

Regulation No. 100 : WATER AND WASTEWATER FACILITY OPERATORS CERTIFICATION REQUIREMENTS

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) "BOARD" means the Colorado Water and Wastewater Facility Operators Certification Board or its designee.
- (2) "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.
- (3) "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.
- (4) "CLASSIFICATION" means the level of operational complexity of a water or wastewater facility as determined by the Division.
- (5) "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.
- (6) "DEPARTMENT" means the Colorado Department of Public Health and Environment.
- (7) "DIVISION" means the Water Quality Control Division, within the Colorado Department of Public Health and Environment.
- (8) "DOMESTIC WASTEWATER TREATMENT FACILITY" means any facility or group of units used for the treatment of domestic wastewater or for the reduction and handling of solids and gases removed from such wastes, whether or not such facility or group of units is discharging into state waters. "Domestic wastewater treatment facility" specifically excludes individual sewage disposal systems.
- (9) "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.
- (10) "NON-COMMUNITY WATER SYSTEM" means a public water system that is not a community water system.

- (11) "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.
- (12) "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.
- (13) "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.
- (14) "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.
- (15) "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.

- (16) "TRAINING UNIT" means the credit given for an increment of training approved as applicable to the fulfillment of certification renewal requirements.
- (17) "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.
- (18) "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.
- (19) "WASTEWATER TREATMENT FACILITY" means either a domestic wastewater treatment facility or an industrial wastewater treatment facility.
- (20) "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.
- (21) "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.
- (22) "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)		
<u>Community Water Systems, Non-Transient Non-Community Water systems, and Transient Non-Community Water Systems.</u> ¹	Below 2	2-5	5.01-9.99
Ground water source with no treatment or with no additional treatment beyond chlorine disinfection. ²	D	D	C
Ground water source with ultraviolet or ozone disinfection	D	C	C
Ground water source with chlorination and	C	C	C

fluoridation			
Ground water utilizing ion exchange, reverse osmosis, membrane filters, or activated carbon to comply with secondary drinking water regulations (see 40CFR143)	C	C	B
Any source utilizing bag or cartridge filtration and providing disinfection with non-gaseous chlorine.	D		
Any source utilizing filtration (slow sand, diatomaceous earth, membrane, ion exchange, activated carbon, reverse osmosis) to comply with primary drinking water regulations (see 40CFR141) and not utilizing chemical addition other than chlorination	C	C	B
Any source utilizing filtration (conventional or direct) with chemical treatment to comply with primary drinking water regulations (see 40CFR141)	B	A	A
Water Vending Machines connected to a public water system, not currently meeting maximum contaminant level requirements	C (all sizes)		

¹These classifications apply to systems other than the Transient Non-community Water System; addressed in section 100.19.2.

²Ground water with waiver of disinfection, including ultraviolet or ozone disinfection, requires a minimum Class 2 distribution system due to the fact that there is no residual disinfectant in the distribution system.

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.

100.5 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
Waste stabilization ponds, including aerated and non-aerated types	D	C	C
Trickling filter or rotating biological contactor	C	C	B
Extended aeration process sequencing batch reactors designed to operate in the extended aeration loading range.	C	B	B
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	B	B	B

polishing ponds.

Recirculating
sandfiltration

D

C

C

Wetlands used as apart of
the watertreatment
process

Will be classified in alignment with the lasttreatment process prior to release of t

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 Industrial wastewater treatment facilities shall be 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

CLASSIFICATION

TREATMENT PROCESS

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;Mi
crofiltration;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 settlingthat regularly utilize chemical addition);Filtration (e.g., mixed media, pressure);Neutralization;Solids Dewatering (e.g., sand or surfaced drying beds,mechanical);Airstriping;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 five classes: Transient Non-community Water System, Small Water System, Class 1, Class 2, or Class 3. 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 3 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 Transient Non-community Water System classification is addressed separately in section 100.19.2. For all other distribution systems:

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

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 four classes: Small Wastewater System, Class 1, Class 2, or Class 3. Small Wastewater Systems are described in section 100.19.1(b). For the other classifications, Class 3 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

Over 25,000

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 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.

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, general equivalency diploma (GED) or its equivalent.

100.9.3 Experience and/or relevant training may substitute for a high school diploma, GED, or its equivalent if the Board or its designee finds, on a case-by-case basis, that the applicant's experience and/or relevant training has given him or her the reading, writing and comprehension skills necessary to protect the public health and otherwise meets the requirements of this regulation.

100.9.4 Use of experience and/or relevant training to meet the education requirement of this section precludes later use of such experience and/or relevant training to meet the experience requirements of this section. Similarly, use of experience and/or relevant training to meet the experience requirement of this section precludes later use of such experience and/or training to meet the education 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 written examination designated for the type and level of facility that he or she seeks to be certified to operate. Except as provided in subsection 100.9.7, to qualify to sit for an examination, an applicant must have the required minimum experience or cross-experience as designated in the table below. 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 Classification of Water or Wastewater

Facility Operator	Minimum Experience Required
Class D	1 Month
Class C	2 Years
Class B	3 Years
Class A	4 Years

Classification of Distribution or Collection System Operator	Minimum Experience Required
Class 1	1 Month
Class 2	2 Years
Class 3	4 Years

100.9.7 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 a validated written exam.
- (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 may not be used to satisfy any certification renewal requirements contained in section 100.14 of this regulation,

(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 a validated written exam.
- (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 educational course used to satisfy the basic experience requirement for a Class 1 Operator may not be used to satisfy any certification renewal requirements contained in section 100.14 of this regulation.

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.

100.10.5 The Board or its designee may request that an applicant provide additional information needed to complete an evaluation of the applicant's eligibility to sit for a certification examination. Such information shall be provided to the Board or its designee within ten working days of the date of the request.

100.11 EXAMINATIONS

100.11.1 The Board or its designee shall oversee the preparation and administration of validated written 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, except in such cases as the Board or its designee decide, on a case-by-case basis, represent proper exceptions to the general rule that all examinations shall be written.

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 Applicants who fail any examination shall be provided with an examination review, the format of which shall be approved by the Board.

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) 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 = 1/2 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) Formal academic education at the post-high school (e.g., Junior College, Vocational Education) or college level may substitute for experience of section 100.9 of this regulation.
- (c) Credit for satisfactorily completing structured programs of study, approved by the Board or its designee, in a degree or certificate earning educational institution or equivalent may be given so long as not less than seventy five percent of the year's completed courses of study are technically oriented, including but not limited to the fields of chemistry, physics, engineering, mathematics, biology, water and wastewater treatment processes.
- (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 requirement exclusively with formal academic education credits or training units.

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 issue to the applicant a certificate designating the appropriate certification level.

100.13.2 Operator certificates shall be valid for three years unless revoked or suspended as provided in section 100.23 of these regulations. 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.

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 Any certificate not renewed by the operator expires on the third anniversary of its issuance. Following expiration of the 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. Any certificate not renewed by the operator prior to the fifth anniversary of its issuance 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.

100.13.7 Certified operators who desire to become certified in a higher level must satisfactorily complete the requirements for that level before a new certificate at the higher level may be issued.

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 written 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.

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 3 water distribution and wastewater collection system operators - 3 training units.
- (f) Class 2 water distribution and wastewater collection system operators - 2 training units.
- (g) Class 1 water distribution and wastewater collection system operators - 1.2 training units.
- (h) Small water system operators -1.8 training units,
- (i) Small wastewater system operators - 1.8 training units,
- (j) 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 holding certifications issued prior to August 1, 2002, shall complete approved training in a course covering the federal requirements for operator-

conducted drinking water analysis 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:

Facility or System Classification	Classification of Operator(s) in Responsible Charge
<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	
3	3
2	3 or 2
1	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	
3	3
2	3 or 2
1	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 examination fees and administration fees.

- (a) Examination fees in the amount of \$25.00 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) 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 \$60.00 for each new and renewal certification.

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 - 100.29 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 operators) can be contacted so that the Board can notify the operators) 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 operators) 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; MARCH, 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 § 24-1-103. 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 100.62 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.