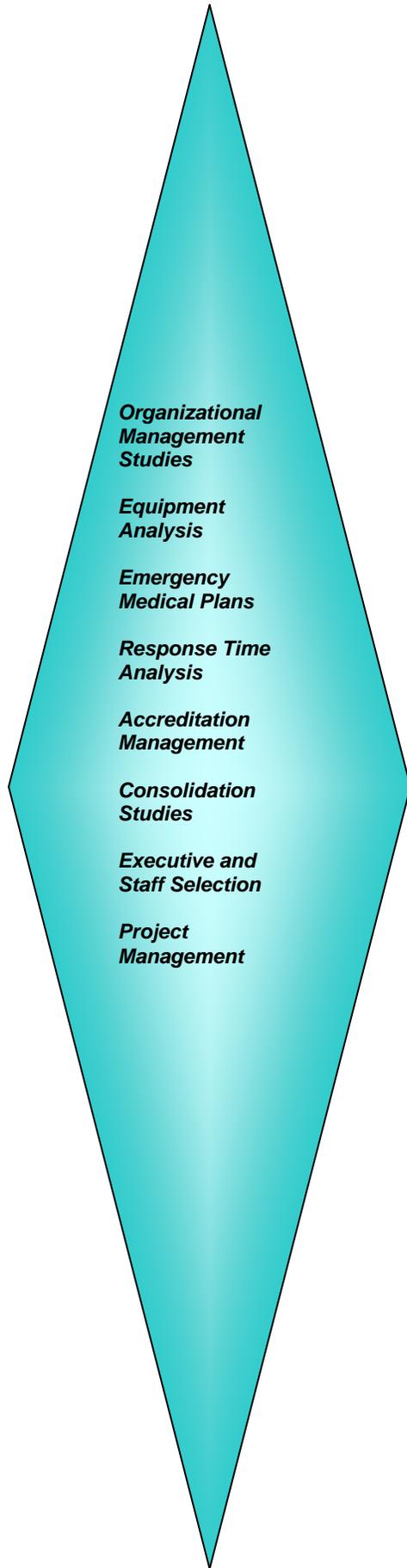


# Town of Clayton



*Organizational  
Management  
Studies*

*Equipment  
Analysis*

*Emergency  
Medical Plans*

*Response Time  
Analysis*

*Accreditation  
Management*

*Consolidation  
Studies*

*Executive and  
Staff Selection*

*Project  
Management*

# **FIRE RESPONSE TIME ANALYSIS STUDY**

**RW Management Group, Inc.  
1295 Appleton Rd., Suite 2  
Menasha, WI 54952  
Phone – 920.727.1000  
Fax – 920.727.1003  
RWManagementGroup.com**



**CLAYTON-WINCHESTER FIRE DEPARTMENT  
FIRE DEPARTMENT RESPONSE TIME STUDY**

**TABLE OF CONTENTS**

<b>Chapter</b>	<b>Page Number</b>
<b>1. Introduction</b> .....	1.1
Project Overview .....	1.1
Project Work Tasks .....	1.6
Overview of the Current Demographics and Environment .....	1.7
<b>Study</b> Structure .....	1.8
<b>2. Operational Recommendations</b> .....	2.1
Operational Overview and Recommendations .....	2.1
Governance and Administration .....	2.1
Assessment and Planning .....	2.3
Goals and Objectives .....	2.4
Financial Resources .....	2.5
Programs .....	2.6
Physical Resources .....	2.7
Human Resources .....	2.10
Training and Competency .....	2.11
Essential Resources .....	2.12
External System Relations .....	2.13
Additional Recommendations .....	2.15
<b>3. Implementation Plan by Priority</b> .....	3.1
Year One .....	3.1
Year Two .....	3.2
Year Three .....	3.3
<b>4. Estimated Budget</b> .....	4.1
Project Budget .....	4.1
Benefits .....	4.1
<b>5. Management Summary</b> .....	5.1
Project Overview .....	5.1
Recommendations .....	5.2
Operational Recommendations .....	5.3
Implementation Plan by Year .....	5.7
Benefits .....	5.9
<b>6. Glossary</b> .....	6.1
<b>7. Attachment A - RHAVE and Community Risk Assessment     for Volunteer Fire Departments</b>	



## CLAYTON-WINCHESTER FIRE DEPARTMENT FIRE DEPARTMENT RESPONSE TIME STUDY

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### CHAPTER 1 – INTRODUCTION

#### ***Project Overview***

The Town of Clayton, who are served by the Clayton-Winchester Fire Department (Department), determined the need to conduct a Fire Department Response Time Study. The purpose of the study was to evaluate options for improving response time, including the construction of a new fire station.

The Fire Department Response Time is made up of several components. Response times are measured starting when the call is dispatched to when on-scene crews have established the resources for initial attack. All of the components must be performed in a safe and organized, as well as timely, manner. The components of response time include:

- The time for firefighters to reach the station and the apparatus
- The travel time for the apparatus to reach the scene
- Size-up and Scene Assessment
- Set-up and activities needed to safely proceed with initial attack

The significant factor in the travel time for the apparatus to reach the scene is the drive distance. Road conditions, driver training, equipment type and condition, and station access also affect this time. The time involved in Size-up, Assessment, and set-up for initial attack are significantly influenced by the effectiveness and efficiency of the Fire Department.

A very basic organization evaluation was conducted for the purpose of evaluating the effectiveness and efficiency of the Clayton-Winchester Fire Department. This review is based upon the following references:

- Center for Public Safety Excellence (CPSE)
- Wisconsin Statute 101, Department of Commerce – Regulation of Industry, Buildings and Safety Administrative Code Chapter 30
- National Fire Protection Association (NFPA) 1720, Standard of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer Fire Departments

This evaluation resulted in findings and recommendations relating to the organizational structure, physical facilities, policies and procedures, major equipment, budgeting and human resources of the Department. The review process was based on the Center for Public Safety Excellence (CPSE) criteria and included the following categories:

- **Governance and Administration**
- **Assessment and Planning**
- **Goals and Objectives**
- **Financial Resources**



## CLAYTON-WINCHESTER FIRE DEPARTMENT FIRE DEPARTMENT RESPONSE TIME STUDY

---

### CHAPTER 1 – INTRODUCTION

- **Programs**
- **Physical Resources**
- **Human Resources**
- **Training and Competency**
- **Essential Resources**
- **External System Relations**

Also used for evaluating effectiveness and efficiency, and response times, were Wisconsin Statute 101, Department of Commerce – Regulation of Industry, Buildings and Safety Administrative Code, more specifically s. 101.055, Public Employee Safety and Health The Wisconsin Department of Commerce Administrative Code Chapter 30 outlines minimum standards for employee Health and Safety. Following are some of the major components of Comm. 30.

- The Fire Department shall have an “Occupational Safety and Health Committee”
- The Fire Department shall have a Safety Position
- The Fire Department shall maintain records related to training, accidents, injuries, and known or suspect exposures of toxics or contagious diseases
- The Fire Department shall provide training, including Incident Command
- Training shall be overseen by the Fire Chief or another appointed person, who has National Fire Academy (NFA) 12-hour “Instructional Techniques for Company Officers” or equivalent
- Establishes Wisconsin Technical College System (WTCS) training was a minimum training prior to actively participating in structural firefighting (reference: NFPA 1001)
- Establishes WTCS training was a minimum training to be obtained within 12 months of being appointed as a pumper or aerial operator (reference: NFPA 1002)
- Fire Department vehicles, depending on age, shall meet NFPA 1901
- The Fire Department shall provide Protective Clothing and training for its proper use (reference: NFPA 1971)
- The Fire Department shall provide and required the use of Self-Contained Breathing Apparatus (SCBA) and provide training for its proper use
- The Fire Department shall adopt and maintain a respiratory protection program per 29 CFR 1910.134 as adopted by reference in Comm. 32



## CLAYTON-WINCHESTER FIRE DEPARTMENT FIRE DEPARTMENT RESPONSE TIME STUDY

### CHAPTER 1 – INTRODUCTION

- The Fire Department shall provide any firefighter using a SCBA a functioning Personal Alert Safety System (PASS) meeting NFPA 1982
- The Fire Department shall use life safety ropes, harnesses, and hardware that meet NFPA 1983
- The Fire Department shall provide eye and face protection as appropriate per 29 CFR 1910.133 as adopted by reference in Comm. 32
- The Fire Department shall provide hearing protection as appropriate at levels in excess of 90 dBA, per 29 CFR 1910.95 as adopted by reference in Comm. 32
- The Fire Department shall establish an incident command system which has written guidelines. (Compliant with National Incident Management System requirements)
- The Fire Department shall use a standard system to identify and account for fire fighters
- Interior structural firefighting, beyond incipient stage, requires 2 in and 2 out be used
- Fire Department Facilities and Structures shall comply with Comm. 32, and s. 61 to 65
- The employer shall make sure that fire fighters are physically able to do duties that may be assigned to them
- The Fire Chief shall not, without a physicians' certificate of fitness, allow fire fighters with known heart disease, epilepsy, or emphysema to participate in emergency operations
- A Fire Fighters Assistance Referral Program for alcohol or substance abuse, stress and personal problems, shall be available. The use of municipal and county programs is acceptable
- Hazardous Materials operations shall comply with 29 CFR 1910.120 as adopted by reference in Comm. 32
- Confined Space operations shall comply with 29 CFR 1910.146 as adopted by reference in Comm. 32
- Diving operations shall comply with 29 CFR 1910 Subpart T as adopted by reference in Comm. 32
- Miscellaneous hazardous operations shall comply with Comm. 30.14, 29 CFR 1910.134, and any other applicable 29 CFR 1910 and 29 CFR 1926 standards, as adopted by reference in Comm. 32

A key standard is NFPA 1720, Standard of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer Fire Departments, 2004 Edition. The first addition of this benchmark standard was issued in 2001. It provides an organized approach to defining levels of service, deployment capabilities, and staffing levels for volunteer fire departments.



## CLAYTON-WINCHESTER FIRE DEPARTMENT FIRE DEPARTMENT RESPONSE TIME STUDY

---

### CHAPTER 1 – INTRODUCTION

This addition also contains minimum requirements for managing resources and systems, such as health and safety, incident management, training, communications, and pre-incident planning. Additional NFPA standards incorporated by reference include:

- NFPA 472 – Standards for Professional Competence of Responders to Hazardous Materials Incidents,
- NFPA 1221 - Standards for the Installation, Maintenance, and Use of Emergency Services Communications Systems,
- NFPA 1500 – Standard for Fire Department Occupational Safety and Health Program,
- NFPA 1561 Standard on Emergence Services Incident Management.

NFPA 1720 - 2004, addresses Organization, Operations, and Deployment. NFPA 1720 strongly emphasizes pre-planning and establishing pre-determined response procedures and standard response assignments for dispatch and response. NFPA 1720 addresses command, the initial response, additional response groups, automatic aid, and mutual aid. It addresses functions and outcomes of service delivery, response capabilities, and resources. It also identifies requirements for managing resources and systems, including:

- Health and Safety
- Incident Management
- Training
- Communications
- Pre-planning

Some specifics of NFPA 1720 include:

- Identification of minimum staffing requirements to ensure sufficient members to operate safely and effectively
- Table 4.3.2: Staffing and Response Times:
  - Demographics of less than 500 people per sq. mile, require a response of 6 firefighters available for initial attack with a response time of 14 minutes or less for at least 80% of the incidents
  - Demographic of 500 - 1000 people per sq. mile, require a response of 10 firefighters available for initial attack with a response time of 10 minutes or less for at least 80% of the incidents
- Incident Commander
  - One Individual
  - Responsible for overall coordination and direction of activities
  - Ensure personnel accountability
- Company Officer
  - Responsible for each member of their crew/company



## CLAYTON-WINCHESTER FIRE DEPARTMENT FIRE DEPARTMENT RESPONSE TIME STUDY

### CHAPTER 1 – INTRODUCTION

- Initial Attack
  - Minimum of 4 firefighters before interior suppression operations at a working structural fire
  - 2 person teams are required in hazardous areas
  - 2 person team present for assistance/rescue, one individual may engage on other (non-critical) tasks, the other individual has “rescue” as focus (This is part of the Rapid Intervention Team concept or 2-in-2-out per 29 CFR 1910.120 and 29 CFR 1910.134)
  - Compliance with NFPA 1500 is needed – allows operations with less than 4 people
  - Must have capability to continue to past initial attack
- Safety and Health System per NFPA 1500
- Incident Management System per NFPA 1561, including training programs and policies and competency
- Communication Systems include standard protocols and meet NFPA 1221 and 1561
- Mutual Aid
  - Written agreements between external agencies/jurisdictions
  - Comprehensive procedures and training to ensure effective response and unified operations
  - Communications between command and officers/leaders

The December 2006 “Public Facilities Needs Assessment for Fire Station Impact Fees” by Foth & Van Dyke and Associates was included in the documentation reviewed for this study. Chapter 3 of the Foth report presents growth projections, indicating that additional population growth will occur on the East side of the Township. Chapter 4 of the report concludes that the existing station is not adequate, and that drive time from the existing (Larsen) station to areas of the Township does not allow for adequate response. The report also identifies the need for additional volunteers, vehicles, and equipment in the future as the population of the Township grows. Chapter 5 presents Capital Costs, Impact Fees, and the effects of the fees. The model fire station presented in the Foth report appears to be adequate for current needs, and is expandable to accommodate future needs.

The Foth & Van Dyke report uses the Insurance Services Office Rating Schedule (ISO) for a service level standard to evaluate response. While ISO does assess fire department response it has a limited focus. For that reason, RW Management Group, Inc. used NFPA 1720 to evaluate response capabilities, response time, and effectiveness and efficiency of the Department.



## CLAYTON-WINCHESTER FIRE DEPARTMENT FIRE DEPARTMENT RESPONSE TIME STUDY

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### CHAPTER 1 – INTRODUCTION

#### ***Project Work Tasks***

To complete the objectives set forth by the Town of Clayton, RW Management Group, Inc. (RW) evaluated the operations of the Department. RW met with firefighters from the Town of Clayton-Winchester Fire Department and gathered information regarding the needs and concerns of the members of the Department. RW met with the Chief Officers representing neighboring fire departments. RW also reviewed department facilities and equipment to further understand the relationship between the Department and the needs of the Town of Clayton

Following is an overview of the work tasks completed by RW during the project.

- Conducted an initial meeting with the Project Team to discuss project plans, establish liaison responsibilities and coordinate project schedules. The Project Team consists of:
  - Patti Purcell, Town of Clayton Fire Station Investigation/Research Committee
  - Craig Clark, Town of Clayton Administrator
  - Dean Mathison, Clayton-Winchester Fire Chief
- Obtained and reviewed documentation provided by the Department pertaining to this project
- Reviewed the department response area, fire equipment and station
- Reviewed questionnaires completed by 15 Clayton – Winchester firefighters
- Conducted interviews with
  - Craig Clark, Town Administrator
  - Dean Matheson, Clayton-Winchester Fire Chief
  - Mark Luebke, Chair, Town of Clayton Board
  - 4 Clayton-Winchester Firefighters
  - Chief Officers from several adjacent Fire Departments
- Prepared for and facilitated a project status meeting to discuss the results of the interviews and on-site observations with the Project Team and to review the next steps of the project
- Developed a basic needs analysis, utilizing the information provided by the documentation received, the interviews, and on site observations. The projected growth and level of service needs were considered during the development of these recommendations. Recommendations include:
  - Departmental organizational compliance
  - Present and future needs for planning
  - Significant policies and practices of the Department
  - Cooperative efforts with surrounding communities
  - The need for a new fire station on the east side of the district
  - Other issues identified during the analysis
- Facilitated a Recommendations Meeting to present preliminary recommendations and obtain feedback from the Project Team.



## CLAYTON-WINCHESTER FIRE DEPARTMENT FIRE DEPARTMENT RESPONSE TIME STUDY

---

### CHAPTER 1 – INTRODUCTION

- Listed and described the findings and recommendations of the Response Time Study, including service levels, policies and procedures, programs, and all other items evaluated and analyzed during the project.
- Assembled the **Study** document. Performed a detailed quality assurance review of the document to ensure that the document meets the expectations of the Town of Clayton and conforms to RW's standards.
- Prepared and delivered the draft **Study** to the Project Team for review. Facilitated a Report Delivery Meeting to review content as well as schedules and expectations for the remaining project steps.
- Facilitated a **Study** Review Meeting with the Project Team after initial delivery to answer questions regarding the content of the Plan. Made any changes to the Plan based on the discussions at the **Study** Review Meeting. Produced and delivered copies of the final document to the Project Team.
- Presented the findings and recommendations of the **Study** to the Board. .

### ***Overview of the Current Demographics and Environment***

The Clayton-Winchester Fire Department (Department) utilizes paid on call firefighters. The Department's coverage area encompasses the Townships of Clayton and Winchester. The land area is approximately 72 square miles. The Fire Response District (District) is located within Winnebago County.

The estimated population of the Fire District is 5,200 residents; 3,500 within the Town of Clayton. The area's growth has been primarily residential. The future growth plan also identifies areas for commercial and industrial growth. The current population density is less than 500 people per square mile. Future development may increase the population density to 500 to 1000 people per square mile in some areas.

The Department has a staffing limit of 40 personnel, and 38 active members. Currently, 21 of the members live within the Town of Clayton. The Department responds from two (2) Fire Stations. Station #44 is located in Winchester, and funded by the Town of Winchester. Station #43 is located in Larsen, and funded by the Town of Clayton. The Department's apparatus inventory includes: 2 engines, 2 tenders, 1 engine/tender combination, 1 command unit, 1 utility truck, and 1 grass rig. An engine, 2 tenders, and the utility truck are housed at the Larsen station. The approved 2008 budget for the Department included \$139,000 for operational costs. The Department responds to an average of 46 incidents per year in the Town of Clayton. The number of responses has remained consistent for the past 5 years This Study focuses on the resources supported by the Town of Clayton, including Station #43.



## CLAYTON-WINCHESTER FIRE DEPARTMENT FIRE DEPARTMENT RESPONSE TIME STUDY

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### CHAPTER 1 – INTRODUCTION

#### ***Fire Department Response Time Study Report Structure***

To present the findings and recommendations that resulted from the engagement, RW has prepared this document; commonly referred to as the ***Fire Department Response Time Study (Study)***. The Study includes RW's specific recommendations related to the Center for Public Safety Excellence Standards Categories, NFPA 1720, Wisconsin Department of Commerce Chapter 30, and Occupational Safety and Health Agency (OSHA) Code of Federal Regulations (CFR). The remainder of this report is structured as follows:

- Chapter 2 – Operational Recommendations: This chapter lists the findings and presents recommendations on the current and future issues associated with organizational aspects of the Department. This chapter contains the following sections:
  - Governance and Administration
  - Assessment and Planning
  - Goals and Objectives
  - Financial Resources
  - Programs
  - Physical Resources
  - Human Resources
  - Training and Competency
  - Essential Resources
  - External System Relations
- Chapter 3 - Implementation Plan: A phased implementation timetable for the RW recommendations made in the ***Study*** is presented.
- Chapter 4 – Estimated Budget and Benefits: Budget categories are presented, as well as a brief summary of tangible and intangible benefits.
- Chapter 5 – Management Summary: A summarized version of the ***Study*** is presented, highlighting RW's findings and recommendations.
- Chapter 6 – Glossary of Terms: A glossary of terms is presented for reference.



**TOWN OF CLAYTON, WISCONSIN  
FIRE DEPARTMENT RESPONSE TIME STUDY**

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**CHAPTER 2 – OPERATIONAL RECOMMENDATIONS**

### ***Operational Overview and Recommendations***

As stated earlier, the objectives for this project included RW staff evaluating the need for a new fire station, determining the effectiveness and efficiency of the Fire Department, and to present recommendations to the Township. This section summarizes the evaluation of the Department's present fire operational workflow and processes. Furthermore this document presents the recommendations relating to potential organizational and operational requirements. This review was based on the Center for Public Safety Program Criterion and the sections are outlined based on the accreditation categories.

### ***Governance and Administration***

RW performed an evaluation of the legal formation, agency administration and organizational structure of the department and has made recommendations for future operations.

### **Findings**

Governance and Administration of the Clayton - Winchester Fire Department is the legal responsibility of the *Townships of Clayton – Winchester Joint Fire Board*. The responsibilities of Joint Fire Board, and its officers, include:

- The approval of rules, regulations and procedures governing the operations of the Department,
- Ensuring the Fire Chief fulfills the responsibilities of the position,
- Being responsible for all funds and securities, and
- Keeping documentation and records, and posting notices.

The Department appears to be administered as a private corporation, with the election of officers, including a Secretary and Treasurer, from the membership of the Department by the firefighters. This appears to be a conflict with its status as a municipal fire department that is governed by the Joint Fire Board.

The Clayton - Winchester Fire Department, per the *Townships of Clayton – Winchester Joint Fire Board By-Laws Amended and Updated January 2002*, is a municipal (town) fire department, also known as a public sector fire department, having been established under Wisconsin Statutes 60.29 (18) and 60.29 (20). Therefore the activities of the Fire Department are the responsibility of the involved Towns. Both the Joint Fire Board and the Fire Department are regulated by WI s. 101.055, outlining Public Health and Safety. The Wisconsin Department of Commerce Administrative Code Chapter 30 outlines minimum standards for employee Health and Safety.



**TOWN OF CLAYTON, WISCONSIN  
FIRE DEPARTMENT RESPONSE TIME STUDY**

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**CHAPTER 2 – OPERATIONAL RECOMMENDATIONS**

The Joint Fire Board By-Laws reference sections 60.29 (18) and 60.29 (20) Wisconsin Statutes. This document was “revised and drafted in February 1983 by Att. Robert Torgerson from the original by-laws of Apr. 18, 1945.” The 1981 – 1982 WI Statutes contain 60.29 (18) and 60.29 (20). The 1983 Wisconsin Act 532 significantly affected Chapter 60. Statutes 60.29 (18) and 60.29 (20) were revised to 60.55 and 60.555 and 60.557. The exact details were not reviewed. The electronic version of the 2005 – 2006 electronic data base, updated through Feb 2008 and 2007 Wis. Act 54 were used as reference for this **Study**.

The Joint Fire Board By-Laws, January 2002, defines the purpose of the Clayton-Winchester Fire Department to “provide fire protection to the residents of the Towns of Clayton and Winchester with all the powers granted to town fire departments under Sections 60.29 (18) and 60.29 (20) Wisconsin Statutes.”

The Department is governed and administered by a Joint Board of 6 people, 3 supervisors from both Town of Clayton and Town of Winchester. The Joint Board meets quarterly. The Bi-Laws were revised by the Joint Fire Board in 2002. The Firefighters Rules and Policies were amended January 2008.

The firefighters elect a Chief in January of each year. The Joint Board can terminate a Fire Chief with a majority vote. Upon termination of a Fire Chief, the firefighters have the opportunity to elect a replacement. If the election process is unsuccessful, the Joint Board may assign a Fire Chief until the following January election. The Fire Chief is responsible to the Joint Board, but shall communicate through the President except at Joint Board meetings.

Rules, regulations, and standard operating procedures governing emergency and non-emergency operations are subject to approval by the Joint Board. The drafting and presenting of such to the Joint Board is the responsibility of the Fire Chief.

In accordance with *Townships of Clayton – Winchester Joint Fire Board By-Laws Amended and Updated January 2002*, a 2/3 majority vote is required to amend the by-laws. Also a 2/3 majority vote at 2 successive regularly scheduled meetings may dissolve the department. If the department is dissolved ½ of the assets shall be distributed to each Township.

Each Township is required to furnish a Fire Station for the storage of Fire Vehicles and Equipment. The station shall be kept in good repair and fitted for the proper care of such vehicles and equipment.

### **Recommendations**

- Fire department activities are the responsibility of the involved Towns, and shall be governed through the Joint Board. A thorough understanding by the Board of s. 60.55, and Comm. 30 will help the Board ensure compliance with applicable regulations and rules essential to department operations.



**TOWN OF CLAYTON, WISCONSIN  
FIRE DEPARTMENT RESPONSE TIME STUDY  
CHAPTER 2 – OPERATIONAL RECOMMENDATIONS**

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- The Joint Fire Board has significant authority granted by statute to regulate the administration and operations of the fire department. A more detailed understanding of the responsibilities of the Board with respect to management of the Fire Department is needed. Some of the responsibilities of the Joint Fire Board include:
  - Ensuring proper administration at both the Board and Department levels.
  - Responsible for job descriptions, qualifications and hiring processes for the administration as well as other members of the fire department.
- Procedures should include job descriptions that outline qualifications and credentials required to select the Fire Chief.

### ***Assessment and Planning***

RW staff reviewed documentation of the area's characteristics, fire incident data and response data for the Department. The following findings and recommendations are based on planning concerns and risk management criteria that will impact critical outcomes and provide for the basic operational needs to complete the mission of the Department. The risk management and planning criteria utilized in this study were selected to address the mission of the Department. The outcomes from these recommendations are intended to provide the basic needs to allow department personnel an opportunity to conduct activities consistent with the mission of the Department.

### **Findings**

The lack of documented risk assessment, standard of cover, and planning hinders the development and guidance of the Joint Fire Board and the Department because progress cannot be tracked or measured.

The Clayton-Winchester Fire Department has an Insurance Service Office (ISO) rating of 6 within 5 road miles of a station and a rating of 10 for locations more than 5 road miles from either of the stations. The last ISO review was conducted in 2002.

The Department has not conducted a formal risk assessment while a standard of cover strategy has not been established.

Water in the rural areas is supplied by tenders, dry hydrants, ponds, water at gravel pits, rivers/creeks and mutual aid.

The Department does not have a written strategic long-range plan. A strategic plan should cover stations, vehicles and personnel for the next ten (10) years.



**TOWN OF CLAYTON, WISCONSIN  
FIRE DEPARTMENT RESPONSE TIME STUDY**

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**CHAPTER 2 – OPERATIONAL RECOMMENDATIONS**

### **Recommendations**

- The Department should complete an All Hazards Risk Assessment and develop response strategies. Information relating to Risk, Hazard and Value Evaluation (RHAVE) and Community Risk Assessment for Volunteer Departments is included in the **Study** as Appendix A.
- A Standard of Response coverage strategy should be established utilizing the All Hazard Risk Assessment document.
- The Department should take the next step in the planning process and develop a strategic plan for the next ten (10) years. This plan should include specific information relating to Department development during that time period. The plan should identify the processes to achieve the goals, what mechanism will be utilized to track progress, and how progress will be measured. The completed plan should be approved by the Fire Board.

### **Goals and Objectives**

RW performed an evaluation of the overall mission, goals, and objectives of the Department, and has made recommendations for future operations.

### **Findings**

The Department does not have a written vision or mission statement, department goals, or written objectives to meet established goals.

The administrative structure of the Department should reflect the vision and mission statement of the department, as well as the defined goals and objectives of the department. The administrative structure should be defined through an organizational chart.

### **Recommendations**

- The Department should establish a vision and mission statement and then develop goals and objectives based on this mission statement. A management process should be developed to implement these goals and objectives. The Board should approve the vision and mission statement, as well as the goals and objectives.
- An annual review of the department goals and objectives should be completed and reviewed by the Joint Board.



**TOWN OF CLAYTON, WISCONSIN  
FIRE DEPARTMENT RESPONSE TIME STUDY  
CHAPTER 2 – OPERATIONAL RECOMMENDATIONS**

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### ***Financial Resources***

RW reviewed the Department's budget practices. The findings and recommendations relating to the financial resources are listed in this section.

### **Findings**

The Clayton – Winchester Fire Department is financially supported by the Town of Clayton, the Town of Winchester, and fund raising activities of the members of the Department. The monies are managed through several different methods. Financial management methods were not reviewed as part of this study.

The Joint Board approves the yearly budget for the Fire Department. The budget is drafted by the members of the fire department and presented to the board by the Fire Chief, or other appointed person.

The Townships use equalized valuation to determine each Townships portion of the yearly budget costs of equipping, maintaining, and operating the Department. The current financial obligations are approximately 72% Clayton and 28% Winchester. The cost of major equipment, trucks, vehicles, etc., is shared on a 50 – 50 or equal basis.

The members of the Department are involved in a variety of fundraising activities. These funds are used for the purchase of equipment and other expenditures for the benefit of the Department, and are managed by the Department and not the Joint Fire Board.

The lack of written long term planning, goals or objectives does not allow for budget based performance measures.

### **Recommendations**

- The growth of the District will require future capital expenditures. These expenditures should be based on organizational objectives. The Department needs to develop a Capital Improvement Program to outline apparatus needs and other major capital equipment needs over the next ten years.
- A policy should be established for the development and implementation of the budget.
- The control and management of Department revenue and expenditures needs to be evaluated to insure compliance with both United States and Wisconsin regulations that includes fundraising activities.



**TOWN OF CLAYTON, WISCONSIN  
FIRE DEPARTMENT RESPONSE TIME STUDY**

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**CHAPTER 2 – OPERATIONAL RECOMMENDATIONS**

***Programs***

RW reviewed current Department programs to determine effectiveness and operational efficiencies. The following findings and recommendations are based on safety concerns and appropriate compliance standards. The findings are based upon criteria that will improve fire and safety outcomes, provide for the potential reduction of potential for loss of life and property damage.

**Findings**

***Fire Response***

The Department does not staff apparatus on a full time basis and utilizes paid on call response for all fire-rescue incidents.

The Department does not have a Standard of Cover for emergency deployment. A Standard of Cover outlines response time, pumping capacity, or apparatus and equipment deployment objectives.

The apparatus are equipped for structural firefighting, water supply, extrication and rescue. The vehicles are checked for call readiness on a regular basis.

The Department does not have written Standard Operating Guidelines (SOG's).

Responding units and personnel do not utilize the Incident Command System (ICS) for all responses.

Written procedures for establishing and utilizing Rapid Intervention Teams (RIT) for safety and rescue of attack crews in jeopardy are not available. The RIT concept supports the philosophy of no less than two (2), and preferably four (4), firefighting personnel assigned firefighter rescue as their primary duty and responsibility.

The Department is currently staffed with 38 paid on call firefighters. The Department is allowed up to 40 firefighters. There is no known current recruitment list.

The Department does not use written guidelines to establish an officer or firefighter on the scene of an incident as safety officer.

The Department uses a simple accountability system to account for firefighters at an incident. It tracks arrival and departure, but does not track tasks or location on the fire ground.

The Department responds to an average of 46 fire-rescue incidents within the Town of Clayton per year. The call average has been consistent over the last 5 years.



**TOWN OF CLAYTON, WISCONSIN  
FIRE DEPARTMENT RESPONSE TIME STUDY**

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**CHAPTER 2 – OPERATIONAL RECOMMENDATIONS**

***Technical Rescue***

The Department provides auto extrication services and has adequate equipment relating to extrication.

**Recommendations**

- RW recommends that the Department perform a complete information management review, including evaluation of the functional needs of the Department.
- RW recommends compliance with the National Incident Management System (NIMS). This requires institutionalizing the use of ICS, common language, size-up reporting for situational awareness on all incidents, establishing command, providing backup firefighters in full protective gear and air packs for any entry into hazardous conditions, and an after action review of all incidents.
- RW recommends that the Department implement the use of the safety engine concept or Rapid Intervention Teams. This includes providing training and equipment, in addition to establishing policies and procedures, for activation and implementation of rescue tactics. These concepts support the philosophy of no less than two (2), and preferably four (4), firefighting personnel assigned firefighter rescue as their primary duty and responsibility. This concept complies with National Fire Protection Association (NFPA) 1500 and OSHA 1910.134.
- RW recommends that the Department establish, utilize, and develop standard operating guidelines for personnel accountability.
- RW recommends that the Department develop Standard Operating Guidelines for structural collapse, trench rescue, elevated rescue, hazardous material incidents and confined space rescue. These SOG's shall include response strategies, mutual aid needs, as well as identifying the required level of response.

***Physical Resources***

For this study, only the resources within the Town of Clayton were evaluated. This did not include the Winchester Station and the apparatus housed there.

**Findings**

The physical drive distance from the Larsen Station to areas within the Town of Clayton is such that meeting the response times in NFPA 1720 is not feasible. Specifically the Northeast and Southeast corners have long drive distance as well as being the location of a significant portion of the population. These are also the areas identified for additional residential growth. The



**TOWN OF CLAYTON, WISCONSIN  
FIRE DEPARTMENT RESPONSE TIME STUDY  
CHAPTER 2 – OPERATIONAL RECOMMENDATIONS**

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space and accommodations at the existing station does not appear to adequately meet the needs of the Department. There is a need for a new fire station at a location east of the existing station.

Fire Station #43 is located at 8348 County Road T, Larsen, Wisconsin. The station was built in 1964. An addition to the station increased the size by 1 truck bay, with door heights of 14 feet. The original 2 bays have door heights of 10 feet. A cistern is located under the station. The cistern holds about 72,000 gallons of water. A 650 GPM pump can fill trucks both through inside and outside fill sites. The station is also set up to top fill trucks in the shorter bay. There is no written physical resource plan in place for Fire Station #43.

NFPA 1720 specifies organization and deployment standards for initial attack structural fire suppression capabilities in volunteer fire departments. The document addresses the functions and outcomes of service delivery, response capabilities, and resources. Incident management systems, training systems, and communications systems are also discussed. NFPA 1720 also includes the following Staffing and Response Times criteria:

- Demographics of less than 500 people per sq. mile, require a response of 6 firefighters available for initial attack with a response time of 14 minutes or less for at least 80% of the incidents
- Demographic of 500 - 1000 people per sq. mile, require a response of 10 firefighters available for initial attack with a response time of 10 minutes or less for at least 80% of the incidents

Using NFPA 1720, response times are measured starting when the call is dispatched to when the crews have established the resources for initial attack. The fire department then has two minutes to establish the attack. Response time includes:

- The time for the firefighters to arrive at the station
- The travel time from the station to the scene
- Set-up at the scene prior to initial attack

Response records kept by County Dispatch and the Clayton – Winchester Fire Department track response time starting at the time of dispatch to when the apparatus radios to dispatch they are on scene. This does not indicate the activities that are occurring at the scene. Response records from 2003 through 2007, as well as an informational letter written by Fire Chief Mathison, printed in the March 2007 Town Newsletter confirmed that response times within the Town of Clayton are often greater than 10 minutes. One particular incident recorded a response time as being 24 minutes. Chief Mathison's letter specifically mentions that response times to the Northeastern and Southeastern edges of the Town from the existing stations could take 13 to 15 minutes. It is important to note that the records provide times from dispatch to arrival on scene, and do not indicate time to initial attack.

As discussed previously, the Foth & Van Dyke report identified response within portions of the Town of Clayton from the Larsen Station as being inadequate based upon ISO and 5 miles of road travel. NFPA 1720 uses the following formula for the calculation of travel time. This formula



**TOWN OF CLAYTON, WISCONSIN  
FIRE DEPARTMENT RESPONSE TIME STUDY  
CHAPTER 2 – OPERATIONAL RECOMMENDATIONS**

---

is based upon the fact that the average responding speed, with the use of lights and sirens, is 35 mph. It is intended for use with response distances from ½ mile to 8 miles.

$$\text{Calculation of Travel Time} = (1.7) (\text{distance}) + 0.65.$$

Using the NFPA formula with the ISO 5 road mile parameter indicates that, at 5 miles from the station, travel time is approximately 9 minutes and 12 seconds.

The conclusion from both evaluations is that the existing station is not located to allow acceptable response times to areas of the Town of Clayton because of the road distance traveled.

Following is a brief summary of the capacity of the Larsen Station

- Space is sufficient for housing of vehicles
- Space is not adequate for other agency functions such as administration, support programs and training. There is no office space or document storage capability.
- Equipment storage space is limited. Currently a limited amount of extra hose is stored at the facility however there is not adequate space for cleaning, drying, and inspecting hose and other equipment after use.
- A vehicle exhaust system is not provided. The need for exhaust systems in fire stations has been identified by NFPA and OSHA. Evaluation of the firefighter's exposure to hazardous materials in their working environment is required under 29 CFR 1910.134.
- The facility does not provide locker rooms/showers nor laundry equipment for cleaning Personal Protective Equipment (PPE). This impacts the amount of exposure the firefighters and their families have to the toxic byproducts of fires and other response operations. The consequences of exposure to harmful fire byproducts are increased by the fact that the firefighters carry their gear with them in their personal vehicles, thereby increasing their exposure and that of others who would not otherwise be exposed.
- The facility provides minimal kitchen space and no sleeping space, which may impact support activities needed for some types of events.
- While Standards of Coverage and Service Level Objectives have not been established, the response time from the station to parts of the fire district is in excess of consensus standards, it is too long. This indicates that the station location may not be appropriate to provide the level of service anticipated by the residents of the Town.



**TOWN OF CLAYTON, WISCONSIN  
FIRE DEPARTMENT RESPONSE TIME STUDY  
CHAPTER 2 – OPERATIONAL RECOMMENDATIONS**

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The following apparatus are housed at this station:

- T43: 1979 Ford Tender - 500 GPM pump and 3,000 gallons of water
- T343: 2000 Sterling Tender - 500 GPM pump and 4,000 gallons of water
- E43: 1995 Ford Engine - 1,250 GPM pump and 2,000 gallons of water, foam, large diameter hose (LDH), dump tank
- U43: 1997 Ford F-450 - transports a 6-wheeler and Jaws, and other rescue equipment
- All trucks have two (2) person cabs

Following is a brief summary of the planning and management of apparatus and vehicles:

- A written program is not in place for capital expenditures, including apparatus up grades or replacement.
- The current practice is to purchase a new vehicle every five (5) years. This results in an expected service life of 40 years.
- Comm. 30.09 requires newer vehicles (post 1991) to meet current standards, and older vehicles to be maintained in accordance to the standards in effect at the time of manufacture. There is some question as to compliance, due to the age of the vehicles and the purchase of used vehicles that have been modified by the fire fighters.

### **Recommendations**

- RW recommends that a physical resource plan be written as part of the strategic plan.
- Construction of a new fire station in the immediate future.
- An apparatus maintenance schedule and replacement plan should be written. The anticipated life span for apparatus should be between 15 – 20 years. This information should then be incorporated into a Capital Improvement Plan (CIP).
- Request Emergency Vehicle Technician Certification for the mechanics who work on the fire apparatus.

### **Human Resources**

RW did a limited review of the development and utilization of human resources within the Department.



**TOWN OF CLAYTON, WISCONSIN  
FIRE DEPARTMENT RESPONSE TIME STUDY  
CHAPTER 2 – OPERATIONAL RECOMMENDATIONS**

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### **Findings**

The Department does not have a designated personnel manager. The Department also does not have policies and practices for personnel administration, which must be based on local, state and federal requirements.

The Department does not have detailed selection process guidelines.

The Department does not have a health and safety committee in place. There is not a risk management program.

### **Recommendations**

- Designate a personnel and risk manager within the Department. This person could be of any rank, but should have knowledge of personnel laws, recruitment, selection, promotion and recognition programs.
- RW recommends that the Department establish and implement occupational safety, health and fitness, and risk management programs. These programs will provide for the coordination and continuity of the safety and health and fitness activities that are already taking place within the District. It will also contribute to the mitigation of work accidents and occupational exposure, increase hazard awareness, and potentially reduce loss time injuries and legal actions.
- Establish recruitment, selection and promotion process and associated policies and procedures that comply with local, state and federal equal opportunity and discrimination standards.
- Establish Standard Operating Guidelines which designate safety officers, their utilization, duties and responsibilities at all incidents.

### ***Training and Competency***

RW's review of documentation and interview answers provided the information in this section.

### **Findings**

Written training programs were not available for review. The department does not appear to have a process in place to identify training needs or to ensure that the training programs are consistent with legal requirements for mandatory training. In addition, training and educational resources, including the training facilities, are not adequate to support the department's needs.



**TOWN OF CLAYTON, WISCONSIN  
FIRE DEPARTMENT RESPONSE TIME STUDY**

---

**CHAPTER 2 – OPERATIONAL RECOMMENDATIONS**

Firefighters are required to complete entry level firefighter training before being allowed to enter hazardous atmospheres. The majority of the department has taken entry level training but has not received the subsequent State certification. Performance based measurements are not utilized to evaluate individual personnel performance.

The Department's training and programs do not meet several of the requirements of Comm. 30, including:

- A Training Officer with National Fire Academy or equivalent training
- The use of ICS and SOG's
- A standard method of accountability, including location on scene and task assignment
- Written Training Programs and Assessment tools

### **Recommendations**

- RW recommends that the Department prepare a long range training plan, including identifying training needs for the next five (5) to ten (10) years and develop a performance based analysis tool for evaluation of all Department personnel. Training needs should be reviewed regularly, and the long range training plan updated as needed. This plan should incorporate assessment techniques and measurable performance criteria per NFPA, and consistent with Comm. 30, and additional requirements of other state and national fire service standards programs. Training facility needs, instructional information systems, and telecommunication needs should be outlined in this plan.
- Establish a training officer with the minimum qualifications under Comm. 30, or hire a qualified organization to provide training.
- Establish, and train on, written programs for detailed accountability and the use of ICS that meet Comm. 30 and NIMS compliance.
- Establish record keeping and accountability processes for training.
- Manage training consistent with National Fire Academy (NFA) guidelines.

### **Essential Resources**

Essential resources are defined as those mandatory services or systems required for the Department's operation. RW reviewed water supply, communications, administration and office systems for this section.



**TOWN OF CLAYTON, WISCONSIN  
FIRE DEPARTMENT RESPONSE TIME STUDY  
CHAPTER 2 – OPERATIONAL RECOMMENDATIONS**

---

## **Findings**

Essential Resources include water supply, communication systems, administrative support systems, and office systems.

The department needs for water are met using tenders to transport water to the scene. The department has access to multiple water supplies and the ability to transport large amounts of water rapidly, in addition to mutual aid for water.

Communication systems include county wide dispatch, including both Outagamie and Winnebago counties. At this time, communication systems in the State are moving forward with mandatory upgrades.

No administrative support systems or office systems were identified. These services would include research, planning, and purchasing. Fire Inspectors and firefighters involved in public education create, maintain, and store the needed information. Additional required tasks are performed as needed by members of the fire department. Information and records are maintained in various formats and stored at the individual firefighter's residences.

## **Recommendations**

- Provide adequate Information Management Systems, including office space and equipment for records management.
- Provide secure storage for personnel data and other records.
- Follow data management requirements under Comm. 30 and other applicable State and Federal Standards.

## ***External Systems Relations***

RW reviewed mutual and automatic aid agreements and met with surrounding fire jurisdictions to prepare the findings and recommendations for this section.

## **Findings**

The Department does not have a strategic plan in place to define the relationships with, or how the strategies of, external agency systems affect the mission or cost effectiveness of the Department.



**TOWN OF CLAYTON, WISCONSIN  
FIRE DEPARTMENT RESPONSE TIME STUDY  
CHAPTER 2 – OPERATIONAL RECOMMENDATIONS**

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The Department is part of the County Wide Mutual Aid agreement. The Department is attempting to develop an automatic aid agreement with an adjacent department. The process is underway to establish a MABAS district in Winnebago County to improve mutual aid.

There are limited practices and training with adjacent departments and other departments on the mutual aid agreement. The willingness of adjacent departments to participate in mutual aid and auto aid agreements beyond the County Wide Agreement is influenced by many things, including:

- The difference response protocols used by the different departments
- The lack of written SOG's and other documentation within the Department
- The apparatus all having "2 man" capacity
- The firefighters responding in personal vehicles
- The lack of a "standard response" SOG identifying first out apparatus and minimum staffing of the vehicles and at the scene,
- The lack of a standardized accountability system
- Concern with response times

### **Recommendations**

- A strategic plan for the Department was recommended in the Assessment and Planning section of this chapter. This strategic plan should define the relationships with external agencies and evaluate the potential impact, including benefits to, the mission and cost effectiveness of the Department. This portion of the plan should also include a conflict resolution policy between the Department and the external agencies.
- Work with surrounding departments to establish similar SOG's, response protocols, and accountability systems.
- Move towards eliminating response in personal vehicles.
- Continue to work towards a County MABAS Agreement.
- Work towards compliance with the National Incident Management System (NIMS), including the utilization of ICS and accountability on all incidents.
- Conduct training with mutual aid departments that is scenario based allowing for assessment of response protocols, command structure and accountability systems.



**TOWN OF CLAYTON, WISCONSIN  
FIRE DEPARTMENT RESPONSE TIME STUDY**

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**CHAPTER 2 – OPERATIONAL RECOMMENDATIONS**

***Additional Recommendations***

The objectives of this project were for RW to evaluate the need for a new fire station. The need for a new fire station contains two major subjects for discussion. The first is whether the current facility is adequate for the physical needs of the Department. The second is how the location of the station within in a given area affects the response times of department. Response times however are also influenced by the effectiveness and efficiency of the Fire Department. To present recommendations to the Township regarding the need for a new fire station a basic analysis of the organization was required. The above evaluation and recommendations are based upon the Town of Clayton and the Clayton – Winchester Joint Fire Board working together to ensure the Clayton-Winchester Fire Department becomes Comm. 30, NIMS, and NFPA 1720 compliant. This will be an on-going process that requires both short and long term planning commitments. It also requires the construction of a new fire station in the immediate future. The location proposed in the Foth & Van Dyke report is acceptable based on either an ISO or NFPA 1720 analysis and the current location of the Winchester Station. Response times will theoretically improve with the construction of a new station at the proposed location.

Recognizing that the Town is required to provide fire protection for its residents and has expressed the desire for effective and efficient fire responses, the other option is to contract for fire protection services to all or parts of the Town of Clayton. This may include contracting with one or more Fire Departments that comply with Comm. 30 and can meet the requirements of NFPA 1720. Detailed information on this option, including area fire departments available to contract with, whether the agencies are Comm. 30 compliant, whether the agencies have the ability to meet NFPA 1720, the full costs of such a contract, and the need for the construction of a new station under this arrangement, is beyond the scope of this project.



## TOWN OF CLAYTON, WISCONSIN FIRE DEPARTMENT RESPONSE TIME STUDY

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### CHAPTER 3 – IMPLEMENTATION PLAN

#### ***Implementation Plan by Priority***

The following implementation plan is based upon the decision to bring the Clayton-Winchester Fire Department into compliance with Wisconsin Department of Commerce 30 and NFPA 1720, and construction of a new fire station within the Town of Clayton that will meet current and future needs.

To successfully bring the Clayton-Winchester Fire Department into compliance certain key components must be implemented. Without the implementation of these components to provide guidance for additional progress, benefits will be reduced and success limited. The process will require a focused commitment of personnel and time.

The following implementation plan lists, by priority, those requirements that satisfy the principles of comprehensive delivery of fire service protection as well as meeting State and national standards. Using this approach, the Department will not only be moving toward sound fire department services, practices and systems, but they will also be implementing changes in operations that yield the highest returns first.

#### **Year One**

The goal for the first year of implementation should be to begin planning for the comprehensive development of the recommendations. Most of these recommendations do not have additional costs other than personnel time. The following areas are to be developed during year one:

- The Joint Fire Board should develop a more detailed understanding of the responsibilities of the Joint Fire Board, and the Towns, with respect to management of the Fire Department. A thorough understanding of s. 60.55, Comm. 30, and NFPA 1720 will help the Board ensure compliance with applicable regulations and rules essential to department operations.
- Define a Project Team made up of members from the Joint Fire Board and Department. This team will provide oversight of the implementation of the recommendations, and work with internal and external resources to coordinate efforts. (The management process of the Project Team must be defined by the Joint Board.)
- The Project Team should develop a vision and mission statement. Goals and objectives need to be developed based on the mission statement. The Joint Fire Board should approve the vision and mission statement, as well as the goals and objectives. This key component will provide direction and focus for additional planning activities.
- The Project Team should evaluate the control and management of Department revenue and expenditures to insure compliance with both United States and Wisconsin regulations, including fundraising activities.



## TOWN OF CLAYTON, WISCONSIN FIRE DEPARTMENT RESPONSE TIME STUDY

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### CHAPTER 3 – IMPLEMENTATION PLAN

- The Joint Fire Board should develop procedures for the selection and promotion process, including qualifications and credentials for selection of a Fire Chief.
- The Department should establish standard operating guidelines, including the identification of first out apparatus and minimum staffing.
- The Department should establish standard operating guidelines which designate safety officers, their utilization, duties and responsibilities at all incidents.
- The Department should work towards compliance with the National Incident Management System (NIMS), including the utilization of ICS and detailed task focused accountability on all incidents.
- The Department should implement the use of the Rapid Intervention Teams or the safety engine concept , as well as specific 2 – in – 2 – 2 out procedures previously described.
- The Project Team should develop a training program which includes assessment techniques and measurable performance criteria per NFPA, and is consistent with Comm. 30. The training program should identify procedures to ensure that training curriculum and materials are adequate and that training is delivered by qualified instructors. The training program should be reviewed and approved by the Joint Fire Board.
- The Project Team should plan the construction of a new fire station in the immediate future. The majority of the research and development has been completed, and the process can be streamlined by updating previous plans and cost assessments. The construction plans and timeline should be reviewed and approved by the Joint Fire Board.
- The Project Team should develop a written Health and Safety program and establish a Health and Safety Committee.

#### **Year Two**

The goals for the second year include development and implementation of the strategic plan and recommendations. The following areas are to be developed during this year:

- The Department should complete an All Hazards Risk Assessment and develop response strategies utilizing the RHAVE form. The Assessment should be reviewed by the Project Team.
- The Project Team should develop a Standard of Response Coverage utilizing the All Hazard Risk Assessment document. The Standard of Response Coverage should be reviewed and approved by the Joint Fire Board.



## TOWN OF CLAYTON, WISCONSIN FIRE DEPARTMENT RESPONSE TIME STUDY

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### CHAPTER 3 – IMPLEMENTATION PLAN

- The Department should develop standard operating guidelines for structural collapse, trench rescue, elevated rescue, hazardous material incidents and confined space rescue. This includes identifying the required level of response, response strategies, and mutual aid needs.
- The Project Team should develop a strategic plan for the next ten (10) years. This plan should include specific information relating to Department development. The plan should identify the processes to achieve the goals, what mechanism will be utilized to track progress, and how progress will be measured. The completed plan should be approved by the Joint Fire Board.
- The Project Team should develop an apparatus maintenance schedule and replacement plan. The anticipated life span for apparatus should be between 15 – 20 years. This information should then be incorporated into the Capital Improvement Plan (CIP).
- The Project Team should develop a Capital Improvement Plan which outlines capital expenditures, apparatus needs, and major equipment needs for the next 10 years.
- The Department should establish and implement occupational safety, health and fitness, and risk management programs under the guidance of the Health and Safety Committee.

#### **Year Three**

The goals for the third year of implementation are to complete the implementation of the report recommendations, begin evaluating the progress, and make adjustments as needed.

- The Joint Fire Board should complete a review of the department goals and objectives. This review should then be conducted on an annual basis.
- The Joint Fire Board should continue to develop procedures for the selection and promotion process, including qualifications and credentials for all members of the Fire Department.
- The Project Team should complete the process of developing a complete strategic plan for the next ten years.
- The Project Team should review the training program and develop a long range training plan that identifies training needs for the next five (5) to ten (10) years. Training needs should be reviewed regularly, and the long range training plan updated as needed. The completed plan should be approved by the Joint Fire Board.



**TOWN OF CLAYTON, WISCONSIN  
FIRE DEPARTMENT RESPONSE TIME STUDY  
CHAPTER 4 – ESTIMATED BUDGET AND BENEFITS**

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### ***Project Budget***

This section of the **Study** presents budget information for the proposed implementation of the recommendations. The implementation process will require a focused commitment of personnel and time. The utilization of qualified individuals already associated with the Towns, the Joint Fire Board, and the Fire Department can minimize costs associated with implementation.

The development of a Capital Improvement Plan will provide budget estimates over the next 10 years. Potential budget items associated with the implementation of these recommendations include:

- Utilization of external resources for Project Management or Legal Counsel
- Information Management and Data Storage Systems, such as a computer network
- Utilization of external resources for training
- Continuing education of existing members
- Education and certification of new members
- Construction of a new fire station
- Apparatus maintenance and replacement
- Implementation of occupational safety, health, and risk management programs

Chapter 5 of the December 2006 “Public Facilities Needs Assessment for Fire Station Impact Fees” by Foth & Van Dyke and Associates presents Capital Costs, Impact Fees, and the effects of the fees. The cost estimate, in 2006 dollars, was \$1.2 million. Adjustments will need to be made to this estimate as the planning process moves forward.

### **Benefits**

As a result of implementing RW’s recommendations, the Towns of Clayton and Winchester, the Joint Fire Board, the Clayton – Winchester Fire Department, and the citizens of the Fire District should realize significant tangible benefits and mitigate liabilities. The following tangible and intangible benefits should be realized as a result of implementation of the recommendations:

- Mitigate liability due to improved response time and the ability to meet the accepted national standards. These standards are nationally recognized in a court of law.
- A new Fire Station which meets the current needs of the Fire Department and is planned to accommodate expansion and future needs.
- Improve the confidence and abilities of emergency response personnel to handle emergency incidents by providing the appropriate facilities, training, management, organizational structure and technology.



**TOWN OF CLAYTON, WISCONSIN  
FIRE DEPARTMENT RESPONSE TIME STUDY**

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**CHAPTER 4 – ESTIMATED BUDGET AND BENEFITS**

- Increase quality improvement through continuous self-assessment, and the capability to identify and correct deficiencies and building on strong points. This will also foster pride within the Department and national recognition by the community and peers. This assures that the Department is utilizing best practices and instills community pride.
- Improve the overall safety, health, and fitness of the Department members. This should contribute to the mitigation of work accidents, occupational exposure, increased hazard awareness, and the reduction of loss time injuries and legal actions.
- Provides a long-term approach for the Department to use as a planning guide for budgetary and operational considerations. This approach improves efficiencies by reducing repetitive processes and provides for a structured management plan.
- Enhances the coordination between emergency departments responding to the same incident.
- Improved coordination, management, preventative maintenance and repairs, and timely upgrades of emergency vehicles and increased familiarity of NFPA standards relating to apparatus.



## CLAYTON-WINCHESTER FIRE DEPARTMENT FIRE DEPARTMENT RESPONSE TIME STUDY CHAPTER 5 – MANAGEMENT SUMMARY

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### Project Overview

The Town of Clayton, who are served by the Clayton-Winchester Fire Department (Department), determined the need to conduct a Fire Department Response Time Study. The purpose of the study was to evaluate options for improving response time, including the construction of a new fire station.

A very basic organization evaluation was conducted for the purpose of evaluating the effectiveness and efficiency of the Clayton-Winchester Fire Department. This evaluation resulted in findings and recommendations relating to the organizational structure, physical facilities, policies and procedures, major equipment, budgeting and human resources of the Department. The review was based on the Center for Public Safety Excellence (CPSE) criteria and included the following categories:

- **Governance and Administration**
- **Assessment and Planning**
- **Goals and Objectives**
- **Financial Resources**
- **Programs**
- **Physical Resources**
- **Human Resources**
- **Training and Competency**
- **Essential Resources**
- **External System Relations**

Also used for evaluating effectiveness and efficiency, and response times, were Wisconsin Statute 101, Department of Commerce – Regulation of Industry, Buildings and Safety Administrative Code, more specifically s. 101.055, Public Employee Safety and Health and the Wisconsin Department of Commerce Administrative Code Chapter 30, as well as standards set forth by the National Fire Protection Association (NFPA).

A key standard is NFPA 1720, Standard of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer Fire Departments. It provides an organized approach to defining levels of service, deployment capabilities, and staffing levels for volunteer fire departments. NFPA 1720 strongly emphasizes pre-planning and establishing pre-determined response procedures and standard response assignments for dispatch and response. It addresses functions and outcomes of service delivery, response capabilities, and resources. It also identifies specific requirements for managing resources and systems.



## CLAYTON-WINCHESTER FIRE DEPARTMENT FIRE DEPARTMENT RESPONSE TIME STUDY

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### CHAPTER 5 – MANAGEMENT SUMMARY

The Wisconsin Department of Commerce Administrative Code Chapter 30 outlines minimum standards for employee Health and Safety.

Part of the documentation reviewed for this study was the December 2006 “Public Facilities Needs Assessment for Fire Station Impact Fees” by Foth & Van Dyke and Associates. Chapter 3 of the report presents growth projections, indicating that additional population growth will occur on the East side of the Township. RW’s research supported this conclusion. Chapter 4 of the report concludes that the existing station is not adequate, and that drive time from the existing station to areas of the Township does not allow for adequate response. The report also identifies the need for additional volunteers, vehicles, and equipment in the future as the population of the Township grows. The report uses ISO for a service level standard to evaluate response. Chapter 5 presents Capital Costs, Impact Fees, and the effects of the fees. The proposed location of the new fire station and model fire station used for the review appear to be adequate for current needs, and able to accommodate future needs.

#### ***Recommendations***

The objectives of this project were for RW to evaluate the need for a new fire station, evaluate the current effectiveness and efficiency of the Fire Department and present recommendations to the Township. The two options presented are:

- Clayton-Winchester Fire Department becomes Comm. 30, NIMS, and NFPA 1720 compliant and the construction of a new fire station, or
- Contract for fire protection services for the Town.

The recommendations are based upon the Town of Clayton, the Town of Winchester, the Clayton – Winchester Joint Fire Board, and the Clayton-Winchester Fire Department working together to ensure the Clayton-Winchester Fire Department becomes Comm. 30, NIMS, and NFPA 1720 compliant. This will be an on-going process that requires both short and long term planning commitments.

The future effectiveness and efficiency of the Department requires the building of a new fire station in the immediate future. RW finds that the location and model station proposed in the Foth & Van Dyke report are acceptable.

Recognizing that the Town of Clayton is required to provide fire protection for its residents and has expressed the desire for effective and efficient fire responses, the other option is to contract for fire protection services to all or parts of the Town. This may include contracting with one or more Fire Departments that comply with Comm. 30 and can meet the requirements of NFPA 1720. Detailed information on this option, including area fire departments available to contract with, Comm. 30 compliance, the ability to meet NFPA 1720, the full costs of such a contract, and the need for the construction of a new station under this arrangement, is beyond the scope of this project.



**CLAYTON-WINCHESTER FIRE DEPARTMENT  
FIRE DEPARTMENT RESPONSE TIME STUDY  
CHAPTER 5 – MANAGEMENT SUMMARY**

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***Operational Recommendations***

The following is a summary of the operational recommendations for the Clayton – Winchester Joint Fire Board and the Clayton - Winchester Fire Department to become Comm. 30, NIMS, and NFPA 1720 compliant. This review was based on the Center for Public Safety Program Criterion and the sections are outlined based on the accreditation categories.

***Governance and Administration***

- The Joint Fire Board has significant authority granted by statute to regulate the administration and operations of the fire department. A more detailed understanding of by the Board of s. 60.55, and Comm. 30 will help the Board ensure compliance with applicable regulations and rules essential to department operations, and the responsibilities of the Board with respect to management of the Fire Department. Some of the responsibilities include:
  - Ensuring proper administration at both the Board and Department levels.
  - Development of functional job descriptions, qualifications and hiring processes for the administration as well as other members of the fire department.
- The Joint Fire Board should develop hiring and promotion assessment procedures, including job descriptions that outline qualifications and credentials required to select the Fire Chief.

***Assessment and Planning***

- Complete an All Hazards Risk Assessment and develop response strategies. Information relating to Risk, Hazard and Value Evaluation (RHAVE) and Community Risk Assessment for Volunteer Departments is included in the **Study** as Appendix A.
- Establish a Standard of Response coverage strategy utilizing the All Hazard Risk Assessment document.
- Take the next step in the planning process and develop a strategic plan for the next ten (10) years. This plan should include specific information relating to Department development during that time period. The plan should identify the processes to achieve the goals, what mechanism will be utilized to track progress, and how progress will be measured. The completed plan should be approved by the Fire Board



## CLAYTON-WINCHESTER FIRE DEPARTMENT FIRE DEPARTMENT RESPONSE TIME STUDY

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### CHAPTER 5 – MANAGEMENT SUMMARY

#### ***Goals and Objectives***

- Establish a mission statement, and then develop goals and objectives based on this mission statement. A management process should be developed to implement these goals and objectives. The Board should approve the mission statement, goals and objectives.
- Perform Annual Reviews of the Department goals and objectives.

#### ***Financial Resources***

- Develop a Capital Improvement Program to outline apparatus needs and other major capital equipment needs over the next ten years. These expenditures should be based on organizational objectives
- Establish a policy for the development, implementation and management of the annual budget.
- Evaluate the control and management of Department revenue and expenditures to insure compliance with both United States and Wisconsin regulations.

#### ***Programs***

- Perform a complete information management review, including evaluation of the functionality needs of the Department.
- Comply with the National Incident Management System (NIMS). This requires institutionalizing the use of ICS, size-up reporting on all incidents, establishing command, providing backup firefighters in full protective gear and air packs for any entry into hazardous conditions, and an after action review of all incidents.
- Implement the use of the safety engine concept or Rapid Intervention Teams. This includes providing training and equipment, in addition to establishing policies and procedures, for activation and implementation of rescue tactics. These concepts support the philosophy of no less than two (2), and preferably four (4), firefighting personnel assigned firefighter rescue as their primary duty and responsibility. This concept complies with National Fire Protection Association (NFPA) 1500 and OSHA 1910.134.
- Develop, utilize, and monitor Standard Operating Guidelines for personnel accountability, including task and location tracking.
- Develop utilize and monitor Standard Operating Guidelines for response strategies and mutual aid needs, as well as identifying the required level of response, for structural collapse, trench rescue, elevated rescue, hazardous material incidents and confined space rescue.



**CLAYTON-WINCHESTER FIRE DEPARTMENT  
FIRE DEPARTMENT RESPONSE TIME STUDY  
CHAPTER 5 – MANAGEMENT SUMMARY**

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***Physical Resources***

- Develop a written physical resource plan as part of the strategic plan.
- Construct a new fire station in the immediate future.
- Write an apparatus maintenance schedule and replacement plan. The anticipated life span for apparatus should be between 15 – 20 years. This information should then be incorporated into a Capital Improvement Plan (CIP).
- Request Emergency Vehicle Technician Certification for the mechanics who work on the fire apparatus.

***Human Resources***

- Designate a personnel and risk manager within the Department. This person could be of any rank, but should have knowledge of personnel laws, recruitment, selection, promotion and recognition programs.
- Establish and implement occupational safety, health and fitness, and risk management programs. These programs will provide for the coordination and continuity of the safety and health and fitness activities that are already taking place within the District. It will also contribute to the mitigation of work accidents and occupational exposure, increase hazard awareness, and potentially reduce loss time injuries and legal actions.
- Establish recruitment, selection standards and promotion processes and associated policies and procedures that comply with local, state and federal equal opportunity and discrimination standards.
- Establish Standard Operating Guidelines which designate safety officers, their utilization, duties and responsibilities at all incidents.

***Training and Competency***

- Prepare a long range training plan identifying training needs for the next five (5) to ten (10) years and develop a performance based analysis tool for evaluation of all Department personnel. Training needs should be reviewed regularly, and the long range training plan updated as needed. This plan should incorporate assessment techniques and measurable performance criteria per NFPA and consistent with Comm. 30. Training facility needs, instructional information systems, and instructor qualifications should be outlined in this plan.
- Establish a training officer with the minimum qualifications under Comm. 30, or hire a qualified organization to provide training.



**CLAYTON-WINCHESTER FIRE DEPARTMENT  
FIRE DEPARTMENT RESPONSE TIME STUDY  
CHAPTER 5 – MANAGEMENT SUMMARY**

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- Establish, and train on, written programs for detailed accountability and the use of ICS that meet Comm. 30 and NIMS compliance.
- Establish record keeping and accountability processes for training.
- Manage training consistent with National Fire Academy (NFA) guidelines.

***Essential Resources***

- Provide adequate Information Management Systems, including office space and equipment for records management.
- Provide secure storage for personnel data and other records.
- Follow data management requirements under Comm. 30 and other applicable State and Federal Standards.

***External Systems Relations***

- Develop the strategic plan as recommended in the Assessment and Planning section. This strategic plan should define the relationships with external agencies and evaluate the potential impact, including benefits to, the mission and cost effectiveness of the Department. This portion of the plan should also include a conflict resolution policy between the Department and the external agencies.
- Work with surrounding departments to establish similar SOG's, response protocols, and accountability systems.
- Move towards eliminating response in personal vehicles.
- Continue to work towards a County MABAS Agreement.
- Work towards compliance with the National Incident Management System (NIMS), including the utilization of ICS and accountability on all incidents.
- Conduct training with mutual aid departments that are scenario based allowing for assessment of response protocols, command structure and accountability systems.



**CLAYTON-WINCHESTER FIRE DEPARTMENT  
FIRE DEPARTMENT RESPONSE TIME STUDY  
CHAPTER 5 – MANAGEMENT SUMMARY**

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***Implementation Plan by Priority***

The following implementation plan is based upon the decision to bring the Clayton-Winchester Fire Department into compliance with Wisconsin Department of Commerce 30 and NFPA 1720, and construction of a new fire station within the Town of Clayton that will meet current and future needs.

**Year One**

The goal for the first year of implementation should be to begin planning for the comprehensive development of the recommendations. Most of these recommendations do not have additional costs other than personnel time. The following areas are to be developed during year one:

- The Joint Fire Board should develop a more detailed understanding of the responsibilities of the Joint Fire Board, and the Towns, with respect to management of the Fire Department
- A Project Team should be developed and include members of the Joint Fire Board and the Department. This Team will provide oversight of the implementation of the recommendations, and work with internal and external resources to coordinate efforts.
- The Project Team should develop a vision and mission statement. Goals and objectives need to be developed based on the mission statement. The Joint Fire Board should approve the vision and mission statement, as well as the goals and objectives. This key component will provide direction and focus for additional planning activities.
- The Project Team should evaluate the control and management of Department revenue and expenditures to insure compliance with both United States and Wisconsin regulations, including fundraising activities.
- The Joint Fire Board should develop procedures for the selection and promotion process, including qualifications and credentials for the Fire Chief.
- The Department should establish standard operating guidelines, including the identification of first out apparatus and minimum staffing.
- The Department should establish standard operating guidelines which designate safety officers, their utilization, duties and responsibilities at all incidents.
- The Department should work towards compliance with the National Incident Management System (NIMS), including the utilization of ICS and detailed task focused accountability on all incidents.
- The Department should implement the use of the safety engine concept or Rapid Intervention Teams.



**CLAYTON-WINCHESTER FIRE DEPARTMENT  
FIRE DEPARTMENT RESPONSE TIME STUDY  
CHAPTER 5 – MANAGEMENT SUMMARY**

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- The Project Team should develop a training program which includes assessment techniques and measurable performance criteria per NFPA, and is consistent with Comm. 30. The training program should identify procedures to ensure that training curriculum and materials are adequate and that training is delivered by qualified instructors. The training program should be reviewed and approved by the Joint Fire Board.
- The Project Team should plan the construction of a new fire station in the immediate future. The majority of the research and development has been completed, and the process can be streamlined by updating previous plans and cost assessments. The construction plans and timeline should be reviewed and approved by the Joint Fire Board.
- The Project Team should develop a written Health and Safety program and establish a Health and Safety Committee.

**Year Two**

The goals for the second year include development and implementation of the strategic plan. The following areas are to be developed during this year:

- The Department should complete an All Hazards Risk Assessment and develop response strategies utilizing the RHAVE form. The Assessment should be reviewed by the Project Team.
- The Project Team should develop a Standard of Response Coverage utilizing the All Hazard Risk Assessment document. The Standard of Response Coverage should be reviewed and approved by the Joint Fire Board.
- The Department should develop standard operating guidelines for structural collapse, trench rescue, elevated rescue, hazardous material incidents and confined space rescue. This includes identifying the required level of response, response strategies, and mutual aid needs.
- The Project Team should develop a strategic plan for the next ten (10) years. This plan should include specific information relating to Department development. The plan should identify the processes to achieve the goals, what mechanism will be utilized to track progress, and how progress will be measured. The completed plan should be approved by the Joint Fire Board.
- The Project Team should develop an apparatus maintenance schedule and replacement plan. The anticipated life span for apparatus should be between 15 – 20 years. This information should then be incorporated into the Capital Improvement Plan (CIP).



## CLAYTON-WINCHESTER FIRE DEPARTMENT FIRE DEPARTMENT RESPONSE TIME STUDY

### CHAPTER 5 – MANAGEMENT SUMMARY

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- The Project Team should develop a Capital Improvement Plan which outlines capital expenditures, apparatus needs, and major equipment needs for the next 10 years.
- The Department should establish and implement occupational safety, health and fitness, and risk management programs under the guidance of the Health and Safety Committee.

#### **Year Three**

The goals for the third year are to complete the implementation of the report recommendations, begin evaluating the progress, and make adjustments as needed.

- The Joint Fire Board should complete a review of the department goals and objectives. This review should then be conducted on an annual basis.
- The Joint Fire Board should continue to develop procedures for the selection and promotion process, including qualifications and credentials for all members of the Fire Department.
- The Project Team should complete the process of developing a complete strategic plan for the next ten years.
- The Project Team should review the training program and develop a long range training plan that identifies training needs for the next ten (10) years. Training needs should be reviewed regularly, and the long range training plan updated as needed. The completed plan should be approved by the Joint Fire Board.

#### ***Benefits***

As a result of implementing RW's recommendations, the Towns of Clayton and Winchester, the Joint Fire Board, the Clayton – Winchester Fire Department and the citizens of the Fire District should realize significant tangible benefits, mitigate liabilities, and justify the recommended investment. The following tangible and intangible benefits should be realized as a result of implementation of the study recommendations:

- Enhances the coordination between emergency departments responding to the same incident.
- Provides a long-term approach for the Department to use as a planning guide for budgetary and operational considerations. This approach improves efficiencies by reducing repetitive processes and provides for a structured management plan.
- Improves the confidence and abilities of emergency response personnel to handle emergency incidents by providing the appropriate facilities, training, management, organizational structure and technology.



## **CLAYTON-WINCHESTER FIRE DEPARTMENT FIRE DEPARTMENT RESPONSE TIME STUDY**

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### **CHAPTER 5 – MANAGEMENT SUMMARY**

- Mitigate liability due to improved response time and the capability to meet the accepted national standards. These standards are nationally recognized in a court of law.
- Increases the quality of the Department and ensures ongoing improvement through continuous self-assessment, including the capability to identify and correct deficiencies and build on strong points. This assures that the Department is utilizing best practices and instills community pride.
- Improves the overall safety, health, and fitness of the Department members. This should contribute to the mitigation of work accidents, increased hazard awareness, reduced occupational exposure to hazards, and the reduction of loss time injuries and legal actions.



**TOWN OF CLAYTON, WISCONSIN  
FIRE DEPARTMENT RESPONSE TIME STUDY**

**CHAPTER 6 – GLOSSARY**

<b>APPARATUS</b>	Apparatus is commonly used to describe multiple types of fire trucks.
<b>CPSE</b>	Center for Public Safety Excellence - Evaluation process for fire departments to established and accepted national standard criteria. The International City /County Management Association and the International Association of Fire Chiefs were both committed to the development of these standards.
<b>EVT</b>	Emergency Vehicle Technician – A mechanic or other service person with Certification indicating they have specialized knowledge pertaining to Emergency Vehicles
<b>ICS</b>	Incident Command System - A documented system used in managing available resources at emergency operations.
<b>IMS</b>	Incident Management System - A documented system used in managing available resources at emergency operations.
<b>ISO</b>	Insurance Services Office Rating Schedule – A system used to evaluate fire departments for insurance rating purposes.
<b>MUTUAL AID</b>	Mutual aid is utilized frequently in fires that exceed the capabilities of a department's equipment or available manpower to appropriately fight a large fire or stabilize an emergency situation. Mutual aid requires a specific request for assistance by the incident commander.
<b>MABAS</b>	Mutual Aid Box Alarm System - MABAS is a mutual aid organization. All MABAS agencies utilize common: standards of operation, incident command, minimal equipment staffing, safety and on-scene terminology.
<b>NFA</b>	National Fire Academy – The educational institute associated with the USFA that delivers educational and training courses having a National focus.
<b>NFPA</b>	National Fire Protection Association - An association organized to reduce the burden of fire on the quality of life by advocating scientifically based consensus codes and standards, research and education for fire and related safety issues.
<b>NIMS</b>	National Incident Management System – Based on presidential directives for management of domestic incidents. The system is designed to provide a consistent nationwide approach for Federal,



**TOWN OF CLAYTON, WISCONSIN  
FIRE DEPARTMENT RESPONSE TIME STUDY**

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**CHAPTER 6 – GLOSSARY**

State, local and tribal governments to work effectively and efficiently together to prepare for, prevent, respond to, and recover from domestic incidents, regardless of cause, size, or complexity.

<b>OSHA</b>	Occupational Safety and Health Administration – A federal regulatory agency which monitors and sets regulations relating to health and safety.
<b>PASS</b>	Personal Alert Safety System – A device to aid in the notification of a firefighter needing assistance, as well as the location of the firefighter, it must meeting the requirements of NFPA 1982
<b>PPE</b>	Personal Protective Equipment – Equipment and clothing designed to protect the wearer from specific hazards. Example include: firefighter turn-out gear, safety glasses, hearing protection, and SCBA's.
<b>RIT</b>	Rapid Intervention Team, also known as a Firefighter Assist and Search Team (FAST) or Rapid Intervention Crew (RIC), is a team that comprises two or more firefighters dedicated solely to search and rescue of other firefighters in distress. RIT shall have no other operational assignment during an incident.
<b>RHAVE</b>	Risk, Hazard and Value Evaluation and Community Risk Assessment for Volunteer Departments
<b>SCBA</b>	Self-Contained Breathing Apparatus
<b>SOG's</b>	Standard Operating Guidelines – Department developed document that establishes parameters for fire fighting operations and other department functions.
<b>STANDARD OF COVER</b>	Adopted written policies and procedures that determine the distribution, concentration and reliability of fixed and mobile response forces for fire, emergency medical services, hazardous materials and other forces of technical response. Also known as “Standards of Response Coverage”
<b>TENDER</b>	Also known as a <b>Tanker</b> - Fire apparatus designed to carry large volumes of water used mainly for non-hydrant areas.
<b>USFA</b>	U.S. Fire Administration - an entity of the Department of Homeland Security's Federal Emergency Management Agency, established to foster a solid foundation in prevention, preparedness, and response by providing national leadership to local fire and emergency services.



**TOWN OF CLAYTON, WISCONSIN  
FIRE DEPARTMENT RESPONSE TIME STUDY**

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**CHAPTER 6 – GLOSSARY**

**WTCS** Wisconsin Technical College System



CLAYTON-WINCHESTER FIRE DEPARTMENT  
FIRE DEPARTMENT RESPONSE TIME STUDY

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## **ATTACHMENT A**

# **RHAVE AND COMMUNITY RISK ASSESSMENT FOR VOLUNTEER FIRE DEPARTMENTS**

## **RHAVE and Community Risk Assessment for Volunteer Fire Departments**

**By Ronny J. Coleman  
Senior Fire Protection Consultant  
Citygate Corp., Folsom, Calif.**

Risk, Hazard and Value Evaluation (RHAVE) is an automated set of tools and methods designed to help fire service and community leaders make objective, quantifiable decisions about their fire and emergency services needs. Today, the fire service and local governments face increasing exposure to liability, public expectations of an all-hazards capability, and simultaneous pressure to justify fire department staffing and equipment.

RHAVE can be used to collect useful information to identify and assess fire and related risks within a community. Information collected through RHAVE may be used by community leaders when developing objective, quantifiable risk reduction policies such as the deployment of emergency service resources. The RHAVE model is a simple-to-use methodology combining forms, formulas, databases, and data analysis.

### **Background**

More than 30 years ago, in one of the earliest versions of the International City/County Management Association (ICMA) book about fire administration, fire department personnel were instructed that they must define ‘what is there to burn.’ At one time, that assessment was more or less left to the insurance industry. During another stage of the fire service’s development, the inventory of a community’s fire problem was part of that ‘master planning’ process. Today, as the tasks of providing fire and emergency services become increasingly complex and more expensive, citizens and local government leaders are demanding that the fire service become more objective in defining what there is to burn.

The RHAVE model – encompassing Risk, Hazard and Value Evaluation – has been designed to provide a means by which the fire service as a whole can respond to its increasingly complex responsibilities. It allows a systematic approach to assess the problem from the simple to the complex. The RHAVE process encourages the development of consistent, comprehensive approaches to define, clarify, illustrate, and use information regarding a community’s fire problem.

RHAVE is a methodology to help fire protection planners and policy makers characterize and categorize fire problems. It is an adjunct to another concept: establishing standards of response coverage. RHAVE does not *make* decisions for fire professionals, but it does help fire professional make *better* decisions. Ultimately, such

better decisions mean safer communities, increased fire fighter safety, reduced liability for local governments, and more efficient use of public and private resources.

The RHAVE model is a conceptual, practical method for defining, describing, documenting, displaying and using information about community fire and emergency service problems. The primary use for such information is setting public policy regarding mitigation practices in both fire prevention and suppression. This project was funded by a cooperative agreement with the United States Fire Administration (USFA) and completed under the direction of the Commission on Fire Accreditation International's RHAVE subcommittee. The RHAVE project is based upon original work conducted by the International Association of Fire Chiefs Accreditation Task Force.

Fire departments in communities of all sizes can use the tools RHAVE provides. RHAVE is a simple-to-use methodology combining forms, formulas, databases, and data analysis. The RHAVE document is supported and enhanced by software designed to be at once powerful and easy to use, even for those with only limited familiarity with computers. The supporting software is available on CD-ROM for use on the Microsoft Windows operating system. RHAVE emphasizes the 'science' aspect of the term 'fire science.'

The program consists of a users' guide, software on CD-ROM (Microsoft Windows operating systems only) and accompanying installation instructions. The RHAVE process may be used in conjunction with the Self-Assessment for Fire and Emergency Services Manual published by the Commission on Fire Accreditation (CFAI) or the model may be used as a stand-alone tool.

Implementation costs will vary from department to department, but there is no charge for the RHAVE program and documentation. The RHAVE document and its supporting software are available free of charge from the United States Fire Administration. USFA will provide one copy of the RHAVE program to fire chiefs upon written request on department letterhead. To order, submit requests to the USFA Publications Center, 16825 S. Seton Ave., Emmitsburg, MD 21727 or fax to (301) 447-1213.

The software can also be downloaded at no charge from [www.rhave.com](http://www.rhave.com), which is a Web site operated for RHAVE on behalf of the USFA.

### **RHAVE Version 2 Addresses Terrorist Threats**

In the aftermath of the September 11, 2001 terrorist attacks, there was a flurry of activity aimed at getting fire agencies to do a better job of conducting assessments of terrorist threats upon critical infrastructure in their communities. The developers of RHAVE reviewed several model assessment criteria and developed a new set of screens used to evaluate facilities from a point of view of what effects there would be upon a community of the facility or facilities were damaged.

Version 2 is now in a beta test version.

## **RHAVE Installation and Users Manual, Version 2 Information**

To help participants in the Symposium become familiar with RHAVE, linked to this paper are two documents (in Microsoft Word) posted on PERI's Web site:

- The RHAVE Installation and Users Manual -- This document leads you through the program, and demonstrates the kind of information you would need to collect and enter. It can be found in the Symposium Papers page, or you can link directly at: <http://www.riskinstitute.org/newsite/uploads/RHAVEManual.doc>
- An Introduction to RHAVE 2, which incorporates security assessment profile information. This brief document can also be found in the Symposium Papers page, or can be linked directly at: <http://www.riskinstitute.org/newsite/uploads/RHAVE2Intro.doc>

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### **About the Author**

Ron J. Coleman is currently the Senior Fire Protection Consultant for Citygate Corp., a management consulting firm in Folsom, Calif., and is a Principal in Fireforceone, a Web site for fire protection services. He also serves as the President Emeritus of the Fire Education & Training Network (FETN). He formerly served as the California State Fire Marshal and retired as Chief Deputy Director of the California Department of Forestry and Fire Protection. He has served in the fire service for 43 years.

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### **About the Symposium**

*Risk Assessment and Planning for Volunteer Fire Departments* is presented as a public service of the Public Entity Risk Institute (PERI), 11350 Random Hills Rd., Suite 210, Fairfax, VA 22030. Web: [www.riskinstitute.org](http://www.riskinstitute.org).

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