
Five Point Plan for a Fire Safe Colorado



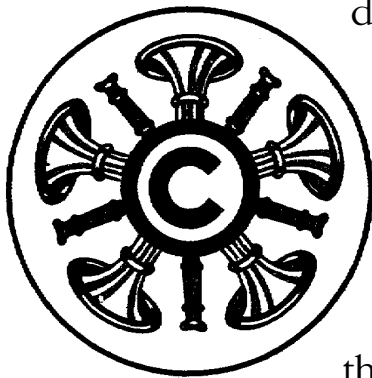
Colorado State Fire Chiefs' Association



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The Colorado State Fire Chiefs' Association is dedicated to providing leadership, education, and support to the Chief Officers of Colorado fire departments in order to reduce the loss of life and property and to protect Colorado's citizens and institutions from all types of emergencies.

The Association strives to have a public that is educated on what to do before, during and after an emergency in order to protect themselves, their families, their homes,



and their businesses. The Association values government with a focus on customer service; teamwork within and between governments, non-profit organizations and private agencies; cost effectiveness; and honesty and integrity in all its dealings with institutions and citizens in the state. It values the safety of firefighters, by providing educational opportunities and a safe work environment. The Association endeavors to provide the executive and legislative branches of Colorado's government with information and recommendations in order to shape public policy that meets the goal of protecting those who live, work and play in Colorado.

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Executive Summary

In keeping with the mission of the Colorado State Fire Chiefs' Association (CSFCA), this paper was written in order to assist Colorado's General Assembly, its Executive Branch and other significant stakeholders to formulate and execute public policy on the topic of fire protection in the State of Colorado. It reflects the wishes of the CSFCA to promote a fire safe Colorado and to help State lawmakers and executives focus on the five issues of greatest importance to those in the state's fire service: (1) fire incident reporting, (2) firefighter training and certification, (3) fire code enforcement, (4) disaster management and resource mobilization and (5) administrative effectiveness. It combines extensive research with significant input from those concerned with fire safety in the state. The Report is future-oriented, holistic and proactive in its approach, findings and recommendations.

In 1997, the demands for fire protection services are exceeding the response capabilities of agencies responsible for these functions. Incidents such as a bombing of a Federal center, a hazardous materials release at Rocky Flats or a large scale fire in a wildland/urban interface area in the state exceed the capacity of local and State officials to respond. Many firefighters require more extensive training to ensure that they are prepared for emergency responses and that they are safe as they act on behalf of Colorado citizens. State

administrative agencies (some 20 separate ones have responsibility for fire safety) are uncoordinated and overlapping, resulting in a fragmented service delivery system. Because the State does not have adequate data on incidents, origins, causes and outcomes of fires, local and State policy makers are forced to make decisions based more on anecdotes and intuition than on timely and accurate information.

The CSFCA'S **Five Point Plan for a Fire Safe Colorado** focuses attention on these issues and suggests actions that will address them. It furthermore outlines cost estimates and funding mechanisms. Appendices, containing detailed information on each of the five points, are available from the CSFCA.

The following recommendations constitute the **Five Point Plan** and are offered as methods for the State to (a) better meet its constitutional, statutory, fiduciary and moral obligations, (b) ensure excellence and cost/effectiveness in fire prevention and suppression services and (c) take an expanded leadership role in assuring the safety of Colorado citizens and visitors. Although these recommendations constitute a comprehensive plan for a more fire safe Colorado, each Point can be explored on its own merits. The CSFCA is eager to work with legislative and executive officials to explore and develop administrative alternatives that will ensure that the

critical components of the Plan are addressed.

While other aspects of fire safety in Colorado are not addressed in this Plan, these five points represent the current priorities of Colorado’s fire service leadership.

The five significant Points and the CSFCA’S major recommendations follow:



Point 1: Fire Incident Reporting

The CSFCA recommends that the State of Colorado enhance the existing state-wide fire incident reporting system by assigning State-level personnel to administer it, increasing the user-friendliness of the system and providing incentives for local fire departments to report to and obtain information. The enhanced system should be consistent with the National Fire Incident Reporting System used by the United States Fire Administration.



Point 2: Firefighter Training and Certification

The CSFCA recommends that the

State create a Firefighter Training Fund, the assets of which would be used to deliver basic and specialized training to firefighters throughout the state.

The State should also preserve the voluntary certification program with continued improvements in practical testing, quality assurance of written test generation and scoring; and continued improvements in reporting test results and providing certificates to firefighters.



Point 3: Fire Code Enforcement

The CSFCA recommends that the State adopt enabling legislation that allows the elected officials of every municipal and quasi-municipal fire department to adopt and enforce fire codes which will be applicable to occupancies, including State licensed facilities, within their jurisdictions. In State owned and operated facilities, the Uniform Fire Code should apply, as it does in almost all Colorado jurisdictions with fire codes. Code enforcement within State owned facilities should be coordinated within the state and between State and local agencies by a single responsible agency.



Point 4: Disaster Management and Resource Mobilization

The CSFCA recommends that the State modify the recently adopted state-wide disaster management plan to make it more effective. In addition, the State should adopt a resource mobilization plan to quickly notify, assemble and deploy the appropriate aid to any local jurisdiction that has exhausted its resources in attempting to control an emergency incident. While the recently adopted state-wide plan is purported to be an all-risks plan, it does not address the mobilization of resources to effectively deal with large scale fires, building collapses, or mass casualty emergencies.

The Association further recommends that the State develop proce-

dures to reimburse local jurisdictions from appropriate Federal, State and private funds when these jurisdictions are mobilized under the plan, and that the State adopt legislation that would further indemnify local jurisdictions from additional liability while assisting others during a disaster.



Point 5: Administrative Effectiveness

The CSFCA recommends that the State create a “State Fire Marshal’s Office” by consolidating all fire safety activities presently administered by Colorado’s fire-safety bureaucracy. This recommendation does not suggest creating another bureaucracy, it merely suggests consolidating the fire safety functions of the 20 State entities currently responsible for fire safety.



Five Point Plan: Background

Colorado fire departments provide fire suppression, fire prevention, injury prevention, emergency medical, rescue, hazardous materials emergency response, and public education through a variety of organizations. Approximately 340 of Colorado's 433 fire departments are volunteer, approximately 39 are career and the remaining are a combination of both.¹ Although most of Colorado's population is protected by career firefighters, most of the state's geographic area is not. Approximately one-third of the fire departments (the ones in the state's more urban areas) cover over eighty percent of Colorado's population.² Colorado fire departments include municipal, county, special district and other political subdivisions of State government as well as private, non-profit and for-profit corporations. Unfortunately, service levels vary greatly from jurisdiction to jurisdiction and significant areas of the state are without organized fire protection at all.

With only one third of Colorado's fire departments reporting aggregate data to the Colorado Division of Fire Safety (including number of calls, injuries and losses), and, with only six percent reporting more detailed data (including origins, causes, types of fires, firefighter and civilian injuries and deaths, and property losses), it is extremely difficult to judge the extent of and respond properly to the state's fire problem.³ Furthermore, the lack of detailed data makes it more difficult for State and local governments

to plan proactively for fire education and prevention services.

Some estimates and projections can be made based on the fact that departments that are reporting aggregate data cover approximately eighty percent of the state's population. From these aggregate data, for instance, it is known that Colorado fire departments respond to approximately 224,000 calls for service each year. Of these, approximately 24,000 (10%) are fire calls. The remaining majority are emergency medical and rescue requests for assistance.⁴ Fires cost Coloradans approximately \$1,280,000,000 annually.⁵ Colorado fires destroy an average of

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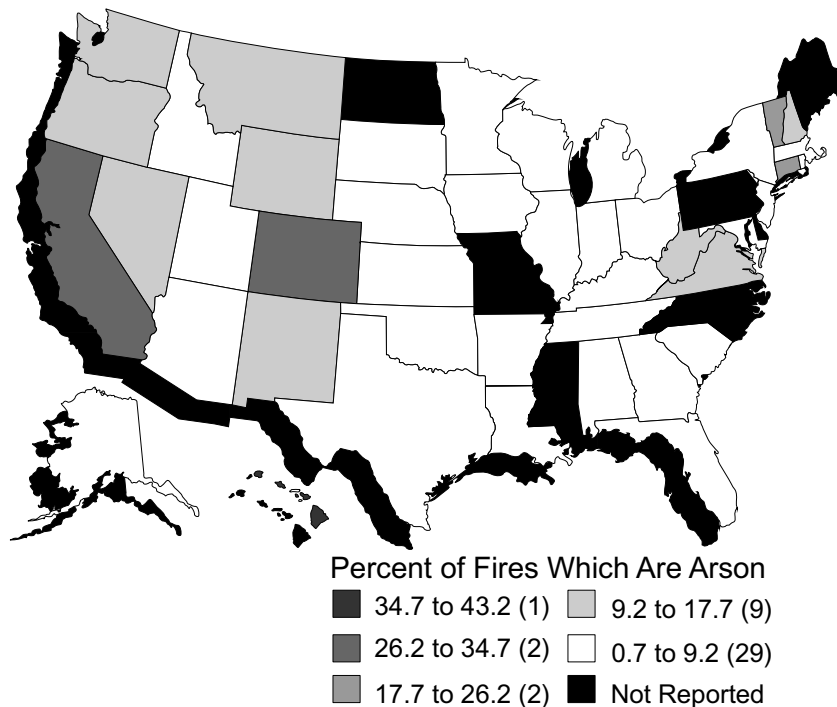
\$93,750,000 worth of property each year.⁶ Over \$4,000,000 is spent per year on hospital costs for Colorado fire victims.⁷ The remaining dollars are spent on insurance overhead, built-in fire protection systems and the operation of Colorado fire departments.⁸

An average of 586 Coloradans are injured by fire each year with injuries ranging from minor wounds to disfiguring burns and from carbon monoxide poisonings to burns of the respiratory tract. The more extensive injuries result in approximately 175 hospital stays over one day at an average cost of \$23,800 for each hospitalization.⁹

Fires kill approximately 35 people each year in the state. In 1994 alone, 56 people died by fire. Taking into account the 14 firefighters killed during the 1994 South Canyon Fire, on average, three firefighters die each year in the line of duty.¹⁰ While these data are quantifiable, they say nothing about the physical, financial and psychological toll on families, communities and the fire service itself.

As an interesting note, arson fires in Colorado occur at a rate 45.6% higher than the national average (in Colorado 28.4% of fires are arson related while the national average is 19.5%)¹¹ and an average of 2,900 arson fires, causing \$16,900,000 in direct property losses, are estimated to occur in Colorado each year.¹² Colorado ranks as the third worst state in the Nation for arson, Figure 1.^{13,14} Fire is becoming the weapon of choice in many violent crimes, as evidenced by recent gang-related arsons in the Denver metropolitan area. Interestingly, arson has become the second leading cause of fire deaths in residences nationwide (careless smoking is the primary cause).¹⁵ The Association's Plan hopes

Figure 1: Arson Rates in the United States¹⁶



to begin addressing the arson problem by helping to identify, track and respond to the problem through enhanced incident reporting.

The Need for an Expanded Leadership Role for Colorado State Government

The CSFCA is asking the Legislative and Executive branches of Colorado State government to take a leadership role in further protecting Colorado's citizens and visitors from fire-related deaths, injuries and property loss.

To aid in this endeavor, the Association recommends that the State implement its comprehensive **Five Point Plan for a Fire Safe Colorado**, which includes the adoption of (1) an improved and user-friendly state-wide fire incident reporting system, (2) an upgraded and coordinated training and certification program for career and volunteer firefighters, (3) a fully integrated all-risks disaster mobilization plan, (4) enabling legislation to allow municipal and quasi-municipal fire jurisdictions to adopt and enforce fire codes, and (5) a State Fire Marshal, whose office would coordinate all fire-related activities within the State.

The State clearly has a constitutional duty to "provide for the common defense; [and] promote the general welfare" as well as to provide "for the public good."¹⁷ To this end,

the State has acknowledged its duty, in statute, to protect the citizens of Colorado from fire-related losses. It has enacted legislation which enables municipalities and counties to adopt and enforce fire codes and it has passed legislation which allows for the formation of fire protection districts. The State has specified the fire safety standards to be used in hospitals, schools and casinos; has created a division to look at fire safety for all oil and gas operations and has established another division to ensure fire safety in mines. In implementing legislative mandates and regulations, it has granted authority to 20 different State agencies. This appears to thwart the notion of integrated and cost-effective services.

In addition to its Constitutional duty, Colorado State government also has a fiduciary responsibility to the citizens of the state. It has the duty to see that tax dollars are being spent in a manner which ensures effective and economical services. More specifically, the State has an obligation to protect its economy from fire-related losses and undue fire prevention costs.

At this particular juncture in Colorado's history, it is necessary for the State to take an expanded leadership role in fire protection. The population of Colorado (approximately 3.2 million in 1984 and approximately 3.7 million in 1994) has grown over 15 percent in the past decade.¹⁸ This growth has placed

The Five Point Plan: Strategy

additional service demands on fire departments and administrative agencies and, unfortunately, these demands often exceed the ability of these organizations to respond adequately. For example, as rural areas become urbanized, firefighters need to deal with new types of construction, new construction materials and new hazardous materials in worksites. It was once said that while in the past, rural firefighters had to deal with grain elevators and barns, today they are responsible for shopping centers and hotels. The urbanization of rural areas has also brought with it the fire-related results of crime and drugs. These same problems continue to plague urban firefighters—witness the high rate of arson fires already reported each year and the increase in crime-related emergency medical services calls.

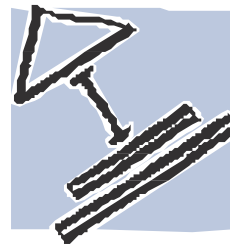
These events are occurring concurrently with changes in the economy that make volunteer fire fighters more scarce. As the economy moves toward a service and information one and away from an agricultural, manufacturing and industrial base, work schedules shift and fewer people are available to be on-call for volunteer assignments. Dual career families are becoming the norm rather than the exception as Colorado’s residents demand higher family incomes. Thus, previously non-employed spouses are in the workplace rather than, among other activities, staffing volunteer fire departments. These changes, coupled with

the restrictions of the TABOR Amendment, have forced all Colorado fire departments to examine more cost-effective means of delivering services. state-wide leadership that adopts the **Five Point Plan for a Fire Safe Colorado** would ensure this outcome.

The CSFCA’S **Five Point Plan for a Fire Safe Colorado** identifies the following five areas of concern and offers recommendations for addressing and funding these issues:

- (1) State-wide Fire Incident Reporting
- (2) Training and Certification for Firefighters
- (3) Fire Code Enforcement
- (4) Disaster Management and Resource Mobilization
- (5) Administrative Effectiveness

Point 1: Fire Incident Reporting



One of the greatest obstacles facing Colorado’s fire service is the lack of reliable data about fires, fire losses and

fire trends within the state. Good public policy is impossible without good information. The lack of an accessible, utilized and user-friendly incident reporting system handicaps State and local lawmakers, executives and fire service personnel. Decisions

regarding fire protection are often restricted, therefore, to insights based

It is thus in the public's interest to upgrade the state's fire incident



reporting system. The system should be well promoted, easily administered and “friendly” to all users—whether they are local fire departments inputting and retrieving data or national, State or local policy analysts using such data in the formulation of “good” public policy.

upon limited information or on the idiosyncratic experiences of specific jurisdictions.

The Colorado Division of Fire Safety does administer an incident reporting system which is computer-based and able to receive, store, analyze, and report data. The predicaments facing the fire service and public officials in the state are that (a) there are insufficient State-level personnel assigned to data gathering, analysis and maintenance of the system, (b) there are insufficient incentives for local fire departments to report or obtain data from the system and (c) the current system is cumbersome and awkward for local fire departments and other officials to use.¹⁹

Benefits of a State-Wide Incident Reporting System

The benefits of such a system are obvious. Relative to local governments, a state-wide incident reporting system would enable fire departments and their jurisdictional officials to (a) determine what suppression resources to allocate to various areas of their jurisdiction, (b) help identify and target specific fire prevention activities at the local level, (c) provide and evaluate public education, fire code and fire inspection programs and, (d) identify programs that may be ineffective, thereby freeing scarce resources for other more beneficial services.

Although most fire departments perform fire investigations and keep

the resulting fire reports, relatively few of them respond to a large enough number of incidents to generate the data to undertake planning and policy analysis activities.²⁰ Such a system would further allow local government officials to access data that would help them undertake comparative analyses—comparing their service to the service of similar jurisdictions. These comparisons could be used to inform policy debates and assist in resource allocation decisions.

With respect to the benefits for State Government, an improved statewide incident reporting system would enable State agencies to obtain an accurate view of fire incidents and trends. It would thereby enable the State to maximize the well-being of its citizens through its enhanced ability to formulate, implement and analyze public policy. The Legislative and Executive branches of State government have already recognized the benefit of having accurate information about the extent of the fire problem in Colorado. By statute, the Colorado Division of Fire Safety is required to “advise the Governor and the General Assembly regarding the problems of fire safety...serve as an information clearinghouse, and collect and disseminate to local governments, the General Assembly, and the general public statistical and research reports which are of interest to them.”²¹ Unfortunately, when no systematic and comparable data are available,

these roles cannot be adequately performed.

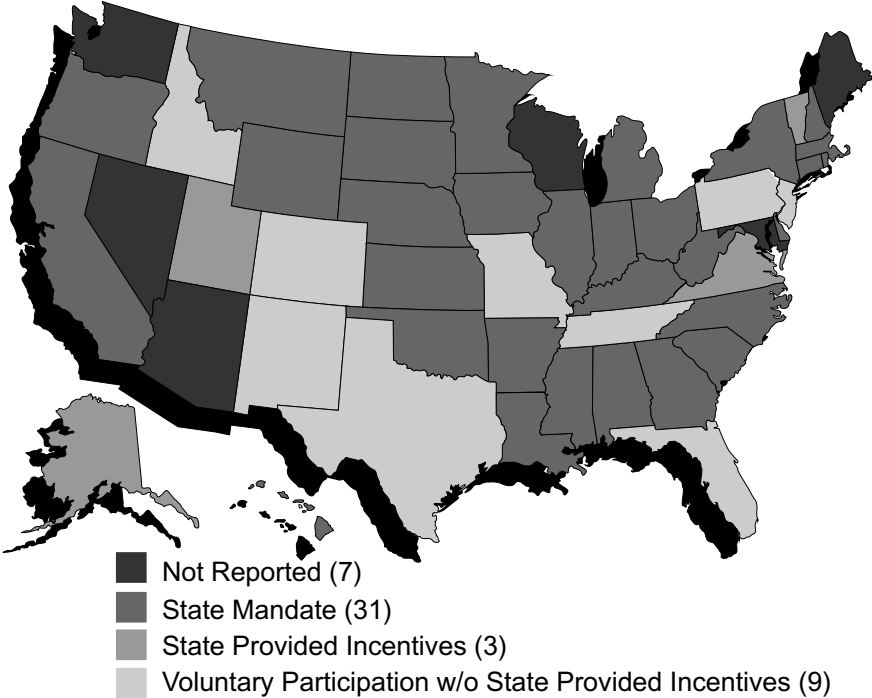
The Federal government, too, utilizes information collected by local and state entities to identify regional and national fire-related problems. These data enable Federal decision makers to determine Federal funding priorities and programs. The Cigarette Safety Act, the child proofing of cigarette lighters, the establishment of bedding material combustibility limits and the Hotel Motel Safety Act are examples of public policy developed at the Federal level using data collected from local and state governments.

Accurate and comprehensive data on the fire problem, if it existed, would be helpful also to the insurance industry which could utilize these data to develop and market insurance products based on Colorado’s fire experience. Finally, other businesses also use fire incident reporting data to develop and market safer products, new fire prevention products, and fire-related services.

Simply put, the existing voluntary fire incident reporting system in the State of Colorado is not effective. Few fire departments forward their incident reports and the Division of Fire Safety does not have the resources necessary to seek out comprehensive data, analyze existing data, or make available data useful to local fire departments, State agencies, the Federal government or business. The existing system is underfunded and



Figure 2: U.S. State-Wide Fire Incident Reporting Systems²³



administered as a “night and weekend project” by the Director of the Division of Fire Safety—a position already encumbered by too many roles and responsibilities.²²

A vicious cycle exists. Because existing data are so limited and difficult to obtain, Colorado fire departments see little benefit in participating in the existing incident reporting program. When local fire departments do not participate, the data become even more limited, making them still less reliable and useful and thereby further decreasing interest in participating. It is obvious that the existing system needs to change in order to facilitate good fire-related public policy.

Recommendations

Within this context, the CSFCA recommends that the State of Colorado enhance the existing state-wide fire incident reporting system by assigning State personnel to administer it, increasing the user-friendliness of the system and providing incentives for local fire departments to report to and obtain information.

The CSFCA believes that by enhancing the voluntary incident reporting system, more Colorado fire departments would participate in it. The improved system would have good data available for policy analysis, which in itself is sufficient for most of Colorado’s fire departments to participate. If this proves to be an

inaccurate belief, the CSFCA recommends that the State explore other incentives for Colorado fire departments to participate in the program. At this time, the CSFCA is not recommending a mandatory incident reporting system. However, as Figure 2 shows, most states have resorted to mandatory state-wide incident reporting requirements.

The enhanced Colorado system should be consistent with the National Fire Incident Reporting System used by the United States Fire Administration. This recommendation is consistent with the 1985 Report of the Colorado State Auditor to the Colorado General Assembly requesting that “the reporting of fire safety data



[be made] mandatory for all fire departments.”²⁴

Cost Estimates and Funding Mechanisms

The costs associated with an improved state-wide fire incident reporting system are minimal. At the State level, administrative funds can be obtained by eliminating redundant fire safety positions within the existing 20 agency fire-related State bureaucracy. The CSFCA believes that the system would require one full-time State employee (at a \$42,000 per year salary and benefit package) to administer and, more importantly, to promote the program and provide technical assistance to participating fire departments. Operating expenses of \$15,000 per year to provide computer support, print forms and develop marketing materials are also anticipated, for an estimated total of \$57,000 per year of State funds. Again, these funds could be gathered by reallocating dollars and FTEs from redundant positions, for example, three different State agencies are responsible for hazardous materials incident reporting. No new money would be requested from the State.

The costs of the program for local fire departments are also very low because almost all departments currently keep reports of their activities, and many are currently using their own computer systems compatible with the National Fire Incident Reporting System. For departments that do not have the National Fire Incident Reporting System software, it

is available for \$25 from the United States Fire Administration and the Colorado Division of Fire Safety. For departments with internet access, reporting could be done for free through the Division of Fire Safety. For departments without computers, computer readable forms are available and could be provided by the State at no cost to the local fire department.

Point 1 of the CSFCA **Five Point Plan for a Fire Safe Colorado** can be addressed with no new State-appropriated dollars.

Point 2: Firefighter Training and Certification



Training

Today's firefighters operate in a complex, dangerous and dynamic environment.

Colorado has approximately 10,600 firefighters; 3,400 are career and 7,200 are volunteer.²⁵ Firefighter training is the single most important factor in determining if firefighters are prepared to meet the challenges of the environments in which they work. Proper training means the difference between success and failure during emergency operations, where proper action must be taken in a swift and decisive manner.²⁶ The need for

augmented firefighter training in Colorado is great and growing.

Rationale for Improved Firefighter Training

Firefighter safety and survival is the first and foremost reason for improved training in the state. As the state grows, firefighters are faced with new hazards. As stated earlier, the urbanization of rural areas presents rural firefighters with new dangers such as more modern construction techniques and new manufacturing processes which require specialized knowledge in order for firefighters to respond safely to emergency incidents. With Colorado's growth of high technology enterprises, urban firefighters are also faced with new challenges. Here, the refinery has been replaced by the biotechnology lab as a fire department's most dangerous occupancy. Urban firefighters also require training in specialized firefighting and rescue techniques for the new types of crime-related hazards they encounter.

Community members also expect better outcomes which are dependent upon a greater level of firefighter training. Fire departments are now expected to provide a variety of services previously unheard of in the fire service—services such as hazardous materials response; emergency medical and ambulance services; urban search and rescue (for incidents such as the bombing of the Federal office building in Oklahoma City);

water rescue; wildland/urban interface fires; mountain rescues, and antiterrorist preparedness for nuclear, biological and chemical attacks—and a variety of social services such as diversion programs for at-risk youth, inoculations of children and “safe places” for runaway minors. Community expectations have particular impacts on recently urbanized areas; where new arrivals expect a similar level of service from their new fire departments as they did from their old metropolitan ones.

The demands for increased efficiency and effectiveness also drive the need for enhanced training. As local governments try to do more with limited resources, they look toward new technologies and procedures to make their operations more efficient and effective. The use of new technologies (such as compressed air foam fire suppression) and procedures (such as urban search and rescue) require training. Basic skills must be practiced and relearned, and new skills must be acquired.

Colorado’s fire service faces some unique training challenges. The geographic separation of population centers forces western slope, mountain and eastern plains fire departments to rely on local resources for training. Unfortunately, these local resources are often inadequate because of the lack of economies of scale. Access to basic training programs is particularly limited for rural fire departments. Access to special-

ized training for metropolitan fire departments is also limited and practically nonexistent for rural fire departments.²⁷

Unlike most other states, the State does not provide any direct training funds nor does it provide much, if any, training directly to firefighters. The State acts only as a conduit for a limited number of training programs provided by the Federal government. In fact, some Colorado fire departments have sought regular training from other states. For example, the Walsh Fire Department receives state funded fire training from Kansas and the Durango Fire Department goes to New Mexico.

Certification

Testing and certification of firefighters are critical components of the training process. Testing helps identify areas where further training is needed. A good testing process lends credibility to certification, while certification allows firefighters to demonstrate competency. Certification is used to ensure that minimal performance standards are met. Therefore, certification is extensively used by fire departments for personnel promotion. Certification also helps fire departments maintain credibility in the community and it decreases liability exposure.

Several problems have plagued the Colorado Division of Fire Safety’s firefighter certification program since its inception and have led to dissatis-



faction among members of Colorado's fire service. Two critical problems have been identified. The first deals with testing for practical skills. The existing program utilizes a variety of examiners to certify that candidates have demonstrated appropriate skills; however, the practical testing process allows for a great amount of subjectivity in the test scoring. The other area of concern relates to the administration of written tests. There have been quality control problems with the creation and scoring of these tests. Some fire departments have asserted that written tests covering the wrong topics have been administered and that other tests have been wrongly scored. Finally, there is a continuous perception that the Division cannot return test results and certificates in a timely manner. It is important to acknowledge that the Division of Fire Safety has made significant improvements in the testing and certification program. However, there is still room for improvement.

Recommendations

Adequate training and certification for firefighters is critical for the optimal delivery of fire protection services to the citizens of Colorado. Competency not only improves firefighter performance, it also improves firefighter safety and survival. Unfortunately, training of firefighters is inadequate in many areas of the state and the Division of Fire Safety has too few resources to provide significant training opportunities to the state's

firefighters. Therefore, the CSFCA recommends that the State create a Firefighter Training Fund, the assets of which would be used to deliver basic and specialized training to firefighters throughout the state. The State should have a single agency which oversees the Fund and which coordinates training efforts between local fire departments, community colleges and other State and Federal agencies.

The State should also continue the voluntary certification program while making continued improvements in practical testing, quality assurance of written test generation and scoring, and continued improvements in reporting test results and providing certificates to firefighters.

Cost Estimates and Funding Mechanisms

The costs associated with improved firefighter training and certification programs can be covered by eliminating redundant fire safety personnel, such as State inspectors that duplicate local and other State fire inspectors work.

The enhanced firefighter training program will require legislative initiative to reallocate two full-time employees (at approximately \$84,000 per year for salaries and benefits); operating expenses (at an estimated \$24,000 per year to design, administer and coordinate firefighter training programs); and approximately \$100,000 to contract with instructors

and to purchase disposable fire training supplies. The certification program can remain cash funded, it merely needs to become a higher priority of the State and be administered with a focus on the firefighter as a customer.

Point 3: Fire Code Enforcement



Fire codes are cost effective means of providing life and property safety and they are the linchpins of

current fire prevention activities. Codes help prevent fires from starting

and minimize the size and impacts of fires which cannot be prevented. They protect the occupants of buildings, buildings themselves and the firefighters who respond to calls for assistance.

Fire codes are regulations that specify (a) the design and construction specifications as they relate to fire safety in new buildings and (b) the maintenance requirements for fire safety systems and the standards for storage of on-site hazardous materials in existing buildings. In rare cases, some jurisdictions may adopt fire code changes that will retroactively alter original constructions.

Advantages of Fire Codes

Fires costs Americans over \$100 billion dollars per year—one to two percent of the gross national product.²⁸ This amount includes the cost of fire suppression services, property losses, insurance overhead, medical costs of fire injuries and costs for built-in fire protection systems.²⁹ This burden is carried by each and every insurance and tax payer.

The primary economic advantage of fire codes is their ability to decrease direct and indirect costs of fires. Effective application of fire codes can reduce the number of fires and the damage caused by fires that cannot be averted.

Fire codes have other economic advantages as well. By limiting fire losses, communities protect their economic and tax bases. Following a



Ten elderly residents perished in the Crystal Springs Nursing Home fire. Inadequate fire codes were found to be a contributing factor.



significant fire, most business never reopen, or they fail shortly after reopening. Their clientele find other suppliers or service providers. This can be devastating to a community or state that has a significant stake in a single business.

Colorado is unique in that it is one of three states (Missouri and Wisconsin are the other two) that does not have coordinated fire code enforcement at the state level.³⁰ It is one of only ten states that does not have a state-wide minimum fire code.^{31,32} And, it is the only state in the nation which, until recently, had statutes that prohibited some local jurisdictions from adopting fire codes.³³

While fire protection districts may adopt a fire code, they cannot enforce it unless the other governing bodies covered by the fire protection district ratify it.³⁴ Twenty-two percent of Colorado fire protection districts which adopted fire codes have not had them ratified by their governing bodies; thus, while the elected officials of the fire protection district may want the code, the lack of ratification leaves citizens without code protections. Thirty-four percent of Colorado's fire departments have not adopted a fire code and the lack of support from other authorities having jurisdiction over fire protection districts was cited as a significant reason.³⁵

Another issue in Colorado is the application of fire codes in State owned and licensed facilities. With

the exception of the Eisenhower and Hanging Lakes tunnels, local jurisdictions are responsible for providing fire protection to State owned and licensed facilities. In many instances, however, these jurisdictions have no authority to enforce their own codes in these buildings. The facilities may or may not have codes of their own and they may or may not be exempt from meeting local code requirements. Unfortunately, these facilities (namely schools, colleges and universities, health care facilities, State housing projects, nursing homes, group homes and child care facilities) present the greatest challenges because they present the highest risk for loss of life.

Recommendations

The CSFCA recommends that the State adopt enabling legislation that allows the elected officials of every municipal and quasi-municipal fire department to adopt and enforce fire codes which are applicable to structures, including State licensed facilities, within their jurisdictions. In State owned and operated facilities, the Uniform Fire Code should apply, as it does in almost all Colorado jurisdictions with fire codes. The Uniform Fire Code is the companion document to the Uniform Building Code and other uniform codes. This enabling legislation would allow for local autonomy while providing adequate fire protection to all facilities. Code enforcement within State owned facilities should be coordinated within

the State and between State and local agencies by a single responsible agency.

Cost Estimates and Funding Mechanisms

The cost to the State, for enabling legislation which allows local jurisdictions to adopt and enforce fire codes, is nominal. Other than for the legislative process, no State funds would be required. The costs associated with assuring that State licensed facilities meet the requirements of contemporary fire codes should, theoretically, be negligible because most State licensed buildings are said to meet current fire codes. State owned buildings, however, would require new State funds if a decision was made to have every structure meet contemporary fire code standards.

Black Tiger fire of 1989 destroyed 44 homes in Boulder County, required over 500 firefighters and resulted in \$10,000,000 in property loss.³⁶ With increasing growth and urbanization, Colorado is becoming more and more vulnerable to similar large scale emergencies.



The Black Tiger fire caused more than \$10,000,000 in property losses.

Point 4: Disaster Management and Resource Mobilization



Disasters are a fact of life in Colorado. The 1994 South Canyon Fire resulted in fourteen firefighter deaths. The 1992 visit of Pope John Paul II resulted in a emergency medical incident of unprecedented scale—over twenty thousand people required emergency medical treatment during the two day event. The

Emergencies are routine for the fire service and generally there is no community-wide impact nor any extraordinary use of resources needed to bring conditions back to normal. When an incident exceeds a local jurisdiction’s resources, it becomes a disaster.

There are three different types of disasters: natural, technological and civil. Natural disasters include, but are

not limited to, forest fires, floods and tornadoes. Technological disasters include chemical and biological releases, industrial fires and radioactive material releases. Civil disasters include civil unrest, terrorist attacks and incidents where no unrest is present but conditions lead to large



numbers of people being injured, such as the Papal visit. What these incidents have in common is that they often exceed the abilities of the local emergency response authorities within a very short time. Furthermore, the State's ability to provide useful assistance is limited.

What may be a disaster in one jurisdiction may not be in another. Each community develops stages of response and has the ability to call in

additional resources when the requirements of the incident exceed its capabilities.

Unfortunately, Colorado does not have a state-wide, all-risks (defined as any and all types—natural, technological or civil disasters) disaster management and resource mobilization plan. Furthermore, while the State has recently adopted an integrated incident command system, it has not integrated it with the local jurisdictions.³⁷ Finally, the State does not have a database of local resources available for mobilization for all risks. Its existing resource list is limited to information collected by the Forest Service which is limited in scope and not easily assessed by local jurisdictions.

Because of these limitations, local fire departments use local plans and they tend to improvise when confronted with a disaster. They do the best they can until and unless the incident is turned over to Federal authorities. Uncertainties cause local fire departments to acquire resources that will not be routinely used in order to improve their ability to handle disaster operations independently. In addition, they must be prepared to respond to their neighbors' requests for immediate assistance, even though they may not be best suited for the task. What results is a reduction in the effectiveness of disaster operations and an inefficient use of the taxpayer's money.

Local, state and Federal govern-

ments each have roles and responsibilities for the four phases of disaster response—mitigation, preparedness, response, and recovery. Local governments focus primarily on mitigation (decreasing the potential impact of a disaster) through zoning and building codes. They also focus on preparedness and response through local disaster planning efforts and the acquisition of resources for emergency responses. The Federal government focuses on preparedness through planning and on recovery efforts by making disaster relief funds available. State government, then, becomes the focal point between response and recovery. It is the State that is responsible for determining the emergency management needs of its political subdivisions and for channeling training, planning and technical support into operational support during a disaster.

Several State agencies are responsible for planning and responding to disasters within Colorado. Unfortunately, there is little coordination between these agencies and almost no coordination between these

agencies and the local jurisdictions that are responsible for handling emergency responses to large scale incidents within their boundaries. In addition, the agencies that plan responses and the agencies that actually respond to disasters have distinctly different approaches in Colorado.

Currently, several plans for emergency response to large scale incidents exist within the state. The existence of multiple plans, however, is problematic. In any particular disaster crossing multiple jurisdictions, it is unclear whose plan should prevail. This was evident during a recent disaster exercise where different State agencies simultaneously



claimed jurisdiction and acted independently even though the local government agencies may have had statutory authority.³⁸

There needs to be a single state-wide plan for emergency response which is accepted by both State and local officials.³⁹ Furthermore, there needs to be a list of resources available for disaster response within the state. Colorado's fire service is less prepared and less able than it should be to respond to a large scale disasters.

Coordination of information, people, money, and equipment is critical for emergency response to a disaster. Coordination ensures that proper functions are carried out through a partnership of officials from various agencies and that the actions of one group take into account the activities of another. This coordination leads to more effective emergency response, financial stability, reduced duplication of services and a continuity of services in areas unaffected by the disaster. Because Colorado has no plan to mobilize and deploy firefighters and rescuers to aid local jurisdictions when disaster strikes, benefits of a coordinated response to disasters are not being fully realized.

Of course, participation by local jurisdictions is critical to the successful outcome of disaster responses. Unfortunately, there are two significant barriers to local participation. The first is the question of liability. An agency responding to the requests for assistance by another agency should be indemnified from liability associated with responding to that request;

however, that is not always the case. While CRS 29-5-108 provides for indemnification, there is disagreement within the state's fire service as to how this indemnification is to be applied; in fact, some department's mutual aid agreements go contrary to the Statute. The second issue involves reimbursement of extraordinary expenses associated with the response to another jurisdiction. If, by assisting another jurisdiction, an agency incurs extraordinary expenses that will not be reimbursed, the agency is less likely to participate in a disaster mobilization program. Again, the State can take a leadership role by developing a system which further indemnifies local jurisdictions from additional liability when responding to a request for assistance and by developing a system which ensures payment for extraordinary expenses incurred by agencies responding to a requests for help.

Recommendations

The CSFCA recommends that the State develop an effective state-wide disaster management and resource mobilization plan to quickly notify, assemble and deploy the appropriate aid to any local jurisdiction that has exhausted its resources in attempting to control an emergency incident. The plan must address natural, technological and civil disasters. It should be an all-risks plan that utilizes a recognized and accepted incident command structure. The plan should be administered by a single agency that is

proficient in emergency operations and that interfaces with the fire service on a regular basis. While the

State has recently adopted an emergency operations plan, the CSFCA believes it is limited because it does

Table 1: Fire Service Functions in Colorado's Bureaucracy⁴⁰

State Level Fire Service Function	Responsible State Agency
<i>Building Code Administration</i>	Department of Administration (only in State Owned buildings)
<i>State Electrical Code Administration</i>	Dept. of Regulatory Agencies / Electrical
<i>Coordination of Fire Suppression</i>	Colorado State Forest Service (forest only) Dept. of Public Safety/Division of Fire Safety (SEOP Executive Order)
<i>Disaster Preparedness</i>	Dept. Local Affairs/Office of Emergency Mgt.
<i>Fire Safety in:</i>	
Health Care Facilities	Dept. Public Health & Environment/Facilities
Day Care Centers	Dept. Human Services / Social Services Div.
K-12 Schools	Dept. of Labor/Public Safety Division
Correctional Facilities	Dept. of Corrections
Institutions	Dept. Public Health & Environment
State Buildings	Dept. Human Services / Institutions Div.
Colleges	Department of Administration
Universities	Dept. of Higher Education
Manufactured Housing	Independent Boards of Regents
Amusement Parks	Dept. of Regulatory Agencies
Casinos	Dept. of Labor/Public Safety Division
Race Tracks	Dept. of Public Safety/Division of Fire Safety
Natural Gas Facilities	Dept. of Regulatory Agencies
Group Homes	Public Utilities Commission
Ski Lifts	Dept. Human Services / Social Services Div. Dept. of Regulatory Agencies/Tramways
<i>Related Regulatory Functions:</i>	
Fuel and LP Gas Storage and Distribution	Dept. of Labor/Oil Inspection Section
Boilers	Dept. of Labor/Boiler Inspection Section
Fireworks	Dept. of Public Safety/Division of Fire Safety
Fire Suppression Systems	Dept. of Public Safety/Division of Fire Safety
Emergency Medical Services	Dept. Public Health & Environment/ EMS Div. Dept. of Public Safety/Division of Fire Safety
Explosives	Dept. of Natural Resources/Mine Safety Dept. of Labor/Public Safety Division
Hazardous Materials	Dept. of Public Safety/State Patrol Dept. Public Health & Environment Dept. of Public Safety/State Patrol
<i>Incident Reporting:</i>	
Fire	Dept. of Public Safety/Division of Fire Safety Colorado State Forest Service (limited)
EMS	Dept. Public Health & Environment/ EMS Div. Dept. of Public Safety/Division of Fire Safety
Hazardous Materials	Dept. Public Health & Environment/ EMS Div. Dept. of Public Safety/Division of Fire Safety Dept. of Public Safety/State Patrol
<i>Other Functions:</i>	
Public Fire Safety Education	Dept. of Public Safety/Division of Fire Safety Dept. Public Health & Environment
Firefighter Training	Dept. of Public Safety/Division of Fire Safety
Firefighter Certification	Dept. of Public Safety/Division of Fire Safety
Arson Investigation—Law Enforcement Agencies Only	Dept. of Public Safety/Colorado Bureau of Investigation

not adequately address the response phase of disaster management.

The Association further recommends that the State develop procedures to reimburse local jurisdictions from appropriate Federal, State and private funds when these jurisdictions are mobilized under the plan, and that the State adopt legislation that would further indemnify from additional liability local jurisdictions that assist others during a disaster.

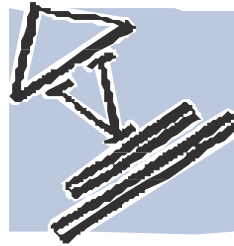
Cost Estimates and Funding Mechanisms

The State's Office of Emergency Management is charged with and funded by State and Federal dollars to provide a useful disaster management and resource mobilization plan. However, significant improvements need to be made for the system to provide an effective response during a disaster and to be more responsive to the needs of local jurisdictions and other agencies within the state. Although recent improvements have been made in the Office of Emergency Management, a practical approach to disaster management does not yet exist.

To develop and finance an effective disaster management and resource mobilization plan, with an administrative system to access existing emergency reserves for disaster mobilization and response, no additional State funds would be required; rather, there may be a cost savings by transferring and consoli-

ating disaster response and management responsibilities to a single entity.

POINT 5: ADMINISTRATIVE EFFECTIVENESS



Efficient and effective delivery of fire prevention and suppression services in Colorado necessitates an active role for

the State. A single State agency should be responsible for Points 1 through 4 above and for assuring the accountability of the many agencies currently undertaking fire safety activities. Unfortunately, a coordinated and effective approach at the State level does not exist in Colorado.

While the Division of Fire Safety is charged with meeting some of these responsibilities, the lack of funding, commitment and authority by the Legislative and Executive branches of Colorado State government have left the Division incapable of performing the duties it has been assigned. The fire incident reporting system and firefighter certification programs run by the Division are less than adequate and the Division's obligation to provide firefighter training cannot be met when the State provides no training funds.

While many fire safety functions

are performed by State government, they are performed by many different agencies in less than coordinated, effective and efficient manners. In some instances there are duplications of effort within the State; at other times there are duplications between the State and local agencies; in other instances there are no efforts at all.

Unfortunately, Colorado fire departments must continue to provide services in this very uncertain environment and must interact with 20 different State agencies that have some responsibility for fire suppression, fire prevention and rescue services. Table 1 illustrates fire service functions and how they are divided among Colorado State governmental units.

It is apparent that one State agency, with statutory authority and adequate resources, should be assigned the leadership role in fire protection and disaster related services in the state. In most states these responsibilities are met by a State Fire Marshal.

Description of a State Fire Marshal

The term “State Fire Marshal” is used here conceptually. The actual title of the position is less important than the functions of the office. The term “State Fire Marshal” is used here because most other states use it to describe an entity that coordinates fire prevention responsibilities at a state level and provides fire-related ser-

vices and information to local fire departments, other state agencies and the public.

Though the Division of Fire Safety is charged with some of the responsibilities of a typical State Fire Marshal’s Office, it differs in two fundamental ways. First, the Division is expected to carry out its functions without adequate resources or statutory authority. Therefore, it cannot perform the critical functions it is currently charged with—firefighter training, firefighter certification and fire incident reporting. The second fundamental difference is the diffusion of fire protection-related roles and responsibilities throughout Colorado State government. This diffusion, with various State agencies acting independently and without regard to their counterparts and local fire departments, has created an inefficient and ineffective approach to critical functions concerning fire safety within Colorado.

Recommendation

The CSFCA recommends that the State create a “State Fire Marshal’s Office” by consolidating all fire safety activities presently administered by Colorado’s fire-safety bureaucracy. The creation of this office will not require additional State resources because it can be funded by consolidating and reorganizing the existing organizational system. Thus, the recommendation does not suggest the creation of another bureaucracy, it

merely suggests streamlining the one that presently exists. As the Governor's Commission on Productivity found, a "State Fire Marshal's Office" could be created by simply transferring "all fire safety functions of the various state agencies to the Division of Fire Safety, along with the [28] FTE performing these functions."⁴¹ The State Auditor agreed and the Colorado Commission on Fire Prevention and Control agreed.^{42,43}

Cost Estimates and Funding Mechanisms

The State of Colorado currently spends over \$1 million per year on its

existing fire safety bureaucracy, with approximately 28 full-time employees with fire safety responsibilities in various State agencies.⁴⁴ By consolidating functions, and eliminating redundant fire inspections performed by State and local officials, the CSFCA is convinced that the State could reduce the cost of its fire safety programs and at the same time greatly enhance the performance of its fire safety related activities.



The Pine Creek Apartment fire in Denver was started by a seven year old boy playing with matches. The fire displaced 130 residents. —Steve Groer/Rocky Mountain News

Conclusion

Now is the time to act. As the response capabilities of State and local fire service agencies are decreasing in relation to the new demands placed upon them, only strong leadership and a commitment to fire safety from the State's General Assembly and Executive Branch will help prevent needless suffering and loss.

Colorado's citizens and visitors are worthy of fire protection services which are delivered by well trained firefighters. They are worthy of fire-related public policy which is made with adequate information and they are worthy of cost effective services. Finally, Colorado's firefighters deserve a State government which helps protect their lives through better training and makes their jobs easier by streamlining the existing bureaucracy.

The CSFCA hopes that this report helps define the fire safety problems and their solutions in the State of Colorado. The Association developed the report and its companion documents in order to assist and support the Legislative and Executive

Branches of Colorado government in their efforts to evaluate and formulate public policy as it relates to fire safety in the State. The Association hopes to inspire legislative action through, and be an active participant in, thoughtful discussion of the **Five Point Plan for a Fire Safe Colorado**.

Again, the five issues of greatest importance to those in the State's fire service are: (1) fire incident reporting, (2) firefighter training and certification, (3) fire code enforcement, (4) disaster management and resource mobilization and (5) administrative effectiveness. The Association recognizes that alternative recommendations to these issues may exist and the Association is more than willing to explore and support efforts to develop novel solutions if the ones presented here do not prevail.

The Association would like to thank each reader for taking the time to examine this report and for becoming an earnest participant in fire safety policy and practice in the State of Colorado.



Endnotes

- ¹It is unclear exactly how many fire departments there are in Colorado because some departments are not incorporated.
- ²Statistical analysis of Colorado Fire Incident Reporting System (CFIRS) data and annual reports provided by the Colorado Division of Fire Safety (CDFS).
- ³Ibid.
- ⁴Ibid.
- ⁵Statistical analysis of US Fire Administration data (Fire in the United States, Eighth Edition, National Fire Data Center, 1993, p. 35 and 36) and demographic data from the Colorado Department of Local Affairs, Demographics Division.
- ⁶Statistical analysis of CFIRS data and annual reports provided by the CDFS.
- ⁷Statistical analysis of data provided by the Colorado Hospital Association.
- ⁸All dollar amounts mentioned in this Report are 1994 constant dollars unless otherwise noted.
- ⁹Statistical analysis of data provided by the Colorado Hospital Association.
- ¹⁰Statistical analysis of data provided by the Colorado Department of Public Health and Environment, Vital Statistics Division.
- ¹¹Arson and fire incident reporting, Chartered Property Casualty Underwriters Society, 1996, p. A-1.
- ¹²Statistical analysis of Colorado Bureau of Investigation, Colorado Division of Fire Safety and US Fire Administration data (Fire in the United States, Eighth Edition, National Fire Data Center, 1993, p. 7 and 280).
- ¹³Excludes the District of Columbia
- ¹⁴Arson and fire incident reporting, Chartered Property Casualty Underwriters Society, 1996, p. A-1.
- ¹⁵Fire in the United States, Eighth Edition, National Fire Data Center, 1993, p. 219.
- ¹⁶Arson and fire incident reporting, Chartered Property Casualty Underwriters Society, 1996 and Fire in the United States, Eighth Edition, National Fire Data Center, 1993.
- ¹⁷Colorado State Constitution, Article VIII, Section 1 and Preamble
- ¹⁸Colorado Department of Local Affairs, Demographics Division
- ¹⁹A soon to be released upgraded version of the national incident reporting system promises to be more user friendly.
- ²⁰Different fire departments perform different levels of fire investigations. Some are very thorough while others are not.
- ²¹CRS 24-33.5-1203
- ²²Fiscal year 1994 Report to the Governor and General Assembly, Colorado Division of Fire Safety, 1995, p.12
- ²³State fire marshal issues and answers, Colorado Department of Public Safety, Division of Fire Safety, 1995 and survey results from the National Association of State Fire Marshals, 1995
- ²⁴Report of the State Auditor, 6/30/1985, Colorado State Auditor, 1985.
- ²⁵Unfortunately, the State of Colorado does not have an accurate count of firefighters. These totals come from CDFS databases where 81 departments are indicated as having no firefighters.
- ²⁶The Fire Chief's handbook, fifth edition, Joseph Bachtler and Thomas Brennan, Pennwell Publishing, 1995, p. 335.
- ²⁷Unpublished findings of Colorado Commission on Fire Prevention and Control, 1992.
- ²⁸Fire in the United States, Eighth Edition, National Fire Data Center, 1993, p.35 and 36.
- ²⁹Ibid.
- ³⁰State fire marshal issues and answers, Colorado Department of Public Safety, Division of Fire Safety, 1995.
- ³¹Colorado has a State fire code, however, it applies only to casinos.
- ³²Survey results from the National Association of State Fire Marshals, 1995.
- ³³Counties under 15,000 in population were prohibited from adopting and enforcing fire codes. However, legislation (that, in large part due to the activities of the Colorado State Fire Chiefs' Association) removed this cap was signed into law in 1996.
- ³⁴CRS 32-1-1002
- ³⁵Colorado Department of Public Safety, Division of Fire Safety survey results reported to the Colorado Commission of Fire Prevention and Control.
- ³⁶Black Tiger Fire case study, National Fire Protection Association, no date printed, p. 3.
- ³⁷An integrated incident command system is used to request and allocate resources during an emergency.
- ³⁸April 17, 1996 Rocky Flats Emergency Exercise.
- ³⁹Although the Office of Emergency Management claims to have an adequate all-risks plan, it does not address the response phase of disaster management.
- ⁴⁰Adapted from State fire marshal issues and answers, Colorado Department of Public Safety, Division of Fire Safety, 1995, and findings of the Colorado Commission on Fire Prevention and Control.
- ⁴¹State fire marshal issues and answers, Colorado Department of Public Safety, Division of Fire Safety, 1995.
- ⁴²Report of the State Auditor, 6/30/1985, Colorado State Auditor, 1985.
- ⁴³Unpublished findings of Colorado Commission on Fire Prevention and Control, 1992.
- ⁴⁴State fire marshal issues and answers, Colorado Department of Public Safety, Division of Fire Safety, 1995.