# 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		Population Density per Sq Mile	Classification
City of Taylorsville	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.

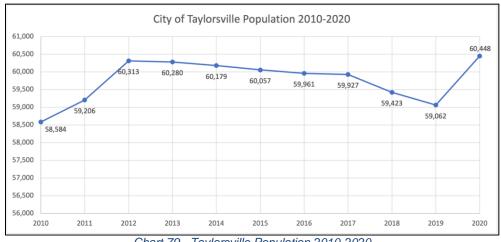


Chart 79 - Taylorsville Population 2010-2020

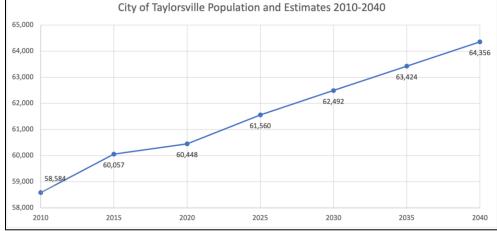


Chart 80 - Taylorsville Population and Estimates 2010-2040

#### City of Taylorsville Station Information

#### **Station 117 information:**

- Owner UFSA
- Opened 2017
- Address 4965 South Redwood Road
- Staffing and Apparatus
  - Type 1, ME 117 (4 persons)
  - o Type 1, ML 117 (4 persons)
  - MA 217 (2 persons, part-time 24 hour)
  - Heavy Rescue (cross-staffed)



Image 26 – Taylorsville Station 117

#### Station 118 information:

- Owner Taylorsville
- Opened 1999
- Address 5317 South 2700 West
- Staffing and Apparatus
  - Type 1, ME 118 (4 persons)
  - MA 118 (2 persons)
  - Battalion Chief 13 (1 person)



Image 27 – Taylorsville Station 118

#### 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

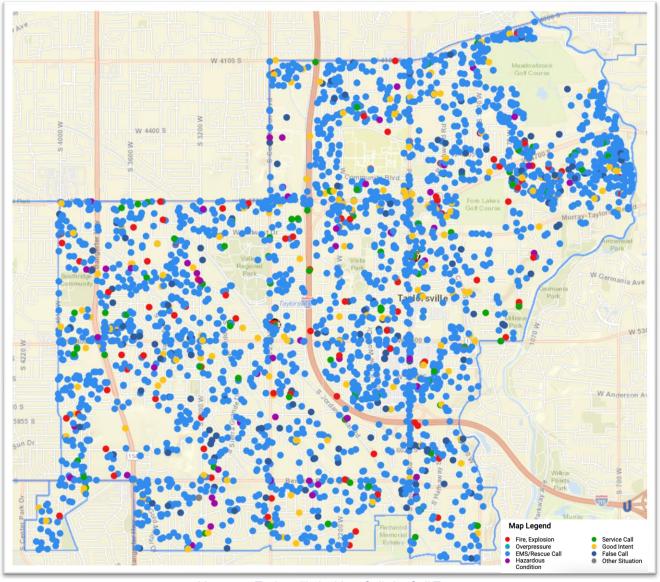
The following data is what the NFIRS type was when crews arrived on scene. This may be different than what was originally dispatched, including a reclassification of a call type from one to another. Cancelled calls occur if the company is cancelled en route to a call and never arrives on scene, which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

	CY 2020	CY 2019	CY 2018
Fire Suppression	122	101	99
EMS	3,736	3,551	3,499
Hazardous Materials	69	74	53
Service Calls	134	207	139
Good Intent	708	496	419
False Calls	204	196	162
Other (Misc., Flood,	4	9	6
Overpressure)			
Total	4,977	4,634	4,377

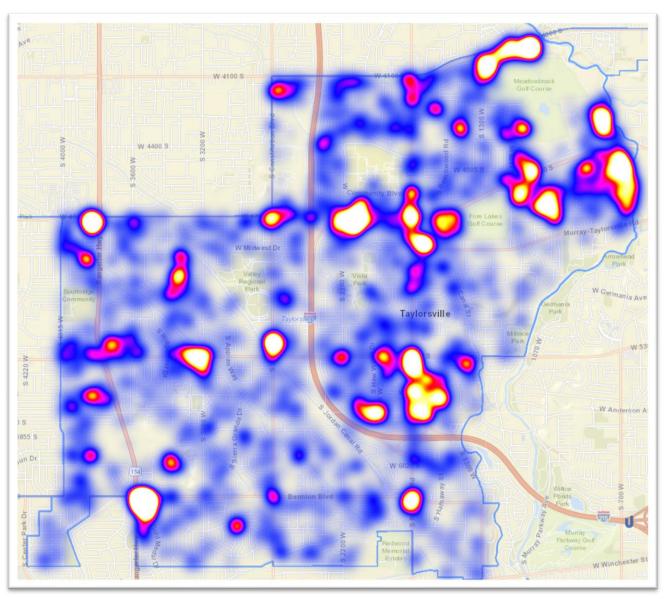
Cancelled	448	257	279
Overall Total	5,425	4,891	4,656

Table 132 – Taylorsville City Call Type

## City of Taylorsville – 2020 Incidents and Heat Map



Map 203 - Taylorsville Incident Calls by 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.

#### **Q**− In Other Words...

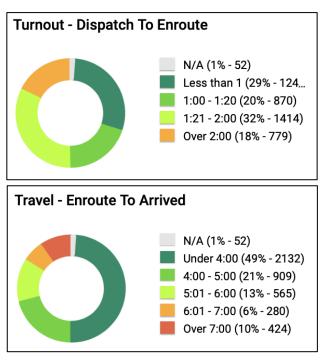
If a value is in the 90<sup>th</sup> percentile, it means the value is better than 90% of all other values in the dataset. In other words, it is within the top 10% of the values.

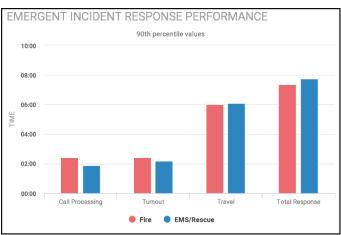
NFPA 1710 encompasses suggested standards for full-time fire departments and recommends the following times (all of which are at the 90<sup>th</sup> percentile): alarm processing – 64 seconds; turnout time for EMS responses – 60 seconds; turnout time for fire responses – 80 seconds; first arriver apparatus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

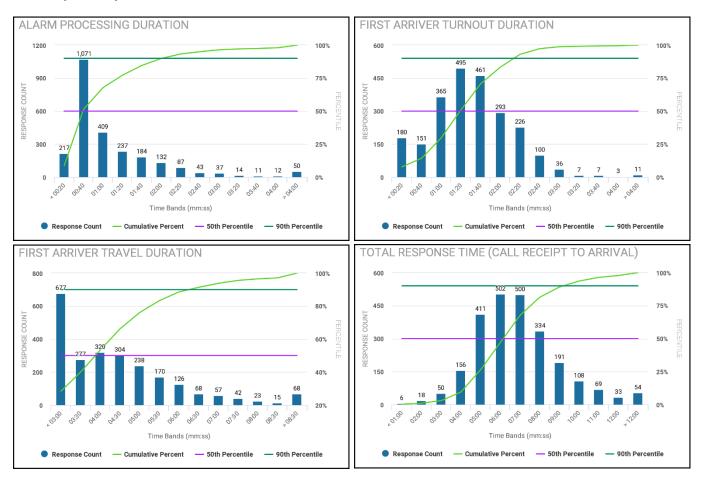




Urban	Call Processing: Fire	Turnout Time: Fire	Travel Time: Fire	Total Response: Fire	Call Processing: EMS	Turnout Time: EMS	Travel Time: EMS	Total Response: EMS
Taylorsville	2:17	2:19	7:03	9:44	1:52	2:12	6:16	9:03
UFA Urban 2018-2020	2:16	2:39	7:36	10:34	1:47	2:32	6:29	9:18
UFA Rural 2018-2020	2:32	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 133 – Taylorsville 2020 Emergent Response Times, 90th 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.

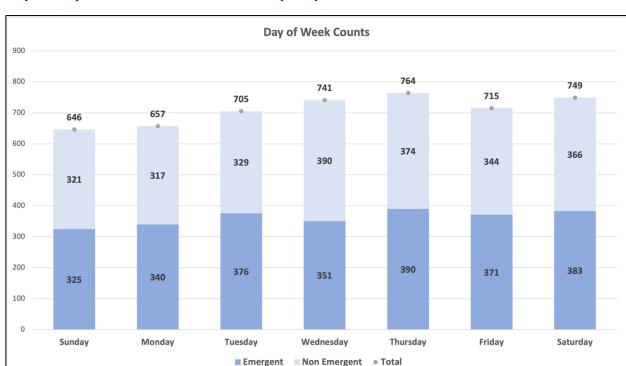
#### ♣ – Of Note...

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 400 323 293 <sup>298</sup> 300 270 <sub>266</sub> 270 <sup>277</sup> 260 <sub>252</sub> NCIDENTS (COUNT) 241 <sub>236</sub> 200 169 163 152 130 103 100 1000 1600 800 , 0:00 600 100 18:00 19:00

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
BLS Transports	2,098	1,870	1,719
Scene Release	232	237	607
Public Assistance	34	34	21
EMS Total Calls	3,677	3,634	3,554

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

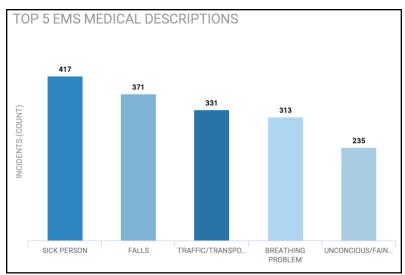


Chart 83 - Top 5 EMS Medical Calls

### City of Taylorsville – 2020 Fire Incidents by Dispatch Type

NFIRS Description	Incident Count	% of Incidents
Structure Fire	49	43.8%
Natural Vegetation Fire	13	11.6%
Outside Rubbish Fire	25	22.3%

NFIRS Description	Incident Count	% of Incidents
Vehicle Fire	10	8.9%
Special Outside Fire	8	7.1%
Fire, Other	5	4.5%
Mobile Property Fire	2	1.8%
Total	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
Assembly	44	3	5	0	52
Commercial/Industrial	4	4	9	3	21
Educational	0	16	1	0	17
Government	9	0	2	1	12
Healthcare	0	0	1	0	1
Hazardous	Unknown	Unknown	Unknown	Unknown	100*
Storage	0	0	0	0	0
Residential	5,003	6,927	483	1	12,414
Residential – Multi Unit	63	159	23	6	251
High Rise	N/A	N/A	0	0	0
Total	5,123	7,109	524	11	12,868

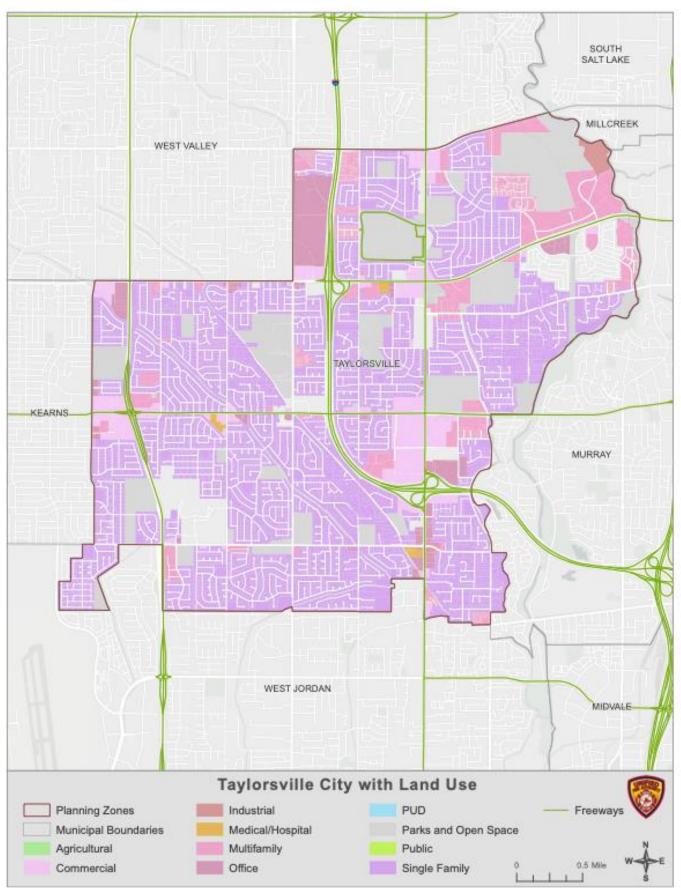
<sup>\*</sup>There is currently a gap within the identification of building size regarding hazardous materials sites. This is a gap that is being closed over the next several years as we collect the data and information.

Table 136 – Taylorsville Building Occupancy and Risk Categories

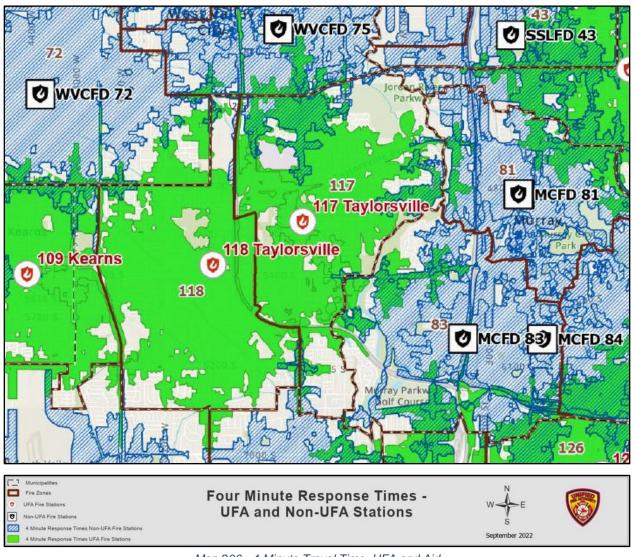
#### **Building Size / Considerations**

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.

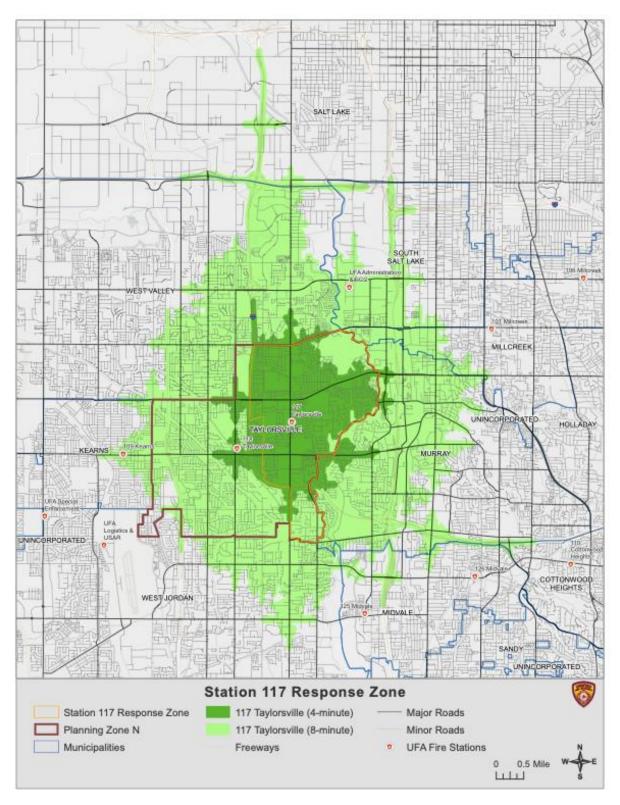
For residential occupancies, the following classifications apply. Low risk = 1-1,999 square feet. Moderate risk = 2,000-3,999 square feet. High risk = 4,000-9,999 square feet. Maximum risk =  $\geq 10,000$  square feet.



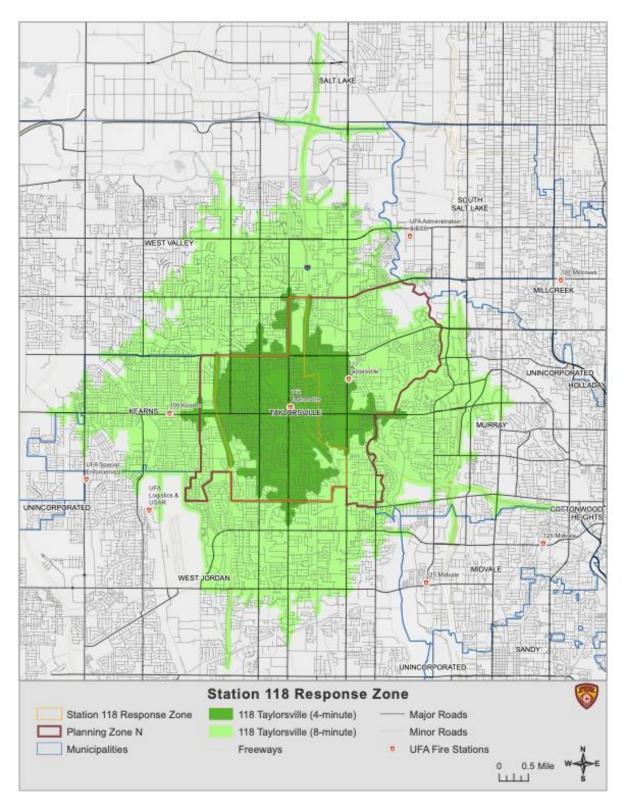
Map 205 - Taylorsville with Land Use



Map 206 - 4-Minute Travel Time, UFA and Aid



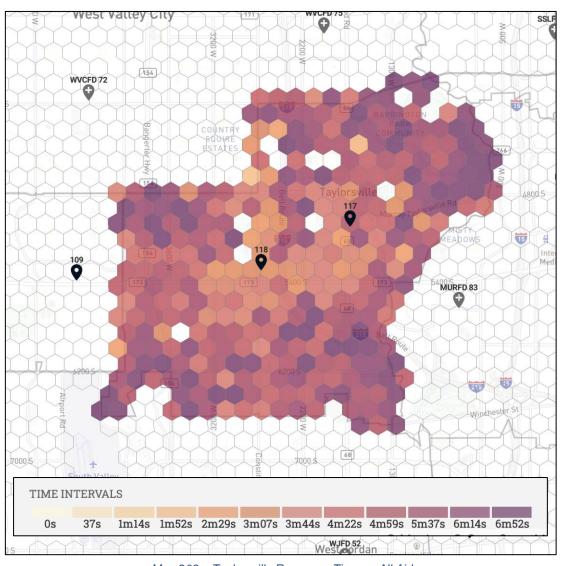
Map 207 - Station 117 4- and 8-Minute Travel Times



Map 208 - Station 118 4- and 8-Minute Travel Times

#### City of Taylorsville - First Arriver Travel Times

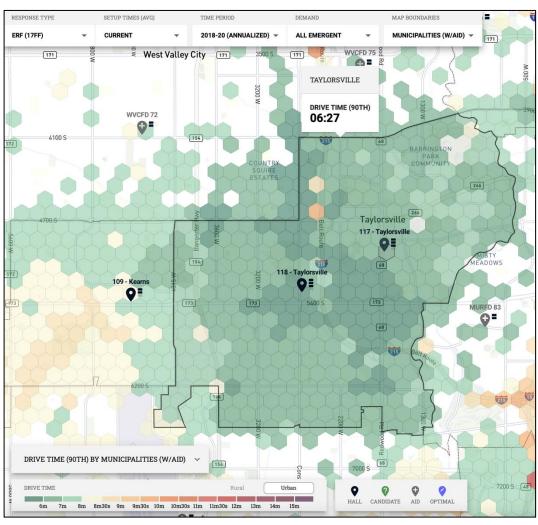
The following maps demonstrate the 90<sup>th</sup> percentile of travel times based off the last three years of historical data (2018-2020). The darker the color is, the more delayed the response, with the lighter colors demonstrating below or near target times. The darker colors on the bar within the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

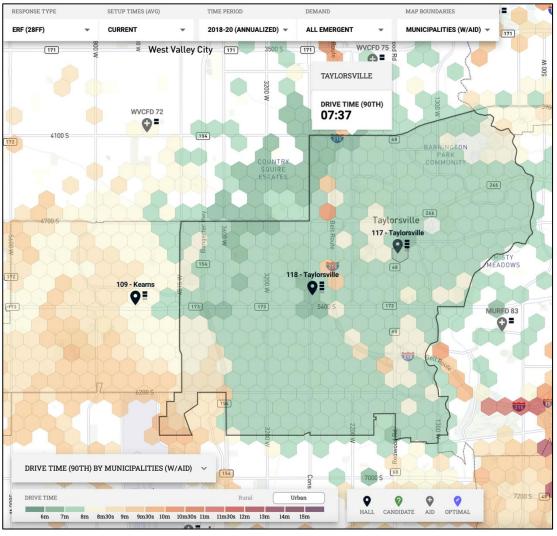
This map demonstrates the coverage of a multi-unit response to a residential fire based off all apparatus being within their station. The green to light yellow demonstrates the ability to have seventeen firefighters (a residential fire effective response force) on scene based off a residential urban 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 (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 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

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.

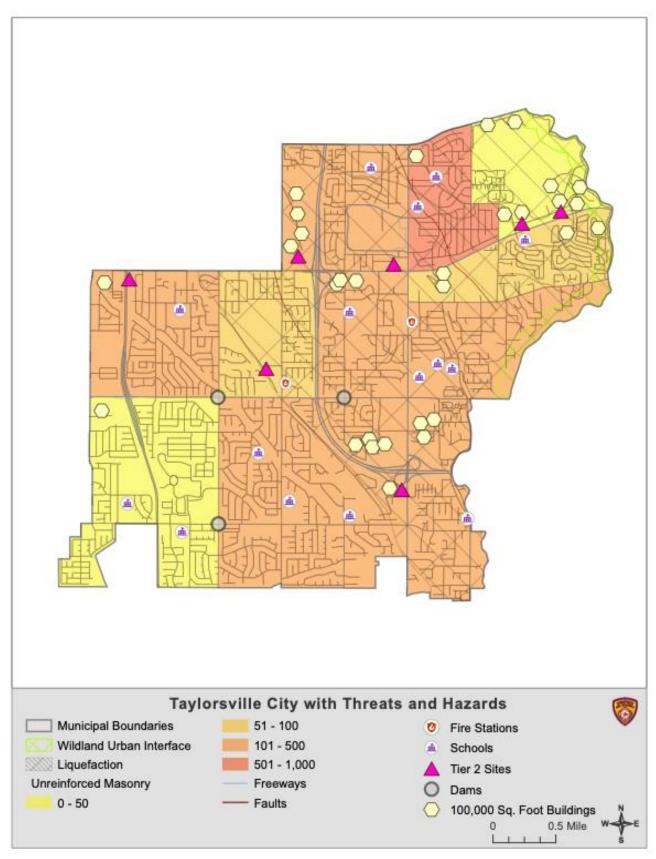
#### **Schools**

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



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 allrisk 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