

R309-300. Certification Rules for Water Supply Operators

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R309-300. Certification Rules for Water Supply Operators.

R309-300-1. Objectives.

These certification rules are established to promote use of trained, experienced, and efficient personnel in charge of public waterworks and to establish standards whereby operating personnel can demonstrate competency to protect the public health through proficient operation of waterworks facilities.

R309-300-2. Authority.

Utah's Operator Certification Program is authorized by Section 19-4-104.

R309-300-3. Extent of Coverage - To Whom Rules Apply - Effective Date.

These rules shall apply to all community and non-transient non-community drinking water systems and all public drinking water systems that utilize treatment of the drinking water. This shall include both water treatment and distribution systems.

R309-300-4. Definitions.

"Commission" see the definition of: Operator Certification Commission.

"Community Water System" means a public drinking water system which serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents.

"Continuing Education Unit (CEU)" means ten contact hours of participation in, and successful completion of, an organized and approved continuing education experience under responsible sponsorship, capable direction, and qualified instruction. College credit in approved courses may be substituted for CEUs on an equivalency basis.

"Direct Employment" means that the operator is directly compensated by the drinking water system to operate that drinking water system.

"Direct Responsible Charge" means active on-site charge and performance of operation duties. A person in direct responsible charge is generally an operator of a water treatment plant or distribution system who independently makes decisions during normal operation which can affect the sanitary quality, safety, and adequacy of water delivered to customers. In cases where only one operator is employed by the system, this operator shall be considered to be in direct responsible charge.

"Director" means the Director of the Division of Drinking Water.

"Discipline" means type of certification (Distribution or Treatment).

"Distribution System" means the use of any spring or well source, distribution pipelines, appurtenances, and facilities which carry water for potable use to consumers through a public water supply. Systems which chlorinate groundwater are in this discipline.

"Distribution System Manager" means the individual responsible for all operations of a distribution system.

"Division of Drinking Water" means the Division within the Utah Department of Environmental Quality which regulates public water supplies.

"Grade" means any one of the possible steps within a certification discipline of either water distribution or water treatment. The water distribution discipline has five steps and the water treatment discipline has four steps. Treatment Grade I and Distribution Small System indicate knowledge and experience requirements for the smallest type of public water supply. Grade IV indicates knowledge and experience levels appropriate for the largest, most complex type of public water supply.

"Grandparent Certificate" means the operator has not been issued an Operator Certificate through the examination process and that a restricted certificate has been issued to the operator which is limited to his current position and system. These certificates cannot be used with any other system should the operator transfer.

"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 persons for more than six months per year. Examples are separate systems serving workers and schools.

"Operator" means a person who operates, repairs, maintains, and is directly employed by or an appointed volunteer for a public drinking water system or a person who has passed the certification exam.

"Operator Certification Commission" means the Commission appointed by the Director as an advisory Commission on certification.

"Public Drinking Water System" means any drinking water system, either publicly or privately owned, that has at least 15 connections or serves at least 25 people for at least 60 days a year.

"Regional Operator" means a certified operator who is in direct responsible charge of more than one public drinking water system.

"Restricted Certificate" means that the operator has qualified by passing an examination but is in a restricted certification status due to lack of experience as an operator.

"Secretary" means the Secretary to the Operator Certification Commission. This is an individual appointed by the Director to conduct the business of the Commission.

Training Coordinating Committee" means the voluntary association of individuals responsible for environmental training in the state of Utah.

"Treatment Plant Manager" means the individual responsible for all operations of a treatment plant.

"Treatment Plant" means those facilities capable of delivering complete treatment to any water (the equivalent of coagulation and/or filtration) serving a public drinking water supply.

"Unrestricted Certificate" means that a certificate of competency has been issued by the Director after considering the recommendation of the Commission. This certificate acknowledges that the operator has passed the appropriate level written examination and has met all certification requirements at the discipline and grade stated on his certificate.

R309-300-5. General Policies.

1. In order to become a certified water operator, an individual shall pass an examination administered by the Division of Drinking Water or qualify for the grandparent provisions outlined in R309-300-13.
2. Any properly qualified operator (see Minimum Required Qualifications for Utah Waterworks Operators Table 5) may apply for unrestricted certification.
3. All direct responsible charge operators shall be certified at a minimum of the grade level of the water system with an appropriate certificate. Where 24-hour shift operation is used or required, one operator per shift must be certified at the classification of the system operated. Failure to comply would be a significant deficiency and subject to demerit points outlined in R309-400-8.
4. The Director, upon recommendation from the Commission, may waive examination of applicants holding a valid certificate or license issued in compliance with other state certification plans having equivalent standards, and grant reciprocity.
5. A grandparent certificate will require normal renewal as with other certificates and will be restricted to the existing position, person, and system for which it was issued. No further examination will be required unless the grade of the drinking water system increases or the operator seeks to change the certificate discipline or grade. At that time, all normal certification requirements must be met.
6. Every community and non-transient non-community drinking water system and all public systems that utilize treatment/filtration of the drinking water shall have at least one operator

certified at the classified grade of the water system. Certification must be appropriate for the type of system operated (treatment and/or distribution).

7. If the Distribution Manager, Treatment Plant Manager, or Direct Responsible Charge Operator is changed or leaves a particular water system, the water system management must notify the Secretary to the Operator Certification Commission within ten days by contacting the Division of Drinking Water in writing. Within one year, the person replacing the Distribution Manager, Treatment Plant Manager or Director Responsible Charge Operator must have passed an examination of the appropriate grade and discipline. Direct responsible charge experience may be gained later, together with unrestricted certification as experience is gained. Failure to comply would be a significant deficiency and subject to demerit points outlined in R309-400-8.

8. The Secretary to the Commission may suspend or revoke a certificate after due notice and opportunity for a hearing. See Section R309-300-9 for further details.

9. An operator may have the opportunity to take any grade of examination higher than the rating of the system which he operates. If passed, the operator shall be issued a restricted certificate at that higher grade. This certificate can be used to demonstrate that the operator has successfully passed all knowledge requirements for that discipline and grade, but that experience is lacking. This restricted certificate will become unrestricted when the experience requirements are met with written verification for the appropriate discipline and grade, provided it is renewed at the required intervals.

10. The Commission will review on a periodic basis each system's compliance with these rules and will refer those systems in violation to the Director for appropriate action. Any requirement can be appealed as provided in R305-7.

11. An operator who is acting as the direct responsible charge operator for more than one drinking water system (regional operator) shall not be a grandparent certified operator.

12. The regional operator must have an unrestricted certificate equal to or higher than the grade and discipline of the rating applied to each system he is operating.

13. If the regional operator is operating any system(s) that have both disciplines involved in their rating, the operator must have unrestricted certificates in both disciplines and at the highest grade of the most complex system he is working with.

14. A regional operator shall be within a one hour travel time, under normal work and home conditions, of each drinking water system for which he is considered in direct responsible charge unless a longer travel time is approved by the Director based on availability of certified operators and the distance between community water systems in the area.

15. If the drinking water system has only one certified operator, with the exception of a drinking water system employing a regional operator, the operator must have a back up

operator certified in the required discipline(s). The back up certified operator must be within one hour travel time of the drinking water system.

16. At no time will an uncertified operator be allowed to operate a drinking water system covered by these rules unless the operator is within the one year grace period specified in R309-300-5.10.

R309-300-6. Application for Examination.

1. Prior to taking an examination, the operator must file a written application with the Division of Drinking Water or apply for an online examination with the appropriate agency, accompanied by evidence of his qualifications for certification in accordance with provisions of this plan (see table 5 on minimum qualifications). Such applications shall be made on forms supplied by the Division.

2. An operator may elect to take any written examination which he believes can be successfully passed. Persons passing such an examination shall be issued restricted certificates for the appropriate discipline and grade.

R309-300-7. Examinations.

1. The time and place of the examination to qualify for a certificate shall be determined by the Commission or a proctor designated by the Commission. All examinations will be conducted at sites designated by the Commission or designated by a proctor designated by the Commission. The written examinations will be graded, and the applicant notified of the results within 30 days. The online examinations will be graded at the site of the examination. If an operator taking the examination fails to pass, the operator may file an application for reexamination 30 days after the exam.

2. The minimum passing grade for all certification exams shall be 70 percent correct on all questions asked.

3. An individual who has failed to pass at least two consecutive written exams, at the same grade level and discipline, may make an application for an oral exam. The oral exam will be administered by at least two Commission members or by other individuals approved by the Director. If the individual fails this exam, the deficient areas will be discussed after the exam is completed.

4. Examinations will be given in nine grades, four in water treatment and five water distribution. The examinations will cover, but not be limited to, the following areas:

- (a) general water supply knowledge;

- (b) control processes in water treatment or distribution;
 - (c) operation, maintenance, and emergency procedures in treatment or distribution;
 - (d) proper record keeping;
 - (e) laws and requirements, and water quality standards.
5. The written examination question bank and text matrix shall be reviewed periodically by the Commission.

R309-300-8. Certificates.

1. All certificates shall indicate the discipline for which they were issued as follows:
 - (a) Water Treatment Plant Operator, Unrestricted;
 - (b) Water Treatment Plant Operator, Restricted;
 - (c) Water Distribution Operator, Unrestricted;
 - (d) Water Distribution Operator, Restricted;
 - (e) Grandparent.
2. A restricted certificate will be issued to those operators who have passed a higher grade examination than the grade for which they have qualified in the experience category. Upon accumulating the necessary experience (see R309-300-19. Table 5), these restricted certificates will become unrestricted with the same renewal date. Certificates issued in the restricted status will include the word RESTRICTED on the certificate.
3. Grandparent certificates will be restricted to the person, position, and water system for which they were issued. These certificates will exempt the holder from further examination but will not be transferable to other persons, drinking water systems or positions.
4. All certificates shall continue in effect for a period of three years unless suspended or revoked prior to that time. The certificate must be renewed every three years by payment of a renewal fee and evidence of required training (see R309-300-14). Certificates will expire on December 31, three years from the year of issuance.
5. Requests for renewal shall be made on the forms supplied by the Division of Drinking Water.

6. A lapsed certificate may be renewed within 6 months of the expiration date by making an application for renewal. A certificate that lapsed more than 6 months earlier, but less than 18 months earlier may be renewed by making application for renewal and by payment of the reinstatement fee or by passing an examination. A certificate that has lapsed 18 months or more may not be renewed and the former certificate holder will be required to meet all requirements for issuance of a new certificate.

R309-300-9. Certificate Suspension and Revocation Procedures.

1. The Secretary shall inform a certificate holder, in writing, if the certificate is being considered for suspension or revocation of an Operator's certificate. The communication shall state the reasons for considering such action and allow the individual an opportunity for a hearing.
2. Grounds for suspending or revoking an Operator's certificate shall be any of the following:
 - (a) demonstrated disregard for the public health and safety;
 - (b) misrepresentation or falsification of figures and reports, or both, submitted to the State;
 - (c) cheating on a certification exam.
3. Suspension or revocation may be imposed when the circumstances and events were under the certificate holder's control. Disasters or "acts of God" which could not be reasonably anticipated will not be grounds for a suspension or a revocation action.
4. Following an appropriate hearing on these matters, the Commission will make a recommendation to the Director. The recommendation shall include a description of the findings of fact and shall be provided to the certificate holder. The information shall also outline the procedures to reapply for certification at the end of the specified disciplinary period.
5. Any suspension or revocation may be appealed as provided in R305-7.

R309-300-10. Fees.

1. Fees for operator certification shall be submitted in accordance with Section 63-38-3.
2. Examination fees from applicants who are rejected before examination will be returned to the applicant.
3. Application fees will not be returned.

R309-300-11. Facilities Classification System.

1. All treatment plants and distribution systems shall be classified in accordance with R309-300-19.
2. Classification will be made by either the point system or on a population-served basis, whichever results in a higher classification.
3. When the classification of a system is upgraded or added to existing system ratings, the Director shall make a determination on the timing to be allowed for operators to gain certification at the higher or different level.

R309-300-12. Qualifications of Operators.

1. Minimum qualifications are outlined in Minimum Required Qualifications for Utah Waterworks Operators, Table 5, included with these rules (see Section R309-300-19).
2. Approved high school equivalencies can be substituted for the high school graduation requirement.
3. Education of an operator can be substituted for experience, but no more than 50 percent of the experience may be satisfied by education. Note: The exception to this is in grades I and II, where the "one year of experience" requirement cannot be reduced by any amount of education.

R309-300-13. Grandparent Certification.

Some community and non-transient non-community water systems have operators with Grandparent Certification. Grandparent Certifications will continue to be sufficient for these operators, with the following restrictions:

1. Grandparent Certificates are valid only for the person, position, water system, and classification of water system for which they were issued;
2. A Grandparent Certification that expires and is not renewed as provided in R309-300-8(9) may not be renewed and the operator will be required to apply for certification as provided in this rule; and
3. No new Grandparent Certificates will be issued.

R309-300-14. CEUs and Approved Training.

1. CEUs will be required for renewal of all certificates (grandparent, restricted and unrestricted) according to the following schedule:

TABLE 1	
CLASSIFICATION	CEUs REQUIRED IN A 3 YEAR PERIOD
Small System	2
Grade 1	2
Grade 2	2
Grade 3	3
Grade 4	3

2. Grandparent certificates are required to have 2.0 or 3.0 CEUs, as per the water system classification, for certificate renewal. These specific CEUs shall be obtained during the first renewal cycle of said certificate.

3. Groups that currently sponsor approved education activities in Utah are:

- The Rural Water Association of Utah;
- Salt Lake Community College
- Utah Valley State College;
- Utah State University at Logan;
- Utah Department of Environmental Quality;
- Manufacturer's Representatives;
- American Water Works Association;
- American Backflow Prevention Association.

4. A continuing education unit is defined as 10 contact hours of participation in, and successful completion of, an organized and approved training education experience under qualified instruction.

5. College level education is accepted in drinking water related disciplines upon approval of the Secretary to the Commission as to CEU credits (1 quarter credit hour will equal 1.0 CEU or 1 semester credit hour will equal 1.5 CEUs).

6. All CEUs for certificate renewal shall be subject to review for approval to insure that the training is applicable to waterworks operation and meets CEU criteria. Identification of approved training, appropriate CEU or credit assignment and verification of successful

completion is the responsibility of the Secretary to the Commission. Training records will be maintained by the Division of Drinking Water.

7. All in-house or in-plant training which is intended to meet any part of the CEU requirements must be approved by the Secretary to the Commission in writing prior to the training.

8. In-house or in-plant training submitted to the Secretary of the Commission must meet the following general criteria to be approved:

(a) Instruction must be under the supervision of an approved instructor.

(b) An outline must be submitted of the subjects to be covered and the time to be allotted to each area.

(c) A list of the teacher's objectives shall be submitted which will document the essential points of the instruction ("need-to-know" information) and the methods used to illustrate these principles.

9. One CEU credit will be given for registration and attendance at the annual technical program meeting of the American Water Works Association (AWWA), the Intermountain Section of AWWA, the Rural Water Association of Utah, or the National Rural Water Association.

R309-300-15. Validation of Previously Issued Certificates.

1. All current certificates issued by the Director will remain in effect until their stated date of expiration and may be renewed at any time before this date in accordance with the rules established herein. Certificates will be issued for a three-year period.

2. Those individuals who were issued Grandparent Certificates and subsequently passed an examination within the same discipline, at the same grade, or a higher grade will be issued a new unrestricted certificate which will nullify the existing "Grandparent " certificate.

R309-300-16. Operator Certification Commission.

1. An Operator Certification Commission shall be appointed by the Director from recommendations made by the cooperating agencies. Cooperating agencies are the Utah Department of Environmental Quality, the Utah League of Cities and Towns, the Training Coordinating Committee of Utah, the Intermountain Section of the American Water Works Association, the Civil or Environmental Engineering Departments of Utah's Universities, and the Rural Water Association of Utah.

2. The Commission is charged with the responsibility of conducting all work necessary to promote the program, recommend certification of operators, and oversee the maintenance of records.
3. The Commission shall consist of seven members as follows:
 - (a) One member shall be a certified operator from a town having a population under 10,000 and will be nominated by the Rural Water Association of Utah.
 - (b) One member shall be at least a grade III unrestricted certified distribution operator and will be nominated by the American Water Works Association.
 - (c) One member shall be at least a grade III unrestricted certified water treatment plant operator and will be nominated by the American Water Works Association.
 - (d) One member shall represent municipal water supply management and will be nominated by the Utah League of Cities and Towns.
 - (e) One member shall represent the civil or environmental engineering department of a Utah university cooperating with the certification program.
 - (f) One member shall represent water supply trainers and will be nominated by the Training Coordinating Committee (TCC).
 - (g) One member shall be a representative for the Division of Drinking Water.
4. Each group represented shall designate its nominee to the Director for a three-year term. Nominations may be accepted or rejected by the Director. Persons may be renominated for successive three-year terms by their sponsor groups. The Director shall notify the sponsoring groups one year in advance of the termination of the Commission member that a nominee will be needed. An appointment to succeed a Commission member who is unable to serve his full term shall be only for the remainder of the unexpired term and shall be submitted by the sponsor groups and approved by the Director as mentioned above.
5. Each year the Commission shall elect from its membership a chairperson and vice-chairperson and such other officers as may be needed to conduct its business.
6. It shall be the duty of the Commission to advise in the preparation of examinations for various grades of operators and advise on the certification criteria used by the Secretary. In addition to these duties, the Commission shall also advertise and promote the program, distribute applications and notices, maintain a register of certified Operators, set examination dates and locations, and make recommendations regarding each drinking water system's compliance with these rules.

R309-300-17. Secretary to the Commission.

The Director shall designate a non-voting member of the Commission to serve as its Secretary, who shall be a senior public health representative from the Division of Drinking Water. This Secretary shall serve to coordinate the paperwork for the Commission and to bring issues before the Commission. His duties consist of the following:

1. acting as liaison between the Commission and the water suppliers, and generally promote the program;
2. maintaining records necessary to implement these rules;
3. classifying all water treatment plants and distribution systems in accordance with R309-300-19;
4. notifying sponsor groups of Commission nominations needed;
5. coordinating with Utah's Training Coordinating Committee (TCC) to ensure adequate operator training opportunities throughout the state;
6. serving as a source of public information for operator training opportunities and certified operators available for employment;
7. receiving applications for certification and screen, investigate, verify and evaluate all applications;
8. bringing issues to the Commission for their review;
9. developing and administering operator certification examinations.

R309-300-18. Non-compliance with Certification Program.

1. After appropriate consideration by the Commission, cases of non-compliance will be referred to the Director for appropriate enforcement action.
2. Non-compliance with the certification rules is a violation of R309-102-8. Whenever such a violation occurs, the water system management will be notified in writing by the Division of Drinking Water and will be required to correct the situation.

R309-300-19. Drinking Water System Classification.

This system applies only to those public water supplies operating coagulation and/or filtration treatment plants. This classification system does not apply to those systems operating only chlorination facilities on distribution systems.

TABLE 2		
	ITEM	POINTS
SIZE	Maximum population served, peak day	1 pt. per 5,000 or part thereof
	Design flow (avg. day) or peak month's	1 pt. per MGD or part thereof
WATER SUPPLY SOURCES	Groundwater	3
	Surface water	5
	Average raw water quality (0-10)	
	Little or no variation	0
	Raw water quality (other than turbidity) varies enough to require treatment changes less than 10% of the time	2
	Raw water quality including turbidity varies often enough to require frequent changes in the treatment process	5
	Raw water quality is subject to major changes and may be subject to periodic serious pollution	10
TREATMENT	Aeration for or with CO2	2
	pH adjustment	4
	Packed tower aeration	6
	Stability or corrosion control	4
	Taste and odor control	8
	Color control	4
	Iron or Iron/Mn, removal	10
	Ion exchange softening	10
	Chemical precipitation	
	Softening	20
	Coagulant addition	4
	Flocculation	6
	Sedimentation	5
	Upflow clarification	14

	Filtration	10
	Disinfection (0-10)	
	No disinfection	0
	Chlorination or comparable	5
	On-site generation of disinfectant	5
	Special processes (including reverse osmosis, electro dialysis, etc.	15
	Sludge/backwash water disposal (0-5)	
	No disposal to raw water source	0
	Any disposal to raw water source	2
	Any disposal to plant raw water	5
LABORATORY	Laboratory control, Biological (0-10)	
	All lab work done outside of plant	0
	Colilert process	2
	Membrane filter	3
	Multiple tube of fecal determination	5
	Biological identification	7
	Viral studies or similarly complex work done on-site	10
	Laboratory control, Chemical/physical (0-10)	
	All lab work done outside of plant	0
	Push button or colorimetric methods such as chlorine residual or pH	3
	Additional procedures such as titrations or jar tests	5
	More advanced determinations such as numerous organics	7
	Highly sophisticated instrumentation such as atomic absorption or gas chromatography	10

TABLE 3				
SUMMARY OF UTAH				
WATER UTILITY CLASSIFICATION SYSTEM				
WATER TREATMENT PLANT CLASSIFICATION				
GRADE	1	2	3	4

Population Served	1500 or less	1501 to 5000	5001 to 15,000	Over 15,000
Plant Points	0 – 40	41 - 65	66 - 90	91 - Up

**TABLE 4
SUMMARY OF UTAH
WATER UTILITY CLASSIFICATION SYSTEM
DISTRIBUTION CLASSIFICATION**

GRADE	SMALL SYSTEM	1	2	3	4
Population Served	500 or less	501 to 1500	1501 to 5000	5001 to 15,000	Over 15,000
Distribution Points	0 - 10	0 - 10	10 - 25	26 – 50	51 - Up

Distribution systems are those which use groundwater sources (springs and wells) and which may or may not use chlorination. Classification will generally be made in accordance with the following five classes. The Commission may change the classification of a particular distribution system when there are unusual factors affecting the complexity of transmission, mixing of sources, or potential health hazards

**TABLE 5
MINIMUM REQUIRED QUALIFICATIONS FOR
UTAH WATERWORKS OPERATORS**

Certification Grade (Both Dist and Treatment)	EDUCATION				EXPERIENCE	
	Degree	Associate Degree	High School	Non High School	Direct Responsible Charge Years	Total Years
4	X				2	4
4		X			2	6
4			X		4	8
4				X	5	10

3	X				1	2
3		X			1	2
3			X		2	4
3				X	3	6
2	X				0	2
2		X			0	2
2			X		0	2
2				X	0	3
1 and Small Systems	X				0	1
1 and Small Systems		X			0	1
1 and Small Systems			X		0	1
1 and Small Systems				X	0	1
Note:(1) Experience requirements apply to all operators except those who have been issued "grandparent" certificates.(2) At least one half of all experience must be gained at the grade of certification desired.						

KEY: drinking water, environmental protection, administrative procedures

Date of Enactment or Last Substantive Amendment: 2017

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Authorizing, and Implemented or Interpreted Law: 19-4-104; 63G-3