Community Risk Analysis
West Barnstable Fire District
2160 Meetinghouse Way
West Barnstable, Massachusetts 02668

June 1st 2016

This Community Risk Analysis is designed to assess the various risks faced by the Village of West Barnstable, Massachusetts and provide a tool for the West Barnstable Fire Department to determine which risks it should plan for and to what extent it should prepare for various risks.

This analysis uses historical data, demographic factors, and geographic factors to identify each risk the community faces and ranks those risks from remote to daily. It will further rank risks based upon their potential impact on the community or individuals in the community, and it will use an objective measure to rank all of the various risks from greatest to least.

The last Community Risk Analysis was performed in 2011 by the West Barnstable Fire Department. This analysis has compared all the above mentioned data for the past 5 years looking for trends in the types of call that we are seeing each year helping the fire department to reevaluate the risks in the community, and allowing us to be prepared for potential emergencies our community faces. The data analysis has shown us that not much has changed in our community. The target hazards have remained the same, there have been no new commercial buildings or complexes built. The West Barnstable Fire Department continues to face the same challenges as it did in 2011. The only notable change is the increase in medical calls the department faces on a daily basis which can be attributed to our aging demographic.

Based upon this analysis, there are six general categories of community wide risk that West Barnstable Fire Department should have comprehensive programs to address. These risks are medical emergencies, motor vehicle crashes, small commercial and residential structure fire, wildland urban interface fires, storm events up to and including a class 2 hurricane, and hazardous materials incidents.

West Barnstable:

West Barnstable is a village within the Town of Barnstable on Cape Cod in Massachusetts. It is served by an independent municipal fire district known as the West Barnstable Fire District. West Barnstable is a rural/suburban community with a year-round residential population of about 3300 people. It has 1,494 single-family homes which has only increased by 14 additional homes since 2001.There are 65 mostly small commercial/ public assemblies in the district which has decreased by 20 since 2001. The largest public assembly use in West Barnstable is Cape Cod Community College (CCCC) with a daytime student/faculty population of up to 6000 people. The next largest facilities are a YMCA, a highway rest stop that includes a Burger King/Mini-Mart/Gas Station and Sandy Neck Beach Park (seasonally upwards of 3000 people).

Population

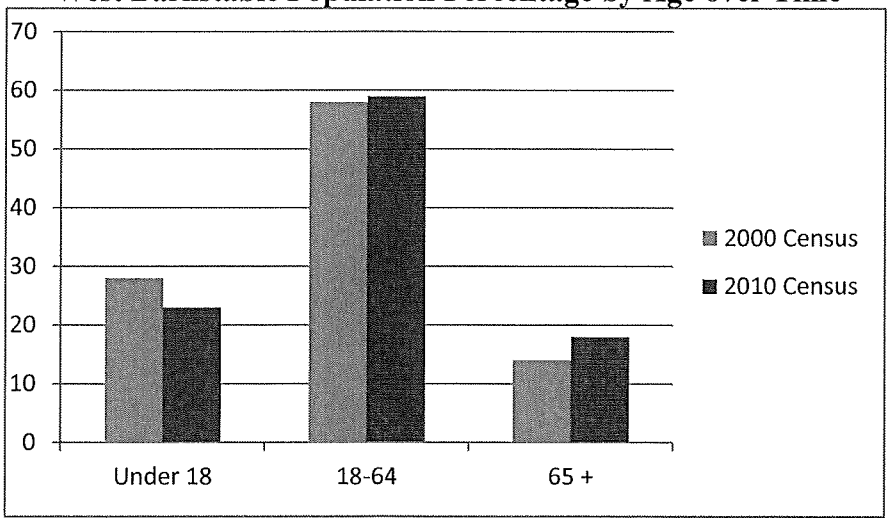
As of the most recent census in 2010, 3278 people resided in West Barnstable. This number is based on the 02668 zip code. Although the zip code lines do not directly match up with fire district boundaries, this unit of measure is the best available option and also enables cross-analysis between population and income statistics. The 2010 census indicates there are around 1,400 households in West Barnstable, 11 percent of that being seasonal housing.

Since 2011 the population of the village had a slight growth rate between 5 and 10 percent. The town of Barnstable's population decreased overall 1.5 percent; the state of Massachusetts overall population grew 3 percent which was the trend of the country of the United States with 3 percent increase also. Adults from ages eighteen to sixty-four make up a majority of the population, while children and senior citizens comprise roughly twenty percent each. The trend from 2000 to 2010 was that all age groups children, adults, and senior citizens increased slightly in population. The median age in West Barnstable is 47 years of age. This aging of the population is consistent with the general population trend in the United States and suggests that the number of calls for elderly patients will keep increasing in the years to come. 823 school aged children also live within the fire district. This suggests that there will be less pediatric calls in future years and also that this is a key time for volunteer recruitment among graduating high school seniors.

Percent Change in Population from 2010 to 2015:

West Barnstable Village	+5.0%
Town of Barnstable	-1.5%
Massachusetts	+3.8%
United States	+4.1%

West Barnstable Population Percentage by Age over Time



The daytime student population at Cape Cod Community College is not included in the permanent resident population statistics above, but is another important group to consider. The college has approximately 5000 students and 250 employees on its campus. It is a year-round facility with summer programs and is busy all day long, from 7am until 10pm. The college also

attracts additional people to its campus through sporting, cultural, and community events. With classes and events, Cape Cod Community College houses a significant portion of both the daytime and evening West Barnstable population, and it could hold more of the fire district's population than the rest of the combined community on certain days.

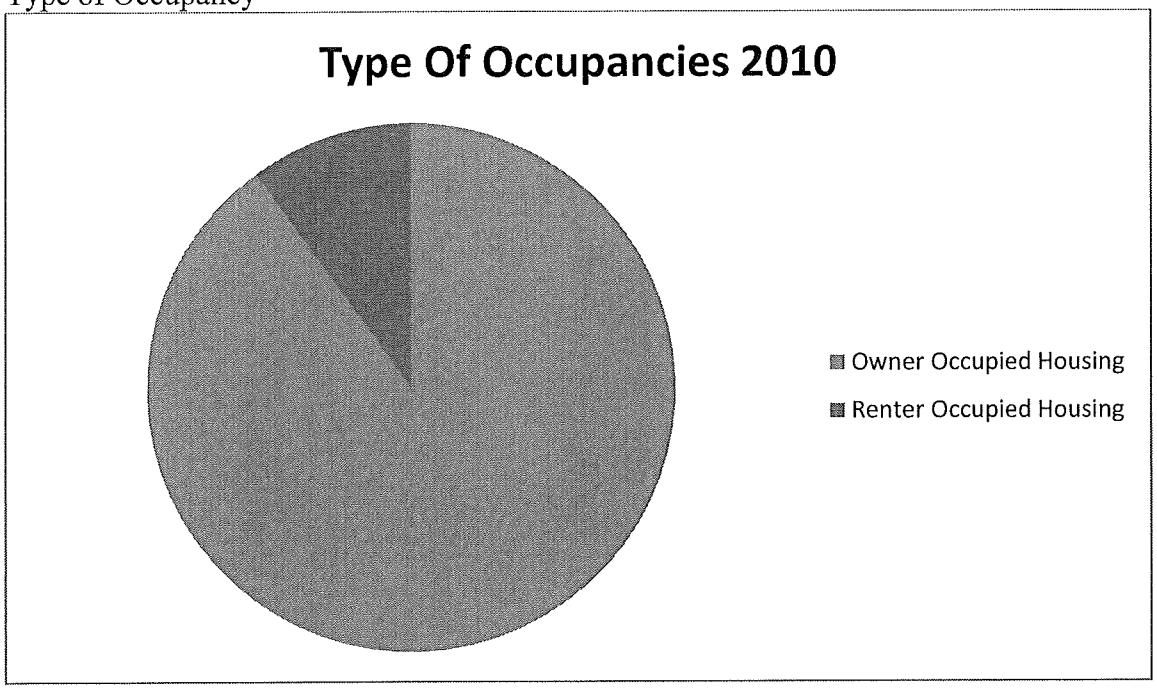
Housing

The number of occupied housing units grew 11% from 2000 to the year 2010. Simultaneously, the proportion of owner-occupied housing units decreased from 93% to 90% as the proportion of renter-occupied housing units increased from 6% to 10%. This means that while 140 housing units were added in West Barnstable between 2000 and 2010, there was a loss of owner-occupied housing units and an increase in renter-occupied housing units in the district. The average household size (density) of owner-occupied units remained the same at 2.62 persons per household, but the average household size of renter-occupied units decreased from 2.30 to 2.11 persons per household.

A. Number of Housing Units

Year	2000	2010
Occupied housing units	1139	1279

B. Type of Occupancy



C. Housing Density

	2000	2010
Average household size of owner-occupied unit	2.77	2.62
Average household size of renter-occupied unit	2.30	2.11

Additional housing in the village of West Barnstable is limited by the large amount of conservation land and the existing zoning restrictions. The total amount of conservation land in West Barnstable is 4029.84 acres (about 6.29 sq. miles) and makes up 47% of the total land in the Fire District. Current zoning regulations indicate that further development in the village cannot divide land into parcels smaller than two acres each. There are fifty-four parcels of land in the village, as identified by the West Barnstable Civic Association, which are larger than four acres and currently undeveloped and unprotected by a conservation restriction. Altogether, this land totals 665.43 acres. However, upon closer examination, some of these parcels are not eligible for development. This group includes cemetery land, Open Space allotments for housing subdivisions, and land owned by the COMM Fire Department for water use. When these parcels (236.1 acres) are subtracted from the previous total of 665.43 acres, the new total is 429.33 acres. In their existing sizes, these parcels could by subdivided into a maximum of 200 parcels, with the minimum parcel size of two acres. This equates to two hundred additional houses. If the current average household size of an owner-occupied unit remains constant at 2.62 persons per household, the maximum additional population for the West Barnstable Fire District would be 524 people.

West Barnstable Fire District:

The West Barnstable Fire District ("District") was formed in 1949 by an act of the Massachusetts Legislature. The District is governed by a New England Town Meeting type of government with an Annual District Meeting to appropriate funds, levy taxes, and establish by-laws. The executive authority of the District is vested in a three member elected board known as the Prudential Committee (similar to a combined Board of Selectmen and Finance Committee in New England town government). The Fire Chief and Deputy Fire Chief are appointed by the Prudential Committee. The Fire Chief appoints all fire department staff. The Fire Department's FY 2015 budget is $1.1 million.

In addition to traditional fire protection and suppression services, the District provides emergency medical services (EMS) at the advanced life support (ALS) paramedic level. The department has been providing paramedic service since 1973. The District also provides street lights to the community and has provisions to provide water, but choose not to install a water system.

The District is one of five fire districts providing service to the Town of Barnstable, Massachusetts. The District comprises about 14 square miles.

West Barnstable Fire Department:

The West Barnstable Fire Department (WBFD) is combination, mostly volunteer, fire and EMS department operating from a single fire station at 2160 Meetinghouse Way (Route 149), West Barnstable, MA. The fire station was built in 1988. The department responded to 758 emergency calls in 2015 (its busiest year).

The WBFD is staffed by five career Firefighter/Paramedics and 35 volunteer Firefighter's. One career Lieutenant Paramedic is on-duty 24 hours per day, seven days per week. A second career

Firefighter/Paramedic is on-duty Tuesday through Friday from 8AM to 6PM. 3 Part time Firefighter/EMT's each work one scheduled day shift 8 AM to 6 PM during the week to provide additional coverage while working on a specific job task. Volunteer firefighters and emergency medical technicians provide coverage on Monday and the weekends.

When there is an emergency call during the daytime (day shift) from 8 AM to 6 PM, the two firefighter on-duty at the station, along with any volunteers that might be at the station respond immediately in the appropriate first due apparatus (ambulance, brush truck, or engine). All off-duty career and volunteer staff are paged and eligible to respond to the emergency by responding to the fire station and staffing additional apparatus.

At night (night shift) from 6 PM to 8 Am, there is only one Lieutenant/Paramedic on-duty at the station, but staffing is supplemented by volunteers who staff the station. Additionally, the volunteers are broken into four on-call response groups and rotate coverage over an eight day cycle for responding to nighttime calls. On the night shifts, medical calls and public service calls are handled by the on-duty Lieutenant/Paramedic and the on-duty group. A full-department recall is used for more serious events such as motor vehicle crashes and fires.

The WBFD operates the following apparatus:

1. Engine 294: A 1250 GPM compressed air foam pumper with 750 gallons of water and crew seating for six. (A 2002 model)

2. Ladder 297: A 1500 GPM quint (ladder) with 400 gallons of water and a 75' aerial ladder and crew seating for six. (A 2002 model)

3. Engine-Tender 296: A 2000 GPM pumper with 3000 gallons of water and crew seating for five. (A 1985 model)

4. Ambulance 293: A 2007 Advanced Life Support Ambulance.

5. Tender 286: A 5000 gallon water tender with a 500 GPM pump and crew seating for two. (A 1991 military chassis converted to fire apparatus.)

6. Breaker 295: A Type 3 Wildland Engine built on a 1972 military chassis with 1000 gallons of water with a 300 GPM pump and seating for two.

7. Squad 287: An F-350 4x4 pickup truck with a utility body and seating for three.

8. Car 280: A four-door pickup truck command vehicle with seating for six.

9. Forestry 290: A Type 6 wildland engine with 200 gallons of water and seating for three built on a 4x4 2012 Ford F-450 chassis.

10. Forestry 288: A Type 3 wildland engine with 600 gallons of water, a 100 GPM pump, and seating for two

11. A Scott Liberty I air supply trailer.

12. A lighting tower and generator trailer.

13. Two 400 gallon military water buffalos (trailers).

The department operates primarily from one central station. The station is located at 2160 Meetinghouse Way (Route 149), West Barnstable, MA. It was built in 1988. The department uses an old station (circa 1950) at 1633 Main Street, known as Station 3, for housing brush apparatus seasonally and for the MCI Trailer. Station 3 is also used as a training prop.

The department tracks the frequency and type of calls for service using the National Fire Incident Reporting System (NFRIS)/ Massachusetts Fire Incident Reporting System (MFRIS) Emergency call activity from 2010 through 2015 is summarized in **Appendix A**

The WBFD has an Insurance Services Office (ISO) rating of Class 2/Class 4.

The Risks:

The risks facing the people of West Barnstable fall into two categories: Man-Made and Natural.

Natural Risks:

Because of its geographic location, West Barnstable may experience hurricanes, blizzards, flooding, earthquakes, tsunamis, and tornados. Of these risks hurricanes and blizzards are the most common. Other natural risks tend to be remote.

Additionally, because of its pitch pine and scrub oak forest, with sandy soils and light ground cover, and because there are large tracts of conservation/agricultural land, the community is in an area indentified as being susceptible to wildland fires. Housing is inter-mixed among the wildlands creating a risk of wildland/urban interface fires. (See a map titled "Regional Risk Hazard III, Cape Cod, Massachusetts – Wildfire Risk Areas – Barnstable (6/15/2004)"

Man-Made Risks:

People living in West Barnstable face all of the normal risks of modern American life such as: residential structure fires, vehicle accidents, vehicle fires, appliance fires, electrical hazardous, hazardous material spills, medical problems and traumatic injuries.

Because of our proximity to the Plymouth Nuclear Power Plant there is a risk of radiation. As with all communities in the USA there is a risk of terrorism (both domestic and foreign), however, West Barnstable lacks high-profile targets. (Other than terrorism this analysis does not attempt to address acts of war.)

There are relatively small amounts of hazardous materials in West Barnstable Fire District. Transportation accidents and home heating oil are bigger threats to the health and safety of the

community. Areas to consider with hazardous materials include the Tower which has a Tier 2 report, the auto body shop, the cranberry bogs, the boat shop, Cape Cod Community College, small propane tanks, oil and propane delivery trucks, and tanker trucks on Route 6.

RISK MATRIX:

The Risk Matrix in **Appendix B** lists the possible hazards that could be encountered in West Barnstable and assigns a RISK RATING to each hazard. The higher the RISK RATING the greater the risk and the more prepared for that risk the community should be.

The Risk Matrix is broken into three parts. The first part labeled "Probability Rating" estimates the probability of the hazard occurring based upon historical data, and estimates the maximum number of persons that might be affected by the hazard.

The second part of the Risk Matrix determines the "Total Vulnerability Rating" associated with each risk based upon five (5) factors: Danger/Personal Harm, Economic Harm, Environmental Harm, Social Harm and Political Planning Level.
The third part of the Risk Matrix calculates a Risk Rating by multiplying the Probably Rating times the Vulnerability Rating. The higher the Risk Rating the greater the risk to West Barnstable.

Based upon the highest Risk Matrix calculations West Barnstable faces ten (10) significant risks as follows:

1. Medical Emergencies	Risk Rating of 6
2. Motor Vehicle Crashes	Risk Rating of 5
3. Commercial Structure Fire – Small	Risk Rating of 4
4. Urban/Interface Fire < 2 homes	Risk Rating of 4
5. Hurricane: Category 2	Risk Rating of 4
6. Gasoline/Oil Spill < 10 gallons	Risk Rating of 4
7. Hazardous Materials Incident	Risk Rating of 4
8. Large Scale Infection Event	Risk Rating of 4
9. Electrical Wires Down	Risk Rating of 4

The top two risks, medical emergencies and motor vehicle crashes, represent 55% or more of the department's total emergency call activity in the prior five years. **(Appendix C)**

All other risks scored lower than a risk rating of 4, because they occur so infrequently or because they do not result in a great deal of relative harm or both.

Additionally, the department determined that of the identified risks, electrical wire down would not be considered a community risk because of the overwhelming majority of incident involving electric lines were in fact other types of incident where electrical line were only part of the problem.

The Nine Risks:

The following is a discussion of each of the ten significant risk categories that West Barnstable should be prepared for.

Medical Emergencies:

Medical emergencies had the highest Risk Rating, a 6 of all of the potential risks that were indentified. Since sixty percent of all of the emergency calls handled by the WBFD are medical emergencies, this level of activity supports the conclusion that medical emergencies are the number one risk faced by residents of West Barnstable.

The reason the Risk Matrix calculates such a high Risk Rating for medical emergencies is because it is the only event that occurs daily in West Barnstable. This results in a Probability Rating higher than any other risk (Probability Rating of 6 (Likely) studied.

In calendar year 2015, the West Barnstable Fire Department transported 342 patients to a hospital.
Medical emergencies include traumatic injuries, chronic illnesses and acute illnesses. Most medical incidents involve only one patient and they represent a serious risk only to the affected patient.

For the staff of the WBFD, responding to medical emergencies is a low risk (to firefighters) high frequency event.

Motor Vehicle Crashes:

The next highest risk, with a Risk Rating of 5, is motor vehicle crashes. Motor vehicle crashes are weekly events in West Barnstable and their high probability pushes them up on the Risk Matrix. They also can have multiple patients. Motor vehicle crashes historically represent the second highest number of emergency incidents handled by the WBFD. In 2015, the department responded to fifty-five motor vehicle crashes. Over the past five years, the highest number of motor vehicle crashes was in 2013 when the department responded to 61 crashes.

Motor vehicle crashes are also closely related to or overlap with two other categories of risk. First, they are emergency medical service incidents. Every crash involves the medical assessment of the persons involved, and about two-thirds of all crashes involve transport one or more injured persons to the hospital. Secondly, motor vehicle crashes overlap with fuel spills and hazardous materials incidents. Many vehicles leak hazardous materials (gasoline, diesel, oil, anti-freeze) when damaged in an accident and the fire department is responsible for the mitigation of these hazards. Occasionally, a vehicle involved in a motor vehicle crash is transporting hazardous materials.

The key element that makes motor vehicle crashes standout from emergency medical services and hazardous materials incidents as a separate and distinct event is the need to provide technical rescue services, namely auto extrication services, to persons trapped in a vehicle.

Commercial Structure Fires – Small

With a Risk Rating of 4, the Risk Matrix indicates that the overall community risk for a small commercial building fire is greater than all other types of structure fires the community faces. At first, this seems contrary to logic because our community consists of about 1,279 single family residences, less than 100 small commercial (mixed commercial/residential) structures and about two dozen large commercial or public occupancies. With the overwhelming number of buildings in the district being single family homes you'd expect these to be a greater risk. However, a review of the district's historical experience with structure fires indicates that commercially occupied structures have a disproportionally high number of fires.

In the past five years, the serious structure fires (known as "working fires" or multiple alarm fires in the fire industry) in West Barnstable have been:

2011:	None	
2012:	Scorton Hill Rd- Residential Use	-Working Fire
	Navigation Way- Residential Use	-Working Fire
	Morgan Way - Residential Use	-2nd Alarm Fire
	Cape Cod Community College – Commercial Use	-Working Fire
2013:	Crooked Cartway N - Residential Use	-2nd Alarm Fire
	Kettlehole Rd - Residential Use	-Working Fire
2014:	Barnhill Rd - Residential Use	-2nd Alarm Fire
2015:	None	

In this five year period, the community experienced seven serious fires and one of them were in commercial structures. This demonstrates a greater working fire experience from a small subset of the buildings in West Barnstable.

Since 2011, the WBFD has handled 45 minor fires in residences. Many are chimney fires, kitchen fires and appliance fires. These incidents, while more numerous than working fires are not rising to the same level of community risk as the working fires in small commercial structures. This could be because virtually all residential homes in West Barnstable have smoke detectors, these fires are reported while they are still small (incipient) and the WBFD has a fast response that stops them before they have a chance to grow.

Wildland Urban Interface Fire < 2 Homes

A Wildland Urban Interface Fire (WUI Fire) is a brush fire that threatens or involves structures. West Barnstable has been identified as an area of high hazard for WUI fires because we have a scrub oak and scrub pine forest that can be highly combustible, especially during spring droughts. This scrub forest has been broken-up into many segments by subdivisions that tend to weave residential structures in and around the scrub forest. In many neighborhoods there is poor separation between the homes and the scrub forest. Adding to the hazard is the slightly rolling (rather than flat) topography that dominates West Barnstable along the "ridge" of Cape Cod.

Historically, the wildland fire hazard in West Barnstable was very different thirty or more years ago. At that time, the village was dominated by large unbroken tracts of scrub forest that resulted in larger, more spectacular looking fires. However, these fires rarely resulted in damage to homes or businesses. Today, a wildland fire is more likely to threaten a home than in our past. A typical wildland fire starts near homes, in the open space surrounding subdivisions and rapidly gets close (50 feet or less) to a building. West Barnstable has been spared any serious damage to buildings from WUI fires due to early detection and notification of the fire department, a good road system that allows for rapid access to the fire and a quick response by the WBFD. Serious springtime drought conditions could fuel larger, hotter and faster burning WUI fires than we normally experience.

Class 2 Hurricane

While tropical storms, blizzards and Class 1 Hurricanes are much more common to West Barnstable, the Risk Rating for a Class Hurricane is a 4, and it is among our greatest risks. The reason that our community is at a greater risk for the less common Class 2 Hurricane is because of the potential for widespread damage coupled with the likelihood of the event.

Tropical storms, blizzards and Class 1 Hurricanes, while more common, don't cause a great deal of damage and therefore they are of less risk to the community. These storms typically result in downed trees, downed power lines and the loss of electricity for no more than a day or two. They don't result is the loss of homes or businesses. They don't usually result in the loss of life, although we have experienced additional risks to individuals because of delays getting EMS to patients due to storm conditions.

A Class 2 Hurricane has sustained winds of 96 to 110 mph. They can also be accompanied by extreme amounts of rain. In the past 100 years there have been nine Class 2 or higher hurricanes that made landfall in New England. Of these, The Great New England Hurricane of 1938, the Great Atlantic Hurricane of 1944, Hurricane Dog of 1950, Hurricane Carol of 1954, and Hurricane Edna of 1954 came ashore on Cape Cod as a Category 2 (or higher) storm. Hurricane Bob in 1990 which did considerable damage in economic terms in Southeastern Massachusetts, as well as killing 18 persons across New England, was a Category 1 storm when it passed over West Barnstable.

An additional hazard related to hurricanes (and similar storm events) is that their effect and damage is spread over the entire Cape Cod/Southeastern Massachusetts area. This means that mutual aid from surrounding fire/ems departments will not be available to supplement the WBFD capabilities.

Gasoline/Oil Spill of Less than 10 gallons

Also with a Risk Rating of 4 are small gasoline and oil spills of less than 10 gallons. Because West Barnstable draws upon a source aquifer for all of its water needs and because most of our businesses, agriculture and residences rely upon private wells, any kind of fuel or chemical spill is a serious environmental and economic threat to the community.

Typically, the WBFD encounters small fuel spills at motor vehicle crashes and the frequency of these crashes is partly the reason for this type of risk being high in our community. But, in addition to motor vehicle crashes, the WBFD has seen an increase in the number of small spills from other causes such as defective fuel tanks and damage/defective hydraulic and fuel lines and industrial accidents. In the period 2011 to 2015, the WBFD responded to 13 spills unrelated to automobile crashes.

A small spill can result in the loss of private wells to a cluster of residences. It can put someone out of business if their well is contaminated, and it can result in high clean-up costs for a homeowner or business. Rapidly containing fuel, oil and other chemical spills is an important function for the WBFD.

Hazardous Materials Incident

This category stands for large or complex hazardous materials incidents resulting from transportation accidents and fixed facility accidents.

Route 6 crosses through West Barnstable west to east from Exit 4 to Exit 6. Over this highway travels gasoline tankers, propane tankers, radiological supplies, (list other chemicals). The Cape Cod Railroad also crosses through West Barnstable and its daily trash train carries an unpredictable soup of hazardous materials on their way to be disposed of at the SeaMass Plant in Rochester, MA. A transportation accident involving these chemicals would result is a serious risk of illness, injury and death to West Barnstable residents.

Complicating matters is the proximity of the Route 6 rest stop to Exit 6, Route 6, Service Road and Route 132. Many of the trucks carrying hazardous materials park and fuel at this location, and an incident here would close all of these roads because they are all within the initial 500' isolation and evacuation zone. The entrance to the Cape Cod Community College is within this isolation zone.

Fixed facility incidents are less of a potential hazard. The only federally designated Tier II hazardous materials site in West Barnstable is the Verizon Radio Tower Site at the corner of Oak Street and Service Road which stores 500 pounds of sulfuric acid on the premises. Other smaller hazardous materials sites are the Community College (dental lab, bulk fuel storage), YMCA (chlorine), auto body (paints and thinners), golf course storage/maintenance facility (pesticide, herbicides & fuel), agricultural storage barns (pesticides, herbicides & fuel) and the gas station.

Historically, there have been few incidents in West Barnstable; however, the large number of people who could be injured and the high potential for economic and environmental damage push these incidents up in the Risk Matrix.

Large Scale Infection Event

Pandemic's while an unusual event and something that is likely to occur only once or twice every one hundred years rated a 4 on the Risk Matrix. This is because a large number of people, potentially the entire community, could be harmed. A flu pandemic would overwhelm the

WBFD's ability to transport patients to the hospital with its one ambulance, and mutual aid ambulances would not be available. A flu pandemic would also affect the staff of the WBFD and could severely reduce the availably of firefighters to manage the pandemic and respond to other types of incidents.

Treating and transporting flu patients are really included within the WBFD's operations as a medical emergency (see above) so this category does not necessarily stand alone as a separate risk. It is a fact that the planning and preparation for a flu pandemic or large scale infection event is mostly done at the federal and state level, with the WBFD being a participant in the planning and in the implementation of a regional plan that sets it apart. The WBFD does need and have its own operation plan for functioning under pandemic conditions that addresses how to maintain emergency medical services when a large part of the staff will be sick, and when the call volume increases.

Wires Down

The final risk that rated a 4 or higher in the Risk Matrix is wires down. This category actually refers to a range of emergency calls related to overhead electric and utility wires. These calls involve pole fires, transformer fires, wires on the ground or tangled in the trees, wires hanging low, sparking wires and utility poles damaged by car crashes. Many of these incidents result in some kind of localized power outage. The hazard from these incidents is to persons who might come in contact with energized electrical equipment, or from fires caused by electrical shorts/surges. It is the frequency of these events that gives them a high Risk Rating.

Additionally, these incidents usually associated with some kind of storm (hurricane, tropical storm, nor'easter, blizzard, etc.) and are the primary hazard that these storms collectively represent. Occasionally, these incidents are the result of a fire or motor vehicle crash. This risk category is really an indication of the department's activity level during storm events.

Semantics: A Community Risk VS. An Emergency Response

In Some cases the identified community risk has the same name or title as one of the many emergency response incidents the department responses to and reports in its annual emergency run data. This can create a little confusion and create the sense that the risk assessment is merely a listing of the most common emergency calls. For instance, Emergency Medical Services (EMS) is both a community risk and the most common emergency call that the department responses to. However, you will never see the category Class 2 Hurricane in our emergency response data. A Hurricane, as a single even, may result in the WBFD responding to two or three dozen different emergency events, such as wires down, water rescue, or flooded basements over a period of a couple days.

Another example of how a category can cause confusion is the Community Risk Category Gasoline/Oil Spill of Less than 10 gallons. Since many of these incident occur as part of a motor vehicle crash they are not separately reported as an independent event and are reported as a motor vehicle crash in our annual response data. However, some of these events are reported as a

fuel spill in our response data when the incident occurs independently from a crash. For instance, a fuel line that break and spills fuel on the roadway would be a fuel spill response.

Similarly, if the WBFD experience a large scale infection event such as a flu pandemic it would be reflected in our annual emergency response data as an increase in EMS calls.

A Comprehensive Program & Standard of Cover

Each of these identified risks constitutes a significant community-wide risk that requires the WBFD to have a comprehensive program and standard of cover to manage them. By a comprehensive program we mean that the department has the necessary equipment, the necessary training, the necessary apparatus, the necessary staffing, and appropriate operational plans to address the risk. It also means that the department meets or exceeds the national response stands for the stated risk. A stand of cover, that sets forth a specific, measurable, response standard for an emergency incident is requires for each of these identified risks.

All Other Risks

All of the other potential risks shown in the Risk Matrix scored a 3 or lower. This means they don't represent a significant community wide risk.

Many of these risks fall into the category of extremely rare, but hazardous. This would include, but not limited to such risks as a class 3-5 hurricane, tornado, airplane crash, commuter train derailment, or large commercial structure fire. While these events could be hazardous to individuals or to the entire community some of them have never occurred in the 400 year history of West Barnstable, while other occur once every decade or two. As result, they don't constitute a significant enough risk to the community to expect the fire department to develop a comprehensive program to address.

Other, are more common, but less hazardous. For instance, the WBFD will respond to a water or ice rescue incident about once or twice a year. In the past decade none of these incidents have involved more than two people. Therefore, ice/water rescue incidents don't constitute a significant risk to the community and the fire department wouldn't be expected to develop a comprehensive program to handle these incidents.

While the fire department wouldn't be expected to develop a comprehensive program to handle these low risk incidents, the department will need to have some type of plan, policy, or procedure in place to guide the occasional response to such incidents. For instance, the department does have a written plan for responding to water/ice rescues and trains annually should an incident occur.

Lesser Included Incidents

Additionally, it should be noted that if the WBFD is properly prepared for one of the identified risks, that there are lesser, but similar incidents that the department will be well prepared to handle. For instance, if the department is well prepared to handle a wildland urban interface fire

involving two homes, all of the training, equipment, staffing, and response procedures that would be effective for that incident, will also be effective for a brush fire that doesn't involve or threaten homes. If the WBFD can effectively handle a structure fire in a small commercial building, then it will be able to effectively handle a chimney fire or a kitchen fire in a residential structure.

Target Hazards

In addition to general community wide risks, the WBFD has identified 12 target hazards that for one or more reasons should have a specific plan to address a fire or other non-fire hazard. The Fire Chief's Handbook explains that a target hazard is a building or occupancy that is unusually dangerous in terms of life loss or has a high potential for property damage. Other definitions of a target hazard include buildings where firefighting operations would be unusually complex or difficult. Each target hazard has been preplanned by the WBFD and preplans are updated annually. As part of the preplanning process, the department has identified and takes into account the existence of fire suppression and detection systems throughout the community. A list of the fire suppression and detection system or preplanned properties is included in **Appendix D**

1. **West Parish Hall (Family School):** The West Parish Hall is a two story, wood frame structure, with a finished basement that serves as a day care center for up to 75 pre-school children, including infants. The building also serves all of the typical functions of a parish community building including offices, meeting rooms, hosting events, and storage. The building has no fire suppression system, but does have a detection system tied to a central station alarm. There are no fire hydrants within a mile, but there is a cistern with 20,000 galls of water for firefighting across the street. Landscaping, driveway layout, and placement of the building on its lot limit access to the building by fire apparatus, especially aerial ladders. The West Parish Hall presents an occupancy that is unusually dangerous in terms of potential for the loss of life, and presents a complex firefighting situation.

2. **West Parish Meetinghouse (Church)** The West Parish Meetinghouse is a church built in 1717. It is heavy timber construction. It does not have a fire suppression system, but it does have a fire detection system tied to a central station alarm. There are no fire hydrants, but there is a 20,000 gallon cistern across the street. This church is a target hazard because of the extreme historic and cultural value to the community. The West Parish is a shared community visual representation of West Barnstable. Additionally, the size of the building would constitute a difficulty fire to suppress. West Parish Hall and Church are within sight of the fire station

3. **Craigville Motel:** The Craigville Motel is a low budget motel that tends to provide long and short-term housing of last resort for unemployed and disabled individuals. It is a two level wood frame motel without any fire suppression system. The motel has a central station alarm system, however residents have a history of disabling detectors. The motel is within a hydrant district, but it is at the extreme end of the department's response district averaging 7 minutes. This property has a potential for a large amount of life hazard and when fully occupied, stretching the fire department resources initially.

4. **Cape Cod Community College:** The Cape Cod Community College (CCCC) is a large complex of administrative and educational buildings built between 1970 and 2007. The college has a daytime population of about 6,000 students, faculty, and staff. There are no dormitories on the premises. The buildings are of fireproof construction, but only one has a complete fire sprinkler system. Another building has a standpipe and partial sprinkler system. The kitchen has a hood suppression system. Otherwise, there are no other fire suppression systems at the college, but there are hydrants on the property. All buildings are connected to a central station alarm system. The college is at the extreme end of the department's response district, and is access by a single one-way loop road with speed bumps. Response times generally average 7 to 9 minutes. Because of the long response time, the overall lack of sprinklers and the large population makes this a target hazard.

5. **Route 6 Rest Area (Burger King Complex):** The rest area at Exit 6 on Route 6 is a complex consisting of commuter parking, bus stop, a gasoline and service station, a Burger King/Dunkin Donuts/Mini-Mart/Subway building, and heavy truck parking. The building is lightweight construction. The gasoline station has a modern suppression system installed over the gasoline pumps. The Burger King has a hood suppression system, there are no other suppression systems on the property.

6. **1611 Main St. (It Works Computers):** The building at 1611 Main Street is a mixed use commercial/residential structure. Its most prominent feature is a large wing with a wooden bow truss roof that would create difficult and dangerous firefighting operation. The building has no suppression system and there is no nearby source of water for firefighting. The building does have a central station alarm system. Generally there are about 2 dozen people on the property daily, so life hazard is low. It is the difficulty of fighting a fire in the structure and the potential loss to the community (It is only one of a handful of larger commercial structures in the district) that make it a target hazard.

7. **West Barnstable Table Company:** The West Barnstable Table Company building is a large three story barn that is heated by wood stoves and houses multiple custom furniture makings. There are no fire protection systems or alarm systems in the building. There are no hydrants and the nearest water source is a 30,000 gallon cistern about 1/3 of a mile away. Only side A of the building is accessible to fire apparatus. Sides B, C, and D are almost inaccessible to firefighters on foot and the building abuts wildland. This property is a target hazard because it represents a difficult fire to fight along with its economic loss to the community.

8. **Bursley Inn:** The Bursley Inn is a target hazard because it would be a difficult fire to fight and has an unusual life hazard. It is a large 1670 home (balloon frame construction) converted into an Inn and located in an non hydrant district. It has 5 guest rooms and two owner's bedrooms. The interior is maze like with two separate attics, and two separate cellars. The presence of guests who do not know the hallways and stairways well in the dark creates an additional life hazard.

9. **Honeysuckle B&B:** The Honeysuckle B&B is a target hazard because it would be a difficult fire to fight and has an unusual life hazard. It is a large 1860 home (balloon frame construction) converted into an Inn and located in a non-hydrant district. It has 5 guest rooms

and one owner's bedroom. It has five staircases (creating plenty of ways for a fire to spread rapidly) and two separate cellars. The presence of guests who do not know the layout of the building well creates an additional life hazard. There is a central station alarm system but no sprinkler system.

10. **Fairground Golf Course Maintenance Building:** The maintenance building at the Fairground Golf Course is a target hazard because it is storage building for pesticides, herbicides, fertilizers, gasoline, and diesel fuel. This storage amount doubles in the winter times due to additional storage from the Hyannis Golf Course. While the building has a fire sprinkler system, an automatic fire alarm, and a hydrant within 300 feet of the building the presence of the hazardous materials is the complicating factor that would make a fire unusually complex.

11. **48 Lombard Ave Complex:** The 48 Lombard Ave Complex is a cluster of eight separate buildings on one site. All but two of the buildings are old and run down. The water flow for the largest building (according to our latest ISO rating) is 3,500 gallons of water per minute and there are no hydrants or nearby sources of water for firefighting. The uses include a boat building shop, boat storage, a nursery, and a building supply company. The buildings are close enough to each other to constitute exposure problems in the event of a serious fire. There are no sprinklers or fire suppression systems, but they do have an automatic fire alarm. The property is a target hazard because of the required fire flow to fight a serious fire and no close water source available.

12. **West Barnstable Village Store:** The WB village store is a target hazard because of its cultural and economic value to the community. It was built in 1881 and is the community's key visual element of the center of West Barnstable. The building is a mixed use commercial/residential balloon frame construction with no sprinkler system but does have an automatic fire alarm. There are no hydrants nearby, this would be a difficulty fire to fight because of its age, construction, and lack water.

What Has Changed Since 2011

2015 proved to be the busiest year in the WBFD history responding to 758 calls. A 20% call increase over 2014 which we responded to 630 calls. West Barnstable is not a growing community, so why are we experiencing so many more emergency calls? There is no single answer to this question. Of the 128 additional emergency calls in 2015, 88 of them came from two categories. Emergency Medical Service (EMS) contributed 53 additional calls and automatic fire alarms accounted for 35 new calls. We experienced a 16% increase in EMS calls. It is easy to understand the increase in EMS calls. Our community continues to age and an aging population requires more EMS than a younger population. We've been trending this way for a decade, but the trend has picked up in the past three years. It is not clear why the number of automatic fire alarms has increased. Looking at the prior five years we note that the number of automatic alarms jumps around and there is no clear trend. A breakdown of the calls in the last 5 years has been added to the end, we will continue to monitor trends every year.

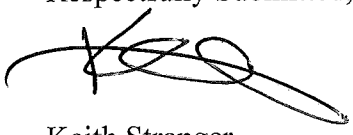
Conclusion

Based upon this analysis, the West Barnstable Fire Department must continue to respond to and mitigate medical emergencies, motor vehicle crashes, small commercial structure and residential structure fires, wildland urban interface fires involving two or fewer structures, storm events up to and including Class 2 Hurricane, and hazardous materials incidents. The department must continue to evaluate our target hazards in the community and have a plan of attack ready.

Table of Appendices:

A. Five Year Summary of Call types by NFIRS codes
B. Risk Assessment Analysis / Risk Matrix
C. Top Two Risks Relative to the West Barnstable Fire Department's Annual Emergency Call Volume
D. Protection System & Detection Systems for Commercial and Public Occupancies

Respectfully Submitted,



Keith Stranger
Lieutenant/Paramedic
West Barnstable Fire Department

*Census data obtained from U.S. Census www.census.gov *

Appendix A

West Barnstable Fire Department
Five Year Summary of Calls by NFIRS Codes

Code	Description	2015	2014	2013	2012	2011	2010
111	Building fire	6	9	9	14	6	6
112	Fires in structure other than in a building	1	-	-	-	1	-
113	Cooking fire, confined to container	2	-	-	3	3	10
114	Chimney or flue fire, confined to chimney or flue	-	1	4	3	3	1
116	Fuel burner/boiler malfunction, fire confined	1	1	1	1	3	-
130	Mobile property (vehicle) fire, Other	-	-	-	-	-	1
131	Passenger vehicle fire	4	1	3	6	1	2
134	Water vehicle fire	1	-	-	-	-	-
137	Camper or recreational vehicle (RV) fire	-	1	1	-	-	-
140	Natural vegetation fire, Other	-	-	1	-	2	1
141	Forest, woods or wildland fire	6	4	2	12	4	5
142	Brush or brush-and-grass mixture fire	1	3	4	6	2	-
150	Outside rubbish fire, Other	-	1	-	-	1	-
151	Outside rubbish, trash or waste fire	1	1	-	-	2	-
154	Dumpster or other outside trash receptacle fire	1	-	-	1	-	1
162	Outside equipment fire	-	-	-	-	1	-
170	Cultivated vegetation, crop fire, Other	-	-	-	2	-	-
251	Excessive heat, scorch burns with no ignition	1	-	1	1	1	1
311	Medical assist, assist EMS crew	-	5	16	24	20	28
320	Emergency medical service, Other (conversion only)	-	1	3	-	-	-
321	EMS call, excluding vehicle accident with injury	406	326	316	311	313	288
322	Motor vehicle accident with injuries	38	35	45	30	44	46
323	Motor vehicle/pedestrian accident (MV Ped)	-	-	-	1	1	1
324	Motor Vehicle Accident with no injuries	31	23	26	21	13	20
340	Search for lost person, other	-	-	-	1	-	-
341	Search for person on land	-	-	2	1	-	-
343	Search for person underground	-	-	-	-	1	-
350	Extrication, rescue, Other	-	1	-	-	-	-
352	Extrication of victim(s) from vehicle	1	-	1	1	-	-
353	Removal of victim(s) from stalled elevator	1	-	-	-	1	1
354	Trench/below-grade rescue	-	-	-	-	1	-
360	Water & ice-related rescue, other	-	-	-	-	-	2
361	Swimming/recreational water areas rescue	2	-	2	-	-	-
364	Surf rescue	-	1	-	-	-	-
365	Watercraft rescue	2	-	-	2	-	-
381	Rescue or EMS standby	-	-	-	1	3	1
400	Hazardous condition, Other	-	-	1	1	1	-
410	Combustible/flammable gas/liquid condition, other	-	-	-	-	1	1
411	Gasoline or other flammable liquid spill	3	3	2	3	2	4
412	Gas leak (natural gas or LPG)	5	4	8	1	3	4
413	Oil or other combustible liquid spill	1	-	1	3	-	1
423	Refrigeration leak	1	-	-	-	-	-
424	Carbon monoxide incident	2	2	3	5	2	-
440	Electrical wiring/equipment problem, Other	1	4	2	4	1	5
441	Heat from short circuit (wiring), defective/worn	-	3	-	-	-	-
442	Overheated motor	-	-	2	-	1	-
443	Breakdown of light ballast	-	-	-	-	1	-

West Barnstable Fire Department
Five Year Summary of Calls by NFIRS Codes

Code	Description	2015	2014	2013	2012	2011	2010
444	Power line down	10	6	14	5	12	4
445	Arcing, shorted electrical equipment	6	1	5	2	17	4
462	Aircraft standby	1	-	-	-	-	-
500	Service Call, other	3	6	1	1	2	1
510	Person in distress, Other	3	4	1	-	1	-
511	Lock-out	7	5	2	3	6	3
512	Ring or jewelry removal	4	-	-	-	-	-
520	Water problem, Other	-	-	-	1	3	1
521	Water evacuation	2	1	1	2	1	1
522	Water or steam leak	2	3	-	-	3	2
531	Smoke or odor removal	3	4	2	3	2	-
541	Animal problem	3	-	-	-	-	-
542	Animal rescue	3	3	-	-	1	-
550	Public service assistance, Other	6	4	-	3	5	4
551	Assist police or other governmental agency	11	11	7	15	7	2
552	Police matter	-	1	-	-	-	-
553	Public service	13	14	7	4	5	3
554	Assist invalid	20	39	14	10	15	8
555	Defective elevator, no occupants	-	-	-	-	-	1
561	Unauthorized burning	3	4	6	2	8	4
571	Cover assignment, standby, moveup	15	16	15	10	14	19
600	Good intent call, Other	6	10	4	6	8	14
611	Dispatched & cancelled en route	13	9	4	3	6	5
621	Wrong location	-	1	1	-	-	1
622	No Incident found on arrival at dispatch address	5	4	7	3	4	5
631	Authorized controlled burning	3	-	3	-	2	-
632	Prescribed fire	10	-	-	-	-	-
641	Vicinity alarm (incident in other location)	1	-	-	-	-	-
650	Steam, Other gas mistaken for smoke, Other	-	-	-	-	1	-
651	Smoke scare, odor of smoke	2	1	4	5	2	-
652	Steam, vapor, fog or dust thought to be smoke	-	1	2	1	-	-
661	EMS call, party transported by non-fire agency	-	1	4	1	1	1
671	HazMat release investigation w/no HazMat	3	-	1	1	1	-
700	False alarm or false call, Other	-	3	4	-	6	2
710	Malicious, mischievous false call, Other	-	-	-	1	-	-
714	Central station, malicious false alarm	-	1	-	1	-	-
730	System malfunction, Other	-	1	3	1	1	3
731	Sprinkler activation due to malfunction	-	-	-	1	-	-
733	Smoke detector activation due to malfunction	15	11	13	10	16	9
734	Heat detector activation due to malfunction	-	1	-	-	1	-
735	Alarm system sounded due to malfunction	8	5	8	11	11	9
736	CO detector activation due to malfunction	13	1	10	3	5	5
740	Unintentional transmission of alarm, Other	4	3	3	4	1	4
742	Extinguishing system activation	1	-	-	1	-	-
743	Smoke detector activation, no fire - unintentional	19	5	8	8	9	7
744	Detector activation, no fire - unintentional	5	1	-	5	1	3
745	Alarm system activation, no fire - unintentional	10	11	15	13	15	11

West Barnstable Fire Department
Five Year Summary of Calls by NFIRS Codes

Code	Description	2015	2014	2013	2012	2011	2010
746	Carbon monoxide detector activation, no CO	3	3	8	4	12	1
800	Severe weather or natural disaster, Other	-	2	19	-	-	1
813	Wind storm, tornado/hurricane assessment	1	-	-	2	-	-
814	Lightning strike (no fire)	-	-	2	2	-	-
900	Special type of incident, Other	1	3	-	1	3	-
911	Citizen complaint	3	-	-	-	2	-
	Total	760	630	654	608	649	568

Appendix B

West Barnstable Fire District
Risk Assessment Analysis
August 1, 2011

Possible Hazards	Vulnerability Rating: Danger/ Personal Harm (High=3 Moderate=2 Low=1)	Economic (Permanent=3 Temporary=2 Immediate Short-Term=1)	Environmental (High=3 Moderate=2 Low=1)	Social (High=3 Moderate=2 Low=1)	Political Planning Level (Federal=3 Regional=2 Local=1)	Total Vulnerability Rating (High = 12 to 15 Medium = 9 to 11 Low = 5 to 8)
Fire						
Residential structure/chimney fire	3	1	1	2	1	8
Commercial structure fire - high risk	3	2	1	2	1	9
Commercial structure fire - low risk	2	2	1	3	1	9
Vehicle fire	1	1	1	1	1	5
Commercial vehicle fire	2	1	1	1	1	6
Contained Fire	1	1	1	1	1	5
Wildland fires < 5 acers	1	1	3	1	1	7
Urban/Interface fire < 2 homes	2	2	3	2	1	10
Urban/Interface fire > 2 homes	3	2	3	2	2	12
Train fire	2	2	1	2	1	8
Natural Disaster						
Tropical storm	1	1	1	1	1	5
Heavy rain/runoff / flooding	2	1	1	1	1	6
Ice storm	2	2	2	2	2	10
Blizzard	2	2	1	1	2	8
Hurricane: Category 1	1	1	1	1	2	6
Hurricane: Category 2	2	2	2	1	3	10
Hurricane: Category 3	3	2	3	3	3	14
Hurricane: Category 4	3	3	3	3	3	15
Hurricane: Category 5	3	3	3	3	3	15
Earthquake	3	3	3	3	3	15
Tornado	3	2	3	3	3	14
Tsumani	3	3	3	3	3	15
Hazmat						
Gasoline/oil spill less then 10gls	1	1	1	1	1	5
Gasoline/oil spill 10-100gls	1	2	2	1	1	7
Gasoline/oil spill more then 100gls	2	2	3	2	2	11
Hazmat	2	2	3	1	2	10
Gas explosion	3	2	1	2	2	10
Biological hazard	2	2	2	2	3	11
Broken pipe - gas	1	1	1	1	1	5
Broken pipe - water	1	1	1	1	1	5
Medical						
Medical	1	1	1	2	1	6
Carbon monoxide incident	2	1	1	1	1	6
MCI	2	1	1	2	1	7
FLU pandemic	3	2	1	3	2	11
Rescue						
Motor vehicle crashes	2	1	1	1	1	6
Ice / water rescue	1	1	1	1	1	5
Elevator rescue	1	1	1	1	1	5
Airplane crash	2	1	1	1	1	6
Building collapse	2	1	1	2	1	7
Missing persons (non-criminal)	1	1	1	1	1	5
Train Accident	2	2	1	2	1	8
Confined space rescue	1	1	1	1	1	5
Trench rescue	1	1	1	1	1	5
High-angle rescue	1	1	1	1	1	5
Terrorism/Warfare						
Nuclear Event - Plymouth	3	3	3	3	3	15
Terrorist	3	3	3	3	3	15
Other						
Wires Down	1	1	1	1	1	5

West Barnstable Fire District
Risk Assessment Analysis
February 13, 2016

Possible Hazards	Vulnerability Rating: Danger/ Personal Harm (High=3 Moderate=2 Low=1)	Economic (Permanent=3 Temporary=2 Immediate Short-Term=1)	Environmental (High=3 Moderate=2 Low=1)	Social (High=3 Moderate=2 Low=1)	Political Planning Level (Federal=3 Regional=2 Local=1)	Total Vulnerability Rating (High = 12 to 15 Medium = 9 to 11 Low = 5 to 8)
Fire						
Residential structure/chimney fire	3	1	1	2	1	8
Commercial structure fire - high risk	3	2	1	2	1	9
Commercial structure fire - low risk	2	2	1	3	1	9
Vehicle fire	1	1	1	1	1	5
Commercial vehicle fire	2	1	1	1	1	6
Contained Fire	1	1	1	1	1	5
Wildland fires < 5 acers	1	1	3	1	1	7
Urban/Interface fire < 2 homes	2	2	3	2	1	10
Urban/Interface fire > 2 homes	3	2	3	2	2	12
Train fire	2	2	1	2	1	8
Natural Disaster						
Tropical storm	1	1	1	1	1	5
Heavy rain/runoff / flooding	2	1	1	1	1	6
Ice storm	2	2	2	2	2	10
Blizzard	2	2	1	1	2	8
Hurricane: Category 1	1	1	1	1	2	6
Hurricane: Category 2	2	2	2	1	3	10
Hurricane: Category 3	3	2	3	3	3	14
Hurricane: Category 4	3	3	3	3	3	15
Hurricane: Category 5	3	3	3	3	3	15
Earthquake	3	3	3	3	3	15
Tornado	3	2	3	3	3	14
Tsumani	3	3	3	3	3	15
Hazmat						
Gasoline/oil spill less then 10gls	1	1	1	1	1	5
Gasoline/oil spill 10-100gls	1	2	2	1	1	7
Gasoline/oil spill more then 100gls	2	2	3	2	2	11
Hazmat	2	2	3	1	2	10
Gas explosion	3	2	1	2	2	10
Biological hazard	2	2	2	2	3	11
Broken pipe - gas	1	1	1	1	1	5
Broken pipe - water	1	1	1	1	1	5
Medical						
Medical	1	1	1	2	1	6
Carbon monoxide incident	2	1	1	1	1	6
MCI	2	1	1	2	1	7
FLU pandemic	3	2	1	3	2	11
Rescue						
Motor vehicle crashes	2	1	1	1	1	6
Ice / water rescue	1	1	1	1	1	5
Elevator rescue	1	1	1	1	1	5
Airplane crash	2	1	1	1	1	6
Building collapse	2	1	1	2	1	7
Missing persons (non-criminal)	1	1	1	1	1	5
Train Accident	2	2	1	2	1	8
Confined space rescue	1	1	1	1	1	5
Trench rescue	1	1	1	1	1	5
High-angle rescue	1	1	1	1	1	5
Terrorism/Warfare						
Nuclear Event - Plymouth	3	3	3	3	3	15
Terrorist	3	3	3	3	3	15
Other						
Wires Down	1	1	1	1	1	5

Appendix C

Top Two Risks Relative to the West Barnstable Fire Department

Annual Emergency Call Volume

Top Two Risks	2011	2012	2013	2014	2015
EMS:	313	311	316	326	406
Motor Vehicle Crash:	58	52	71	58	69
Total:	371	363	387	384	475
Total Incidents:	649	608	654	630	758
Percentage of EMS and MVC calls	57%	59%	59%	60%	62%

5 Year Average

EMS: 387
MVC: 62

Yearly Call Average: 660

Percentage of EMS and MVC Call Average: 68%

Appendix D

Protection Systems & Detection Systems
Public Occupancies & Commercial Occupancies

The Fire Protection and Detection Systems within the West Barnstable Fire District are as follows:

1. Fire Sprinkler Systems with Central Station Alarms:
    a. YMCA
    b. Cape Cod Community College Technology Building
    c. Christian Congregation of Cape Cod
    d. Fairground Golf Course Maintenance Building
    e. Lombard Farms Senior Housing
    f. Kimber Woods Housing Complex

2. Fire Sprinkler System with Remote Station Alarm:
    a. West Barnstable Fire Dept.

3. Partial Sprinkler System with Central Station Alarm:
    a. Cape Cod Community College Arts Building

4. Class III Standpipe System with Central Station Alarm
    a. Cape Cod Community College Arts Building (Limited to Stage Area)
    b. YMCA

5. Fuel Pump Dry Chemical Extinguisher System
    a. Mobil Station

6. Central Station Alarm Only:
    a. West Parish Meetinghouse
    b. West Parish Hall/ Family School
    c. West Barnstable Village Store
    d. Sandy Neck Bathhouse
    e. Cape Cod Conservatory
    f. Burger King Complex
    g. Craigville Motel
    h. Presbyterian Church
    i. Crosby Boat

j. E & T Farms
k. Honeysuckle B & B
l. Cape Cod Cooperative Bank
m. West Barnstable Post Office
n. It Works Computers
o. Bridge Creek Capital
p. Beacon Sales
q. Whippletree Gifts
r. Northside Village
s. Great Marsh Health Services
t. Exit 5 Gallery
u. Golden Gazebo
v. West Barnstable Train Station
w. West Barnstable Stove Shop
x. West Barnstable Deer Club
y. Radio Tower 1731 Service Rd.
z. Tumbleweed Quilts
aa. Tao Water Art Gallery
bb. West Barnstable Community Building
cc. West Barnstable Selectmen's Building
dd. Our Lady Of Hope Church

7. Hood Suppression System for Kitchen with Central Station Alarm
    a. Sandy Neck Bathhouse
    b. Cape Cod Community College Commons Building
    c. Burger King
    d. West Barnstable Deer Club
    e. Lutheran Church

8. Inergen Fire Suppression System with Central Station Alarm
    a. Cape Cod Community College Wilkens Library Records Room

WBFD Motor Vehicle Crash Extrication Times

Incident	Date	Dispatched	Arrival	Pt. Extricated	At Hospital	Disp. to Extrication Time	Arrival to Extrication Time	Dispatch to Hospital Time	Note
2012-049	2/7/2012	0:13	0:20	1:01	1:10	47 Min	41 Min	57 Min	Medflight Transport
2012-473	10/28/2012	22:43	22:48	22:55	23:25	12 Min	7 Min	42 Min	
2012-512	11/10/2012	23:29	23:53						Sandwich Call No Data
2013-056	2/2/2013	19:03	19:05	19:17	19:36	13 Min	11 Min	32 Min	
2013-195	3/24/2013	5:02	5:11	5:28:12	5:47	26 Min	16 Min	45 Min	
2013-279	5/13/2013	9:02	9:06	9:19	9:35	17 Min	13 Min	32 Min	Extricated by COMM
2013-474	8/28/2013	10:59	10:59	11:06	11:32	7 Min	7 Min	33 Min	
2013-483	9/1/2013	6:37	6:42	7:30	7:41	53 Min	48 Min	64 Min	
2013-537	10/4/2013	11:20	11:24	11:29	11:55	9 Min	5 Min	35 Min	
2013-609	11/30/2013	20:50	20:53	21:10	21:33	20 Min	16 Min	42 Min	
2013-624	12/12/2013	8:17	8:21						Sandwich Call No Data
2014-067	2/4/2014	19:04	19:09	19:41	20:00	36 Min	32 Min	56 Min	
2014-231	5/18/2014	5:58	6:08	6:19	6:45	20 Min	11 Min	42 Min	
2015-647	11/5/2015	17:25	17:36						Sandwich Call No Data
2015-748	12/23/2015	0:57	1:02	1:14	NA	17 Min	12 Min	NA	No Transport

Emergency Incident Busiest Locations West Barnstable Fire District

Busiest Locations							
Year	Kimber Woods	Lombard Farms	YMCA	CCCC	Craigville Motel	Burger King Complex	Route 6
2005	0	1	10	24	24	17	34
2006	0	0	6	29	13	15	47
2007	0	0	5	30	18	19	62
2008	0	0	12	40	4	18	59
2009	6	12	22	41	10	15	46
2010	21	17	14	39	21	9	37
2011	19	15	20	52	21	24	41
2012	24	10	8	48	29	24	31
2013	19	5	8	49	37	17	43
2014	27	9	8	44	23	10	39
2015	18	15	11	33	4	26	59

Responses to Cape Cod Community College							
	CCCC Responses			All Responses			
Year	Responses	Percent Change by Year	Percent Change since base year (2005)	Responses	Percent Change by Year	Percent Change since base year (2005)	CCCC Responses as Percent of Total Calls
2005	24			487			4.9%
2006	29	20.8%	20.8%	502	3.1%	3.1%	5.8%
2007	30	3.4%	25.0%	533	6.2%	9.4%	5.6%
2008	40	33.3%	66.7%	560	5.1%	15.0%	7.1%
2009	41	2.5%	70.8%	533	-4.8%	9.4%	7.7%
2010	39	-4.9%	62.5%	568	6.6%	16.6%	6.9%
2011	52	33.3%	116.7%	649	14.3%	33.3%	8.0%
2012	48	-7.7%	100.0%	608	-6.3%	24.8%	7.9%
2013	49	2.1%	104.2%	654	7.6%	34.3%	7.5%
2014	44	-10.2%	83.3%	630	-3.7%	29.4%	7.0%
2015	33	-25.0%	37.5%	760	20.6%	56.1%	4.3%

Comments
Comments here

West Barnstable Fire District
Mutual Aid Summary

Mutual Aid Given

	2015										
	EMS	Fire	MVC	Other	Coverage	Total	2014	2013	2012	2011	2010
Barnstable	36	4	15	3	1	59	55	50	51	47	45
COMM	-	-	2	2	5	9	9	7	3	7	8
Hyannis	-	-	-	1	1	2	2	4	4	3	3
Cotuit	-	-	-	-	-	-	1	-	1	2	3
Sandwich	10	2	2	8	8	30	27	26	25	27	14
Mashpee	-	-	-	-	-	-	1	-	-	1	-
Falmouth	-	-	-	1	-	1	4	1	-	-	-
Bourne	-	-	-	-	-	-	1	3	-	1	1
Wareham	-	-	-	-	-	-	-	-	-	-	1
Yarmouth	-	1	-	-	-	1	-	1	1	2	2
Dennis	-	1	-	-	-	1	-	-	-	-	-
Harwich	-	-	-	-	-	-	-	-	1	1	1
Brewster	-	-	-	-	-	-	-	-	1	-	-
Eastham	-	1	-	-	-	1	1	-	1	-	-
Wellfleet	-	-	-	1	-	1	-	-	-	-	-
Truro	-	-	-	-	-	-	-	-	-	1	-
Brockton	-	-	-	1	-	1	-	-	-	-	-
JBCC	-	-	-	-	-	-	-	-	-	-	1
Total Mutual Aid Given	**46**	**9**	**19**	**17**	**15**	**106**	**101**	**92**	**88**	**92**	**79**
Total WBFD Incidents						760	630	654	608	649	568
Percent Mutual Aid Given						13.9%	16.0%	14.1%	14.5%	14.2%	13.9%

Mutual Aid Received

	2015	2014	2013	2012	2011	2010
Total Mutual Aid Received	**27**	**24**	**35**	**29**	**22**	**23**
Total WBFD Incidents	760	630	654	608	649	568
Percent Mutual Aid Received	3.6%	3.8%	5.4%	4.8%	3.4%	4.0%

Comments

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West Barnstable Fire District
Fire Loss Data

2015 Fire Loss Data by Property Type

Incident Type	Count	Total Value	Total Losses	Total Saved	Percent Saved
Boat Fire	1	$ 10,000	$ 10,000	$ -	-
Building Fire	2	$ 205,000	$ 4,000	$ 201,000	98.05%
Vehicle Fire	3	$ 11,020	$ 11,020	$ -	-
Total	**6**	**$ 226,020**	**$ 25,020**	**$ 201,000**	**88.93%**

Fire Loss Data by Year

Year	Count	Total Value	Total Losses	Total Saved	Percent Saved
2010	10	$ 9,811,000	$ 123,000	$ 9,688,000	98.75%
2011	6	$ 1,853,900	$ 15,250	$ 1,838,650	99.18%
2012	11	$ 2,470,200	$ 262,600	$ 2,207,600	89.37%
2013	9	$ 1,668,950	$ 371,700	$ 1,297,250	77.73%
2014	6	$ 817,300	$ 215,000	$ 602,300	73.69%
2015	6	$ 226,020	$ 25,020	$ 201,000	88.93%

Comments

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