

**AN ASSESSMENT OF THE FIRE ACCREDITATION PROCESS
AND ITS BENEFITS FOR THE DOWNEY FIRE DEPARTMENT**

STRATEGIC MANAGEMENT OF CHANGE

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ABSTRACT

The Downey Fire Department had not had a comprehensive evaluation of its services since the formation of the department in 1957. The purpose of the research was to determine if the fire department assessment developed by the Commission on Fire Accreditation International (CFAI) would provide an adequate evaluation of the entire Downey Fire Department and if there were any other associated benefits that may come from use of the accreditation model.

The methodology included a literature review of relative published writings, standards, and executive fire-officer applied research projects. A survey, of the 33 agencies most involved with the accreditation process, was performed to learn of their experiences. Interviews with subject-matter experts were done to clarify the literature and to add breadth to the research. The CFAI self-assessment model was applied to the Downey Fire Department by the author to determine the thoroughness and quality of the model and provide insight into the magnitude of the effort required for accreditation. Evaluative research techniques were used to determine if the CFAI assessment process would be effective in evaluating the Downey Fire Department and produce any benefits.

The research questions were:

1. Will the accreditation model provide a complete review of all fire department activities?
2. What identified steps must be completed before a fire department is accredited by CFAI?

3. Is it possible for specific problems to be identified utilizing the self-assessment process?
4. What benefits, internal and external, have been experienced by those departments who have completed the CFAI accreditation process?
5. What is the total expected cost to become an accredited agency, including both staff time and monetary expenditures?

The research revealed the CFAI assessment process was thorough and if implemented would prove to be valuable for the organization. Many benefits were identified for the staff, the organization, and the community.

It was recommended that the Department take the necessary steps to begin the CFAI accreditation process.

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INTRODUCTION

A Fire Department's primary business is generally the delivery and support of emergency services. The secondary business, although equally important, consists of services such as fire prevention, public education, and administration.

The management of all fire department operations and services is the responsibility of the fire chief. With the addition of emergency medical services, hazardous materials response teams, and technical rescue groups to traditional fire suppression activities it has become increasingly difficult to evaluate and review the efficiency, effectiveness, and the service quality of the entire operation of modern fire departments.

Considering the above noted issues, the implied or direct public demand for cost-effective services and the actual cost of today's fire departments, it is apparent that the services delivered by fire departments should match the expectations of the community. If fire departments are to remain in good standing with elected officials and their appointed staff as well as with their constituents, they must also work within the constraints of annual budgets and reach or exceed their goals and objectives.

Over the course of the last 42 years, the fire response capabilities of the Downey Fire Department have been evaluated several times by the Insurance Services Office (ISO). The management of the City and Fire Department annually formulate an operating budget that is approved by the elected officials. To date, ISO evaluations and annual budget reviews have served as the organizational reviews for the Department.

The problem is that the Downey Fire Department has not had a comprehensive evaluation of all its services since its formation in 1957.

The purpose of this research is to determine if the Fire Department assessment developed by the Commission on Fire Accreditation International (CFAI) will provide an adequate evaluation of the entire Downey Fire Department and if there are any other associated benefits that may come from the use of the accreditation model.

This study uses the evaluative research methodology to answer the following questions:

1. Will the accreditation model provide a complete review of all fire department activities?
2. What identified steps must be completed before a fire department is accredited by CFAI?
3. Is it possible for specific problems to be identified utilizing the self-assessment process?
4. What benefits, internal and external, have been experienced by those departments who have completed the CFAI accreditation process?
5. What is the total expected cost to become an accredited agency, including both staff time and monetary expenditures?

BACKGROUND AND SIGNIFICANCE

An independent comprehensive evaluation model has not, until recently, been available for use by fire-service managers. To date the review of fire department services has generally been done by the Insurance Services Offices (ISO), by paid consultants, by fire department staff, or occasionally by other government staff. In recognition of the evaluation vacuum, the Commission on Fire Accreditation

International (CFAI) has recently (1997) developed an assessment model for the fire service.

The Insurance Services Offices (ISO) and its former agency, the National Board of Fire Underwriters (NBFU) have served as an evaluative tool for insurance companies to determine a fire department's ability to suppress fires since 1889. The ISO's discriminate review of a fire department's resources, training, staffing, communications, and water supply produces a 1 – 10 rating for use in developing a rate schedule for fire insurance.

Fire Departments earning an ISO Class 1 rating are recognized by insurers as providing a high level of fire-suppression ability. Those fire departments determined to have lesser abilities find themselves rated lower. The actual insurance evaluation, the Fire Suppression Rating Schedule (FSRS), also reviews the balance of a fire department's abilities, such as the relationship between the supply of water and the capabilities of the actual fire department. An identified imbalance may have a negative effect on an overall rating.

For the life of the FSRS evaluations, fire departments have utilized the process to grade themselves. Significant efforts have been made to align fire operations and equipment with the grading schedule to maximize a department's rating and to lower the fire insurance premiums of the protected community. It is important to note that the FSRS was never designed for use by fire departments nor were fire departments consulted during its development. In fact the ISO has gone so far as to advise fire departments that the narrow focus of the FSRS was never intended to serve as an evaluation tool of modern fire departments (Hickey, 1993).

Another fire department method of evaluation is the annual budget process. In some instances this process may be a performance review. It is generally this process that forces the evaluation of existing programs and introduces new ideas and services. Outside of the budget cycle, fire departments have few opportunities to request increased funding.

Several problems present themselves when fire departments utilize the budget-development process as an evaluation tool. First, the budget is cost driven and may not consider the services offered or value added by programs. Second, most fire departments do not create enough revenue to offset their annual cost, hence a cost/benefit profile is difficult. Finally, the delivery of basic emergency services by fire departments is a demand by the public; therefore, whether a service pays for itself does not necessarily make the service more or less attractive.

The International Association of Fire Chiefs (IAFC) recognized the inherent problems with the ISO and budget review evaluation methods and began working with the International City/County Managers Association (ICMA) to formulate a comprehensive evaluation model in 1988 (Bruegman and Coleman, 1997). The mission of the collaborative effort was to measure service delivery by encouraging local administrators to focus on three basic issues:

- To identify organizational goals and objectives.
- To concentrate on the design of quality services.
- To evaluate the efficiency, effectiveness, and quality of department administration.

After considerable testing and review the accreditation model has been finalized. The Commission on Fire Accreditation International (CFAI) was formed in 1997 to oversee the accreditation process and is made up of representatives from the fire service, city/county government, and other fire-industry experts (Commission on Fire Accreditation International, *Fire and Emergency Service Self-Assessment Manual*, 5th ed., 1999). The framers of the CFAI have worked to ensure the acceptance of the model by placing guidelines on each board of trustee and commission member. For example, an agency head from a fire department serving a population of more than 250,000 must fill a seat on the commission.

The Downey Fire Department

The Downey Fire Department was established in 1957. At that time the Department provided fire-protection services for a growing suburban community comprising 12.7 square miles from five fire stations with an on-duty staff level of 27 firefighters. To facilitate the rapid formation of the Department, a great number of the original members were recruited from other local fire departments. This practice immediately provided an experienced staff to administer, provide service, and train the recruit firefighters. By the early 1960s the hiring practices shifted to focus on all recruit-level hiring as the Department was well established. The present fire chief was hired as a recruit firefighter in 1963.

Today the Department provides a complete array of emergency services and with an on-duty staff level of 21 compliments those services with fire-prevention and public-education programs offered by a staff of five. The five fire stations have been reduced to four and are geographically located within the original confines of the city.

The population now exceeds 100,000, and the city is 99% built-out. A joint powers communication center is operated from the headquarters fire station and dispatches for four cities including Downey. In 1998 the number of emergency incidents approached 8,000. Emergency medical responses make up over two-thirds of the call load. In 1999 a basic life-support ambulance company was added to the service to compliment the present medical transport system.

The Department has maintained an ISO rating of two since 1990. This rating was an improvement of the 1980 grade of three and was widely believed to be based on the addition of a second paramedic/firefighter squad (two more firefighters) and a fire-auxiliary program that provides a reserve firefighter for each engine company. The auxiliary program has provided a number of the recruit firefighters hired over the last 12 years.

The members of the Downey Fire Department certainly have a responsibility to deliver services, both emergency and non-emergency, in an effective, efficient, and high-quality manner. Therefore, the focus of this evaluative research is linked to the objectives of the change management model found in Module Two. In particular the analysis phase of the strategic management of change model directs managers to perform an overall needs assessment, hence the CFAI accreditation model, and this research and evaluation of that model are relative (Student Manual, Strategic Management of Change course).

LITERATURE REVIEW

The purpose of this literature section is to analyze and summarize the critical findings of others who have published documents relative to the Commission on Fire Accreditation International (CFAI) accreditation model and more directly to the results of the assessment experience.

To begin with, a limited number of articles have been published on the subject of fire service accreditation in professional journals. In fact, if the framers of the accreditation model were excluded as authors from that list, the number of published works is remarkably few. Four executive fire officer applied-research projects were found and reviewed that focused on the accreditation model; however, over a year has passed since the last publication date. Therefore, a search of the works relative to planning and evaluation, as well as accreditation, was performed utilizing the National Fire Academy Learning Resource Center.

Several interviews were conducted to add to the breadth of or lack of published research. Granito (1997) wrote that “objective evaluation and planning can ensure that a community’s desire for a stipulated level of protection is being met in as cost effective a manner as possible.” However, he did not identify a complete model that could be used. He noted that in 1995 no single organization existed that enabled a comprehensive study or audit of a department. Granito did note that a select committee of fire-service administrators, municipal managers, organized labor, and the insurance industry were working toward such an end. This same committee recommended in 1991 that a program similar to the previously mentioned accreditation model be used to evaluate fire-service delivery. At the time of his writing he did not identify a need for a

strategic plan or a standard of response coverage for a fire department. However, he included a number of reference articles on staffing numbers and use.

As a method of addressing the need for fire chiefs to evaluate their services, Bennett (1989) recommended developing a master plan for fire protection. It is evident the accreditation model framers used the master-plan formula in some of the ten evaluating areas of their model; however, the plan as recommended by Bennett does not specifically address the measurement of performance or the introduction of individuals from outside fire departments for evaluators of performance. The concept of master planning instead utilizes members of other organizations in the community to evaluate fire services. This recommended process may seem appropriate in the case of the Downey Fire Department, although this type of evaluation may be more of a service offering review rather than a performance review.

At the Wingspread conference (1996) it was recommended that the fire-service strategy should be to create and develop national standards and that those standards provide the criteria for the evaluation of the effectiveness, efficiency, safety, and timeliness of response, deployment, operations, and programs. It should be noted that at the time of the conference the National Fire Protection Association (NFPA) was working on a fire department deployment standard that may have helped the fire service reach its emerging strategy. The standard was never released; however, at about the same time the CFAI accreditation process was gathering momentum.

History of Accreditation

The concept of accreditation is not a unique one to the fire service. For schools, colleges, and universities the process is an accepted one. It is important to note that

the accreditation process is appropriate for institutions and agencies, not individuals. Mullen (1995) found that..."Other ** have recognized accreditation as a useful tool. It provides a means for self-regulation, a way to promote their fields by raising institutional standards, and an opportunity to protect the public from incompetent ** by identifying quality institutions." It would seem reasonable that a fire department would aspire to be accredited as a method of validating its performance.

Bruegman and Coleman (1997) felt that "the time had come for the fire service to elevate its level of professionalism by creating a process by which citizens, elected and appointed officials, and members within the fire service can assess when they have achieved an appropriate level of performance and efficiency as an organization." Certainly this feeling by two nationally recognized fire chiefs lends credence to the accreditation process.

A task force in 1989 working on the development of the accreditation model developed three very basic questions that needed to be answered:

1. Is the organization effective?
2. Are the goals, objectives, and mission of that organization being achieved?
3. What are the reasons for the successes of the organization?

(Bruegman and Coleman, 1997).

What followed from those questions were the original goals of the accreditation model framers. Bruegman and Coleman (1997) identify them as:

- The system must be applicable across the spectrum of the fire service. With more than 30,000 fire departments, the concept must be workable for the smallest volunteer agency to the metro-size organization.

- It must have a degree of rigor or it will be meaningless. If it is just a process to “do the process,” It would be of no value.
- It must be contemporary, not revolutionary. Understanding the nature of the fire service, it was understood that evolution, not revolution, would be much more acceptable to the majority of fire service agencies.
- It must have the ability to change over time. If the process and the documents are not dynamic, they will be short-lived and of little long-term benefit to the fire service.
- It must be a rigorous process but achievable.
- It must provide a comprehensive organizational evaluation. Today the fire service is a complex service-delivery system. As such, all components of the organization must be evaluated.
- It cannot be totally self-serving to the fire service. If the process were designed just to make the fire service look good, then there would be no enrollment from those who play a critical role in determining our future, such as our city/county managers and elected officials.
- It must be a practical management tool for the fire-service leader/manager.

The fire chief from Tempe, Arizona, Cliff Jones, was quoted by Bruegman and Coleman (1997) as finding “One of the many advantages of the self-assessment component of the accreditation process is that it provides fire departments the opportunity to take an in-depth look at their organization and its operations, utilizing a standardized approach. This project holds real promise for enhancing the credibility and professional standing of our fire service.”

Briefly, the actual CFAI accreditation process entails several steps. First, the agency must register and begin an application process. Second, at some point an agency must begin the self-assessment process where agency members review the delivery of their services utilizing the self-assessment manual and compare their findings. The results of the self-assessment process are then documented and when complete sent to the staff of CFAI for a preliminary review. If the documents are found to be in order, a peer review is scheduled. Once the peer group has had a chance to review the documents and make a physical visit to the agency a report with a recommendation is developed for the CFAI commissioners. If everything is in order, the agency attains its accreditation goal and is recognized by the CFAI.

While working on accreditation an agency can expect to formulate a strategic or master plan, a risk analysis that can be utilized in a standards-of-response-coverage plan and standard operating procedures/guidelines, if the agency lacks any of them (*Fire and Emergency Services Self-Assessment Manual*, 5th ed., 1999).

The fire accreditation model evaluates the performance of fire departments in ten categories:

- Governance and administration
- Assessment and planning
- Goals and objectives
- Financial resources
- Programs
- Physical resources
- Human resources

- Training and competency
- Essential resources
- External systems relationships

Each of the ten categories is made up of criteria used to measure or evaluate a fire department's abilities to provide service. Performance indicators serve as portions of the criteria and define the desired level of abilities to demonstrate a particular task. The mandatory performance indicators, or core competencies, are those ninety-eight evaluations that must be completed for accreditation status to be successful (Bruegman and Coleman, 1997). For each criteria an agency must explain its present performance, how it should be performing and how it can improve.

As a result of their involvement and research in the accreditation-model project, the authors of the 5th edition of the *Fire and Emergency Services Self-Assessment Manual* (1999) have identified the advantages of the accreditation process:

- Local government will view accreditation as an improvement of accountability and responsiveness to local conditions.
- Local fire authorities will use the accreditation process as a means of identifying the agency's usefulness to the community and provide improved prestige and visibility for fire-service activities.

They also identified two potential disadvantages:

- Local government officials may fear that the system will perpetuate tradition; reduce opportunities for innovation, and limit their flexibility.
- Local fire authorities may fear undertaking the process could "make them look bad."

Local government leaders may be reluctant to engage the self-evaluation as it may

point out deficiencies that they have not considered before conducting the evaluation. Many authorities might feel that the system could be used against them in the area of accountability and liability. The perception may exist that it interferes with local autonomy.

In a seminar held in August of 1999 in Kansas City, representatives of the Commission on Fire Accreditation International (CFAI) presented the accreditation model as a:

- Means for fostering excellence in fire service agencies
- Encouraging improvement of agency endeavors
- Assuring all concerned that the agency has clearly defined in appropriate goals and objectives
- Providing counsel and assistance to agencies
- And lastly, protecting against encroachments

The participants' and observer's findings

O'Connell (1998) found in his research that the accreditation process clearly indicated the CFAI accreditation process would benefit his department and recommended that work on accreditation begin immediately. He based his findings on a survey of fire departments involved in the accreditation process. He also found the greatest impacts of the process were the positive results, organizational growth, improved service, self-analysis, professional growth, and increased marketing opportunities as reported by the involved departments.

In an article written for *Fire Chief Magazine*, Jim Spiegel found "The self-assessment program will provide a method to review your entire agency's operations,

policies, and programs. On completion you'll have improved your agency's risk management and reduced your liability" (1999). He also found that the entire accreditation process could be completed in approximately three months by one person if good management, documentation, and department assignments were in order.

Despite the positive effects of the accreditation process reported by others, Mullen (1995), in his research and experience, found the concept of fire accreditation required additional study to determine the managerial merits as well as the economy of it. It should be known that Mullen's experience included being a beta-test site for the CFAI, and his research included a number of survey documents utilizing members of his own department, Naperville, and of other beta-site departments. Other areas of his research found that although the CFAI model may need work, it was suggested that fire-service administrators may have finally developed the evaluation tool they have been working toward.

When addressing the merits of accreditation and how it meets the needs of fire-service agencies, Mullen (1995) found that those surveyed recommended the process be modified to eliminate the redundancy of some questions and to better define some of the performance indicators. He recommended that a training class be formulated and offered to prospective accreditation applicants and cover the following areas:

- Adequate explanation of the purposes of accreditation
- Clear explanations of the requirements necessary for compliance with criteria and performance indicators
- Justification for the criteria and performance indicators based on the research provided

In a separate study Martinelli (1998) agreed that there was a need for accreditation and that the CFAI model provided fire departments with a self-based method to examine their existing service levels. He also found the model required a comprehensive risk analysis from which service demands could be established.

Based on these findings Martinelli found a fire department could evaluate its service against accepted or standardized practices. Those departments surveyed in his research indicated that the CFAI model accomplished this task.

Martinelli found the benefits of the accreditation process were:

- Comprehensive self-assessment
- Critical peer evaluation
- Clear identification of required service level
- Improved planning
- Improved budget process
- Professional development.

Finally, Martinelli found that the departments surveyed unanimously felt the process was worth the time, cost, and effort. His research also indicated that the process is necessary from both a practical standpoint and a financial perspective.

Interviews

Three interviews were conducted for this research project. The reason for all of them was to gather insight on the CFAI accreditation process that was not found in the published material.

Gerald Caton has been in city government for his entire career and has been the city manager in Downey for over ten years. He obviously understands the need for and

demands the delivery of fire services that are efficient, effective, and of high quality. When questioned about the CFAI accreditation project, he confided he was not familiar with it. However, he added that he would consider the project if a thorough review was undertaken and presented to him.

Dana Taylor, the administrative assistant for CFAI, was contacted to determine the demand for assistance by fire departments as they go through their self-assessment process and prepare for their peer assessment. Her findings were that five to ten agencies each month, of the more than 200 registered agencies, call seeking information. Typically, the staff of CFAI link the departments doing a self-assessment with other departments that have earned accreditation or with a peer assessor. Finally, she was questioned about the number of deficiencies found in the accreditation visits. She responded that to the best of her knowledge all agencies had some deficiencies; however, they all met the core competencies.

Battalion Chief Neil Petzing of the Culver City Fire Department was contacted as a subject-matter expert due to his assignment as the accreditation officer for his department and because his department has been accredited for over a year and a half. He deemed the program “high maintenance” and, of particular interest, found it took 30 – 40% of his present administrative time. This time commitment was not troubling for Petzing as it is part of his assignment. Hence he treats it no differently than any other collateral effort.

Summary of Literature

The objective of the research was to comprehensively evaluate the CFAI accreditation model as an evaluation tool. If found to be effective, the process would

then be reviewed for costs and any benefits that may be experienced besides accreditation.

The literature reviewed first gave direction and motivation to this research. Mullen, Martinelli, and O'Connell all reported positive results from their research, and Mullen had firsthand experience that yielded interesting findings.

Granito (1986) and Marsh (1996) found other methods available to fire-service managers for the evaluation of services; however, the research proved each process was lacking in some manner. For example:

ISO - Interested in fire-suppression capability not efficiency, effectiveness, and quality of service.

Master Plan - Comprehensive review of services without the measurement of performance.

Objective Evaluation and Planning - Comprehensive review of the services without a complete model or third-party review.

NFPA 1201 – Comprehensive evaluation without third-party review.

Self-assessment (only) - Comprehensive review of the services without peer review.

Review of the CFAI assessment manual and the numerous writings of others on the subject of accreditation revealed that the review of fire department operations and services is both prudent and necessary. The actual accreditation process is not a new one for organizations, but it is a change for the fire service.

Bruegman & Coleman (1997) clearly outlined the history of the accreditation process and recognized the merits of it. Each of the ten areas of the CFAI self-

assessment model reviews critical aspects of a fire department's ability to deliver service.

O'Connell (1998), Marsh (1996), Martinelli (1998), and Mullen (1995) all recommended their departments begin the accreditation process and found the process complete.

Spiegel (1999) proclaimed in his experience the accreditation process was worthy of the effort and that significant gains in risk management and reduction of potential liability was possible for departments who have been through the process.

Mullen (1995) and Marsh (1996) found the accreditation process lengthy. Mullen stopped short of determining the process was cost effective, calling for further study. The suggestions by Mullen on improvements, streamlining, and training on the process were apparently well taken as these recommendations have all been implemented.

The surveys of Martinelli (1998) and O'Connell (1998) led both authors to note the unanimous approval of the accreditation process by organizations who have experienced the process as they advise others.

Dana Taylor, an administrative assistant for CFAI, confirmed the staff of the organization lends support to the registered and applicant agencies and that the number of departments who enter the process is increasing.

Neil Petzing confirmed the process is complete and requires diligent follow-up. He also confirmed the value of the process by his department's continued participation.

Finally, Gerald Caton's interest in the process is encouraging for continued study on this subject.

PROCEDURES

Methodology

The research involved a review of the literature from the Learning Research Center at the National Fire Academy. Due to the age of the CFAI accreditation model the amount of published material was less than overwhelming, and only four applied research papers were found relating to the subject. A brief search of the historic evaluation methods for fire services and their content was also performed to provide insight into the CFAI model.

A survey of the 21 fire departments who have earned accreditation status and of the 12 fire departments awaiting the peer review portion of the accreditation process was performed to learn more about the experience and determine the costs, benefits, impacts, and commitments of the said departments. Those departments with registered-agency or accredited-applicant status were not surveyed as they had not completed the self-assessment process. Hence it was felt they may not have the experience this research was looking for.

The focus of this research has been on the entire accreditation process and not on those departments who are presently working on their accreditation. It should be noted that the 12 departments with accreditation-candidate status have not technically completed the entire process. However, these departments have experienced the self-assessment phase. For some departments with accreditation candidate status the peer review has been completed, and only the actual accreditation notification is pending.

Of the accredited departments, 13 of the 21 returned surveys. Of the accreditation candidates, six of the 12 agencies returned their surveys.

Several interviews were performed with individuals who had or could have a significant part in the accreditation process in either their own department or in the administration of the program. The author attended a peer-assessment work shop in hopes of learning even more about the process.

Finally, a preliminary self-assessment was performed on the Downey Fire Department to ascertain the magnitude of the process and how it might affect the department.

In summary, the objective of this research was to review the work, experience, and writings of others and compare those findings to the Downey Fire Department's situation. A recommendation was formed once the evaluation was completed.

Limitations

The author fought two limiting factors; they were time and the number of years the CFAI model has been available. The cycle of research takes time. Once problems are identified and purposes of study are formulated facts must be found and evaluated. Frequently the new findings require and demand more study and evaluation. If given more time for research and more accredited fire departments to study, this research may change.

The survey mailed to the 33 departments attempted to be thorough but like any written document may have been less specific than was necessary. Phone calls were made to clarify surveys answers. A follow-up survey may have helped to clarify some of the survey answers. A fault in this theory may be the author's experience with contacting accredited departments. Evidently all of them have been contacted a number of times and are growing weary of the endless surveys. Since some of the

departments chose not to respond to the original survey and again declined when recontacted, this may be an issue.

The author's knowledge of the Downey Fire Department was based on 20 years of experience and may serve as a limiting factor when evaluating the Downey Fire Department using the CFAI model. If the department chose to utilize the actual CFAI model and go through the process, a team of individuals would clearly perform this task and possibly have different results.

Definition of Terms

Accreditation - An evaluative and recognition process to ensure the maintenance of standards or qualifications for an organization.

Accreditation Candidate - Emergency-service agency that has completed the self-assessment process and submitted the results of its work for review by the CFAI staff and is awaiting a peer-assessment group to review the findings and their organization.

Accredited Agency - An emergency-services agency that has completed the self-assessment, a review of the results, and a peer review and has been found to be compliant with the CFAI accreditation model.

Applicant Agency - An emergency-service agency that has begun the self-assessment process but not completed it or submitted the results.

Certification - The process of testing and evaluation of an individual to compare that person's abilities to those of the standard or body of knowledge.

Commission on Fire Accreditation International (CFAI) - A non-profit organization established to evaluate fire-emergency service providers utilizing an established criteria,

self-assessment, and peer assessment leading to the award of an accredited status, also known as CAFI, and the fire and emergency service self-assessment.

Fire Suppression Rating Schedule (FSRS) - The guidelines and procedures used to review the capabilities of a fire department (to prevent and suppress fires) by the Insurance Services Office (ISO) with the purpose of establishing a rating factor for the calculation of property insurance rates.

Insurance Services Office (ISO) - A national organization that provides rating information to insurance companies based on an evaluation of a fire department's ability to prevent and suppress fire.

National Fire Protection Association (NFPA) - A non-profit, voluntary membership organization that develops standards for fire fighting procedures, fire prevention, and methods of fire protection.

Peer Review - The process whereby an outside group of CAFI fire-service evaluators review the performance of an accreditation candidate agency and determine how that agency compares to the self-assessment model.

Registered Agency - An emergency-service agency that has paid the registration fee with CAFI and receives the newsletter; however, these agencies have not officially started into the self-assessment process.

Self-assessment - The process in which an emergency services agency reviews its own efforts and determines the level of compliance with the standardized model developed by the CAFI. Once the self-assessment is performed and the results are completed the agency can be reviewed and a determination made as to the merits of the agency for accreditation candidacy.

Standardization - An act or process of review as a rule for the measure of a service by an agency.

Standard of Response Coverage - A plan formulated by the local fire agency evaluating community risks, the methods of emergency service delivery (staff and equipment) the response history of the department, and the service-delivery steps. This written plan takes into consideration the geographical distribution of fire stations, the concentration of apparatus and equipment, and the frequency fire companies need or help other fire companies.

Interviews

The three interviews were all performed to clarify or broaden the information learned in the Literature Review. The administrative assistant of CFAI, Dana Taylor, was contacted to determine the current accredited and accreditation candidate agencies. She was also questioned about the amount of assistance that the registered applicant agency-status departments demanded. Dana also supplied the contact addresses for the surveys performed for this research project.

The battalion chief with the administrative assignment of keeping the accredited Culver City Fire Department in compliance, Neil Petzing, was interviewed to determine the amount of effort required to remain accredited.

The city manager of the City of Downey, Gerald Caton, was interviewed to determine his opinion, if any, of the accreditation process. The author was encouraged to learn Mr. Caton was interested in this research and open to the accreditation concept.

RESULTS

The information collected during this research through literature review, survey, and appropriate interviews serve as the basis for the findings of the research questions.

Answers to Research Questions

Research question 1: Will the accreditation model provide a complete review of all fire department activities?

A review of the literature found citations of several fire chiefs (Bruegman & Coleman, 1997) and the staff of the CFAI (Coleman, 1999) verifying the model's capacity for evaluation and the thoroughness of it.

A survey (Appendix A and B) performed for this research confirmed the findings of the Literature Review. All survey respondents answered "yes" to this question. Two agencies did comment that the model could be broadened to encompass more agency activities. Specifically, one agency felt with the amount of emergency medical services provided by fire departments, a larger component of the model should be focused on this. Another agency recommended a technology/automation component be added to the model. It should be noted each of the previously mentioned departments responded with a "yes" to this question.

An interview conducted with a battalion chief in the Culver City Fire Department, (Personal Correspondence December 19, 1999), who has a responsibility of maintaining the department's accredited status, also confirmed the model served as a complete evaluation.

Finally, this author performed a preliminary self-assessment of the Downey Fire Department (Appendix C) and found the model to be very comprehensive. No operation of the Downey Fire Department was found unevaluated.

Research question 2: What identified steps must be completed before a fire department is accredited by CFAI?

A review of the literature from the CFAI identified the following exact steps:

Registered agency phase

- Preliminary documents required - Application for registration.
- Time parameter - Three years are allowed to prepare for the actual self-assessment or this period ends when an agency changes in status to “applicant agency.”
- Actions required during this phase - Staff review of registration and return application packet to CFAI applicant.

Applicant agency phase

- Preliminary documents required - Letter of commitment (the statement from the agency and its governing body of staff and budgetary commitment to the accreditation process):
 - * Demographics form
 - * Application form
 - * Report on eligibility
- Time parameters - An agency’s self-assessment manual must be returned to CFAI within 18 months of application.
- Actions required during this phase - Complete the self-assessment for the agency.

Accreditation candidate phase

- Preliminary documents required - The self-assessment manual complete, reviewed by the assessors.
- Time parameters - Once the assessment is complete the peer assessors have three to 12 months to review the document, make a site visit, and develop a report for CFAI, including a recommendation on the agency's compliance with the accreditation model.
- Actions required during the accreditation candidate phase - A peer assessment is performed by CFAI evaluators. The results and recommendations of the site visit are then reviewed by the CFAI staff. If everything is in order, the agency is granted its accreditation.

Accredited agency phase

- Preliminary documents required - Compliance with categories and criteria.
- Time parameters - An annual report is due within 30 days of agency-accreditation anniversary. A reapplication for accreditation must be performed in five years.
- Actions required during the accredited phase - CFAI reviews agency status annually via the annual report (Commission on Fire Accreditation International, *Fire and Emergency Service Self-Assessment Manual*, 5th ed., 1999).

Research Question 3: Is it possible for specific agency problems to be identified utilizing the self-assessment process?

The 5th edition of the *Fire and Emergency Service Self-Assessment Manual* (1999) provides ample opportunity for applicant agencies to identify their strengths and weaknesses through the ten categories, 44 criteria, 233 performance indicators, and 98

core competencies. The manual offers an evaluative tool that attempts to set a standard for the delivery of emergency services. The studied Applied Research Project (ARP) authors, Mullen (1995), O'Connell (1998), Marsh (1996), and Martinelli (1998), all apparently focused on the following aspects of accreditation:

- The theory of general accreditation process.
- The fit of the CFAI accreditation model with fire service agencies.
- The comparisons of the CFAI model with other fire-service evaluation tools.
- The preliminary experiences of the early accredited agencies.

All of the ARP authors recommended the CFAI model as a means to evaluate emergency-service delivery and noted the details of assessment. As noted above, the tangible benefits of the self-assessment were not the main focus of the ARP authors. Hence further study was warranted.

The survey performed for this research (Appendix A and B) specifically asked for each agency's experience in identifying practices/operations within an agency that required the attention of the department after going through the self-assessment. All but one department responded that the self-assessment process identified internal problems with current practices or operations. Some of the departments remarked that the self-assessment provided immediate help. A general survey response focused on the highlighting of insufficiencies in the area of planning (master, strategic, and standards of coverage), risk and liability, analysis, and standard operating procedures/guidelines. One agency made up a list of 300 items that needed attention.

The interview with Neil Petzing of the Culver City Fire Department confirmed the accuracy of the survey results (Personal Conversation 12/19/99). He elaborated that a

number of shortcomings were found along with a number of solutions to the same problems.

The author's preliminary self-assessment identified a number of operational and planning matters that will require attention if the Downey Fire Department chooses to begin the accreditation process. Those areas found deficient were similar to those reported in the survey of accredited and accreditation candidate agencies.

Research Question 4: What benefits have been experienced by those departments who have completed the CFAI accreditation process?

A review of the literature provided several examples of benefits for departments willing to endure the accreditation process.

In the broadest sense the planning and evaluation of all services is a staple activity of management. Therefore, merely completing those activities should serve the department well assuming the effort is diligent and truthful and the tenets of management are true.

Internal Benefits

The 5th edition of *Fire Emergency Service Self-Assessment Manual* (1999) identifies a number of benefits from conducting a self-assessment of a fire agency.

They are:

- The promotion of excellence within your fire/emergency service organization.
- Encouraging quality improvement through a continuous self-assessment process.
- Providing related assurance to peers and the public that the organization has defined a mission and related objectives that will result in improving organizational performance.

- Providing a detailed evaluation of the department and the services it provides to the community.
- Identifying areas of strength and weakness within the department.
- A methodology for building on strong points, addressing deficiencies.
- Provides for departmental growth.
- Provides a forum for the communication of management and leadership philosophies.
- A system for national recognition for the department.
- A mechanism for developing concurrent documents, such as strategic and business plans and a “desktop manual” of everything your agency is involved in (often referred to as a turnover/takeover document for a new CEO).
- Fosters pride in an organization, from department members, community leaders, and citizens.

It should be noted that the authors of the CFAI manual do not cite any particular survey to arrive at their conclusions. However, as previously noted, the framers of the manual all have had involvement in the accreditation process and have presumably experienced the benefits.

Several authors (Marsh, 1996; O’Connell, 1998; Martinelli, 1998; and Mullen, 1995) all noted agency benefits in their studies of the self-assessment process. Marsh found that the process provided a means for an agency to organize and evaluate itself, to effect change, and to receive recognition.

O’Connell surmised after his review of the literature and his own surveys that “It was easy to see that the overwhelming majority of personnel who have been involved in

the CFAI fire self-assessment and accreditation process speak very positively of the benefits and outcomes.” He found only one of the eight accredited departments he surveyed disagreed with one of his statements as to the benefits of accreditation. Thus in O’Connell’s research 98.95% of the responses as to the benefits of accreditation were positive. He also felt accreditation increased an agency’s marketing abilities.

Martinelli (1998) found in his survey that eight of ten respondents, or 80%, listed the information gained from a comprehensive self-assessment as a benefit of the process. He reported that less than half of the respondents felt the peer-review portion of the process was important. Furthermore, he found that 20% of the respondents felt the accreditation process clearly identified the service provided to fire fighters, to the community, and to local officials. Finally, 20% of his respondents found the process improved their organizational planning and determined that was a benefit.

In Mullen’s research (1995) he found consensus in the following benefits of accreditation:

- Completion of a detailed evaluation of agency operations.
- Identification of areas of the organization requiring improvement.
- Development of a plan to address deficiencies.

He found significant approval of the respondents (surveyed members of his own department and other accredited departments) regarding the ability of the self-assessment process in identifying agency goals, assisting in the design of quality services, and in promoting effectiveness and efficiency in the administration of fire services.

In the survey (Appendix A) completed for this research problem, all respondents noted benefits of some type. Whether those benefits were tangible, like the development of a strategic plan, or intangible, like staff becoming more efficient, grasping the department's mission or having a better vision of the big picture were all benefits noted by the respondents. A nearly universal response was that of understanding the activities of the entire department, not just those of a specific division.

External Benefits

Certainly emergency-service agencies have benefited in their community from their own good work in their fields of responsibility. The focus of the results for this question have related so far to internal benefits experienced by the 13 accredited departments who responded to this author's survey. Therefore, it seems reasonable to evaluate the experiences of those departments who have become accredited relative to the benefits of accreditation outside their organization.

Of the 12 responding fire agencies (Appendix A), all but one department noted their efforts were worthwhile for the community. The exception was a report from one agency of the community not seeming to be interested in their accreditation honors. However, another agency noted they had utilized members of their community for their strategic-planning work and reported they had experienced increased community support.

With the exception of one agency who did not finish its survey, all of the agencies noted there was at least a minimal amount of recognition by their governing body, namely a council presentation. Several agencies hosted press conferences, luncheons, and parties. One agency was recognized on the Floor of their State Senate.

When the surveyed agencies were queried as to their expectations and experiences relative to their accreditation efforts and any recognized external successes, the respondents noted the benefits for the department and the community were: help with the budget (4) and professionalism (3). One department felt their accredited status would help with their negotiations. It should be noted, however, that Mullen (1995) determined in his research that the accreditation process was not meant for this.

Research Question 5: What are the total expected costs to become an accredited agency, including the staff, time, and monetary expenditures?

The 5th edition of the *Fire and Emergency Service Self-assessment Manual* (1999) identifies several fees charged by the CFAI for registration, applicant agency, accreditation candidate, and an accredited agency phases of the process. The fees the CFAI would charge for the Downey Fire Department are as follows:

- Registration - \$250 (plus \$200 for the manual)
- Applicant agency - \$5,000 (based on the population of Downey)
- Accreditation candidate - actual cost of the peer-team visitors (Martinelli (1998) found this cost to be approximately \$3,000)
- Accredited agency – One-fifth of the applicant agency fee per year

The CFAI manual estimates the time required to complete the self-assessment process was 18 months for a team composed of a cross-section of agency human resources staff.

Martinelli (1998) explored the costs associated with the accreditation process. He found the CFAI costs were predictable as well as the peer-assessment team's travel

and expenses. However, his survey produced a range of responses for the completion of the self-assessment from nine to 18 months. He also found the associated staff hours to complete the self-assessment to vary between 1,000 and 7,000 hours. He reported the mean staff hours required were 1,200.

The survey performed for this applied research project addressed the costs of the accreditation process. The respondents reported the time required to complete the accreditation process varied from three months to four years. The actual staff hours required to complete the project were reported between 1,000 and 2,500. None of the respondents identified the actual staff costs as most reported the project was done by several individuals who retained their normal assignments.

Only four agencies of the 13 accredited agencies specifically assigned staff to the accreditation project. The majority of the departments performed their self-assessments utilizing teams of agency members generally led by a motivated project manager.

The costs for continuing the accreditation process after becoming accredited are less apparent. Only four of the 13 accredited agencies identified any costs (hours or expenditures). The responses varied from 30 to 40% of an administrator's staff time, to ten days of staff time, to negligible, to \$4,000. One of the departments reported their experience with the costs as zero as they were only doing what they should have been doing all along.

Results Summary

The findings of the literature review, the interviews, the external survey, and the internal analysis all fit together well.

The information found in the CFAI document, the associated articles, and applied research projects all concur that the CFAI model provides a vital evaluation of fire department services. Agencies that have successfully earned accreditation all believe the process was thorough, well planned, beneficial to their organization, and worth the efforts.

Judging by the surveys and literature there is little doubt that the accreditation path is arduous and long with some initial expense and little ongoing cost.

Most importantly all research concludes that the divisions and staff inside the agencies all experienced improvements.

Survey Summary

The surveys e-mailed to the 21 accredited agencies and those e-mailed to the 12 accreditation candidates differed slightly. However, with the exception of how many surveys were returned (accredited agencies 13 of 21: accreditation candidates 6 of 12), the answers to the questions were remarkably similar. Agreement was found on the time and costs, the benefits to the organization, problems found and then solved, and the value of the process for the organization and community.

The Internal Analysis Survey (Appendix C) performed for this research revealed the assessment and planning section and the goals and objectives as the lowest rated performance areas of the Downey Fire Department. The governance and

administration, financial resources, and physical resources all achieved quiet success with their high compliance scores.

Interview Summaries

The interviews for this research were performed to help clarify the literature and to add depth where little had been done by others.

The administrative assistant of CFAI, Dana Taylor, confirmed the CFAI actively supports those agencies that register with training by providing subject-matter experts to the departments who are going through the accreditation process. She also confirmed that essentially all accredited departments are keeping current and expecting to continue their accreditation efforts.

The Culver City battalion chief, Neil Petzing, in charge of their re-accreditation effort, confirmed the amount of commitment required and the cost to remain engaged in the accreditation process.

DISCUSSION

The purpose of this research was to determine if the fire department assessment process, developed by the CFAI, would provide an adequate evaluation of the entire Downey Fire Department, and if there are any other associated benefits that may come from the use of the assessment model.

In 1996 a distinguished group of fire-service leaders at the Wingspread conference found that fire departments must challenge themselves to reach the highest levels of service.

Mullen (1995) found, "...Administrators felt that a uniform, but independent, method of performance measurement would assist greatly in appraising the present services, focusing planning for future projected demands and improvements, and demonstrating accountability to local elected officials and the public."

Clearly the process of accreditation is an accepted method of achieving Mullen's finding. Several authors (Marsh, 1996; Martinelli, 1998; and O'Connell, 1998) all extolled the virtues of accreditation and recommended their own agencies start the process.

Recognizing the need to begin the evaluation process and grasping the evaluative tool to accomplish the task are the first steps required to begin the CFAI accreditation process. Developing the will and motivation for an agency to complete such an arduous endeavor is necessary to complete the task. Certainly the authors of the 5th edition of the *Fire Emergency Services Self-Assessment Manual* (1999) found the assessment process to be beneficial to fire service managers. Their long list of justifications for the effort serves as a rallying point.

The surveys and interviews for this research corroborated the findings of previously mentioned authors. All of the respondents (accredited agency or accreditation candidates) found the process to be beneficial to their staff and their agency.

This research attempted to broaden the base of information on accreditation by surveying agencies who had not been previously contacted. It is the comments and responses from those departments that distinguish this project from the other applied research projects. It is assumed that if the group of accredited agencies and

accreditation candidates were contacted next year, the number would be larger and the results may differ.

For example, when Mullen (1995) did his research, the time required for the completion of the accreditation process was not as tangible since only a few departments had completed the fledgling process. In most cases those early departments also reported a lack of direction from the accreditation design team. He found that...“As the concept of fire service accreditation takes shape and becomes accepted, additional research must attempt to determine not only the managerial merits of accreditation but its economy as well.” The surveys done for this project have indicated that the agencies all found the accreditation process worthwhile and thorough. Even the two agencies who had their accreditation deferred until a time when they were more prepared reported the process was beneficial to their agencies.

Regarding the surveys, the findings of this research were congruent to the works of the others. The only difference being the larger number of respondents and another year, in some cases, to reflect on experiences.

When the remarks of the respondents are evaluated and then factored in to the authors own brief self-assessment of the Downey Fire Department (Appendix C), it appears considerable work lies ahead for The Downey Fire Department before any credible effort at accreditation is possible.

Without question the formulation of a risk-assessment model, standards of response coverage, and a strategic plan will be laborious but will benefit the Downey Fire Department and improve the knowledge of those who are involved in the process.

It should be noted that the several departments who have started the accreditation process and stopped were not contacted. Previous study by O'Connell (1998) led him to find that..."The time and resources required to complete the assessment/accreditation process became overwhelming." The survey responses for this research again corroborated with those findings relative to benefit: That is, even if an agency does not finish the process, benefit is experienced.

One finding from the survey of the accreditation candidates was that CFAI accreditation is not a "sure thing." Of the six survey respondents, two agencies had their efforts deferred until such time that their performance and the self-assessment were more closely aligned.

Another important finding from the surveys was the Share Our Solution (SOS) policy of Lincoln, Nebraska Fire Department. Apparently an active network exists amongst those agencies involved in the accreditation process. The Downey Fire Department could benefit immediately from such a network. As previously noted, the preliminary self-assessment of the Downey Fire Department has identified a number of documents and procedures that are absent.

The implications of this research and that of many others is that the Downey Fire Department would benefit from entering and then completing the CFAI accreditation process. The research found the process to be thorough and demanding with numerous identified benefits for the staff, the department, and the community. The associated costs are minimal in relation to the department budget and the positive experiences elaborated by the respondents.

RECOMMENDATIONS

As a result of this research it is recommended that the administration of the Downey Fire Department begin the process of evaluating their services utilizing the CFAI assessment model.

The Downey Fire Department should take the following steps to complement the recommendations:

- Brief the Downey City Manager and City Council on the accreditation process, the costs, and the benefits. Recommend they support the effort.
- Brief the entire Department (line and staff) on the merits of accreditation and the intent to begin the assessment process. Seek for their comments and support.
- Form a diverse team to tackle the self-assessment process.
- Begin preliminary work on developing the necessary documents for the self-assessment process.
- Begin the registration process with the CFAI staff.
- Monitor the progress of the accreditation candidates contacted for this research and consider utilizing their successful findings during the Downey Fire Department assessment process.
- Formulate a budget plan determined by the actual and associated costs of the accreditation process and appropriate the funds to start and complete the process.

REFERENCES

- Bruegman, Randy R. and Coleman, Ronny J. (1997, March). *Self-assessment: safeguarding the future fire engineering*, 83 – 94.
- Coleman, Ronny J. (1993). *The concept of accreditation*. Fairfax, VA: International Association of Fire Chiefs, 1 – 19.
- Commission On Fire Accreditation International, (1999). *Fire and Emergency Service Self-Assessment Manual* (5th ed.). Fairfax, VA: Commission on Fire Accreditation International.
- Granito, John (1997). *Evaluation and planning of public fire protection*. In Arthur E. Cote, P.E. (ed.), *Fire Protection Handbook*, 10-29 – 10-44. Quincy, MA: National Fire Protection Association.
- Hickey, Harry E. (1993). *Fire Suppression Rating Schedule Handbook*. Professional Loss Control Foundation, 11.
- International Association of Fire Chiefs Foundation. (1996). *Wingspread iv: Statements of critical issues to the fire and emergency service in the United States*. (A Wingspread conference report of the International Association of Fire Chiefs Foundation held in Dothan, AL, October 23-25, 1996). York, PA: Author.
- Marsh, Andrew D. (1996, September). *Accreditation as a systematic process for evaluating a combination of fire/rescue services* (Applied Research Project). Emmitsberg, MD. National Fire Academy, Executive Fire Officer Program.
- Martinelli, Dan (1998, September). *Evaluation and recommendation for accreditation for the Aurora Fire Department* (Applied Research Project). Emmitsberg, MD. National Fire Academy, Executive Fire Officer Program.
- Mullen, Patrick J. (1995, April). *Fire service accreditation: issues and impacts on local fire departments*. Masters Research Paper. Governors State University.
- National Fire Protection Association (1994). *NFPA 1201: Standard for developing fire protection services for the public*. (1994 ed.). Quincy, MA: Author.
- O'Connell, Thomas J. (1998, November). *An evaluation of fire service accreditation and ISO grading processes as organizational service quality tools* (Applied Research Project). Emmitsberg, MD. National Fire Academy, Executive Fire Officer Program.
- Spiegel, J. (1999, January). *On the fast track*. *Fire Chief*, 43, 26 – 31.

Appendices Not Included. Please visit the Learning Resource Center on the Web at <http://www.lrc.fema.gov/> to learn how to obtain this report in its entirety through Interlibrary Loan.