

**IMPLEMENTATION PLAN OF NFPA 1500, *STANDARD ON FIRE DEPARTMENT  
OCCUPATIONAL SAFETY AND HEALTH PROGRAM*, 1997 EDITION, FOR THE  
ORANGE COUNTY EMERGENCY SERVICES DISTRICT #1**

**EXECUTIVE LEADERSHIP**

BY: By Scott D. Kerwood

Fire Chief

Orange County Emergency Services District #1

Vidor, Texas

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## ABSTRACT

The Orange County Emergency Services District #1 (OCESD #1) must adopt the National Fire Protection Association (NFPA) Standard, NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*, to reduce the frequency and severity of job-related injuries (Kerwood, 1998b). The problem was that OCESD #1 did not have a plan on how to implement NFPA 1500. The purpose of this research was to develop a plan for the implementation of NFPA 1500 for OCESD #1. This study used a descriptive research methodology to answer the following questions:

1. What steps are used by OCESD #1 to implement major program changes?
2. How have other Texas fire departments implemented NFPA 1500?
3. What must be included in the OCESD #1 NFPA 1500 implementation plan?

A literature review was conducted along with the preparation and distribution of research surveys. These surveys went to 60 randomly chosen members of the Texas Fire Chiefs Association (TFCA) and four management members of OCESD #1. The surveys were used to identify successful implementation of NFPA 1500 or some other major program or program change. The results of the survey indicated that 23.8% of the TFCA respondents implemented NFPA 1500, of which 100.0% indicated successful implementation. All of the OCESD #1 respondents indicated successful implementation of some major program or program change.

The recommendations of the research were:

1. OCESD #1 must implement a plan that follows the NFPA 1500 implementation steps identified by Peterson (1997).
2. OCESD #1 management must develop an organizational culture that does not reward or recognize injuries as “part of the job.”
3. The membership of OCESD #1 must actively participate in the implementation of NFPA 1500.
4. OCESD #1 must continue to implement the occupational safety and health recommendations established in the previous studies.

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## INTRODUCTION

### **Problem Statement**

The Orange County Emergency Services District #1 (OCESD #1) must adopt the National Fire Protection Association (NFPA) Standard, NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*, to reduce the frequency and severity of job-related injuries (Kerwood, 1998b). The problem was that OCESD #1 did not have a plan on how to implement NFPA 1500.

### **Purpose Statement**

The purpose of this research was to develop a plan for the implementation of NFPA 1500 for OCESD #1. This study used a descriptive research methodology to answer the following questions:

1. What steps are used by OCESD #1 to implement major program changes?
2. How have other Texas fire departments implemented NFPA 1500?
3. What must be included in the OCESD #1 NFPA 1500 implementation plan?

## BACKGROUND AND SIGNIFICANCE

By implementing the NFPA 1500 standard, OCESD #1 can utilize an occupational safety and health program that is recognized as a prevailing standard of care and avoid being placed on the Texas Workers' Compensation Commission (TWCC) Extra-Hazardous Employer Program (Kerwood, 1998b). The

Extra-Hazardous Employer Program identifies employers whose injury rates (frequency and severity) are substantially higher than those of similar sized employers in the same industry. The program requires implementation of accident-prevention plans and levies fines of up to \$5,000 per day for non-compliance with the program (Kerwood, 1998b). TWCC defines an injury as an “episode” that exceeds eight days (Texas Fire Chiefs Association [TFCA], 1998a). This definition is consistent with the Texas Municipal League (TML) definition of “lost-time injury” (Kerwood, 1997). The TWCC has determined an acceptable injury rate for fire departments as 1.5 injuries per 100 employees (TFCA, 1998b). According to TFCA (1998a), almost every Texas fire department has an injury rate that will designate it an extra-hazardous employer. The TFCA (1998a) stated that the TWCC is concentrating its inspection efforts on the physical workplace of the fire station, even though most injuries across Texas occur on the fireground or during emergency medical calls. However, occupational illnesses also place Texas fire departments in the Extra-Hazardous Employer Program. TFCA (1998a) noted that it will be just a matter of time before all Texas fire departments are inspected for Extra-Hazardous Employer Program compliance by the TWCC. Appendix A illustrates the injuries and illnesses that placed the Victoria, Texas, Fire Department in the Extra-Hazardous Employer Program (V.L. Riley, personal communication, October 13, 1998).

Additionally, the Texas Commission on Fire Protection (TCFP) (1998a) recommends that all paid and combination fire departments use NFPA 1500. The



TCFP is the state regulatory agency responsible for overseeing paid, volunteer, and combination Texas fire departments. While the TCFP currently only recommends that fire departments follow this standard, there exists a possibility the “recommendation” could become a “requirement” (Kerwood, 1998a). This is realized by the establishment of a TCFP work group to study the potential impact on fire departments should the state of Texas adopt the Occupational Safety and Health Administration (OSHA) *Respiratory Protection Standard* (29 CFR 1910.134), a document that was developed from NFPA 1500 (TCFP, 1998b).

The National Fire Academy (NFA) Executive Leadership course emphasized the impact of organizational change on individuals and on organizational processes and performance (NFA, 1996). This change is based on the organization’s beliefs and values, which are the assumptions that form the organizational culture. This basis is on actions rather than what people say their beliefs and values are. The organizational culture within the department sets the paradigms, any set of rules and regulations that guide the organization in solving problems. The paradigms establish boundaries and tell an organization how to be successful by solving problems within those boundaries (NFA, 1996). This research is important because of the individual and organizational changes that will be required in OCESD #1 to implement NFPA 1500. Kerwood notes that OCESD #1 must develop an organizational attitude that does not reward or recognize injuries as “part of the job.” Rather, management must perpetuate an attitude that injuries are preventable (Kerwood, 1998b, p. 32). This applied research

project is directly related to leading the changing of paradigms within OCESD #1 as far as they apply to firefighter occupational safety and health.

## **LITERATURE REVIEW**

According to Brunacini, “the fire service has suffered the most severe occupational discrimination as it relates to health and safety” (Foley, 1995, p. 303). Given the hazardous nature of firefighting, an occupational safety and health program developed and implemented in compliance with NFPA 1500 is instrumental in securing the highest possible levels of health and safety (Peterson, 1997). Rubin and Foley (1993) stated that the development and implementation of a comprehensive safety and health program using NFPA 1500 will help realize the goal of stopping firefighter deaths and injuries. Wortham (1998) noted that the implementation of an occupational safety and health program must encompass all of “the tools provided by management including budget, information, personnel, assigned responsibility, adequate expertise and authority, line accountability, and program review procedures” (p. 77). A step-by-step process by which a fire department can create a written document and implement NFPA 1500 is shown in Appendix B (Peterson, 1997).

A major factor in the successful implementation of NFPA 1500 depends upon the degree and commitment in the leadership of the fire department (Smith, 1990). Becker, Craig, Davis, Mearns, Smith, and Trump (1992) noted that management’s commitment to the program is the hardest yet most important step that will be taken in the success

of the safety and health program. According to Breeding (1989), it is not wise for a fire chief to claim the position of “conscientious objector” towards improved safety and health. Additionally, Foley (1995) stated that “fire chiefs must lead the fight, support the cause, and inform the people who run the cities and towns that the safety and health of the firefighters is a high priority” (p. 303).

Wortham (1997) identified “visible management leadership” as the motivating force for an effective safety and health program. It is visible management leadership that establishes the leadership climate. The leadership climate is one where followers have set expectations for their leaders and the leader demands certain responses from the followers. The leadership climate is the “personality” of the organization (Taylor & Rosenbach, 1996). According to Smith (1990), the strongest influence of the organization’s culture is the actions or inactions of the fire department leadership. Randlemen (1989) substantiated this statement by noting that while there are other influences on an organization’s culture, the most powerful influence is the fire department leadership.

Organizational culture is therefore determined by the leadership climate (Taylor & Rosenbach, 1996). According to Snook (1988), the only important thing that leaders do is determine the direction of the organizational culture. Cook (1998) identified organizational culture as the following:

A pattern of basic assumptions invented, discovered, or developed by a given group to learn to cope with its problems of external adaption and internal integration that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems (p. 151).

For cultural change to occur, there must be a leader out in front of the fire department. Pritchett and Pound (1988) state that cultural change can be the finest hour for the leader. However, the leader must manage the change process itself. The leader must transform the department's members from workers to followers. This transformation of the organization's basic assumptions and beliefs about itself is known as a paradigm shift (Cook, 1998). The paradigm shift involves a "radical reconceptualization of the organization's mission, culture, critical success factors, form, leadership, and/or other defining characteristics of the organization" (NFA, 1997, p. SM-Ex I-5).

According to Taylor and Rosenbach (1996), the way leaders make decisions and choices, work with people, and reward people determines the leader's values. It is therefore imperative that leaders know and understand their own values. Additionally, the values of each of their members must be known. It is these beliefs and values of the individual fire department members that are directly affected by the values of the fire department. Phillips (1992) states that leaders must be able to respond to these

values of their members. It is the actions or inactions of the individual member that are directly influenced by their values and beliefs (Smith, 1990). These values tend to be motives by which the members act and react (Phillips, 1992). Gill (1993) noted the following:

Firefighters have a personality which attracts them to their dangerous job.

Without that personality they would be unable to manage themselves as well as they do under the extraordinary stresses they usually encounter. Although the firefighter's personality helps them to perform well in the face of danger, it may also inadvertently contribute to the high rate of injuries (pp. 4-5).

Craig (1994) stated that some firefighters wear injuries like a red badge of courage. Injuries allow firefighters to become members in some non-existent fraternity thus taking pride in the claims that the fire service is the most dangerous profession in the world. This is substantiated by firefighters who state that safety is a relative concept and that injuries are the price to pay for being a firefighter (Kerwood, 1997, p. 12). It is the values and beliefs of the fire service organizations that hardens firefighters to resist change (Rielage, Ewell, & Perkins, 1998).

Wortham (1997) noted that employee participation is also a key factor in the success of implementing an occupational safety and health program. Witt (1994) stated that members want the opportunity to influence the decisions that affect their working conditions and work tasks. According to Wright (1994), the NFPA 1500 plan

must satisfy the needs of all concerned, management and membership. Cook (1998) noted that 80% of the success of an organization is contributed by the followers. For example, the Monterey, California, Fire Department implemented a program where employees had significant input into the day-to-day operation of the organization. As a result, productivity of the individual members nearly doubled. Additionally, this program also prepared the employee for other changes occurring within the Monterey Fire Department (International City Management Association [ICMA], 1983). Pritchett and Pound (1990) stated that employees are supposed to help the organization succeed with an organizational change. Cook (1998) substantiated this by stating how employees know that they can become organizational change agents or the victims of change.

## **PROCEDURES**

### **Population**

A survey was conducted using a sample size of 60 fire departments that were members of the TFCA (Appendix C). These 60 survey fire departments were identified from the total TFCA membership through the use of systematic sampling. To overcome any periodicity that might have been present during sampling, the procedure was conducted twice (O'Sullivan & Rassel, 1989). Four management team members (three captains and one secretary) of OCESD #1 were given a similar questionnaire.

## **Instrumentation**

The TFCA sample population survey, which is shown in Appendix D, consisted of 18 questions designed to identify successes in implementing NFPA 1500 or some other major program. Eleven of these survey questions were closed-ended questions. They were as follows:

1. What type of fire department are you representing?
2. Has your fire department been placed on the Extra-Hazardous Employer Program?
3. Has your fire department implemented an occupational safety and health program that follows NFPA 1500?
4. Do you agree or disagree that implementing NFPA 1500 has provided a higher level of health and safety, given the hazardous nature of firefighting?
5. What steps did you use to implement NFPA 1500?
6. Do you agree or disagree that you were successful in your implementation of NFPA 1500?
7. If you answered "agree," please indicate why you were successful.
8. If you answered "disagree," please indicate why you were not successful.
9. Do you agree or disagree that you were successful in your implementation of some major program or program change within your fire department?
10. If you answered "agree," please indicate why you were successful.
11. If you answered "disagree," please indicate why you were not successful.

The remaining seven questions were open-ended further explaining each fire department's successes in implementing NFPA 1500 or some other major program and identifying its demographics. Twenty-one (35.0%) surveys were received on or before the established deadline. Four (6.7%) were received after the deadline and were not used for this paper. Thirty-five (58.3%) surveys were not returned.

Appendix E illustrates the OCESD #1 management questionnaire. Six questions were presented to identify major program implementations or program changes within OCESD #1. Four questions were closed-ended questions. They were:

1. Do you agree or disagree that OCESD #1 was successful in the implementation of some major program or program change?
2. If you answered "agree," please indicate why OCESD #1 was successful.
3. If you answered "disagree," please indicate why OCESD #1 was not successful.
4. What steps did OCESD #1 use to implement some major program or program change?

The remaining two questions were open-ended further identifying the successes of a major program implementation or program change. The questionnaires were returned before the deadline by all four management team members.



### **Data Collection**

Raw data were compiled from each survey. The results from each respondent were then developed into appropriate representative tables.

### **Assumptions**

Several assumptions were made for this paper:

1. OCESD #1 management team members would have knowledge of major programs implemented or changed in the organization.
2. The survey method would provide a random sample of the TFCA membership.
3. The TFCA sample population had knowledge of their fire departments' NFPA 1500 implementation plan or other major program implementation or program changes.
4. Each respondent would answer the questions honestly.

### **Limitations**

1. The survey sample size of 60 does not adequately represent the entire population of Texas fire departments.
2. The sample of the OCESD #1 management team does not represent the entire population of the organization.
3. OCESD #1 management team members have been with the organization for only a short period of time.

4. Several questions were open-ended leaving room for interpretation on behalf of the respondent.

5. The survey was written by a student of the Executive Fire Officer Program.

### **Definition of Terms**

The following terms were used in the survey and are presented here for clarity:

NFPA 1500 - The National Fire Protection Association (NFPA) *Standard on Fire Department Occupational Safety and Health Program*.

Extra Hazardous Employer Program - The Texas Workers' Compensation

Commission program identifying employers whose injury rates are substantially higher than those of similar sized employers in the same industry.

## **RESULTS**

Table 1 illustrates that eight (38.1%) of the respondents were paid fire departments, four respondents (19.0%) were volunteer fire departments, and nine (42.9%) respondents were combination fire departments.

**Table 1**

Fire Department Representation by Type of Department

Type	N	%
Paid	8	38.1
Volunteer	4	19.0
Combination	9	42.9
Total	21	100.0

Populations of the respondents' communities ranged from 5,000 to 1,800,000, while the size of the respondents' fire departments ranged from 15 members to 3,200 members. Three (14.3%) of the respondents, as shown in Table 2, were identified as participating in the Extra-Hazardous Employer Program. All of these respondents identified injury frequency as the reason they were placed in the program. Additionally, these three respondents were all paid fire departments.

**Table 2**

Extra-Hazardous Employer Program by Fire Department Required Participation

Participation	N	%
Yes	3	14.3
No	18	85.7
Total	21	100.0

**1. What steps are used by OCESD #1 to implement major program changes?**

The OCESD #1 respondents identified 12 of Peterson's 17 steps (Appendix B) as being used to implement major program changes in OCESD #1. These steps were: (1) obtain a copy of the standard, (2) establish a project team, (3) compare with established practices, (4) identify sections where compliance is met, (5) identify sections where compliance is needed, (6) identify alternatives or specific solutions, (7) adopt a plan, (8) organize implementation teams, (9) identify implementation strategy, (10) implement the plan, (11) monitor the progress of the plan, (12) review and update the plan. The identified percentage use for each step is presented in Appendix F. Table 3 shows that three (75.0%) of the OCESD #1 respondents strongly agreed that OCESD #1 was successful in the implementation of some major program, while one (25.0%) of the respondents agreed that OCESD #1 was successful.

**Table 3**

OCESD #1 Major Program Implementation by Success

Successful	N	%
Strongly Agree	3	75.0
Agree	1	25.0
Somewhat Agree	0	0.0
Somewhat Disagree	0	0.0
Disagree	0	0.0
Strongly Disagree	0	0.0
Total	4	100.0

The respondents identified the successfully implemented OCESD #1 programs as records management, vehicle maintenance, incident management system, and the purchasing of a children’s fire safety house. Management leadership, employee/membership participation, and an implementation plan all were identified by the OCESD #1 management team as contributing to the successful implementation of a major program or program change.

**2. How have other Texas fire departments implemented NFPA 1500?**

Table 4 shows that five (23.8%) of the TFCA respondents have implemented an occupational safety and health program that follows NFPA 1500.

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**Table 4**

NFPA 1500 Safety Program by Fire Department Implementation

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Implementation	N	%
Yes	5	23.8
No	16	76.2
Total	21	100.0

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Table 5 shows that two (40.0%) of these respondents were paid fire departments, two (40.0%) were combination fire departments, and one (20.0%) was a volunteer fire department. None of these five fire departments were placed in the Extra-Hazardous Employer Program.

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**Table 5**

NFPA 1500 Safety Program by Type of Department

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Department Type	N	%
Paid	2	40.0
Volunteer	2	40.0
Combination	1	20.0
Total	5	100.0

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Of these respondents, two (40.0%) agreed that implementing NFPA 1500 provided a higher level of health and safety, while the remaining three (60.0%) somewhat agreed (Table 6). These five respondents identified an increased level of member awareness, an opportunity to review procedures, and specific safety guidelines as reasons that NFPA 1500 provided a higher level of safety.

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**Table 6**

NFPA 1500 Implementation by Higher Level of Safety

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Higher Level	N	%
Strongly Agree	0	0.0
Agree	2	40.0
Somewhat Agree	3	60.0
Somewhat Disagree	0	0.0
Disagree	0	0.0
Strongly Disagree	0	0.0
Total	5	100.0

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Table 7 shows that two (40.0%) of the respondents agreed that they were successful in the implementation of NFPA 1500. Three (60.0%) of the respondents somewhat agreed that they had successfully implemented NFPA 1500.

**Table 7**

NFPA 1500 Implementation by Successful Implementation

Successful	N	%
Strongly Agree	0	0.0
Agree	2	40.0
Somewhat Agree	3	60.0
Somewhat Disagree	0	0.0
Disagree	0	0.0
Strongly Disagree	0	0.0
Total	5	100.0

Management leadership, employee/member participation, organizational culture, and an implementation plan were all listed by the TFCA respondents as factors in the successful implementation of NFPA 1500. Additionally, each of the steps identified by Peterson to implement NFPA 1500 (Appendix B) was reported to be used by the five fire departments in their safety program implementation. Appendix G illustrates the percentage of use for each identified step.

Of the fire departments that did not implement NFPA 1500, 15 (93.8%) indicated that they did implement some major program or program change. Table 8 illustrates that ten (66.7%) of these respondents strongly agreed that they were successful in the program implementation; four (26.7%) agreed; and one (6.7%) somewhat agreed. These respondents also identified management leadership, employee/member participation, organizational culture, and an implementation plan as factors in their



respective programs' success.

**Table 8**

Major Program Implementation / Change by Successful Implementation

Successful	N	%
Strongly Agree	10	66.7
Agree	4	26.7
Somewhat Agree	1	6.7
Somewhat Disagree	0	0.0
Disagree	0	0.0
Strongly Disagree	0	0.0
Total	15	100.1*

\* Rounding Discrepancy

**3. What must be included in the OCESD #1 NFPA 1500 implementation plan?**

The survey indicated that 12 of Peterson's 17 steps were used by OCESD #1 to successfully implement a major program or program change (Appendix G). Table 3 shows that the respondents felt OCESD #1 had been successful in how it implemented major programs and program changes. Additionally, the OCESD #1 respondents identified that the success of the program implementation was based on management leadership, employee/member participation, and an implementation plan.

## **DISCUSSION**

### **1. What steps are used by OCESD #1 to implement major program changes?**

Table 3 illustrates that OCESD #1 successfully used 12 of Peterson's 17 NFPA 1500 implementation steps in order to implement a major program or program change. Appendix F shows the percentage use for each step identified by the respondents. The steps used by OCESD #1 for major program implementations consisted of all of the tools Wortham notes are necessary for the "implementation" of an occupational safety and health program. They included budget, information, personnel, assigned responsibility, adequate expertise and authority, line accountability, and program review procedures (Wortham, 1997).

Additionally, the OCESD #1 respondents noted that both the management and the membership brought about the successful implementation of these programs. While management must be out in front of the organization leading the way, 80% of the success of an organization is contributed by the members (Cook, 1998).

### **2. How have other Texas fire departments implemented NFPA 1500?**

The results indicated that 23.8% of the TFCA respondents have implemented NFPA 1500 (Table 4). Of these survey respondents, 40.0% were combination fire departments like OCESD #1 (Table 5). All of the fire departments that implemented NFPA 1500 used a combination of the steps recommended by Peterson (Appendix G).

Table 2 illustrates that 14.3% of the total respondents were required to participate in the Extra-Hazardous Employer Program. However, none of these Extra-Hazardous Employer Program participants had implemented NFPA 1500. As was noted by Kerwood (1998b), the NFPA 1500 standard is recognized as a prevailing standard of care. Implementation of the standard can help a fire department avoid being placed on the TWCC Extra-Hazardous Employer Program.

Each of the TFCA survey respondents noted that management leadership, employee participation, organizational culture, and an implementation plan were factors in the successful implementation of NFPA 1500. Additionally, of those fire departments that did not implement NFPA 1500, 93.8% indicated that these four items were also factors in the successful implementation of some other major program. Table 7 shows that fire departments utilizing NFPA 1500 were successful in the implementation of the standard. This successful implementation of the standard also provided a higher level of safety (Table 6) due to increased levels of member awareness, an opportunity to review procedures, and specific safety guidelines. As noted by Rubin and Foley (1993), the development and implementation of a comprehensive safety and health program using NFPA 1500 will help realize the goal of stopping firefighter deaths and injuries.

### **3. What must be included in the OCESD #1 NFPA 1500 implementation plan?**

As was noted, each of the OCESD #1 management team respondents indicated that the district was successful in implementing major program changes (Table 3). Management leadership, employee/membership participation, and an implementation plan were all factors in this success. It was indicated by the OCESD #1 survey results that 12 of Peterson's 17 steps were used successfully to implement these changes (Appendix G). Additionally, these steps were also indicated by the TFCA survey respondents as being used successfully to implement NFPA 1500. These steps, while not all of them were used by all respondents, were instrumental in bringing about the success of a program.

As was noted by Wortham (1997), "visible management leadership" is the motivating force for an effective safety and health program. This is consistent with the indication from the OCESD #1 management team that management leadership was a factor in successfully implementing a major program. Smith (1990) indicated that the success of a program will be led by management.

Additionally, the OCESD #1 respondents identified that employee/member participation was a key factor in successful program implementation. As was noted by Cook (1998), 80% of the success of an organization is brought about by the members. Witt (1994) stated that members want the opportunity to influence the decisions that

affect their working conditions and work tasks. Cook (1998) noted that the members can help change the organization or be victims of the change.

Organizational culture was not identified by the OCESD #1 respondents as a factor in the successful implementation of a major program. However, Taylor and Rosenbach (1996) noted that the “visible management leadership,” or leadership climate, determines the type of organizational culture. The organizational culture/leadership climate of OCESD #1 must recognize the importance of the safety and health of each member. Becker et al. (1992) stated that management’s commitment to the safety and health program is the hardest yet most important step that will be taken in the success of the safety and health program. For the success of the safety and health program, Cook (1998) noted that the leader must transform the organization’s basic assumptions and beliefs about itself. As was noted by Kerwood (1998b), management must perpetuate an attitude that injuries are preventable and are not a “part of the job” (p. 32).

## **RECOMMENDATIONS**

1. OCESD #1 must implement a plan that follows the 17 steps identified by Peterson (Appendix B). By following these steps, the district can utilize an implementation process successfully used by other Texas fire departments.

2. OCESD #1 management must develop an organizational culture that does not reward or recognize injuries as “part of the job.” Management must also perpetuate a leadership climate that states injuries are preventable.

3. The membership of OCESD #1 must actively participate in the implementation of NFPA 1500. The success of the program is based on its values and beliefs.

4. OCESD #1 must continue to implement the occupational safety and health recommendations established in the previous studies. This continued implementation will reaffirm the district’s commitment to the health and safety of the membership. Also, the implementation of these recommendations will help keep OCESD #1 from being placed in the TWCC Extra-Hazardous Employer Program.

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**APPENDIX A**

**Victoria, Texas, Fire Department Extra-Hazardous Employer Injuries**

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Victoria Fire Department

FOR YOUR INFORMATION

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To: Chief Scott Kerwood  
Company:  
Fax number: (409) 769-2359  
Business phone:  
From: Vance L. Riley  
Fax number: (512) 572-9701  
Home phone  
Business phone: (512) 572-6600  
Date & Time: 10/13/98 15:56:18PM  
Pages sent: 1  
Re:

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Victoria FD from 12/1/96 to 11/30/97:

Secretary: Back injury while exercising, no lost time.  
Captain: Old back injury from three years prior, off all year.  
Paramedic: Possible exposure to TB, no lost time.  
Paramedic: Possible exposure to Hep, a few shifts.  
Lieutenant: Poison ivy exposure, no lost time.  
Fire Engineer: Cut finger at fire, 1 shift.  
Fire Engineer: Hurt ankle at basketball, unknown.  
Lieutenant: Neck injury while diving at Diver Team training, off 3 months.

If you have any questions or need any further, please let me know I been there and done all that with EFO, glad to lend a hand.

Vance Riley, EMT-P  
Fire Chief

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606 E. Goodwin  
Victoria, Texas 77901

## APPENDIX B

### **Peterson's Seventeen Steps for Implementing NFPA 1500**

- Step 1: Obtain a copy of the standard.
- Step 2: Establish a project team.
- Step 3: Compare NFPA 1500 with established practices.
- Step 4: Identify sections where compliance is met.
- Step 5: Identify sections where compliance is needed.
- Step 6: Identify available alternatives or specific solutions.
- Step 7: Estimate time and cost for each alternative.
- Step 8: Select the best alternatives.
- Step 9: Prepare a draft plan.
- Step 10: Legal/risk management review.
- Step 11: Submit the draft plan for adoption.
- Step 12: Adopt the plan.
- Step 13: Organize implementation teams.
- Step 14: Identify implementation strategy.
- Step 15: Implement the plan.
- Step 16: Monitor progress.
- Step 17: Review and update the plan regularly.

**APPENDIX C**

**TFCA Survey Recipients**

Fire Chief  
Addison Fire Department  
P.O. Box 144  
Addison, TX 75001-0144

Fire Chief  
Alpine Fire Department  
309 W. Sul Ross  
Alpine, TX 79830

Fire Chief  
Atlanta Fire Department  
P.O. Box 669  
Atlanta, TX 75551-0669

Fire Chief  
Azle Fire Department  
613 S.E. Parkway  
Azle, TX 76020

Fire Chief  
Bellaire Fire Department  
5105 Jessamine  
Bellaire, TX 77401

Fire Chief  
Belton Fire Department  
P.O. Box 120  
Belton, TX 76513-0120

Fire Chief  
Brownfield Fire Department  
201 W. Broadway  
Brownfield, TX 79316

Fire Chief  
Brownwood Fire Department  
P.O. Box 1389  
Brownwood, TX 76804-1389

Fire Chief  
Carrollton Fire Department  
P.O. Box 110535  
Carrollton, TX 75011-0535

Fire Chief  
Champions Area Fire Department  
P.O. Box 692075  
Houston, TX 77269

Fire Chief  
Comanche Fire Department  
219 Austin  
Comanche, TX 76442

Fire Chief  
Conroe Fire Department  
P.O. Box 3066  
Conroe, TX 77305-3066

Fire Chief  
Corsicana Fire Department  
200 N. 12th Street  
Corsicana, TX 75110

Fire Chief  
Crockett Fire Department  
202 N. 6th Street  
Crockett, TX 75835

Fire Chief  
Dallas / Fort Worth Airport  
P.O. Drawer 610687  
D/FW Airport, TX 76065

Fire Chief  
Del Rio Fire Department  
P.O. Box 4239  
Del Rio, TX 78841-4239

Fire Chief  
DeSoto Fire Department  
211 E. Pleasant Run Rd., #A  
DeSoto, TX 75115-5817

Fire Chief  
El Paso Fire Department  
8600 Montana  
El Paso, TX 79925



Fire Chief  
Eules Fire Department  
201 N. Ector Drive  
Eules, TX 76039-3595

Fire Chief  
Forney Fire Department  
P.O. Box 940  
Lancaster, TX 75146-0940

Fire Chief  
Fort Worth Fire Department  
1000 Throckmorton  
Fort Worth, TX 76102-6311

Fire Chief  
Georgetown Fire Department  
P.O. Box 409  
Georgetown, TX 78627-0409

Fire Chief  
Glenn Heights Fire Department  
1938 S. Hampton Rd.  
Glenn Heights, TX 75154

Fire Chief  
Groves Fire Department  
P.O. Box 846  
Groves, TX 77619-0846

Fire Chief  
Harker Heights Fire Department  
401 Indian Trail  
Harker Heights, TX 76543

Fire Chief  
Hawley Fire Department  
P.O. Box 126  
Hawley, TX 79525

Fire Chief  
Houston Fire Department  
410 Bagby  
Houston, TX 77061

Fire Chief  
Huntsville Fire Department  
1212 Ave. M  
Huntsville, TX 77340-4608

Fire Chief  
Keller Fire Department  
P.O. Box 770  
Keller, TX 76244-0770

Fire Chief  
La Marque Fire Department  
1111 Bayou  
La Marque, TX 77568

Fire Chief  
Live Oak Fire Department  
8001 Shin Oak Drive  
Live Oak, TX 78233

Fire Chief  
Longview Fire Department  
P.O. Box 1952  
Longview, TX 77830

Fire Chief  
Lyford Fire Department  
P.O. Box 367  
Lyford, TX 78569

Fire Chief  
Mansfield Fire Department  
210 Smith Street  
Mansfield, TX 76063

Fire Chief  
Mercedes Fire Department  
P.O. Drawer 837  
Mercedes, TX 78570-0837

Fire Chief  
Mexia Fire Department  
P.O. Box 207  
Mexia, TX 76667-0207

Fire Chief  
Missouri City Fire Department  
P.O. Box 666  
Missouri City, TX 77459-0666

Fire Chief  
Murphy Fire Department  
205 N. Murphy Road  
Murphy, TX 75094

Fire Chief  
Needville Fire Department  
P.O. Box 374  
Needville, TX 77461

Fire Chief  
North Richland Hills Fire Department  
P.O. Box 820609  
North Richland Hills, TX 76182

Fire Chief  
Pampa Fire Department  
P.O. Box 2499  
Pampa, TX 79066-2499

Fire Chief  
Pecan Grove Fire Department  
727 Pitts Road  
Richmond, TX 77469

Fire Chief  
Plainview Fire Department  
901 Broadway  
Plainview, TX 79072

Fire Chief  
Port Arthur Fire Department  
5237 12th Street  
Port Arthur, TX 77640

Fire Chief  
Refinery Terminal Fire Company  
P.O. Box 4162  
Corpus Christi, TX 78469

Fire Chief  
Richardson Fire Department  
P.O. Box 830309  
Richardson, TX 75083-0309

Fire Chief  
Rosenburg Fire Department  
P.O. Box 32  
Rosenburg, TX 77471-0032

Fire Chief  
Rowlett Fire Department  
P.O. Box 99  
Rowlett, TX 75030-0099

Fire Chief  
Schertz Fire Department  
P.O. Drawer I  
Schertz, TX 78154-0890

Fire Chief  
Seguin Fire Department  
P.O. Box 591  
Seguin, TX 78155-0591

Fire Chief  
South Montgomery County Fire Department  
P.O. Box 1465  
Willis, TX 77378-1465

Fire Chief  
South Padre Island Fire Department  
P.O. Box 3410  
South Padre Island, TX  
78597-3410

Fire Chief  
Sugar Land Fire Department  
P.O. Box 110  
Sugar Land, TX 77487-0110

Fire Chief  
Temple Fire Department  
505 North 3rd Street  
Temple, TX 76501

Fire Chief  
The Colony Fire Department  
4900 Blair Oaks  
The Colony, TX 75056

Fire Chief  
Travis County ESD #6  
15516 General Williamson Dr.  
Austin, TX 78734

Fire Chief  
Victoria Fire Department  
606 E. Goodwin  
Victoria, TX 77901

Fire Chief  
Waco Fire Department  
1016 Columbus Ave.  
Waco, TX 76701

Fire Chief  
Weslaco Fire Department  
901 N. Airport Drive  
Weslaco, TX 78596

Fire Chief  
Wichita Falls Fire Department  
1005 Bluff  
Wichita Falls, TX 76307

**APPENDIX D**

**TFCA - Executive Leadership Research Project Survey**

For the purpose of this survey, the following definitions will be used:

NFPA 1500: The National Fire Protection Association (NFPA) Standard on Fire Department Occupational Safety and Health Program.

Extra-Hazardous Employer Program: The Texas Workers' Compensation Commission program identifying employers whose injury rates are substantially higher than those of similar sized employers in the same industry.

PLEASE CIRCLE OR FILL IN THE ONE APPROPRIATE ANSWER TO EACH QUESTION.

1. What is the name of the organization you are representing?

---

2. What is the population of the community served by your fire department?

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3. What type of fire department are you representing?

a. Paid

b. Volunteer

c. Combination

- 4. What is the size of the fire department you are representing?  
a. Paid \_\_\_\_\_ b. Volunteer \_\_\_\_\_ c. Combination \_\_\_\_\_
  
- 5. Has your fire department been placed on the Extra-Hazardous Employer Program?  
a. Yes b. No

IF YOU ANSWERED "NO" TO QUESTION 5, PLEASE SKIP TO QUESTION 7 AND COMPLETE THE REST OF THE SURVEY.

- 6. Why has your fire department been placed on the Extra-Hazardous Employer Program?

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- 7. Has your fire department implemented an occupational safety and health program that follows NFPA 1500?  
a. Yes b. No

IF YOU ANSWERED "NO" TO QUESTION 7, PLEASE SKIP TO QUESTION 14 AND COMPLETE THE REST OF THE SURVEY.

8. Do you agree or disagree that implementing NFPA 1500 has provided a higher level of health and safety, given the hazardous nature of firefighting?

- a. Strongly Agree
- b. Agree
- c. Somewhat Agree
- d. Somewhat Disagree
- e. Disagree
- f. Strongly Disagree

9. Why do you agree or disagree that implementing NFPA 1500 has provided a higher level of health and safety, given the hazardous nature of firefighting?

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10. What steps did you use to implement NFPA 1500? (Circle all that apply)

- a. Obtain a copy of the standard.
- b. Establish a project team.



- c. Compare NFPA 1500 with established practices.
  - d. Identify sections where compliance is met.
  - e. Identify sections where compliance is needed.
  - f. Identify available alternatives or specific solutions.
  - g. Estimate time and cost for each alternative.
  - h. Select best alternatives.
  - I. Prepare draft plan.
  - j. Legal/Risk Management review of the plan.
  - k. Submit the draft plan for adoption.
  - l. Adopt the plan.
  - m. Organize implementation teams.
  - n. Identify implementation strategy.
  - o. Implement the plan.
  - p. Monitor progress of the plan.
  - q. Review and update the plan.
11. Do you agree or disagree that you were successful in your implementation of NFPA 1500?
- a. Strongly Agree
  - b. Agree
  - c. Somewhat Agree
  - d. Somewhat Disagree

- e. Disagree
- f. Strongly Disagree

12. If you answered Question 11 as “a,” “b,” or “c,” please indicate why you were successful. (Check all that apply)

- a. Management leadership
- b. Employee/Membership participation
- c. Organizational culture
- d. Implementation plan
- e. Other \_\_\_\_\_

13. If you answered Question 11 as “d,” “e,” or “f,” please indicated why you were not successful. (Check all that apply.)

- a. Management leadership
- b. Employee/Membership participation
- c. Organizational culture
- d. Implementation plan
- e. Other \_\_\_\_\_

QUESTIONS 14 THROUGH 18 ARE ONLY FOR THOSE FIRE DEPARTMENTS THAT ANSWERED “NO” TO QUESTION 7.

14. Do you agree or disagree that you were successful in your implementation of some major program or program change within your fire department?
- a. Strongly Agree
  - b. Agree
  - c. Somewhat Agree
  - d. Somewhat Disagree
  - e. Disagree
  - f. Strongly Disagree
  - g. Not Applicable
15. If you answered Question 14 as “a,” “b,” or “c,” please indicate why you were successful. (Check all that apply.)
- a. Management leadership
  - b. Employee/Membership participation
  - c. Organizational culture
  - d. Implementation plan
  - e. Other \_\_\_\_\_
16. If you answered Question 14 as “d,” “e,” or “f,” please indicated why you were not successful. (Check all that apply.)
- a. Management leadership
  - b. Employee/Membership participation

- c. Organizational culture
- d. Implementation plan
- e. Other \_\_\_\_\_

17. If you answered Question 14 as “a” through “f,” please indicate the program or program change that your fire department implemented.

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18. If you answered Question 14 as “g,” please indicate why the question was not applicable.

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Thank you for taking time from your busy schedule to complete this survey. If you would like a summary of the results of this study, please take an extra few minutes to fill out the following information:

Name/Title: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## APPENDIX E

### OCESD #1 - Executive Leadership Research Project Survey

PLEASE CIRCLE OR FILL IN THE APPROPRIATE ANSWER TO EACH QUESTION.

1. Do you agree or disagree that OCESD #1 was successful in the implementation of some major program or program change?
  - a. Strongly Agree
  - b. Agree
  - c. Somewhat Agree
  - d. Somewhat Disagree
  - e. Disagree
  - f. Strongly Disagree
  - g. Not Applicable
  
2. If you answered Question 1 as "a," "b," or "c," please indicate why OCESD #1 was successful. (Check all that apply.)
  - a. Management leadership
  - b. Employee/Membership participation
  - c. Organizational culture
  - d. Implementation plan
  - e. Other \_\_\_\_\_

3. If you answered Question 1 as “d,” “e,” or “f,” please indicate why OCESD #1 was not successful. (Check all that apply)

- a. Management leadership
- b. Employee/Membership participation
- c. Organizational culture
- d. Implementation plan
- e. Other \_\_\_\_\_

4. If you answered Question 1 as “a” through “f,” please indicate the program or program change that OCESD #1 implemented.

---

---

5. If you answered Question 1 as “g,” please indicate why the question was not applicable.

---

---

6. What steps did OCESD #1 use to implement some major program or program change? (Circle all that apply.)

- a. Obtain a copy of the program.
- b. Establish a project team.

- c. Compare with established practices.
- d. Identify sections where compliance is met.
- e. Identify sections where compliance is needed.
- f. Identify available alternatives or specific solutions.
- g. Estimate time and cost for each alternative.
- h. Select best alternatives.
- l. Prepare draft plan.
- j. Legal/Risk Management review of the plan.
- k. Submit the draft plan for adoption.
- l. Adopt the plan.
- m. Organize implementation teams.
- n. Identify implementation strategy.
- o. Implement the plan.
- p. Monitor progress of the plan.
- q. Review and update the plan.

Thank you for taking time from your busy schedule to complete this survey.

## APPENDIX F

**OCSED #1 Use of Peterson's Seventeen NFPA 1500 Implementation Steps**Major Program Implementation / Change by Implementation Steps Used

Steps Used	N	%
Copy of Standard	2	50.0
Project Team	2	50.0
Establish Priorities	3	75.0
Compliance Met	1	25.0
Compliance Needed	2	50.0
Available Alternatives	1	25.0
Time and Cost	0	0.0
Best Alternatives	0	0.0
Draft Plan	0	0.0
Legal/Risk Management Review	0	0.0
Draft Plan Adoption	0	0.0
Adopt Plan	3	75.0
Implementation Teams	1	25.0
Implementation Strategy	1	25.0
Implementation Plan	3	75.0
Monitor Progress	3	75.0
Review and Update	3	75.0



**APPENDIX G**

**TFCA Use of Peterson's Seventeen NFPA 1500 Implementation Steps**

NFPA 1500 Implementation by Implementation Steps Used

Steps Used	N	%
Copy of Standard	4	80.0
Project Team	3	60.0
Establish Priorities	5	100.0
Compliance Met	3	60.0
Compliance Needed	2	40.0
Available Alternatives	2	40.0
Time and Cost	4	80.0
Best Alternatives	3	60.0
Draft Plan	2	40.0
Legal/Risk Management Review	2	40.0
Draft Plan Adoption	1	20.0
Adopt Plan	2	40.0
Implementation Teams	1	20.0
Implementation Strategy	1	20.0
Implementation Plan	2	40.0
Monitor Progress	4	80.0
Review and Update	3	60.0