-A STRATEGIC APPROACH-
IMPROVING THE CITY’S PUBLIC PROTECTION CLASSIFICATION
AS MEASURED BY THE
INSURANCE SERVICES OFFICE’S (ISO)
FIRE SUPPRESSION RATING PROCESS

EXECUTIVE LEADERSHIP

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

The City of Miles City, Montana (City) fails to include as a priority in its budget planning process costs associated with operation, maintenance, replacement, and improvement of fire and rescue department equipment. Over the course of time, this inadequate funding has compounded with other problems to create the imminent risk of the City receiving a retrogressive classification in the next Insurance Services Office (ISO) rating process.

The purpose of this applied research project was to develop, refine, and present to city officials an educational program illustrating the importance, both to the City and to the community, of the ISO’s Public Protection Classification (PPC) process.

An action research methodology was utilized to answer the following questions:

1. What criteria are used by the Insurance Services Office (ISO) that the Miles City Fire and Rescue Department (MCFR) must meet to maintain the current ISO classification of 5?

2. What criteria are used by the Insurance Services Office (ISO) that the Miles City Fire and Rescue Department (MCFR) must meet to improve the current ISO classification to 3 or 4?

3. What would the potential benefit(s) be for the City, community, and the Miles City Fire and Rescue Department (MCFR) in taking the necessary actions to improve the current ISO classification?
Literature reviewed included fire service manuals and textbooks, online articles, professional journals, research papers and related resource articles about the ISO from the National Fire Academy’s Learning Resource Center.

Procedures implemented for this action research project included:

1. Formatting and executing a survey of fire departments (n=14) across the State of Montana;
2. Collaborating with an insurance agent to prepare a comparative chart using the current computer program of the ISO’s classification process;
3. Formulating a PowerPoint® educational program illustrating the impact of the ISO rating process on City, residential, and commercial insurance premiums;
4. Submitting grant applications for financial assistance in meeting ISO guidelines;
5. Receiving from ISO and evaluating the last classification detail evaluation for MCFR; and
6. Collating, analyzing, and describing the data collected.

Research findings indicated that improving the City’s current ISO rating could result in significant premium savings for commercial property owners, while a retrogressive rating could result in significant premium increases for both residential and commercial property owners.

As an effect of these research findings, several recommendations were made and actions taken. First, a time for making a presentation of the
PowerPoint® program designed for the education of city officials will be scheduled. In addition, an informational brochure was developed and distributed to explain the value-added services MCFR provides to the community.

Recommendations made included one that quarterly reports summarizing MCFR status relative to ISO Fire Suppression Readiness Guidelines be prepared for city officials, and another that the city council renew its April 22, 2003 Resolution #2968 creating a capital improvement fund wherein cash will accumulate for the purpose of meeting MCFR’s equipment operation, maintenance, replacement, and improvement needs.
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INTRODUCTION

The elected officials of the City of Miles City, Montana have not included the Miles City Fire and Rescue Department’s (MCFR) equipment operation, maintenance, replacement, and improvement costs as a priority in city budget planning. Inadequate funding over time has compounded the City’s public safety problems to create the imminent risk of a retrogressive classification in the next Insurance Services Office’s (ISO) rating process. The consequences of such a classification may negatively impact the City and community in areas other than just the cost of insurance.

The primary purpose of this applied research project is to develop, refine, and present an educational program to city officials illustrating the importance of the ISO’s Public Protection Classification (PPC) process to the City and community. An action research methodology was utilized to answer the following questions:

1. What criteria are used by the Insurance Services Office (ISO) that the Miles City Fire and Rescue Department (MCFR) must meet to maintain the current ISO classification of 5?

2. What criteria are used by the Insurance Services Office (ISO) that the Miles City Fire and Rescue Department (MCFR) must meet to improve the current ISO classification to a 3 or 4?

3. What would the potential benefits be for the City, community, and the Miles City Fire and Rescue Department (MCFR) in taking the necessary actions to improve the current ISO classification?
The debate over the importance of the ISO rating process is ongoing. Stevens (1997) said that “…the ISO thing is nothing but an open book test with three chapters: communications, water and the fire department,” and “there are no good reasons to not score well on an open book test, especially when you have ten to fifteen years to prepare” (Stevens, 1997, p. 4). Many people are of the opinion that the ISO is no longer important, but since the ISO writes the language on the majority of fire insurance policies in the United States, those opinions ought to be considered with some discernment (Stevens, 1997, p. 6). In any event, the majority of resources agree that an ISO PPC is generally considered the fire insurance rating for that community.

**BACKGROUND AND SIGNIFICANCE**

The Executive Fire Officer Program (EFOP) of the National Fire Academy, Emmitsberg, Maryland, requires an applied research project to be completed for each rubric of study on campus. This research is directly related to the EFOP course *Executive Leadership*. Specifically, this project makes use of several areas of content in the Executive Leadership Manual, viz., Unit Eight: *Influencing*, Unit Nine: *Power*, Unit Twelve: *Influencing Skills*, Unit Thirteen: *Storytelling*, and Unit Fourteen: *Persuasion* (Federal Emergency Management Agency [FEMA], 2000).

My knowledge of the community I serve is broader than that of the fire department alone. Miles City is my hometown. I was born here, grew up here, and was educated here, e.g., grade school, high school, and community college. Having always been interested in the politics of this community, and having
always worked toward the best interests of its residents, I support the “ways and means” of growing our community whenever possible. Miles City is the county seat of Custer County in southeastern Montana. It is an economically depressed, rural farm/ranch community of 11,696 people. I began my firefighting career here 21 years ago as a part-paid member of the Miles City Fire Department. When the opportunity presented itself for me to join the department as a full-time firefighter, I took advantage of it. I studied hard to rise through the ranks. In 1994 this department went through its last ISO PPC process. At that time, my rank in the department was that of firefighter, I had completed my two year Associate Degree in Fire Science, and I was and still am an Emergency Medical Technician Intermediate (EMT-I). While I was not one of the high-ranking officers in 1994, I had accepted additional responsibilities as the newly-appointed Finance Officer. That opportunity, namely learning about the budget and budgeting process, served me well as I advanced to my current position as Fire Chief four and a half years ago. Over the course of my tenure, I have learned, as did my predecessors, that educating the city council to understand the critical importance of having MCFR’s equipment operation, maintenance, improvement, and replacement costs deemed a priority in City budget planning is a continuing challenge.

Both leadership and the ability to lead are critical to succeeding in lowering the community’s ISO classification. Dilts (1996) characterizes leadership as a “commitment demanding a special set of models and abilities that involve communicating, interacting, and cultivating relationships within an
organization, network or social system, to assist a leader in moving toward achievement of a leader's highest aspirations” (Dilts, 1996, p. 5). The key elements of leadership are signified as “the system, the goal(s), self, and others” (Dilts, 1996, p. 5). A leader’s requisite personal skills include “self-skills, relational skills, strategic thinking skills, and systemic thinking skills” (Dilts, 1996, pp. 14-15). Self-skills are those by which a leader chooses or engineers the most appropriate attitude and focus with which to enter a situation. Relational skills concern a leader's ability to understand, motivate and communicate with other people. Strategic thinking skills are those used to determine which operators and operations will most efficiently and effectively facilitate navigating from the present state to the desired state or goal. Finally, a leader uses systemic thinking skills to cultivate an understanding of the overall “problem space” and to apply problem-solving skills in a practical and concrete way in order to achieve organizational goals (Dilts, 1996, pp. 14-15).

Ideas and concepts detailed in the student manual of the Executive Leadership course, provided an important framework upon which to build the ultimate product toward which this research project is directed. For example, Unit Eight: SM-3, The Dynamics of Influencing Others: A Conceptual Model, was useful in planning the substance and format of the PowerPoint® program created as an educational tool for city officials (Appendix A). In addition, Unit Fourteen: SM-6, Persuasion, detailing the four components of a successful persuasion approach, provided a sub-strategy to stay on point (FEMA, 2000).
“Capability, flexibility, and adaptability are keys to a fire service leader’s success” (Barr, 2003, p. 206). The important principles that apply to leadership on a day-to-day basis are set forth as follows (Barr, 2003):

- Practice ethical personal values and self-discipline; when in doubt, do the right thing.
- Maintain a plan for the future to sustain confidence.
- Act as if (and believe) people are the most valuable resource in the organization.
- Maintain open lines of communication.
- Stay competent.
- Recover and rebound from the bad things and avoid living in failures of the past. (p. 208).

The ISO has developed a framework within which it evaluates, assesses, and ultimately rates communities for the purpose of levying a PPC rating. In order to effectively navigate within that framework and to lead MCFR in our continuing efforts to lower our PPC, I must be well-armed with the facts to support MCFR’s purpose, i.e., mission and vision, in and for this community. I must build a personal, comprehensive understanding of the evolution of the ISO organization, as well as of it’s intended purpose(s) using the present Fire Suppression Rating Schedule (FSRS).

The significance of this research project is even greater now than it was when the topic for the project was chosen several months ago. On November 4, 2003, the people of Miles City elected a new mayor whose campaign platform
was primarily based upon the cost of the fire department and ambulance service. During the campaign, the candidate stated, “That department represents the biggest slice of the city’s budget pie.” He promised to change the way the city budget was allocated, beginning with reducing MCFR to a volunteer fire department. Of course, MCFR as a department, and its members as individual citizens, responded by providing the community with accurate and complete information to counter the misinformation and half-truths otherwise being disseminated to the public. Nonetheless, this mayor-elect won by 225 votes over a highly qualified opponent. As a consequence, MCFR has a lot of work ahead of it if it is to gain city council’s support so that every possible avenue for maintaining or improving the community’s current ISO PPC can be judiciously explored and evaluated. Failure is not an option.

The plan of the mayor-elect for reducing fire protection services is a course of action adverse to the welfare of the community as a whole, not to mention to the individual people. If the mayor-elect could find a way to reduce the complement of firefighters protecting this community, the potential for loss of life in fire would undoubtedly increase. Furthermore, the firefighters themselves would be at greater risk, in that an inadequate number of inadequately trained firefighters responding to fires on equipment that does not meet minimum ISO specifications would, without question, contribute to a greater risk of loss of life and property to fire. Such an outcome is diametric to the Five-year Operational Objectives of the United States Fire Administration (USFA). In fact, this sort of “failed scenario” is entirely contrary not only to MCFR’s mission, vision, and
values, but also to those of its personnel who made have a personal commitment to the health and safety of the community and its people.

**LITERATURE REVIEW**

Today’s ISO is “the premier source of information, products, and services related to property and liability risk” (Insurance Services Office, 2001, p. 1). But how did ISO services become so relevant to fire department operations and the communities they serve? As is so often the case, the need for fire services was recognized following a disaster of monumental proportions. During the reign of Charles II, the Great Fire of London occurred. On September 2, 1666, a fire began in a baker’s house near London Bridge. The area was congested with many rows of wooden homes built close together along narrow streets and alleys. The fire spread quickly over a five day period, destroying more than 13,000 homes along with many public and private buildings, including the original St. Paul’s Cathedral (What is a Fire Mark?, 2003).

Many factors contributed to the magnitude of the disaster in 1666. “There were no organized groups of men trained to fight fires. Water supplies and firefighting equipment were totally inadequate, as well” (Fire Brigades, 2003). The only form of assistance to property owners at that time were “collections received from church-going residents at the request of church parsons to ‘help the needy’. That too was inadequate in the face of such catastrophic losses” (Fire Insurance History, 2003).

It was during the process of rebuilding the homes and businesses that community leaders became involved with residents in establishing regulations
regarding how buildings would be constructed. Officials also established ordinances regulating the width of streets, improving water supplies, and improving firefighting equipment (Fire Brigades, 2003).

By 1680, ideas and opinions regarding the need for fire protection had grown. The first fire insurance company, called the Fire Office, was established, and with it a “fire brigade was formed to protect properties insured by the Fire Office” (Fire Brigades, 2003). As more fire insurance companies were formed, they hired their own fire brigades. The practice became that each fire brigade would respond to fires involving only the properties insured by the companies they represented. Because streets were not named and houses were not numbered, each insurance company developed what became known as a “Fire Mark”. These were emblems peculiar to a particular insurance company, and an emblem, cast in metal, was attached to each insured property for identification by the fire brigade which would respond should that property be burning (Fire Insurance Marks, 2003; Fire Brigades, 2003).

London’s fire insurance companies learned early that they needed to employ men “outright” to be firemen rather than depend on casual laborers to fight fires. The insurance companies recruited ferrymen who worked on the Thames River because they were used to danger and could easily be located and called on to fight fires (Fire Brigades, 2003).

In 1826, the Royal Exchange Assurance, the London Assurance, and the Phoenix Fire Office joined forces. They combined their offices and brigades, and under the auspices of one superintendent, their brigades began to fight fires.
Later, other companies joined the original three, and on January 1, 1833, the
London Fire Engine Establishment was formed. The new company, comprised
of 10 of London’s leading fire insurance companies, was controlled by a
committee made up of members of the merged companies. James Braidwood
was appointed to serve as the superintendent, but he was killed in a fire in 1861.
Shortly thereafter, in 1866, control of firefighting was handed over to other
supervising entities. First, firefighting was controlled by the Metropolitan Board of
Fire Engine Department employed a permanent body of firemen, ready to fight
fires 24 hours-a-day, and assigned them to fire stations in various parts of
London (Fire Brigades, 2003).

Eventually, the age of the Fire Mark passed. Once crucial as a means of
identifying insured properties, the Fire Mark’s usefulness waned beginning in
1840 with the start of the Penny Postal System. This new method of parcel and
post delivery brought about the numbering of homes and businesses and the
naming of streets (What is a Fire Mark?, 2003).

Fire insurance companies also engaged in the craft of making maps to
assist in their endeavors. In fact, maps for fire insurance purposes were being
created for more than 200 years when the insurance industry in America in the
middle and late 1800’s fanned the growth of insurance map companies (Nehls,
2003). The practice of creating maps for insurance purposes began in the
United States shortly after the colonies achieved their independence. D.A.
Sanborn founded the most successful of map companies in 1867, and its maps
set the standards for both design and accuracy (Nehls, 2003). The company employed surveyors in each state. Each Sanborn map included the location of all the buildings in each city or town, as well as information regarding the building materials used for each structure. In addition, surveyors noted the strength of each city or town fire department, and they specifically labeled locations of gas and water mains, public buildings, businesses, and churches (Nehls, 2003).

The first municipal fire protection surveys were initiated in the United States in 1889 in an effort to help solve fire protection problems in the cities. At that time, the National Board of Fire Underwriters (NBFU) hired a former fire department officer to examine fire protection facilities across the country. Later, a committee from the National Fire Protection Association (NFPA) was formed to develop an objective Public Fire Protection Rating Schedule. The schedule addressed five classes of protection, and each classification addressed some specifications for the fire department and water system (Barr, 2003).

At the beginning of the 20\textsuperscript{th} century, America's large cities consisted of wood-frame or wood joist masonry buildings with little space between them, creating huge fire exposure problems. Water supply systems were expensive to build, unstable, and unreliable. Baltimore experienced a terrible conflagration in 1904, focusing America's attention on the vulnerabilities of cities to devastating fires. In fact, there were several severe conflagrations in the country resulting in the acknowledgement of the need for sweeping change on how fire protection was assessed and provided (Barr, 2003). “These disasters also alerted the nation’s insurers to the significant financial exposure to their industry as a whole
of uncontrolled and apparently unchecked fire risk” (Barr, 2003, p. 181). It was obvious that growth in the cities was advancing without the guidance or the interest of city planners. Zoning and building laws were seldom a part of planning, and insurance companies realized they needed advance information about fire loss characteristics of the cities they insured to do business “efficiently and prudently” (Barr, 2003, p. 181).

Sanborn insurance maps were a tool for the NBFU staff of engineers as they surveyed cities and metropolitan areas to assess the fire departments, water supplies, streets, and the enforcement of building codes and laws. The engineer reports were to include probability and potential of conflagration hazard areas. Even the services of the city police departments were surveyed in the initial reports (Nehls, 2003; Barr, 2003, p. 181). Data gathered by the engineers was compiled by NBFU, which documented the fire risk and made recommendations for correcting problems in each area. NBFU intended to have its engineering teams revisit these areas periodically to determine whether its recommendations were being attended to and if improvements had been made (Barr, 2003).

In 1909, the NBFU inspection program was made permanent, and in 1916, the first grading schedule was released (Barr, 2003). The schedule included criteria in seven different areas, and as each of the criterion were reviewed, a corresponding number of points was assigned to it (Barr, 2003). This grading schedule assigned deficiency points to communities unable to meet any portion of the fire risk criteria reviewed by the NBFU inspection teams.

While the 1916 schedule focused predominantly on the central business
cores of communities, changes in society and technology resulted in changes in the first inspection program schedule. First, in the 1920's and 1930's, firefighting apparatus progressed from horse-drawn to motorized vehicles. By the 1940's, the focus of inspections shifted from the cities’ centers to the outskirts of communities. By the 1950's and 1960's, the focus of protection shifted again to emphasize cities as a whole. During this time, municipal water systems were seeing significant improvements (Barr, 2003).

In 1971, the ISO was formed. The “Grading Schedule for Municipal Fire Protection” released at that time was modified to include the built-up areas of cities with a focus on risk of fires in individual buildings. Another change was the ISO’s inclusion of the statement that the schedule was intended only as a tool for fire insurance rating purposes and not as a comprehensive analysis of every aspect of a community’s fire protection program (Barr, 2003).

In 1980, the ISO took a new approach to more specifically design a program to meet its municipal grading objectives. The ISO’s Fire Suppression Rating Schedule (FSRS) was implemented to replace the 1974 “Grading Schedule for Municipal Fire Protection.” Development of the FSRS represented yet another facet of ISO’s goal to modernize the methods used to develop equitable fire insurance rates relative to individual properties (Polson, 1980). “The new classification system and process is not intended to be a comprehensive analysis of a city’s public protection classification needs---” (Polson, 1980, p. 20). “The new classification system is a credit review schedule, although points may be deducted if activities or actions are occurring that are
considered improper. The system is objective in that each item can be evaluated and a corresponding amount of credit calculated mathematically” (Barr, 2003, p. 184; Polson, 1980, pp. 20-21). The ISO believes the changes in the 1980 program using the FSRS will allow measurement of the actual fire suppression capability for each location. The ISO does not contend that the 1980 schedule is a “standard” for municipal fire protection. Its 1980 schedule represents the minimum requirements or benchmarks to enable the ISO to measure municipal fire suppression capabilities for insurance rating purposes (Polson, 1980, pp. 20-21). Some state boards, using their own rating organizations, follow the pre-1980 ISO rating schedule, which includes topics such as fire prevention.

While city officials, and even some insurance representatives, continue to debate the merit or importance of the ISO, it is worth noting that “fire is still the leading cause of loss for both personal and commercial property” (Insurance Services Office, 2001). In its brochure detailing the PPC program, the ISO writes:

There is a definite correlation comparing improved fire protection (as measured by the ISO PPC Program) with reduced losses in property. By offering substantial economic benefits to communities that earn better PPCs, the ISO PPC Program helps fire departments plan for, budget for, and justify expenditures that reduce property damage from fires. Furthermore, by helping communities prepare to fight fires effectively, ISO’s PPC program saves lives (Insurance Services Office, 2003, p. 8).
Granito and Hickey (1999) noted that the ISO clearly establishes that its PPC program was developed for purposes of property insurance calculations only. The ISO’s Public Protection Office is committed to assisting cities in achieving the best PPC possible based on the fire protection system in place when the grading evaluation is conducted (Granito & Hickey, 1999).

May (2003) encourages each fire department to incorporate the process associated with the FSRS as a method of establishing the fire department’s value and effectiveness to the various institutions, businesses, and citizens each department protects. May (2003) also asserts that since that the rating process primarily involves fire services, insurance companies, and of course, city officials, the public in general does not understand the significance of a positive, low numerical PPC. Consequently, each department is encouraged to effectively market the results of its efforts to achieve the lowest, positive numerical PPC. These efforts will allow the general public to understand how the fire department is using tax dollars to run an effective and efficient department (May, 2003).

Caliendo (2000), in his research paper entitled ISO Classification, quoted Perry (1995), who stated that “a low numerical ISO classification for a community many times results in savings that exceed the entire budget of the fire department.” That fact alone is sufficient to warrant any fire department and city official to aspire to achieving a low numerical ISO classification for their community.

Douglas Brent (1994) inspired this project with his research effort entitled Living through an Insurance Services Office (ISO) classification retrogression.
Brent (1994) posed two thought-provoking questions, i.e., (1) could a department improve its PPC by making needed improvements, and (2) could a department be about to lose critical points because of something not done? Brent (1994) quoted Coe (1983) when he reported that in many fire service circles and government organizations, the ISO FSRS is widely criticized because it focuses on a narrow scope of areas rather than taking into consideration the overall picture of a community. In addition, some local jurisdictions use the rating schedule as a guide, mistakenly permitting firefighting equipment and water systems to deteriorate considerably between inspections (Brent, 1994). While this sort of practice demonstrates a lack of responsible leadership and could result in an ISO retrogressive classification for the community, the FSRS rating schedule cannot and should not be disregarded until it is replaced with something better (Brent, 1994).

In summary, literature reviewed for this research effort reinforced some important facts and ideas:

1. From the earliest attempts of man to protect society from devastating conflagrations, employing full-time firefighters ready to respond at the first alarm at any time of the night or day was and continues to be of significant importance.

2. The number of firefighters, the availability of proper equipment, and an adequate water supply are and always will be paramount concerns to fire protection and suppression efforts.
3. For the past almost 350 years, people started living in larger, more congested communities. Consequently, insurance companies have been involved in identifying policy and procedure to mitigate the ensuing fire risks.

4. Today, ISO represents the merging “of twenty different insurance-related organizations employing thousands of people and supplying statistical, actuarial, and underwriting information for and about the property and casualty industry. ISO is broader in scope than just the rating program that concerns the fire department” (Barr, 2003, p. 180).

5. ISO uses the FSRS to score a community on its existing fire protection and suppression capabilities, and the resulting score is used as a factor of the cost of insurance coverage.

PROCEDURES

The review of literature included fire service manuals, fire service journals and textbooks, on-line articles and websites, and other resource articles and research papers referencing the ISO classification process from the National Fire Academy's Learning Resource Center.

An introductory statement was developed as a preamble to the survey questions formulated for this study. The statement introduced the researcher, described the purpose of the survey, and expressed the researcher’s appreciation to the participant for responding to the survey (Appendix B) and explained that the results of the survey (Appendix C) would be included with this
applied research project and submitted to the evaluator of the EFOP for review. The researcher, in his capacity as the Fire Chief, requested Miles City’s 1994 Classification and Improvement Statements (Appendix D) with his ISO cover letter (Appendix E) including the classification details (Appendix F). The researcher considered the problem and purpose of the research, as well as the intent of the research questions, in formulating the 10 survey questions for this study (Appendix B).

A convenience sample of fire departments (n=14) which crisscross the State of Montana was selected, and the survey was submitted to the fire chief of each of those departments. The following information regarding the convenience sample was obtained:

- One fire department represents a volunteer fire department.
- One fire department represents Montana’s largest city.
- Montana’s capital city, Helena, was included.
- Three fire departments represent fire districts.
- One department has just completed the ISO rating process.
- Nine fire departments are members of Montana’s Firefighters Testing Consortium.

Each fire department in the study survey (n=14) was contacted via e-mail. One hundred percent of surveys sent were returned either via e-mail or fax.

Because of the adverse political climate in Miles City this fall, a northeastern Montana insurance agent located outside Custer County was contacted for his assistance in developing an insurance premium comparison
chart (Appendix G). The agent, Mr. William Seitz, III, generously agreed to use his current ISO classification software to construct a rating comparison chart of residential and commercial properties using simulated test property values (Appendix G) as examples.

A PowerPoint® educational program on the ISO’s FSRS process (Appendix A), as it relates to MCFR’s 1994 ISO rating (Appendix F), was developed by the author of this project in collaboration with MCFR’s Assistant Fire Chief. The program was created to present to the mayor and city council in an on-going attempt to educate city officials regarding the importance of ISO to the City and the community. The program was first presented to MCFR officers and then to MCFR firefighters for their input. Having received that input and having refined the presentation, the researcher must now schedule a time for the presentation to city officials.

City government officials passed Resolution #2968, dated April 22, 2003, for the purpose of creating a reserve fund for capital improvements (Appendix H). Reference to that resolution was made in the PowerPoint® presentation in order to reinforce the need to have MCFR’s operational, maintenance, replacement, and improvement costs as priorities in city budget planning. In addition, MCFR made application for a Federal Emergency Management Agency Fire Act Grant (Appendix I) to gain financial assistance in meeting department equipment deficiencies that have gradually increased since the last ISO scheduled rating process.
Assumptions and Limitations of this study:

Since the majority of insurance companies use the ISO’s current classification rating program, one assumption is that the premium rate savings for commercial and residential purposes should be unbiased. Another assumption is the ISO’s Fire Suppression Rating Schedule (1980) will continue to be the primary tool for measuring the effectiveness and efficiency of fire departments for some time to come. ISO’s PPC schedule will likewise continue as a method of calculating community fire risks for insurance companies.

The major limitation of the study was the convenience sample of fire departments surveyed (n=14), although, the author did receive completed surveys from all fire departments selected. In selecting those departments, the author of this project was striving for a representative cross-section of fire departments in the State of Montana. In addition, the survey was designed to gather information regarding various methods used by departments to educate their city officials regarding the ISO PPC process and it's importance. The information gathered was used for the ultimate purpose of this applied research project, i.e., to develop, refine, and eventually present an educational program for city officials to understand the importance of the ISO’s PPC program. The information also assisted in answering other questions related to the ISO classification process.

An additional limitation was collaborating with one independent insurance agent and using simulated residential and commercial property values to
illustrate differences in insurance premiums for the ISO PPC ratings given (Appendix G).

RESULTS

Of the 14 surveys submitted to a cross-section of fire departments across the State of Montana, all 14 were completed and returned to the author of this research project for his review and analysis. Information extrapolated from the completed surveys (Appendix C) was used to supplement the educational PowerPoint® presentation developed as a component of this research effort (Appendix A).

The following results are detailed as a result of reviewing the data from the survey responses solicited for the purpose of answering the following research questions:

**Question 1**: What criteria are used by the Insurance Services Office (ISO) that Miles City Fire and Rescue Department (MCFR) must meet to maintain the current ISO classification of 5? The short answer to this question is very simple, i.e., MCFR must do no less than it did in 1994 in each of the three areas, namely, the fire department, communications, and water supply. MCFR was evaluated under the 1980 FSRS process in 1994, and the details of that classification process are set forth in more detail in Appendix F.

Having last been revised in 1980, the FSRS is based upon a point System with which ISO examiners can objectively gather information about the municipal fire protection services being provided to a community (Insurance Services Office, 2001). Granito (1998) recognizes that the advantages of the
ISO FSRS process are, first, that the method of scoring each item is well-tested by experienced examiners, and second, that the process is reasonably short. ISO's position is that a community’s investment in fire mitigation is “a proven and reliable predictor of future fire losses” (Insurance Services Office, 2001, p. 1).

Whenever FSRS points are lost, whether from indifference or lack of attention, supervision, or leadership, the resulting retrogressive classification can have a significant negative impact on the community (Brent, 1994). The need for fire officers to have a means by which to effectively assess their departments continues to grow (Granito, 1998). The assessment is necessary not only to assist with the education of and negotiation with those who control resource allocation, but also to form a basis for department planning (Granito, 1998). The ISO FSRS can be an effective assessment tool. Knowing where a fire department is in its ability to serve the community is necessary in meeting the challenges of today and tomorrow (Granito, 1998). When a fire department’s officers engage in a proactive assessment process, it can expect a positive future outcome without retrogressive classification concerns.

**Question 2**: What criteria are used by the Insurance Services Office (ISO) that the Miles City Fire and Rescue Department (MCFR) must meet to improve the current ISO classification to a 3 or 4? In order for MCFR to be successful in improving its PPC, it must address the shortcomings detailed in its last assessment as set forth in Appendix F.

The current FSRS describes the major requisite elements of a community’s fire suppression system in detail (Insurance Services Office, 2003).
Those elements are used to formulate a community’s PPC on a relative scale of 1 to 10, with 10 representing an assessment of less than the minimum protection capability (Insurance Services Office, 2003). Polson (1980) identifies the FSRS as a credit review rather than a deficiency review. Section I of the schedule covers the PPC, which includes average buildings, and Section II is applied to each large building (Insurance Services Office, 2003).

The FSRS credits are distributed according to the following percentage values:

<table>
<thead>
<tr>
<th>Fire Alarm</th>
<th>Fire Department</th>
<th>Water Supply</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receipt of Alarm = 2%</td>
<td>Pumpers = 11%</td>
<td>Supply Works, Fire Flow</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Delivery, Distribution of</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hydrants = 35%</td>
</tr>
<tr>
<td>Operators = 3%</td>
<td>Ladder/Service</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Companies = 6%</td>
<td>Hydrants: Size, Type,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>and Installation = 2%</td>
</tr>
<tr>
<td>Alarm Dispatch Circuit Facilities = 5%</td>
<td>Distribution of</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Companies = 4%</td>
<td>Hydrants: Inspection and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Condition = 3%</td>
</tr>
<tr>
<td></td>
<td>Pumper Capacity = 5%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Department</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Staffing = 15%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Training = 9%</td>
<td></td>
</tr>
<tr>
<td>100% = 10%</td>
<td>100% = 50%</td>
<td>100% = 40%</td>
</tr>
</tbody>
</table>

(Barr, 2003, pp. 183-184).
The FSRS schedule is, in fact, a straightforward point system without surprises. However, some changes were made to the 1980 FSRS, making imperative the necessity that fire departments stay up-to-date with the most current FSRS rating process (Granito, 1998).

When the author of this research project was appointed to the position of Fire Chief four and one-half years ago, MCFR members were directed towards a common strategic goal of maintaining or improving the community’s 1994 PPC rating of 5. Over the course of time, the necessary improvements have been made in Section I, Receiving and Handling of Fire Alarms. Specifically, Item 414 has been corrected, Item 422 remains at maximum points, and Item 432 has been brought in line with the specifics of the FSRS review of dispatch circuits (Appendix F). Resources for these improvements were provided by the 911 Committee which serves both Custer and Garfield counties.

In general, MCFR first addressed corrections in operations which were the easiest and least expensive to remedy. FSRS items directed at training issues, the routine testing of pieces of equipment, and pre-planning and record-keeping were the first items corrected. To meet the minimum FSRS standards which necessarily require the purchase of big-ticket items, e.g., replacing the 1956 fire engine, and addressing insufficient equipment (Appendix F), MCFR submitted a grant application to the Federal Emergency Management Agency (FEMA) (Appendix I). Just prior to the submission of this research project, MCFR was advised that it had been awarded the grant in the amount of $182,700 to be used to replace the 1956 fire engine with a newer used engine.
Question 3: What would the potential benefits be for the City, community, and the Miles City Fire and Rescue Department (MCFR) in taking the necessary actions to improve the current ISO classification? For more than 100 years, insurers have acknowledged that a direct correlation exists between improved fire protection services and a decrease in property losses and loss of life from fire (Insurance Services Office, 2001). The PPC program is an incentive program that sends a clear message to city officials and the communities they serve. By supporting the improvement of fire protection and suppression services, the community stands to benefit not only from reduced loss of life from fire, but also from fewer and lower-cost property losses and from lower insurance premium rates for residential and/or commercial properties (Insurance Services Office, 2001). The reality of this diametric relationship is that in addition to the aforementioned benefits, the insurance industry is protected from larger casualty claims.

In determining whether or not a reduced premium would be a reasonable expectation for our community should it reduce its PPC from a 5 to a 4 or 3, this researcher collaborated with an independent insurance agent, William Seitz, III. The product of this collaboration, described previously under “Procedures,” is set forth in Appendix G, entitled Seitz Insurance Agency ISO Rating Comparison. The information obtained establishes that reducing the PPC from a 5 to a 4 or a 3 would likely not result in a premium reduction for residential property owners. However, commercial property owners would realize a savings. For example, on a commercial property valued at $100,000, the insured would
realize a 15.6% premium savings, a 17.2% savings on a $300,000 commercial property, and a 10.1% savings on a commercial property valued at $500,000 (Appendix G).

One question on the survey constructed for this project asked participants to state their opinions as to whether they believed improving their ISO classification would be worth the effort. Ten participants responded affirmatively, while two responded negatively, one responded “maybe”, and one was undecided. Half of the participants had already determined that a reduction of their communities’ ISO classification would result in insurance premium savings. Ten of the participants stated they were actively working towards improving the classification of their own communities at the time they responded to the survey. Three participants, each of whom has a current ISO classification of 3, stated they were not actively working towards improving their ISO rating because of budget constraints. The remaining participant, whose department has an ISO classification of 4, reported that he was not seeking to improve his department’s classification, but rather, was working hard just to maintain that classification. All the survey participants reported having some method of educating city officials and of keeping them apprised of ISO-related issues (Appendix C).

The benefits of the improved ISO classification can result in a boon for the community. First and most immediately, if property owners spend their insurance premium savings in the community, the result is a boost to the local economy. In addition, a community with high quality fire protection services often discovers
that attracting new businesses is much easier. Consequently, jobs are created and the economy improves (Insurance Services Office, 2001).

Results from the product for this applied action project, which represents the purpose of this research effort and was previously described under “Procedures,” are not addressed here for two important reasons. First, the mayor and city council meet only twice each month, and no time has been available on the agenda to present the prepared PowerPoint® presentation. Second, the City elected a new mayor and replaced some council members during the November election. Finally, the holidays have presented scheduling difficulties. However, the program will be presented to city officials on the earliest date available. The PowerPoint® program to be presented is entitled, The Insurance Services Office (ISO), The Fire Suppression Rating Schedule (FSRS), and The ISO’s Public Protection Classification (PPC) Program: History and Relevance (Appendix A).

DISCUSSION

I began this action research project with a specific theory about the nature of the problem in the City with regard to lack of support from city officials for MCFR operations. I specifically related that lack of support to the risk of a retrogressive PPC rating following the next ISO rating process in our community. Given my presupposition that the problem statement was correct, I moved ahead with my strategy as stated in the purpose statement of this action research project. I believed if I reached out to educate city officials, the weight of the evidence and the wisdom of the ideology would prevail. I also believed that, as a
consequence, city officials, MCFR, the communications departments, and the
water department would all work together toward achieving a 3 or 4 ISO rating for
the community.

To fulfill the purpose of this action research project, I developed the
PowerPoint® program as an educational tool which has yet to be presented to
city officials for reasons essentially beyond my control. I am unable to present
results from the evaluation of the program (Appendix A) at this writing. I am able
to infer from May’s (2003) article that “what gets measured gets funded,” and that
“in every city, it is important that the public understands the significance of the
ISO rating” (May, 2003, p. 28). The rating process, in general, is described as a
“report card” reflecting the “effectiveness and the accountability” of fire protection
services, however, “[t]he public does not understand the rating (i.e. ISO) or it’s
application to their concerns” (May, 2003, p. 29). Reaching the public through
presentation of the PowerPoint® program (Appendix A) to civic groups in our
community is, in fact, part of my strategy to build understanding of the
importance and significance of ISO. The presentation will also be a tool to build
support from the business community, as well as from city officials, to make
MCFD’s operational, maintenance, replacement, and improvement costs a
priority in city budget planning.

Brent (1994) spoke of a higher ISO PPC rating risk to any fire department
which has grown neglectful of its infrastructure with the very title of his research,
*Living through a retrogressive classification*. Caliendo (2000), quoting Granito
and Hickey (1999), acknowledged the importance of the ISO classification when
he wrote, “A city Public Protection Classification not only provides a guide to city insurance structure, but also is an indicator of the city’s commitment to public services” (Granito & Hickey, 1999, p. 4). Yet, city officials, as well as administrators of fire protective services, generally continue to debate the issue of the importance of the ISO PPC rating in communities across America.

Insurance Services Office (2001) had an independent research firm conduct a survey of 501 fire chiefs or departmental officials from across the country, and from that survey, the following information became apparent:

- The PPC program plays an important part in most communities’ decisions on their fire-protective services.
- 92% of those surveyed said in budget planning or justifying improvements in their communities’ public fire protection, the effect of such changes is rated as very or somewhat important. (pp. 4-5)

I was also interested to learn that the ISO has a website whereby it reaches out to fire chiefs and other public officials to answer their questions about the PPC program in and to assist them in receiving benefits for their communities (Insurance Services Office, 2001).

The coming re-evaluation of MCFR’s existing fire protection and suppression capabilities presents several implications. Statistics show that in any given year, more than half the communities that are re-evaluated receive a better PPC rating, and only about 2% receive a worse classification (Insurance Services Office, 2001). As MCFR’s Fire Chief, one of my continuing courses of action is to guide MCFR toward achieving an improved PPC rating of 4 or 3
during our next evaluation process. One of the implications for the City and the business community is probable insurance premium savings for commercial properties. An implication for MCFR is improved morale and greater company pride from having better and safer equipment to operate. Finally, the implication for the community is that it will have the best fire protective services money can buy, as demonstrated by MCFR’s good leadership, its well-trained firefighters, and its updated and well-maintained equipment.

**RECOMMENDATIONS**

The results of the survey implemented for this applied research project indicated that the majority of the participants surveyed (Appendix C) believe improving the ISO PPC rating for their respective communities is worth the effort. Additionally, the Seitz Insurance Rating Comparison (Appendix G), compiled by using “test properties,” indicates that the owners of commercial properties in Miles City could realize a meaningful savings in insurance premiums should a lower PPC rating be achieved. MCFR, the communications departments, and the water department must all work together to succeed in passing the FSRS, or what has been called an “open book test with three chapters” (Stevens, 1997, p. 4).

At the earliest possible date and in my capacity as Fire Chief, the PowerPoint® program (Appendix A) developed to fulfill this study’s purpose statement will be scheduled for presentation. The same PowerPoint® program will be used to educate MCFR firefighters, fire officers, and administrative staff in order to expand their understanding of the PPC process. The ultimate goal is to
broaden each person’s base of knowledge such that each one becomes personally invested in the process and will take pride in working to improve our city’s classification. In addition, MCFR personnel will be able to answer questions the public may pose regarding the rating process and specifically how the rating impacts the community. Because the business community must be apprised of and must understand the rating process and its implications, the PowerPoint® program (Appendix A) will also be offered as a presentation at the various civic groups’ meetings.

Because Miles City has a mayor coming into office whose entire campaign was based on an anti-fire department platform, the recommendations related to this project are mainly directed to me, as Fire Chief. My recommendations following presentation of the educational program to city officials will be contingent on what transpires during question and answer sessions and program evaluation. However, my strategy will continue to be to use every leadership skill I have in my toolbox, e.g., “power” tools, influencing and persuasion tools, and negotiation tools. I may pull a “story” or two out of the toolbox also, to keep up company morale as we work to gain and maintain support of the city council, the community, and maybe even the mayor-elect. I will continue to express and direct my passions by leading the MCFR to be the best we can be, by being fair in decision-making, and by displaying respect for others (Barr, 2003). Furthermore, I will continue to set the best work ethic examples I can and to provide opportunities within MCFR for personnel to “realize their potential while being included and valued” (Barr, 2003, p. 205).
During the research process, I learned of ISO's service of providing on-line assistance to fire service personnel and public officials by answering questions and providing technical expertise. MCFR officials will be taking advantage of this benefit as we continue to prepare for our next evaluation process.

I have several recommendations for future researchers and readers. The first is best expressed by Theodore Roosevelt's famous words, “Speak softly and carry a big stick.” Researchers and readers can arm themselves with their big stick by researching and developing a thorough understanding of their organizations, including its strengths and weaknesses. Of course, “goals” add purpose and direction, so researchers and readers should fine tune their goals and develop all the leadership skills they possibly can, as they will need them every day. Regarding recommendations for replicating any part of this study, researchers should definitely build a survey sample from a population large enough to point to a statistically significant finding. Insurance comparisons should be obtained from several companies in order to determine premium savings related to ISO PPC ratings for their communities. In addition, time should be taken to pursue grants, because with practice and diligence, your efforts will eventually pay off.

My final recommendation, not only to future researchers and readers, but also to myself, is one inspired by the words of President John F. Kennedy, who said, “There are risks and costs to a program of action, but they are far less than the long range costs of comfortable inactions.” In other words, sitting idle or
allowing the nay-sayers to deter you from what you know to be a good course of action accomplishes nothing and can only result in ultimate harm. Therefore, have the courage to decide on a course of action, work steadily towards achieving the objectives of that plan, work the problems as they come, stay the course, and most importantly, believe in your plan. Good Luck!
REFERENCES


