



Dora
Department of Regulatory Agencies

Office of Policy, Research and Regulatory Reform

2012 Sunset Review: Examining Board of Plumbers

October 15, 2012





Executive Director's Office

Barbara J. Kelley
Executive Director

John W. Hickenlooper
Governor

October 15, 2012

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 mission of the Department of Regulatory Agencies (DORA) is consumer protection. As a part of the Executive Director's Office within DORA, the Office of Policy, Research and Regulatory Reform seeks to fulfill its statutorily mandated responsibility to conduct sunset reviews with a focus on protecting the health, safety and welfare of all Coloradans.

DORA has completed the evaluation of the Colorado Examining Board of Plumbers (Board). I am pleased to submit this written report, which will be the basis for my office's oral testimony before the 2013 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 58 of Title 12, C.R.S. The report also discusses the effectiveness of the Board and staff in carrying out the intent of the statutes and makes recommendations for statutory changes in the event this regulatory program is continued by the General Assembly.

Sincerely,

Barbara J. Kelley
Executive Director





John W. Hickenlooper.
Governor

Barbara J. Kelley
Executive Director

2012 Sunset Review: Examining Board of Plumbers

Summary

What Is Regulated?

The Examining Board of Plumbers (Board) regulates plumbers and plumbing. Plumbing is defined by the Plumbing Practice Act (Act) as: drinking water supply piping, fixtures and traps, drains (including all joints and connections, devices, receptacles, and accessories), vent pipes, residential fire sprinkler systems in one- and two-family dwellings and townhouses that are part of the potable water supply, and all medical gas and vacuum systems in health care facilities.

Why Is It Regulated?

The General Assembly decided that because improper plumbing can adversely affect the health of the public and that faulty plumbing is potentially lethal and can cause widespread disease, individuals who plan, install, alter, extend, repair, and maintain plumbing systems should be of proven skill.

Who Is Regulated?

During fiscal year 10-11 the Board regulated 9,068 individuals, including:

- 2,053 Plumbing Contractors;
- 4,044 Master Plumbers;
- 2,717 Journeyman Plumbers; and
- 254 Residential Plumbers.

How Is It Regulated?

The Board is a Type 1 board charged with adopting a Colorado Plumbing Code (Code). The Code serves as the minimum standard for plumbing installations across the state. Using the Code as its foundation, the Board inspects plumbing and gas pipe installations, and qualifies and regulates plumbing professionals.

What Does It Cost?

The program is cash-funded. During fiscal year 10-11, monetary expenditures were \$1,545,216. Approximately 13 full-time equivalent employees, nine of whom were plumbing inspectors, were allocated for program implementation.

What Disciplinary Activity Is There?

Annually, for the period examined by this sunset review, the Board took an average of 67 disciplinary actions and levied an average of 14 fines totaling approximately \$8,700.

Key Recommendations

Continue the Act for 11 years, until 2024.

A primary task of the Board is to adopt and update the Code to protect the public from germs and disease. The Code is the foundation of plumbing regulation in Colorado. It sets the standards for plumbing installations and is the centerpiece of the licensing program.

The Division inspects installations to ensure that they conform to the Code. A faulty installation may not only affect the premises and people in direct proximity but it may also affect the premises and people in the surrounding area.

The Board also ensures that only qualified individuals become plumbers and remain eligible to perform plumbing in an ongoing manner through license renewal and disciplines licensee that violate the standards established in the Act.

Direct the Board to permit and inspect plumbing installations in all areas that do not have a permit and plumbing inspection program.

The Act is quite clear; it is the desire of the General Assembly that all plumbing be installed based on the Code. During the course of this sunset review, research uncovered multiple regional jurisdictions that do not enforce the Code as the minimum standard as required by the Act. Because of the inaction, the health, safety, and welfare of the citizens who live in those jurisdictions is threatened.

If there is no local plumbing inspection authority some local jurisdictions mistakenly assume no inspections need to be made. This position is obviously counter to the aim of the Act and the wishes of the General Assembly to, "...safeguard the health of the people of this state." Therefore, the Board should inspect plumbing installations in all areas that do not have a permit and plumbing inspection program.

Contacts Made During This Review

Colorado Association of Home Builders
Colorado Building and Construction Trades Council
Colorado Chapter-International Code Council
Colorado Counties Incorporated
Colorado Division of Fire Safety
Colorado Municipal League
International Association of Plumbing and Mechanical Officials
Office of the Colorado Attorney General
Pipefitters Local 3
Utah Division of Occupational and Professional Licensing
Arizona Registrar of Contractors

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 protecting the public. In formulating recommendations, sunset reviews consider the public's right to consistent, high quality professional or occupational services and the ability of businesses to exist and thrive in a competitive market, free from unnecessary regulation.

Sunset Reviews are Prepared by:
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Background

Introduction

Enacted in 1976, Colorado's sunset law was the first of its kind in the United States. A sunset provision repeals all or part of a law after a specific date, unless the legislature affirmatively acts to extend it. During the sunset review process, the Department of Regulatory Agencies (DORA) conducts a thorough evaluation of such programs based upon specific statutory criteria¹ and solicits diverse input from a broad spectrum of stakeholders including consumers, government agencies, public advocacy groups, and professional associations.

Sunset reviews are based on the following statutory criteria:

- 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;
- 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;
- 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;
- Whether an analysis of agency operations indicates that the agency performs its statutory duties efficiently and effectively;
- 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;
- The economic impact of regulation and, if national economic information is not available, whether the agency stimulates or restricts competition;
- 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;
- Whether the scope of practice of the regulated occupation contributes to the optimum utilization of personnel and whether entry requirements encourage affirmative action;
- Whether administrative and statutory changes are necessary to improve agency operations to enhance the public interest.

¹ Criteria may be found at § 24-34-104, C.R.S.

Types of Regulation

Consistent, flexible, and fair regulatory oversight assures consumers, professionals and businesses an equitable playing field. All Coloradans share a long-term, common interest in a fair marketplace where consumers are protected. Regulation, if done appropriately, should protect consumers. If consumers are not better protected and competition is hindered, then regulation may not be the answer.

As regulatory programs relate to individual professionals, such programs typically entail the establishment of minimum standards for initial entry and continued participation in a given profession or occupation. This serves to protect the public from incompetent practitioners. Similarly, such programs provide a vehicle for limiting or removing from practice those practitioners deemed to have harmed the public.

From a practitioner perspective, regulation can lead to increased prestige and higher income. Accordingly, regulatory programs are often championed by those who will be the subject of regulation.

On the other hand, by erecting barriers to entry into a given profession or occupation, even when justified, regulation can serve to restrict the supply of practitioners. This not only limits consumer choice, but can also lead to an increase in the cost of services.

There are also several levels of regulation.

Licensure

Licensure is the most restrictive form of regulation, yet it provides the greatest level of public protection. Licensing programs typically involve the completion of a prescribed educational program (usually college level or higher) and the passage of an examination that is designed to measure a minimal level of competency. These types of programs usually entail title protection – only those individuals who are properly licensed may use a particular title(s) – and practice exclusivity – only those individuals who are properly licensed may engage in the particular practice. While these requirements can be viewed as barriers to entry, they also afford the highest level of consumer protection in that they ensure that only those who are deemed competent may practice and the public is alerted to those who may practice by the title(s) used.

Certification

Certification programs offer a level of consumer protection similar to licensing programs, but the barriers to entry are generally lower. The required educational program may be more vocational in nature, but the required examination should still measure a minimal level of competency. Additionally, certification programs typically involve a non-governmental entity that establishes the training requirements and owns and administers the examination. State certification is made conditional upon the individual practitioner obtaining and maintaining the relevant private credential. These types of programs also usually entail title protection and practice exclusivity.

While the aforementioned requirements can still be viewed as barriers to entry, they afford a level of consumer protection that is lower than a licensing program. They ensure that only those who are deemed competent may practice and the public is alerted to those who may practice by the title(s) used.

Registration

Registration programs can serve to protect the public with minimal barriers to entry. A typical registration program involves an individual satisfying certain prescribed requirements – typically non-practice related items, such as insurance or the use of a disclosure form – and the state, in turn, placing that individual on the pertinent registry. These types of programs can entail title protection and practice exclusivity. Since the barriers to entry in registration programs are relatively low, registration programs are generally best suited to those professions and occupations where the risk of public harm is relatively low, but nevertheless present. In short, registration programs serve to notify the state of which individuals are engaging in the relevant practice and to notify the public of those who may practice by the title(s) used.

Title Protection

Finally, title protection programs represent one of the lowest levels of regulation. Only those who satisfy certain prescribed requirements may use the relevant prescribed title(s). Practitioners need not register or otherwise notify the state that they are engaging in the relevant practice, and practice exclusivity does not attach. In other words, anyone may engage in the particular practice, but only those who satisfy the prescribed requirements may use the enumerated title(s). This serves to indirectly ensure a minimal level of competency – depending upon the prescribed preconditions for use of the protected title(s) – and the public is alerted to the qualifications of those who may use the particular title(s).

Licensing, certification and registration programs also typically involve some kind of mechanism for removing individuals from practice when such individuals engage in enumerated proscribed activities. This is generally not the case with title protection programs.

Regulation of Businesses

Regulatory programs involving businesses are typically in place to enhance public safety, as with a salon or pharmacy. These programs also help to ensure financial solvency and reliability of continued service for consumers, such as with a public utility, a bank or an insurance company.

Activities can involve auditing of certain capital, bookkeeping and other recordkeeping requirements, such as filing quarterly financial statements with the regulator. Other programs may require onsite examinations of financial records, safety features or service records.

Although these programs are intended to enhance public protection and reliability of service for consumers, costs of compliance are a factor. These administrative costs, if too burdensome, may be passed on to consumers.

Sunset Process

Regulatory programs scheduled for sunset review receive a comprehensive analysis. The review includes a thorough dialogue with agency officials, representatives of the regulated profession and other stakeholders. Anyone can submit input on any upcoming sunrise or sunset review via DORA's website at: www.askdora.colorado.gov.

The regulatory functions of the Examining Board of Plumbers (Board) and DORA's Division of Professions and Occupations as enumerated in Article 58 of Title 12, Colorado Revised Statutes (C.R.S.), shall terminate on July 1, 2013, unless continued by the General Assembly. During the year prior to this date, it is the duty of DORA to conduct an analysis and evaluation of the administration of the plumber licensing and plumbing installation and inspection program pursuant to section 24-34-104, C.R.S.

The purpose of this review is to determine whether the currently prescribed regulation of plumbing should be continued for the protection of the public and to evaluate the performance of the Board and its staff. During this review, the Board must demonstrate that the regulation serves to protect the public health, safety or welfare, and that the regulation is the least restrictive regulation consistent with protecting the public. DORA's findings and recommendations are submitted via this report to the Office of Legislative Legal Services.

Methodology

As part of this review, DORA staff attended Board meetings, interviewed Board staff, reviewed Board records and minutes including complaint and disciplinary actions, interviewed officials with state professional associations, interviewed building officials from local Colorado jurisdictions, reviewed Colorado statutes and Board rules, and reviewed the laws of other states.

Profile of the Profession

In 1848, concerns over germs and disease made the English Public Health Code a model plumbing code for the world to follow. The idea of sanitary plumbing systems within buildings was an American development. During the second half of the 19th century plumbing health codes expanded to include examination, training and licensing.²

² PlumbingSupply.com. *History of Plumbing in America*. Retrieved June 13, 2012 from <http://www.plumbingsupply.com/pmamerica.html>

Plumbers install and repair the water, waste disposal, drainage, and sometimes the gas fuel systems in buildings. They use many different materials and construction techniques, depending on the type of project. Residential water systems, for example, incorporate copper, steel, and plastic pipe that can be handled and installed by one or two plumbers. Plumbers also work in commercial and residential settings where water and septic systems need to be installed and maintained. Often plumbers are on-call for emergencies nights and weekends.

Because the details of a plumbing installation are not always worked out prior to installation, some plumbers are also involved in the design process on-site.

Plumbers must also be able to follow building plans or blueprints and instructions from supervisors, lay out jobs, and work efficiently with the materials and tools of their trade. When piping a new house, plumbers typically work from blueprints or drawings that may show the planned location of pipes, plumbing fixtures, and appliances. Their knowledge of codes and the operation of plumbing systems can help cut costs.

This occupation experiences a higher than average rate of nonfatal injuries. Plumbers frequently lift heavy pipes, stand for long periods, and work in uncomfortable or cramped positions. On occasion they also may have to work outdoors in inclement weather. In addition to these problems, they are subject to possible falls from ladders, cuts from sharp tools, and burns from hot pipes or soldering equipment.

A person becomes a plumber in a variety of ways. Most get their training in apprenticeships and/or in technical schools. Most states and communities require plumbers to be licensed. Licensing requirements vary, but generally years of experience and passage of an examination that tests knowledge of the trade and of plumbing codes is necessary. Several states require a special license to work on gas fuel lines.³

The State of Colorado, through the Board, creates a Colorado Plumbing Code, licenses plumbers, and inspects plumbing and gas fuel piping installations to verify that they meet the standards specified in the Code. The Board also considers requests for variances to the Code.

³ U.S. Bureau of Labor & Statistics. Occupational Outlook Handbook, 2010-11 Edition: Plumbers, Pipelayers, Pipefitters, and Steamfitters. Retrieved November 17, 2011, from G:\2012\Plumbers\BLS Handbook.mht

Legal Framework

History of Regulation

The regulation of plumbers by Colorado municipalities with populations over 50,000 began in 1893. It was illegal for a person to practice the trade of plumbing without a valid certificate of competency. The municipalities and counties were authorized to establish individual boards of plumbers and issue certificates of competency.

In 1917, plumbing became a state-regulated occupation. The Examining Board of Plumbers (Board) was organized in what was then the Department of Health (DOH) and it licensed journeyman and master plumbers by examination. From 1917 to 1970, the Board consisted of three plumbing examiners, one master plumber, one journeyman plumber, and one representative of the DOH.

In 1970, the composition of the Board was changed to one master plumber, one journeyman, one representative from the DOH, one plumbing contractor, and one public member. The administration of the Board was transferred to the Department of Regulatory Agencies (DORA) and the Board was authorized to promulgate rules and regulations regarding the practice of plumbing. The inspection of plumbing work remained in the DOH.

In 1982, the authority of the DOH over plumbing inspections was transferred to DORA. The Board was required to adopt a Colorado plumbing code. The registration of plumbing apprentices was adopted, and a new licensing class, residential plumber, was created. Since 1982, the definition of plumbing codified in the Plumbing Practice Act (Act) has been amended five times by the General Assembly.

The current seven member composition of the Board was adopted as a result of the 1987 sunset review.

In 2007, the Board was given the task of registering plumbing contractors.

Examining Board of Plumbers

Article 58 of Title 12, Colorado Revised Statutes (C.R.S.), contains the Act which regulates plumbing professionals, plumbing installations, and gas fuel piping installations executed within Colorado.

As defined by the Act, plumbing includes: drinking water supply piping, fixtures and traps, drains (including all joints and connections, devices, receptacles, and accessories), vent pipes, residential fire sprinkler systems in one- and two-family dwellings and townhouses that are part of the potable water supply, and all medical gas and vacuum systems in healthcare facilities.⁴

Specifically excluded from the codified definition of plumbing is the installation, extension, alteration, or maintenance, of domestic appliances equipped with backflow preventers, fire protection systems except for multipurpose residential fire sprinkler systems in one- and two-family dwellings and townhouses that are part of the potable water supply, air conditioning installations, process and industrial equipment and piping systems, or indirect drainage systems not a part of a sanitary sewer system.⁵ The Act also excludes water and sewer systems owned or acquired by counties, municipalities, or water and sanitation districts and any contracted work performed on those systems from the definition. Finally, systems installed according to the Individual Sewage Disposal Systems Act are also not considered plumbing.⁶

The Act establishes a Type 1 board, the Examining Board of Plumbers (Board).⁷ The Board's functions are administered and policies are enforced by DORA's Division of Professions and Occupations (Division).⁸ However, because it is a Type 1 board, statute grants it a large degree of autonomy. Section 105 of Article 1, Title 24, C.R.S., which authorized the placement of the Board into DORA reads, in part:

[A board transferred under a Type 1 transfer] ... shall exercise its prescribed statutory powers, duties, and functions, including rule-making, regulation, licensing, and registration, the promulgation of rules, rates, regulations, and standards, and the rendering of findings, orders, and adjudications, independently of the head of the principal department.

The Board consists of seven Governor-appointed, Senate-approved members: a journeyman plumber, a master plumber, two plumbing contractors, one general contractor, one member from local government who performs plumbing inspections, and one from the public at large. A representative of the Colorado Department of Public Health and Environment serves as an ex officio nonvoting member. At least one member must be a resident of the Western Slope. Member terms are four years⁹ and no major political party can have more than one member more than the other major political party.¹⁰

⁴ § 12-58-102(5)(a), C.R.S.

⁵ § 12-58-102(5)(a)(I), C.R.S.

⁶ § 12-58-102(5)(b), C.R.S.

⁷ § 12-58-103(1), C.R.S.

⁸ § 24-34-102, C.R.S.

⁹ §§ 12-58-103(2)(a) and 3(a), C.R.S.

¹⁰ § 12-58-103(4), C.R.S.

Members of the Board, Board staff, any witness, Board consultant, or complainant is immune from civil liability for any action taken in regard to Board activities. The immunity stands as long the person made a reasonable effort to obtain facts and acted with reasonable belief that the action was warranted by the facts.¹¹

The major charges of the Board are licensing plumbers¹² and establishing, enforcing, and considering variances to a plumbing code.¹³ In addition, the Board has the power to:¹⁴

- Elect its own officers and prescribe their duties;
- Conduct licensing examinations;
- Establish licensing fees;
- Promulgate, adopt, amend, and repeal rules necessary to conduct its affairs and administer the Act;
- Employ inspectors and charge fees for making inspections of plumbing installations in those areas where the local jurisdiction has not adopted its own plumbing code and where that jurisdiction has requested such inspections; and
- Conduct hearings and discipline individuals who violate the Act.

Licensing

The Act stipulates that no person may act as a residential, journeyman, or master plumber without a license or a temporary permit.¹⁵ Nor may a person use any of those titles without first being licensed.¹⁶ Any person who works, or attempts to work, as a residential, journeyman, master, or apprentice plumber without the appropriate license, commits a Class 2 misdemeanor punishable by 3 to 12 months in jail, a fine from \$250 to \$1,000, or both, for the first offense. For the second or any subsequent offense, the person commits a Class 6 felony which carries a \$1,000 fine and a one year mandatory prison sentence, which can be extended to 18 months.¹⁷

License Qualifications

A master plumber has the training, experience, and technical knowledge to properly plan, lay out, install, and repair plumbing apparatus. He or she also has the ability to supervise installations in accordance with Board standards.¹⁸

¹¹ § 12-58-110.3, C.R.S.

¹² § 12-58-104(1)(c), C.R.S.

¹³ § 12-58-104.5, C.R.S.

¹⁴ § 12-58-104(1), C.R.S.

¹⁵ § 12-58-105(1), C.R.S.

¹⁶ § 12-58-106, C.R.S.

¹⁷ § 12-58-116(2), C.R.S.

¹⁸ § 12-58-102(3), C.R.S.

A journeyman plumber is not a master plumber, residential plumber, or plumber's apprentice, but can alter, repair, and renovate plumbing in accordance with Board standards.¹⁹

A residential plumber is a person other than a master or journeyman plumber or plumbing apprentice who has the necessary training, experience, and technical knowledge to install plumbing and equipment in one-, two-, three-, and four-family dwellings, not more than two stories aboveground.²⁰

A plumbing apprentice is a person who, as a principal occupation, is engaged in learning and assisting in the installation of plumbing.²¹ No apprentice may perform any plumbing work for which a license is required unless he or she is under the responsible supervision of a licensed plumber who can be disciplined for the work. A licensed plumber cannot supervise more than three apprentices at the same jobsite and must be present to supervise the work.²² An apprentice must register with the Board within 30 days of commencing employment.²³

Rather than specifically delineating the time-based qualifications for licensure, the Act states that the Board is to establish experience conditions for licensure within defined parameters:²⁴

- The minimum practical experience the Board may require for an applicant to qualify for a master plumber's license is five years;
- The maximum practical experience the Board may require for an applicant to qualify for a journeyman plumber's license is four years or 6,800 hours; and
- The maximum practical experience the Board may require for an applicant to qualify for a residential plumber's license is two years or 3,400 hours.

Work experience gained in plumbing maintenance that is not required to be performed under a permit, inspection, or the direct supervision of a licensed plumber may be counted at a ratio of one month credit for each two months worked. This time may count for up to one-half of the experience requirement.²⁵

Academic training may substitute for practical experience. The applicant must be a graduate of a community college or a Board-approved trade school plumbing program. The Board is required by the Act to establish a rule providing a uniform ratio for work experience credit to other academic or military training.²⁶

¹⁹ § 12-58-102(2), C.R.S.

²⁰ § 12-58-102(9), C.R.S.

²¹ § 12-58-102(6), C.R.S.

²² § 12-58-117, C.R.S.

²³ § 12-58-105(2)(a), C.R.S.

²⁴ § 12-58-107(1)(a), C.R.S.

²⁵ § 12-58-107.5, C.R.S. and Board Rule 3.4.

²⁶ § 12-58-107(1)(b), C.R.S.

The Act directs the Board to hold examinations for licensure at least four times per year.²⁷ The examination may be administered either by the Board or an authorized agent. Examinations may include written and practical tests consistent with current practical and theoretical requirements of plumbing, and must ensure that a passing grade reflects a minimum level of competency.²⁸

Endorsement and Temporary Permits

The Board may issue a license by endorsement to someone licensed in another state. The applicant must present “proof satisfactory” that he or she has credentials and qualifications “substantially equivalent” to those required by Colorado. The Board may require a six month waiting period after the issuance of a license by another state before issuing a Colorado license.²⁹

The Board may issue a temporary permit to journeyman or residential plumbers. The applicant must furnish satisfactory evidence that he or she has the requisite experience and must apply for an examination.³⁰ The temporary permit expires 30 days after the examination date, and no more than two temporary permits may be issued.³¹

Licenses are renewed pursuant to a schedule established by the Division Director. If a license lapses, it is deemed to have expired. Prior to reinstatement of an expired license, the Board may require the licensee to demonstrate competency.³²

Plumbing Contractors

Every firm, partnership, corporation, or association that desires to act or advertise as a plumbing contractor, or use the title “plumbing contractor,” must be registered with the Board. A contractor must pay a fee, comply with Colorado’s workers’ compensation and unemployment compensation laws, and must designate a full-time master plumber responsible for all the plumbing performed by the contractor. No master plumber may be responsible for more than one plumbing contractor at a time. A contractor’s designated master plumber must notify the Board within 15 days after separation from that plumbing contractor.³³

It is the responsibility of the employer to ensure that all apprentices are registered with the Board.³⁴

²⁷ § 12-58-107(2), C.R.S.

²⁸ § 12-58-107(3), C.R.S.

²⁹ § 12-58-111, C.R.S.

³⁰ § 12-58-112(1), C.R.S.

³¹ § 12-58-112(3), C.R.S.

³² § 12-58-108(2), C.R.S.

³³ §§ 12-58-105(3) and 12-58-106.5, C.R.S.

³⁴ § 12-58-105(2)(b), C.R.S.

Licensure Exemptions

Any individual may perform plumbing on his or her own property or residence and may employ a non-licensed person to complete routine repair, maintenance, and replacement of sinks, faucets, drains, showers, tubs, toilets, and domestic appliances and equipment equipped with backflow preventers. However, if the property or residence is intended for sale or resale, is a residential rental property, or is a commercial building, this exemption does not apply.³⁵

Federal employees working on federal facilities, people who inspect, test, and repair backflow prevention devices, businesses that sell plumbing supplies but do not act as plumbers, and individuals that fabricate and install manufactured housing are exempt from the license provisions of the Act.³⁶

Discipline

The Board is empowered to deny, suspend, revoke, or refuse to renew any license or registration. It may also cite, fine, or enter into a stipulation with or place a licensee on probation for any violation of the Act or associated rules.³⁷ If in the Board's opinion, formal action is warranted in any case, then it cannot be resolved with a deferred settlement, action, judgment, or prosecution.³⁸ Disciplinary actions must be taken in accordance with guidelines established in the State Rule-making and Licensing Procedures.³⁹ All citations must be issued within six months of a violation.⁴⁰

Violations of the Act fall into two general categories: scope of practice issues and fraud issues. Examples of scope of practice issues include failing to follow the laws governing building construction; failing or refusing to remove any unsatisfactory plumbing installation within a reasonable time; and failing to provide adequate supervision, among others. Fraud issues include false or misleading advertising and being deceitful in acquiring a license, among others.⁴¹

If the Board believes that a licensee's actions present a health and safety threat or a layperson is plumbing without a license, it is empowered to issue a cease and desist order. The accused party has 10 days after it receives the order to request a hearing.⁴²

³⁵ § 12-58-113(2), C.R.S.

³⁶ §§ 12-58-113(1), (3), (4), and (5), C.R.S.

³⁷ §§ 12-58-110(1)(a), (1)(b), and 12-58-116.5, C.R.S.

³⁸ §§ 12-58-110(4) and 12-58-116.5(1)(b)(III), C.R.S.

³⁹ § 12-58-110(3), C.R.S.

⁴⁰ § 12-58-116.5(2.5)(f), C.R.S.

⁴¹ § 12-58-110(1), C.R.S.

⁴² § 12-58-110(5), C.R.S.

The Board may also issue an order to show cause why it should not issue a final cease and desist order. The hearing on a show cause order cannot begin sooner than 10 nor later than 45 calendar days after the date of transmission or service of the Board notification. The Board is required to issue a final order within 10 days of the hearing.⁴³

Any person aggrieved by a final cease and desist order may seek judicial review.⁴⁴ The Court of Appeals has initial jurisdiction to review all final actions and orders.⁴⁵

No person whose license has been revoked may reapply for a license within two years from the date of revocation.⁴⁶

A licensee that has been cited for a violation may make a request to negotiate a stipulated settlement agreement with the Program Administrator. All stipulated settlement agreements are conducted pursuant to Board rules. If a settlement cannot be reached, a licensee may request a hearing on the citation.⁴⁷ Additionally, if a citation recipient does not provide written notice to the Board that he or she intends to contest the citation or negotiate a stipulated agreement within 10 working days of service, the citation is considered a Board final order. If a licensee fails to comply with the terms of a final order, his or her license may be suspended or revoked.⁴⁸

The Board may issue fines, based on a fining schedule, up to \$2,000 for each day a violator is in violation of the Act.⁴⁹ Fines are transmitted to the state treasurer, who credits one-half of the amount to the General Fund, and one-half to the applicable municipality or county. The Colorado Attorney General provides legal assistance and advice to the Program Administrator in any action to collect an unpaid fine.⁵⁰

At the Board's discretion, it may reconsider any action at any time and reinstate or restore a license, terminate probation, or reduce an action's severity.⁵¹

If after reviewing a complaint, the Board decides no formal disciplinary action should occur but the complaint should not be dismissed without merit, it may issue a letter of admonition. Upon receipt of a letter of admonition, a licensee has 20 days to request that formal disciplinary proceedings begin on the matter.⁵²

⁴³ § 12-58-110(6), C.R.S.

⁴⁴ § 12-58-110(9), C.R.S.

⁴⁵ § 12-58-110.4, C.R.S.

⁴⁶ § 12-58-110.1, C.R.S.

⁴⁷ § 12-58-116.5(1), C.R.S.

⁴⁸ §§ 12-58-116.5(2.5)(c) and (2.5)(d), C.R.S.

⁴⁹ § 12-58-116.5(2), C.R.S.

⁵⁰ § 12-58-116.5(4), C.R.S.

⁵¹ § 12-58-110.2, C.R.S.

⁵² § 12-58-110(2), C.R.S.

A confidential letter of concern is issued by the Board when a complaint is dismissed but the Board noticed conduct during the investigation that could be a concern if not corrected.⁵³

Colorado Plumbing Code

The Board is required to adopt a Colorado Plumbing Code (Code) that is to be used as the minimum standard for all installations, alterations, and repairs of plumbing equipment and systems in Colorado. Because it sets the standards, the Code is the foundation of plumbing regulation in Colorado. Interestingly, while the Board is tasked with inspecting gas fuel piping installations, it is not required to adopt a code or any other standards for installations.

The Board may review and approve requests for exceptions to the Code in situations where the Code could result in unreasonable operational conditions or unreasonable economic burdens. When considering exceptions the Board cannot compromise public safety.

If it is petitioned, the Board must hold annual public hearings to consider amendments to the Code.⁵⁴

The Division Director has the ability to appoint or employ State Plumbing Inspectors who have the ability to enter any building to determine compliance with the Act.⁵⁵ If a person claims harm due to the failure of an inspection without having been given the reasons, or a State Plumbing Inspector fails to inspect a permitted property, he or she may request that the Program Administrator review the plumbing inspector's actions. If the request is not granted within 10 days, it is considered rejected. Subsequently, the aggrieved person may request a hearing with the Board.⁵⁶

Local governments may adopt a local plumbing code as long as the standards are equal to the minimums established in the Code.⁵⁷ Regardless of whether a local jurisdiction has adopted a local code, any plumbing or gas piping installation in any new construction, remodeling, or repair of a public school must be inspected by a State Plumbing Inspector.⁵⁸

⁵³ § 12-58-110(2.5), C.R.S.

⁵⁴ § 12-58-104.5, C.R.S.

⁵⁵ § 12-58-114.2, C.R.S.

⁵⁶ § 12-58-114.5(7), C.R.S.

⁵⁷ § 12-58-104.5(2), C.R.S.

⁵⁸ § 12-58-114.5(5), C.R.S.

If a local jurisdiction makes a request to the Board, a State Plumbing Inspector must inspect plumbing installations in that jurisdiction.⁵⁹ If a local jurisdiction intends to commence or cease performing plumbing inspections, it must give written notice to the Board.⁶⁰

Prior to commencing an installation, the person making the installation must apply for an inspection permit and pay the required fee. The inspections must be done within three working days after the Division receives a request for inspection. If the inspection has not occurred within five working days, work may resume on the project.⁶¹ Permits are good for 12 months. If a permit has expired or has been cancelled, a new permit must be applied for and granted before an inspection can be performed.⁶²

If a project does not meet the standards established in the Code, the inspector must give written notice with the reasons to the applicant. If the installation is hazardous to life or property, the inspector may order the plumbing or gas service discontinued until such installation is made safe. The applicant may appeal a failed inspection to the Board and be granted a hearing within seven days after notice of appeal is filed. If the applicant fixes the reason for the disapproval, he or she may apply for re-inspection.⁶³

⁵⁹ § 12-58-114.5(1), C.R.S.

⁶⁰ § 12-58-114.5(6), C.R.S.

⁶¹ § 12-58-114.5(1), C.R.S.

⁶² § 12-58-114.5(3), C.R.S.

⁶³ § 12-58-114.5(2), C.R.S.

Program Description and Administration

The Colorado Examining Board of Plumbers (Board) is the Governor-appointed, Senate-approved regulatory body for plumbers, plumbing installations, and gas fuel piping installations. Its members are a journeyman plumber, a master plumber, two plumbing contractors, one general contractor, one member from a local government that performs plumbing inspections, and one member from the public at large. A representative of the Colorado Department of Public Health and Environment serves as an ex officio nonvoting member. At least one member must be a resident of the Western Slope. Member terms are four years⁶⁴ and no major political party can have more than one member more than the other major political party.⁶⁵

The Board independently licenses plumbing professionals, adopts a Colorado Plumbing Code (Code), and considers variances to the Code. Currently, the International Plumbing Code serves as the adopted code.

All Board proceedings, with the exception of discussions in executive session, are open to the public. The Colorado Attorney General's office determined that disciplinary discussions are a matter of attorney-client privilege and are held in a closed executive session. However, all official actions taken by the Board as a result of those discussions must be taken in an open session.

The program is cash funded. Table 1 illustrates that its full-time equivalent (FTE) employees and expenditures vary only slightly from year to year. Average annual expenditures were approximately \$1.5 million during the period examined for this sunset review, varying from \$1.3 million to \$1.7 million.

**Table 1
Agency Expenditures**

Fiscal Year	Total Program Expenditures	FTE
06-07	\$1,295,026.56	12.20
07-08	\$1,665,485.96	13.45
08-09	\$1,560,933.87	12.45
09-10	\$1,670,613.83	12.85
10-11	\$1,545,215.99	12.85

⁶⁴ §§ 12-58-103(2)(a) and (3)(a), C.R.S.

⁶⁵ § 12-58-103(4), C.R.S.

Of the roughly 13 FTE utilized by the program annually, approximately eight are allocated to inspector positions spread throughout Colorado and the remaining positions are allocated to the support staff such as the Program Director, Chief Inspector, Enforcement Unit Supervisor, a program assistant, and other administrative personnel. The FTE for fiscal year 11-12 was 12.80. The breakdown is as follows:

Administrative Assistant II	0.30
Administrative Assistant III	1.10
Program Assistant I	0.20
General Professional III	0.30
General Professional IV	1.00
General Professional V	0.30
General Professional VI	0.50
General Professional VII	0.10
Inspector III	9.00

These FTE do not include employee functions performed in the centralized offices of the Division of Professions and Occupations (Division). Centralized offices include the Director's Office, Office of Investigations, Office of Examination Services, Office of Expedited Settlement, Office of Licensing, and Office of Support Services. The cost of the centralized functions is reflected in the Total Program Expenditures in Table 1. The Board pays for those FTE through a cost allocation methodology developed by the Division and the Department of Regulatory Agencies' (DORA) Executive Director's Office.

Licensing

Application

An application for an original license may be obtained at the Division office or on the Board website. Once completed, it is returned to the Division's Office of Licensing with the application fee. During August of 2012, the fee for an original master application was \$140, a journeyman application was \$120, and a residential application was \$100.⁶⁶

If a license applicant wishes to work as a plumber prior to obtaining a license, he or she must request a temporary work permit when applying for a license. Only one permit may be issued to an applicant. Work permits expire on the next scheduled examination date. If an applicant fails the license examination, the temporary work permit is no longer valid. If the applicant does not hold a Colorado license in another category, he or she must register as an apprentice to work in the plumbing field.⁶⁷

⁶⁶ Division of Registrations. *Application for Original License by Examination*. Retrieved January 12, 2012, from <http://www.dora.state.co.us/plumbing/forms/PLUoriginal.pdf>

⁶⁷ Department of Regulatory Agencies, Examining Board of Plumbers. *Licensing Requirements*. Retrieved January 12, 2012, from <http://www.dora.state.co.us/plumbing/requirements.htm>

Table 2 shows the licensing activity during the period under review. The licenses issued under the “Examination” heading are issued to residential, journeyman, and master plumbers. Apprentices and plumbing contractors are listed under the “Registration” heading.

Table 2
Summary of Board Licensing
Fiscal Years 06-07 through 10-11

Fiscal Year	New Licenses Issued				Renewal	Reinstatement	Active Licenses June 30*
	Examination	Registration	Endorsement	Total New Licenses			
06-07	306	1,113	3	1,422	0	61	6,957
07-08	346	2,892	11	3,249	6,171	144	8,382
08-09	379	886	13	1,278	0	62	9,087
09-10	332	530	3	865	7,760	188	8,591
10-11	244	470	6	720	0	95	9,068

*The State fiscal year runs July 1st through June 30th. The data are recorded at years end.

The first fiscal year the Board registered Plumbing Contractors was 07-08, which explains the increase in registration numbers. Subsequent to that fiscal year, the downturn in the building sector economy is illustrated by the corresponding decrease in the number of new registrations. However, the number of total licensees remained fairly steady with a slight increase.

Examinations

To qualify for examination as a residential, journeyman, or master plumber, an applicant must provide evidence of practical experience. No academic experience is required but academic and military experience as a plumber may be substituted for practical experience. The minimum hours of practical experience required for examination are:⁶⁸

- 3,400 for a residential;
- 6,800 for a journeyman; and
- 9,780 for a master, with a minimum of 60 months at 163 hours per month allowed.

⁶⁸ Board Rule 3.3.

Because an apprentice must be registered until he or she acquires a license, an applicant must provide proof of plumbing installation experience. Original verification letters from master plumber-employers must be on company letterhead and signed by the master plumber. Verification letters must include the exact dates of employment, a breakdown of the time, and a specific job description of plumbing installation experience for evaluation by Board staff.

If an applicant worked in Colorado and for some reason was not registered as an apprentice, the master plumber-employer must also verify plumbing work during the unregistered period.⁶⁹ Verification of out-of-state experience follows the same procedure. However, an applicant licensed in another state must also submit a photocopy of his or her out-of-state license(s) and may not verify his or her own experience.

If an application is approved, the applicant may take a licensing examination. The pass/fail, English-only, licensing examination is developed specifically for Colorado and administered by Pearson Vue, a private testing agency.⁷⁰ Pearson Vue has testing centers in Colorado Springs, Grand Junction, Greeley, Greenwood Village, Pueblo, Westminster, and Wheat Ridge.⁷¹

Candidates are examined in 10 content areas for each category of license. Those include:⁷²

- Sanitary Drainage Systems;
- Indirect and Special Waste;
- Storm Drainage Systems;
- Vents and Venting;
- Traps, Interceptors, and Separators;
- Plumbing Fixtures;
- Water Distribution Systems;
- General Regulations;
- Gas Piping;
- Calculations; and
- Isometrics.

Examination questions are based on the International Plumbing Code (IPC), the International Fuel & Gas Code, and Board Rules.⁷³

⁶⁹ Colorado Division of Registrations, Application for Original License by Examination – Plumber, Applicant Instructions/Applicant Checklist.

⁷⁰ DORA Examining Board of Plumbers. Licensing Requirements. Retrieved March 21, 2012, from <http://www.dora.state.co.us/plumbing/requirements.htm>

⁷¹ Pearson Vue. *Locate Test Center*. Retrieved March 21, 2012, from

<https://www.asitests.com/CandStudentSvcstc.asp?DB=CAT&Client=Colorado%20Plumbers&Program=496>

⁷² Colorado Examining Board of Plumbers, Candidate Handbook, Pearson Vue 2011, p.9.

⁷³ Colorado Examining Board of Plumbers, Candidate Handbook, Pearson Vue 2011, p.9.

Table 3 shows the number of examinations administered and the passing ratio during the years considered for this sunset review.

**Table 3
Examination Information
Fiscal Years 06-07 through 10-11**

Fiscal Year	Examination Category	Examinations	Percent Passing
06-07	Residential Plumber	75	61.33
	Journeyman Plumber	312	46.79
	Master Plumber	301	38.87
07-08	Residential Plumber	60	63.33
	Journeyman Plumber	351	49.00
	Master Plumber	336	44.05
08-09	Residential Plumber	36	66.67
	Journeyman Plumber	467	42.61
	Master Plumber	335	46.27
09-10	Residential Plumber	35	74.29
	Journeyman Plumber	374	43.32
	Master Plumber	331	46.22
10-11	Residential Plumber	17	70.59
	Journeyman Plumber	202	47.52
	Master Plumber	269	49.07

Analysis of the examination data illustrates that an average of 67 percent of the candidates pass the residential plumber's examination annually. However, the majority of journeyman and master plumber candidates fail the examination. An average of 54 out of 100 journeyman candidates and 55 out of 100 master candidates fail annually. A representative of the DORA contacted Pearson Vue inquiring how the Colorado passing percentages compare to other states but was unable to obtain any information.

An applicant may acquire a license by endorsement if he or she completed an approved state or federal apprenticeship program, or has the required years and type of experience for a comparable license; passed a comparable licensing examination centered on the current or most previous edition of the IPC adopted by the Board; and holds an active license by the endorsing state.⁷⁴

At the start of 2008, the General Assembly directed the Board to begin registering plumbing contractors. Fees for fiscal year 10-11 were \$210 for an original registration and a renewal. Table 4 depicts the number of registered plumbing contractors in Colorado during the sunset review period.

⁷⁴ Board Rule 3.5

**Table 4
Plumbing Contractor Registrations
Fiscal Years 06-07 through 10-11**

Fiscal Year	Original	Renewal	Reinstatement	Active as of June 30th
07-08	1,690	N/A	N/A	1,690
08-09	277	N/A	N/A	1,957
09-10	201	1,577	70	1,879
10-11	165	0	29	2,053

Inspections and Variances

Beyond the regulation of plumbers, the Board also has the statutory charge of permitting and inspecting plumbing and gas pipe installations in all Colorado public schools and in local jurisdictions that request it. If a plumbing contractor or a licensed plumber performs the gas installation it is included as a portion of the plumbing permit. However, if a gas pipe installation is performed by someone who is not licensed by the Board, the installation permit is issued separately and is inspected separately. Table 5 shows both the number of permits and the number of inspections performed by Board staff during the period under review.

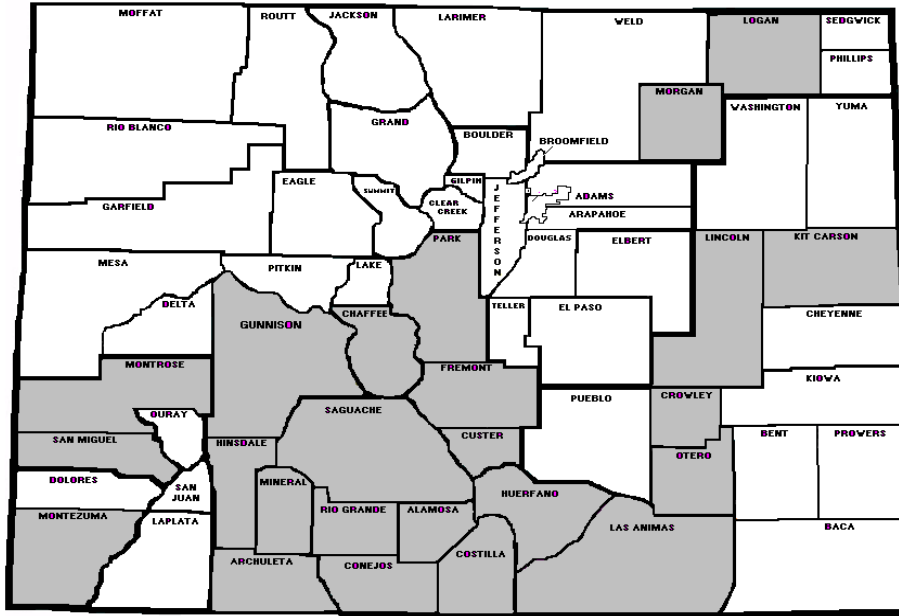
**Table 5
Permits and Inspections
Fiscal Years 06-07 through 10-11**

Fiscal Year	Number of Permits	Number of Inspections
06-07	5,337	11,274
07-08	4,902	11,550
08-09	4,040	11,149
09-10	3,398	9,388
10-11	3,121	9,123
TOTAL	20,798	52,484

Prior to the summer of 2011, the Division employed nine inspectors in satellite offices throughout the state. For greater efficiency, the Division closed those offices but retained the inspectors. Currently, the inspectors are based in home offices and also equipped with portable wireless computers, printers, and cell phones which enable them to use their vehicles as mobile offices.

The shaded areas of Map 1 indicate the counties where State Plumbing Inspectors inspect installations.

Map 1 Plumbing Inspection Regions



Counties the Examining Board of Plumbers provides permitting and inspection services to are in grey.

The Board is also charged with reviewing requests for variances to the Code. Variances are justified when a strict interpretation would not be reasonable or would create an unreasonable economic burden. However, no variance can compromise public safety.⁷⁵ Table 6 lists the number of variance applications and the Board decisions on them during the period reviewed.

**Table 6
Variances
Fiscal Years 06-07 through 10-11**

Fiscal Year	Variance Requests	Board Approved	Board Denied
06-07	14	6	8
07-08	12	7	5
08-09	26	13	13
09-10	25	16	9
10-11	15	10	5
Totals	92	52	40

The Board approved slightly over half of the requests, 57 percent, which it received during the review period.

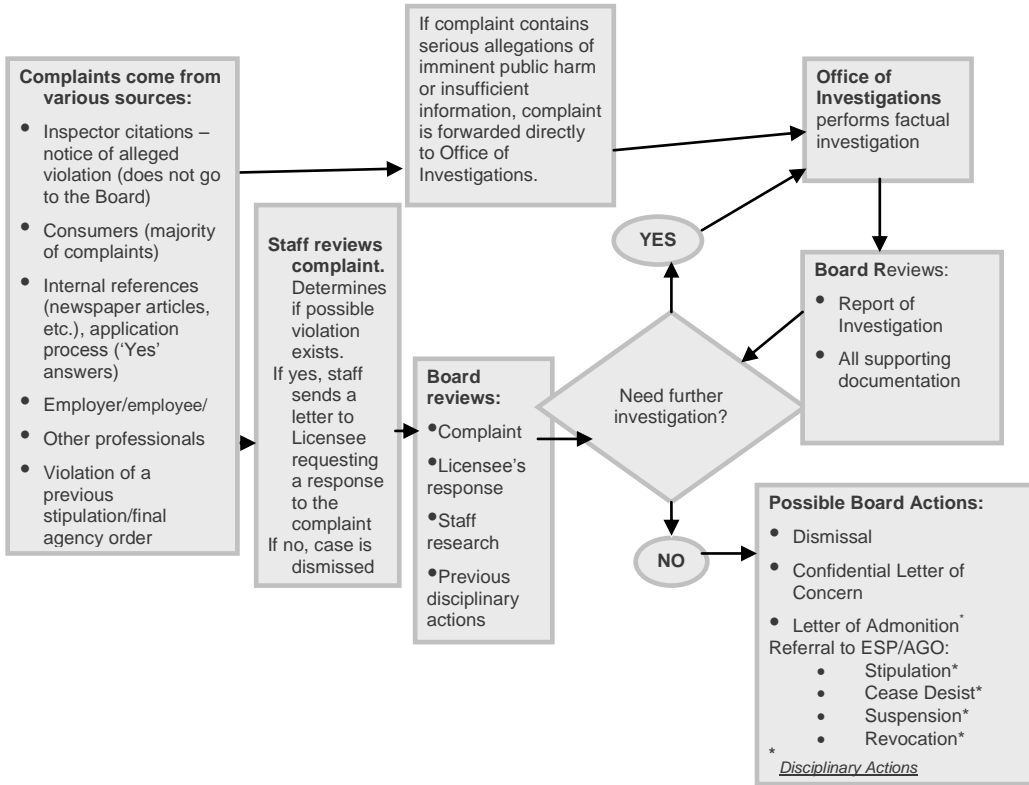
⁷⁵ § 12-58-104.5(4), C.R.S.

Complaints and Discipline

Though there is variation, as Chart 1 illustrates, complaints follow the same general path(s). When Board staff receives a complaint, it sends a packet to the licensee identified in the complaint. The packet contains the case presented by the complainant and instructs the licensee to respond. In most cases, following a licensee's reply, which must be made within 30 days, the complaint is sent to the Board for review at its next meeting. The Board first chooses whether to dismiss or pursue the complaint, or send the complaint to the Division's Office of Investigations (OI) to obtain more facts. In some rare cases that pose an imminent threat to the public, the complaint is sent directly to OI upon receipt. Once the Board is satisfied that it has all pertinent information, it acts. It must choose one of two basic options. It may dismiss the charge, with or without a confidential letter of concern (LOC) or take disciplinary action, i.e., a letter of admonition (LOA), fine, probation, license suspension, license revocation, or some combination of disciplinary actions. The licensee may choose to accept the discipline, ending the process, or contest it in a hearing.

Occasionally, the Board sends cases directly to the Attorney General's Office (AGO), to begin the hearing process. Most complaints, however, go to the Division's Office of Expedited Settlement (ESP), which confers with the licensee to resolve the disputed issues. Post negotiations, the Board and licensee may enter into a stipulated settlement. A stipulated settlement may contain one or more of the disciplinary actions available to the Board. However, if ESP and the licensee cannot reach a settlement, the Board may issue a LOA or forward the case to the AGO to commence other formal disciplinary action.

Chart 1 - Complaint/Discipline Process



The following tables enumerate the complaints that came to the Board during the period examined. Each table is segregated by the license category. Classifications of complaints in which there was no violation during any year reviewed were omitted.

**Table 7
Complaint Information
Fiscal Years 06-07 through 10-11
Apprentices**

Nature of Complaints	FY 06-07	FY 07-08	FY 08-09	FY 09-10	FY 10-11
Practicing and/or advertising without a license / registration	2	10	5	9	6
Deception/misrepresentation when attempting to obtain a license	1	2	2	0	1
Permit or inspection issues: failure to obtain/correct or provide access	0	2	0	1	1
Felony conviction	2	1	11	6	6
Violation of a Board order	0	1	1	2	2
Standard of practice	0	0	1	1	0
TOTAL	5	16	20	19	16

Apprentice deception/misrepresentation complaints generally mean the apprentice supplied the Board with a fraudulent Social Security number.

**Table 8
Complaint Information
Fiscal Years 06-07 through 10-11
Residential Plumbers**

Nature of Complaints	FY 06-07	FY 07-08	FY 08-09	FY 09-10	FY 10-11
Practicing and/or advertising without a license / registration	1	1	0	2	1
Practicing while license is expired	4	2	0	0	2
Selling or furnishing a license	0	0	0	1	0
Permit or inspection issues: failure to obtain/correct or provide access	0	0	1	0	0
Felony conviction	1	3	3	0	2
Violation of a Board order	0	0	1	0	1
TOTAL	6	6	5	3	6

Table 8 illustrates that the Board sees very few complaints levied against residential plumbers. During the period under review the average was five.

**Table 9
Complaint Information
Fiscal Years 06-07 through 10-11
Journeyman Plumbers**

Nature of Complaints	FY 06-07	FY 07-08	FY 08-09	FY 09-10	FY 10-11
Practicing and/or advertising without a license / registration	0	2	4	0	2
Practicing while license is expired	21	6	13	8	9
Failure to supervise apprentices(s)	0	1	0	0	0
Deception/misrepresentation when attempting to obtain a license	1	0	1	1	0
Selling or furnishing a license	0	0	0	0	1
Permit or inspection issues: failure to obtain/correct or provide access	0	0	0	0	3
Felony conviction	18	6	13	4	2
Violation of a Board order	0	0	1	0	5
TOTAL	40	15	32	13	22

Table 9 illustrates that complaints against journeyman plumbers tend to be in one of two categories: Practicing with an expired license and having a felony conviction.

Table 10
Complaint Information
Fiscal Years 06-07 through 10-11
Master Plumbers

Nature of Complaints	FY 06-07	FY 07-08	FY 08-09	FY 09-10	FY 10-11
Practicing and/or advertising without a license / registration	1	5	10	5	12
Practicing while license is expired	11	11	5	17	6
Employment of unlicensed person	0	0	1	2	1
Failure to register apprentice(s)	3	5	2	2	0
Failure to supervise apprentices(s)	0	1	3	1	0
Selling or furnishing a license	3	0	0	2	1
Permit or inspection issues: failure to obtain/correct or provide access	2	7	6	7	19
Felony conviction	6	3	3	4	6
Violation of a Board order	0	0	5	1	4
Standard of practice	1	0	2	2	2
Failure to report violations to the Board	0	0	1	0	0
Failure to cooperate with a Board investigation	0	1	3	0	0
Violating other law in connection with a construction project	0	0	1	0	0
Other	0	0	0	0	1
TOTAL	27	33	42	43	52

Table 10 shows that in fiscal year 10-11, the Division increased permit enforcement. The number of complaints increased nearly threefold from the average of the previous years.

Table 11
Complaint Information
Fiscal Years 06-07 through 10-11
Plumbing Contractors

Nature of Complaints	FY 07-08	FY 08-09	FY 09-10	FY 10-11
Practicing and/or advertising without a license / Registration	0	7	6	7
Practicing while license is expired	0	0	26	3
Employment of unlicensed person	0	4	2	1
Failure to register apprentice(s)	1	6	1	1
Failure to supervise apprentices(s)	1	1	0	0
Deception/misrepresentation when attempting to obtain a license	0	2	0	0
Selling or furnishing a license	0	1	0	0
Permit or inspection issues: Failure to obtain/correct or provide access	2	5	4	11
Standard of Practice	0	7	11	0
TOTAL	4	33	50	23

Because plumbing contractors were first registered in 2008, no data exists for fiscal year 06-07. Table 11 shows fiscal year 09-10 yielded a high number of complaints for practicing without a valid license because that was the first renewal cycle.

The Board acts in some manner on every complaint that is registered. Table 12 depicts the actions taken during the period under review. The data are aggregated for all license types.

Table 12
Final Board Actions
Fiscal Years 06-07 through 10-11

Board Action	FY 06-07	FY 07-08	FY 08-09	FY 09-10	FY 10-11
Revocations	1	5	1	5	4
Suspensions	0	0	0	3	0
Stipulations	20	19	23	22	37
Letters of Admonition	21	25	17	6	14
Other	7	30	26	17	30
Total Disciplinary Actions	49	79	67	53	85
Dismissals	37	35	22	36	52
Letters of Concern	16	0	3	38	11
Total Dismissals	53	35	25	74	63

When the Board issues a LOC to the licensee, it is telling the licensee that while the facts support dismissal in this case, they did pose issues which need to be addressed. A LOC is not part of the licensee's permanent record, but it is kept on file for five years. Just over one-quarter of all dismissals (27.2 percent) during the period, were issued with a LOC.

The Board also has the ability to issue fines for violations of the Plumbing Practice Act or associated rules. In conjunction with that authority, it has developed a schedule to determine what fine amounts are levied for specific violations. Table 13 lists the violations and associated fines.

**Table 13
Plumbing Board
Fine Schedule 2012**

Violation	1 st offense	2 nd offense	3 rd offense
Engaging in the business, trade, or calling of a residential plumber without a license.	\$150	\$375	Up to \$2,000 per day
Engaging in the business, trade or calling of a journeyman plumber without a license.	\$225	\$600	Up to \$2,000 per day
Engaging in the business, trade or calling of a master plumber without a license.	\$300	\$600	Up to \$2,000 per day
Failure of a plumbing contractor to register an apprentice.	\$225	\$600	Up to \$2,000 per day
Failure of an apprentice to work under the supervision of a licensed plumber.	\$50	\$200	Up to \$2,000 per day
Employment of unlicensed personnel to perform plumbing work.	\$300	\$600	Up to \$2,000 per day
Operating as a plumbing contractor without obtaining registration from the Board.	\$750	\$1,500	Up to \$2,000 per day
Failure of a licensee to supervise a plumbing apprentice.	\$375	\$600	Up to \$2,000 per day
Supervision by a residential, journeyman, or master plumber of more than three apprentice plumbers at the same jobsite.	\$375	\$600	Up to \$2,000 per day
Failure of a licensed or registered individual working as a plumber to carry on his or her person the appropriate license, temporary work permit, or registration.	\$150	\$375	Up to \$2,000 per day
Failure to obtain a permit and/or failure to obtain an inspection.	\$375	\$900	Up to \$2,000 per day
Failure to remove a cause for disapproval of any plumbing installation within a reasonable time.	\$450	\$900	Up to \$2,000 per day
Advertising by a licensee or registrant which is false or misleading.	\$375	\$750	Up to \$2,000 per day
Deception, misrepresentation or fraud in obtaining or attempting to obtain a license.	\$1,000	\$2,000	Up to \$2,000 per day
Failure to comply with other state law (<i>i.e.</i> , building or construction safety, labor, worker's compensation insurance, health, or tax laws).	\$375	\$750	Up to \$2,000 per day
Other violations of the Act or any Board rule.	Up to \$1,000	Up to \$2,000	Up to \$2,000 per day

Table 13 shows that the Board may issue fines up to \$2,000 per day, per violation.

Table 14 shows the number and total amount of the fines issued during the period under review.

Table 14
Board Fines
Fiscal Years 06-07 through 10-11

Fiscal Year	Number of Fines	Total Value of Fines Collected / Paid
06-07	4	\$2,000
07-08	16	\$13,175
08-09	17	\$7,981
09-10	12	\$10,075
10-11	22	\$12,053

Analysis and Recommendations

Recommendation 1 – Continue the Plumbing Practice Act for 11 years, until 2024.

The primary reason to conduct a sunset review of a regulatory program is to determine if regulation is necessary to protect the health, safety, and welfare of the public. Recall from the “Profile of the Profession” section of this report that the genesis of plumbing codes came from a desire to protect the public from germs and disease.

The World Health Organization (WHO) asserts that:

...access to safe drinking-water and adequate sanitation and encouraging personal, domestic and community hygiene will improve the quality of life of millions of individuals.⁷⁶

Indeed statistics bear this assertion out. The WHO found that in the U.S., where plumbing codes commonly protect the public from most contaminated water, four out of every 1,000 deaths were attributable to water sanitation and hygiene problems.⁷⁷ However, in countries where water improvements are not the status quo, the death rate is much higher. For example, in Afghanistan, that rate is more than 40 times higher. In that country 162 deaths of every 1,000⁷⁸ are attributable to water sanitation and hygiene problems. In Mexico, the rate is nearly five times higher at 19 per 1,000.⁷⁹

The plumbing code is the foundation of plumbing regulation in Colorado. It sets the standards for plumbing installations and is the centerpiece of the licensing program.

The Plumbing Practice Act (Act) directs that the Examining Board of Plumbers (Board) is responsible for adopting a Colorado Plumbing Code (Code), inspecting various installations, and licensing plumbers. Given the necessity of a code, it also is important that installations be inspected to ensure that they conform to the Code. A faulty installation may not only affect the premises and people in direct proximity but it may also affect the premises and people in the surrounding area. If a waste line leaks into a building or into the ground, the contamination can result in the spread of disease or death. If the potable water supply is not sealed properly, it too can cause health problems as well as destruction to property.

⁷⁶ Annette Prüss-Üstün, Robert Bos, Fiona Gore, Jamie Bartram, *Safer Water Better Health*, World Health Organization (2008), p.5.

⁷⁷ *ibid.* p. 52.

⁷⁸ *ibid.* p. 31.

⁷⁹ *ibid.* p. 42.

No code alone can ensure that contamination will be held in check. Another safeguard is confirming that those responsible for installing plumbing are qualified. The Act is explicit in this desire:

Consistent with its duty to safeguard the health of the people of this state, the General Assembly hereby declares that individuals who plan, install, alter, extend, repair, and maintain plumbing systems should be individuals of proven skill.⁸⁰

The public policy mechanism to measure if a professional is of proven skill is licensure. Colorado follows the same general licensing rubric as most other states. It has different levels of licensure from apprentice to master plumber as well as a plumbing contractor registration. Each level of licensure carries different qualifications designed to warrant that each person performs only those tasks he or she is qualified to perform. This scheme protects the public.

A responsible, licensed master plumber is required to be in charge of every installation in Colorado. This is an important prerequisite because every detail of every installation is not spelled out in a building design, plumbing permit, or in the Code itself. The licensed, responsible master plumber must have an operational knowledge of plumbing theory because failure to comply with mechanics and theories behind the Code and the profession sometimes results in the spread of disease. He or she must also have a grasp of the theories to install plumbing correctly in those instances where improvising is necessary. On those occasions, applying technical and theoretical expertise, cooperating with the other building trades, and collaborating with plumbing inspectors protects the consumer from harm.

The Board is the plumbing regulatory authority in Colorado. It disciplines plumbers who do not follow the code or live up to the expectations of the license granted to them. It makes sure that only qualified individuals remain eligible to perform plumbing in an ongoing manner through license renewal which is as important to protecting consumers as the initial licensure qualification. Because the Board has the ability to review any work performed by any plumber in Colorado, the risk of a consumer being harmed is kept at a minimum. Moreover, in addition to adopting the Code, the Board keeps the Code updated. Finally, Board staff effectively performs its inspection and license related responsibilities.

Therefore, the General Assembly should continue the Act for 11 years, until 2024.

⁸⁰ § 12-58-101(1)(b), C.R.S.

Recommendation 2 – Direct the Board to permit and inspect plumbing installations in all areas that do not have a permit and plumbing inspection program.

The Act is quite clear; it is the desire of the General Assembly that all plumbing be installed based on the Code. During the course of this sunset review, research uncovered multiple regional jurisdictions that do not enforce the Code as the minimum standard as required by statute. Because of the inaction, the health, safety, and welfare of the citizens who live in those jurisdictions is threatened.

In adopting the Act, the General Assembly was unambiguous in expressing that the ultimate authority for regulating the industry in Colorado lies with the Board. The Board licenses and disciplines licensees and is mandated by the Act to adopt minimum standards for plumbing, using the Code as its guide. If a regional jurisdiction chooses to provide its own permitting and inspection program it may use a stricter code than the Code, but must use, at minimum, the standards in the Code. Board powers and duties read, in part:

The Board shall establish a Colorado Plumbing Code ... Such Code shall represent the minimum standards for installation, alteration, and repair of plumbing equipment and systems throughout the state.

Local governments shall be permitted to amend the Code when adopting a plumbing Code for their jurisdictions as long as such amendments are at least equal to the minimum requirements set forth in the Colorado Plumbing Code.⁸¹

This section of the Act is unequivocal that the Code is the minimum standard to be used for plumbing in any political subdivision. The Act is equally as clear that a State Plumbing Inspector may enter any building where plumbing is being installed, public or private, to make a plumbing inspection and determine compliance with the Act.⁸² The Act also states that when a local jurisdiction intends to begin or end performing inspections, it must notify the Board in writing.⁸³

Though the intentions of the General Assembly seem indisputable, the verbiage used in section 104(1)(f) of the Act, muddles the issue. That section states that the Board will perform:

... inspections of plumbing work covered by the Colorado Plumbing Code in those areas where the local jurisdiction has not adopted its own plumbing code and where that jurisdiction has requested such inspections;

⁸¹ §§ 12-58-104.5(1) and (2), C.R.S.

⁸² § 12-58-114.2(2), C.R.S.

⁸³ § 12-58-114.5(6), C.R.S.

In local jurisdictions where there is no local code, plumbing installations automatically default to the Code. But if no request is made to the Board to perform inspections, some local jurisdictions mistakenly assume none needs to be made. Therefore, there is no way to determine if the plumbing is installed consistent with Code standards. This position is obviously counter to the aim of the Act and the wishes of the General Assembly to, "...safeguard the health of the people of this state."⁸⁴

Data indicate that the wellbeing of consumers who have plumbing installed with no inspection is jeopardized. During the period examined for this sunset review, 17 percent, or nearly two out of every 10 installations inspected by State Plumbing Inspectors, were rejected. In those cases a portion of the installation needed to be altered and reinspected before work could recommence. Because the data are averages over a five year period, it is reasonable to assume that that the results will correlate to the areas that currently go uninspected.

The General Assembly should amend similar language to what is in the Electrical Practice Act (EPA) into the Act. The EPA states that the Electrical Board, "...shall provide for inspections of electrical installations where local inspection authorities are not providing such service..."⁸⁵ In other words, if there is no local permit and inspection program, those chores automatically default to the Electrical Board. The EPA goes on to state that if any local authority does not adopt or adhere to the minimum standards required by the EPA, i.e., the Electrical Code, it can be stopped from issuing permits and performing inspections.⁸⁶ Amending similar provisions into the Act will ensure that consumers are protected throughout Colorado and not exposed to possible harm due to a flawed interpretation of the Act.

In conclusion, the General Assembly should direct the Board to permit and inspect plumbing installations in all areas that do not have a permit and plumbing inspection program.

⁸⁴ § 12-58-101(2), C.R.S.

⁸⁵ § 12-23-100.2, C.R.S.

⁸⁶ §§ 12-23-104(2)(k), 104(2)(l), and 104(2)(m), C.R.S.

Recommendation 3 – Direct the Board to adopt the International Plumbing Code as the Code and empower it to enforce local compliance.

The Board is mandated by the Act to adopt a plumbing code to use as its regulatory underpinning. The Code represents the, "...minimum standards for installation, alteration, and repair of plumbing equipment and systems throughout the state."⁸⁷ The Board also licenses plumbers, disciplines licensees, issues permits, and inspects installations based on the standards established in the Code. Rather than developing a Code from scratch, since 2005, the Board has used the International Plumbing Code (IPC) as the Code. The IPC is the standard in 34 states, the District of Columbia, Guam, and Puerto Rico.⁸⁸

The Act allows that if a local government chooses to provide its own permitting and inspection program, it may. However, it must use the Code as its starting point:

Local governments shall be permitted to amend the code when adopting a plumbing code for their jurisdictions as long as such amendments are at least equal to the minimum requirements set forth in the Colorado plumbing code.⁸⁹

During the course of this sunset review research found that 99 percent of the state had adopted the IPC as the minimum for its local code. It is the remaining one percent of the state that has not adopted the IPC as the minimum standard as required by the Act that presents a problem.

Because it is the foundation for regulation, the Code needs to be consistent statewide. Licensees should be able to count on knowing that regardless of where they work in Colorado the basic fundamentals of plumbing that they have been licensed under are the same with only slight modifications based on local needs. Predictability in regulation is a major motivation behind the General Assembly instituting a statewide licensing system. Consistency in construction codes allows wide-ranging assimilation of construction practices and allows construction professionals such as architects, engineers, and contractors to practice competently in different areas of Colorado and other states. The greater the level of familiarity with a code by professionals, the greater the level of safety for citizens.

The jurisdictions that have not complied clearly fail to provide the consistency and predictability standards contemplated by the General Assembly. More importantly, the health, safety, and welfare of the citizens who live in those jurisdictions is threatened by not adopting the Code as a minimum standard.

⁸⁷ § 12-58-104.5(1), C.R.S.

⁸⁸ International Code Council. *International Code Adoptions*. Retrieved July 17, 2012 from <http://www.iccsafe.org/gr/pages/adoptions.aspx>

⁸⁹ § 12-58-104.5(2), C.R.S.

By reference to the Electrical Board, a more predictable model was put in place, during 2010, by the General Assembly for the regulation of electricians in the EPA.

The EPA directs the Electrical Board to be,

...governed when appropriate by the standards on the most current edition of the National Electrical Code or by modifications to such standards made by the Board after a hearing...⁹⁰

The EPA names the specific code that the Electrical Board is to use as its foundation, the National Electrical Code. This provision provides the stability and predictability necessary for statewide regulation. The major decisions the Electrical Board makes regarding code adoption are deciding if the current National Electric Code is “appropriate” and, after a hearing, if it wants to amend it for Colorado implementation.

The EPA model also presents a solution to the problem of non-compliance. Faced with the same issue of local governments not adopting the State Electrical Code, the General Assembly empowered the Electrical Board to act against local governments that refuse to comply. The Electrical Board now has the powers to issue a cease and desist order or seek an injunction from issuing permits or performing inspections, to any jurisdiction that does not adopt the state code as its minimum standard within 12 months from the day a new edition of the code is adopted by the Electrical Board.⁹¹ For jurisdictions that choose to not obey the statutory directive and have permitting and inspection authority revoked, the state permitting and inspection program takes over.

The promulgation of a new IPC does not occur in a vacuum. It is widely known in the plumbing industry that adoption occurs every three years and what changes are being considered. Every local jurisdiction will be well aware of all proposed changes long before their adoption and has the ability to affect the adoption and amendment process by the Board. Because of the predictability in the adoption process, local jurisdictions have a greater chance of affecting specific change than they would if the Board was to consider several Code options and adopt the Code publicly.

The Code is the foundation for both plumbing licensing and installation. Ultimately, what is most important is that the Code is effective in protecting consumers who contract with construction professionals. The best way to ensure protection for the public’s well-being is to make Code adoption and implementation consistent, predictable, and less confusing for the plumbers, architects, engineers, and building officials.

Therefore, the General Assembly should direct the Board to adopt the IPC as the Code and empower it to enforce local compliance.

⁹⁰ § 12-23-104(2)(a), C.R.S.

⁹¹ §§ 12-23-104(2)(k), (2)(l) and (2)(m), C.R.S.

Recommendation 4 – Direct the Board to adopt a separate Gas Fuel Code.

Section 12-58-104(1)(j), C.R.S., directs the Board to inspect gas piping installations. However, there is no specific reference to the Board adopting standards with which the installations must comply.

The Board has adopted the standards of the International Fuel Gas Code, by rule, and included it in the Code. But there are issues of appropriate “fit” with this method. The most significant is that a plumbing code directs the installation of plumbing, and gas piping is not plumbing.⁹²

A gas fuel system is an entirely separate scheme, has a completely different purpose, and satisfies completely different needs in a building. The only similarity is that pipe is involved in transporting both gas and water.

The General Assembly found it necessary to require the Board to inspect gas piping installations to ensure that they are correctly finished. Most people agree with that requirement. A faulty installation can result in a catastrophic loss of life or property.

Directing the Board to adopt a separate Gas Fuel Code, together with the responsibility of inspecting installations will ensure that the installations will continue to be performed up to the necessary standards. Furthermore, it clarifies that a gas piping installation is not plumbing and need not be installed by plumbers. Making sure the end product is correctly installed is the key to fulfilling legislative intent and protecting the public.

To reduce confusion in implementing the Act, the General Assembly should direct the Board to adopt a separate Gas Fuel Code.

Recommendation 5 – Repeal the requirement in the Act that State Plumbing Inspectors be certified by the Division of Fire Safety.

The Act requires State Plumbing Inspectors to be certified by the Division of Fire Safety (DFS) to inspect multipurpose residential fire sprinkler systems in one- and two-family dwellings and townhouses that are part of the potable water supply.⁹³ This section was amended into the Act during 2010 as part of a bill designed to, “...expand the regulation of persons who work on fire suppression systems...”⁹⁴

The addition of this section has caused systemic problems. The DFS does not have regulatory authority over the multipurpose residential fire sprinkler systems or State Plumbing Inspectors.

⁹² § 12-58-102(5)(a), C.R.S.

⁹³ § 12-58-104(1)(k), C.R.S.

⁹⁴ House Bill 10-1241.

The section states that the sprinkler system is part of the potable water supply. If it is part **of** the potable water supply, it is in fact, plumbing. Both the Board and the DFS concur on this point. The DFS website states, "...a multipurpose residential fire sprinkler system shall be defined as a part of the premises plumbing."⁹⁵ Because it is plumbing, the DFS has no regulatory authority over it. The regulatory authority is vested exclusively in the Board.

If a fire suppression system is **attached to** the potable water supply with back flow protection, then it is considered a separate system and not regulated as plumbing. When it is a separate fire suppression system, it is regulated and inspected by DFS.

Removing the certification dictate from the Act would not leave consumers exposed. Aside from requiring the unneeded certification, the Act also directs the Board to establish minimum requirements and standards for the inspection of multipurpose residential fire sprinkler systems.⁹⁶ Consequently, if the General Assembly repeals the certification requirement, there will continue to be installation standards and there will continue to be inspections.

Therefore, the General Assembly should remove the requirement in the Act that State Plumbing Inspectors be certified by the DFS.

Recommendation 6 – Amend confusing language regarding inspection procedures.

Section 12-58-114.5(1), C.R.S., provides that a plumbing inspection must be performed within three days after the receipt of the inspection request. If it has not been performed within five days after receipt, work may resume on the, "...construction, repair, or remodeling."

This latter provision, stating that work may resume, is both confusing and misleading.

First, all work on a construction site is not stopped prior to a plumbing inspection. Typically, there are many facets of the job that are ongoing and are not affected by a plumbing inspection. It is erroneous to infer that most jobs standstill waiting for the plumbing inspection and must be resumed post inspection. Plumbing is but one of many aspects of most construction jobs.

Second, despite the statutory declaration that work may resume, all plumbing must be Code-compliant and accessible to the inspector. So if a contractor does resume working, it does so at his or her own peril if the work includes making the plumbing inaccessible.

⁹⁵ Colorado Department of Public Safety, Division of Fire Safety, Residential Multipurpose Inspector Certification Program Overview. Retrieved July 19, 2012 from http://dfs.state.co.us/Multipurpose_Inspector/RESInspectors_Front.htm

⁹⁶ § 12-58-104(1)(k), C.R.S.

The inspections are completed to ensure that installations are Code-compliant in order to protect consumers from faulty installations. A passing, overall, final, building inspection cannot occur without a plumbing inspection, and a plumbing inspection cannot be performed without inspection of every aspect of the installation, regardless of what the installer infers from the statutory provision. The Board's policy is that any covered, uninspected plumbing or gas pipe installation constitutes a potential safety hazard and may render a structure uninhabitable. The Act should be explicit in this regard.

Finally, this provision appears to be unnecessary. During the period under review, less than three of every 1,000 inspections occurred beyond the five day time limit. All of those inspections were final inspections. Consequently, no work was stopped.

To reduce confusion and protect both the installer and consumer from harm, the General Assembly should repeal the following language regarding inspections: "If the inspection is not performed within five working days, work may resume on any such construction, repair, or remodeling." Subsequent to the change, inspectors will still have the requirement to inspect an installation within three days.

To protect the health and safety of consumers, the General Assembly should delete the language noted above regarding inspection procedures.

Recommendation 7 – Clarify that local licensure does not exempt a plumbing contractor from Board registration.

The General Assembly directs that, "No person, firm, partnership, corporation, or association shall operate as a plumbing contractor until such contractor has obtained registration from the Board."⁹⁷

However, section 12-58-115, C.R.S., allows that any city, town, county, or city and county may provide for the licensing of plumbing contractors. This provision does not, however, alleviate the need for a contractor to register with the Board. The General Assembly allows local licensing in addition to the Board registration, not in lieu of the Board registration.

If a contractor is licensed locally but not registered with the Board, and if that contractor performs a plumbing or gas pipe installation, he or she commits a violation of the Act. The Act is unequivocal that all contractors must be registered with the Board.

The General Assembly should clarify the continuing requirement of registration with the Board in relationship to section 115 of the Act.

⁹⁷ § 12-58-105(3), C.R.S.