



Dora
Department of Regulatory Agencies

Office of Policy, Research and Regulatory Reform

**2012 Sunset Review:
Water and Wastewater Facility
Operators Certification Board**

October 15, 2012





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 Water and Wastewater Facility Operators Certification 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 9 of Title 25, C.R.S. The report also discusses the effectiveness of the Colorado Department of Public Health and Environment (CDPHE) 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: Colorado Water and Wastewater Facility Operators Certification Board

Summary

What Is Regulated?

Water and wastewater facility operators perform one or more of the following critical functions: treat water to make it suitable for drinking, assure water is distributed to customers, oversee the collection of wastewater, and treat collected wastewater to ensure it is safe to flow back into streams and reservoirs or to be used for irrigation.

Why Is It Regulated?

Requiring facility operators to meet minimum requirements assures a standard level of competency. Colorado's operator certification program also fulfills the U.S. Environmental Protection Agency's mandate that states require water treatment and water distribution facility operators to meet minimum standards.

Who Is Regulated?

In 2011, there were 5,650 certified operators holding 10,144 certifications.

How Is It Regulated?

The Colorado Water and Wastewater Facility Operators Certification Board (Board), housed within the Water Quality Control Division of the Colorado Department of Public Health and Environment (Division and CDPHE, respectively), is vested with the authority to regulate water and wastewater facility operators. In order to qualify for certification, applicants must meet certain education and experience requirements and pass the appropriate certification examination. The Division bears the primary responsibility for ensuring that water and wastewater facilities are operating under the direct supervision of an operator in responsible charge (ORC) that is, a certified operator holding a certification equal to or higher than the classification of the facility.

What Does It Cost?

In fiscal year 10-11, it cost the Board \$132,052. In calendar year 2011, Colorado Environmental Certification and Testing, Inc. and the Certification Council—the two nonprofits the Board contracts with to administer the program—spent a total of \$503,920.

What Disciplinary Activity Is There?

From fiscal year 06-07 to 10-11, the Board issued a total of six disciplinary actions—four letters of reprimand and two consent agreements—against individual facility operators.

In 2011, nearly 98 percent of all water and wastewater facilities were in compliance with the ORC requirement. The Division took four formal actions, all of which were Notices of Violation without Penalty, against non-compliant facilities.

Key Recommendations

Continue the Board for seven years, until 2020.

Clean drinking water and the safe disposal of wastewater are essential to the public health and welfare. By assuring certified operators meet certain minimum requirements, taking disciplinary action against operators who violate the law, and promulgating rules governing the operation of water and wastewater facilities, the Board protects the health and welfare of Colorado citizens. For these reasons, the Board should be continued. To monitor progress on the issue of persistently low examination pass rates, the program should be continued for seven years, until 2020.

Change the seat on the Board for the Colorado Rural Water Association to a more general small-systems seat.

The Colorado Rural Water Association (CRWA) represents the interests of small systems in Colorado. However, there are other organizations operating within Colorado that also represent the interests of small systems. When considering board composition, it is good policy to name the constituency a board seat is intended to represent rather than designating that seat for a specific organization. In that spirit, the General Assembly should repeal the seat designated for CRWA and instead create a seat for an individual representing the interests of small systems, that is, systems serving 3,300 or fewer individuals.

Allow the Board to exempt certain domestic wastewater facilities from the requirement that they operate under the supervision of a certified operator.

There are instances where domestic wastewater treatment facilities could be operated safely without ORC supervision. Granting the Board the authority to establish subsets of domestic wastewater facilities that are not required to operate under ORC supervision would relieve the regulatory burden on small businesses and allow the Division to focus its enforcement efforts on facilities that truly do require ORC supervision to operate safely. Exempted facilities would remain under the regulatory authority of CDPHE and facility owners would still have to obtain applicable wastewater discharge permits, meet reporting requirements, and ensure the facilities are operated in compliance with all applicable state and federal laws.

Major Contacts Made During This Review

Certification Council
Colorado Department of Public Health and Environment
Colorado Environmental Certification and Testing, Inc.
Colorado Rural Water Association
Colorado Water and Wastewater Facility Operators Certification Board
Operator Certification Program Office
U.S. Environmental Protection Agency, Region 8

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 Water and Wastewater Facility Operators Certification Board (Board) as enumerated in Article 9 of Title 25, 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 facility operator licensing program pursuant to section 24-34-104, C.R.S.

The purpose of this review is to determine whether the currently prescribed regulation of water and wastewater facility operators should be continued for the protection of the public and to evaluate the performance of the Board. 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 and contractor meetings, interviewed staff with the Water Quality Control Division within the Department of Public Health and Environment, reviewed Board records and minutes, interviewed officials with state and national professional associations, visited water and wastewater facilities, interviewed water and wastewater facility operators, reviewed Colorado statutes and Board rules, and reviewed the laws of other states.

Profile of the Profession

Generally, water and wastewater facility operators perform four critical functions. They treat water from streams, rivers, and other natural sources to make it suitable for drinking. They assure the water is distributed to customers. They oversee the collection of the wastewater that has flowed into drains and sewers. Finally, they treat the collected wastewater to ensure it is safe to flow back into streams and reservoirs or to be used for irrigation.

Accordingly, facility operators work in the following types of facilities:²

- **Water treatment facilities**, which alter the physical, chemical, or bacteriological quality of the water.
- **Water distribution systems**, which are any combination of pipes, tanks, pumps, or other facilities that deliver water from a source or treatment facility to the consumer.
- **Wastewater collection systems**, which are the pipes and conduits that transport domestic wastewater from the point of entry (e.g., a storm drain) to a domestic wastewater treatment facility.
- **Wastewater treatment facilities**, which are grouped in two categories:
 - **Domestic wastewater treatment facilities** are used to treat domestic wastewater or handle solids and gases removed from such wastewater.
 - **Industrial wastewater treatment facilities** are used for the pretreatment, treatment, or handling of industrial waters, wastewater, and wastes that are discharged into state waters.

The daily duties of water and wastewater treatment plant and system operators can include:³

- Operating equipment to purify water or to process or dispose of sewage;
- Cleaning, maintaining, and inspecting equipment;
- Adding chemicals, such as ammonia, chlorine, or lime, to disinfect water;
- Monitoring and recording operating conditions, meters, and gauges;
- Collecting and testing water and sewage samples; and
- Ensuring safety standards are met.

The specific duties of facility operators vary depending on the type and size of the facility.

² § 25-9-102, C.R.S.

³ U.S. Department of Labor, Bureau of Labor Statistics. *Occupational Outlook Handbook: Water and Wastewater Treatment Plant and System Operators*. Retrieved on August 29, 2012, from <http://www.bls.gov/ooh/production/water-and-wastewater-treatment-plant-and-system-operators.htm#tab-2>

Facilities serving small communities are sometimes designed to handle multiple aspects of the community's water and wastewater needs: for example, a single facility might handle both water treatment and distribution. Operators of such facilities are generalists familiar with all aspects of facility operation.

Large, urban areas tend to have multiple, specialized facilities focusing on specific aspects of water or wastewater treatment, having separate facilities for water treatment, water distribution, wastewater collection, and wastewater treatment. Operators of those facilities specialize in specific areas and are likely to use automated systems to help them monitor processes.

Federal law requires states to certify water facility operators and mandates that water facilities operate under the supervision of a certified operator. Consequently, all states require water facility operators to meet certain education, experience or examination requirements, although the exact requirements vary widely from state to state.

Most states, including Colorado, also require wastewater facility operators to meet certain education, experience or examination requirements. These exact requirements also vary considerably from state to state.

States typically classify water and wastewater facilities based upon their size and complexity and offer levels of operator certification that mirror the facility classifications. For example, an operator who oversees a facility with the highest classification would have to obtain the highest level of certification.

Facility operators typically work for local municipalities. In May 2010, the median annual salary of operators was \$40,770.⁴

⁴ U.S. Department of Labor, Bureau of Labor Statistics. *Occupational Outlook Handbook: Water and Wastewater Treatment Plant and System Operators*. Retrieved on August 29, 2012, from <http://www.bls.gov/ooh/production/water-and-wastewater-treatment-plant-and-system-operators.htm>

Legal Framework

History of Regulation

In 1973, the General Assembly created the nine-member Water and Wastewater Treatment Plant Operators Certification Board when it passed Senate Bill 253. The powers and duties of the newly created board included certifying qualified applicants, promulgating rules, and promoting operator training programs. The bill established four tiers of classification for both water treatment plant operators and wastewater treatment plant operators, with each successive level of classification requiring higher levels of knowledge and work experience. The bill established monetary penalties for individuals who represent themselves as certified operators without being so certified and for facility owners who operate such plants without the supervision of a certified operator of the appropriate level of certification.

The General Assembly did not make any substantive changes to the law until 1996, with the passage of House Bill 1074. This bill made numerous changes, including creating separate definitions for domestic and industrial wastewater treatment facilities and establishing classes of facility operator certifications for each, and establishing criteria for disciplinary action against certified operators.

In 2000, the General Assembly passed House Bill 1431, which renamed the board the Water and Wastewater Facility Operators Certification Board (Board). The bill vested the Water Quality Control Division (Division) within the Department of Public Health and Environment (CDPHE) with the responsibility to investigate possible misconduct by facility operators and make recommendations to the Board regarding appropriate disciplinary action. The bill also added language allowing the Board to contract with a nonprofit entity to administer the operator certification program and authorized the nonprofit to collect certification and renewal fees to operate the program. However, the bill required the nonprofit to direct \$5 per certification to the state's General Fund.

The General Assembly passed House Bill 04-1211 following the 2003 sunset review. The bill made numerous technical changes and mandated that the Board approve all contracts the designated nonprofit enters into with subcontractors.

In 2011, the General Assembly passed Senate Bill 21, which removed the provision restricting Board members to two terms of service.

Federal Law

Passed into law in 1973, the Safe Drinking Water Act (Act) authorized the U.S. Environmental Protection Agency (EPA) to establish minimum quality standards for drinking water.

In 1996, Congress amended the Act. Among the changes was a new provision directing the EPA to establish rules specifying minimum standards for the certification and recertification of the operators of:

- Community water systems, defined as systems that provide drinking water to at least 15 service connections or regularly serve at least 25 individuals.⁵
- Non-transient non-community (NTNC) water systems, defined as public water systems that regularly serve at least 25 of the same people over six months per year. Typical instances of NTNC water systems are those serving schools, restaurants, factories, and hospitals.⁶

The EPA rules promulgated pursuant to the Act require operator certification programs to meet nine baseline standards. Under the standards, states must:⁷

1. Have statutory authority to implement and enforce the program.
2. Classify water treatment facilities and systems based on indicators for potential health risks; develop specific operator certification and renewal requirements for each level of classification; and require owners of all community and NTNC water systems to place the direct supervision of their facilities under the responsible charge of an operator certified at or above the classification of the facility.
3. Require operators to take and pass a validated examination, possess a high school diploma or general equivalency diploma (GED), and have the level of experience appropriate to their level of certification.
4. Have regulations in place that require all applicable water systems to comply with the law and that include adequate enforcement mechanisms, such as ability to fine water systems and revoke individual certifications.
5. Establish requirements for certification renewal, including training requirements.
6. Allot sufficient resources to fund and sustain the program.
7. Establish recertification requirements for operators whose certifications have expired.
8. Include ongoing stakeholder involvement when making changes to operator certification programs.
9. Conduct periodic reviews of the operator certification program to evaluate, among other things, program rules and budget, examination items, and relevance of training.

⁵ 42 U.S.C. § 300f (15).

⁶ 64 Fed. Reg. 5921 (1999).

⁷ 64 Fed. Reg. 5919-5921 (1999).

The Act requires the EPA to reimburse states for the cost of training associated with certification, including an appropriate per diem for unsalaried operators, and for individuals operating facilities serving 3,300 or fewer people.⁸

If a state fails to implement a program that conforms to EPA guidelines, the EPA must withhold 20 percent of the funds a state is otherwise entitled to receive in its Drinking Water State Revolving Fund capitalization grants.

The Act and EPA rules address only operators of water treatment facilities and water distribution systems. The Act does not require that states certify operators of wastewater treatment facilities or collection systems.

Colorado Law

The laws relating to water and wastewater facility operators regulation in Colorado are contained within Article 9 of Title 25, Colorado Revised Statutes (C.R.S.). The Article establishes the classifications for water and wastewater facilities and the minimum qualifications for the operators of such facilities, and mandates that a certified operator must supervise the operation of all water and wastewater facilities.⁹

The Board is a Type 1, policy-autonomous board. The Governor appoints the Board's 10 members. Representation on the Board is as follows:¹⁰

- A certified water treatment or domestic wastewater treatment facility operator with the highest level of certification available in Colorado;
- A certified industrial wastewater treatment facility operator or other representative of a private entity that operates an industrial wastewater treatment facility;
- A city manager, manager of a special district, or utility manager in a city, county, or city and county that operates a domestic water or wastewater treatment facility;
- A representative of the CDPHE, who is an ex officio, nonvoting member;
- A certified water distribution or wastewater collection system operator with the highest level of certification available in Colorado;
- A representative from the Colorado Rural Water Association; and
- Four members from diverse areas of the state—at least one member must live in rural eastern Colorado and one must live west of the Continental Divide—whose appointments reflect the various interests that hold a stake in the facility operators certification program.

⁸ 42 U.S.C. § 300g-8 (d).

⁹ § 25-9-101, C.R.S.

¹⁰ § 25-9-103(1), C.R.S.

At least four of the voting Board members must be certified facility operators with some representing the water industry and others representing the wastewater industry. Every year, the Board elects a chair and secretary.¹¹

Board members serve four-year terms.¹² They receive no compensation for their service, but are reimbursed for the actual expenses they incur.¹³

The duties of the Board include:

- Establishing classes of certified facility operators, taking into consideration the complexity of different types of facilities and the appropriate qualifications for certification for each class;¹⁴
- Establishing rules defining the certification requirements for facility operators;¹⁵
- Adopting rules that set program fees that reflect the actual costs of administering the program;¹⁶
- Ensuring that an office is maintained for contact with operators and employers;¹⁷
- Using subject matter experts to ensure that each certification examination tests for the knowledge necessary to operate the corresponding facility type;¹⁸
- Establishing for each water and wastewater facility a minimum class of certified operators required for its supervision;¹⁹
- Granting exemptions to certain industrial wastewater treatment facilities from the requirement to operate under the supervision of a certified operator, as long as such an exemption is not inconsistent with protecting the public health and the environment;²⁰ and
- Suspending or revoking the certification of any operator who has violated the law.²¹

Classification of Facilities and Operators

The Division classifies water and wastewater facilities based on each facility's size, the size of the population it serves, its complexity, and other factors.

¹¹ § 25-9-104(1)(a), C.R.S.

¹² § 25-9-103(3)(a), C.R.S.

¹³ § 25-9-104(7), C.R.S.

¹⁴ § 25-9-104(3), C.R.S.

¹⁵ § 25-9-104(1)(a), C.R.S.

¹⁶ § 25-9-108(1), C.R.S.

¹⁷ § 25-9-104(1)(a), C.R.S.

¹⁸ § 25-9-104(1)(a), C.R.S.

¹⁹ § 25-9-104(4), C.R.S.

²⁰ § 25-9-104(4), C.R.S.

²¹ § 25-9-104(6), C.R.S.

Every water or wastewater facility must operate under the supervision of a certified operator of the classification level appropriate for that facility.²² Board rule refers to this supervising operator as the operator in responsible charge (ORC), and defines it as:²³

the person designated by the owner of the water or wastewater facility to be the certified operator(s) who has ultimate responsibility for decisions regarding the daily operational activities of the facility that will directly impact the quality and/or quantity of drinking water, treated wastewater, or treated effluent.

The Board is responsible for establishing the appropriate level of operator certification for the ORC of each type of facility.

The Division classifies water and domestic wastewater treatment facilities into four classes: "A," "B," "C," and "D," with "A" being the highest level of classification. The Board issues four corresponding levels of certification for water facility operators and four levels for domestic wastewater.

The Division classifies water distribution and collection systems into four classes: "1," "2," "3," and "4," with "4" being the highest level of classification. The Board issues four corresponding levels of certification for water distribution and collection operators.

The Division classifies industrial wastewater treatment facilities into two classes: Class 1 and Class 2. Class 2 facilities are exempt from the requirement to operate under the supervision of a certified operator. Class 1 facilities are subdivided into four classes: "A," "B," "C," and "D," with "A" being the highest level of classification. The Board issues four corresponding levels of certification for industrial wastewater facility operators.

The Board also issues these specialized certifications:

- **Class S** water and wastewater certifications for operators of small systems serving fewer than 3,300 people.
- **Class T** water certifications for operators of transient, non-community water systems that serve fewer than 100 people per day, draw from groundwater only, and meet other requirements specified in rule. Common examples of transient non-community water systems include campgrounds and gas stations.

²² § 25-9-110(2)(a), C.R.S.

²³ 5 CCR 1003-2, 100.2(18).

Table 1 shows the minimum level of certification an operator must have to serve as the ORC for facilities of each classification.

Table 1
Certification Requirements for Operators in Responsible Charge²⁴

Facility or System Classification	Certification of Operator(s) in Responsible Charge
Water Treatment	
A	A
B	A or B
C	A, B, or C
D	A, B, C, D, S, or T
Water Distribution	
4	4
3	4 or 3
2	4, 3, or 2
1	4, 3, 2, 1, or S
Domestic Wastewater Treatment	
A	A
B	A or B
C	A, B, or C
D	A, B, C, D, or S
Wastewater Collection	
4	4
3	4 or 3
2	4,3, or 2
1	4, 3, 2, 1, or S
Industrial Wastewater Treatment	
A	A
B	A or B
C	A, B, or C
D	A, B, C, D, or S

Rule 100.18.4(a) requires each water or wastewater facility to report within 30 days of commencing operations:

- The name, mailing address, phone number, email address (if available) and the classification and expiration of certification of all ORCs employed by the owner; and
- Identification of the facility or facilities for which each ORC has responsibility.

Every time the contact information of the existing ORC changes or when a new ORC is hired, the facility must report that information to the Division within 30 days.

²⁴ 5 CCR 1003-2, 100.18.5.

Certification and Renewal

Applicants for all levels of certification must possess a high school diploma or GED, except that relevant experience or training may be substituted. Education and cross-experience²⁵ may be substituted for experience requirements for certification as a water or wastewater facility operator, except that at least 50 percent of any experience requirement must be met by actual on-site operating experience in the appropriate facility type.²⁶

To qualify to sit for any certification examination that is higher than entry-level, an applicant must hold a certification for the same certification category (water treatment, domestic or industrial wastewater treatment, distribution or collection) in the class immediately below the class for which application is being made.

Table 2 shows the experience and prior certification required to take the examinations for the various classes of operator certification.

Table 2
Experience and Certification Required to Take Examinations²⁷

Operator Class	Prior Certification Required	Minimum Experience Required
Class T	None	No minimum experience requirement
Class S	None	1 month
Class D or Class 1	None	1 month
Class C	Class D or Class S	2 years
Class 2	Class 1 or Class S	2 years
Class B	Class C	3 years
Class 3	Class 2	3 years
Class A	Class B	4 years
Class 4	Class 3	4 years

Applicants seeking certification in Class S, Class D, or Class 1 may sit for the examination before accruing the required experience. After passing the examination, the applicant may then accrue the required experience through on-the-job training, through an apprenticeship under the supervision of a certified operator, or by completing a Board-approved training program. Once applicants can demonstrate they have completed the required experience, the Board will issue the certificate.

²⁵ Pursuant to § 25-9-106.5, C.R.S., experience as a wastewater treatment facility operator may be substituted for experience as a water treatment facility operator and vice versa. This is what "cross-experience" means.

²⁶ § 25-9-106.5, C.R.S.

²⁷ 5 CCR 1003-2, 100.9.8.

If an applicant applies for certification in a field where he or she does not have experience, the Board evaluates the applicant’s knowledge of water and wastewater facility operation—demonstrated through examination and verified work experience—to determine the appropriate type and level of certification to be issued.²⁸

Once issued, certifications are good for three years.²⁹ To renew a certificate, operators must pay a fee and complete the required training units.³⁰ By rule, one training unit equals 10 contact hours,³¹ meaning 10 hours of classroom attendance or supervised participation.³²

Table 3 shows the training units required to renew the various classes of operator certification.

Table 3
Training Units Required for Renewal³³

Certification Class	Training Units Required
Class T	1.2 (12 contact hours)
Class D and Class 1	1.2 (12 contact hours)
Class S	1.8 (18 contact hours)
Class C and Class 2	1.8 (18 contact hours)
Class B and Class 3	2.4 (24 contact hours)
Class A and Class 4	3.0 (30 contact hours)

Operators who fail to renew their certifications before the expiration date have two years after the expiration date to pay the required fee and complete the applicable ongoing training units. If an operator does not renew the certification within those two years, the certification is automatically revoked and the operator must reapply for certification as though he or she were a new applicant.³⁴

A person who holds a facility operator’s certification issued in another state may apply to the Board for a Colorado certification of comparable classification. If the requirements for operator certification are equal to or greater than Colorado’s, the Board may certify the applicant. Where there is a question as to the level of certification that should be granted, the Board may authorize special examinations or other procedures to confirm the appropriate certification level.³⁵

²⁸ § 25-9-107(2), C.R.S.

²⁹ § 25-9-107(3), C.R.S.

³⁰ § 25-9-107(4)(a), C.R.S.

³¹ 5 C.C.R.1003-2, 100.14.3.

³² 5 C.C.R.1003-2, 100.12.2(d)(i).

³³ 5 C.C.R.1003-2, 100.14.2.

³⁴ § 25-9-107(4)(b), C.R.S.

³⁵ § 25-9-107(5), C.R.S.

It is unlawful for any person to represent himself or herself as a certified operator of any category and of any class without first being so certified and without holding a current valid certificate issued by the Board.³⁶

Program Administration

The Board may select and appoint one or more independent nonprofit corporations to administer the operator certification program.³⁷ In order to qualify for consideration to administer the program, the corporation must have expertise in training and testing procedures and demonstrated knowledge of water and wastewater treatment, collection, and distribution systems.³⁸

The duties associated with administering the program include, but are not limited to:³⁹

- Maintaining records of certified operators;
- Notifying operators of expiration of certification;
- Providing information on accredited training requirements;
- Preparing and furnishing the examination material;
- Collecting fees;
- Setting the times, dates, and places for holding examinations, one of which must be given at least annually;
- Grading examinations;
- Evaluating the work experience of applicants;
- Evaluating continuing training achievements for renewal of certification; and
- Evaluating requests for reciprocity.

If the Board appoints a nonprofit corporation to perform these activities, it must enter into a contract to ensure that such corporation:⁴⁰

- Receives applications and fees;
- Conducts examinations;
- Records and notifies applicants of examination results, and provides feedback to examinees upon request;
- Recommends issuance of certificates; and
- Prepares and distributes an annual report.

With the Board's permission, a nonprofit corporation selected to administer the program may enter into subsidiary agreements with other nonprofit corporations, educational institutions, and for-profit corporations to carry out the duties assigned by the Board. Any such subsidiary agreements are subject to prior approval by the Board.⁴¹

³⁶ § 25-9-110(1), C.R.S.

³⁷ § 25-9-104(1)(a), C.R.S.

³⁸ § 25-9-104(1)(b), C.R.S.

³⁹ § 25-9-104(1)(a), C.R.S.

⁴⁰ § 25-9-104(1)(a), C.R.S.

⁴¹ § 25-9-104(1)(a), C.R.S.

The nonprofit corporation under contract to the Board may collect certification and renewal fees to pay for its actual costs to administer the program, but it must remit a \$5 fee for each new and renewal certificate to the Colorado State Treasury. If the Board directly receives any certification and renewal fees, it must deposit all those funds with the Colorado State Treasury.⁴²

The Board is responsible and retains the final authority for all actions and decisions carried out on its behalf by any nonprofit corporation, educational institution, or for-profit corporation. Such authority includes, but is not limited to, the authority to modify, suspend, or reverse any action or decision of any nonprofit corporation, educational institution, or for-profit corporation.⁴³

Complaints and Enforcement

Section 25-9-104(6), C.R.S., directs the Board to establish criteria for the discipline or reprimand of any water or wastewater facility operator and for the suspension or revocation of the certification of any such operator. Accordingly, the Board established the following grounds for taking disciplinary action against certified operators:⁴⁴

- Failing to exercise reasonable care and judgment consistent with the operator's level of certification and degree of responsibility for the operation of a water or wastewater facility;
- Failing to properly perform and/or supervise activities pertinent to controlling the operation of a water or wastewater facility;
- Willfully or negligently violating, causing, or allowing the violation of the Operator Certification Regulations, the Colorado Primary Drinking Water Regulations, the Colorado Discharge Permit System Regulations, or certain, enumerated discharge permits;
- Submitting false or misleading information on any document provided to the CDPHE, Division, Board, or designee of the Board;
- Using fraud or deception in the course of employment as an operator;
- Failing to conform with minimum standards of performance of an operator's duty;
- Engaging in dishonest conduct during an examination;
- Obtaining a certificate through fraud, deceit, or the submission of materially inaccurate application information; and
- Representing oneself as holding a valid operator's certificate after the expiration, suspension, or revocation of the certificate.

⁴² § 25-9-108(1), C.R.S.

⁴³ § 25-9-104(1)(a), C.R.S.

⁴⁴ 5 CCR 1003-2, 100.20.1.

The Board established additional grounds for discipline against ORCs. The Board may take disciplinary action against an ORC who fails to fulfill the responsibilities of an ORC as defined by rule, or who willfully or negligently causes or allows any other person under his or her supervision to act in a manner inconsistent with an operator's duties and obligations.⁴⁵

The Division has the primary responsibility for investigating instances of possible misconduct by water and wastewater facility operators. The Division must report the results of any investigation to the Board and make recommendations regarding appropriate disciplinary action,⁴⁶ which can include:

- A **reprimand**, an official admonition the Board issues to an operator in the form of a letter, which includes the facts and circumstances leading to the reprimand, the statutory and regulatory provisions at issue, and a warning of more serious consequences for future violations;⁴⁷
- **Suspension** of the operator's certificate, for up to three years;⁴⁸ and
- **Revocation** of the operator's certification.⁴⁹

By rule, the Board authorizes the Division to immediately suspend or revoke an operator's certification if necessary to protect the public health or the environment.⁵⁰

Operators may request a hearing before the Board within 30 days of receiving the notice of disciplinary action.⁵¹

It is unlawful for an owner of a water or wastewater facility to allow the facility to be operated without the supervision of an ORC holding the classification level appropriate for that facility.⁵² When the Division has reason to believe such a violation has occurred, it must serve written notice to the alleged violator. The notice must state the allegations and may include the specific action required to come into compliance.⁵³

Upon being served, the alleged violator has 30 days to request a public hearing on the matter. The Board's decision following a hearing is considered final.⁵⁴

Owners who are found to have violated the ORC requirement are subject to a civil penalty of up to \$300 per day for each day of the violation. All civil penalties are credited to the state's General Fund.⁵⁵

⁴⁵ 5 CCR 1003-2, 100.20.2.

⁴⁶ § 25-9-104(6.5), C.R.S.

⁴⁷ 5 CCR 1003-2, 100.20.4.

⁴⁸ 5 CCR 1003-2, 100.20.5(a).

⁴⁹ 5 CCR 1003-2, 100.20.6.

⁵⁰ 5 CCR 1003-2, 100.20.7.

⁵¹ 5 CCR 1003-2, 100.21.2.

⁵² § 25-9-110(2)(a), C.R.S.

⁵³ § 25-9-110(3), C.R.S.

⁵⁴ § 25-9-110(4), C.R.S.

⁵⁵ § 25-9-110(5), C.R.S.

Program Description and Administration

The Colorado Water and Wastewater Facility Operators Certification Board (Board) is vested with the authority to regulate water and wastewater facility operators in Colorado. The 10-member Board meets at least six times a year. The Board's duties include establishing minimum standards of competence for certified operators, certifying facility operators meeting those standards, taking disciplinary action against individual operators, and promulgating rules to administer the program.

The Water Quality Control Division (Division) within the Colorado Department of Public Health and Environment (CDPHE) is responsible for enforcing the requirement that every water and wastewater facility operate under the direct supervision of a certified operator of the appropriate level of certification, or operator in responsible charge (ORC). The Division also investigates complaints against certified operators. The Division's other duties include doing outreach, providing educational opportunities for the regulated community, and helping facilities achieve and maintain compliance with the law.

Table 4 illustrates, for the five fiscal years indicated, CDPHE's expenditures and staff associated with facility operator certification.

**Table 4
CDPHE Fiscal Information**

Fiscal Year	Total CDPHE Expenditure	Full Time Equivalent Employees
06-07	Data not available	1.6
07-08	\$149,884	2.1
08-09	\$170,425	2.1
09-10	\$169,832	2.1
10-11	\$132,052*	2.0

*Includes \$13,008 for the salaries of Board administration staff. That figure was not available for fiscal years 06-07 to 09-10.

The CDPHE's expenditures in support of the program include salaries, travel, and supplies. These expenditures are paid with a combination of General Fund dollars, federal grants, and facility fees.

The expenditures decreased from fiscal year 09-10 to 10-11 because a full-time Environmental Protection Specialist III position was vacant from November 2010 to June 2011.

The Board contracts with two nonprofit companies to administer the operator certification program. Colorado Environmental Certification and Testing, Incorporated (CECTI) handles water and wastewater treatment certification and the Certification Council handles water distribution and wastewater collection certification. Both CECTI and the Certification Council are comprised of volunteer certified facility operators who provide subject matter expertise in water and wastewater facility operation.

CECTI and the Certification Council have subcontracts in place with two entities. The Associated Boards of Certification (ABC) develops validated examinations for the various classifications of certified operators. Total Events and Management Services, Inc. (TEAMS) runs the Operator Certification Program Office (OCPO) and oversees the daily operation of the program, including processing applications for certification, depositing fees, administering examinations, renewing operator certifications, and maintaining records of operator certifications and approved training courses.

Table 5 illustrates, for the five fiscal years indicated, CECTI and the Certification Council's expenditures associated with facility operator certification.

**Table 5
Contractor Fiscal Information**

Calendar Year	CECTI	Certification Council	Total Expenditures
2007	\$234,353	\$149,460	\$383,814
2008	\$207,158	\$170,331	\$377,489
2009	\$230,872	\$199,213	\$430,085
2010	\$261,311	\$249,458	\$510,769
2011	\$269,695	\$234,225	\$503,920

The table above reflects the dollars paid to ABC and TEAMS, to develop the examinations and administer the program, respectively. Fees paid by certified operators cover these costs.

Not reflected in the table above is the considerable number of volunteer hours logged by the volunteer subject-matter experts comprising CECTI and the Certification Council. OCPO estimates that in 2011, CECTI and the Certification Council volunteered an approximate total of 3,125 hours. If these volunteers had been paid, that would have added nearly \$362,500 to the annual cost of the program.⁵⁶

Table 6 shows the current fees associated with the program.

**Table 6
Operator Certification Fees⁵⁷**

Examination fee	\$45
Online examination fee	\$80*
New certification by examination	\$70**
New certification by reciprocity	\$85**
Certification renewal	\$85**
Late fee (for late renewals)	\$50
Training Unit approval (per course)	\$50

*\$45 examination fee plus a \$35 surcharge.

**Amount reflects total fee including a \$15 application fee.

⁵⁶ OCPO based this calculation on the assumption that volunteers would be paid 50 percent of a private sector consultant's hourly fee, i.e., \$116 per hour.

⁵⁷ 5 CCR 1003-2, 100.19.

The fees are set in rule. Under section 25-9-108, Colorado Revised Statutes, the Certification Council and CECTI may collect the fees and use them to pay for the costs of the program, but they must pay \$5 from every certification or renewal fee into the General Fund. In 2011, the Certification Council paid \$7,560 to the state's General Fund and CECTI paid \$8,495, for a total of \$16,055.

Examinations

CECTI and the Certification Council contract with ABC to develop and validate the certification examinations.

Table 7 shows each examination ABC provides and the total number of questions on each test.

Table 7
Operator Certification Examinations

Operator Category	Classification Level	Number of Questions
Water Treatment	Class A	200
	Class B	150
	Class C	120
	Class D	100
Wastewater Treatment	Class A	200
	Class B	150
	Class C	100
	Class D	100
Industrial Wastewater	Class A	150
	Class B	120
	Class C	100
	Class D	50
Water Distribution	Class 1	100
	Class 2	120
	Class 3	150
	Class 4	200
Wastewater Collection	Class 1	100
	Class 2	120
	Class 3	150
	Class 4	200
Small Water System	100	
Small Wastewater System	100	
Transient Non-Community	50	

The number of questions increases with each classification level.

The subject matter covered in the examinations and the percentage of questions devoted to each subject area varies considerably according to the operator category (e.g., water treatment) and the classification level, but generally, the examinations cover:

- Monitoring, evaluating, and adjusting treatment processes or distribution/collection systems;
- Maintaining, installing, and operating equipment;
- Collecting samples and performing laboratory analyses;
- Complying with laws and rules; and
- Performing safety, security, and administrative duties.

The small systems examinations include questions on a broad range of topics, while the other examinations focus more in-depth on relatively narrow areas.

OCPO is responsible for administering the validated examinations. Applicants must submit their applications on or before three specified deadline dates in order to sit for the examination during the subsequent three-month period:

- March 1, to test in April, May, June, and July
- July 1, to test in August, September, October, and November
- November 1, to test in December, January, February, and March

The examinations are offered in paper-and-pencil format and web-based format. Candidates have three to seven hours to take each examination, depending on the classification level of the examination.

OCPO offers web-based testing at its offices in Aurora at least three days per week year-round.

Candidates who cannot travel to OCPO's offices or those who wish to take the paper-and-pencil examination may sit for the examinations at various locations throughout the state, including Colorado Springs, Durango, Ft. Morgan, Grand Junction, Lakewood, Leadville, Longmont, Montrose, and Pueblo. However, not all examinations are offered at all locations and not all locations are available for each testing cycle. The water and wastewater treatment examinations are offered nine times per year, while water distribution and wastewater collection are offered four times per year. Industrial wastewater and small systems examinations are offered three times per year.

Candidates taking the web-based examination receive their results immediately. Candidates taking the paper-and-pencil examination can view their results on the OCPO website within four weeks of the test date, and OCPO mails the results within five weeks of the test date.

OCPO staff administratively approves all applications for entry-level examinations (Class D, Class 1, Class S, or Class T) which either have no minimum work experience requirement or allow candidates to meet such requirement after passing the test.

For all other examination applications, OCPO staff checks the database of certified operators to verify that the applicant meets the prior certification requirements.

If the applicant does not meet the prior certification requirement, OCPO notifies the applicant that he or she is ineligible to take the examination.

If the applicant holds the proper prior certification, OCPO forwards the application to the review committee of the appropriate organization—CECTI for water or wastewater treatment or the Certification Council for distribution or collection—to determine whether the applicant’s work experience qualifies him or her to sit for the examination. Once the appropriate committee approves the application, OCPO schedules the applicant for the examination. Applicants whose applications are denied may ask the committee to review their applications again. If they are denied a second time, the applicants may appeal the committee’s decision before the Board.

Table 8 shows the pass rates for all facility operator certification examinations for the five calendar years indicated.

Table 8
Aggregate Pass Rates for Operator Certification Examinations

Calendar Year	Total Examinations Given	Overall Pass Rate (%)
2007	2,626	54
2008	2,564	53
2009	2,548	57
2010	2,528	53
2011	2,415	55

The pass rates for all examinations have remained consistently low over the past five years. In fact, looking back to the 2003 sunset review, the aggregate pass rates were similarly low at that time.

This could be partially explained by the fact that until recently, the Board permitted “multiple-entry” examinations, meaning that as long as applicants had the required work experience, they could seek any level of certification without first having to secure lower levels of certification. For example, a person could take the Class B water treatment examination without first getting a Class C certification. This multiple-entry regime may account for the low pass rates.

In November of 2011, the Board promulgated rules abolishing multiple-entry and implemented “sequential testing” by establishing prior certification requirements for all operator classifications higher than entry-level.

The 2011 disaggregated pass rates for the various certification examinations reveal that the pass rates are the highest for entry-level certification examinations and generally decline with each successive level of classification. In theory, sequential testing will assure that a candidate possesses the knowledge required for each specific level before advancing to the next. This might result in improved pass rates.

Certification

Once applicants pass their respective examinations, they are eligible for certification. Applicants must submit an application for certification and a \$55 fee to OCPO. OCPO staff then issue the certificate. For those operator classes that can complete their work experience after passing the examination, OCPO verifies that the applicant has met the experience requirement before issuing the certificate.

Table 9 illustrates the number of certifications for levels of classification in each category issued for the five calendar years indicated.

**Table 9
New Operator Certifications**

	2007	2008	2009	2010	2011	Total
Water Treatment	353	391	337	304	308	1,693
Water Distribution	331	441	348	372	334	1,826
Wastewater Treatment	266	277	340	347	271	1,501
Wastewater Collection	298	308	290	302	260	1,458
Small Water System	65	117	52	126	96	456
Total	1,313	1,534	1,367	1,451	1,269	6,934

The number of new certifications issued has remained relatively stable over the past five years.

Table 10 shows, for calendar year 2011, the total number of active certifications for each operator class.

Table 10
Total Number of Certifications

Operator Category	Classification Level	Total Number
Water Treatment	Class A	767
	Class B	250
	Class C	596
	Class D	765
Wastewater Treatment	Class A	592
	Class B	148
	Class C	394
	Class D	689
Industrial Wastewater	Class A	118
	Class B	31
	Class C	177
	Class D	143
Water Distribution	Class 1	1,056
	Class 2	611
	Class 3	154
	Class 4	889
Wastewater Collection	Class 1	695
	Class 2	392
	Class 3	152
	Class 4	703
Small Water System		191
Small Wastewater System		562
Transient Non-Community		69
Total Active Certifications		10,144

With the exception of the Industrial Wastewater category, there appear to be the greatest number of people in the entry-levels (Class D for water and wastewater treatment, Class 1 for collection and distribution) and in the highest levels (Class A for water and wastewater treatment and Class 4 for collection and distribution).

Many individuals hold more than one type of certification: for example, a person might be certified as both a Class A water treatment facility operator and a Class 4 water distribution facility operator. Consequently, the actual number of certified operators is closer to 6,000.

Training Unit Approval

To qualify for renewal, certified operators must complete a specific number of training units. In order for trainees to receive credit for the class, the class must be approved by CECTI or the Certification Council.

To submit a course for approval, trainers pay a \$50 fee and submit the course outline, syllabus, and any other relevant materials to OCPO via an online application. Committee members evaluate the course materials to determine whether the course meets the criteria established in rule and if so, how many training units should be credited and in which operator category (i.e., water distribution).

Committee members review and approve courses via the online application. As soon as courses are approved, they appear on the list of available training courses for certified operators on the OCPO website.

Complaints/Disciplinary Actions

The Division bears the primary responsibility for ensuring that water and wastewater facilities are operating under the direct supervision of an ORC, that is, a certified operator holding a certification equal to or higher than the classification of the facility. Non-compliant facilities are typically reported by departing facility employees or facility owners themselves. CDPHE might also discover a facility is non-compliant while conducting an inspection.

Table 11 illustrates water and wastewater facilities' rate of compliance with this requirement for the five calendar years indicated.

**Table 11
Facility Compliance with the Operator in Responsible Charge Requirement**

Calendar Year	Number of Facilities	Compliant	Non-Compliant	Compliance Rate (%)
Community Water Systems				
2007	901	853	48	95
2008	902	880	22	97
2009	926	914	12	98
2010	927	916	11	98
2011	933	916	17	98
Non-Transient Non-Community Water Systems				
2007	178	173	5	97
2008	171	168	3	98
2009	179	178	1	99
2010	184	182	2	98
2011	182	180	2	98
Transient Non-Community Water Systems				
2007	901	853	48	95
2008	902	880	22	97
2009	923	916	12	98
2010	927	916	11	98
2011	933	916	17	98
Domestic Wastewater				
2011	598	581	17	97
Industrial Wastewater				
2011	129	127	2	98
Wastewater Collection Districts				
2011	124	119	5	96

The compliance rate has continued to improve from year to year. From 2006 to 2010, the Division took no formal action against facilities for failing to comply with the ORC requirement. In 2011, the Division took four formal actions, all of which were Notices of Violation without Penalty.

The Division is responsible for investigating allegations of misconduct against certified operators and recommending disciplinary action to the Board. Anyone—including facility customers, employees, supervisors and subordinates, as well as Division staff—may file a complaint against a certified operator. The Division accepts anonymous complaints.

Recent complaints against certified operators included allegations of:

- Failing to properly maintain storage tanks in the distribution system, resulting in a waterborne disease outbreak.
- Failing to maintain sample collection protocol.
- Failing to monitor and report contaminants.
- Falsifying experience/education requirements.
- Falsifying records, specifically, laboratory data.
- Refusing to comply with requests from the Division.

Table 12 illustrates the number of complaints received against individual certified operators and the Board action taken for the five fiscal years indicated.

Table 12
Complaints against Certified Operators and Board Action Taken

Action	FY 06-07	FY 07-08	FY 08-09	FY 09-10	FY 10-11
Letter of Reprimand	0	1	0	3	0
Suspension	0	0	0	0	0
Revocation	0	0	0	0	0
Consent Agreement	0	1	0	1*	0
Dismissed for Lack of Evidence	2	0	2	4	1
TOTAL Complaints	2	2	2	8	1

*The certificate was invalidated and the person was required to retake the examination.

Given that there are over 10,000 active certifications in the state, the number of complaints and disciplinary actions has remained very low. The apparent spike in the number of final actions in fiscal year 09-10 occurred because the Division was investigating and clearing a backlog of cases that had accumulated over the previous several years.

Analysis and Recommendations

Recommendation 1 – Continue the Water and Wastewater Facility Operators Certification Board for seven years, until 2020.

Article 9 of Title 25, Colorado Revised Statutes (C.R.S.), vests the Water and Wastewater Facility Operators Certification Board (Board) with regulating water and wastewater facility operators in Colorado. The duties of the Board include determining the minimum qualifications for operators of water and wastewater facilities, certifying operators who meet such qualifications, promulgating rules, and taking disciplinary action against operators who violate the law.

The Board is a Type 1, policy-autonomous board housed within the Water Quality Control Division (Division) of the Colorado Department of Public Health and Environment (CDPHE), which provides the Board with staffing and resources.

The first question of a sunset review is whether this regulation serves to protect the public health, safety and welfare.

Among regulated professionals, water and wastewater facility operators have tremendous reach. Although consumers typically do not interact directly with facility operators, consumers interface with water and wastewater systems many times a day, every day. Water distribution facility operators work to ensure that when people turn on the tap, water will come out. Water treatment facility operators make sure that water safe to drink. Collection facility operators make sure that the dirty water that flows down the drain is conveyed safely to a wastewater treatment facility, where wastewater treatment facility operators assure that the wastewater is properly treated before being returned to public water sources.

Improper water treatment could sicken literally thousands of people. Improper collection and treatment of wastewater could result in dangerous runoff to streams and rivers. Such incidents are extremely rare, but the potential for harm is considerable. By assuring certified operators meet certain minimum requirements, taking disciplinary action against operators who violate the law, assuring facilities operate under the supervision of an operator in responsible charge (ORC), and promulgating rules governing the operation of water and wastewater facilities, the Board protects the health and welfare of Colorado citizens.

Therefore, regulation is justified and should be continued.

The third and fourth sunset criteria require a sunset review to consider:

- 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; and
- Whether an analysis of agency operations indicates that the agency performs its statutory duties efficiently and effectively.

The structure of Colorado's operator certification program is unique. Section 25-9-104(1)(a), C.R.S., permits the Board to appoint one or more nonprofit corporations to administer the program and examinations. The Board has chosen to do so.

Colorado Environmental Certification and Testing, Incorporated (CECTI) handles the water and wastewater treatment portion of the program and the Certification Council handles the wastewater distribution and collection portion. These two contractors then subcontract with the Associated Boards of Certification (ABC) to develop validated examinations for the various classifications of certified operators and with Total Events and Management Services, Inc. (TEAMS) to run the Operator Certification Program Office (OCPO) and oversee the daily operation of the program.

While this structure makes for a complicated organizational chart, the responsibilities of the six entities involved in facility operator certification are reasonably well defined:

- **The Board** establishes minimum standards for certified operators, promulgates rules, and bears ultimate responsibility for the operations of the program.
- **The Division** serves as staff to the Board, investigates complaints against individual operators, and assures facilities operate under the direct supervision of a certified operator of the appropriate class.
- **CECTI** and the **Certification Council** provide subject matter expertise in evaluating certification applications and approving training courses.⁵⁸
- **ABC** develops the certification examinations.
- **TEAMS** operates OCPO, which administers the daily operations of the program.

In general, the program operates efficiently with little duplication of effort. That said, the complex program structure underscores how vitally important it is for the Board to maintain vigorous oversight of its contractors and subcontractors. The Board bears the ultimate responsibility for protecting the public health and welfare.

⁵⁸ As of this writing, CECTI and the Certification Council were in the process of merging into a single entity, which might facilitate more efficient operations.

One issue that has dogged the program ever since it was implemented in 2000 is consistently low examination scores. On average, the scores for all examinations hover around 50 percent.

As explained in the “Program Description and Administration” section, the low pass rates could be partially explained by the fact that until recently, the Board permitted “multiple-entry” examinations, meaning that as long as applicants had the required work experience, they could seek any level of certification without first having to secure lower levels of certification. In November of 2011, the Board implemented “sequential testing,” which requires applicants for operator classifications higher than entry-level to meet prior certification requirements. It is a reasonable expectation that under this regime the pass rates should improve.

Clean drinking water and the safe disposal of wastewater are essential to the public health and welfare. Also, Colorado’s operator certification program fulfills the mandate of the U.S. Environmental Protection Agency that states require water treatment and water distribution facility operators to meet minimum standards. For these reasons, the Board should be continued.

To monitor progress on the issue of persistently low examination pass rates, continuing the regulation of water and wastewater facility operators for seven years, until 2020, is justified.

Recommendation 2 – Change the seat on the Board for the Colorado Rural Water Association to a more general small-systems seat.

The 2003 sunset review recommended reducing the size of the Board from 13 to 9 members, arguing that a smaller Board might be more efficient while still assuring diverse representation on the Board. The 2003 report identified several potential redundancies in the Board composition at that time.

Among the redundancies was the fact there was one seat (created in 1996) for a small systems facility operator and another seat (created in 2000) for a representative of the Colorado Rural Water Association (CRWA), a professional association representing small systems. The 2003 sunset report recommended that the General Assembly use its discretion in determining which seat should be eliminated. The General Assembly ultimately determined to keep the CRWA seat.

There is no doubt that CRWA represents the interests of small systems in Colorado. However, there are other organizations operating within Colorado that also represent the interests of small systems, including the Rocky Mountain Section of the American Water Works Association and the Rural Community Assistance Association. Reserving a seat on the Board specifically for CRWA seems inequitable in light of these other worthy organizations that also serve small systems.

When considering board composition, it is good policy to name the constituency a board seat is intended to represent rather than designating that seat for a specific organization. There is precedent on the Board for repealing seats designated for specific entities: the seat for a representative of the Colorado Municipal League (CML), which had been in place since at least 1973, was repealed in 2004. The current composition calls for a city manager, manager of a special district, or utility manager in a city or county that operates a domestic water or wastewater treatment facility. In other words, the current seat calls for a Board member representing a municipality. The Governor could still appoint a CML representative to this seat, but may also consider other candidates who represent municipalities.

In that spirit, the General Assembly should repeal the seat designated for CRWA and instead create a seat for an individual representing the interests of small systems, that is, systems serving 3,300 or fewer individuals. Such a person could be a certified operator who runs a small system or a person from an organization representing small systems. Making this change would give other organizations and individuals an opportunity to serve on the Board and would give the Governor a wider range of potential Board members to consider for appointment.

Recommendation 3 – Allow the Board to exempt certain domestic wastewater facilities from the requirement that they operate under the supervision of a certified operator.

Section 25-9-104(4), C.R.S., allows the Board to exempt certain industrial wastewater treatment facilities or classes of facilities from the ORC requirement as long as making such exemptions is consistent with the Board's duty to protect the public health and environment.

In determining whether to grant such an exemption, the Board may consider criteria including, but not limited to:

- Discharges of limited duration;
- The sensitivity of the receiving waters;
- The level of toxic pollutants in the discharge; and
- Situations where chemical, mechanical, or biological treatment techniques are not required to meet permit limits.

If the Board is assured that allowing the facility to operate without ORC supervision would not endanger the public health, it may exempt that facility from the ORC requirement. The exemption represents a cost savings to the facility and aligns with the second sunset criterion that regulation be the least restrictive consistent with the public interest.

There are instances where domestic wastewater treatment facilities could be operated safely without ORC supervision, for example, a campground where wastewater flows directly into a septic tank. Under the current law, however, the Board may only grant exemptions to industrial facilities, so that campground would be required to hire a certified operator to oversee the septic tank even though the public health and environment is not at risk.

Generally, the Board has not been enforcing the ORC requirement in instances such as the one above, and through lack of enforcement, such facilities have been effectively exempted. This is no substitute, however, for a clear, defined exemption authority.

It is important to note that even if the Board were to exempt a domestic wastewater facility from the ORC requirement, that facility would remain under the regulatory authority of CDPHE. Facility owners would still have to obtain applicable wastewater discharge permits, meet reporting requirements, and ensure the facilities are operated in compliance with all applicable state and federal laws.

Granting the Board the authority to establish subsets of domestic wastewater facilities that are not required to operate under the supervision of an ORC would relieve the regulatory burden on small businesses and allow the Division to focus its enforcement efforts on facilities that truly do require the supervision of an ORC to operate safely. Doing so would not limit or otherwise affect CDPHE's ability to intervene and take action if a domestic wastewater facility were to pose a threat to the public health and environment.

Therefore the General Assembly should expand the Board's authority to grant exemptions from the ORC requirement to include domestic as well as industrial wastewater treatment facilities.

Recommendation 4 – Create separate statutory sections delineating the responsibilities of the Board, the Division, and any nonprofit corporations under contract with the Board.

The General Assembly created the underlying statute for the Board in 1973. Since then, the statutory provisions have been revised many times. As a result, the provisions are poorly organized and contain language that is duplicative and confusing. Specifically, section 25-9-104, C.R.S., titled "Duties of Board—Rules", includes, among other things:

- Administrative information (e.g., information on Board elections and the duties of the Board).
- Duties of the Board, such as classifying facility operators, promulgating rules, and disciplining operators.

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- Powers of the Board, such as appointing a nonprofit corporation to administer the operator certification program and promoting operator training programs.
 - Minimum qualifications nonprofits must possess to be considered for Board appointment.
 - Duties of the Division, such as investigating instances of possible misconduct by facility operators.
 - Elements that must be included in a contract between the Board and any nonprofit appointed to administer the program.

As discussed in Recommendation 1 of this sunset report, the current structure of the facility operator certification program is generally effective, but complex. The statute should clearly reflect the duties, powers, and responsibilities of each party involved with operator certification. Over the past almost 40 years, multiple revisions have rendered this section confusing and at times duplicative. For this reason, section 25-9-104, C.R.S., should be split into four separate sections as described below.

Section 1: Duties and Powers of the Board.

This section should include all tasks the Board “shall” and “may” do. This section should include the provisions permitting the Board to appoint a nonprofit corporation to administer the programs and the provision compelling the Board to enter into a contract with such nonprofits. The specific tasks associated with program administration and all other provisions relating to contracts or subcontracts should be moved to the new “Contracts” section below.

Section 2: Contracts.

This new section should provide implementation details regarding the Board’s power to select and appoint nonprofit corporations to administer the program. This section should contain four basic components:

- Provisions establishing that the contractor would be responsible for all tasks associated with administration of the program, as defined by rule.

The way the current statute is written, there is one list of duties associated with program administration and a second list of duties which must be specifically addressed in the Board contract. A side-by-side comparison of these tasks reveals numerous duplications and several areas of inexplicable divergence.

In addition, the Board has promulgated rules delineating the administrative functions of the program.⁵⁹

⁵⁹ 5 CCR 1003-2, 100.3.

It is appropriate that this kind of detailed information be included in rule rather than statute because the Board has more flexibility to revise rules as needed.

Therefore, the provision should state that a contractor would be responsible for all program administration functions as defined by rule, and that the contract must specifically address all such functions.

- The provision currently located at section 25-9-104(1)(b), C.R.S., describing the expertise a contracted nonprofit must possess to be considered for Board appointment.
- The provision currently located in section 25-9-104(1)(a), C.R.S., allowing the nonprofit corporation to enter into subsidiary agreements subject to prior approval by the Board.
- The provision currently located in section 25-9-104(1)(a), C.R.S., stating that the Board is responsible for and has final authority for all actions and decisions carried out on its behalf by any such nonprofit corporation.

Section 3: Division - Primary investigatory authority. This section should include the wording of section 25-9-104(6.5), C.R.S., vesting the Division with the primary responsibility for investigating complaints.

Section 4: Exemptions. The section should include the provision currently located in section 25-9-104(4), C.R.S., establishing the Board's ability to grant exemptions from the ORC requirement for industrial wastewater treatment facilities and domestic wastewater treatment facilities as described in Recommendation 4 of this sunset report.

Making these changes would not substantively change any aspect of the existing program. Rather, the changes would clarify the duties and responsibilities for all interested parties, remove duplicative language, and provide a clearer framework for future amendments to the law. For these reasons, the General Assembly should reorganize section 25-9-104, C.R.S., as described above.