

2017

ANNUAL REPORT

To the United States
Environmental Protection Agency

Colorado Water and Wastewater Facility
Operators Certification Program



COLORADO

Water & Wastewater Facility
Operators Certification Board

Department of Public Health & Environment

*Report to EPA
July 1, 2018*

CONTACT



COLORADO

Water Quality Control Division

Department of Public Health & Environment

Armando Herald, Local Assistance Unit Manager
4300 Cherry Creek Drive South
Denver, CO 80246-1530
303-692-3619 | armando.herald@state.co.us
www.colorado.gov/cdphe/wq-facility-operator-certification

TABLE OF CONTENTS

Contact	2
Introduction	3
Antibacksliding	3
Rulemaking	3
Authorization.....	4
Classification of systems, facilities and operators	5
Public water systems	5
Table 1 - Community and non-transient non-community facilities.....	5
Certified operators.....	5
Active operators	5
Table 2 - Active operator certificates	6
Operator in Responsible Charge Requirements	6
Compliance Advisories.....	6
Tracking.....	6
Process Control and System Integrity Decisions Reserved	6
Availability	7
Operator Qualifications	7
Certification by Examination	7
Table 3 - Written exam pass rates by level.....	7
Table 4 - Electronic exam pass rates by level.....	8
Table 5 - 5 year exam pass rates	8
Reciprocity	9
Table 6 - Certificates by reciprocity	9
Education and experience requirements.....	9
Enforcement.....	9
Facility enforcement	9
Operator disciplinary action.....	10
Certificate renewal	10
Certificate renewal and professional development	10
Table 7 - Certificate renewals	11
Grandparenting provision	11
Resources needed to implement the program	12
Operator certification - capacity development partnership.....	12
Recertification	13
Stakeholder involvement.....	13
WWFOCB meetings	14

AquaTalk newsletter	14
Program review	14
Summary	15
Water and Wastewater Facility Operators Certification Requirements, Regulation 100	16
Colorado Attorney General’s Certification of Enforceability	17
Administrative Services External Review Report	18
Water and Wastewater Facility Operators Certification board customer satisfaction survey results	19
Water and Wastewater Facility Operators Certification Board strategic plan	20

INTRODUCTION

In 1999, the U.S. Environmental Protection Agency (EPA) issued guidelines for the operator certification program. The guidelines specified minimum standards for certification and recertification for operators of community and non-transient, non-community public water systems. Operator certification is an important step in promoting compliance with the federal Safe Drinking Water Act.

The operator certification program's public health objectives are to ensure customers of Colorado public water systems are provided with an adequate supply of safe, potable drinking water, customers are confident that their water is safe to drink and facility operators are trained and certified and they have the knowledge and understanding of the public health reasons for drinking water standards.

Colorado ensures the public health objectives are met by the operator certification program.

This is the annual program report to EPA for calendar year 2017. In accordance with the guidelines, this report addresses the status and continued implementation of Colorado's program for antibacksliding and the nine major program components for public water systems. The components of the report are:

1. Antibacksliding
2. Authorization.
3. Classification of systems, facilities and operators.
4. Operator qualifications.
5. Enforcement.
6. Certification renewal.
7. Resources needed to implement the program.
8. Recertification.
9. Stakeholder involvement.
10. Program review.

ANTIBACKSLIDING

In 2001, the State of Colorado Operator Certification Program was approved as consistent with the *Final Guidelines for the Certification and Recertification of the Operators of Community and Non-Transient Non-Community Public Water Systems*, 64 CFR 5916. Colorado's statute required certified treatment operators for all public water systems, not just community and non-transient non-community water systems prior to EPA issuing the guidelines for the operator certification program in 1999. This report includes all public water systems in Colorado.

Rulemaking

At its November 29, 2016 rulemaking hearing, the board revised section 100.9.7 to state that a facility owner can respond to a notice of violation issued by the division or a civil penalty assessment issued by the Department by "submitting to the Board" a hearing request. Subsequently it came to the board's attention that this revision was not consistent with the Board's enabling statute (section 25-9-110(4), C.R.S.), which requires that the facility owner submit such hearing requests to the division. The board conducted a "written comment only rulemaking hearing" to address this relatively minor issue, and received no comments.

In order to align the language in the regulation with the statute, the board revised section 100.9.7 to indicate that hearing requests for notices of violation under sections 100.9.1-100.9.5 and related civil penalty assessments are to be submitted to the division. The hearings are then conducted by the board.

The rulemaking hearing was held on June 20, 2017, and the board amended Regulation 100 with an effective date of August 31, 2017. The current version of Regulation 100 is attached to this report (Appendix A) with the Colorado Attorney General's Certification of Enforceability (Appendix B).

The revisions to regulations put the language back to the original, therefore there was no change to the approved program.

The operator certification program remains the same and no backsliding has occurred since submitting the annual report covering program activities for calendar year 2016 and does not amend the initial program description submitted in 2001.

AUTHORIZATION

The Water and Wastewater Facility Operators Certification Board is a section of the Division of Administration within the Colorado Department of Public Health and Environment. Article 9 of Title 25, Colorado Revised Statutes (C.R.S.), requires every water and wastewater facility to be under the supervision of a certified operator holding a certificate equal to or greater than the classification of the facility. The board is authorized by 25-9-101 et. seq., C.R.S., to promulgate Regulation 100, Water and Wastewater Facility Operators Certification Requirements (5 CCR 1003-2).

The Colorado Department of Public Health and Environment, Water Quality Control Division has been delegated responsibility for the oversight of public water systems in Colorado to ensure compliance with and enforcement of the provisions in Regulation 100, Regulation 11-Colorado Primary Drinking Water Regulations, the Safe Drinking Water Act and other pertinent regulations.

Regulation 100 was amended on November 29, 2016. That revision was reported in the annual report for calendar year 2016.

At its November 29, 2016 rulemaking hearing, the board revised section 100.9.7 as discussed above. This change does not significantly change the operator certification program and Colorado continues to meet the antibacksliding provisions of the guidelines.

A copy of Regulation 100 and the Colorado Attorney General's Certification are attached as Appendix A and B respectively.

CLASSIFICATION OF SYSTEMS, FACILITIES AND OPERATORS

Public water systems

Colorado separately classifies treatment plants and distributions systems. The division is responsible for classifying all public water system treatment and distribution system facilities in accordance with the provisions of Regulation 100.

Treatment classification is based on specific design features that include treatment processes and their complexity, source water type and design capacity. Water treatment facilities are classified as Class D, Class C, Class B or Class A. Class A is the highest level of classification.

Distribution systems are classified by the population served. Water distribution systems are classified as Class 1, Class 2, Class 3 or Class 4. Class 4 is the highest level of classification.

Compliance with operator certification requirements is a Safe Drinking Water Program priority. Table 1 is the total number of public water system facilities required to comply with the certified operator requirements.

Table 1 - Community and non-transient non-community facilities

	Number of facilities
Community treatment	741
Community distribution system	878
Non-Transient, non-community treatment	158
Non-Transient, non-community distribution system	116
Transient, non-community treatment	922
Transient, non-community distribution system	553
TOTAL	3,368

Colorado has approximately 2,000 public water systems. For operator certification purposes there are 3,368 separate facilities required to be under the direct supervision of a certified operator in responsible charge (ORC).

Certified operators

Operators are certified by the level of exam successfully passed. Colorado administers the Association of Boards of Certification (ABC) internationally standardized and validated exams. Colorado utilizes ABC's need to know criteria to ensure the classification of facilities matches the complexities of each exam level.

Active operators

Colorado requires separate treatment and distribution certificates. Active drinking water certificate counts are listed by category in Table 2. Colorado also grants a Class S and Class T certificates. These certificates are a combination of treatment Class D and distribution Class 1 operator certificates designed specifically for small and very small public water systems. An operator with a Class S certificate may serve as the operator in responsible charge for systems serving a population of less than 3,300 with basic treatment processes. An operator with a Class T certificate may serve as an operator in responsible charge for systems serving a population of less

than 100 persons and the only treatment is non-gaseous chlorine. Many operators hold multiple certificates.

Table 2 - Active operator certificates

Certificate Levels*	Active certificates
Distribution 4	699
Distribution 3	307
Distribution 2	683
Distribution 1	1320
Total distribution	3,009
Treatment Class A**	475
Treatment Class B	306
Treatment Class C	498
Treatment Class D	848
Class S Water	570
Class T	39
Total treatment	2,736

* Class 4 is the highest level distribution system certificate.

** Class A is the highest level treatment certificate.

Operator in Responsible Charge Requirements

Regulation 100 requires owners of water and wastewater facilities to place the operation of facilities under the supervision of a certified operator in responsible charge who holds a certificate equal to or greater than the classification of the facility.

Compliance Advisories

The division issued 97 compliance advisories to community, non-transient non-community and transient non-community water systems for failure to have a certified treatment and/or distribution system operator or failure to have a certified operator at the correct level for each facility they were operating in calendar year 2017. This represents a 98 percent overall compliance rate for 2017.

Colorado does not have a temporary operator certification program. All facilities are required to comply with the operator in responsible charge requirement at all time.

Tracking

Colorado uses the Safe Drinking Water Information System to track the operator in responsible charge for each public water system.

Process Control and System Integrity Decisions Reserved

Regulation 100 reserves all process control and system integrity decisions to the certified operator in responsible charge or another operator holding a certificate equal to or greater than the classification of the facility in accordance with a written operating plan.

Availability

Regulation 100 requires the certified operator in responsible charge or another operator who holds a certificate equal to or greater than the classification of the facility be available at all times during operation of the water treatment or distribution facility. To maintain direct supervision when the operator in responsible charge is not on-site, Regulation 100 requires a written operating plan (section 100.11.6, Regulation 100).

The written operating plan requirements are in addition to a facility's operating procedures. The written operating plan allows the operator in responsible charge to delegate tasks or activities, to other facility operators if the plan is precise in defining the limits of such tasks or activities. Any operational activity beyond the limits defined in the operating plan requires the immediate and direct consultation with and participation of a certified operator in responsible charge or another operator holding a certificate equal to or above the classification of the facility he or she is operating. The operators in responsible charge remain accountable for the consequences of the performance of such tasks or activities by other facility operators under their charge.

OPERATOR QUALIFICATIONS

Certification by Examination

An applicant for certification must pass a validated examination designated for the category and level of facility for which application is being made with a minimum passing score of 70 percent. Colorado uses the Association of Boards of Certification (ABC) internationally standardized and validated exams.

ABC exams are rigorously developed using an in-depth jobs analyses, development of Need-to-Know Criteria for each category and level of exam, the use of subject matter experts to write exam items and a psychometric analysis of each item to ensure the exams demonstrate that the operator has the necessary skills, knowledge, ability and judgement as appropriate for the certificate level.

Table 3 - Written exam pass rates by level

Exam Class*	Exams Administered	Exams Passed	Pass %
A	39	10	26
B	34	8	24
C	59	19	32
D	128	54	42
S	58	32	55
T	7	6	86
4	46	9	20
3	71	14	20
2	118	41	35
1	220	86	39
Total	780	279	38

*Class A is the highest level of treatment classification.
Class 4 is the highest level of distribution system classification.
Class S is a combined level D treatment and level 1 distribution.

Table 4 - Electronic exam pass rates by level

Exam Class*	Exams Administered	Exams Passed	Pass %
A	83	31	37
B	64	42	66
C	80	58	73
D	179	133	74
S	43	39	91
4	82	26	32
3	99	51	52
2	143	77	54
1	245	165	67
Total	1018	622	61

*Class A is the highest level of treatment classification.
Class 4 is the highest level of distribution system classification.
Class S is a combined level D treatment and level 1 distribution.

Successfully passing exams is vital to maintain a steady workforce of certified operators. Low pass rates for higher level certificates continue to be an area of concern. Colorado offers three exam cycles per year. There are multiple exam locations and dates during each cycle.

The 2017 average pass rates for water treatment and distribution exams represent a 16 point drop in the pass rates for written exams and a 7 point drop in pass rates for electronic exams from the high in 2014. It is not clear why there was such a significant decrease in pass rates over the past three years; further analysis is necessary to explain the decrease in these rates.

Table 5 - 5 year exam pass rates

	Written	Electronic	Average
2013	53	67	60
2014	54	68	61
2015	45	62	54
2016	39	60	50
2017	38	61	50

The overall pass rate for water treatment and distribution is a 11 point drop from the high in 2014 and the lowest level in the last 5 years.

The 23 point difference in pass rates between written and electronic exams is unlikely the result of a single factor. It's more likely a combination of factors, such as:

- Electronic testing allows operators to make an appointment to take exams at their convenience.
- Electronically administered exams are administered in a room with a maximum of 24 people taking the exam.
- The atmosphere for electronically administered exams is quieter, more relaxed and questions are presented one at a time eliminating the distractions inherent in the traditional paper and pencil booklet style exams.

- The differences in demographics of examinees who prefer to take the exam electronically compared to those choosing to take the exam by paper and pencil.

Reciprocity

Certificates may be issued by the Board, without examination, on a case-by-case basis, to persons in a comparable classification who have passed an adequate, validated examination and who hold a valid certificate provided the entity issuing the certificate have requirements are of a standard equal to or higher than that specified by Regulation 100. The board's current policy is published on its web site at www.colorado.gov/cdphe. The board approved 30 reciprocity requests in 2017.

Table 6 - Certificates by reciprocity

Treatment A	9
Treatment B	1
Treatment C	3
Treatment D	4
Distribution 4	3
Distribution 3	2
Distribution 2	1
Distribution 1	6
Total	30

Education and experience requirements

Regulation 100 requires all operators have a high school diploma, general equivalency diploma (GED) or board approved relevant training to qualify to sit for an examination. Regulation 100 defines the minimum amount in-facility experience required to sit for each exam level. Up to 50 percent of the required job experience may be met with post high school education or with cross-experience. The cross experience is between water and wastewater treatment or distribution and collection.

ENFORCEMENT

Facility enforcement

Enforcement authority is granted to the department to issue and enforce administrative orders and to impose civil penalties against facility owners for failure to operate their systems under the supervision of a certified operator (25-9-110(3), C.R.S.).

The division calculates compliance for the operator in responsible charge requirements monthly. Compliance advisories are issued to community, non-transient non-community and transient non-community water systems for failure to have a certified operator or failure to have a certified operator at the correct level for the facility they were operating. The division issued 97 compliance advisories to owners of public water systems for failure to have a certified operator or failure to have a certified operator at the correct level for the facility they were operating. The majority of facility owners act quickly to return their facility to compliance upon notification. Those facilities that do not return to compliance in a timely manner may be issued a formal enforcement order with penalties.

In 2017, there were five formal enforcement orders issued to owners of public water systems for violating certified operator requirements. By December 31, 2017, three of the five systems had returned to compliance.

Operator disciplinary action

The board has authority to establish criteria for the discipline or reprimand of an operator (25-9-104(6), C.R.S.). Section 100.23.3 grants authority to investigate possible misconduct by certified operators. In 2017, the division investigated four complaints of operator misconduct. Three of the investigations have been closed, two with no formal action. One investigation resulted in a formal reprimand by the board.

CERTIFICATE RENEWAL

Certificate renewal and professional development

Certificates must be renewed every three years. The certificate is invalid after the expiration date of the certificate. Regulation 100 requires on-going professional development to renew certificates. This requirement includes grandfathered certificates. As an incentive to maintain certificates in current status, a \$50 late fee is charged to an operator who submits their renewal application after the certificate expiration date.

Individual operators are responsible for tracking and reporting training units for certification renewal. Certificates of completion and transcripts are reviewed to determine fulfillment of professional development requirements. In 2017, more than 500 approved courses were offered. Many of these classes were held multiple times within the year. The price for each course varies from no charge to several hundred dollars for multiple-day training. Each operator has many options to ensure they receive the training necessary to maintain and enhance their job knowledge, skills and abilities as certified operators.

Colorado does not maintain a clearinghouse that tracks the number of classes taught by an instructor or institution, the number of attendees at each training class or the cost to the student for each course. Courses approved for training units are not ranked by certification level. Training courses used to fulfill the professional development requirement must be approved by the board or its contractor. Regulation 100 requires certified operators to meet the on-going professional development requirements established for each category and level of certificate held for renewal. This is to ensure certified operators getting the necessary training for continuing certification.

Trainers submit applications for training units for their courses, workshops, seminars or conferences. The applications are approved by a committee of volunteer subject matter experts who review and assign training units. Once approved, the course is entered into the database of approved training courses. A list of approved courses is available online: www.ocpoweb.com.

The current data system does not track operators who renew after their certificate expired but before the two year automatic revocation.

Table 7 - Certificate renewals

Treatment A	160
Treatment B	86
Treatment C	162
Treatment D	268
Treatment S	182
Treatment T	16
Distribution 4	235
Distribution 3	102
Distribution 2	226
Distribution 1	455
Total	1892

No operators were required to take additional training beyond the required training units for renewal.

Grandparenting provision

When in effect, the grandparenting provision was available to water distribution system operators. The provision allowed an operator who was certified before January 30, 2001, under the voluntary program administered by the Colorado Water and Wastewater Collection Systems Certification Council, Inc. to continue operating under the voluntary certificate for two years. All distribution operators were required to obtain a standard or restricted certificate no later than January 30, 2003.

A standard certificate requires qualifying for and passing a standardized exam. The board determined in 2000 that water distribution system operators certified under the voluntary program in place prior to January 30, 2001, were qualified to continue to operate the facility they were employed at on January 30, 2001, and would be issued restricted certificates. The board placed the following restrictions on those certificates:

1. Restricts the operator to employment at the facility they operated on January 30, 2001.
2. Stipulated that if the facility's classification changed to a higher level the operator would be required to obtain a standard certificate at the correct level to remain as the operator in responsible charge.
3. Requires the same on-going training to renew the certificate as for non-restricted certificates.

Colorado operators with restricted certificates have been operating the same distribution system facilities for over 17 years and have met requirements for renewal every three years. Colorado has ensured these operators possess the knowledge, skill, abilities and judgment to continue to operate the respective water distribution systems.

Currently, there are 70 operators holding restricted distribution certificates under this provision. All others who were granted a restricted certificate have either allowed the certificate to expire or successfully passed a certification exam and no longer rely on a restricted certificate.

RESOURCES NEEDED TO IMPLEMENT THE PROGRAM

Operator certification fees do not fund agency staff. Agency staff funding comes from state general funds, drinking water and permit program fees and federal grants. The division has one full-time employee dedicated to operator certification who serves as staff and liaison to the board. There has been no change in the number of full-time employees assigned to the operator certification program from last year.

Compliance with the requirements of Regulation 100 is performed by drinking water program compliance and enforcement staff. Additionally, compliance is checked on-site by field services staff during sanitary surveys. Facility classification is done at the time of design review by engineering section staff. The division's data system (SDWIS), management and administrative teams provide all necessary program support for agency activities. The board's administrator and staff are approximately 0.2 full-time employees. In total, there are over 75 division staff members with responsibilities related to the certified operator program. It is estimated the work done by the division is equivalent to at least four full-time employees.

Colorado uniquely contracts the program administrative services to a non-profit organization comprised of subject matter experts who volunteer their time and expertise. The contracting organization is the Colorado Environmental Certification and Training, Inc. (CECTI). CECTI is responsible for the certification of individuals, approving applications, making recommendations regarding reciprocity requests and evaluating courses used for certificate renewals.

Income to support CECTI originates from fees charged to applicants and operators as authorized by statute and Regulation 100. In 2017, CECTI subject matter experts volunteered over 3,000 hours reviewing applications and training courses, proctoring exams and completing other contractual activities. This is approximately one and a half full-time employees.

Under the current organization and with the current level of funding to the agency, Colorado has sufficient resources to implement the operator certification program now and into the future.

Operator certification - capacity development partnership

The local assistance unit is part of the division's Safe Drinking Water Program. This unit works in partnership with drinking water systems, assistance partners and division staff from various program areas. The partnership reaches operators and system owners on a grassroots level to improve compliance, enhance water quality, better position a system managerially, financially, and technically for the future and to protect public health.

The unit's purpose is to provide training, assistance and management support services to public water systems so they can strengthen their ability to supply safe drinking water to the public. In this function, the unit provides capacity coaching and training services, security and emergency preparedness services, and utilizes drinking water state revolving fund set-asides and other EPA grants to retain contractors for additional services.

The source water protection program is an integral part of the local assistance unit that focuses primarily on voluntary preventative strategies to protect sources of drinking water prior to treatment. The unique combination of training and source water protection assistance provides enhanced operator training, contaminant prevention strategies and public drinking water system assistance.

Finally, the unit is responsible for providing advice and assistance to the Water and Wastewater Facility Operators Certification Board, facility owners, certified operators and division staff on operator certification policy and regulatory matters as well as recommendations regarding disciplinary action against operators. This is accomplished by the operator certification staff who serves as the liaison to the board providing outreach and compliance assistance to operators and system owners. The liaison role ensures alignment with capacity development efforts including training, certification challenges and improved assistance to facility owners.

In an effort to address identified areas of concern, the division has increased outreach to operators:

- The division sponsors no or low-cost training offered in multiple sites across the state with a focus on operations, math and regulations.
- In 2017, division coaching staff provided 209 on-site, individual operator training sessions at no cost and classroom style training and presentations at other schools and conferences.
- Division compliance, operator certification and engineering staff regularly present at conferences, seminars and other training venues throughout the state on various regulatory compliance topics.
- Operator certification staff participate in the Rocky Mountain Section AWWA small systems education committee which provides training that targets small system operators.
- The local assistance unit provides support to Colorado's Water and Wastewater Agency Response Network (CoWARN) and works with them to provide systems and operators with emergency preparedness and response training.
- The Communication and Special Projects Unit now implements the pursuing excellence drinking water awards program to recognize drinking water utilities that choose to go above and beyond to improve public health from source to tap. Drinking water utilities are eligible to receive awards through the program.

RECERTIFICATION

Certificates are valid for three years from the date issued. Once a certificate has expired, the operator is no longer certified. A certificate may be restored, through renewal, for up to two years after the expiration date. A certificate is automatically revoked after two years if not renewed.

Subsequently, if the person desires to be recertified, they are treated as a new applicant for certification and must re-test starting at the lowest level and sequentially take tests until they reach the desired level.

The board provides an exception to this rule for active duty members of the uniformed services. These individuals have time to renew their certificates after being released from active duty. For more details about this provision see section 100.15.1(e), Regulation 100.

STAKEHOLDER INVOLVEMENT

Stakeholder involvement is important to the public health objectives of Colorado's operator certification program. It helps to ensure the relevancy and validity of the program, and the confidence of all interested parties. In recognition of this, Colorado employs various strategies to include ongoing stakeholder involvement in the revision and operations of its operator certification program.

WWFOCB meetings

The Water and Wastewater Facility Operators Certification Board consists of ten members representing the varied interests in the water and wastewater facility certification program. Article 9 of Title 25, Colorado Revised Statutes (C.R.S.) specifies the make-up of the ten member governor appointed board.

Board members serve four year terms with staggering expiration dates. Generally, board members serve for no more than two consecutive terms. Each board member brings a unique perspective based on their expertise and experience. The division serves as staff to the board.

In 2017, the WWFOCB held six meetings. All meetings are open to the public and participation is encouraged. The February meeting was held in conjunction with the annual Colorado Rural Water Association conference with approximately 100 in attendance.

The division began a stakeholder process to gather information and form workgroups to make recommendations to the board regarding updating of the facility classification matrices in Regulation 100. The division held eight initial meetings across the state and formed four workgroups. Work continues into 2018.

The board's contractor is a non-profit corporation made up of certified operators. This group provides input and makes suggestions regarding the certified operator program.

AquaTalk newsletter

The Safe Drinking Water Program publishes a quarterly newsletter that is distributed to approximately 3,000 system owners, certified operators and others. The newsletter is also available on the division's web site. Each newsletter contains at least one article specifically focused on operator certification topics and any changes to regulation or board policy. The Aqua Talk newsletter is at: www.colorado.gov/cdphe/aqua-talk. This is an excellent way for the division and the board to inform operators and owners regarding the program.

PROGRAM REVIEW

The division conducts periodic reviews of its processes, procedures and data management. Each public water system is assigned a compliance specialist. Each compliance specialist oversees all compliance and enforcement activities related to a specific water system in regards to both drinking water regulations and operator certification regulations. This is a holistic approach that enhances communication between the division and the regulated community. The approach has also improved program efficiency and effectiveness.

In 2017, the program began an external program review in accordance with published EPA guidance and direction. The review included an agency review for compliance with the nine baseline standards, an administrative services evaluation for compliance and efficiencies, and a customer satisfaction survey. The administrative services evaluation and the customer satisfaction survey were completed in summer 2017. The administrative services final report is attached as Appendix C. The customer satisfaction survey and summary are attached as Appendix D.

The board held its first strategic planning session in October 2017 to establish priorities for the coming years to maintain a robust operator certification program, ensure customer satisfaction, and identify priority areas and specific actions for improvement. A copy of the plan is attached as Appendix E.

The program continues to work toward developing a standardized approach to conducting future internal and external reviews.

SUMMARY

Colorado continues to ensure customers of Colorado public water systems are provided with an adequate supply of safe, potable drinking water, customers are confident that their water is safe to drink and facility operators are trained and certified and they have the knowledge and understanding of the public health reasons for drinking water standards. Colorado's facility operator certification program is meeting the requirements for the nine baseline standards established in 1999 and 2001.

Appendix A

WATER AND WASTEWATER FACILITY OPERATORS CERTIFICATION REQUIREMENTS, REGULATION 100

5 CCR 1003-2

AMENDED JUNE 20, 2017
EFFECTIVE AUGUST 31, 2017



COLORADO

Water & Wastewater Facility Operators Certification Board

Department of Public Health & Environment

DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

Water And Wastewater Facility Operators Certification Board

REGULATION NO. 100 - WATER AND WASTEWATER FACILITY OPERATORS CERTIFICATION REQUIREMENTS

5 CCR 1003-2

Amended:	May 28, 2002
Effective Date:	July 30, 2002
Amended:	March 25, 2003
Effective Date:	June 2, 2003
Amended:	October 26, 2004
Effective Date:	December 30, 2004
Emergency:	November 30, 2004
Amended:	November 30, 2004
Effective Date:	January 30, 2005
Amended:	October 25, 2005
Effective Date:	January 1, 2006
Amended:	February 14, 2006
Effective Date:	April 30, 2006
Amended:	July 31, 2007
Effective Date:	September 30, 2007
Amended:	April 28, 2009
Effective Date:	June 30, 2009
Amended:	September 29, 2009
Effective Date:	November 30, 2009
Amended:	November 24, 2009
Effective Date:	January 30, 2010
Amended:	November 29, 2011
Effective Date:	January 30, 2012
Amended:	April 24, 2012
Effective Date:	June 30, 2012
Amended:	August 26, 2014
Effective Date:	October 30, 2014
Amended:	June 30, 2015
Effective Date:	August 30, 2015
Amended:	December 9, 2015
Effective Date:	January 30, 2016
Amended:	November 29, 2016
Effective Date:	January 30, 2017
Amended:	June 20, 2017
Effective Date:	August 31, 2017

DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT	1
DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT	1
100.1 AUTHORITY AND PURPOSE	1
100.2 DEFINITIONS	4
100.3 WATER QUALITY CONTROL DIVISION AND CONTRACTOR DUTIES: APPEALS OF DETERMINATIONS	6
100.4 WATER TREATMENT FACILITY CLASSIFICATION	7
100.5 DOMESTIC WASTEWATER TREATMENT FACILITY CLASSIFICATION	9
100.6 INDUSTRIAL WASTEWATER TREATMENT FACILITY CLASSIFICATION	10
100.7 WATER DISTRIBUTION SYSTEM CLASSIFICATION	11
100.8 WASTEWATER COLLECTION SYSTEM CLASSIFICATION	12
100.9 RESPONSIBILITIES AND DUTIES OF WATER AND WASTEWATER FACILITY OWNERS	12
100.10 RESPONSIBILITIES AND DUTIES OF A CERTIFIED OPERATOR	15
100.11 RESPONSIBILITIES AND DUTIES OF A CERTIFIED OPERATOR IN RESPONSIBLE CHARGE 16	
100.12 DISCIPLINARY PROCEEDINGS	17
100.13 APPLICATION TO SIT FOR CERTIFICATION EXAMINATION, QUALIFICATIONS, EDUCATION, EXPERIENCE AND SUBSTITUTIONS	19
100.14 APPLICATION FOR NEW CERTIFICATES AND CERTIFICATES BY RECIPROCITY	25
100.15 CERTIFICATE RENEWAL, EXPIRATION, REVOCATION AND TRAINING UNIT REQUIREMENTS	26
100.16 FEES	30
100.17 RESTRICTED WATER DISTRIBUTION AND WASTEWATER COLLECTION SYSTEMS CERTIFICATES	31
100.22 - 29 RESERVED	31
100.30 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; NOVEMBER, 2000 RULEMAKING	31
100.31 FINDINGS IN SUPPORT OF EMERGENCY ADOPTION OF REGULATION NO. 100; DECEMBER 5, 2000	35
100.32 FINDINGS IN SUPPORT OF EMERGENCY ADOPTION OF REVISIONS TO REGULATION NO. 100.22.2(b); JANUARY 30, 2001	35

100.33	STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; ARCH, 2001 RULEMAKING	36
100.34	STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; AUGUST, 2001 RULEMAKING	36
100.35	FINDINGS AND STATEMENT OF BASIS AND PURPOSE FOR ADOPTION ON AN EMERGENCY BASIS OF REVISIONS TO REGULATION NO. 100 JANUARY, 2002 RULEMAKING	37
100.36	STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; JANUARY, 2002 RULEMAKING	38
100.37	STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; APRIL, 2002 RULEMAKING	39
100.38	STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; MAY, 2002 RULEMAKING	39
100.39	STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: MARCH 2003 RULEMAKING	40
100.40	STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: OCTOBER 2004 RULEMAKING	40
100.41	STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE AND EMERGENCY FINDINGS: NOVEMBER 2004 RULEMAKING	42
100.42	STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: JULY 26, 2005 RULEMAKING	43
100.43	STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: FEBRUARY 14, 2006 RULEMAKING	45
100.44	STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: APRIL 24, 2007 RULEMAKING; ADOPTED JULY 31, 2007; EFFECTIVE SEPTEMBER 30, 2007	46
100.45	STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: APRIL 28, 2009 RULEMAKING; ADOPTED APRIL 28, 2009; EFFECTIVE JUNE 30, 2009	48
100.46	STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: SEPTEMBER 29, 2009 RULEMAKING	50
100.47	STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: NOVEMBER 2009 RULEMAKING; ADOPTED NOVEMBER 24, 2009; EFFECTIVE JANUARY 30, 2010	51
100.48	STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: NOVEMBER 2011 RULEMAKING ADOPTED NOVEMBER 29, 2011; EFFECTIVE JANUARY 30, 2012	51
100.49	STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: FEBRUARY 2012 RULEMAKING; ADOPTED APRIL 24, 2012; EFFECTIVE JUNE 30, 2012	52
100.50	STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: APRIL 29, 2014 RULEMAKING ADOPTED AUGUST 26, 2014; EFFECTIVE OCTOBER 30, 2014	54

100.51	STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: JUNE 30, 2015 RULEMAKING ADOPTED AUGUST 25, 2015; EFFECTIVE SEPTEMBER 30, 2015	57
100.52	STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: DECEMBER 9, 2015 RULEMAKING, EFFECTIVE JANUARY 30, 2016	58
100.53	STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; NOVEMBER 29, 2016 RULEMAKING; EFFECTIVE JANUARY 30, 2017	59
100.54	STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: JUNE 20, 2017 RULEMAKING; EFFECTIVE AUGUST 31, 2017	61

DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

Water And Wastewater Facility Operators Certification Board

REGULATION NO. 100 - WATER AND WASTEWATER FACILITY OPERATORS CERTIFICATION REQUIREMENTS

5 CCR 1003-2

100.1 AUTHORITY AND PURPOSE

100.1.1 Authority

This regulation is promulgated pursuant to the sections 25-9-101 through 110, C.R.S.

100.1.2 Purpose

Article 9 of Title 25, C.R.S., requires that every water treatment facility, domestic or industrial wastewater treatment facility, wastewater collection system and water distribution system be under the supervision of a certified operator, holding a certificate in a class equal to or higher than the class of the facility or system.

Certification under this statute is available to all persons who meet the minimum qualifications of a given classification as described in section 100.13. Operators are encouraged to apply for certification in the highest classification consistent with their qualifications.

100.1.3 Severability

The provisions of these regulations are severable. If any regulation, rule, section, paragraph, or other portion of the *Water and Wastewater Facility Operators Certification Requirements* is, for any reason, held inoperative, unconstitutional, void or invalid, the validity of the remaining portions shall not be affected.

100.1.4 Applicability

The Water and Wastewater Facility Operators Certification Requirements apply to:

- (a) Each person who meets the qualifications for certification.
- (b) The owners of water and wastewater facilities.
- (c) In accordance with Article 9 of Title 25, section 104.4, C.R.S., the Board has the authority to exempt certain water and wastewater facilities from operating under the supervision of a certified operator in responsible charge if the exemption does not endanger the public health or the environment.

100.1.5 Automatic Exemptions

- (a) The following facilities and systems are exempt from the requirement to operate under the supervision of a certified operator in responsible charge:

- (i) Water treatment facilities that are not “public water systems” subject to the *Colorado Primary Drinking Water Regulations*, 5 CCR 1002-11.
- (ii) Water distribution systems whose entire distribution system falls within the jurisdiction of the *Water Well Construction and Pump Installation Contractors Act*, C.R.S. 37-91-101, et. seq.
- (iii) Water distribution systems that are not “public water systems” subject to the *Colorado Primary Drinking Water Regulations*, 5 CCR 1002-11.
- (iv) Industrial wastewater treatment facilities that satisfy the following criteria:
 - (A) The quality of the wastewater discharged is such that discharge permit limits can be met utilizing only passive treatment (treatment in which chemical, mechanical, or biological treatment techniques are not utilized) or no treatment;
 - (B) The facility has designated a responsible person who is specifically responsible for overseeing the facility’s operation and for ensuring compliance with the facility’s discharge permit, including monitoring and reporting requirements. “Responsible person” mean an individual, designated by the owner of a wastewater facility, who is specifically responsible for overseeing the facility’s operation and for ensuring compliance with the facility’s discharge permit and who receives relevant training with respect to these duties including, as appropriate, specific measures used to meet effluent limits, monitoring, inspection, planning, reporting, and documentation requirements; and
 - (C) Discharge under one of the following general industrial permits:
 - (I) Industrial stormwater permit,
 - (II) Construction stormwater permit,
 - (III) Municipal stormwater permit,
 - (IV) Industrial facilities that discharge under the following general permits:
 - (1) Construction Dewatering Activities;
 - (2) Aquatic Animal Production;
 - (3) Sand and Gravel Process Water and Stormwater;
 - (4) Minimal Industrial Discharge;
 - (5) Subterranean Dewatering and Well Development;
 - (6) Hydrostatic Testing of Pipelines;
 - (7) Tanks and Similar Vessels;
 - (8) Non-Contact Cooling Water;

- (9) Pesticides; or
 - (10) Commercial Washing of Outdoor Structures.
- (v) Category A, B, And C graywater treatment facilities as defined in *Graywater Control Regulation*, 5 CCR 1002-86.
- (b) Facilities that discharge pursuant to a general industrial permit for Water Treatment Plant Wastewater Discharge are not required to be under the supervision of an industrial wastewater treatment certified operator in responsible charge if the facility is under the supervision of a water treatment certified operator in responsible charge who is specifically responsible for overseeing the facility's operation and for ensuring compliance with the facility's discharge permit, including monitoring and reporting requirements.

100.1.6 Discretionary Exemptions

- (a) Wastewater Facilities – Any wastewater facility that does not qualify for an automatic exemption under section 100.1.5 may request an exemption from the Board from the requirement to operate under the supervision of a certified operator in responsible charge. In determining whether to grant such an exemption, the Board may consider:
 - (i) Discharges of limited duration;
 - (ii) The sensitivity of the receiving waters;
 - (iii) The level of toxic pollutants in the discharge;
 - (iv) Situations where chemical, mechanical, or biological treatment techniques are not required to meet permit limits, including sedimentation ponds at mining operations for construction materials, as defined by section 34-32.5-103 (3), C.R.S.
- (b) Water Facilities – Any water facility that does not qualify for an automatic exemption under section 100.1.5 may request an exemption from the Board from the requirement to operate under the supervision of a certified operator in responsible charge. In determining whether to grant such an exemption, the Board may consider:
 - (i) The classification of the facility as public or nonpublic under the *Colorado Primary Drinking Water Regulations*, 5 CCR 1002-11;
 - (ii) The applicability of the *Colorado Primary Drinking Water Regulations*, 5 CCR 1002-11, to the facility or class of facilities; and
 - (iii) A distribution system having a minimal number of connections.
- (c) Industrial Wastewater Treatment Facilities – Any industrial wastewater treatment facility that does not qualify for exemption under section 100.1.5 may request exemption from the requirement to operate under the supervision of a certified operator in responsible charge. In determining whether to grant such an exemption, the facility must demonstrate to the Board's satisfaction that:
 - (i) The quality of the industrial wastewater discharge is such that discharge permit limits can be met utilizing only passive treatment (treatment in which chemical, mechanical, or biological treatment techniques are not utilized) or no treatment; and

- (ii) The facility has designated a responsible person who is specifically responsible for overseeing the facility's operation and for ensuring compliance with the facility's discharge permit, including monitoring and reporting requirements. "Responsible person" means an individual, designated by the owner of an industrial wastewater facility, who is specifically responsible for overseeing the facility's operation and for ensuring compliance with the facility's discharge permit and who receives relevant training with respect to these duties including, as appropriate, specific measures used to meet effluent limits, monitoring, inspection, planning, reporting, and documentation requirements.
- (d) The Division shall evaluate a written request for exemption from the facility and shall provide the Board with a recommendation based on the criteria in sections 100.1.6 (a-c), as appropriate.
- (e) The Board shall approve or deny such requests at a regularly scheduled Board meeting.
- (f) The Board has the authority to remove a facility exemption if the facility fails to comply with the requirements of its discharge permit or if the facility's operational practices result in a direct, negative impact on the public health or the environment.
- (g) If at any time, the facility does not meet the applicable conditions of sections 100.1.6 (a-c), the facility must notify the Division, in writing, and begin operating under the supervision of a certified operator in responsible charge within 30 days of the change in operations.

100.1.7 Exceptions

The Board may make exceptions to this regulation, if the exception is not in conflict with its enabling statute, sections 25-9-101 et. seq., C.R.S., and does not endanger public health or the environment in accordance with section 24-4-105, C.R.S.

100.2 DEFINITIONS

- (1) "BOARD" means the Water and Wastewater Facility Operators Certification Board created by section 25-9-103, C.R.S.
- (2) "CERTIFICATE" means the certificate of competency issued by the Board stating that the operator named thereon has met the requirements for the specified classification of the certification program.
- (3) "CERTIFIED OPERATOR" means any person who has responsibility for the operation of any water and wastewater facility and is certified in Colorado as a "Certified Water Professional" ("CWP") in accordance with the provisions of this regulation. For purposes of this regulation, having "responsibility for the operation" of a water and wastewater facility refers generally to being qualified to perform various operational activities at such facilities in the capacity of a CWP.
- (4) "CERTIFIED OPERATOR IN RESPONSIBLE CHARGE" means the certified operator designated by the water or wastewater facility owner to be responsible for making process control and/or system integrity decisions about water quality or quantity that may affect public health or the environment. A facility owner may designate one or more certified operators to serve in this capacity. Such an operator must be certified at a level equal to or higher than the classification of the facility he or she is operating.
- (5) "CLASSIFICATION OF A WATER OR WASTEWATER FACILITY" means the level of operational complexity and/or size of a water or wastewater facility as determined by the Division.

- (6) "DEPARTMENT" means the Colorado Department of Public Health and Environment.
- (7) "DIVISION" means the Water Quality Control Division within the Colorado Department of Public Health and Environment.
- (8) "DOMESTIC WASTEWATER TREATMENT FACILITY" means any facility or group of units used for the treatment of domestic wastewater or for the reduction and handling of solids and gases removed from such wastes, whether or not such facility or group of units is discharging into state waters. "Domestic wastewater treatment facility" specifically excludes on-site wastewater treatment systems.
- (9) "GRAYWATER TREATMENT FACILITY" means a graywater treatment works as defined in the *Graywater Control Regulation*, 5 CCR 1002-86.
- (10) "INDUSTRIAL WASTEWATER TREATMENT FACILITY" means any facility or group of units used for the pretreatment, treatment, or handling of industrial waters, wastewater, reuse water, and wastes that are discharged into state waters. "Industrial wastewater treatment facility" includes facilities that clean up contaminated ground water or spills; except that such term does not include facilities designed to operate for less than one year or facilities with in-situ discharge.
- (11) "OPERATOR" means any person who performs activities and/or tasks pertinent to the operation of a water or wastewater facility. An operator may or may not be certified.
- (12) "OWNER" means (a) the supplier of water as defined in 5 CCR 1002-11; (b) the person or persons required to apply for a discharge permit in accordance with 5 CCR 1002-61; or (c) the person with legal responsibility for a wastewater collection system or a graywater treatment facility. For purposes of this definition, "person" means an individual, corporation, partnership, association, state or political subdivision thereof, federal agency, tribal agency, state agency, municipality, commission, or interstate body.
- (13) "PLANT DESIGN FLOW" means the maximum flow rate (water) or the hydraulic capacity (wastewater) approved for a water or wastewater treatment facility by the Division.
- (14) "TRAINING UNIT" means the credit given for an increment of training approved as applicable to the fulfillment of certificate renewal requirements. Ten contact hours shall be required to equal one training unit. A "contact hour" means a classroom or supervised hour of attendance or hour of participation recognized by the Board as a training unit.
- (15) "VALIDATED EXAMINATION" means an examination that is independently reviewed by subject matter experts to ensure that the examination is based on a job analysis and is related to the classification of the system or facility.
- (16) "WASTEWATER COLLECTION SYSTEM" means a system of pipes, conduits, and associated appurtenances that transports domestic wastewater from the point of entry to a domestic wastewater treatment facility. The term does not include collection systems that are within the property of the owner of the facility.
- (17) "WASTEWATER TREATMENT FACILITY" means either a domestic wastewater treatment facility or an industrial wastewater treatment facility.
- (18) "WATER AND/OR WASTEWATER FACILITY" means a water treatment facility, domestic wastewater treatment facility, industrial wastewater treatment facility, water distribution system, or wastewater collection system.

100.3 *WATER QUALITY CONTROL DIVISION AND CONTRACTOR DUTIES: APPEALS OF DETERMINATIONS*

- (19) "WATER DISTRIBUTION SYSTEM" means any combination of pipes, tanks, pumps, or other facilities that delivers water from a source or treatment facility to a consumer.
- (20) "WATER TREATMENT FACILITY" means the facility or facilities within the water distribution system that can alter the physical, chemical, or bacteriological quality of the water.

100.3 WATER QUALITY CONTROL DIVISION AND CONTRACTOR DUTIES: APPEALS OF DETERMINATIONS

100.3.1 The Colorado Water Quality Control Division oversees state-wide implementation of this regulation with respect to owner compliance and operator discipline. The local city, city and county, or county with a local graywater control program has exclusive enforcement authority regarding compliance with the ordinance or resolution and, if applicable, rule, including the certified operator in responsible charge requirements for graywater facilities.

100.3.2 In carrying out its responsibilities to administer the operator certification program pursuant to Article 9 of Title 25, C.R.S., the Board may select and appoint through contract, one or more independent nonprofit corporations ("contractors") to carry out the following duties, including but not limited to:

- (a) administering the operator certification program;
- (b) with the prior approval of the Board for each agreement, a nonprofit corporation contracted by the Board may enter into subsidiary agreements with other nonprofit corporations, educational institutions, and for-profit corporations to carry out the duties assigned by the Board.
- (c) collecting program fees for administration of the operator certification program;
- (d) administering validated examinations for operator certification;
- (e) maintaining records of certified operators;
- (f) notifying operators of expiration of certificates;
- (g) providing information on accredited training programs and training requirements;
- (h) preparing and/or furnishing validated examinations and related materials;
- (i) collecting fees for examinations and administration of examinations;
- (j) setting times, dates, and places for holding examinations;
- (k) ensuring the accurate and unbiased grading of examinations;
- (l) evaluating work experience of applicants;
- (m) evaluating and approving training units for renewal of certificate;
- (n) evaluating and making recommendations for requests for certification based upon reciprocity;
- (o) recording results of examinations;
- (p) notifying applicants of their examination results;

- (q) recommending issuance of certificates or issuing certificates in accordance with Board criteria; or
- (r) preparing and distributing annual reports.

100.3.3 The Board retains the final authority for all actions and decisions carried out on behalf of the Board by a nonprofit corporation, educational institution, or for-profit corporation.

100.3.4 Any person affected or aggrieved by a decision of the Division or the Board's contractor(s) may request a hearing before the Board within thirty (30) days of notice of such decision by submitting a request containing the following information:

- (a) identification of the person(s) requesting the hearing and the subject matter of the request
- (b) the statutory and/or regulatory authority and factual basis for the request, and
- (c) the relief requested.

100.3.5 The Board shall grant any hearing request made pursuant to section 100.3.4 and shall schedule and conduct an adjudicatory hearing in accordance with section 24-4-105, C.R.S.

100.4 WATER TREATMENT FACILITY CLASSIFICATION

100.4.1 Water treatment facilities shall be classified in accordance with the following four classes; Class D, Class C, Class B, or Class A. Class A is the highest level of classification and Class D is the lowest level of classification. The Division may make changes in classification in accordance with the needs created by particular complexities of any specific water treatment facility based on consideration of facility specific factors, including, but not limited to:

- (a) special features of design;
- (b) source of supply which make operation more difficult than normal; or
- (c) a combination of such conditions.

100.4.2 Table - Criteria for Water Treatment Facility Classes A, B, C, and D

	Plant Design Flow (in MGD)			
Description of the Facility	Below 2	2 – 5	5.01 – 9.99	10 or more
<u>Ground Water Systems</u>	.	.	.	.
(a) Ground water source with no treatment or with no additional treatment beyond chlorine disinfection.	D	D	C	B
(b) Ground water source with ultraviolet or ozone disinfection.	D	C	C	B
(c) Ground water source utilizing chemical addition and/or a treatment technology (for example, ion exchange, reverse osmosis, membrane filters, or activated carbon) for the specific purpose of meeting secondary drinking water standards.	C	C	B	B

<u>All Water Systems</u>				
(d) Any source utilizing bag or cartridge filtration to comply with primary drinking water standards ¹ . "Bag or cartridge filtration" means a filtration system consisting of a fixed filter housing into which flexible (bag) or rigid (cartridge) filters are inserted. Both bag and cartridge filters are disposable and cannot be backwashed or re-used.	D	--	--	--
(e) Any source utilizing a treatment technology (for example, slow sand, diatomaceous earth, membrane filtration, ion exchange, activated carbon filtration, reverse osmosis) with disinfection to comply with primary drinking water standards and which is not listed in sections 100.4.2(d) or 100.4.2(f).	C	B	B	A
(f) Any source utilizing conventional or direct filtration with disinfection to comply with primary drinking water standards. "Conventional filtration treatment" means a series of processes including coagulation, flocculation, sedimentation, and filtration resulting in substantial particulate removal. "Direct filtration treatment" means a series of processes including coagulation and filtration, but excluding sedimentation, resulting in substantial particulate removal.	B	A	A	A
<u>Chemical Addition</u>	.	.	.	.
(g) Any source utilizing chemical treatment for the specific purpose of complying with secondary drinking water standards ² .	C	C	B	B
(h) Any source utilizing additional chemical treatment, with the exception of corrosion control in the distribution system and disinfection for the specific purpose of complying with primary drinking water standards ¹ .	B	B	A	A
(i) Any source utilizing chemical treatment for the specific purpose of controlling corrosion (i.e., lead and copper) in the distribution system.	C	C	B	B
(j) Any source utilizing fluoridation.	C	C	C	B
<u>Other</u>	.	.	.	.
(k) Water vending machines connected to a public water system that does not currently meet primary drinking water standards ¹ .	C	C	C	C

¹ "Primary drinking water standard" means any of the set of enforceable maximum contaminant levels for drinking water regulated under the Colorado Primary Drinking Water Regulations, 5 CCR 1002-11.

² "Secondary drinking water standard" means any of the set of secondary maximum contaminant levels for drinking water regulated under the Colorado Primary Drinking Water Regulations, 5 CCR 1002-11. These standards are not enforceable, but are intended as guidelines.

100.4.3 The classification of any water treatment facility may be changed at the discretion of the Division based on changes in any condition or circumstance since the last classification determination.

100.4.4 Any drinking water treatment facility that utilizes a combination of two or more of the treatment processes described in section 100.4.2 shall be classified in accordance with the highest level of treatment process utilized.

100.4.5 Water treatment facilities that meet the exemption criteria in section 100.1.5(a) are exempt from the requirement to operate under the supervision of a certified operator in responsible charge and shall not be classified.

100.5 DOMESTIC WASTEWATER TREATMENT FACILITY CLASSIFICATION

100.5.1 Domestic wastewater treatment facilities and category D non-single family, indoor toilet and urinal flushing graywater treatment facilities shall be classified in accordance with the following four classes: Class D, Class C, Class B, or Class A. Class A is the highest level of classification and Class D is the lowest level of classification. The Division may make changes in classification in accordance with the needs created by particular complexities of any specific domestic wastewater treatment facility based on consideration of facility specific factors, including, but not limited to:

- (a) design features or other characteristics that make the facility more difficult to operate than usual;
- (b) facility design flow;
- (c) the character and volume of wastes to be treated;
- (d) the facility's design being approved under the Department's variance procedure;
- (e) a waste unusually difficult to treat;
- (f) flow conditions, use classifications and/or water quality standards assigned to the waters receiving the treated effluent that require an unusually high degree of plant operational control in order to meet permit conditions; or
- (g) combinations of such conditions or circumstances.

100.5.2 Table - Criteria for Domestic Wastewater Treatment Facility Classes A, B, C, and D

Description of the Facility	Plant Design Flow (in MGD)				
	Below 0.5	0.5-1.00	1.01-2.00	2.01-4.00	Above 4.00
(a) Waste stabilization ponds, including aerated and non-aerated types	D	C	C	B	B
(b) Trickling filter or rotating biological contactor	C	C	B	B	A
(c) Extended aeration process sequencing batch reactors (SBR) designed to operate in the extended aeration loading range.	C	B	B	B	A
(d) All other activated sludge processes and extended aeration where used beyond secondary treatment (i.e., nitrification) and chemical and/or physical processes providing a high degree of treatment other than polishing ponds.	B	B	B	B	A
(e) Re-circulating sand filtration	D	C	C	C	C

(f) Wetlands used as a part of the water treatment process	Will be classified in alignment with the last treatment process prior to release of the effluent into the wetland for further treatment.
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100.5.3 The classification of any domestic wastewater treatment facility may be changed at the discretion of the Division based on changes in any condition or circumstance since the last classification determination.

100.5.4 Any domestic wastewater treatment facility that utilizes a combination of two or more of the treatment processes described in section 100.5.2 shall be classified in accordance with the highest level of treatment process utilized.

100.6 INDUSTRIAL WASTEWATER TREATMENT FACILITY CLASSIFICATION

100.6.1 Industrial wastewater treatment facilities shall be classified in accordance with the following four classes: Class D, Class C, Class B, or Class A. Class A is the highest level of classification and Class D is the lowest level of classification. The Division may make changes in classification in accordance with the needs created by particular complexities of any specific industrial wastewater treatment facility based on consideration of facility specific factors, including, but not limited to:

- (a) design features or other characteristics that make the plant more difficult to operate;
- (b) treatment of a waste that is unusually difficult to process adequately;
- (c) flow conditions, use classifications and/or water quality standards assigned to the waters receiving the treated effluent requiring an unusually high degree of plant operation control in order to meet permit conditions; or
- (d) any combination of the above conditions or circumstances.

100.6.2 Table - Criteria for Industrial Wastewater Treatment Facility Classes A, B, C, and D

CLASSIFICATION	TREATMENT PROCESS ¹
Class A	Chemical conversion (e.g., cyanide destruction, hexavalent chromium reduction); Ion exchange; Electrolytic conversion; Filtration by reverse osmosis.
Class B	Chemical coagulation and flocculation; Adsorptive processes (e.g., activated carbon); Ultrafiltration; Microfiltration; Chemical precipitation; Suspended, fixed, or a combination of biological processes (e.g., activated sludge, trickling filters, rotating biological contactors).
Class C	Standard clarification (including waste ponds for settling that regularly utilize chemical addition); Filtration (e.g., mixed media, pressure); Neutralization; Solids Dewatering (e.g., sand or surfaced drying beds, mechanical); Airstripping; Sludge Digestion.

Class D	Particulate settling ponds; Simple gravity flow filtration without chemical addition; Physical water/gas separation without chemical addition; Cooling water discharge without chemical addition.
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1 Treatment processes are listed as examples and are not all inclusive.

100.6.3 The classification of any industrial wastewater treatment facility may be changed at the discretion of the Division based on changes in any condition or circumstance since the last classification determination.

100.6.4 Any industrial wastewater treatment facility that regularly utilizes a combination of two or more of the treatment processes described in section 100.6.2 shall be classified in accordance with the highest level of treatment process utilized.

100.6.5 Industrial wastewater treatment facilities that meet the automatic exemption criteria in section 100.1.5(a) are exempt from the requirement to operate under the supervision of a certified operator in responsible charge and shall not be classified.

100.7 WATER DISTRIBUTION SYSTEM CLASSIFICATION

100.7.1 Water distribution systems shall be classified in accordance with the following four classes: Class 1, Class 2, Class 3 or Class 4. Class 4 is the highest level of classification and Class 1 is the lowest level of classification. The Division may make changes in classification in accordance with the needs created by particular complexities of any specific water distribution system based on consideration of system specific factors, including, but not limited to:

- (a) unusual factors affecting the complexity of transmission, mixing of sources, or potential public health hazards;
- (b) size and/or length of the system's water mains;
- (c) whether or not there are automatic control valves, including but not limited to, pressure reducing or altitude valves;
- (d) number and/or size and/or types of meters;
- (e) existence of storage tanks in the system;
- (f) existence of multiple pressure zones;
- (g) maximum pressure in the system;
- (h) existence of booster stations;
- (i) number of service connections; or
- (j) quantity of water distributed.

100.7.2 Table - Criteria for Water Distribution System Classes 1, 2, 3, and 4

CLASS	POPULATION SERVED
Class 1	3,300 or Less
Class 2	3,301 - 25,000

Class 3	25,001 - 100,000
Class 4	Over 100,000

100.7.3 The classification of any water distribution system may be changed at the discretion of the Division based on changes in any condition or circumstance since the last classification determination.

100.7.4 Water distribution systems that meet the exemption criteria in section 100.1.5(a) are exempt from the requirement to operate under the supervision of a certified operator in responsible charge and shall not be classified.

100.8 WASTEWATER COLLECTION SYSTEM CLASSIFICATION

100.8.1 Wastewater collection systems shall be classified in accordance with the following four classes: Class 1, Class 2, Class 3 or Class 4. Class 4 is the highest level of classification and Class 1 is the lowest level of classification. The Division may make changes in classification in accordance with the needs created by particular complexities of any specific wastewater collection system based on consideration of facility specific factors, including, but not limited to:

- (a) any unusual factors affecting the complexity of collection;
- (b) whether there is the potential for mixing of sources; or
- (c) the presence of any potential public health hazards.

100.8.2 Table - Criteria for Wastewater Collection System Classes 1, 2, 3, and 4

CLASS	POPULATION SERVED
Class 1	3,300 or Less
Class 2	3,301 - 25,000
Class 3	25,001 - 100,000
Class 4	Over 100,000

100.8.3 The classification of any wastewater collection system may be changed at the discretion of the Division based on changes in any condition or circumstance since the last classification determination.

100.9 RESPONSIBILITIES AND DUTIES OF WATER AND WASTEWATER FACILITY OWNERS

100.9.1 Supervision by a Certified Operator in Responsible Charge

- (a) No owner of a water or wastewater facility shall allow the facility to be operated without the direct supervision of one or more certified operators in responsible charge.

"Direct supervision" means that the certified operators in responsible charge have supervisory responsibility and authority with respect to the operation of the water or wastewater facility and for the activities and functions of other facility operators.
- (b) The owner designates the certified operators in responsible charge of the water or wastewater facility by completing and submitting the appropriate division contact update form.

100.9 RESPONSIBILITIES AND DUTIES OF WATER AND WASTEWATER FACILITY OWNERS

- (c) Owners shall ensure that their agreements with the certified operators in responsible charge are sufficiently detailed and formal to reflect all the duties as outlined in section 100.11.
- (d) Contracts for limited services do not fulfill the owner's obligation, under section 100.9.1(a), to place the facility under the supervision of one or more certified operators in responsible charge. Contracts for limited services, such as compliance sampling, do not rise to the level of a contract for a certified operator in responsible charge.

100.9.2 Decisions Reserved to Certified Operator in Responsible Charge

Each owner of a water or wastewater facility shall ensure that all process control and/or facility integrity decisions about water quality or quantity or wastewater effluent quality or quantity that may affect public health or the environment are made by either a certified operator in responsible charge or by another operator certified at a level equal to or above the classification of the facility he or she is operating in accordance with the facility's written operating plan as described in section 100.11.6.

100.9.3 Availability of Certified Operator in Responsible Charge

Each owner of a water or wastewater facility shall ensure that a certified operator in responsible charge is available or ensure that operations are conducted in accordance with the facility's written operating plan as described in section 100.11.6 whenever the facility is in operation.

Available" means either on-site or able to be contacted as needed to make decisions and to initiate appropriate actions in a timely manner.

100.9.4 Reporting Requirement

Each owner of a water or wastewater facility shall submit the appropriate division contact update form, no later than thirty (30) days following the date the facility is initially placed on-line and thereafter, no later than thirty (30) days after changes to any of the following information:

- (a) name, mailing address, phone number, and email address (if available) of the facility legal representative providing the information;
- (b) full legal name and operator identification number of the certified operators in responsible charge;
- (c) identification of the facility or facilities for which each certified operator in responsible charge has responsibility; or
- (d) the Public Water System Identification (PWSID) number, the Colorado Discharge Permit System (CDPS) permit number, or general permit certification number for all facilities listed.

100.9.5 Certified Operator in Responsible Charge Certification Requirements

- (a) Each water and wastewater facility shall have at least one certified operator in responsible charge certified as shown in the following table:
- (b) Table - Criteria for Certified Operator in Responsible Charge

100.9 RESPONSIBILITIES AND DUTIES OF WATER AND WASTEWATER FACILITY OWNERS

<u>Facility or System Classification</u>	<u>Certified Operator in Responsible Charge Minimum Required Certification Levels</u>
<u>Water Facilities</u>	
Water Treatment	
A	A
B	A or B
C	A, B, or C
D	A, B, C, D, S ¹ or T ²
Water Distribution	
4	4
3	4 or 3
2	4, 3 or 2
1	4, 3, 2, 1, or S ¹
<u>Domestic Wastewater Facilities</u>	
Wastewater Treatment	
A	A
B	A or B
C	A, B, or C
D	A, B, C, D, or S ³
Wastewater Collection	
4	4
3	4 or 3
2	4, 3 or 2
1	4, 3, 2, 1, or S ³
<u>Industrial Wastewater Facilities</u>	
A	A
B	A or B
C	A, B, or C
D	A, B, C, or D, or S ³

1 Applicable only in accordance with section 100.9.5(d)

2 Applicable only in accordance with section 100.9.5(c)

3 Applicable only in accordance with section 100.9.5(e)

- (c) Class T certificate is only valid for operating facilities that meet all of the following criteria:
 - (i) are classified as transient non-community public water systems;
 - (ii) that draw water from ground water sources not under the direct influence of surface water;
 - (iii) serve fewer than 100 individuals per day;
 - (iv) utilize treatment consisting only of non-gaseous chlorine disinfection; and
 - (v) would be classified as a Class "D" water treatment facility and/or as a Class "1" water distribution system under the provisions of this regulation.
- (d) Class S Water certificate is only valid for operating facilities that meet all of the following criteria:
 - (i) serve no more than 3,300 persons; and

- (ii) would be classified as a Class “D” water treatment facility and/or as a Class “1” water distribution system under the provisions of this regulation.
- (e) Class S Wastewater certificate is only valid for operating facilities that meet all of the following criteria:
 - (i) serve no more than 3,300 persons; and
 - (ii) would be classified as a Class “D” wastewater treatment facility and as a Class “1” wastewater collection system under the provisions of this regulation.

100.9.6 The Division shall investigate any instances of possible violations of the requirements of sections 100.9.1-100.9.5 by any owner of a water or wastewater facility. The Division shall enforce compliance with these requirements in accordance with the procedures in section 25-9-110, C.R.S.

100.9.7 Any water or wastewater facility owner who seeks a hearing in response to a Division finding of a violation under sections 100.9.1-100.9.5 or a Department assessment of a civil penalty for such violation may request a hearing in accordance with section 24-4-105, C.R.S., before the Board by submitting to the Division, within thirty (30) days of notice of such finding or assessment, a request containing the following:

- (a) identification of the person(s) requesting the hearing and the subject matter of the request;
- (b) the statutory and/or regulatory authority and factual basis for the request; and
- (c) the relief requested.

100.10 RESPONSIBILITIES AND DUTIES OF A CERTIFIED OPERATOR

100.10.1 In the performance of their duties, certified operators shall exercise a level of reasonable care and judgment consistent with the experience and training appropriate to their level of certification as defined in these regulations.

100.10.2 Certified operators shall protect the public health and the environment by properly performing and/or supervising the activities pertinent to controlling the operation of a water or wastewater facility in accordance with a written operating plan as described in section 100.11.6 as appropriate to their level of certification, including but not limited to the following:

- (a) controlling the selection of or flow from a source to a water or wastewater facility and controlling the selection of or flow from a water or wastewater facility to a receiving body or system;
- (b) controlling the processing of raw and/or treated and/or finished water/wastewater;
- (c) preparing and/or controlling chemical addition for water or wastewater treatment;
- (d) observing and taking necessary actions in response to variations in operating conditions;
- (e) interpreting meter and/or gauge readings and adjusting facility processes based on such interpretations;
- (f) controlling the operation and maintenance of valves and/or gates;

100.11 RESPONSIBILITIES AND DUTIES OF A CERTIFIED OPERATOR IN RESPONSIBLE CHARGE

- (g) controlling the operation and maintenance of pumps;
- (h) maintaining logs and/or records;
- (i) collecting and/or analyzing process control samples; and
- (j) reporting instances of non-compliance or situations that could result in non-compliance to the certified operator in responsible charge.

100.10.3 When acting in the capacity of a certified operator, certified operators shall refrain from behaving in a threatening, intimidating, demeaning or similar manner in verbal or written communications or in interactions with the public, the regulated community and regulators.

100.10.4 Certified operators shall update the Board or its contractor with any changes to mailing address, telephone number, or email within 30 days of such a change.

100.11 RESPONSIBILITIES AND DUTIES OF A CERTIFIED OPERATOR IN RESPONSIBLE CHARGE

100.11.1 Certified operators in responsible charge are designated by the owner of the water or wastewater facility and have supervisory responsibility for the operation of the facility and for the operational activities and functions of other facility operators.

100.11.2 Process control and/or system integrity decisions with respect to drinking water quality or quantity that may affect the public health or the environment are reserved to certified operators in responsible charge.

100.11.3 Process control and/or facility integrity decisions with respect to effluent quality or quantity that may affect the public health or the environment are reserved to certified operators in responsible charge.

100.11.4 Certified operators in responsible charge of a water or wastewater facility must hold a valid certificate equal to or greater than the classification of the water or wastewater facility they operate.

100.11.5 Certified operators in responsible charge shall protect the public health and the environment in the conduct of their duties. The certified operators in responsible charge are accountable for the operation and maintenance of the water or wastewater facility and are responsible for understanding the requirements of the applicable permits, laws and regulations. These duties include the following:

- (a) controlling, supervising or actively participating in the planning, operation and maintenance of a water or wastewater facility;
- (b) making process control and system integrity decisions on the operation and maintenance of the water or wastewater facility;
- (c) making decisions and initiating actions regarding the operation of the water or wastewater facility in a timely manner;
- (d) inspecting and testing new, modified, or repaired facilities prior to placing or returning such facilities into service;
- (e) developing maintenance programs;
- (f) developing and maintaining the written operating plan as described in section 100.11.6;

- (g) reporting instances of non-compliance or situations that could result in non-compliance as appropriate to facility owners and the Department; and
- (h) performing other functions of direct responsibility, including those enumerated in section 100.10.

100.11.6 Written Operating Plan - Certified operators in responsible charge of a water or wastewater facility may delegate tasks or activities, including those listed in section 100.10, to other facility operators when delineated by a written operating plan.

- (a) Such tasks may be performed by the facility operators even if the certified operator in responsible charge is not on-site.
- (b) The operating plan must be precise in defining the limits of such tasks or activities.
 - (i) The operating plan must be reviewed and updated, as needed, at least once each calendar year by a certified operator in responsible charge.
 - (ii) The operating plan must be available to the facility owner and other facility operators at all times. The operating plan must be available for inspection by the Department upon request.
- (c) Any operational activity beyond the limits defined in the operating plan requires the immediate and direct consultation with and participation of a certified operator in responsible charge or another operator holding a certificate equal to or above the classification of the facility he or she is operating.
- (d) Certified operators in responsible charge remain accountable for the consequences of the performance of such tasks or activities by other facility operators under their charge.

100.12 DISCIPLINARY PROCEEDINGS

100.12.1 The Division shall investigate any instances of possible misconduct by certified operators or certified operators in responsible charge. The Division shall present the results of the investigation and its recommendations for any disciplinary action, including reprimand or suspension or revocation of a certificate, to the Board in accordance with section 24-4-104, C.R.S.

100.12.2 Certified Operators – In accordance with the procedures in sections 24-4-104 and 105, C.R.S., the Board may reprimand a certified operator, and/or suspend or revoke the certificate of any certified operator who violates the requirements of this regulation, including, but not limited to the following:

- (a) 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;
- (b) failing to properly perform and/or supervise activities pertinent to controlling the operation of a water or wastewater facility, including, but not limited to the tasks described in section 100.10 of this regulation;
- (c) willfully or negligently violating, causing, or allowing the violation of this regulation, 5 CCR 1003-2; the *Colorado Primary Drinking Water Regulations*, 5 CCR 1002-11; the *Colorado Discharge Permit System Regulations*, 5 CCR 1002-61, or a discharge permit issued thereunder; or any other relevant regulations;

- (d) submitting false or misleading information on any document provided to the Department, Division, Board, or contractor of the Board;
- (e) using fraud or deception in the course of employment as a certified operator;
- (f) failing to conform with minimum standards of performance of a certified operator's duty;
- (g) engaging in dishonest conduct during an examination;
- (h) obtaining a certificate through fraud, deceit, or the submission of materially inaccurate application information;
- (i) representing oneself as holding a valid operator's certificate after the expiration, suspension, or revocation of the certificate; or
- (j) when acting in the capacity of a certified operator, behaving in a threatening, intimidating, demeaning or similar manner in verbal or written communications or in interactions with the public, the regulated community or regulators.

100.12.3 Certified Operators in Responsible Charge – In accordance with the procedures in sections 24-4-104 and 105, C.R.S., the Board may reprimand a certified operator in responsible charge, and/or suspend or revoke the certificate of any certified operator in responsible charge, who:

- (a) fails to meet the requirements of a certified operator in responsible charge as defined in section 100.11; and/or
- (b) willfully or negligently causes, instructs, or allows any other person or operator under his or her charge, direction, or supervision to act in a manner inconsistent with a certified operator's duties and obligations as described in section 100.10 or other relevant parts of this regulation, or to act in a manner inconsistent with any other relevant regulations or permits.

100.12.4 Reprimand

A reprimand is an official admonition for wrongdoing issued to a certified operator by the Board 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 wrongdoings.

100.12.5 Suspension

- (a) The Board may suspend a certificate for a period not to exceed three (3) years.
- (b) At the end of the suspension period, an operator may resume prior duties without being required to submit a new application for certification.
- (c) If an operator's certificate is due for renewal during the period of suspension, the operator shall remain subject to the renewal deadline and shall renew the certificate in a timely manner.
- (d) Certificates renewed during a suspension period shall become valid for a period of three (3) years, effective on the ending date of the suspension period.

100.12.6 Revocation

100.13 APPLICATION TO SIT FOR CERTIFICATION EXAMINATION, QUALIFICATIONS, EDUCATION, EXPERIENCE AND SUBSTITUTIONS

- (a) Following the revocation of a certificate, an operator may not apply for another certificate in the same classification category as that of the revoked certificate for a period of three (3) years.
- (b) Any operator whose certificate is revoked shall be treated as a new applicant for purposes of this regulation and must meet all the initial certification requirements, including passing the appropriate certification examination.

100.12.7 Emergency Suspension or Revocation

The Division may immediately suspend or revoke certificates where such immediate action is necessary to protect the public health or the environment.

- 100.12.8 Following the suspension or revocation of his or her certificate, an operator shall not represent that he or she holds a certificate in the classification category for which the certificate was suspended or revoked. No person shall operate a water or wastewater facility with a suspended or revoked certificate.

100.13 APPLICATION TO SIT FOR CERTIFICATION EXAMINATION, QUALIFICATIONS, EDUCATION, EXPERIENCE AND SUBSTITUTIONS

- 100.13.1 A person desiring to be certified to operate a water or wastewater facility shall first file an application to sit for examination with the Board or its contractor.

- 100.13.2 The Board shall designate the number of examination cycles during each calendar year.

- 100.13.3 For each examination cycle, the Board or its contractor shall specify an application deadline.

- 100.13.4 All applications for certification examinations shall be made on forms provided by the Board or its contractor.

- 100.13.5 Completed application materials and fees must be received by the Board or its contractor on or before the application deadline for each examination cycle.

- 100.13.6 While an applicant may apply for more than one examination during a cycle, that applicant may apply for only one level of certification for each certification category (water treatment facility, domestic or industrial wastewater treatment facility, distribution system or collection system).

- 100.13.7 The applicant must specify examination category (i.e. water, domestic or industrial wastewater, distribution, collection, Class S water system, I Class S wastewater, or Class T), level of certification sought, examination date, and testing location and may only take the specified examination once during each examination cycle.

- 100.13.8 The Board or its contractor shall review applications and supporting documents, determine the eligibility of applicants to sit for the examination, and notify the applicants of their status. Any application disapproval notification shall specify the reason(s) the application does not meet the minimum requirements.

- 100.13.9 If an application is disapproved, the applicant may request a re-review of the application, including consideration of any clarifying information that the applicant may choose to submit regarding the identified basis for disapproval.

*100.13 APPLICATION TO SIT FOR CERTIFICATION EXAMINATION, QUALIFICATIONS, EDUCATION,
EXPERIENCE AND SUBSTITUTIONS*

- (a) Any such request for re-review must be received by the Board or its contractor within two weeks of the date of the disapproval notification letter.
- (b) All additional factual information supporting the application must be received with the re-review request.

100.13.10 If an application is still disapproved after re-review by the Board's contractor, the applicant may appeal this decision to the Board in accordance with the procedures in section 24-4-105, C.R.S.

- (a) Any such appeal must be received in the Board's office within two weeks of the date of the second disapproval notification letter.
- (b) No new factual information will be accepted during the Board appeal process, except for good cause shown.

100.13.11 Qualifications for Certification

(a) Basic Requirements for Certification by Examination

- (i) Applicants shall be evaluated by the Board or its contractor as to education, experience, and knowledge related to the classification level for which the applicant seeks to be certified.
- (ii) An applicant must pass a validated examination designated for the category and level of facility for which application is being made with a minimum passing score of 70 percent.
- (iii) To qualify to sit for an examination, an applicant must meet the minimum education requirements, the minimum experience or cross-experience requirements, and the prior certification requirements as set forth in section 100.13.11(g).

(b) Minimum Educational Requirements for Certification by Examination

- (i) Applicants must have a high school diploma or a general equivalency diploma (GED), except as provided in section 100.13.11(b)(iii).
- (ii) Experience and relevant training may substitute for a high school diploma or GED. Applicants substituting experience and relevant training for the high school diploma or GED shall:
 - (A) have an additional six (6) months of qualifying experience; and
 - (B) demonstrate the completion of 1.0 training units in a course approved as a substitute for entry-level experience requirements.
- (iii) Applicants for certification as Class D, Class 1, Class S, or Class T operators of water or wastewater facilities who are enrolled in the last semester of Board approved courses or programs which are specifically designed to prepare secondary students to operate water or wastewater facilities may be approved to take the examination before earning a high school diploma.

*100.13 APPLICATION TO SIT FOR CERTIFICATION EXAMINATION, QUALIFICATIONS, EDUCATION,
EXPERIENCE AND SUBSTITUTIONS*

- (A) Such an approval shall be based on a case-by-case determination that such courses or programs are directly and specifically relevant to the operation of water and wastewater facilities.
 - (B) After passing the examination, the certificate will be issued upon submitting proof of the high school diploma to the Board or its contractor.
- (c) Experience Determinations for Certification by Examination
 - (i) No more than one year of experience will be credited for employment/activities during any one calendar year.
 - (ii) For water or wastewater facilities that require less than a full time operator for proper operation, the experience of an operator of such a facility who works less than half time will be counted as half-time experience; the experience of an operator of such a facility who works half-time or more will be counted as full-time experience.
 - (iii) The aggregate time spent operating multiple facilities shall be considered in any determination of whether to credit full-time experience or half-time experience.
 - (iv) Experience obtained in the operation of a seasonal water or wastewater facility will be credited only for that portion of the year during which the facility is in operation.
 - (v) Except as described in section 100.13.11(h), the certification examination application deadline is the experience cut-off date in determining whether an operator has the required experience to take a certification examination at a particular level.
 - (vi) To meet the experience requirement to test for a particular level of certification, the experience relied upon does not have to be at the level of the examination for which application is being made.
- (d) Evaluation of Experience. For purposes of this section, domestic and industrial wastewater treatment facility experience shall be considered interchangeable. In evaluating experience of operators the Board or its contractor will be guided by:
 - (i) whether and to what degree the experience required technical knowledge of the operation of a water or wastewater facility;
 - (ii) whether and to what degree the experience was actual on-site operating experience with the daily operational aspects of a facility that could affect water quality or quantity; and
 - (iii) whether or not the experience included the responsible charge of a water or wastewater facility.
- (e) Once specific experience or relevant training is credited toward the satisfaction of either the experience or education requirements of this section, that same experience and/or training may not be further credited to meet other requirements of this section.
- (f) Prior Certification Requirements. To qualify to sit for an examination, an applicant must hold a certificate for the same certification category (water treatment facility, domestic or industrial wastewater treatment facility, distribution system or collection system) and in

100.13 APPLICATION TO SIT FOR CERTIFICATION EXAMINATION, QUALIFICATIONS, EDUCATION, EXPERIENCE AND SUBSTITUTIONS

the class immediately below the class for which application is being made. Prior certification requirements are shown in the table below.

(g) Table - Prior Certification and Experience Requirements

Certification Class	Prior Certification Required ¹	Minimum Experience Required
Class T	None	No minimum experience requirement
Class S, 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

¹ Prior certification must be for the same certification category as that of the examination being applied for.

(h) Special Rules for Satisfying the Minimum Experience Requirements for Class D, Class 1, Class S and Class T Certifications:

- (i) Applicants for certification as Class D, Class 1, Class S, or Class T operators of water or wastewater facilities may be approved to take the examination before accruing the necessary experience for the issuance of a certificate.
- (ii) After passing the examination, the certificate will be issued upon showing completion of satisfactory experience to the Board or its contractor.
- (iii) The required experience may be obtained either under the supervision of a certified operator in responsible charge or through the successful completion of an approved training course or course of study.
- (iv) Any education courses used to satisfy the basic experience requirement for a Class D, Class 1, Class S, or Class T certificate may not be used to satisfy the certificate renewal requirements for that same certification.

100.13.12 Substituting education and cross experience for the experience requirements

(a) Substituting Education for Experience Requirements

- (i) Post-secondary education may also be substituted for the experience requirements of section 100.13.11(c) based on successful completion of formal academic credit hours, as approved by the Board or its contractor in accordance with section 100.13.12(b), for all or a portion of an academic year. For education substitution for experience, academic credit hours shall be calculated as follows:
 - (A) 15 semester hours = ½ academic year = 6 months experience; 15 quarter hours = 1/3 academic year = 4 months experience;
 - (B) Training units: 300 contact hours or 30 training units = 15 quarter hours = 4 months experience;
 - (C) thirty (30) semester hours and/or forty-five (45) quarter hours shall constitute one (1) year's formal education and may be substituted for one (1) year of experience.

- (ii) Consideration of Field(s) of Study
 - (A) Credit for up to fifty percent (50%) of the applicable experience requirement of section 100.13.11 may be granted for satisfactorily completing structured programs of study in a degree or certificate granting educational institution or equivalent for technically oriented programs which the Board or its contractor has determined are directly relevant to the operation of water and wastewater facilities, including but not limited to post high school education in the environmental control field, engineering or related science. Experience credit shall be granted based upon the number of academic years required to complete the program, in accordance with section 100.13.12(a).
 - (B) Credit for up to twenty-five (25%) of the applicable experience requirement of section 100.13.11 may be granted for satisfactorily completing structured programs of study in a degree granting educational institution or equivalent, regardless of field of study. Experience credit shall be granted based upon the number of academic years required to complete the program, in accordance with section 100.13.12(a).
 - (iii) In instances where an approved degree or certificate program has not been completed, credit for up to fifty percent (50%) of the applicable experience requirement of section 100.13.11 may be granted for the completion of individual technically oriented courses as approved by the Board or its contractor as relevant to the operation of water and wastewater facilities, including but not limited to post high school education in the environmental control field, engineering or related science, in accordance with section 100.13.12(a).
 - (iv) At least fifty percent (50%) of any experience requirement of section 100.13.11 of this regulation shall be met by actual on-site operating experience in a water or wastewater facility, except that Class D, Class 1, and Class S applicants may satisfy the experience requirements exclusively with formal academic education credits or training units, in accordance with section 100.13.11(h).
- (b) Approval of Training, Educational Courses, and Institutions When Substituting Education for Experience
- (i) The Board or its contractor may approve, for purposes of substituting education for experience, courses or programs which are specifically designed to prepare secondary students to operate water or wastewater facilities. Such an approval shall be based on a case-by-case determination that such courses or programs are directly and specifically relevant to the operation of water and wastewater facilities.
 - (ii) Approval of technically-oriented courses or programs, for purposes of substituting education for experience, shall be determined by the Board or its contractor based on a determination that such courses or programs are directly relevant to the operation of water and wastewater facilities. Such courses and programs may include, but are not limited to, post-secondary education in the environmental control field, engineering, microbiology, chemistry, or other related science.
 - (iii) Approval of educational institutions for purposes of substituting education for experience shall be determined by the Board or its contractor based on accreditation by recognized regional associations for such institutions in the

100.13 APPLICATION TO SIT FOR CERTIFICATION EXAMINATION, QUALIFICATIONS, EDUCATION,
EXPERIENCE AND SUBSTITUTIONS

United States. For educational institutions outside the United States, the applicant shall be required to establish to the satisfaction of the Board or its contractor the equivalency and suitability of the courses of study claimed for credit.

- (iv) Other educational programs, including but not limited to, specialized operator training courses, seminars, workshops, correspondence or computer courses, and technical conferences, may be credited toward education for purposes of substitution for experience as approved by the Board or its contractor. Such programs will receive credit in training units on the following basis:

- (A) Ten (10) contact hours shall be required to equal one training unit. A contact hour means a classroom or supervised hour of attendance or hour of participation, recognized by the Board as a training unit, successfully completed by an applicant.
- (B) Three (3) training units shall equal one semester credit hour or two training units shall equal one quarter credit hour for purposes of equivalency.

(c) Substitution of Cross-Experience for Experience Requirements

- (i) Cross-experience may be substituted for the experience requirements of section 100.13.11 for certification as a Class C, Class B, or Class A water treatment facility operator, domestic or industrial wastewater treatment facility operator; or for a Class 2, Class 3, or Class 4 water distribution or wastewater collection system operator, except that at least fifty percent (50%) of any experience requirement of section 100.13.11 shall be met by actual on-site operating experience in the specific certification category, water or wastewater, for which application is being made.
- (ii) For the purpose of this section, "cross-experience" means that:
 - (A) qualifying experience as an operator in a water treatment facility may be substituted for up to fifty percent (50%) of the experience requirement for certification as an operator of a wastewater treatment facility;
 - (B) qualifying experience as an operator in a wastewater treatment facility may be substituted for up to fifty percent (50%) of the experience requirement for certification as an operator of a water treatment facility;
 - (C) qualifying experience as an operator in a water distribution system may be substituted for up to fifty percent (50%) of the experience requirement for certification as an operator of a wastewater collection system; or
 - (D) qualifying experience as an operator in a wastewater collection system may be substituted for up to fifty percent (50%) of the experience requirement for certification as an operator of a water distribution system.

100.13.13 Examinations

- (a) The Board or its contractor shall oversee the preparation and administration of validated examinations to be used in determining whether or not the applicant has the necessary skills, knowledge, ability and judgment appropriate for the level of certification sought.

100.14 APPLICATION FOR NEW CERTIFICATES AND CERTIFICATES BY RECIPROCITY

- (b) Examinations shall be held at places and times set by the Board or its contractor. Advance announcements of the date and locations of examinations shall be made by the Board or its contractor.
- (c) All examinations shall be written or administered electronically, except in such cases as the Board or its contractor decide, on a case-by-case basis, represent proper exceptions to this requirement.
- (d) All examinations will be graded by the Board or its contractor, and the applicants shall be notified of the results.
- (e) Examinees shall be provided an analysis of their examination performance indicating the level of knowledge demonstrated for each topic tested.
- (f) Separate validated examinations will be prepared for each category and level of certification available. The appropriate range and balance of examination material shall be developed from formal job analyses and the need-to-know criteria resulting from such analyses.
- (g) Applicants who fail an examination may retest during subsequent, regularly scheduled examination cycles upon complying with all applicable application procedures including the payment of appropriate fees.
- (h) Any form of cheating on the part of an applicant will invalidate the results of his or her examination and may result in the applicant being barred from sitting for an examination for a period of 1 to 5 years, as determined by the Board following a hearing in accordance with section 24-4-104, C.R.S.

100.14 APPLICATION FOR NEW CERTIFICATES AND CERTIFICATES BY RECIPROCITY

100.14.1 The Board or its contractor shall award to the applicant a certificate designating the appropriate certification level upon satisfactory fulfillment of the requirements of section 100.14.3 or 100.14.4, as appropriate, and payment of all applicable program fees listed in section 100.16.2.

100.14.2 New certificates shall be valid for three (3) years from the date of the certification eligibility notification letter. Renewed certificates shall be valid for three (3) years from the date of expiration of the prior certificate, not from the issue date of the renewed certificate.

100.14.3 Application for New Certificates

- (a) After receiving written notification of eligibility to apply for the certificate, the applicant must complete and submit the certificate application. Applicants must meet all certification requirements and shall submit the following, where applicable:
 - (i) verification of the experience requirements for Class D, Class 1, Class S and Class T certification pursuant to section 100.13.11(h);
 - (ii) a copy of a high school diploma pursuant to section 100.13.11(b);
 - (iii) a current mailing address, telephone number and email address (if available); and
 - (iv) verification of lawful presence in the United States in accordance with section 24-76.5-101 et.seq, C.R.S.

100.15 **CERTIFICATE RENEWAL, EXPIRATION, REVOCATION AND TRAINING UNIT REQUIREMENTS**

- (b) An applicant shall complete the certification process within three (3) years from the date of the certification eligibility notification letter.

100.14.4 Application for Certificates by Reciprocity

- (a) Operators must submit a written application for certification by reciprocity to the Board or its contractor.
- (b) Certificates may be issued by the Board or its contractor, without examination, on a case-by-case basis, to persons in a comparable classification who have met the following requirements:
 - (i) Passed an adequate, validated examination and who hold a valid certificate in another state, territory or possession of the United States, or other country as issued by one of these entities or, at the discretion of the Board, by another certifying entity, provided the requirements for certification of operators under which the person's certificate was issued do not conflict with the provisions of Article 9 of Title 25, C.R.S., and are of a standard not lower than that specified by these regulations.
 - (ii) Obtained qualifying experience in the state, territory or possession of the United States, or other country in which they hold a valid certificate.
- (c) After receiving written notification of approval by the Board for certification in Colorado, applicants shall follow the instructions provided in the approval letter to complete the certification process.
- (d) Certificates by reciprocity shall be considered "new" certificates subject to all requirements of sections 100.14.3 and 100.16.

100.15 CERTIFICATE RENEWAL, EXPIRATION, REVOCATION AND TRAINING UNIT REQUIREMENTS

100.15.1 Application for Renewal of Certificates

- (a) Certified operators must submit a complete written application for renewal to the Board or its contractor six to eight weeks prior to the expiration date of the certificate.
- (b) Renewal applications must demonstrate that the certified operator satisfies the requirements for renewal, including the training unit requirements in section 100.15.5.
- (c) Renewal applications must include verification of lawful presence in the United States in accordance with sections 24-76.5-101 et.seq, C.R.S.
- (d) The Board or its contractor shall provide all application forms for renewal of certificates.
- (e) Renewal Process for Certified Operators Absent Due to Military Service
 - (i) "Military service" means service in the uniformed services, as defined in the Uniformed Services Employment and Reemployment Rights Act (USERRA), 38 U.S.C. §§ 4301-4335, as the performance of duty on a voluntary or involuntary basis in a uniformed service under competent authority and includes active duty, active duty for training, initial active duty for training, inactive duty training, full-time National Guard duty, a period for which a person is absent from a position of employment for the purpose of an examination to determine the fitness of the

person to any such duty, and a period for which a person is absent from employment for the purpose of performing funeral honors duty as authorized by section 12503 of title 10 or section 115 of title 32.

- (ii) During the period a certified operator is participating in military service, his or her certificate(s) shall be tolled relative to certification renewal and training unit requirements (i.e., for every day a certified operator is in military service, all certifications held by that operator will be put on hold for purposes of meeting the renewal and training unit deadlines). In addition to the number of days in service, an extra 90-day grace period shall be afforded to certified operators upon return from military service for purposes of meeting renewal and training unit deadlines. The Board or its contractor shall have the discretion to extend this grace period to address extenuating circumstances on a case-by-case basis.
- (iii) If the two-year renewal window for any certificate expires while a certified operator is in military service, the operator's certificate(s) will not become invalid during the period the operator is in service. Upon return from military service, the certified operator will have the amount of time accrued while in military service, plus an additional 90 days to obtain the required training unit credits and to submit a renewal application. The operator's certificate(s) will remain valid during that extended time period. In no case will the certified operator be subject to any late fees at the time of submitting a renewal application that is in conformance with section 100.15.1(e).
- (iv) It is the certified operator's responsibility to alert the Board or its contractor of intervening military service at the time of filing a renewal application. Such notification shall include the dates the operator was in "service in the uniformed services" in accordance with the USERRA definition. Certified operators shall be expected to provide a signature swearing under the penalty of perjury to the veracity of all statements regarding military service.

100.15.2 Expired Certificates

- (a) A certificate becomes invalid on its expiration date.
- (b) Following expiration of a certificate, the operator shall not represent that he or she holds a certificate in the class for which the certificate expired.
- (c) No certified operator in responsible charge of a water or wastewater facility shall operate a facility with an expired certificate.

100.15.3 Restoration of Expired Certificates

- (a) An operator may apply for renewal for two years following expiration of the certificate. The Board or its contractor will renew the certificate if the operator pays the renewal and applicable late fees, as listed in section 100.16.2, and satisfies all applicable renewal requirements.
- (b) Certificates renewed after their expiration date shall be valid for three years from the date of expiration of the prior certificate, not from the issue date of renewed certificate.

100.15.4 Revocation of Non-Renewed Certificates

- (a) Any certificate not renewed by the operator within two years of its expiration is automatically revoked.

- (b) Any operator whose certificate is revoked shall be treated as a new applicant for purposes of this regulation and must meet all the initial certification requirements, including passing the appropriate certification examination.

100.15.5 Training Units

- (a) In addition to the other requirements of this regulation, all certified operators must earn the appropriate number of training units, as specified in section 100.15.5, before the operator's certificate will be renewed.
- (b) At least fifty percent (50%) of the training units for certificate renewal must be for courses approved for credit in the specific certificate category (water treatment, domestic wastewater treatment, industrial wastewater treatment, distribution system or collection system) being renewed.
- (c) Up to fifty percent (50%) of the training units for certificate renewal may come from courses approved for credit in a category (water treatment, domestic wastewater treatment, industrial wastewater treatment, distribution system or collection system) other than that of the certificate being renewed, including supplemental training courses.
- (d) For renewal of a certificate, the maximum number of training units allowed from a specific course is the total number of training units approved for the course.
- (e) If applicable, the training units from one course may be applied toward the renewal of more than one certificate.
- (f) Training units may only be used once in each category to renew a certificate.
- (g) Training units are earned during the three-year period a certificate is valid. Training units may not carry over from one three-year period to the next.
- (h) For training that occurs over multiple dates, the training units will be considered to have been obtained on the date of completion of the training course or class.
- (i) If an operator takes a training course prior to taking a certification examination, passes the examination, and obtains a certificate at a new level, the training course completed prior to the examination will not count toward training units for renewal of the new certificate. Should a certified operator complete such a training course and not pass a new certification examination, that training course can be used, if applicable, to meet the training unit requirements for renewal of the operator's current certificate.
- (j) Late renewal
 - (i) Training classes taken after the expiration date of a certificate, but before the automatic revocation date, may be used to renew the expired certificate.
 - (ii) If an operator completes training units after the expiration date of a certificate, but before the certificate is renewed and does not use the training units to renew the previous certificate, the training units may be used for the subsequent renewal.
 - (iii) It is the certified operator's responsibility to keep track of when the training unit credits have been used and will be responsible to verify and affirm on the renewal application that he or she is not using the credits more than once.

- (iv) In the event that a certified operator uses training credits more than once, that could be grounds for disciplinary action, including revocation of a certificate.

100.15.6 Table - Training Unit Requirements for Operator Certificate Renewal

Certified Operator Class	Training Unit Requirement
Class T	1.2 Training Units
Class D or Class 1	1.2 Training Units
Class S	1.8 Training Units
Class C or Class 2	1.8 Training Units
Class B or Class 3	2.4 Training Units
Class A or Class 4	3.0 Training Units

100.15.7 All training unit subject matter will be determined by the Board or its contractor to be relevant and necessary to the successful operation of a water or wastewater facility.

- (a) The Board or its contractor shall approve as “core training” courses with topics that are directly applicable to aspects of water and wastewater facility operations that may affect public health or the environment, or the need to maintain compliance with established requirements. Training units from such courses may be used to satisfy the training units requirements for the renewal of an operator’s certificate in accordance with sections 100.15.5 and 100.15.6.
- (b) Eligible “core training” topics may include the following subjects:
- (i) operation and maintenance of facility mechanical systems, electrical equipment or hydraulics;
 - (ii) physical treatment, chemical treatment, biological treatment;
 - (iii) physical testing, chemical testing, biological testing, or disinfection;
 - (iv) regulatory compliance; or
 - (v) other relevant topics approved by the Board or its contractor.
- (c) The Board or its contractor may approve as “supplemental training” any courses that are found to provide useful operator knowledge but are not directly related to water or wastewater facility operations. Training units from courses approved as “supplemental training” may be used to satisfy the training unit requirements for renewal of an operator’s certificate in accordance with section 100.15.5 and 100.15.6.

100.15.8 Training units shall be awarded to certified operators for teaching a classroom course that has been approved by the Board or its contractor. The training units awarded shall be double the training units approved for the course. If a course is given multiple times in a given year under a single course approval number, double training units will be given the first time the course is taught, and no additional training units will be granted for repeat presentations of the same course with the same course approval number.

100.15.9 Institutions, seminar presenters, and others may seek approval of their training or educational courses or programs by application to the Board or its contractor. Such an application must demonstrate that their proposed material, curricula, contact hour equivalency, and facilities meet the criteria established in section 100.15.7.

100.16 FEES

100.16.1 Application fees for new certificates, renewed certificates, and certificates by reciprocity shall be \$15, and shall be nonrefundable.

100.16.2 Program fees shall consist of the following.

- (a) Examination fees in the amount of \$45.00 will be charged for each examination the applicant signs up to take. Examination fees are based on the cost of preparing, administering, and scoring the certification examination.
- (b) An additional fee of \$35.00 per examination will be charged applicants who choose to take certification examinations electronically. This fee is based upon the added cost to the program of making electronic testing available.
- (c) Administration fees will be charged upon issuance of all new and renewal certificates and will be based on the cost of administering the operator certification program. Administration fees shall be:
 - (i) \$55.00 for each new certificate by examination; and
 - (ii) \$70.00 for each renewal certificate and each new certificate by reciprocity.
 - (iii) For all new and renewed certificates, a standard 6 x 9 inch certificate is available at no additional cost. A 9 x 11 inch certificate may be requested by the operator for a \$5.00 fee.
- (d) There shall be a \$20.00 fee to cover the cost of replacing certification documentation.
- (e) There shall be a \$50.00 late fee, in addition to the regular administration fee, for issuance of certificates for new certificates or certificates by reciprocity requested sixty-one (61) days or more after the date of the letter notifying the applicant of eligibility to receive certification.
- (f) There shall be a \$50.00 late fee, in addition to the regular administration fee, for the renewal of any certificate for which the renewal application is submitted after the expiration date of the certificate being renewed.
- (g) Training unit approval fees shall be \$50.00 for each course submitted for review, except that:
 - (i) Accredited or equivalent educational institutions as referenced in subsection 100.13.12(b) shall not be required to submit courses for review in order for such courses to be used to satisfy training unit requirements; if such institutions choose to submit courses for review, the \$50.00 fee will apply and the applicable courses will be posted along with other approved courses;
 - (ii) An individual attending a course that has not been approved for training units may apply for training unit credit for that course for a fee of \$25.00, provided that the course will then be approved only for the individual operator requesting approval; and
 - (iii) The \$50.00 fee may be waived by the Board or its contractor on a case-by-case basis upon a determination that:

**100.17 RESTRICTED WATER DISTRIBUTION AND WASTEWATER COLLECTION SYSTEMS
CERTIFICATES**

- (A) The course is offered for open enrollment at no cost to those taking the course and with no compensation to the course sponsor;
- (B) Payment of the fee would constitute a financial hardship for the course sponsor; and
- (C) In the absence of the fee waiver, it is unlikely that this training opportunity would be available to operators.

**100.17 RESTRICTED WATER DISTRIBUTION AND WASTEWATER COLLECTION SYSTEMS
CERTIFICATES**

Existing operators of water distribution or wastewater collection systems as of January 30, 2001, whose responsibility includes making process control and/or system integrity decisions about water quality or quantity that may affect the public health or environment, may continue to operate the specific system in which they are currently employed so long as the following requirements are satisfied:

- (a) The operator shall not operate any other system until he or she meets the initial certification requirements for that system and obtains a certificate appropriate for that system.
- (b) This provision is non-transferable, applies only to the specific system and operator and does not authorize operation of the system by any other operator.
- (c) If the classification of a facility changes to a higher level, this provision expires, and is no longer valid.
- (d) Any operator authorized to continue operation under this provision who chooses to work for a different facility must meet all the initial certification requirements for that facility.

100.22 - 29 RESERVED

100.30 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; NOVEMBER, 2000 RULEMAKING

The provisions of sections 25-9-104(1)(a), (3), (4), (5) and (6), C.R.S.; 25-9-106; 25-9-106.2; 25-9-106.3; 25-9-107; 25-9-108, C.R.S., provide the specific statutory authority for the adoption of these regulatory provisions. The Board also adopted, in compliance with section 24-4-103(4), C.R.S., the following statement of basis and purpose.

BASIS AND PURPOSE

Background and Overview

The 2000 Colorado General Assembly adopted HB 00-1431, revising the certification procedures and requirements for operators of water and wastewater facilities, which include water treatment facilities, domestic and industrial wastewater treatment facilities, water distribution systems and wastewater collection systems. The bill established the composition, duties and rulemaking authority of the Water and Wastewater Facility Operators Certification Board (formerly the Plant Operators Certification Board).

The Board intends that the rules adopted pursuant to HB 00-1431 will comply with guidelines established by the United States Environmental Protection Agency (EPA) under section 1419(a) of the federal Safe Drinking Water Act, which specifies minimum standards for certification and recertification of operators of community and nontransient noncommunity public water systems. In particular, the Board anticipates

that this regulation will satisfy EPA requirements and allow that agency to release to the state federal funding that is contingent on adoption of appropriate certification requirements.

Operator Classification and Qualification Issues

In this rulemaking, the Board established various classes of operators for water treatment facilities, domestic and industrial wastewater treatment facilities, water distribution systems and wastewater collection systems. Pursuant to HB 00-1431, the classes of operators established by the Board reflect the differing levels of complexity encountered in operating the various types of facilities and systems. This legislation also authorized the Board to establish separate certification classifications for operators of multiple facilities and for operators of certain small systems. Because of time constraints imposed by EPA deadlines, the Board has chosen to address the issue of operators of multiple facilities in a later rulemaking and has simply "reserved" this section at this time. The Board has made specific provisions for the certification of operators of Small Water and Wastewater Systems and for Transient Non-community Water Systems, as discussed below.

The Board also defined a process for determining the qualifications for certifying and renewing the certification of operators in each of the various classes. In accordance with HB 00-1431 and EPA guidelines, the Board adopted minimum education and experience requirements for operators, a requirement that examinations be validated, and a requirement that operators meet ongoing training requirements in order to renew their certification. The Board intends that if an operator wishes to renew multiple certifications, the same training units may be applied to meet the requirements of more than one certification renewal if the courses in question have been accredited for each of the certifications in question. Operators with multiple certifications are encouraged to take training courses specific to each of their certifications.

The Board also chose appropriate levels at which an applicant may substitute experience for education, or education for experience, in order to allow operator certification where a combination of these components demonstrates that the operator is competent to operate a particular class of facility. Although either education or cross-experience may be substituted for a portion of the experience requirement for any classification, the Board intends that no less than 50 percent of any experience requirement must be met by actual on-site operating experience in the classification applied for. A provision providing for transitional renewal training requirements for operators whose certificates expire prior to January 30, 2004 is also included.

Minimum Experience for Entry Level Operators

According to EPA regulations, operators seeking to be certified must have a specified amount of minimum experience. Several stakeholders expressed concern that requiring a minimum amount of experience for all operators placed an undue burden on entry-level operators in rural areas of Colorado because they would not have the time or financial capability to meet such a certification requirement. In response to these concerns, the Board created a new level of certification for operators of water treatment facilities and water distribution systems serving Transient Non-community Water Systems that draw water from ground water sources not under the influence of surface water, serve less than 100 persons per day, and utilize only non-gaseous chlorine disinfection. Recognizing that such transient non-community systems are outside the scope of EPA guidelines, the Board chose not to impose a minimum experience requirement on such operators and allowed them to gain certification based solely on the passage of a written examination that focuses on subjects particularly relevant to operating this category of transient non-community water treatment facilities and transient non-community water distribution systems. For other entry level water and wastewater facility operators (Class D and Class 1), the Board has established a one-month minimum experience requirement. In order to provide flexibility to entry-level operators, the Board has established a number of options for meeting this experience requirement, including on-the-job training, apprenticeship, and on-site or correspondence training courses.

The Board also created a Small System classification for both water and wastewater facilities. These classifications apply to facilities that serve under 3300 persons and that otherwise fall into the Class D

treatment and Class 1 distribution or collection classifications. Small water system operators shall be certified by taking a single examination in water treatment and distribution. Small wastewater system operators shall be certified by taking a single examination in wastewater collection and treatment. Renewal training requirements for these certificates have been set at 1.8 training units. During the transition period prior to the construction and validation of these examinations, applicants for these certifications will take both the Class D and Class 1 examinations in the appropriate category. The application and fee structures have been adjusted to reflect the degree of overlap among these requirements.

Classification of Water and Wastewater Treatment Facilities

Generally, the Board, chose to establish a system for classification of the State's water and wastewater treatment facilities according to their prior system of classification. Accordingly, the Board adopted a classification scheme which takes into consideration factors such as the size, complexity, and amount of water processed through the facility. The Board determined that it would be most efficient for the Division to retain the authority to classify facilities and modify the classification of any facility. Classification decisions by the Division can be appealed to the Board.

The Board recognizes that water treatment processes that do not utilize chemicals are more problematic and impose a greater risk on public health. Therefore, the Board requires that a higher class of distribution system be used in combination with treatment facilities that utilize ground water with a waiver of disinfection, including ultraviolet and ozone disinfection. This is due to the fact that there is no residual disinfectant in the distribution system.

Classification of Water Distribution and Wastewater Collection Systems

In classifying water distribution systems and wastewater collection systems the Board chose to initially classify the systems based on population, which the Board believes serves as an adequate surrogate for complexity. Additionally, the Board provided that the Division can change the classification of any particular facility based on complexity factors. The Board intends to revisit their initial classification scheme for water distribution and wastewater collection systems in a future rulemaking to consider adoption of a classification system that will more accurately reflect the complexities and differences between the various types of distribution and collection systems.

Fees

The new state legislation authorized the Board to adopt application and program fees which reflect the actual costs of administering the operator certification program. The Board has established a certification application fee of \$15, as specified in the statute. It also established two types of program fees: (1) an examination fee of \$25 to cover the cost of administering each examination, and (2) an administration fee that will be charged upon issuance of a certificate and upon renewal of a certificate. The administration fee will cover ongoing costs of program administration by a third party contractor. The Board did not adopt specific fee amounts in this rulemaking because the arrangements with a third party contractor, which will determine the necessary amount of the fees, have not yet been finalized. The Board therefore is reserving the adoption of specific administration fees for a later rulemaking. The Board also anticipates that the fees established in this rulemaking may need to be revised as the transition to this new mode of implementing the operator certification program is completed.

Status of Existing Operators

The Board chose to certify under these regulations those operators of water and wastewater treatment facilities who had been previously certified under the prior certification system. The Board also chose to certify under these regulations those operators of water distribution systems and wastewater collection systems who had been previously certified under the voluntary program administered by the Colorado Water and Wastewater Collection Systems Certification Council, based on the understanding that the

voluntary certification program, and in particular the exam administered under the voluntary program, was adequate to ensure the protection of public health and the environment, and the safe operation of water distribution and wastewater collection systems.

In addition, the new regulation provides a procedure to authorize certain existing operators of existing water distribution and wastewater collection systems who have not obtained voluntary certification to continue operation of the specific systems where such operators are currently employed for a period of time without receiving a certificate. Pursuant to EPA guidelines the Board chose to allow operators of existing systems, who were authorized to make process control and/or system integrity decisions about water quality or quantity that may affect the public health or environment, to continue operation of their systems so long as certain requirements are met and a certain procedure is followed. This procedure allows owners of such systems to apply to the Board for an "Authorization for Continued Operation" for the existing operators of their system. Pursuant to EPA guidelines, the Board chose to make the "Authorization for Continued Operation" site-specific and non-transferable. To maintain this authorization, operators will need to meet the same on-going training requirements as certified operators. To move to another facility, operators would need to meet all initial certification requirements, including passing the appropriate exam. These same procedures apply to operators who hold existing restricted certificate issued under authority of the regulations being repealed in this rulemaking.

Operator Responsibilities

One section of the regulation adopted by the Board specifies the duties of certified operators and defines certain standards of performance for certified operators of affected facilities. The regulation requires certified operators to exercise reasonable care and judgment while performing their duties and in supervising facility operations. The regulation also requires operators to keep current with the Board information on where the operator(s) can be contacted so that the Board can notify the operator(s) of certification expiration, renewal requirements, and testing information.

Owner Responsibilities

Another section of the regulation adopted by the Board specifies the duties of owners of water and wastewater facilities. Pursuant to the legislation and EPA guidelines, the Board chose to require owners to place the direct supervision of their facilities under the control of an "operator in responsible charge" holding a valid certification equal to or greater than the classification of the facility. The Board clarified that a direct supervisor relationship exists if the operator in responsible charge has supervisory responsibility and authority with respect to other operators. The Board does not intend for direct supervision to mean that the operator in responsible charge must be on-site at all times.

In order to meet EPA guidelines, the Board required that all process control and/or system integrity decisions about water quality or quantity that may affect the public health or the environment be made by either an operator in responsible charge or another certified operator. This operator must be certified at a level equal to or higher than that of the facility. The Board also required owners to designate a certified operator who would be available for each operating shift. The Board clarified that in order for an operator to be "available," he or she must be on-site or able to be contacted as needed to initiate appropriate actions in a timely manner.

Finally, the regulation requires owners to submit to the Board information on the operator(s) in responsible charge of their facility so that the Board and Division can more efficiently enforce the provisions of this regulation and better protect the public health.

Division Enforcement Procedures

HB 00-1431 also set out the roles of the Water Quality Control Division and the Board in enforcing the new operator certification program. The Board recognized the role of the Division as the agency primarily responsible for investigating and reporting to the Board any misconduct by water and wastewater facility

operators. Any disciplinary action regarding operators would be taken by the Board, after an opportunity for a hearing. Pursuant to the legislation, the Board also chose to allow owners of water and wastewater facilities to seek a hearing before the Board in response to a Division finding of a violation of the regulations or in response to a Department assessment of a civil penalty. The rule also establishes a process by which any person, affected or aggrieved by a decision of Division or a third party contractor implementing certain aspect of the program may seek relief through an appeal or hearing before the Board.

Nonprofit Contractors Issues

HB 00-1431 authorized the Board to appoint one or more independent nonprofit corporations to administer the operator certification program, including providing examinations, issuing certification documents, evaluating continuing training requirements for renewal of certification, and evaluating requests for reciprocity. The Board specified in the new regulation the program administration duties that it may choose to delegate to a nonprofit corporation.

100.31 FINDINGS IN SUPPORT OF EMERGENCY ADOPTION OF REGULATION NO. 100; DECEMBER 5, 2000

In addition to its adoption of Regulation No. 100 in accordance with the standard procedures specified in section 24-4-103, C.R.S., which result in an effective date for this regulation on a permanent basis of January 30, 2001, the Board also is adopting the rule on an emergency basis with an effective date of December 5, 2000.

In order to satisfy the new federal requirements noted in section 100.30 above, the modified operators certification program established by these regulations must be in effect by February, 2001. In addition, the new state legislation noted above, which became effective in May, 2000, mandates that the state's operators certification program be implemented in accordance with its provisions. This new regulation needs to be in effect to assure that program implementation is consistent with the new statutory provisions. Because the already-established 2001 certification examination cycle begins in January, 2001, with an application deadline of December 15, 2000, there would be substantial disruption to the certification program, with serious financial implications for operators whose employment depends upon obtaining certification, if this new regulation did not become effective immediately.

Therefore, the Board finds that the immediate adoption of Regulation No. 100 with an effective date of December 5, 2000 is imperatively necessary to comply with state law and for the preservation of public health, safety and welfare, and that compliance with the requirements of section 24-4-103, C.R.S. as to the normal effective date for new regulations would be contrary to the public interest.

100.32 FINDINGS IN SUPPORT OF EMERGENCY ADOPTION OF REVISIONS TO REGULATION NO. 100.22.2(b); JANUARY 30, 2001

In order to satisfy the new federal requirements noted in section 100.30 above, the modified operators certification program established by the Board's regulations must be in effect by February 5, 2001. In its December 5, 2000 rulemaking, the Board reserved a provision in section 100.22.2(b) for an administration fee. This rule revision establishes the amount of the fee.

The Board has determined that collection of a fee to help cover the costs of administration of the Operators Certification Program by nonprofit, third party contractors is necessary to effectively carry out the program. The Board also concludes that immediate imposition of the fee is necessary in order to assure that the program is fully implemented by the federal deadline. Therefore, the Board finds that the immediate adoption of the administration fee in section 100.22.2(b) with an effective date of January 30, 2001 is imperatively necessary to comply with state law and for preservation of public health, safety and welfare, and that compliance with the requirements of section 24-4-103, C.R.S. as to the normal effective date for new regulations would be contrary to the public interest.

**100.33 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; ARCH, 2001
RULEMAKING**

The provisions of sections 25-9-104(1)(a), (3), (4), (5) and (6); 25-9-105; 25-9-106.3; 25-9-107; 25-9-108, C.R.S., provide the specific statutory authority for the adoption of these regulatory provisions. The Board also adopted, in compliance with section 24-4-103(4), C.R.S., the following statement of basis and purpose.

BASIS AND PURPOSE

The 2000 Colorado General Assembly adopted HB 00-1431, revising the certification procedures and requirements for operators of water and wastewater facilities, which include water treatment facilities, domestic and industrial wastewater treatment facilities, water distribution systems and wastewater collection systems. The bill established the composition, duties and rulemaking authority of the Water and Wastewater Facility Operators Certification Board (formerly the Plant Operators Certification Board).

The new state legislation authorized the Board to adopt application and program fees that reflect the actual costs of administering the operator certification program. The Board has previously established a certification application fee of \$15, as specified in the statute. Regulation No. 100 also provides for two types of program fees: (1) an examination fee to cover the cost of administering each examination, and (2) an administration fee that will be charged upon issuance of a certificate and upon renewal of a certificate. The Board has previously established an examination fee of \$25.

On January 30, 2001, the Board adopted on an emergency basis an administration fee of \$60.00 for each new and renewal certification. This administration fee will cover ongoing costs of program administration by one or more third party contractors. The amount of this fee is based upon evidence presented in the emergency rulemaking hearing regarding the actual costs of program administration, taking into account a level of uncertainty associated with this new third party role. In this rulemaking, based on the evidence presented the Board has readopted this same administration fee. The Board intends that the amount of this fee will be revisited from time to time in the future as more experience with implementation of the Operators Certification Program by the third party contractors is gained.

Section 25-9-104 (1)(a) C.R.S. requires a failed examination review without specifying any specific format or requirements for this review. The current regulation (section 100.11.5, 5 C.C.R. 1003-2) contains a similar requirement. It is possible, however, to interpret the regulation as requiring that failed examinees be permitted to review actual copies of the examination. The Board recognizes that providers of standardized examinations are reluctant to permit, and often refuse to permit, copies of their examinations to be available for individual review. These providers generally produce detailed, individualized statistical analyses of examination results. Such analyses can form the basis for a meaningful review of individual's performance on examinations.

The Board, therefore, has decided to amend the regulatory language to more clearly reflect the statutorily permitted flexibility regarding failed examination reviews. The specific format of failed examination review sessions may be determined by the Board or its designee, consistent with the restrictions imposed by the provider(s) of the standardized examinations used in certification testing.

**100.34 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; AUGUST,
2001 RULEMAKING**

The provisions of sections 25-9-104(1)(a), (3), (4), (5), (6) and (6.5); 25-9-105; 25-9-106.3; 25-9-107; 25-9-108; and 25-9-110, C.R.S., provide the specific statutory authority for the adoption of these regulatory provisions. The Board also adopted, in compliance with section 24-4-103(4), C.R.S., the following statement of basis and purpose.

BASIS AND PURPOSE

1. Subsections 100.18.2 and 100.18.3:

The previous version of section 18, 5 C.C.R. 1003-2, made provision for the continuance of the certifications of water distribution and wastewater collection operators who are (as of January 30, 2001) currently certified under the voluntary certification program administered by the Colorado Water Distribution and Wastewater Collection Systems Certification Council by declaring, in section 100.18.1, that such certifications will be considered valid. Operators who have not been certified under the voluntary program have an opportunity to obtain either a full or a restricted certification under the provisions of section 100.18.2. No provision was made to address those operators who hold either expired voluntary certifications or who are under-certified for the level of their job responsibility. This amendment broadens the scope of section 100.18.2 to include such operators.

The original structure of the first paragraph of section 100.18.2 mixed provisions applicable to two distinct groups of operators: those currently operating water distribution and wastewater collection systems and those holding restricted water or wastewater treatment certifications valid under the previous version of these regulations. This admixture of subjects makes the language and interpretation of the existing regulation awkward. Therefore, a new section, 100.18.3, is appropriate. This section applies specifically to operators who hold currently valid restricted water and wastewater treatment certificates.

2. Subsections 100.23.3 and 100.23.4:

Section 25-9-104(6.5), C.R.S., vests the responsibility to investigate instances of possible operator misconduct with the Water Quality Control Division, not with an "other Board designee". Similarly, sections 25-9-110(3) through 25-9-110(6), C.R.S., vest enforcement authority for violations of section 25-9-110(2), C.R.S., with the Division. The enforcement of section 100.21, 5 C.C.R. 1003-2, is also vested in the Division. The original language of sections 100.23.3 and 100.23.4 of the regulation did not accurately reflect this placement of responsibility. The language adopted by the Board eliminates reference to designees of the Board as investigative agents.

3. Subsection 100.11.8:

Similar to subsections 100.23.3 and 100.23.4, this section was revised to eliminate the reference to designees of the Board, since the hearing in question would appropriately be held by the Board.

4. Subsection 100.21.5:

This subsection was revised to clarify that higher levels of water treatment certifications are acceptable for operators in responsible charge of transient non-community water systems. Therefore, for example, an operator with a level "D" water treatment certification may be an operator in responsible charge for a transient non-community system and need not hold a separate water distribution system certification. On the other hand, that operator must hold a level "1" or higher water distribution certification in addition to the level "D" water treatment certification to be a designated operator in responsible charge of a small water system. The Board intends that small systems may have a single operator with the required certifications, or may have multiple operators who together hold the required certifications.

100.35 FINDINGS AND STATEMENT OF BASIS AND PURPOSE FOR ADOPTION ON AN EMERGENCY BASIS OF REVISIONS TO REGULATION NO. 100 JANUARY, 2002 RULEMAKING

On January 29, 2002 the Board adopted revisions to Regulation No. 100, Water and Wastewater Facility Operator Certification Requirements [5 CCR 1003-2] to establish a new subsection 100.14.6, regarding "supplemental training" both on an emergency basis pursuant to § 24-4-103(6), C.R.S., and as a final rule pursuant to § 24-4-103, C.R.S.

The Board has established a new category for "supplemental training" courses. These courses are those that are found to provide useful operator knowledge but are not directly related to water or wastewater facility operations. Examples of such courses would include courses on topics such as first aid or word processing skills, which provide general knowledge that may be useful to certified operators, but do not contribute directly to an operator's professional water or wastewater facility expertise and knowledge. Supplemental training courses would be ones that do not fall into the specific categories listed in subsection 100.14.4 (a) through (e).

The Board has determined that it is appropriate to allow training units associated with such supplemental training courses to be used for up to (but not more than) 50% of the training requirements to renew a certificate. This system will allow operators to get credit for obtaining training in useful general subject matter areas, while assuring that at least half of the training units relied on for renewal are related to courses that are directly applicable to water and wastewater facility operational expertise.

The Board's permanent rule adoption complies with the hearing procedures and notice requirements of § 24-4-103, C.R.S. The Board concludes that adoption of the same requirements on an emergency basis is imperatively necessary to protection of public health and safety and that compliance with the effective date provisions of § 24-4-103, C.R.S., would be contrary to the public interest. The purpose of the emergency adoption is to assure that operators seeking certificate renewal prior to the effective date of the permanent rule obtain training that is directly related to water and wastewater facility operational expertise, thereby advancing the purposes of operator certification -- protection of public health and safety. In addition, emergency adoption will minimize confusion and inequity between the types of approval given to operator training courses in 2002.

**100.36 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; JANUARY,
2002 RULEMAKING**

The provisions of sections 29-5-104(1)(a), 25-9-104(3), 25-9-104(4) and 25-9-106.2, C.R.S., provide the specific statutory authority for the adoption of these regulatory provisions. The Board also adopted, in compliance with section 24-4-103(4), C.R.S., the following statement of basis and purpose.

BASIS AND PURPOSE

1. Section 100.6:

The Board recognizes that there are a variety of industrial facilities whose wastewater handling involves only physical settling, filtration, or separation processes. These facilities process wastewater without chemical addition and normally require only the monitoring of otherwise passive physical processes. The Board has determined that such facilities represent a lower degree of complexity than is represented by the "C" level of the existing industrial wastewater facility classifications. The Board also recognizes that the facilities described above do not require the supervision of an industrial wastewater facility operator having the level of expertise required of a "C" level operator. Therefore, the Board has determined that a new industrial wastewater facility classification, the "D" level is appropriate. This classification shall consist of facilities whose wastewater handling is purely physical and is without routine chemical addition or complex mechanical manipulation. Subsection 100.6.2 is amended to establish the "D" level industrial wastewater facility classification.

To provide for the proper supervision of "D" level industrial wastewater facilities, the Board establishes a "D" level industrial wastewater facility operators certification. This certification level

shall have the same initial certification and renewal requirements as the “D” level water treatment and domestic wastewater treatment certifications.

To allow a degree of flexibility for facilities that only occasionally use processes classed at a higher level than those regularly employed, the Board has broadened the language of subsection 100.6.4 to allow for the occasional use of such processes without requiring a facility classification upgrade.

2. Subsection 100.9.7(a)(i):

This subsection describes the experience requirement for “D” level operators. The subsection is amended to include “D” level industrial wastewater operators within its existing provisions.

3. Subsection 100.21.5:

This subsection is amended to include “D” level industrial wastewater as a listed facility classification and operator certification level. The final paragraph of subsection 100.21.5 was made obsolete by the rulemaking of August 28, 2001, and is hereby deleted.

**100.37 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; APRIL, 2002
RULEMAKING**

The provisions of sections 25-9-104(1)(a), 25-9-104(3), 25-9-104(4) and 25-9-106.2, C.R.S., provide the specific statutory authority for the adoption of these regulatory provisions. The Board also adopted, in compliance with section 24-4-103(4), C.R.S., the following statement of basis and purpose.

BASIS AND PURPOSE

Section 100.6:

The capitalization of the word “and” in the process descriptions for Class B industrial wastewater treatment facilities is an error. The case of the word “and” is, therefore, changed to lower case.

The Board recognizes that stormwater runoff is not an industrial wastewater. Therefore, the listing of “stormwater runoff control ponds” as an example of a process utilized in a class “D” industrial wastewater facility is an error and is hereby deleted.

**100.38 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; MAY, 2002
RULEMAKING**

The provisions of sections 29-5-104(1)(a) and 25-9-104(3), C.R.S., provide the specific regulatory authority for the adoption of this regulatory provision. The Board also adopted, in compliance with section 24-4-103(4), C.R.S., the following statement of basis and purpose.

BASIS AND PURPOSE

In order to maintain enforcement primacy under the Safe Drinking Water Act, the State needs to approve parties who are qualified to make and to assure the quality of certain analyses required by the Environmental Protection Agency (EPA). Most of the required analyses are already made by certified operators of water treatment facilities and water distribution systems. Rather than develop a new certification program to approve parties under the EPA rules, the Board has decided to incorporate the EPA requirements into the existing operators certification program.

Beginning with the Fall 2002 examinations, the Board will expand the coverage of the certification examinations to cover the analyses required by EPA. Because the content of certification examinations is

reserved by statute and regulation to the Board, the inclusion of the EPA-required analyses in the certification examinations will not require a regulatory change. However, operators who are already certified will need to acquire training in the EPA requirements. To assure that currently certified operators receive training in the EPA analysis and quality assurance requirements, an ongoing training requirement, to be completed within three years of the start of the Fall 2002 examination cycle, is hereby established.

100.39 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: MARCH 2003 RULEMAKING

Provisions of section 25-9-104(1)(a), C.R.S., provide the specific statutory authority for the adoption of these amendments to the established regulatory provisions of Regulation 100 (5 CCR 1003-2). The Board also adopted, in compliance with section 24-4-103(4), C.R.S., the following statement of basis and purpose.

BASIS AND PURPOSE

The Board has determined that the following sections must be amended in order to correct errors and to clarify the intent of the Regulation: sections 100.1.1, 100.2(15), 100.2(16), 100.4.2 – footnote #1, 100.4.2 – footnote #3, 100.6.2, 100.7.2, 100.10.1, 100.10.2, 100.10.5, 100.11.1, 100.11.8, 100.14.1, 100.14.7, 100.19.1, 100.22.4, and 100.23.5. None of these amendments are intended to substantively modify the Regulation or to change the current practice of the Board.

Section 100.9.6, which details the experience requirements for certification, was reorganized to clarify the experience required for various certification levels. The Board also made explicit its long-standing practice of considering domestic and industrial wastewater treatment experience to be interchangeable for purposes of qualifying to sit for a certification examination.

The failed examination review required by statute (25-9-104, C.R.S.) is non-specific as to format; the Board has determined that the corresponding regulatory provision, section 100.11.5, shall likewise be non-specific as to format. This change permits the Board to accept the detailed, individualized analyses prepared by the examination provider as an appropriate examination review.

The Board has determined that the training required for certification renewal will have “core” and “supplemental” components. The amendment to sections 100.14.4 through 100.14.6 adopted by the Board clarifies the relationship between core and supplemental training, gives examples of core subject matter, specifically authorizes the granting of supplemental credit for non-listed topics, and reorganizes the sections so that they are more readily understood.

Section 100.18.3 is obsolete and substantively conflicts with the broad acceptance of prior certifications granted in section 100.9.1. The Board has determined that section 100.18.3 should be deleted.

100.40 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: OCTOBER 2004 RULEMAKING

Provisions of section 25-9-108, C.R.S., provide the specific statutory authority for the adoption of these amendments to the established regulatory provisions of Regulation 100 (5 CCR 1003-2). The Board also adopted, in compliance with section 24-4-103(4), C.R.S., the following statement of basis and purpose.

BASIS AND PURPOSE

A. New and Revised Fees.

The Board has revised section 100.22.2 to modify the current examination and administration fees. The existing \$25.00 examination fee is inadequate to cover the actual cost of certification exams provided by ABC. Up until now, the resulting deficit has been made up by the

administration fee. However, the Board agrees with the CECTI and Certification Council proposal that it is more appropriate to increase the examination fee (to \$35.00), while reducing the administration fee (from \$60.00 to \$50.00) for those obtaining a new certification by examination. The net result will be no change in total fees for those passing a certification examination to obtain a new certification at a higher level. Those who take an examination and fail will incur a somewhat higher expense. The Board also agrees that it is appropriate not to make any change in the administration fees at this time for those obtaining renewal certifications or certification by reciprocity.

B. Cross-Experience Training for Certification Renewal.

Subsection 100.14.1 has been revised to allow a portion of the training units required for certification renewal to be obtained from courses approved as core training in categories other than the operator category for the certification being renewed. The Board has determined that this is consistent with the fact that “supplemental” training courses on a wide variety of topics are already allowed to provide a portion of the training units for certification renewal. This approach is also consistent with the fact that up to 50 percent of the experience requirement for operators qualifying to take certification examinations can be based on “cross-experience”.

The revised regulation clarifies that at least 50 percent of the training units for certification renewal must be obtained from core training courses approved in the certification category being renewed. The remainder of the training units may consist of any combination of supplemental training units and/or training units approved as core training in other certification categories. The Board also has included language to prevent “double-counting” the training units from a single course. For example, if a course has been approved for 1.0 training units in each of the certification categories, an operator renewing a class A water treatment operator certification may count the 1.0 training unit toward renewal but may not also use cross-experience credit for the same course, even though it has been approved for training units in other certification categories.

C. Examination Feedback.

The Colorado operators certification statute previously required that each of the Board’s nonprofit contractors “conducts failed exam reviews” following each certification examination cycle. This provision was amended in House Bill 04-1211, adopted by the 2004 session of the Colorado General Assembly, to provide that each contractor “provides feedback to examinees upon request following each examination”. Subsection 100.11.5 has been revised to require that feedback regarding applicants’ performance on the individual topics tested be provided to each person taking an operators certification examination. This new language goes beyond the revised statutory mandate, which only requires such feedback upon request. However, the Board has provided in the regulation for the automatic provision of feedback to all examinees, since that is consistent with the contractors’ current practice.

D. Specific Training Requirement for Operators Conducting Certain Quality Control Analyses

In order to maintain enforcement primacy under the Safe Drinking Water Act, the State must approve parties who are qualified to make and to assure the quality of certain analyses required by the Environmental Protection Agency (“EPA”). These requirements are detailed in the Colorado Primary Drinking Water Regulation, 5 CCR 1003-1, Article 7.5, “Disinfectant Residuals, Disinfection Byproducts, and Disinfection Byproduct Precursors.” Colorado elected to approve certified operators as the parties approved by the State to perform these analyses.

To meet this requirement, the Board approved the original version of subsection 100.14.6 of Regulation 100 in May 2002. However, as originally adopted, the subsection was overly broad. The amendment approved by the Board in this rulemaking clarifies that subsection 100.14.6 applies only to those operators whose duties include performing the above-mentioned analyses

*100.41 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE AND
EMERGENCY FINDINGS: NOVEMBER 2004 RULEMAKING*

and associated quality assurance procedures required by the article 7.5 of the Colorado Primary Drinking Water Regulation.

**100.41 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE AND
EMERGENCY FINDINGS: NOVEMBER 2004 RULEMAKING**

Provisions of section 25-9-108, C.R.S., provide the specific statutory authority for the adoption of these amendments to the established regulatory provisions of Regulation 100 (5 CCR 1003-2). The Board also adopted, in compliance with section 24-4-103(4), C.R.S., the following statement of basis and purpose.

BASIS AND PURPOSE

The Board also adopted a new training unit course approval fee of \$50.00, to cover the cost of the contractors' review of training courses submitted through the new online review and approval system. The Board determined that it is appropriate for the costs of the training unit approval process to be covered by training providers. Establishing a reasonable fee for this service should also have the added benefit of discouraging submittal of training course approval applications for courses of marginal relevance or benefit to certified operators.

In order to address certain special circumstances, the Board has created three exceptions to the \$50.00 training unit approval fee. First, the Board intends that appropriate courses from accredited educational institutions in the United States, and equivalent institutions outside the United States, can be used for training unit credit for certification renewal without approval of the specific courses by the Board or its designee. However, some educational institutions may wish to have their courses listed with other approved training unit opportunities, which generally are posted on the web site of the Board and/or its designee. If an educational institution wishes to have its courses posted along with other approved training units, its courses will be subject to the usual \$50.00 fee and will be reviewed by the normal training unit review process.

The Board recognizes that in some instances an individual may take a course that provides relevant and appropriate operator training, but which has not been submitted by the course sponsor for training unit approval. For example, this could occur if an operator attends training at an out-of-state national conference that has not submitted its courses for approval in Colorado. To reduce the hardship on individuals seeking approval of such courses, the Board established a reduced fee of \$25.00 for applications for approval of a course submitted for review by an individual attending the course. To assure that this option is not used by course sponsors as an opportunity to avoid payment of the usual \$50.00 fee, the Board provided that any course submitted for approval by an individual attending a course will be approved only for that individual.

Finally, to account for other special circumstances that may arise, the Board established an opportunity for case-by-case waiver of the \$50.00 fee. The Board intends that its contractors may use this provision to avoid financial hardships and the potential unintended consequence of reducing training opportunities for Colorado operators. The Board assumes that this provision will apply infrequently.

The Board provided that the new training unit approval fee will apply to all courses approved for offering in 2005 and later. The Board understands that while some courses have already been submitted and reviewed for offering in 2005, course sponsors submitting such courses have been notified that final approval of such courses will not occur until finalization of this new fee. The Board determined that it is appropriate for all courses to be offered for calendar year 2005 and later to be subject to the same fee provisions, in order to provide for even-handed treatment. Therefore, the Board adopted the new training unit approval fee provisions on both an emergency and permanent basis.

EMERGENCY FINDINGS

On an emergency basis, the training unit course approval fee shall become effective November 30, 2004, and shall remain effective on an emergency basis until it becomes permanently effective on January 30, 2005 pursuant to section 24-4-103(5), C.R.S.. The Board further determined that this result is appropriate and should not result in hardship to course sponsors. This rulemaking was initiated in October 2004 after complying with the usual notice requirements. Possible approaches to the training unit approval fee were discussed at the October 2004 hearing and interested parties had an opportunity to discuss and comment on the proposal. In addition, December 30, 2004 would have been the normal effective date had final action been taken at the October 2004 hearing at the same time as the remainder of the proposed rule. Course sponsors have been aware of the intent to establish a new training unit approval fee for 2005 courses and relying on the usual effective date would now result in unequal treatment in favor of course sponsors that submitted applications for approval of 2005 courses prior to the effective date. Therefore, the Board finds that immediate adoption of these revisions to Regulation No. 100 is imperatively necessary to preserve public welfare and that compliance with the requirements of section 24-4-103(5), C.R.S. would be contrary to the public interest.

100.42 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: JULY 26, 2005 RULEMAKING

The provisions of sections 25-9-104(3) and 25-9-104(4), C.R.S., provide the specific statutory authority for the adoption of these regulatory provisions. The Board also adopted, in compliance with section 24-4-103(4), C.R.S., the following statement of basis and purpose.

BASIS AND PURPOSE

The Board adopted revisions to the drinking water treatment facility classification system in section 100.4 of this regulation in order to more precisely define some classifications, to broaden classifications to include newer technologies, and to remove certain inconsistencies in the former classifications. The classification categories have been indexed for clarity.

Ground Water Systems: Subsections 100.4.2(a) through (c).

Subsection 100.4.2(a). The deletion of footnote #2 is reflective of the Board's recognition that a level "1" water distribution system operator should have sufficient knowledge and skill to supervise a small ground water system that operates with a waiver of disinfection.

Subsection 100.4.2(c). The Board clarified that treatment technologies other than what may be commonly connoted by the term "filtration" are encompassed by the regulation. The Board also recognized that chemical addition to improve the aesthetic quality of drinking water (secondary drinking water standards as listed in 40 CFR 143) ordinarily should not raise the classification of a system beyond the "C" level. Ground water systems with treatment techniques or chemical additions, other than disinfection, that are used for the specific purpose of meeting primary drinking water requirements (40 CFR 141) should be classified under the criteria in subsection 100.4.2(g).

All Water Systems: Subsections 100.4.2(d) through (f).

Subsection 100.4.2(d). The Board intends that small, simple water systems that require filtration in addition to disinfection be classified a "D" systems only if the system utilizes disposable filters, i.e., filters that do not require periodic backwashing or other maintenance and which must be disposed of when they lose their effectiveness. The Board has determined that the type of disinfection utilized should not be restricted to non-gaseous chlorine and has deleted that qualifier from the regulation.

Subsection 100.4.2(e). The Board recognizes that the expertise required to operate water systems that use a variety of filtration and other treatment technologies (other than disposable filters or direct or

conventional filtration) in order to meet primary drinking water standards is often equivalent to the skill required to operate water systems using the same techniques to improve the aesthetic quality of water. The classification of such systems is intended to be "C" for smaller systems. However, because of the enhanced public health risk in the case of system failure, the Board intends that the increase in classification level with size be accelerated for systems using filtration and other technologies to meet primary standards.

Subsection 100.4.2(f) Primary treatment techniques that incorporate or depend upon additional chemical treatment in order to function properly are intrinsically more complex to operate. An example of such a system would be a conventional filtration system, which ordinarily requires the additional steps of chemically aided coagulation and flocculation. The terms "conventional filtration" and "direct filtration" are defined in the Colorado Primary Drinking Water Regulations, articles 1.5.2(21) and 1.5.2(30), March 30, 2005, respectively. These definitions are intended to apply to Regulation 100, section 100.4.2(f). Such systems have significant monitoring, testing and adjustment requirements. The Board intends that systems utilizing any filtration technique or other treatment technology that, in and of itself, requires additional chemical treatment in order to meet primary drinking water requirements have an initial classification of "B".

Chemical Addition: Subsections 100.4.2(g) through 100.4.2(i).

Subsection 100.4.2(g). Secondary drinking water standards have defined "secondary maximum contaminant levels", SMCLs, which are non-enforceable (40 CFR 143). The Board intends that chemical addition for the specific purpose of meeting secondary drinking water standards, such as iron and manganese control, pH control, or water softening, should not affect the classification of a level "B" or "C" water system. Level "D" systems utilizing chemical addition for the specific purpose of meeting secondary drinking water standards should be individually evaluated under the authority of section 100.4.1 to determine the appropriate classification.

Subsection 100.4.2(h). The Board intends that this classification category apply to systems that, in addition to the primary treatment process, utilize chemical treatment for the specific purpose of meeting the enforceable "maximum contaminant level" requirements for primary contaminants (40 CFR 141). An example of such a chemical treatment would be the use of lime softening for the specific purpose of controlling radionuclides. The Board also intends that disinfection is not to be considered as an "additional chemical treatment" within the meaning of Regulation 100, subsection 100.4.2(h).

Subsection 100.4.2(i). Although lead and copper are contaminants of special concern, they differ from most primary drinking water contaminants in that (1) they commonly occur in the distribution system, not in the source water; and (2) the methods of treatment for lead and copper are relatively non-complex. The Board, therefore, intends that systems that treat for lead and copper in the distribution system (a process commonly referred to as "corrosion control") have a minimum classification of "C". Should treatment be necessary because of the contamination of source water with lead and copper, a higher classification may be appropriate. The Division should evaluate such systems to determine whether an application of section 100.4.1(b) is appropriate.

Subsection 100.4.2(j). The Board intends that any water system utilizing fluoridation have a minimum classification of "C", hence the designation of chlorination as a companion process to fluoridation has been deleted.

Multiple Treatment Processes: Subsection 100.4.2.4.

Systems utilizing multiple water treatment processes should be classified in accordance with the most complex process regularly used. This regulation already contains a parallel requirement for domestic and industrial wastewater systems, sections 100.5.4 and 100.6.4, and the Board has determined that the requirement should be included as part of the drinking water classifications.

**100.43 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: FEBRUARY
14, 2006 RULEMAKING**

The provisions of sections 25-9-104, C.R.S., provide the specific statutory authority for the adoption of these regulatory provisions. The Board also adopted, in compliance with section 24-4-103(4), C.R.S., the following statement of basis and purpose.

BASIS AND PURPOSE

The Board adopted revisions to a variety of provisions in this regulation in order to clarify the intent of certain provisions and to incorporate within the regulation the definitions of terms commonly used in the water and wastewater industries.

Definitions: Section 100.2.

Subsections 100.2(1), (7), and (9). The Board includes the definitions of “Bag or Cartridge Filters”, “Conventional Filtration Treatment”, and “Direct Filtration Treatment” in order to standardize the understanding of these treatment techniques as used in the water treatment facility classifications of subsection 100.4.2 of this regulation. The Board intends that these definitions be interpreted in a manner consistent with the Colorado Primary Drinking Water Regulation (5 C.C.R. 1003-1).

Subsection 100.2(17). The definition of “Plant Design Flow” is added to this regulation in order to clarify that the classification of a water or wastewater facility is to be based upon the capacity of the facility, as approved by the Division, and not upon the actual production of the facility.

Subsections 100.2(18) and (20). Definitions of “Primary Drinking Water Requirements” and “Secondary Drinking Water Standard” are included in order to remove the incorporation by reference of these terms in subsections 100.4.2(d),(e),(f),(g) and (h) of this regulation.

Subsection 100.2(23). The Board intends to clarify that the “Transient Non-Community” operator certification level, as described in subsection 100.19.2 of this regulation, covers only a specific subset of transient non-community public water systems.

Subsection 100.2(25). The Board intends that the term “validated examination”, as used in section 100.11 of this regulation, be interpreted in a manner consistent with the federal guidelines for facility operator certification examinations (Federal Register, Vol.64, No. 24; February 5, 1999.)

Water Facility Classification: Subsection 100.4.2

Subsections 100.4.2(d),(e),(f),(g) and (h). Cross-references to provisions of the Code of Federal Regulations are deleted by this amendment. The definitions of the previously cross-referenced terms are explicitly added to this regulation as subsections 100.2(18) and (20).

Subsection 100.4.2(k). The criterion for the classification of water vending machines is amended to be consistent with the terminology used in other facility classifications in section 100.4.2 of this regulation.

Qualifications and Classifications for Certification of Operators: Section 100.9

Subsections 100.9.2 and 100.9.3. The Board intends that a demonstration, by the applicant for a certification examination, of skills equivalent to the General Equivalency Diploma (GED) may be substituted for the requirement that an applicant hold either a high school diploma or a GED.

Subsections 100.9.4 and 100.9.8(a)(iv) and (b)(iv). The Board intends to clarify that once specific experience or education is used by an applicant to fulfill a requirement for certification, that same experience or education may not be used to meet any other requirement for the same certification.

Application for Certification: Section 100.10

Subsections 100.10.4, 5, and 6.

The Board intends to clarify the process by which an applicant may request a re-review of his or her application. All application denial notices should include the specific grounds upon which the application was denied. Such notices should include sufficient detail to allow the applicant to supply relevant supplementary information to the Board's designee in a timely manner.

The timeframes allowed for an applicant to request an application re-review or to request an appeal of an application denial are specified.

The Board intends that all material to be considered during a re-review or during an appeal must be submitted at the time of the request for re-review. Appeals to the Board will be evaluated based upon the material available during the re-review of the application. Material submitted after the re-review will not be considered by the Board at an appeal hearing, unless the operator provides a showing why such information could not have been submitted earlier in the process.

Education and Cross Experience Substituted for Experience Requirements: Section 100.12

Subsection 100.12.1(a). The Board intends to clarify that any education credit claimed as a substitute for experience must be post-secondary education. The Board intends that education obtained at institutions such as community colleges and post-secondary technical schools is acceptable.

Subsections 100.12.1(b) and (c). The Board intends to clarify that an approved and completed program, for which the applicant has received a diploma or certificate, is to be counted as a whole when used as a substitute for education. Experience equivalencies should be credited as specified in subsection 12.1(a). Only when an approved course of study has not been completed should the relevancy of individual courses be evaluated and a course-by-course determination of equivalency determined.

Certificates: Section 13

Subsection 100.13.7. The Board deleted this subsection as not necessary to this regulation.

Training Unit Requirements for Renewal of Certification: Section 100.14

Subsection 100.14.1. The Board recognizes that many training courses are approved for credit in multiple fields. While an operator may not count the same material twice toward the renewal of a single certification, the Board intends that operators be granted credit for the full time he or she attended a course. For example, a water treatment operator attends a six-hour course offering 0.4 Training Units (TUs) in water treatment and 0.6 training units in water distribution. For the renewal of a water treatment certification, the operator may count a total of 0.6 TUs for the course: 0.4 TUs may be counted toward the core requirement in water treatment and 0.2 TUs of the credit approved for water distribution may be counted as "outside the field" credit.

100.44 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: APRIL 24, 2007 RULEMAKING; ADOPTED JULY 31, 2007; EFFECTIVE SEPTEMBER 30, 2007

The provisions of sections 25-9-104 and 25-9-108, C.R.S., provide the specific statutory authority for the adoption of these amendments to the established regulatory provisions of Regulation 100 (5 CCR 1003-2). The Board also adopted, in compliance with section 24-4-103(4), C.R.S., the following statement of basis and purpose.

BASIS AND PURPOSE

Subsections 100.9.2 and 100.9.3. It is the intention of the Board to reflect the intent of the Environmental Protection Agency (EPA) regarding the substitution of education and/or experience for the general prerequisite that a high school diploma or general equivalency diploma (GED) be held by all candidates for certification. EPA intends that candidates not meeting this prerequisite have education and/or experience beyond that which is required of other candidates. The Board has amended subsections 100.9.2 and 100.9.3 to clarify that (1) the GED is the only automatically acceptable alternative to a high school diploma and that (2) for candidates lacking a high school diploma or GED, there will be an additional experience and education requirement in order to qualify for examination. The choice of a six month period of additional experience is intended to reflect the experience equivalent of a full semester of academic credit as described in section 100.12.1(a) of this regulation.

Subsections 100.12.1(b)(i) and 100.12.1(c). While recognizing the value of all post-secondary education, the Board has revised these sections of the regulation to provide that programs or courses acceptable as a year-for-year substitute for up to 50% of the direct experience requirements of this regulation be limited to those that the Board has determined are directly relevant to the operation of water and wastewater facilities. The previous version of Regulation No. 100 allowed any "technically oriented" courses or programs to substitute for up to 50% of the experience requirement. Addition of the "directly relevant" language reflects the Board's intent to be more specific with respect to the types of programs or courses that may receive credit. The Board has adopted language from an ABC report on operator certification program standards to provide examples of the types of courses or programs that would be considered "directly relevant". The Board intends that its contractors will apply this provision in the first instance, subject to appeal and final determination by the Board.

Subsection 100.12.1(b)(ii). Although a degree that does not meet the criteria of section 100.12.1(b)(i) does not provide the specific background skills for entry into the water and wastewater professions, the Board recognizes that applicants who have completed a post-secondary degree program have demonstrated a set of learning abilities which should enable them to more efficiently acquire many of the skills normally developed by hands-on experience. The Board has determined, therefore, that a 25% education credit toward meeting the experience requirement is appropriate for applicants holding post-secondary degrees, regardless of the fields in which the degrees are granted.

Subsection 100.13.8. This section is deleted as duplicative of subsection 100.13.7.

Subsection 100.22.2. The Board has revised subsection 100.22.2 to modify the examination and administration fees. The previous \$35.00 examination fee is inadequate to cover the actual cost of certification exams provided by ABC, including preparation and administration of those exams. Additionally, the previous administration fee of \$50.00 is inadequate to cover the costs incurred in maintaining the database of operators, issuing and mailing certificates and other correspondence. The Board agrees with the CECTI and Certification Council proposal that it is more appropriate to increase the examination fee (to \$45.00) and to increase the administration fee (to \$55.00) for those obtaining a new certification by examination. The net result will be an increase of \$15.00 in total fees for those passing a certification examination to obtain a new certification at a higher level. Those who take an examination and fail will incur a \$10.00 increase.

The Board also agrees that it is appropriate to increase the administration fees at this time for those obtaining renewal certifications or certification by reciprocity from \$60.00 to \$70.00 to cover administrative costs. The Board also determined that it is appropriate to add a \$20.00 fee to cover the cost of providing replacement certification documentation.

Water Distribution and Wastewater Collection Classifications

A. Operator Certification Levels

The Board has revised subsection 100.9.7 to include a level 3 certification requiring 3 years experience. Further, the Board has agreed to recognize current Class 3 operators as Class 4 operators and authorizes the issuance of operator certificates reflecting Class 4 certification. The Board has determined that this is appropriate, based on the four-year experience requirement previously in place for Class 3 operators and based on the content of the previous Class 3 examinations. Any current restricted Class 3 collection and distribution certification would become a restricted Class 4 certification.

B. System Classifications

The Board has revised subsections 100.7.2 and 100.8.1 to modify the current Water Distribution and Wastewater Collection Systems classification tables to address the complexity of very large systems. Class 3 systems will be changed from serving populations greater than 25,000 to serving populations from 25,001 to 100,000. The Board has added a Class 4 classification that serves populations greater than 100,000.

Corresponding revisions have been adopted for sections 100.14 and 100.21.

**100.45 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: APRIL 28, 2009
RULEMAKING; ADOPTED APRIL 28, 2009; EFFECTIVE JUNE 30, 2009**

The provisions of section 25-9-104(4), C.R.S. (2008), provide the specific statutory authority for the adoption of these amendments to the established regulatory provisions of Regulation 100 (5 CCR 1003-2). The Board also adopted, in compliance with section 24-4-103(4), C.R.S., the following statement of basis and purpose.

BASIS AND PURPOSE

Subsection 100.2(12). The Board added a definition of “Responsible Person” that sets requirements for persons charged with the responsibility for supervising Class 2 industrial wastewater operations and for ensuring compliance with the facility’s discharge permit requirements. The Board intends that such persons receive adequate and ongoing training in areas relevant to their responsibilities, such as specific measures used to meet effluent limits, monitoring, inspection, planning, reporting, and documentation requirements.

Subsection 100.2(18). The Board adopted a definition of “Passive Wastewater Treatment” that parallels the statutory language of section 25-9-104(4)(d), C.R.S.

Subsection 100.6.1. The Board adopted this amendment to Regulation 100 to implement the provisions of section 25-9-104(4), C.R.S., as amended by the Colorado General Assembly in 2008. The Board recognizes that there are wastewater treatment activities in Colorado that require only passive treatment in order to meet Colorado Discharge Permit System (“CDPS”) effluent limitations. The Board also recognizes that many of these activities are currently managed under a variety of Best Management Practice (“BMP”) requirements. Additionally, the Board recognizes that it is current practice in many of these industrial activities to place the facility/activity under the supervision of an environmental professional responsible for effluent quality, for overseeing monitoring, and for ensuring timely and accurate discharge monitoring reporting.

In light of the above considerations, the Board divided permitted industrial wastewater facilities into two distinct classes. Class 2 facilities shall not be subject to the requirements to operate under the supervision of a certified operator. The Board maintained the requirement for all industrial wastewater facilities not classified as class 2 facilities to remain subject to the requirements of Regulation 100 to operate under the supervision of a certified operator and designated these facilities as class 1 facilities.

Subsection 100.6.1(b)(i). The Board has determined that facilities/activities which discharge solely under the authority of stormwater permits shall be classified as class 2 facilities without the need for specific Board action other than the adoption of this amendment to Regulation 100. The Board recognizes that such facilities utilize only passive treatment or no treatment of stormwater and are subject to significant requirements, including the filing of and adherence to Stormwater Management Plans. The Board has determined that facilities subject to stormwater discharge permits are appropriately classified as class 2 pursuant to the criteria in section 25-9-104(4) C.R.S. since these discharges generally do not contain substantial concentrations of toxic pollutants and do not require chemical, mechanical, or biological treatment. The Board intends that the designation as class 2 shall include facilities discharging under the authority of municipal stormwater permits, industrial stormwater permits and construction stormwater permits. The Board does not grant automatic class 2 classification to facilities discharging under the authority of combined process water and stormwater permits.

The Board has further determined that facilities/activities discharging pursuant to the Water Quality Control Division's "Low Risk Discharge Policy" shall be classified as class 2 facilities. The Board recognizes that the discharge from such activities is considered to pose minimal risk of environmental degradation. Such discharges generally do not contain substantial concentrations of toxic pollutants and do not require chemical, mechanical, or biological treatment. The Board further recognizes that water distribution systems holding "Treated Water Distribution System" permits are already required to be under the direct supervision of certified water distribution system operators whose training and certification criteria include the handling of the type of discharges covered under these permits. Similarly, water treatment facilities holding "Water Treatment Plant Discharge" permits are already required to be under the direct supervision of certified water treatment operators whose training and certification criteria include the handling of the type of discharges covered under these permits.

Subsection 100.6.1(b)(ii). The Board recognizes that there are additional CDPS general industrial discharge permits whose effluent requirements can ordinarily be met by utilizing, at most, passive treatment techniques. These general industrial permits are listed within the amendment in subsection 100.6.1(b)(ii). The Board has provided that facilities holding these discharge permits shall be recognized as class 2 facilities based upon the Water Quality Control Division's verification of a facility's written certification that effluent limitations can be met utilizing only passive treatment and that the facility is under the supervision of a responsible person as defined in subsection 100.2(21) of this regulation. Verification by the Division will serve to confirm that a facility qualifies as a class 2 facility consistent with the classification determinations made by the Board in revisions to Regulation 100. The Board intends that the Division retain a record of such classifications. The Board recognizes that facilities denied a class 2 classification may appeal the Division's determination to the Board pursuant to section 100.24 of this regulation.

Subsection 100.6.1(b)(iii). The Board further recognizes that certain facilities are required to hold individual industrial discharge permits rather than general industrial discharge permits. Individual permits are usually required either because of the sensitivity of the receiving waters, the nature of the effluent, or the complexity of the treatment required in order to meet effluent limitations. The Board has reserved to itself the authority to grant a class 2 classification to such facilities. The Board has provided that such facilities may submit a request for reclassification to the Board. This request shall include a demonstration that the facility's operations meet the applicable considerations of section 25-9-104(4), C.R.S.; that effluent limitations can be met utilizing only passive treatment; and that the facility is under the supervision of a responsible person as defined in subsection 100.2(21) of this regulation. The Board will forward the material submitted with the request to the Division for evaluation and recommendation. The Board will approve or deny such requests at an adjudicatory hearing at a regular Board meeting.

The Board recognizes that there are certain general industrial permits that authorize discharges from types of activities which are inherently more complex than those described in section 100.6.1(b)(ii) above. It is the Board's intention that facilities discharging under the authority of general permits other than those listed in subsection 100.6.1(b)(ii) should follow the reclassification procedure outlined for facilities holding individual industrial discharge permits.

Conditions Applicable to Subsections 100.6.1(b)(2) and 100.6.1(b)(iii). In order to ensure that facilities meet the requirements for class 2 classification on a continuing basis, the Board has provided that each facility classified as a class 2 facility under subsection 100.6.1(b)(ii) or subsection 100.6.1(b)(iii) shall submit an annual certification confirming that the conditions under which its classification was granted are still being met and that ongoing annual training has been provided to the designated responsible person. The Board does not intend that a detailed accounting of the nature or timing of such training be submitted with each annual certification.

The Board may reclassify a class 2 facility to class 1 if that facility fails to meet the requirements of its discharge permit or if the facility's operational practices result in a direct, negative impact on the public health or the environment.

**100.46 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE:
SEPTEMBER 29, 2009 RULEMAKING**

The provisions of section 25-9-107, C.R.S., provide the specific statutory authority for the adoption of these amendments to the established regulatory provisions of Regulation 100 (5 CCR 1003-2). The Board also adopted, in compliance with section 24-4-103(4), C.R.S., the following statement of basis and purpose.

BASIS AND PURPOSE

Subsection 100.6.1. The Board added subsection 100.6.1 in April 2009 to implement the provisions of section 25-9-104(4), C.R.S., as amended by the General Assembly in 2008. The Office of Legislative Legal Services, which conducts legal reviews of all newly-promulgated agency rules, subsequently expressed concerns regarding the apparent "incorporation by reference" of the Division's Low Risk Discharge Policy in subsection 100.6.1(b)(i)(B). Based on these concerns, the Board decided as part of this rulemaking proceeding to delete subsection 100.6.1(b)(i)(B) (and to re-number the subsection accordingly).

The Board's initial intent in referencing the Division's Policy was to categorically exempt such facilities from the certified operator requirement because of their low risk of impacting the quality of state waters. The Board and the Division have agreed that the Board's intent can be accomplished alternatively through language in the Division's Low Risk Discharge Policy itself. Thus, the Low Risk Discharge Policy will soon be amended to state that the Division will use its enforcement discretion with respect to facilities which do not have a certified operator, where such facilities can prove that they are discharging pursuant to the Policy and implementing the best management practices outlined in the related guidance documents.

Subsection 100.13. The Board recognizes that section 25-9-107, C.R.S., refers to the "award" of a certificate, that certificates shall be "awarded for a period of three years", and that the timing of automatic revocation for non-renewal is referenced to the "expiration date" of the certificate. Earlier versions of this regulation, however, reference the date of automatic revocation of a certificate to the "issue" date. Because certificates may not always be issued exactly three years prior to the expiration date, this difference in language is significant.

The Board has, therefore, chosen to align the language of subsection 100.13 of this regulation more closely with the language of the governing statute and refer the three year validity period of all certificates either to the date of "award" (for new certificates) or to the date of expiration of the previous certificate (for renewed certificates). It is clarified that renewed certificates are valid for three years from the date of expiration of the certificate being renewed and not from the date of issue of the renewal certificate.

The Board further determined to adopt language which clarifies that the date of issue of a certificate does not determine the date on which a non-renewed certificate is automatically revoked. The Board intends to

clarify that certificates shall be automatically revoked if not renewed within two years of the expiration of the certificate.

100.47 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: NOVEMBER 2009 RULEMAKING; ADOPTED NOVEMBER 24, 2009; EFFECTIVE JANUARY 30, 2010

Provisions of section 25-9-108, C.R.S., provide the specific statutory authority for the adoption of these amendments to the established regulatory provisions of Regulation 100 (5 CCR 1003-2). The Board also adopted, in compliance with section 24-4-103(4), C.R.S., the following statement of basis and purpose.

BASIS AND PURPOSE

A. New and Revised Fees.

The Board has revised section 100.22.2 to modify the current examination fees by establishing a \$35.00 fee for online testing. Examination fees currently cover the costs associated with certification when certification examinations are taken in a written format during the regularly scheduled examination periods. Recent advances in technology have now made it possible to offer certification examinations in an electronic format. While this technology offers advantages in the form of convenience, enhanced security and immediate results, there are added costs associated with this form of testing. These costs include added cost for the setup and maintenance of the electronic testing system and the cost of administering and staffing an examination facility. The Board concludes that since electronic testing is an option offered for the convenience of the applicant, the added costs associated with this form of testing should be met by the assessment of a fee specific to electronic examinations and should not be met by an increase in the existing examination fee.

B. Other Revisions

The Board has also revised sections 100.9.6, 100.9.8, 100.11.1, 100.11.3, and 100.13.8 to modify references to "written examinations" in order to accommodate electronic testing.

100.48 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: NOVEMBER 2011 RULEMAKING ADOPTED NOVEMBER 29, 2011; EFFECTIVE JANUARY 30, 2012

Provisions of section 25-9-108, C.R.S., provide the specific statutory authority for the adoption of these amendments to the established regulatory provisions of Regulation 100 (5 CCR 1003-2). The Board also adopted, in compliance with section 24-4-103(4), C.R.S., the following statement of basis and purpose.

BASIS AND PURPOSE

The Board determined that it was necessary to revise Regulation 100 to reflect a change in its testing policy which, before this hearing, consisted of requiring operators to take standard "multiple entry" exams to acquire certification for the various classes within the certification categories. The material on such exams covers the lower levels or classes within a certification category up to the certification level sought. The Board is now changing to a "sequential" testing scheme; each test focuses on the material for a particular class/level of certification within each certification category. Operators will now be required to hold a certification in the class immediately below the class for which the application is being made, and thus the operators will not be able to "skip" any classes of certification in progressing to the higher classes. The Board has determined that it is prudent to make this change in policy for the following reasons.

The Board agrees with recent findings by the Association of Boards of Certification (ABC) that there are certain deficiencies with the multiple entry exam approach. For example, operators who passed the Class 4 Distribution exam by doing very well with the lower level exam questions could actually do very poorly

on the questions specific to Class 4. This indicates that the multiple entry approach may not provide an accurate indication of proficiency in the skills required of a Class 4 Distribution operator. For this reason, ABC is no longer developing standardized multiple entry exams for their clients.

Additionally, the Board was persuaded by the results of an analysis by a psychometrician hired by its Contractors to evaluate knowledge required of Colorado's operators for the various certification categories and the classes within each. Exam blue prints have been developed which support the use of sequential testing because some areas of knowledge are tested more thoroughly at a lower level than at an upper level. The Board also considered the issue of reciprocity, as there will be very few, if any, states using multiple entry exams by the end of 2011. The Contractors' reciprocity committees will benefit from a sequential testing scheme because it will allow an equal comparison of Colorado's testing requirements with those of other states.

Accordingly, the Board added new section 100.9.7 to include the new requirement that in order to qualify to sit for an exam, an applicant must hold a certification for the same category and in the class immediately below the class for which the application is being made. The Board also revised the corresponding "Prior Certification and Experience Requirements" table in section 100.9.8 to consolidate and simplify the explanation of the experience requirements for the various certification categories and classes within each. Minor revisions were also made to section 100.9.6 for consistency with the other changes.

The Board agrees with the Contractors' assessment that relatively few operators will be impacted by this change in testing policy, as most operators already gain the required experience and take examinations with the intent to advance sequentially through a particular certification category. For those few operators who currently have the requisite experience to bypass lower level exams and may wish to skip to higher class of certification, they should be able to obtain their desired level of certification in an expeditious manner. The Contractors have indicated to the Board that, beginning in 2012, they will be expanding from their current offering of two examination cycles per year to three cycles. This added exam cycle will allow operators who meet higher level experience requirements to go through the sequential testing process more quickly in order to obtain their desired level of certification.

100.49 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: FEBRUARY 2012 RULEMAKING; ADOPTED APRIL 24, 2012; EFFECTIVE JUNE 30, 2012

Provisions of section 25-9-108, C.R.S., provide the specific statutory authority for the adoption of these amendments to the established regulatory provisions of Regulation 100 (5 CCR 1003-2). The Board also adopted, in compliance with section 24-4-103(4), C.R.S., the following statement of basis and purpose.

BASIS AND PURPOSE

The Board determined that it is necessary to revise Regulation 100 to reflect the following changes:

Generally, the Board added clarifications where appropriate, deleted obsolete language, corrected referenced citations, and made grammatical corrections. Stylistic changes throughout the text of the regulation were made for uniformity and clarity. Where possible, the Board reorganized and combined like requirements into unified sections, i.e., section 100.9.9 describing the special rules for satisfying the minimum experience requirements for Class D, Class 1, Class S and Class T certifications. Because the minimum experience requirement is the same for all three classes, sections 100.9.9(a), 100.9.9(b), and 100.9.6 have been combined into 100.9.9.

Section 100.1. For consistency with other Department regulations, the Board added reference to the specific statutory authority of the Board to promulgate regulations.

Section 100.2. The Board added definitions for the "Colorado Discharge Permit System Regulation" and the "Colorado Primary Drinking Water Regulations;" modified the definition for "public water system" to be

consistent with the definition in the “Colorado Primary Drinking Water Regulations;” deleted language in the definition of “operator” that was redundant with the section of the regulation pertaining to certified operator duties; deleted the definition for “small system” because this classification was renamed “Class S” in this rulemaking; deleted the definition for “transient non-community certification” because this term is no longer used; and modified the definition of “water treatment facility” to match the statutory definition, 25-9-102(7), C.R.S.

Sections 100.4.1, 100.5.1, 100.7.1 and 100.8.1. The Board recognizes the confusion resulting from the use of like terms, specifically: 1) transient non-community water system, transient non-community water system operators certification, and transient non-community water system facility classification; and 2) small system under the Colorado Primary Drinking Water Regulations, small water system operators certification, small wastewater system operators certification, small water system facility classification and small wastewater facility classification. Because transient non-community water systems, small water systems, and small wastewater systems are subcategories of Class D water or wastewater treatment facilities with a Class 1 water distribution or wastewater collection system rather than distinct facility classifications, they have been removed as facility types.

Accordingly, the Board revised sections 100.4.1, 100.5.1, 100.7.1, and 100.8.1 to remove references to transient non-community system, small water system, and small wastewater system from the respective lists of facility classifications, and corrected the number of facility classification types in each section; and the sentence preceding the table in section 100.7.2 referencing small water system and transient non-community water system facility classifications was also deleted.

For clarity, the Board also changed the names of the following operator certifications: transient non-community systems to “Class T,” small water system to “Class S,” and small wastewater system to “Class S.” Sections 100.9.2 (d), (e), and (f), containing requirements for certification by examination, define when Class T and Class S certifications are valid to operate a Class D/Class 1 facility.

Section 100.6. The Colorado Discharge Permit System is a self-reporting program, and the Board recognizes that large numbers of the permits issued to facilities that meet the requirements for the Class 2 industrial facility exemption under Regulation 100 are never used or are effective for only short periods of time. The Board also recognizes the inability of the Division to verify on an annual basis each facility’s certification that it meets the requirements for the Class 2 industrial facility exemption.

Accordingly, the Board simplified the exemption process for Class 2 industrial facilities to reduce the regulatory reporting burden on the Division and on businesses operating within the State. A provision requiring facilities to notify the Division when they no longer meet the requirements of the exemption was added to ensure timely transition to operation under the supervision of a certified operator. The Board also added the new general “Pesticides” permit to section 100.6.1(b)(i)(C), and removed the specific industrial general permit numbers to prevent the need to modify the regulation each time the Division discontinues or adds to the permit numbering schema for the identified activity types.

Section 100.9, 100.10, 100.11, 100.12, 100.13, 100.14, 100.15, 100.16, 100.20, 100.21. The Board added language to clarify and to incorporate language from its policies and procedures regarding the following topics: certification requirements; minimum education and experience requirements; criteria for evaluation of experience; application procedures; substitution for the experience requirements; approval of training units, educational courses, and institutions; procedures for purchase of new certificates, renewal of certificates, and certificates by reciprocity; training unit requirements for renewal of certification; expired certificates; duties of certified operators; duties of operators in responsible charge; facility owners’ responsibilities, including the role of contract operators; and disciplinary actions, including clarified terminology and procedures.

Section 100.9.3 and 100.13.1. The Board recognizes the issues many small facilities face in ensuring they have trained certified operators. The Board also recognizes that the certified operator profession has an aging work force, and wishes to encourage dedicated young people to enter the profession. Accordingly, the Board added specific language regarding the examination and certification requirements

for applicants participating in an approved high school program to encourage them to enter the water and wastewater fields. Specifically, the revised language allows a student to sit for an entry level certification examination prior to graduation from high school, with the provision that the certification will only be issued when the examinee successfully passes the examination and submits proof of graduation.

Section 100.13.1 The Board added a deadline of three years from the date of notification of certification eligibility to apply for the certificate. It is the Board's intention that after the three year deadline has expired, an individual would need to re-apply and retake the examination.

Section 100.13.5(a). The Board added the requirement that in order to obtain a certificate by reciprocity, persons passing exams in other states, territories, or countries must also acquire qualifying experience in the state, territory, or country in which they obtained their certificate. The Board wishes to maintain Colorado's high standards for operator certification, and this requirement is intended to deter persons (particularly Colorado-based operators) from taking certification exams in other states, territories, or countries as a means to more easily obtain a Colorado certification. The Board currently requires that exams taken in other states by reciprocity applicants must be adequate, validated, and "of a standard not lower" than Colorado's. The Board believes, however, that this additional requirement will help streamline the reciprocity process and make it less subjective in situations where an applicant could have taken an exam in Colorado, but instead chose to take it elsewhere with the intent to find a less challenging exam.

Section 100.14.2. For ease of reference, the Board consolidated the training unit requirements that were previously listed in narrative in this subsection into a table.

Section 100.18. The Board added the responsibility for a facility owner to ensure the employment agreement with a certified operator reflects the requirements of an operator in responsible charge. The Board also defined the decisions reserved to the operator in responsible charge and modified the reporting requirements of facility owners.

Section 100.18.5. For consistency with other changes in the regulation, references to Class S and Class T were added to the table regarding criteria for operators in responsible charge.

Section 100.19. In provisions regarding administration fees, the Board clarified that there is no additional fee for a standard 6 x 9 inch certificate, but that an additional fee of \$5.00 will be charged for operators who opt for a larger size of certificate. Operators have had this option since 2008, but the Board believes it is appropriate to formalize this practice through its Regulations. The Board determined that the additional fee is necessary to cover postage and other incidental administrative costs associated with the larger certificate. The Board also added a \$50 late fee for purchases of certificates 61 or more days after the date of the letter notifying the applicant of eligibility to receive certification and for renewal of a certificate after the expiration date. The Board found that the \$50 amount is necessary and appropriate to cover administrative costs associated with delays in application for certification or certification renewal.

Section 100.21. For consistency with other Department regulations, the Board defined a timely appeal to the Board as submitting the request for hearing within thirty (30) days of notice of a decision by the Board's designee or the Division.

Section 100.25. This section regarding "Transitional Renewal Training Unit Requirements" was removed as obsolete.

The Board postponed the adoption of proposed sections 100.16.3(g), 100.16.3(h) and 100.16.4(a)-(f) regarding requirements for delegation of duties to uncertified personnel until a later rulemaking to allow time for additional stakeholder input.

Provisions of section 25-9-104, C.R.S., provide the specific statutory authority for the adoption of these amendments to the established regulatory provisions of Regulation 100 (5 CCR 1003-2). The Board also adopted, in compliance with section 24-4-103(4), C.R.S., the following statement of basis and purpose.

BASIS AND PURPOSE

The Board held a rulemaking hearing on April 29, 2014. After receiving testimony from the Division, CECTI, and members of the public, the Board voted to continue the hearing until its August meeting with direction to the Division to work with stakeholders in developing a revised proposal regarding the definitions of “certified operator” and the associated terminology. At the hearing in August, the Board adopted the Division’s revised proposal regarding the certified operator terminology, which was discussed and agreed to by the various stakeholders. As discussed in more detail below, the Board determined that the Division’s revised proposal helps to clarify the roles of “operators,” “certified operators,” and “certified operators in responsible charge,” while maintaining consistency with the statutory definition of “certified operator.” The Board further determined that it was necessary to revise Regulation 100 as follows:

Generally, the Board added clarifications where appropriate, deleted obsolete and redundant language, corrected referenced citations, and made grammatical corrections. Stylistic changes throughout the text of the regulation were made for uniformity and clarity. Where possible, the Board reorganized and combined like requirements into unified sections. Additionally, there were many instances where the term “certification” was used when the reference was more accurately referring to a “certificate.” In those instances, “certification” was changed to accurately refer to a “certificate.”

Section 100.1.1. The Board revised the statutory citation to match current practice.

Section 100.2. The Board revised the term “certified operator” to be consistent with the common understanding of this term within the profession. Accordingly, the Board now defines this term as including all operators in Colorado who hold a Certified Water Professional (“CWP”) certificate. To accomplish this, within its definition of “certified operator,” the Board revised its interpretation of an operator’s having “responsibility for the operation” of a facility. The Board’s previous interpretation referred only to those operators who were in charge of making process control and/or system integrity decisions that may affect public health or the environment. The revision construes the term more broadly to include all CWPs who, by virtue of holding a certificate, are qualified to perform various operational responsibilities at a facility.

The previous term “operator in responsible charge” was deleted and replaced with “certified operator in responsible charge.” The Board determined that the new term was more appropriate to reflect the status of such operators. Within the definition, the Board clarified that “certified operators in responsible charge” have a higher level of responsibility at facilities because they are in charge of making process control/and or system integrity decisions that may affect public health or the environment. The Board also clarified its endorsement of the long-standing practice that facility owners may designate more than one person as the certified operator in responsible charge.

Finally, the definition of “operator” was revised to indicate that it is a general term that includes persons who may or may not hold a CWP certificate, and to delete the unnecessary word “supervises” to alleviate any confusion as to the general responsibilities or qualifications of an “operator.” The Board made revisions to terminology throughout the regulation to be consistent with these changes to the definitions of “certified operator,” “certified operator in responsible charge,” and “operator.”

Additionally, the Board moved definitions that are only used once in the regulation to the section of the regulation where the term is used. The definitions of “Board,” “certificate,” “department, and “domestic wastewater treatment facility” were changed to match the statutory definitions, and clarifying language was added to the term “training unit.” The Board removed the definitions of “community water system,” “non-transient community water system,” and “non-community water system” because these terms are not specific to Regulation 100, and they are defined in the Colorado Primary Drinking Water Regulations, 5 CCR 1002-11.

Section 100.4. The Board removed as unnecessary the terms “community,” “non-transient community,” and “transient non-community” water systems in the section 100.4.2 table heading. In accordance with authority granted in § 25-9-104.4(2), C.R.S., the Board added section 100.4.5, which exempts water treatment facilities that are not public water systems subject to the Colorado Primary Drinking Water Regulations.

Section 100.6. The Board combined the stormwater permitted facilities with other facilities discharging under listed general industrial permits, requiring these facilities to meet the conditions for classification as Class 2 industrial facilities. With changes to the stormwater permit discharge limits, there is the possibility a facility may install active treatment to meet permit discharge limits. This change ensures that if that were to occur, the facility would be required to operate under the direct supervision of a certified operator in responsible charge.

Section 100.7.5. The Board added a provision that exempts water distribution facilities that fall within the jurisdiction of the “Water Well Construction and Pump Installation Contractors Act,” 37-91-101 C.R.S. This provision was moved into the regulation from the Board’s “De Minimis Distribution Systems” policy (July 20, 2003).

Section 100.9. The Board added the minimum passing score to the requirements for certification. The Board changed the minimum passing score for certification by examination to 70 percent at the April 2004 meeting. This decision is being incorporated in the regulation for clarity and transparency of the Board’s expectations.

To improve the alignment of like provisions, the Board moved the provisions regarding restrictions on Class T and Class S Water and Wastewater certifications from section 100.9.2 (d), (e), and (f) to section 100.18.5(c), (d), and (f), which defines the minimum certification levels necessary for certified operators in responsible charge for each facility classification. Persons holding Class T and Class S certificates may serve as a certified operator in responsible charge only when all of the criteria in the relevant sections is met.

The Board made changes to the wording to increase clarity and readability. In addition, redundant language in section 100.9.9(c) was removed regarding the special rules for satisfying the minimum experience requirement for entry level certification in order to simplify the section.

Sections 100.10 and 100.11. For consistency, the Board changed the word “type” to “category” in sections 100.10.7 and 100.11.6. In addition, the terms “small water system” and “small wastewater system” were corrected in section 100.10.7 to be consistent with changes to the certificate names made in 2012. Class T was added to the list.

Section 100.13.1(a)(iii) and section 100.13.6. To ensure the Board has the most accurate operator contact information, the Board added the requirements to provide current contact information when applying for a new certificate and to update the Board upon a change to the contact information within 30 days of such a change.

Sections 100.13(e) and 100.16. The Board added language to clarify its expectations and to incorporate language from its policies and procedures regarding the following topics: renewal process for operators absent due to military service, delegation of tasks or activities, and duties of certified operators in responsible charge. These include the following Board policies: Policy 13-2 (USERRA), “Delegation of Tasks to Uncertified Personnel,” approved September 24, 2002, and “Interpretation of Operator in Responsible Charge Duties,” approved June 26, 2001.

Section 100.13.5(a)(i). The Board broadened the list of certifying authorities for applicants seeking to obtain a certificate by reciprocity by adding the general term “another certifying entity”. This revision gives the Board discretion to consider certificates awarded by national or international water or wastewater professional organizations, such as the Association of Boards of Certification (of which the Board is a

*100.51 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: JUNE 30, 2015
RULEMAKING ADOPTED AUGUST 25, 2015; EFFECTIVE SEPTEMBER 30, 2015*

member), which offers professional certification for water and wastewater facility operators. The Board recognizes that this type of certification should be recognized and taken into account when evaluating an operator who applies for a certificate by reciprocity.

Section 100.15.6 and 100.20.1. The Board added the requirement for certified operators to conduct themselves in a professional manner when acting in the capacity of an operator, and included failure to do so to the list of offenses that may result in a Board disciplinary action. The Board made this addition to clarify its expectations with respect to a certified operator's obligation to uphold the integrity of the CWP profession while acting in such capacity.

Section 100.18.2 and 100.18.3. The Board clarified for facility owners its expectation regarding who may make process control decisions and who must be available to make those decisions. This change is consistent with section 100.30 (Statement of Basis and Purpose November 2000), which states: "In order to meet EPA guidelines, the Board required that all process control and/or system integrity decisions about water quality or quantity that may affect the public health or the environment be made by either an operator in responsible charge or another certified operator. This operator must be certified at a level equal to or higher than that of the facility."

**100.51 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: JUNE 30, 2015
RULEMAKING ADOPTED AUGUST 25, 2015; EFFECTIVE SEPTEMBER 30, 2015**

Provisions of section 25-9-104, C.R.S., provide the specific statutory authority for the adoption of these amendments to the established regulatory provisions of Regulation 100 governing the requirements for water and wastewater facility operators (5 CCR 1003-2). The board hereby adopts, in compliance with section 24-4-103(4), C.R.S., the following statement of basis and purpose.

BASIS AND PURPOSE

The board held a rulemaking hearing on June 30, 2015. After receiving testimony from the division and members of the public, the board determined that it was necessary to revise Regulation 100 as follows:

Generally, the board made grammatical corrections, stylistic changes and used simple declarative sentences when possible to avoid confusion or ambiguity.

Based on the input received from stakeholders, no changes to the provisions regarding experience requirements of section 100.9.4 are being made at this time.

Section 100.2(11). The board added the definition for owner. Not all suppliers of water, permittees and co-permittees are the owners of the physical facilities. Defining owner in regards to Regulation 100 clarifies who is responsible for ensuring the facility is under the direct supervision of a certified operator in responsible charge when it is operating as required by section 100.18.1.

Sections 100.10. For clarification, the board changed the title and provisions of section 100.10 to clearly reflect that this section refers to the first of the two-step process of certification, to apply to sit for a certification examination.

Section 100.13. To ensure consistency, provisions of Regulation 100 that refer to the issuing of the certificate, payment of program fees and the period each certificate is valid were moved to section 100.13 "Introduction." For transparency, the board added the requirements to comply with section 24-76.5-101 et seq., C.R.S., often referred to as the lawful presence legislation when applying for new or renewed certificates.

Section 100.13.1, 100.13.2 and 100.13.5. For clarification, the board changed the headings and provisions of these three sections to clearly reflect they refer to the second of the two-step process of

certification, the requirement to submit application for new or renewed certificates or to obtain certification by reciprocity.

Section 100.15.3. In August 2014, the board adopted revisions to section 100.20.1(j) to clarify that the board may take disciplinary action for failure to conduct oneself in a professional manner. In this proceeding, the board also adopted section 100.15.3 to include in the list of certified operators' duties the requirement to act in a professional manner. The board made this addition to clarify its expectations with respect to a certified operator's obligation to uphold the integrity of the CWP profession while acting in such capacity.

Section 100.16.5. The board removed responsibility from the certified operator in responsible charge duties for the management, administration, compliance with regulatory and permit requirements, and other responsibilities that require decision-maker action and approval, such as providing operational, technical and financial resources necessary for proper operation and maintenance of the water or wastewater facility. These responsibilities are implicitly and explicitly identified in other applicable regulatory and permit requirements as belonging to the owner of the facility. The board wanted it clearly understood that the certified operator in responsible charge is responsible for the professional operation and maintenance of the facility as appropriate to their certification level and working with the resources provided by the owner.

Section 100.18.1(a) and (b). For consistency and clarity, the board combined these provisions so the definition for direct supervision immediately follows the requirement for direct supervision by a certified operator in responsible charge.

Section 100.18.1 (b). The board defined how an owner designates the certified operator in responsible charge.

Section 100.18.3(a) and (b). For consistency and clarity, the board combined these provisions so the definition for available immediately follows the requirement for a certified operator in responsible charge to be available to make decisions and initiate actions that are reserved to the certified operator in responsible charge.

Section 100.18.4. For clarity, the board defined how an owner reports changes to the certified operator in responsible charge to the division. The division requires that current update forms be used. In addition, the board removed reference to certified operators in responsible charge being employed or contracted by the owner from sections 100.18.4 (b) and (c). There are other relationships that may exist between the owner and certified operators in responsible charge.

100.52 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: DECEMBER 9, 2015 RULEMAKING, EFFECTIVE JANUARY 30, 2016

Provisions of section 25-9-104, C.R.S., provide the specific statutory authority for the adoption of these amendments to the established regulatory provisions of Regulation 100 governing the requirements for water and wastewater facility operators (5 CCR 1003-2). The board hereby adopts, in compliance with section 24-4-103(4), C.R.S., the following statement of basis and purpose.

BASIS AND PURPOSE

Sections 100.15.3 and 100.20.1(j). The board added subsection 100.20.1(j) in August 2014 to clarify that the board may take disciplinary action against a certified operator for failure to conduct oneself in a "professional manner." In August 2015, the board adopted section 100.15.3 to include in the list of certified operators' duties the requirement to act in a professional manner. The board made these additions to clarify its expectation that certified operators have an obligation to uphold the integrity of the profession by working with the public, others in the regulated community, and regulators in a dignified

manner that fosters trust and respect. The board believes this obligation is important because the profession is directly linked to the important duties of protecting public health and the environment.

The Office of Legislative Legal Services, which conducts legal reviews of all newly-promulgated agency rules, expressed concern after the August 2015 adoption of section 100.15.3 that the language describing “professional manner” was too vague to meet the requirements of the Colorado Administrative Procedures Act, 24-4-101 et. seq., C.R.S. To address these concerns, the board adopted changes to section 100.15.3 to delete the concept of “professional manner,” and instead to specifically prohibit certain types of behavior when a certified operator is acting in a professional capacity. These prohibited behaviors are related to a certified operator’s demeanor while communicating/interacting with the public, the regulated community and regulators. The board similarly revised section 100.20.1(j) to clarify that certified operators who exhibit such behavior are subject to disciplinary action by the board.

100.53 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; NOVEMBER 29, 2016 RULEMAKING; EFFECTIVE JANUARY 30, 2017

Provisions of section 25-9-104, C.R.S., provide the specific statutory authority for the adoption of these amendments to the established regulatory provisions of Regulation 100 governing the requirements for water and wastewater facility operators (5 CCR 1003-2). The board hereby adopts, in compliance with section 24-4-103(4), C.R.S., the following statement of basis and purpose.

BASIS AND PURPOSE

The board held a rulemaking hearing on November 29, 2016. After receiving testimony from the division and members of the public, the board determined that it was necessary to revise Regulation 100 as follows:

Generally, the board made grammatical corrections, stylistic changes, and used simple declarative sentences when possible to avoid confusion or ambiguity. The board also made clarifications, removed duplicates and obsolete language, updated citations and numbering, and changed section titles to be more specific. The sections of the regulation were reorganized for a more logical flow and to increase readability. Sections 100.1 through 100.13 describe the various components of the operator certification program, including facility classification criteria. Sections 100.13 through 100.17 detail the certification process and requirements for obtaining and renewing certificates.

Section 100.1.3. The board created a new section titled “Severability” to make it known that if, for any reason, a portion of the regulation is held inoperative, unconstitutional, void or invalid, the validity of the remaining portions is not affected.

Section 100.1.4. The board created a new section titled “Applicability.” For clarity, the board defined the categories of persons to which the regulation applies.

Section 100.1.5. The board created a new section titled “Automatic Exemptions.” It is divided into four subsections covering water treatment facilities and water distribution systems, as well as certain industrial wastewater treatment facilities. Each subsection includes the criteria which, if met, automatically results in an automatic exemption from the requirement for the facility/system to operate under the supervision of a certified operator in responsible charge (ORC). Under these subsections, if the criteria are met, there is no requirement for a facility to request an exemption from the board.

Section 100.1.6. The board created a new section titled “Discretionary Exemptions.” This new section outlines the procedure for facilities that do not meet the “automatic exemption” criteria of section 100.1.5 to request an exemption from the requirement to operate under the supervision of a certified operator in responsible charge. This section is comprised of a combination of language from 25-9-104.4, C.R.S. (covering water and wastewater facilities), and from section 100.6, which is specific to industrial wastewater treatment facilities. The board also removed the requirement that was previously in section

100.6 for an adjudicatory hearing to address an industrial wastewater treatment facility exemption request. The division will evaluate exemption requests made under this section and make a recommendation to the board. The board will make a decision regarding the request at a regularly scheduled meeting.

Section 100.1.7. The board created a new section titled “Exceptions” which makes clear that the board has the authority to make exceptions to the requirements in Regulation 100 if the exception is not contrary to statute and does not endanger the public health or environment.

Section 100.2(9). The board added the definition for graywater treatment facility. In this rulemaking, the board is adding a requirement for a certified operator in responsible charge for certain graywater treatment works as defined in the *Graywater Control Regulation*, 5 CCR 1002-86.

Section 100.3. The board added a provision to clarify the role of the Water Quality Control Division, which details the scope of division enforcement authority and oversight and reserves all enforcement and oversight regarding graywater facilities to the local city, city and county, or county with a local graywater control program in accordance with the *Graywater Control Regulation*, 5 CCR 1002-86.

The board also clarified the duties delegated to its contractor and removed two provisions that were not accurate. Throughout the regulation for consistency, the board deleted the term “the board’s designee” and replaced it with “the board’s contractor.”

Section 100.3.2. For clarity, the board added this provision from section 25-9-104.2(4), C.R.S., stating that the board retains the final authority over all actions and decisions of its contractors and subcontractors.

Section 100.3.2. To accomplish better flow of the regulation, this section was moved from the former section 100.21, “Hearings and Appeals,” and placed into this section of the regulation because it outlines the process for appealing decisions of the division and the board’s contractor(s).

Section 100.6. The board added category D non-single family, indoor toilet and urinal flushing graywater treatment facilities, as defined in the *Graywater Control Regulation*, 5 CCR 1002-86, to domestic wastewater treatment facilities that require supervision by an ORC. Treated graywater is not potable water and is not required to be treated to potable water standards prior to recycling. Using non-potable water in homes, apartments or condominiums, schools, businesses, hotels, dormitories, etc. may increase the possibility of exposure to pathogens or other substances from partially treated water and could pose a public health risk. Current research is showing an increase in risk with each additional contributor to a graywater system, such as apartments, condominium units, hotel rooms, or numbers of people.

Ensuring that graywater treatment processes are functioning properly is a critical component in protecting public health. A certified operator is specifically trained to understand and oversee operation of treatment processes. Based on this increased risk from multiple contributors and the unique role of a certified operator in protecting public health, the board is requiring an ORC for non-single family graywater treatment facilities that supply non-potable water for toilet and urinal flushing.

The board is not requiring an ORC for category A and C single family graywater systems and category B non-single family subsurface irrigation graywater systems as defined in the *Graywater Control Regulation*, 5 CCR 1002-86.

Section 100.9.7. To accomplish better flow of the regulation, the board removed this provision dealing with the appeal rights of facility owners regarding a violation of the responsibility to have an ORC from the former section 100.21, “Hearings and Appeals”

*100.54 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: JUNE 20, 2017
RULEMAKING; EFFECTIVE AUGUST 31, 2017*

Section 100.15.5(b) and (c). For clarification and consistency, the board replaced the word “field” with “category” and spelled out the five certificate categories: water treatment, domestic wastewater treatment, industrial wastewater treatment, distribution system or collection system.

Section 100.15.5(d). For clarity and to make it easier to understand, the board reworded the section using plain language.

Section 100.15.5(f-j). For clarification and transparency, the board added certain provisions from Policy #15-3 regarding timing of training units.

Section 100.15.8. The board clarified the criteria for a certified operator to receive double training units for teaching a board approved classroom course.

100.54 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: JUNE 20, 2017 RULEMAKING; EFFECTIVE AUGUST 31, 2017

Provisions of section 25-9-104, C.R.S. provide the specific statutory authority for the adoption amendments to the established regulatory provisions of Regulation 100 governing the requirements for water and wastewater facility operators (5 CCR 1003-2). The Board hereby adopts, in compliance with section 24-4-103(4), C.R.S., the following statement of basis and purpose.

BASIS AND PURPOSE

At its November 29, 2016 rulemaking hearing, the board revised section 100.9.7 to state that a facility owner can respond to a notice of violation issued by the division or a civil penalty assessment issued by the Department by "submitting to the Board" a hearing request. Subsequently it came to the board's attention that this revision was not consistent with the Board's enabling statute (section 25-9-110(4), C.R.S.), which requires that the facility owner submit such hearing requests to the division. The board conducted a “written comment only rulemaking hearing” to address this relatively minor issue, and received no comments. In order to align the language in the regulation with the statute, the board is now revising section 100.9.7 to indicate that hearing requests for notices of violation under sections 100.9.1-100.9.5 and related civil penalty assessments are to be submitted to the division. The hearings are then conducted by the board.

Appendix B

COLORADO ATTORNEY GENERAL'S CERTIFICATION OF ENFORCEABILITY



CYNTHIA H. COFFMAN
Attorney General

MELANIE J. SNYDER
Chief Deputy Attorney General

LEORA JOSEPH
Chief of Staff

FREDERICK R. YARGER
Solicitor General

**STATE OF COLORADO
DEPARTMENT OF LAW**

RALPH L. CARR
COLORADO JUDICIAL CENTER
1300 Broadway, 10th Floor
Denver, Colorado 80203
Phone (720) 508-6000

**Natural Resources and
Environment Section**

May 16, 2018

Mr. Doug Benevento
Administrator, Region 8
United States Environmental Protection Agency
1595 Wynkoop Street
Denver, CO 80202-1129

RE: Attorney General Certification Regarding the Continued Enforceability of
Colorado's Operator Certification Program

Dear Mr. Benevento:

This letter is provided in accordance with the requirements of the U.S. Environmental Protection Agency's Operator Certification Guidelines, and specifically, "Baseline Standard No. 1." On June 20, 2017, the Colorado Water and Wastewater Facility Operators Certification Board ("Board") adopted certain revisions to its "Water and Wastewater Facility Operators Certification Requirements," Regulation No. 100 (5 C.C.R. 1003-2). These revisions to Regulation No. 100 became effective on August 31, 2017. I hereby certify pursuant to my authority as Senior Assistant Attorney General and as counsel for the Board that these revisions did not impact the State of Colorado's legal authority to fully implement and enforce the requirements of its operator certification program.

Sincerely,

FOR THE ATTORNEY GENERAL

ANNETTE M. QUILL
Senior Assistant Attorney General
Natural Resources and Environment Section
Colorado Office of the Attorney General
Ralph L. Carr Judicial Center
1300 Broadway, 7th Floor

Denver, Colorado 80203
Telephone: 720-508-6264
E-mail: annette.quill@coag.gov

Appendix C

ADMINISTRATIVE SERVICES EXTERNAL REVIEW REPORT

REVIEW AND ANALYSIS OF THE OPERATOR CERTIFICATION PROGRAM

Final Report

September 19, 2017

Presented to

**Water & Wastewater Facility Operators
Certification Board**

Prepared by

Francine Butler PhD

Empressa Consulting Ltd.

Sections of the Report

1. Mandate of the Project.....	3
2. Regulations.....	5
3. OCPO.....	8
4. Database and Website	11
5. Exam Security and Confidentiality	12
6. Program Summary: Metrics and Finances.....	13
7. Recommendations and Comments	14
8. Final Comments	21

1. Mandate of the Project

The charge: Conduct a review of the Wastewater Operator Certification Program

Task A. Evaluate the operation of the program

This evaluation included a review of staff, operations, website, application and examination process, staffing, security, and budget.

Observation: The Wastewater Operator Certification Program is strong, healthy, and operating in compliance with regulations. There are areas that can be enhanced by implementing some changes suggested below.

Task B. Make recommendations in customer satisfaction, efficiency, and cost-effectiveness

Customer satisfaction was measured in the recent user survey. For the most part, the ratings were high for customer satisfaction. Yes, there were a number of negative comments relating to “customer service.” A proposal for dealing with customer or user feedback in the future is offered in the suggestions/recommendations section.

Efficiency is not an easy concept to measure. The keys to efficiency are budget and operating tools. Both of these aspects are well in hand in the office. With respect to budget, the financial statements are showing positive oncome leading to building a reserve. Operations are systematic and in keeping with regulation guidelines.

Cost effectiveness is not always easy to measure. Consider this factor to be investment in the program and measure it in terms of program success.

Task C. Assess program resources relating to technology, fees, and other sources of funding

Suggestions and recommendations to follow are made in the spirit of enhancing the operation of the certification program. As I prepared this report and in conversation with staff, it appears a number of the proposals are already in the planning stages or have been initiated. I hope my comments will serve to support those efforts and any budget requirements necessary to implement them.

Task D. Costs and strategies

These are offered wherever possible.

Procedure:

First weeks were spent gathering information, reports, guidelines, regulations, and all documents governing the process and learning how they interrelate. The number of documents, regulations, and statutes are complex to those not familiar with the government system. It is complex with many intersecting pieces. Having said that, I am impressed by how the system integrates and operates.

The second segment of the project focused on a deep dive into operations, procedures, and how things work—and not just how, but the rationale for certain procedures to determine what is working and what needs attention and to offer suggestions on new tactics.

2. Regulations

As noted, the first few weeks were spent gaining an understanding of the fundamentals of the operation of this program. It was important to review the regulation; the statute; the interaction between the volunteer entities, such as the board and committees; and the state structure and reporting mechanisms. For example, I was surprised to learn the board has a 501(c)(3) classification because that is rare for a certification program. The background and the guiding documents for the program are significant to inform anyone interested in the program as to its inception, operation, and purpose.

During the initial proposal interview process, I was asked to be sure to review the EPA Guidelines for State Operator Certification Programs. The following summarizes the review of factors for *External Review* specified in the EPA Guidelines, such review to be done every five years. These criteria were reviewed with Sylvia Rottman. Results are summarized as follows:

- Staffing

In addition to the CECTI administrator (Ms. Rottman), there are six staff members with varying responsibilities to the program. Ms. Tezak oversees test administration with three staff members under her direction. Another staff member oversees the training unit (TU) operations. Two other staff members have meetings responsibility.

This is a relatively small staff for the volume of exams and renewal of certifications that are managed. However, the key to staffing in a small office is cross-training. The ability for the office to continue functioning when staff cannot be there due to, for example, illness or vacation, is paramount.

- Budget/finance

I was able to review the auditor's report. It appears the program is financially successful. The goal is to have one year's operating budget in reserves. That is likely possible if the numbers of certificants holds steady. Any changes in staffing or improvements in equipment may slow that course for a year. However, the improved operation from increased staff or enhanced IT systems can make a positive difference as well.

- Exam reviews

This function is not handled by the Colorado staff, but is outsourced to a test provider. Nevertheless, it is the Board's responsibility to insure that the tests offered to candidates in Colorado reflect operations and regulations in Colorado and according to Colorado law.

- Compliance rate determination

This function is not within the scope of the contract.

- Regulation review

This is done by the state.

- Enforcement

A procedure is in place to investigate complaints or other issues.

- Trends

Staff is in an excellent position to be aware of potential issues or trends in the industry. These concerns can be shared with the Board. For example, one such issue is the drop in certifications for a particular specialty due to the growing use of computer technology to replace the need for operators.

- Training/testing

Testing is overseen by staff. In addition, being aware of courses that offer training to meet initial qualification and to meet renewal criteria are monitored by staff.

- Renewals

Staff maintains records and informs certified individuals about what they need to do on an annual basis to stay current and maintain their certification.

- Database management

The database is the fundamental core of operations in any certification program. The current system is scheduled to be upgraded to allow for a number of online functions currently not available.

- EPA expense reimbursement

Staff is aware of this program, but it is not applicable to the Colorado operation.

- Outreach

PR is ongoing with such opportunities as taking the booth to appropriate industry meetings and events to increase awareness of the program.

- Stakeholder involvement

All certified individuals are welcome to submit comments or feedback through participation in open board meetings.

3. OCPO

A major task was to perform a review of *staff functions* and operations. A staff organizational chart was provided to me. To date, I have communicated in person, by phone four times, and via numerous email exchanges with Sylvia Rottman and Teresa Tezak to gain an understanding of procedures, including the database, the website, the examination process, staffing, and technology needs and challenges. We further discussed requirements to sit for the exam, the application process, the testing process, security issues, record keeping, and written policies and procedures.

Crisis management: No one wants to deal with disaster or unforeseen circumstances, but taking precautions ahead of time is a best practice for any agency dealing with sensitive material.

Written procedures exist for each of the following certification functions:

- How to process mailed forms
- How to process faxed forms
- How to process e-forms
- How to process credit cards
- How to process checks
- How to respond to candidate reapproval/disapproval
- How to order test booklets
- How to prepare exam sites and books
- How to prepare certificates
- How to process renewals
- How to manage reciprocity applications

With regard to *staffing*, continuity is ensured through the practice of cross-training. In the event someone is not able to be there due to illness or vacation, operations will continue.

We reviewed the *examination procedure* whereby the exams are electronically sent or paper copies delivered as necessary. The exam consists of

100 multiple-choice questions. The test allows four hours to complete. At any one testing session, as many as eight different exams are offered, covering different expertise of the applicants. Candidates may not bring electronic equipment into the exam room (tablets, phones, watches, etc.). They sign in with a picture ID. A staff member is present at all times. The room is under observation via security camera.

Records retention is a major issue. Application materials (hard copies), reciprocity materials, renewal applications, training course materials, accounting records, and the database are stored on site. Files are locked, the office is locked, and the building is locked. Records are stored with ease of access for five years. The question I raised is why are the paper copies kept for so long? Moving to online storage and retrieval would certainly decrease the overhead on storage and staff time. My understanding, however, is that this policy is mandated by a state regulation and thus not easily changed.

The database is backed up daily. Antivirus and security software is in place.

The staff prides itself on delivering personalized *customer service*. The majority of candidate interaction is done by phone although some activity is conducted in person. The goal is to return all calls on the same day. The benefit of personal interaction is a reputation for good customer service. If the issue has to do with a complaint or challenge to any staff decision, written documentation of the interaction is necessary.

A set of documents entitled *Process Flow Charts* were introduced at the Board meeting I attended. These impressive documents map the certification process and can be useful in several ways:

- Serve as teaching tools for staff
- Provide a checklist to ensure all steps are relevant and functional
- Introduce the process to new Board members or relevant parties
- Create posters that can be taken to trade shows and meetings where the certification is promoted
- Serve as a means of continuous improvement by eliminating redundant steps

Regular updates with staff efficiencies not reflected in the document and feedback from staff that steps are still meaningful and functional will enhance the value of the flow charts.

The certification program shows every sign of continuing to grow. As such, there will likely be a need to *increase staff*. Finding staff who understand certification is possible but not easy. However, procedures can be taught. The skill to seek is *customer service*. Dealing with individuals applying to sit for an exam when the results may affect their ability to work and who often wait until the deadline to apply requires a skill set of care that conveys support while setting boundaries. This is especially important in light of the phrase in the contract between CECTI and TEAMS, Inc., that says, *“The tasks will be performed by responsible staff members who oversee the program management and provide information in a friendly and courteous manner to members of CECTI’s constituency.”* (Ref. paragraph 2 Mutual Objectives).

Best Practices:

The following best practices are in place at OCPO demonstrating professionalism and adherence to business discipline:

- Cybersecurity insurance (in progress)
- Key man insurance
- Errors and omissions insurance
- Directors’ and officers’ liability for CECTI and CDPHE
- Recognized accounting software: QuickBooks Professional
- Online credit card processing is PCI compliant
- An annual staff evaluation is performed
- CECTI performs an annual evaluation of TEAMS
- An annual strategic planning process is conducted with the Board

4. Database and Website

An RFP has been developed for a complete revision of the website. That would have been a recommendation, so commendation is in order as that process has been initiated. This report, then, focuses on suggestions for design and content to be included in the new site. Comments from the user survey certainly were taken into consideration.

Although the database and website are integral to each other, a few comments are necessary.

By *database*, I refer to information from candidates that is collected and stored. So the primary factors are what information is collected from applicants (including payment of fees), how the information is stored, and how it is accessed. The information is personal and sensitive, so the primary criterion, security, is essential.

By *website*, I refer to the *public face of the program*. The key element guiding design of any website is to determine its purpose. Is this for the public or for candidates? By public, I mean employers, government agencies, or other users. Fundamentally, it conveys what a wastewater operator is, how a person becomes and stays certified, and who currently holds those certifications.

It is understood that this site is for individuals interested in becoming certified and the community who wants to know who is certified. At the Board meeting I attended, I also heard a discussion of the *professionalism* of this field. A section on the website could certainly be dedicated to public education as to the value of the expertise and how it protects the public.

A new website brings the opportunity to update the current system, address ease of access and use, determine necessary information, and maximize security.

It would be of value to create a small workgroup made up of interested users to help determine what is needed and to serve as a sounding board. The panel could include staff, a Board member, and someone who was certified recently. A “public member”—someone who is not related to the industry—is also helpful because he or she will be sensitive to jargon.

More suggestions regarding the website are included in the section on recommendations.

5. Exam Security and Confidentiality

Construction of the exam, storage and security of the test questions, scoring, and computer interaction are all within the purview of an outside contractor, ABC. Copies are requested according to a defined procedure with specified time frames for delivery and return of secure documents.

It is not within the scope of work of this review to discuss the body of knowledge upon which the exam is based. I understand that is managed by the company that constructs the exams. It is critical that the exam reflect the knowledge needed to do the job and that the tasks are regularly reviewed to ensure the current state of the field is reflected in the exam.

Direct staff-candidate interaction occurs when the exam takes place in the secure testing center within the certification staff office. The online exam is scored upon completion, and successful candidates are congratulated and presented with their certificates at that time. Results of written exams are not available on site. Those who do not pass are later informed of next steps to retake the exam.

The exams are conducted according to a procedure that maximizes the security and integrity of the process. The exam room at the OCPO is monitored at all times (by camera and by staff). Candidates may not take any electronic devices, such as phones, calculators, tablets, and watches, into the examination room. Sign-in is via picture ID.

6. Program Summary: Metrics and Finances

Finances: The 2016 Operators Report provides a comprehensive summary of program activity. There are seven active committees, whose volunteer time contributes significantly to the success of the program. The financial statement reports a positive balance of \$33,229 or approximately 5% of the budget. The program has a goal of building a one-year financial reserve.

Metrics: Although the total of 11,906 certified individuals is a significant number, looking at the change occurring between 2011 and 2016 provides content for future discussion about trends and direction. See the following examples.

- Water Treatment: All categories increased over time except W-T. In 2015, all categories decreased.
- Wastewater Treatment: All categories increased; WW-S stayed constant.
- Industrial Wastewater Treatment: Ind-A minimal increase, Ind-B doubled, Ind-C decreased, and Ind D increased about 30%.
- Water Distribution: All categories increased except D-4.
- Wastewater Collection: All categories increased except C-4.

So what does it all mean? Certainly trend analysis can be used to help predict activity in the upcoming years.

Pass/fail rates: The summary of data for 2016 exams tells a story. Of the total 3,586 applications submitted, 5% were not approved. There were 2,757 eligible to sit for the exam. For the written exam, 995 took the exam, and 54% passed. For the electronic exam, 1,762 took the exam, and 62% passed.

Questions: Why is the fail rate so high? Is this comparable with the fail rates for past exams? Do these data compare to pass/fail rates with other states? Is comparison with other states valid?

7. Recommendations and Comments

In conversations with staff, it appears that some suggestions and/or recommendations I am offering in this report have been initiated or are already being planned. I hope the following comments will serve to support those efforts and any budget requirements necessary to fund them.

Survey

The Board sponsored a major survey of all certificants to gain their feedback on all aspects of the certification program. More than 10,000 surveys were sent, and the response rate was about 10%. Statistically, this is a strong response rate.

Instant feedback vs. periodic surveys

It would be helpful to have feedback from candidates on a timelier basis. An easy and cost-effective way to do that is to add a quick survey of everyone taking the exam as a part of or immediately following the exam. The benefit is that any problems/issues can be addressed in a timely manner. I suggest no more than four or five key questions, along the lines of the following:

- Did the exam reflect your job?
- Did you encounter any problems in signing up...finding an exam location...filing your application...any suggestions for staff?

Make more test sites available

It is to the benefit of a certification program not to make it unduly difficult to meet requirements. Although some comments addressed finding proper courses for renewal of certification, the majority of comments were focused on the lack of test centers—hence, the suggestion to create more test sites.

Potential options: CSU has a testing center. Pearson Testing Centers are available. National College Testing Association (www.ncta-testing.org/) has a network of testing centers in all of its member universities, including seven in Colorado (AcuSkill, Colorado Springs; Colorado Mesa University, Grand Junction; Colorado State University, Pueblo; Otero Junior College, La Junta; Pikes Peak Community College, Colorado Springs; Pueblo Community College, Canon City; University of Northern Colorado, Greeley).

It is understood that saying “explore more test centers” comes with an investment of staff time and effort. Clearly a cost-benefit analysis would help define where and when such additional sites could/should be offered. It is not a small task and one that might be outsourced.

A parallel suggestion to offering more sites is to expand the ability to take an exam with a “trusted monitor.” Are there individuals (often Board members do this) who might lend their office for a day with proper security to host an exam for a small number of candidates? And finally, the OCPO office might serve as one of these micro exam sites at times other than the regularly offered dates. It is not uncommon to charge special fees to cover the costs of these special exam arrangements.

Test date conflict

How to address the concern that test dates conflict with work time? Consider test sites on Saturday or non-work days. But how practical is this option?

Online submission of documents

This comment appeared a number of times in the survey. In this age of instant communication, improving the online option should be explored. A new website will contribute to enhancing this process.

Willingness to pay for ease of access/training unit management system

About 50% of the respondents said they might/would be willing to pay for some services. Keeping track of required training units online can be a challenge for anyone who is certified. Developing a system whereby those records could be stored and maintained online could prove beneficial. Training unit tracking might offer the highest cost-benefit at a fee to cover cost and provide a needed service. *Note: this item is in the RFP for the new website.*

Areas to address

Two survey questions addressing process had roughly identical responses. Nearly 50% of respondents rated the exam process and the renewal process as “could be done better.” The other 50% said it was done well. The adage that you can’t please everybody might apply here. Nevertheless, it would be good to improve that satisfaction factor.

Courses

When asked what courses people wanted, four course topic areas were frequently submitted. Sharing this information with course developers might yield increased content in these areas.

Summary page of the survey

The summary sentence captures the sentiment and the challenge from the survey comments: *Integrate technology throughout the processes and functions.*

Developing a new website certainly opens the door to addressing that request.

Feedback

The survey was sent to some 10,000 operators, and 1,000 took the time to respond. Is there a mechanism to share the results with them? Prepare a brief summary thanking them for their time and their input to improve the process.

What is the value of doing that? Such an action reflects that you listened and are moving toward considering their suggestions and feedback. It is understood that certified operators do not constitute a membership group. But a simple thanks on the website is good communication.

Other Suggestions/Recommendations

Press release and recognition of the credential

How is certification recognized? The work of individuals who have earned this designation is critically important to the health of the community they serve. Sharing the attainment of the credential with the community through press releases and/or articles in relevant publications would help in recognizing their vital role in protecting community health and resources.

It is understood they get a certificate, ID card, and pin. These are personal recognitions. The note above recognizes their professionalism to the community they serve.

Letter of congratulations

A survey question asked if fees were paid personally or by an employer, and more than 80% of responses noted that the employer provides financial support. Clearly, employers have a large investment in the process. Consider

sending a congratulatory letter from the Board to the employer on the success of their employee. Thank them for supporting the program. This shares the pride and tells the employee and the employer they are valued.

Professionalism

When we met to review the proposal, I heard comments about “improving the professionalism of the credential.” Suggestions such as a letter to the successful candidate and to the employer contribute to that effort. The press release contributes as well because it provides an opportunity to educate the public about the job and the importance of the certification as it relates to the public health of Coloradans.

Terminology

The term “grandfathering” is used in some reports. The language “certified by prior experience” is the preferred terminology.

“Candidate” is a person eligible to sit for the exam.

“Certificant” is a person who has earned the certificate.

Board orientation

Note: I understand from staff that some of the following has been implemented.

Recommendations

Hold the first board meeting of each business year at the OCPO office. Benefits of this action include the opportunity to meet staff, experience the process, and tour the facility.

Conduct a new Board orientation. Although this is technically designed for new Board members, it is a strong reminder to standing Board members of the operations and responsibilities of staff and the Board. Staff shared a power point titled “WWFOCB Member Training” that contains much of the material needed for this first meeting of a new Board. *Key items* are the history; the fact that CECTI holds a 501(c)(3) IRS tax status, a status rarely granted to a credentialing program; the relationship with TEAMS to manage the certification program; an overview of the types of certification offered; and an outline of the process from application to the certificate.

Conduct a mock exam for which the Board members are the candidates and they take the exam in order for them to have the same experience and see the process as the candidates do.

Demonstrate the process using the newly developed *flow charts* so that the Board has an understanding of the level of detail and complexity.

Prepare an operations notebook for each new Board member introducing him or her to the staff. Include a photo, brief job description, and authority. The Board needs to know who is responsible for each function. Make it personal. The staff is dedicated to the program and to the voice on the phone; they *are* the program.

Include the bylaws, a meeting schedule, financial overview, and an anticipated work plan for the year, that is, a forecast of exams and candidate numbers for the year. A suggestion is also to do a mock application procedure to demonstrate the database and website because it will be a new system.

Website Factors/Suggestions

Determine who this website is for and design for that factor.

According to the minutes of the 4/17 Board meeting, the website should exist to submit applications, renew certification, and track training units. Noting that this is not a closed website, but one open to the public, I suggest including information on educating the public about wastewater issues and why certification is important for public health. This section need not be long and comprehensive—a paragraph or two would be sufficient. The following text is an introduction in the 2016 report to the EPA that succinctly defines the operator certification program. It would serve well as text on the website opening page to introduce the program to the reader. It serves as a value statement.

The goal of the operator certification program is to ensure that skilled professionals are overseeing the treatment and distribution of safe drinking water. In 1999, the U.S. Environmental Protection Agency (EPA) issued guidelines for the operator certification program. The guidelines specified minimum standards for certification and recertification for operators of public water systems. Operator certification is an important step in promoting compliance with the federal Safe Drinking Water Act.

General observations regarding the current website

These comments are made in the spirit of sharing with the new website designer. The current site is text dense. Getting to a specific page requires more than one click. We live in a world of instant communication, and people expect immediate answers. User comments in the survey asked why more of the process could not be available online.

These are a few ideas to consider:

- The home page of the current website has a column of “News,” but there is no connection between the news and the content on that page.
- The concept of news for the industry is a good one, but it should be housed in a separate area.
- There is no search bar.
- The “News” button has no content. Consider delete.
- The login area asks if you are a member/non-member...of what?
- Make the “frequently asked questions” section easy to access.
- The Overview page was last modified in April 2012. Either update or delete that phrase.
- It would be helpful to simply list the steps to be certified. Submit application, wait for approval, pay fees, select exam site, etc., to give the applicant a simple guide to successful completion of certification.
- Training opportunities is an important area of the website for both the user and the person seeking TUs. It appears the fee for a course to be approved is \$50. You might consider basing the fee on the number of hours offered with a minimum of \$50.
- Does the applicant have the opportunity to evaluate a TU course after completion?
- The copyright date on the overview page says 2002–2014.

Make the application and payment portion easy

Many comments in the survey addressed the complexity of payment and response. The new web designer will surely provide options to make the process efficient, safe, and secure. Whether you set up payment through a major credit card company or use a system such as PayPal, the goal is the same: safe and efficient.

Add a Q&A section based on actual questions posed to staff

In reading the survey, there seem to be a lot of comments that fall into the category of “I didn’t know.” Refer to the survey to find questions that could be included in the Q&A section. Numerous occasions of questions from survey respondents began with “Why do I have to...” Keep this section dynamic by constantly updating with current information based on questions raised by candidates. *Note:* It is understood that the current website has a Q&A page; however, the last update was 2012.

Although the personal touch is very important, there are times when it is not possible, for example, after 5 pm and on weekends. These tend to be high-stress times as candidates approach deadlines. Referring a candidate to the website, although not ideal, can often resolve their issue.

Job board

A place to find job opportunities can provide a value added to the credential when offered in conjunction with the certification program. Having a source for job opportunities adds value to the credential. *Note: this item is in the RFP for the new website.*

8. Final Comments

Thanks to Sylvia Rottman and the staff of OCPO for their patience in responding to my continuing questions.

The original charge of this project was to evaluate the program and recommend improvements. The program operates in compliance with the regulation. The staff is dedicated to the success of the program. They function successfully within the technology parameters of the database system and the examination schedules. Developing a new website with expanded ability for online user access will benefit both staff and the certification community.

A number of suggestions/recommendations were offered in support of enhancing the user-customer interaction. Some require a budget; others may be implemented operationally. All are intended to enhance the value of the program.

Report prepared by
Francine Butler PhD
Empressa Consulting Ltd.
1944 Goldenvue Drive
Golden, CO 80401
(o) 303-279-5412
(c) 303-725-9155
Francine@empressaconsulting.com

Appendix D

WATER AND WASTEWATER FACILITY OPERATORS CERTIFICATION BOARD CUSTOMER SATISFACTION SURVEY RESULTS

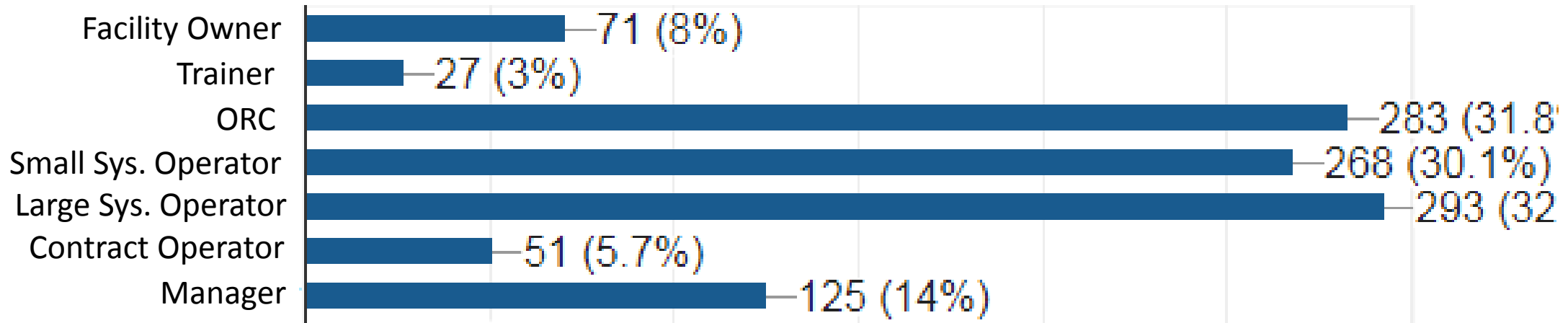
Satisfaction Survey Summary

Operator Certification Program

Disclaimer

- Many of the pie charts in the google survey data contain a slice for non-applicable. This can be confusing to interpretation of some of the results. The NA portion was often removed and the rest of the categories “normalized”. This results in the pie percentages in the text not exactly matching the percentages shown in the original pie chart source data.
- Also survey results can be interpreted in different ways by different individuals. This is one evaluation of the survey results that I thought important. It is not inclusive and may not agree with your interpretation. Original results can be found at https://docs.google.com/a/state.co.us/forms/d/1_CrVB58s5vUpd_dl_bkdYXK7Z8V5Kl3YGZft7ooaiyVY/viewanalytics

Survey Respondents



1. Good response from Operators

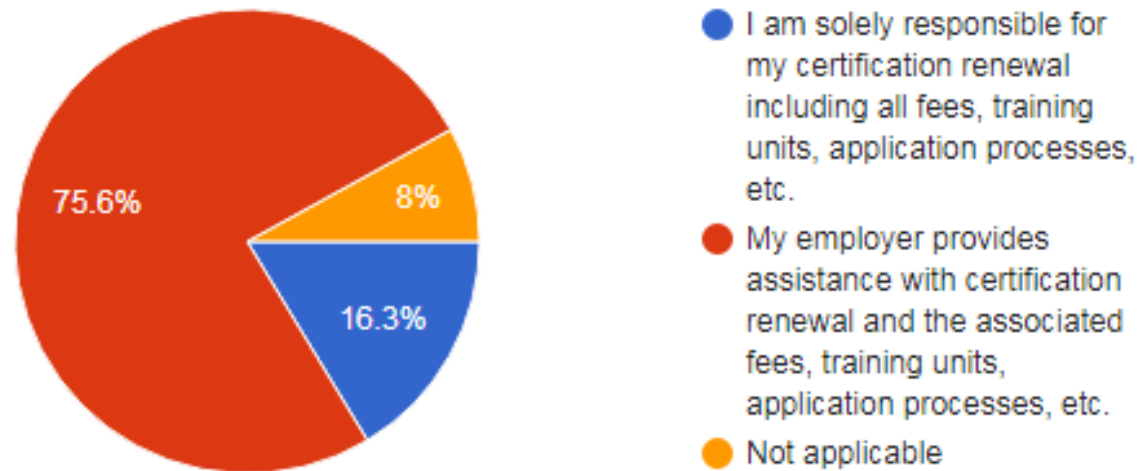
- About 70% of 891 responses were from Operators
- Operators (561), ORCs (283) Managers (125), Owners (71)

Who pays the fees?

- Over 80% of operators have fees paid by employers.

If you are a certified operator, which of the following applies to you?

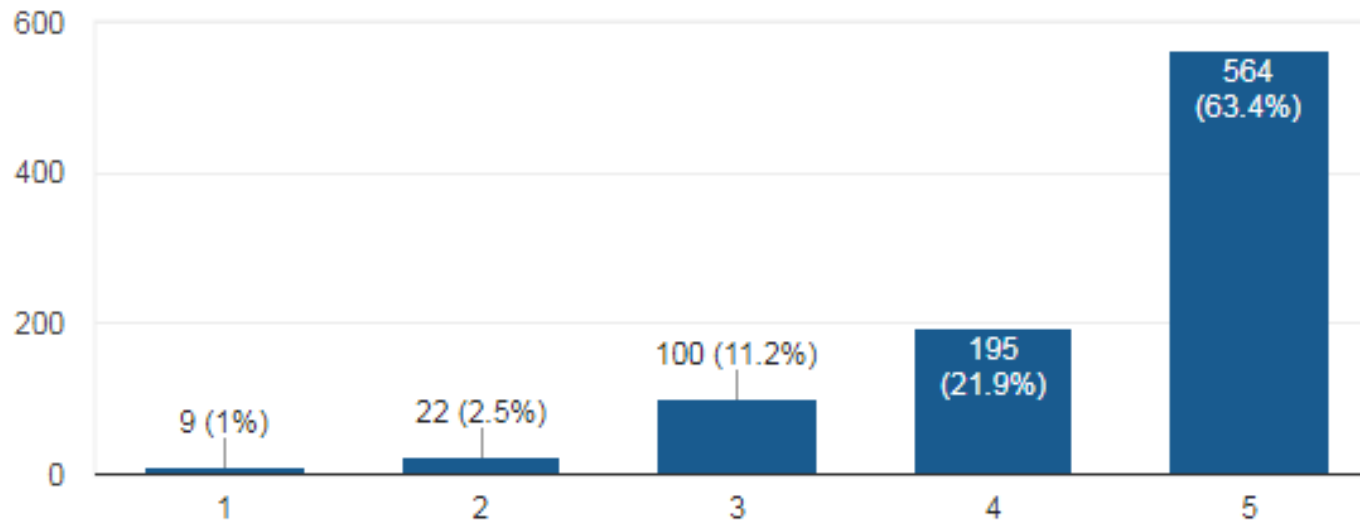
887 responses



Can they use computers?

How comfortable are you using a computer and the internet to do your work?

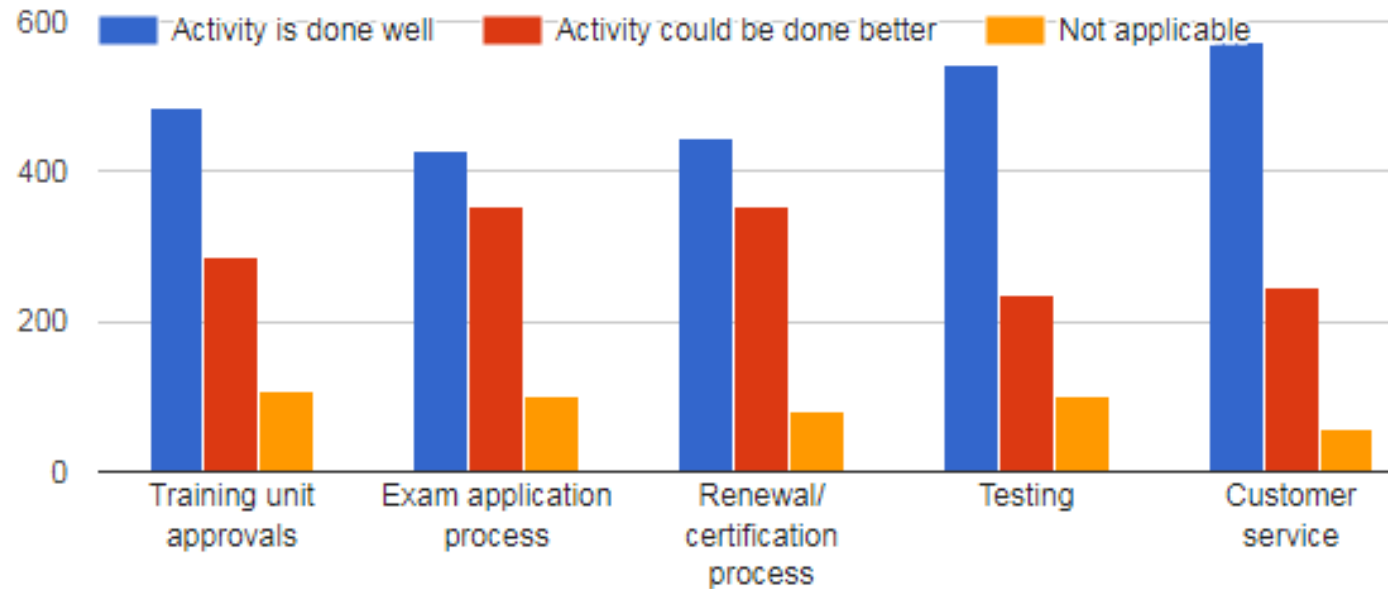
890 responses



- Less than 3% of respondents not comfortable with computers

Program Evaluation

How would you assess the following operator certification program activities?



- Two areas identified the highest in needing work are:

- Exam application
- Renewals

Courses

- Course topics desired most by operators are in the areas of
 - Compliance
 - WQCD Regulatory Documents
 - Facility Operations
 - Maintenance



Satisfaction With Programs

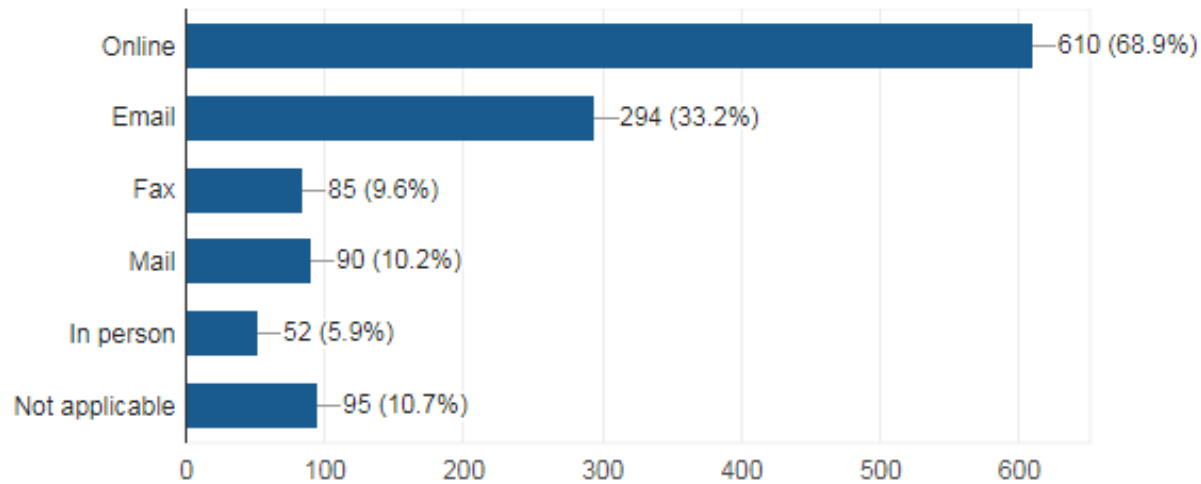
- There was about and 80% - 20% split on satisfaction with
 - Exam process
 - Understandability of experience requirements
 - Certification renewal



Submittal of exam applications

How would you prefer to submit exam applications?

885 responses



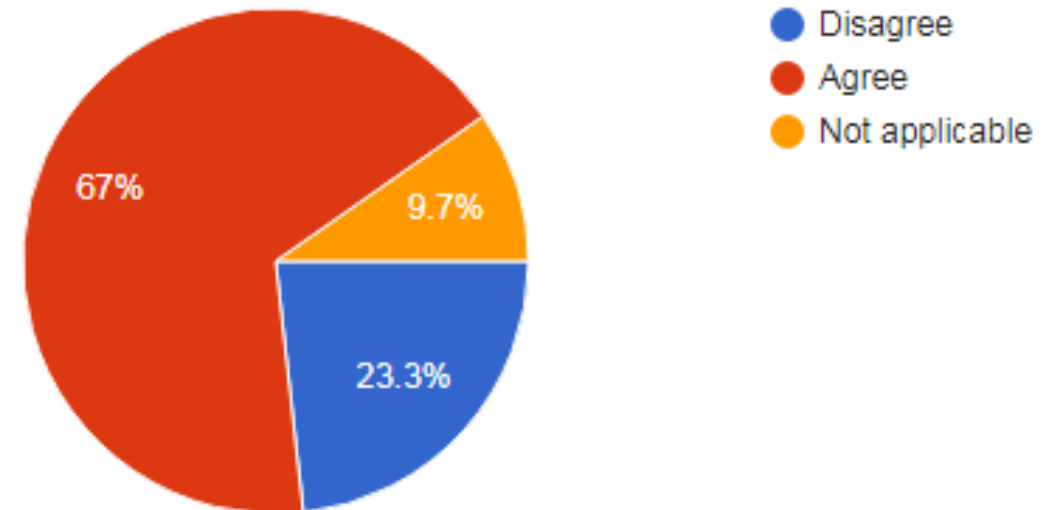
- Operators would overwhelmingly prefer to submit exam applications using online (70%) or email (33%) methods.

Testing Cycle

- About ¼ of respondents feel the testing cycle is insufficient.

The current testing cycle (three per year) is sufficient to adequately plan future certification upgrades.

886 responses

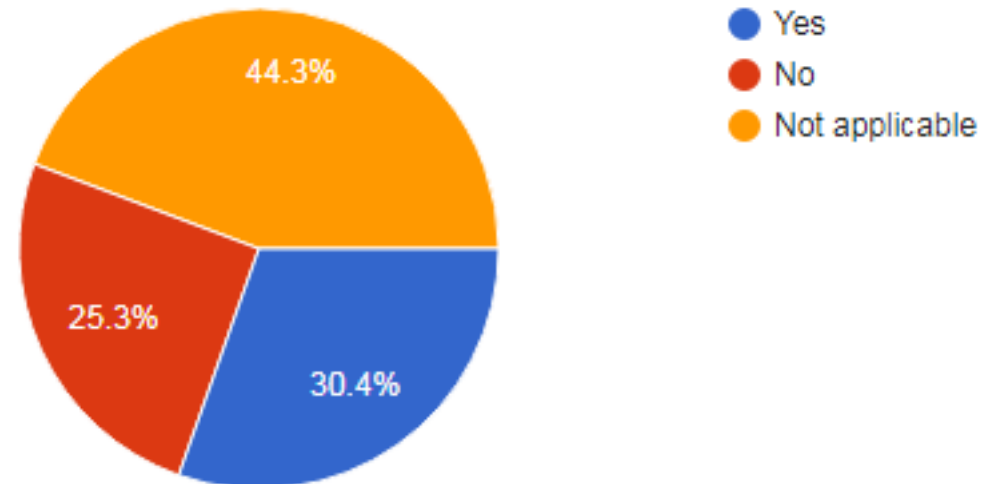


Exam vs. Work

- A little less than half of operators do not think the exam reflects info they use on a regular basis.

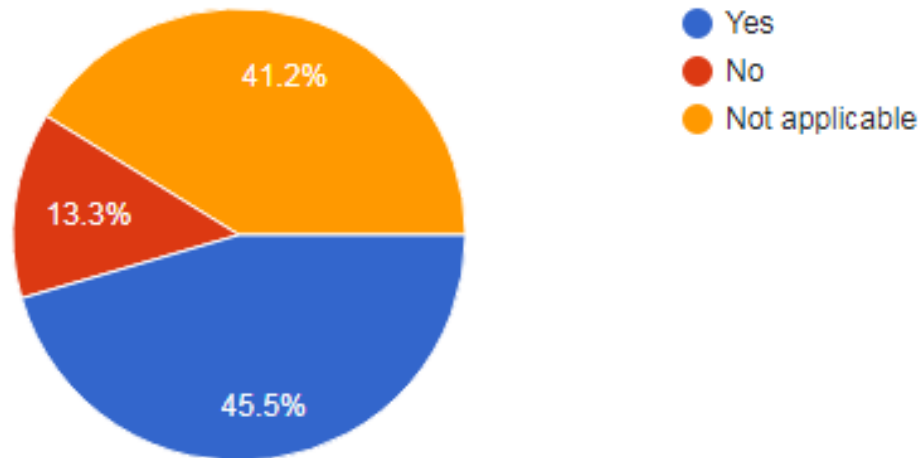
If you tested within the last three years, did the exam reflect information you use on a regular basis?

881 responses



Testing Options

- Over 75% thought there were convenient test-taking options (time place method).



- Of those who didn't, reasons included
 - Hi driving distances required
 - More locations needed – western, central, northern, southern Denver, Colorado Springs,
 - Online should be actual online rather than computer based in person
 - Weekends aren't the best

Suggestions for improvement

- Many suggestions were given.
Themes included:
 - Faster testing results turn-around
 - Flexible online testing
 - Citizenship requirement onerous
 - Process for payment and receipts not efficient

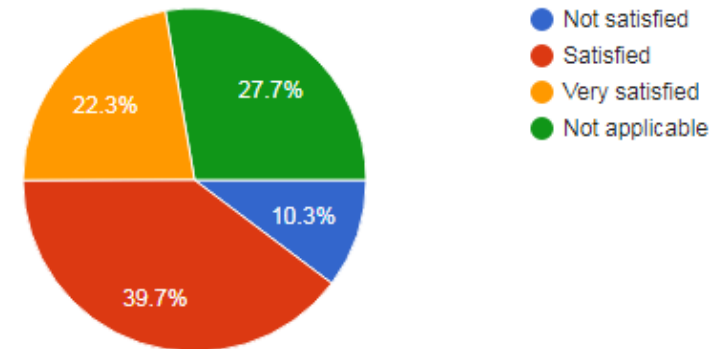


Communication

- 85% of people are satisfied or very satisfied with OCPOs service when communicating with them.

If you communicated with OCPO in the past year, how satisfied were you with the service you received?

887 responses

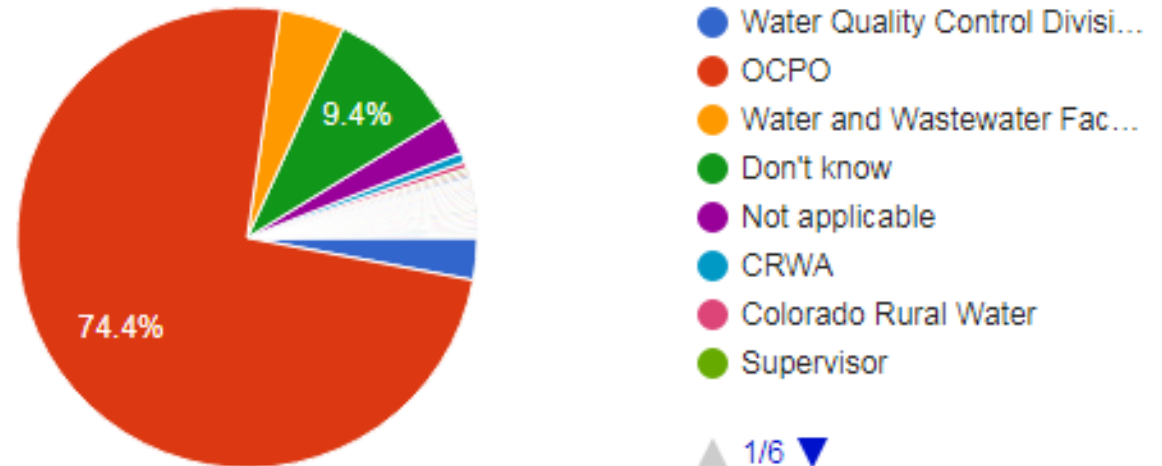


Where questions are going

- This is good because that's where people are looking first (about 75%).

Who would you contact first with questions about your certification?

882 responses

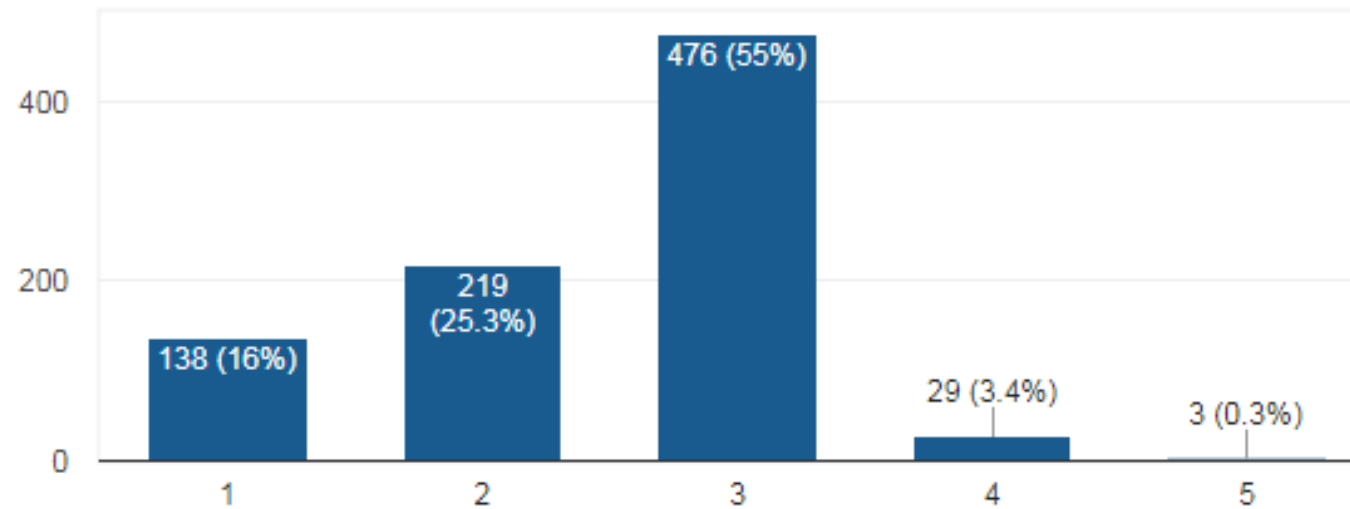


Fees

- A majority of respondents think program fees are “OK”

How appropriate do you think the fees are for the services received?

865 responses

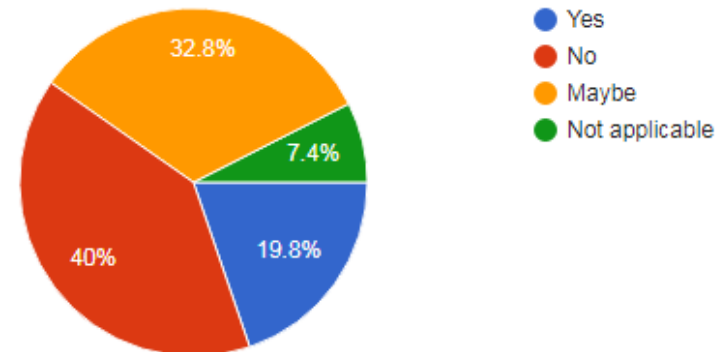


Willingness to Pay for Improvements

- 57% of Operators would be willing, or might be willing to pay more for online portal-type services such as:
 - TU Tracking
 - Online Database
 - Expanded Electronic Testing
 - Certification Expiration Warnings
 - Individual Account-based Login

Would you be willing to pay more for additional services, such as the ability to enter and track your approved training units courses in an online database or expanded electronic testing?

886 responses



Summary

- People are generally fine with the program.
- Ideas for improvement were mostly based in integrating technology throughout processes and functions like
 - Testing
 - Application submission
 - Renewals
 - payments



Appendix E

WATER AND WASTEWATER FACILITY OPERATORS CERTIFICATION BOARD STRATEGIC PLAN



COLORADO

**Water & Wastewater Facility
Operators Certification Board**

Department of Public Health & Environment

Water and Wastewater Facility Operators Certification Board

2017-2022 Strategic Plan

On October 31, 2017, the Colorado Water and Wastewater Facility Operators Certification Board (“WWFOCB”) held its first strategic planning session. The WWFOCB felt this was an opportune time to establish priorities for the coming years to maintain a robust operator certification program, ensure customer satisfaction, and identify priority areas and specific actions for improvement.

Mission of the WWFOCB

The WWFOCB began its strategic planning session by reviewing its mission, as set in statute:

To assure adequate operation of water and wastewater facilities, and to preserve the public peace, health, and safety, the provisions of this article and any rules authorized pursuant thereto are enacted to provide for the examination, classification, and certification of water and wastewater facility operators and to establish minimum standards therefore based upon their knowledge and experience, to provide procedures for certification, to encourage vocational education for such operators, to provide a penalty for the wrongful use of the title "certified operator", to require each water and wastewater facility to be under the supervision of a certified operator, to provide for the classification of all water and wastewater facilities in the state, and to provide a penalty for the operation of a water or wastewater facility without supervision of a certified operator.

Review of Input Received

The WWFOCB conducted a customer satisfaction survey in May 2017. The survey was sent to nearly 10,000 people, and the WWFOCB received 891 responses. Approximately 70% of the responses were from operators. The survey results were shared with the WWFOCB.

The WWFOCB retained Empressa Consulting in June 2017 to evaluate the operation of the program, make recommendations on customer satisfaction, efficiency, and cost-effectiveness, and assess program resources related to technology, fees, and other sources of funding. The WWFOCB received a report from Empressa Consulting on September 19, 2017 which included some recommendations for improvements to the program.

The WWFOCB has also directed staff of the Water Quality Control Division to take part in a peer review with other state certification programs. That review is ongoing and was not complete at the time of the strategic planning session.

Prior to the strategic planning session, the WWFOCB reviewed both the results from the customer satisfaction survey as well as the report from Empressa Consulting. The WWFOCB took all of this input into consideration during its strategic planning session in setting its goals and priorities for the coming years. The WWFOCB noted that it intends to revisit the strategic plan after the peer review is completed to determine whether to make any changes or additions to the strategic plan.

Identification of Themes

The WWFOCB then discussed the overarching themes that have emerged through the input it

has received. The WWFOCB noted the following themes emerged:

- Integrating technology in processes and functions (testing, application submittals, renewals, payments)
- Improve processes for exam applications and renewals (online application)
- Expanding test site locations
- Training up new generation of operators and promoting the profession
- Ensure information on exams is up to date with the times and technology
- Promote health equity and environmental justice in goals and activities

WWFOCB Goals and Priorities

Taking into consideration its mission and the input it has gathered, the WWFOCB then identified 4 goals to focus on over the next 5 years:

1. Improve operator services with minimal increase in cost
2. Update facility classifications
3. Promote the profession
4. Board development

In addition to establishing these goals, the WWFOCB identified specific activities that will support those goals. The goals and supporting activities are identified in the attached table. Those goals and activities comprise the WWFOCB's 2017-2022 Strategic Plan.