Town of Brighton

Community Risk Assessment

Photo Courtesy of: KUTV

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.

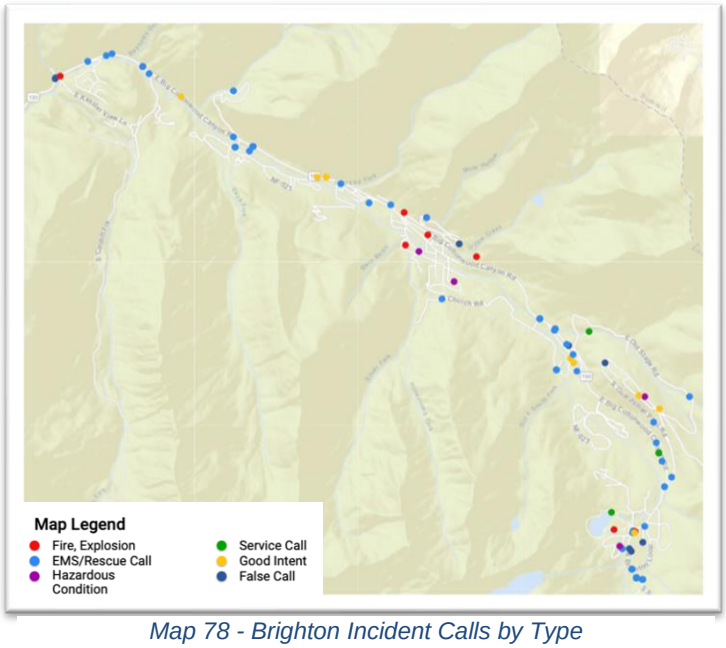
Brighton – Incidents by Dispatch Type

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.

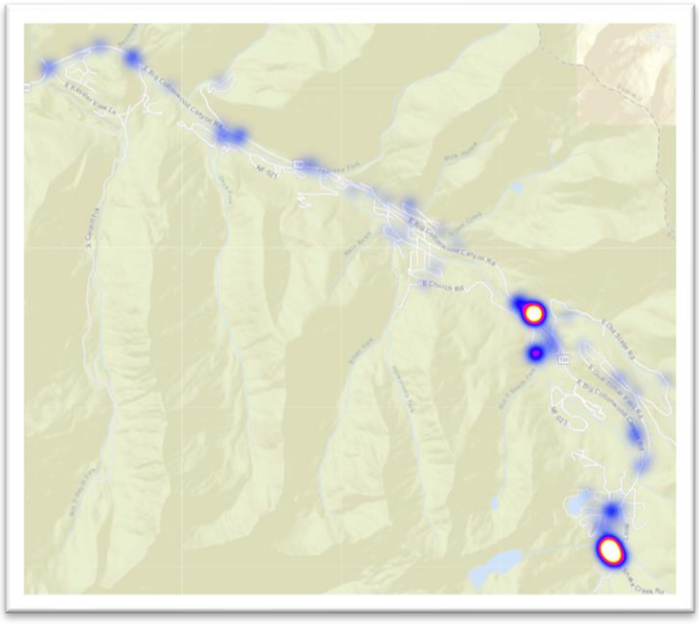
	CY 2020	CY 2019	CY 2018
Fire Suppression	8	3	3
EMS	145	163	178
Hazardous Materials	10	7	3
Service Calls	6	3	3
Good Intent	48	58	39
False Calls	8	14	12
Other (Misc., Flood, Overpressure)	0	0	0
Total	225	248	238
Cancelled	30	33	30
Overall Total	255	281	268

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 90th percentile times.

– In Other Words…

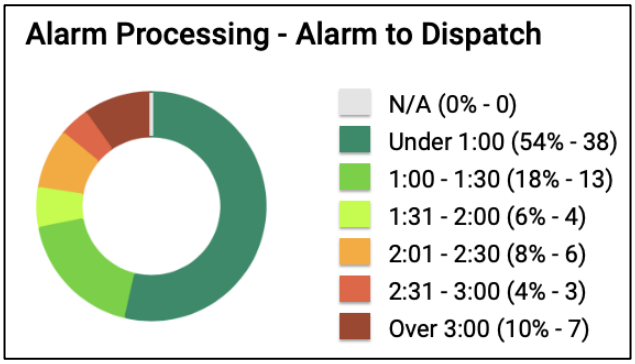
If a value is in the 90th percentile, it means the value is better than 90% of all other values in the dataset. In other words, it is within the top 10% of the values.

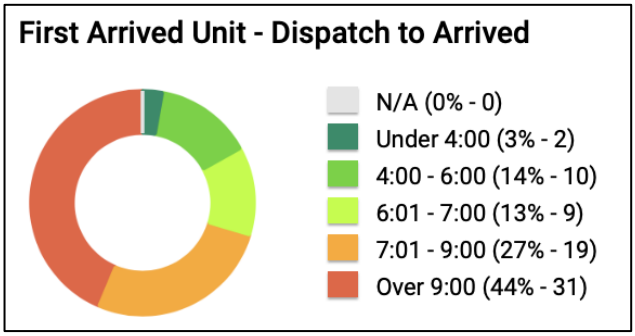
NFPA 1710 encompasses suggested standards for full-time fire departments and recommends the following times (all of which are at the 90th percentile): alarm processing – 64 seconds; turnout time for EMS responses – 60 seconds; turnout time for fire responses – 80 seconds; first arriver apparatus – 240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

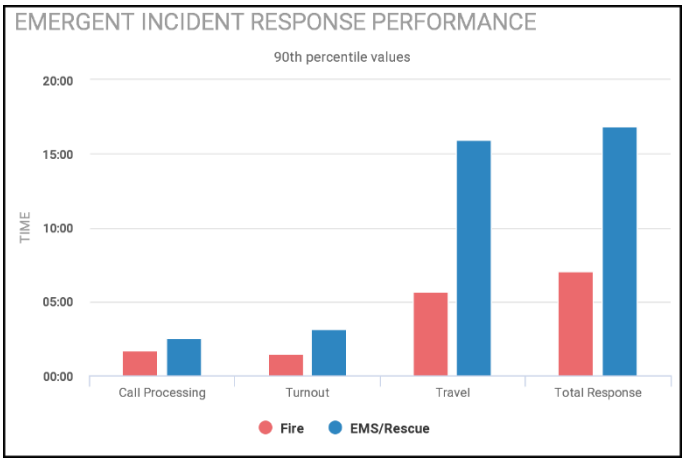
– Of Note…

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.

Brighton – 2020 Dispatch and Response Times



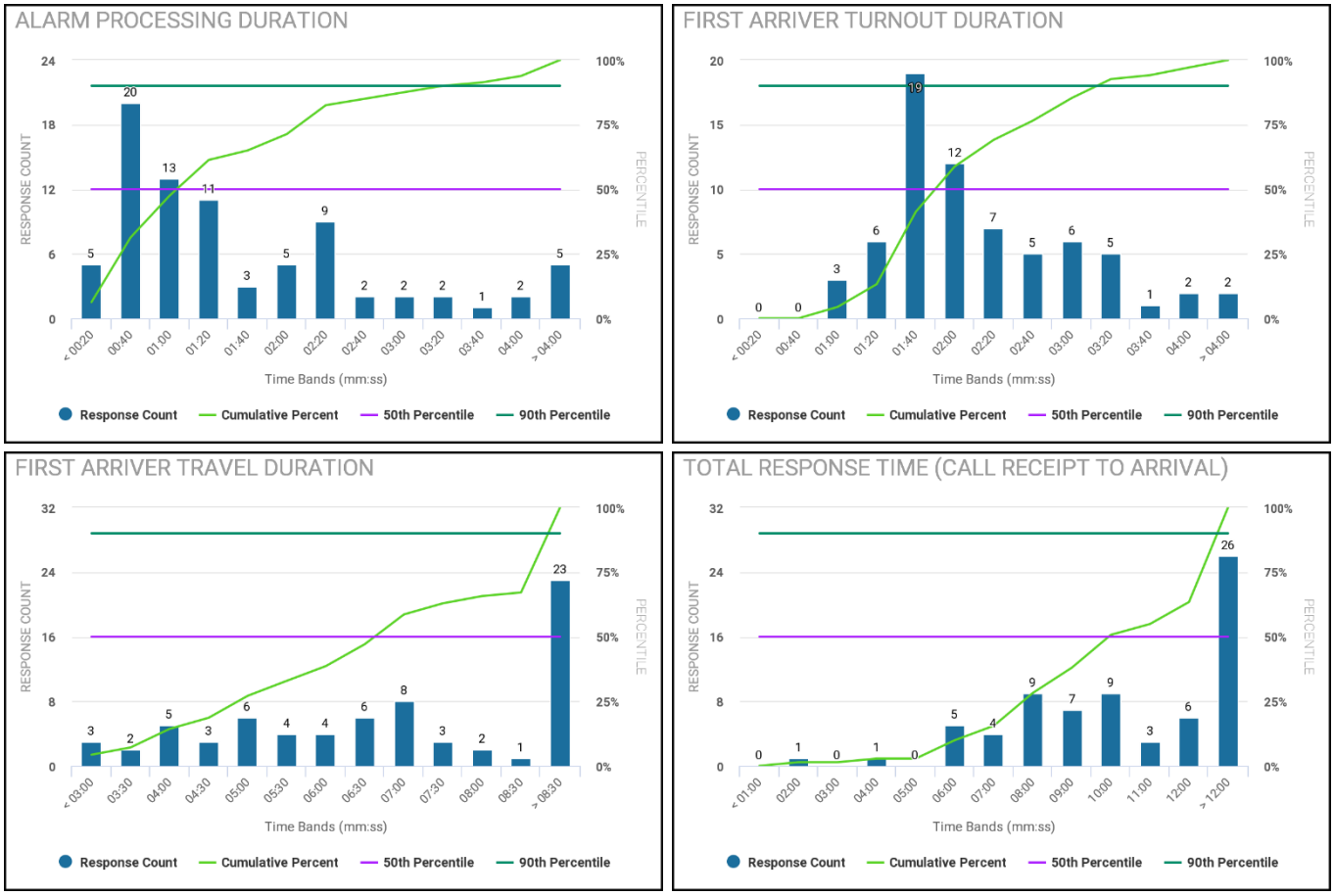




Rural	Call Processing: Fire	Turnout Time: Fire	Travel Time: Fire	Total Response: Fire	Call Processing: EMS	Turnout Time: EMS	Travel Time: EMS	Total Response: EMS
Brighton	2:50	3:11	18:40	28:04	2:10	3:09	17:24	20:20
UFA Urban 2018-2020	2:16	2:39	7:36	10:34	1:47	2:32	6:29	9:18
UFA Rural 2018-2020	2:32	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 56 – Brighton 2020 Emergent Response Times, 90th 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 (90th 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 90th 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

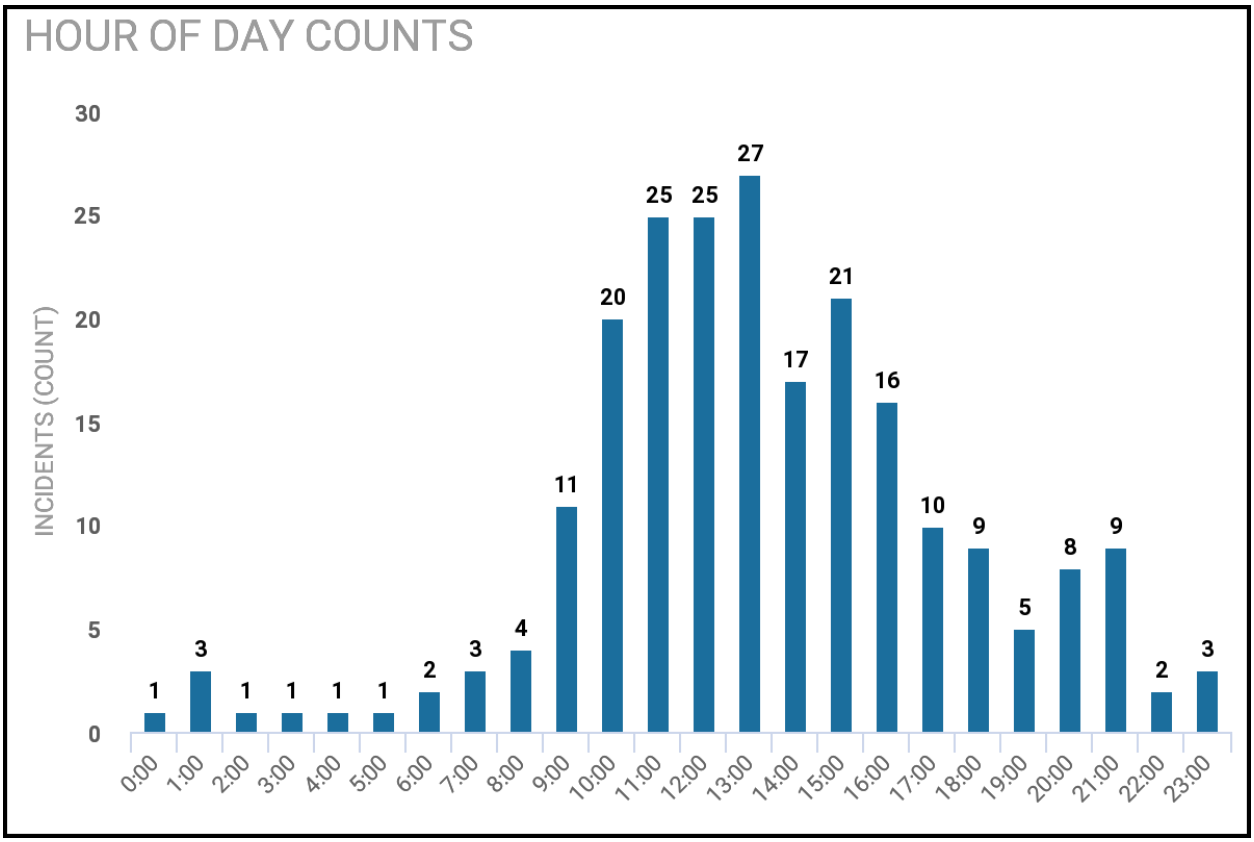


Chart 18 –Brighton 2020 Incidents by Time of Day

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

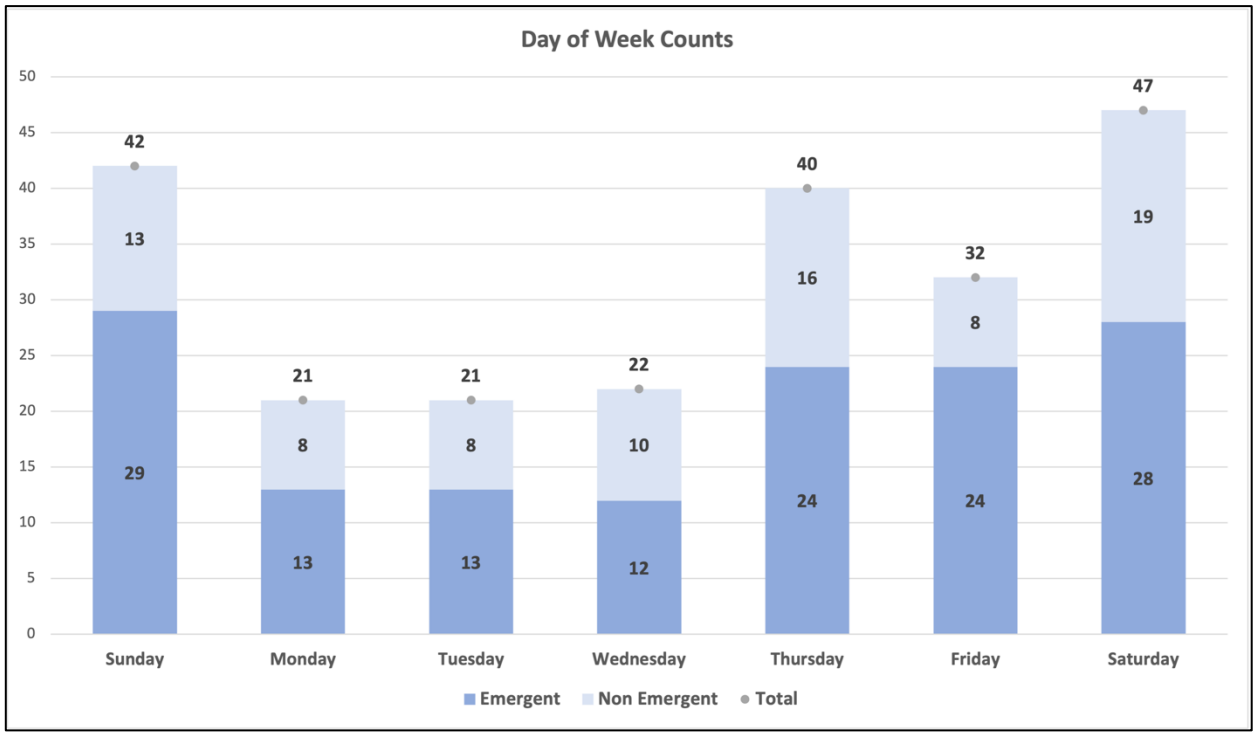


Chart 19 – Brighton Incidents by Day of Week

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

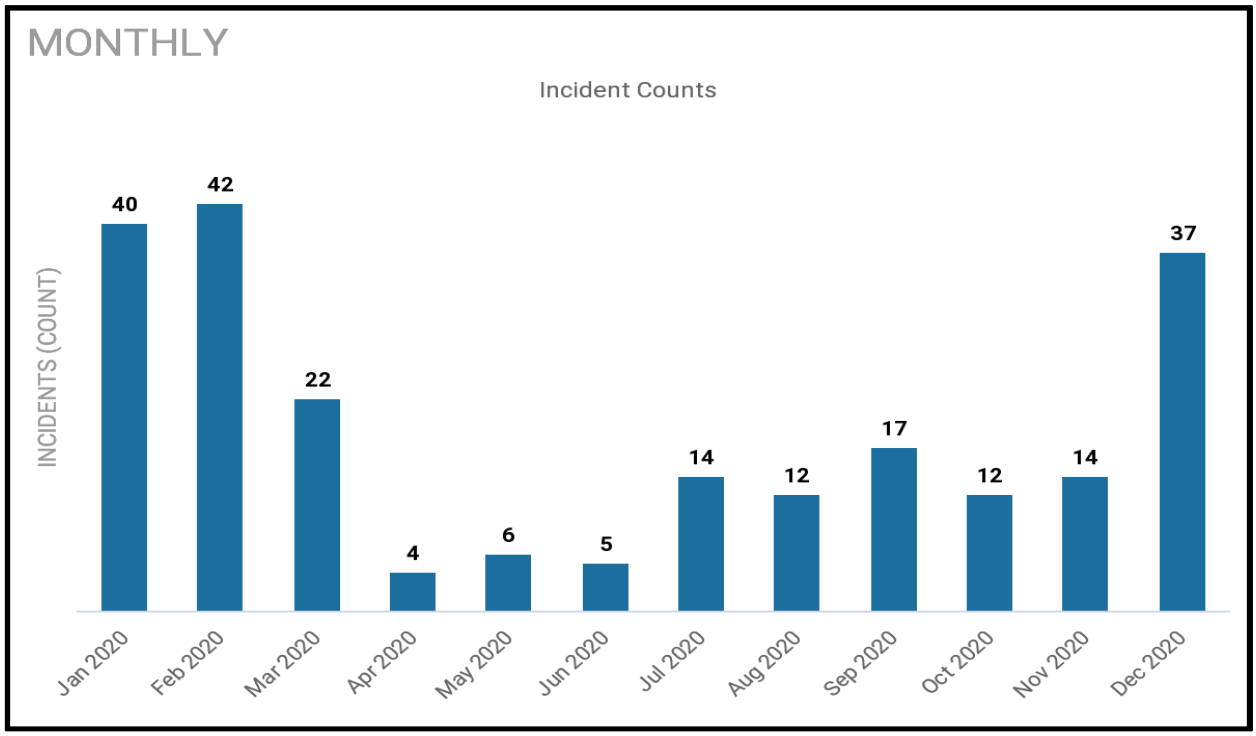


Chart 20 – Brighton Incidents by Month

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
ALS Transports	87	95	95
BLS Transports	70	53	51
Scene Release	10	5	7
Public Assistance	0	0	0
EMS Total Calls	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

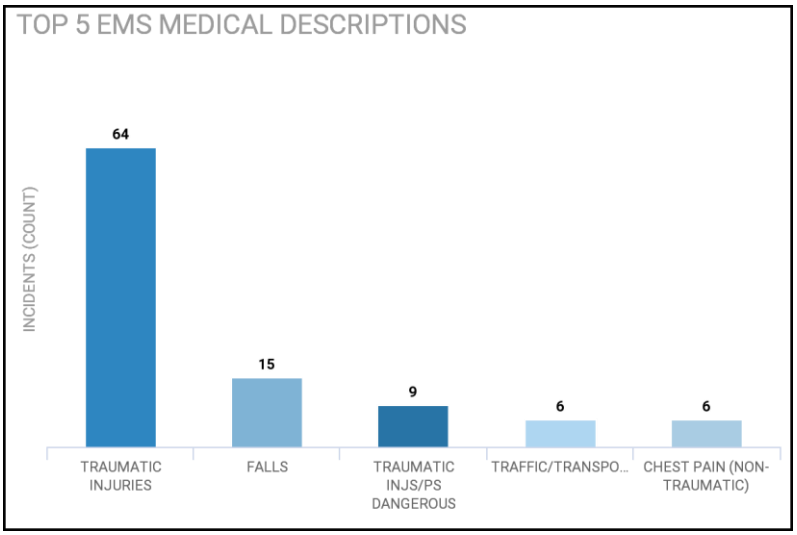


Chart 21 - Top 5 EMS Medical Calls - 2020

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%
Total	8	100%

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
Total	9	1	2	2	16

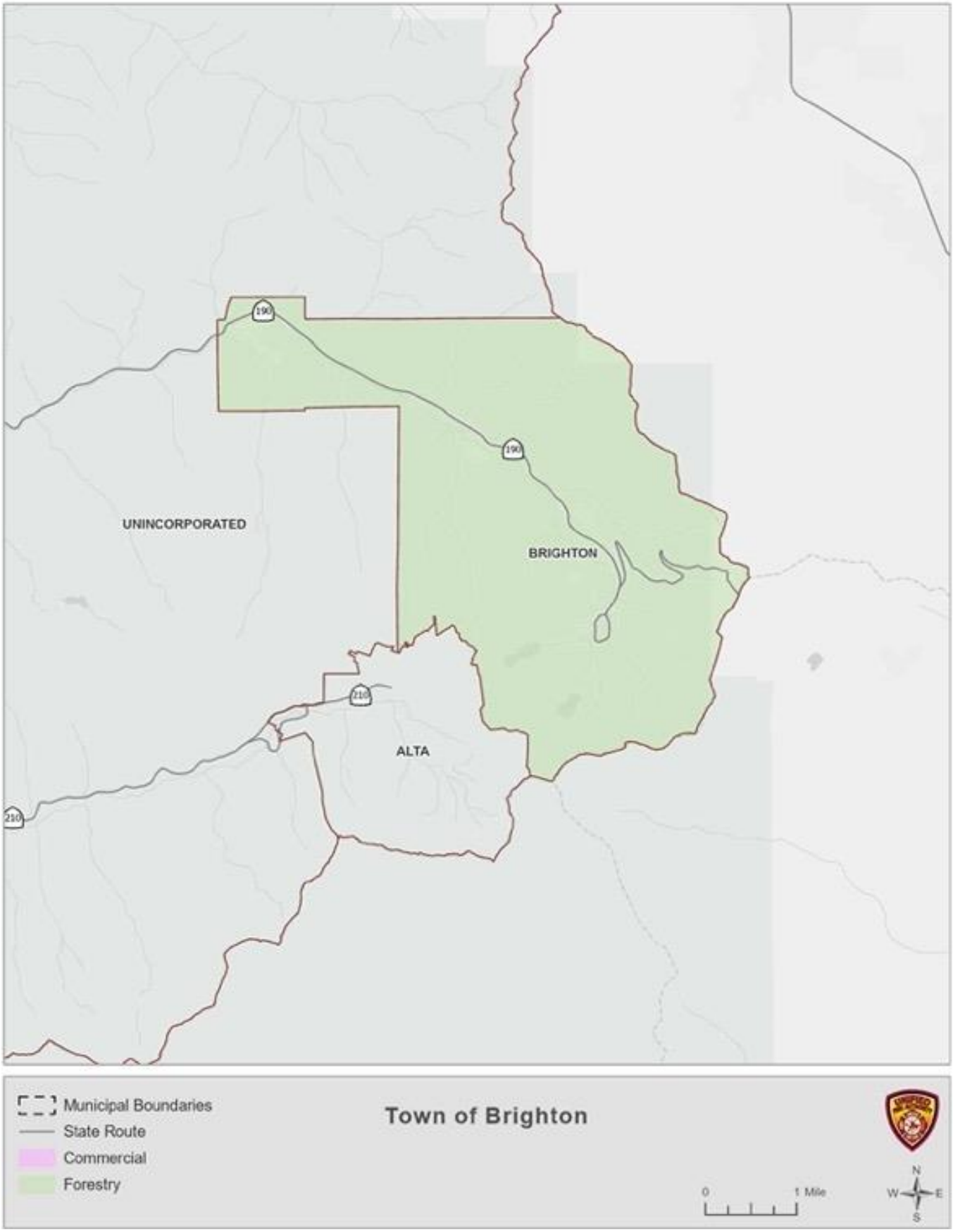
*There is currently a gap within the identification of building size regarding hazardous materials sites. This is a gap that is being closed over the next several years as we collect the data and information.

Table 59 – Brighton Building Occupancy and Risk Categories

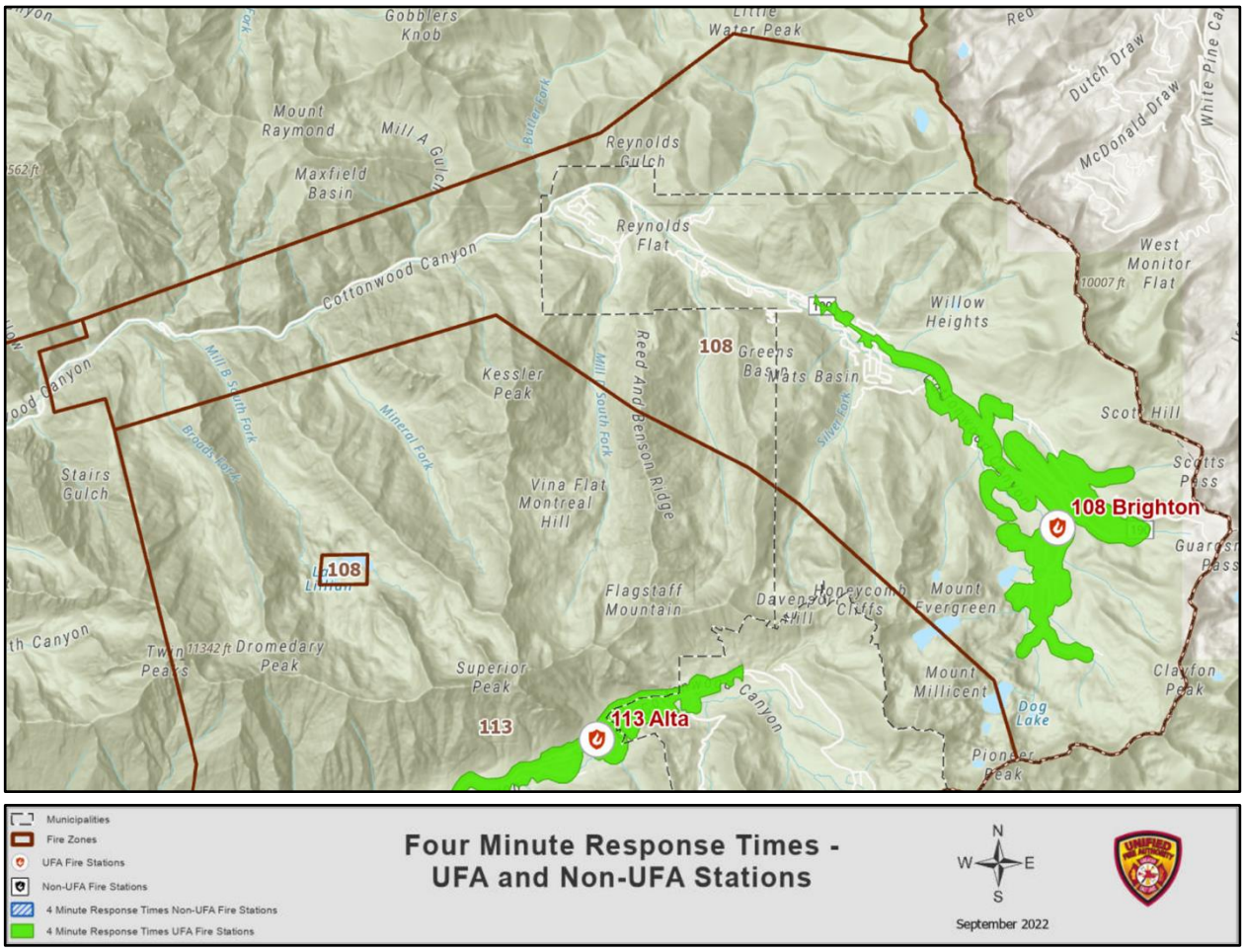
Building Size / Considerations

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.

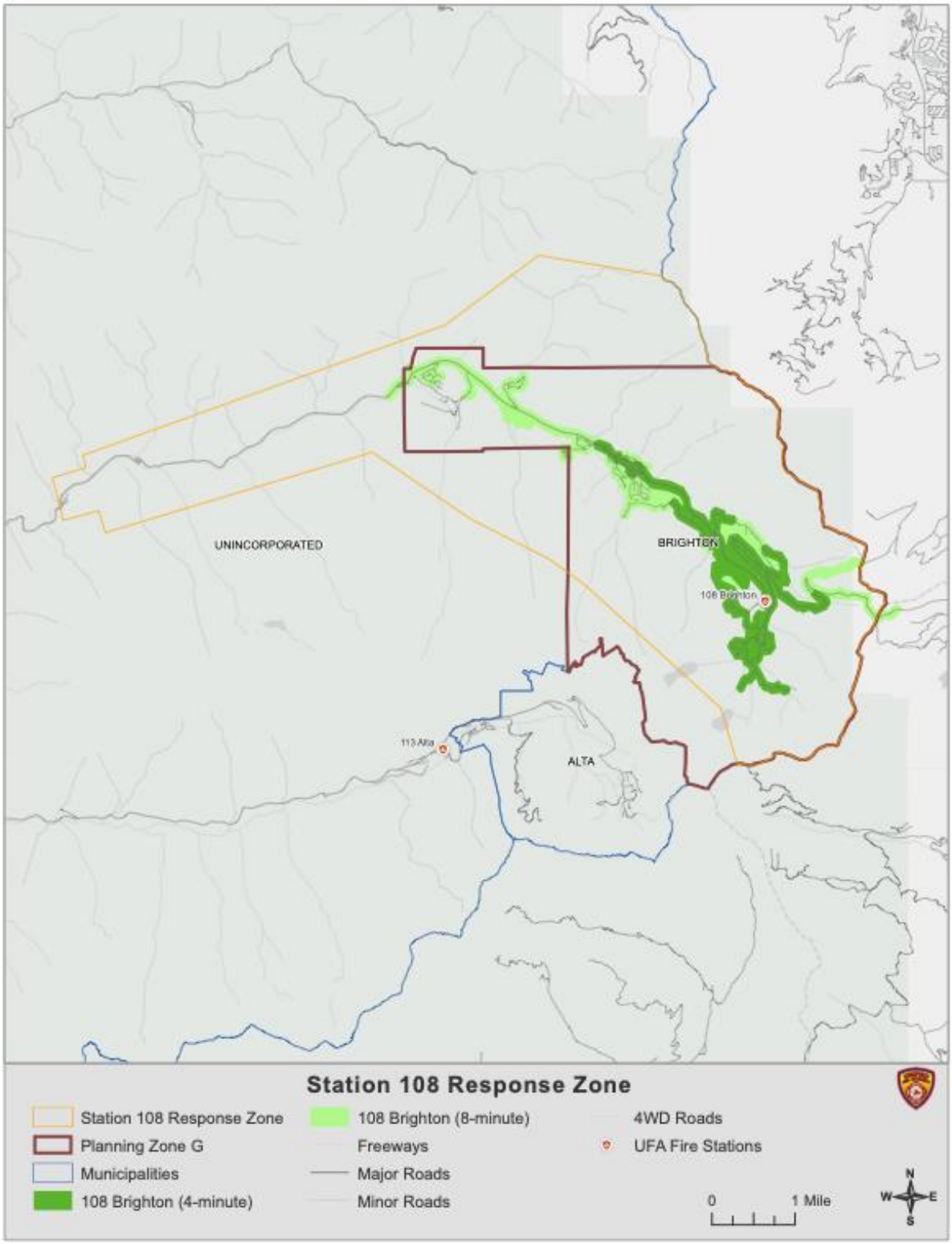
For residential occupancies, the following classifications apply. Low risk = 1-1,999 square feet. Moderate risk = 2,000-3,999 square feet. High risk = 4,000-9,999 square feet. Maximum risk = ≥10,000 square feet.



Map 79 – Brighton with Land Use



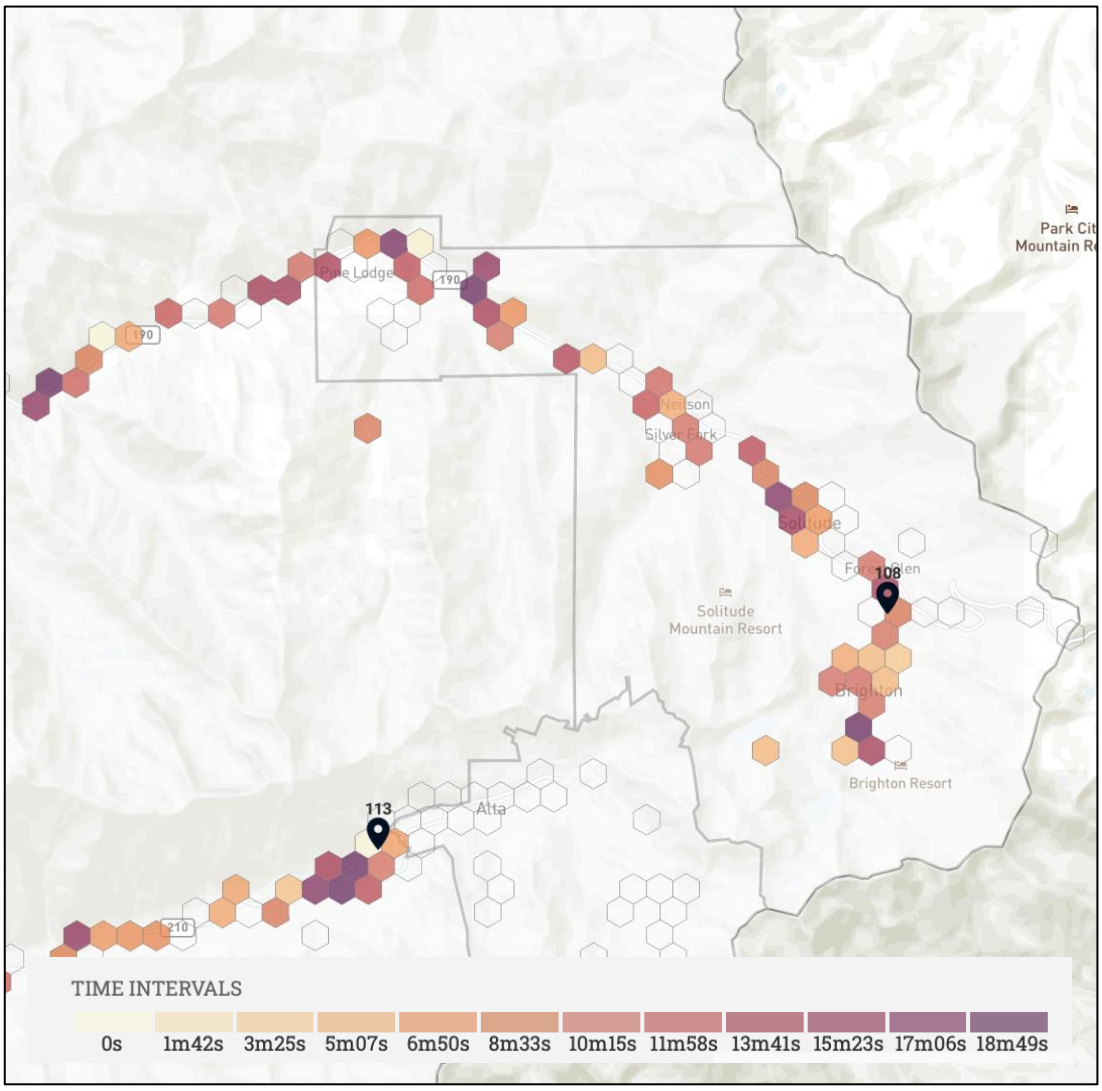
Map 80 - 4-Minute Travel Time, UFA and Aid



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

Brighton – First Arriver Travel Times

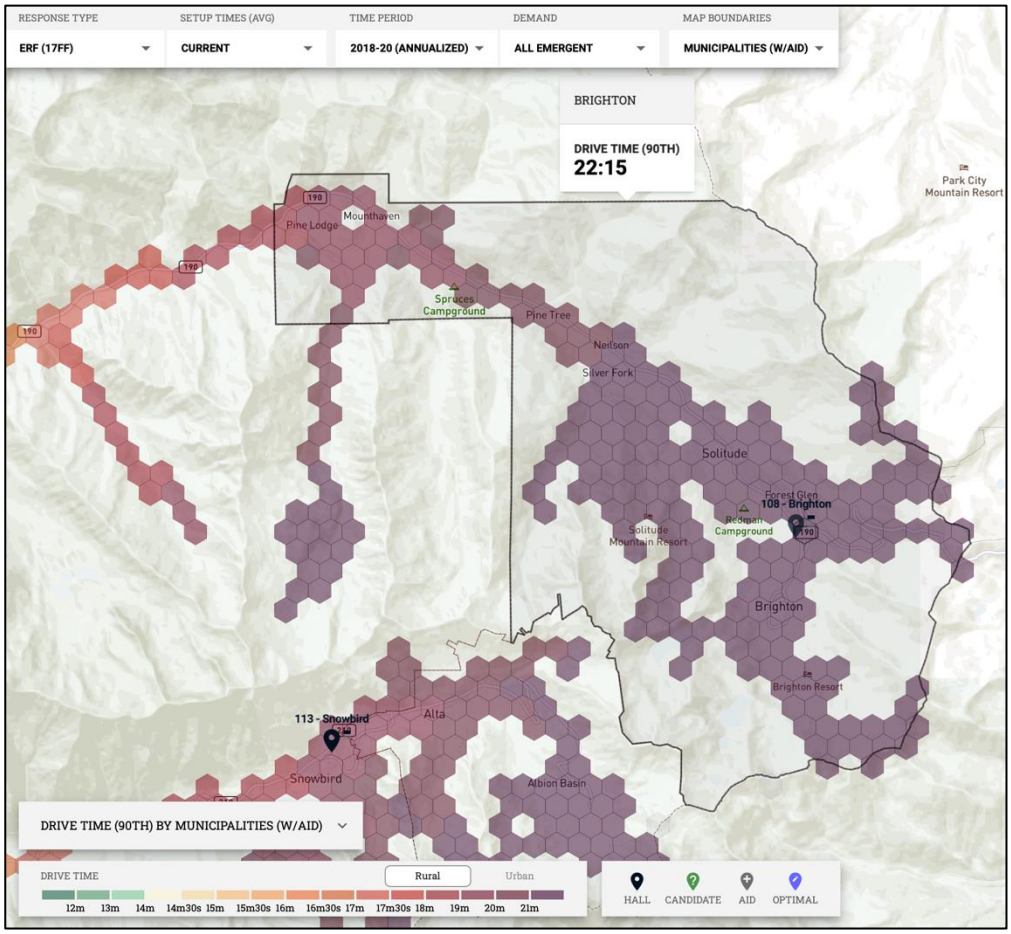
The following maps demonstrate the 90th percentile of travel times based off the last three years of historical data (2018-2020). The darker the color is, the more delayed the response, with the green and light colors demonstrating below or near target times. The darker colors on the bar within the key demonstrating longer travel times by apparatus. This map's drive times (or travel times) are based off the current NFPA 1710 standard of four minutes (90th percentile) from notification of the alarm to the arrival of the first arriving apparatus — not an adopted standard by UFA. UFA is currently in process of identifying benchmark and target standards to be adopted by the UFA Board of Directors. Currently within Brighton, the 90th 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)

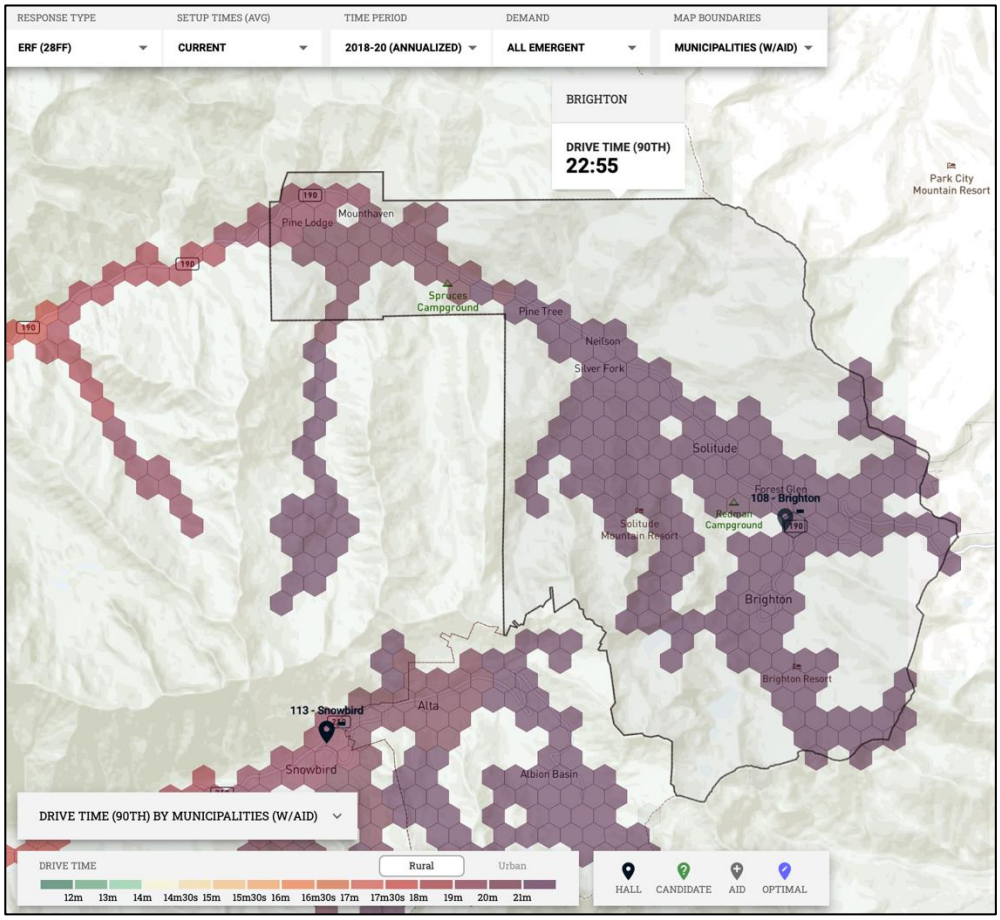
This map demonstrates the projected coverage of a multi-unit response to a residential fire based off all apparatus being within their station. The green to light yellow demonstrates the ability to have seventeen firefighters (a residential fire effective response force) on scene based off a residential urban fire force response. This map's drive times (or travel times) are based off the current NFPA 1710 standard of eight minutes (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 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 (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 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

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 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

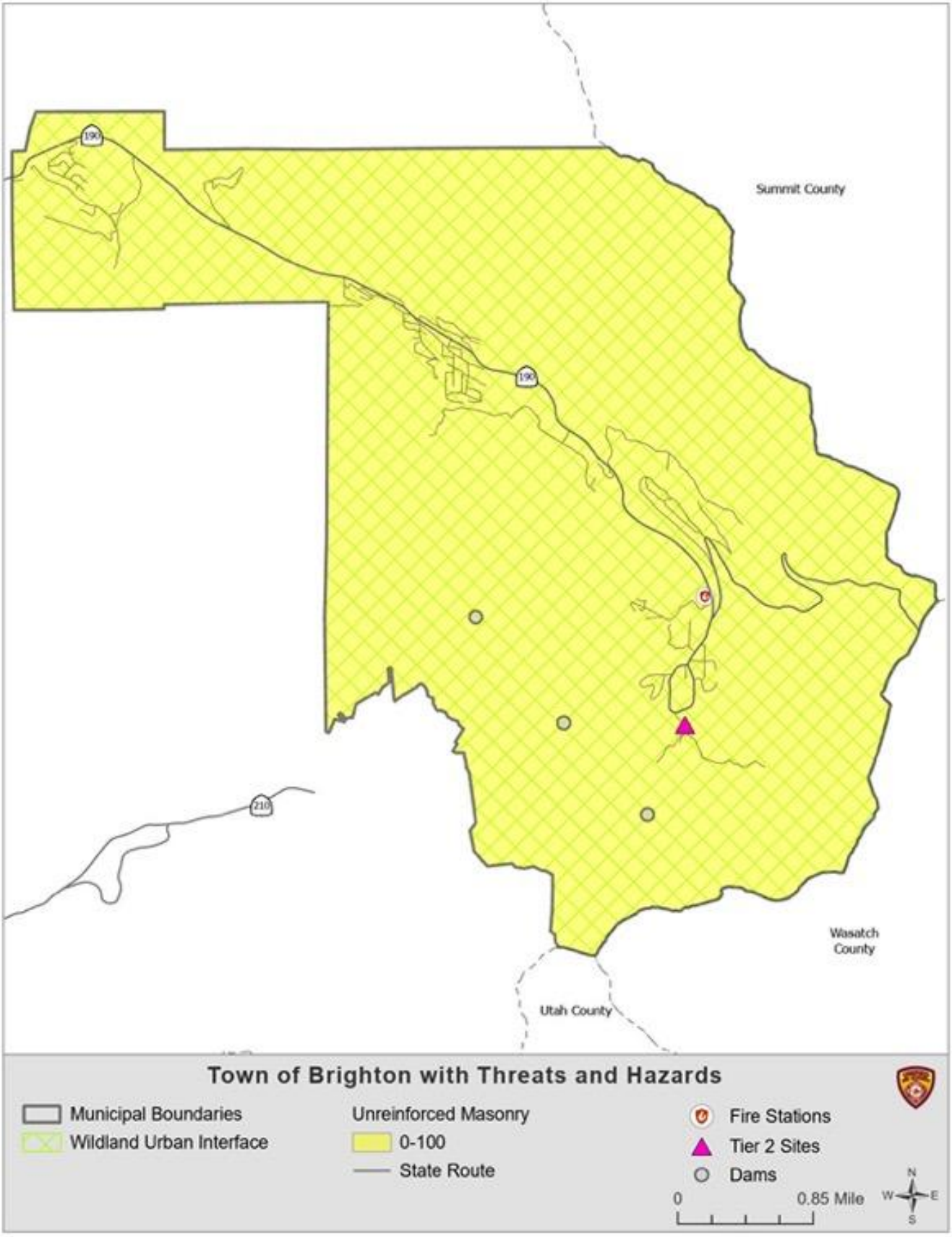
There is one identified HazMat/Tier II Sites within Brighton, which is in the moderate-risk category.

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

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Salt Lake City, UT 84119