

**COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT  
WATER AND WASTEWATER FACILITY OPERATORS CERTIFICATION  
REQUIREMENTS**

**REGULATION NO. 100**

**5 CCR 1003-2**

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## TABLE OF CONTENTS

100.1	PURPOSE.....	1
100.2	DEFINITIONS .....	1
100.3	ADMINISTRATIVE FUNCTIONS.....	4
100.4	WATER TREATMENT FACILITY CLASSIFICATION .....	5
100.5	DOMESTIC WASTEWATER TREATMENT FACILITY CLASSIFICATION .....	6
100.6	INDUSTRIAL WASTEWATER TREATMENT FACILITY CLASSIFICATION.....	8
100.7	WATER DISTRIBUTION SYSTEM CLASSIFICATION.....	11
100.8	WASTEWATER COLLECTION SYSTEM CLASSIFICATION.....	12
100.9	QUALIFICATIONS AND CLASSIFICATIONS FOR CERTIFICATION OF OPERATORS .....	13
100.10	APPLICATION FOR CERTIFICATION.....	2
100.11	EXAMINATIONS.....	3
100.12	EDUCATION AND CROSS EXPERIENCE SUBSTITUTED FOR EXPERIENCE REQUIREMENTS .....	3
100.13	CERTIFICATES .....	5
100.14	TRAINING UNIT REQUIREMENTS FOR RENEWAL OF CERTIFICATION.....	5
100.15	APPROVAL OF TRAINING AND EDUCATIONAL COURSES .....	7
100.16	CERTIFIED OPERATOR DUTIES.....	7
100.17	OPERATOR IN RESPONSIBLE CHARGE DUTIES .....	8
100.18	AUTHORIZATION FOR CONTINUED OPERATION OF WATER DISTRIBUTION AND WASTEWATER COLLECTION SYSTEMS.....	9
100.19	SMALL SYSTEM OPERATOR PROVISIONS.....	10
100.20	MULTIPLE FACILITY OPERATOR PROVISIONS.....	10
100.21	RESPONSIBILITIES OF WATER AND WASTEWATER FACILITY OWNERS .....	10
100.22	FEES.....	12
100.23	DISCIPLINARY PROCEEDINGS .....	14
100.24	HEARINGS AND APPEALS .....	15
100.25	TRANSITIONAL RENEWAL TRAINING UNIT REQUIREMENTS .....	15

100.26 – 29 RESERVED .....	16
100.30 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; NOVEMBER, 2000 RULEMAKING .....	16
BASIS AND PURPOSE .....	16
100.31 FINDINGS IN SUPPORT OF EMERGENCY ADOPTION OF REGULATION NO. 100; DECEMBER 5, 2000 .....	20
100.32 FINDINGS IN SUPPORT OF EMERGENCY ADOPTION OF REVISIONS TO REGULATION NO. 100.22.2(b); JANUARY 30, 2001 .....	20
100.33 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; ARCH, 2001 RULEMAKING .....	20
BASIS AND PURPOSE .....	20
100.34 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; AUGUST, 2001 RULEMAKING .....	21
BASIS AND PURPOSE .....	21
100.35 FINDINGS AND STATEMENT OF BASIS AND PURPOSE FOR ADOPTION ON AN EMERGENCY BASIS OF REVISIONS TO REGULATION NO. 100 JANUARY, 2002 RULEMAKING .....	22
100.36 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; JANUARY, 2002 RULEMAKING .....	23
BASIS AND PURPOSE .....	23
100.37 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; APRIL, 2002 RULEMAKING .....	24
BASIS AND PURPOSE .....	24
100.38 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; MAY, 2002 RULEMAKING .....	24
BASIS AND PURPOSE .....	24
100.39 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: MARCH 2003 RULEMAKING .....	24
BASIS AND PURPOSE .....	24
100.40 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: OCTOBER 2004 RULEMAKING .....	25
BASIS AND PURPOSE .....	25
100.41 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE AND EMERGENCY FINDINGS: NOVEMBER 2004 RULEMAKING .....	26
BASIS AND PURPOSE .....	26

EMERGENCY FINDINGS .....	27
100.42 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: JULY 26, 2005 RULEMAKING .....	27
BASIS AND PURPOSE .....	28
100.43 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: FEBRUARY 14, 2006 RULEMAKING .....	29
BASIS AND PURPOSE .....	29
100.44 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: APRIL 24, 2007 RULEMAKING; ADOPTED JULY 31, 2007; EFFECTIVE SEPTEMBER 30, 2007.....	31
BASIS AND PURPOSE .....	31
100.45 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: APRIL 28, 2009 RULEMAKING; ADOPTED APRIL 28, 2009; EFFECTIVE JUNE 30, 2009.....	32
BASIS AND PURPOSE .....	33
100.46 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: SEPTEMBER 29, 2009 RULEMAKING; ADOPTED SEPTEMBER 29, 2009; EFFECTIVE NOVEMBER 30, 2009 34	
BASIS AND PURPOSE .....	34
100.47 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: NOVEMBER 2009 RULEMAKING; ADOPTED NOVEMBER 24, 2009; EFFECTIVE JANUARY 30, 2010 .....	35
BASIS AND PURPOSE .....	35
100.48 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: NOVEMBER 2011 RULEMAKING ADOPTED NOVEMBER 29, 2011; EFFECTIVE JANUARY 30, 2012 .....	36
BASIS AND PURPOSE .....	36

# COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

## WATER AND WASTEWATER FACILITY OPERATORS CERTIFICATION REQUIREMENTS

### REGULATION NO. 100

#### 5 CCR 1003-2

##### 100.1 PURPOSE

100.1.1 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.

100.1.2 Certification under this statute is available to all persons who meet the minimum qualifications of a given classification. Each operator is encouraged to apply for certification in the highest classification consistent with their qualifications.

##### 100.2 DEFINITIONS

- (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.
- (2) "BOARD" means the Colorado Water and Wastewater Facility Operators Certification Board or its designee.
- (3) "CERTIFICATE" means the written document issued by the Board or its designee stating that the person named thereon has met the requirements for operating the specified class of facility or system.
- (4) "CERTIFIED OPERATOR" means the person who has responsibility for the operation of any water and wastewater facility and is certified in accordance with the provisions of this regulation. For purposes of this regulation, "responsibility for the operation" means making process control and/or system integrity decisions about water quality or quantity that may affect public health or the environment.
- (5) "CLASSIFICATION" means the level of operational complexity of a water or wastewater facility as determined by the Division.
- (6) "COMMUNITY WATER SYSTEM" means a public water system which serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents.
- (7) "CONVENTIONAL FILTRATION TREATMENT" means a series of processes including coagulation, flocculation, sedimentation and filtration resulting in substantial particulate removal.
- (8) "DEPARTMENT" means the Colorado Department of Public Health and Environment.

- (9) "DIRECT FILTRATION TREATMENT" means a series of processes including coagulation and filtration, but excluding sedimentation, resulting in substantial particulate removal.
- (10) "DIVISION" means the Water Quality Control Division, within the Colorado Department of Public Health and Environment.
- (11) "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 individual sewage disposal systems.
- (12) "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.
- (13) "NON-COMMUNITY WATER SYSTEM" means a public water system that is not a community water system.
- (14) "NON-TRANSIENT NON-COMMUNITY WATER SYSTEM" means a public water system that is not a community water system and that regularly serves at least 25 of the same individuals for over 6 months per year.
- (15) "OPERATOR" means any person who performs or supervises tasks pertinent to controlling the operation of a water or wastewater facility, such as:
- (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) operating valves and/or gates either manually or by remote control;
  - (G) maintaining logs and/or records;
  - (H) collecting and/or analyzing process control samples;
  - (I) ensuring proper inspection and testing of new, modified or repaired facilities prior to permitting these facilities to be put into or returned to service;
  - (J) developing and implementing preventative maintenance programs and performing routine maintenance functions for facilities; or

- (K) overseeing compliance with laws and regulations and reporting as appropriate to facility owners and the Department.
- (16) "OPERATOR IN RESPONSIBLE CHARGE" means the person designated by the owner of the water or wastewater facility to be the certified operator(s) who has ultimate responsibility for decisions regarding the daily operational activities of the facility that will directly impact the quality and/or quantity of drinking water, treated wastewater, or treated effluent.
- (17) "PASSIVE WASTEWATER TREATMENT" means treatment in which chemical, mechanical, or biological treatment techniques are not utilized.
- (18) "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.
- (19) "PRIMARY DRINKING WATER REQUIREMENT" means any of the set of enforceable Maximum Contaminant Levels for drinking water regulated under the Colorado Primary Drinking Water Regulations (5 CCR 1003-1).
- (20) "PUBLIC WATER SYSTEM" means a system for the provision to the public of water for human consumption through pipes or other constructed conveyances, if such system has at least fifteen service connections or regularly serves an average of at least twenty-five individuals, at least 60 days out of the year. Such term includes:
- (A) Any collection, treatment, storage, and distribution facilities under control of the operator of such system and used primarily in connection with such systems, and
  - (B) Any collection or pretreatment storage facilities not under such control which are used primarily in connection with such systems.
- (21) "RESPONSIBLE PERSON" means an individual, designated by the owner of a Class 2 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 annual training with respect to these duties including, as appropriate, specific measures used to meet effluent limits, monitoring, inspection, planning, reporting, and documentation requirements.
- (22) "SECONDARY DRINKING WATER STANDARD" means any of the set of Secondary Contaminant Level guidelines for drinking water regulated under the Colorado Primary Drinking Water Regulations (5 CCR 1003-1).
- (23) "SMALL SYSTEM" means a water or wastewater facility that serves a population of 3300 or less and that would be classified as a class "D" treatment facility and as a class "1" distribution or collection system under the provisions of this regulation.
- (24) "TRAINING UNIT" means the credit given for an increment of training approved as applicable to the fulfillment of certification renewal requirements.
- (25) "TRANSIENT NON-COMMUNITY CERTIFICATION" means the certification available to those Transient Non-Community water systems which meet the conditions in subsection 100.19.2 of this regulation.
- (26) "TRANSIENT NON-COMMUNITY WATER SYSTEM" means a non-community public water system that does not regularly serve at least 25 of the same individuals for over six months per year.

- (27) "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.
- (28) "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.
- (29) "WASTEWATER TREATMENT FACILITY" means either a domestic wastewater treatment facility or an industrial wastewater treatment facility.
- (30) "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.
- (31) "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.
- (32) "WATER TREATMENT FACILITY" means the facility or facilities upstream of, within, or downstream of the water distribution system that alters the physical, chemical, or bacteriological quality of the water by the application of physical, chemical or bacteriological means.

### **100.3 ADMINISTRATIVE FUNCTIONS**

100.3.1 In carrying out its responsibilities to administer the operator certification program pursuant to Article 9 of Title 25, C.R.S., the Board or its designee may carry out any of the following duties, including but not limited to:

- (a) Administration of the operator certification program;
- (b) Collection of program fees for administration of the operator certification program;
- (c) Administration of validated examinations for operator certification;
- (d) Maintaining records of certified operators;
- (e) Maintaining records of water and wastewater facilities;
- (f) Notifying operators of expiration of certification;
- (g) Providing information on accredited training programs and training requirements;
- (h) Preparing and 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) Grading examinations;
- (l) Evaluating work experience of applicants;

- (m) Evaluating and approving training units for renewal of certification;
- (n) Evaluating and approving requests for 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;
- (r) Conducting failed exam reviews; or
- (s) Preparing and distributing annual reports.

**100.4 WATER TREATMENT FACILITY CLASSIFICATION**

100.4.1 Water treatment facilities shall be classified by the Division in accordance with the following six classes; Transient Non-community Water System, Small Water System, Class D, Class C, Class B, or Class A. Small Water Systems are described in section 100.19.1(a). Transient Non-community Water Systems are described in section 100.19.2. For the other classifications, 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 WATER TREATMENT FACILITY CLASSIFICATION TABLE

Description of the Facility	Plant Design Flow (in MGD)			
	Below 2	2 – 5	5.01 – 9.99	10 or more
Community Water Systems, Non-Transient Non-Community Water systems, and Transient Non-Community Water Systems <sup>1</sup> .				
<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	C	C	B	B

water standards.				
<u>All Water Systems</u>	.	.	.	.
(d) Any source utilizing bag or cartridge filtration to comply with primary drinking water requirements.	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 requirements and which is not listed in sections 100.4.2(d) or 100.4.2(f) of this regulation.	C	B	B	A
(f) Any source utilizing conventional or direct filtration with disinfection to comply with primary drinking water requirements.	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.	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 requirements.	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 requirements.	.	C (all sizes)	.	.

<sup>1</sup> These classifications apply to systems other than the Transient Non-community Water Systems addressed in section 100.19.2.

100.4.3 The classification of any water treatment facility may be changed at the discretion of the Division by reason of changes in any condition or circumstance on which the classification was predicated.

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 of this regulation shall be classified in accordance with the highest level of treatment process utilized.

**100.5 DOMESTIC WASTEWATER TREATMENT FACILITY CLASSIFICATION**

100.5.1 Domestic wastewater treatment facilities shall be classified by the Division in accordance with the following five classes: Small Wastewater System, Class D, Class C, Class B, or Class A. Small Wastewater Systems are described in section 100.19.1(b). For the other classifications, 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 DOMESTIC WASTEWATER TREATMENT FACILITY CLASSIFICATION TABLE

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 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) Recirculating 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 by reason of changes in any condition or circumstance on which the classification was predicated.

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 of this regulation shall be classified in accordance with the highest level of treatment process utilized.

## 100.6 INDUSTRIAL WASTEWATER TREATMENT FACILITY CLASSIFICATION

### 100.6.1 Classification

(a) Pursuant to section 25-9-104(4), C.R.S., industrial wastewater treatment facilities shall be classified by the Board as Class 1 or Class 2 facilities. Class 2 facilities shall be exempt from the requirement to operate under the supervision of a certified operator. Facilities not classified by the Board as Class 2 facilities shall be classified as Class 1 facilities.

(b) Class 2 Facilities

(i) Class 2 facilities shall include facilities:

(A) which discharge only pursuant to an industrial stormwater permit, a construction stormwater permit, or a municipal stormwater permit,

(B) which discharge pursuant to Colorado Discharge System general industrial permit COG-380000, Treated Water Distribution System Wastewater Discharge, provided that the permitted distribution system is under the supervision of a properly certified water distribution system operator who is specifically responsible for overseeing the system's operation and for ensuring compliance with the system's discharge permit, including monitoring and reporting requirements, or

(C) which discharge pursuant to Colorado Discharge System general industrial permit COG-641000, Water Treatment Plant Wastewater Discharge, provided that the permitted water treatment facility is under the supervision of a properly certified water treatment facility operator 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.

(ii) Facilities which discharge pursuant to one of the following Colorado Discharge Permit System general industrial wastewater permits are eligible for classification as class 2 facilities:

COG-070000 Construction Dewatering Activities,

COG-130000 Aquatic Animal Production with Continuous and Intermittent Discharge,

COG-500000 Sand and Gravel Process Water and Stormwater Combined,

COG-600000 Minimal Industrial Discharge

COG-603000 Subterranean Dewatering and Well Development,

COG-604000 Hydrostatic Testing of Pipelines, Tanks and Similar Vessels,

COG-605000 Non-Contact Cooling Water, and

COG-607000 Commercial Washing of Outdoor Structures.

- (A) Such a facility shall be classified as a class 2 facility following verification by the Division of the facility's written certification that:
    - (I) the quality of the wastewater discharged is such that discharge permit limits can be met utilizing only passive treatment 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.
  - (B) The Division shall notify the facility in writing of its classification determination.
  - (C) Each facility classified as a class 2 facility under the authority of this subsection shall re-certify in writing, by December 31st of each year, that the conditions in part (A) of this subsection continue to be met.
  - (D) The Board has the authority to reclassify any facility 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.
- (iii) A facility which discharges pursuant to either an individual industrial wastewater discharge permit or a general industrial permit not listed in 100.6.1(b)(ii) above may request classification by the Board as a class 2 facility.
- (A) Considering the criteria in sections 25-9-104(4)(a) through (d), C.R.S., the Board may approve class 2 classification for such a facility where it determines that the facility has demonstrated that:
    - (I) the quality of the wastewater discharged is such that discharge permit limits can be met utilizing only passive treatment 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.

- (B) The Division shall evaluate a written request from the facility and shall provide the Board with a classification recommendation based upon the criteria in part (A) of this subsection and upon the criteria listed in sections 25-9-104(4)(a) through (d), C.R.S.
- (C) The Board shall approve or deny such classification requests at an adjudicatory hearing to be held at a regularly scheduled Board meeting.
- (D) Each facility classified as a class 2 facility under the authority of this subsection shall re-certify in writing, by December 31st of each year, that the conditions in part (A) of this subsection continue to be met.
- (E) The Board has the authority to reclassify any facility 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.

(c) Class 1 Facilities.

Class 1 industrial wastewater treatment facilities shall be further classified by the Division 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 INDUSTRIAL WASTEWATER TREATMENT FACILITY CLASSIFICATION TABLE

<u>CLASSIFICATION</u>	<u>TREATMENT PROCESS</u>
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.

Note: 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 by reason of changes in any condition or circumstances on which the classification was predicated.

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 of this regulation shall be classified in accordance with the highest level of treatment process utilized.

## **100.7 WATER DISTRIBUTION SYSTEM CLASSIFICATION**

100.7.1 Water distribution systems shall be classified by the Division in accordance with the following six classes: Transient Non-community Water System, Small Water System, Class 1, Class 2, Class 3 or Class 4. Small Water Systems are described in section 100.19.1(a). Transient Non-community Water Systems are described in section 100.19.2. For the other classifications, 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 WATER DISTRIBUTION SYSTEM CLASSIFICATION TABLE**

The Small Water System classification is addressed separately in section 100.19.1 and the Transient Non-community Water System classification is addressed separately in section 100.19.2. For all other distribution systems:

<u>CLASS</u>	<u>POPULATION SERVED</u>
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 by reason of changes in any condition or circumstances on which the classification was predicated.

100.7.4 Section 100.7 only applies to distribution systems that serve a public water system.

**100.8 WASTEWATER COLLECTION SYSTEM CLASSIFICATION**

100.8.1 Wastewater collection systems shall be classified by the Division in accordance with the following five classes: Small Wastewater System, Class 1, Class 2, Class 3 or Class 4. Small Wastewater Systems are described in section 100.19.1(b). For the other classifications, Class 4 is the highest level of classification and Class 1 is the lowest level of classification. Except that 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.

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

100.8.2 The classification of any wastewater collection system may be changed at the discretion of the Division by reason of changes in any condition or circumstances on which the classification was predicated.

## **100.9 QUALIFICATIONS AND CLASSIFICATIONS FOR CERTIFICATION OF OPERATORS**

100.9.1(a) Operators certified under the previous system of classification and certification, including distribution and collection system operators who passed the voluntary examination, shall be deemed compliant with this provision and fully capable of operating facilities as described herein.

(b) Operators holding Class 3 water distribution or wastewater collection certifications issued prior to January 1, 2008 shall be deemed to have met the requirements for the Class 4 certification and shall be issued Class 4 certifications.

100.9.2 Applicants shall be examined by the Board or its designee as to education, experience, and knowledge related to the classification level for which the applicant seeks to be certified. Applicants must have a high school diploma or a general equivalency diploma (GED).

100.9.3 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 have an additional six months of qualifying experience and shall demonstrate the completion of 1.0 training units in a course approved as a substitute for entry-level experience requirements.

100.9.4 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.

100.9.5 In evaluating experience of operators the Board will be guided by whether the experience required some technical knowledge of the work and whether or not responsible charge of work was included.

100.9.6 Operators shall be classified according to the type of facility they are certified to operate. An applicant must pass a validated examination designated for the type and level of facility that he or she seeks to be certified to operate. Except as provided in section 100.9.9, to qualify to sit for an examination, an applicant must have the required minimum experience or cross-experience and meet the prior certification requirements as set forth in sections 100.9.7 and 100.9.8. Small system water or wastewater operator requirements are the same as for Class D and Class 1 below. There is no minimum experience requirement for certification as a Transient Non-community Water System Operator as described in section 100.19.2. For purposes of this section, domestic and industrial wastewater treatment facility experience shall be considered interchangeable.

100.9.7 Prior Certification Requirements. To qualify to sit for an examination, an applicant must hold a certification for the same certification category (water treatment facility, domestic or industrial wastewater treatment facility, distribution system or collection system) and in the class immediately below the class for which application is being made. Prior certification requirements are shown in the table below.

100.9.8 Prior Certification and Experience Requirements for Certification Table

Certification Class	Prior Certification Required <sup>1</sup>	Minimum Experience Required
Class TNC	None	No minimum experience requirement
Class D, 1, Small Water, or Small Wastewater	None	1 Month
Class C	Class D or Small Water or Small Wastewater	2 Years
Class 2	Class 1 or Small Water or Small Wastewater	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

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

100.9.9 Special rules for satisfying the minimum experience requirements of this regulation:

- (a) Class D Operators:
  - (i) Applicants for certification as Class D Operators of water or wastewater treatment facilities may take the Class D examination before accruing the necessary experience for the issuance of a certificate.
  - (ii) The Class D certificate will then only be issued upon a showing of satisfactory experience to the Board or its designee, as well as passage of the Class D examination.
  - (iii) The required experience may be accrued under the supervision of a certified operator, through on the job training with a certified operator, or through an apprenticeship with a contract operator who is certified. The required experience may also be accrued through the successful completion of an on-site or correspondence training course, approved by the Board or its designee, which is designed to prepare the Class D Operator to operate Class D facilities.
  - (iv) Any education courses used to satisfy the basic experience requirement for a Class D Operator certification may not be used to satisfy the certification renewal requirements for that same certification.

- (b) Class 1 Operators:
  - (i) Applicants for certification as Class 1 Operators of water distribution or wastewater collection systems may take the Class 1 examination before accruing the necessary experience for the issuance of a certificate.
  - (ii) The Class 1 certificate will then only be issued upon a showing of satisfactory experience to the Board or its designee, as well as passage of the Class 1 examination.
  - (iii) The required experience may be accrued under the supervision of a certified operator, through on the job training with a certified operator, or through an apprenticeship with a contract operator who is certified. The required experience may also be accrued through the successful completion of an on-site or correspondence training course, approved by the Board or its designee, which is designed to prepare the Class 1 Operator to operate a Class 1 system.
  - (iv) Any education courses used to satisfy the basic experience requirement for a Class 1 Operator certification may not be used to satisfy the certification renewal requirements for that same certification.

#### **100.10 APPLICATION FOR CERTIFICATION**

100.10.1 A person desiring to be certified to operate a water or wastewater facility shall file an application with the Board or its designee. 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).

100.10.2 The applicant must specify examination type (i.e. water, domestic or industrial wastewater, distribution, collection, small water system, or small wastewater system), level of classification sought, exam date, and testing location and may only take the specified examination once during each examination cycle.

100.10.3 Application for certification examinations shall be made on forms provided by the Board or its designee.

100.10.4 The Board or its designee 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 denial notice shall specify the reason(s) the application does not meet the minimum requirements.

100.10.5 If the application is disapproved, the operator may request a re-review of the application, including consideration of any clarifying information that the operator may choose to submit regarding the identified basis for disapproval. Any such request for re-review must be received within two weeks of the date of the disapproval letter. All factual information supporting the application must be received with the re-review request.

100.10.6 If an application is still disapproved after re-review, the operator may appeal this determination to the Board. Any such appeal must be received in the Board's office within two weeks of the date of the second disapproval notification letter. No new factual information will be accepted during the Board appeal process, except for good cause shown.

## **100.11 EXAMINATIONS**

- 100.11.1 The Board or its designee 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.
- 100.11.2 Examinations shall be held at places and times set by the Board or its designee. Advance announcements of the date and locations of examinations shall be made by the Board or its designee.
- 100.11.3 All examinations shall be written or administered electronically, except in such cases as the Board or its designee decide, on a case-by-case basis, represent proper exceptions to this requirement.
- 100.11.4 All examinations will be graded by the Board or its designee, and the applicants shall be notified of the results.
- 100.11.5 Examinees shall be provided an analysis of their exam performance indicating the level of knowledge demonstrated for each topic tested.
- 100.11.6 Separate validated examinations will be prepared to cover basic differences in types of water treatment processes, size and/or complexity of water and wastewater facilities, variations in wastewater and/or water quality, conditions of receiving waters, and other relevant factors as determined by the Board or its designee. To facilitate the transition to the program established by these regulations, the Board may choose to utilize unvalidated examinations for domestic and industrial wastewater facility operators for the Spring 2001 testing cycle.
- 100.11.7 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.
- 100.11.8 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 taking examinations for a period of 1 to 5 years, as determined by the Board following a hearing pursuant to Article 4 of Title 24, C.R.S.

## **100.12 EDUCATION AND CROSS EXPERIENCE SUBSTITUTED FOR EXPERIENCE REQUIREMENTS**

- 100.12.1 Substitution of education for experience requirements:
- (a) Post-secondary education may also be substituted for the experience requirements of section 100.9 on the basis of successful completion of formal academic credit hours for all or a portion of an academic year (15 semester hours = ½ academic year = 6 months of experience), and/or corresponding credits in the form of training units (300 contact hours or 30 training units = 15 quarter hours = 4 months experience). Thirty (30) semester hours and/or 45 quarter hours shall constitute one year's formal education.
  - (b) (i) Credit for up to 50% of the applicable experience requirement of section 100.9.8 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 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 subsection 100.12.1(a).

- (ii) Credit for up to 25% of the applicable experience requirement of section 100.9.8 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 subsection 100.12.1(a).
- (c) In instances where an approved degree or certificate program has not been completed, credit for up to 50% of the applicable experience requirement of section 100.9.8 may be granted for the completion of individual technically oriented courses which the Board 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, in accordance with subsection 100.12.1(a).
- (d) At least fifty percent of any experience requirement of section 100.9 of this regulation shall be met by actual on-site operating experience in a water or wastewater facility, except that Class D Operators and Class 1 Operators may satisfy the experience requirements exclusively with formal academic education credits or training units, in accordance with subsection 100.9.8.

100.12.2 Substitution of cross-experience for experience requirements:

- (a) Cross-experience may be substituted for the experience requirements of section 100.9 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 or Class 3 water distribution or wastewater collection system operator, except that at least fifty percent of any experience requirement of section 100.9 shall be met by actual on-site operating experience in a water or wastewater facility, as the case may be.
- (b) For the purpose of this section, "cross-experience" means that:
  - (i) qualifying experience as an operator in a water treatment facility may be substituted for the experience requirement for certification as an operator of a wastewater treatment facility;
  - (ii) qualifying experience as an operator in a wastewater treatment facility may be substituted for the experience requirement for certification as an operator of a water treatment facility;
  - (iii) qualifying experience as an operator in a water distribution system may be substituted for the experience requirement for certification as an operator of a wastewater collection system; or
  - (iv) qualifying experience as an operator in a wastewater collection system may be substituted for the experience requirement for certification as an operator of a water distribution system.

### **100.13 CERTIFICATES**

- 100.13.1 Upon satisfactory fulfillment of the requirements of this regulation, the Board or its designee shall award to the applicant a certificate designating the appropriate certification level. Newly awarded operator certificates shall be valid for three years unless revoked or suspended as provided in section 100.23 of these regulations.
- 100.13.2 Operators may seek renewal of a certificate by submitting a written application for renewal to the Board or its designee prior to the expiration date of the certificate. Renewed certificates shall be valid for three years from the date of expiration of the prior certificate, not from the issue date of the renewed certificate.
- 100.13.3 Renewal applications must demonstrate that the operator satisfies the requirements of this regulation including meeting the renewal training unit requirements stated in section 100.14 of this regulation. See §100.25 for transitional renewal training unit requirements for certifications expiring prior to January 30, 2004.
- 100.13.4 The Board or its designee shall provide all application forms for renewal of certificates.
- 100.13.5 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 and no operator of a water or wastewater facility shall operate a facility in reliance on the expired certificate.
- 100.13.6 An operator may apply for renewal for two years following expiration of the certificate. The Board or its designee will renew the certificate if the operator pays the renewal fee and satisfies all applicable requirements. Certificates which are 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.
- 100.13.7 Any certificate not renewed by the operator within two years of its expiration is automatically revoked. 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.
- 100.13.8 Reciprocity--Certificates may be issued by the Board or its designee, 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 in another state, territory or possession of the United States or any country 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.

### **100.14 TRAINING UNIT REQUIREMENTS FOR RENEWAL OF CERTIFICATION**

- 100.14.1 In addition to the other requirements of this rule, all certified operators must earn the appropriate number of training units, as specified in this rule, before the operator's certificate will be renewed. Up to 50 percent of the training units for certification renewal may come from courses approved as supplemental training or from courses approved as core training for certification categories other than the category of the certification being renewed, provided that at least 50 percent of the training units for certification renewal shall come from courses approved as core training for the category of certification being renewed. Subject to the 50 percent core training limitation above, a course with training units approved in multiple categories may be counted up to the training unit equivalent of the actual number of approved hours in the course for each certificate being renewed.

100.14.2 Operators seeking renewal of their certificates shall meet the following training unit requirements:

- (a) Class A water treatment, domestic wastewater treatment, and industrial wastewater treatment facility operators - 3 training units.
- (b) Class B water treatment, domestic wastewater treatment, and industrial wastewater treatment facility operators - 2.4 training units.
- (c) Class C water treatment, domestic wastewater treatment, and industrial wastewater treatment facility operators – 1.8 training units.
- (d) Class D water treatment, domestic wastewater treatment, and industrial wastewater treatment facility operators – 1.2 training units.
- (e) Class 4 water distribution and wastewater collection system operators – 3 training units.
- (f) Class 3 water distribution and wastewater collection system operators – 2.4 training units.
- (g) Class 2 water distribution and wastewater collection system operators – 1.8 training units.
- (h) Class 1 water distribution and wastewater collection system operators - 1.2 training units.
- (i) Small water system operators – 1.8 training units.
- (j) Small wastewater system operators – 1.8 training units.
- (k) Transient non-community water system operators – 1.2 training units.

100.14.3 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 in accordance with section 100.15.

100.14.4 All subject matter for which training units will be granted must be determined by the Board or its designee to be relevant and necessary to the successful operation of a water or wastewater facility.

- (a) The Board or its designee shall approve as “core training” courses on 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 up to one hundred percent (100%) of the training units requirements for the renewal of an operator’s certification.
- (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.
- (c) The Board or its designee 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 up to fifty percent (50%) of the training unit requirements for renewal of an operator’s certification.

100.14.5 Training units shall also be awarded to certified operators for teaching a classroom program that has been approved by the Board or its designee.

100.14.6 Water treatment and water distribution operators who conduct analyses for chlorine residual (total, free, or combined), pH, chlorine dioxide (at entry point or in distribution system), chlorite (entry point only), alkalinity, or UV absorbance prescribed in Article 7.5 of the Colorado Primary Drinking Water Regulations, 5 CCR 1003-1, and who hold certifications issued prior to August 1, 2002, shall complete training in an approved course covering the requirements associated with drinking water analytical procedures and quality assurance. This requirement must be fulfilled by August 31, 2005.

**100.15 APPROVAL OF TRAINING AND EDUCATIONAL COURSES**

100.15.1 Approval of educational institutions for purposes of substituting education for experience shall be determined by the Board or its designee based on accreditation by recognized regional associations stated in section 23-2-102(3), C.R.S., for such institutions in the United States. For educational institutions outside the United States, the applicant shall be required to establish to the satisfaction of the Board or its designee the equivalency and suitability of the courses of study claimed for credit.

100.15.2 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 designee. Such credits are designated training units on the following basis:

- (a) 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 successfully completed by an applicant.
- (b) Three training units shall equal one semester credit hour or two training units shall equal one quarter hour for purposes of equivalency.

100.15.3 Institutions, seminar presenters and others may seek approval of their training or educational courses or programs by application to the Board or its designee, demonstrating that their proposed material, curricula, and facilities for contact hour equivalency are satisfactory to the Board or its designee.

**100.16 CERTIFIED OPERATOR DUTIES**

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

100.16.2 Certified operators shall protect the public health and safety by properly performing and/or supervising the tasks pertinent to controlling the operation of a water or wastewater facility, 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) operating valves and/or gates either manually or by remote control;
- (g) starting and/or stopping pumps;
- (h) maintaining logs and/or records;
- (i) collecting and/or analyzing process control samples;
- (j) ensuring proper inspection and testing of new, modified or repaired facilities prior to permitting these facilities to be put into or returned to service;
- (k) developing and implementing preventative maintenance programs and performing routine maintenance functions for facilities; or
- (l) overseeing compliance with laws and regulations and reporting as appropriate to facility owners and the Department.

100.16.3 Each certified operator shall provide to the Board or its designee his or her current mailing address and telephone number, and shall update this information as necessary.

#### **100.17 OPERATOR IN RESPONSIBLE CHARGE DUTIES**

100.17.1 The operator 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 he or she operates.

100.17.2 The operator in responsible charge shall protect the public health and safety in the conduct of his or her duties. These duties shall include the following, as appropriate:

- (a) The management or administration of a water or wastewater facility;

- (b) The charge, commission, or duty to comply with applicable regulations and requirements for proper operation of the water or wastewater facility;
- (c) The accountability for the proper operation and maintenance of the water or wastewater facility;
- (d) The control of, supervision over, or active participation in the daily planning, operation or maintenance of a water or wastewater facility;
- (e) Authority and/or power to make day-to-day decisions on the operation and maintenance of the water or wastewater facility; or
- (f) The capacity and availability to perform the above as well as other functions of direct responsibility, such as those enumerated in section 100.16.2 of these regulations.

**100.18 AUTHORIZATION FOR CONTINUED OPERATION OF WATER DISTRIBUTION AND WASTEWATER COLLECTION SYSTEMS**

100.18.1 Operators of water distribution and/or wastewater collection systems certified prior to January 30, 2001 under the voluntary program administered by the Colorado Water and Wastewater Collection Systems Certification Council, Inc., shall be considered compliant with the certification requirements of this provision. Upon expiration of current certificates issued under this voluntary program, all new and renewed certificates shall be valid for a period of three years. Such certification shall be renewable upon payment of appropriate fees and obtaining the required training units.

100.18.2 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 for a period of two years from the issuance of an authorization for continued operation without meeting the certification requirements of this regulation, provided that they have the requisite minimum experience levels provided in section 100.9 and so long as the following requirements are satisfied:

- (a) The owner of the existing water distribution or wastewater collection system applies to the Board or its designee for issuance of an authorization for such operator to continue operation without compliance with the otherwise applicable certification requirements of this regulation. The owner must submit such application to the Board or its designee within one year of January 30, 2001.
- (b) Such an 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.
- (c) Authorization for continued system operation under 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.
- (d) Within two (2) years from the issuance of an authorization for continued operation under this provision, an operator must obtain a certificate, restricted to the operation of the specific system, by meeting all requirements for obtaining certificate renewal including payment of fees, acquiring the minimum training

units, and demonstrating to the Board or its designee all requisite skills, knowledge, ability and judgment for the type of system.

- (e) If the classification of a facility or system changes to a higher level, the authorization to continue operation under this provision expires, and is no longer valid unless the classification change occurs without any significant physical change in the system as determined by the Board or its designee.
- (f) Any operator authorized to continue operation under this provision who chooses to work for a different facility or system must meet all the initial certification requirements for that facility or system, including obtaining a certificate appropriate to that facility or system, passage of a validated written examination, and satisfaction of the minimum experience requirements of this regulation.

#### **100.19 SMALL SYSTEM OPERATOR PROVISIONS**

##### 100.19.1 Small Water and Wastewater System Classification

- (a) A separate facility classification is hereby established, which shall apply to small water systems serving no more than 3300 persons and which would be classified as a class "D" water treatment facility and as a class "1" water distribution system under the provisions of this regulation. Operator certification requirements for such facilities shall combine Class D Water Treatment and Class 1 Distribution certifications into a single test and certificate, the "Small Water System" certification.
- (b) A separate facility classification is hereby established, which shall apply to small wastewater systems serving no more than 3300 persons and which would be classified as a class "D" wastewater treatment facility and as a class "1" wastewater collection system under the provisions of this regulation. Operator certification requirements for such facilities shall combine Class D Wastewater Treatment and Class 1 Collection certifications into a single test and certificate, the "Small Wastewater System" certification.

##### 100.19.2 Transient Non-community Water System Classification.

- (a) A separate facility classification is hereby established for transient non-community public water systems that draw water from ground water sources not under the influence of surface water, serve less than 100 individuals per day and utilize treatment consisting only of non-gaseous chlorine disinfection.
- (b) Operators of water treatment facilities and distribution systems associated with the transient non-community systems described in subsection (a) above may be certified as "Transient Non-community Water System Operators".

#### **100.20 MULTIPLE FACILITY OPERATOR PROVISIONS**

RESERVED

#### **100.21 RESPONSIBILITIES OF WATER AND WASTEWATER FACILITY OWNERS**

100.21.1 No owner of a water or wastewater facility shall allow the facility to be operated without the direct supervision of an operator in responsible charge certified in a classification equivalent to or higher than the classification of the facility as specified in these regulations. For purposes of this regulation, "direct supervision" means that the operator

in responsible charge has supervisory responsibility and authority with respect to the activities and functions of other facility operators.

100.21.2 Each owner of a water or wastewater facility shall ensure that all process control and/or system integrity decisions about water quality or quantity that may affect public health or the environment are made by either an operator in responsible charge or by another certified operator.

100.21.3 Each owner of a water or wastewater facility shall ensure that a designated certified operator is available for each operating shift. This operator must be certified in a classification equivalent to or higher than the classification of the facility. For purposes of this regulation, "available" means that the designated operator must be on-site or able to be contacted as needed to initiate appropriate actions in a timely manner.

100.21.4 Each owner of a water or wastewater facility shall submit in writing to the Board or its designee, within sixty (60) days of January 30, 2001, and shall keep current with the Board or its designee the following information:

- (a) Name, address and phone number of the facility representative providing the information;
- (b) Name, address, phone number and level of certification of all operator(s) in responsible charge employed by the owner;
- (c) Identification of the facility or facilities for which each operator in responsible charge employed by the owner has responsibility;
- (d) The Public Water System Identification number and permit number for all facilities listed.

100.21.5 Each water and wastewater facility shall have an operator in responsible charge certified as shown in the following table:

<u>Facility or System Classification</u>	<u>Classification of Operator(s) in Responsible Charge</u>
<u>Water Systems</u>	
Water Treatment	
A	A
B	A or B
C	A, B, or C
D	A, B, C, or D
Small Water System	Small Water System; D and 1; or any higher-level water treatment and water distribution certifications
Transient Non-Community	A, B, C, D, Small Water System, or Transient Non-Community
Water Distribution	

4	4
3	4 or 3
2	4, 3 or 2
1	4, 3, 2, or 1
<u>Domestic Wastewater Systems</u>	
Wastewater Treatment	
A	A
B	A or B
C	A, B, or C
D	A, B, C, or D
Small Wastewater System	Small Wastewater System; D and 1; or any higher-level wastewater treatment and wastewater collection certifications
Wastewater Collection	
4	4
3	4 or 3
2	4, 3 or 2
1	4, 3, 2, or 1
<u>Industrial Wastewater Systems</u>	
A	A
B	A or B
C	A, B, or C
D	A, B, C, or D

**100.22 FEES**

100.22.1 Application fees for certification, renewal of certification, and issuance of a certificate upon a Board finding of reciprocity shall be \$15, and shall be nonrefundable.

100.22.2 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 certifications and will be based on the cost of administering the operator certification program. Administration fees shall be:
  - (i) \$55.00 for each new certification by examination; and
  - (ii) \$70.00 for each renewal certification and each new certification by reciprocity.
- (d) There shall be a \$20.00 fee to cover the cost of replacing certification documentation.
- (e) 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 100.15.1 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 designee on a case-by-case basis upon a determination that:
    - (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.

The training unit approval fee shall apply to all courses approved for offering in 2005 and later.

100.22.3 Until such time as a single examination for small water system certification is developed, applicants shall take the existing Class D water treatment and Class 1 distribution examinations. Applicants shall pay one application fee, one administration fee and both examination fees. Similarly, applicants for small wastewater system certification shall

take the existing Class D wastewater treatment and Class 1 collection examinations. Applicants shall pay one application fee, one administration fee and both examination fees.

### **100.23 DISCIPLINARY PROCEEDINGS**

100.23.1 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 display in practice the experience and qualifications in performance of duties and/or exercise reasonable care and judgment consistent with the requirements and minimum qualifications for certification;
- (b) Failing to properly perform and/or supervise the following tasks pertinent to controlling the operation of a water or wastewater facility, including, but not limited to the tasks described in section 100.16 of this regulation.
- (c) Willfully or negligently violating, causing, or allowing the violation of rules promulgated pursuant to this article or failing to comply with the provisions of this article;
- (d) Submitting false or misleading information on any document provided to the Department, Division, Board, or designee of the Board;
- (e) Using fraud or deception in the course of employment as an operator;
- (f) Failing to conform with minimum standards of performance of an 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; or
- (i) Representing oneself as holding a valid operator's certificate after the expiration or revocation of the certificate.

100.23.2 The Board may reprimand an operator in responsible charge, and/or suspend or revoke the certificate of any operator in responsible charge, who:

- (a) Fails to meet the requirements of an operator in responsible charge as defined in section 100.17 of this regulation; and/or
- (b) Willfully or negligently causes or allows any other person or operator under his charge, direction or supervision to perform duties inconsistent with an operator's duties as stated in section 100.16 or any other requirements of this regulation.

100.23.3 The Division shall investigate any instances of possible misconduct by certified operators or operators in responsible charge of water and wastewater facilities. 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 24-4-105, C.R.S.

100.23.4 The Division shall investigate any instances of possible violations of the requirements of this regulation by any owner of a water or wastewater facility. The Division shall enforce

compliance with the requirements of this regulation in accordance with the procedures in section 25-9-110(3), (4) and (6), C.R.S.

100.23.5 Following the suspension or revocation of his or her certificate, an operator shall not represent that he or she holds a certificate in the class for which the certificate was suspended or revoked. No person shall operate a water or wastewater facility in reliance on a suspended or revoked certificate.

#### **100.24 HEARINGS AND APPEALS**

100.24.1 The Division, in seeking any disciplinary action under section 100.23.3 of this regulation may request a hearing before the Board 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.

100.24.2 Any water or wastewater facility owner who seeks a hearing in response to a Division finding of a violation under section 100.23.4 or a Department assessment of a civil penalty may request a hearing before the Board by submitting to the Division within thirty (30) days of notice of the 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.

100.24.3 Any person affected or aggrieved by a decision of the Board's designee or the Division may request a hearing before the Board 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.

100.24.4 The Board shall grant any hearing request made pursuant to section 100.24.1, 100.24.2, or 100.24.3 of this regulation and shall schedule and conduct an adjudicatory hearing in accordance with section 24-4-105, C.R.S.

#### **100.25 TRANSITIONAL RENEWAL TRAINING UNIT REQUIREMENTS**

100.25 To facilitate the transition to the full implementation of the renewal training unit requirements in section 100.14 of these regulations, the renewal training unit requirements shall be phased in as follows:

- (a) Certifications expiring between January 30, 2001 and January 29, 2002 shall automatically be extended for one year. Upon renewal application and completion of one-third of the renewal training units required in section 100.14, a new three-year certificate shall be issued.
- (b) Certifications expiring between January 30, 2002 and January 29, 2003 shall automatically be extended for one year. Upon renewal application and completion of two-thirds of the renewal training units required in section 100.14, a new three-year certificate shall be issued.
- (c) Certifications expiring between January 30, 2003 and January 29, 2004 shall automatically be extended for one year. Upon renewal application and completion of the renewal training units required in section 100.14, a new three-year certificate shall be issued.
- (d) Renewal of certifications expiring after January 30, 2004 shall require completion of the renewal training units required in section 100.14 prior to the expiration date of the certificate.

**100.26 - 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 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; ADOPTED SEPTEMBER 29, 2009; EFFECTIVE  
NOVEMBER 30, 2009**

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.