



**RULES GOVERNING CERTIFICATION FOR
Water Quality Laboratory Analysts
2002**

- 1 Definitions** - These terms, as defined, apply explicitly to the California-Nevada Section of the American Water Works Association Water Quality Laboratory Analyst Certification Program.
- 1.1 Administrator** - The CA-NV Section volunteer evaluating applications, administering examinations, issuing certificates, and performing associated duties.
- 1.2 Applicant** - Anyone who applies for initial, upgraded, or reinstated certification, or reciprocity.
- 1.3 Certificate** - A certificate issued by the CA-NV Section AWWA attesting to the fact that an analyst has proven their qualifications for performing the duties of a water quality analyst according to the criteria stated within these Rules, and the grade in which they are certified.
- 1.4 Certification Director** - The person appointed by the Section to represent the Certification Board to the Board of Trustees.
- 1.5 Certification Grade or Grade** - The level of analyst certification from I to IV, as defined in these Rules, corresponding to an applicant's degree of education, experience, and responsibility in performing the duties of a water quality analyst.
- 1.6 Chairperson** - The individual, appointed by the Section Chair, who is responsible for directing the activities of the Water Quality Analyst Certification Subcommittee.
- 1.7 Committee** - The CA-NV Section AWWA Water Quality Analyst Certification Subcommittee as appointed and administered by the Section via the Certification Board and charged with administering the program for water quality analysts.
- 1.8 Contact Hour** - A minimum 50 minutes of actual time an attendee participates in continuing education offered by an approved provider, on a public water supply related topic.
- 1.9 Continuing Education Course** - A presentation given by an accepted provider that transmits information related to the operation of a treatment plant and/or distribution system, including but not limited to, water quality maintenance in the public water supply system, or a similar class from a Western Accredited College (W.A.C.) or the International Association for Continuing Education and Training (IACET) accredited college.

- 1.10 Laboratory Director or Laboratory Manager** - Any person who is in direct responsible charge of a water quality laboratory.
- 1.11 Responsible Charge** - An individual whose job includes management functions, such as hiring and evaluating subordinates, budgeting, authority for purchasing supplies and equipment, or planning the activities of a laboratory, is considered to be in responsible charge.
- 1.12 Section** - The California-Nevada Section, American Water Works Association (AWWA).
- 1.13 Voluntary Temporary Suspensions** - A suspension of all rights and responsibilities related to the certificate that is requested by the certificate holder. A statement of illness or other good cause, verified by a corroborating statement from a licensed physician must accompany the request. This suspension can be maintained for a maximum of two years.
- 1.14 Waiver** - A release from certain requirements granted by the Certification Director as allowed for under specific sections of the Rules.
- 1.15 Water Quality Analyst** - Any individual who is engaged in or responsible for physical, chemical, biological, or radiological analysis of drinking water.
- 1.16 Water Quality Laboratory** - A public or private laboratory engaged in the physical, chemical, biological, or radiological analysis of drinking.

2 APPOINTMENT OF COMMITTEE

- 2.1** The Chairperson of the Committee shall be appointed by the Section Chair of the California-Nevada Section of the AWWA, as recommended by the Certification Director.
- 2.2** Membership on the Committee shall be by Recommendation of the Chairperson and the approval of the Certification Director. Committee membership shall be limited to AWWA members.

3 PROCEDURE FOR CERTIFICATION

- 3.1** Completed applications for certification shall be submitted to the Administrator no later than thirty (30) days prior to the time set for the examinations on forms prescribed by the Committee.
- 3.2** Any analyst certified in Grade I, II, or III may apply for certification in a higher grade in accordance with the procedure outlined herein. Qualifications required for upgrading shall be those outlined herein.
- 3.3** Applications will not be accepted from any individual requesting a grade more than one (1) grade higher than they currently hold, or their present job duties or position justify.

- 3.4** The Administrator will review all applications to insure the applicant has the necessary qualifications specified in Section 8 of these Rules for the grade of certification requested. If the applicant does not, the application will be returned. The administrator will offer certification in a lower grade, if appropriate.
- 3.5** An applicant may appeal decisions made by the Administrator by notifying the Committee Chairperson in writing. This appeal must be made within thirty (30) days of the applicant receiving the Administrator's written determination. The Committee Chairperson will investigate the protest and within sixty (60) days give the applicant an answer in writing. Any appeals to the Committee Chairperson's determination shall be to the Certification Director. Further appeal may be made to the Section Executive Secretary who shall consult the Section Governing Board, whose decision shall be final. The appellant must send the original facts again, and state in writing what part of the Certification Director's decision he/she deems improper, and why.
- 3.6** The Committee, with prior approval from the Governing Board of the California-Nevada Section, AWWA, shall have power to modify the classifications and requirements provided herein as needed, except that no change in classifications or requirements shall be effective until ninety (90) days after it has been announced. In all instances, requirement shall include an examination, as well as experience and educational qualifications.

4 RECIPROCITY

- 4.1** The Section may issue certificates for equivalent classifications with the Association of Boards of Certification (ABC) reciprocity programs upon recommendation from the Program Administrator. In order to determine reciprocity eligibility, the applicant must submit:
- (a) A copy of the applicant's current certificate or wallet card.
 - (b) A completed application and filing fee.
 - (c) An organization chart showing the applicant's current position (Grades III and IV only).
 - (d) Proof of being in direct, responsible charge (Grade IV only).
- 4.2** The application fee will be the same as for initial certification.
- 4.3** No written examination will be required for reciprocity.

5 EXAMINATION

- 5.1 The Committee shall prepare or have prepared written examinations that, in their opinion, will properly reflect the knowledge and ability required of the grades of analyst certification established.
- 5.2 A grade of 70% is considered passing.
- 5.3 Examinations are closed-book, and multiple choice.
- 5.4 The Committee shall hold examinations at times and places throughout the year as, in their opinion, may be required and convenient. These examinations are given at the semi-annual Section conferences, and can be scheduled at any time at the California-Nevada Section office.
- 5.5 In the event an applicant fails to pass an examination, he/she may retest after six (6) months. A new application fee will be required.
- 5.6 If an applicant fails to appear for a scheduled examination without an excuse acceptable to the Certification Administrator, the applicant will be required to reapply and pay another application fee.

6 CERTIFICATES AND RENEWALS

- 6.1 Upon passing the written examination and satisfactory fulfillment of the other requirements stated herein, the Committee will issue a certificate signed by the Certification Director and Certification Administrator. The certificate will indicate the holder is a water quality analyst, the certification grade, and bear the seal of the Section.
- 6.2 A certificate issued under these regulations will be valid for a period of two (2) years. The certificate may be renewed for additional two year (2-year) periods with no examination required, and upon payment of the renewal fee.
- 6.3 Certificate holders failing to renew their certification within six (6) months after the expiration date will be subject to a penalty fee set by the Section Governing Board.
- 6.4 If a certificate holder has not renewed a certification within two (2) years of the expiration date, their name will be removed from the certification list.
- 6.5 The Committee will revoke the certificate any person who is found to have obtained certificate by fraud or deceit, or if there is conclusive evidence that the certificate holder is not capable of performing the duties of a water quality analyst. Anyone whose certificate is revoked or has their name removed from the certification will be required to reapply and take an examination to reinstate their certification.
- 6.6 An initial certificate for any discipline/grade shall be valid for a period of two years from the date of issuance. Any person wishing to maintain a valid certificate shall submit an application for renewal prior to the expiration date, but no more than six months, prior to

the expiration date indicated on the certificate. The request for renewal shall include the following:

- (a) The applicant's name, current mailing address, grade, and certificate number.
- (b) Payment of the renewal fee specified in the renewal notice
- (c) Proof of continuing education contact hours in amounts required by subsection (2) Table A. For each successfully completed course, the proof of completion shall include the name of the course, the name of the instructor, the location, the date(s), and the number of contact hours provided.

6.7 To be eligible for certificate renewal, certificate holders submitting renewal applications after July 1, 2005, shall complete continuing education contact hours since the previous renewal or issuance of the certificate pursuant to Table A. No more than 25% of the contact hours shall be safety courses.

Table A - Required Continuing Education Contact Hours for Certificate Renewal

<i>Cross-Connection Control Specialist (Sec.4)</i>	<i>Contact Hours Required</i>
<u>Certificate</u>	<u>12</u>
<i>Distribution Operators/Associates (Sec.5)</i>	<i>Contact Hours Required</i>
<u>Distribution 1</u>	<u>12</u>
<u>Distribution 2</u>	<u>16</u>
<u>Distribution 3</u>	<u>24</u>
<u>Distribution 4</u>	<u>24</u>
<i>Treatment Operators (Sec.5)</i>	<i>Contact Hours Required</i>
<u>Treatment 1</u>	<u>12</u>
<u>Treatment 2</u>	<u>16</u>
<u>Treatment 3</u>	<u>24</u>
<u>Treatment 4</u>	<u>24</u>
<i>Water Quality Laboratory Analysts(Sec.6)</i>	<i>Contact Hours Required</i>
<u>Water Quality Analyst 1</u>	<u>12</u>
<u>Water Quality Analyst 2</u>	<u>16</u>
<u>Water Quality Analyst 3</u>	<u>24</u>
<u>Water Quality Analyst 4</u>	<u>24</u>

- (a) The certificate holder shall retain proof of continuing education as supplied by the acceptable provider for a minimum of four years.
- (b) Certificate holders possessing certificates in more than one CA-NV AWWA discipline may apply continuing education credits obtained within a renewal period to all current certificates.

- (c) Full semester courses taken at an accredited college, related to the operation and maintenance of public water supply systems, including water quality maintenance in the distribution system, shall be applicable for the hours listed in the accredited college's course outline.
- (d) Any certificate holder selected for an audit of compliance with the continuing education requirement shall submit to the Section a copy of proof of completion provided to the applicant for renewal by the provider of the continuing education since the date of last certificate renewal, within 30 calendar days of notification of selection.
 - (i) The certificate for any applicant for renewal who is found to have not successfully completed the continuing education requirement of this article will be revoked.
 - (ii) The applicant shall have the right to appeal such findings to the Section. An appeal shall be requested in writing to the Administrator of the discipline in question.
- (e) When applying for renewal of a certificate, an applicant may request a waiver of all or part of the continuing education requirement. To be eligible for a waiver, an applicant shall verify the following in writing to the Section Office:
 - (i) Residence in another country for at least half the period since the certificate was issued or last renewed, and that this prevented completion of the continuing education requirements.
 - (ii) Absence from employment due to military service for at least half the certificate period since the certificate was issued or last renewed, and that this prevented completion of the continuing evaluation requirements.
- (f) When applying for renewal of a certificate, an applicant may request a voluntary temporary suspension of the certificate. To be eligible for a voluntary temporary suspension, an applicant shall verify the following in writing to the Section Office:
 - (i) Illness or other good cause, verified by a corroborating statement from a licensed physician, that precluded completion of the continuing education requirements. Qualifying illnesses or causes include, but are not limited to:
 - a) Total physical and/or mental disability of the operator for at least half of the period since the certificate was issued, or if previously renewed, since it was last renewed; or
 - b) Total physical and/or mental disability of an immediate family member for at least half of the period since the certificate was

issued or last renewed, where the applicant has total responsibility for the care of that family member.

- (ii) A voluntary temporary suspension of a certificate can extend a maximum of two years. To end a temporary suspension, the applicant must supply verification from a licensed physician that corroborated the reason for the voluntary suspension that the condition has been mitigated and meet the continuing education requirements and pay all fees and penalties due.

6.8 Each successfully renewed certificate shall be valid for a period of two years.

7 REINSTATEMENT

7.1 A certificate that has been revoked for failure to complete the continuing education contact hours required in Table A may be reinstated within six months if all requirements specified in Table A are met and all penalties as established in the Rules Governing Certification are paid and the renewal application is complete. Contact hours obtained for reinstatement shall not be used to satisfy the requirements of the next renewal period.

7.2 A certificate that has been expired for more than one year shall not be renewed.

7.3 The expiration date of a certificate that has been renewed pursuant to this section shall remain the same as if the previous certificate had been renewed prior to the expiration date.

8 ACCEPTANCE OF CONTINUING EDUCATION PROGRAMS

8.1 Only providers who offer continuing education programs that meet all of the following criteria shall be accepted:

- (a) Use instructors who are competent in subject matter by education, training, or experience, and maintain a brief biography for the instructor,
- (b) Offer courses that are a minimum of 50 minutes in duration excluding evaluation by participants of the continuing education program,
- (c) Offer courses that are relevant to the scope of duties of related to the certificate,
- (d) Have clearly stated, measurable, education objectives,
- (e) Use teaching methods which are consistent with the objectives of the continuing education program; and
- (f) Have a method for determining participants' attendance and/or participation in the class and exams.

- (g) Maintain accurate and complete records and copies of all reference materials, handouts and any and all other additional materials provided to and used by the attendees and is able to provide copies upon request.

9 FEES FOR CERTIFICATION

- 9.1 The application fee for certification examination shall be payable to the California-Nevada Section, AWWA. The current application fee shall be posted on the application forms provided by the Section. The fee shall be the same for applicants residing outside the Section.
- 9.2 Fees for renewal of a valid certification will be posted on the renewal application form.
- 9.3 Fees must accompany the application for certification renewal
- 9.4 Checks returned for non-sufficient funds (NSF) will be subject to a charge equal to the application or renewal fee.
- 9.5 Certified water quality analysts may obtain a replacement certificate under the original number, for a fee of five dollars (\$5.00).

10 QUALIFYING REQUIREMENTS FOR CERTIFICATION

- 10.1 General requirements for all grades of certification are:
 - (a) Ability to comprehend the English language.
 - (b) Be over the age of eighteen (18).
- 10.2 Demonstrate current employment in a laboratory doing water quality analyses (Grades II, III, and IV only).
- 10.3 Provide an organizational chart showing the applicant's current position with their company (Grades III and IV only).
- 10.4 Proof of responsible charge (Grade IV only):
 - (a) A copy of the applicant's job description;
 - (b) A statement from the applicant's supervisor indicating that the applicant is in direct responsible charge of a water quality laboratory

10.5

Grade	Min. Education	Min. Exp.
Water Quality Analysts I	High School (or GED)	1 year
Water Quality Analyst II	High School (or GED)	4 years

	or Associates of Arts Degree	2 years
	or Bachelors Degree	1 year
Water Quality Analyst III	High School (or GED)	7 years
	or Associates of Arts Degree	5 years
	or Bachelors Degree	3 year
Water Quality Analyst IV	High School (or GED)	10 years
	or Associates of Arts Degree	8 years
	or Bachelors Degree	6 year
	or Advanced Degree	4 years

10.6 Appropriate formal education at the post-secondary level may be substituted for the experience requirements on a year-for-year basis. Thirty (30) semester hours or forty-five (45) quarter hours are considered equivalent to one (1) year of formal education. The determination of appropriate formal education will be made by the Committee.

10.7 Specialized laboratory training courses, seminars, workshops, conferences, etc., may be substituted without limit for formal education, with the approval of the Committee.

10.8 The Committee, at its discretion, may require proof of education, work experience, and attendance records of specialized laboratory training courses, seminars, workshops, and conferences.

11 TYPICAL TOPICS COVERED IN LABORATORY ANALYSTS CERTIFICATION EXAM

(Note the examination is not limited to these topics, which are examples only.)

11.1 Water Quality Analyst I

General Analyses: Chloride, Color, Conductivity, Alkalinity (Total and Phenolphthalein), pH, Temperature, Total Hardness, Turbidity, Chlorine Residual (Free and Combined), Dissolved Oxygen, Solids (Total Dissolved, Total, Total Suspended), Odor (TON)

Plant Process Control Topics: Jar Testing

Other Basic Topics: Quality Assurance, Laboratory Terminology, Laboratory Equipment, Sampling Techniques, Laboratory Safety, Basic Laboratory Calculations

Microbiology Analyses: Sterile Techniques, Most Probable Number (MPN), Confirmed, Presence/Absence Test for Coliforms

11.2 Water Quality Analyst II: Includes all Grade I topics plus the following:

General Analyses: Sulfate, MBAS

Spectrophotometry Methods: Boron, Nitrate, Nitrite, Ammonia, Phosphate, Silica

Atomic Absorption Methods: Flame Applications

Specific Ion Methods: Fluoride, Ammonia, etc.

Microbiological Analyses: More Advanced Bacteriological Tests (Completed, Total and Fecal, Membrane)

Other Topics: More Advanced Laboratory Calculations, Primary and Secondary Water Quality Standards

11.3 Water Quality Analyst III: Includes all Grade II topics plus the following:

Instrumental Methods: Atomic Absorption Spectrophotometry (Graphite, Furnace, Cold Vapor), Gas Chromatography (Pesticides, Trihalomethanes, VOC's, etc.)

Plant Process Control Topics: Basic Treatment Techniques

Other Topics: Advanced Laboratory Calculations (Statistics), Water Monitoring and Reporting Regulations

11.4 Water Quality Analyst IV: Includes all of the topics in Grade III plus the following:

Administration: Staffing, Budgeting, and Purchasing

Supervision: Evaluating, Performance, Safety, and Training

Management: Project Administration, Quality Assurance

Plant Process Control Topics: Advanced Treatment Techniques (e.g., Algae Control, Organics Removal, etc.)