2019

STANDARDS OF COVER

&

COMMUNITY RISK ASSESSMENT

HARTFORD FIRE DEPARTMENT

1893

VERMONT

HARTFORD FIRE DEPARTMENT

Introduction

The following report serves as the Hartford Fire Department Integrated Risk Management Plan: "Standards of Cover" document. . The purpose for completing such a document is to assist the agency in ensuring a safe and effective response force for fire suppression, emergency medical services, and specialty response situations in addition to homeland security issues.

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Executive Summary

The Hartford Fire Department is a combination of fulltime and paid on call firefighters that provide fire, rescue, hazardous materials response, and emergency medical services to the residents of the Town of Hartford.

The Town of Hartford is 45.9 square miles in size and is made up of the five villages of White River Junction, Wilder, Quechee, Hartford and West Hartford. These villages are made up of mostly residential homes with some urban and industrial areas.

History and tradition have influenced how fire departments provide service to a community. Fire stations are built using this design and staffing has been historically influenced by what the local Fire Chief has perceived as what is needed or required.

This process of producing a Standards of Cover drives a department and a community to complete a community risk assessment and analysis to define and compare our needs against a national model and standards. It enables a department to set policy by determining a level of risk acceptable sets a standard of emergency forces ready and able to respond and provides performance measures and accountability.

In this document are the facts, figures, measure and accountability for the delivery of fire, rescue, haz-mat and EMS service by the Hartford Fire Department.

The ability to provide services and the quality of how these services are provided can be measured by the standard that has been set in this document. The department needs to continue to monitor the changes in the community, the risk and the demand each year so that this standard will be the model/goal for the department and the community it protects for future years.

A. Community Overview

The Town of Hartford consists of five villages; White River Junction, Wilder, Hartford, West Hartford and Quechee.

In 1893 a petition was presented before the Board of Selectmen requesting fire protection. A two-mile square boundary was developed around the village of White River Junction. On June 6, 1893 Fire District No. 1 was formed. The station was centrally located near downtown White River Junction. The actual building still exists today serving mainly as a historical museum, although it does have other small businesses located within it.

In 1914 the Board of Selectmen was once again petitioned for fire protection within the Town. The citizens of Hartford Village were not within the response area of Fire District No. 1 and were therefore not protected. In 1915 Fire District No. 2 was formed.

In 1961, the citizens of Fire District No. 2 voted to merge with Fire District No. 1. As a result of the merger, the single fire department for the Town of Hartford was established. The name of the fire department remained the White River Junction Fire District No. 1. In 1965 the Fire District was dissolved and ownership was transferred to the Town of Hartford. The new municipal fire department was now known as the Hartford Fire Department. In 1996 the name of the organization was changed to the Hartford Emergency Services. This change was due to the many different types of emergencies, other than that of fire calls, that the department was trained for and being called for, such as high angle rescue, surface ice rescue and swift water rescue just to name a few. In 2005, the name of the organization was reverted back to the Hartford Fire Department.

With an increasing population and subsequent call volume, staffing was increased in 1968 to four full time employees. Currently, the Hartford Fire Department has one shift of five and three shifts of four personnel. A Fire Marshal position was added in 2009 and in 2018 a part-time Fire Inspector was added. As the operations of the department have continued to grow an Assistant Chief of Operations and Training was added in 2017. The department continues to utilize a full-time Fire Chief, Administrative Assistant, and several Call Firefighters. The minimum staffing allowed to be on duty at any given time is three but increases to 4 on 1900 on Fridays through 1900 on Sundays. When responding to still alarms and ambulance calls, off duty personnel are called in to maintain the minimum staffing of three.

Prior to 1971 the local funeral director provided ambulance coverage to the citizens of the Town. In January 1971, due to an increase in calls, the funeral director gave up this service and the Hartford Fire Department took it over. The initial members were trained in basic first aid which led into them being certified as Emergency Service Technicians. In 1978 some members were trained in advanced life support capabilities. This included the ability to administer intravenous medications and perform cardiac defibrillation. Today, the Department operates two modern ambulances with all full-time staff being trained to at least the Advanced EMT level and eight being trained at the Paramedic level.

In the early 1970's the Town began to search for a place to construct a new fire station. The Select Board at that time also wanted to house the Fire department and the Police Department in one public safety building. After about four years of debate and attempts to get federal funding, the new fire station was constructed in 1978 where it stands today. The new fire station has full living quarters, offices, and space to hold up to ten vehicles. Twelve years later an addition was built to house the Hartford Police Department.

In the 1970's, the village of Quechee was growing substantially. Because travel time to Quechee from White River Junction was unacceptable for fire response, the Quechee Engine Company was established in 1972. The station was located in a barn owned by the Quechee Lakes Landowners Association. In 1980 the owners of the barn wanted to use it for themselves, so they donated a piece a piece of land in the center of the village to the town to construct a station. A substation was built in 1982 that could house three trucks and had bathroom and shower facilities. This station is not manned and relies on off-duty or paid-on call personnel to respond to get the apparatus to respond to emergencies.

The Hartford Fire Department has grown over the years from a group of concerned citizens with a horse drawn stream pumper, a hook and ladder wagon, and several hose carts with a small station to store it in to what it is today, a larger group of people with the same dedication and commitment but with more technology, manpower, apparatus, training and equipment. A strong emphasis is placed on public education and training. The Fire Department has taken over performing building inspections and plan reviews of new construction from the State of Vermont. The founding members of the Department would be in awe to see what we have become.

GOVERNANCE MODEL

The current Town governance is that of a Town Manager/Board of Selectmen. The day to day operations of the shifts are managed by the shift Lieutenant and/or Captain. The Captain reports to the Fire Chief. The Fire Chief is ultimately the manager of the Fire Department who reports to the Town Manager. The Town Manager then reports to the Board of Selectmen who are elected officials of the Town. The Town of Hartford still uses a Town Meeting every spring to vote on budgets, appointments and other various items that affect the Town.

B. Current Service Levels

The current authorized strength of the Hartford Fire Department is twenty-one full time staff including the Fire Chief, Assistant Fire Chief, Fire Marshal and Administrative Assistant. The department recently added a part time Fire Inspector (32hours weekly) The shifts consist of a Fire Captain, Fire Lieutenant, and either two or three Firefighters. There are currently 6 paid on-call members that train and respond to emergencies with the full-time staff. The department is managed by the Fire Chief.

The Hartford Fire Department operates two fire stations. Station 1 is located in White River Junction and the Station 2 is located in Quechee. Station 1 houses the majority of the apparatus. Located in Station 1 are the two ambulances, two engines, one ladder truck, one rescue truck, and a Forestry truck. Station 1 also houses 5 trailers; one all-terrain trailer with a John Deere UTV, a haz-mat decontamination trailer, and a technical rescue equipment trailer, a command support trailer, and a swift-water rescue boat trailer with two inflatable boats. Station 2 houses one engine and trailers are stored there during the winter months.

The Department provides fire, rescue, hazardous materials response and emergency medical services to the residents of the Town of Hartford. As well as those functions the department personnel have been training in specific technical rescue specialties and provide these services statewide through an agreement with Vermont Emergency Management and the Vermont Department of Homeland Security. These specialties include: swift water, high angle, and confined space rescue at the technician level and trench, and building collapse rescue at the operations level.

The Hartford Fire Department is responsible for Fire Prevention within the Town of Hartford, from the State of Vermont. There is a cooperative inspection program and plans review agreement between the State of Vermont and the Town of Hartford. The agreement assigns the Hartford Fire Department the responsibility for plan review, permitting, inspection and enforcement of the Vermont Fire Prevention and Building Code as it applies to all new and existing public buildings and the Accessibility in Public Buildings Rules for all new construction and alterations in existing public buildings.

The following are identified as either new or existing public buildings:

Assembly Occupancies

Educational Occupancies

Hotels and Dormitories

Apartment Buildings

Lodging or rooming houses providing sleeping accommodates for 16 or fewer persons

Two family dwellings and single-family dwellings not occupied by the owner.

Mercantile Occupancies

Business Occupancies

Industrial Occupancies

Storage Occupancies

Military Training Facilities

The Vermont Division of Fire Safety has retained responsibility for inspection and plans review day-care, health care, detention and correctional, residential board and care facilities, state owned buildings, and high-rise buildings within the Town of Hartford.

MISSION AND VISION STATEMENT

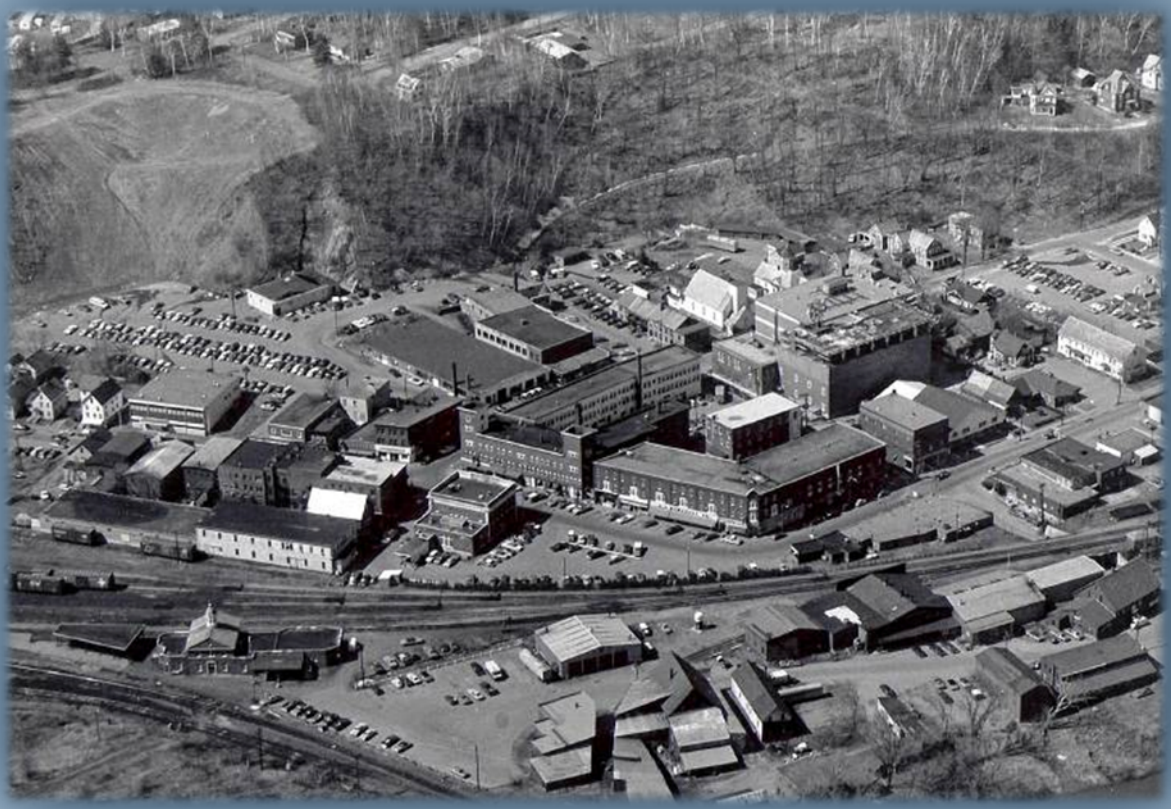
MISSION STATEMENT

Provide the highest levels of community safety prevention and emergency response services.

VISION STATEMENT

Our Vision is to be a regional emergency service leader in support of our changing community needs, through innovative practices and partnerships that result in a comprehensive and adaptive set of programming.

EXCELLENCE IN SERVICE



Risk Assessment

Introduction

The Standards of Cover is a tool used to distribute and concentrate the resources of a fire department to fulfill its goals and objectives. Standards of Cover are created by performing a risk assessment of the community, and allocating resources based on the probability and consequences of an emergency incident occurring. To provide the most effective emergency response for the town of Hartford, the Hartford Fire Department must have an up-to-date understanding of what our community looks like, and what risks it faces. By assessing existing and new structures in our community, studying demographic statistics, and analyzing existing call data, we are able to quantify risks facing specific areas of our community. In this way, the Hartford Fire Department can ensure it is utilizing resources in the most efficient manner while responding to emergencies, and is doing everything possible to minimize the risks to our community.

The Hartford Fire Department first formally assessed the community's risk from both fire and non-fire related emergencies in 2003, as part of the initial accreditation process. All existing occupancies were re-evaluated and new occupancies added during the 2008 assessment. In our 2012 re-accreditation process the Hartford Fire Department used the "Risk Probability/Consequence Matrix" to complete our community risk assessment. In our 2019 assessment we are again updating, and refining our model, in an attempt to achieve an even greater understanding of the risks facing the Town of Hartford, and how the Hartford Fire Department can best respond to them.

Challenges in Accurate Risk Assessment

Access to accurate demographic data is crucial to performing an effective risk assessment. The Hartford Fire Department is working from the 2010 Census results to establish population, and population density statistics in our various response zones; however, our town is experiencing a noticeable population increase. We are working with town officials to ensure a more accurate Census report in 2020. We have done this by supporting the US Census Bureau's Local Update of Census Addresses (LUCA). Additionally, the risk assessment methods commonly used in the fire service are best suited to larger departments with higher annual response numbers, and a broader set of data to work from. Applying this current methodology to the Hartford Fire Department, and our community does not always give a complete picture of the unique risks faced by a department of our size. In the future we will continue to work on developing and updating our risk assessment methodology to fit the scale of our department, and generate the most accurate and useful risk data

Town of Hartford Demographics

Town of Hartford estimates for 2010:

- Total population: 9,952
- Total housing units – 5,816
- Occupied housing units – 4,446
  - Owner occupied – 2,953
  - Renter occupied – 1,493
  - Vacant housing (seasonal, recreation, occasional use) – 1,370
- Median annual household income - $61,600
- Average family size – 2.82
- Average household size – 2.22

Industry within the Town of Hartford can be broken down as follows (2010):

- Agriculture – 2.0%
- Construction – 4.7%
- Manufacturing – 5.8%
- Wholesale Trade – 2.1%
- Retail Trade – 14.5%
- Transportation, warehousing – 46.4%
- Information – 2.9%
- Finance, insurance, real estate, rental and leasing – 4.6%
- Professional, scientific, management, administrative, waste management – 9.8%
- Educational, health, social services – 27.3%
- Arts, entertainment, recreation, accommodation and food services – 11.5%
- Other services – 4.4%
- Public administration – 3.9%

Hartford Housing Data

TYPE	Private Residences	Condominiums	Apartment complexes	Totals
Total Structures	3,742	1,135	160	5,037
Built Prior to 1900	428	12	96	536
Built 1900-1940	400	0	85	485
Built 1940-1980	1,443	350	200	1,993
Built 1980-2000	1,196	584	165	1,945
Built 2000-present	431	188	128	747

Hartford Housing Data

Type	Private Residence	Condominium	Apartment Complexes	Total
Single Unit	3,503	1,135	204	4,842
2 Units	167	0	47	214
3-5 Units	72	0	79	151
6-10 Units	0	0	52	52
More Than 10 Units	0	0	30	30

Total Housing units in the Town of Hartford is approximately 6,605

Fire Risk Assessment

The definition of a risk factor is as follows:

1. Requires the quick response of a fire company.
2. Requires specialized response capabilities.
3. Requires a large response of resources in order to alleviate the situation.
4. Significantly impacts the economical wellness of the community.
5. Negatively impacts operations and quality of life in the community.

Factors that affect risk level:

1. High life loss potential.
2. Critical and essential governmental infrastructures and facilities.
3. Hazardous Materials storage.
4. Health Care, Educational & Historic Centers.
5. Occupancy type and contents.
6. Building construction and availability of built in fire protection.
7. Fire loss potential.

A Fire Department providing an all-hazards response capability must perform an assessment of their community to fully understand existing risks or potential risks.

Non-Fire Risk Assessment

In evaluating the non-fire risk within the Town of Hartford the department utilized as its primary reference the Town of Hartford Emergency Operations Plan. The following assessment and conclusions are drawn from that document.

The following natural or man-made hazards are the prime consideration of the Emergency Operations Plan:

- Biological Agent
- Chemical Agent
- Civil Disorder
- Conventional Bomb
- Cyber-Terrorism
- Flooding
- Hazardous Materials (transportation and fixed facility)
- Ice & Snow Events
- Multiple Vehicle Accident (Transportation accidents/emergencies)
- Plane Crash
- Radiological Emergencies
- Wind

- School Incident: Mass Casualty

Hartford faces a wide array of risks which may pose a significant threat to the population and property within the Town. These include natural, human-caused and technological emergencies or disasters. Depending upon the extent and nature of the disaster or emergency, a potential condition could exist that may severely hamper the economic and physical infrastructure of the Town. During an emergency or disaster, the Town and its emergency response agencies will take immediate and appropriate actions to determine, direct, mobilize, and coordinate the response movement. The Incident Commander will activate the necessary functions to redirect resources in order to save lives, relieve human suffering, sustain survivors, protect property, and repair essential facilities. A catastrophic disaster may overwhelm town forces in providing a timely and effective response to meet the needs of the situation, necessitating State and/or Federal assistance.

Hazard Analysis and Assessment

The top non-fire threats to Hartford are:

- Flooding
- Hazardous Materials Accident
- Mass Casualty Incident including Health Emergency; Epidemic or Pandemic
- Severe Winter Weather Events
- Transportation accidents
- School Incidents

Additional details on hazard assessments for Hartford have been included in Appendix B; Hazard Analysis and Assessment, in the Administrative Appendices to the EOP.

Flood

Flooding is most likely to occur on Quechee Main St. and Route 14. Flooding can occur at all times of year, but has historically occurred due to ice jams, snowmelt runoff in spring, severe thunderstorms in summer, tropical remnants in the fall, or late fall rainstorms on frozen ground. There will generally be some warning of a flood event, and there are few inhabited structures that would be inundated. The effects of large floods would range from temporary loss of roadways due to submersion or days to weeks due to washouts. This could result in access difficulties for essential services. Persons attempting to cross flowing water could also require rescue. Nationally, most flood victims are due to driving flooded roads.

Hazardous Materials Incident

Interstates 89 and 91, and Routes 4, 5, and 14 and the railroad yards and rail lines are the most likely areas where a transportation hazardous materials incident could occur. Any large fire or explosion could also result in an MCI. The Fire Department is equipped to begin initial operations to save lives and isolate the affected area but would require support from other fire departments and agencies.

Mass Casualty Incident (MCI)

In addition to large numbers of injured being caused by a fire or explosion, there also exists the possibility of an MCI due to a motor vehicle accident involving a bus, multiple motor vehicle collision, and an accident or an intentional act of violence at the School. MCIs may also be caused by epidemics or pandemics.

Severe Winter Weather Events

Severe winter storms can cause serious damage, including collapse of buildings due to overloading with snow or ice, brutal wind chills, power outages due to downed trees and power lines and the closure of rail, road and air travel. People can be at risk of freezing in extended power outages if they lack wood heat or backup power and individuals shoveling large accumulations of snow can also be at risk from frostbite, hypothermia, heart attacks or other injuries due to cold and overexertion. Though most residents and local forces are prepared for routine winter weather, historical data show that severe storms can occur.

School Incidents

An incident at a Hartford School, whether accidental or intentional, could create large numbers of injured, as well as the need for a Unified Command incident management approach. Notification of parents, counseling, public information, and other actions could easily overwhelm local forces. The Hartford School District does have a plan for their response to incidents involving their facilities.

Hazards Analysis and Assessment

This risk assessment included fire, emergency medical services, hazardous materials, technical rescue, criminal and civil issues, public works risks, weapons of mass destruction (WMD) and Terrorism Risks.

Risk Assessment Model and Methodology

For a community to appropriately provide for, and understand the need for emergency services, a coordinated and comprehensive assessment must be maintained.
If a community fails to assess the risks it faces, they will either fail to properly respond to the risk when needed, or will expend valuable resources in the wrong areas.

For the 2018 update to our risk-assessment we are using the three-axis risk calculation process, suggested by CPSE. This methodology looks at 3 primary aspects of risk:

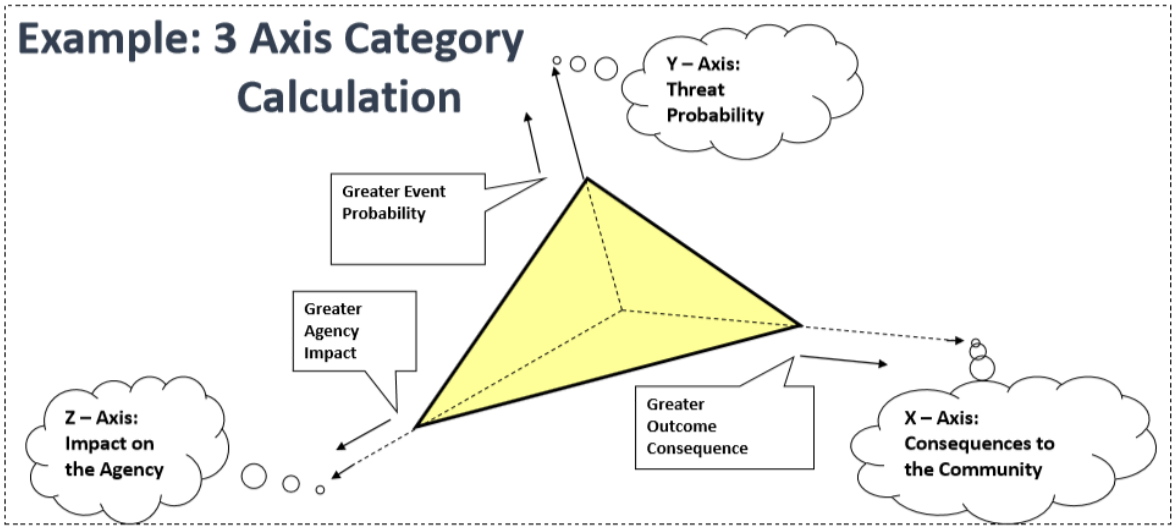
1) Probability:
How likely is this event to occur?
a) Quarterly/yearly
b) Monthly
c) Weekly
d) Daily

2) Impact on the Agency:
How many personnel will this event require for an effective response?
a) Four or less
b) Five to eight
c) Nine to fourteen
d) Fifteen plus

3) Consequences to the community
What portion of the community will this event effect?
a) Individual/business
b) Multiple people/businesses
c) Multiple people/businesses/financial impact to the town
d) Town/community/region

Each aspect is assigned a numerical value based on severity. We then use Heron's formula to generate a risk score for each type of risk in our community. By doing this we can clearly see the highest risk incident types around our community, and ensure that we are prepared to respond to each of these risk types, whenever and wherever they occur.

Additionally, we analyze call data from each zone, and using GIS mapping systems, we plot the frequency and type of incidents occurring. These maps, along with dependability of water supplies, and the response times are all considered when assessing risks in our community. The number of calls for each incident type is based on the median call number over the past 5 years, using NFIRS data alone.



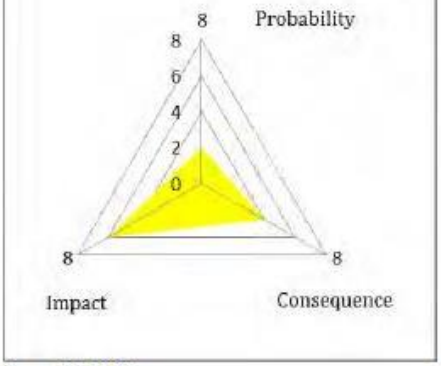
Probability
2=Quarterly/Yearly
4=Monthly
6=Weekly
8=Daily
Consequence
2=Individual/Business
4=Multiple People/Businesses
6=Multiple People/Businesses/Financial Impact to City
8=City/Community/Region
Impact
2=Four or less
4=Five to Eight
6=Nine to Fourteen
8=Fifteen Plus
Probability, Concequence, and Impacy Scale
2-None/Low
4-Moderate
6-High
8-Maximum

Heron's Formula modified for Tetrahedrons:

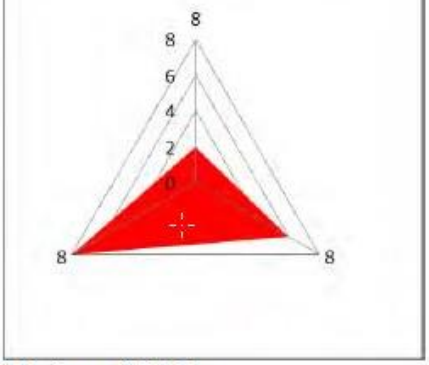
p = probability (Y Axis)
c = *community* consequence (X Axis)
I = *community/agency* impact (Z Axis)

$$Risk = \sqrt{\frac{(pc)^2}{2} + \frac{(ci)^2}{2} + \frac{(ip)^2}{2}}$$

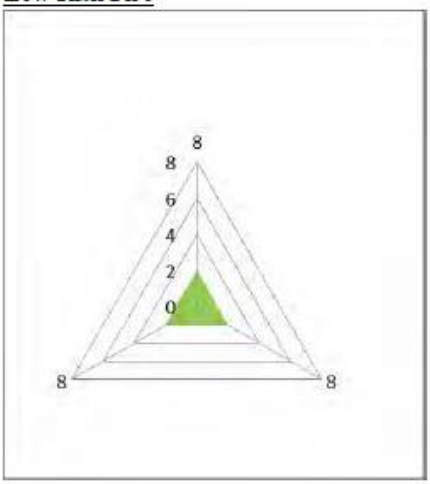
Moderate Risk Fire



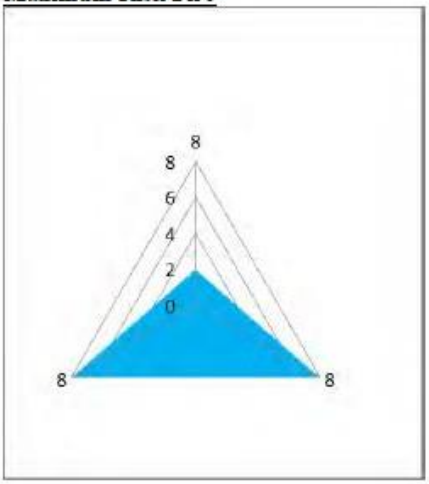
High Risk Fire



Low Risk Fire



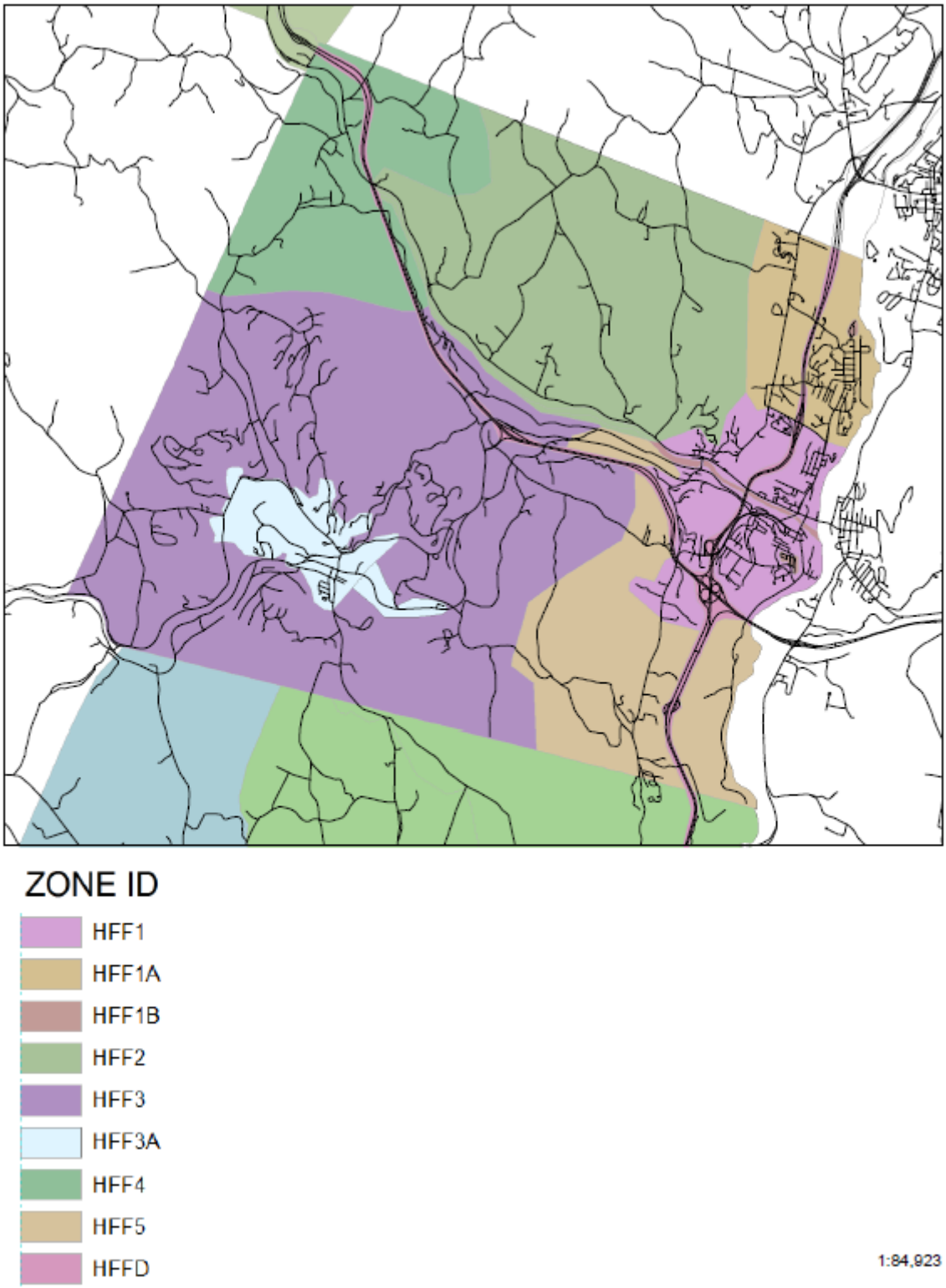
Maximum Risk Fire



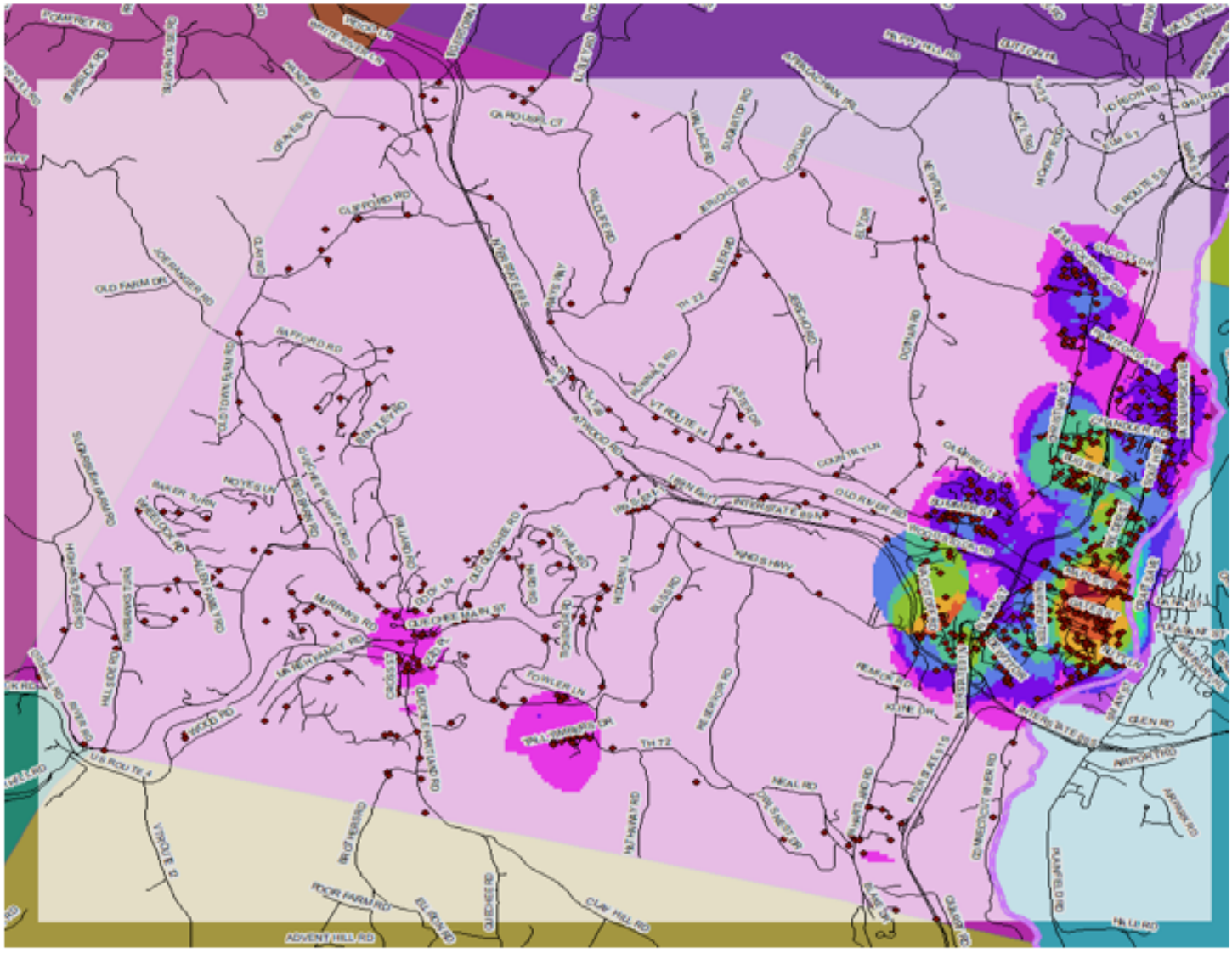
Fire Risk Level Classification

Low hazard/risk score:	4.89 – 12.32
Moderate hazard/risk score:	12.33 – 13.85
High hazard/risk score:	13.86 – 28.15
Maximum hazard/risk score:	28.16 +

Town of Hartford Response Zones



Emergency Response Density Map



Identifying Target Risks in each zone

The Hartford Fire Department has identified target risks in our community. The target risks can be broken down into two groups: Fire Risks, and Special incident risks.
Target Fire Risks include buildings in our community that pose a significant risk due to high-occupancy levels, major economic impact on the community, specific risk to rescuers, etc.
Target Special Incident risks include locations in our community that pose a significant risk due to geographical locations, risk of natural disasters, difficult access for rescuers, etc.

As part of our ongoing assessment of target risks in our community, all business's risks are rated using our "Fire Risk Assessment Form". This form assesses key factors that contribute to the risk of life/property loss from fire:

- Life Hazard
- Community Impact
- Water Supply
- Building Usage
- Building Construction
- Number of Stories
- Square Footage
- Exposures
- Fire Detection and Suppression System

Each category of the Fire Risk Assessment form is assigned a score. Based on the findings of each category, the business is assigned an overall Fire Risk score. This score puts the business into one of 4 risk categories: Low, Moderate, High or Maximum.
These risk assessment forms, as well as the final risk score is uploaded into our mobile data system, and can be accessed from Fire Department apparatus, while en-route to a call. This risk assessment score, and associated information can be used by fire department personnel to more effectively respond to emergencies in the town of Hartford.

Hartford Fire Department Fire Risk Assessment Form

Fire Risk Assessment Form

FIRE RISK ASSESSMENT FORM

Building Address: _____ District: _____

Property Name: _____

Person Making Assessment: _____ Date: _____

	(circle one from each group)
Life Hazard	
High Life Hazard (100 or more occupants)	4
Medium Life Hazard (25 to 99 occupants)	2
Low Life Hazard (less than 25 occupants)	1
Community Impact	
Severe Impact (irreplaceable/historical/hospital)	3
Moderate Impact (high casualty/job loss/tax/food store)	2
Minor Impact (minor casualty/family loss)	1
Hazard Index	
Complex/Multiple/Industrial/Special	3
Simple/Moderate/Business	2
Limited/Common/Residential	1
Water Supply (within 800')	
0 or 1 Hydrant (with less than 1000 gpm)	3
1 at 1000 gpm or over, and 1 less than 1000 gpm	2
2 hydrants at 1000 gpm or higher	1
Building Usage	
Industrial/High Life Hazard/Large Business	3
Residential	2
Office/Small Business	1
Building Construction	
Combustible	3
Limited Combustibility	2
Non-combustible	1
Number of Stories	
3 or more (or greater than 40' in overall height)	3
2 Story Building	2
Single Story Building	1
Square Footage	
15,000 square feet or more	3
7,501 to 14,999 square feet	2
7,500 square feet or less	1
_____ feet x _____ feet x ____ (# of stories) = _____ square feet	
Exposures (buildings within 50')	
3 or more exposure buildings	3
2 exposures buildings	2
1 exposure building	1
None	0
	Subtotal Score: _____
Deductions	
Presence of detection system (fire alarm system)	0.5
Presence of Fire Suppression System (sprinkler system)	0.5
	Total Deductions: _____
Total Score (Subtract total deductions from the subtotal score)	**Total Score:** _____

Risk Categories: Low – (0-6), Moderate – (7-15), High – (16-19), Maximum – (20+)

Pre-plans

As a way to better prepare for target risks, and increase the effectiveness and efficiency of our responses, the Hartford Fire Department routinely conducts pre-plan visits to businesses around our community. These visits allow Fire Department personnel to familiarize themselves with businesses throughout our community, particularly those identified as target risks. These pre-plans also allow Fire Department personnel to locate components of the building's systems:

- FDC
- Sprinkler rooms, and shutoffs
- Knox Boxes
- Roof access, etc.

These pre-plans are uploaded into our mobile data system, and can be accessed from Fire Department apparatus while en-route to a call. This pre-plan form and associated information can be used by fire department personnel to more effectively respond to emergencies in the town of Hartford.

Hartford Fire Department Preplan Questionnaire

TOWN OF HARTFORD
FIRE DEPARTMENT
Fire/Ambulance/Rescue

Scott Cooney, Fire Chief
scooney@hartford-vt.org

812 VA Cutoff Rd., White River Junction, VT 05001
Telephone: 802-295-3232 ~ Fax: 802-295-5143

Preplan Questionnaire

Basic Business Info

Business Name: _____ Phone Number: _____

911 Address: _____

City: _____ ZIP: _____

Building Owner: _____Phone Number: _____

Emergency Contact Info

Emergency Contact #1: _____ Phone Number: _____

Emergency Contact #2: _____ Phone Number: _____

About Facility

Knox Box Location: _____

Number of Buildings: _____ Building Construction: _____

Basement: Yes No Basement: Full Partial

Basement Access Location: _____

Height (In stories): _____ Square Footage: _____

Roof Construction: _____ Roof Access Location: _____

Number of Employees: _____ Approximate Number of Occupants: _____

Business Hours: _____ After Hours Employees: _____

Elevator: Yes No Number of Elevators: _____

Elevator Mechanical Room Location: _____

Fire Protection/Security

Monitored Fire Alarm System: Yes No Sprinkler System: Yes No

Fire Pump: Yes No Hood System: Yes No

Monitoring Company: _____Phone Number: _____

Radio Box #: _____

Fire Alarm Panel Location: _____ Annunciator Location: _____

Sprinkler Shutoff Location: _____

Fire Pump Location: _____ Hood System Location: _____

FDC Location: _____

TQP Inspection Dates - Fire Alarm: _____Sprinkler: _____Hood: _____ Pump: _____

Building Utilities

Main Electric Shut off Location: _____

Photovoltaic Panels: Yes No Photovoltaic Panel Location: _____

Photovoltaic Disconnect Location: _____

Gas Shutoff Location: _____

Gas Supply Location: _____

Heat Location: _____

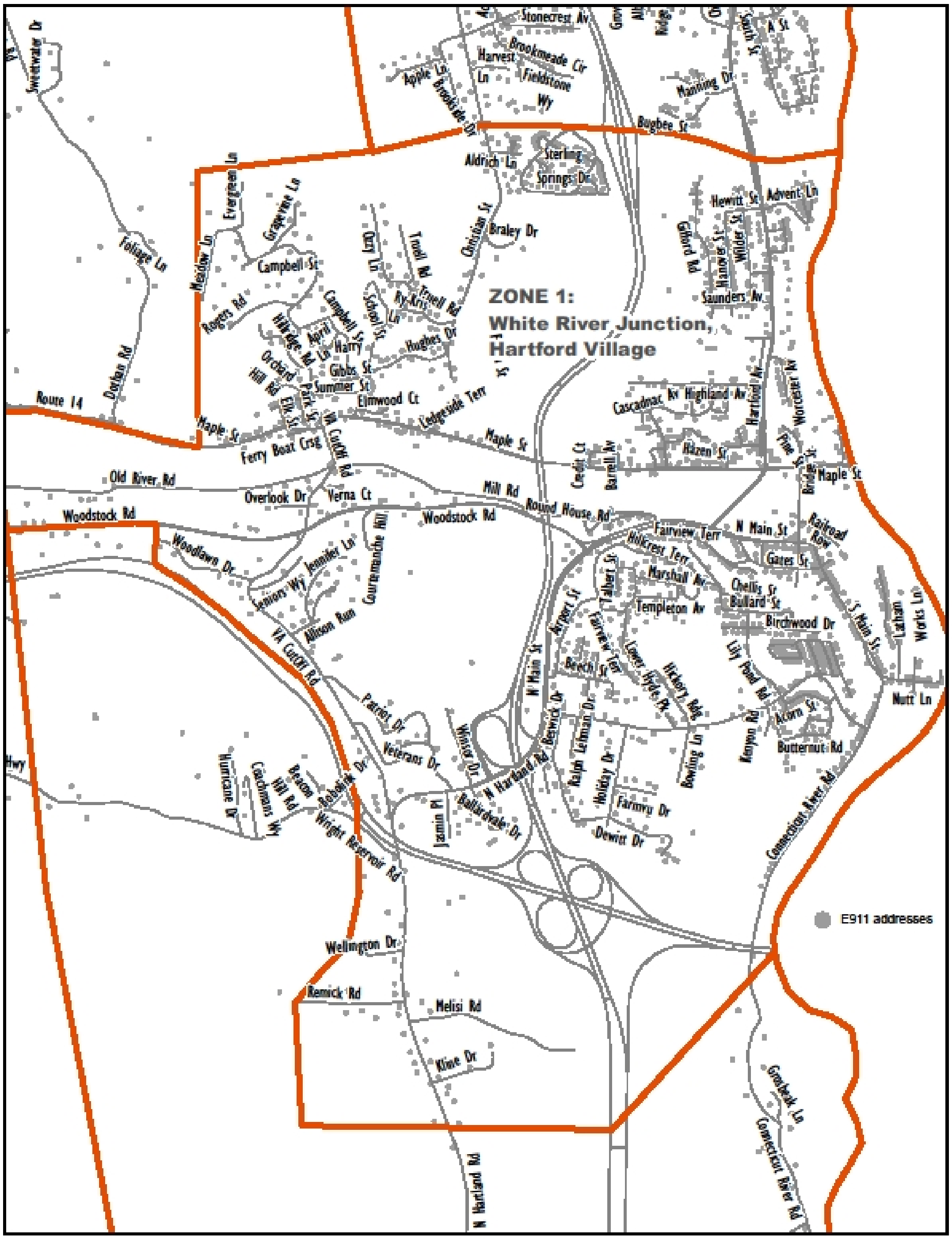
A/C Location: _____

Domestic Water Shut off Location: _____

Emergency Generator: Yes No Generator Location: _____

Comments

_____
_____
_____
_____


ZONE 1:
White River Junction,
Hartford Village
E911 addresses
Stonecrest Av
Brookmeade Cir
Harvest Ln
Fieldstone Wy
Apple Ln
Brookside Dr
Manning Dr
Bugbee St
South St
A St
Sweetwater Dr
Aldrich Ln
Sterling Springs Dr
Evergreen Ln
Grapevine Ln
Hewitt St
Advent Ln
Gifford Rd
Hanover St
Wilder St
Braley Dr
Christian St
Ozzy Ln
Trudi Rd
Foliage Ln
Meadow Ln
Campbell St
Rogers Rd
Trumbull Rd
Saunders Av
Hughes Dr
Harry
Gibbs St
Summer St
Orchard Hill Rd
Elmwood Ct
Ledgeside Terr
Dothan Rd
Route 14
Cascadnac Av
Highland Av
Hartford Av
Worcester Av
Maple St
Ferry Boat Crsg
Hazen St
Pine St
Bridge St
Old River Rd
Overlook Dr
Verna Ct
Mill Rd
Round House Rd
Woodstock Rd
Fairview Terr
N Main St
Railroad Row
Woodlawn Dr
Hillcrest Terr
Gates St
Marshall Av
Chellis St
Bullard St
Templeton Av
Birchwood Dr
S Main St
Latham Works Ln
Allison Run
VA Cutoff Rd
Airport St
Talbert St
Beech St
Hickory Rdg
Lily Pond Rd
Nutt Ln
Patriot Dr
Acorn St
Butternut Rd
Veterans Dr
Winsor Dr
N Hartland Rd
Berwick Dr
Ralph Lehman Dr
Holiday Dr
Bowling Ln
Kenyon Rd
Hurricane Dr
Coachmans Wy
Beacon Hill Rd
Wright Reservoir Rd
Ballardvale Dr
Farmvu Dr
Dewitt Dr
Connecticut River Rd
Wellington Dr
Remick Rd
Melisi Rd
Kiwe Dr
Grosbeak Ln
Hwy

Zone 1

Community Profile:

Community Profile Type: Combination of residential, hotel and small business
Population Density: 1,345 persons per square mile
Zone 1 is primarily White River Junction and the hydrant area of Hartford Village. Both villages have construction features dating from the early 1900's.

White River Junction is built around the confluence of the Connecticut and White River as well as the intersection of railroad transportation. Because White River Junction was the central location of railroad travelers, there are many large, older buildings such as hotels, store fronts, restaurants etc. Most of these buildings are balloon type construction and some have been modified over the years to fit new uses such as apartments, newer stores, and restaurants. Hartford Village is mostly residential, but still has most of the same building characteristics as White River Junction.

Fire Risks:

The Hotel Coolidge, Hartford Church, Gates-Briggs Building, Consolidated Communications Building, Hartford High School, Veterans Medical Center and Hospital, St. Anthony's Church, Hotel Vermonter, and the Village at White River.

Non-Fire Risks:

EMS Risks: Interstate Highway system, multifamily dwellings, assisted-living, low income housing, and homeless camps throughout zone 1.
Other Risks: Passenger and freight trains in remote areas.
WMD and Terrorism Risks: Veterans Medical Center and Hospital, Wilder Dam, US Post Office, Hartford Municipal Building, Hartford Schools, Hartford Fire/Police Facility, Hartford Water System Storage Tanks in Wilder and White River Jct., and Railroad yards.
Public Work Risks: Town well, water storage tanks, sewer plant and bridges over the White River.
Transportation Issues
There are multiple modes of transportation that travel through this zone. The different modes present different challenges. As stated previously, this zone is a major intersection for railroad transportation. The issue with the railroad is the variety of materials that are transported via rail, everything from simple building materials to oil, propane and other hazardous materials. Passenger rail cars also travel through White River Junction causing concern for a mass-casualty incident in the event of a crash or derailment. Interstate 91 and 89 intersect in White River Junction with much of the same concerns as the railroad in terms of commercial transportation. The interstates also pose the threat of motor vehicle accidents involving multiple vehicles, or larger passenger vehicles. Zone 1 also has U.S. Routes 5 and 4 and VT State Route 14 passing and intersecting in it.

There is a small municipal airport across the Connecticut River in Lebanon, NH with regularly scheduled commercial flights. Most of the airports concern would be dealt with by their local fire department, however many planes taking off and landing in the airport have to travel over our community, specifically over Zone 1. The concern would be crash landings on and off of the Interstates.

Identified Special Risks

Identified significant risks in Zone 1:

There are many older buildings with a high occupancy possibility. The Hotel Coolidge was built in the early 1900's and although it is sprinkled, it is balloon frame construction and a very large building with many exposures. The Gates-Briggs building is an extremely large occupancy (44,000 sqft) building in downtown Zone 1. Home to both restaurants, retail space, as well as offices and apartments. Although the building is sprinkled in common areas and egresses, it is very old rambling construction, and poses significant risk to both occupants and rescuers. There are many older homes that have been converted into smaller apartments. Most of these homes are also balloon frame construction and have been modified from their original design to allow for two or sometimes more apartments. There have been many new hotels built in Zone 1 which would cause concern for occupancy load. There is only one hospital in the Town of Hartford, the Veterans Administration Medical Center and it is located in Zone 1. Patient evacuation and some possible hazardous materials inherent to hospitals pose a significant risk to emergency workers. There are three public schools in Zone 1 causing concern about mass-casualty incidents. A large U.S. Post Office is in Zone 1. The post office is a central distribution center for the postal service and has the potential for a haz-mat incident as well as mass casualty due to the large number of employees in that facility. A number of homeless camps have been established around zone 1. The most populous is under the urban bridge, off of Bridge Street. The Hartford Police Department estimates the full-time residents of the camp to be between 8 and 12. Due to the location, reaching and extricating patients poses a risk to rescuers. Also, due to the secluded nature of the camp, there is the additional risk of violence aimed at rescuers.

Zone 1 Risk Assessment Results

INCIDENT TYPE	PROBABILITY	CONSEQUENCE	IMPACT	RISK SCORE	RISK ASSESSMENT
Fire	4	2	6	19.8	high
Wildland Fire	2	2	6	12.3	low
EMS	8	2	2	16.2	high
Rescue	2	2	6	12.3	low
Haz-Mat	2	4	6	19.8	high

Fire Risk Assessment of Identified Target Risk

FIRE RISK ASSESSMENT FORM

BUILDING ADDRESS: 101 Currier St **VILLAGE:** 1 Tiff

PROPERTY NAME: Village at White River Junction

PERSON MAKING ASSESSMENT: Jones **DATE:** 5/22/2018

Life Hazard		Check one from each group
High life hazard ~ 100 or more occupants	4	4
Medium life hazard ~ 25 - 99 occupants	2	
Low life hazard ~ less than 25 occupants	1	
Community Impact		
Severe impact ~ irreplaceable - historical - hospital	3	
Moderate impact ~ high casualty - job loss - tax - food store	2	2
Minor impact ~ minor casualty - family loss	1	
Hazard Index		
Complex - multiple - industrial - special	3	
Simple - moderate - business	2	
Limited - common - residential	1	1
Water Supply		
0 or 1 hydrant ~ with less than 1000 gpm	3	
1 at 1000 gpm or over, and 1 less than 1000 gpm	2	
2 hydrants at 1000 gpm or higher	1	1
Building Usage		
Industrial - high life hazard - large business	3	
Residential	2	2
Office - small business	1	
Building Construction		
Combustible	3	
Limited combustibility	2	
Non-combustible	1	1
Number of Stories		
3 or more ~ or greater than 40' in overall height	3	3
2 story building	2	
Single story building	1	
Square Footage		
15,000 square feet or more	3	3
7,501 - 14,999 square feet	2	
7,500 square feet or less	1	

feet x feet x # of s 85,000

Exposures ~ buildings within 50'		
3 or more exposure buildings	3	
2 exposures buildings	2	2
1 exposure building	1	
None	0	
Subtotal Score		19
Deductions		
Presence of detection system ~ fire alarm system	0.5	0.5
Presence of fire suppression system ~ sprinkler system	0.5	0.5
Total Deductions		1

Total score ~ subtract total deductions from the subtotal score

Total Score 18

Risk Categories

Low ~ 0-9 Moderate ~ 7-15 High ~ 16-19 Maximum ~ 20 +

Fire Risk Assessment of Identified Target Risk

FIRE RISK ASSESSMENT FORM			
BUILDING ADDRESS:	39 S. Main Street	VILLAGE:	1 Tiff
PROPERTY NAME:	Hotel Coolidge		
PERSON MAKING ASSESSMENT:	Jones	DATE:	5/22/2018

Life Hazard		Check one from each group
High life hazard ~ 100 or more occupants	4	
Medium life hazard ~ 25 - 99 occupants	2	
Low life hazard ~ less than 25 occupants	1	1
Community Impact		
Severe impact ~ irreplaceable - historical - hospital	3	
Moderate impact ~ high casualty - job loss - tax - food store	2	2
Minor impact ~ minor casualty - family loss	1	
Hazard Index		
Complex - multiple - industrial - special	3	
Simple - moderate - business	2	
Limited - common - residential	1	1
Water Supply		
0 or 1 hydrant ~ with less than 1000 gpm	3	
1 at 1000 gpm or over, and 1 less than 1000 gpm	2	
2 hydrants at 1000 gpm or higher	1	1
Building Usage		
Industrial - high life hazard - large business	3	
Residential	2	2
Office - small business	1	
Building Construction		
Combustible	3	
Limited combustibility	2	2
Non-combustible	1	
Number of Stories		
3 or more ~ or greater than 40' in overall height	3	3
2 story building	2	
Single story building	1	
Square Footage		
15,000 square feet or more	3	3
7,501 - 14,999 square feet	2	
7,500 square feet or less	1	

feet x feet x # of s 51,950

Exposures ~ buildings within 50'		
3 or more exposure buildings	3	3
2 exposures buildings	2	
1 exposure building	1	
None	0	0
Subtotal Score		18
Deductions		
Presence of detection system ~ fire alarm system	0.5	0
Presence of fire suppression system ~ sprinkler system	0.5	0.5
Total Deductions		0.5

Total score ~ subtract total deductions from the subtotal score

Total Score	17.5

Risk Categories

Low ~ 0-9 Moderate ~ 7-15 High ~ 16-19 Maximum ~ 20 +

Fire Risk Assessment of Identified Target Risk

FIRE RISK ASSESSMENT FORM

BUILDING ADDRESS: 5 S. Main Street **VILLAGE:** 1 Tiff

PROPERTY NAME: Gates-Briggs

PERSON MAKING ASSESSMENT: Jones **DATE:** 5/22/2018

Life Hazard		Check one from each group
High life hazard ~ 100 or more occupants	4	4
Medium life hazard ~ 25 - 99 occupants	2	
Low life hazard ~ less than 25 occupants	1	
Community Impact		
Severe impact ~ irreplaceable - historical - hospital	3	3
Moderate impact ~ high casualty - job loss - tax - food store	2	
Minor impact ~ minor casualty - family loss	1	
Hazard Index		
Complex - multiple - industrial - special	3	
Simple - moderate - business	2	2
Limited - common - residential	1	
Water Supply		
0 or 1 hydrant ~ with less than 1000 gpm	3	
1 at 1000 gpm or over, and 1 less than 1000 gpm	2	
2 hydrants at 1000 gpm or higher	1	
Building Usage		
Industrial - high life hazard - large business	3	
Residential	2	2
Office - small business	1	
Building Construction		
Combustible	3	
Limited combustibility	2	2
Non-combustible	1	
Number of Stories		
3 or more ~ or greater than 40' in overall height	3	3
2 story building	2	
Single story building	1	
Square Footage		
15,000 square feet or more	3	3
7,501 - 14,999 square feet	2	
7,500 square feet or less	1	

feet x feet x # of s 44,378

Exposures ~ buildings within 50'		
3 or more exposure buildings	3	3
2 exposures buildings	2	
1 exposure building	1	
None	0	0
Subtotal Score		**22**
Deductions		
Presence of detection system ~ fire alarm system	0.5	0.5
Presence of fire suppression system ~ sprinkler system	0.5	0.5
Total Deductions		**1**

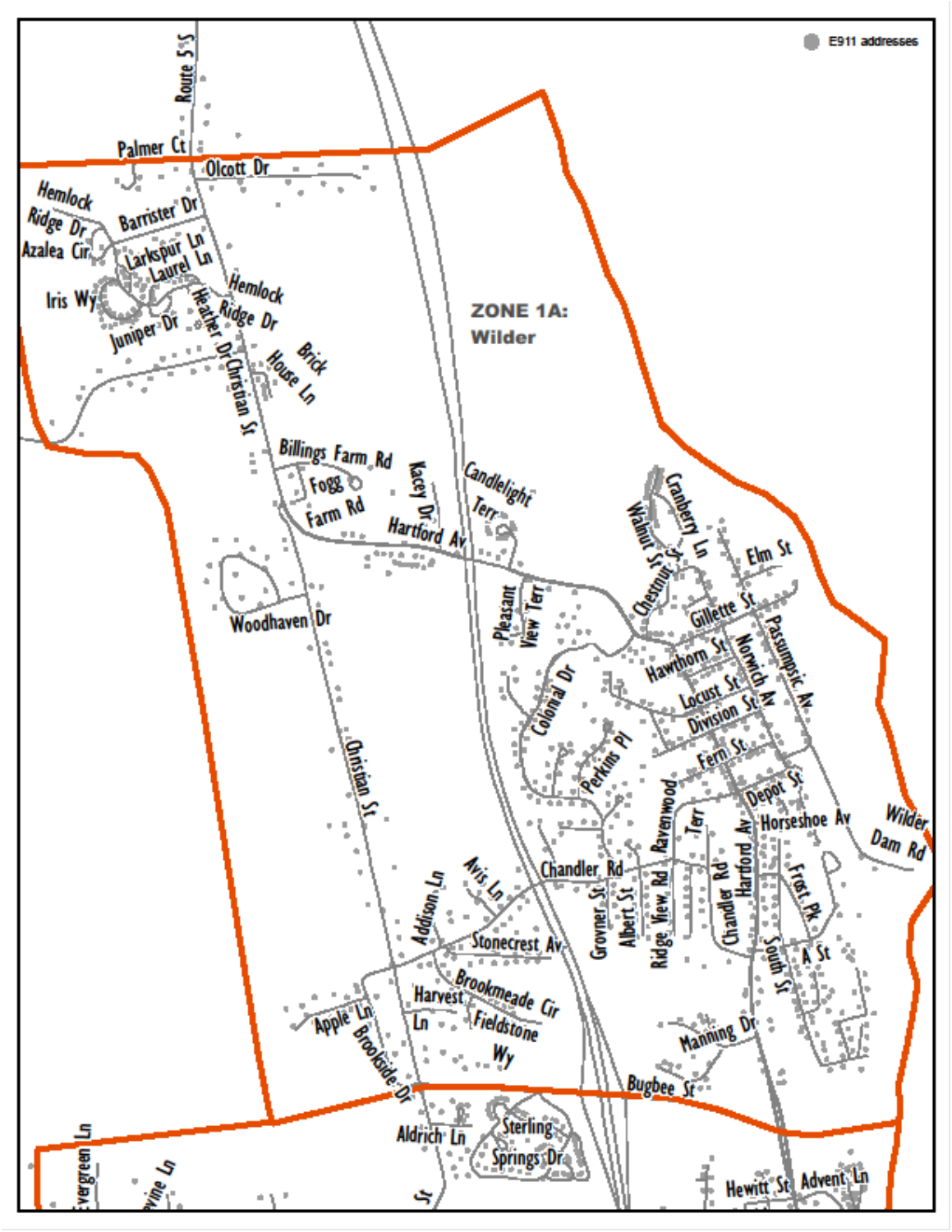
Total score ~ subtract total deductions from the subtotal score

Total Score **21**

Risk Categories

Low ~ 0-9 Moderate ~ 7-15 High ~ 16-19 Maximum ~ 20 +

Zone 1A


E911 addresses
ZONE 1A:
Wilder
Route 5
Palmer Ct
Olcott Dr
Hemlock Ridge Dr
Barrister Dr
Azalea Cir
Larkspur Ln
Laurel Ln
Iris Wy
Juniper Dr
Heather Dr
Hemlock Ridge Dr
Christian St
Brick House Ln
Billings Farm Rd
Fogg Farm Rd
Nacey Dr
Hartford Av
Candlelight Terr
Woodhaven Dr
Pleasant View Terr
Walnut St
Chestnut St
Cranberry Ln
Elm St
Gillette St
Hawthorn St
Norwich Av
Passumpsic Av
Locust St
Division St
Fern St
Colonial Dr
Perkins Pl
Ravenwood Terr
Depot St
Horseshoe Av
Wilder Dam Rd
Chandler Rd
Hartford Av
Frost Pk
South St
A St
Ridge View Rd
Grovner St
Albert St
Addison Ln
Avis Ln
Stonecrest Av
Brookmeade Cir
Harvest Ln
Fieldstone Wy
Apple Ln
Brookside Dr
Manning Dr
Bugbee St
Aldrich Ln
Sterling Springs Dr
Hewitt St
Advent Ln
Evergreen Ln

Community Profile

Community Profile Type: Mostly Residential
Population Density: 2,061 persons per square mile
Zone 1A is the Village of Wilder. Wilder is primarily residential with some new homes but also having many older homes from the early to mid-1900's. Located within Zone 1A, there is a portion of Interstate 91 and the railroad leaving White River Junction., heading north. Also located in Zone 1A is a nursing home, an assisted living facility, and many new condo units that have large occupancies and exposure issues. Near the northern boundary of Zone 1A is a small industrial park with a UPS warehouse, bus terminal, puzzle manufacturer, and several other small businesses.

Fire Risks

Valley Terrace Assisted Living, Dothan Brook School

Non-Fire Risks

EMS Risks: Valley Terrace Assisted Living has a high number of non-ambulatory residents, and those needing special medical care. There are also a number of low-income multi-family residences in this zone.
Other Risks: Passenger and freight trains in remote areas.
WMD and Terrorism Risks: Wilder Dam, Hartford Water System Storage Tanks.
Public Work Risks:
Town well, water storage tanks, sewer plant and bridges over the White River.

Transportation Issues
A portion of Interstate 91, a portion of railroad, and a portion of U.S. Route 5 all pass through Zone1A, all with the same inherent risks as those of Zone 1.

Identified Special Risks
Identified special risks in Zone 1A:
Many older homes have been converted into smaller apartments. Most of these homes are also balloon frame construction and have been modified from their original design to allow for two or sometimes more apartments. There are two public schools in Zone 1A causing concern about mass-casualty incidents. There is a small U.S. Post Office that has the potential for a haz-mat incident. There is a nursing home and an assisted living facility within Zone1A that poses a mass-casualty risk as well as an evacuation risk. An area of Zone 1A has recently been developed and has numerous condominiums and a large three story, multi-unit apartment building. There are many condominium developments spread throughout Zone 1A. Most of the developments are a substantial distance from Station One in White River Junction. One of the major hydro-electric dams of the Connecticut River is located in Zone 1A, although owned by the State of New Hampshire; any major fluctuations with water level could affect homes and/or businesses in Zone 1A.

Zone 1A Risk Assessment Results

INCIDENT TYPE	PROBABILITY	CONSEQUENCE	IMPACT	RISK SCORE	RISK ASSESSMENT
Fire	2	2	6	12.3	low
Wildland Fire	2	2	6	12.3	low
EMS	8	2	2	16.2	high
Rescue	2	2	6	12.3	low
Haz-Mat	2	4	6	19.8	high

Fire Risk Assessment of Identified Target Risk

FIRE RISK ASSESSMENT FORM

BUILDING ADDRESS: 2820 Christian Street **VILLAGE:** 1A

PROPERTY NAME: Valley Terrace

PERSON MAKING ASSESSMENT: Jones **DATE:** 5/22/2018

Life Hazard		Check one from each group
High life hazard ~ 100 or more occupants	4	
Medium life hazard ~ 25 - 99 occupants	2	2
Low life hazard ~ less than 25 occupants	1	
Community Impact		
Severe impact ~ irreplaceable - historical - hospital	3	
Moderate impact ~ high casualty - job loss - tax - food store	2	2
Minor impact ~ minor casualty - family loss	1	
Hazard Index		
Complex - multiple - industrial - special	3	
Simple - moderate - business	2	
Limited - common - residential	1	1
Water Supply		
0 or 1 hydrant ~ with less than 1000 gpm	3	
1 at 1000 gpm or over, and 1 less than 1000 gpm	2	2
2 hydrants at 1000 gpm or higher	1	
Building Usage		
Industrial - high life hazard - large business	3	
Residential	2	2
Office - small business	1	
Building Construction		
Combustible	3	
Limited combustibility	2	
Non-combustible	1	1
Number of Stories		
3 or more ~ or greater than 40' in overall height	3	
2 story building	2	2
Single story building	1	
Square Footage		
15,000 square feet or more	3	3
7,501 - 14,999 square feet	2	
7,500 square feet or less	1	

feet x feet x # of s 44,272

Exposures ~ buildings within 50'		
3 or more exposure buildings	3	
2 exposures buildings	2	
1 exposure building	1	
None	0	0
Subtotal Score		**15**
Deductions		
Presence of detection system ~ fire alarm system	0.5	0.5
Presence of fire suppression system ~ sprinkler system	0.5	0.5
Total Deductions		**1**

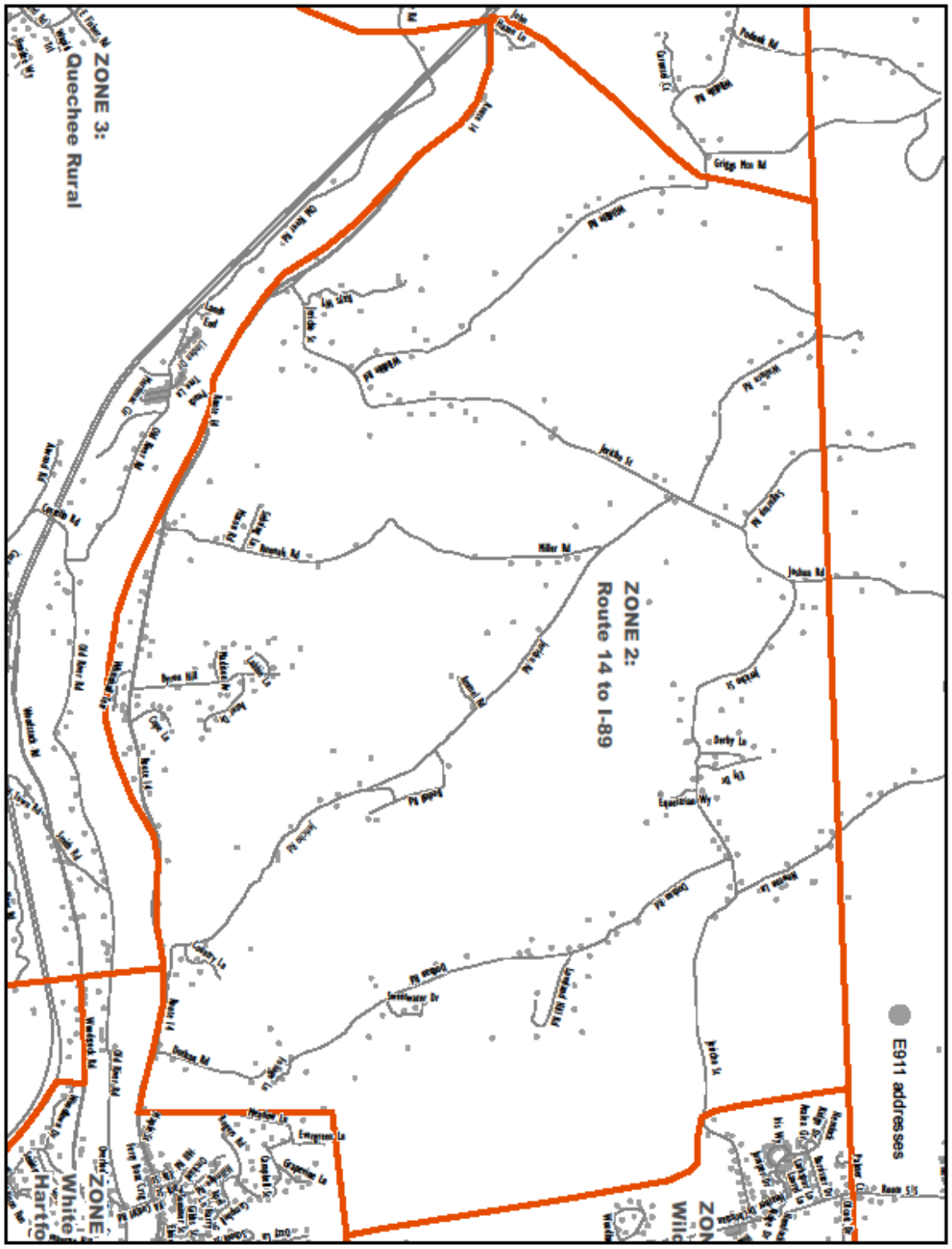
Total score ~ subtract total deductions from the subtotal score

Total Score **14**

Risk Categories

Low ~ 0-9 Moderate ~ 7-15 High ~ 16-19 Maximum ~ 20 +

ZONE 2



Zone 2 Risk Assessment Results

INCIDENT TYPE	PROBABILITY	CONSEQUENCE	IMPACT	RISK SCORE	RISK ASSESSMENT
Fire	2	2	6	19.8	high
Wildland Fire	2	2	6	12.3	low
EMS	6	2	2	12.3	low
Rescue	2	2	6	12.3	low
Haz-Mat	2	4	6	19.8	high

FIRE RISK ASSESSMENT FORM			
BUILDING ADDRESS:	1341 RT 14	VILLAGE:	2
PROPERTY NAME:	Pete's Tire Barn		
PERSON MAKING ASSESSMENT:	Jones	DATE:	5/22/2018

Life Hazard		Check one from each group
High life hazard ~ 100 or more occupants	4	
Medium life hazard ~ 25 - 99 occupants	2	
Low life hazard ~ less than 25 occupants	1	1
Community Impact		
Severe impact ~ irreplaceable - historical - hospital	3	
Moderate impact ~ high casualty - job loss - tax - food store	2	2
Minor impact ~ minor casualty - family loss	1	
Hazard Index		
Complex - multiple - industrial - special	3	
Simple - moderate - business	2	2
Limited - common - residential	1	
Water Supply		
0 or 1 hydrant ~ with less than 1000 gpm	3	3
1 at 1000 gpm or over, and 1 less than 1000 gpm	2	
2 hydrants at 1000 gpm or higher	1	
Building Usage		
Industrial - high life hazard - large business	3	3
Residential	2	
Office - small business	1	
Building Construction		
Combustible	3	3
Limited combustibility	2	
Non-combustible	1	
Number of Stories		
3 or more ~ or greater than 40' in overall height	3	
2 story building	2	
Single story building	1	1
Square Footage		
15,000 square feet or more	3	
7,501 - 14,999 square feet	2	2
7,500 square feet or less	1	

feet x	feet x	# of s	10,000

Exposures ~ buildings within 50'		
3 or more exposure buildings	3	
2 exposures buildings	2	
1 exposure building	1	
None	0	0
	Subtotal Score	17

Deductions		
Presence of detection system ~ fire alarm system	0.5	0.5
Presence of fire suppression system ~ sprinkler system	0.5	0.5
	Total Deductions	1

Total score ~ subtract total deductions from the subtotal score

	Total Score	16

Risk Categories			
Low ~ 0-9	Moderate ~ 7-15	High ~ 16-19	Maximum ~ 20 +

Fire Risk Assessment of Identified Target Risk

FIRE RISK ASSESSMENT FORM

BUILDING ADDRESS: 1118 RT 14 **VILLAGE:** 2

PROPERTY NAME: White River Paper/Swish

PERSON MAKING ASSESSMENT: Jones **DATE:** 5/22/2018

Life Hazard		Check one from each group
High life hazard ~ 100 or more occupants	4	
Medium life hazard ~ 25 - 99 occupants	2	
Low life hazard ~ less than 25 occupants	1	1
Community Impact		
Severe impact ~ irreplaceable - historical - hospital	3	
Moderate impact ~ high casualty - job loss - tax - food store	2	2
Minor impact ~ minor casualty - family loss	1	
Hazard Index		
Complex - multiple - industrial - special	3	3
Simple - moderate - business	2	
Limited - common - residential	1	
Water Supply		
0 or 1 hydrant ~ with less than 1000 gpm	3	3
1 at 1000 gpm or over, and 1 less than 1000 gpm	2	
2 hydrants at 1000 gpm or higher	1	
Building Usage		
Industrial - high life hazard - large business	3	3
Residential	2	
Office - small business	1	
Building Construction		
Combustible	3	
Limited combustibility	2	
Non-combustible	1	1
Number of Stories		
3 or more ~ or greater than 40' in overall height	3	
2 story building	2	
Single story building	1	1
Square Footage		
15,000 square feet or more	3	3
7,501 - 14,999 square feet	2	
7,500 square feet or less	1	

feet x feet x # of s 43,550

Exposures ~ buildings within 50'		
3 or more exposure buildings	3	
2 exposures buildings	2	
1 exposure building	1	
None	0	0
Subtotal Score		**17**
Deductions		
Presence of detection system ~ fire alarm system	0.5	0
Presence of fire suppression system ~ sprinkler system	0.5	0.5
Total Deductions		**0.5**

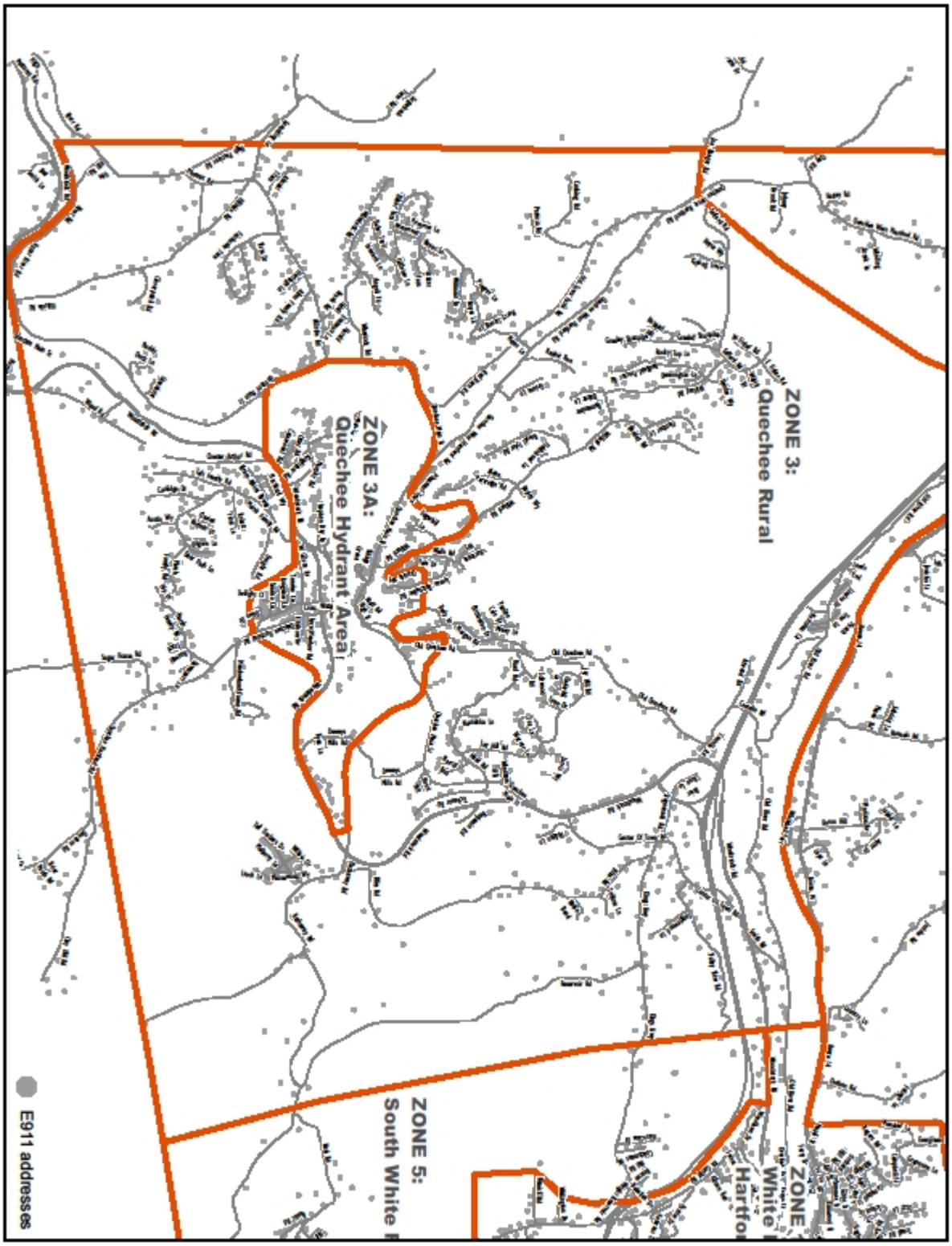
Total score ~ subtract total deductions from the subtotal score

Total Score **16.5**

Risk Categories

Low ~ 0-9 Moderate ~ 7-15 High ~ 16-19 Maximum ~ 20 +

ZONE 3


ZONE 3A:
Quechee Hydrant Area
ZONE 3:
Quechee Rural
ZONE 5:
South White
E911 addresses

Community Profile

Community Profile Type: Mostly Residential
Population Density: 126 persons per square mile
Zone 3 is the non-hydrant portion of the Village of Quechee. Zone 3 is primarily residential and most of the homes are seasonal and therefore not occupied year-round. Significant development of Zone 3 began around the late 1960's. Before this time, it was primarily wooded areas and farmland. In the early 1980's multiple condominium developments started to appear and continue to grow today. As stated earlier most of the homes are seasonal as there is a small resort in Quechee that includes a ski hill, two golf courses and a club house with pools, racquet ball courts, exercise equipment and a few banquet halls. Located within Zone 3, is a portion of Interstate 89 and the railroad leaving White River Junction., heading west. Most of the structures in Zone 3 are located relatively rural compared to other Zones. This makes for extended response times from Hartford Station One. Station Two, the Hartford Sub-Station, is located in the center of Zone 3A (hydrant area of Quechee) but is an unmanned station and is dependent on off-duty or paid on-call personnel to get apparatus.

Fire Risks

The Ridge, Snow Village, Kingswood Condominiums, and Birchwood Condominiums

Non-Fire Risks

<u>Public Work Risks:</u> Water system reservoirs and sewage treatment plant.

Transportation Issues
A portion of Interstate 89, a portion of railroad, and a portion of U.S. Route 4 all pass through Zone 3, all with the same inherent risks as those of Zone 1. Various times of the year the population in Quechee is substantially larger than normal. This is mainly due to tourism. During these times of the year the extended response times to emergencies are made that much more difficult due to increased vehicle and pedestrian traffic.

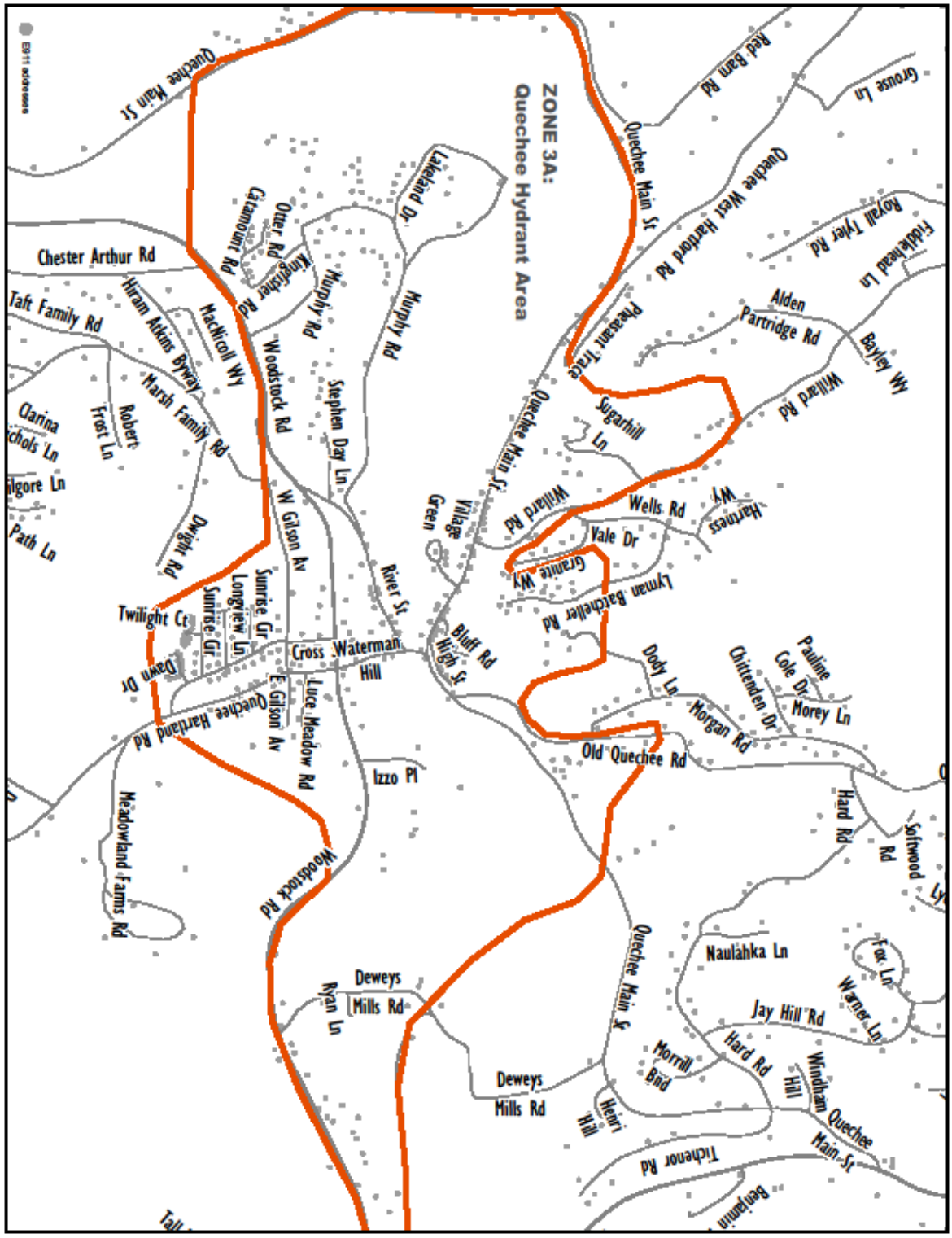
Identified Special Risks
Identified special risks in Zone 3:

As stated earlier, many of the buildings in Zone 3 are relatively rural and are also seasonal. This makes the response time longer, especially in poor weather conditions. Because of the small resort in Quechee, the concept of condominiums has become very attractive to developers. This raises concern for exposure risks as well as multiple families residing in the same building. Being the part of Quechee that does not have hydrants, water supply is a concern. There are several dry hydrants and small ponds located throughout Zone 3. The Ottauquechee River runs through portions of Zone 3. This river has cut into the valley in a snake-like pattern causing concern in the spring when the ice begins to melt. Because of the pattern of the river, ice jams are prevalent and with any added water such as a warming trend or rain, the river has potential to overflow its banks in certain areas.

Zone 3 Risk Assessment Results

INCIDENT TYPE	PROBABILITY	CONSEQUENCE	IMPACT	RISK SCORE	RISK ASSESSMENT
Fire	2	2	6	12.3	low
Wildland Fire	2	2	6	12.3	low
EMS	8	2	2	16.2	moderate
Rescue	2	2	6	12.3	low
Haz-Mat	2	4	6	19.8	high

ZONE 3A


ZONE 3A:
Quechee Hydrant Area
Quechee Main St
Red Barn Rd
Grouse Ln
Quechee West Hartford Rd
Foxhall Tyler Rd
Fiddlehead Ln
Alden Partridge Rd
Bayley Wy
Willard Rd
Pheasant Trace
Sugarhill Ln
Wells Rd
Vale Dr
Granite Wy
Hartness Wy
Lyman Batchelder Rd
Village Green
River St
Bluff Rd
High St
Dody Ln
Chittenden Dr
Morgan Rd
Pauline Cole Dr
Morey Ln
Old Quechee Rd
Hard Rd
Softwood Rd
Naulahka Ln
Fox Ln
Warner Ln
Jay Hill Rd
Morrill Rd
Windham Hill
Quechee Main St
Tichenor Rd
Benjamin
Deweys Mills Rd
Ryan Ln
Izzo Pl
Meadowland Farms Rd
Woodstock Rd
Quechee Hartland Rd
E Gilson Av
Lucs Meadow Rd
Cross Waterman Hill
Dawn Dr
Twilight Ct
Sunrise Gr
Longview Ln
W Gilson Av
Stephen Day Ln
Woodstock Rd
Murphy Rd
Lakeland Dr
Otter Rd
Claremont Rd
Chester Arthur Rd
Hiram Atkins Byway
MacNicoll Wy
Taft Family Rd
Marsh Family Rd
Robert Frost Ln
Clarina
Dwight Rd
Path Ln
Quechee Main St

Community Profile

Community Profile Type: Combination of residential and small business.
Population Density: 338 persons per square mile
Zone 3A is the hydrant district of the Village of Quechee. Much of Zone 3A is older construction as it is the center of Quechee and was the original village surrounded by large farms. Quechee Main Street is a narrow road that cuts through the middle of Zone 3A and is surrounded on both sides by a few old mills, barns and store fronts that have become various businesses, apartment buildings and stores. The buildings are mainly balloon type construction. Many have been remodeled to become multiple apartments within one building. Many of the buildings in the center of Zone 3A were built very close to one another. This raises concern for fire exposure issues.

Fire Risks

Simon Pearce Glass Studio and Restaurant, Condominiums, Quechee Inn at Marshland Farm, Quechee Church, and Quechee Club including the base lodge at the ski hill and the Quechee Fells Barn.

Non-Fire Risks

EMS Risks: Quechee Gorge for high angle rescue. Ottauquechee River near the intersection of Quechee Main St. and Waterman Hill. Quechee Ski Hill (alpine skiing).
Other Risks: Flooding along Quechee Main St.
WMD and Terrorism Risks: Quechee Gorge, Ottauquechee River, Waldorf and Mid-Vermont Christian Schools.
Law Enforcement Risks; High traffic volume particularly during holidays and weekends.
Public Work Risks: Quechee Covered Bridge

Transportation Issues
Zone 3A is a relatively small zone. One of the main roads through this zone is US Route 4. Route 4 is the major route connecting the east and west sides of central Vermont. Located on US Route 4 are many tourist attractions, including the Quechee Gorge, which attracts many pedestrians. There are no Interstates or railroads that run through Zone 3A. The only major waterway is the Ottauquechee River.

Identified Special Risks
Identified significant risks in Zone 3A:
There are many older buildings that have been remodeled with smaller apartments and businesses within them. The buildings, especially on Quechee Main Street were built in close proximity of each other raising concern for exposure issues. Because of the age of these buildings, most do not have sprinkler protection. The narrowness of Quechee Main Street makes truck placement a concern with even a small incident. The Ottauquechee River is located alongside Quechee Main Street. Because of the winding path that the river has cut over the years, ice jams and flooding become a concern during the early spring when melting occurs. There is a

public elementary school and a private elementary and high school located within Zone 3A causing concern for a possible mass-casualty event.

Zone 3A Risk Assessment Results

INCIDENT TYPE	PROBABILITY	CONSEQUENCE	IMPACT	RISK SCORE	RISK ASSESSMENT
Fire	2	2	6	12.3	high
Wildland Fire	2	2	6	12.3	low
EMS	8	2	2	16.2	high
Rescue	2	2	6	12.3	low
Haz-Mat	2	4	6	19.8	high

Fire Risk Assessment of Identified Target Risk

FIRE RISK ASSESSMENT FORM

BUILDING ADDRESS: 91 Village Green **VILLAGE:** 3A

PROPERTY NAME: Village Green/ Post Office

PERSON MAKING ASSESSMENT: jones **DATE:** 5/30/2018

Life Hazard		Check one from each group
High life hazard ~ 100 or more occupants	4	
Medium life hazard ~ 25 - 99 occupants	2	
Low life hazard ~ less than 25 occupants	1	1
Community Impact		
Severe impact ~ irreplaceable - historical - hospital	3	
Moderate impact ~ high casualty - job loss - tax - food store	2	
Minor impact ~ minor casualty - family loss	1	1
Hazard Index		
Complex - multiple - industrial - special	3	
Simple - moderate - business	2	
Limited - common - residential	1	1
Water Supply		
0 or 1 hydrant ~ with less than 1000 gpm	3	
1 at 1000 gpm or over, and 1 less than 1000 gpm	2	
2 hydrants at 1000 gpm or higher	1	1
Building Usage		
Industrial - high life hazard - large business	3	
Residential	2	2
Office - small business	1	
Building Construction		
Combustible	3	1
Limited combustibility	2	
Non-combustible	1	
Number of Stories		
3 or more ~ or greater than 40' in overall height	3	
2 story building	2	2
Single story building	1	
Square Footage		
15,000 square feet or more	3	
7,501 - 14,999 square feet	2	
7,500 square feet or less	1	1

feet x feet x # of s 7,576

Exposures ~ buildings within 50'		
3 or more exposure buildings	3	
2 exposures buildings	2	
1 exposure building	1	1
None	0	0
	Subtotal Score	**11**
Deductions		
Presence of detection system ~ fire alarm system	0.5	
Presence of fire suppression system ~ sprinkler system	0.5	
	Total Deductions	**0**

Total score ~ subtract total deductions from the subtotal score

Total Score **11**

Risk Categories

Low ~ 0-9 Moderate ~ 7-15 High ~ 16-19 Maximum ~ 20 +

Fire Risk Assessment of Identified Target Risk

FIRE RISK ASSESSMENT FORM

BUILDING ADDRESS: 55 Village Green **VILLAGE:** 3A

PROPERTY NAME: Village Green/ Quechee lakes rentals

PERSON MAKING ASSESSMENT: jones **DATE:** 5/30/2018

Life Hazard		Check one from each group
High life hazard ~ 100 or more occupants	4	
Medium life hazard ~ 25 - 99 occupants	2	
Low life hazard ~ less than 25 occupants	1	1
Community Impact		
Severe impact ~ irreplaceable - historical - hospital	3	
Moderate impact ~ high casualty - job loss - tax - food store	2	
Minor impact ~ minor casualty - family loss	1	1
Hazard Index		
Complex - multiple - industrial - special	3	
Simple - moderate - business	2	
Limited - common - residential	1	1
Water Supply		
0 or 1 hydrant ~ with less than 1000 gpm	3	
1 at 1000 gpm or over, and 1 less than 1000 gpm	2	
2 hydrants at 1000 gpm or higher	1	1
Building Usage		
Industrial - high life hazard - large business	3	
Residential	2	2
Office - small business	1	
Building Construction		
Combustible	3	3
Limited combustibility	2	
Non-combustible	1	
Number of Stories		
3 or more ~ or greater than 40' in overall height	3	
2 story building	2	2
Single story building	1	
Square Footage		
15,000 square feet or more	3	
7,501 - 14,999 square feet	2	
7,500 square feet or less	1	1

feet x feet x # of s 5,204

Exposures ~ buildings within 50'		
3 or more exposure buildings	3	
2 exposures buildings	2	
1 exposure building	1	1
None	0	0
	Subtotal Score	13
Deductions		
Presence of detection system ~ fire alarm system	0.5	
Presence of fire suppression system ~ sprinkler system	0.5	
	Total Deductions	0

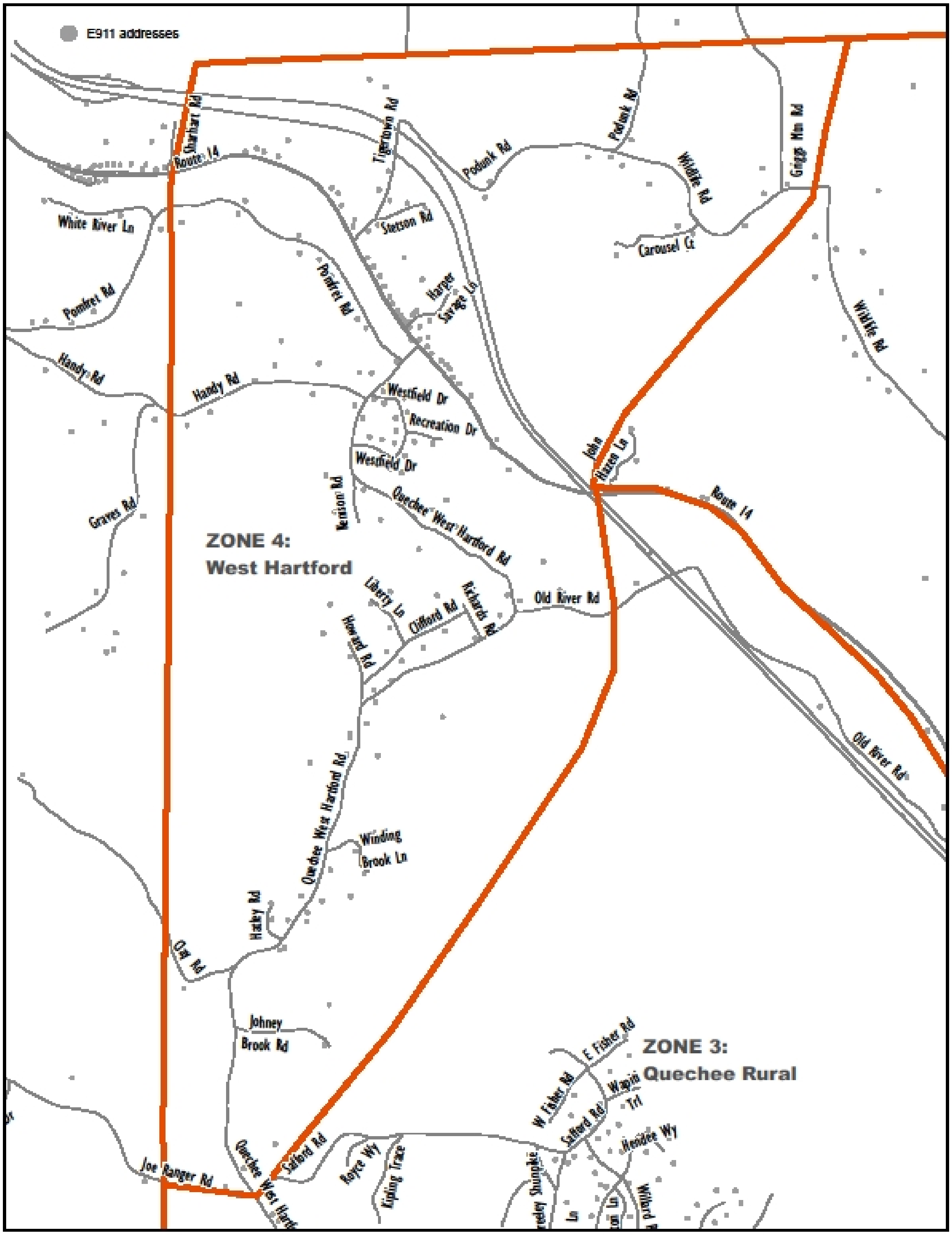
Total score ~ subtract total deductions from the subtotal score

Total Score 13

Risk Categories

Low ~ 0-9 Moderate ~ 7-15 High ~ 16-19 Maximum ~ 20 +

ZONE 4


E911 addresses
ZONE 4:
West Hartford
ZONE 3:
Quechee Rural
Route 14
Podunk Rd
Tigertown Rd
Stetson Rd
White River Ln
Pomfret Rd
Handy Rd
Westfield Dr
Recreation Dr
Graves Rd
Quechee West Hartford Rd
Old River Rd
Liberty Ln
Clifford Rd
Richards Rd
Howard Rd
Winding Brook Ln
Haley Rd
Johney Brook Rd
Joe Ranger Rd
Safford Rd
Royce Wy
Kipling Trace
Carousel Ct
Wildlife Rd
Griggs Mtn Rd
John Hazen Ln
E Fisher Rd
W Fisher Rd
Henidee Wy
Wilbard Rd

Community Profile

Community Profile Type: Mostly Residential
Population Density: 126 people per square mile
Zone 4 is a non-hydrant area. It consists mostly of the Village of West Hartford and includes some remote locations extending away from the Village. Portions of Interstate 89 and railroad pass through Zone 4. VT Route 14 is the local passageway through Zone 4. Zone 4 is primarily residential with the majority of the homes being sparsely located compared to Zones 1 and 1A. There are some small businesses that are located along Route 14 and the White River.

Fire Risks

Large buildings in West Hartford Village

Non-Fire Risks

EMS Risks: West Hartford Bridge over White River for water rescue. Clifford Park
Other Risks: Passenger and freight trains in remote areas.
Public Work Risks: West Hartford Bridge

Transportation Issues
Interstate 89, New England Central Railroad, and VT Route 14 all pass through Zone 4, all with the same inherent risks as those of Zone 1.

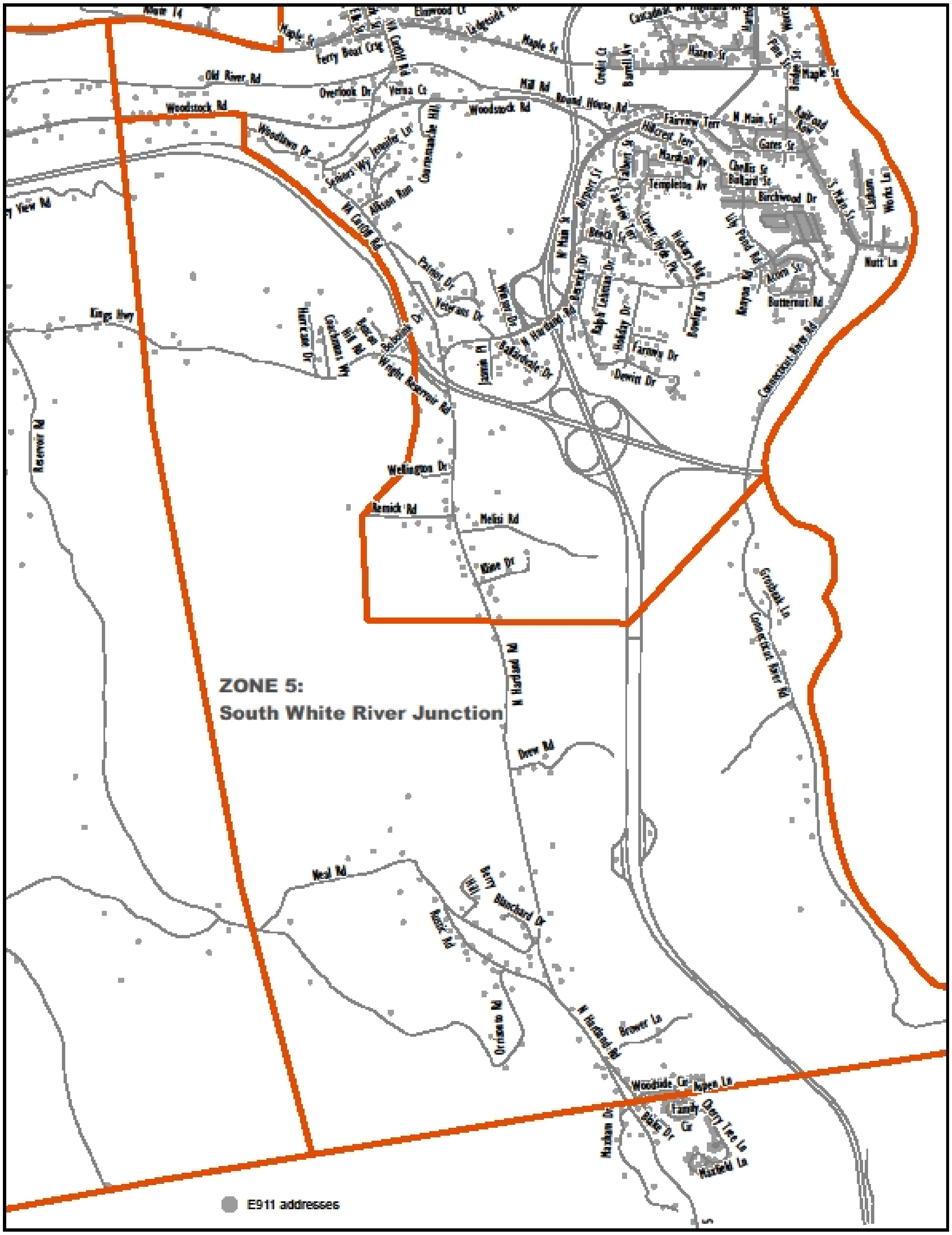
Identified Special Risks
Identified special risks in Zone 4:

The largest special risk in Zone 4 would be the remote location of the Zone from the fire station, which causes an extended response time. A portion of the Interstate, railroad, and VT Route 14 run through Zone 4 with the same inherent risks of Zone 1 and 1A. There are some homes and business that are located on VT Route 14 which runs along the White River. Ice jams and subsequent flooding are a concern in the spring. Water supply is an issue within this Zone as it is does not have fire hydrants. There are a few dry hydrants located throughout the Zone and the White River to the south with several access points to get water.

Zone 4 Risk Assessment Results

INCIDENT TYPE	PROBABILITY	CONSEQUENCE	IMPACT	RISK SCORE	RISK ASSESSMENT
Fire	2	2	6	12.3	low
Wildland Fire	2	2	6	12.3	low
EMS	6	2	2	12.3	low
Rescue	2	2	6	12.3	low
Haz-Mat	2	4	6	19.8	high

ZONE 5


ZONE 5:
South White River Junction
E911 addresses
Old River Rd
Woodstock Rd
Maple St
Mill Rd
Kings Hwy
Reservoir Rd
Wellington Dr
Remick Rd
Melisi Rd
N Hartland Rd
Drew Rd
Neal Rd
Brower Ln
Grosbeak Ln
Connecticut River Rd
Butternut Rd
Nutt Ln

Community Profile

Community Profile Type: Mostly Residential
Population Density: 126 persons per square mile
Zone 5 is a non-hydrant area. It is the most southern portion of the Town. It consists of the southern parts of the Village of White River Junction. Portions of Interstate 89, Interstate 91, the railroad, US Route 5 and US Route 4. There are some small businesses that are located along US Route 5 including a propane distribution facility and the Town redemption / recycle center. The east side of the Zone is bordered by the Connecticut River. The remainder of the Zone is sparsely located residential.

Fire Risks

Pinecrest Motel, Armed Forces Training Facility, Young's Propane, gasoline and fuel oil distribution center, and construction and demolition materials disposal area at the land fill.

Non-Fire Risks

EMS Risks:
Other Risks: Passenger and freight trains in remote areas. Hazardous waste at landfill.
WMD and Terrorism Risks: Young's Propane
Public Work Risks: Solid Waste transfer facility.

Transportation Issues
A portion of Interstate 89 and 91, a portion of railroad, and a portion of US Route 5 and 4 all pass through Zone 5, all with the same inherent risks as those of Zone 1.

Identified Special Risks
Identified special risks in Zone 5:

Because of the Interstates and railroads, the greatest concern would be probability of a hazardous material incident and multiple vehicle accidents within that Zone. Water supply is an issue as there are no municipal hydrants. There are several dry hydrants in various locations to assist with water supply. The Zone is in close proximity of the fire station so that response times are minimal.

Zone 5 Risk Assessment Results

INCIDENT TYPE	PROBABILITY	CONSEQUENCE	IMPACT	RISK SCORE	RISK ASSESSMENT
Fire	2	2	6	12.3	low
Wildland Fire	2	2	5	12.3	low
EMS	6	2	2	12.3	low
Rescue	2	2	6	12.3	low
Haz-Mat	2	4	6	19.8	high

Conclusion

The Hartford Fire Department strives to provide the most appropriate and effective response to emergencies in the town of Hartford. Community risk assessments are a valuable tool to help ensure that we are responding to each incident, in each unique response zone, with the appropriate apparatus and personnel. By continuing to track and analyze risk data we are furthering our commitment to **"Excellence in Service".** Community risk assessment and community risk reduction are much more than data analyzation alone; particularly for a smaller department, like Hartford. An important element is our overall presence and involvement in the community. Through our fire-prevention work and community outreach, the Hartford Fire Department works hard to be a trusted and dependable resource to our entire community. The benefits of our everyday community interactions- both formal and informal are a form of community risk reduction that cannot be quantified within this document.

Community risk assessments will always be a tool to help us meet the needs of our ever-changing and growing town. Moving forward we will be researching alternate methods of risk assessment that better fit a department of our size, and help us ensure that the residents of the Town of Hartford continue to receive the highest level of emergency services possible.

C. Standards, Goals, and Objectives

Terminology

Event Initiation

The point at which factors occur that may ultimately result in the activation of the emergency response system. Precipitating factors can occur seconds, minutes, hours, or even days before a point of awareness is reached. An example is the patient who ignores chest discomfort for days until it reaches a critical point at which he/she makes the decision to seek assistance (point of awareness). It is rarely possible to quantify the point at which event initiation occurs.

Emergency Event

The point at which an awareness of conditions exists requiring an activation of the emergency response system. This is considered the point of awareness. It may be the recognition by an individual that assistance is needed, or it may consist of mechanical or electronic recognition of an event such as a smoke or heat detector activation.

Alarm

The point at which emergency response system is activated. An example of this time point is the transmittal of a local or central alarm to a public safety answering point. Again, it is difficult to determine the time interval during which this process occurs with any degree of reliability.

Notification

The point at which an alarm is received by an agency. This transmittal may take the form of electronic or mechanical notification received and answered by the dispatch center.

Alarm Processing

The interval between the time a request or alarm is received and the time it is transmitted to emergency responders.

Turnout Time

The point at which the call from the dispatch center to the respective fire station(s). Total turnout time begins at this point and ends with the beginning of travel time.

Travel Time

The point at which units are en route to the call. When responding from a fixed facility, this is the point at which the apparatus exists the facility. Total travel time begins here and ends with arrival on-scene.

On-Scene Time

The point at which the responding unit arrives on-scene.

Initiation of Action

The point at which operations to mitigate the event begin. This may include size-up, resource deployment, etc.

Termination of Incident

The point at which units have completed the assignment and are available to respond to another request for service.

Total Response Time

Calculated from the point at which the alarm is reported (Notification) to the point when units arrive at the emergency event (on-scene).

Fire Science

A fire within a structure has been classified into five stages according the International Fire Service Training Association (IFSTA). They are the ignition stage, growth stage, flashover stage, fully developed stage, and the decay stage.

When the four elements of the Fire Tetrahedron come together and begin combustion, it is known as the ignition stage. At the point where a material reaches its ignition temperature, it gives off gasses that will ignite. The fire will normally be small at this point and usually confined to the material, or fuel, that was first ignited.

When the temperature of a fire gets high enough, visible flames can be seen. This is known as the growth stage of the fire. As the fire grows, it will form a plume above it. As the plume develops, the fire will draw in air from the bottom. The growth of a fire is dependent on the fuel type that is burning. Heat is conducted into the walls and ceilings as the hot gasses flow past them, raising the temperature in the room. The growth stage will continue as long as fuel and oxygen are available. If the oxygen is used up, the fire will go directly to the decay stage. As long as oxygen is not introduced, it will go out. If oxygen is rapidly introduced, such as door opening or a window being broken, the fire will reignite violently.

The flashover stage is the stage between the growth and decay stages. There is no definite time line as to when the flashover stage begins. It is dependent on the room size, combustibles burning, temperature and amount of oxygen present. During flashover, the contents of the room all come to their ignition temperature at about the same time, thus all igniting at the same time. Anyone that gets caught in a room during flashover are not likely to survive as temperatures can be anywhere from 1000 degrees to 1500 degrees. Firefighters wearing their turn-out gear are slightly protected, but they are also not likely to survive the event of flashover. After flashover occurs, firefighters may have past the point of no return. The point of no return is a distance inside of a burning room beyond which a searching firefighter will not escape and will not reach the door or window entered. It is said that five feet into a room is the point of no return when flashover occurs. Time and motion tests in the NFPA Handbook of Fire Protection reveal that the average person moves 2.5 feet per second when walking. It is thought that a firefighter, in protective clothing, can only take the flashover heat of 1000-1500 degrees for about two seconds. Any distance more than five feet into a flashover situation, the firefighter's body will be subjected to the extreme temperatures of flashover.

As mentioned the temperatures achieved during flashover can reach easily over 1500 degrees. Recent research has revealed those temperatures are even burning hotter simply because of newer construction and room contents that burn at higher temperatures. These findings have encouraged the agency to increase water flows to interior attack lines, add smooth bore nozzles to 1 ¾ hand lines and replacing our 1 ¾ hose to a higher quality 1 ¾ hand line allowing the agency to flow 200 gallons per minute.

When all combustible materials in a compartment are involved during a fire it is called the fully developed stage. The maximum amount of heat possible is released for the available fuel packages. This produces large volumes of fire gasses. The volume of fire gasses and amount of heat produced all depend on the number and size of ventilation openings. Ventilation openings offer more air for the fire as well as a place for the fire to go or spread. Hot, unburned fire gasses will begin to flow from the room of origin to adjacent rooms. Those gasses will then ignite if sufficient oxygen is present, causing the fire to spread.

During the decay stage of a fire, the available fuels in a room or area are consumed by fire. The rate of heat release begins to decline as fuels are consumed. Because the fuel diminishes as it is burned, the temperatures in the room or area begin to diminish. If the fire is diminished because of a lack of oxygen, then the fuels and high temperatures could possibly still be present.

Medical Response

Sudden cardiac arrest is a leading cause of death in the United States and Canada. The Centers for Disease Control and Prevention estimates that in the United States approximately 330,000 people die annually from coronary disease before reaching the hospital or in the emergency room. About 250,000 of those deaths occur in the out-of-hospital setting. The agency has been instrument in providing AED's as well as AED training throughout the community, including CPR and First Aid Programs as well as hands only CPR.

The northeast, especially the regions of Vermont and New Hampshire has seen a dramatic rise in the use of narcotics and narcotic related emergencies. In conjunction with local hospitals, our police department has been provided with Narcan by the state of Vermont EMS office to aid patients suffering a narcotic overdose. The program has been successful thus far and has assisted countless patients since its inception.

Mental health crises also continue to be on the rise in the state of Vermont. The increasing incidents in regards to mental illness coupled with recreational drug use (including THC, methamphetamines) has dramatically increased our probability of encountering patients in crisis. Personnel continue to encounter patients exhibiting signs of excited delirium. With a combined effort of the Vermont EMS Office, our Medical Control Hospital, Medical Director additional education and new medications have been added to current protocols to assist personnel in safely encountering patients suffering a behavioral emergency.

The emergency medicine portion of our profession continues to grow as does the need and complexity of our patients. The agency continues to support further education of our EMS

providers and encourages them to research and remain connected and aware of this quickly changing environment.

D. Critical Task Capabilities

EMERGENCY MEDICAL CRITICAL TASKING

The following critical tasks and staffing are established in the initiation of basic and advanced life support to patients experiencing medical or traumatic emergencies:

1. Standard Medical

   Basic Life Support: This type of response can normally be handled by two Firefighter /EMT's. One EMT would be the primary care attendant while the other would be the secondary care attendant. The second EMT also has the added responsibility of ensuring a safe trip to the hospital while care is being continued in the back.

   Primary care Attendant: 1 - Firefighter/EMT

   Driver: 1 - Firefighter/EMT

2. ALS Emergency

   Advanced EMT /Paramedic Care: This type of response could possibly be handled by two Firefighter/EMT's, but the condition of the patient may warrant added personnel. Advanced Life Support responses require the added training of the Advanced EMT and/or Paramedic. Examples include: diabetic emergencies, difficulty breathing, chest pain, etc.

   Primary Care Attendant: 1 - Firefighter/Paramedic/ EMT

   Secondary Care Attendant: 1 - Firefighter/EMT

   Driver: 1 - Firefighter/EMT

3. Motor Vehicle Accident

Ambulance Company: The Ambulance Company has the initial responsibility of scene safety, then primary patient care. Concentration is placed on treating immediate life threats first, then stabilizing the patient for extrication and/or treatment. Patients involved in motor vehicle accidents could require BLS care or could have serious injuries requiring ALS care. Typically one EMT can be responsible for patient care once in the ambulance while the other EMT has the responsibility of safe transport of the patient and the crew to the hospital.

Primary Care Attendant: 1 - Firefighter/EMT

Driver: 1 - Firefighter/EMT

Engine Company / Rescue Company: The Engine and/or Rescue Company have the initial responsibility of scene safety as well as taking steps to ensure continued scene safety. This could be as simple as directing traffic until the Police Department arrives, shutting down the road so that traffic come to a stand-still while rescue efforts continue or can be as complicated as vehicle stabilization and/or using extrication tools to extricate the patient (s). The Engine/Rescue Company allows for more man-power at the scene as typically the Ambulance Company cannot be responsible for all of the tasks required at an incident.

Incident Commander: 1 - Fire Officer/EMT

Driver: 1 - Firefighter/EMT

4. Trauma

Ambulance Company: The Ambulance Company has the initial responsibility of scene safety, then primary patient care. Concentration is placed on treating immediate life threats first, then stabilizing the patient for extrication and/or treatment. Trauma, translated means “injury”. Trauma could be as simple as a minor laceration of a finger or as complicated as a multi-system injury from a significant fall. Some trauma patients require only BLS care or could have serious injuries requiring ALS care. Mechanism of injury as well as patient condition dictates the number of EMT’s required to administer the care needed. The driver has the added responsibility of safe transport of the patient and the crew to the hospital.

Primary care Attendant: 1 - Firefighter/EMT

Driver: 1 - Firefighter/EMT

Engine Company: The Engine Company has the initial responsibility of scene safety as well as taking steps to ensure continued scene safety. The Engine Company allows for more man-power at the scene, especially with the more substantial types of trauma.

Incident Commander: 1 - Fire Officer/EMT

Driver: 1 - Firefighter/EMT

5. Cardiac Arrest

Ambulance Company: The Ambulance Company has the initial responsibility of scene safety, then primary patient care. A cardiac arrest requires more personnel than the typical ambulance response. Responsibilities include airway management, chest compressions, I.V access, medication administration, operation of defibrillator, etc.

Airway Management: 1 - Firefighter/EMT

Chest Compressions: 1 - Firefighter/EMT

I.V. Access / Med Admin/ Defibrillation: 1 - Firefighter/Paramedic/ EMT

Engine Company

Incident Commander: 1 - Fire Officer/EMT

Driver (May be relocated to Medical Unit for transport): 1 - Firefighter/EMT

6. Mass Casualty

Ambulance Company: The Ambulance Company has the initial responsibility of scene safety, then primary patient care. A mass casualty is considered anything more than the initial responding units can effectively take care of along with local mutual aid. The Hartford Fire Department has two ambulances that are able to respond to an incident immediately. Lebanon and Hanover, NH are both career departments providing mutual aid to effectively mitigate incidents with up to 8 patients.

The initial scene size-up will determine the number of apparatus required for the incident. The Hartford Fire Department utilizes a mutual aid agreement mass casualty protocol that uses 5 MCI levels and a disaster level.

Hartford-Hanover-Lebanon MCI Transport Plan

Mutual Aid	Ambulance	Personnel	Specialized Resource	Cover
2-8 patient duty crew	Hartford AMB 1+2 Med 1+ Med 2 Hanover Amb 1+2 UVA	Duty Crews	Engines and Rescue as needed	On-call personnel

MCI Level 1	Ambulance	Personnel	Specialized Resource	Cover
10-15 patients 6 ambulances	Hartford AMB 1+2 Med 1+Med 2 Hanover Amb 1+2 Upper Valley DHART - optional	Hanover 1st Alarm or Lebanon 1st Alarm or Hartford 1st Alarm	Hartford Rescue Lebanon Rescue Local Funeral Directors for body bags	Hanover - UVA Lebanon - Golden Cross Hartford- Woodstock *These cover ambulances are committed to handle routine call.*

MCI Level 2	Ambulance	Personnel	Specialized Resource	Cover
15-20 patients 11 ambulances	Golden Cross X 2 Woodstock Enfield Windsor	Norwich FAST Hartland Rescue	*Consider Bus list*	Hartford - Rutland

MCI Level 3	Ambulance	Personnel	Specialized Resource	Cover
20 - 30 patients 15 ambulances	Upper Valley Canaan Windsor New London	Lebanon Fire	Hartford Rescue Golden Cross (2) two medical treatment trailers NH/VT State Police Grafton/Windsor County Sheriff *Consider Bus list*	

MCI Level 4	Ambulance	Personnel	Specialized Resource	Cover
30 - 50 patients 20 ambulances	South Royalton Springfield VT Woodstock VT New London White River Valley	Thetford FAST	DHMC Medical Team *Consider Bus list*	

MCI Level 5	Ambulance	Personnel	Specialized Resource	Cover
50 - 100 patients 25 ambulances	Springfield VT Lefebvre Woodsville Plymouth Charlestown	Upper Valley Search & Rescue	Local EAP NH OEM American Red Cross VEM *Consider Bus list*	

MCI Disaster Level	Ambulance	Personnel	Special	Cover
100 + patients 35 ambulances	Rescue Inc. X 2 Bradford NH Fire Hopkinton Keene Concord Calex Rutland Regional Barre Town ROSS- Littleton		NH National Guard Life Flight - Boston DMAT Team DMORT Team	

Discussion of Critical Tasks
Fire Related Incidents

Critical tasking is the process of assigning tasks to firefighters that must be conducted in a timely manner at structure fires in order to control the fire prior to the flashover point. There are still critical tasks after flashover, but the essence of critical tasking is most effective prior to flashover. While creating standards of response coverage, the capability of arriving companies and individual firefighters to achieve these duties must be taken into consideration. On-scene operations, critical tasking, and maintaining an effective response team are elements of response coverage that determine staffing levels, number of apparatus needed, and duties to be performed by each team while on the fire ground.

The Town of Hartford Fire Department performs offensive interior fire attack whenever possible, placing firefighter safety in high regards, and using the RECEO VS approach (rescue, exposure, confinement, extinguishment, overhaul ventilation, and salvage). In rescue situations, the first objective is to put a hose line between the victims and the fire, if possible, to assist with the rescue. The second is to contain the fire to the point of origin. Before on-scene procedures can be established, the incident commander (IC) must determine whether or not the fire ground will operate under an offensive or defensive strategy. A defensive strategy is one that allows for no interior fire attack; therefore, no rescue of endangered victims is attempted. All firefighting is performed from outside the structure with the goal of containing the fire to the initial structure involved.

An organization providing for an offensive strategy requires the necessary fire companies to arrive sooner than they would have to if only the defensive strategy was provided for. Locations of fire stations and fire apparatus play a major role in the probability of a successful rescue. The incident commander must maintain scene management in order to properly implement the plan of attack. Scene management is not separate from, but is an integral part of successfully managing the incident. Objectives of scene management are life safety for firefighters (accountability, etc.) and non-emergency personnel on the scene, stabilizing the incident by controlling non-emergency personnel so they do not interfere with fire ground activities, and conserving property through timely implementation of resources to gain and maintain control.

The Town of Hartford Fire Department has evaluated the critical tasks needed to control fires in each respective risk category. Firefighter safety must be held as a priority when identifying each of these critical tasks. Whenever firefighters are operating in an immediate danger to life and health (IDLH) environments, additional personnel must be staged to perform rescue functions for interior firefighters, commonly known as 2 in 2 out. In this situation, a command structure must also be in place. The growth of fire and the dynamics that are involved, as well as the uniqueness of the property and life safety risks combine to determine which fire ground duties may be required to aid in mitigating potential loss.

On-scene Operations

Before a specific on-scene strategy can be established an initial size-up must be completed by the first arriving unit. The first fire company to arrive at the scene will usually initiate the incident command system (ICS) and then the rescue and fire attack, taking into consideration the present and expected behavior of the fire. This size-up should facilitate which strategy may be utilized – offensive, defensive, or transitional.

Offensive strategy:
Is used in an interior fire attack operation with the top priority of this strategy is to search and rescue any trapped victims. The Town of Hartford Fire Department employs this strategy most often attempting to limit the number of fires that spread beyond the room of origin. For this reason, the Town of Hartford Fire Department uses an aggressive fire attack whenever possible, taking into consideration firefighter safety and other pertinent concerns.

Defensive strategy:
Is an exterior fire attack operation, and does not maintain an interior attack, except if it is necessary to rescue firefighters. There are no attempts to rescue any civilian victims because the stage of the fire is past the flashover point and that the probability that any victims would be presumed to be beyond rescue. In this situation, nearly all of the firefighting is to be performed from the outside of the structure with the concept of containing the fire to the initially involved structure. In the case of a large structure with a defensive attack implemented, a portion of the building may be salvaged with the use of an interior attack to create a safe haven for trapped occupants taking advantage of the building's design.

Transitional strategy:
Is utilized when the fire companies are faced with changing fire conditions, this strategy can go from offensive to defensive as well as defensive to offensive. The offensive to defensive strategy is best used when a structure is rendered to be unsafe for continued interior operations. The defensive to offensive strategy is also appropriate when on scene units are waiting for the arrival of sufficient resources to safely amount an offensive attack or when the initial defensive mode of operations has reduced the to a point where interior operations can be conducted in a safer manner. The combination attack is an effective tactic to exercise when the OSHA Two-in/Two-out rule cannot be initially met. Two-in/Two-out refers to the OSHA requirement that two firefighters be on scene, equipped and in position for immediate entry, before at least two more firefighters can be allowed to enter an IDLH environment.

These strategies have common tasks no matter which one (or more) is employed. These tasks are unified, but can be separated into two basic functions: life safety and fire flow.

Life safety tasks:
Relate to finding trapped, disoriented, or incapacitated victims and removing them safely from the structure. Fire flow tasks relate to simply getting water on the fire. Life safety

tasks are based upon many factors, such as, number of occupants, the age of the occupant, their location in relationship to the fire, their status (awake or asleep), and their ability to remove themselves from the structure.

Fire flow tasks:
Depend primarily on the type of strategy that is used. If the responding units use the offensive strategy, they will be using hand lines to attack the fire. If responding units use the defensive strategy, they may retain the use of master-streams. Master-streams take relatively few firefighters to operate, since they are usually affixed to the fire apparatus. These master-streams will be used to extinguish the fire and keep it from advancing to any adjacent exposures.

Initial Critical Tasks

Critical tasks are assignments that must be completed in order to control the incident, and are described below. These descriptions are supplemented by tables that outline the tasks that must be accomplished by the initial response force if the Department is to meet its mission, goals and objectives. The number in parentheses is the minimum number of personnel required for that task.

Attack Line (2):
A 1 ¾ inch hose that produces up to 200 GPM and is usually handled by a minimum of two firefighters, The engines carry attack lines pre-connected to the pump, three folded in the hose bed, and a special pack designed to be carried into high rise buildings. The selection of attack line for a given situation depends on the type of structure, the distance to the seat of the fire, and the stage of the fire. The pre-connected lines are the fastest to use but are limited to fires within 200 feet of the pumper. When attack lines are needed beyond this limit, 150 feet of 1 ¾ inch hose is supplied through a wye or reducer appliance by a 2 ½ inch hose.
A 2 ½ inch attack line may be used when the fire has passed the flashover stage and threatens an unburned portion of the structure and must be made up depending on the situation and conditions.

Back-Up Line (2):
A 1¾ inch hose line that produces up to 200 GPM and is usually handled by a minimum of two firefighters, or a 2½ inch hose line that produces up to 250 GPM handles by two firefighters. This line is in place to serve as a protection line in case the attack line becomes disabled or there is a need to deploy it in an emergency.

Search and Rescue Crew (2):
A minimum of two firefighters are assigned to search for and remove living victims while the attack crew moves between the victims and the fire to stop it from advancing to them. A two-person crew is normally sufficient for most structures, but additional crews are required in multi-story buildings or structures with people who are not capable of self-removal.

Ventilation Crew (3)

During the initial firefighting operations three firefighters are typically assigned as a company to open horizontal ventilation channels when the attack crew is ready to enter the building. Ventilation removes superheated gasses and obscuring smoke, thereby reducing the probability of flashover and allowing attack crews to see and work closer to the seat of the fire. Ventilation also gives the fire a route of escape so the attack crew can force the fire out the opening they choose and keep it away from endangered people or unburned property. Ventilation must be closely timed with the fire attack. If it is performed too soon, the fire will receive additional oxygen and grow. If it is performed too late, the attack crew cannot force the fire in the desired direction. Instead, the gasses and smoke will be forced back on the firefighters and endangering them as well as any victims and or unburned property they are protecting.

Rapid Intervention Team (2)

A minimum of two firefighters equipped with personal protective equipment (PPE), SCBA and tools available near the entry point to go into the structure in case the attack team declares a Mayday or an emergency.

Pump Operator (1)

One firefighter assigned to deliver water, under the correct pressure, to the attack, back-up, and building fire suppression systems. The pump operator monitors the pressure changes caused by changing flows on each line, and ensures that water hammer does not endanger any of the hose line crews. This firefighter also completes the hose hookups to the correct discharges and the water supply hookup to intake. The pump operator can sometimes make the hydrant hookup alone if the pumper is near the hydrant, but the hydrant spacing normally prevents this.

Incident Command (1)

An officer assigned to remain outside of the structure and manage the incident. The IC should specifically coordinate the attack, evaluate results, redirect the attack, arrange for more resources, the release of resources and monitor conditions if the incident. If any of the critical tasks are not assigned, the IC has the responsibility to ensure the tasks are fulfilled.

Safety Officer (1)

One firefighter or officer on the fire ground dedicated to the exterior of the structure with the sole responsibility of firefighter and scene safety.

The assignments of responding fire companies are sometimes due to the sequence of their arrival. However many times because of varying circumstances, a fire company may not be in its station or district. When this occurs the IC must ensure that the critical tasks for the incident are assigned.

Alarm Levels, Hartford Fire Department Classification of Alarms:

Still Alarm

A Still Alarm is an alarm whereas; one engine and the duty crew can handle the incident. Examples include trash barrel fires, car fires, small gas spills, public assist, and small contained grass fires.

1-Engine
- Attack Line –(2)
- Pump Operator –(1)
- Incident Command – (1)

General Alarm

A General Alarm is an alarm that requires the response of all Hartford Fire Department personnel. The established effective minimum response force for general alarm assignments is 12 personnel from the Department. Tankers and Ladders can be interchanged depending on the zone the alarm is requested for. Since our zones are based on the availability of hydrants and building types the need for a tanker vs. an engine or ladder is determined by the run card and the pre-programmed Computer Aided Dispatch (CAD) recommendation. Forestry only responds on wildland fires. Examples include, smoke in the building, chimney fires, large grass fires, and outside fires with building exposure.

ZONE 1, 1A, 3A (hydrant)

1 – Engine – (3)
1 – Engine – (3)
1 – Truck – (3)
1 – Rescue – (3)
1 – Ambulance – (2)
1 – Engine – (2 or 3 *Sta. 2*)

ZONE 2, 3, 4, 5 (non-hydrant area)

1 – Engine – (3)
1 – Engine – (3)
1 – Tanker – (2)
1 – Rescue – (3)
1 – Ambulance – (2)
1 – Engine – (2 or 3 *Sta.)*

First Alarm

A First Alarm is for all credible reports of **BUILDING FIRES**, and requires the response of all Hartford Fire Department personnel as well as the automatic aid response from neighboring jurisdictions. The established effective minimum response force for first alarm assignments is 12 personnel from the Department. The effective response is enhanced through the use of auto aid from surrounding communities to ensure prompt arrival of suppression personnel. Tankers and Ladders can be interchanged depending on the zone the alarm is requested for. Since our zones are based on the availability of hydrants and building types the need for a tanker vs. an engine or ladder is determined by the run card and the pre-programmed CAD recommendation.

ZONE 1, 1A, 3A (hydrant)

1 – Engine – (3)
1 – Engine – (3)
1 – Truck – (3)
1 – Rescue – (3)
1 – Ambulance – (2)
1 – Engine – (2 or 3 *Sta. 2*)
1 – Command Staff – (1)
1 – Engine- (2 auto aid Lebanon, NH)
1 – Truck – (3 auto aid Hanover, NH)

1 – Engine – (3)
1 – Engine – (3)
1 – Tanker – (2)
1 – Rescue – (3)
1 – Ambulance – (2)
1 – Engine – (2 or 3 *Sta.)*
1 – Command Staff – (1)
1 – Engine- (2 auto aid Lebanon, NH)
1 – Tanker – (2 auto aid zone dependent)

ZONE 2, 3, 4, 5 (non-hydrant area)

Additional Alarms

Additional alarms are requested using a Zone specific alarm card. In the hydrant areas an additional alarm request generates 2 engines and 1 ladder. While in the rural Zones an additional alarm brings 2 engines and 2 tankers. Ladders are special call in the rural areas. Currently the Harford Fire Department alarm cards have been pre-established up to a 10^{th} alarm. All assignments in the 6^{th} – 10^{th} alarms are standard for all Zones.

NON-FIRE, CRITICAL TASKING

The following critical tasks and staffing are established as a standard in order to cease the escalation of the identified hazardous materials or technical rescue emergency:

Hazardous Materials

In the early stages of a haz-mat incident (HMI), it may be necessary for all available manpower to assist in accomplishing those tasks required to initiate the

control of a HMI for the protection of life and property, coordination, directed attack and team work all agencies will be necessary. Any haz-mat incident beyond the routine fuel spills/odor investigation are dispatched as a General Alarm assignment.

In the case of a request for the decontamination trailer outside of the mutual aid system, the Vermont Hazardous Materials Response Team is the only agency that can make this request. The Department will only respond to emergencies within its training level or participate in those activities in which the members are trained.

Routine Fuel Spill/Odor Investigation- Still Alarm

Incident Commander - (1)

Driver/Operator - (1)

Air Monitoring - (1)

Support Function - (1)

Hazardous Materials Events - General Alarm

Incident Commander - (1)

Research/ documentation - (2)

Safety Officer - (1)

Entry Team - (2)

Back up Team - (2)

Air Monitoring - (2)

Support Functions - (4)

Decon Unit Response w/ Team (Minimum) - Still Alarm, (Special Call)

Incident Commander - (1)

Decon Team - (3)

Setup and Support - (2)

Pump Operator - (1)

Haz-Mat Decontamination Trailer - Still Alarm (Special Call)

Fire Officer - (1)

Driver/ Operator - (1)

Rope Rescue

A first alarm assignment is given to all technical rescue incidents allow auto-aid personnel to respond from neighboring communities. This alarm requires the response of all Hartford Fire Department personnel. The duty officer makes the determination as to which apparatus shall respond.

Any request for assistance at a technical rescue incident outside of the Departments mutual aid district shall be at the direct request of Vermont Emergency Management.

Rope Rescue Team:

Incident Commander - (1)

Safety Officer - (1)

Primary Rescue - (2)

Secondary Rescue - (2)

Belay Team - (2)

Haul Team/Lowering - (3)

Water/Ice Rescue

The Hartford Fire Department Water Rescue Team (WRT) is available to attempt rescue of individuals that are in peril by moving water, and individuals that have fallen through the ice but are still at the surface. A first alarm assignment is given to all technical rescue incidents allow auto-aid personnel to respond from neighboring communities. The ranking Fire Officer can dictate which apparatus may respond according to the nature of the call, number of patients, etc.

Any request for assistance at a technical rescue incident outside of the Departments mutual aid district shall be at the direct request of Vermont Emergency Management.

Rescue Team:

Incident Commander - (1)

Safety Officer - (1)

Primary Rescue - (2)

Secondary Rescue - (2)

Down Stream Safety - (2)

Rope/Haul Team (if needed) - (6)

Confined Space

A first alarm assignment is given to all technical rescue incidents allow auto-aid personnel to respond from neighboring communities. This alarm requires the response of all Hartford Fire Department personnel.

Any request for assistance at a technical rescue incident outside of the Departments mutual aid district shall be at the direct request of Vermont Emergency Management.

Rescue Team:

Incident Commander - (1)

Incident Command Aide- (1)

Safety Officer - (1)

Primary Rescue - (2)

Air monitoring- (1)

Secondary Rescue - (2)

Rope/Haul Team (if needed) - (6)

Trench Rescue

A first alarm assignment is given to all technical rescue incidents allow auto-aid personnel to respond from neighboring communities. This alarm requires the response of all Hartford Fire Department personnel.

Any request for assistance at a technical rescue incident outside of the Departments mutual aid district shall be at the direct request of Vermont Emergency Management.

Rescue Team:

Incident Commander - (1)

Safety Officer - (1)

Rescuer - (1)

Backup Rescuer - (1)

Shoring Team - (4)

Strut Team - (3)

Support - (2)

Deployment Plan Non Fire Risk

Hazardous Materials – Still Alarm

1-Engine (4)

Hazardous Materials- General Alarm

1-Engine (3)	1-Engine (3)	1-Rescue (3)
1-Decon Trailer (2)	1-Ambulance (2)	1-Command Car (1)

Hazardous Materials - Decon Trailer w/Team

1- Decon Trailer (2)	1-Engine (4)

Hazardous Materials- Decon Trailer

1- Decon Trailer (2)

Rope Rescue

1-Engine (3)	1-Command Car (1)	1-Rescue (3)
1-Ambulance (2)	1-ATV Trailer (2)	

Water/Ice Rescue

1-Engine (3)	1-Command Car (1)	1-Rescue (3)
1-Ambulance (2)	1-ATV Trailer (2)	1-Engine (3)

Confined Space Rescue

1-Engine (3) 1-Command Car (1) 1-Rescue (3)

1-Ambulance (2) 1-Engine (3)

Trench Rescue

1-Engine (3) 1-Command Car (1) 1-Rescue (3)

1-Ambulance (2) 1-Engine (3) 1-Support Vehicle (2)

The computer-aided dispatch system allows for pre-programmed recommendations for the various responses within the different response zones. The attached matrix below shows the initial response force and alarm level by call type in each response zone:

RESPONSE TYPE	ZONE 1	ZONE 1A	ZONE 2	ZONE 3	ZONE 3A	ZONE 4	ZONE 5
ACCIDENT EXTRICATION	Still Alarm Rescue & Amb 1	Still Alarm Rescue & Amb. 1	Still Alarm Rescue & Amb. 1	Still Alarm Rescue & Amb. 1	Still Alarm Rescue & Amb. 1	Still Alarm Rescue & Amb. 1	Still Alarm Rescue & Amb. 1
ACCIDENT FIRE	Still Alarm E-4 & Amb. 1	Still Alarm E-4 & Amb. 1	Still Alarm E-4 & Amb. 1	Still Alarm E-4 & Amb. 1	Still Alarm E-4 & Amb. 1	Still Alarm E-4 & Amb. 1	Still Alarm E-4 & Amb. 1
ACCIDENT INJURY	Still Alarm E-4 & Amb. 1	Still Alarm E-4 & Amb. 1	Still Alarm E-4 & Amb. 1	Still Alarm E-4 & Amb. 1	Still Alarm E-4 & Amb. 1	Still Alarm E-4 & Amb. 1	Still Alarm E-4 & Amb. 1
AIRCRAFT CRASH	General Alarm STA.1, E-4	General Alarm STA.1, E-4	General Alarm STA.1, E-4	General Alarm STA.1 & 2, E-4	General Alarm STA.1 & 2, E-4	General Alarm STA.1 & 2, E-4	General Alarm STA.1 & 2, E-4
ALARM FIRE	Still Alarm STA.1 E-4	Still Alarm STA.1 E-4	Still Alarm STA.1 & 2, E-4	Still Alarm STA.1 & 2, E-4	Still Alarm STA.1 & 2, E-4	Still Alarm STA.1 E-4	Still Alarm STA.1 E-4
AMBULANCE CALL	Ambulance Call STA.1, Amb. 1	Ambulance Call STA.1, Amb. 1	Ambulance Call STA.1, Amb. 1	Ambulance Call STA.1, Amb. 1	Ambulance Call STA.1, Amb. 1	Ambulance Call STA 1, Amb. 1	Ambulance Call STA 1, Amb. 1
BOMB THREAT	Still Alarm STA.1, E-4	Still Alarm STA.1, E-4	Still Alarm STA.1, E-4	Still Alarm STA.1, E-4	Still Alarm STA.1, E-4	Still Alarm STA.1, E-4	Still Alarm STA.1, E-4
BRUSH/GRASS FIRE	Still Alarm STA.1 E-4	Still Alarm STA.1 E-4	Still Alarm STA.1 E-4	Still Alarm STA.1 & 2, E-4	Still Alarm STA.1 & 2, E-4	Still Alarm STA.1 E-4	Still Alarm STA.1 E-4
BUILDING COLLAPSE	General Alarm STA.1 & 2, E-4	General Alarm STA.1 & 2, E-4	General Alarm STA.1 & 2, E-4	General Alarm STA.1 & 2, E-4	General Alarm STA.1 & 2, E-4	General Alarm STA.1 & 2, E-4	General Alarm STA.1 & 2, E-4

CAR FIRE	Still Alarm STA.1, E-4	Still Alarm STA.1, E-4	Still Alarm STA.1, E-4	Still Alarm STA.1 & 2, E-4	Still Alarm STA.1 & 2, E-4	Still Alarm STA.1 & 2, E-4	Still Alarm STA.1 E-4
CHIMNEY FIRE	General Alarm STA.1 & 2, E-4	General Alarm STA.1 & 2, E-4	General Alarm STA.1 & 2, E-4	General Alarm STA.1 & 2, E-4	General Alarm STA.1 & 2, E-4	General Alarm STA.1 & 2, E-4	General Alarm STA.1 & 2, E-4
CO DETECTOR - w/ SYMPTOMS	Still Alarm E-4 & Amb. 1	Still Alarm E-4 & Amb. 1	Still Alarm E-4 & Amb. 1	Still Alarm STA.1 & 2, E-4	Still Alarm STA.1 & 2, E-4	Still Alarm E-4 & Amb. 1	Still Alarm E-4 & Amb. 1
ELECTRICAL PROBLEM	Still Alarm STA.1, E-4	Still Alarm STA.1, E-4	Still Alarm STA.1, E-4	Still Alarm STA.1 & 2, E-4	Still Alarm STA.1 & 2, E-4	Still Alarm STA.1, E-4	Still Alarm STA.1, E-4
EXPLOSION	General Alarm STA.1 & 2, E-4	General Alarm STA.1 & 2, E-4	General Alarm STA.1 & 2, E-4	General Alarm STA.1 & 2, E-4	General Alarm STA.1 & 2, E-4	General Alarm STA.1 & 2, E-4	General Alarm STA.1 & 2, E-4
GAS/VAPOR LEAK (AIRBORN)	Still Alarm STA.1, E-4	Still Alarm STA.1, E-4	Still Alarm STA.1, E-4	Still Alarm STA.1, E-4	Still Alarm STA.1 & 2, E-4	Still Alarm STA.1 & 2, E-4	Still Alarm STA.1 & 2, E-4
GASOLINE LEAK/SPILL	Still Alarm STA.1, E-4	Still Alarm STA.1, E-4	Still Alarm STA.1, E-4	Still Alarm STA.1 & 2, E-4	Still Alarm STA.1 & 2, E-4	Still Alarm STA.1 & 2, E-4	Still Alarm STA.1 & 2, E-4
HAZ - MAT INCIDENT	General Alarm STA.1 & 2, E-4	General Alarm STA.1 & 2, E-4	General Alarm STA.1 & 2, E-4	General Alarm STA.1 & 2, E-4	General Alarm STA.1 & 2, E-4	General Alarm STA.1 & 2, E-4	General Alarm STA.1 & 2, E-4
ILLEGAL BURN	Still Alarm STA.1, E-4	Still Alarm STA.1, E-4	Still Alarm STA.1, E-4	Still Alarm STA.1 & 2, E-4	Still Alarm STA.1 & 2, E-4	Still Alarm STA.1, E-4	Still Alarm STA.1, E-4
MUTUAL AID FIRE	Still Alarm STA.1	Still Alarm STA.1	Still Alarm STA.1	Still Alarm STA.1	Still Alarm STA.1	Still Alarm STA.1	Still Alarm STA.1
ODOR INVESTIGATION	Still Alarm STA.1, E-4	Still Alarm STA.1, E-4	Still Alarm STA.1, E-4	Still Alarm STA.1, E-4	Still Alarm STA.1, E-4	Still Alarm STA.1, E-4	Still Alarm STA.1, E-4
PARAMEDIC INTERCEPT	Ambulance Call Sta. 1, Utility	Ambulance Call Sta. 1, Utility	Ambulance Call Sta. 1, Utility	Ambulance Call Sta. 1, Utility	Ambulance Call Sta. 1, Utility	Ambulance Call Sta. 1, Utility	Ambulance Call Sta. 1, Utility
POWER LINES DOWN	Still Alarm STA.1, E-4	Still Alarm STA.1, E-4	Still Alarm STA.1, E-4	Still Alarm STA.1 & 2, E-4	Still Alarm STA.1 & 2, E-4	Still Alarm STA.1, E-4	Still Alarm STA.1, E-4
RESCUE CALL	Still Alarm Rescue	Still Alarm Rescue	Still Alarm Rescue	Still Alarm Rescue	Still Alarm Rescue	Still Alarm Rescue	Still Alarm Rescue
SERVICE CALL FIRE	Still Alarm E-4 & Amb. 1	Still Alarm E-4 & Amb. 1	Still Alarm STA.1, E-4	Still Alarm STA.1, E-4	Still Alarm STA.1, E-4	Still Alarm STA.1, E-4	Still Alarm STA.1, E-4
SMOKE IN BUILDING	General Alarm STA.1 & 2, E-4	General Alarm STA.1 & 2, E-4	General Alarm STA.1 & 2, E-4	General Alarm STA.1 & 2, E-4	General Alarm STA.1 & 2, E-4	General Alarm STA.1 & 2, E-4	General Alarm STA.1 & 2, E-4
SMOKE INVESTIGATION	Still Alarm STA.1, E-4	Still Alarm STA.1, E-4	Still Alarm STA.1, E-4	Still Alarm STA.1 & 2, E-4	Still Alarm STA.1 & 2, E-4	Still Alarm STA.1, E-4	Still Alarm STA.1, E-4
SPRINKLER ACTIVATION	Still Alarm STA.1, E-4	Still Alarm STA.1, E-4	Still Alarm STA.1 & 2, E-4	Still Alarm STA.1 & 2, E-4	Still Alarm STA.1 & 2, E-4	Still Alarm STA.1, E-4	Still Alarm STA.1, E-4
STRUCTURE FIRE	First Alarm STA.1 & 2, E-4	First Alarm STA.1 & 2, E-4	First Alarm STA.1 & 2, E-4	First Alarm STA.1 & 2, E-4	First Alarm STA.1 & 2, E-4	First Alarm STA.1 & 2, E-4	First Alarm STA.1 & 2, E-4
TRANSFORMER FIRE	Still Alarm STA.1, E-4	Still Alarm STA.1, E-4	Still Alarm STA.1, E-4	Still Alarm STA.1 & 2, E-4	Still Alarm STA.1 & 2, E-4	Still Alarm STA.1, E-4	Still Alarm STA.1, E-4

TRASH/DUMPSTER FIRE	Still Alarm STA.1, E-4	Still Alarm STA.1, E-4	Still Alarm STA.1, E-4	Still Alarm STA.1 & 2, E-4	Still Alarm STA.1 & 2, E-4	Still Alarm STA.1, E-4	Still Alarm STA.1, E-4
WATER/ROPE RESCUE	General Alarm STA.1 & 2, Res.	General Alarm STA.1 & 2, Res.	General Alarm STA.1 & 2, Res.	General Alarm STA.1 & 2, Res.	General Alarm STA.1 & 2, Res.	General Alarm STA.1 & 2, Res.	General Alarm STA.1 & 2, Res.
UNATTENDED BURN	Still Alarm STA.1, Forestry	Still Alarm STA.1, Forestry	Still Alarm STA.1, Forestry	Still Alarm STA.1, Forestry	Still Alarm STA.1, Forestry	Still Alarm STA.1, Forestry	Still Alarm STA.1, Forestry

E. Service Level Objectives – Standards of Cover

Service Level Objectives

Based upon the community risk and funding resources, service level objectives have been set which have driven the current distribution and concentration of forces which are currently in place, and which drive future station locations and staffing.

Services provided include structural fire suppression, EMS response and transportation at the Advanced EMT and Paramedic levels, rescue services providing automobile extrication, high angle, water, ice, trench, confined space and building collapse rescue. Hazardous Material response is at the operations and decontamination level with technician response provided by the State of Vermont Haz-Mat Team.

It will be important that the agency continues to monitor and evaluate changes in the community risk dynamics and emergency response demand as the development of the Town continues.

Distribution Criteria

The Town of Hartford Fire Department has established the majority of its emergency response force based in the primary fire station (Station 1) which is located in response Zone 1. This location is within the most densely populated region of the community and is the only staffed station in the community. Given the current response demand of the Town the highest demand areas of the community are Zone 1 and Zone 1A which the current placement of resources supports that distribution.

<u>Distribution Service Level Objective</u>

Performance Goal

The Hartford Fire Department shall limit the risk to our communities and our citizens from fire, injury, death, and property damage associated with fire, accidents, illness, explosions, hazardous materials incidents, and other natural or manmade emergencies through prevention and response.

Performance Level Objectives outline the commitment of the Department to meet pre-established objectives regarding the timeliness of response to specific risks. The objectives that follow are the result of a thorough evaluation and categorization of our risks. For each risk we have analyzed our historical response to that risk, the outcome of those responses and have analyzed the potential for future risk in each defined category. Specific performance measures have been established based on our analysis and mission.

Benchmark Definition

A benchmark is defined as a standard from which something can be judged. Searching for the best practices will help define superior performance. This Standards of Cover document uses a combination of standards from NFPA and ISO for determining best practices for fire and EMS response. Political officials and policy makers use economic indicators and factors that dictate a balance of risk and adequate effective response force. These response resources are enhanced by prevention mitigation intervention; employing enforcement, education, and engineering innovations.

Performance Objective: Fire

Benchmark

The department's standard of cover response objective(s) are as follows:

For 90 percent of all structure fires, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, shall be: 7 minutes and 0 seconds in suburban areas; and 12 minutes and 20 seconds in the rural areas. The first due unit for all risk levels shall be capable of: providing a minimum of 1000 gallons of water and 1,000 gallons per minute (gpm) pumping capacity; initiating command; requesting additional resources; establishing and advancing an attack line flowing a minimum of 150 gpm; establishing an uninterrupted water supply; containing the fire; rescuing at-risk victims; and performing salvage operations. These operations shall be done in accordance with departmental standard operating procedures while providing for the safety of responders and the general public.

For 90 percent of all structure fires, the total response time for the arrival of the effective response force (ERF), staffed with 14 firefighters and officers shall be: 15 minutes and 20 seconds in suburban areas; and 16 minutes and 20 seconds in the rural areas. The ERF shall be capable of: establishing command; providing an uninterrupted water supply; advancing an attack line and a backup line for fire control; complying with the Occupational Safety and Health Administration (OSHA) requirements of two in-two out; completing forcible entry; searching and rescuing at-risk victims; ventilating the structure; controlling utilities; and performing salvage and overhaul. These operations shall be done in accordance with

departmental standard operating procedures while providing for the safety of responders and the general public.

Performance Objective: EMS

Benchmark

The department's standard of cover response objective(s) are as follows:

For 90 percent of all emergency medical services (EMS) responses, the total response time for the arrival of the first-due unit which is the effective response force (ERF), staffed with 2 firefighters, shall be: 7 minutes and 0 seconds in suburban areas; and 12 minutes and 20 seconds in rural areas. The first due unit shall be capable of: assessing scene safety and establishing command; sizing-up the situation; conducting initial patient assessment; obtaining vitals and patient's medical history; initiating mitigation efforts within one minute of arrival; providing appropriate treatment; performing automatic external defibrillator (AED); initiating cardio-pulmonary resuscitation (CPR); providing intravenous (IV) access-medication administration, producing related documentation and transport of patient.

Performance Objective: Hazardous Materials

Benchmark

The department's standard of cover response objective(s) are as follows:

For 90 percent of all hazardous materials response incidents, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, shall be: 7 minutes and 20 seconds in suburban areas; and 12 minutes and 20 seconds in rural areas. The first due unit shall be capable of: establishing command; sizing up and assessing the situation to determine the presence of a potential hazardous material or explosive device; determining the need for additional resources; estimating the potential harm without intervention; and begin establishing a hot, warm and cold zone.

For 90 percent of all hazardous materials response incidents, the total response time for the arrival of the effective response force (ERF), staffed with 12 firefighters and officers shall be: 15 minutes and 20 seconds in suburban areas; and 16 minutes and 20 seconds in rural areas. The ERF shall be capable of providing the equipment, technical expertise, knowledge, skills and abilities to mitigate a hazardous materials incident in accordance with department standard operating guidelines.

Performance Objective: Technical Rescue

Benchmark

The department's standard of cover response objective(s) are as follows:

For 90 percent of all technical rescue incidents, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, shall be: 7 minutes and 20 seconds in suburban areas; and 12 minutes and 20 seconds in rural areas. The first due unit shall be capable of: establishing command; sizing up to determine if a technical rescue response is required; requesting additional resources; and providing basic life support to any victim without endangering response personnel.

For 90 percent of all technical rescue incidents, the total response time for the arrival of the effective response force (ERF), staffed with 12 firefighters and officers shall be: 15 minutes and 20 seconds in suburban areas; and 16 minutes and 20 seconds in rural areas. The ERF shall be capable of: establishing patient contact; staging and apparatus set up; providing technical expertise, knowledge, skills and abilities during technical rescue incidents; and providing first responder medical support.

Standards of Cover

Baseline Response Statics

Structure Fires - 90th Percentile Times – Baseline Performance			**2014 - 2018**	**2018**	**2017**	**2016**	**2015**	**2014**
Alarm Handling	Pick-up to Dispatch	Suburban	02:52	00:43	02:47	01:27	--:--	03:03
		Rural	02:04	00:09	00:25	01:16	00:38	02:16
Turnout Time	Turnout Time 1st Unit	Suburban	02:30	02:04	02:24	02:43	--:--	00:55
		Rural	03:08	02:26	02:19	03:18	01:20	02:25
Travel Time	Travel Time 1st Unit **Distribution**	Suburban	06:46	05:00	04:56	07:26	--:--	06:11
		Rural	14:30	09:36	10:54	15:09	10:16	05:17
Total Response Time	Total Response Time 1st Unit On Scene **Distribution**	Suburban	09:50	06:38	07:56	09:48	--:--	09:53
		Rural	16:56	12:11	10:54	17:43	13:46	06:41
	Total Response Time ERF **Concentration**	Suburban	22:12	22:46	19:56	17:32	--:--	16:29
		Rural	26:11	26:11	--:--	22:40	22:18	22:11
Total Number of Incidents		Suburban	16	3	4	5	0	2
		Rural	11	1	2	4	2	2

*Due to the low frequency of structure fires within the community the slowest times are shown for each measure with the exception of 2016-2018 fields and including the Rural ERF Concentration.

EMS - 90th Percentile Times – Baseline Performance			2014 - 2018	2018	2017	2016	2015	2014
Alarm Handling	Pick-up to Dispatch	Suburban	01:22	01:22	01:22	01:20	01:15	01:37
		Rural	01:32	01:27	01:26	01:32	01:18	01:49
Turnout Time	Turnout Time 1st Unit	Suburban	01:45	01:38	01:40	01:22	01:39	02:06
		Rural	01:46	01:43	01:41	01:11	01:43	02:15
Travel Time	Travel Time 1st Unit **Distribution**	Suburban	07:44	07:59	08:01	07:11	07:39	07:46
		Rural	12:48	12:25	13:52	13:13	12:02	13:21
Total Response Time	Total Response Time 1st Unit On Scene **Distribution**	Suburban	09:19	09:18	09:36	08:39	09:12	09:47
		Rural	14:45	14:10	16:14	14:50	13:45	15:28
Total Number of Incidents		Suburban	3395	898	598	634	635	630
		Rural	1246	423	238	193	203	189

Hazardous Materials

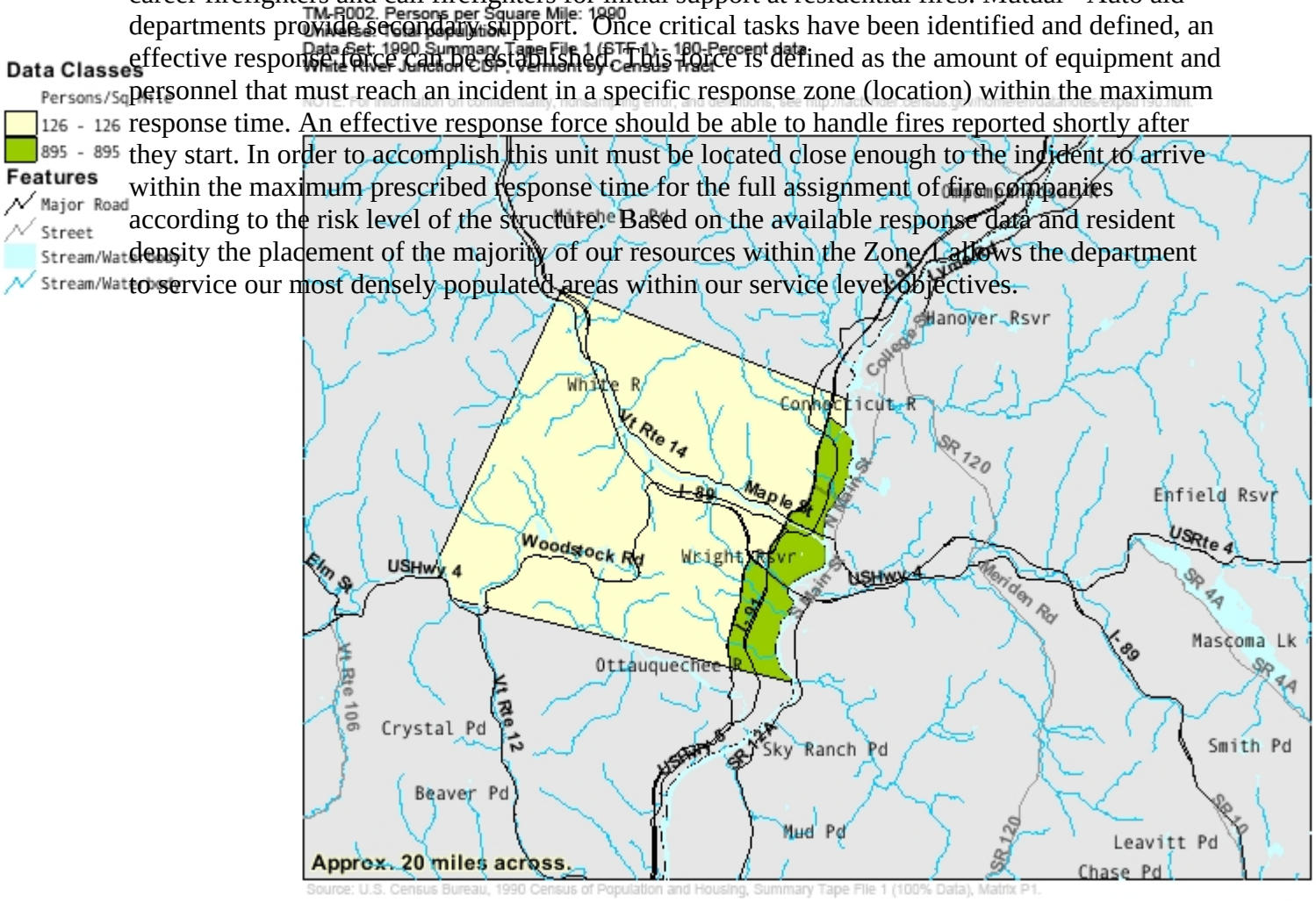
The Hartford Fire Department tracks its performance in responding to Hazardous Materials incidents. In the years ranging from 2014 through 2018 the Hartford Fire Department did not respond to any full scale Haz-mat incidents. In the five years included in this report the Hartford fire department responded 8 incidents involving hazardous materials where a release had occurred, this includes medical calls where occupants of buildings had used “bug bombs” and remained in the residence after activating the device. As a result of this exceptionally small amount of data no performance data is included in this report.

Technical Rescue

The Hartford Fire Department tracks its performance in responding to Technical Rescue incidents. Most of these responses occur outside of the Town of Hartford but within our mutual aid compact or are a recovery operation versus without an emergent response. As a result, most responses are not within our planning zones or within the scope of this document. In the last 5 years there have been two true technical rescues within the Town of Hartford. Incidentally, both responses have been to the covered bridge on Waterman Hill for swimming related accidents in the river below. The Quechee Gorge has been the other historical location of technical rescue events, but due to the nature of events that occur at this venue they are deliberate recoveries planned by the fire department with an accompanying risk assessment for the specific event.

Concentration Criteria

The Department's objective is for the on-duty crew to perform initial attack and recalled off-duty career firefighters and call firefighters for initial support at residential fires. Mutual - Auto aid departments provide secondary support. Once critical tasks have been identified and defined, an effective response force can be established. This force is defined as the amount of equipment and personnel that must reach an incident in a specific response zone (location) within the maximum response time. An effective response force should be able to handle fires reported shortly after they start. In order to accomplish this unit must be located close enough to the incident to arrive within the maximum prescribed response time for the full assignment of fire companies according to the risk level of the structure. Based on the available response data and resident density the placement of the majority of our resources within the Zone 1 allows the department to service our most densely populated areas within our service level objectives.



Concentration Service Level Objective:

The recognized effective response force has been established at 12 Department personnel for general and first alarms to affect the tasks outlined in the Critical Tasking section of this document. The use of automatic aid from adjoining communities increases the Departments ability to meet the time/staffing objective. Data collected from emergency incidents over the past three calendar years indicates that the Department meets the response time objective 90% of the time for the first due unit with the exception of some very rural, remote sections of the community. These areas see very infrequent calls for service and the Department does not view this as a gross deviation of service provided. An effective response force shall be able to provide the initial critical tasks identified to cease the escalation of most fire, rescue, hazardous materials and EMS emergencies.

Evaluations of Reliability of Fire Companies

Response reliability is the number of calls missed by first-in units while they are committed to emergency calls, or are out of service for other reasons (i.e. Ambulance out of service for mechanical repair).

Drawdown of Resources

As stated earlier in this document minimum staffing is three between 1900 on Sunday and 1900 on Fridays and four during the forty-eight hours of the weekend. On average a staffing of four personnel is maintained. Should these resources not provide an adequate pool for emergency events, the dispatch center through CAD, automatic aid agreements, and department run cards can assign additional units whether Hartford units are available to make the call or not. A full response is always made.

Exhaustion of Resources

As stated above due to the adoption of mutual aid agreements resources are provided through run cards to allow for a response for all incidents. Do to our proximity to neighboring communities with available resources it is highly unlikely that no units would be available to respond.

Policy Recommendations

The agency should continue to monitor response time data to ensure that service level objectives continue to be met.

The agency should continue to attempt to capture data in regards to tracking containment of fires in to the initial room of ignition. The agency has the capability to easily do so and has for last several years. However low frequency of fire incidents do not allow for accurate outcomes.

The agency should continue to promote adequate staffing and investigate additional staffing options to maintain an effective response force.