# *Fire Services Evaluation and Master Plan for Moorestown Fire District #1, Moorestown, New Jersey*

***February, 2008***


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# Preface

During the period of July and August, 2007, a consulting team from Emergency Services Education and Consulting Group (ESECG, a subsidiary of VFIS, Inc.) conducted a documentation review and site analysis of the Moorestown Fire District #1, Burlington County, New Jersey. This work effort was consistent with the scope of work described in the proposal agreed upon between Moorestown Fire District #1 Board of Fire Commissioners and ESECG

The Board of Fire Commissioners of Moorestown Fire District #1 is to be congratulated for its proactive initiative to evaluate its fire department services and in developing a plan for the future. Too frequently communities undertake such activities following major adverse events,

It must be noted that the interests expressed by the Board of Fire Commissioners, the members and staff and the community were focused upon providing quality service to the residents, workers, and visitors to Moorestown Township. There were many positive efforts and programs found to be in place within the Department. While much of this report centers upon action to be taken to enhance long term performance, everyone recognized the fire department performs the

There were seven (7) primary activities involved in this project.

1. An introductory meeting was held with the Board of Fire Commissioners and fire company officers to establish an understanding of project involvement and expectation as well as a timeline to complete the project. At this meeting, the department was provided with self-assessment tools and a series of questions to complete to establish baselines of performance and dates for submission were established. A list of necessary documents needed for review and people to contact was also submitted.
2. "Self Assessments" and "Statements of Issues and Concerns" were obtained, and a compilation and analysis of the data provided, was completed.
3. Site visits to each fire station were made to confirm self assessment information, review commentaries submitted, and establish a structure for possible solutions to identified issues. The department officers were open and provided applicable documentation to the teams and provided "tours" of facilities and apparatus.
4. A number of documents were reviewed as submitted by the township, including, but not
    - Insurance Services Office Report,
    - Master Plan (dated 1994),
    - Various fire company response summaries and documents,
    - Existing Standard Operating Procedures/Guidelines, and
5. Specific meetings were conducted and surveys of member perceptions were completed and analyzed. In addition, meetings were conducted with business owners from the community to assess their perceptions and comments. These were compiled and will be

6. Follow-up activities with the Chief and the Administrator were conducted as necessary.
7. This document is the result of the completed and consolidated efforts of the six aforementioned activities.

We wish to complement the Board of Fire Commissioners of Moorestown Fire District #1 and the officers and membership of the Moorestown Fire Department for their proactive initiative to evaluate long term needs of the community's fire services; and for their willing and active

# STATEMENT OF WORK

This project is intended to assist the Moorestown Fire District #1 in key areas of service delivery.

# SCOPE OF WORK

The scope of proposal and statement of work plan and product will reflect a combination-based fire and rescue service.

# PROJECT APPROACH

In order to accomplish the "Scope of Work," the project activities will be composed of five (5) phases.

## Approach to Project Objectives

The proposed methods, procedures and anticipated deliverable items of this project have been organized into objectives. Each objective is described below.

*Phase I: Initiate Project*

**Task No. 1:** **Development of Project Action Plan**

**Activity:** A comprehensive action plan shall be developed identifying:

1. Primary tasks to be performed
2. Person(s) responsible for each task
3. Timetable for each task to be complete
4. Method of evaluating results
5. Resource to be utilized

Possible obstacles of problem areas associated with the accomplishment of each task. This plan shall be developed in cooperation with the members of the Moorestown Fire District #1 Commission, membership and staff. This plan will be completed within 15 days of the awarding of the project to the project team. This plan will list

**Task No. 2:** **Stakeholders Input**

**Activity:** Conduct interviews with and gather information from key personnel—Including:

The project team will interview key stakeholders of any organization associated with this study. At a minimum, members of the project team will interview township officials, Fire Commission, Fire District, and E.M.S. officials.

From these interviews, the project team will obtain additional perspective on operational, economics, and policy issues facing the Fire and Rescue Services. In addition, the project team will learn more about availability of data necessary to meet projected goals.

*Phase II: Emergency Services Information Review*

**Task No. 3:** **Emergency Services Information Review**

**Activity**: The project team will conduct a general review of the current status of Emergency Services, including, but not limited to:

- Organization Overview
- Management Overview
  - Policies, procedures, rules and regulations
- Risk Assessment Process
  - Risk Analysis by response area
  - Target Hazard Identification
  - Hazardous Materials
  - Pre-Incident Planning
  - Inspection/Pre-Planning Coordination
  - Water Supply Assessment
  - Planning for Fire Protection and Other Emergency Services
  - ISO recommendations
  - Community Development
- Delivery Systems—Suppression/Rescue
  - Service Delivery comparison to National Fire Protection Association (NFPA) Standard #1720
  - 3-year review of response performance
- Standard of Response Cover
  - Staffing
  - Response personnel - current versus desired versus necessary
  - Inspection personnel – current versus desired versus necessary
  - Administrative Staff – current versus desired versus necessary

- Facilities
- Apparatus and Equipment
- Capital Improvement Plan
    - Review of Training Program to meet requirements and demands
    - Officer Qualifications
    - Officer Training
- Mutual Aid Companies
- Relief Association
- Closest Company Response

At the completion of each activity defined above, a status and "gap" statement will be prepared which will indicate the current status of that activity, any gaps between that activity and expected performance (as defined by standards or organizational policy), and activities that need to be undertaken to close the "gaps". Where possible, tools to assist in the development of these activities will be provided. The initiatives will be integrated into a comprehensive schedule of

*Phase III: Strategic Plan*

**Task No. 4:** **Strategic Planning Process**

**Activity:** Vision, Mission, and Guiding Principles - Validate the development of meaningful vision, mission, and guiding principles:

A. Develop/Revise Vision statements that describe the way the Fire District views itself in the future
B. Develop/Revise Mission statement that describes the purpose for which the Fire District exists
C. Develop/Revise Guiding principles that will enumerate the values or ideas that are

**Activity:** External Customer Needs and Expectations – Identification of external customers and their critical needs/issues, as deemed needed.

A. How customers prioritize the services provided by the Fire District
B. Areas of customer concern about the Fire District
C. Customer expectations of the Fire District

**Activity:** Internal Assessment – Identification of internal customer needs and issues (SWOT Analysis).

A. **S**trengths of the organization
B. **W**eaknesses of the organization
C. **O**pportunities for the organization
D. **T**hreats to the organization

**Activity:** Citizens' and Community Leaders' Involvement – As deemed appropriate, facilitate discussions with interested citizens and community leaders to develop consensus on:

A. Service expectations and priorities
B. Selection of a service delivery model
   1. "Geographic-based" coverage
   2. "Demand-based" coverage
C. Selection of key community emergency services performance objectives and

**Activity:** Goals and Objectives – The establishment of goals and objectives (as well as the tasks and performance statements) that is imperative to the organization and individual members.

A. Establishment of organizational goals that address the identified concerns of the external and internal customers.
B. For each goal, the development of one or more measurable objectives that are written in such a manner as to describe the criteria by which an outcome is judged complete or successful and the time frame in which to expect the desired outcome.
C. Development of associated tasks for each goal and objective utilizing the format of identified measurable criteria.
D. Development of performance measures for ongoing assessment of Fire District performance.

The project team will complete a review of the strategic plan and related goals and objectives. In addition, the project team will review and make recommendations on the goals and objectives of the plan as related to the study findings.

## *Phase IV: Prepare Draft Report*

**Task No. 5:** **Prepare Draft of the Strategic Plan**

**Activity:** Prepare Draft Report - Upon completion of Phase III, the Board of Supervisors will receive a report of findings and recommendations.

The draft report undergoes a process of accuracy review by the project team in preparation for the production of the final product. The editorial and critical comments obtained from the Fire District shall be considered as essential information in the final report.

*Phase V: Prepare Final Report*

**Task No. 6: Final Evaluation and Strategic Plan Report**

**Activity:** Prepare and Present Final Report - Prepare and present final ~~l~~ Evaluation, Strategic Plan Report and Master Plan for Fire and Rescue Services..

Adhering to the parameters as established by the Moorestown Fire District #1 and agreed to by ESECG, the project team will then prepare the final report. The report will detail the data and information acquired during the engagement and the project team's analysis and recommendations. All objective areas explored during the process will be addressed in the final report.

# Introduction

As noted in the Strategic Plan developed in conjunction with this report, the nation's volunteer fire service is changing. Given the extent of these changes and at times the lack of awareness or even unwillingness to accept these external forces on the volunteer system, it is important to help

Longtime volunteers often look back on the "way it used to be." They recall a time when training was much less demanding and time consuming and the local fire department had fewer responsibilities. Fires and accidents were pretty much the game. Attendance and training standards were achievable. There were fewer calls but each was an event that required the assistance of neighbors, who took great pride in their membership in the local department. The community appreciated their neighbors' help, local businesses supported the volunteer fire department, and the call volume was small enough so as not to interfere with the requirements of the members' jobs. The system was manageable, the emergencies were mitigated, and it was fun

The reality today is that in many communities, to be a contributing, effective firefighter, a person has to meet significantly higher standards physically, in terms of training, and in terms of time "on the job" gaining experience. Not everyone has the luxury of time or in some cases the inclination, to meet those requirements in today's hectic environment. Anymore, the fire department is not just a group of people trained to suppress fire and render first aid. It has become the premiere provider of choice for different levels of emergency medical services and in many cases transportation, as well as the provider of just about every other service that is not provided by the police department—hazardous materials response, high-rise and below-grade rescue, inspections, prevention and education, and community emergency planning and

This is not to say that volunteers can't handle the job, for their abilities and successes are demonstrated daily in many places from coast to coast and border to border. But where they can not, community and fire leaders are challenged to meet their community's needs. In some cases, they will find ways to reinvigorate the volunteer members of their departments and improve their performance. In others, they will recognize the need for another type of change, moving to some

The Moorestown Fire District #1 has a rich and proud tradition, dating back to the early 1800's in Chester Township, now known as the Township of Moorestown, the citizens of the town have been faithfully served by a volunteer fire department. In 1879 the New Jersey Legislature created Fire Districts to administer fire protection in townships and portions of townships in New Jersey. In September of 1879, Fire District No.1 of the Township of Chester was created to protect the village of Moorestown, which later became Fire District No. 1 of the Township of Moorestown. There are two stations, Hose Company No.1 and Relief Engine Company, within the boundaries

Incorporated on November 14, 1888, Hose Company No. 1, in 1893, the Commissioners provided Hose Company No. 1 with a new house built on a lot located at North Washington Street. In 1916, Hose Company No.1 moved to 215 West Main street and then recently to 261

Relief Engine Company, which is situated on Chester Avenue, was first incorporated in 1890 as Hose Company No. 2. In 1892, the company was renamed and chartered as Relief Engine Company. In 1910 the company raised their own capital to fund the construction of their new

To this day, the Moorestown Fire Department has remained a primarily volunteer organization, serving the community with state-of-the-art equipment. Moorestown Fire District No.1 has come a long way since the original hand drawn pumper. Today the district possesses four "Class A" pumpers, a brush unit, a fire rescue/cascade unit, a ladder truck, support vehicles and additional technological equipment to assist with the daily operations. Moorestown's fire prevention and public safety education programs have also grown in time. Children, as well as adults, are learning on a continuous basis about the dangers of fire and

As this report is written, The Moorestown Fire Department serves a population of 20,400 residents covering 15 square miles of schools, libraries, houses, businesses, churches, synagogues, community centers, and cultural and historic buildings, responds to over 700 incidents a year and provides reciprocal assistance to neighboring townships.

[1] http://www.moorestownfire.org/htmlfiles/history.html

# Mission Statement, Core Values, and Responsibilities

Any planning process must evaluate the key beliefs and operating philosophies of the organization. To that end, the Moorestown Fire District #1 has developed a mission statement, core values and responsibilities based upon the challenges posed within Moorestown Township, and based on the input of residents, township officials and staff, the business community, as well

**Mission Statement**

Two critical steps in the development of strategic and operational processes were completed by the development of a mission statement for fire and rescue services. Moorestown Fire District's mission statement can be found in its handbook, which reads:

> **"The fire department is organized to protect life and property from the hazards of fire, to alleviate situations with the potential for fire and explosion and to prevent, control and extinguish fires that occur within the Fire District. The department shall also provide rescue service. The fire department shall provide immediate emergency services including extinguishment of fires, control of situations involving hazardous materials, spills or leaks with a potential for fire or explosion and to safe guard life in a variety of situations where prompt action may be needed. Upon the removal of the threat of fire of explosion or when the immediate urgency has been met, control and responsibility for the situation will be turned over to the appropriate State, County, or municipal agency., Public utility or other commercial service agency. The fire department may also provide aid to other state, county and local emergency services organization, Such aid may include, but not be limited to fire, rescue and emergency management operations. The fire department shall maintain the needed apparatus and equipment to meet its purpose and objective including pumping engines, aerial ladder trucks, rescue equipment**

This statement covers the purpose and capability of the organization as defined in Fire District documents. For the purpose of communicating the Fire District's mission and vision to the general public and its members, this can be consolidated to a simpler statement for public use

This mission/vision can be stated as:

> **"Fire and Rescue Services are provided to maintain an effective response capability to natural and man-made emergencies through planning, pre-emergency assessment, and the effective use of human resources and equipment when needed."**

This mission statement provides the organization's purpose, business and value and is intended to provide a concise statement of the what, how, and why of an organization.

**Standard of Response Cover**

A major component of the delivery system of Moorestown Fire and Rescue Services' delivery system is to provide an assurance to the public that it is organized and capable of responding to emergencies with qualified personnel, in an appropriate time frame, with the proper equipment. To accomplish this, the Moorestown Fire District has developed the following operational

> **"The Moorestown Fire Department will respond with three (3) people, within fifteen (15) minutes of dispatch, 90% of the time."**

The application of this standard of response cover is to assure the services (directed by the charter of the Fire District as approved by the Township) are achieved in a fashion to comply with the mission statement and the needs of the community. The Moorestown Fire District #1 Board of Fire Commissioners is responsible for the annual review of measurements related to

It should be stated that Moorestown Township enjoys a relatively low fire rate and has a well respected emergency service provider. The standard of response cover is met, but should be revisited regularly to assure it is being achieved. The failure to achieve the standard of response cover will be the first indicator to revisit the true applicability of the standard and staffing

As a group, the department members identified the most important functions and services it provides and offers. It is important to identify these functions in order to assure they are consistent with the critical needs of its customers. The core services and supporting programs

**FIRE-RESCUE OPERATIONS**
- Fire Suppression
- Rescue (light)
- Hazardous Materials (Operations Level)
- Fire Police
- Storm Management
- Community Care Calls

**EMERGENCY MEDICAL SERVICES**
- First Responder

**FIRE & INJURY PREVENTION**
- Public Education
- Community First Aid & CPR Courses

* Note, these are further defined in Appendix 1.

Basic management practices apply to the volunteer fire service and provide for efficient long term focus and help facilitate result orientation. Upon establishment of specific actions to maintain and achieve these key organizational deliverables, the leaders of the organization can periodically solicit appropriate input and guidance from key service stakeholders and plan for

# Project Findings

The project findings were compiled as a result of document review, self assessment reviews, comparisons of observations to information and comparisons provided, and input on concerns, issues, and problems.

The team was quick to observe that the Fire District Commissioners and the fire department personnel have the safety of the public as a prime concern. The interest in providing a quality service to the people who live, work and visit Moorestown Township was quite obvious. The relatively low fire experience in the township is also a testament to the overall performance of

Personnel, officers and Commissioners were afforded the opportunity to identify concerns and issues of current operational practices. These items were part of the analytical process and were validated by the assessment team and have all been reflected in this report. The department is to

raising the issues for discussion and recognizing that the issues raised will result in recommendations to change current methods of operation.

As the project team analyzed and observed operations, it quickly became clear that the department had long-standing values, philosophies and operational success; apparatus was current and in good repair; and one of the two stations was adequate for current and future needs. It was also apparent that change in the community and community expectations will drive operational demands in the future

Documents were provided which detailed the statutory authority and general powers of the Fire District. This included:

***"The Board of Fire Commissioners, Fire District No. 1 were established pursuant to Chapter LXXII an act to provide means for protection against fire in Townships an act adopted by the Senate and General Assembly of the State of New Jersey on March 10, 1879, and Fire District being created within the boundaries of Chester Township by Ordinance in the year 1879, and further conveyed to the Township of Moorestown pursuant to Senate Bill No. 101 adopted March 11, 1922 and through a concurring Resolution of the Township of Moorestown adopted July 21, 1922 adopting all ordinances of Chester Township prior to the separation of***

***The Board of Fire Commissioners operate pursuant to N.J.S.A. Title 4OA014-70 et. seq. with regard to matters relating to fire protection.***

***As a political subdivision of the Township of Moorestown, County of Burlington, State of New Jersey, the Board of Fire Commissioners are further regulated in the official duties and conduct by various statues and administrative codes adopted and approved by the State Legislature including, but not limited to: Open Public Meetings Act (N.J.S.A. 10:4-6); Municipalities and Counties (N.J.S. A. 40A); and the Local Authorities Fiscal Control Regulations (N.J.A.C. 5:31-a).***

***The Commissioners of a Fire District shall have the power, duties and functions within said District to the same extent as in the case of municipalities, related to the prevention and extinguishment of fires and the regulation of fire hazards (N.J.S. A. 4OA:14-61)***

***The Fire District and the Commissioners thereof shall be a body corporate, to be known as the Commissioners of Fire District No. 1 in the Township of Moorestown, County of Burlington. The said body corporate shall have the power to acquire real and personal property for its purposes. It may adopt and use a corporate seal, sue or be sued and shall have such powers,***

A Fire Department Master Plan for the Moorestown Fire District #1 was conducted in 1994 by Eckman Associates. A fire-oriented master plan is typically completed to assist in identifying the priority and level of service provided in specific operational areas, and can assist in addressing adequacy and performance, and align specific divisional needs with organizational expectations and the strategic plan.[2] Of specific note in the master plan are objectives and goals involving, among others:

- To evaluate the quality of fire protection ,
- To evaluate the effectiveness of the organization
- To evaluate the practicality of continuing to operate with volunteers, and
- To make recommendations for improvements.

It should be noted there is a distinct difference in philosophy between the Eckman report and this report. The Eckman report stressed a defined time for fire department response without qualifying the expectation or defining the science behind the statement; and the philosophy that an automatic fire alarm should be handled in the same regard as report of fire in a building. In 2007 the fire service operates on the philosophy of a "Standard of Cover" which includes a correlation of response to hazard and uses data to establish priority in dispatching and response. These are based on criteria established jointly by the International Association of Fire Chiefs and the International City Manager's Association. These referenced recommendations have been restated at various points within this document. A number of recommendations made in the Eckman report were acted on and some remain in consideration. While the information from the Eckman report be considered dated (14 years old), a number of the significant recommendations

- the construction on the East End of Moorestown Township
- the possible integration of Emergency Medical Services into Fire District operations, and
-

The Insurance Services Office (ISO) report, completed in May 1997, was reviewed. ISO is the leading supplier of statistical, underwriting, and actuarial information for the property/casualty insurance industry. Most insurers use the Public Protection Classification (PPC) survey for underwriting and calculating premiums for residential, commercial and industrial properties. The

[2] "Strategic Planning: One Plan Type o f Many", Chief Fire Officer's Desk Reference, Jones and Barltett Publishers, Inc. Sudbury, MA, 2005, Page 26.

in Moorestown Township. The resulting classification of Class 4/9 represents a lack of water supply in a portion of the township, resulting in a low grading. The report provided a number of "Improvement Statements". With respect to the fire department, the ISO report indicated deficiencies due to

- insufficient equipment on Engine 3113 (lacking minimum hose and pump testing)
- insufficient equipment of Engine 2123
- not all sections of the fire district with hydrant protection are within in 1.5 miles of a
- an insufficient response of fire department members to emergency calls
- a lack of pre-fire planning inspections of each commercial, industrial, institution and other similar type building twice annually, with records of notes and sketches
-

As is typical with volunteer fire companies in the ISO reporting system, volunteer companies are found deficient in company personnel (number responding to incidents) and a lack of training records.[3] While some improvement was noted during the visits, the basic issues of water supply and staffing were found to still exist. The Fire Chief was pursuing a re-evaluation by ISO and that should be pursued as changes over the last ten years should result in a positive improvement, at least in "9" segment of the rating. Further details are indicated in Appendix 5 of this report and

- Main and Church Streets,
- Main Street and Page Lane,
- Marter Rd. south of Main Street,
- Stanwick Road south of Bridgeboro Road

The fire department was requested to complete a self-assessment using National Fire Protection Association (NFPA) Standard 1720 as a baseline. NFPA 1720, entitled the "Standard for the Organization and Deployment of Fire Suppression, Emergency Medical Operations, and Special Operations to the Public by Volunteer Fire Departments", the standard was developed as a national consensus document to identify minimum requirements related to the organization and deployment of volunteer fire service agencies. While there is no mandate to use this document, it is the closest definition of expected service delivery by volunteer fire agencies. This document replaces many items of arbitrary definition in the Eckman report. Areas of positive and deficient performance were identified by this assessment. The assessment indicates that there is a belief that the organization is performing in compliance with the standard in a number of key areas,

- attaining needed staffing to handle incidents
- understanding the risks involved
- establishing adequate response teams
  ability to provide an initial attack within two (2) minutes of arrival, 90% of the time
-

Each of the 58 assessment components were evaluated with companies assigning an Attains (A), Partially Attains (PA), or Fails to Attain (FA) rating. The following areas were self-determined

[3] "Public Protection Classification Results, Moorestown Township, Burlington County, NJ, ISO, Marlton N.J., December 3, 2003.

to require action, based up the indication of a deficiency (failing to attain expectations). These included

- development of a risk management plan (Section 4.2)
- conducting annual evaluations (Section 4.4.2.1)
- intercommunity organization training and guidelines (Section 4.7)
- implementation of RIC (4.9.5)
- standard radio procedures and language (Section 5.4.3 and 5.4.4)

Recommendations related to these issues are found in subsequent sections of the report. Details of this effort are provided in Appendix 3.

Similarly, a review of existing Standard Operating Procedures/Guidelines (SOPs/SOGs) was conducted based on information provided by the Chief and Battalion Chief. Based upon the NFPA 1720 self-assessment and the results of the interviews conducted by the assessment team, a recommended outline for development of SOPs/SOGs is provided later in this report. There is an excellent opportunity to use existing SOPs/SOGs and those of other agencies as the basis for the development of updated SOPs/SOGs, by providing existing programs that work and eliminate extensive research time. This should help expedite the time it would take to develop

Similarly an overview document such as a strategic approach to incident management is not in place. This Strategic Guideline identifies and outlines some basic rules and principles that relate to the major areas of fire fighting strategy and subsequent fireground activity. The uniform application of this guideline will produce favorable fireground outcomes. This guideline is designed to offer a basis and simple framework for Moorestown Fire Department fireground operations and command; it also represents many existing practices, and a defining of how this department is expected to perform during certain emergencies. A draft copy is provided in

The observations, analyses, and subsequent recommendations are provided in the following categories.

- Management Issues,
- Operational Issues,
- Personnel,
- Apparatus,
- Standard Operating Procedures,
- Mutual/Automatic Aid, and

As will be seen in the body of this report and in the recommendations, many of the items center upon the fact that a lack of coordination among District 1 and District 2 exists and provides organizational and performance challenges in each of the sections of this report.

# Assumptions and Current Trends

Any conceptual project begins with a set of assumptions and analysis of current trends within the industry. This project is no exception. There were four (4) basic assumptions established prior to the assessment and development of a report for Moorestown Fire District #1. The assumptions

- The desire is to maintain a volunteer system to deliver fire and rescue services as long as possible.
- There is a possible need for a station on the East End of the Township that should be evaluated.
- Nationally recognized standards would be used as the baselines for any recommended changes in operations.
- Programs, best practices policies, guidelines, etc. recommended for use, should be recognized successful programs, best practices policies, guidelines, etc. in other



Time was taken to compare Moorestown Fire District #1 to fire services in similar sized communities around the Unites States. A national study was conducted by the National Fire Protection Association entitled "U.S. Fire Department Profile through 2005" which was printed in 200, measured service provision in several key areas. These are compared in the following

| *Nationwide Area of Comparison* | *National Result** | *Moorestown F.D. #1* |
|---|---|---|
| Percentage of communities between 10,000 and 24,999 population with all volunteer fire services | See below | Mostly volunteer service |
| Number of volunteers per 1,000 population | 1.57 (median)<br>2.0 in the Northeast | 3.5<br>est. 70 volunteers |
| Number of stations per 1,000 population | .126 | .098 |
| Number of pumpers per 1,000 population | .185 | .26 |
| Number of aerial trucks per 1,000 population | .033 | .130 |
| % Departments in communities between 10,000 and 24,999 population with 3-4 Pumpers | 49.3% | 4 pumpers |
| % Departments in communities between 10,000 and 24,999 population with 1 Aerial | 46.0% | 1 aerial truck |
| % Departments in communities between 10,000 and 24,999 population with 2 Stations | 30.4% | 2 stations |
| % Departments in communities between 10,000 and 24,999 population where fire department provides EMS Service. | NO EMS – 30%<br>BLS – 41%<br>ALS – 29% | BLS non-FD |

**Comparison was against communities with populations between 10,000 and 25,000.*

[4] Michael J. Karter, "U.S. Fire Department Profile Through 2005", NFPA, Quincy, MA, 2006, 27 pages.

In the 10,000 to 24,999 population category there are 3,525 fire departments,

17.6% of the departments are all career,
22.1% of the departments are mostly career,
41.4% of the departments are mostly volunteer, and

Throughout the United States, in communities of 10,000 to 24,999 populations, the % of membership by age range is as follows:

| | NATIONWIDE | MOORESTOWN FD#1 |
|---|---|---|
| Under age 30 = | 28.4% | 36% |
| Age 30-39 = | 31.2% | 15% |
| Age 40-49 = | 25.1% | 24% |
| | 16.3% | 25% |



Overall, the comparison of Moorestown Fire District #1 Fire and Rescue Services to communities of similar size demonstrates Moorestown Fire District #1 to be consistent with or to have more than the equipment, facilities and staffing provided in similar sized communities throughout the United States.

# Management Issues

The Fire District personnel do their best to provide emergency response services to the community. The lack of significant major loss events is a tribute to the performance of the organization.

The Fire District as directed by state statute and guidelines is required to establish a series of programs, maintain specific records, and manage the organization in a professional manner. This is evident in the extensive amount of documentation readily available for the project team upon their arrival and made available during the time on site and afterward. The fact that various state statutes must be followed drives specific processes; such as budgeting, basic forecasting, human resource management, and basic service delivery; and make the operation of a Fire District very efficient. Moorestown Fire District #1 has further deemed it appropriate to hire not only administrative staff but operational staff to manage the burden of documentation and performance reliability for the organization. The District uses the state model for an employee and needs to expand on this as appropriate, either through Standard Operating Guidelines or

The organization has matured over the years starting with an Administrator and adding operational staffing. The fact that these individuals not only provide for the management oversight issues, but are available to respond to daytime incidents, (as recommended by prior

Annual budget documents and basic reports are compiled and distributed. An annual report sheds light on the operations and inner-workings of the fire companies and allows for more citizen acceptance and review. While completed, it is clear from discussions with residents and business owners that more of the information about the "happenings of the Fire District" needs to be disseminated. Similar to this is the need to establish long term capital expense planning through a

While basic mission and vision statements can be interpreted from statutory documents, it is worthwhile to formalize this information in order that members and the public understand the services provided by the Fire District so that their expectations as recipients of the service can be

**VISION STATEMENT**
***(Proposed draft for review, agreement and revision*)**

The Moorestown Fire District #1 provides a state of the art fire and rescue service to the people of Moorestown Township and as an organization is dedicated to service and excellence through superior leadership and technology that fosters a climate of openness, trust, and diversity that recognizes the achievement of people working together.

**MISSION STATEMENT**
***(Proposed draft for review, agreement, and revision)***

**"Fire and Rescue Services are provided to maintain an effective response capability to natural and man-made emergencies through planning, pre-emergency assessment, and the effective use of human resources and equipment when needed."**

Integral to these operations are defined procedures for:

- officer qualifications and incident command
- apparatus response procedures
- firefighter and officer training

Management information is maintained at the discretion of the Administrator and the Chief, and while computers are prevalent in the facilities, an overall approach to Information Management was not clear.

The department and its members indicated training as a hallmark of their performance, individual staff development, and value to the community. The consistent record of performance would validate that the companies integrate training within their operational activities. However, based on the documentation provided and the responses to questions during site visits, it is clear that the overall approach to training and development of standard operating guidelines needs refinement to truly be effective. A suggested model for comprehensive training and resultant officer qualifications is provided as Appendix 2 of this report. It should be used as a baseline for discussions to develop the ultimate model for use in the Fire District. While standard operating guidelines are in place and others are being developed, an over-riding guideline for strategically operating at incidents should be developed to provide both a risk management and over-riding

Several management practices considered common in the business world have appropriate expansion into emergency services and should be applied in the Moorestown Fire District #1. These specifically include the expansion of current risk management initiatives into a comprehensive risk management plan, and the expansion of the current disaster preparedness initiatives into a comprehensive disaster planning/business recovery program for the fire district. It should be noted that the Administrator has already initiated some activities within the disaster planning/business continuity process and during this evaluation process compiled the first step of a comprehensive risk management plan, which must now be coordinated with the Chief for full implementation. Additional details on the Risk Management Plan can be found in Appendix 16. Information on the further development of a disaster/business recovery plan for the organization

**RECOMMENDATIONS**

07-01 Develop a Service Delivery Statement which would indicate the types of services to be provided, the area to be covered, and the delegation of authority to perform those services. This will also serve as the basis for development and implementation of a

07-02 Develop a Standard of Response Cover for use in Moorestown Township as a method to define a service expectation the community will accept. T~~his~~ will also serve as a benchmark to determine when and if career staff would ever be needed for fire-fighting

07-03 Develop capital plans for any expenditure over a fixed amount. The amount is at the discretion of township officials, based on the accounting principles in place to define capital purchases. As a minimum, this would involve apparatus and facilities.

07-04 Establish a process to assure a risk assessment is conducted for the community which provides input and a basis for the development and implementation of the community's standard of response cover.

07-05 Develop an approach to strategically manage operations which clearly defines a comprehensive approach

07-06 Develop an annual report for consolidated service delivery provided by the Fire District, including a projected costs savings to the taxpayers, through the utilization of the National Volunteer Fire Council's "Volunteer Fire Service Cost Savings Model",

07-07 Expand the current Risk Management Plan to address the control and financing of risk, outside the purchase of insurance. A model format to use in the development of this process is provided outside the contents of this document.

# Administrative Issues

The Fire District policy is established by the Board of Fire Commissioners with implementation of administrative issues by the Fire District Administrator. This role has changed as the District has expanded its activities and responsibilities. While the role of Administrator has had multiple functions in the past, this was due to the initial needs of an administrator, coupled with work demands. As those demands expanded, various roles were undertaken by other career positions. This continues to be the case and this report will recommend, not only modifications to the

In addition to financial, human resource, data management, and maintenance, the current administrative function includes the fire official. There are functional conflicts with having the fire official report to administration instead of operations, and a recommendation follows. There is also no one responsible for overall information technology, which should be coordinated in the

RECOMMENDATIONS

07-08 A functional reorganization should occur to place more responsibility for operations and related information in the operations function and more responsibility for administrative activities within administration. With the expansion of information technology (IT), this

07-09 The information technology function for the organization should be consolidated in the administrative function of the organization as a process that provides data to all facets of the Fire District. The overall IT function should report to the Fire District Administrator

- fire inspection management and record keeping
- pre-emergency planning
- permit issuance
- accounts payable and receivable
- personnel information
- apparatus maintenance
- building maintenance
- incident reporting
- training information
- training programs

miscellaneous use by members (including games and web access), and should include a security component to prevent both unauthorized use and

# Operational Issues

As noted earlier, the fire department operates under long-standing procedures, using mutual aid, automatic aid, and standard operating practices. This culture and tradition has built an organization that has performed as needed for the community for decades. However, the changing demands and expectations on emergency services, particularly in communities such as Moorestown, create conflicts in performance and develops potential operational and liability issues. This issue was recognized a few years ago, resulting in the selection of a career Fire Chief and Battalion Chief to begin to address these 21st Century Fire Service conflicts. To that end the

In looking at the delivery of service as compared to communities of similar size and complexity, firefighting, rescue, hazardous materials, terrorism, and emergency medical services were all evaluated.

To determine the operational needs of the fire department, there must first be an understanding of the hazards being faced. There is no community risk analysis at this time, so it becomes important to gain as much an understanding of the hazards posed as possible. This can be done by analyzing response data, defining and inventorying what are considered major or target

Since a comprehensive risk analysis has not been completed, it is recommended that one be completed. There have been some individual assessments of properties completed and pre-plans developed. As part of this project, a risk posed level by response zone map was developed and can be found in Appendix 9 as well as a preliminary comprehensive risk map in Appendix 19 (risk level considering risk posed, actual responses, water available, and people exposed). In addition, there were 22 SARA TITLE III sites indicated which are currently being evaluated and planned. Key target hazards such as large area structures, high density/personal care/nursing homes, and other similar challenges exist and require pre-planning. Also to be noted in detail, is the lack of coordinated communication between the Fire Official and the Fire Chief on routine findings during inspections and integrating inspection information into the pre-planning process. Recommendations will be made to change the organizational and operational practices of the Fire Official to be more involved in comprehensive fire protection of the community instead of just code enforcement and public education. Various tools were provided to the Fire Chief and the Battalion Chief to consider for modification and use in the risk analysis and pre-planning process. These pre-emergency action plans, are recognized methods to predefine the risk posed, the necessary water supply, apparatus, personnel, support resources, etc. to manage an incident at

The primary mission of the organization since its inception was fire suppression and the primary tool to suppress fire was and remains water. Therefore, once target and routine hazards are analyzed, water supply becomes the first point of consideration. Water supply, in general, is considered inadequate for fire protection, based on the information presented and tests conducted

1. The ISO report indicated that "water supply was deficient (less water available from the municipal water supply system than the needed fire flow) in six of the nine locations tested".
2. Water Model Upgrade Report, completed by GPM Associates of Cherry Hill conducted field water supply tests and stated "concerns expressed by Township officials over available fire flows in the downtown portion of the system are verified by Figure 4", with recommendations made to enhance the water supply system.
3. The 2007 study conducted by GPM validated a 2004 study conducted by Pennoni Associates, which confirmed water supplies to be less than needed fire flows.
4. Water supply modeling and mapping, completed by GPM Associates of Cherry Hill, N.J. illustrated water supplies which would be of adequate capacity only within an approximate one-quarter mile radius of the two water storage facilities:
   - at the intersections of Westfield Road and Tom Brown Road.

In essence, there is limited and in all probability inadequate water available for effective fire fighting in high density construction areas, high population areas and the main shopping district of the town. The reason this becomes of such concern, is that the availability of an adequate water supply for fire suppression is THE primary component to successful fire incident management. All of the fire engines and staffing in the world will be unsuccessful in managing a fire, if there is insufficient water available to manage the spread of fire. Knowing and understanding the available water supply is critical to effective risk assessment, pre-planning,

> *In analyzing the water supply information provided, if one assumes that the requirement is 2000 gpm for 2 hours (which would be in a good estimation for a small town with no major fire risks) they would have to have both the volume of water available (120 minutes X 2000 gpm = 240,000 gallons) and the ability to deliver it at the required flow rate and pressure. They would need to deliver that flow rate (assumed 2000 gpm) with at least 20 psi residual pressure at the hydrant(s). They would need to have that much volume of water available...**plus** the amount required for domestic flow during the same duration. While the depth in the storage tanks can be used to determine the volume that is available in storage, it doesn't provide the information that is needed to determine flow rate and delivery pressure.*
>
> *If they are simply using the elevation pressure in the tank to provide their system pressure, they may have difficulty in obtaining the needed water. The 9 feet of head provides 20 psi at the discharge from the tank, but that doesn't allow anything for friction loss in the distribution system or changes in elevation. 20 psi at the hydrants, where the water comes out of the system...not where it enters the system. If the storage tank is elevated or at the top of a hill and the town is in a valley they may be adequate, but is not the case as was observed in Moorestown.*
>
> *Possibly by using pumps on the discharge side of the storage tanks the system pressure can be increased, but must be automatic to be effective.. In that case we need to know the capacities (gpm and psi) of the distribution pumps. ISO assumes that the largest pump will be out of service, so they evaluate the delivery capacity with the rest of the pumps in operation. The pressure requirements depend on the characteristics of the distribution system, which can be calculated if they know all of the pipe sizes, changes in elevation, grid design and distances. The easiest way to obtain*

*this information is to conduct hydrant flow tests and measure what comes out. This information was not available.*

*Therefore, based on the information provided to the project team, it is appropriate to raise the concern of an adequate water supply to the local elected officials, particularly considering growth opportunities available in the community.*

Once the water supply necessary and available to suppress fires in the community is defined, one can move on to the demand for operational staffing, apparatus, stations, and their respective positioning and availability. Each of these will be provided separate sections of evaluation and

As part of this project, the Chief was asked to complete an assessment of operations, consistent with NFPA 1720 "The Standard for Providing Emergency Services by Volunteer Fire Departments." The details of this assessment can be found in Appendix 3. There were several items within this assessment that require action. First there are periodic calls for various rescue situations, including "trench rescue", "high-angle rescue", "confined space rescue", and "water rescue". Cherry Hill provides hazardous materials, trench rescue, confined space rescue, and high angle rescue services. Mt. Laurel provided water rescue services. While the use of mutual aid for specialized services makes operational and financial sense, there is a need for Moorestown Fire Department personnel and officers to have an awareness level of training and basic equipment for each such event to begin rescue operations preparation before arrival of the special teams. For each of the services named above, the responding mutual aid agency should be contacted to assist in the development of the awareness program content and equipment

The Department of Forestry met with the Chief of Department to evaluate the wildland interface issues facing Moorestown Fire District #1, and submitted a report with findings and recommendations on training, equipment and education. The Department of Forestry report indicated Moorestown Fire District #1 to have an overall rating of 2 (moderate) on a scale of 1 to 5 As noted in the report, this "*this does not mean that there is no potential for wild fires that can cause serious issues, it is merely a way to look a the amount of mitigation work, type of equipment and levels of training needed to deal with the wild fire situation. The exception to this, is the Creek Road/Rancocas Creek area of the township. I would rate this specific region as a 3 to 4 classic urban interface area, favoring the very high side*." Recommendations for equipment, training, education, and code enhancement were made within the report. These should be pursued in concert with the Department of Forestry as well as the potential to obtain needed

## RECOMMENDATIONS

07-10 A formal letter of concern needs to be provided to the elected officials of Moorestown Township advising them of the water supply for fire protection situation, in order to place them on notice that the fire department may not be able to adequately manage a fire situation if there is insufficient water to fight the fire. This will also require a diligent process on the part of Fire District personnel to capture hazard and water supply

in the township to understand where water supplies are deficient for fire-fighting and determine both secondary water supply options as well as defensive firefighting operations.

07-11 Three ordinances were deemed appropriate for recommendation to the Fire District for consideration and advancement to Moorestown Township elected officials. These include the proposals for:

- the adoption of a code banning the use of cedar shake roofing materials in future construction and "re-roofing" projects. These materials are notorious for supporting fire spread and creating fire suppression challenges to the fire department, particularly in wildland interface areas, such as those posed in Moorestown Township.
- the adoption a smoke alarm ordinance requiring all occupied dwelling units, regardless of when they were built, to have working smoke alarms.
- the adoption of an automatic fire sprinkler ordinance for all new construction in Moorestown Township. Not only has there never been a loss of life in a sprinklered building in the United States, automatic fire sprinklers provide early warning to a fire and provide quick control of a fire thus limiting the response requirements of the fire department. Automatic sprinklers also:
    - decrease the economic and physical burden of the fire department and the fire department's ability to keep the community safe.
    - decrease the necessity of building or purchasing more fire department infrastructure to meet the needs of revitalized down town areas and sprawling suburban development.
    - decrease insurance costs within the community (ISO rating).
    - save billions of gallons of water used in fighting fires by conventional (Manual) means. Thousands of gallons of water from fire department hose lines do not have the effectiveness of less than a hundred gallons from a fire sprinkler system

07-12 For the demands of "trench rescue", "high-angle rescue", "confined space rescue", and "water rescue" services, the responding mutual aid agency should be contacted to assist in the development of the awareness program content and equipment purchase to be consistent with the needs of the technical rescue team upon their arrival. Develop an awareness training and operational program for the functions of confined space rescue, trench rescue, water rescue and high-angle rescue, using the operations level service provider as the trainer for this training and to recommend what equipment should

07-13 The Chief should integrate the findings of the August 1, 2007 report of the Department of Environmental Protection, Assistant Division Forest Fire Warden Christopher Irick, into the operational and financial plans for the next 24-months. This would include four

- Obtain additional guidance from the Forest Firewardens on the nature, type, and content of education that should be provided to the residents and businesses in Moorestown Township as it relates to wildland interface and fires beginning in 2008.
- Obtain additional guidance from the Forest Firewardens on the content of an ordinance which can be proposed and adopted regarding the ultimate elimination of cedar shake roofing (and similar) materials which contribute to rapid fire growth. This should be completed by year end 2007, for proposal and implementation in 2008.
- Integrate into the 2007 and 2008 budgets, appropriate equipment to support the mission and needs of wildland interface fire suppression.
- The Administrator should begin in the fourth quarter of 2007 the preparation and

07-14 Similar to many suburban communities with volunteer fire companies, Moorestown Township experiences its share of automatic fire alarm activations necessitating a response from the fire company. In the majority of instances, the alarm activation is not an emergency situation. The system has actually activated due to a malfunction, a cause not due to a fire, an accidental use or misuse of the system equipment, or testing of the system where notification was not made to the alarm center prior to the testing. In all of these instances, fire apparatus are dispatched, respond at emergency speed, and find no emergency upon arrival at the location. The current response models being used in Moorestown Township were reviewed with the officers. In the 1994 Eckman report there was specific reference to "treat the fire alarm as if it were a report of a fire in a building". Experience however, has taught us differently. In fact well over 95% of alarm activations each year actually require at most, one engine and staff to solve the problem being alerted to by the activation. In addition, there is a developing trend across the United States to respond to such events in a non-emergency driving manner, which leads the project team to suggest a change in the response pattern that is not quite as drastic. The assessment team recommends a reduced response be based on assuring apparatus respond with full staffing is dispatched to assure a standard complement of resources is provided to handle

07-15 Develop a process for the development, distribution, and training of pre-emergency plans for target locations as identified in the risk assessment process. This should include water supply information, as well as a hydrant out-of-service notification process. The fire

# Personnel

The two companies in the Fire District collectively indicated approximately 71 individuals were members of Moorestown Fire District #1's organization. In this day and age when it is more and more difficult to recruit and retain volunteers for any activity, Moorestown Fire District #1 is finding a way to sustain members, however, it is more and more challenging to recruit and retain

Personnel represent the most significant resource of Moorestown's Fire Services. Without trained people who are willing to respond to emergencies, perform maintenance work, and train, there would be a mammoth challenge to assuring the safety of the people and properties of the township. Unfortunately, like many similar communities, less time to volunteer, more calls, more required training, and expanded fund raising needs are all reported to be situations challenging



Using the basic data of 71 volunteers, three pumpers, one aerial, and one rescue, a cost savings calculation can be made to determine the savings to the taxpayers of Moorestown Township, by using a volunteer system. The National Volunteer Fire Council's (NVFC), Volunteer Fire Service Cost Savings Calculator, computes this savings (for salaries and benefits of firefighter/EMTs) to be approximately $5,000,000 or $750 per household to Moorestown Township. The NVFC Cost Savings Calculator was created by St. Joseph's University Graduate Program in Public Safety

- develop a model to calculate the cost savings of an emergency service organization
- develop a model power-point slide presentation for an emergency service, organization to use with elected officials and public groups to promote their service and the value created by the service, and
- develop a projection of annualized savings of volunteer Emergency Service

The study found the savings, nationwide, to be $37 billion. The program and additional information can be found at www.nvfc.com.

The question was asked how Recruitment and Retention activities are conducted. There was no structure to the process, individually or collectively. The two companies indicated they conduct a variety of activities, but gave no baseline for goals, expectations, or consolidated approach to the process of recruitment and retention. Without a comprehensive approach to recruiting and retaining members, that is local in design, which is responsive to members needs, the

The maintenance of human resource related data is not standardized. A common set of information components should be established, the recognized for establishment and maintenance by the Fire District Administrator, including what should be maintained electronically, and what should be maintained in paper fashion. For example, there are no standards for minimum documents, such as:

- application
- driver license copy
- annual Motor Vehicle Record report

As part of this analysis, an assessment of the Moorestown Fire Department's culture and perspective on management, operations and safety by requesting member to complete questionnaires and participate in a group (and as requested individual) meeting. Over thirty (30) members provided responses to the questionnaire. However, the data and comments provided several items of interest, note, and necessary action. (A fully detailed analysis is provided under

Included in the responses were all age ranges within the department, as well as a diverse group representing new members to over 30 years experience. The fundamental responses revealed an organization that is open to change, is well aware of performing their jobs safely and its impact on effectiveness, and that changes being implemented are behavior oriented. However, only a

Of particular note though are the following overwhelmingly positive responses:

- Officers have an accurate understanding of reality
- Officers act more like coaches than bosses
- The efforts in safety upgrades are positive
- Members take responsibility for the quality of the things they do
- Officers are available for support and assistance when needed
- Members are valued
- Management is considered flexible and effective
- Equipment and facilities are considered to be in good condition and well maintained.
- Senior officers are visible and accessible
- Member overwhelmingly like being a member of the organization

There were several items of note in the survey results.

- Approximately 20% do not believe gains from member suggestions are shared with all members.
- Approximately 20% are not satisfied with their role in the organization.
- Approximately 20% do not believe the organization has the ability to change and adapt quickly.
- Approximately 15% indicated they do not believe operations are done in a method to improve operations.
- Approximately 15% believe members do not really care about the organization and that the members do only what they want to do.
- Approximately 25% believe members are not involved at all stages of the implementation of a program, that officers and members are not in constant communication with each other, that members do not have input on safety decisions, that officers do not follow up on suggestions and requests made by members, and that officers only take note when

- There is a slight concern that officers do not get along with some members.
- Almost half believe the organization only admits the best people.
- Almost half believe barriers exist between firefighters and senior officers
- There is a concern that all members are not treated fairly when it comes to working in hazardous environments.
- Approximately 20% believe the organization is not consistent in following standard operating guidelines, particularly officers wearing personal protective equipment.
- Approximately 20% believe the organization faces a higher than average turnover of members.
-

These key points of the perception survey indicate the organization has some communication and performance challenges, but none that cannot be managed.

Members indicated they volunteer for two primary reasons, to serve the community and because of the people with whom they volunteer. The two primary ways of communication are via 1to1 communication and 1 to group communication. The group was split on a willingness to realign station assignments, but were overwhelmingly agreeable to dual memberships (membership at

With regard to training, members are primarily interested in basic training and furthering current training. Regarding potential benefits, the members indicated interest in continuing the Length of Service Award Program (LOSAP), insurance programs, gas and uniform allowances. Interest was also shown in gym availability, tax refund potential and moving toward the 20% of career staff

Recruitment and retention was felt to require additional focus by the members, particularly regarding recruiting new members and adopting a plan that includes advertising, public program involvement, and using word of mouth to attract people. Members felt that once they joined, the expectations of them were simply to run calls and do a good job. They seek from leadership communication, respect, fairness, and to listen. There were several comments that lead to a need

Based on the member's responses, the overwhelming majority believe they are there to serve the community. A few believe the fire company should serve them first. This philosophy clearly can create conflicts for leaders when developing and implementing programs and change that are geared to enhance the organization's mission and necessitates an effort to change this minority perspective. Similarly, there were some concerns expressed about the organization's movement to career officers and the limited flexibility and growth which it gives the organization. These too appear to be minority comments and possibly a failure to fully understand the mission and needed change to the fire service in current and future times. There were also comments

Members suggest that the standard of cover model include the following components

- respond within 10 minutes of dispatch
- with four firefighters
- arriving at the scene in 8 minutes

This would result in an 18 minute total reflex time which is generally considered too long for a community such as Moorestown.

The data suggests that additional focus be placed on involving members more in decisions, particularly regarding safety and operations. Officers have an opportunity to expand involvement and interaction with members to enhance morale and performance.

**RECOMMENDATIONS**

07-16 Develop and implement a comprehensive approach to the recruitment and retention of an adequate force of competent fire and rescue service personnel. Coupled with this should be minimal criteria for membership.

07-17 Develop a standardized set of data and documents to be maintained for each member, by each company. This should include, as a minimum, an application, physician's release to perform firefighter duties, training information, driver license, working papers, etc., as deemed appropriate. Sample information and forms is provided in VFIS safety and management forms which are forwarded under separate cover.

# Apparatus

The apparatus of the fire district was found to be in good condition overall. Thought has obviously been given to the types of apparatus needed within the Fire District and the purchasing plan was useful in reaching today's level of serviceable apparatus. Based on physical observation and discussion with officers and members, as well as the review of records management, the

| | |
|---|---|
| Engine 3111 - 1994 Pierce 1000 gpm engine | Good Condition |
| Engine 3112 – 2004 Pierce 1500 gpm engine | Good Condition |
| Engine 3121 – 1997 Pierce 1500 gpm engine | Good Condition |
| Engine 3123 – 1987 Pierce 1000 gpm engine | Fair Condition* |
| Ladder 3125 – 2004 Pierce 105' aerial | Good Condition |
| Rescue 3119 – 2002 Pierce Rescue | Good Condition |
| Brush 3126 – 1982 Ford 300gpm brush truck | Fair Condition* |
| Fire Police 3128 – 1995 Chevy Van | Good Condition |
| Utility 3117 – 2003 Ford F-350 maintenance | Good Condition |
| Command 3100 - 2004 Ford Expedition | Good Condition |
| Command 3101 – 1996 Chevy Tahoe | Being Replaced |
| Operations 3100 – 2003 Chevy Impala | Good Condition |

* Fair condition due to age, not mechanical capability

There was no "long term" purchasing plan/projection made available to the project team. The project team developed such a schedule to assist in long term planning and financial projections to assist the Commissioners with their decision making. This projection is included as Appendix

While one "20 Year Apparatus Purchasing Plan" was developed and is now "complete", a new plan needs to be developed as current apparatus is nearing the end of its life cycle. While the assessment team could develop a new 20 year plan, that would need to be based on a risk assessment finding which would develop a definition of how many apparatus, and of what type, would be needed. This assessment does not exist today. That plan in turn would assist in determining what apparatus could be staffed and dispatched to calls. Among consideration in the plan should be the available personnel to respond, response history, value and use of vehicles

This plan should be developed and documented in accordance with allocated tax dollars each year, in order to provide a full understanding of what apparatus will be purchased, when it will be purchased and what the tax impact will be.

Critical to the longevity, service ability, functional ability, and reliability is the maintenance of the apparatus. The apparatus in service today is in good repair with just a few pieces of equipment considered nearing its replacement cycle. There are a couple of fundamental decisions

1. What warrants replacement;
   - Age alone
   - Age coupled with level of performance
   - Performance only

The apparatus was found to be on a service/maintenance program by a "Certified Emergency Vehicle Technician" from Fire & Safety Associates of Piscataway, New Jersey. File information found that the maintenance is conducted and appropriate records are maintained in a paper file. You are to be commended on this process. It is a current state of the art technique in managing costs associated with fire apparatus, managing the performance of the vehicles which are becoming more and more complicated to service, and providing a method to determine longevity of a vehicle to better define its replacement period. We do recommend however, that a computer database be established, as well as a single form (Appendix 7) to provide a "single snapshot" of when maintenance is due, what repairs are recommended or conducted and what is expended. This will assist in the determination if apparatus is deteriorating or costing the district more than necessary in expense. Maintenance of the apparatus is the responsibility of the Senior Fire

A review of the Insurance Services Office (ISO) reports found that annual fire pump, aerial ladder, hose line and ground ladder testing are being conducted. Again, you are to be commended for using qualified vendors to conduct these tests in a timely fashion thus assuring optimum performance of the apparatus. While the ISO report indicated that apparatus met testing requirements, it noted that some equipment was insufficient. In reviewing the apparatus equipment, the equipment was found to meet the actual needs of the department in fighting fires

**RECOMMENDATIONS**

07-18 Create and document a policy for replacement of fire apparatus and develop a theoretical 20-year apparatus replacement and funding plan. The plan should be coordinated to determine available tax dollars to determine impacts upon the tax and budgeting process

07-19 A computer database should be developed to manage vehicle maintenance information for apparatus to provide an easy method of identifying expense by unit and purpose to assist in budgeting and replacement processes.

# Facilities

The stations were evaluated to consider suitability and growth opportunities within the response district. The fire station conditions were rated subjectively, based on housekeeping, size of apparatus bays, existence of detection and suppression equipment ramp size, building

| ***Location*** | ***Condition*** |
|---|---|
| Main Street Station | Good Condition |
| Chester Avenue Station | Fair Condition but extremely crowded |
| East End Station | At the request of the fire commission, an evaluation was made for the feasibility of this station. |

The Main Street Station, which houses the fire apparatus, offices, district facilities, inspection staff, and the Moorestown First Aid and Rescue Squad was found to be well spaced, suited for the type of operations occurring within the structure and generally state of the art in design.

The Chester Avenue Station, which is much older is approximately 8 blocks distant from the Main Street Station. Given its age and the expanded design and size of newer fire apparatus, the apparatus bays are crowded. Although well-maintained, its usefulness as a modern day fire

A review of structures was also conducted for critical areas such as basic construction, maintenance and safety. As noted above, facilities were found to be well maintained and companies were operating safely within their stations despite the crowdedness at the Chester

First, maintenance agreements were not in place for major service equipment. Each company should evaluate and obtain service maintenance agreements for HVAC systems, as a minimum. These two systems are critical to sustaining operational use of the stations. Consistent with this,

Secondly, vehicle exhaust removal systems in place were providing unknown value. Diesel and gasoline engine exhaust poses major long term health problems and short term acute illness problems. The installation of vehicle exhaust systems which capture the products at the vehicle exhaust duct, will reduce the level of risk to firefighters and reduce the build-up of exhaust on firefighter clothing, building components and other exposed items. Monthly evaluations of carbon monoxide production should be conducted by the officers, when apparatus is running in the station, to determine if the units in place are adequately protecting members from these

**RECOMMENDATIONS**

07-20 Service maintenance agreements should be obtained for HVAC units. Qualified contractors should be retained to evaluate electrical, plumbing and roofing systems every 3 years.

07-21 Vehicle exhaust removal systems should be evaluated monthly to determine a baseline of successful performance of the current exhaust units.

07-22 The process should begin to establish and construct the East End Station with no less than a seven (7) year timetable. This will place the opening of the station at about 2015. There are five (5) options considered in the development of this recommendation.

1. Keep the two existing stations, rehabilitating the current Relief Fire Company station.
   - this would not solve the accessibility to the East End
2. Keep the two existing stations and add a third station on the East End of Moorestown.
   - fixed costs of three stations is not warranted
3. Keep one engine in the Relief Fire Company station and convert the remaining portion of the facility to apartments for firefighters to live in at a reduced rate, and build the East End Station
   - this has merit if commitments can be gained from members
4. Transition the EMS operations to the Relief Fire Company station
   - this does not solve the station infrastructure issues and related costs
5. Transition to members responding to any station for a call, eliminating the Relief Fire Company station and building a station on the East End, to be named Relief Fire Company of Moorestown.

# Standard Operating Procedures

The project team found that the officers have a process in place to develop, implement and monitor the organization's standard operating procedures. The format now being used is considered to be effective, including the indication of the date adopted, date reviewed date, and

- purpose
- scope
- responsibility
- safety
- definitions
- references and attachments, and

is comprehensive and consistent with the various training, implementation, performance, and monitoring components that standard operating procedures should include.



The standard operating procedures developed illustrate state of the art approaches to many issues. However, they exist in different formats and exist in multiple manuals. The officers acknowledge that there are an extensive number and various types of standard operating procedures to revise, develop and implement. The read and sign approach by all members is excellent approach to assuring members are aware of the updates and new procedures implemented. The project team discussed several options (manual process, electronic applications, etc.) to accomplish this with the Chief. These options should be considered and the

A master Table of Contents for Standard Operating Guidelines is developed and was made available to the project team. The Table of Contents is quite extensive and it was expressed to the project team that the push on SOGs by the officers is too extensive and too aggressive. This is in addition to the length of review and approval time taken by the Fire Commissioners, all of which create an effectiveness issue of the entire SOG project. The project team believes that the number of SOGs and related review/approval/implementation can be more efficient by consolidating similar SOGs into fewer overall documents, but must have an appropriate relationship. For example, all Incident Management SOGs should be in one SOG, not separated into 17 topics and related SOGs. Where there are over-riding guidelines in place (e.g. County accountability, rehabilitation, mayday and evacuation protocols), they should be simply adopted and inserted with a MFD SOG cover sheet which references application of the County or other SOG. There

Standard Operating Procedures serve several functions in today's emergency services. Not only do they provide an understanding of how certain activities are to be accomplished, but they establish basic training criteria. A more realistic plan, using member and officer involvement, needs to be established to review the existing Standard Operating Procedures and begin the

In today's society it is essential that all emergency service organizations develop, adopt, and implement standard operating procedures and guidelines. The principal of public kindness is no

longer acceptable practice. Concepts, such as sovereign immunity (individual vs. government) have been significantly limited and narrowed by the courts.

Many of the federal, state, and provincial laws allow for suits against individual leaders of emergency service organizations. Terms such as "duty of care," "breach of omission or commission," and "joint and several liability" are entering the vocabulary of emergency service

One important way to prepare for this challenge is to develop, adopt, and implement a comprehensive set of Standard Operating Procedures/Standard Operating Guidelines (SOP/SOGs.)[5]. Standard Operating Procedures/Standard Operating Guidelines are a fundamental safety

During the process of compiling SOP/SOGs, the difference between these varied documents may become blurred. For instance, often the distinction between policy and procedure do not seem so clear. Policy is different from a SOP/SOG. All procedures and guidelines are based on an over-riding policy. Policy should be viewed as the attitude, philosophy and intent of top management to the organization's personnel. It provides a framework and guidance to organization personnel in making decisions. To aid in the development of SOP/SOGs, understanding specific definitions

It is understood that the Authority Having Jurisdiction (AHJ), in this case the Board of Fire Commissioners, is responsible for granting approval or designating that responsibility for Standard Operating Procedures/Guidelines. As the organization grows, and more full-time staff in place, this level of oversight may not be necessary. There should be a process implemented to grant authority and responsibility for routine operational procedures and tasks to the career staff, following a process that requires member input, career staff development and finalization. Policy issues and administrative issues shall remain under the clear control, authority and responsibility

The breakdown of major sections of the SOG Manual is appropriate and should be modified as follows:

| | |
|---|---|
| Section 1 | Department Mission and Organization |
| Section 2 | Administration |
| Section 3 | Training and Education |
| | Risk Management and Personnel Safety (including Health, Wellness, infectious disease, & haz mat exposure control) |
| Section 5 | Building Intelligence and Pre-plans |
| Section 6 | Command, Control and Communications |
| Section 7 | Incident Operations |
| Section 8 | Hazardous Materials Operations |
| Section 9 | Technical Rescue Operations |

[5] Developing and Implementing SOP and SOG for Emergency Service Organizations, VFIS, York, PA 2001, Page 2.
[6] Ibid, Page 9

Section 11 Fire Police Operations
Section 12 Fire Investigation
Section 13 Fire Prevention
Section 14 Apparatus Operations and Maintenance
Section 15 Equipment Operations and Maintenance

As a starting point, we suggest that four procedures be developed each month and reviewed. The following priority listing is provided for consideration in reviewing existing SOPs/SOGs and developing a related township-wide SOP/SOG.

Priority 1 – Policy Level Issues
Priority 2 – Operational Level Issues
Priority 3 – Administrative Level Issues

Finally, as noted earlier there is no one document that establishes a Strategic Guideline that identifies and outlines some basic rules and principles that relate to the major areas of fire fighting strategy and subsequent fireground activity. The uniform application of this guideline will produce favorable fireground outcomes. This guideline is designed to offer a basis and simple framework for Moorestown Fire Department fireground operations and command; it also represents many existing practices, and a defining of how this department is expected to perform

**RECOMMENDATIONS**

07-23 Continue the development of Standard Operating Procedures/Guidelines, using the existing procedure format and develop a prioritization for development and revision, using the information provided in this section as a guideline. It was discussed at several different levels in the organization, that the SOG's must be approved by the Board of Fire Commissioners. Within the process must be a timetable for SOG's to be acted on by the Fire Commission. It is recommended that the Fire Commission take no longer than thirty

# Mutual/Automatic Aid

The fire department uses a mix of mutual and automatic aid. The philosophies for the number and types of apparatus being deployed to calls and the related use of mutual and automatic aid is established by response grid, however, the mutual/automatic aid company may not respond or may

Mutual Aid agreements are in place as follows:

1. Moorestown Fire District No. 1 and Moorestown Fire District No. 2 are participating parties to the Burlington County Mutual Aid Plan under the direction of the Burlington County Fire Marshal. No agreements are signed as part of this plan.

2. Moorestown Fire District No.1 and Moorestown Fire District No. 2 are participating parties to a Burlington County Local Mutual Aid Agreement as approved by resolution of the respective districts. Other local municipalities and the fire districts participate but no complete list has

The above agreements are considered to be challenging at best to understand what will be provided, when it will be provided and how it will be provided when assistance is requested or needed.

**RECOMMENDATION**

07-24 Moorestown Fire District No.1 should take the lead in advocating a more structured county-wide approach to mutual aid including the definition of responsibilities and liabilities for mutual aid involvement. A guiding document is provided under separate cover to assist in the enhancement of mutual aid agreement creation.

# Response Times and Station Locations

One of the analytical models which was part of this process involves an evaluation of station location in proximity to the location and types of calls for assistance. A study such as this can determine where additional stations can be located to meet service delivery demands. Using a standard model advanced by the Insurance Services Office for basic station location analysis, Moorestown Township was found to have a unique location for its stations, as one station is clearly most appropriate for a defined area (Main Street Station) while the other station (Chester Avenue Station) is relatively close to members and thus they are in relatively close proximity and have over-laying boundaries for response areas, as established by the Insurance Services Office

The Insurance Services Office process uses the approach for response time that road distance criteria for engines (1.5 miles), ladders (2.5 miles) and in New Jersey a maximum distance (5 miles) translates into response time. The distances are based on a formula developed years ago

$$T = 0.65 + 1.7D$$

T = travel time in minutes
D = distance in miles

The formula is based on an average 35 mph road speed, which is quite realistic for most areas considering road conditions and type, weather, intersections, traffic, etc. Mathematically, this converts to engines 3.2 minutes, ladders 4.9 minutes, and a maximum response distance of 9.15 minutes. It is easy to see that times much greater than these are pushing the limits of the fire department's ability to successfully control a fire (especially considering that these are only travel times, not dispatch and turnout time etc). It is very easy to see why for most states the Insurance Services Office has a maximum 5 road mile distance for which a protected class (class 1 through 9) will apply; and anything over 5 road miles is almost a known higher loss and

Appendix 10 illustrates the current 1.5 mile road distances from the two stations. It clearly identifies portions of the community that exist outside the bounds of the 1.5 mile area, with some areas covered by two stations, within the same 1.5 mile road distance. A recommendation is made at this time to build a new station. When the construction of the new station arises, this map should be consulted and any stations should complement the map overlay, and enhance the delivery system, not conflict with it. Appendix 10 illustrates the potential coverage area if the

**RECOMMENDATION**

Reference Recommendation 22, the current two stations do not present an adequate response capability to the community, based on current locations. Coupled with the condition of the Chester Avenue Station, it is appropriate to consider the construction of a new station either on

on a site closer to the intersection of East Main Street and Stanwick Road, to provide the most opportunity for member access and protection to the demand and risk areas of the community.

# Miscellaneous

(Reserved for future use)

# Recommendation Action Plan

***Based upon the input, findings and assessments conducted as part of this project, the assessment team provides the following recommendations. Each recommendation is provided with a problem statement and reason that it is a problem, and a solution. Where possible, a priority level is assigned, a projected completion time is provided, and if costs are foreseen, an estimate of that cost is provided.***

***The recommendations are submitted with the following considerations; the findings and improvement recommendations of the Insurance Services Office; state of the art best practices in risk assessment, standard of response cover, strategic planning; and practices and protocols defined within the reference documents for this project which are detailed in the References section of this report.***

***It must be recognized that the purpose of this process is to facilitate discussion and action on the problem. In reality, you may find alternative solutions which are more (or less) efficient, more (or less) costly, more (or less) politically expedient, take more (of less) time, and have more (or less) success. However, the fact that elected municipal officials, municipal administrative staff, and municipal fire and rescue service provider officers develop a consensus approach to managing the risks posed is the ultimate goal. The use of these recommendations as discussion and action points should assist you in achieving local progress in the management of fire and rescue services.***

**RECOMMENDATION 07-01**

**ISSUE/PROBLEM**

Currently, there is no documented statement of what services are to be provided by the companies, as related to the needs and wants of the community. Understanding the parameters of the service to be provided and the related expectations from elected officials and members of the general public is critical to effective performance and the delivery of emergency services. Coupled with this statement of services should be the revision of the mission and vision statement for these municipal services.

Without clarity regarding what services will be provided by whom, and when, will allow for multiple levels of standard of care and delivery, all of which could actually present both operational and risk management challenges for the municipality. The current approach has multiple mission and vision approaches for a single municipality, which may create service delivery conflict.

**SUGGESTED ACTION**

It is recommended to develop a statement of services which would indicate the types of services to be provided, the area to be covered, and the delegation of authority to perform those services. A model to accomplish this is provided in Appendix 1. A proposed mission statement and vision statement are provided within the body of the text and serve as starting points for discussion and development of Moorestown Fire District No. 1's vision and mission.

**PRIORITY – 1**

**TIME FRAME – 6 MONTHS**

**COST – NONE ANTICIPATED**

**JUSTIFICATION/SUPPORT – NFPA STANDARD 1201, STANDARD FOR PROVIDING EMERGENCY SERVICES TO THE PUBLIC & COMMISSION ON FIRE**

**RECOMMENDATION 07-02**

**ISSUE/PROBLEM**
No Standard of Response Cover exists for the community's fire protection system.

Without a standard of response cover defined, there is no true understanding and definition via "policy, procedure or guideline that determines the distribution, concentration and reliability of fixed and mobile response forces to fire, emergency medical service, hazardous materials, and other forces of technical response". Therefore decisions on level of service become arbitrary decision points, instead of being based on empirical evidence and rational discussion.



**SUGGESTED ACTION**
Develop a Standard of Response Cover for use in Moorestown Township as a method to define a service expectation the community will accept. Not only does the standard of response cover establish expectations of performance of the fire companies, it is a tool for evaluating and defining the agencies goals and objectives, determines the levels of service for all, or portions of a community, and measures an agency's performance over different budget or operational years. This process can further serve as a benchmarking "trigger point" for the decision making purposes of staff changes or additions.

**PRIORITY – 1**

**TIME FRAME – 6 MONTHS**

**COST – NONE ANTICIPATED**

**JUSTIFICATION/SUPPORT – NFPA 1201 STANDARD FOR PROVIDING EMERGENCY SERVICES TO THE PUBLIC and COMMISSION ON FIRE**

**RECOMMENDATION 07-03**

**ISSUE/PROBLEM**
A capital improvement plan does not exist for the stations and apparatus.

Similar to an annual operating budget, capital spending plans must be known to effectively allocate funds, plan income needs, project revenue services. Otherwise, cash flow challenges exist and planning and operations become adversely affected.

**SUGGESTED ACTION**
Develop capital plans for any expenditure over a fixed amount. The amount is at the discretion of the township officials, based on the accounting principles in place to define capital purchases. As a minimum, this would involve apparatus and facilities.

**PRIORITY – 2**

**TIME FRAME – 12 MONTHS, IMPLEMENT WITH 2009 BUDGETING PROCESS**

**COST – NONE ANTICIPATED TO DEVELOP THE PLAN, ACTUAL COSTS WOULD BE DEVELOPED AS ANNUAL/CAPITAL BUDGETARY ITEMS**

**JUSTIFICATION/SUPPORT – COMMISSION ON FIRE ACCREDITATION SELF-**

**RECOMMENDATION 07-04**

**ISSUE/PROBLEM**

A comprehensive Community Risk Assessment for the provision of services to Moorestown Township does not exist.

The lack of a community risk assessment for fire and non-fire risks is critical to the development of needed resources to combat a fire or other emergency. These tools not only enable the community to determine its needs, but also to develop a comprehensive long term plan to manage both the activities and the costs.



**SUGGESTED ACTION**

Establish a process to assure a risk assessment and master plan is conducted for the community, which provides input and a basis for the development and implementation of the community's standard of response cover. The development process is best achieved by using the Commission on Fire Accreditation model for developing a Standard of Response Cover, which includes the risk assessment process.

**PRIORITY – 2**

**TIME FRAME – 1 YEAR**

**COST – $10,000 POTENTIAL COSTS MAY BE PLANNED FOR, IN THE EVENT FIRE COMPANY AND FIRE DISTRICT STAFF CANNOT ACCOMPLISH THIS TASK.**

**JUSTIFICATION/SUPPORT – NFPA 1201 STANDARD FOR PROVIDING EMERGENCY SERVICES TO THE PUBLIC and COMMISSION ON FIRE**

**RECOMMENDATION 07-05**

**ISSUE/PROBLEM**

The Fire Department has an extensive array of standard operating guidelines, however, a strategic guideline which offers a framework for combating fire and dealing with emergencies both offensively and defensively, should be used as a foundation document in their approach to managing emergencies.

**SUGGESTED ACTION**

An Operational Strategic Guideline should be developed that outlines some basic rules and principles that relate to the major areas of fire fighting strategy and subsequent fireground activity. The uniform application of this guideline will produce favorable fireground outcomes. A draft copy is provided in Appendix 4.

All Standard Operating Guidelines should be web-based to allow for easy staff reference.

**PRIORITY – 1**

**TIME FRAME – 3 MONTHS**

**COST – NONE ANTICIPATED**

**JUSTIFICATION/SUPPORT – NFPA STANDARD 1720 STANDARD FOR THE ORGANIZATION AND DEPLOYMENT OF FIRE SUPPRESSION EMERGENCY MEDICAL OPERATIONS, AND SPECIAL OPERATIONS TO THE PUBLIC BY**

**RECOMMENDATION 07-06**

**ISSUE/PROBLEM**

The Fire Department currently provides a comprehensive annual report for the City but it is not distributed to the community at large. Without a consolidated annual report an understanding of the true value of the service to the community cannot be known or understood, which leads to lack of knowledge, lack of funding, and lack of interest.



**SUGGESTED ACTION**

Develop an annual report for consolidated service delivery provided to the township by the companies, including a projected costs savings to the taxpayers, through the utilization of the National Volunteer Fire Council's Volunteer Fire Service Cost Savings Model", available at www.nvfc.org . The report document should be no longer than one page two-sided and serve as a hand-out to the general public in multiple venues.

**PRIORITY – 2**

**TIME FRAME – 9 MONTHS**

**COST – $1,000 PRINTING COSTS**

**JUSTIFICATION/SUPPORT – COMMISSION ON FIRE ACCREDITATION SELF-**

**RECOMMENDATION 07-07**

**ISSUE/PROBLEM**

Outside of the procurement of insurance, a comprehensive risk management plan does not exist. This provides an inability to fully understand the personal and organizational risks to which the organization and members are exposed.

A compilation was made of current known risk issues where insurance or some similar financial protection was provided.



**SUGGESTED ACTION**

Expand the current Risk Management Plan to address the control and financing of risk; outside the purchase of insurance. A model format to use in the development of this process will be provided outside the contents of this document.

**PRIORITY – 2**

**TIME FRAME – 9 MONTHS**

**COST – TO BE DEVELOPED, BASED ON THE RISK IDENTIFIED**

**JUSTIFICATION/SUPPORT – NFPA 1201 STANDARD ON PROVIDING EMERGENCY SERVICES TO THE PUBLIC, NFPA 1250 EMERGENCY SERVICE ADMINISTRATIVE RISK MANAGEMENT, and THE COMMISSION ON FIRE ACCREDITATION SELF-**

**RECOMMENDATION 07-08**

**ISSUE/PROBLEM**

While the role of Administrator had multiple functions in the past, this was due to the initial needs of an administrator, coupled with work demands. As those demands expanded, various roles were undertaken by other career positions. This continues to be the case and this report will recommend, not only modifications to the organization design, but changes in reporting relationships. This will occur throughout the report.

The current administrative functions include the financial, human resource, data management, maintenance, and the fire official. There are functional conflicts with having the fire official report to administration instead of operations, and a recommendation follows. There is also no one responsible for overall information technology, which should be coordinated in the Administrator's office.

**SUGGESTED ACTION**

A functional reorganization should occur to place more responsibility for operations and related information in the operations function and more responsibility for administrative activities within administration. With the expansion of information technology (IT), this will further support the reorganization concept. A suggested organizational chart for consideration is included as Appendix 14.

**PRIORITY – 2**

**TIME FRAME – 9 TO 12 MONTHS**

**COST – NONE ANTICIPATED**

**JUSTIFICATION/SUPPORT – NFPA 1201 STANDARD ON PROVIDING EMERGENCY SERVICES TO THE PUBLIC, NFPA 1250 EMERGENCY SERVICE ADMINISTRATIVE RISK MANAGEMENT, VFIS TEXT "MANAGING VOLUNTEER AND COMBINATION EMERGENCY SERVICE ORGANIZATIONS", and THE COMMISSION ON FIRE**

**RECOMMENDATION 07-09**

**ISSUE/PROBLEM**

As noted in Recommendation 07-08, there is also no one responsible for overall information technology, which should be coordinated in the Administrator's office.

**SUGGESTED ACTION**

The information technology function for the organization should be consolidated in the administrative function of the organization as a process that provides data to all facets of the Fire District. The overall IT function should report to the Fire District Administrator and support all aspects of the organization, including:

- fire inspection management and record keeping
- pre-emergency planning
- permit issuance
- accounts payable and receivable
- personnel information
- apparatus maintenance
- building maintenance
- incident reporting
- training information
- training programs
- miscellaneous use by members (including training, games & web access), and and should include a security component prevent both unauthorized use and appropriate use of the IT system.

**PRIORITY – 2**

**TIME FRAME – 6 TO 9 MONTHS**

**COST – NONE ANTICIPATED, HOWEVER, LONG TERM THERE IS THE POTENTIAL FOR THIS TO BECOME EITHER A PART-TIME POSITION FOR A CAREER PERSON, OR A NEW CAREER POSITION**

**JUSTIFICATION/SUPPORT – NFPA 1201 STANDARD ON PROVIDING EMERGENCY SERVICES TO THE PUBLIC, NFPA 1250 EMERGENCY SERVICE ADMINISTRATIVE RISK MANAGEMENT, VFIS TEXT "MANAGING VOLUNTEER AND COMBINATION**

## RECOMMENDATION 07-10

**ISSUE/PROBLEM**

Water supply is considered inadequate for fire protection, based on the information presented and tests conducted by independent third parties.

The ISO report indicated that "water supply was deficient (less water available from the municipal water supply system than the needed fire flow) in six of the nine locations tested".

Water Model Upgrade Report, completed by GPM Associates of Cherry Hill conducted field water supply tests and stated "concerns expressed by Township officials over available fire flows in the downtown portion of the system are verified by Figure 4", with recommendations made to enhance the water supply system.

The 2007 study conducted by GPM validated a 2004 study conducted by Pennoni Associates, which confirmed water supplies to be less than needed fire flows.

Water supply modeling and mapping, completed by GPM Associates of Cherry Hill, N.J. illustrated water supplies which would be of adequate capacity only within an approximate one-quarter mile radius of the two water storage facilities:

- at the intersections of Westfield Road and Tom Brown Road.
- a portion of the industrial park area of Fire District #2.

In essence, there is limited and in all probability inadequate water available for effective fire fighting in the area of high density construction areas, high population areas and the main shopping district of the town. The reason this becomes of such concern, is that the availability of an adequate water supply for fire suppression is THE primary component to successful fire event management. All of the fire engines and staffing in the world will be unsuccessful in managing a fire, if there is insufficient water available to manage the spread of fire. Knowing and

**SUGGESTED ACTION**

A formal letter of concern needs to be provided to the elected officials of Moorestown Township advising them of the water supply for fire protection deficiency, in order to place them on notice that the fire department may not be able to adequately manage a fire situation if there is insufficient water to fight the fire. This will also require a diligent process on the part of Fire District personnel to capture hazard and water supply (needed and available) at each commercial, industrial, and institutional risk in the township to understand where water supplies are deficient for fire-fighting and determine both secondary water supply options as well as defensive firefighting operations

**PRIORITY – 1**

**TIME FRAME – 0 TO 6 MONTHS**

**COST – NONE ANTICIPATED**

**JUSTIFICATION/SUPPORT – DOCUMENTS AND REFERENCES AS NOTED ABOVE.**

**RECOMMENDATION 07-11**

**ISSUE/PROBLEM**

The community's fire protection needs are outpacing the ability of the fire department to provide sufficient service in its current mode of operation. This is common and seen in growing communities throughout the United States. Two specific challenges (cedar shake roofing materials and residential fire sprinklers) can be managed through the adoption of appropriate codes.

**SUGGESTED ACTION**

Two ordinances were deemed appropriate for recommendation to the Fire District for consideration and advancement to Moorestown Township elected officials. These include the proposals for:

- the adoption of a code banning the use of cedar shake roofing materials in future construction and "re-roofing" projects. These materials are notorious for supporting fire spread and creating fire suppression challenges to the fire department, particularly in wildland interface areas, such as those posed in Moorestown Township
- the adoption of an automatic fire sprinkler ordinance for all new construction in Moorestown Township. Not only has there never been a loss of life in a sprinklered building in the United States, automatic fire sprinklers provide early warning to a fire and provide quick control of a fire thus limiting the response requirements of the fire department.

**PRIORITY – 1**

**TIME FRAME – 6 MONTHS**

**COST - $5,000 LEGAL FEE FOR ORDINANCE DRAFTING AND CODE IMPLEMENTATION**

**JUSTIFICATION/SUPPORT – NFPA FIRE PROTECTION HANDBOOK, NFPA**

**RECOMMENDATION 07-12**

**ISSUE/PROBLEM**

The fire district relies on neighboring communities for key rescue services including

Trench rescue
Water rescue
High-Angle rescue
Confined Space rescue

This makes perfect sense to use neighboring resources for minimal activity areas. However, at least a "rescue awareness" and preliminary action standard operating guidelines should be established to prepare the scene for the technical rescue capabilities prior to arrival and take any appropriate actions to prevent the situation from degrading any further.

**SUGGESTED ACTION**

For the demands of "trench rescue", "high-angle rescue", "confined space rescue", and "water rescue" services, the responding mutual aid agencies should be contacted to assist in the development of the awareness program content and equipment purchase to be consistent with the needs of the technical rescue team upon their arrival. (NOTE: County, state or private agency awareness training may also be available.)

**PRIORITY – 1**

**TIME FRAME – 6 MONTHS**

**COST - $5,000 FOR MISCELLANEOUS EQUIPMENT THAT MAY BE NECESSARY TO SUPPORT THE SERVICE TO BE PROVIDED.**

**JUSTIFICATION/SUPPORT – NFPA 1201 STANDARD ON PROVIDING EMERGENCY SERVICES TO THE PUBLIC and THE COMMISSION ON FIRE ACCREDITATION**

**RECOMMENDATION 07-13**

**ISSUE/PROBLEM**

In August of 2007, the Department of Environmental Protection, Assistant Division Forest Fire Warden Christopher Irick conducted an urban-wildland fire protection interface assessment of the Moorestown Fire District No. 1. A report was provided with the recommendation for specific actions.

**SUGGESTED ACTION**

The Chief should integrate the findings of the August 1, 2007 report of the Department of Environmental Protection, Assistant Division Forest Fire Warden Christopher Irick, into the operational and financial plans for the next 24-months. This would include four specific activities:

- Obtain additional guidance from the Forest Firewardens on the nature, type, and content of education that should be provided to the residents and businesses in Moorestown Township as it relates to wildland interface and fires beginning in 2008.
- Obtain additional guidance from the Forest Firewardens on the content of an ordinance which can be proposed and adopted regarding the ultimate elimination of cedar shake roofing (and similar) materials which contribute to rapid fire growth. This should be completed by year end 2007, for proposal and implementation in 2008.
- Integrate into the 2007 and 2008 budgets, appropriate equipment to support the mission and needs of wildland interface fire suppression.
- The Administrator should begin in the fourth quarter of 2007 the preparation and submission of a grant for the identified wildland interface equipment.

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**PRIORITY – 1**

**TIME FRAME – 6 MONTHS**

**COST - $5,000 FOR MISCELLANEOUS EQUIPMENT THAT MAY BE NECESSARY TO SUPPORT THE SERVICE TO BE PROVIDED. THIS CAN BE RECOVERED VIA A GRANT.**

**JUSTIFICATION/SUPPORT – REPORT OF THE NEW JERSEY DEPARTMENT OF**

## RECOMMENDATION 07-14

**ISSUE/PROBLEM**

Similar to many suburban communities with volunteer fire companies, Moorestown Township experiences its share of automatic fire alarm activations necessitating a response from the fire company. In the majority of instances, the alarm activation is not an emergency situation. The system has actually activated due to a malfunction, a cause not due to a fire, an accidental use or misuse of the system equipment, or testing of the system where notification was not made to the alarm center prior to the testing. In all of these instances, fire apparatus are dispatched, respond at emergency speed, and find no emergency upon arrival at the location.

**SUGGESTED ACTION**

The current response models being used in Moorestown Township were reviewed with the officers. In the 1994 Eckman report there was specific reference to "treat the fire alarm as if it were a report of a fire in a building". Experience however, has taught us differently. In fact well over 95% of alarm activations each year actually require at most, one engine and staff to solve the problem being alerted to by the activation. In addition, there is a developing trend across the United States to respond to such events in a non-emergency driving manner, which leads the project team to suggest a change in the response pattern that is not quite as drastic. The assessment team recommends a reduced response be based on assuring a single apparatus respond with full staffing is dispatched to assure a standard complement of resources is provided to handle the type of situation generally encountered at fire alarm system activation incidents, with no required upgrading.

Develop a modification to the response criteria for automatic fire alarm activations, to be consistent with the threat/challenge being presented. The elimination of unnecessary responses by emergency vehicles and related waste of human and physical resources should be one of the response criteria's goals. A maximum of one unit response from either station is suggested unless additional information warrants an upgrade by an officer.

**PRIORITY – 1**

**TIME FRAME – 2 MONTHS**

**COST – NONE ANTICIPATED.**

**RECOMMENDATION 07-15**

**ISSUE**
Pre-emergency plans have not been conducted for all facilities and target hazards.



**PROBLEM**
Without a predefined plan to handle emergencies, hazards and resource needs cannot be planned for, offering the potential for greater than expected losses. While some preplanning is conducted and some plans are available, a more consistent feeding of information from the Fire Official's office to the Fire Chief, including the development of appropriate plans, photos, data sources, etc. will enhance this planning effort and ultimately improve efficiency and performance at emergencies.

**SUGGESTED ACTION**
Develop a process for the development, distribution, and training of pre-emergency plans for target locations as identified in the risk assessment process. This should include water supply information, as well as a hydrant out-of-service notification process. The fire marshal's office should serve as an integral part of this process.

**PRIORITY – 3**

**TIME FRAME – 18 MONTHS**

**COST – $10,000 PER YEAR FOR OUTSIDE CONSULTING SERVICES OR TO INCREASE STAFF CAPABILITY.**

**JUSTIFICATION/SUPPORT – COMMISSION ON FIRE ACCREDITATION SELF-ASSESSMENT PROCESS, and NFPA STANDARD 1720 STANDARD FOR THE ORGANIZATION AND DEPLOYMENT OF FIRE SUPPRESSION EMERGENCY MEDICAL OPERATIONS, AND SPECIAL OPERATIONS TO THE PUBLIC BY**

**RECOMMENDATION 07-16**

**ISSUE/PROBLEM**
There is no structured approach to recruitment and retention.

People are the most valuable resource to any emergency agency, volunteer or career. Without people, apparatus cannot respond and incidents cannot be handled. The program must be developed based on what members want as benefits or incentives, what member's value in the organization and effective leadership.



**SUGGESTED ACTION**
Develop and implement a comprehensive approach to the recruitment and retention of an adequate force of competent fire and rescue service personnel. Coupled with this should be minimal criteria for membership.

**PRIORITY – 2**

**TIME FRAME – 12 MONTHS**

**COST – $30,000 PER YEAR IN 2ND AND 3RD YEARS, $0 IN FIRST YEAR**

**JUSTIFICATION/SUPPORT – USFA REPORT "RECRUITMENT AND RETENTION PRACTICES FOR VOLUNTEER EMERGENCY SERVICE ORGANIZATIONS, COMMISSION ON FIRE ACCREDITATION SELF-ASSESSMENT PROCESS, and US FIRE ADMINISTRATION AND NATIONAL VOLUNTEER FIRE COUNCIL**

**RECOMMENDATION 07-17**

**ISSUE/PROBLEM**

Personnel, training, health, and operational data are all critical to effective performance of a fire company. The lack of consistent data and its accessibility creates challenges and conflicts to efficient operation of companies.

**SUGGESTED ACTION**

Develop a standardized set of data and documents to be maintained for each member, by each company. This should include, as a minimum, an application, physician's release to perform firefighter duties, training information, driver license, working papers, etc., as deemed appropriate. Sample information and forms is provided in VFIS safety and management forms which are forwarded under separate cover.

**PRIORITY – 2**

**TIME FRAME – 12 MONTHS**

**COST – NONE ANTICIPATED**

**JUSTIFICATION/SUPPORT – COMMISSION ON FIRE ACCREDITATION SELF-ASSESSMENT PROCESS, NFPA STANDARD 1720 STANDARD FOR THE ORGANIZATION AND DEPLOYMENT OF FIRE SUPPRESSION EMERGENCY MEDICAL OPERATIONS, AND SPECIAL OPERATIONS TO THE PUBLIC BY VOLUNTEER FIRE DEPARTMENTS, NFPA STANDARD 1201 STANDARD FOR PROVIDING EMERGENCY SERVICES TO THE PUBLIC, and USFA/NVFC**

**RECOMMENDATION 07-18**

**ISSUE/PROBLEM**
A capitalized fire apparatus replacement plan is not in place.

Without such a plan, the potential costs for replacing equipment, coupled with the income stream to meet the financial need, are not available for implementation. Attached with this document is a long-term capital planning chart which illustrates an approach to a 20-year apparatus replacement plan. The model projects $100,000 per year income, income from sale of vehicles and purchase of new vehicles (2 major units for each station, plus a transport unit). The plan is designed only to illustrate the potential funding necessary and when apparatus should be replaced, based upon projected life of service times.



**SUGGESTED ACTION**
Create a policy for replacement of fire apparatus and major equipment, and develop a theoretical 20-year apparatus replacement plan. The plan should be coordinated to determine available tax dollars to determine impacts upon the tax and budgeting process for the district. Criteria including age, use and maintenance are just some of the elements to a capital replacement program.

Similarly, consideration must be given to the construction of a future facility.

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**PRIORITY – 1**

**TIME FRAME – 6 MONTHS TO DEVELOP, 20 YEARS TO COMPLETE**

**COST – CAPITALIZED, APPROXIMATELY $6,000,000**

**JUSTIFICATION/SUPPORT – COMMISSION ON FIRE ACCREDITATION SELF-ASSESSMENT PROCESS, and NFPA STANDARD 1201, STANDARD FOR PROVIDING**

**RECOMMENDATION 07-19**

**ISSUE/PROBLEM**

While there are structured preventative maintenance plans for apparatus the data is maintained in hard paper copy in files in the district office. While the recordkeeping needs are being met, the efficiency is suspect.



**SUGGESTED ACTION**

A computer data base should be developed to manage vehicle maintenance information for apparatus to provide an easy method of identifying expense by unit and purpose to assist in budgeting and replacement processes.

**PRIORITY – 1**

**TIME FRAME – DEVELOP USING AN EXCEL TYPE SPREADSHEET AND BEGIN WITH NEXT REPAIR**

**COST – $0**

**JUSTIFICATION/SUPPORT – COMMISSION ON FIRE ACCREDITATION SELF-ASSESSMENT PROCESS, and NFPA STANDARD 1901 STANDARD FOR MOTORIZED**

**RECOMMENDATION 07-20**

**ISSUE/PROBLEM**

There are no reported structured maintenance plans for major fire station infrastructure items, such as HVAC units.

Failure to maintain major fire station infrastructure equipment will result in poor performance and mechanical failure.



**SUGGESTED ACTION**

Service maintenance agreements should be obtained for HVAC units and back-up generators. Qualified contractors should be retained to evaluate electrical, plumbing and roofing systems every three (3) years.

**PRIORITY – 2**

**TIME FRAME – 9 to 12 MONTHS FOR 2009 BUDGET**

**COST – $7,500**

**JUSTIFICATION/SUPPORT – NFPA STANDARD FOR COMMISSION ON FIRE ACCREDITATION SELF-ASSESSMENT PROCESS and NFPA STANDARD 1201**

**RECOMMENDATION 07-21**

**ISSUE/PROBLEM**

When vehicles are started, there is an exhaust system in place, but it does not capture contaminants at the source, to quickly and efficiently remove the vehicle exhaust from the area. Individuals then breathe this contaminated air while accessing their protective equipment and vehicles.

Diesel and gasoline exhaust produce known carcinogenic products and carbon monoxide which can contaminate firefighter clothing and personally harm them.



**SUGGESTED ACTION**

Vehicle exhaust removal systems should be evaluated monthly (by taking carbon monoxide readings when engines are started) to determine a baseline of successful performance of the current exhaust units.

Vehicle exhaust removal systems should be installed to discharge toxic exhaust from the buildings. It is recommended that the companies collectively submit a grant for funding of this equipment through the Assistance to Firefighters Grants program.

**PRIORITY – 3**

**TIME FRAME – 36 MONTHS to 72 MONTHS**

**COST – APPROXIMATELY $130,000**

**JUSTIFICATION/SUPPORT – NFPA STANDARD 1500, STANDARD FOR FIREFIGHTER OCCUPATIONAL SAFETY AND HEALTH.**

**RECOMMENDATION 07-22**

**ISSUE/PROBLEM**

The current Station on Chester Avenue is no longer efficient for emergency service operations and vehicle housing. Costs to upgrade this station would be extensive. In addition, the current two stations do not present an adequate response capability to the community, based on current locations. Coupled with the condition of the Chester Avenue Station, it is appropriate to consider the construction of a new station on the Fire District owned property in the East End of Moorestown Township.

**SUGGESTED ACTION**

The process should begin to establish and construct the East End Station with no less than a seven (7) year timetable. This will place the opening of the station at about 2015. There are five (5) options considered in the development of this recommendation.

**1.** Keep the two existing stations, rehabilitating the current Relief Fire Company station.
- this would not solve the accessibility to the East End

**2.** Keep the two existing stations and add a third station on the East End of Moorestown.
- fixed costs of three stations is not warranted

**3.** Keep one engine in the Relief Fire Company station and convert the remaining portion of the facility to apartments for firefighters to live in at a reduced rate, and build the East End Station.
- this has merit if commitments can be gained from members

**4.** Transition the EMS operations to the Relief Fire Company station
- this does not solve the station infrastructure issues and related costs

**5.** Transition to members responding to any station for a call, eliminating the Relief Fire Company station and building a station on the East End, to be named Relief Fire Company of Moorestown.
- appears to be a long term fix, with short term attendance issues

**PRIORITY – 2**

**TIME FRAME – 12 MONTHS TO MAKE DECISION**

**COST – NONE ANTICIPATED TO DEVELOP THE PLAN, UP TO $6,000,000 TO BUILD FACILITY**

**JUSTIFICATION/SUPPORT – NFPA STANDARD 1201, THE STANDARD FOR**

**RECOMMENDATION 07-23**

**ISSUE/PROBLEM**

This is an extensive plan to develop and implement Standard Operating Guidelines, however, the plan may be inconsistent with the ability of the members to absorb and apply the information.

It was also discussed at several different levels in the organization that the SOG's must be approved by the Board of Fire Commissioners and that it takes an inordinate amount of time for the Board to act on the proposed SOG's.

**SUGGESTED ACTION**

Continue the development of Standard Operating Procedures/Guidelines, using the existing procedure format and develop a prioritization for development and revision, using the information provided in this section as a guideline.

Within the process must be a timetable for SOG's to be acted on by the Fire Commission. It is recommended that the Fire Commission take no longer than thirty (30) days to respond to a proposed SOG.

**PRIORITY – 1**

**TIME FRAME – 6 MONTHS**

**COST – NONE ANTICIPATED**

**JUSTIFICATION/SUPPORT – COMMISSION ON FIRE ACCREDITATION SELF-ASSESSMENT PROCESS, and NFPA STANDARD 1720 STANDARD FOR THE ORGANIZATION AND DEPLOYMENT OF FIRE SUPPRESSION EMERGENCY MEDICAL OPERATIONS, AND SPECIAL OPERATIONS TO THE PUBLIC BY**

**RECOMMENDATION 07-24**

**ISSUE/PROBLEM**
Mutual Aid plans are in place, but are not formalized.

**SUGGESTED ACTION**
Moorestown Fire District No. 1 should take the lead in advocating a more structured county-wide approach to mutual aid including the definition of responsibilities and liabilities for mutual aid involvement. A guiding document is provided under separate cover to assist in the enhancement of mutual aid agreement creation.

**PRIORITY – 3**

**TIME FRAME – 36 MONTHS**

**COST – NONE ANTICIPATED**

**JUSTIFICATION/SUPPORT – COMMISSION ON FIRE ACCREDITATION SELF-ASSESSMENT PROCESS, and NFPA STANDARD 1720 STANDARD FOR THE ORGANIZATION AND DEPLOYMENT OF FIRE SUPPRESSION EMERGENCY MEDICAL OPERATIONS, AND SPECIAL OPERATIONS TO THE PUBLIC BY**


# APPENDICES

# APPENDICES

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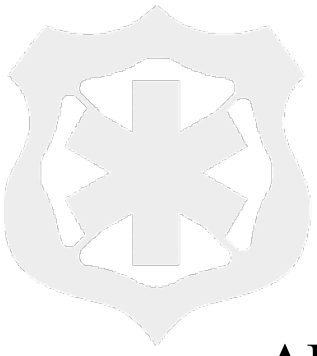
# APPENDIX 1

# MUNICIPAL
# FIRE AND
# EMERGENCY MEDICAL SERVICE
# DELIVERY MODEL

# MUNICIPAL FIRE/EMS SERVICE DELIVERY CHART

Based upon a meeting of the undersigned, this summary chart identifies the primary provider of services to the community.

| | |
|---|---|
| Fire Suppression* | **MOORESTOWN FIRE DISTRICT #1** |
| Hazardous Materials – Awareness Level | **MOORESTOWN FIRE DISTRICT #1** |
| Hazardous Materials – Operations Level | **BURLINGTON COUNTY HAZ-MAT TEAM** |
| Fire Police | **MOORESTOWN FIRE DISTRICT #1** |
| Rescue (vehicle, elevator, light entrapment) | **MOORESTOWN FIRE DISTRICT #1** |
| Confined Space Rescue | **CHERRY HILL FIRE DEPARTMENT** |
| Trench Rescue | **CHERRY HILL FIRE DEPARTMENT** |
| Technical (structural collapse) Rescue | **CHERRY HILL FIRE DEPARTMENT** |
| Water Rescue | **MOUNT LAUREL FIRE DEPARTMENT** |
| Wilderness Rescue | **N/A** |
| High Angle Rescue | **CHERRY HILL FIRE DEPARTMENT** |
| Basic Life Support – EMS | **MOORESTOWN FIRST AID & EMERGENCY SQUAD** |
| Advanced Life Support – EMS | **VIRTUA HEALTH CARE** |
| Terrorism Response | **SHERIFF'S DEPARTMENT** |




# APPENDIX 2

# TRAINING REQUIREMENTS BY POSITION AND OFFICER QUALIFICATIONS

# Moorestown Fire District #1
# Training Requirements By Position (Recommended)

| | HM Awareness | HM Operations | Infection Control | Firefighting I | Firefighting II | CPR/AED | NIMS | Fire Officer I (or equivalent) | EVOC | Annual MVR Check | Vehicle Extrication** | Confined Space Awareness | Trench Rescue Awareness | | Fire Police Vehicle Training | EMT-B | Pump Operation | Aerial Operations | Qualified App. Operator | Basic Fire Police |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Chief** | x | x | x | x | x | x | X | X | x | x | x | X | X | - | - | x | x | x | x | - |
| **Assistant Chief** | x | x | x | x | x | x | X | X | x | x | x | x | X | - | - | x | x | x | x | - |
| **Battalion Chief** | x | x | x | x | x | x | X | X | x | x | x | X | X | - | - | - | x | x | x | - |
| **Captain** | x | x | x | x | x | x | X | X | x | x | x | x | X | - | - | - | x | x | x | - |
| **Lieutenant** | x | x | x | x | x | x | X | X | x | x | x | X | X | - | - | - | x | x | x | - |
| **Senior Firefighter** | x | x | x | x | x | x | X | - | x | x | x | X | X | - | - | - | - | - | - | - |
| **Firefighter** | x | x | x | x | - | x | X | - | x | x | x | X | X | - | - | - | - | - | - | - |
| **Probation Firefighter*** | x | - | x | - | - | - | - | - | x | x | - | X | X | - | - | - | - | | - | - |
| **Apparatus Operator** | x | - | x | - | - | x | X | - | x | x | - | X | X | - | - | - | x | x | x | - |
| **Fire Police** | x | x | x | - | - | x | X | - | x | x | - | - | - | - | x | - | - | - | - | x |

* Recruit orientation program

** If member responds to these type calls, they must have this training

NOTE: Anyone may be responsible for a task that may be within the ICS and should be understanding of the system. ICS is required by NIMS (IC 100, IC 200, and IC 700).

NOTE: Fire Officer I Equivalent includes: Tactics and Strategy, INSTRUCTOR Supervision classes

Chief has made recommendations for an organizational change which would be consistent with this chart.

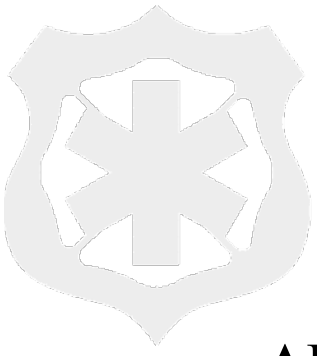
# Moorestown Fire District #1
# Officer Requirements By Position (Recommended)

| | Fire Service Experience (YRS) | Twp. Company Experience (YRS) | Moorestown Twp. Resident | Minimum Age |
|---|---|---|---|---|
| **Chief**** | 7 | 5 | x | 25 |
| **Assistant Chief**** | 5 | 3 | x | 24 |
| **Battalion Chief**** | 3 | 3 | X | 23 |
| **Captain** | 2 | 2 | X | 22 |
| **Lieutenant** | 2 | 2 | x | 21 |
| | | | | |
| **Senior Firefighter** | 1 | 2 | - | 21 |
| **Firefighter** | 1 | 1 | - | 18 |
| **Probation Firefighter** | 0 | 0 | - | 18*** |
| **Apparatus Operator (cease driving at age 70)** | 1 | 1 | - | 21* |
| **Fire Police** | 0 | 0 | X | 18 |

* 18 Years of Age for vehicles under 10,000GVW

** An Assistant Chief must serve one year as a Lieutenant

*** Junior firefighters may be younger than 18 but, must meet NJ child labor law requirements




# APPENDIX 3

# NFPA 1720 SELF-ASSESSMENT STANDARD FOR THE ORGANIZATION AND DEPLOYMENT OF FIRE SUPPRESSION, EMERGENCY MEDICAL OPERATIONS, AND SPECIAL OPERATIONS TO THE PUBLIC, BY VOLUNTEER FIRE DEPARTMENTS

**NFPA 1720**

**STANDARD FOR THE ORGANIZATION AND DEPLOYMENT OF FIRE SUPPRESSION, EMERGENCY MEDICAL OPERATIONS, AND SPECIAL OPERATIONS TO THE PUBLIC BY VOLUNTEER FIRE DEPARTMENTS.**

This standard was developed to identify minimum requirements relating to the organization and deployment of fire suppression operations, emergency medical operations, and volunteer fire departments. Approximately three of every four fire departments in the United States is volunteer, therefore this standard as well as related practices (accreditation, certification, etc.) have a profound effect on the direction of the volunteer fire service.



The standard does NOT include Fire Prevention, Community Education, Fire Investigations, Support Services, Personnel Management, and Budgeting.

This standard may, in the minds of some create a benchmark to aspire and plan to, to others, it represents a minimum baseline. To others it will serve as an expectation that contracted services must meet or plan to meet. In reality the standard will mean different things to different entities because a key section indicates, "The Authority Having Jurisdiction determines if this standard is

Therefore, the first question to ask and resolve is whether or not the Authority Having Jurisdiction (AHJ) will use/apply the standard. The AHJ will vary by municipality/district/etc. applying this standard.

The next step is to determine how the organization meets the "substantially volunteer" definition. There is no defined calculation method or model; thus, you may establish your criteria based on:

- Number of volunteers versus number of paid staff.
- Hours contributed by volunteers versus number of hours worked by paid staff.
- Average response (number of persons) by volunteer staff versus paid staff, or any similar calculations process.

It should also be recognized that this standard recommends a predefined approach in some cases, where an "equivalency" may occur locally. If there is an equivalency, documentation of how that is achieved is warranted. There is an intent in this standard to enhance effectiveness and efficiency, even though they may not be compatible at all times. The intent of this guide and your evaluation and assessment should be to determine gaps and establish a plan to close those

As you review the NFPA 1720 document and this implementation guide you will quickly notice that there are enhanced expectations for volunteer units in organization, communication, planning documentation and scheduling; in some ways being modeled after career services. These can be narrowed to six key critical criteria, in addition to defining the level and type of services to be provided; as well as assuring a training program is in place to achieve performance

Completing this self review is simple and straight forward. In order to help ensure accuracy, it is advisable to utilize the actual NFPA 1720 document in conjunction with the self review. This document is designed to assist departments in understanding and initiating the review process to determine key areas requiring action by the fire department. Many of these components can be achieved in a variety of ways. It is up to each agency to determine how achievement is measured. Simply indicating compliance with this document does not validate compliance. Appropriate support detail must be collected and maintained, and assurance made that any related references

This matrix is not intended to replace or assure compliance with NFPA 1720, The Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer Fire Departments (2001 Edition).

Additional NFPA Standards Referenced:

- ✓ NFPA 1500 Standard on Fire Department Occupational Health and Safety Program
- ✓ NFPA 472 Standard for Professional Competence of Responders to Hazardous Materials Incidents
- ✓ NFPA 1561 Standard on Emergency Services Incident Management Systems
- ✓ NFPA 1221 Standard for the Installation, Maintenance, and Use of Emergency Service Communications Systems
- ✓ NFPA 1600 Standard on Disaster/Emergency Management and Business Continuity Programs
- ✓ NFPA 1620 Recommended Practice for Pre-Incident Planning

A copy of the entire document can be obtained from:

National Fire Protection Association

1 Battery march Park

P.O. Box 9101

# Instructions for the Assessment Process

This assessment process has ten (10) components:

1. Thoroughly read and review this document, and preferably NFPA 1720 as well, prior to taking any action or making any assessment. Obtain appropriate advice or counsel before beginning the assessment.
2. Complete the "Definition Assessment" and the NFPA 1720 "Critical Criteria Assessment" sections. Note any deficiencies or items of concern in the "Summary Statement" section.
3. Read each survey component item.
4. Review the appropriate fire department document, procedure, operation, practice, etc. which applies to the survey component item. (suggested review items are indicated in the notes section)
5. In the notes section of the evaluation guide, indicate any applicable documents, processes, etc.; that demonstrates achievement of the component item.
6. Attempt to both document (D) and observe (O) achievement/compliance. This process completion should be noted by your marking by a check (✓ or X or circle) the D (documented), and O (observed) portions of each survey component item.
7. Use your best judgment to determine if the fire department
   - A – Achieved PA – Partially Achieved FA – Failed to Achieve

   the intent of each component. Indicate your grading on the appropriate survey component section and the summary page. Indicate any action required in the appropriate page of the summary.
8. Based upon your assessments, provide an overall assessment of how you believe the organization has achieved, partially achieved, or failed to achieve the intent of NFPA 1720. Provide substantiation statements to support your rating.
9. Transfer any "actions required" from the summary page to the "Action Plan" page, assigning the responsibility for completion to an appropriate person, and prioritize the action required.
10. Monitor the action plan on a monthly basis and incorporate, as needed, items into the annual and strategic plan; monitoring and modifying them on an annual basis.

The process should be done with all officers present and involved. Completion should take approximately 12 hours.

# NFPA 1720 Definition Assessment

Authority Having Jurisdiction has indicated whether or not the standard applies to the fire department.

☐ Yes ☐ No

Authority Having Jurisdiction_____

(if Fire Chief is AHJ what higher level authority has concurred)

- Person _____
- Title _____

Organization has indicated and documented why it is classified under NFPA 1720. (Predominately volunteer) ☒ Yes ☐ No

Demonstrated via the amount of volunteer firefighting forces versus career staff. It may appear the fire department has a substantial amount of career personnel, when in fact, those employees have administrative assignments. Being a volunteer member of the fire department is an asset to the community and fire department, while there is no legal provision for the AHJ to require their response.

# NFPA 1720 – Critical Criteria Assessment

Minimum critical criteria

Department's organizational, operational and deployment procedures must be in writing and issued to members.

☐ Yes ☒ Partial ☐ No Demonstrated via partial completion of SOGs



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The department is involved in developing a community risk management plan. Such a plan requires coordination with law enforcement, emergency management, EMS, Hazmat, and related agencies.

☒ Yes ☐ No Demonstrated via MFD the Fire Department's proactive participation with the LEPC. This is not as complete as the AHJ would like.

---

The department identified minimum staffing levels to ensure that a sufficient number of members are available to operate safely and efficiently.

☒ Yes ☐ No Demonstrated via MFD SOGs.

---

The response to an incident shall be based on risk analysis and pre-fire planning based on specific location or incident.

☐ Yes ☒ Partial ☐ No Demonstrated via response to target facilities and geographic areas are pre-determined. Pre-incident planning has begun.

---

The department has defined that personnel responding to fires and other emergencies be organized into company units or response teams and shall have appropriate apparatus and equipment.

☒ Yes ☐ No Demonstrated via _Standard Operating G~~ui~~deline

---



The fire department is classified as: (4.3.2*)

| | Demand Zone | Demographics | Staffing & Response Time | Percentage |
|---|---|---|---|---|
| ☐ | Special Risks | AHJ | AHJ | 90% |
| ☒ | Urban | >1000 population /mi² | 15/9 | 90% |
| ☐ | Suburban | 500-1000 people/mi² | 10/10 | 80% |
| ☐ | Rural | <500 people/mi² | 6/14 | 80% |
| ☐ | Remote | Travel dist. ≥ 8 mi | 4 | 90% |

The department has the capability, upon assembling the necessary resources, to safely initiate an initial attack within 2 minutes, 90 percent of the time.

☒ Yes ☐ No Demonstrated via __Performance at training and incidents

---

The department has a training program to cover each component of operations. Indicate for each the programmatic requirement:

| | | |
|---|---|---|
| Firefighting | | **X** |
| EMS (level_____BLS_____) | | **X** |
| HazMat (level - Operations) | | **X** |
| Rope Rescue | 8 trained members, outdated equipment | **X** |
| Water Rescue | | N/A |
| Trench/Collapse Rescue | | N/A |
| Confined Space Rescue | | N/A |
| Extrication Rescue | | **X** |
| Air/Sea Rescue | | N/A |
| USAR-Light | | N/A |
| SWAT | | N/A |
| Fire Police | | **X** |
| Public Service/Assistance | | **X** |
| | | |

# NFPA 1720 Evaluation Checklist

| | Survey Component | Notes |
|---|---|---|
| | **Organization, Operation & Deployment** | **Chapter 4** |
| | **Fire Suppression Organization** (4.1*[7]) | |
| **1** | Are fire suppression operations (ops) organized to ensure the fire department's (FD) suppression capability includes sufficient resources to efficiently, effectively & safely deploy fire suppression resources? (4.1*) | ☒ SOP (dispatch/response/ manning/aid-automatic/mutual)<br>***daytime member response may be insufficient at times***<br>☒ Mission statement |
| **2** | Has authority having jurisdiction (authority) promulgated[8] the FD's organizational, operational, & deployment procedures with written regulations, orders and standard operating procedures (SOP's)? (4.1.1*) | ☐ Municipal operating statement/statute<br>☒ SOP manual<br>***AHJ (board) adopts each by resolution*** |
| **3** | Do FD SOP's clearly state succession of command responsibility? (4.1.1.1*) | ☒ Organization chart<br>☐ Job description<br>☒ ICS SOP |

[7] * - An asterisk denotes that there is additional explanatory information in "Annex A" which follows the text of NFPA 1720
[8] Promulgate – defined as to put into operation by formal proclamation

| | Community Risk Management (4.2*) | |
|---|---|---|
| **4** | The fire department shall participate in a process that develops a community fire and emergency medical services risk management plan (4.2*)<br><br>The specific role of the fire department and other responding agencies shall be defined by the community risk management plan (4.2.1)<br><br>The number and type of units assigned to respond to a reported incident shall be determined by risk | ☐ Plan<br>☐ SOP(s)<br>☐ Standard of response cover document<br>☐ Relation to code enforcement<br><br>***Predetermined units are assigned by a "grid" system that the district is divided*** |
| **5** | Has FD participated in development of a community risk management (mgmt) plan regarding associated risks with storage, use, & transportation of hazardous materials (haz-mat)? (4.2.3.1)<br><br>Does plan define role of FD and other agencies for haz-mat ops mgmt as well as including other special ops? (4.2.3.2) | ☒ Plan<br>☒ SOP<br>☒ Haz-mat SOP ***(handled by outside service)***<br>☐ Technical rescue SOP<br>☒ LEPC relation |

| | Survey Component | Notes |
|---|---|---|
| | **Fire Suppression Organization** | |
| **6** | Has FD Identified minimum staffing requirements that ensure sufficient number of members are available to operate safely and efficiently? (4.3.1) | ☒ SOP – response/safety/RIT<br>☐ Standard of response cover |
| **7** | Table 4.3.2 indicated in Critical Criteria Assessment 11 completed by AHJ to determine staffing and response time capabilities, and the federal accomplishment for reporting purpose (4.3.2*)<br><br>After assembling necessary resources at emergency scene, does FD have the capability to safely initiate the initial attack within 2 minutes 90 percent of the | ☒ Table completed in Critical Criteria Assessment<br>☐ Community risk profile<br>☐ Standard of response cover<br>☐ Standard of response cover statement<br>☐ SOP<br>☒ Incident reports |
| **8** | Are FD personnel responding to emergencies:<br>1. Organized into company units or response teams?<br>2. Equipped with appropriate apparatus & equipment? (4.3.3*) | ☒ Organizational chart<br>☒ SOP - response/POV<br>☐ Inventory records |
| **9** | Do standard response assignments (including mutual aid response & mutual aid agreements) predetermined by location, & nature of reported emergency regulate the dispatch of companies, response groups and command officers to | ☒ SOP – response<br>☒ Run cards/dispatch guidelines<br>☐ Any written agreements<br><br>***Needs updating*** |
| **10** | Does FD maintain standard reports for each response that contains:<br>1. Nature?<br>2. Location?<br>3. Description of ops performed?<br>4. Identification of members responding? | ☒ Incident report<br><br>***Includes all calls for service and training***<br>***This is computer and/or data based*** |

| | | |
|---|---|---|
| | **Annual Evaluation (4.4.2)** | |
| **11** | Does the fire department evaluate its level of service and deployment delivery and response time objective on an annual basis? (4.4.2.1)<br><br>Annual evaluation shall be based on data relating to level of service, deployment, and the achievement of each response time objective in each demand zone within the jurisdiction of the fire department. (4.4.2.2) | ☐ Summary report<br>☐ Comparison report to SORC<br>☐ Report by demand zone<br>☐ SOP – response<br>☐ Run cards/dispatch guidelines<br>☐ Any written agreements<br>***No formal process in place,*** |
| | **Quadrennial Report (4.4.3)** | |
| **12** | Does the fire department provide the AHJ with a written report, quadrennially, that shall be based on annual evaluations required by (4.4.3.1)?<br><br>Does the report explain the predictable consequences of identified differences and address steps within a fire department strategic plan necessary to achieve compliance? (4.4.3.2)<br><br>Standard response assignments and procedures, including mutual aid response and mutual aid agreements predetermined by location and nature of reported incident, shall regulate dispatch of companies, response groups, and command officers to fires and other emergency incidents. | ☐ Quadrennial Reports<br>☐ Demand Zone charts/reports<br>☐ Strategic Plan (reference/concept)<br>☐ SOP - response<br>☐ Run card/dispatch guidelines<br>☒ Any written agreements - ***County mutual aid agreements, signed participant*** |

| | Survey Component | Notes |
|---|---|---|
| | **Fire Suppression Operations** (4.5) | |
| **13** | Do SOP's require one individual assigned as the incident commander (IC)? (4.5.1*) | ☒ SOP – ICS |
| **14** | Do SOP's require the assumption of command to be communicated to all units involved in the incident? (4.5.1.1*) | ☒ SOP – ICS |
| **15** | Do SOP's require the IC to be responsible for overall coordination & direction of all activities for the duration of incident? (4.5.1.2) | ☒ SOP – ICS |
| **16** | Do SOP's require the IC to ensure an accountability system is immediately established to ensure rapid accounting of all on-scene personnel? (4.5.1.3) | ☒ SOP – accountability/ICS<br>☒ Training Records |
| **17** | Do SOP's require the company officer/crew leader to be aware of the identity, location, & activity of each member assigned to the company at all times? (4.5.2) | ☒ SOP<br>☒ Accountability system<br>☒ Radio equipment |
| **18** | Do SOP's require the company members to be aware of the identity of the company officer/crew leader? (4.5.2.1) | ☒ SOP<br>☒ Accountability system<br>☒ Training records |

| | Survey Component | Notes |
|---|---|---|
| | **Initial Attack** (4.6) | |
| **19** | Are orders to crewmembers, particularly verbal & those at emergency scenes transmitted through the company officer? (4.5.2.2) | ☐ SOP |
| **20** | Are initial attack ops organized to ensure that at least four members are assembled before initiating internal fire attack at a working structure fire? (4.6.1*) | ☒ SOP |
| **21** | Do two members work as a team while in hazardous area? (4.6.2) | ☒ SOP<br>☒ Incident reports |

| | Survey Component | Notes |
|---|---|---|
| **22** | Do SOP's provide for the assignment of two members outside of hazardous area to assist or rescue team operating within the hazardous area?<br><br>1. One of these rescue team members is permitted to engage in other activities (4.6.3)<br>2. Members performing critical tasks that if abandoned to perform rescue, would endanger any firefighter operating at the incident are prohibited from assignment to the two-person rescue team (4.6.4) | ☒ SOP<br><br>☒ SOP |
| **23** | Where immediate action could prevent loss of life or serious injury, are initial attack ops organized to ensure that first arriving attack personnel who find an imminent life-threatening situation take appropriate action (even with less than 4 personnel on-scene) in accordance with NFPA 1500[9]? (4.6.5) | ☒ SOP<br>☐ Incident reports for accidents |

[9] NFPA 1500 – Standard on Fire Department Health and Safety Program

| | Survey Component | Notes |
|---|---|---|
| **24** | Beyond the capability of the initial attack, can FD provide for sustained ops including:<br>1. Fire suppression?<br>2. Search & rescue?<br>3. Forcible entry?<br>4. Ventilation?<br>5. Preservation of Property?<br>6. Accountability of personnel?<br>7. Dedicated rapid intervention crew (RIC)?<br>8. Support activities beyond capabilities of | ☒ SOP – response<br>☒ Automatic aid agreement |
| | **Intercommunity Organization** (4.7) | |
| **25** | Are mutual aid, automatic aid and other fire protection agreements in writing and complete and include issues such as:<br>1. Liability for deaths and injuries?<br>2. Disability retirements?<br>3. Cost of services?<br>4. Authorization to respond?<br>5. Staffing and equipment?<br>6. Resources made available?<br>7. Designation of incident commander (IC)? | ☐ SOP<br>☐ Dispatch center procedure<br>☒ Agreements written<br>☐ Training records |
| **26** | Are procedures and training of personnel for all FD's involved in agreements sufficiently comprehensive to produce an effective fire force and insure uniform operations? (4.7.2) | ☐ SOP<br>☐ Training records<br>***Companies operate well together and there are some BCFCA guidelines. Beginning organizing for Struct Task Forces and Pipeline Companies. Plan for Moorestown, Lenola, and Maple Shade to develop*** |

| | Survey Component | Notes |
|---|---|---|
| **27** | Are units responding to mutual aid incidents equipped with communications equipment to permit communications with IC, division, group and/or sector officers? (4.7.3) | ☒ SOP - **County**<br>☒ Dispatch center procedures<br>☒ Inventory of radios |
| | **Emergency Medical Services (EMS)** (4.8*) | |
| **28** | Are EMS services organized to ensure FD's EMS capability includes sufficient resources to deploy initial arriving company & additional alarm assignments? (4.8.1.1)<br><br>Automatic and mutual aid agreements are permitted to satisfy this requirement. (4.8.1.2) | ☐ SOP FD<br>☐ SOP EMS (or mutual aid agreement)<br>☐ Mission Statement<br><br>☐ SOP<br>☐ Dispatch center procedures |
| **29** | The provisions of this chapter apply to FD's that provide EMS services. (4.8.2*) | ☐ Municipal operating statement/statute<br>☐ Organizational chart<br>☐ EMS guidelines<br>☐ |
| **30** | Has FD clearly documented its role, responsibilities, functions & objectives for EMS delivery? (4.8.3*) | ☐ Mission statement<br>☐ Organization chart<br>☐ SOP's |

| | Survey Component | Notes |
|---|---|---|
| | **System Components** (4.8.4) | |
| **31** | Basic EMS system treatment levels as used in this standard are categorized as:<br>1. First responder.<br>2. Basic Life support (BLS)<br>3. Advanced life support (ALS) (4.8.4.1)<br>Specific treatment capabilities associated with each level are determined by authority for approval & licensing of EMS providers in each state & province. (4.8.4.2) | ☐ SOP (dispatch, medical protocols)<br>☐ Dept. of Health license<br>☐ Certifications<br>☐ Training records |
| | **EMS System Functions** (4.2.5*) | |
| **32** | Determine FD's level of EMS service delivery. The five basic functions within an EMS system include:<br>1. First responder.<br>2. BLS response.<br>3. ALS response.<br>4. Patient transport with uninterrupted patient care at ALS or BLS levels while enroute to medical facility.<br>5. EMS quality assurance program. | Level_____<br>☐ Organization chart |
| **33** | Is FD involved in providing any or all of the functions identified in 4.4.3.1(1) thru 4.4.3.1 (5)? (4.8.5.2) | ☐ SOP-Organization chart |

| | Survey Component | Notes |
|---|---|---|
| | **Quality Management** (4.8.6) | |
| **34** | Does FD have a quality mgmt program? (4.8.6.1) | ☐ SOP<br>☐ Policy statement<br>☐ Manager/assigned<br>☐ Job description<br>☐ Records maintained |
| **35** | Is first responder and BLS care provided by FD documented & reviewed by FD medical personnel? (4.8.6.2) | ☐ Copies of run reports<br>☐ Management review process |
| **36** | If ALS is provided, does FD have a named medical director who oversees and assures quality medical care in accordance with state or provincial regulations?<br>Is process documented? (4.8.6.3) | ☐ SOP/medical director<br>☐ SOP |
| **37** | If ALS is provided, does FD provide mechanism for immediate communications with EMS supervision & medical oversight? (4.8.6.4) | ☐ SOPs<br>☐ Medical communication channel |

| | Survey Component | Notes |
|---|---|---|
| | **Special Operations Response** (4.9*) | |
| **38** | IF PROVIDED, are FD's special operations (special ops) organized to insure special ops capability includes sufficient:<br>1. Personnel<br>2. Equipment<br>3. Resources<br>to deploy the initial arriving company and additional alarm assignments providing such special ops services? (4.9.1.1)<br><br>Established automatic and mutual aid agreements are permitted to comply with these requirements. | ☐ SOP's<br>☒ Mutual aid agreement<br><br>***Verbal agreement in place for some special operations. Mutual Aid agreement with County Haz Mat*** |
| **39** | Has FD adopted a special ops response plan and related standard operations procedures (SOP's) that specify:<br>1. Role and responsibilities of the FD in special operations?<br>2. Authorized functions of members responding | ☒ SOP<br><br>***HazMat teams*** |
| **41** | Are FD members expected to respond to HazMat incidents beyond first responder operations level trained to applicable requirements of NFPA 472[10]? (4.9.4) | ☐ SOP<br>☒ Mission statement<br>☐ Training records/certification |

[10] NFPA 472-Standard for Professional Competence of Responders to Hazardous Materials Incidents

| | Survey Component | Notes |
|---|---|---|
| **42** | Does FD shall have capacity to implement RIC during special operations incidents that would subject firefighters to immediate danger of injury, or in the event of equipment failure or other sudden events per NFPA 1500[11]? (4.9.5) | ☐ SOP<br>☐ Training records<br><br>***Only through ICS, Mutual Aid, Incident Assessment*** |
| **43** | If a higher level of response is needed beyond the capability of the FD for special ops, does the FD have procedures to determine:<br>1. Availability of outside resources to deploy these capabilities<br>2. Method of contact and response<br>3. Integration with local resources? (4.9.6.1)<br>Do procedures limit FD to performing only those specific special ops functions for which their | ☐ SOP<br>☐ Contact list/agreements<br>☒ Dispa~~tch~~ procedures<br><br>☒ SOP<br>☐ Mission statement |

[11] NFPA 1500-Standard on Fire Department Occupational Safety and Health Program

| | Survey Component | Notes |
|---|---|---|
| | SYSTEMS | **Chapter 5** |
| | **Safety and Health System** (5.1*) | |
| **44** | Does FD provide occupational safety and health program in accordance with NFPA 1500[12] that forms the basic structure of protecting the health & safety of firefighters, regardless of the scale of the dept. or emergency? (5.1*) | ☒ SOP<br>☒ Safety officer<br>☒ Program<br>☒ Contact for CISD<br>☒ OSHA requirements<br>☐ Physical fitness equip.<br>☐ Safety posters<br>***Newly formed Health and*** |
| | **Incident Management System** (5.2*) | |
| **45** | Does FD provide an incident mgmt system in accordance with NFPA 1561[13] that forms the basic structure of all emergency ops regardless of scale of dept. or emergency? (5.2.1) | ☒ SOP |
| **46** | Is incident mgmt system designed to manage incidents of all different types, including (5.2.2*)<br>- structure fires<br>- wildland fires<br>- haz-mat incidents<br>- emergency medical operations<br>- others | ☒ SOP |
| **47** | Does FD have a training program and policy to ensure that personnel are trained and their competency is maintained to execute their responsibilities consistent with FD's organization and deployment addressed in Chapter 4? (5.3) | ☒ SOP<br>☒ Training program – *Not complete*<br>☐ Training records |

[12] NFPA 1500-Standard on Fire Department Occupational Safety and Health Program
[13] NFPA 1561-Standard on Emergency Services Incident Management System

| | System Component | Notes |
|---|---|---|
| | **Communication Systems** (5.4*) | |
| **48** | Does FD have a reliable communication system to facilitate prompt delivery of fire suppression, EMS and special operations? (5.4.1*) | ☒ SOP<br>☒ License<br>☒ |
| **49** | Do FD's communications facilities, equipment, staffing and operation procedures comply with NFPA 1221[14]? (5.4.2) | ☒ Certification statement/license |
| **50** | Do operating procedures for radio communications provide for standard protocols and terminology at all types of incidents? (5.4.3) | ☐ SOP<br>***Burlington County Radio Manual under revision. Moorestown Fire District has a document, not in use and awaits Burlington*** |
| **51** | In compliance with NFPA 1561, is standard terminology established to transmit information including:<br>1. Strategic modes of operation?<br>2. Situation reports?<br>3. Emergency notifications of imminent hazards? (5.4.4) | ☐ SOP<br>***Per above*** |
| | **Pre-Incident Planning** (5.5*) | |
| **52** | Does FD have operational requirements to conduct pre-incident planning, with particular attention to target hazards? (5.5*) | ☐ SOP<br>☐ PEP's/run book<br>☐ Risk assessment survey |

[14] NFPA 1221-Standard for the Installation, Maintenance and Use of Emergency Services Communications Systems


# APPENDIX 4

# STRATEGIC GUIDELINE FOR EMERGENCY OPERATIONS

Moorestown Fire Department

# DRAFT - Standard Operational Guideline - DRAFT

S.O.P Title: Strategic Guidelines 
Original Issue Date:
Latest Revision:

Authorized By_____

This Strategic Guideline identifies and outlines some basic rules and principles that relate to the major areas of fire fighting strategy and subsequent fireground activity. The uniform application of this guideline will produce favorable fireground outcomes. This guideline is designed to offer a basis and simple framework for Moorestown Fire Department fireground operations and command; it also represents many existing practices, and a defining of how this department is expected to perform during certain emergencies.



STRATEGIC PRIORITIES

There are four separate strategic priorities that must be considered in order to stabilize fireground situations - these priorities also establish the order that other basic fireground functions must be performed. These strategic priorities should be regarded as separate, yet interrelated, activities that must be considered in order. The Incident Commander cannot proceed on to the next priority until the objective of the current function has been completed.

The Basic Strategic Priorities are as follows:

**Life Safety** (Rescue) - The activities required to protect occupants, and to treat the injured.

**a) Removing victims from threat**
**b) Removing threat from victims**
**c) Defending in place, to buy time**

**Exposure Protection** - Keep things (persons or property) that are threatened by fire from being damaged by fire.

**Fire Control/Extinguishment** - The activities required to stop the forward progress of the fire and to bring the fire under control, and complete extinguishment.

**Property Conservation** - The activities required to stop or reduce additional loss to property. This includes but is not limited to salvage.

All four strategic priorities require a somewhat different tactical approach from both a command and an operational standpoint. While the Incident Commander should satisfy the objectives of each function in its priority order, he must, in many cases, overlap and "mix" the activities of each to achieve completion. Notable examples of this are the need many times to achieve interior tenability with active/extensive fire control efforts before getting on with primary search, or the need to initiate salvage operations while active fire control efforts are being extended.

1. LIFE SAFETY

It shall be a standard Moorestown Fire Department procedure to extend a primary and secondary search in ALL involved and dangerously exposed areas that can be entered in accordance with the Occupational Safety & Health Administration (OSHA) 2 in 2 out rule. The Incident Commander and operating companies cannot depend upon reports from spectators to determine status of victims. Fire Department personnel should utilize such civilian reports as to the location, number and condition of victims as information that "supports" routine primary search efforts. Positive information from spectators about victims inside shall be considered sufficient for the OSHA rescue exception. Other probabilities as well may indicate a situation where the OSHA exception applies. Such activity must only be carried out with the knowledge and consent of the Incident Commander in order to insure the safety of the rescuers.

The Incident Commander must structure initial operations around the completion of the **primary search**. Primary search means companies have quickly gone through ALL occupiable area(s) and verify the removal and/or safety of all occupants. Asking spectators or one time occupants "is everybody out?", or the status of the fire, is not enough. Time is the critical factor in the primary search process and successful primary search operations must be extended quickly and during initial fire stages to be regarded as being primary. The completion of the primary search shall be reported to the Incident Commander using plain language by those who were assigned the task. It is the responsibility the Incident Commander to coordinate primary search assignments, secure completion reports from interior companies and to communicate the search accomplishment to all units operating on the scene. The Incident Commander must make specific primary search assignments to companies to cover specific areas of large complex occupancies and maintain on-going control of such companies until the entire area is searched. Once the primary search has been completed and communicated to all units, the Incident Commander must take steps to maintain control of access to the fire area; beware of occupants (and others) re-entering the building.

The life safety functions that follow lengthy fire control activities are regarded as representing a **secondary search**. A secondary search means that fire companies thoroughly search the interior of the fire area after initial fire control and ventilation activities have been completed. Different companies should preferably complete a secondary search than those involved in the primary search activities. Thoroughness (rather than time) is the critical factor in a secondary search.

The *stage of the fire* becomes a critical factor that affects the life safety approach developed by the Incident Commander. The following items outline the basic approach of the Incident Commander to standard fire stages:

**Nothing Showing** - In nothing showing situations or in very minor fire cases that clearly pose no life hazard, the officer in charge must organize and direct a rapid interior search and those carrying out that task must promptly report their findings. In such cases, the interior search for victims will also verify no fire.

**Smoke Showing** - In smoke showing and working fire situations, fire control efforts must be extended simultaneously with rescue operations to gain entry and to control interior access to complete the primary search. In such cases, the Incident Commander and all operating companies must be aware that the operation is in a rescue mode until primary search is complete, regardless of the fire control required. In working fire situations, primary search must be followed by a secondary search.



**Fully Involved** - In cases of fully involved buildings or sections of buildings, immediate entry (and primary search activities) becomes impossible and survival of the occupants improbable, the incident commander must initially report fully involved conditions and that a primary search is not possible. As quickly as fire control is achieved, Command must then structure what is in effect a secondary search for victims.

The Incident Commander must consider the following factors in developing a basic life safety size-up:

Number, location and condition of victims.
Effect the fire has on the victims.
Capability of the fire-rescue forces to enter the building, remove and protect the victims and control the fire.

The most urgent reason for the special calling of additional units is for the purpose of covering life safety. It is the responsibility of the Incident Commander to develop a realistic (and pessimistic) rescue size up as early as possible.

The Incident Commander must make one of these three basic life safety decisions.

Do we remove victims from the threat?

Do we remove the threat from the victims?

Do we buy time until more resources are available?

In some cases occupants may be safer in their rooms than moving through contaminated hallways and interior areas. Also, such movement may impede interior fire

fighting. In still other cases the fire-rescue personnel may have no choice in the matter; some occupants will insist in evacuation while others will refuse to leave the relative safety of their rooms.

Life Safety efforts should be extended in the following order:

Most severely threatened.
The largest number (groups).
People in the remainder of the fire area.
People in the exposed areas.

All initial attack forces must be directed toward supporting rescue efforts and hose lines must be placed in a manner to control interior access, confine the fire, and protect avenues of escape. Hose line placement becomes a critical factor in these cases and all operating companies must realize that the operation is in a Life Safety (rescue) Mode and if necessary operate in a manner that writes off the structure in order to buy rescue time.



Normal means of interior access (stairs, halls, interior public areas, etc.) should be utilized to remove victims whenever possible. Secondary means of rescue (ladders, fire escapes, and the like), should be utilized only in their order of effectiveness.

It shall be the responsibility of the incident commander to structure the treatment of victims after removal. Multiple victims should be removed to the same location for more effective treatment. The incident commander should direct and coordinate the "EMS" structure whenever possible. Implementation of the "Mass Casualty" might be in order depending upon circumstances and the number of victims.

## 2. FIRE CONTROL

It shall be the standard Moorestown Fire Department operating procedure to attempt to stabilize fire conditions by extending wherever possible an **aggressive**[15] well-placed and adequate interior fire attack effort and to support that attack with whatever resource and action is required to reduce fire extension and to bring the fire under control. Incident commanders must develop a fire control plan of attack that first stops the forward progress of the fire and then brings the fire under control. In most cases, the first arriving company will not *immediately* have adequate resources to accomplish all of the attack needs that may be faced. The initial Incident Commander must prioritize attack efforts, act as a resource allocator and determine the resources the fire will eventually require. Accurate forecasting of conditions by the Incident Commander becomes critical during this initial evaluation process.

There will be cases where the entire first arriving engine company (as a whole, fully geared unit!) may be required to enter a structure to locate, search, and operate an attack line from a standpipe system. This situation will most likely occur in buildings

[15] A well- thought out, staffed, equipped, and supplied (GPM) fire fighting\life safety effort.

such as college dormitories, high rise, and modern low-rise buildings. When this "total engine company" enters the structure, **the second arriving engine must function as the water supply company feeding the various fixed fire protection systems being used.** Radio communication becomes critical during this process. Other arriving units must know what the first arriving unit is doing. The *Total Engine Company Concept* is an option, and mentioned here for individual officer consideration.

**Fires should be fought from the unburned side.** Attack from the burned side generally will drive the fire, smoke and heat into uninvolved portions of the building and the interior control forces out of the building.

**Fires should be fought from the interior**. The fastest place to put water on the fire is generally from the outside at the point where the fire is burning out of the building – most of the time this is the worst application point.

The Incident Commander must consider the most dangerous path of travel and avenue of fire extension, particularly as it affects rescue activities, confinement efforts, and exposure protection. Resources must then be allocated based upon this fire growth prediction.

Initial attack efforts must be directed toward supporting primary search. The first attack line must go between the victims and the fire and protect avenues of escape.

First arriving units must determine fire location and extent before starting fire operations (as far as possible). All such beginning operations must be communicated.

**Put water on fire**: The rescue, exposure protection, confinement, extinguishment, overhaul, ventilation & salvage problem is solved in the majority of cases by a fast, strong, well-placed attack.

The Incident Commander must consider seven (7) sides (or sectors) of the fire: front, back, sides, top, bottom and interior.

The Incident Commander must develop a conscious time decision with regard to both the size of the attack and the position of the attack. The bigger the attack, the longer it takes to get it going; the more the interior attack is repositioned, the longer it will take to complete the task. "*Where the fire is going to be?*" after set up is completed, is an important question that must be answered.

Lacking direction, when fire is showing, companies will many times lay hose and put water on the fire utilizing the fastest, shortest, most direct route. This process has been identified in some fire service texts as the "candle-moth syndrome"; everyone wants to go to the flames. It is the responsibility of the Incident Commander to insure that all operations are "directed" activities.

When the fire is coming out of a burning building and not affecting exposures, **let it vent**. Launch an interior attack from the unburned side. It is generally venting in the proper direction. Placing a hose stream in the ventilation opening is dangerous, careless and reckless. It requires discipline on the part of the fire fighters and fire officers not to do so, and not submit to "candle-moth" temptations.

The Incident Commander must develop critical decisions that relate to cut-off points and must approach fire spread determinations with pessimism. It takes a certain amount of time to "get water" and the fire continues to burn while the attack gets set up. The Incident Commander must consider where the fire will be when attack efforts are ready to actually go into operation; if the Incident Commander misjudges, the fire may burn past the planned attack/cut-off position.

Don't put water into burned-out property, particularly where there is unburned property elsewhere left to burn. It is generally improper to operate fire streams into property that is already lost, many times such activity is done at the expense of exposed unburned property, and wastes valuable extinguishment efforts. Write-Off property that is already lost and go on to protect exposed property based on the most dangerous direction of spread. Do not continue to operate in positions that are essentially lost.



3. PROPERTY CONSERVATION

It shall be standard Moorestown Fire Department operating procedure to commit whatever fireground resource is required to reduce property loss to an absolute minimum. **It must be stressed that; the age old practice of taking chances with fire fighter lives for vacant and derelict buildings is no longer acceptable!** *The Incident Commander must weigh the risk versus the benefit, at all operations.* The activities that relate to effective property conservation require the same early and ongoing command functions and aggressive action as both rescue and fire control. All members are expected to perform in a manner that continually reduces loss during fire operations.

When the fire is out - shut down fire streams. Early recognition that the forward progress of the fire has been stopped is an important element in reducing loss. The earlier the salvage operations begin, the smaller the loss.

When basic fire control has been achieved, the Incident Commander must commit and direct companies into "stop loss" activities; such activities generally include:

Evaluating damage to overall fire area.

Evaluating the salvage value of various areas.

Evaluate resources that will be required.

Committing the necessary companies to salvage functions.

Reducing hose lines from fire control functions to salvage functions.

Additional rotation of personnel due to fatigue.

In cases where there is an overlapping need for both fire control and salvage to be performed simultaneously and where initial arriving companies are involved in fire fighting and salvage remains undone, it shall be considered reasonable to special call additional resources to perform salvage functions.

Be aware that personnel involved in rescue and fire control operations are generally fatigued and have reached a state of reduced efficiency by the time property conservation functions must be completed - this can result in a high potential for injury. The incident commander must evaluate personnel conditions and replace with fresh companies if needed.

4. ASSUMPTION OF COMMAND

First Arriving Unit: The first arriving unit or officer is responsible for initially assuming command. This individual (officer or member in charge of the unit) retains command responsibilities until command is transferred to a higher-ranking officer or until the incident is terminated. This assumption of command by the first unit is **mandatory**.

As the identity of the incident commander changes through the formal *command transfer process*, the responsibility for command functions also changes. (Note: The Incident Commander is responsible for all Command functions, all of the time during the incident) The term INCIDENT COMMANDER refers jointly to the person, the functions, and the location of who ever is in charge, and provides a standard identification tag for the **single** person in charge. With this system, it should be all but impossible for more than one officer to act as an Incident Commander at any one time on any one incident scene.

Incident Commander Modes - When the first unit arrives, quick decisions must be made as to which of the following commitments the unit will make:

NOTHING SHOWING MODE - Generally requires investigation by the first arriving unit while others remain in a stand-by position. Usually, the officer on the first unit will go with the investigating company while **using the portable radio to continue the command function**. In effect, this creates a "mobile command"; a condition that is otherwise undesirable.

FAST ATTACK MODE - Requires immediate action to stabilize (e.g., a working, interior fire in a residence, apartment or small commercial occupancy). For an offensive fast attack, the choice may be to lead the attack while utilizing the portable radio to continue command. This fast attack mode should be concluded rapidly with one of the following outcomes:

Situation stabilized by the offensive attack.

Command transferred to the first arriving chief officer

Situation not stabilized; member in charge of the first arriving unit moves to an exterior (stationary) command position.

The Fast Attack Mode will most likely be the mode most officers will utilize in the beginning, at the majority of fires.

COMMAND MODE - Because of the size of the fire, complexity of the occupancy, or the possibility of extension, some situations will demand strong direct command from the outset. In these cases, the first arriving unit will maintain at an exterior command position and remain there until relieved of command.

Chief officers arriving upon the scene of an incident not yet declared under control may "take" Command by a formal process. The actual command transfer is regulated by a very simple, straightforward procedure that includes: Contacting the Incident Commander directly. (Face to face is always preferable), however, transfer of command by radio can be accomplished during fairly simple incidents when the responding officer has "copied' all Command activity made before arrival. Standard communications must be followed.

The officer being relieved will provide a briefing that includes:

- Initial Situation - "What was it like when you arrived?"
- Deployment & Assignment - "What you are doing?"
- Strategic and Tactical Plan - "What would you do if I wasn't here?"
- Safety Considerations- "Are there any unusual safety problems that you know of?"

**This briefing concludes with a confirmation of command transfer.** It should be a short, straight to the point exchange!

The County Dispatch Center shall be advised what unit identifies the Incident Commander.

Transfer of Command takes place on the scene only.

Only the Incident Commander shall do radio communications from the scene to the dispatch center.


# APPENDIX 5

# INSURANCE SERVICES OFFICE SUMMARY FINDINGS OF MOORESTOWN FIRE DISTRICT #1

***(Information extracted from report of May 1997, the most recent ISO report for this fire district)***

## INSURANCE SERVICES OFFICE
## FIRE DEPARMENT SUMMARY FINDINGS 03/97

| RATING SEGMENT – RECEIVING & HANDLING FIRE ALARMS | ACTUAL CREDIT | MAXIMUM CREDIT |
|---|---|---|
| Credit for Telephone Service<br>- This item reviews the facilities provided for the public to report fires, including the listing of fire and business numbers in the telephone directory | 2.00 | 2.00 |
| Credit for Operators<br>This item reviews the number of operators, on duty, at the communication center to handle calls | 3.00 | 3.00 |
| Credit for Dispatch Circuits<br>- This item reviews the dispatch circuit facilities used to transmit alarms to fire department members | 3.50 | 5.00 |
| TOTAL CREDIT FOR RECEIVING & HANDLING FIRE ALARMS | 8.50 | 10.00 |

| RATING SEGMENT – FIRE DEPARTMENT | ACTUAL CREDIT | MAXIMUM CREDIT |
|---|---|---|
| Credit for Engine Companies<br>- This item reviews the number of engine companies and the hose and equipment carried. | 8.75 | 10.00 |
| Credit for Reserve Pumpers<br>- This item reviews the number of reserve pumpers and the equipment carried on each | 0.87 | 1.00 |
| Credit for Pumper Capacity<br>- This item reviews the total available pump capacity | 5.00 | 5.00 |
| Credit for Ladder Service<br>- This item reviews the number of ladder and service companies and the equipment carried. | 4.74 | 5.00 |
| Credit for Reserve Ladder Service<br>This item reviews the number of reserve ladder and service trucks and the equipment carried | 0.31 | 1.00 |
| Credit for Distribution<br>- This item reviews percent of the built-upon area of the city which has a first-due engine company within 1.5 miles and a ladder-service company within 2.5 miles | 2.88 | 4.00 |
| Credit for Company Personnel<br>- This item reviews the average number of equivalent fire fighters and company officers on duty with existing companies | 3.71 | 15.00+ |
| Credit for Training<br>- This item reviews the training facilities and their use. | 4.05 | 9.00 |
| TOTAL CREDIT FOR FIRE DEPARTMENT | 30.31 | 50.00+ |

+ indicates that credit for manning is open-ended, with no maximum credit for this item

| RATING SEGMENT – WATER SUPPLY | ACTUAL CREDIT | MAXIMUM CREDIT |
|---|---|---|
| Credit for Water System<br>- This item reviews the supply works, the main capacity and hydrant distribution. | 23.89 | 35.00 |
| Credit for Hydrants<br>- This item reviews the type of hydrants, and method of installation | 1.94 | 2.00 |
| Credit for Inspection and Condition of Hydrants<br>- This item reviews the frequency of inspections of hydrants and their condition. | 1.97 | 3.00 |
| TOTAL CREDIT FOR WATER SUPPLY | 27.80 | 40.00 |

Deficient areas identified included (references needed gpm and available gpm) (gpm refers to gallons per minute of water available from water supply system)

| Hydrant Location | Water (gpm*) Required | Water (gpm*) Available |
|---|---|---|
| - Maple & Dawson Streets | Needed 2,500 gpm | Available 3,800 gpm |
| - Main and Church Streets | Needed 3,000 gpm | Available 1,900 gpm |
| - Main and Page Lane | Needed 2,000 gpm | Available 900 gpm |
| - Main and Page Lane | Needed 4,500 gpm | Available 900 gpm |
| - Stanwick Road South of Bridgeboro Road | Needed 4,500 gpm | Available 1,700 gpm |
| - Hartford Road and Bortons Landing Road | Needed 2,250 gpm | Available 2,700 gpm |
| - Cove Road West of Landing Road | Needed 750 gpm | Available 1,500 gpm |
| - Demarest Road (north end) and Georgian Drive | Needed 1,250 gpm | Available 1,000 gpm |

***It should be noted that the majority of sites tested have <u>LESS</u> water supply available than is necessary for adequate fire protection, based on the Insurance Service Office determination.***

* gpm = gallons of water discharged per minute


# APPENDIX 6

# APPARATUS AND MAJOR EQUIPMENT REPLACEMENT PLAN

## MOORESTOWN FIRE DISTRICT #1

## APPARATUS AND MAJOR EQUIPMENT REPLACEMENT PLAN

| UNIT | | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E2111 | 1994 | | | | | | | 491,840 | | | | | | | | | | | |
| E2112 | 2004 | | | | | | | | | | | | | | | | | 650,600 | |
| E2122 | 1987 | | 424,360 | | | | | | | | | | | | | | | | |
| E2121 | 1997 | | | | | | | | | | 537,447 | | | | | | | | |
| R3119 | 2002 | | | | | | | | | | | | | | | 623,047 | | | |
| L2125 | 2004 | | | | | | | | | | | | | | | | | 1,299,439 | |
| | | | | | | | | | | | | | | | | | | | |
| C3180 | 2004 | | | | | | | 49,194 | | | | | | | | 190,585 | | | |
| C3181 | 2007 | | | | | | | | | | 53,756 | | | | | | | | 68,006 |
| B3139 | 1982 | | | | | 150,000 | | | | | | | | | | | | | |
| Car 1 | 2005 | | | | | | 47,761 | | | | | | | | 60,502 | | | | |
| Car 2 | 1997 | 41,200 | | | | | | | | 52,190 | | | | | | | | 66,118 | |
| | | | | | | | | | | | | | | | | | | | |
| Service | 1998 | | | | | | | | | | | 169,333 | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| STATION | | | | | | | | 6,000,000 | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| Bunker Gear? | | | | | | | | | | | | | | | | | | | |
| SCBA? | | | | | | | | | | | | | | | | | | | |
| Computers? | | | | | | | | | | | | | | | | | | | |
| Pagers? | | | | | | | | | | | | | | | | | | | |
| Large Diameter hose? | | | | | | | | | | | | | | | | | | | |
| Radios? | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| TOTALS BY YEAR | | 41200 | 424,360 | 0 | 0 | 150000 | 47761 | 6541034 | 0 | 52190 | 591203 | 169333 | 0 | 0 | 60,502 | 813632 | 0 | 1955247 | 68,006 |
| RESERVE | | 400,000 | | | | | | | | | | | | | | | | | |
| TAX INCOME | | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 |
| EQUIP SALE INCOME | | 4,120 | 42,436 | 0 | 0 | 15,000 | 4,776 | 54,103 | 0 | 5,219 | 59,120 | 16,933 | 0 | 0 | 6,050 | 81,363 | 0 | 195,524 | 6,800 |
| INTEREST INCOME | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| EXPENSE | | 41,200 | 424,360 | 0 | 0 | 150,000 | 47,761 | 6,541,034 | 0 | 52,190 | 591,203 | 169,333 | 0 | 0 | 60,502 | 813,632 | 0 | 1,955,247 | 68,006 |
| DEBT SERVICE | | 170,000 | 180,000 | 195,000 | 211,000 | 225,000 | | | | | | | | | | | | | |
| ACCOUNT BALANCE | | 292,920 | -169,004 | -264,004 | -375,004 | -635,004 | -577,989 | -6,964,920 | -6,864,920 | -6,811,891 | -7,243,974 | -7,296,374 | -7,196,374 | -7,096,374 | -7,050,926 | -7,683,095 | -7,583,095 | -9,242,818 | -9,204,105 |

Program assumes $400,000 is reserve, plus annual $100,000 income from tax. Actual annual investment must be calculated and approved by Fire Commission.

Equipment sale income is estimated at 10% of new vehicle value. Vehicle costs based on Engines $400,000 in 2007, Aerial $750,000 in 2007, Cars at $40,000 in 2007 with 3% increase per year.

THIS IS AN ILLUSTRATIVE PROJECTION WITH MANY VARIABLES, ALL OF WHICH REQUIRE DECISION BY THE FIRE COMMISSION

AS CAN BE SEEN A FINANCIAL PLAN NEEDS TO BE DESIGNED, AS EVEN A $100,000 ALLOCATION OF TAX DOLLARS PER YEAR WILL NOT MEET THE EXPENSE PROJECTIONS TO REPLACE BASIC EQUIPMENT

INVESTIGATION SHOULD ALSO BE MADE INTO THE VALUE OF CAPITALIZING COSTS OF BUNKER GEAR, SCBA, COMPUTER REPLACEMENT, PAGERS, LARGE DIAMETER HOSE, RADIOS, ETC.


# APPENDIX 7

# VEHICLE ASSESSMENT FORM

## VEHICLE ASSESSMENT
## (conducted every 3 years)

Unit # _____

Vehicle _____ VIN _____

| Vehicle Component | Rating* | Adversely Affects State Inspection |
|---|---|---|
| Engine | _____ | ☐ |
| Chassis | _____ | ☐ |
| Transmission | _____ | ☐ |
| Axles | _____ | ☐ |
| Electrical | _____ | ☐ |
| Pump | _____ | ☐ |
| Tank | _____ | ☐ |
| Steering | _____ | ☐ |
| Body | _____ | ☐ |
| Aerial Device | _____ | ☐ |



Comments _____.

_____.

Projected Life _____Years

Signed _____EVT Date _____

| | |
|---|---|
| *Rating Definition: | 1 = works well, no problems<br>2 = any problems resolved by routine maintenance<br>3 = problem is manageable<br>4 = major repair required in next 12 months, costing over $5,000<br>5 = not functional |


# APPENDIX 8

# FIRE AND RESCUE SERVICES COMPARISON OF MOORESTOWN FIRE DISTRICT #1 TO NATIONAL AVERAGES

**Career Firefighters per population protected***

| Population | Low | Median | High |
|---|---|---|---|
| 25,000-49,999 | 0 | 1.27 | 4.07 |

There is no data on career staffing for departments serving less than 25,000 population.

**Source, NFPA US Fire Department Profile Through 2005. These rates are reported rates to NFPA, not based on any standard. The rates of a particular size of community may vary widely because departments face variation in their specific circumstances and policies including length of work week, unusual structural conditions, types of service provided, geographical dispersion,*

*Low and High vary by size of community. Median value is chosen so that half the departments had higher values, and half had lower values.*



**Career firefighters per population protected***

.48 per 1,000 population**

*** source ICMA - reflects on-duty staffing*

Based on 28,000 population, these can be interpolated to equate

NFPA = 36.56 total staffing

**Moorestown Fire District #1's approach to volunteerism, number of volunteers, support of the current system and structure, make it unique at the lowest number of career firefighters required.**

**Volunteer firefighter rates per population protected***

| Population | Low | Median | High |
|---|---|---|---|
| 10,000-24,999 | 0 | 1.67 | 8.32 |

** Source NFPA US Fire Department Profile Through 2005. These rates are reported rates to VFPA, not based on any standard.*

**Volunteers are generally not found in communities above 25,000 population, thus the study cut-off was 25,000 population. At approximately 70 volunteer firefighters, the fire district averages 3.5 volunteer firefighters per 1,000 population. The average in the Northeast in this category is 2.0, which places Moorestown Fire District #1 above the average in number of volunteers per 1,000 population.**

**In the 10,000 to 24,999 population category, the types of departments are:**

| All Career | Mostly Career | Mostly Volunteer | All Volunteer |
|---|---|---|---|
| 17.6% | 22.1% | 41.4% | 18.9% |

**Average Apparatus and Station Rates per 1,000 population**

| **Population** | **Pumpers/1,000** | **Aerials/1,000** | **Stations/1,000** |
|---|---|---|---|
| 10,000-24,999 | .185 | .033 | .126 |
| Moorestown | .26 | .130* | .098 |
| National Average All size communities | .233 | .022 | .201 |

**Note, that the rates per NFPA reflect primarily mostly volunteer status which is similar to Moorestown..**

***Insurance Services Office (ISO) Requirements mandate a ladder automatically respond within 2.5 miles of all points in the community.**



**Costs of Fire Protection**

Fire Protection costs rose 81% from 1983 to 2002 after adjusting for inflation.

**EMS**

The larger the community, the more likely EMS service was provided.

| Population Protected | No MES | BLS | ALS |
|---|---|---|---|
| 25,000 – 49,999 | 30% | 21% | 29% |

Average Response Rates per 1,000 population

| | | | |
|---|---|---|---|
| Fires* | Average 4.9/1,000 population | = | 137 |
| EMS calls** | Mean (average) 131/1,000 population | = | 3,668 |

*NFPA data
** HIS/NFTSA/HRSA data


# APPENDIX 9

# MOORESTOWN FIRE DISTRICT #1
# RISK ASSESSMENT
# BY PLANNING ZONE
# MAP

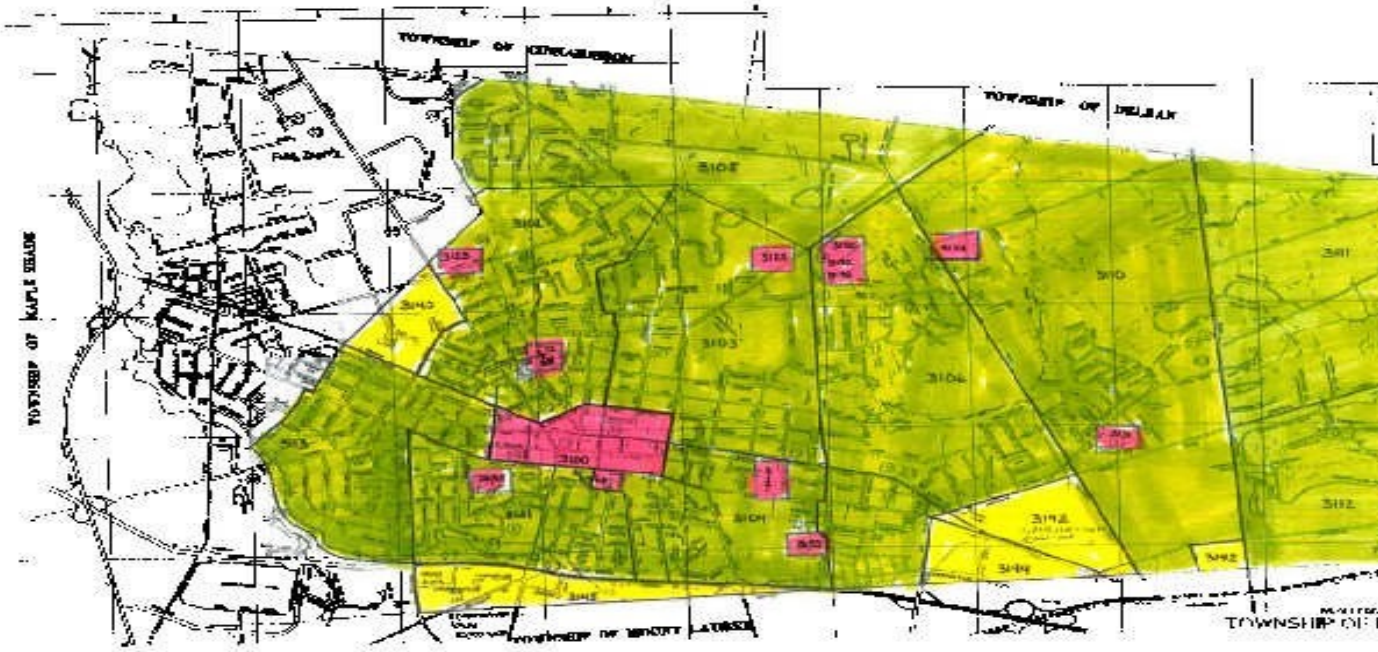
# RISK ANALYSIS BY PLANNING ZONE

This reflects an assessment of current risk of the properties in response zones, based on fire/non-fire risk posed and p

Low = Primarily Non-Sprinkler protected properties – Residential & Commercial, Primarily Non-Monitored F
Poor Water Supply for fire load/occupancy and construction, Mixed (Old / New / Type) Construction, Close C
Taxpayers Division 1 / Apartments and Offices above, Narrow Streets / Alleys

Average = Primarily residential with some commercial

High – Medium to heavy fire loading – Primarily Sprinklered and Alarmed, Medium to High Life Safety issue



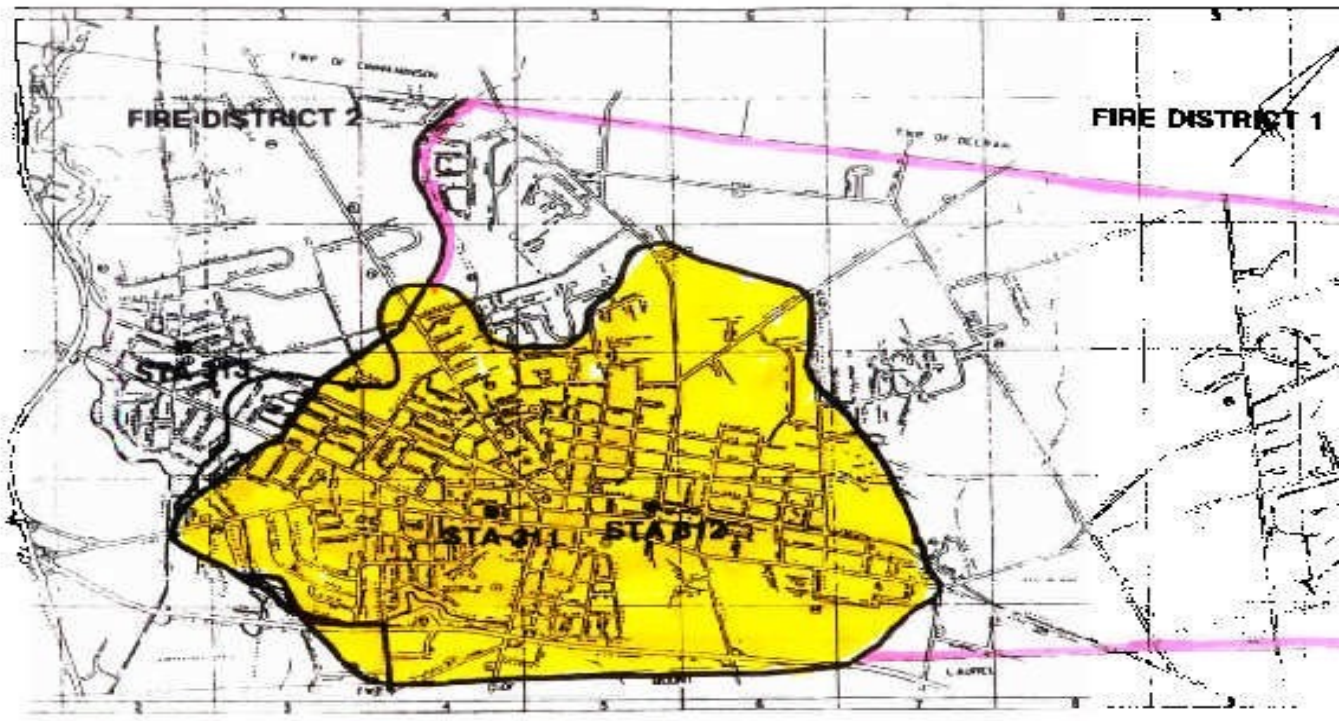

# APPENDIX 10

# MOORESTOWN FIRE DISTRICT #1 MAP ILLUSTRATING 1.5 MILE PUMPER RESPONSE CAPABILITY

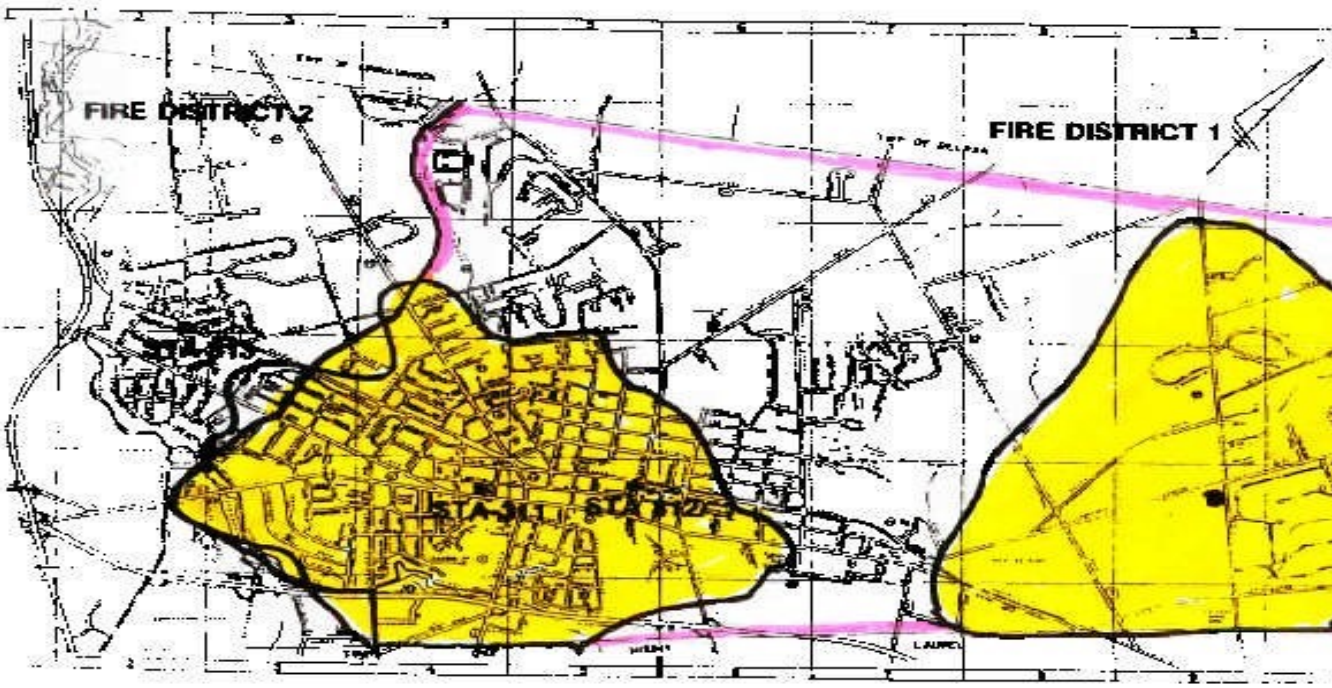
**A. WITH CURRENT STATION LOCATION**

**B. WITH EAST END STATION LOCATION**

## 1.5 PUMPER MILE ROAD COVERAGE FROM CURRENT STATION



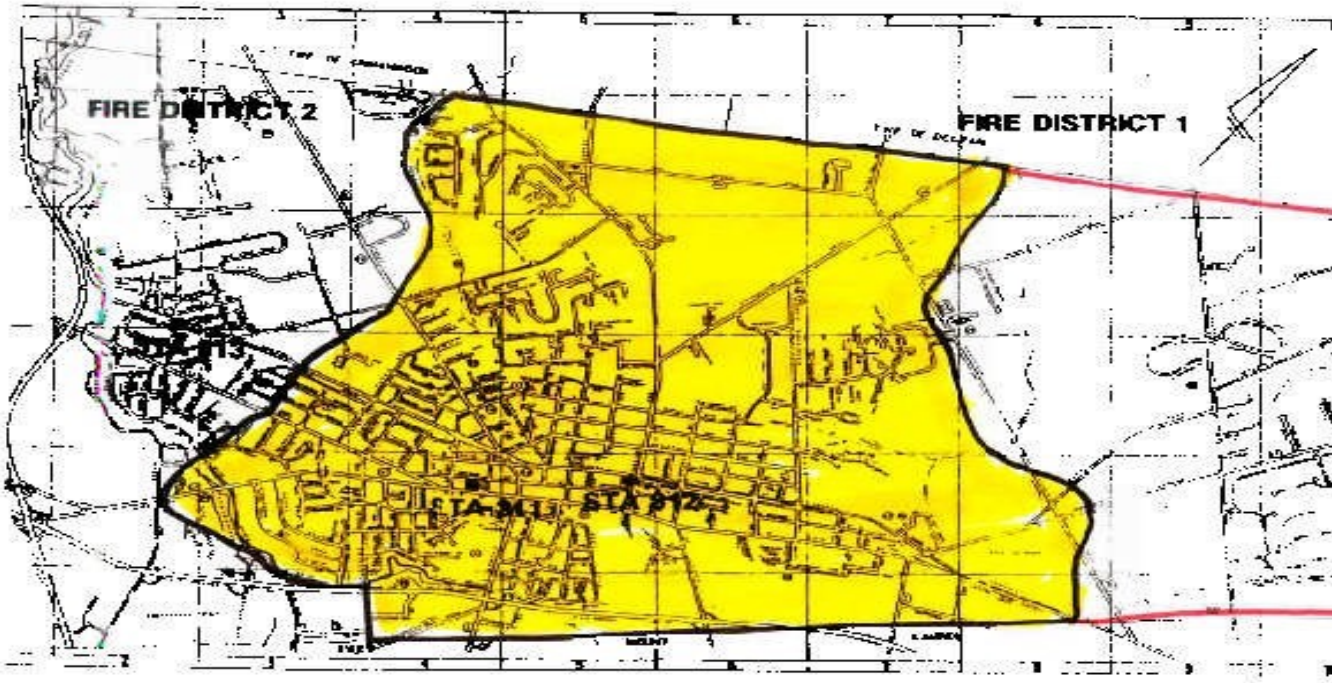
## 1.5 MILE ROAD COVERAGE FROM CURRENT MAIN STATION AND PROPOSED EAST END STA




# APPENDIX 11

# MOORESTOWN FIRE DISTRICT #1
# MAP ILLUSTRATING 2.5 MILE
# AERIAL LADDER
# RESPONSE CAPABILITY

## 2.5 AERIAL MILE ROAD COVERAGE FROM CURRENT STATION LOC




# APPENDIX 12

# SAMPLE PRE-EMERGENCY PLAN FORMAT[16]

[16] Jenaway, W.F., Pre-Emergency Planning, ISFSI, Ashland, MA, 1984.

**CITY FIRE DEPARTMENT**
**FACILITY PRE-PLANNING**

## I. GENERAL

ADDRESS _____ DATE _____

TYPE OCCUPANCY _____

BUSINESS NAME _____

TELEPHONE: BUSINESS _____ EMERGENCY _____

NAME AND ADDRESS OF OCCUPANT _____

_____

NAME AND ADDRESS OF OWNER _____

_____

MATERIALS OF CONSTRUCTION _____

_____

BUILDING DIMENSIONS: LENGTH _____ WIDTH _____# FLOORS_____

STRUCTURAL NOTES (FIRE WALLS, BREACHES, ETC.) _____

_____

_____

DOLLAR STOCK CONCENTRATION:

| | | |
|---|---|---|
| STOCK | SQ. | **STOCK/BLDG.** |
| BUILDING _____ | | |
| TOTAL | | |

COMMENTS:

**II.**

HEAT: TYPE _____ SIZE _____ LOCATION (H) _____

COOL: TYPE _____ SIZE _____ LOCATION (C) _____

GAS SHUT-OFF (G) LOCATION _____

CO. NAME/PHONE NO. _____

ELECTRIC SHUT-OFF LOCATION (EL) _____

CO. NAME/PHONE NO. _____

STEAM/OTHER SHUT-OFF LOCATION (S) _____

CO. NAM/PHONE NO. _____

WATER SHUT-OFF LOCATION (W) _____

CO. NAME/PHONE NO. _____

COMMENTS: _____

_____

**III. EXTERIOR**

OBSTRUCTION

S: FENCES _ VEHICLES _ WIRES _ WALL _ EQUIPMEN _ TREES _ GATE _ PRODUCT _ OTHER/COMMENT _____

_____

EXPOSURES:

N: CONSTRUCTION _____HEIGHT _____DISTANCE _____

OCCUPANCY _____

S: CONSTRUCTION _____HEIGHT _____DISTANCE _____

OCCUPANCY _____

E: CONSTRUCTION _____HEIGHT _____DISTANCE _____

OCCUPANCY _____

W: CONSTRUCTION _____HEIGHT _____DISTANCE _____

OCCUPANCY _____

**IV. WATER SUPPLY**

SOURCE _____TYPE _____

HYDRANT LOCATION/GPM AVAILABLE _____

GPM NEEDED:

1. BUILDING LENGTH X WIDTH + 1,000
   10 = _____
2. (HT. IN STORIES – 1) X 500 = _____
3. EXPOSURES 0' – 30' = 2,000 31' – 60' = 1,500 = _____
   61' – 90' = 1,000 91' + = 500 = _____
4. IF NONHAZARDOUS OCCUPANCY, SUBTRACT ¼ OF (1 + 2 + 3) = _____
5. IF FIRE RESISTIVE OR SEMI-FIRE RESISTIVE BUILDING, SUBTRACT 1/3 OF (1 + 2 + 3) = ( )
6. IF BUILDING IS AUTOMATICALLY SPRINKLERED, SUBTRACT 1/10 OF (1 + 2 + 3) = ( )

GPM TOTAL REQUIRED _____

GPM AVAILABLE _____

GPM EXCESS OR (NEEDED) _____

COMMENTS _____

_____

**V. OTHER PROTECTION**

A.S. □ F.D. CONNECTION STDP. □

EXTINGUISHE □ _____

OTHE □ _____

(NOTE ON DIAGRAM AS APPROPRIATE)

HOUSEKEEPING: GOOD □ FAI □ POOR □

SPECIAL HAZARDS/LOCATION/CONTROLLED (YES/NO)

* _____/_____/_____
* _____/_____/_____
* _____/_____/_____
* _____/_____/_____

## VI. TACTICAL CONCERNS

RESCUE:

HIGHLY POPULATED AREAS _____

NEED FOR _____

INVALIDS _____

HOW TO ACCOMPLISH _____

FORCIBLE ENTRY/VENTILATION:

ACCESS POINTS _____

_____

LOCKING METHODS _____

FORCING METHODS _____

BLIND OPENINGS _____

FALSE CEILINGS/COCKLOFTS _____

POSSIBLE FIRE TRAVEL ROUTES _____

_____

METHODS TO CONTROL FIRE TRAVEL _____

_____

POTENTIAL MAN-TRAPS/DROP-OFFS _____

_____

ROOF LEVEL: CONSTRUCTION CONCERNS _____

NOTE ON DRAWING: SCUTTLE HOLES _____ SKYLIGHTS ____PENTHOUSE ____

HEAVY OBJECTS _____ PARAPETS ____ VENTS ____

OTHER _____

COMMENTS _____

ADJOINING STRUCTURE USE _____

_____

_____

LOCATION/TYPE OF: (INCLUDE ON DRAWINGS)

STAIRWAYS _____

ELEVATORS (E) _____

FIRE ESCAPES _____

EVACUATION CONCERNS _____

_____

SALVAGE NEEDS _____

_____

**VII. POTENTIAL NONFIRE**

HAZARDOUS MATERIALS ☐ FLOOD ☐ WINDSTORM/TORNADO ☐

VEHICL ☐ SNOW ☐

EARTHQUAKE ☐ E ☐ _____

_____

EMERGENCY MEDICAL NEEDS _____

_____

**VII. GENERAL**

## IX. BUILDING

PLOT (SHOW RELATIONSHIPS OF BUILDING, STREET, EXPOSURES, WATER SUPPLY) FLOOR (SHOW FOR EACH FLOOR: ROOMS, WALLS, DOORS, KEY ACCESS POINTS) ROOF (SHOW LOCATION OF ALL OBJECTS) TACTICAL (SHOW TACTICAL APPROACH TO INCIDENT)

**MIX AND MATCH TO SHOW BEST**


# APPENDIX 13

# RISK ASSESSMENT BY PLANNING ZONE SAMPLE REPORT

**Planning Area 11**

**FIRE-RESCUE RISK LEVEL – MEDIUM**

This planning area in the East portion of the Township is comprised of primarily single family houses of frame construction, ranging from approximately 1,200 square feet to 1,800 square feet. The Westwood Shopping Center is also located in this Planning Area, as is the Westwood Farms Swim Club (with a 1-story ordinary construction structure), several small commercial properties, a church, and the Westwood Farms Elementary School (a 1 story non-combustible school building) which houses some 456 students. This is an extremely dense housing area, with small dwellings and small lots. There are some 411 housing units. The Westwood Shopping Center is comprised of a 30,000 square foot grocery store and several smaller stores, all of which are sprinklered. There is a diagram for the Westwood Shopping Center, but no pre-emergency plan has been developed. There are several small streams determined to be of no significance in this Planning Area, as well as St. James Cemetary and John Phillips Sousa Park. A water supply

**There is one target fire hazard in this Planning Area.**

1. **The CSX Rail Line presents numerous challenges such as rail accidents and brush fires to name the most common. A Local Emergency Planning Commission Survey and Analysis was not available for review, nor was it known if one was completed, yet should be to understand the types of rail cars traversing the township and the probability of a related incident. The CSX Railroad crosses the coverage area east to west with freight and Regional Rail commuters (average daily riders 13,000) rail line runs north and south. While Regional Rail is technically not in the Township,**

**There are no non-fire target hazards in this Planning Area.**

Planning Area 11's Fire Rescue Risk Level is rated MEDIUM based on the following empirical and anecdotal data.

1. Historically, this Planning Area experiences between 1 and 5% of total fire service responses each year which places it in the MEDIUM risk level.
2. The population density for this area is 1,142 as compared to an average of 551 per Planning Area.
3. There are no significant fire threats in this Planning Area, however, the density of housing and related population, water supply deficiencies identified by ISO, and the location of a significant size elementary school present a greater than average probability for

A pre-emergency plan should be prepared for

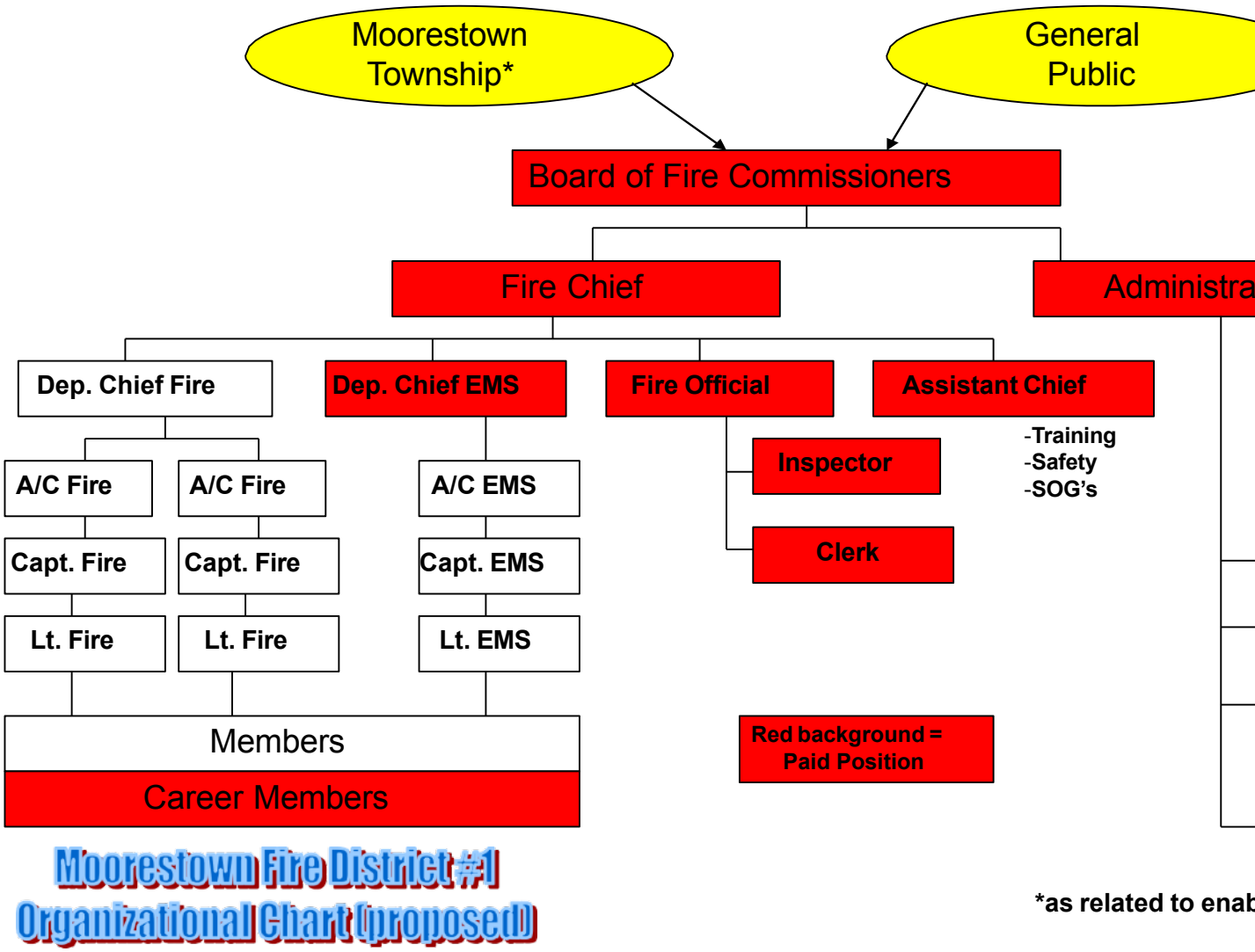
- Westwood Shopping Center
- CSX Rail Line

Additional required resources (needed water supply, apparatus type and number, staffing levels and patterns, unique hazards and the method to manage the hazard, and mutual aid) for the target hazards identified are indicated in specific response dispatch procedures. Copies are attached.

THIS INFO IS THEN INDICATED ON A MUNICIPAL MAP WHICH RELATES THE RISK LEVEL TO OTHER PORTIONS OF THE COMMUNITY. AN OVERLAY TO A WATER SUPPLY MAP SHOWING DEFICIENT AREAS, AS WELL AS AREAS WHERE STRUCTURES REQUIRE LADDERING OR EXCESS STAFFING REQUIREMENTS ARE

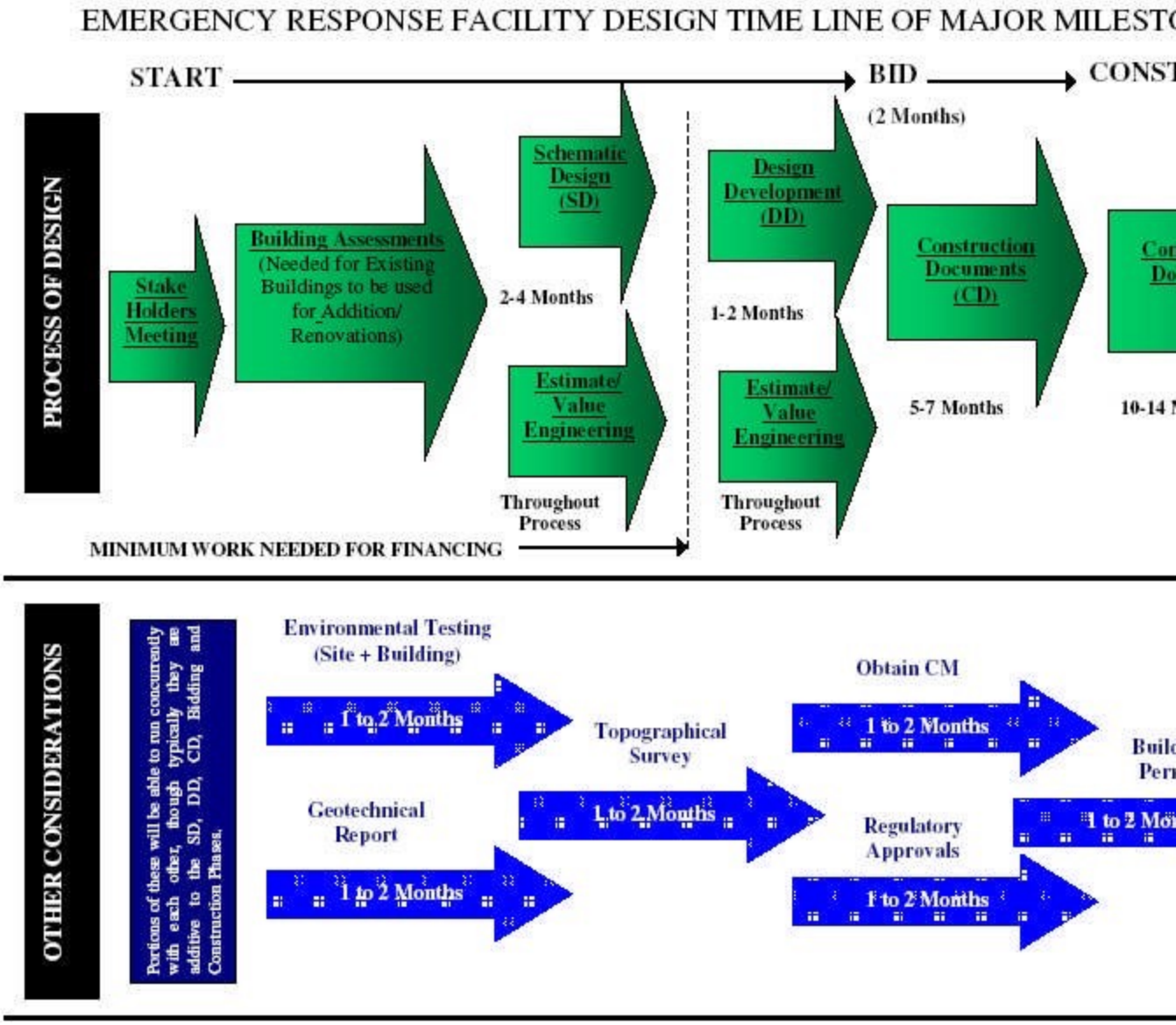

# APPENDIX 14

# ORGANIZATION CHART (PROPOSED)


Moorestown Township*
General Public
Board of Fire Commissioners
Fire Chief
Administra
Dep. Chief Fire
Dep. Chief EMS
Fire Official
Assistant Chief
-Training
-Safety
-SOG's
A/C Fire
A/C Fire
A/C EMS
Inspector
Capt. Fire
Capt. Fire
Capt. EMS
Clerk
Lt. Fire
Lt. Fire
Lt. EMS
Members
Career Members
Red background = Paid Position
Moorestown Fire District #1
Organizational Chart (proposed)
*as related to enab


# APPENDIX 15

# STATION CONSTRUCTION TIMELINE


EMERGENCY RESPONSE FACILITY DESIGN TIME LINE OF MAJOR MILESTO
START
BID
CONST
(2 Months)
PROCESS OF DESIGN
Stake Holders Meeting
Building Assessments (Needed for Existing Buildings to be used for Addition/ Renovations)
2-4 Months
Schematic Design (SD)
Estimate/ Value Engineering
Throughout Process
1-2 Months
Design Development (DD)
Estimate/ Value Engineering
Throughout Process
Construction Documents (CD)
5-7 Months
10-14
MINIMUM WORK NEEDED FOR FINANCING
OTHER CONSIDERATIONS
Portions of these will be able to run concurrently with each other, though typically they are additive to the SD, DD, CD, Bidding and Construction Phases.
Environmental Testing (Site + Building)
1 to 2 Months
Topographical Survey
1 to 2 Months
Geotechnical Report
1 to 2 Months
Obtain CM
1 to 2 Months
Regulatory Approvals
1 to 2 Months
1 to 2 Mo


# APPENDIX 16

# RISK MANAGEMENT PLAN

## RISK MANAGEMENT PLAN
## MOORESTOWN FIRE DISTRICT NO. 1

| Area of Concern | Risk Management Provider | Deductible / Expensed Item** | Level of Coverage |
|---|---|---|---|
| Life Insurance | VFIS Trust | | $250,000 |
| Accident and Sickness Insurance | VFIS Trust | | $500 Weekly Income first 28 days $500 maximum weekly amount after 28 days |
| Disability Insurance | Not available for Fire District Staff | | |
| Workers' Compensation Insurance | Public Alliance Insurance Coverage Fund | | Please see attached Coverage Summary |
| Buildings and Contents Insurance | VFIS | $500 | $1,707,830 for 261 West Main/$1,003,018 for 222 Chester Av<br>$168,154 Blanket Contents Limit |
| Automobile | VFIS | $500 | $1,000,000 Bodily Injury, Uninsured/Underinsured/Personal Injury Protection included/$10,000 Medical payments each person/Automobile Schedule attached |
| Portable Equipment | VFIS | $500 | Replacement Costs (Guaranteed) |
| General Liability | VFIS | | $1,000,000 Each Occurrence, Personal & Advertising Injury, Fire Damage Legal Liability/$5,000 Medical Expense each person<br>$3,000,000 General Aggregate and Products/Completed |
| Management Liability | VFIS | | $1,000,000 Each Occurrence or Wrongful Act/$3,000,000 Aggregate/$5,000 Defense Expense for Injunctive Relief |
| Umbrella Liability | VFIS | | 5,000,000 Each Occurrence/$10,000,000 Annual Aggregate |
| Antique Auto Policy | J.C. Taylor Antique Auto | | $500,000 Each Accident Liability/$35,000 Each Accident for Underinsured and Uninsured |
| Fidelity Bond | VFIS | | $50,000 Public Employees Blanket and Treasurer |

# AUTOMOBILE SCHEDULE

| Veh. No. | Year & Make | ACV | Agreed Value | Comp Ded | Coll Ded |
|---|---|---|---|---|---|
| | | | | | |
| 1 | 2004 Pierce Aerial | | $700,000 | $500 | $500 |
| 2 | 1998 Pierce Pumper LDH | | $500,000 | $500 | $500 |
| 3 | 1987 Pierce Pumper LDH | | $400,000 | $500 | $500 |
| 4 | 1982 Ford Brush Vehicle | | $150,000 | $500 | $500 |
| 5 | 1994 Pierce Pumper LDH | | $450,000 | $500 | $500 |
| 6 | 2004 Pierce Pumper LDH | | $500,000 | $500 | $500 |
| 7 | 2002 Pierce Rescue Heavy | | $500,000 | $500 | $500 |
| 8 | 2003 Ford PPT | X | N/A | $100 | $500 |
| 9 | 1996 Chevy PPT | X | N/A | $500 | $500 |
| 10 | 2003 Chevy PPT | X | N/A | $100 | $500 |
| 11 | 2002 Chevy PPT | X | N/A | $100 | $500 |
| 12 | 1999 Chevy PPT | X | N/A | $500 | $500 |
| 13 | 2004 Ford Service | X | N/A | $500 | $500 |

**PUBLIC ALLIANCE INSURANCE COVERAGE FUND**
**2006 COVERAGE SUMMARY**

**PROPERTY SUMMARY**

| COVERAGE | 2005-06 PROGRAM JIF/MEL/ LEXINGTON |
|---|---|
| ***Statewide Shared Limits:*** | ***Excess of $250,000 SIR:*** |
| Per Occurrence Limit | $1,000,000 |
| Flood (Wholly or partially inside Special Flood Areas of 100 year flooding) | $1,000,000 Per Location |
| **Flood (Inside/Outside)Annual Aggregate** | **$50,000,000** |
| Earthquake (Annual Aggregate) | $50,000,000 |
| Demolition and Increased Cost of Construction | $10,000,000 |
| Valuable Papers & Records | $10,000,000 |
| Extra Expense | $10,000,000 |
| Accounts Receivable | $10,000,000 |
| Business Interruption (Revenue Producing Properties) | $2,000,000 |
| Transit (Per occurrence/disaster) | $250,000 |
| Fine Arts (Owned/Non-Owned) | $100,000 |
| Pollution Cleanup (Annual Aggregate) | $100,000 |
| Asbestos Cleanup (Annual Aggregate) | $25,000 |
| ***Additional Property Coverages:*** | |
| Builders Risk (subject to reporting) | $15,000,000 |
| Autos, Contractors Equipment & Misc. Equipment | Included |
| Leasehold Interest and Rents | $15,000,000 |
| Debris Removal | 25% of loss, No more than $15,000,000 |
| Newly Acquired Locations subject to 90 reporting | $10,000,000 |
| EDP & Communications Equipment | Included |
| Real & Personal in Care, Custody, Control | Included |
| Commandeered and Impounded Property | Included |
| Miscellaneous Unnamed Location | $2,500,000 |
| Rehabilitation's (subject to reporting) | Included |
| Vacant/Unoccupied (subject to reporting) | Included |
| Personal Property Off Premises | Included |
| Other Owned Property* | Included |
| Service Interruption – Property Damage (excluding overhead transmission & distribution lines) | $5,000,000 |
| Service Interruption – Time Element (excluding overhead transmission & distribution lines) | $1,000,000 |
| Service Interruption – PD & Time Element (excluding overhead transmission & distribution lines) | $1,000,000 within 1,000 feet of insured premises |
| Ingress/Egress | $2,500,000 or 30 days whichever is less |
| Acts of Terrorism | Included |
| **Cyber Secure Coverage** | **$1,000,000 Annual aggregate Sub-limit $100,000 per member deductible** |
| ***Property Deductibles:*** | |
| Member Entity Per Occurrence Deductible | $1,000 (or $500) |
| Auto Physical Damage Deductible | Same |
| Earthquake Deductible | Same |
| Flood Deductible (Outside Special Flood Areas of 100 year flooding) | Same |
| Flood (Wholly or partially inside Special Flood Areas of 100 year flooding) | $500,000 Building per Location** $500,000 Contents per Location** |
| Windstorm Named Storm **Wind and Flood** | $1,000 See Summary Below |

| | |
|---|---|
| ***JIF Retentions: All Limits are in Addition to the Retention*** | |
| Member Joint Insurance Fund | $50,000 |
| MELJIF | $200,000 excess $50,000 |
| ***Other:*** | |
| Perils Insured Against | All Risk of Physical Damage Except on Piers, Wharfs, Pilings & Docks |
| Piers, Wharfs, Pilings, Docks | Fire & Extended Coverage |
| Coinsurance | None |
| **Valuation:** | |
| Buildings, Contents, EDP Machinery, Equipment, Misc. Equipment | Replacement Cost, if replaced<br>Actual Cash Value, if not replaced |
| Auto and contractors equipment Physical Damage | Actual Cash Value |
| Fire Trucks/Emergency Transport Vehicles (15 years Or less) | Replacement Cost*** |
| Vacant/Unoccupied (Subject to reporting) | Replacement Cost, if replaced |
| Business Interruption | Actual Loss Sustained |
| Valuable Papers | Cost to repair or replace, otherwise, Actual Cash Value |
| ***Additional Terms:*** | |
| Watercraft over 26 feet and Aircraft | Excluded |
| Underground Piping beyond a 1,000 feet of a pumping station, process plants, metering pits, wells and similar locations, which are owned, leased, used, occupied or intended for use by the member entity | Excluded |
| Underground electric, data voice, digital, fiber optic or similar cable beyond 1,000 feet of covered locations owned by the member town | Excluded |
| Underground gas pipelines | Excluded |
| Underground storage tanks & associated systems incl. piping | Excluded |
| Year 2000 | Excluded |
| Ordinary Payroll – Business Interruption | Excluded |
| Data Distortion/Corruption | Excluded |
| Loss Adjustment Expenses (cost to prepare proof of loss) | Excluded |
| Mold and Fungus | Excluded |
| Land including ocean sand | Excluded |
| Overhead transmission and distribution lines and associated equipment of the member entity beyond 1,000 feet except as scheduled by endorsement under the policy | Excluded |

* Including, but not limited to items such as flagpoles, signs, fences, monuments, scoreboards, bleachers/grandstands, lifeguard shacks, lights, retaining walls, traffic lights, antennas, bridges, tunnels, satellite dishes and street signs.

** Coincides with maximum available Federal Flood Program coverage limits. Does not apply to mobile equipment, vehicles, pistol ranges and pumping stations.

*** Fire trucks/emergency transport vehicles over 15 years at actual cash value, unless refurbished and approved by the JIF – then replacement cost.

**2005-06 "NAMED STORM" WIND AND "NAMED STORM" FLOOD DEDUCTIBLES**

**Locations:** In Ocean, Monmouth and Burlington Counties located east of the Garden State Parkway; in Atlantic County located within 5 miles of the ocean and all locations in Cape May County.

**Deductible: 1%** of the total insurable value at all covered locations reporting loss of damage in the loss subject to a maximum deductible of 1,000,000 per occurrence for all covered locations.

**Locations:** In Ocean, Monmouth and Burlington Counties located west of the Garden State Parkway; in Atlantic County located more than 5 miles from the ocean and all locations in the remaining counties, except Cape May County as noted above.

**Deductible:** $1,000 (JIF Retention $50,000; MELJIF Retention $200,000 xs $50,000)

**Location means the definition contained in the Lexington policy form.**

**PUBLIC ALLIANCE INSURANCE COVERAGE FUND**
**2006 COVERAGE SUMMARY**

**PUBLIC OFFICIALS/EMPLOYMENT LIABILITY SUMMARY (continued)**

*Public Officials and Employment Liability – For member entities with unfavorable loss experience, the deductible with an approved LC/RMP program increases to a $35,000 deductible per occurrence and the deductible without an approved LC/RMP program increases to a $70,000 deductible per occurrence. This applies to members that reported 3 or more POL/EPL claims during the period of 2000 to 2004 and incurred a loss ratio greater than 200%.

**Where both monetary and no-monetary damages are sought, the MEL will defend the claim for monetary damages if it meets the other terms of the policy and the MEL may provide up to $10,000 for the defense of the non-monetary "injunctive relief" element of the claim. If the community decides not to grant the non-monetary relief, the coverage for monetary relief will also be subject to an overall limit of $100,000.



| MEL'S PUBLIC OFFICIALS LIABILITY COVERAGE<br>PRIOR ACTS COVERAGE |
|---|

| | |
|---|---|
| 1. | Any member with five (5) years or more of continuous membership gets full prior acts. |
| 2. | New member or an existing member (with less than 5 years of continuous service) with an expiring policy providing full prior acts will get full prior acts from MEL. |
| 3. | New member or an existing member (with less than 5 years continuous service) with an expiring policy providing less than full prior acts, MEL will honor its current retroactive date or provide one (1) year, whichever is greater. |

| MEL'S EMPLOYMENT LIABILITY COVERAGE<br>PRIOR ACTS COVERAGE |
|---|

| | |
|---|---|
| 1. | All current members through 12/31/96 will have a uniform retroactive date of 10/1/93. The members respective retention and coinsurance contribution in effect at the time the claim is made will apply. This is based on whether or not the member has an approved loss control/risk management plan in place. |
| 2. | All new members on or after 1/1/97 with prior Employment Liability coverage will have a retroactive date that is the same as the date of membership. All new members with no prior coverage will have the higher retention and higher coinsurance percentage until their loss control/ risk management program is submitted and approved. See enclosed for retention and coinsurance amounts. |

## 2006 COVERAGE SUMMARY

### BOILER & MACHINERY SUMMARY

| ***Statewide Shared Limits:*** | **2005-05 PROGRAM LEXINGTON (Reinsured by Hartford Steam Boiler)** |
|---|---|
| Property Damage Any One Accident | $100,000,000 |
| Demolition | $10,000,000 |
| Ordinance and Law | $1,000,000 |
| Computer Equipment | $10,000,000 |
| Ammonia Contamination | Included in Perishable Goods |
| Expediting Expense | $1,000,000 |
| CFC Refrigerants | $1,000,000 |
| Extra Expense (100% 1st Month) | $1,000,000 |
| Perishable Goods | $1,000,000 |
| Business Interruption (Revenue Producing) | $2,000,000 |
| Hazardous Substances | $500,000 |
| Excavation | $50,000 |
| Off Premises Property Damage | $250,000 |
| Service Interruption | Covered in BI |
| ***B&M Deductibles:*** | |
| Deductible – each accident | $3,500 |
| Deductible – Business Interruption | 24 Hours |
| ***JIF Retention:*** | |
| Member Joint Insurance Fund | None |
| MEL JIF | None |
| ***Coverage:*** | |
| Mechanical Breakdown to Insured Objects | Extended Comprehensive Coverage |
| Policy Form | Endorsement to Lexington manuscript policy form |
| ***Valuation:*** | |
| Property Damage | Repair or Replacement |
| Business Interruption | Actual Loss Sustained |
| Coinsurance | None |
| ***Additional B&M Coverage:*** | |
| Connected Ready for Use | Included |
| Omnibus Location Endorsement | Included |
| Fire Fighting & Rescue Equipment Extension | Included |
| Ensuing Loss for Electrical Damage to Electrical Objects from Named Perils | Excluded |
| Cost of Operating Certificates | Included |
| Safety & Loss Control Inspections | Included |
| ***Additional Terms:*** | |
| Year 2000 | Excluded |
| Trickle Filters | Included |
| Rotating Biological Contractor | Included |
| Collapse, Upset of Crane, etc. | Excluded |
| **Combustion Explosion Coverage** | **Included** |
| ***Other:*** | |
| Loss Adjustment Agreement | Not Applicable |
| Notice of Cancellation | 90 Day |

**PUBLIC ALLIANCE INSURANCE COVERAGE FUND**
**2006 COVERAGE SUMMARY**

| | |
|---|---|
| Quasi Entities – Where approved by the local JIF | Included |

**PUBLIC OFFICIALS/EMPLOYMENT LIABILITY SUMMARY**

| COVERAGE | 2006 JIF PROGRAM |
|---|---|
| ***Per Occurrence CSL for:*** | $2,000,000 **(Limits available up to $6,000,000)** |
| Public Officials Liability | ***Excess of the retention*** |
| Employment Liability | |
| ***POL & EPL Annual Aggregate for CSL for:*** | $2,000,000 **(Limits available up to $6,000,000)** |
| Public Officials Liability | ***Excess of the retention*** |
| Employment Liability | |
| ***Member Entity Retention:*** | |
| Public Officials* | $10,000 each loss |
| Employment Liability* | $10,000 with approved LC/RMP*<br>$50,000 without approved LC/RMP* |
| ***JIF Retention:*** | |
| Member JIF Retention | None |
| MEL JIF Retention | $2,000,000 |
| ***Coinsurance:*** | |
| Public Officials | 20% of 1st $100,000 of loss |
| Employment Liability | 20% of 1st $100,000 of loss with approved & certified LC/RMP<br>20% of 1st $2,000,000 of loss without approved & certified LC/RMP |
| ***Other:*** | |
| Defense Costs | Inside the Limit |
| Retention & Coinsurance | Eroded by Defense & Indemnity |
| Extended Reporting Period | 12 months @ 200% |
| Claims Made Policy | Yes |
| Pay on Behalf Policy | Yes |
| ***Prior Acts:*** | |
| Public Officials | See Next Page |
| Employment Liability | See Next Page |
| ***Additional Coverage:*** | |
| Fraud, Dishonesty, Criminal and Willful Violation | Defense of claim up to not after adverse judgment or adjudication |
| Non-monetary Relief – (SEE BELOW FOR WHEN MONETARY DAMAGES ARE SOUGHT & MEMBER REFUSES TO GRANT NON-MONETARY RELIEF**) | $10,000 per claim & $50,000 aggregate, where compensatory damages are sought |
| Mutual Assistance Agreements | Fire, First Aid, etc. |
| Separation of Insureds | Included |
| Acts of Terrorism | Included |
| ***Professionals:*** | |
| Auditor, Accountant and Engineer | Full Time Employed – Covered |
| Attorney | Full Time Employed – Covered, subject to guidelines & application |
| Fellow Employee | Excluded under the POL |
| ***Additional Employee Liability Coverages:*** | |
| Front Pay, Back Pay, Future Damages | Defense Only |
| ***Persons Insured:*** | |
| Elected, Appointed, Employed Officials | Past, Present, Future – Covered |
| Employees | Covered |
| Volunteers | Included under POL & EPL except under Title 34 Volunteers |
| Title 34 Volunteers | Covered under POL only |
| Persons Serving on Outside Entity Coverage | Included |
| Governing Body, Departments, Units | Included |
| Business/Special Improvement Districts | Included, where approved by MELJIF and the member JIF |

**PUBLIC ALLIANCE INSURANCE COVERAGE FUND**
**2006 COVERAGE SUMMARY**

**LIABILITY SUMMARY**

| COVERAGE | 2006 JIF PROGRAM |
|---|---|
| ***Limit Per Occurrence (CSL) for:*** | $5,000,000* |
| General Liability | |
| Automobile Liability | |
| Law Enforcement Professional | |
| Employee Benefits | |
| ***Annual Aggregate CSL for:*** | |
| All Coverages Except Auto Liability | $5,000,000 (Auto Liability Unaggregated) |
| ***Additional General Liability Coverages and Sublimits:*** | |
| Premises Operations | Included |
| Personal & Advertising Injury | Included |
| Independent Contractors | Included |
| Products/Completed Operations | Included |
| Contractual Liability | Included |
| Medical Malpractice | Emergency Response – Team(s) & Public Nurse only |
| Pollution from a Hostile Fire | Included |
| Host Liquor Liability | Included |
| Skateboard Facilities – Where approved by member JIF | $5,000,000 |
| Failure to Supply | $5,000,000 |
| Riot or Civil Commotion | $5,000,000 |
| Quasi Entities (I & II) | $5,000,000 |
| Quasi Entities (III & IV) Where approved by member JIF | $5,000,000 |
| Garage keepers Legal Liability | $2,000,000 |
| Disinfectant Agents Release Hazard | $1,000,000 |
| Fire Legal – Real Property | Included |
| Business /Special Improvements Districts – where approved by MELJIF and the member JIF | Included |
| Acts of Terrorism | Included |
| Mold and Fungi | $1,000,000 |
| Dam Liability Class III and IV – Annual Aggregate<br>- when not involved in the same occurrence as a Class I or II.<br>- When involved in the same occurrence as a Class I and II. | Premises/Existence Hazard – Included<br>Collapse hazard - $5,000,000<br>Collapse hazard - $1,000,000 |
| Dam Liability Class I and II – Annual Aggregate | Premises/Existence Hazard – Included<br>Collapse Hazard - $1,000,000 |
| Subsidence | BI – Included; PD - $2,000,000 Sub-Limit<br>($1,000,000 excess $1,000,000 subject to reinsurance statewide annual aggregate of $2,000,000) |
| Sewer Back Up | BI – Included; PD - $2,000,000 Sub-Limit<br>($1,000,000 excess $1,000,000 subject to reinsurance statewide annual aggregate of $2,000,000) |
| Lead, Asbestos and Pollution Liability | Excluded |
| **Nursing Homes** | **Excluded** |
| ***Retentions:*** | |
| Member Entity Liability Deductible | None |
| Member Joint Insurance Fraud | **$200,000** |
| MEL JIF | **$800,000** |



**PUBLIC ALLIANCE INSURANCE COVERAGE FUND**
**2006 COVERAGE SUMMARY**

## LIABILITY SUMMARY (continued)

- **Option to purchase up to $20 million in layers of 2x5, 3x7, 5x10 and 10x10.**
- **Includes Member JIF and MELJIF Retention**

| | |
|---|---|
| ***Other General Liability Coverages:*** | |
| Good Samaritan | Included |
| Fellow Employee | Excluded, except for emergency volunteers |
| 911 (Dispatchers) Liability | Included |
| Owned and Non-owned Watercraft | Less than 50ft. in length or commandeered |
| Volunteers to Governing Body | Included |
| ***Additional Auto Liability Coverages:*** | |
| Bodily Injury & Property Damage | Included |
| Uninsured/Underinsured Motorist | $15,000/$30,000 |
| Personal Injury Protection | $250,000 |
| Medical Expense Benefits | $10,000 |
| Owned, Non-owned, Hired | Included |
| Fellow Employee | Excluded, except for emergency service volunteers |
| Garage Liability | Included |



## NON-OWNED AIRCRAFT LIABILITY SUMMARY

| COVERAGE | 2006 JIF PROGRAM |
|---|---|
| Statewide Limit Each Occurrence CSL for Bodily Injury & Property Damage | $5,000,000 |
| Deductible | None |
| Acts of War & Terrorism including TRIA | Included |

**PUBLIC ALLIANCE INSURANCE COVERAGE FUND**
**2006 COVERAGE SUMMARY**

**WORKERS' COMPENSATION SUMMARY**

| COVERAGE | 2006 JIF PROGRAM |
|---|---|
| Coverage A – Workers' Compensation | Statutory |
| Coverage B – Employers Liability | $5,000,000 |
| USL&H Coverage | $1,000,000 Occ/$3,000,000 Aggregate incidental exposure only, |
| Jones Act Coverage | $1,000,000 Occ/$3,000,000 Aggregate incidental exposure only, |
| Other States Coverage, except monopolistic states | Included |
| Member Entity Retention | None |
| Member Joint Insurance Fund Retention | **$200,000** |
| MEL JIF Retention | **$800,000** |
| Acts of Terrorism | Included |

**CRIME SUMMARY**

| COVERAGE | 2006 JIF PROGRAM |
|---|---|
| Forgery or Alteration Coverage B | $1,000,000 |
| Theft, Disappearance and Destruction on/Off Premises Coverage C | $1,000,000 |
| Robbery & Safe Burglary Coverage D | $1,000,000 |
| Employee Dishonesty Coverage O | $1,000,000 |
| Faithful Performance | Included in Coverage O |
| Deductible Each Loss | $1,000 |
| Member Joint Insurance Fund Retention | $50,000 |
| MEL JIF Retention | $950,000 excess $50,000 |
| ***Other – Employee Dishonesty*** | |
| Employees (non-statutory) | Included |
| Court Employees (non-statutory) | Included |
| Volunteers | Included |
| Treasurer | Excess of Statutory Requirement to $1,000,000 |
| Tax Collector | Excess of Statutory Requirement to $1,000,000 |
| Any other Positions Required by Statute to be individually bonded | Excess of Statutory Requirement to $1,000,000 |
| Non-compensation Officials & Officers | Included |
| ERISA Plan Coverage | Included |

This coverage summary is for informational purposes only. It does not alter, amend or change your coverage. Please refer to the specific policies for actual limits, terms, conditions and exclusions.
Revised 1/20/06-


# APPENDIX 17

# WATER SUPPLY MAP

# FIRST DRAFT 07-07

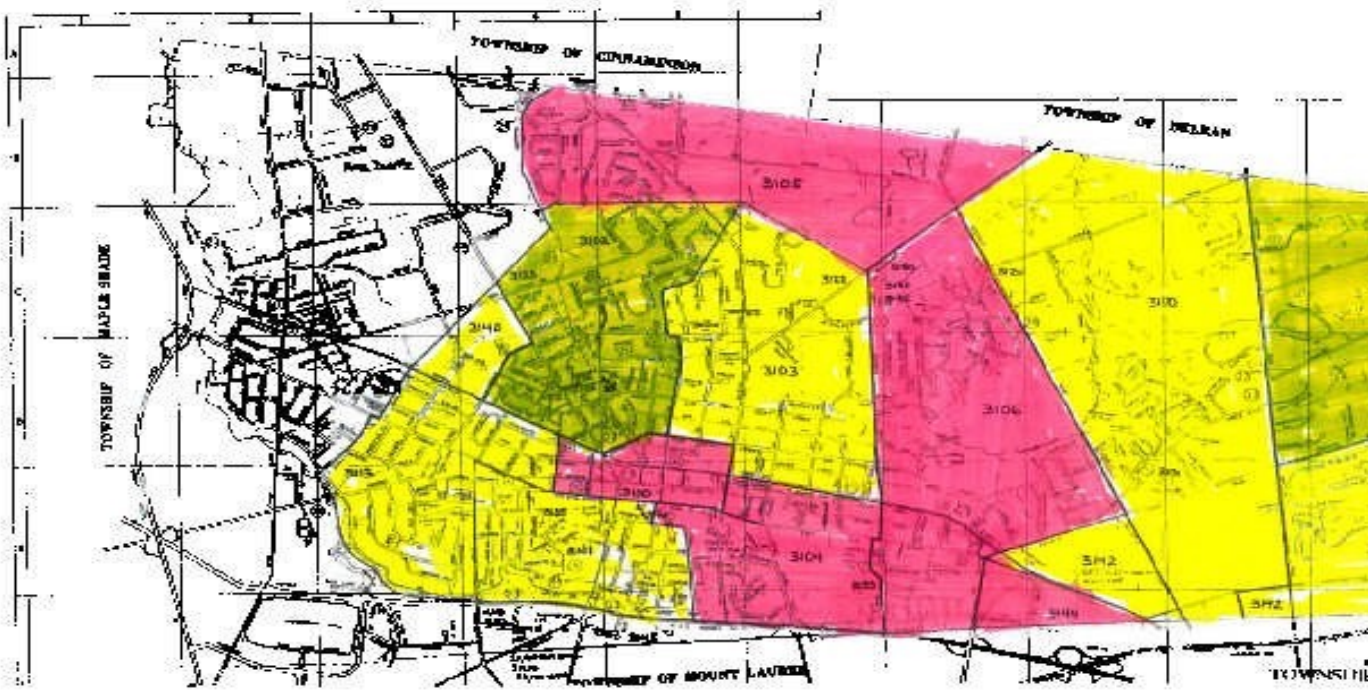
## WATER SUPPLY MAP

This reflects an assessment of the water supply for fire protection, based on reports provided by the fire de

Good = Water available, adequacy for risks posed is predictable

Fair/Suspect = Water available, adequacy depends on time of day and gpm required for a specific p

Poor = Determined inadequate for fire protection demand, based on study by Insurance Services O




# DRAFT #3 05-06

Summary of Recommendations


# APPENDIX 18

# RESPONSE ACTIVITY MAPS

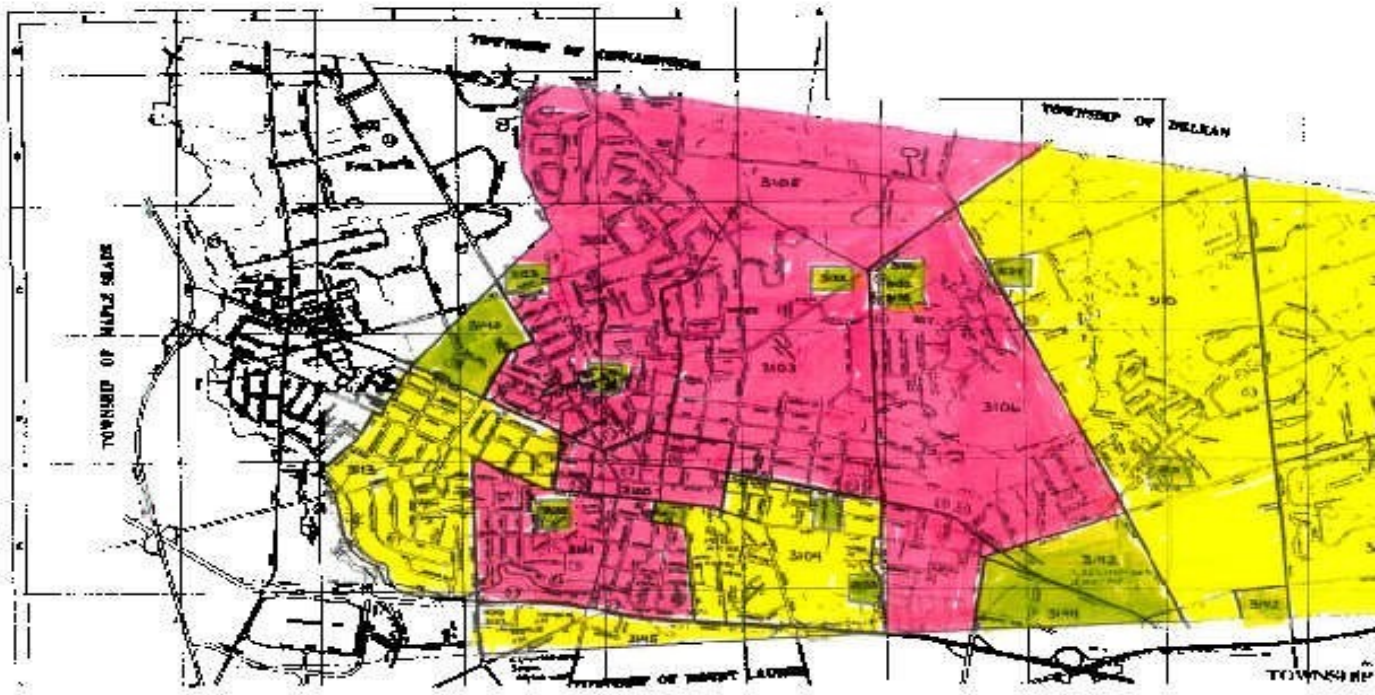
# DRAFT #2 08-07

## INCIDENT RESPONSE MAP - 2005

Less than 2% of all incident responses to this response zone

2.1% to 4.9% of all incident responses to this response zone

5% or more of all incident responses to this response zone



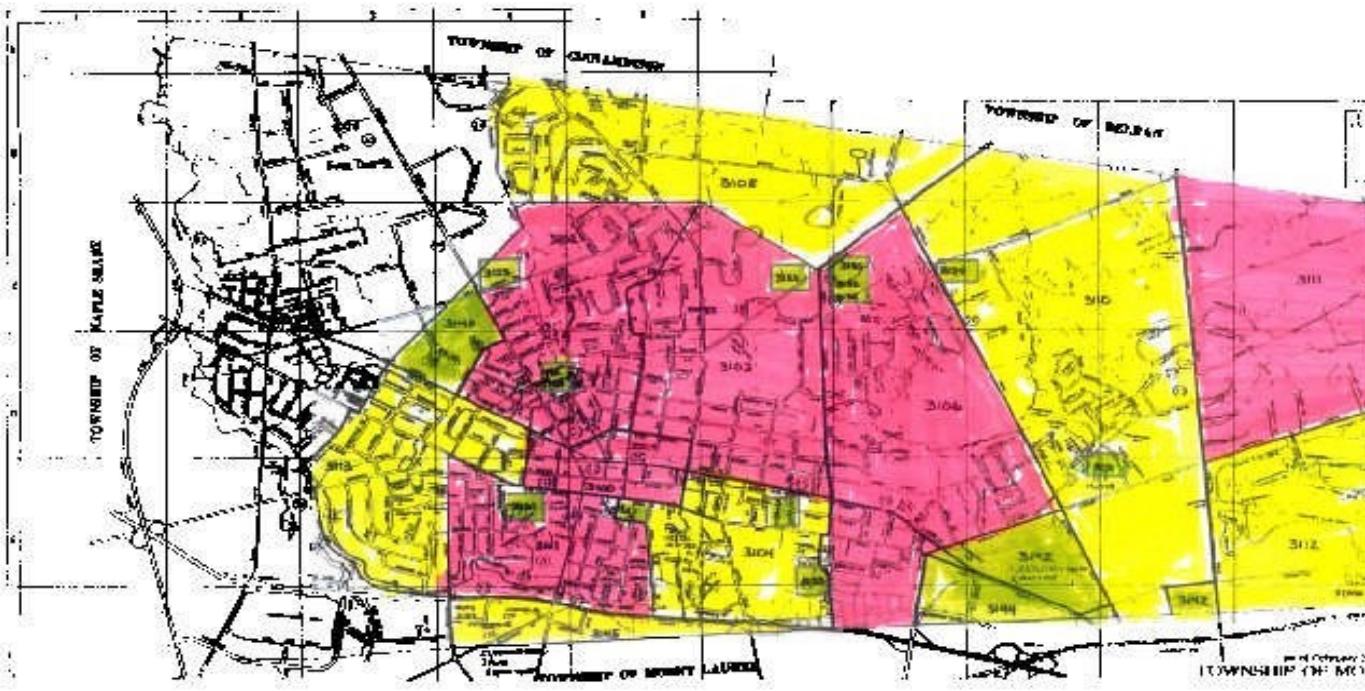
# DRAFT #2 08-07

## INCIDENT RESPONSE MAP - 2006

Less than 2% of all incident responses to this response zone

2.1% to 4.9% of all incident responses to this response zone

5% or more of all incident responses to this response zone

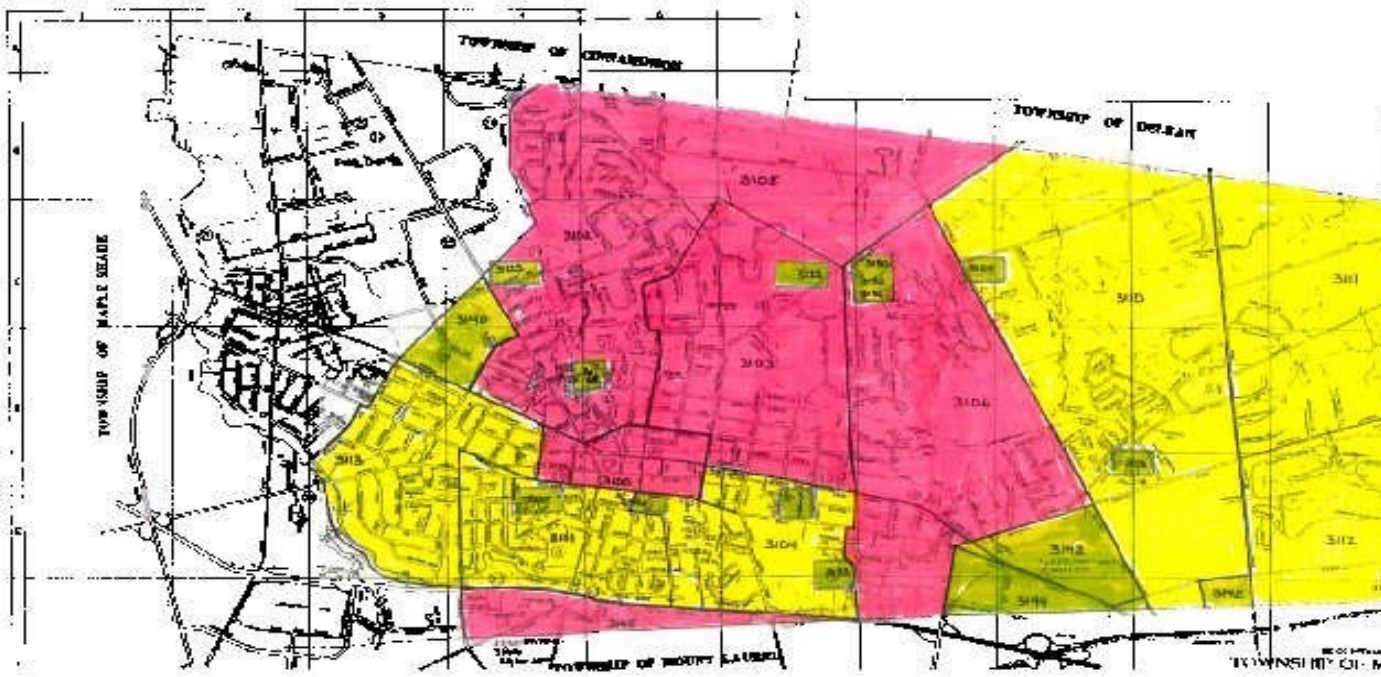


## INCIDENT RESPONSE MAP – 2007 THROUGH 6 MONTHS

Less than 2% of all incident responses to this response zone

2.1% to 4.9% of all incident responses to this response zone

5% or more of all incident responses to this response zone




# APPENDIX 19

# COMPREHENSIVE RISK ANALYSIS

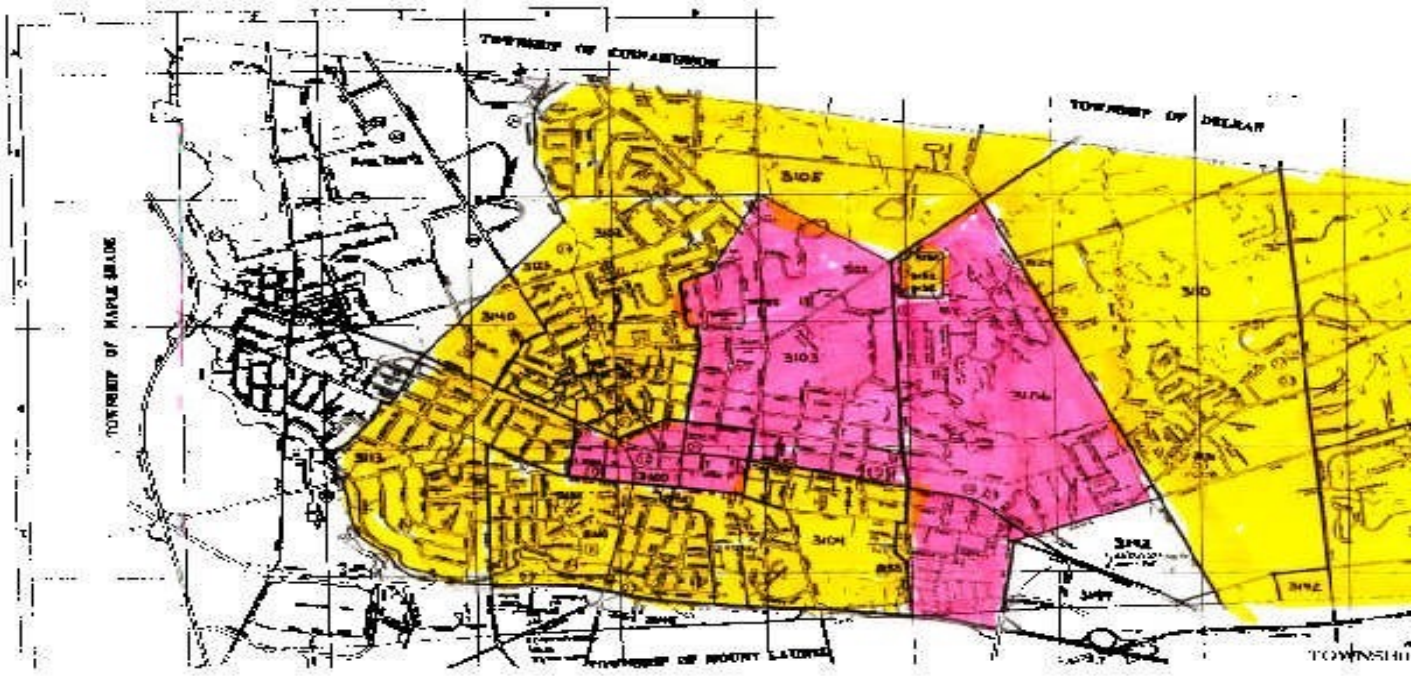
## COMPREHENSIVE RISK ANALYSIS BY PLANNING ZONE

This reflects an assessment of current risk of the properties in response zones, based on fire/non-fire risk posed a

Low = Low to medium population density, low fire response, good to fair water supply, low risk propertie

Average – Medium to high population density, medium fire response, good to fair water supply, medium

High = High population density, high fire response, fair to poor water supply, high risk properties




# APPENDIX 20

# FIRE STATION INSPECTION FORM

VFIS

## SELF-INSPECTION FORM
## FOR EMERGENCY SERVICE ORGANIZATION BUILDING & GROUNDS

**IMPORTANT:** Periodic inspection of your organization's buildings and grounds can alert you and your maintenance staff to hazards which may cause damage and accidents to your buildings and those who use it. This form is provided for periodic self-inspection and is recommended for use on a quarterly basis to assist you in discovering hazards before an accident can occur. Correct all negative conditions immediately.

This self-inspection form does not intend to point out all hazards and exposures which may be found at your building. It is intended to be used as a guide to highlight major areas of exposure which are common to most emergency service organization buildings. The use of this form does not warrant that all hazards will be found and corrected.

INSTRUCTIONS: Please check Yes, No or NA (not applicable) answers to all questions below. All "No" answers indicate an area of unsatisfactory conditions and comment regarding same should be made in the space provided on the back of this form. Use a separate sheet for each building.

**NAME OF ORGANIZATION:**_____

**BUILDING LOCATION:** _____
(Street Number) (City)

_____
(County) (State) (Zip Code)

**NAME OF INSPECTOR:**_____ **DATE OF INSPECTION**_____

* * *

### SECTION I-GROUNDS

1. Are parking areas, walkways, stairs, driveways, etc. free from conditions that may cause slipping or falling?
   ☐ YES ☐ NO ☐ NA
2. Is exterior lighting adequate in all areas?
   ☐ YES ☐ NO ☐ NA
3. Are all exterior stairs provided with handrails which are in good condition?
   ☐ YES ☐ NO ☐ NA
4. Are exterior fire escapes in good condition?
   ☐ YES ☐ NO ☐ NA
5. Is exterior storage of trash and rubbish at least 25 feet away from the building?
   ☐ YES ☐ NO ☐ NA
6. Are daily inventory records kept for your underground fuel storage tank to insure that there is no leakage?
   ☐ YES ☐ NO ☐ NA

### SECTION II-INTERIOR DOORS AND STAIRWAYS

1. Are all exit doors properly marked?
   ☐ YES ☐ NO ☐ NA
2. Are all exit doors easily accessible?
   ☐ YES ☐ NO ☐ NA
3. Do all exit doors open outward?
   ☐ YES ☐ NO ☐ NA
4. Are all exit doors equipped with panic hardware?
   ☐ YES ☐ NO ☐ NA
5. Are all doors easily opened and closed?
   ☐ YES ☐ NO ☐ NA
6. Are all doorways and areas adjacent to them free of obstructions?
   ☐ YES ☐ NO ☐ NA
7. Are full length, clear glass doors and windows properly identified?
   ☐ YES ☐ NO
8. Do all interior stairs have anti-slip treads?
   ☐ YES ☐ NO ☐ NA
9 Are stairway and exit doors kept. closed at all times?
   ☐ YES ☐ NO ☐ NA
10. Do all interior stairways have property secured hand rails?
   ☐ YES ☐ NO ☐ NA
11. Are interior stairways kept free of storage and obstructions at all times?
   ☐ YES ☐ NO ☐ NA
12. Are interior stairways properly lighted?
   ☐ YES ☐ NO ☐ NA

(reference-NFPA #101 Life Safety Code)

13. Is the emergency lighting system tested on a monthly basis?
   ☐ YES ☐ NO ☐ NA
14. Is the emergency power generator tested on a weekly basis?
   ☐ YES ☐ NO ☐ NA

### SECTION III-HEATING AND AIR CONDITIONING EQUIPMENT

1. Has heating equipment been thoroughly inspected by a qualified service man within the past year?
   ☐ YES ☐ NO ☐ NA Service Date_____
2. Is heating equipment (including flues and pipes) properly insulated from combustible materials?
   ☐ YES ☐ NO ☐ NA
3. Are heating and air conditioning equipment rooms free of storage?
   ☐ YES ☐ NO ☐ NA
4. Are heating and air conditioning rooms restricted areas
   ☐ YES ☐ NO ☐ NA
5. Is air conditioning equipment cleaned and serviced annually?
   ☐ YES ☐ NO ☐ NA

### SECTION IV- ELECTRICAL EQUIPMENT & CONTROL PANELS

1. Has the electrical system been inspected within the past five years by a certified electrician or electrical inspector?
   ☐ YES ☐ NO ☐ NA
2. Are electrical panels always kept closed?
   ☐ YES ☐ NO ☐ NA
3. Are electrical panels always kept clear of storage and obstructions?
   ☐ YES ☐ NO ☐ NA
4. Is circuitry adequate to handle load demand (not requiring frequent fuse replacement or circuit breaker resetting)?
   ☐ YES ☐ NO ☐ NA
5. Was electrical system installed by a competent electrician?
   ☐ YES ☐ NO ☐ NA
6 Is electrical system regularly maintained by a competent electrician?
   ☐ YES ☐ NO ☐ NA
7. Are all electrical appliances properly grounded and cleaned?
   ☐ YES ☐ NO ☐ NA
8. Are electric motors adequately ventilated to prevent overheating and are they cleaned regularly?
   ☐ YES ☐ NO ☐ NA
9. Are proper size electrical cords used and are they in good condition?
   ☐ YES ☐ NO ☐ NA

(reference-NFPA #70 National Electric Code)

## SECTION V-KITCHEN EQUIPMENT-COMMERCIAL TYPE

1. Is all commercial cooking equipment protected as recommended by NFPA #96?
   ☐ YES ☐ NO ☐ NA
2. Is hood and duct exhaust system installed according to NFPA #96 guidelines?
   ☐ YES ☐ NO ☐ NA
3. Are grease filters U.L. listed for grease extraction and installed according to NFPA #96?
   ☐ YES ☐ NO ☐ NA
4. Are the hood and duct system cleaned at least on a semi-annual basis?
   ☐ YES ☐ NO ☐ NA
5. Are the kitchen appliance protected with an automatic fire extinguishing system?
   ☐ YES ☐ NO ☐ NA
6. Is the fire extinguishing system serviced and inspected at least on a semi-annual basis?
   ☐ YES ☐ NO ☐ NA

## SECTION VI-HOUSEKEEPING

1. Are storage and supply rooms kept clean and orderly?
   ☐ YES ☐ NO ☐ NA
2. Are trash and rubbish stored in metal containers?
   ☐ YES ☐ NO ☐ NA
3. Are all flammable items (paint, lacquer, paint thinner, etc.) kept in safety containers and stored in approved metal cabinets?
   ☐ YES ☐ NO ☐ NA
4. Are adequate ash trays and metal waste receptacles provided in each room?
   ☐ YES ☐ NO ☐ NA
5. Are only non-flammable cleaning agents used throughout the entire building?
   ☐ YES ☐ NO ☐ NA
6. Is ready disposal of combustible wastes provided?
   ☐ YES ☐NO ☐NA
7. Are areas used for public meetings or other functions always thoroughly checked before securing?
   ☐ YES ☐ NO ☐ NA
9. Are rags, cloths, etc. used in cleaning stored in an approved, self- closing metal container?
   ☐ YES ☐ NO ☐ NA

## SECTION VII-FIRE PROTECTION

1. Are all the fire extinguishers tagged, serviced and inspected annually?
   ☐ YES ☐ NO ☐ NA
2. Are all fire extinguishers tagged with latest service record and inspection date?
   ☐ YES ☐ NO ☐ NA
3. Are fire extinguishers located within 75 feet from any point on each floor?
   ☐ YES ☐ NO ☐ NA
4. Are extinguishers property protected from damage and freezing?
   ☐ YES ☐ NO ☐ NA
   (reference NFPA #10)
5. Is building protected with smoke/heat detection system?
   ☐ YES ☐ NO ☐ NA
6. Is smoke/heat detection system tested and inspected on a monthly basis?
   ☐ YES ☐ NO ☐ NA
   (reference NFPA #72E)
7. Is there a two inch drain test performed on the sprinkler system on a quarterly basis?
   ☐ YES ☐ NO ☐ NA

**COMMENTS:** (If an explanation is needed for the above questions, please comment below. If any "NO" block is checked, indicate action taken and date to be corrected.)

| SECTION NUMBER: | ITEM NUMBER: | ACTION TAKEN: | CORRECTION BY: | DATE CORRECTED: |
|---|---|---|---|---|
| | | | | |
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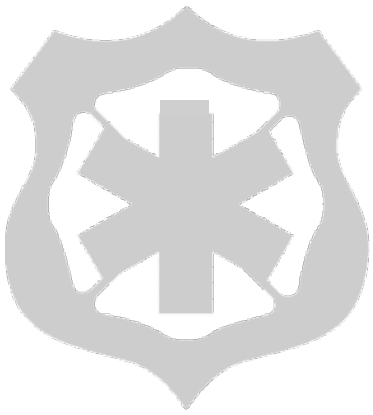

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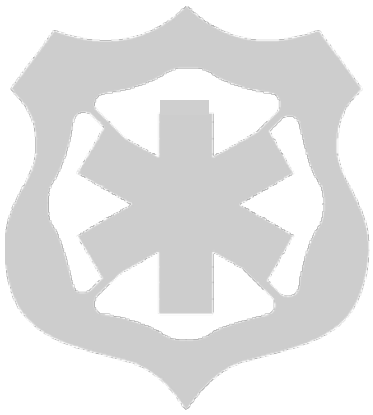
# CONSULTING TEAM

# Consulting Team

**William F. Jenaway, Ph.D., CFO, Associate, Project Member.**
Dr. William F. Jenaway, CFO, CFPS will serve as Project Manager for this engagement. Dr. Jenaway if the CEO of ESECG and currently serves as the Chief of Fire and Rescue Services in King of Prussia, Pennsylvania; as well as being Chairman of the municipality's Fire and Rescue Services Board. Chief Jenaway's department is the only all volunteer Accredited Fire Service Agency in the US. Fire Chief Magazine named him the "Volunteer Fire Chief of the Year" in 2001. Bill's background includes 30-plus years of volunteer fire and EMS experience. Over the life safety issues. He holds Certified Fire Protection Specialist and Certified Fire Officer designations as well. For the past three years he has served on the Presidential/Congressional Commission known as the "Advisory Panel to Assess preparedness for Terroristic Acts Involving Weapons of Mass Destruction" (a/k/a Gilmore Commission). Dr. Jenaway also serves as President of the Congressional Fire Services Institute.

**Daniel B.C. Gardiner, M.S., CFPS, Consultant, Project Manager.**
Daniel B.C. Gardiner retired as the Chief of the Department of Fire-Rescue Services, in Fairfield, Connecticut, serving there for 31 years. Fairfield is a combination (career and volunteer) fire/EMS department. Prior to his appointment as Chief, he was the department's Budget Control Officer, in charge of a budget of over eight million dollars. He redesigned the budget system currently used in the Town of Fairfield, and has been a frequent contributor to other communities financial reorganizations. Chief Gardiner holds a Bachelor's Degree in Fire Science and holds two Masters Degrees, one in Public Administration and one in Fire Science Technology, from the University of New Haven, Connecticut. Chief Gardiner has been extensively involved in managing and conducting assessment center activities for various positions throughout the Northeast. He has also provided testimony before numerous fire commissions, boards of inquiry and study panels, in addition to serving on a number of review boards as well. An author of a number of fire service texts and articles, Chief Gardiner edited the book, *Managing Fire Department Operations*, and co-authored the best selling text, *Fire Protection in the 21st Century*. Now serving his fifth term as a Director of the Certified Fire Protection Specialist Board, Chief Gardiner speaks nationally on fire protection, and fire service finance.

**Robert Drennen, M.S. CFPS, Consultant Project Member.**
Robert Drennen is the Director of the St. Joseph's University Public Safety and Environmental Protection Master's Degree Program. Within this program Mr. Drennen directs the students' development and the course program. Research papers of the students serve to broaden the perspective of Mr. Drennen and his team in the development of new techniques and procedures for fire service. Under the direction of Mr. Drennen, St. Joseph's worked with Dr. Jenaway in the development of an efficient and effective model for businesses to utilize in the preparation, prevention, response and recovery to emergencies as well as projects for the National Volunteer Fire Council involving volunteer recruitment, retention and cost savings. Mr. Drennen holds a Masters Degree, and is a retired Chief Officer of the Philadelphia Fire Department, and currently



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