

## **Summary of Fire Department Daily Operations**

All members of the Brewster Fire Department have diverse emergency medical and fire suppression related responsibilities and duties that vary not only day-to-day, but sometimes minute-by-minute. This group of dedicated employees consists of a career staff divided as follows; 1 Chief of Department, 1 Deputy Fire Chief, 4 Shift/Group Captains, 16 shift firefighters, and 1 Fire Prevention Captain. In addition to the career staff 2 call firefighters are assigned to career groups or "shifts". The department remains a combination type "all hazards" response organization that prides itself on its ability to effectively prepare for and efficiently respond to a diverse variety of emergency medical and requests for assistance from the community.

In calendar year 2022 the department responded to 3236 requests for service which set a record for annual responses. In using our most current fiscal year (2022) response data, the Brewster Fire Department responded to (3,125) total incidents which included (2323) emergency medical responses resulting in (1510) transports to Cape Cod Hospital and (802) fire related responses. To provide an inside view of our daily operations and the various tasks required to be completed by our career staff we offer the following.

### **Daily Operations**

In addition to the emergency incident responses, the Brewster Fire Department serves the citizens of Brewster with numerous other services that require a significant use of career personnel daily. Examples of these services include, but are not limited to:

- Inspection services for renovations and sales of homes
- Consultation with developers and plan reviews of new homes, fire suppression and detection systems, and site plan reviews of proposed construction projects
- Emergency management operations
- Management of the regional Community Emergency Response Team (CERT)
- Management of the Towns Office of Emergency Management (OEM)
- State mandated quarterly inspections of schools and nursing homes
- State mandated annual inspections
- State mandated fire drills at all schools
- Walk-in blood pressure analysis
- Lock box installation and maintenance
- Conducting emergency preparedness training events for the community such as CPR classes, Citizen's Fire Academy, school fire safety education, and fire department open houses
- Managing sharps disposal program in partnership with Barnstable County
- Management of the Massachusetts Open Brush Burning Season Program
- Management and maintenance of Town owned Automated External Defibrillators
- Public relations requests, such as fire station tours

When personnel are not actively engaged in community support services or responding to emergency incidents, they are expected to be taking actions to prepare themselves and the organization for future responses. It is vitally important to recognize that most, if not all the daily activities and operations of the department described herein are accomplished by on-duty or recalled to duty career staff.

The Town of Brewster currently owns millions of dollars' worth of sophisticated emergency equipment including three advanced life support ambulances, numerous fire apparatus, all-terrain vehicles, boats, automatic CPR devices, cardiac monitors, and self-contained breathing apparatus. Since the organization is called upon over three thousand times per year to respond to emergency incidents that could potentially jeopardize the lives and well-being of the citizens of Brewster, this equipment must be maintained daily to ensure its readiness.

Vehicle maintenance is an important aspect of the daily routine and a critical component of maintaining a high level of response capability. Each of our vehicles is checked regularly for operational readiness. This regular check includes checking vehicle fluids such as oil and transmission fluid, checking that all lights are in working order, the air brake function test, and ensuring proper general operation of the vehicle. For example, a general operations check involves running the pump on an engine, or the aerial ladder on the ladder truck to make certain they will function in an emergency. Ambulances and the equipment within are systematically disinfected, function checks completed, and medication inventories undertaken daily. Because of the high potential for simultaneous or overlapping calls all vehicles must be thoroughly checked and readily available. Any found deficiencies and/or maintenance issues are logged and submitted to the Deputy Chiefs office for repair.

Aside from training on and maintaining the equipment and vehicles, the members of the Brewster Fire Department also maintain the station itself. This involves cleaning and maintaining all areas of the building. Cleaning, which occurs daily, involves vacuuming, scrubbing toilets, mopping floors, washing windows and mirrors, taking out garbage, washing dishes, laundry, and dusting. In fact, the fire department is the only department that cleans their own building. Small maintenance issues are sometimes handled by on-duty staff as well, such as minor plumbing and electrical repairs such as changing light bulbs.

### **Response to Fire Based Incidents**

Of the (802) fire related incidents the department responded to in FY22 (39) were for actual fires including (7) building fires. Total property loss from these building fires was \$542,000.00 However, this is in no way a reflection of the need to continue to staff, train, and prepare for these potential events. Strong fire prevention programs nationwide continue to reduce the risk of building fires. This proactive approach has been extremely successful in saving lives and property. Because of this proactive approach the role of not only the Brewster Fire Department, but the fire service is changing. Today, the Brewster Fire Department is responding to less building fires but more false alarms, carbon monoxide alarms, water rescues, service calls, heating and cooking appliance problems, and mechanical and electrical problems than in years past. The fact that the number of building fires has decreased is a testament to the hard work of the fire department's Fire Prevention Office. However, despite this reduction in structure fires the risk remains. Brewster Fire Department's members must consistently maintain their state of readiness to ensure a rapid and effective response to any type of emergency incident. The department is truly a "multi-Hazard" public safety agency.

In addition to fire related events, the Brewster Fire Department responds to other rescue related emergencies, many of which require extensive staffing to mitigate such an event. These types of situations can become extremely complex and require a significant number of personnel to mitigate effectively and safely. For example, in the event of a motor vehicle crash (45 in FY2022), there are often multiple patients to be treated and transported to the hospital. Rescue tools commonly known as the "jaws of life" may be required to extricate patients from vehicles. Hazardous materials may be present

as well as power lines from broken poles, and other safety factors such as potential fires are a constant threat.

Other incident types that require intensive staffing include, but are not limited to:

- Ice and water rescues
- Missing persons searches
- Elevator entrapments
- Activated alarms/suppression system activations
- Hazardous materials incidents
- Brush fires
- Fuel spills
- Propane and natural gas leaks
- Severe weather/storm related incidents

### **Training**

To ensure competency and to meet National and State fire service training standards our full-time members are contractually obligated to conduct daily training sessions covering a wide range of specific operational skill sets. Due to the training challenges inflicted by the ongoing COVID pandemic during FY2021 we purchased a web-based training program providing our staff of full and part-time employees the ability to maintain their emergency medical certifications and obtain fire-based training from work or while off-duty. The system has also given department administrators the ability to assign specific monthly training evolutions to individual firefighters or to any one of the four full-time shifts. In addition to the above we have partnered with our neighboring fire departments to bring nationally recognized fire experts to the region for classroom-based instruction. During calendar year 2022 we sent four firefighters to Firehouse Expo in Ohio, hosted a Man-in-Machine hands-on training program, conducted hands-on fire suppression training in partnership with the Barnstable County Fire Academy, conducted firefighter survival training, revitalized our training curriculum, and obtained a \$152,000 grant to conduct Fire Instructor and Fire Officer training for every member of the department.

### **Incident Reporting**

Every incident we respond to regardless of type must be documented in Image Trend, the department's computer reporting software. This information is then processed through the National Fire Incident Reporting System, where each response is evaluated, and statistics gathered to identify current trends across our Nations fire service. Firefighters and officers alike are equally responsible for the thorough and accurate documentation of these incidents. The collection of this data is also mandated by the Commonwealth of Massachusetts, and it is a vital component of the numerous grant awards that we have successfully secured over the past several years.

### **Emergency Medical Services**

The bulk of the fire department's responses involve requests for emergency medical services. These runs vary in nature and urgency and range from non-life-threatening calls for first aid to patients that are critically ill that involve trauma, difficulty breathing, chest pain, and cardiac arrest. Because EMS requirements and regulations are continually evolving to meet the demands of society, the dual trained emergency medical technicians (EMTs) and paramedics of the Brewster Fire Department are continually training to learn new life saving techniques and procedures while simultaneously remaining competent in the use of the equipment that is currently carried on the ambulances.

Every year the Massachusetts Department of Public Health reviews and makes changes in the regulations governing emergency medical providers. These regulations dictate the types of procedures that can and will be performed and under which circumstances they can be performed by EMTs and paramedics in the pre-hospital environment. In the last several years, an emphasis has been placed on greater autonomy of providers which results in additional training requirements. In the past, every procedure performed would be under the direction of a physician in the emergency center. Today, paramedics are responsible to perform the following interventions prior to seeking guidance from emergency center physicians:

- Intravenous access and administration of IV fluids
- Intraosseous (needle inserted into a leg or arm bone) access and administration of fluids and medications
- Advanced cardiac monitoring (ECG)
- Electrical cardiac therapies such as defibrillation, cardioversion, pacing
- Administration of over 30 types of medication including Schedule II type narcotics such as morphine and fentanyl
- Oxygen administration
- Advanced airway procedures such as endotracheal intubation and needle cricothyrotomy (tubes placed in throat or neck to assist with breathing)
- Needle chest decompression (needle placed into chest to relieve trapped air)
- Continuous positive airway pressure (CPAP) to assist breathing
- Nebulizer or updraft breathing treatments
- Blood glucose analysis

Because of the frequent updates to EMS protocols, the EMTs and paramedics must continuously train to stay proficient in these skills. Every two years, both EMTs and paramedics are required by state and national regulations to recertify as an emergency medical service provider. Recertification requires that an EMT or paramedic obtain a minimum number of continuing education hours (48 for a paramedic, 36 for an EMT). These hours are completed through monthly EMS training, which is held at the Brewster Fire Department, and via state sanctioned refresher courses, offered locally. Cape and Islands paramedics are also required to complete several hours per recertification period of morbidity and mortality (M & M) rounds at a nearby hospital or via zoom to maintain their authorization to practice. Ultimately, a paramedic or EMT will participate in hundreds of hours of continuing education during a two-year certification period. To ensure all required training is completed, State protocols followed, medical supplies maintained, and ambulance and medication licenses kept current one of our full-time paramedics serves as the departments Emergency Medical Officer. This individual is assigned to one of the four groups or shifts of full-time career staff and completes the required duties during work hours and other regulated overtime hours. This is a position that requires a significant amount of work to ensure our main area of operational response is functioning as required. Future requests for additional staff will include making this position a fulltime day assignment to allow the individual to assist with daytime responses and complete the numerous tasks essential to the position.

An example of an EMS incident is as follows; a patient calls 911 because they are having chest pain. The dispatcher receives the call and dispatches an ambulance to the incident address. The Brewster Fire Department will send three EMS providers on the ambulance to mitigate the incident. They arrive and immediately begin to assess the patient. This includes obtaining vital signs, lung sounds, and perhaps

cardiac monitor tracings. Another EMT or paramedic on scene will speak to family to get pertinent information such as name, birthday, medications the patient is taking, and past medical history, which is all pertinent to the treatment of the patient. Treatment is usually begun at the patient's side, which could possibly include the administration of oxygen or other medications. The patient is then extricated, or removed, from the residence by a stretcher or special chair (called a "stair chair") that allows EMS providers to safely carry a patient down a set of stairs or through the small hallways and rooms within many of Brewster's residences.

During transport to the hospital, the ambulance staff will begin advanced care as necessary and may request specialized teams such as cardiac specialists, surgeons, and neurology consultation. They may also receive further online direction from the hospital concerning patient care. This process ensures the patient promptly receives the required pre-hospital life-saving care as ordered by a doctor. In the case of a patient with chest pain, who may be having a heart attack, the paramedic might request a "Cath lab activation," which allows the hospital to proactively prepare the staff and equipment required to open any blocked artery a patient may have in a surgical environment immediately upon arrival at the hospital. Upon delivery patient care is transferred to the nurses and doctors in the emergency department. While at the hospital the EMS crew is tasked with putting the ambulance back into service as best as possible including the decontamination of the interior, disposal of medical waste, and restocking of equipment while the paramedic in charge completes the required patient documentation and transfer to the nursing staff.

In addition to the fire-based documentation required for each incident a patient care report (PCR) is also required for each medical response. This report must be completed prior to leaving the hospital where it is printed and given to hospital staff upon transfer of care. This PCR serves as a legal account of patient care and remains with the patient's medical records. The PCR also serves as a means for the department to bill the patient or the patient's insurance company, which helps recoup some of the cost of providing emergency medical services. The Brewster Fire Department employs Comstar as its third-party EMS billing service. Through the fire departments Image Trend and Nemsis software programs, the bills are automatically submitted for fast, efficient billing and collection of revenues.

After the ambulance leaves the hospital, the crew returns to the fire station to restock whatever equipment might have been used during the response. They also wash and refuel the ambulance in preparation for the next request for service. The entire process of responding to, assessing, packaging, and transporting a patient can take upwards of two hours, sometimes more depending on circumstances. It also causes the ambulance crew of three or more personnel to be unavailable for additional responses during this period which in turn results in the recall of personnel for station coverage.

Often, without the well-trained and highly skilled staff of the Brewster Fire Department, many patients would not survive a medical emergency of this type. In fact, several times per year the department is dispatched to a cardiac arrest where a patient has died, and the staff members are able to "restart" the individual's heart using a variety of equipment and medications and deliver the patient to the hospital breathing and with a pulse.

### **Conclusion**

The Brewster Fire Department is a multi-functional all hazards emergency service organization that utilizes our dual certified and trained fire and EMS staff members in an efficient and effective manner to provide high quality, professional service to our residents. We stand as the community's first line of

defense against fires, emergency medical incidents, natural disasters, terrorism, hazardous material, and technical rescue responses. Over the years we have built a relationship with our community that focuses on the valued delivery of exceptional fire related services, superior public interaction, outstanding patient care, and definitive efficiency. With the continued support of our residents our staff members pledge to continue to maintain the highest levels of operational readiness and service delivery to our community.