

WE—VIEW—THE—SUCS—4002

Colorado Department of Regulatory Agencies
Office of Policy, Research and Regulatory Reform

Colorado Fire Suppression System Program



October 15, 2004

STATE OF COLORADO

DEPARTMENT OF REGULATORY AGENCIES

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Bill Owens
Governor

October 15, 2004

Members of the Colorado General Assembly
c/o the Office of Legislative Legal Services
State Capitol Building
Denver, Colorado 80203

Dear Members of the General Assembly:

The Colorado Department of Regulatory Agencies has completed its evaluation of the Fire Suppression System Program (Program). I am pleased to submit this written report, which will be the basis for my office's oral testimony before the 2005 legislative committee of reference. The report is submitted pursuant to section 24-34-104(8)(a), of the Colorado Revised Statutes (C.R.S.), which states in part:

The department of regulatory agencies shall conduct an analysis of the performance of each division, board or agency or each function scheduled for termination under this section...

The department of regulatory agencies shall submit a report and supporting materials to the office of legislative legal services no later than October 15 of the year preceding the date established for termination....

The report discusses the question of whether there is a need for the regulation provided under Article 33.5 of Title 24, C.R.S. The report also discusses the effectiveness of the Program and staff in carrying out the intent of the statutes and makes recommendations for statutory and administrative changes in the event this regulatory program is continued by the General Assembly.

Sincerely,

A handwritten signature in cursive script that reads "Tambor Williams".

Tambor Williams
Executive Director

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Executive Summary

Quick Facts

What is Regulated? The installation and inspection of fire suppression systems.

Who is Regulated? Fire suppression system contractors and inspectors:

- 349 registered contractors
- 216 certified inspectors

How is it Regulated? The Director of the Division of Fire Safety is the Administrator of the Fire Suppression System Program (Program). The Administrator registers contractors that install fire suppression systems and certifies inspectors who review system plans and inspect installations. In addition to promulgating rules, the Administrator may withhold, deny, revoke and suspend any registration and certification, as well as impose fines for any violations of the statute and rules.

What Does it Cost? The fiscal year 03-04 expenditure to oversee the Program was \$43,851, and there were 0.7 FTE associated with the Program.

In 2004, fees were:

- Contractor Registration -- \$55
- Inspector Certification -- \$15
- Plan Registration -- \$10
- Plan Review -- \$25/hour
- Inspections -- \$35/hour

What Disciplinary Activity is There? Between fiscal years 98-99 and 03-04, the Administrator's disciplinary proceedings consisted of:

Complaints Filed	131
Revocations	0
Suspensions	0
Denials	7
Fines	0

Where Do I Get the Full Report? The full sunset review can be found on the internet at:

<http://www.dora.state.co.us/opr/oprpublications.htm>

Key Recommendations

Continue the Program until 2014.

Inadequate fire suppression systems pose significant risks of loss of life and property damage. The Program's system of plan review by certified inspectors, installation by registered contractors and inspection by certified inspectors serves to protect the public health and safety from the dangers presented by inadequate fire suppression systems.

Require the Administrator to Implement a Formal Recordkeeping System to Track Complaints and the Final Dispositions.

In its 1997 sunset review of the Program, the Department of Regulatory Agencies noted that the Program lacked a system for tracking complaints and final agency actions. This situation is substantially unchanged. Formal recordkeeping and complaint and disposition tracking systems will enable the Administrator and the General Assembly to more readily determine the effectiveness of the Program.

Authorize the Administrator to Issue Letters of Admonition.

The Administrator may withhold, deny, revoke or suspend any registration or certification. The Administrator may also impose fines, but the Administrator lacks the statutory authority to issue letters of admonition (LOAs). LOAs are common in professional and occupational regulatory programs and often constitute the lowest form of formal discipline. LOAs are typically issued in those situations where the regulatory authority determines that a violation has occurred, but the nature of the violation does not merit more serious action, such as cessation of practice or the imposition of a fine. They permit the regulatory authority greater flexibility in ensuring that the nature of the discipline imposed is proportional to the nature of the violation.

...Key Recommendations Continued

Restate the Grounds for Discipline to Prohibit any Conduct Likely to Deceive, Defraud or Harm the Public.

Currently, the Administrator may take disciplinary action against any registered contractor or certified inspector who, among other things, engages in “dishonorable, unethical or unprofessional” conduct that is likely to deceive, defraud or harm the public. While the goals of this provision are meritorious, the terms involved are so vague that they may be unenforceable. These terms should, therefore, be repealed and the provision simplified.

Require that all Fines Imposed by the Administrator that are Associated with the Program be Credited to the State’s General Fund, Rather than the Fire Suppression Fund.

When the fines imposed by a cash-funded agency, such as the Program, are credited to that agency’s cash fund, a perceived conflict of interest is inevitable because that agency then has a financial incentive to impose fines. When fines are credited to the state’s General Fund, such incentives and perceptions are removed.

Major Contacts Made in Researching the 2004 Sunset Review of the Program

Certified Fire Suppression System Inspectors
Colorado Division of Fire Safety
Fire Suppression System Advisory Committee
National Fire Protection Association
Registered Fire Suppression System Contractors
U.S. Fire Administration

What is a Sunset Review?

A sunset review is a periodic assessment of state boards, programs, and functions to determine whether or not they should be continued by the legislature. Sunset reviews focus on creating the least restrictive form of regulation consistent with the public interest. In formulating recommendations, sunset reviews consider the public's right to consistent, high quality professional or occupational services and the rights of businesses to exist and thrive in a highly competitive market, free from unfair, costly or unnecessary regulation.

Sunset Reviews are Prepared By:
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Background

The Sunset Process

The authority of the Division of Fire Safety (Division) in the Department of Public Safety to administer Colorado's Fire Suppression System Program (Program) is subject to sunset review as provided for in section 24-34-104, Colorado Revised Statutes (C.R.S.). In accordance with section 24-33.5-1209(2), C.R.S., the fire suppression functions of the Division related to the regulation of fire suppression system contractors and inspectors are repealed effective July 1, 2005, unless continued by the General Assembly. The Department of Regulatory Agencies (DORA) must conduct an analysis and evaluation of the Program pursuant to section 24-34-104(8)(a), C.R.S.

The purpose of this review is to determine whether regulation by the Program should be continued for the protection of the public and to evaluate the performance of staff in the Division. During this review, the Division must demonstrate that there is still a need for regulation, and that the regulation is the least restrictive regulation consistent with the public interest. DORA's findings and recommendations are submitted via this report to the legislative committee of reference of the Colorado General Assembly. Statutory criteria used in sunset reviews may be found in Appendix A on page 23.

Methodology

As part of this review, DORA staff:

- Reviewed Colorado statutes and rules governing the Program;
- Interviewed agency staff, examined agency records, and reviewed disciplinary actions taken by the Program;
- Surveyed individuals regulated by the Program;
- Canvassed the laws of other states;
- Reviewed documents concerning fire safety published by state and federal government agencies; and
- Reviewed industry journals and publications.

History of Regulation

Over 100 years ago, fire suppression systems, or sprinklers as they are often called, were originally introduced to protect factories. Although many inventors developed preliminary devices, an American is credited with the invention of the modern sprinkler head. Henry S. Parmalee developed and installed a sprinkler system in 1874 to protect his piano factory. For decades, sprinklers were installed almost exclusively for the protection of buildings, especially warehouses and factories. Insurance savings that could pay back the cost of the systems in a few years, were the major incentives. However, following fires with large losses of life (Coconut Grove Nightclub, Boston, 1942: 492 dead and LaSalle Hotel, Chicago, 1946: 61 dead), fire and building officials explored options that would provide life safety for building occupants.

By the early 1970s, government studies indicated that fire-related deaths were a problem across the country. Statistical information from fires showed that factories and other buildings equipped with automatic sprinklers had an amazingly good life safety record compared with similar buildings without sprinklers. As a result, building codes were amended to provide for a stronger position on life safety. The installation of an automatic fire sprinkler system was no longer an option to lower fire insurance rates, but a mandated requirement for public safety. Today, the three most common codes addressing fire safety issues are Building Official and Code Administrators International, International Conference of Building Officials (ICBO), and Southern Building Code Congress International. The ICBO controls and publishes the Uniform Building Code.

As concern for fire safety grew across the country, state and local jurisdictions implemented programs to register and certify those individuals responsible for the installation and inspection of fire suppression systems. In 1989, the Colorado Fire Protection Association (CFPA) submitted a sunrise application for the regulation of the fire suppression system industry. The CFPA argued that properly installed and maintained fire suppression systems provide life safety protection and minimize property damage. Conversely, improperly installed systems can be worse than no system at all. A system that is inoperative or ineffective gives the impression of protection, while creating a false sense of life safety and security.

Before the Colorado Fire Suppression System Program (Program) was created, there were no state-mandated minimum standards for individuals operating in the fire suppression industry. Although some building and fire departments examined fire suppression system plans, there were no consistent formal requirements for these systems and enforcement was inconsistent. Furthermore, many areas of the state had no individual who possessed expert understanding of the specifications and workings of these systems.

As a result of the 1989 sunrise review, the General Assembly enacted Senate Bill 90-04, and created the Program. The Program was designated to terminate (sunset) on July 1, 1998, unless continued by the General Assembly. Prior to that date, DORA conducted the first sunset review and recommended continuation of the Program with minor changes. The General Assembly continued the Program through Senate Bill 98-1009, until July 1, 2005.

Fire Suppression Systems

Fire suppression sprinklers are the single most significant element of fire management programs. Typically, the installation of these systems results in lower fire insurance premiums, reduced property damage by preventing flashover¹ and reduced loss of life. In just a matter of minutes, sprinklers can control the advancement of a fire.

Automatic fire sprinklers are individually heat-activated, and tied into a network of piping with water under pressure. When the heat of a fire raises the sprinkler temperature to its operating point (usually 165 degrees Fahrenheit) a solder link will melt or a liquid-filled glass bulb will shatter to open that single sprinkler, releasing water or other fire retardant directly over the source of the heat. Proper design and installation of sprinkler systems is standardized nationally in a consensus standard promulgated by the National Fire Protection Association – NFPA 13.

Profile of the Profession

Fire Suppression System Installation Contractors. Installation contractors sell, install, modify, alter, repair, maintain, and perform maintenance inspections of fire suppression systems. The systems are designed to deliver water or other fire retardant. Contractors install all or part of a system, which may include retrofit in existing facilities, or new installations in facilities under construction according to detailed design plans.

The installation of the piping systems leading to the heads or other distribution mechanism of a fire suppression system is similar to the work of a plumber, but is beyond the scope of work done by plumbers. Current statute excludes the installation of these systems from the definition of plumbing.

Fire Suppression System Inspectors. During a system inspection, an inspector examines the above ground sprinkler piping and the underground piping system, and performs a hydrostatic test of the system. The inspector also performs system operational tests on the waterflow detecting devices, the dry pipe systems, and the control valve tamper switches. A final walk-through inspection is conducted to check system coverage, blocked sprinkler heads, and any item noted on plan review or rough-in inspection as deficient. In Colorado, certified inspectors are also responsible for reviewing system designs prior to installation.

¹Flashover is the point at which the temperature rises to the level at which anything not already on fire will spontaneously ignite. Flashover consumes all the remaining oxygen and raises the temperature past a survivable temperature. This can occur in as quickly as two to three minutes after the first visible flame.

Fire Suppression System Designers. The design of these specialized systems requires knowledge of the hydraulic sizing and layout of all pipes, sprinkler heads and other components necessary to ensure effective delivery of either water or some other fire retardant. Within the United States, the National Institute for Certification in Engineering Technologies (NICET) has established minimum standards of competency for those persons practicing fire suppression system design. NICET regularly conducts certification examinations across the country for those individuals who want to be certified in suppression system design. To better understand the private certification available to contractors, inspectors and designers, descriptions of NICET and other training programs follow.

National Institute for Certification in Engineering Technologies (NICET). Beginning in 1978, the National Fire Sprinkler Association (NFSA) worked with a division of the Society of Professional Engineers to develop a nationwide program to test and certify the competence of fire protection engineering technicians working in the area of sprinkler system layout and detailing. Today, NICET maintains a program of quarterly testing for status as a Certified Engineering Technician in the field of Fire Protection and the subfield of Automatic Sprinkler System Layout. The technician program recognizes four levels: 1) Student Technician, 2) Associate Engineering Technician, 3) Engineering Technician, and 4) Senior Engineering Technician. Each level is associated with special work elements; the higher levels relate to work elements of greater responsibility. NICET has established enrollment and certification requirements for each level.

American Fire Sprinkler Association (AFSA). AFSA offers a four-book series correspondence course designed specifically for training apprentices in the fire sprinkler trade. In addition, they offer a two-week school on principles of sprinkler design, and seminars on selected supplemental topics.

National Fire Sprinkler Association (NFSA). NFSA offers a two-week training seminar for entry-level engineering technicians, a sprinkler system designer programmed instruction course, and a sprinkler design certification review handbook.

National Fire Protection Association (NFPA). NFPA offers automatic sprinkler system workshops and special subject seminars.

Legal Framework

Colorado Law

Title 24, Article 33.5, Part 12, Colorado Revised Statutes (C.R.S.), provides for the creation and administration of the Fire Suppression System Program (Program). The specific sections of this article that relate to the Program are discussed below.

Powers of the Administrator

Section 24-33.5-1204.5, C.R.S., grants specific duties and powers to the State Fire Suppression Administrator (Administrator). The Administrator is defined as the Director of the Division of Fire Safety (Division), or the Division Director's designee. The statute grants the Administrator the following duties and powers:

- To establish a registration program for fire suppression contractors and to adopt such rules and regulations to administer the Program and the inspection and maintenance of fire suppression systems;
- To establish fees and charges in amounts necessary to offset the costs of administration. Fees may not exceed the maximum for the specific services set in statute;
- To receive, investigate, and act upon complaints against those persons who violate any of the provisions of the statute;
- To conduct hearings upon charges for discipline of a fire suppression contractor or a certified fire suppression systems inspector; issue subpoenas; compel attendance of witnesses and the production of books, records, papers, and documents; administer oaths to persons giving testimony at hearings; and recommend prosecution of persons violating the statute; and
- To maintain records of all applications, registrants, investigations, disciplinary and other actions.

Registration of Contractors Required

Section 24-33.5-1206.1, C.R.S., compels anyone who acts or advertises as a fire suppression contractor to register as such with the Administrator, comply with any locally required licenses or permits, and conform to local building and fire codes. Registered fire suppression contractors are responsible for the acts of their employees and agents while they sell, advertise, layout, fabricate, install, add to, alter, service, repair, or inspect any fire suppression system. Furthermore, each registrant must employ a responsible person who is qualified in the layout, fabrication, installation, alteration, servicing, repair, and inspection of fire suppression systems. An on-site installer who is qualified must supervise each job. Registration will not be granted to contractors who have violated the statutory provisions of the Program or rules of the Division.

The layout, fabrication, installation, alteration, servicing, repair, or inspection of fire suppression systems must be done according to applicable standards adopted by the Administrator or applicable local codes and ordinances. In adopting standards, the Administrator may consider the standards of the National Fire Protection Association (NFPA). Actual fabrication, installation, alteration, servicing, or repair of any fire suppression system must be done in accordance with approved plans, layout, or design.

All interim and final inspections and system tests must be completed according to the standards adopted by the Administrator or the requirements set out by local fire safety inspectors. All required logs, reports, or results of inspections and system tests must be accurately recorded and conveyed to the county, municipality or special district if such local governmental entity possesses fire suppression system authority, or to the Division, as appropriate.

Job Registration and Plan Review

Section 24-33.5-1206.2, C.R.S., requires that prior to any installation, modification, alteration or repair that affects the integrity of a fire suppression system, the registrant will secure all local permits and register the job, including the name, registration number of the contractor, and other pertinent information with the Administrator or the approved local fire safety agency.

The working plans and hydraulic calculations for the job must also be reviewed and approved by either the Administrator or a certified local fire safety inspector. The Administrator is required to establish standards for review and approval. All working plans and hydraulic calculations submitted for review must bear the signature and certification number of either a registered professional engineer, or a level three or higher National Institute for the Certification of Engineering Technologists certified engineering technician (fire suppression engineering technology - automatic sprinkler design or fire suppression engineering technology - special hazards system layout), whichever is relevant to the particular job or design. Such certified professional engineer or engineering technician must attest that he or she has reviewed the plan and design, and finds that it meets the applicable standards for fire safety and that it is adequately designed to meet a given system's requirements.

Requirements for Installation, Inspection, and Maintenance

Under section 24-33.5-1206.3, C.R.S., fire suppression systems must be designed and installed in accordance with the applicable standards adopted by the Administrator, manufacturer's specifications, and applicable local codes and ordinances.

Inspections and tests of fire suppression projects must be conducted by certified fire safety inspectors, and in compliance with applicable standards. Complete records must be kept of the tests and operations of each system. The records must be available for examination by the local certified fire safety inspector. Moreover, fire suppression contractors must furnish the user with operating instructions for all equipment installed, together with as-built diagrams of the final installation.

System Approval and Inspection

Section 24-33.5-1206.4, C.R.S., requires that a certified fire suppression systems inspector approve fire suppression systems before the structure is cleared for use or occupancy. Approval of the system must include a review of working plans and hydraulic calculations, as well as final tests. The Administrator must provide, on a contractual or job-by-job basis, fire safety inspections to any county, municipality, or special district. The local jurisdiction must pay the actual costs of such inspections.

Each county, municipality, and special district that has fire suppression systems enforcement authority must make available a certified fire suppression systems inspector. The governing body of a local jurisdiction that has fire suppression systems enforcement responsibilities may establish and collect fees to pay the costs of plan review, inspections, and related administrative expenses.

Every inspection of a fire suppression system must be conducted by a state-certified inspector who has met the training requirements set by the Administrator, including:

- Completion of an examination for fire suppression systems inspection;
- Proof that other equivalent qualifications, as may be prescribed by rule, including but not limited to education and experience, have been met; or
- Substantially equivalent training from another state.

Every certificate issued by the Administrator is valid for a period of three years from the date of issuance.

Criminal Penalties

Section 24-33.5-1206.5(1), C.R.S., provides that any person acting as a fire suppression contractor or inspector who does not register as such commits a Class 3 misdemeanor. A second offense constitutes a Class 2 misdemeanor.

Section 24-33.5-1206.5(2), C.R.S., provides that any person who knowingly and willfully makes any false statement or who conceals a material fact in any application, form, claim, advertisement, contract, warranty, guarantee, or statement, either written or oral, with the intent to influence the actions or decisions of any owner or contractor negotiating or contracting for the installation, alteration, or repair of any fire suppression system, or to any bonding agent, commits a Class 1 misdemeanor.

Disciplinary Actions

Section 24-33.5-1206.6, C.R.S., permits the Administrator to withhold, deny, suspend, or revoke the registration or certification of any registered fire suppression contractor or certified fire safety inspector or applicant if the individual has violated any of the provisions of the statute or any rule promulgated by the Administrator. Additional grounds for discipline include:

- Fraud or material deception in obtaining or renewing a registration;

-
- Incompetence as manifested by poor, faulty, or dangerous workmanship;
 - Engaging in dishonorable, unethical, or unprofessional conduct of a character likely to deceive, defraud, or harm the public in the course of professional services or activities; and
 - Failing to comply with any pertinent provision of law or rule.

In any first administrative proceeding against a contractor or inspector, a fine of not less than \$100, nor more than \$1,000 may be imposed. For subsequent violations, a fine of not less than \$1,000, but no more than \$10,000 may be levied. All monies collected pursuant to a fine are deposited in the Fire Suppression Fund.

Rules

The Administrator has promulgated 10 sections of rules to give effect to the statute. The rules address the following: background information; definitions; registration of fire suppression system contractors; fire suppression system inspector certification; plan and inspection requirements; codes and standards; complaints; fees and charges; severability; and inquiries.

The rules governing the registration of contractors and the certification of inspectors outline the required knowledge and education needed to become registered or certified. Of these, Rules 3.2.4 and 3.2.5 require contractor applicants to comply with all applicable codes, standards, and rules adopted by the Administrator, as well as relevant legislation and ordinances and resolutions of local jurisdictions.

Rule 4.2 requires inspectors either to pass an examination administered by the Program, possess current valid inspector certification issued by a nationally recognized organization or demonstrate to the Administrator that they have met equivalent qualifications by submitting to the Administrator documentation from specified educational and training entities. The rule also lists prerequisite knowledge, skills and abilities necessary for inspectors to become certified. Rule 4.4 prohibits a certified inspector from also being a registered contractor.

Section 6 establishes the codes and standards governing the design and installation of fire protection systems. The Uniform Building Code, Uniform Fire Code and several NFPA fire protection standards are included in this section.

Section 7 defines the complaint procedure for the Program. This section allows the Administrator to accept anonymous complaints, investigate complaints and assess penalties and fines.

Section 8 establishes the fee schedule for the Program. The fees may not exceed the statutorily set limit.

Regulation in Other States

Between 1997 and 2003, the number of states regulating fire suppression system professionals increased. According to a 2003 survey conducted by *Sprinkler Age*,² 38 states (74 percent), up from 31 states (67 percent) in 1997, reported that they require some sort of licensing or registration for fire suppression contractors; 23 states (46 percent), up from 16 states (32 percent) in 1997, require certification of inspectors; and 17 states (34 percent), up from 13 states (26 percent) in 1997, require plan review. Table 1 shows the results of the 2003 survey.

Table 1
State Licensing and Certification Requirements³

State	Requires Certification of		Requires Licensing for			Required for Sprinkler Drawings		
	Plan Reviewer	Inspector	Contractor	Fitter	Designer	PE/Arch Seal	NICET Level III	NICET Level IV
AL	N	N	Y	-	-	-	Y	-
AK	-	-	Y	Y	Y	-	Y	Y
AZ	N	N	Y	Y	Y	Y	-	-
AR	-	Y	Y	Y	Y	Y	-	-
CA	N	N	Y	Y	Y	Y	N	N
CO	Y	Y	Y	-	-	Y	Y	Y
CT	Y	Y	Y	Y	Y	Y	Y	N
DE	N	N	Y	N	N	N	N	N
FL	Y	Y	Y	N	Y	Y	Y	Y
GA	N	N	Y	N	Y	-	Y	-
HI	N	N	Y	Y	Y	Y	N	N
ID	N	N	Y	N	N	-	NY	-
IL	N	N	Y	Y	Y	Either	Either	-
IN	N	N	N	N	Y	N	Y	Y
IA	N	N	N	N	N	N	N	N
KS	N	N	N	N	N	Y	Y	N
KY	Y	Y	Y	N	Y	Y	Y	Y
LA	Y	Y	Y	N	Y	Y	Y	-
ME	N	Y	Y	N	Y	Y	Y	Y
MD	N	N	Y	N	Y	Y	Y	Y
MA	N	Y	Y	Y	-	-	-	Y
MI	Y	Y	Y	Y	Y	N	N	N
MN	N	N	Y	Y	N	N	N	N
MS	N	N	N	N	N	N	N	N
MO	N	N	N	N	N	N	N	N
MT	-	Y	-	-	-	-	-	Y
NE	N	N	Y	N	N	N	Y	N
NV	N	N	Y	Y	Y	N	N	Y
NH	N	N	N	N	N	N	N	N
NJ	Cert	Y	Y	N	N	Y	-	-
NM	-	-	Y	Y	-	-	-	Y
NY	N	Y	N	N	N	Y	N	N
NC	Y	Y	Y	-	-	Y	Y	-
ND	N	N	N	N	N	Y	-	-
OH	Y	Y	Y	Y	Y	-	-	-
OK	Y	Y	Y	Y	Y	Y	N	N
OR	Y	Y	N	N	N	N	N	N
PA	N	N	N	N	N	N	N	N
RI	N	N	Y	Y	-	Y	N	N
SC	Y	Y	Y	Y	Y	-	Y	-
SD	N	N	N	N	N	N	N	N
TN	N	Y	Y	Y	Y	-	Y	-
TX	N	N	Y	N	Y	-	Y	Y

² "2003 Legislative Review," *Sprinkler Age*, Nov. 20, 2003, p. 20.

³ *Id.*

State	Requires Certification of		Requires Licensing for			Required for Sprinkler Drawings		
	Plan Reviewer	Inspector	Contractor	Fitter	Designer	PE/Arch Seal	NICET Level III	NICET Level IV
UT	Y	Y	Y	Y	Y	N	N	N
VT	N	N	Cert	Cert	Cert	-	Y	-
VA	Y	Y	Y	Y	Y	-	Y	-
WA	Y	Y	Y	Y	Y	Y	Y	Y
WV	N	N	Y	Y	N	Y	Y	Y
WI	Y	Y	Y	Y	Y	Not all	N	N
WY	Y	Y	N	N	N	Y	N	N

KEY: "PE/Arch Seal" = Professional Engineer/Architect Seal
 "NICET Level III" = NICET Engineering Technician
 "NICET Level II" = NICET Senior Engineering Technician

Within the regulating states, there are variations in the particular departments that are responsible for overseeing the regulation. Some are under the control of the State Fire Marshall and some are under departments such as buildings and construction, commerce, public safety and insurance. All regulating states have recognized the need to set standards for the installation of systems. A number of states, such as California, Colorado, Mississippi, Maryland, Oklahoma and Wyoming, have adopted NFPA standards or developed fire suppression guidelines within their state fire codes.

Federal Issues

The U.S. Fire Administration (USFA) supports the use of automatic fire sprinklers to save lives, reduce injuries and protect property. The USFA reports that a combination of deaths related to residential fires and an identified history of success with sprinkler use has furthered its belief that sprinklers should be installed in all residential occupancies. The USFA plans to develop a national strategy in which the main goal is to increase the proportion of U.S. homes protected by residential sprinkler systems. In addition, the USFA plans to develop and implement policies that have an immediate national impact, by identifying and removing barriers inhibiting the acceptance and use of residential fire sprinklers to reduce life loss and injuries.

Further, five bills affecting the fire suppression industry are pending before Congress at the time of this writing. HR 1613 and its companion bill S.620 provide for incentive programs within the Department of Education to promote the installation of fire sprinkler systems or other fire suppression technologies in student housing.

HR 1824 and companion bill S.1566 provide that automatic fire sprinkler systems be classified as "5-year-property" for purposes of depreciation. Finally, HR 4967 would require the installation of fire sprinkler systems in all nursing facilities participating in the Medicare or Medicaid programs.

Program Description and Administration

In accordance with Senate Bill 90-4, the Colorado Fire Suppression System Program (Program) began on January 1, 1991. The Division of Fire Safety (Division) within the Colorado Department of Public Safety administers and enforces the Program. The goal of the Program is to ensure that fire suppression systems in commercial and residential structures are installed and maintained properly in accordance with nationally recognized standards. The ultimate purpose of the Program is to eliminate or reduce death and injury when fires occur in buildings where these systems are installed.

The Director of the Division is defined as the administrator of the Program (Administrator) with the powers and duties to establish and maintain the Program. The statute provides that the Administrator administer three distinct components to ensure that fire suppression systems are installed and maintained properly. The Administrator is responsible for:

- Registering fire suppression installation contractors;
- Certifying fire suppression inspectors; and
- Providing inspection, plan registration and plan review services for those jurisdictions that do not have access to certified inspectors.

Program Administration

The Program is currently staffed by 0.7 of a full-time equivalent (FTE) employee. In addition, members of the Fire Suppression System Program Advisory Committee (Advisory Committee) assist the Administrator in identifying methods to improve the Program and assist the Administrator in the review of complaints. The Executive Director of the Department of Public Safety, through Executive Order CDPS-DFS 98.01, created the Advisory Committee in 1998.

Table 2 below provides an overview of the staff and budget of the Program for the preceding five fiscal years.

**Table 2
Fiscal Information**

	FY 99-00	FY 00-01	FY 01-02	FY 02-03	FY 03-04
Program Expenditures	\$65,789	\$33,893	\$39,802	\$33,644	\$43,851
Associated FTE	1.0	0.7	0.7	0.5	0.7

The Program employs two part-time certified inspectors to provide inspections to areas of the state with no local inspector. The Program contracts with a third certified inspector to perform plan review as requested.

Registration of Contractors

Registration as a fire suppression contractor is required of any individual, firm, or group that represents or offers to sell, install, alter, or repair any fire suppression system in Colorado. A registration fee of \$55 is collected annually from each contractor. Each contractor is classified as a fire sprinkler contractor, an underground contractor, or a combination contractor. Contractors are required to employ a person in responsible charge who is qualified in all areas of fire suppression system installation and repair. All registered contractors are responsible for the acts of their employees and agents. Furthermore, an on-site installer who is qualified in the work performed must supervise each job.

Table 3 below shows the total number of fire suppression system contractors doing business in Colorado for the previous five fiscal years. The table indicates a steady increase in the number of contractors registered with the Program. According to Program staff, a surge in the number of contractors during 2001 can be attributed to a building boom during that time. The necessary application form for contractor registration is available on the Division's web site.

Table 3
Active Contractor Registrations

Fiscal Year	Registered Contractors
99-00	326
00-01	414
01-02	350
02-03	347
03-04	349

Certification of Inspectors

State statute requires that a certified inspector conduct an inspection of a fire suppression system prior to the building being approved for occupancy. Rule 4.2.3 establishes the prerequisite knowledge, skills and abilities necessary for inspectors to become certified, including those related to plan reviews, National Fire Protection Association (NFPA) standards, hydraulic calculations, and inspection and testing procedures. Certification is dependent upon the individual proving his or her knowledge by: successfully completing an examination; providing documentation of successful completion of a certified higher education program; or documentation of inspector certification issued by a nationally recognized fire protection organization. All applicants must also provide a letter from his or her employer verifying the applicant's knowledge and responsibilities.

Certification is valid for a period of three years. Renewal is contingent upon 1) completion of 24 hours of relevant continuing education, or 2) eight hours of continuing education and completion of a fire suppression systems inspectors' certification examination. A letter must accompany all renewals from the inspector's employer verifying the inspector's knowledge and responsibilities.

Table 4 shows the total number of certified inspectors for the previous five fiscal years.

**Table 4
Certification Information**

Fiscal Year	New Certified Inspectors	Certified Inspectors Renewal	Total Inspectors Certified
99-00	15	100	269
00-01	33	46	229
01-02	28	48	204
02-03	31	38	213
03-04	27	40	216

Job Registration, Plan Review and Inspections

Prior to any installation or structural change to a fire suppression system, the contractor must secure all local permits and register the job with the Administrator or the approved local fire safety agency. The working plans and hydraulic calculations for the job must also be reviewed and approved by either the Administrator or a certified local fire safety inspector.

The Administrator has established standards for review and approval. In addition, the statute requires that the signature and certification number of either a registered professional engineer or a level three or higher National Institute for Certification in Engineering Technologies (NICET) certified engineering technician appear on all working plans and hydraulic calculations submitted for review. Table 5 lists the number of plan reviews conducted by the Program during the last five fiscal years. The 2001 boom in construction can also be seen in the increased number of plan reviews in that year.

**Table 5
State Inspections and Plan Reviews**

	FY 99-00	FY 00-01	FY 01-02	FY 02-03	FY 03-04
Fire Suppression Projects	74	97	78	66	76
Fire Suppression Plan Reviews	126	135	120	96	106
Average Number of Submittals per Job	1.7	1.4	1.5	1.5	1.4
Fire Suppression Inspections	149	217	180	173	207
Average Number of Inspections per Job	2	2.2	2.3	2.6	2.7

Table 5 also shows the number of plan registrations, plan reviews and inspections conducted by the Program's certified inspectors during the past five fiscal years. This table provides a relatively small picture of the number of plan registrations, plan reviews and inspections conducted statewide per year since it only shows the workload of the two Program inspectors. There are a total of 216 certified inspectors working statewide.

Appendix B on page 24, *Examples of Inadequate or Incomplete Plans or Design & Installation*, discusses inadequate plans identified during plan review and the steps taken to resolve the inadequacies. This information indicates that the function of plan review enhances the safety of fire suppression systems by ensuring that the systems meet specific design standards prior to installation.

The Program further enforces compliance with the statute and the rules governing the Program through the inspection of installed systems. Section 24-33.5-1206.4, Colorado Revised Statutes (C.R.S.), requires that a certified fire suppression systems inspector approve the installation, modification, alteration or repair of a fire suppression system before the structure is cleared for occupancy. Each county, municipality, and special district that has fire suppression system enforcement responsibilities provides a state certified fire suppression systems inspector. Currently, 78 local governments possess such authority.

Where there is no local certified inspector, a certified inspector employed by the Program performs the inspections and reviews the plans. Upon request, the Administrator or the Administrator's agent is required to provide such fire safety inspections to any county, municipality, or special district on a contractual or case-by-case basis.

During an inspection, an inspector examines the above ground sprinkler piping and the underground piping system, and performs a hydrostatic test of the system. The inspector also performs system operational tests on the waterflow detecting devices, the dry pipe systems, and the control valve tamper switches. A final walk-through inspection is conducted to check system coverage, blocked sprinkler heads, and any item noted on plan review or rough-in inspection as deficient. Program staff listed the following problems that typically delay installation approval: problems with piping not holding hydrostatic test; improper installation of fire department connection; inadequate sprinkler system coverage in a building; poor design resulting in inadequate flow or system pressure; and improper installation of the alarm system.

Complaints/Disciplinary Actions

The Administrator is responsible for handling complaints filed against certified inspectors and registered contractors. Staff routinely screens complaints to make sure that the Program has jurisdiction and that the allegations contained in the complaint would constitute a violation of the law if proven true. The vast majority of complaints are lodged by telephone, while some are in written form.

According to Program staff, complaints are generally lodged by inspectors against contractors, and most deal with improper installation or inaccurate plans. The Program has not received any complaints against inspectors. However, about five prospective inspectors have been denied certification due to a lack of qualifications.

Table 6 displays the number and nature of complaints filed against contractors for the review period.

**Table 6
Complaint Information**

Nature of Complaints	FY 99-00	FY 00-01	FY 01-02	FY 02-03	FY 03-04
Practicing w/o a License	0	0	3	2	1
Violation of Design Standards	2	8	13	5	4
Violation of Installation Standards	3	4	16	8	11
Violation of State & Local Rules	2	5	19	9	6
Fee Disputes	1	1	4	1	2
Total	8	18	55	25	24

Once a complaint is received, Program staff records the date the complaint was filed, the individual the complaint is against and the specifics of the complaint. Staff then sends a warning letter to the contractor or inspector in question informing them that a complaint was filed. The letter informs the individual of the substance of the complaint and requires a formal response.

Resolving the complaint entails documenting steps to correct the violation or providing sufficient information that the violation has been resolved. The Program relies heavily on its legal authority to withhold signature on the necessary permits for building occupancy as a means of achieving contractor compliance. In the warning letter, the contractor or inspector is notified that additional violations may result in a fine, suspension or revocation of registration or certification. All documentation concerning the complaint is placed in the respondent's file. There is no formal procedure to track the outcome of complaints.

If, after the investigation, the Administrator determines there are grounds for disciplinary action, a variety of enforcement mechanisms are available. The Administrator may take disciplinary action by way of withholding, denying, suspending or revoking the registration of any fire suppression contractor or the certification of any fire suppression systems inspector or applicant as well as by assessing fines. The statute and rules governing the Program provide for assessment of fines for first, second and third violations. However, it is unclear whether the Administrator could easily identify a contractor or inspector with repeat violations since there is no mechanism for tracking past violations or for monitoring the outcome of complaints.

For the period under review, approximately 75 to 80 percent of the complaints warranted a warning letter. Program staff reported that in most cases, the contractor corrected the deficiency. The Administrator has not fined or otherwise disciplined any contractors, although the Administrator denied renewal to seven contractors.

The Program staff also reported that some contractors receive more than one warning letter; however, it is not usually for the same infraction. Rule 7.4.4 states that subsequent violations do not need to be related to the first violation in order to assess penalties and fines according to Rule 7.4.3.

Analysis and Recommendations

Recommendation 1 – Continue the Fire Suppression System Program until 2014.

The Department of Regulatory Agencies (DORA) has determined through this sunset review that the Fire Suppression System Program (Program) serves to protect the public health and safety by ensuring that persons involved in fire suppression system installation, modification, and maintenance, as well as inspectors of such systems, meet minimum standards of competency. According to the administrator of the Program (Administrator), in 2003, there were 16,424 fires in Colorado. These fires claimed 22 lives, caused 178 injuries and caused \$80.1 million in property damage. Research indicates that at least 80 percent of all fire losses could be eliminated with properly installed and functioning fire sprinklers. In addition, pending federal legislation requiring the installation of fire suppression systems in nursing homes and college housing may increase the number of systems installed. Colorado should be prepared to ensure that these life saving systems are installed in accordance with nationally recognized standards.

Under the current system, contractors must simply register with the state in order to do business in Colorado. As indicated in Appendix C, *Survey of Contractors and Inspectors*, which can be found on page 27, some members of the industry, as well as representatives of the Division of Fire Safety (Division) would like to see stronger educational requirements placed on registered contractors. DORA concludes, however, that the public is sufficiently protected by the current registration and inspection processes.

Contractors must have their plans reviewed and their systems inspected by certified inspectors before a building is cleared for occupancy. The inspector will not issue a certificate of occupancy prior to the system being installed properly. This inspection system is adequate to protect the public without unduly burdening the industry. In addition, if the Administrator took a more aggressive stance on issuing fines and imposing discipline, incompetent contractors would be forced to comply or leave the business, thus enhancing public protection.

Recommendation 2 – Require the Administrator to implement a formal recordkeeping system to track complaints and final dispositions of those complaints.

In the last sunset review, DORA recommended that the Program maintain formal records of complaints and final agency actions. The 1997 sunset report noted:

Currently, after the Division has responded to complaints, there are no statistics kept in order to review this aspect of the program. To make this information more easily available for review, a tracking system should be implemented. Records pertaining to the disposition of complaints are necessary to determine whether the regulatory program is functioning adequately in protecting the health and safety of the citizens of Colorado. In addition, the intent of the complaint procedure is to determine whether there are recurring complaints against an inspector or contractor.

This recommendation was implemented in the sense that complaints and final dispositions are now filed in the relevant contractor's or inspector's file. The Administrator is unable, however, to derive general complaint and disciplinary statistics without reviewing all contractor and inspector files.

Although improvements have been made, DORA recommends that the General Assembly require the Administrator to implement formal recordkeeping and tracking systems for complaints and final agency actions, separate from the original application of contactors or inspectors. Thorough tracking and recordkeeping will enable the General Assembly and the Administrator to determine the effectiveness of the Program while ensuring that those who continually violate the provisions of the law are monitored properly, thereby enhancing public protection.

Furthermore, to the extent possible, information on disciplinary actions should be provided electronically in the form of a database that both the public and interested parties can access via the Internet. This will enable the public and interested parties to determine whether a contractor they are considering hiring has been disciplined.

Finally, an online complaint form would facilitate and standardize the complaint process.

In order to determine the effectiveness of the Program and to enhance public protection, the General Assembly should require the Administrator to implement formal recordkeeping and tracking systems for complaints and final dispositions.

Recommendation 3 – Authorize the Administrator to issue letters of admonition.

Among the disciplinary tools at the disposal of the Administrator is the authority to withhold, deny, suspend or revoke the registration of any contractor or the certification of any inspector, or applicants therefore. Additionally, the Administrator is authorized to impose fines against contractors and inspectors. Notably, however, the Administrator lacks the statutory authority to issue letters of admonition (LOAs).

LOAs are common in the organic statutes of most professional and occupational regulatory programs. LOAs are typically issued in circumstances where a violation has occurred, but the facts of the case do not warrant disciplinary action as severe as suspension, revocation or the imposition of a fine, but where the regulator determines something must be done. In programs authorized to issue them, LOAs constitute the lowest form of formal discipline.

Regardless of the Administrator's lack of statutory authority to issue LOAs, Rule 7.4.3 anticipates the issuance of an LOA for a second or third violation. Rule 7.4.3 states:

The penalties and fines for violating any provision C.R.S. 24-33.5-1206.5 through 1206.6 or these rules, shall generally be as follows:

- (a) First violation: Warning (corrective action)
- (b) Second violation: Letter of Admonition
- (c) Third violation: Letter of Admonition and \$250 fine

(d) Any subsequent violations shall result in a hearing on revocation pursuant to C.R.S. 24-33.5-1205(1)(b)(III)(c) and (e) and the Colorado Administrative Procedures Act (C.R.S. 24-1-101, et seq.)

LOAs are useful disciplinary tools and the Administrator should be granted clear statutory authority to issue them.

Section 24-33.5-1206.6, C.R.S., should be amended to include a new paragraph (6), which should read as follows:

(6)(a) WHEN A COMPLAINT OR INVESTIGATION DISCLOSES AN INSTANCE OF MISCONDUCT THAT, IN THE OPINION OF THE ADMINISTRATOR, DOES NOT WARRANT FORMAL ACTION BUT THAT SHOULD NOT BE DISMISSED AS BEING WITHOUT MERIT, A LETTER OF ADMONITION MAY BE ISSUED AND SENT, BY CERTIFIED MAIL, TO THE REGISTERED CONTRACTOR OR CERTIFIED INSPECTOR.

(b) WHEN A LETTER OF ADMONITION IS SENT BY THE ADMINISTRATOR, BY CERTIFIED MAIL, TO A REGISTERED CONTRACTOR OR CERTIFIED INSPECTOR, SUCH INDIVIDUAL SHALL BE ADVISED THAT HE OR SHE HAS THE RIGHT TO REQUEST IN WRITING, WITHIN TWENTY DAYS AFTER RECEIPT OF THE LETTER, THAT FORMAL DISCIPLINARY PROCEEDINGS BE INITIATED TO ADJUDICATE THE PROPRIETY OF THE CONDUCT UPON WHICH THE LETTER OF ADMONITION IS BASED.

(c) IF THE REQUEST FOR ADJUDICATION IS TIMELY MADE, THE LETTER OF ADMONITION SHALL BE DEEMED VACATED AND THE MATTER SHALL BE PROCESSED BY MEANS OF FORMAL DISCIPLINARY PROCEEDINGS.

Recommendation 4 – Restate the grounds for discipline so as to prohibit any conduct likely to deceive, defraud or harm the public.

Section 24-33.5-1206.6(2)(c), C.R.S., authorizes the Administrator to take disciplinary action against any contractor or inspector for:

Engaging in dishonorable, unethical, or unprofessional conduct of a character likely to deceive, defraud, or harm the public in the course of professional services or activities;

The terms “dishonorable,” “unethical” and “unprofessional” are problematic in this provision because they are vague to the point of being meaningless. Although it may be possible to objectively determine what types of activities constitute unprofessional conduct, “honorable” or “ethical” conduct are inherently subjective principles, rendering this statutory provision almost unenforceable.

Regardless, the spirit of the provision is meritorious – to prevent fraud, deceit and harm to the public. Therefore, the General Assembly should amend section 12-34.5-1206.6(2)(c), C.R.S., so as to prohibit any conduct that is likely to deceive, defraud or harm the public in the course of performing professional services or activities.

Recommendation 5 – Require that all fines imposed by the Administrator that are associated with the Program be credited to the state's General Fund, rather than the Fire Suppression Fund.

Section 24-34.5-1206.6(3), C.R.S., requires that “[a]ll fines imposed by the administrator pursuant to this section shall be credited to the fire suppression fund created in section 24-33.5-1207.6, [C.R.S.]”

Ordinarily, when an agency is given fining authority, any funds generated by such fines are credited to the state’s General Fund. This is done so that the agency has no incentive to impose fines, other than taking legitimate disciplinary action.

In situations such as the one at issue here, where fines are credited to the agency’s cash fund, there can be a perceived conflict of interest -- an agency can increase revenues by imposing more fines. For cash funded agencies, this can allow them, and in some cases require them, to reduce license and other fees.

Although no such allegations have been levied against the Administrator during the course of this sunset review, DORA makes this recommendation as a policy matter so as to prevent any such allegations from arising in the future.

Administrative Recommendation 1 – The Administrator should review all statutory citations listed in the Program's rules to ensure accurate citation.

The Administrator should amend Section 7 of the rules to clarify the statutory citation that relates to disciplinary hearings. The current citations -- sections 24-33.5-1205(1)(b)(III)(c) and (e), C.R.S., do not exist. The correct citation is section 24-33.5-1204.5(1)(e), C.R.S.

Appendix A – Sunset Statutory Evaluation Criteria

- (I) Whether regulation by the agency is necessary to protect the public health, safety and welfare; whether the conditions which led to the initial regulation have changed; and whether other conditions have arisen which would warrant more, less or the same degree of regulation;
- (II) If regulation is necessary, whether the existing statutes and regulations establish the least restrictive form of regulation consistent with the public interest, considering other available regulatory mechanisms and whether agency rules enhance the public interest and are within the scope of legislative intent;
- (III) Whether the agency operates in the public interest and whether its operation is impeded or enhanced by existing statutes, rules, procedures and practices and any other circumstances, including budgetary, resource and personnel matters;
- (IV) Whether an analysis of agency operations indicates that the agency performs its statutory duties efficiently and effectively;
- (V) Whether the composition of the agency's Board or commission adequately represents the public interest and whether the agency encourages public participation in its decisions rather than participation only by the people it regulates;
- (VI) The economic impact of regulation and, if national economic information is not available, whether the agency stimulates or restricts competition;
- (VII) Whether complaint, investigation and disciplinary procedures adequately protect the public and whether final dispositions of complaints are in the public interest or self-serving to the profession;
- (VIII) Whether the scope of practice of the regulated occupation contributes to the optimum utilization of personnel and whether entry requirements encourage affirmative action;
- (IX) Whether administrative and statutory changes are necessary to improve agency operations to enhance the public interest.

Appendix B – Examples of Inadequate of Incomplete Plans or Design and Installation

1. Cliff House Hotel, Manitou Springs 1998

Cliff House was originally designed to be no more than four stories in height. This would allow the sprinkler system to be designed and installed as a residential system per the National Fire Protection Association standard 13R (NFPA). This standard allows sprinkler protection to be eliminated in certain areas such as bathrooms, closets and combustible concealed spaces. During the remodel and construction phase of the project the design of the building was changed to include an area of the building to be five stories in height. Residential occupancies that are more than four stories in height are required to have a commercial system installed that requires the building to be protected throughout.

Action taken: The option was given that either the system is redesigned as a commercial system, or the fifth floor would need to be eliminated from the design. The system was not approved until this issue was resolved. The final resolution was to eliminate the plans for the fifth floor.

2. Fairplay High School, Fairplay 1999

During the inspection, it was found that the outside post indicator valves did not have tamper switches installed and the system was not monitored by an approved central station as required for systems of its size.

Action taken: System was not approved until corrections were made and system was retested.

3. St. Thomas Moore Hospital, Canon City 2000

System was installed as a partial system in an existing building. The Division of Fire Safety (Division) does not allow partial systems to be installed unless the areas are separated from each other such that they could be considered separate buildings. During the site inspection it was found that not only was there not the appropriate separation between the sprinkled and non-sprinkled areas, some systems ended in the middle of a room or hallway.

Actions taken: The system was required to be modified to protect entire rooms and hallways, ending the system only at a separation wall or door. This was a temporary solution to allow hospital operations to continue. A plan was devised to phase in the sprinkler system throughout the building. A complete final approval was given once the entire building was protected.

4. Hillcrest Assisted Living, Wray 2000

The systems were all tested to ensure that they operated as designed. During this time it was determined that the dry system installed did not meet the minimum time requirement for water to reach the test connection.

Actions taken: System was not approved until corrections were made and the system was retested.

5. Salida Building & Loan, Salida 2000

The plans and hydraulic calculations submitted for review showed areas without sprinkler protection. The plans and hydraulic calculation did not have corresponding information, the area calculated was not the most demanding area and the square footage calculated was significantly different than what was shown on the plans.

Actions taken: Contractor was required to re-submit plans and calculations with the appropriate information. System was not approved until corrections were completed.

6. Washington County Justice Center, Akron 2001

System was designed and installed by a contractor from Texas that was not registered by the State of Colorado. Plans were not submitted for review and the installation had started before the Division was notified of the project. The main problem with the system was the lack of water supply for the sprinkler system.

Action taken: The installation was halted until the contractor obtained registration with the state and submitted plans and hydraulic calculations to the Administrator for review. The owner and general contractor hired a separate registered contractor to resolve the water supply problem. The system was not approved nor the building released for occupancy until the corrections were made and all inspection and testing was completed.

7. Westcliff Bowl, Westcliff 2001

There were several issues with the sprinkler coverage found during the visual inspection of the piping. Several openings in the ceiling would potentially allow fire to travel, past and above the sprinkler into an unprotected area. The large canopy installed on the exterior of the building, constructed with combustible material, also required sprinkler protection.

Action taken: The system was not approved until all issues were resolved and corrections were made.

8. Grandview Condos, Grand Lake 2001

During the final inspection and testing of the system it was found that the pressure at the base of the riser was several pounds lower than the minimum pressure required for the system as designed.

Action taken: The system was not approved and cleared for occupancy until the problem was resolved. After researching the problem it was found that a valve in the city's water supply system was partially closed, reducing the volume and flow that was available.

9. Delta County Memorial Hospital, Delta 2003

Plans and hydraulic calculations submitted for review showed areas that did not have sprinklers installed. The information provided was inadequate to determine if the outside canopies required sprinkler protection. The pipe size information used in the hydraulic calculations for a remote area did not correspond with the pipe size shown on the plans.

Actions taken: Contractor was required to resubmit plans and calculations showing the corrections noted in the review report.

10. Yampa Airport Remodel, Yampa 2003

Plans showed sprinklers installed in the addition only. The standard requires that buildings protected with sprinklers shall be protected throughout. The plans showed the attic space was of combustible construction, which would require sprinkler protection to be installed. Hydraulic calculations submitted did not meet the minimum requirements for flow and gallons per minute.

Action taken: Plans and hydraulic calculations were not approved until corrections were made. Plans were approved after three submittals.

Appendix C – Survey of Contractors and Inspectors

As part of its sunset review of the Fire Suppression System Program (Program), the Department of Regulatory Agencies (DORA) sent a 12-question survey to the 337 registered contractors and the 237 certified inspectors listed on the Program's mailing list. Twenty-five contractors responded to the survey for a response rate of 7 percent. Thirty-five inspectors responded to the survey for a response rate of 15 percent.

In addition to answering the questions posed in the survey, the majority of the respondents provided comments. The purpose of the survey was to elicit these comments as well as to provide general information from the regulated community on its views of the Program's effectiveness. The response total in each category may not equal 100 percent since some respondents did not answer all questions.

Discussion of Survey Results

Please note that since the response rate was not high for this survey, the results of the survey should be used only as a general indicator of the attitudes within the regulated community. Nearly 56 percent of survey respondents have found an improvement in the quality of fire suppression system installations since the program began in 1991. All of the respondents except one believe that the Program should be continued. Over 80 percent would like to see the Program place stricter requirements on contractors prior to registration. However, of the 47 respondents who answered question 7(b) concerning the competency of contractors, 83 percent stated that the contractors they deal with are competent. Eight respondents (17 percent) claimed that the contractors they worked with were not very competent. Most respondents believe that the Division of Fire Safety (Division) is responsive to their needs, but that the Division needs more staff and funding.

Following is the body of the Fire Suppression Contractors and Inspectors Survey including summarized responses:

1. Are you a contractor or Inspector?

Sent 337 surveys to contractors. Twenty-five contractors responded, a 7% response rate.
Sent 237 surveys to inspectors. Thirty-five inspectors responded, a 15% response rate.

2. Have you noticed an improvement in the quality of the fire suppression system installations since the Fire Suppression Program became law in 1991? Since statutory changes in 1998. Please explain.

YES -- 56%
NO ---- 23%

Comments:

- systems more likely to conform
- some people still not doing jobs to code
- installation still problem
- provides enforceable standards of installation

3. The present system allows anyone to register as a fire suppression contractor. (However, a responsible person in the employment of the contractor must be qualified in the layout, fabrication, installation, etc. of fire suppression systems). Do you feel the program would be enhanced if contractor qualifications for registration were required up front, i.e. proof of education, work experience or testing?

YES --- 80%

NO ----- 6%

Comments:

- too easy to be registered
- contractors need more knowledge
- work experience and education key not testing
- CA, NM, UT, have higher standards

4. Is there anything in the law that has made your job easier or more difficult? Please explain.

Easier ----- 41%

More Difficult --- 16%

Comments

- code makes it easier to know what is expected
- provides credibility to the profession - more power to require jobs to be to code
- way to check up on contractors
- underground fire line has provided installation information
- can require better qualified contractors
- contractor list helps identify registered contractors
- NICET III on staff burden for small business

5. Do you believe that the life safety of occupants in buildings with fire suppression systems installed has been upgraded by this program? Please explain.

YES --- 77%

NO ----- 10%

6. Do you feel that the fee schedule for contractor registration, plan registration, plan review, travel, job site inspection, etc. is?

a. Adequate ----- 48%

b. Should be higher --- 25%

c. Could be lower ----- 5%

Comments:

- many respondents were not familiar with the state fee schedule because local inspectors create their own fee schedule

7. (a) Do you believe that the certified inspectors you deal with understand the codes, and plan review and inspection responsibilities?

40 Respondents answered this question. All said yes, except for one who said, "some do some don't"

(b). Do you believe that the registered contractors you deal with are competent in their ability to install and maintain fire suppression systems?

YES -- 83%

NO ---- 17%

Comments.

- some are some aren't
- some registered without proper knowledge or insurance

8. Do you believe that the Division of Fire Safety provides you, as their customer, with enough service for the fire suppression system program?

YES --- 51%

NO ----- 21%

Comments:

- need more inspectors/plan reviews
- does a good job
- under staffed under funded

9. Please explain, giving examples, how beneficial (or nonbeneficial) the fire suppression program has been since 1991.

Beneficial ----- 44%

Nonbeneficial -- 7%

Comments:

- systems meet design and install standards
- asset for small fire departments

10. Do you feel that the fire suppression program should be continued?

YES --- 95%

NO ----- 2%

Comments:

- one response yes for inside not for outside main
- should be expanded to require more qualifications for contractors

11. Explain how you feel the program could be improved.

Comments:

- state fire marshal
- increase staff/budget
- rely on solid engineering and physic principles less on NFPA

12. Are there issues concerning the program not covered in this survey that you would like this review to consider?

Comments:

- update standards when new additions