

# California Rural Water Association

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Training Programs  
IACET Approved  
Experienced Instructors  
Private Tutoring Available

Programs Developed for the Water Professional



## Program Listings

- AWE Backflow Assembly Tester
- AWE Beginning & Advanced Computer Applications for Water Operators & Managers
- AWE Distribution O&M
- AWE Water Treatment O&M
- Chlorine Disinfection
- Confined Space Awareness, Attendee's & Entrants Courses
- Conservation/Water Shortage Management Plans
- Drinking Water System Security
- Electrical Fundamentals
- Emergency Preparedness
- Emergency Response Table Top Exercise Courses
- Basic, Intermediate & Advanced Water Math
- Regulatory Update
- Sampling Procedures & Certifications
- Understanding Rates & Rate Structures
- Wastewater Grades 1 & 2 Certification Review
- Water Conservation & Leak Detection Principles
- Water Distribution Grades 1, 2 & 3 Certification Review
- Water Treatment Grades 1, 2, & 3 Certification Review

## Water and Wastewater Training

CRWA is a certified IACET Continuing Education Unit (CEU) provider. What this means is that the Association's training programs have been reviewed and certified by IACET. CRWA applied for this certification 4 years ago and went through rigorous onsite inspection and audit before being allowed to train under the IACET program. IACET does a full training audit every 5 years to ensure compliance with training standards, methods, and record keeping. This program also means that our CEU training is recognized nationwide.

The California Rural Water Association has been providing training to California utility operators since 1990. Two years ago the CRWA Board of Directors established the Academy of Water Education (AWE), in an effort to provide more training with a little different agenda. The AWE was established to provide in-depth training and to bring renewed interest into the utility operations and management field. These efforts have seen an average of 3100 operators/managers per year utilize the training provided through CRWA and AWE training curriculum in the last several years.

CRWA has now established contract training division with the ability to bring training to you. We recently built portable test stands for our backflow tester's course and most of our other classes can be taught off site as well. We can provide you almost all of our trainings on site and specific to your needs under a training contract. These can be one time agreements or multi-year agreements whatever fits your needs.

Please review the training list for something that you would like to see and give CRWA a call. We look forward to working with you in providing quality training. Remember your CRWA membership will automatically qualify you for training discounts. Please contact Dan DeMoss ([ddemoss@calruralwater.org](mailto:ddemoss@calruralwater.org)) or Aleia Wisbaum ([awisbaum@calruralwater.org](mailto:awisbaum@calruralwater.org)) for information and scheduling.

## CRWA Training Courses for Utility Operators & Managers

- **AWE Backflow Assembly Tester** – This BAT program will qualify you for an AWWA, ABPA, or NCBPA certification test. The NCBPA exam is included in our class price and given onsite at the completion of the 40 hour course. The course will cover cross-connection control program regulations, plumbing codes, hydraulics and hazards of backflow, tester safety training, and approved testing procedures on the required assemblies. Emphasis will be placed on hands on practice in the wet lab and troubleshooting problems with assemblies. **40 contact hours.**
- **AWE Beginning Computer Applications for Water Operators & Managers** – This training course is designed to train utility operators and managers on the various computer applications available for operating and managing your utility. This course provides training in computer applications that will assist with regulatory compliance, financial reporting, and O&M of the plant and distribution system. Basic instruction will be given in Word, Outlook and Excel as they relate to utility operations and management. Student wishing to take this class do not have to have much experience in these computer applications. **12 contact hours.**
- **AWE Advanced Computer Applications for Water Operators & Managers** – This training course is designed for operators that function well and feel comfortable with basic computer operations. The course will provide advanced training in the applications of Word, Outlook, and Excel for utility operators and managers as the programs apply specifically to utility operations. This training will assist with the use of these programs for regulatory compliance, financial tracking and recording, and O&M of your utility. Students wishing to take this class should have a working knowledge of these computer applications. **12 contact hours.**
- **AWE Distribution O&M** – This class is dedicated to the typical field duties of a distribution operator, distribution system design and operation as well as regulatory requirements of a distribution operator. The class covers basic math, chlorine disinfection, pipeline flushing, hydrant and valve installation and maintenance, main line leak repair and service line installation, storage tank maintenance, plan reading and project planning as well as dealing with the systems customers and public relations. This class will offer formal classroom training as well as hands on work in the training shop. System tours are also conducted so student can see processes like chlorine disinfection at work. **36 contact hours (CDPH recognized 36 hour course for certification).**
- **AWE Water Treatment O&M** – This Class will cover the typical duties of a Water Treatment Plant operator. The course will cover math calculations through the grade 3 level, the 4 stages of conventional filtration, all required regulatory compliance record keeping, basic lab test, and troubleshooting for your water treatment plan. Attendees will tour a conventional treatment plant to actually see the processes working and hear from treatment plant experts in the field. Emphasis will be placed on understanding the basic concepts of water treatment as well as the options for treatment when evaluating raw water quality. **36 contact hours (CDPH recognized course for certification).**

- **Chlorine Disinfection** – This course is designed to provide instruction in basic chlorine and disinfection techniques. Attendees will learn how to calculate dose rates, the effects that water quality has on the chlorine disinfection process and what to expect with some of the issues created when you add chlorine to the water. Attendees will learn basic water chemistry, how to deal with chlorine taste and odor problems and innovative ideas in dealing with customer complaints about chlorine related taste and odor problems. **6 or 12 contact hours.**
- **Confined Space Awareness, Attendee's and Entrant courses** – These classes are required for operators who want to be recognized as a confined space competent. These classes cover roles and responsibilities, safety and awareness, and required permit paperwork and filing. Operators will be able to recognize potential hazards and know procedures associated with those hazards. Operators will also receive hands on instruction on operation of confined space entry equipment. **Minimum 4 contact hours per/ area.**
- **Conservation/Water Shortage Management Plans-** The course will cover the different types or forms of water conservation planning with information based on your water systems needs and capabilities. This course will also review the tools and public education materials available to systems implementing a conservation plan. This class will also cover potential financial issues with revenue that can occur when not considered in the planning and implementation of a water shortage/ conservation plan. **6 contact hours.**
- **Drinking Water System Security** – This course highlights the vulnerability of our Drinking water distribution systems to accidental or intentional contamination, and the role that the distribution system plays in that vulnerability. The course will cover potential threats, monitoring for those threats' and the role management, operators, and the local community need to take in the security of the distribution system. Other areas include the vulnerability assessments and the chemical security act as it relates to water. **6 contact hours.**
- **Electrical Fundamentals** – Attendee's will learn the basic components of a normal electrical system, terminology associated with those systems and how to understand and trouble shoot some basic system failures that may occur on any electrical system. Attendees will gain knowledge in electrical safety programs and procedures as they apply in the utility industry. **12 contact hours.**
- **Emergency Preparedness-** Did you know that most public water systems are required to develop an Emergency Response Plan? This course will cover the procedures and documents required by the state and funding agencies utilized in Emergency response. You will also receive instruction on how to educate the public about emergency response as it relates to the water system. **4 contact hours.**
- **Emergency Response Table Top Exercise courses-** CRWA can provide actual table top ERP exercise courses. These courses are interactive and fun with predetermined emergency scenarios for course attendees to address. These ERP exercises courses are conducted according to EPA standards as required by FEMA. This is a great team building exercise for those systems with large staff and a variety of potential scenarios. **6 or 12 contact hours.**
- **Basic Water Math** – The basic math course will cover area, volume, and cubic feet per second calculations as they relate to both water treatment and distribution. Attendees will learn the building blocks needed to ensure they can do well on exams and apply the information in the field. **4 or 6 contact hours.**

- **Intermediate Math** – The Intermediate Math class will cover dosage calculations, flow and velocity problems, detention time and filter rate calculations including horse power calculations as they relate to treatment and distribution. This course is great grade 2 or 3 exam prep and will cover the majority of the math on the exam. **6 contact hours.**
- **Advanced Math** – The Advanced Math course will cover friction loss calculations, bleach content calculations, Contact Time calculations and advanced Chemical treatment math. The Advance class will cover grades 3 and 4 calculations with an emphasis on the more difficult calculations you will see on a grade 3 or 4 exam. **6 contact hours.**
- **Regulatory Update** – This course will cover existing regulations and how they apply to your water system. Material will include operator certification, system classification, basic SDWA requirements, disinfection, Total Coliform Rule requirements, etc. and Source Water Protection. **2, 4 or 6 contact hours.**
- **Sampling Procedures and Certification**- This course will cover both class A & B sampling procedures. The emphasis will be on appropriate sampling procedures, record keeping and reporting. You will receive a sampling certification upon completion of this course. **4 contact hours.**
- **Understanding Rates and Rate Structures** -This covers base rate and usage rate calculations based on fixed costs and operations costs. You will learn to calculate your rates according to your systems financial needs. The class will cover the basics of compliance with Prop 218 and what you can do as an agency to inform and educate the public about the systems reasons for a rate increase. Course participants will have group exercises as well as formal class room instruction. **6 contact hours.**
- **Wastewater Certification Review** – This course will cover basic wastewater treatment technology with an emphasis on treatment terminology and math calculations. The operator will learn about lagoons, trickling filters, and basic primary and secondary clarification operations. Sludge handling and disposal will be discussed as it relates to the operator certification exam. The attendees will receive a workbook, pre- test and practice exams for their use when preparing at home. **1.2 CWEA CEU's.**
- **Water Conservation and Leak Detection Principals**- This course will increase your knowledge of key water conservation techniques and water loss accountability. You will learn when and how to apply the different leak detection technologies available in the business. This specialized session will include actual field hands on training with digital leak correlation equipment. **12 contact hours.**
- **Water Distribution Certification Review** – This course is designed to enhance you working knowledge of Water Distribution Grades 1, 2, or 3 exam information. You will learn to calculate tank volumes, pipeline volumes, chemical feed rates and simple pressure problems. Attendees will be able to understand the basic construction of common distribution and storage tank systems and how they operate. The class includes pre-test and post- tests, detailed instructions for Water Distribution operators, and practice exams and math problems to work on at home. **12 contact hours.**
- **Water Treatment Certification Review** – This course will cover information needed for attendees taking the grade 1, 2, or 3 Water Treatment Certification exam. The areas to be covered are the five stages of water treatment, disinfection, surface water treatment, regulations, related math calculations and safety as they apply to the exam. Attendees will be well prepared for the exam, they will receive a practice test and math problems for additional study at home. **12 contact hours.**