Fire Services Organizational Analysis

Manchester by the Sea, Massachusetts

March, 2009

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MUNICIPAL RESOURCES INC.

Services for Effective Government

Town of Manchester by the Sea, Massachusetts

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EXECUTIVE SUMMARY

The Town of Manchester by the Sea, Massachusetts, covers 18.25 square miles and has a population of 5,286. The Town is served by a combination fire service organization, composed of 13 full-time personnel, including the Chief of the Department and a Captain. The on-call component of the organization consists of 13 personnel. Availability of on-call personnel, including off duty career staff, to provide an appropriate rapid secondary response capability, at times is limited. During our field visits to Manchester, we were impressed with the ingenuity of Department members and their willingness to become involved in specialized projects as the organization has evolved. The organization has been carried by the strength and innovation of its personnel who have worked to maximize limited resources. This is a good fire service organization staffed by exceptional people.

The federal OSHA standard of Two In/Two Out as it pertains to firefighting dictates that four (4) personnel be assembled on the scene of a fire or hazardous rescue to provide for firefighter safety as emergency operations commence. The one exception to this rule is that if an imminent rescue needs to occur, fewer than four personnel to be assembled. Manchester currently has 2 or 3 career personnel on-duty. More emphasis also needs to be placed upon the recruitment and retention of additional on-call personnel. The current on-call compliment stands at 13 personnel and national averages based on the size of the community indicate that 26 on-call personnel would be necessary to provide a reasonable level of service to the Town. This reflects the dedication of existing firefighters as they have provided an exceptional level of service with less than the national average of 26 personnel. Although benchmarking other Massachusetts communities indicates that Manchester is on track in terms of on-call personnel, we feel that this is a time to invest in recruitment and retention in an effort to ensure sufficient resources for the future.

The fundamental issue facing Manchester by the Sea is to determine an acceptable level of risk for the community and then define an appropriate level of service based upon this risk. In the context of determining the level of risk/service, the two aspects detailed below need to be addressed:

1. Should Emergency Medical Services be operated at the Advanced Life Support level by the Fire Department?

2. Should the federal OSHA standard of Two In/Two Out be adhered to for all fire suppression/rescue responses in Manchester By the Sea?

Based on the results provided from the citizens we surveyed, we found that emergency operations are well regarded by the public who feel the Department provides a high quality public safety service. As residents feel that overall they are receiving a quality

service, there are indicators that there would be resistance to privatizing, contracting or substantially altering the services provided at the local level within Manchester.

As the study progressed, seven themes emerged:

- On-duty staffing, and whether Advanced Life Support services should be provided by the Fire Department;
- Whether the number of call firefighters is sufficient and a recruitment and retention program be investigated;
- Should a new ambulance be added and the older unit retained as a second transport vehicle;
- The effectiveness and efficiency of the Emergency Dispatch Center.
- Capital Plan for Vehicles and small equipment;
- Fire Prevention Program, Inspections and fees
- Records

This report will concentrate on the following 13 focus areas. These areas can serve as a foundation for action and are discussed more fully later in the body of this report:

I. Leadership and Staffing
II. Recruitment and Retention of Call Firefighters
III. Emergency Medical Services
IV. Emergency Dispatch Center
V. Vehicles and Equipment
VI. Fire Prevention Programs, Inspections and Fees
VII. Record-keeping
VIII. Evaluate fire station locations
IX. ISO Community Rating
X. Benchmarking of Peer Communities
XI. Fire Department Emergency Operations
XII. Training
XIII. Funding Sources, including Grants

The Fire Chief provides stable leadership for the organization, and is well-respected by his peers in the area. His largest accomplishment to date has been to upgrade EMS with advanced life support services. The main question in this area now is whether or not Manchester can continue to provide this service.

Staffing is one area of concern that is shared by all parties – selectmen, firefighters and citizens. Are three (3) on-duty personnel too many, just right, or not enough for a community the size of Manchester? How does the operation of the ambulance (EMS) add to or detract from the on-duty complement of staff? The National Fire Protection Association (NFPA) and federal Occupational Safety and Health Administration (OSHA)

are the two national organizations that establish staffing standards for Fire Departments. Those standards for a community of Manchester's size, demographics, topography and inherent hazards (seacoast industry, highways and commercial area) suggest that the career staff is appropriately sized and the on-call component is too low. The current annual call volume of 485 fire and 458 EMS emergencies along with 861 calls for non-emergency service and 419 life-safety inspections suggest a busy Department. An all on-call Fire Department would have extreme difficulty sustaining a call volume of this magnitude. The level of fire prevention inspections would be difficult to handle with a volunteer organization, as well.

The Board of Selectmen chose five communities with which to compare Manchester to. These are Chatham, Cohasset, Eastham, Orleans and Nahant. When comparing benchmark communities, we prefer the "apple to apple" approach, or comparing towns that offer similar services in a like environment (similar population, topography, site hazards, Fire Department organization and services provided). After conducting this analysis, we, feel that some of the benchmark towns (Chatham and Orleans) do not offer this optimal mix.

An evaluation of the current facility revealed that it is not adequate for the needs of the Department as organized presently, not to mention what the future will hold. The Fire Department boasts an exceptional average response time of 3 minutes 40 seconds from the current fire station so any new facility needs to be constructed in the same general vicinity. A review of response data indicated that response times to the vast majority of emergency calls (in excess of 85%) are adequate from the existing facility and clearly demonstrates that Manchester does not need to operate more than one fire service facility.

One major area of concern emerged relative to the Department's ability to operate a dispatch center. Any outside training or deployment after an emergency call is received renders internal Fire Department dispatching moot initially as all personnel are committed to respond to the emergency. The Police Department primarily controls communications but firefighters do take over the dispatch function during a major call.

The Police and Fire Departments cooperate especially well together, from the chiefs down to the personnel delivering services in the street. The chiefs set the example and the employees mimic it.

Regionally, the Fire Chiefs and Fire Departments cooperate readily on emergency responses, specialized technical rescue, and mutual aid. Again, peer fire chiefs respect Chief Paskalis and state that he has professionalized the Manchester Fire Department.

One area that we were asked to investigate is whether the Fire Department should continue to provide EMS at the advanced life support (ALS) level. Usually approximately 40% of all EMS calls dictate some form of ALS be provided. ALS costs more to deliver, but it also generates higher revenues. One issue in Manchester is that

sometimes there are insufficient paramedics available on-duty to provide an immediate ALS response. Off-duty paramedics then are paged out to respond to the incident scene while a private ambulance ALS unit also is summonsed. Patient care can be compromised: the expense to Manchester in terms of overtime can be high: and Manchester could lose that entire call's revenue if the private EMS provider arrives first at the scene.

The standard of care set by the Commission on the Accreditation of Ambulance Services (CAAS) is to have a unit on scene at a medical emergency within eight minutes fifty-nine seconds. However, national standards set by medical directors for stroke and cardiac patients would indicate a maximum six minute response time is essential to provide successful intervention. The recommendations in this report consider both the standard of care and applicable NFPA standards.

Privatizing EMS completely would result in the loss of ambulance revenues which already are being collected and would most likely result in a stipend that will need to be paid to the private provider in order to retain an ambulance vehicle and crew in Town. Even if one could argue that the number of Fire Department career staff could be trimmed using this model, the community still loses money, on-duty Fire Department resources, EMS quality of care and efficiency of operations.

Based upon national averages, Manchester should have the following resources:

- 7 career firefighters (1.43/1,000 population)
- 26 on-call firefighters
- 2 pumpers
- 1 aerial ladder
- 1 fire station
- 55% of the Departments provide EMS

It should be noted that as Manchester has far less than the minimal contingent of on-call personnel recommended (by 13 personnel), additional career personnel are required to fill that gap. The lack of on-call and volunteer personnel is an issue faced by many communities across the country and especially in Massachusetts. This scarcity of human resources is driven by the following factors:

- A reduction in leisure time,
- The need to maintain multiple jobs,
- Generational differences,
- Increasing training requirements,
- Affluence of the community,
- The cost of housing in many destination communities.

We feel that a higher level of effort should be placed upon the recruitment and retention of on-call personnel, although it may not be realistic to add 13 more on-call personnel

based upon the affluent nature of the community. The Department may have difficulty finding, equipping and training 13 individuals who wish to seek this type of part-time employment. But, aggressively seeking and reaching beyond Manchester's immediate borders for on-call staff is highly encouraged.

In terms of operational safety, we are concerned with the Department's ability to meet OSHA's *Two-In/Two-Out* rule that requires four firefighters on the scene of an incident prior to initiating an interior fire attack (except to perform a visible rescue). As Manchester staffs units with two to three personnel, two units must be on scene before offensive fire operations can be initiated. Honestly, we feel that this rule is often ignored in Manchester as two person crews "do what is necessary" to get the job done and prevent fire spread. Although this is a tribute to the dedication of the Manchester firefighters, it is a dangerous situation that can rapidly result in the serious injury or death of a firefighter. Eventually Manchester will have to add some career personnel to maintain an ability to provide service levels commensurate with resident expectations and firefighter safety. In the meantime, there are other avenues to pursue to meet the OSHA Two-In/Two-Out rule.

In addition, NFPA 1710 requires a minimum first alarm assignment of 13 personnel on scene within eight minutes of a reported structure fire, 90% of the time. Although Manchester presently has two to three personnel on duty, we feel the Town can increase the number of on-call personnel and also employ an aggressive regional approach and utilize automatic aid to meet this standard.

Some in the Department want to retain the 2000 ambulance when a new unit is purchased. If there are sufficient simultaneous multiple ambulance calls, it would make sense to do so, from a patient care and revenue enhancement perspective. If not, the issue becomes the cost of maintaining a second ambulance if it does not generate sufficient revenue to offset those costs. There are several other issues beyond a strict cost/benefit analysis, which we will discuss in that section of the report.

The quint apparatus and several staff vehicles and equipment generally are in good condition. The two Department pumpers (21 and 31 years old now) are not, however, and the 1978 unit should be replaced. Engine 3, the mini-pumper purchased in 2000, which was designed to be a pumper, rescue truck and brush truck, unfortunately performs none of those functions well. The Department has attempted to shed weight off this truck so that it can traverse off-road but those attempts have hurt the other modalities of the truck. There is a Department capital plan in mind, and in that section we will recommend an apparatus replacement program.

As we noted above, Manchester personnel do what is needed to get the job done (or started), regardless of staffing or national standards. This "can do" attitude is exemplary for the protection of life and property as long as firefighters recognize their limitations in certain types of incidents and don't over commit – a situation that could lead to firefighter injuries or fatalities.

The training program and record-keeping system in the Fire Department does not meet the strict interpretation of the national standard, but this level of documentation is normally what we find in a Department the size of Manchester.

The current dispatching system with the Police Department could be characterized as fragile as it lacks secure redundancy and provides opportunities for error – dangerous for the public and for firefighter safety. We see an inherent risk of continuing with the single dispatcher model, and then turning over the process back to the fire department when it is able to muster an individual from home to cover the desk. Manchester personnel often roll out the door on emergencies or non-emergent situations, turning over the duties to civilian dispatchers in the Police Department. The current operation poses a great danger to both citizens and firefighters. A comprehensive regional dispatch system should be utilized that provides more redundant service.

Top Five Challenges for the Town of Manchester for the Town of Manchester by the Sea

1. ***Compliance with OSHA Two-In/Two-Out standard.***

2. ***Compliance with NFPA 1710 on-scene staffing standard.***

3. ***Fire Station facility, planning, design and development.***

4. ***Dispatching Services transition to more reliable Regional Center .***

5. ***Recruitment and retention of on-call firefighters.***

Our Top Five Recommendations for the Town of Manchester for the Town of Manchester by the Sea

1. ***Staff shifts with four (4) personnel, utilizing the chief daytimes and an upgraded on-call system nights and weekends.***

2. ***Add more on-call firefighters and expand automatic aid from neighboring communities on all reports of smoke or fire in structures to dramatically increase responding forces in a quicker timeframe.***

3. ***Initiate planning to renovate or replace the current station with a state-of-the-art facility, to provide effective emergency response to the public for the next 50 years.***

4. ***Support the establishment of an Essex County Regional Communications Center for all EMS and fire dispatching services.***

5. ***Aggressively seek federal SAFER Act grants for hiring of career personnel and retention and recruitment of on-call firefighters, along with expanding recruitment efforts immediately beyond the borders of Manchester.***

PURPOSE, SCOPE, AND METHODOLOGY

MRI (Municipal Resources, Inc.) was engaged by the Town of Manchester, to review the operation of the Fire Department, to determine how it compares to contemporary fire service practices and to assess the need for both staff and facilities. We have attempted to produce a report containing recommendations that will assist the department and the Town to set a clear course of action for future improvement.

Our Objectives:

- To help municipalities and agencies obtain maximum value for limited tax dollars;
- To raise public awareness of the value and professionalism of their municipal resources; and
- To help local leaders develop and execute plans that best meet their community's needs, given available resources.

Scope of Work

This study will review the manner in which fire, rescue, and emergency medical services are provided within the Town. Using this review as a basis, MRI will make recommendations for improvements that are to take into consideration the current and future financial ability of the Town, appropriate modifications to the delivery systems to provide optimum response time and service to the entire Town, location or expansion of physical facilities and equipment, and whether the current organization is appropriate or should be modified. Emphasis will be placed on the following:

A. Staffing

The Town provides Advanced Life Support Service (ALS). MRI will review and make recommendations regarding what staffing and recall response times will be necessary to continue to offer ALS services, given the difficulty in finding affordable housing for firefighters in the Cape Ann area.

MRI will also make recommendations as to how the Town can improve recruitment and retention of the Town's permanent force.

B. Call Firefighters

MRI will review and make recommendations regarding what role the Call force should play in the Manchester Fire Department over the next 5 years; over the next 10 years, including how the Town can improve recruitment and retention of the Call force.

C. Ambulance

MRI will review and make recommendations on replacing the current ambulance and on whether or not the Town should retain the current ambulance as a spare.

D. Emergency Dispatch

MRI will review and make recommendations on the costs and benefits of developing a joint dispatch with the Manchester Police Department or with other nearby fire departments. This review will include the current proposal among the Essex County Fire Chiefs' Association to develop a regional dispatch capability.

E. Vehicles and Equipment

MRI will review and make recommendations regarding the current condition of the Fire Department building, vehicles and equipment, including whether they are appropriate and adequate for the Department.

F. Fire Prevention Programs, Inspections, and Fees

MRI will provide an analysis of the Manchester Fire Department's Fire Prevention Programs, Inspection Programs, and Fees, and will make recommendations for improvements.

G. Records

MRI will evaluate the record-handling processes of the Manchester Fire Department and make recommendations.

The scope of this project will include the following actions and methodologies as they apply to the scope of services detailed above:

- All recommendations for improvement will be based on ISO, NFPA, CFAI (Commission on Fire Accreditation International), CAAS (Commission on Accreditation of Ambulance Services), nationally accepted standards, and administrative regulations.

- Recommendations on the optimum organizational structure for delivery of fire, rescue and emergency medical services in the Town for the immediate, five-year time frame, and ten-year time frame. Our report will include recommendations regarding the potential for cost savings or consolidation of functions, if needed.

- Analysis of the fire, rescue, and emergency medical services shall include system strengths and weaknesses and analysis of responders for appropriate certification and mandated training compliance.

- An analysis of current reporting methodology employed and reliability of statistical information.

- An analysis of administration, staff and supervisory structures, and personnel assignments including response methodology.

- An analysis of the cost allocation for personnel, equipment, supplies, etc. for various functions of the department.

- A review of current recruitment and retention programs and recommendations for enhancements.

- Training program analysis to include review of current training levels, training facilities and equipment.

- Analysis of dispatch and communications functions and capabilities with recommendation for areas of potential improvement.

- Analysis of existing equipment, serviceability, needs, and excesses.

- Analysis of the location of the existing fire station, and type of the facility needed to best serve the Town in the future, if any.

- Interviewing members of the Department.

- Interview the Members of the Board of Selectmen.

- Interview the Town Manager.

- Interview School Officials as identified by the Town Manager.

- Analysis of comparable agencies and “best practices” in an effort to determine benchmarks that will assist in the planning process.

- Development of a set of recommendations and related action plan to be considered by the municipality for the delivery of quality fire suppression, emergency medical services in a cost-effective manner so as to best serve the Town over the next decade or so.

- A review of potential sources of additional state and federal funding.

- Analysis of the utilization of advanced state-of-the-art technology, including automated data processing and procedures, and other technology capable of enhancing fire productivity and effectiveness.

Methodology

There were thirteen major work elements involved in this review. These are:

1. A review of compiled data regarding key operational aspects of the Department.

2. A thorough tour of the community to gain a sense of the physical environment, the primary fire and life safety risk exposures and the location of population and commercial centers in relation to existing facilities.

3. Interviews with key individuals including the Board of Selectmen, Town Administrator, Fire Chief, Department Members, Police Chief and Finance Committee Chairman. We asked to meet with the Town Planner but it could not be arranged.

4. A review of the fire service facility and equipment.

5. A review of response time statistics

6. A review of emergency communications at several incidents.

7. Observation of two training sessions and review of lesson plans.

8. A summary comparative analysis using national norms and practices of other Massachusetts communities.

9. Considered alternate station locations.

10. Met with Area Fire Chiefs.

11. Considered the practicality of federal Fire Act and SAFER Act grants.

12. Reviewed alternative service delivery options inclusive of contracting for specific services.

13. Review incident volume, workload and EMS revenue

To accomplish this, members of the study team held an initial orientation meeting with Town officials and available members of the department, and in partnership with them, gathered a variety of statistical information and data on the department. As well, several weeks of on-site work, interviews, and observations in Manchester were performed by MRI consultants.

We investigated areas such as the command structure, chain of command, span of control, recruitment, selection and training, budgeting, staff recall, service demand, fire prevention services, the deployment of personnel, the communications and data processing functions, internal discipline, working relationships with other persons and agencies, responsiveness, internal regulations, facilities and equipment, and compliance with various state and federal regulations.

Following the on-site visits, the data collected and observations made were subjected to analysis by the project team, both individually and collectively. The information was then compared with contemporary fire service and public safety practices, in order to formulate the recommendations contained in this report.

We would be remiss in not thanking the Town of Manchester by the Sea, the Board of Selectmen, the Town's Management staff, Chief Paskalis and the entire staff of the Manchester by the Sea Fire Department for being most cooperative and helpful in assisting us in carrying out our work.

3THE STUDY TEAM

The following MRI personnel participated in the study:

Project Manager:

Brian P. Duggan now commands the Fire Department in the City of Northampton, Massachusetts, where he has instituted substantial changes to modernize the entire department including equipment, facilities, personnel, training and organizational structure. He formerly commanded the Northborough, Massachusetts Fire Department, and has significant experience with the Massachusetts Department of Fire Services

where he held several key positions. He also developed and directed the Graduate and Undergraduate Fire Science Programs at Anna Maria College in Paxton, Massachusetts, from 1995 - 2003. Chief Duggan has a Business Management/Fire Science degree from Providence College, and a Masters Degree of Business Administration (MBA) from Nichols College in Dudley, Massachusetts. He is also a graduate of the National Fire Academy's Executive Fire Officer Program, and is one of only a few fire service professionals to be designated as a Chief Fire Officer by the Commission on Fire Accreditation International. Chief Duggan also leads the Massachusetts fire service through his affiliation as Chairman of the Fire Chief Association of Massachusetts Technology Committee and as a Regional Director on the Massachusetts State Fire Mobilization Committee. In addition, he has authored several publications inclusive of writing Section 7, Chapter 3, "*Fire Department Information Systems"* in the Nineteenth Edition of the National Fire Protection Association's Fire Protection Handbook.

MRI Associates:

Keith E. Hoyle has served as a Fire Chief in two Massachusetts communities and has extensive fire prevention and safety experience through his years of working within the University of Massachusetts Environmental Health and Safety program at the University of Massachusetts Amherst. Keith served as Fire Chief within the Town of Franklin from 1994–1999, and currently serves as the Fire Chief in the Town of Amherst, Massachusetts. Keith offers a Masters degree in Fire Administration from the University of New Haven and is a graduate of the National Fire Academy's Executive Fire Officer Program. Keith has also worked as a consultant for Bennett Associates and has delivered promotional assessment centers.

Robert A. DiPoli began his public service career in 1969 where he served the citizens of Needham, Massachusetts, for 35 years. Starting his career with the Town in the Department of Public Works, Bob became a firefighter where he rose through the ranks, serving as a Deputy Fire Chief for 15 years and as Fire Chief for 9 years. During his tenure, he led the Department through a difficult period of fiscal conditions which required downsizing and innovation to the fire department, while modernizing the department's buildings, apparatus, and elevating the department's Emergency Medical Response to the Advanced Life Support level. A strong and successful advocate for federal funding of the Nation's fire service, Bob was elected Second Vice President of the International Association of Fire Chiefs (IAFC) in 2002 and became President of the 12,000 member organization in 2004. As President, he led the Association through significant milestones, including Second Stage review of the Department of Homeland Security, and the creation of the NIMS Program, the Institution of Firefighter Safety Stand Down, and the Near Miss Reporting System. Bob served as the President of the Fire Chiefs Association of Massachusetts in the mid-1990s and currently serves as the Governmental Affairs Director for FCAM, where he is responsible for the Association's

Legislative Agenda at both the state and federal levels. Bob is active with the National Fallen Firefighters Foundation and has authored numerous articles for fire service publications, with a book due for publication in 2009.

BACKGROUND AND DEMOGRAPHICS

Setting

Manchester by the Sea, nestled on Cape Ann in northeastern Massachusetts is bound by Beverly and Wenham on the west, Hamilton and Essex on the north, Gloucester on the east, and the Atlantic Ocean on the south. The town is located 25 miles north of Boston and 245 miles from New York City. With its 18.25 square miles (7.84 land area), Manchester by the Sea is a thriving community with continuing economic and residential growth that strives to remain true to its historical heritage and beauty. Most growth is concentrated in and adjacent to the town center. But, due to its suburban location to Boston, ease of access from major highways, and its coastal attractiveness, there is significant in-fill growth along the coastline and among the various local roads. There is on-going effort throughout town to encourage pedestrian-friendly development attractive in which to live, economically viable for business, and a focal destination for visitors.

Definition of the "Community"

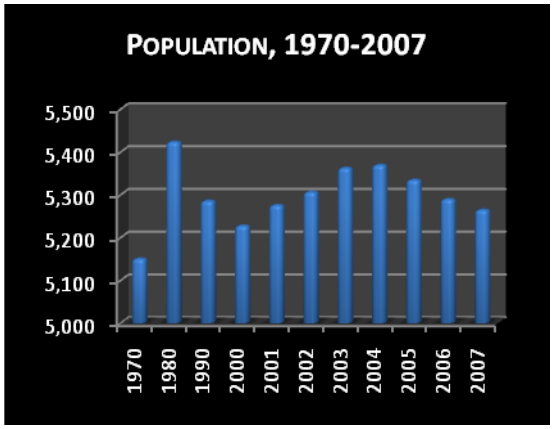
What is Manchester by the Sea's identity? Perhaps unlike many communities of the past, it's not any one central place, industry, theme, or folktale. Rather, the community is the sum of its parts. It's the rich history inclusive but not limited to Colonial forefathers, Revolutionary and Civil War heroes, and Boston society's community of choice for summer residency. It's the ability to foresee a thriving seaside community for its 5,300 suburban residents and its ever-challenging and growing, yet fashionable, summer visitors. It's continuing success to maintain a personal identity while recognizing the influence of Boston's growth. It's unwavering support of its beautiful beaches, yachting harbor, and commercial lobstering balanced with stewardship of its historical context and natural resources. It's the comfort citizens feel about Manchester by the Sea as a place to live due to an excellent school system, an abundance of recreational opportunities, its proximity to topnotch business, and its quality public safety teams. And, it's all the rest.

Select Demographics

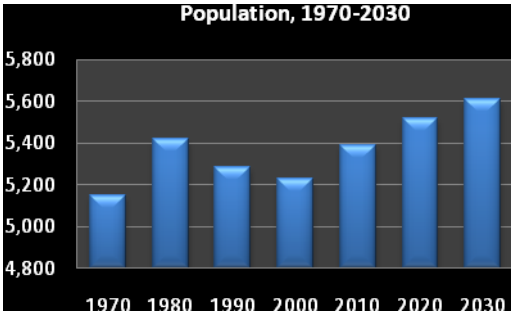
Though probably debated by local officials, latest population estimates place the town's population at about 5,300 persons. Refer to the table and graph on the next page showing Manchester's population trends.

POPULATION, 1970-2007			
Year	Population	#Δ	%Δ
1970	5,151	---	---
1980	5,424	273	5.30%
1990	5,286	-138	-2.54%
2000	5,228	-58	-1.10%
2001	5,276	48	0.92%
2002	5,307	31	0.59%
2003	5,363	56	1.06%
2004	5,370	7	0.13%
2005	5,335	-35	-0.65%
2006	5,290	-45	-0.84%
2007	5,265	-25	-0.47%

Note: 2001-2007 figures are estimates
Sources: Census 1970-2000 & MA Dept of Revenue, Div of Local Services



Massachusetts Area Planning Council (MAPC) recently released population projections. According to those figures, Manchester-by-the-Sea's resident population is expected to reach 5,600 by 2030.



Source: Census 1970-2000 & MAPC's MetroFuture: Making a Greater Boston Region, May 2008

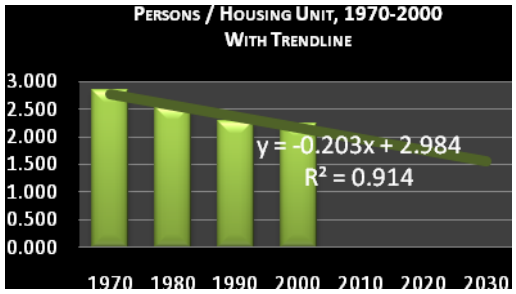
The town's some 5,300 residents predominately reside in owner-occupied housing attributing to a land area density of about 676 persons/sq. mile (i.e., not including the summer transient population). According to the latest US Census (which reports a population of 5,228 persons), there is a greater number of women (53%) than men (47%) living in town. Resident median age equals 43.7 years and the population predominately is white (98.9%). Based on occupied housing units, average household size is 2.40 persons while average family size equals 2.96 persons. Just over sixty-six percent (66.2%) of households are family households—55.7% are married-couple families, 29.6% are families with children under 18 years of age, and 8.1% are female householder (with no husband and half of those women have children under 18 years of age). For non-family households (33.8%), 27.5% are householders living along and 11.8% are 65 years of age or older.

In order to examine trends in household/family size, unfortunately, the US Census cannot be compared from decennial to decennial due to logistical survey data collection changes made for the 2000 Census. However, a comparison can be made using total housing units (i.e., combination of occupied and vacant units). The following table and graph show Manchester's population per total housing unit. The trend since 1970 indicates a decline in the number of persons per unit, which matches national trends. If the trend from 1970 to 2000 continues, by

2030 the number of persons per housing unit could dip as low as 1.5 – [To confirm such a low figure, it's recommended that additional analysis be conducted to include study of at least in-/out-migration, birth/death statistics, age categories, housing stock and inventory, and inclusion of the impending 2010 US Census].

PERSONS PER HOUSING UNIT, 1970-2000

Year	Population	Housing Units	Persons / Housing
1970	5,151	1,814	2.840
1980	5,424	2,139	2.536
1990	5,286	2,315	2.283
2000	5,228	2,327	2.247
2010	5,392	N/A	See trend graph
2020	5,519	N/A	See trend graph
2030	5,615	N/A	See trend graph



According to state labor and industry statistics, the town's November 2008 labor force comprised 2,798 persons which is a growth of only 27 workers since 2000. The unemployment rate in November 2008 was 3.9% and since 2000 the rate has ranged from a low of 2.1% to a high of 4.2%. Of the 228 businesses needing to file reports to the state's labor and industry department, the 2007 average weekly wage equaled $862. Forty-one (41) of the businesses were in the Professional & Technical Services category with an average weekly wage of $2,039 (highest wage in all categories). The next greatest number of businesses were in the Other Services Ex. Public Admin. category. In this grouping there were 40 businesses with an average weekly wage of $571 (only three other categories held a lower average weekly wage).

City-Data.com reports several 2007 statistics related to Manchester by the Sea. The on-line source put median household income at $87,548 and some housing-related information as follows:

Median house or condo value, estimated		$ 781,503
Mean price:		
All housing	$914,009	
Single-family, detached	$950,806	
Townhouse and other attached	$662,106	
Duplex	$818,452	
3-4 unit structures	$430,505	
5 or more unit structures	$212,540	
Median contract rent		$ 985
Median rent asked for vacant for-rent units		$ 1,539
Median gross rent		$ 1,078

Community Infrastructure

Principal highways to/from Manchester by the Sea include Routes 127 and 128, with tertiary access to Interstates I-93 and I-95. Refer to the map at the end of this section. Notably, the Boston MPO in 2005 indicated that Route 128 in the Manchester area was under 75% capacity. Commuter rails service is available from Manchester Station to Beverly Farms Station and North

Station (Boston). Travel time from Manchester Station is about 45-55 minutes and there are 71 available MBTA parking spaces. Manchester by the Sea maintains membership in the Massachusetts Bay Transportation Authority. In addition, the town besides having access to Logan Airport has access to the Beverly Municipal Airport—a reliever (RL) facility with non-precision instrument approaches available.

The Manchester School District relies on four schools to educate its children. For the 2007-08 academic year, total enrollment equaled 1,572 students with each containing the following enrollment figures: Manchester Memorial Elementary K-6 – 442 students; Essex Elementary PK-6 – 297 students; Manchester Essex Regional Middle School 7-8 – 212 students; and, Manchester Essex Regional High School 7-12 – 621 students.

Manchester's wastewater treatment plant operates under the following EPA permitted flow limits:

1.20 million gpd monthly average December through May
0.67 million gpd monthly average June through November
0.67 million gpd annual average (Ocean Sanctuaries Act Limit).

Although the plant is designed to treat 1.2 million gallons per day, the plant operates under an Ocean Sanctuaries Limit of 0.67 million gallons per day annual average which effectively limits expansion of the sewer collection system.

The town's fresh water sources include Gravelly Pond and the Lincoln Street well. Both sources remain free from contamination and do not exceed limits for any compounds. The system is free of micro-biological contamination. 1992 samples resulted in lead and copper violations. More than likely this related to homes containing lead piping. Since 1992, treatment equipment was installed to address the issue. To date, lead and copper levels are meeting limits, however some homes continue to exhibit higher levels.

Household waste and recycling is disposed of via curbside pickup or via the town's transfer station and compost facility. At the transfer station recycling is limited and no construction waste/debris or hazardous waste is collected. Note: beside household generated hazardous waste, the state Department of Environmental Protection maintains an on-line list of hazardous sites at: http://db.state.ma.us/dep/cleanup/sites/Results2.asp

The community's public safety is secured directly by the Manchester Police Department and the Fire/Rescue Department. Peripherally, additional safety is provided by the Harbormaster, Highway Department operations, the local Health Department, the town's Building Inspector services, and via many state resources (e.g., E9-1-1, MA State Police, etc.)

Summary

The above information is intended to provide a community "snapshot" of Manchester by the Sea. It is not intended to be all-inclusive or comprehensive. For the Manchester Fire Department it serves to put the town into some context as the department works to carry out the recommendations of this management study. However, caution here is warranted. The above offers a general picture of the resident or citizen population. While significant, summer

residents, visitors, and other transient persons are not adequately described in the summary. This occurs only because a source of reliable information doesn't appear to exist.

Map source: North of Boston Visitors & Convention Bureau.

RECOMMENDATIONS

As we developed the report we produced a series of 67 recommendations which are detailed in the following pages.

Please note that some recommendations are repeated as they fall into more than one of the thirteen focus areas. We have purposefully allowed these recommendations to repeat so that there is a clear definition of what focus areas they impact.

I. Leadership & Staffing

The primary impetus of this study was to identify staffing standards to minimize emergency response times and to address the issue of fire department funding. We were asked to evaluate operations and determine, based upon national standards and peer communities, the recommended number of career staff required to properly provide a consistent level of service to the Town. During the study, we observed that there were too few resources available to meet nationally accepted EMS and fire service delivery standards for the Town of Manchester. It also became clear that the residents of the community expect a high level of service and desire an immediate emergency response.

Several national standards apply; these include the following:

- The Occupational Safety and Health Administration (OSHA) *Two-In/Two-Out* rule which requires four firefighters on the scene of an emergency prior to initiating operations within a structure that is on fire (except to perform an immediate, visible rescue).

- National Fire Protection Association (NFPA) Standard 1710 which requires a first alarm minimum response of 13 firefighters within eight (8) minutes ninety (90) percent of the time to provide basic fire attack and rescue operations.

- The Commission on Accreditation of Ambulance Services (CASS) standard for emergency ambulance response to a scene is less than nine (9) minutes ninety (90) percent of the time. However, we know that the accepted EMS standard of care for cardiac and stroke patients is to have a basic life support response on scene within six minutes or brain damage and death occurs at an increasing rate.

We interviewed Fire Chiefs from Essex County, spending the most time with Chief Pierce from Beverly. To a man, they had nothing but praise for Chief Paskalis. He is a recognized leader among Essex County fire departments and has professionalized the fire department, according to area fire chiefs. There is support to regionalize the communications center (dispatch center).

The Department's Standard Operating Procedures instituted are thorough and complete. But, we must comment that they are so comprehensive that personnel have a difficult time remembering all aspects and perhaps some need to be simplified. And, the only copy of the SOP's exists in the Chief's Office. At a minimum, two SOPs should be reviewed at each training session and each officer should have a copy so that the SOPs immediately are available to everyone.

The fire chief had a good grasp of the Department personnel, operations and issues.
,
To achieve the fourth person on shift in the near term, we propose utilizing the fire chief during the workweek daytimes, and adding more on-call personnel for shiftwork on nights and weekends. In addition, two federal SAFER Act grants should be sought to increase career and call firefighter contingents.

In terms of call firefighters, Manchester was one of two communities with a marginal number of on-call firefighters. As leisure time decreases, this is a valuable community asset that is difficult to retain. Although it is clear that planned growth of career personnel will become a necessity, a stronger recruitment and retention program for on-call personnel will be required to maintain an effective fire and EMS force into the foreseeable future in Manchester.

I.1 Recommendation – A federal SAFER Act grant for recruiting and retaining on-call firefighters should be applied for in FY10. An on-call force of 26 members is the national norm for a community of Manchester's size and the town has only 12 viable members(with another that covers dispatch).

The Department has attempted to recruit call firefighters but with little success. The amount of time required for an individual to become firefighter and EMT-certified in 2008 is substantial. Most citizens in Manchester have no desire to spend that much leisure time becoming a call firefighter. The Department must look beyond its borders to recruit new blood, including possibly establishing an Explorer program at the regional high school to provide a pool of call firefighter candidates for later service.

The SAFER Act grant will provide funds to assist with recruiting (posters, multi-media ads, booths/displays, etc.) and retention (training and firefighting/EMS course costs, college fire science and EMS courses, a coordinator's position, insurance, uniforms, etc.). This competitive grant process has been earmarked for nearly a $200 million budget in FY08, and there is NO community matching funds required.

I.2 Recommendation – The number of career staff should be increased slowly to reach four (4) on duty at all times. A federal SAFER Act grant for hiring career personnel should be sought in federal FY12 to hire four new members. This program has the feds paying $110,000 over four years for each firefighter position on a sliding scale arrangement (90%:75%:50%:25%). By the fifth year, it is the community's responsibility to pay for all the new positions on their own (fire prevention and inspection fee increases and EMS transport fee increases over a number of years can partially provide the necessary funds and only limited tax increases, if any at all, will be needed to fund four new positions).

The number of career personnel in the northeast for a community of Manchester's size averages at 7, according to NFPA figures. But, that takes into account that the Departments studied have a viable call firefighter contingent of several times the size of the Manchester on-call force. Manchester does not have and will never have those types of numbers of on-call personnel as the community demographics will not support it. And, most communities we are aware of do not have the Atlantic Ocean in its back yard, thus enhancing the need for an immediate response capability and depleting a potential pool of on-call candidates if Manchester was surrounded by other communities.

As mentioned earlier, achieving the OSHA Two-In/Two-Out rule compliance is very important to firefighter safety and effectiveness. We recommend that the chief be utilized daytimes Mondays-Fridays, when possible, for immediate response to smoke and fire calls to achieve the fourth person. Assuming new call firefighters can be recruited and retained, a new program of utilizing them on nights and weekends as the fourth member will suffice until the community can afford to add four more career members. This program will entail a small monetary stipend to be paid to the call firefighter on-call to respond to an incident scene to comprise the fourth person. Presently the Department strikes a callback tone for additional personnel, depending upon the type of call. Having one on-call person could negate the need for so many call-back tones.

The NFPA 1710 standard requires that for a fire, a minimum of thirteen (13) firefighters be on scene in eight (8) minutes ninety (90) percent of the time. That figure is almost impossible for Manchester to meet unless the call occurs at shift change and half of the call firefighters show up quickly and get to the scene in apparatus. Another method to assist in compliance is automatic mutual aid from neighboring Fire Departments for all calls where smoke or fire in a structure is reported.

I.3 Recommendation – Continue and expand the practice of notifying mutual aid Fire Departments for an automatic response into Manchester for actual (but not Fire Department-confirmed) reports of fire and smoke in buildings.

With so many career personnel residing outside town, and sometimes no viable on-call force, it is critical that sufficient numbers of firefighters be rapidly dispatched to a fire for firefighter safety and to efficiently mount a rescue effort and provide fire suppression services. Even when a viable on-call force can be established (using residents from other communities and perhaps a high school Explorer program), many personnel still will live a ways out from the fire station and take time to respond in. And, Beverly Fire, on mutual aid, may not always be able to respond immediately for assistance if they are tied up at their own calls.

1.4 Recommendation: Have the Fire Chief prepare and deliver, from time to time, brief multi-media updates to the Board of Selectmen relative to Fire Department organization, mission and year-to-date activities, including simultaneous incidents and others that taxed the Department's ability to provide fire and EMS services in a timely manner.

It is clear to us that the Board is unsure if the present Fire Department resource allocation is appropriate, too small or too large. Often the Chief is seen as defensive when discussing budget allocations and does not always provide sufficient data to the Board to support his conclusions, in their opinion. A better educational effort is required from the Department for the town fathers to help them to understand Fire Department operations and pressures in this budgetary climate. The Captain should assist in any presentations, and more thorough data sets need to be presented.

I.5 Recommendation - Enhanced communication with the Board of Selectmen is needed. The Board of Selectman should appoint a liaison to the Fire Department.

Having one Selectman completely familiar with the Fire Department operations will enhance the understanding between the Board and the Department relative to its needs. In tight budgetary times this does not guarantee additional resource allocation to the Fire Department, but the myriad of services that the Department is expected to deliver by national policymakers and state government, as well as the from the citizens of Manchester, will be better comprehended by all decision-makers. When the Board sets the limits for public safety services, it will fully understand the levels of risk assumed for the citizenry. Sometimes the Chief is seen as defensive by the Board, and a liaison would temper this reaction.

I.6 Recommendation – The Fire Department has no clerical staff assigned and the Department members must perform all bureaucratic accounting and reporting operations themselves. A part-time person shared with another department (or a call firefighter with an accounting background) would free up the chief to concentrate more on strategic and long-range planning and fire prevention/inspection/education efforts – a much more efficient and productive use of his time.

1.7 Recommendation – All officers should pursue certification through the state and attend the National Fire Academy for specialized training.

The National Fire Academy is the recognized fire service leader in advanced education. The Executive Fire Officer Program, especially, should be completed by shift officers.

The Manchester Fire Department has more career staff than other communities its size in the state and region. As explained previously, the community's demographics, proximity to the ocean, bisected by a major interstate highway and a high number of EMS calls has led to this staffing level.

We noted that the OSHA Two-In/Two-Out rule is not met by the Department on nights or weekends and might not be met daytimes during the week if the chief does not respond or on-duty staffing is down to two personnel. A fourth crew member needs to be secured not only for firefighter safety but for the added level of service it will provide to the community. Increasing call firefighter numbers first and utilizing these personnel to achieve staffing will be less expensive than adding four (4) career members. At some point, though, the only solution will be to add personnel unless a regional approach can be utilized. Such an approach has to keep in mind response times, however. And, local leaders lose budget control in regional applications, which can be problematic, especially in the state of this economy.

Manchester's response times are excellent except to the east and to possibly downgrade this level of service through a regionalized approach would not be in the public interest.

The current shift rotation for career staff is three (3) personnel on twenty-four (24) hour shifts. Altering this schedule would require bargaining with the firefighters' union.

Currently there are only thirteen (12) active call firefighters(with another assigned to dispatching functions). We feel that there has not been enough effort spent in this area. Having said that, the demographics of Manchester are such that it will be impossible to find enough suitable candidates to develop an effective call fire force. The most that can be hoped for is to relax residency requirements to reach slightly beyond Manchester's borders for candidates or college students studying in a fire science or EMS curriculum. The Town should seek an FY10 federal SAFER grant in the area of Recruitment and Retention to attract and keep call firefighters.

Perhaps some effort also can be made to establish an Explorer Post in the Regional High School to create a pool of call firefighter candidates for the future, or develop a college student internship program to provide a fourth on-duty person.

There appears to be excessive overtime in the budget, when compared to peer communities. However, this is a reflection of the higher number of career staff in Manchester. This factor results in the re-call of off-duty staff to continue to provide fire/EMS coverage for the town.

I.8 Recommendation: Utilize the chief, when possible, for weekday daytime responses to meet the OSHA Two-In/Two-Out rule.

I.9 Recommendation: Aggressively increase call firefighter membership to achieve an organization with approximately 20 on-call members. Reach beyond Manchester's borders to do this. Train these individuals to the NFPA Firefighter I/II levels so that they can work an evening or weekend shift to provide a four (4) person minimum on-duty complement.

I.10 Recommendation: Initiate an Explorer Program in the Regional High School to create a pool of future call firefighter (and eventually career) candidates.

I.11 Recommendation: Explore whether or not a college student firefighter internship is a possibility to provide a fourth on-duty member on shift.

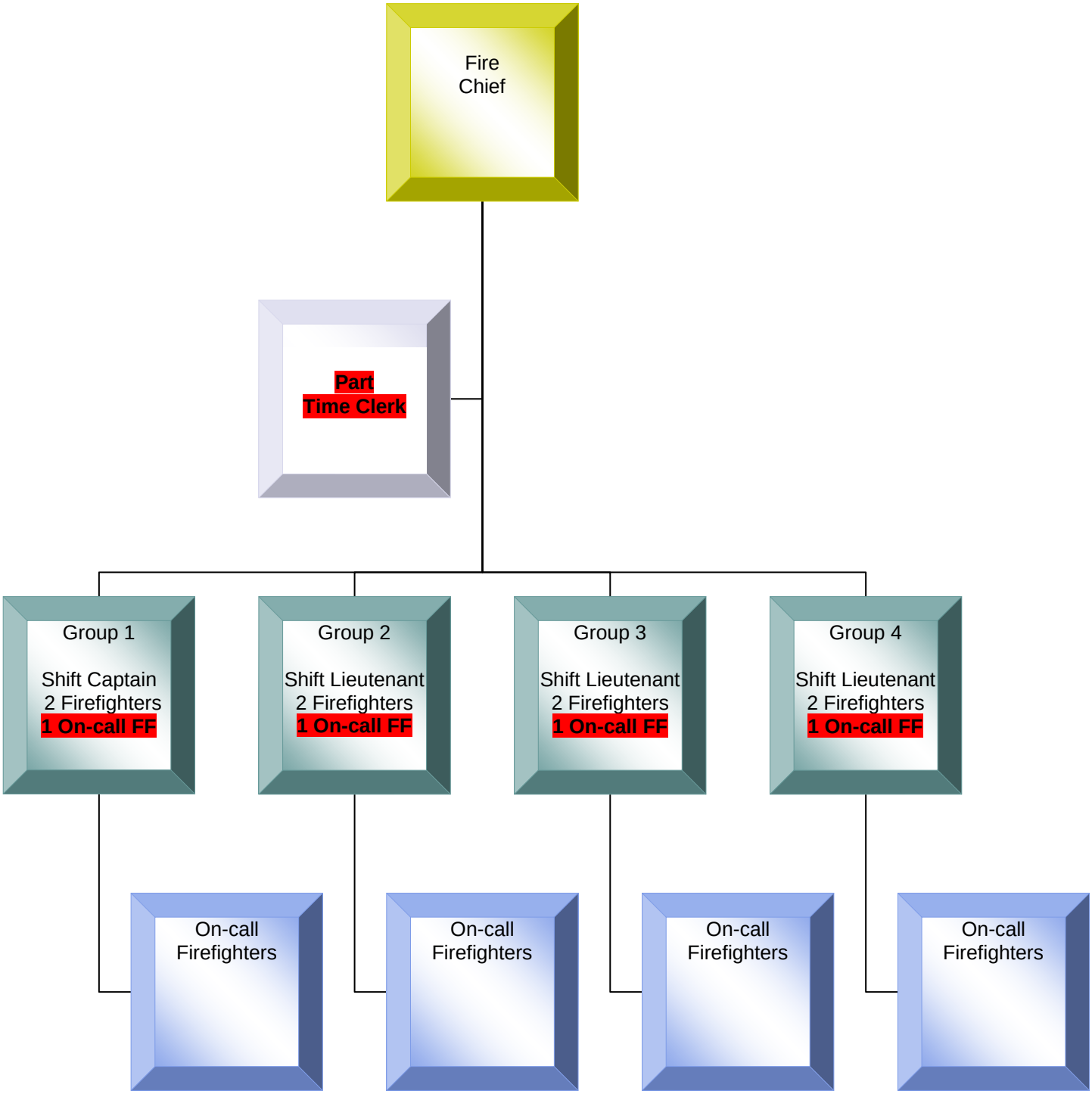
I.12 Recommendation: Continue to provide the same level of response times as is presently delivered (3 minutes 40 seconds average). This only can be accomplished by an on-duty contingent of personnel.

I.13 Recommendation: Continue to pursue NFPA 1710 compliance by utilizing automatic aid whenever possible; by moving to four (4) personnel on-duty; and by increasing the complement of on-call personnel in the 20 member range.

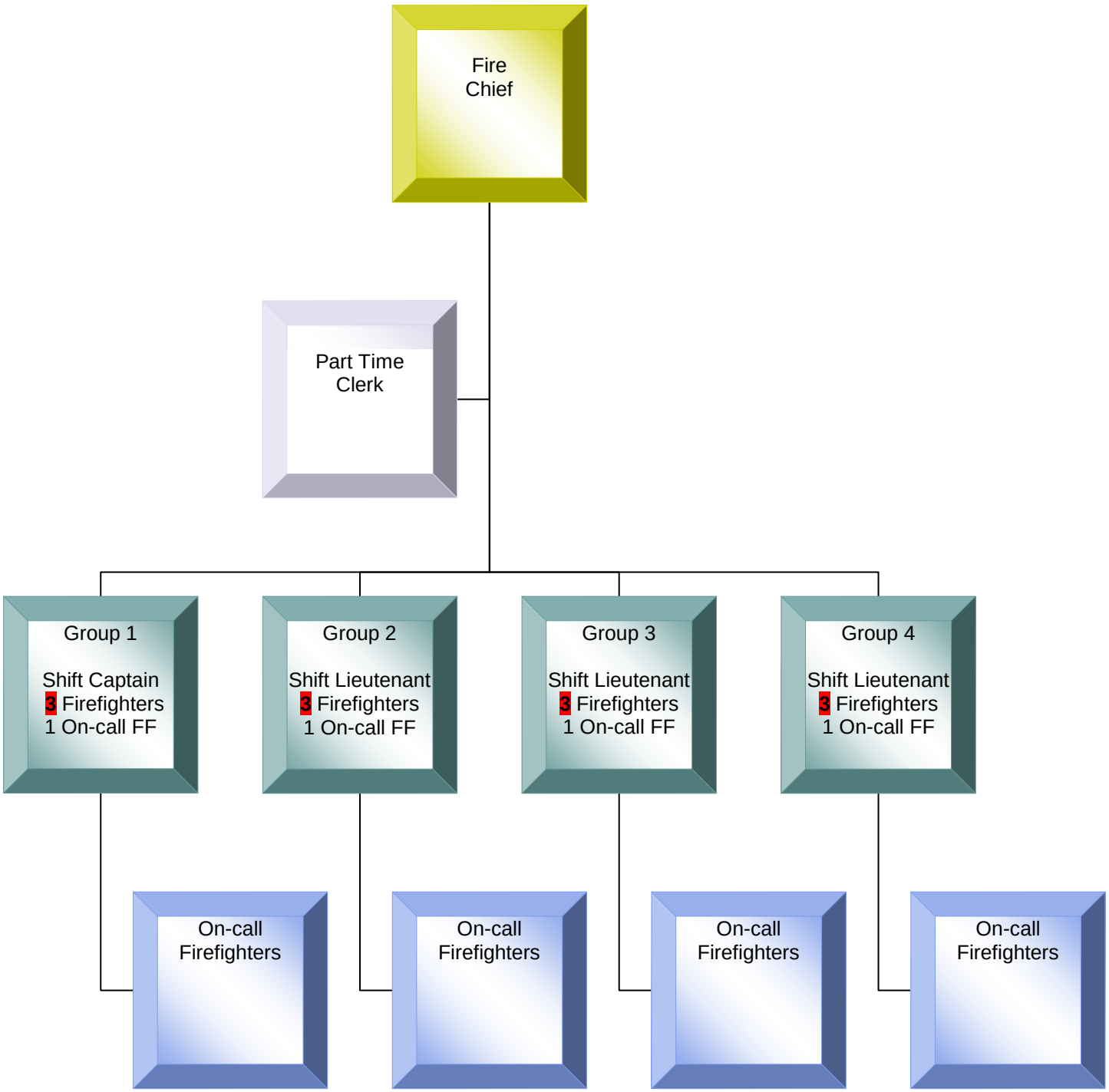
I.14 Recommendation – The Manchester Fire Department should continue to grow and evolve to meet the service expectations of the community. Below we have developed a series of timed organizational charts to illustrate and anticipate planned growth:

Present Organizational Chart:

Fiscal 2011 Organizational Chart – Add part time clerk, utilize on-call Firefighter to provide 4 personnel for response



Fiscal 2011 Organizational Chart – Add 4 firefighters, 1 per shift via Federal SAFER Grant



II. RECRUITMENT & RETENTION PROGRAMS FOR CALL FIREFIGHTERS

As explained under the Leadership and Staffing section, call firefighters in a community the size of Manchester are essential to provide for a greater measure of public safety. Manchester cannot afford an on-duty contingent of 8 to 10 career firefighters to deliver EMS and fire response capability as recommended in the national standards (two (2) pumpers and an aerial ladder as the first-due response package). Manchester relies on a small cadre of career staff on-duty to provide EMS transport services and an initial fire apparatus response. The hope relative to a fire response is that the initial-arriving crew can make a "quick stop" before fire consumes the building. The problem with this theory is that in order to insure a quick stop, not only does the rapid deployment of a hoseline with subsequent delivery of water at the seat of the fire need to occur, but a search and rescue crew, water supply crew and a smoke and heat ventilation crew needs to be employed simultaneously. A two pumper and one aerial response to an incident insures this. A single pumper with 2, 3 or 4 personnel cannot. The community assumes a risk, therefore, if the standard response package cannot be provided for. The risk transcends the community's citizens – it also affects its firefighters and their level of safety at major incidents. For multiple calls for service or major incidents, Manchester relies on call firefighters and to a lesser degree, off-duty career staff, to increase resources to deal with these emergencies.

Manchester has 13 call firefighters (12 who can fight fires). This is about one half of the average number seen in other communities of Manchester's size in the northeast. We do recommend that this number be increased to 20. That being said, it will be difficult as the demographics don't support a large number of citizens who would be willing to step forward and devote hundreds of hours annually to their community in training time and immediately drop-what-you're doing to respond to emergency calls. The older generations did this as a matter of course in service to their community. The newer generation sees family time and hobby time as sanctity and are not willing to sacrifice it, for the most part.

The answer to increasing the size of the call firefighter force is multi-faceted. Searching within the town via the town website, newsprint, cable TV, and through the high school is the standard fare. Offering special incentives such as free dump stickers/trash pick-up, town insurance, etc. is enticement. Extending the employment opportunity to non-Manchester residents who might live slightly over the town line is another option, although the town's rules and regulations on call firefighter residency may need to be changed. Creating an Explorer Post in the Regional High School is another method to develop a call firefighter pool. And finally, the federal SAFER Act grant for Recruitment and Retention of call and volunteer firefighters should be applied for. This grant has no

community percentage match, like the SAFER Act Hiring grant requires. The community receives all the funding the federal government grants. This grant requires that the town appoint a "coordinator" who the grant will pay for (can be a line Lieutenant or Captain) and there must be some sort of insurance offered. Otherwise, things such as uniforms, EMT and fire training, college fire courses, recruitment signs, billboards, static displays, etc. are items that usually are requested in the grants. Often a multi-year grant is sought.

Difficulties in recruiting call firefighters are many. Among them are:

- A reduction in leisure time;
- The need to maintain multiple jobs;
- Generational differences;
- Increasing training requirements;
- Affluence of the community, and;
- The cost of housing in many destination communities.

As explained elsewhere in this report, a 4-6 minute response time for EMS and a 5-7 minute time for fires is the benchmark to aim for to provide optimal times for lifesaving measures by a fire and EMS department. Note that Manchester meets these nationally recommended response times, and that is because they have career staff on-duty around the clock to respond with apparatus or an ambulance immediately upon dispatch. One would need a very large on-call or volunteer staff able to live-in or immediately adjacent to the fire station to duplicate this effort. Unfortunately in this day and age, one cannot find on-call or volunteers in sufficient numbers to give up free or family time to platoon in or near a fire station to answer emergency calls. Manchester has so many calls, though, a volunteer or on-call staff would be answering multiple calls daily, and soon you would burn-out the force. The rationale of maintaining a small career force is to handle the EMS calls and "routine" fire calls (smoke detectors sounding – no smoke or fire reported, etc.) so as not to bother the on-call personnel except for simultaneous calls and true fire or smoke conditions in buildings when every member may be needed.

You get what you pay for. Manchester's citizens get an excellent response time from the Fire Department with on-duty staffing, and they are supplemented well by the call firefighters. However, in order to better insure OSHA Two In/Two Out compliance, the number of call firefighters needs to be increased to bridge the gap between the on-duty force and the four (4) personnel that are required.

II.1 Recommendation: Apply for a federal SAFER Act grant for Recruitment and Retention of Call Firefighters

There is no match percentage for this grant. Manchester can apply for a multi-year grant to assist in administrative costs (ten (10) % of the annualized salary for the Training Coordinator who can be a line officer) and operational costs. We recommend

that Manchester attempt to reach a goal of 20 call firefighters (a more comprehensive discussion on the SAFER Act occurs on the previous page). Having call firefighters attend EMT and paramedic courses, along with a fire science curriculum, can assist them in moving up onto the career force when there are vacancies.

Beyond things that the Town can do for call firefighters such a free dump stickers, library cards, etc., the SAFER grant can provide insurance, uniforms (not protective gear), specialized training, fire science courses, EMT and advanced life support coursework, attendance at the National Fire Academy, recruiting stanchions in the fire stations, schools and community buildings, exercise equipment and programs, etc. As creative as you can get, SAFER may fund it.

II.2 Recommendation: If the Department is not successful in obtaining a SAFER Act grant, then move forward in recruiting on your own. Utilize town incentives such as free dump permits, library cards, tax incentives, etc. to create a positive environment to attract candidates.

II.3 Recommendation: Increase the weekly training sessions for call firefighters to 50 (Christmas and New Years Weeks off). There is too much training and skill retention involved to expect competent skill development through having one drill per month. Plus, setting a realistic attendance standard (80% of drills) will allow for each member to take vacation and sick leave as appropriate.

II.4 Recommendation: Establish an officer corps in the Call Force, such as a Captain and several Lieutenants, to create rank order and discipline in the Call Force.

II.5 Recommendation: Allow trained call firefighters to "work" shifts alongside career staff, especially on call-backs or stand-by shifts to make-up the 4th on-duty member.

II.6 Recommendation: Create a policy in that any call firefighter who takes advantage of any course through the SAFER Act program must remain in the Department's employ for up to four (4) years or pay-back the grant funds.

III. Emergency Medical Services

Manchester responds on approximately 480 EMS calls annually, transporting on 310 of them. According to statistics provided by the Department, there were perhaps as many as 40 calls for service where Lyons Ambulance or another mutual aid carrier responded into Manchester. This is nearly 8.5% of all EMS calls, and warrants serious investigation into a second EMS unit being maintained by the Fire Department.

Most peer Fire Departments have only 1 ambulance. For Manchester to maintain two (2) would require operational cost outlays for insurance, maintenance, state OEMS ambulance inspection fees and medical equipment and supply replacement costs. This is on top of the initial equipment/supply costs unless Manchester is going to assume the full cost of purchasing and supplying the new ambulance and retaining the older unit fully stocked. Depending upon the mechanical breakdowns or parts replacements for brakes, suspension, motor/drivetrain and electrical components, which most often suffer failures on the ambulances, the costs could easily exceed $10,000.

Based upon current collection rates, the Town, if they could staff two units, could collect more funds then they expend, but just barely, and if overtime funds are required to staff the second unit, it may break-even or actually cost the Town funds.

The one solid reason for maintaining two units is that if the primary ambulance goes down for maintenance or is involved in an accident, Manchester continues to provide its own EMS without skipping a beat. Fire District 14 has a spare ambulance that they loan out to member communities just for this situation. A similar program could be initiated in Essex County.

At this time, we would suggest that maintaining a second ambulance in the current economic downturn is not cost effective. Certainly when 10% of all EMS calls are not being answered by Manchester, it is time to re-visit this issue.

III.1 Recommendation: replace the 2000 Ford ambulance with a new vehicle.

III.2 Recommendation: at this time we are not recommending retaining the 2000 unit, due to upcoming financial constraints in this fiscal climate. Once simultaneous calls approach 10% of volume, a second EMS unit should be secured.

III. 3 Recommendation: Fire District Fourteen has a loaner ambulance owned by the Association and supported by District fees to its members. Perhaps an arrangement such as this could be implemented in Essex County.

IV. Recommendation: Emergency Dispatch Center (Communications)

Presently the Police Department is the primary answering point for all “911” emergency calls. In Massachusetts, most Police Departments are the PSAP.

The Fire Department answers its own business line, and receives emergency calls from the Police Department dispatcher.

Working in a dispatching center is a very demanding and under-recognized job. Some of the demands placed upon a dispatch center involve the following:

- Call taking
- Provide emergency medical instructions to caller
- Assign units to the call
- Coordinate re-calling of personnel from home or mutual aid
- Managing mutual aid units responding into Town
- Making emergency contacts
- Monitoring Fire Department running cards
- Tracking police officers
- Coordination of fire ground communications
- Providing information on listings and warrants
- Utilizing multiple computer-aided systems including enhanced "911" and Computer-Aided Dispatch (CAD)

The Police Department uses a combination of civilians and police officers on the desk for dispatch. They usually transfer over to the Fire Department calls, if the Fire Department is staffing their dispatch "desk" (sometimes the Fire Department answers the phone – sometimes not, if all personnel are out on calls). When off-duty firefighters respond back into the fire station, one of them will take over the "desk".

The handling of phone calls, then, is inconsistent. It would be better if one agency handled all the phone calls and radio communications. The Fire Department still would handle business calls, but if the phone is not answered in a certain time period, it would transfer over to the Police Department dispatcher.

The quality of dispatching has improved with the arrival of Police Chief Glen McKiel. However, there still are times when incomplete information is relayed to the Fire Department which would change the type of emergency response made by the Fire Department.

Dispatchers all should be certified as emergency medical dispatchers (EMD) so they can give emergency medical instructions to the caller over the phone while the ambulance and emergency personnel are en route to their location. This is especially helpful for cardiac arrests, strokes, child-birth, severe bleeding and trauma incidents.

The Essex County Fire Chiefs are investigating the initiation of a "Regional Dispatch Center" to service the Fire Departments in the county. If this initiative were to become a reality, and the annual charge to Manchester was reasonable, it would be in the best interests of public safety to join this county effort. There are several reasons for this recommendation. First, dispatchers would be well versed in EMS and fire suppression operations, making communications with firefighters in the field seemless. Second, a county-wide operation would be organized so that every community's resource availability would be tracked. If a particular community required mutual aid, it would be

dispatched quickly and a clear picture of what remained in service county-wide would be known. This is extremely helpful for a major incident because no community or section of the county would be stripped of resources without backfilling from other Fire Departments or counties.

Third, emergency medical dispatching and instructions to callers would be effortless as the sheer numbers of calls would provide efficiencies.

IV.1 Recommendation: Insure that all current dispatchers are EMD-trained and certified.

IV.2 Recommendation: All pertinent information for a fire and EMS call immediately must be relayed to the Fire Department to insure proper patient care and service delivery for the citizens of Manchester.

IV.3 Recommendation: Centralize dispatching operations with the Police Department. This improves overall performance for dispatching in Manchester and eliminates mistakes that occur when transferring functions between the police and fire departments, especially when the fire station is not staffed due to emergency responses.

IV.4 Recommendation: Train several more civilians (perhaps the call firefighter who dispatches now for the Fire Department when it is busy) so that there is a sufficient pool to re-call another civilian into the Dispatch Center when a second person is required due to activity volume.

IV.5 Recommendation: Investigate the cost to create an emergency version of the Police Dispatch Center in the Fire Department in the event the Police facility fails or is subject to a man-made or natural event that renders it inoperative. Apply for a Homeland Security Council Grant to cover this expense.

IV.6 Recommendation: We understand that the Essex County Fire Chiefs may receive a grant from the state E-911 system to formulate a county-wide Dispatch Center. If so, determine if the expense for service with this new operation is cost-effective. If so, plan to join the new system when it is operational.

V. Vehicles and Equipment

Fire Suppression Units

Engines

Engine 1 - 1978 Pirsch 1000/500

Engine 3 - 2001 Ford/Central States 1000/300

Engine 4 - 1988 KME 1250/500/40F

Aerial Units

Ladder 1 - 2002 E-One 2000/500 100' RMA

Brush & Forestry Units

Forestry 1 - 1965 Chevrolet C-30/Farrar 4x4 250/200 *(former Engine 3)*

Specialty Units

Marine One

Ambulance & EMS Units

Rescue 1 - 2000 Ford E450/Lifeline

Utility/ Administrative Units

Administration/ Inspection Vehicle

We will not address the backup ambulance concept in this section, as that already has been covered in section III of this report.

There are three pumpers (1978, 1988, 2000) and one aerial (2001) as major pieces of fire equipment. There is an older brush truck (1965) and several new 4WD staff vehicles.

In communities the size of Manchester, there usually are two pumpers minimum, the first being no more than 10 years old and the second no more than 20 years old. Currently the two trucks built as adequate pumpers are 21 and 31 years old, with the 2000 Ford unit (Engine 3) insufficiently designed and constructed to be an adequate pumping apparatus (overweight). It was purchased to be a combination pumper, rescue truck and brush truck, and unfortunately, does none of these tasks well. Much equipment and some structure was removed to get the weight down as the vehicle continually became stuck off-road. To attempt to trade it in on a typical Class A pumper would yield a low return.

The 1988 pumper, Engine 4, is in need of replacement. It has an “open-type” cab that is not safe for firefighters and is suffering the ravages of time.

The 1978 pumper (Engine 1) already has been re-built once and should be traded in. It also has an open cab and is in worse shape than Engine 4.

The aerial unit, a 2001 apparatus, usually is the first-out truck with the career staff. The 1988 pumper responds second. This policy results in the aerial logging many miles.

The 1965 brush truck was up on blocks when we saw it but we were advised it quickly can be placed in service for brush fires and is more serviceable in the woods than Engine 3.

It is clear that another pumper is needed in Manchester. It should be a rescue-pumper type to carry equipment expected for fires and technical rescue incidents. However, a $400,000 bare-bones apparatus in this economic climate will not be purchased by taxpayers. A federal FIRE Act grant should be sought this April. With the age and condition of Engines 1 and 4, Manchester should be successful in obtaining a grant. The community’s contribution percentage under the grant formula is 10%, but this figure easily can be funded as part of the annual capital budget.

Engine 4 then should be placed into reserve status and Engine 1 traded in. Engine 3 can be used as a brush piece or to supply water to one of the other pumpers at the scene of a major incident. The second pumper can be used to supply water to the aerial truck.

Firefighter protective gear is relatively new and self-contained breathing apparatus is good.

The radio communications system often was cited by firefighters as needing improvement. Especially in the vicinity of Beverly, radio communications sometimes is lost, creating a firefighter safety issue. With much Homeland Security funding still accessible, Manchester should seek a grant to improve radio signaling by use of repeaters. There is a repeater system in the neighborhood of the high school, but areas towards Beverly and Gloucester need one as well.

The fire station itself is in need of renovation and repair. Every year for the past several, the Department has requested funds to replace the apparatus bay doors. These huge glass doors are not energy efficient and sometimes stick open. The bay garage is of an open loft design and once again, is not energy efficient. During winter months it is very cold on the apparatus floor and we were told that heaters often are utilized inside the ambulance to keep the narcotics for the paramedics usable. During hot summer months, the apparatus floor is miserable in humidity and heat.

The floor plan was never really designed for career staff housing overnight. There is insufficient training space, office and storage space. The dispatch area is cold in winter and excessively warm in summer.

The station appears to be centrally located in terms of emergency responses. The longest responses are to the Magnolia section, adjacent to Gloucester. So, relocating it does not necessarily make sense.

There needs to be more space for training, offices and exercise. Reworking the existing station to achieve these modalities is our recommendation. More space can be obtained through better use of the basement and placing an enclosed mezzanine above the apparatus floor.

V.1 Recommendation: Replace Engine 1 (1978) with a new 1500 gallon per minute rescue-type pumper and a 1000 gallon water tank. Submit a federal FIRE Act grant in April to accomplish this. If the grant is not successful (it should be based upon the ages of Engines 1 and 4 [call Engine 3 a "brush truck" so its age is not counted as a pumper], then apply again in FY11 for the grant. Once again, if not successful, apply again in FY12 but also provide town funds in the event the grant application fails for a third time. The purchase of a new pumper cannot be delayed past 2012. The town contribution % if the FIRE Act grant is awarded is 10%. Otherwise the cost of a rescue pumper in FY12 will approach $450,000.

V.2 Recommendation: Once Engine 1 is replaced, two years later trade in Engine 3 and the 1965 brush truck for a Ford 450 or equivalent model with a flatbed brush fire skid tank and pump. This will provide for a reliable brush fire

rig and auxiliary tow vehicle for the hazardous material trailer. Cost with trade-ins should be in the neighborhood of $40,000.

This also opens up one storage bay for the retention of the next ambulance for two EMS units, in FY13 or so.

V.3 Recommendation: Place Engine 4 in reserve. In the meantime, make the cab area safe for firefighters. Replace Engine 4 in FY16.

V.4 Recommendation: Replace Ladder 1 in FY21, so the capital replacement program for apparatus will be on target at that time.

V.5 Recommendation: Replace other major equipment at 10 years old (self-contained breathing apparatus, portable radios, thermal imaging cameras, etc.

V.6 Recommendation: Replace firefighter protective gear (coats, pants, helmets and boots) when necessary (7 years or so).

V.7 Recommendation: Replace the apparatus bay doors in FY10.

V.8 Recommendation: Upgrade the HVAC systems to provide for better cooling in the summer and heating in the winter.

V.9 Recommendation: Renovate the fire station in FY15 to provide for a better training classroom, office space, exercise area for firefighters and storage space.

VI. Fire Prevention Programs, Inspections and Fees

The Fire Prevention Program is supervised by the Captain. Plans for homes, buildings and renovations are submitted to the Fire Department and a plan review is conducted, recommendations or code requirements are made, and fees collected. The Fire Chief and Captain do the bulk of plan reviews.

The Department appears to conduct code-mandated inspections of fire alarm and carbon monoxide devices, flammable liquid and LP gas storage tanks, open air burning, blasting and public occupancy inspections and fire drills.

There is a public education program for the schools and for the community at large, including tours of the fire station, and installation of child car seats.

VI.1 Recommendation: Review Chapter 148 section 6 and 527 CMRs to insure that all occupancies required under MGL Chapter 148 are being inspected, as well

as 527 CMR code-mandated commercial businesses, public assembly, residential and hazardous materials manufacture and storage structures.

VI.2 Recommendation: Provide more formalized fire prevention training by sending officers to the National Fire Academy.

VI.3 Recommendation: Review the Fire Prevention fee structure and add "field inspection charges" to enhance the income stream from fire prevention inspections. Otherwise, increase fees to match those of other Essex County Fire Departments to maximize revenues. For fire protection systems installations, charge a per square foot fee for major installations and a per device fee for partial additions of components.

VI.4 Recommendation: Enhance the public safety education program to more formalize the school curriculum, add an elderly component (slips, trips and falls as well as fire safety) and better utilize the media (town website and cable TV and print components.

VII. Recordkeeping

We shall evaluate the training aspects of the Fire Department in another section further into this report.

Code-mandated inspections were documented on forms, some more complete than others. Building construction and renovations for plan reviews were observed. As the Captain and Fire Chief tend to complete most of these, the consistency here is more pronounced.

It is more difficult to achieve a certain standard of completeness when more than several people are involved on a continuous basis. Smaller departments tend to have the line officers perform more fire prevention inspections, and unless trained adequately and held to high standards, proficiency tends to be varied.

As there is no department secretary, the chief and officers complete much of the paperwork in the Department, including payroll, and purchase order forms. Unfortunately, these officers are highly paid clerks at the time they are performing these duties. It would be advantageous for the Town to assign a part-time secretary (maybe partially from another department or a call firefighter with an accounting background) and free up the Chief for community involvement or other fire prevention activities.

We did not observe any vehicle maintenance forms, although we were told that all vehicles received weekly and sometimes daily shift inspections.

VII.1 Recommendation: Insure that officers are properly trained for fire prevention inspections and form completion.

VII.2 Recommendation: Add a part-time secretary (perhaps another town employee whose time is patched together from several other Departments) or a call firefighter with an accounting background, to assume the record-keeping functions of payroll, purchasing and other human resources issues.

VIII. Fire Station Location

Facilities - Fire Headquarters

The single fire station is located about as well as one can expect. The high value district in Town is well-served by the present fire station location. The area of highest response time in town is the Magnolia section. Gloucester cannot be relied upon for an

automatic response to calls in this sector as Gloucester's own station in this area of town sometimes is closed.

Beverly often responds on automatic aid to Manchester's western borders.

The average response time for Manchester units is three (3) minutes and forty (40) seconds, well within the national guidelines of 4-6 minutes for EMS calls and 7-8 minutes for fires. Of course, simultaneous calls for service usually cannot be accommodated and results in lengthened response times for these incidents.

The fire station does need a renovation, with training, office, dormitory, storage space, parking and energy conservation notable. Replacing Engine 1, Engine 3 and the aging brush truck with a new rescue pumper and a smaller utility/brush truck will provide sufficient space for all apparatus, including a spare ambulance at some point. The height of the apparatus space makes the addition of a mezzanine for a training office and storage space an attractive option. Such a renovation certainly will be in the neighborhood of $1.5 million.

Parking will become more of a concern if 7 more call firefighters and perhaps up to 4 more career staff are added over the next few years.

Most of the projected growth in Manchester is to be in the downtown and waterfront areas, well within the response protocols for the Department operating out of its present facility. There is stability in the community and little increase in growth is expected.

VIII.1 Recommendation: Provide study money in the FY11 budget to evaluate the condition of the present fire station with a renovation in mind to enhance dormitory, office, storage, energy efficiency, HVAC and parking (more in section V).

VIII.2 Recommendation: Expand the "line box" automatic aid concept beyond Beverly to include the other bordering communities as well.

VIII.3 Recommendation: Add career staffing when appropriate through the SAFER Act grants. The Town should begin this process through the addition of a fourth on-duty member perhaps on stand-by, and upgrade apparatus through a capital program and a FIRE Act grant, in order to maintain the Department's exceptional 3 minute, 40 second average response time.

IX. Community ISO Rating

Manchester has a 5/9 ISO fire grading. In order to provide a real savings for businesses and homeowners on their personal fire insurance costs, the ISO score

would have to improve so much that the expense of adding resources to the Fire Department, water services and the dispatch center would outstrip the individual benefits to business owners and homeowners town-wide.

The only plausible way to better the ISO rating is to add more personnel (career and call), improve the dispatch center to two call-takers at once, and modernize the fire pumper fleet. The costs associated with doing this will approach $500,000 in annual operating funds and more than $600,000 in one-time capital expenses. Clearly Manchester cannot afford this along with all the other fiscal pressures being exerted on the community.

IX.1 Recommendation: Evaluate the ISO grading schedule to understand the weaknesses within the Fire Department, dispatching and the water service.

IX.2 Recommendation: Where possible, make improvements to small items such as fire prevention record-keeping, training, maintenance records, etc.

IX.3 Recommendation: Include staffing and equipment improvements in the Department's long-range plan, but recognize that it will take much time to achieve these improvements based upon the current economic conditions and the fiscal ability of the Town.

X. Benchmarking of Peer Communities

The communities of Chatham, Cohasset, Eastham, Orleans and Nahant were chosen by the Select Board to be subject to peer review as compared to Manchester. It is noted that Cohasset and Eastham did not respond to repeated phone and e-mail requests to cooperate with the study.

A number of factors are compared beyond the normal demographics, budgets and personnel. How a Department operates in the EMS and fire suppression/prevention arenas is equally important. What does their fire/EMS vehicle fleet and capital replacement program look like. How do they operate with the resources they have – what is their staffing on fire apparatus and which standards do they meet and which ones don't they meet.

The benchmarking data provided by the communities selected is detailed within the tables on the next page:

Community	Population	Square Miles
Chatham	6,700	16
Orleans	7,000	13
Nahant	3,900	1
Average	5,867	10.00
Manchester by the Sea	5,500	18.25
Deviation	0.94	1.83

Community	Community Budget FY2009	Fire Budget FY2009
Chatham	$ 32,000,000.00	$ 1,900,000.00
Orleans	$ 26,981,810.00	$ 2,218,442.00
Nahant	$ 10,000,000.00	$ 708,425.00
Average	$ 22,993,936.67	$ 1,608,955.67
Manchester by the Sea	11,767,935	$ 956,690.00
Deviation	0.51	0.59

Community	Fire Calls 2008	Fire Dollar Loss 2008
Chatham	873	1,000,000
Orleans	496	205,000
Nahant	148	0
Average	506	$ 401,666.67
Manchester by the Sea	485	$ 25,000.00
Deviation	0.96	0.06

Community	EMS Calls 2008	EMS Level ALS/BLS
Chatham	1,658	ALS
Orleans	1,805	ALS
Nahant	288	BLS
Average	1,250	ALS
Manchester by the Sea	458	ALS
Deviation	0.37	

Community	Number of Career Personnel	Minimum Shift Strength
Chatham	24	5
Orleans	21	4.5
Nahant	8	2
Average	17.67	3.83
Manchester by the Sea	13	2
Deviation	0.74	0.52

Community	Number of on-call Firefighters	Firefighter Injuries in 2008
Chatham	2	7
Orleans	20	3
Nahant	17	0
Average	13.00	3.33
Manchester by the Sea	12	5
Deviation	1	1.5

Community	Civilian Injuries in 2008	Number of Stations
Chatham	1	1
Orleans	0	1
Nahant	0	1
Average	0.33	1
Manchester by the Sea	0	1
Deviation	0	1

Community	Engine Company Crew Size	ISO Rating
Chatham	4	5
Orleans	3	3
Nahant	1	4
Average	2.67	4.00
Manchester by the Sea	2.5	.80
Deviation	0.94	0.00

Community	Dispatch Platform Fire , Pollice, Civilian, Regional	Number of Ambulances
Chatham	Fire	3
Orleans	Regional	3
Nahant	Regional	1
Average	Regional	2.33
Manchester by the Sea	Fire/Police	1
Deviation		0.43

Community	Number of Engines	Number of Ladders
Chatham	3	0
Orleans	2	1
Nahant	2	1
Average	2	0
Manchester by the Sea	3	1
Deviation	1.29	2.50

Community	Personnel Dedicated to Fire Prevention	OSHA 2 in 2 Out Compliant
Chatham	1	Yes
Orleans	1	Yes
Nahant	0	Yes
Average	0.67	Yes
Manchester by the Sea	0	NO
Deviation	0	

Community	NFPA 1710 Compliant	Deputy Fire Chief?
Chatham	Yes	Yes
Orleans	Yes	Yes
Nahant	Yes	No
Average	Yes	Yes
Manchester by the Sea	No	No
Deviation		

Community	Cost per call	Cost per Capita
Chatham	$ 750.69	$ 283.58
Orleans	$ 964.12	$ 316.92
Nahant	$ 1,624.83	$ 181.65
Average	$ 1,113.21	$ 260.72
Manchester by the Sea	$ 446.43	$ 173.94
Deviation	0.40	0.67

Based upon the information contained herein, we have developed the following observations and recommendations:

X.1 Recommendation –The Department should develop a comprehensive strategy to reduce the current ISO rating.

The Insurance Services Office (ISO) rating for the peer communities is the best in Orleans. Interestingly, it is the communities with career staff that posts the lowest (or best) ISO rates, which in turn translates to lower insurance rates for homes and businesses there. Manchester can improve its ISO rating by adding more on-duty firefighters; by increased usage of automatic aid agreements; by achieving NFPA 1710 compliance 90% of the time; by improving the dispatching arrangements; by improving water supply testing and pressures in the high value districts; and by insuring that the ISO-required equipment and apparatus testing regimens are followed. It must be noted that some ISO requirements are outdated now, but ISO still enforces these standards, whether relevant or not. Based on the configuration of the Departmetn and the community it would be cost prohibitive to reduce the ISO rating to a point where homeowners would see a tangible benefit.

X.2 Recommendation – The Department should develop a comprehensive strategy to improve dispatching capability through either improving their own in-house service or contracting with Essex County if and when the county initiates their own dispatching operations.

Currently the Department is dispatched by police initially and then assumes its own radio operations as quickly as possible. This is a disjointed system and could lead lead

to missed radio communications, a dangerous situation for firefighter safety and the public safety at large. Initially we recommend that the police conduct all dispatching including radio communications for continuity. If and when Essex County initiates its own public safety dispatching, then the Town should contract with them for all services.

Working within a dispatch center is a very demanding and under recognized job. Some of the demands placed upon a dispatch center involve the following:

- Call Taking
- Provide emergency medical instructions to the caller
- Assigning units
- Coordinating recall of personnel and mutual aid
- Managing mutual aid operations
- Making emergency contacts
- Monitoring running cards
- Tracking officers
- Coordination of fire ground communications
- Providing information on listing and warrants
- Utilizing multiple computer aided systems including enhanced 911 and Computer Aided Dispatch (CAD)

X.3 Recommendation – Add one (1) staff per shift to achieve Two-In/Two-Out OSHA compliance and improve Department effectiveness (i.e, at major fires: for motor vehicle accidents with injury and entrapment: for multiple calls: to improve on-duty Department training opportunities. This should be accomplished initially by having an on-call person to respond on calls. Eventually the Town should seek a federal SAFER grant for hiring of four (4) career personnel. The town's portion of the grant partially can be offset by higher fire prevention, inspection and EMS transport fees.

Only Nahant had fewer on-duty personnel than Manchester, but achieving OSHA Two-In/Two-Out compliance still is within reach and should be a goal to improve community and firefighter safety over time through the use of creative staffing initiatives.

X.4 Recommendation –Aggressively increase the number of call personnel to assist in cost reduction and improve service delivery. It is noted elsewhere in this report that the inclusion of candidates outside the town borders will be required in this effort – increasing membership to 20 on-call personnel over time.

XI. FIRE DEPARTMENT EMERGENCY OPERATIONS

Usually the Manchester Fire Department does not meet OSHA Two In/Two Out standards on most responses. The Department just does not have four personnel assigned to a shift or to the initial piece of apparatus out the door. Likewise, meeting the NFPA 1710 standard of assembling 13 firefighters on the fireground in eight (8) minutes is a stretch as well. Most small Departments like Manchester cannot meet the standards by themselves, but if they partner with mutual aid neighbors for an automatic response upon initial dispatch, they can achieve compliance most of the time. At issue is whether Beverly, Gloucester, Wenham and the smaller volunteer/call operations can provide resources to Manchester in a timely manner.

Manchester follows the time-tested axiom of do what you have to do regardless of any national standards. They hope that they will not get into trouble on a fire call and need additional resources immediately after arrival in order to mount an interior attack on the fire or make a rescue.

Usually Fire Departments get away with this behavior, but once in a while they do not, and firefighter injuries or fatalities occur with the resultant federal investigation (required for firefighter deaths). A community does not want to be the subject of such an investigation. Litigation may well be an after-effect of such a federal presence.

As much as possible, communities should try to achieve compliance or develop legitimate alternatives. The SAFER Act grants were developed by FEMA for just such a reason (4 person engine companies): (assemble 13 or more staff on the incident scene in 8 minutes).

There are many ways a community can assemble 4 person engine companies – the personnel do not have to ride together on one pumper – several vehicles can be used. Hence a call firefighter on stand-by for alarms who responds to a call independent of the pumper still counts as one of four arriving personnel.

Use of automatic aid by mutual aid neighbors to achieve 13 members on scene in 8 minutes also counts for NFPA 1710 compliance. All personnel do not have to come from one department – just 13 firefighters need to be assembled in 8 minutes.

The Department has a comprehensive set of Standard Operating Procedures (SOPs). However, there is only one set of these SOPs in the station, and the crews do not have ready access to them. So, as good as the SOPs are, if one cannot train to them and be held accountable to them, the SOPs are not effective for Department operations. The SOPs need to be published, provided to each shift and call firefighters, and be put on-line. Training needs to occur based upon the SOPs.

Sometimes a firefighter travels alone to an EMS call in the ambulance, hoping that an off-duty member arrives on scene to assist. A private carrier is contacted immediately in these cases to respond initially as well, so there is no delay in patient care.

The Department responds initially to fire calls with Ladder 1. This allows for an aerial to be set up in front of an incident scene before other apparatus can lay hoselines and jam up the front of the building, making it impossible for the aerial to place itself in a useful position.

Off-duty staff respond into the station and usually staff Engine 4 first, as a water supply pumper. Department operations in terms of utilizing the accountability tags appears to work OK. How the firefighter accountability system works under duress is not clear to us.

The mutual aid system operates very well. Neighboring fire chiefs have a lot of respect for Chief Paskulis. They stated to us that they believe he has "professionalized" the fire service in Manchester, quite a compliment.

On our several visits to the Manchester fire station, the on-duty crews were busy maintaining equipment, from pumpers to self-contained breathing apparatus to radio communications equipment.

One area of questioning that always occurs is relative to the number of on-duty staff: Is 3 too many, just right, or not enough. According to OSHA, it is too few, although one more arriving independent of each other will make 4 personnel. Our recommendation is to hire a fourth person, a call firefighter most likely, to be on-call to respond immediately to an emergency and accompany the pumper. If the on-call person does not respond in a set time, then another call firefighter can be provided the opportunity.

How one achieves NFPA 1710's standard is more complicated. Mutual aid neighbors responding back into Manchester on a "line box" is the easiest way to achieve compliance under this standard. At least three departments should respond back in on the call, however.

XI.1. Recommendation: Evaluate the SOP system and open it up to all Department members. It is difficult for members to accept an SOG that they have not trained on nor are very familiar with. Continue to improve SOPs as conditions in the field change or new hazards are presented that must be dealt with.

XI.2 Recommendation: Continue to conduct officer meetings on a monthly basis.

X1.3 Recommendation: Utilize mutual aid communities for immediate response on all calls involving smoke and fire in buildings, to insure an adequate initial response and to assure compliance with NFPA 1710.

XI.4 Recommendation: Review all major incidents with Department personnel, perhaps utilizing outside experts for serious injury or fatality incidents, with the focus on improving performance, not laying blame for errors.

XI.5 Recommendation: Adhere to the capital equipment acquisition program so that apparatus continues to be functional and safe for firefighter usage and public safety.

XII. TRAINING

The Department Training Program is well documented. It is based upon NFPA standards for fire training, although we could not see formalized lesson plans used for instruction. Training was held Department-wide monthly. Good individual records were kept for this training.

EMS training was per state OEMS guidelines. We did not meet with the Department's CQI Committee (continuous quality control), so we cannot report on this activity. However, if it is organized similar to the other programs we observed, the CQI Committee should be effective for EMS operations.

New career firefighters attend the Massachusetts Firefighting Academy Recruit Program, the premier basic firefighting instructional program in the state.

Some call firefighters have attended the Massachusetts Firefighting Academy Firefighter I/II Plus Program, which trains call and volunteer firefighters to the national certification standard.

Career staff attempt to train on-duty when possible. However, as the Department becomes busier, the ability to train on-duty lessens as the interruption of answering emergency calls disrupts the flow of the delivery of curriculums.

XII.1 Recommendation: Increase the number of training sessions especially for call firefighters to meet the ISO standards. Four of the overall Department sessions should include drills with mutual aid neighbors.

XII.2 Recommendation: Publish a Training Schedule for the Department several months in advance so members can plan their lives and be able to attend training as much as possible .

XII.3 Recommendation: Train utilizing "lesson plans" that are designed to denote objectives and key instructional points for consistent and effective delivery of fire and EMS training to members. All training sessions should be reduced to written "lesson plans".

"XII.4 Recommendation: Encourage specialized training for officers and supervisors beyond the normal "skill" or "operations" types of training.

XII.5 Recommendation: Encourage members, especially officers, to attend the National Fire Academy in Emmitsburg, Maryland – the fire service's version of the FBI Academy. The natural place to begin would be to attend the Massachusetts State Weekend there in October and branch out to their two-week programs later on.

XIII Funding and Grants

Fiscal Year 2010 and beyond will prove to be very challenging times for municipal and state government. The stimulus packages from the federal government will target various entities of local and state governments, and provide construction and seed monies for many infrastructure projects.

First, Fire Departments need to maximize local revenues by charging appropriate fees in fire prevention and inspections, and in EMS transports. Raising revenues here may save jobs or provide matching funds for federal grants such as SAFER or the FIRE Act.

Next, Fire Departments need to keep abreast of state Regional Homeland Security Council funding initiatives, whether for training opportunities, equipment requests, or regional projects that can benefit each Fire Department.

Third, the state Department of Fire Services and Public Health agencies have annual grants for Fire Safety in the Schools (SAFE), Firefighter Safety Equipment, and Decontamination/mass casualty equipment and training.

Fire Departments should apply annually for the federal FIRE Act grants, either for equipment, vehicles or training. The federal government also has the annual SAFER Act grants: one for hiring career staff and one for recruiting and retaining call and volunteer firefighters.

Lastly, the federal stimulus programs need to be studied closely for application to the fire service. One proposal is for fire station construction. Another is to suspend the municipal match for the first two years on four year SAFER Act hiring grants. There undoubtedly are more federal initiatives that can affect municipal funding.

XIII.1 Recommendation: Maximize local revenues by charging appropriately for fire prevention and inspection fees; and EMS transport trips to medical control facilities.

XIII.2 Recommendation: Apply for Regional Homeland Security grants whenever possible.

XIII.3 Recommendation: Continue to apply to state Firefighter Equipment, SAFE and Public Health grants on an annual basis.

XIII.4 Recommendation: Apply annually for federal FIRE Act grants for equipment, vehicles or training.

XIII.5 Recommendation: If appropriate, submit applications for federal SAFER Act grants for Recruiting and Retaining Call Firefighters and eventually hiring four (4) career personnel.

APPENDIX A

SAFER GRANT OVERVIEW AND GUIDANCE

APPENDIX B

NFPA FIRE DEPARTMENT PROFILE

APPENDIX C

NFPA 1001 FIREFIGHTER PROFESSIONAL QUALIFICATIONS

APPENDIX D

COMMISSION ON THE ACREDITATION OF AMBULANCE SERVICES (CAAS) STANDARDS

APPENDIX E

OSHA TWO IN TWO OUT OVERVIEW

APPENDIX F

EXAMPLE TRAINING SCHEDULE

APPENDIX G

EXAMPLE LESSON PLAN