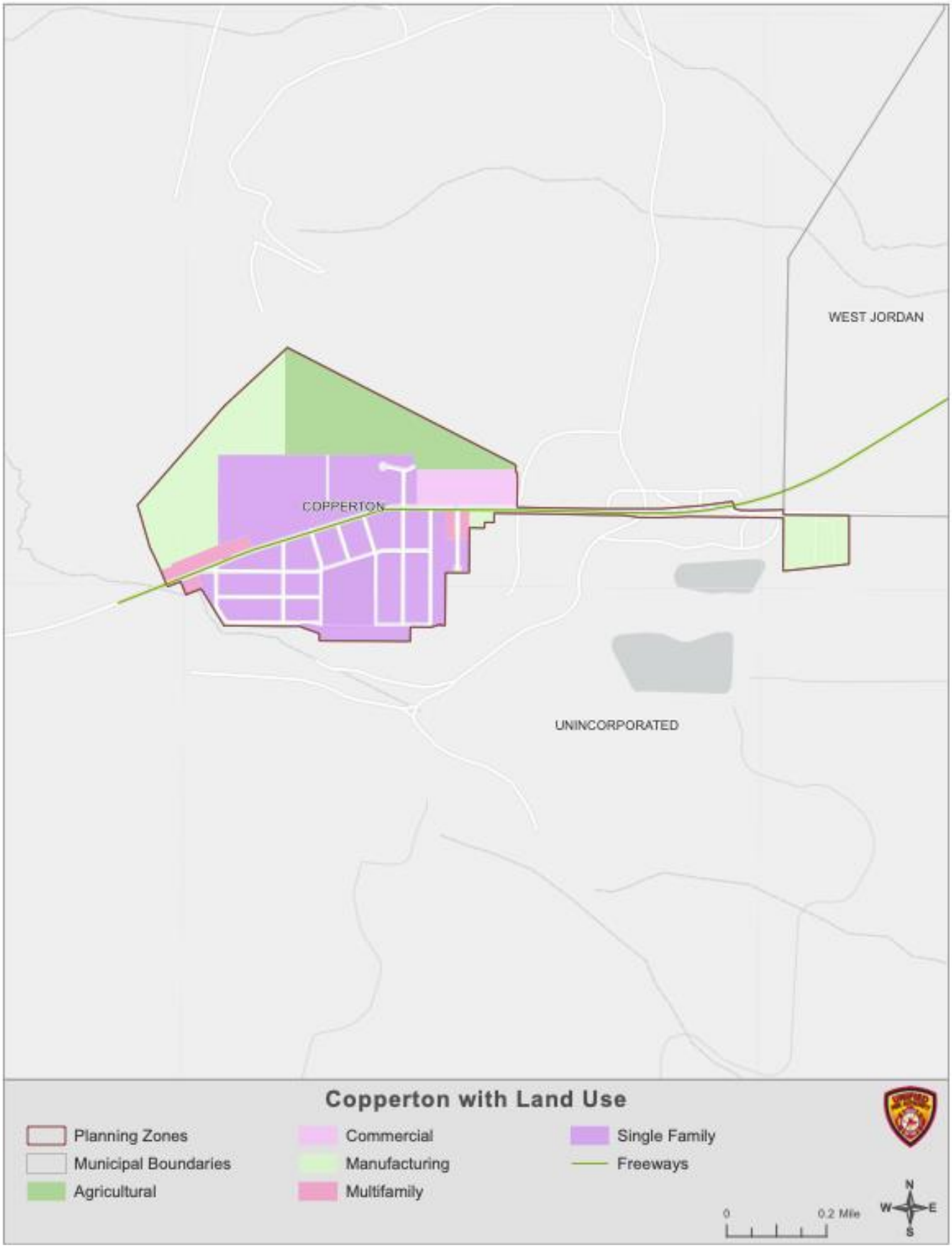
*There is currently a gap within the identification of building size regarding hazardous materials sites. This is a gap that is being closed over the next several years as we collect the data and information.

Table 70 – Copperton Building Occupancy and Risk Categories

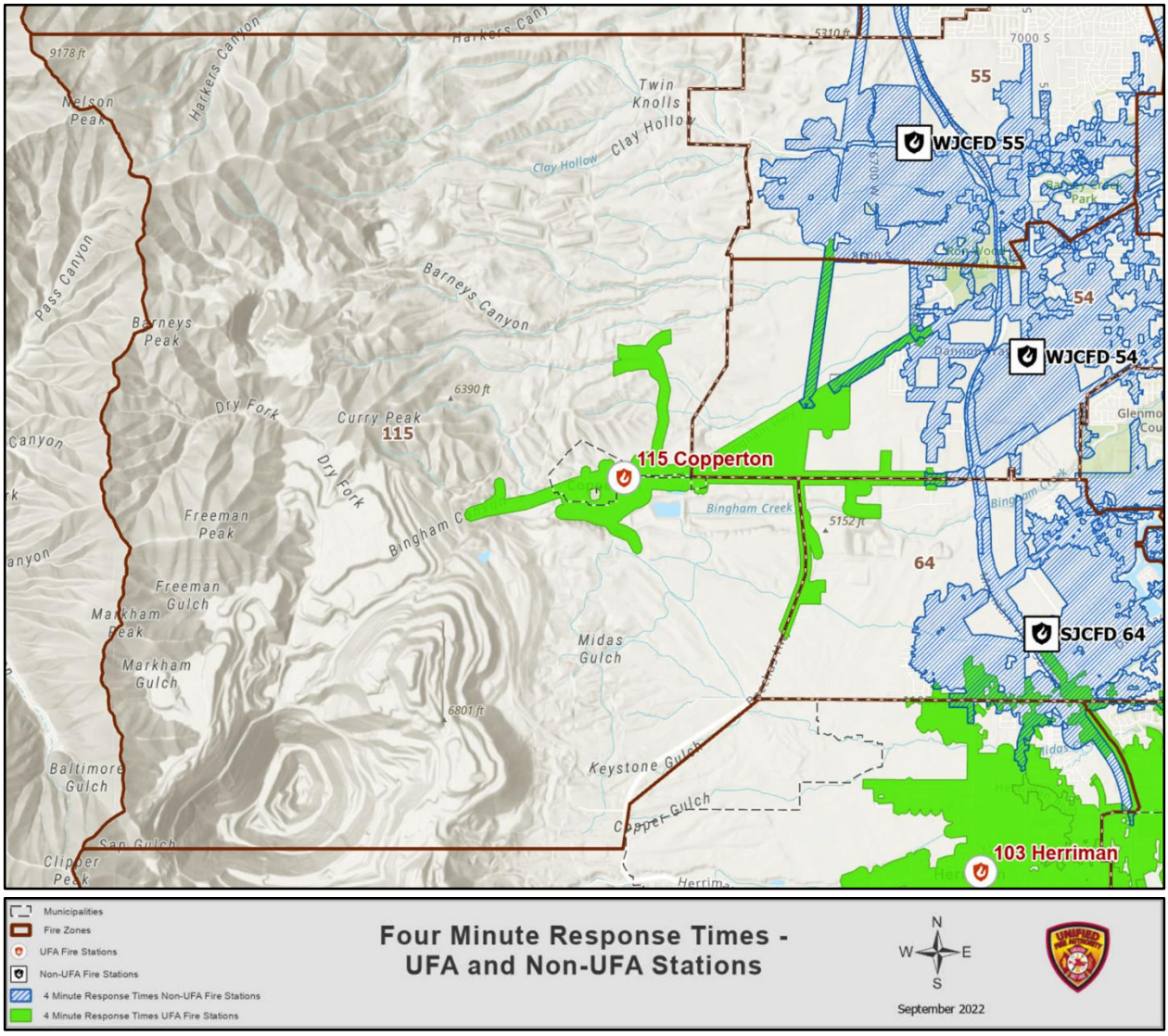
Building Size / Considerations

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.

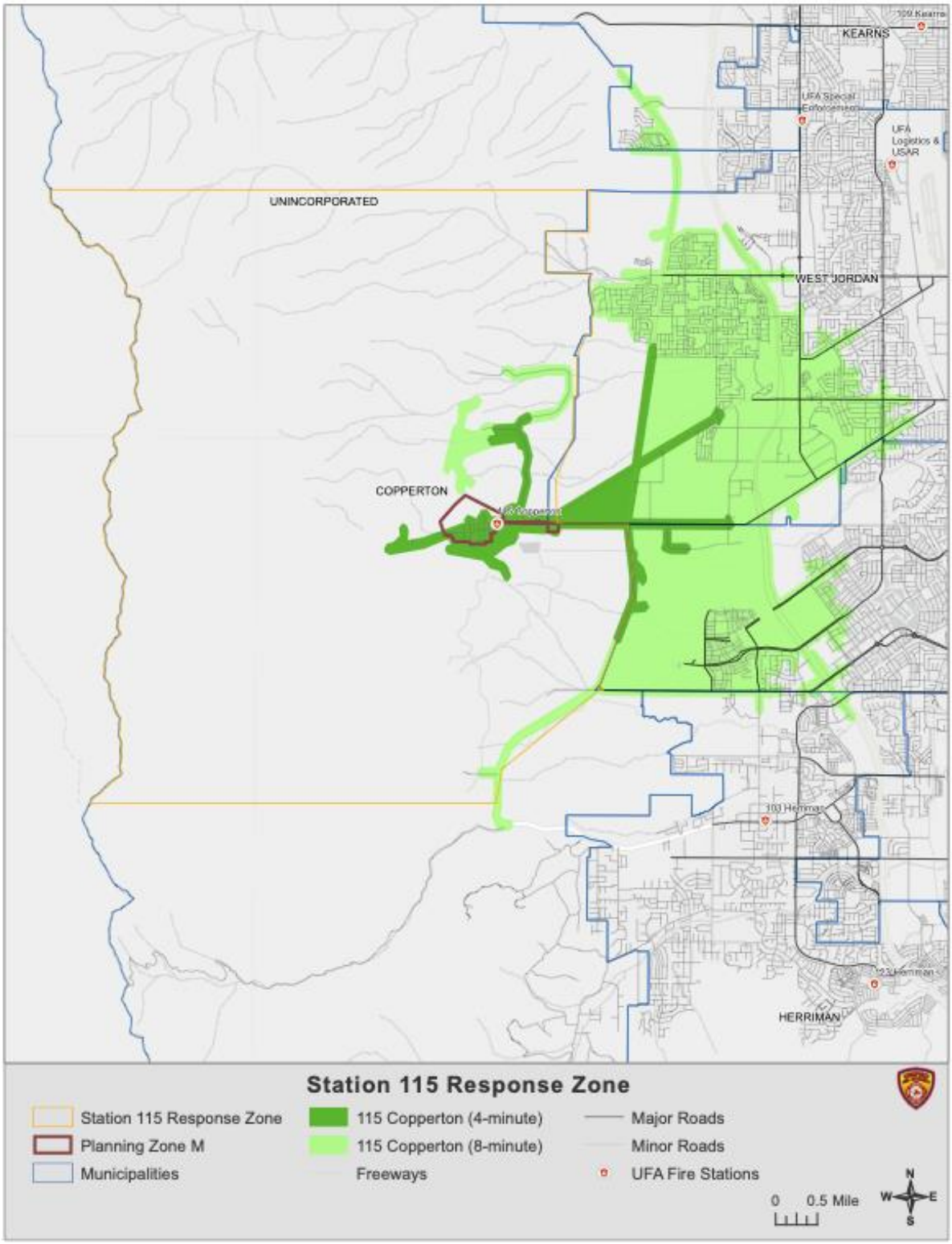
For residential occupancies, the following classifications apply. Low risk = 1-1,999 square feet. Moderate risk = 2,000-3,999 square feet. High risk = 4,000-9,999 square feet. Maximum risk = ≥10,000 square feet.



Map 97 – Copperton with Land Use



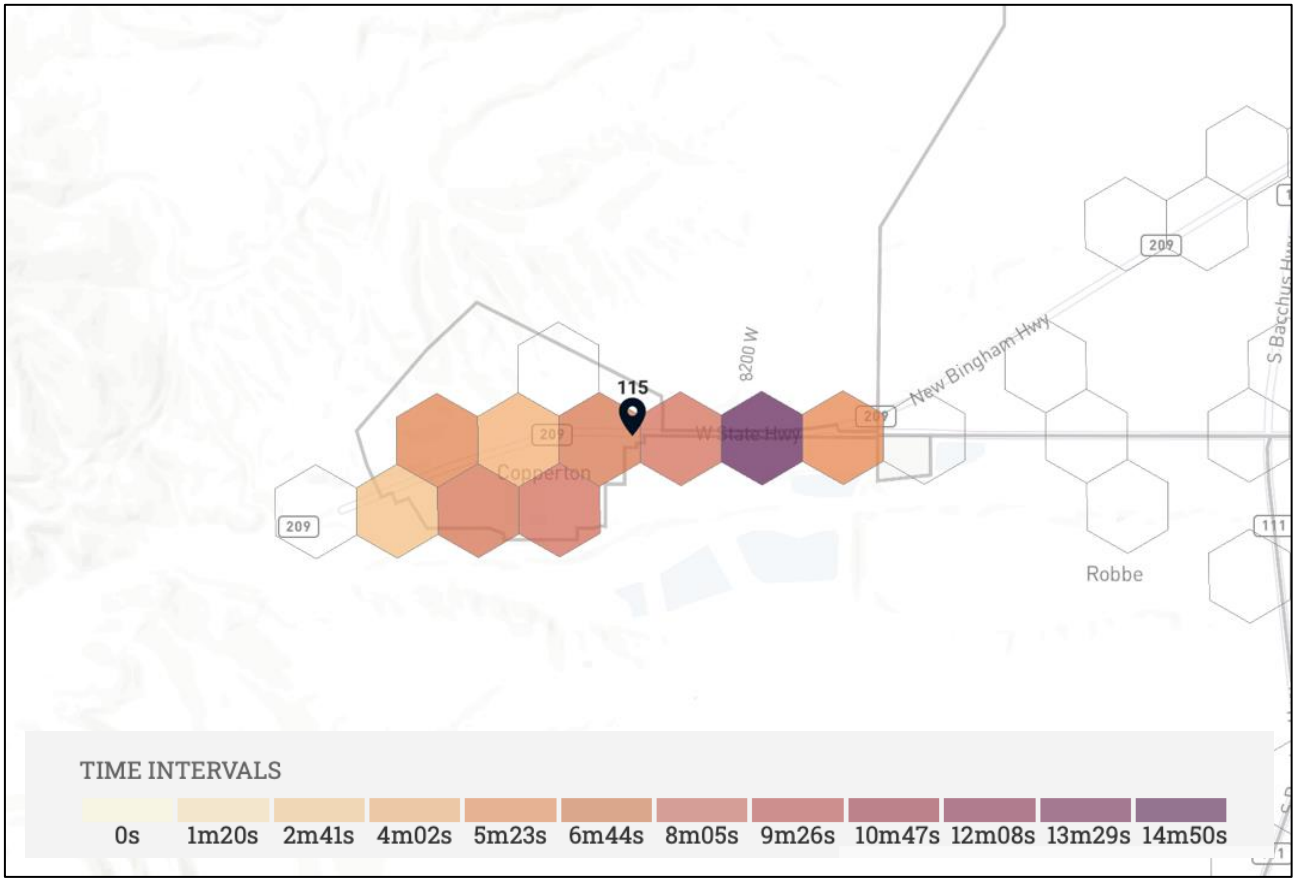
Map 98 - 4-Minute Travel Times, UFA and Aid



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

Copperton – First Arriver Travel Times

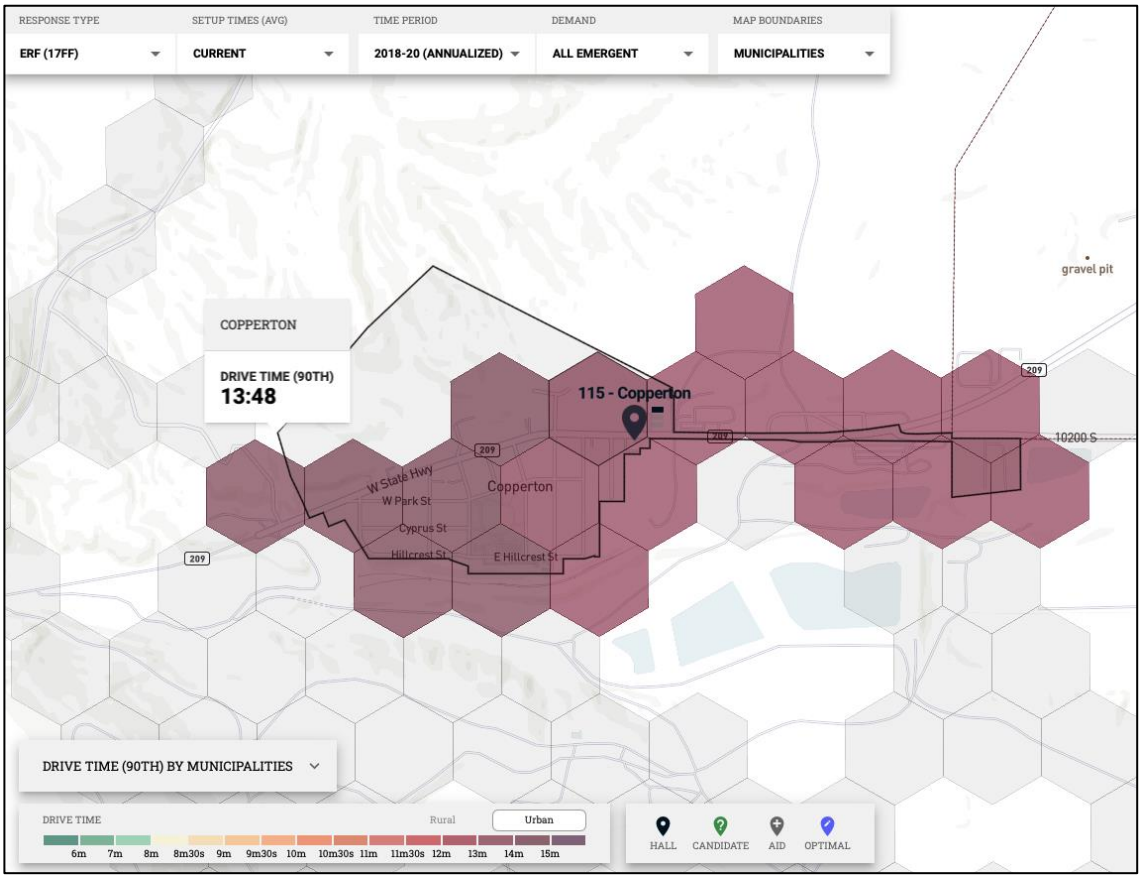
The following maps demonstrate the 90th percentile of travel times based off the last three years of historical data (2018-2020). The darker the color is, the more delayed the response, with the lighter colors demonstrating below or near target times. The darker colors on the bar within the key demonstrating longer travel times by apparatus. This map's drive times (or travel times) are based off the current NFPA 1710 standard of four minutes (90th 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 90th percentile drive time is 9:41 for fire and 7:15 for EMS, or a combined 90th percentile drive time of 8:01.



Map 100 – Copperton Response Times – All Aid

Copperton – Residential Fire Effective Response Force (17 FF)

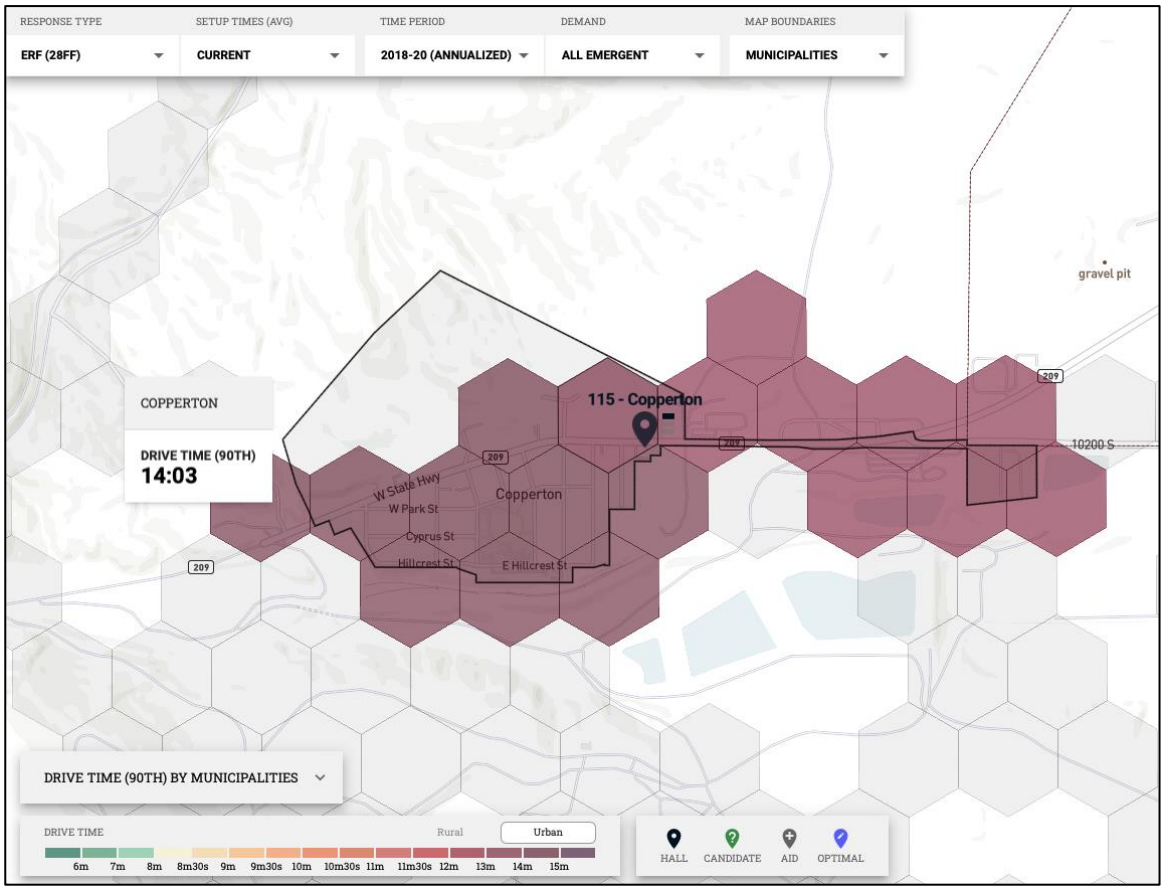
This map demonstrates the coverage of a multi-unit response to a residential fire based off all apparatus being within their station. The green to light yellow demonstrates the ability to have seventeen firefighters (a residential fire effective response force) on scene based off a residential urban fire force response. This map's drive times (or travel times) are based off the current NFPA 1710 standard of eight minutes (90th percentile) from notification of the alarm to the arrival of the initial full alarm assignment (a minimum of 17 firefighters) for a residential, low, or medium hazard assembly — not an adopted standard by UFA. 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 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 (90th percentile) from notification of the alarm to the arrival of the initial full alarm assignment (a minimum of 28 firefighters) for a commercial, high hazard or high-rise assembly — not an adopted standard by UFA. 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.

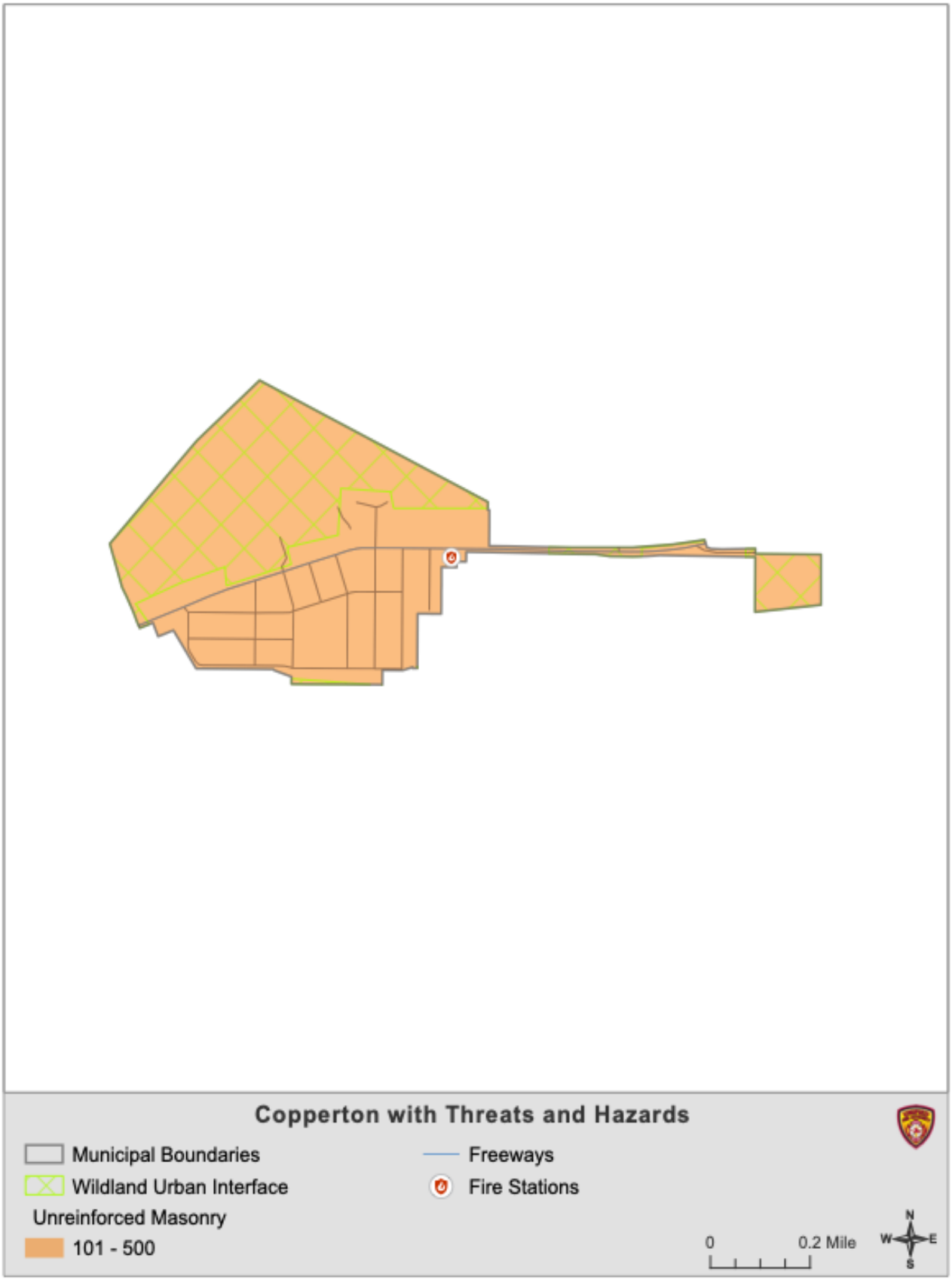
Schools

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

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Salt Lake City, UT 84119