



CA DRINKING WATER WORKSHOPS

**FREE Classroom & Online:
July–December 2022**

Presented by: Rural Community Assistance Corporation (RCAC)

Funded by: California State Water Resources Control Board



About the Workshops:

The goal of these workshops is to provide information to help small, rural water systems deliver safe, reliable drinking water to their customers and to demonstrate how to properly manage a water system for long-term viability.

Financial stability is the key to success for most water systems.

The California State Water Resources Control Board has identified 13 Technical, Managerial and Financial (TMF) elements necessary for public water systems.

The 13 elements are:

Technical:

- Consolidation Feasibility
- System Description
- Certified Operators
- Operations Plans
- Source Capacity
- Training

Managerial:

- Ownership
- Water Rights
- Organization
- Emergency Response Plan
- Policies

Financial:

- Budget Projection / Capital Improvement Plans
- Budget Control



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Contact Hours & Certificates:

Each classroom workshop qualifies for six (6) drinking water contact hours. Exceptions include the AB54 & 240 class, which qualifies for two (2) drinking water contact hours.

Each online, one-part workshop qualifies for two (2) drinking water contact hours. Each online, Deep Dive workshop qualifies for four (4) drinking water contact hours. Each online series, qualifies for two (2) drinking

water contact hours per session.

Certificates for all online sessions are available for self-printing within 48 hours through your RCAC website registration/profile account. Self-printing classroom certificates are also available for most workshops, but may take longer to access through your online account. RCAC and the Water Board require signatures to verify attendance for in-person trainings and we must wait to receive the original classroom sign-in sheets from the RCAC trainer in order to verify attendance.

Certificates will be provided at the conclusion of each on-site training to those who pre-registered at least two weeks in advance.

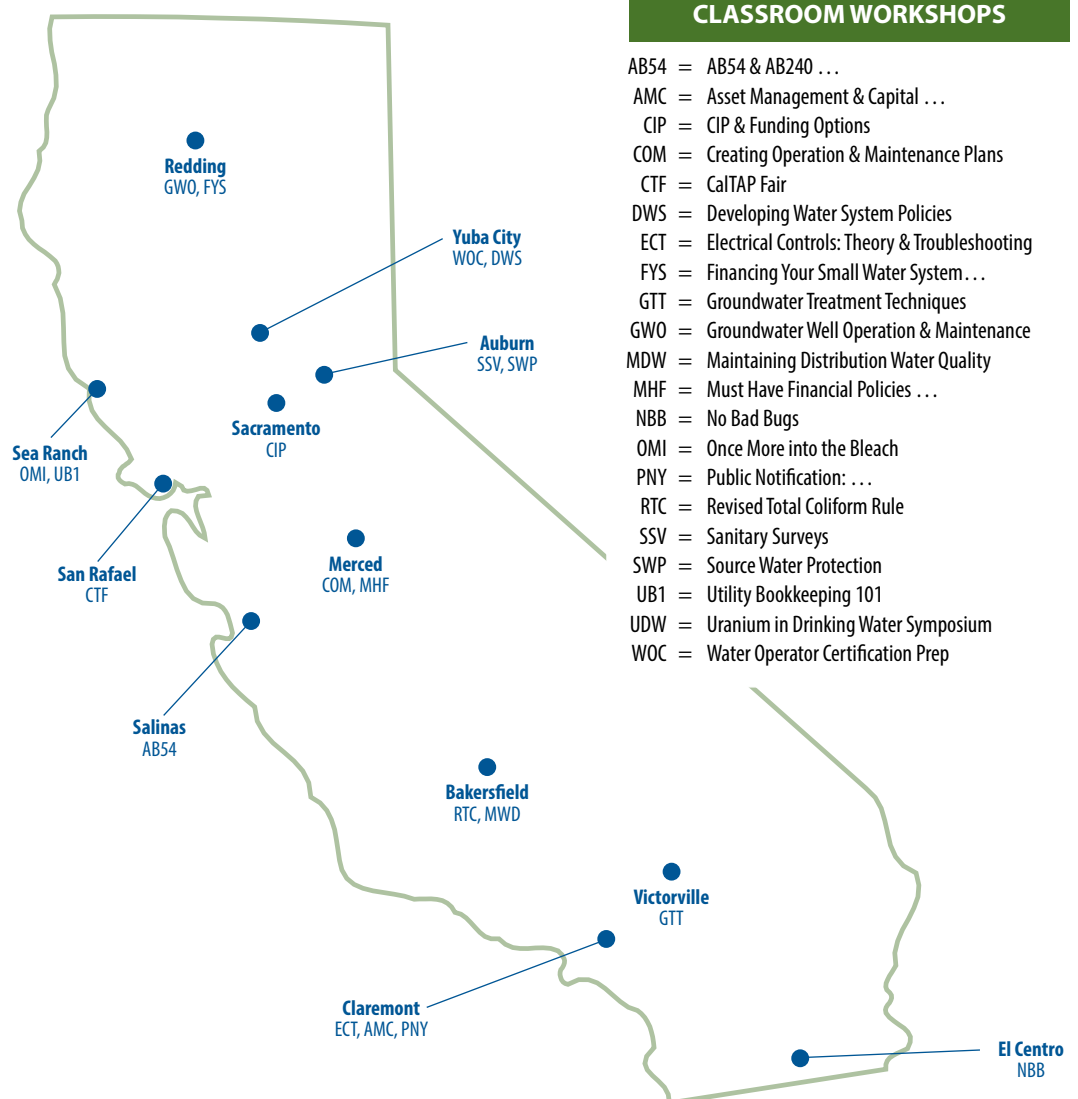
Cost:

There is no fee to attend these workshops. Priority is given to smaller water systems. For classroom trainings, handouts will be available for those who register at least three weeks before the class date.

COVID-19 Response

We are monitoring the situation and will adhere to state and county COVID-19 guidelines/restrictions. All classroom workshops are subject to change in an effort to ensure public and trainer safety, and to comply with state and county guidelines/restrictions.

July–December 2022 On-Site Workshop Topics and Locations



CalTAP Fair



Emerging Trends in Water

August 25, 2022 • San Rafael, CA

Embassy Suites • 101 McInnis Parkway • San Rafael, CA 94903

Join us and learn about the California Technical Assistance Providers (CalTAP) programs, funded by the California State Water Resources Control Board. These programs provide onsite technical assistance and free workshops, as well as many other resources, for water professionals throughout California.

This CalTAP Fair for Water Systems qualifies for six (6) contact hours.

See page 18 for more information. (Lunch is one hour and on your own.)

CalTAP Fair: Emerging Trends in Water • August 25, 2022 PROGRAM AT A GLANCE

8:00 AM

Registration Opens

8:30 AM

Welcome & CalTAP Fair Presentations

10:30 AM

Regulations Update

Technical Track

Managerial Track

Combined Track

1:00 PM

Groundwater Well Operation & Maintenance

Simple Water Auditing

Recruiting & Retention

2:40 PM

Pumping System Troubleshooting

Regionalization

Workforce Development

4:00 PM

Adjourn

The CalTAP providers are:

- California State Water Resources Control Board
- California Rural Water Association
- Office of Water Programs, California State University Sacramento
- Rural Community Assistance Corporation (RCAC)
- Self-Help Enterprises
- U.S. Environmental Protection Agency



Online Workshops

RCAC's online trainings are instructor-led, interactive, internet-based workshops designed to provide quality training without participants having to travel. Each session is two hours and qualifies for two contact hours.

Registration

In order to receive contact hours for online workshops, **each person must be registered with their own email address and complete an online survey at the end of the training.**

Are you attending as a group, but not watching from your own computer?

Attendees do not need to participate from their own computer/device for the online trainings, but will need to complete an evaluation to receive credit. **Your group leader will need to inform RCAC (registration@rcac.org) of attendees who will be viewing sessions as a group prior to session start. Sign-in sheets are NO LONGER accepted to validate attendance for contact hours for online workshops.**

Online certificates

Certificates are available for self-printing within 48 hours through your RCAC website registration/profile account. This allows RCAC time to confirm your participation in the online training.

RCAC uses the GoToTraining™ online platform. We recommend that you sign-in to the session 15 to 30 minutes early to download the GoToTraining desktop app (if needed). **All online workshop registrations require a valid email address.** This is how the links (invitations) to the training are sent to registered participants.

Technical recommendations

Online workshops will be hosted on the GoToTraining platform. The recommended web browsers are Edge and Chrome. Use of other browsers may lead to functionality issues. If using an IOS device, the GTT application should be downloaded and used.

We recommend using a headset or speakers with your computer. You do not need a microphone for this class. You can use the chat box to type your questions and comments to the instructors and others in the training if you choose. GoToTraining has links available for you to test your connection and/or audio and to provide assistance if you are having problems connecting to a session. **If you continue to have problems connecting, contact GoToTraining Tech Support, toll free, at (855) 352-9002, and choose option 1.**

Cancellation

Please notify RCAC as soon as possible if you cannot attend a session that you have registered for, as we have an attendee limit for online workshops.

Cancellation can be made by email at registration@rcac.org or by phone at (916) 447-9832 x 1429. Please do not cancel through GoToTraining.

IMPORTANT: Failure to attend three workshops for which you reserved a seat (and did not cancel) in any six-month period will disqualify you from attending workshops in the following six-month period.

PLEASE CANCEL A MINIMUM OF 48 HOURS IN ADVANCE TO ALLOW OTHERS TO ATTEND THE TRAINING.

Cancellation can be made by email at registration@rcac.org or by phone at (916) 447-9832 x 1429. Please do not cancel through GoToTraining.

Groundwater Wells with Iron

July 12, 2022 @ 10 a.m. & 2 p.m.

One of the most common minerals found in groundwater wells is iron. This mineral can cause a multitude of problems including colored water, taste and odor issues and potential unwanted bacteria. This workshop will cover the problems associated with iron in drinking water sources, as well as troubleshooting the best removal techniques. Mitigation for iron issues includes flushing programs, chemical oxidation with chlorine or potassium permanganate, oxidation/sedimentation, oxidation/filtration, ion exchange filtration and sequestration.

Participants will learn:

- The iron in groundwater well basics
- Water distribution flushing techniques
- Oxidation, sedimentation and filtration
- Ion exchange treatment
- Sequestration

Operator Basics Series: The recommended audience includes water system operators, maintenance staff and managers.

Water System Basic Operations

July 26, 2022 @ 10 a.m. & 2 p.m.

A public water system manager and operator have a lot of irons in the fire. They answer to their customers, local government (board of directors), state and county primacy agencies, other state/county/federal agencies and various businesses/industries. Where does one begin? It all begins with operations, and managers/operators need to ensure that safe water is consistently delivered to the customers; the water is under sufficient pressure; all required water testing is performed promptly and with proper testing techniques; and all records are documented accurately and as required. This workshop will utilize the trainer's experiences, as well as the experience of participants in the workshop, to explore these topics and others.

Participants will learn:

- About doing "the rounds"
- Record keeping and reporting
- Daily/weekly/monthly tasks
- Their responsibility to the public
- About dealing with the board of directors or other local government

Operator Basics Series: The recommended audience includes local government (board of directors), managers and operators.

Get the Lead Out: Lead & Copper Rule Revisions

August 9, 2022 @ 10 a.m. & 2 p.m.

After 30 years, the EPA has officially passed new regulations for the Lead and Copper Rule. These revisions are a major step toward keeping communities safe from lead. The new Lead and Copper Rule Revisions (LCRR) will require water systems and water system operators to rethink how they address lead and copper in their systems. These new requirements will require a thorough understanding of the LCRR's requirements

so you can effectively engage in short- and long-term actions that will ensure compliance and safe water for all your customers.

This webinar will guide drinking water operators through the new Lead and Copper site selection process, criteria and sampling plans so that water supplies maintain compliance for lead and copper under the Safe Drinking Water Act.

Participants will learn:

- The requirements of the new lead service line inventory
- Lead service line replacement requirements
- Monitoring childcare and school facilities
- New monitoring requirements
- Expanded communications programs
- More stringent response to elevated lead levels

Regulations Basics Series: The recommended audience includes operators, managers and board members.

Disinfection By-Products Rule

August 10, 2022 @ 10 a.m. & 2 p.m.

Certain commonly used drinking water disinfectants can react with naturally occurring materials in the water to form disinfection by-products (DBPs), which may pose long-term health risks. The Long-Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR) and the Stage 2 Disinfection By-Product Rule (DBPR) are the second phase of regulations meant to strengthen protection against microbial contaminants, and at the same time reduce the potential health risks of DBPs. This workshop will examine the factors and causes of DBP formation and the regulatory framework of the Stage 1 and Stage 2 DBPR.

Participants will learn:

- The differences between the Stage 1 and Stage 2 rules
- How to calculate Locational Running Annual Averages (LRAA) and flow-weighted averaging for compliance reporting
- How to identify a Combined Distribution System (CDS) and whether it applies to you
- Alternative disinfectants and application practices that may reduce or eliminate DBP formation

Regulations Basics Series: The recommended audience includes operators and managers of water systems that chlorinate their water.

Mapping Small Water Systems with Free Google Earth Pro Desktop

August 16, 2022 @ 10 a.m. & 2 p.m.

For a water utility, asset management plays a significant role in overall financial performance. With the use of effective asset management, it is possible to reduce overall infrastructure costs instead of waiting until the assets fail, incurring higher than necessary costs. Mapping a water system's assets can greatly assist with developing an asset management plan and your ability to locate assets during an emergency.

Participants will receive a step-by-step tutorial on how to get started mapping their water system's assets using Google Earth Pro for project planning, public presentations and developing capital improvement plans.

Participants will learn:

- The basic tools of Google Earth needed to map water system assets
- How to import scanned maps and handheld GPS coordinates
- How to derive water main pipe lengths, project planning, and cost estimating
- How to edit, save and share your Google Earth maps with project team members and the public

The recommended audience includes operators, managers and board members.

Participants should download and install the free Google Earth Pro software prior to the class (<https://earth.google.com/web/>).

Back to Basics: Water Supply & Sources

August 17, 2022 @ 10 a.m. & 2 p.m.

The essential mission of every water system is to provide an adequate volume of high-quality water at the lowest sustainable cost. The key words here are: “adequate volume” and “high-quality.” This learning event is to provide operators, managers, and board members of small water systems with a basic knowledge of how to determine the supply requirements (in terms of both volume and quality) of their water supply and to provide a basic understanding of the two types of water sources (groundwater and surface water) commonly used by small water systems. This will include the concepts of Max Day Demand, Peak Hour Demand, Diurnal Demand, and source reliability. There will be a focus on the supply adequacy requirements of the California Water Works Standards.

Participants will learn:

- Water system demand – How much is enough?
- High-quality water – How clean is clean enough?
- Types of water sources commonly seen in small systems
- Source water protection planning

Operator Basics Series: The recommended audience includes system managers, new or existing water system operators, managers and especially board members.

MHI as a Management Tool

August 18, 2022 @ 10 a.m. & 2 p.m.

If your water system plans to apply for funding for future infrastructure projects, then this session is for you! This presentation is designed to help your system develop a sustainable capital improvement plan (CIP) that will prepare you for funding opportunities. It will help you to understand how census data is used to determine your system's eligibility for grants and low interest loans from state and federal funding agencies. Learn how an income survey could benefit your system and funding eligibility.

Participants will learn:

- How to determine if your system could benefit from an income survey
- How to plan better by using census data in your CIP planning stage
- How you can avoid having to implement large rate increases to obtain funding
- To understand how funders determine grant eligibility

The recommended audience includes board members, managers and operators.

Storage & Distribution

August 31, 2022 @ 10 a.m. & 2 p.m.

This module presents the varying operation of water storage systems and distribution piping. The distribution and storage systems are the unrecognized backbone of any water system. However, due to their inconspicuous nature, problems are seldom realized, and maintenance is seemingly nonexistent. The fact is that most bacteriological contamination takes place in the distribution system. This alone should be enough to warrant prudent maintenance of piping and valves, and storage tanks in the system. Through purposeful flushing procedures and adequate planning, system downtime can be minimized and water quality can be improved. This workshop will give participants the information and resources they need to understand proper operation and maintenance of their storage and distribution systems.

Participants will learn:

- Common components and types of water distribution system piping and storage
- Maintenance guidelines and programs that reduce long-term expenditures
- Possible pathways to reduce contamination
- Inspection and record-keeping procedures that improve water quality

Operator Basics Series: The recommended audience includes system operators, new board members and those considering becoming certified operators of a water system.

Pathogens in Drinking Water

September 7, 2022 @ 10 a.m.

Disease outbreaks in water systems are rare, but they can and do happen. There are hundreds of known disease-causing organisms that can contaminate water, and new ones are being discovered every day. Even 40 years ago, pathogens like Giardia were not believed to be harmful to humans.

Participants will learn:

- Types of disease-causing organisms that are of concern for water systems
- Regulations addressing contamination
- How to operate and maintain your water systems to minimize the possibility of microbial contamination

Operator Basic Series: The recommended audience includes board members, managers and operators.

Coliform Sampling Procedures

September 7, 2022 @ 2 p.m.

Sampling for total coliforms and E. coli in the water system is one of the most important things an operator can do. The new Revised Total Coliform Rule (RTCR), effective April 2016, affects every public water system. These revisions to the Total Coliform Rule will affect how operators and managers respond to total coliform positives (TC+) and require steps to analyze the integrity of the system as a result of positive samples. Investigation and corrective actions are at the forefront of the RTCR and knowing how to complete a level 1 assessment can be the difference between compliance and violation. This workshop will focus on reviewing triggers for level 1 and level 2 assessments, who is expected to perform them, and how to conduct an assessment with examples and small group exercises.

Participants will learn:

- Repeat sampling requirements
- New procedures for the month following a TC+
- What to do if you have a positive E. coli result
- When an assessment of a system is needed
- How to complete a level 1 assessment of your system
- Tips on system inspection/investigation

Operator Basics Series: The recommended audience includes operators, managers and board members.

Hydrant Installation

September 13, 2022 @ 10 a.m. & 2 p.m.

A crucial part of any capital improvement plan (CIP) is to follow through and complete planned tasks. One of these tasks is the replacement and/or installation of new fire hydrants. This workshop will outline the steps necessary to install wet barrel and dry barrel fire hydrants. This includes the initial planning, the installation itself and steps that may need to be taken upon completion of the installation.

Participants will learn:

- CIP overview
- Planning for fire hydrant installation
- Fire hydrant installation
- Recommended steps to follow upon completion of new hydrant installation

The recommended audience includes water system operators, maintenance staff and managers.

Water Quality Sampling

September 27, 2022 @ 10 a.m. & 2 p.m.

Public health is the primary concern of water providers and the only way to ensure your water is safe is to test for possible contamination. Water system sampling can vary from monthly bacteriological to radionuclide testing every nine years. This workshop will focus on water sample collection while also reviewing monitoring schedules, site sample plans and reporting and public notification requirements.

Participants will learn:

- Monitoring and reporting regulations under the California Safe Drinking Water Act
- General and specific sampling procedures
- The benefits of a timely water quality monitoring program

Regulations Basics Series: The recommended audience includes operators, managers and anyone responsible for ensuring compliance with sampling regulations.

Arsenic

September 28, 2022 @ 10 a.m.

Since the arsenic maximum contaminant level was lowered from 50 ppb to 10 ppb in 2001, water systems have been scrambling to comply with this more stringent standard. For many small water systems, compliance with the Arsenic Rule has been a significant technological, financial and operational challenge.

This online learning event is intended to provide a small water system with a “road-map” to Arsenic Rule compliance. We will begin with reviewing the requirements of the Arsenic Rule. We will then explore non-treatment options for compliance, which are almost always less costly than treatment. We will then assess the pros and cons of several of the most common arsenic treatment technologies.

Participants will learn:

- The health effects of arsenic in water
- Non-treatment options for Arsenic Rule compliance
- An overview of the most used arsenic treatment technologies
- Practical considerations when choosing an arsenic treatment system

Regulations Basics Series: The recommended audience includes operators, managers and board members that have an interest in providing arsenic-safe water to their customers.

Nitrates

September 28, 2022 @ 2 p.m.

Nitrates are the most common chemical contaminant in groundwater aquifers worldwide. In 1980, nine drinking water wells in California had unsafe levels of nitrates. By 2007, this acute contamination had spread to more than 648 wells. Nitrates continue to impact the health of California residents and the problem is only getting worse. This workshop will help you make informed decisions about mitigating this contaminant.

Participants will learn:

- What nitrates are
- How nitrates get into drinking water
- The acute health effects of nitrate exposure
- How to achieve compliance with Safe Drinking Water Act requirements for nitrates
- An overview of the most used nitrate treatment technologies
- Practical considerations when choosing a nitrate treatment system

Regulations Basics Series: The recommended audience includes operators, managers and board members that have an interest in providing nitrate-safe water to their customers.

Groundwater Well Operation & Maintenance

October 4, 2022 @ 10 a.m. & 2 p.m.

How is your well performing? How do you know what is going on deep in the ground? Like all equipment, water wells must be maintained to ensure long life and quality water within the system. Wells need to be monitored regularly to compile vital information on the health of the source.

Participants will learn:

- Well inspection
- Well operation and maintenance practices
- Well pump basics and how to properly throttle a well pump
- Groundwater quality concerns and trouble indicators
- Measuring drawdown and tracking over time
- Well sounders: Which one is right for me?

Operator Basics Series: The recommended audience includes operators, management, water system personnel or anyone with an interest in better understanding the value of operating a safe drinking water system.

Budgeting for Small Water Systems

October 5, 2022 @ 10 a.m.

In order to remain viable, all public water systems need to acquire and manage sufficient financial resources to achieve and maintain compliance with regulatory requirements. One primary tool to become and remain viable is developing and maintaining a comprehensive budget. This workshop will show board members, managers and operators how to develop a budget, identify revenues and expenses, methods to balance the budget, and how to review a budget comparison report on a regular basis.

Participants will learn:

- How to prepare a budget
- How to identify revenue and expenses
- How to identify fiscal policies to assist in balancing the budget
- How to review the budget comparison report on a regular basis

Board Basics Series: The recommended audience includes directors, board members and managers of mutual water companies.

Emergency Response Planning & Hazard Mitigation

October 18, 2022 @ 10 a.m. & 2 p.m.

Natural disasters that can affect public water systems in California include fires, floods, earthquakes, tsunamis and droughts. You name it, we have it. The fires in California have become increasingly vexing, and this workshop will focus primarily on fire prevention and recovery. It can happen to your water system! Water system emergencies are any situations that cause water outages, unsafe drinking water or any harm to humans or animals. Have you prepared ahead of time? Do you have a written response plan? Do you have mutual aid agreements in place? Are you prepared to interact with state and federal agencies afterwards? This workshop will provide water system personnel with information and resources to respond preemptively and proactively to most emergency situations.

Participants will learn:

- Ways to protect your water system before disaster strikes
- Lessons from emergencies experienced by the trainers
- How to establish effective mutual aid agreements
- How to create an emergency and disaster response plan using the Water Board-approved template
- Lessons learned regarding state and federal assistance immediately following emergencies

The recommended audience includes managers, operators, administrative staff and board members.

Navigating State Funding

October 19, 2022 @ 10 a.m. & 2 p.m.

Does your system have a capital improvement project and you are trying to figure out where to start in the state funding process? In this class you will learn about the resources available to identify funding opportunities, the requirements of a state funding application and how to request assistance so your system is prepared to execute a funding agreement.

Participants will learn:

- How to request technical assistance and the types of assistance available
- Resources for identifying state funding opportunities
- What to expect when completing a funding application

The recommended audience includes managers, board members and operators.

AB54 & AB240: Ethics for Mutual Water Company Board Members

October 27, 2022 @ 6 p.m.

By law, all mutual water board members are required to have two hours of ethics training within six months of taking office and every six years following. This training is designed to provide system longevity and help ensure that board members meet their legal responsibilities. Required training topics include conflicts of interest, fiduciary responsibilities, Safe Drinking Water Act compliance, long-term management and capital improvement planning. We will also cover the AB240 requirements, which affect mutual water systems as of Jan. 1, 2014. This workshop allows mutual water systems to comply with this regulation and helps prepare them to better govern their water company. This workshop meets the legal requirement for board members ethics training under AB54.

Participants will learn:

- Requirements of AB54 and AB240
- Financial conflicts of interest to avoid
- Strategic planning
- Financial responsibilities
- Capital improvement planning
- How to comply with the Safe Drinking Water Act

Board Basics Series: The recommended audience includes directors, board members and managers of mutual water companies.

The Safe Drinking Water Act

November 9, 2022 @ 10 a.m. & 2 p.m.

Throughout the country, small water system staff adhere to regulations to provide safe drinking water for their customers. The drinking water system staff follow direction from the state or county health department but may not realize that these regulations began at a federal level. This workshop will teach operators, managers and board members how and why these regulations exist.

Participants will learn:

- The basis for SDWA and the related U.S. code and federal regulations
- How drinking water events correspond with amendments to the SDWA
- How to look-up drinking water regulations under development and review

Board Basics Series: The recommended audience includes all water system operators and managers.

Water System Workforce Development

November 17, 2022 @ 10 a.m. & 2 p.m.

Think about the water system operators and board members you know, how close are they to retirement? Chances are many will be retiring in the next five to 10 years, if not sooner. In rural places, younger operators may be difficult to retain. As their skills improve, the salary and benefits offered by larger systems may become increasingly attractive. Join us for a discussion about how to develop the workforce that keeps your system running sustainably.

Participants will learn:

- What legacy planning looks like
- How to meet the needs of their system now AND for the future
- If water operators are a dying breed
- What other projects and programs doing to support the industry
- What the future looks like for water operators

The recommended audience includes managers, board members and operators interested in the future of water operator careers.

Cyber Security for Drinking Water Systems

November 29, 2022 @ 10 a.m. & 2 p.m.

Recent cyber-attacks on water and wastewater systems have manipulated treatment processes, disabled process control and business enterprise systems and stolen proprietary data. Cybersecurity best practices and incident response planning can prevent or mitigate many of these attacks and are essential to the sound operation and management of water and wastewater systems.

Participants will learn how to recognize cybersecurity threats, how to complete the self-assessment questionnaire and utilize the water industry cybersecurity controls for small systems. Based on the cybersecurity self-assessment and cybersecurity controls for small utilities, participants learn how to identify at-risk areas and take actions to protect their systems.



Participants will learn:

- Why cybersecurity is important
- How to conduct a self-assessment of your system to identify vulnerabilities
- Cybersecurity controls for small water systems

The recommended audience includes board members, managers and operators.

Financial Management for Small Water Systems

November 30, 2022 @ 10 a.m.

Do you want to improve your water system's financial health? As a member of the governing body, management or staff of a small water system, you have very important financial responsibilities including establishing the policy framework governing your utility's finances, planning for the system's financial future, preparation and adoption of budgets, monitoring and oversight of financial performance and ensuring accountability and integrity of the financial system. The goal of good financial management is to ensure that your utility is operated as a financially sustainable enterprise while providing safe and reliable water, both in the short- and long-term, to your utility's customers.

Participants will learn how to:

- Recognize various financial statements and understand how to use them to make informed decisions
- Understand the elements of internal controls
- Develop a meaningful budget
- Identify methods to balance the budget

Board Basics Series: The recommended audience includes local government (board of directors), managers and operators.

Dealing with “Forever Chemicals”: PFAS in Drinking Water

December 01, 2022 @ 10 a.m. & 2 p.m.

The issue of PFAS contamination is being highlighted throughout the country with many experiencing anxiety over possible water contamination. PFAS are a group of man-made chemicals which include Perfluorooctanoic Acid (PFOA) and Perfluorooctanesulfonic Acid (PFOS). Known as “forever chemicals,” PFAS compounds have been found widely in the environment, including thousands of groundwater sources throughout US.

PFAS compounds are currently the #1 emerging threat to water systems. Continuing studies are identifying potential health risks associated with these chemicals. This session examines the origin, the concerns and provides information for small systems about protecting public health.

Participants will learn:

- Why these “forever” chemicals are not going away
- Where PFAS come from
- What the health effects of PFAS are
- PFAS regulations in drinking water
- PFAS treatment technologies for drinking water systems

The recommended audience includes board members, managers and operators.

Board Roles & Responsibilities

December 13, 2022 @ 10 a.m. & 2 p.m.

There are many responsibilities attached to serving on a water board. Many board members are unaware of the scope and breadth of these responsibilities, which range from fiscal responsibility to environmental compliance, ethics, avoiding conflicts of interest and familiarity with state and federal laws. This workshop will give participants the information and resources they need to understand a board’s legal responsibilities and become proactive and informed board members.

Participants will learn:

- Why a public drinking water supply system must operate as a viable business
- The concept of capacity development for technical, managerial and financial (TMF) elements, and how each of the TMF elements are interrelated
- The key legal responsibilities of governing bodies in the oversight of a water utility
- Board practices that can help water boards stay informed and respond proactively

Board Basics Series: The recommended audience includes system managers, new or existing board members and those considering serving on a water system board.

Partnerships & Regional Solutions

December 20, 2022 @ 10 a.m. & 2 p.m.

This workshop will discuss the spectrum of opportunities for partnering with others. From casual information sharing or operational support, to formal consolidation or joint powers agreements, we will review the challenges and benefits of partnering up.

By creating partnerships and opportunities for working together we can solve some of our small system challenges.

Participants will learn:

- How to evaluate their system’s potential for partnership
- Options for working with other systems
- The next steps to start or continue the conversation

The recommended audience includes anyone involved with a small water system.

Understanding Bacteriological Water Quality Standards

December 21, 2022 @ 10 a.m. & 2 p.m.

Providing safe and affordable drinking water to customers is the primary objective of any drinking water system. Routine monitoring for bacterial contamination is one of the most effective indicators of a potentially hazardous condition in your system. Although waterborne disease outbreaks are relatively uncommon in the United States, the threat can be deadly. Missed routine and repeat samples are costly in many ways including time, lab fees, penalties and consumer confidence, not to mention the health risk to the public.

Join us to learn or review the bacteriological standards required by both California State Total Coliform Rule (TCR) and Federal Revised Total Coliform Rule (RTCR). This workshop will address public water system standards for ensuring bacteriological quality through monitoring and reporting.

Participants will learn:

- The importance of total coliform as an indicator of water quality
- Compliance with California state and federal bacteriological quality monitoring and reporting regulations
- Public notification requirements
- Triggers and follow-up for Level 1 and Level 2 assessments

Regulations Basics Series: The recommended audience includes new operators and managers as well as anyone interested in understanding bacteriological standards for public water systems.



Online Deep Dive Workshops

In response to COVID-19, RCAC is offering online, four-hour deep dive trainings that are instructor-led, interactive, internet-based workshops designed to provide in-depth quality training without participants having to travel. Attendees may register for each deep dive workshop and are expected to attend the entire four-hour session, partial credit will not be awarded.

Financing Your Small Water System: Budgeting & Rates Setting

July 13, 2022 @ 8:30 a.m. through 12:30

In order to remain viable, all public water systems need to acquire and manage sufficient financial resources to achieve and maintain compliance with regulatory requirements. One primary tool to become and remain viable is developing and maintaining a comprehensive budget. This workshop will show board members, managers and operators how to develop a budget, identify revenues and expenses, methods to balance the budget and what information to consider when setting rates.

Participants will learn how to:

- Prepare a realistic budget
- Identify fiscal policies for assisting in balancing the budget
- Monitor the budget
- Take corrective action when you have unexpected expenses or falling revenues
- Develop an adequate alternate rate structure
- Prepare for Prop. 218

Board Basics Series: The recommended audience includes governing bodies, general managers, operators and financial/accounting staff of small water systems.

Operation & Maintenance: Maintaining Distribution System Water Quality

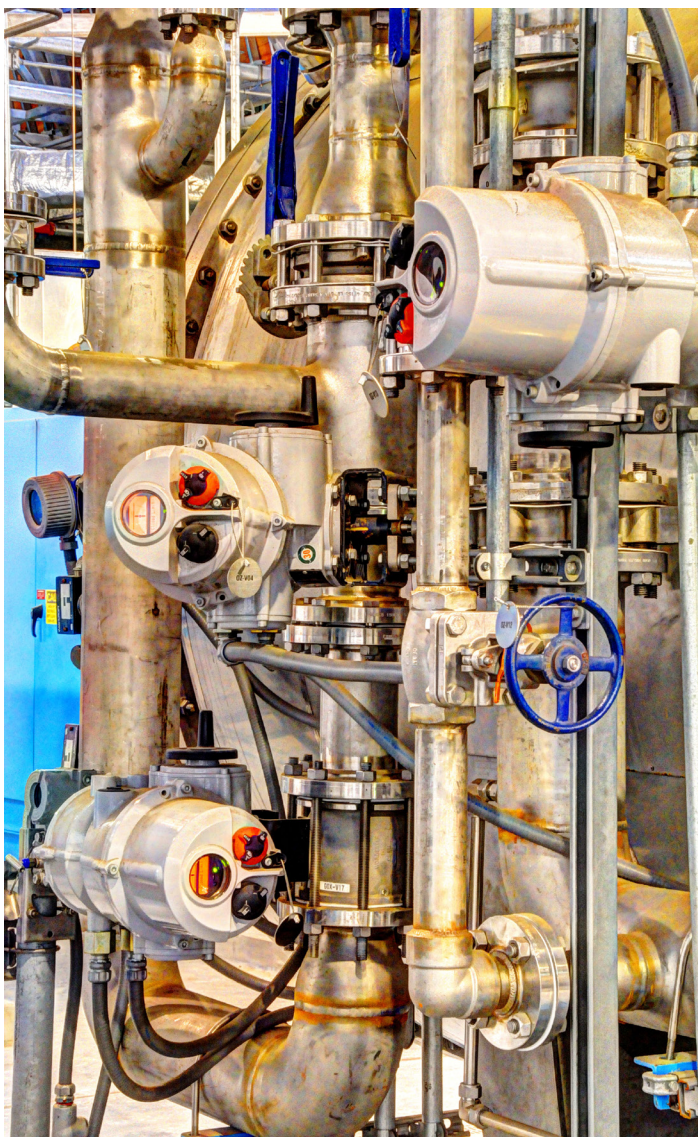
August 30, 2022 @ 8:30 a.m. through 12:30

Public water systems are required to provide safe drinking water. Methods for providing safe drinking water vary from system to system, but there are a handful of methods that apply to all systems. This workshop, designed for operators and managers, will cover the methods used by most water systems to ensure acceptable water quality.

Participants will learn:

- The techniques and importance of coliform sampling
- The importance and methods for unidirectional flushing
- Disinfection basics
- Water storage tank cleaning and maintenance
- Cross connection prevention

Regulations Basics Series: The recommended audience includes water system operators and managers. Board members, council members and water consumers are welcome to attend as a diverse group of participants should generate good feedback and networking regarding the demands of operating and maintaining a public water system.



Regulation Essentials: The California Safe Drinking Water Act

October 11, 2022 @ 8:30 a.m. through 12:30

The primary mission of every public water system is to provide water that is safe to drink. There are upwards of 100 chemicals and microbials regulated under the California and federal versions of the Safe Drinking Water Act. In addition, the regulations mandate operational activities and infrastructure standards that help ensure the delivery of safe drinking water. These regulations have changed and evolved over the last 45 years.

The California drinking water regulations define “safe drinking water” and mandate operations that maintain water quality. Every operator, manager and board member is required to have a reconnaissance-level knowledge of California’s drinking water regulations and an understanding of how these regulations apply to the day-to-day operation of a public water system.

This training will be presented in two 2-hour sessions. In general, these sessions are non-sequential – meaning that the second session is not predicated on material in the first session.

Participants will learn:

- Overview/history/purpose/structure of the Safe Drinking Water Act
- California Drinking Water Regulations - Need-to-know / Nice-to-know / Where-to-go modules
 - Cross-connection control
 - Operator Certification
 - System Classification
 - POU- POE Treatment
 - Bacteriological Quality
 - Groundwater Rule
 - Primary Standards
 - Inorganics
 - Organics
 - Fluoridation
 - Radioactivity
 - Secondary Standards
 - Public Notification
 - Consumer Confidence Reporting
 - Reporting and Recordkeeping
 - Disinfection By-products
 - Waterworks Standards
 - Surface Water Treatment Rule
 - Lead and Copper Rule

Regulations Basics Series: The recommended audience includes all water system operators and managers.

Pump & Motors Troubleshooting

November 8, 2022 @ 8:30 a.m. through 12:30

How many times has this happened to you? You discover that one of your pumps is not performing like you think it should, or it will not run at all. What are your next steps? When should you call in an expert? These questions and more will be answered in the Pump and Motor Troubleshooting workshop. This will be an extensive course in the most common pumping and electrical system issues that could leave you out of water.

Participants will learn:

- Electric motor troubleshooting and common issues
- Basic types of centrifugal pumps and their characteristics
- How to calculate TDH in a fluid pumping system
- How to calculate friction loss
- How to read pump curves
- Centrifugal pump performance testing and troubleshooting techniques

Operator Basics Series: The recommended audience includes system operators, technicians, and managers.

Online Series Workshops

In response to COVID-19, RCAC is offering online, series trainings that are instructor-led, interactive, internet-based workshops designed to provide buildable in-depth quality training without participants having to travel. Each session of the series qualifies for two hours for a total of eight hours if taken together. Attendees may register and participate in one session for two hours or up to four sessions for eight hours. Registration must be made for each session.

DO THE MATH 4-PART SERIES

At a minimum, every public water system, regardless of size and complexity, requires a certified water distribution operator. In addition, those systems using treatment also must have an operator that holds a water treatment operator certification. The most significant hurdle for many grade 1 and grade 2 operators in passing the operator certification exam, however, is the math portion of the test. Typically, the math section of the certification exam constitutes about 35 percent of the total exam score, so proficiency in math is necessary to pass the test.

The math included in the first three sessions is based on the expected-range-of-knowledge for the California distribution D1/D2 exams. Operator Math 301 is targeted to the grade 3/4 level exams.

The target learner for this training wants (and needs) one specific thing: the ability to accurately calculate operator certification exam math questions. Accordingly, the learning event design focuses solely on this need. This training is not designed for “contact hours” or participant “entertainment.” This is a hands-on training with an expectation of continuous participation -- working and answering math problems -- throughout the entire session.

Operator Basics Series: The recommended audience includes operators and managers.

Operator Math 101: The Basics

September 1, 2022 @ 10 a.m.

Participants will learn how to convert:

- Water units (ft³ to gal, gal to wt)
- Distance (in to ft, ft to m, ft to mi)
- Areas (ac to ft², in² to ft², yd² to ft²)
- Volumes (ft³ to gal, gal to L, L to mL)

Operator Math 102: The Basics

September 8, 2022 @ 10 a.m.

Participants will learn how to calculate:

- Area of a circle
- Area of a rectangle
- Volume of a cylinder
- Volume of a rectangular tank

Operator Math 201: Applied Math Problems

September 15, 2022 @ 10 a.m.

Participants will learn:

- Pressure and Head problems
- Dosage problems (simple no conversions)
- Well calculations (drawdown and specific capacity)
- Flow calculations (gal/min, ft³/sec, velocity problems)

Operator Math 301: Advanced Math Problems

September 22, 2022 @ 10 a.m.

Participants will learn:

- Pressure and Head problems (multi conversion problems)
- Chemical dosage problems (HTH and hypochlorite)
- Pumping problems (horsepower)
- Odds and Ends (supply, solution, SCADA, specific gravity)



Classroom Workshops

RCAC's classroom trainings are instructor-led, interactive workshops designed to provide quality, in-person training and networking opportunities. Each session qualifies for six contact hours. Exceptions include the AB54 & AB240 class, which qualifies for two contact hours.

Unless otherwise noted, all classroom workshops will be on the following schedule: Registration/Check-in: 8 a.m. Workshop: 8:30 a.m.–3:30 p.m. Lunch is one hour (on your own). All classroom workshops are subject to change due to COVID-19 in an effort to ensure public and trainer safety and comply with guidelines/restrictions. All workshops will be limited in size based on federal, state and local public health guidelines in place at the time of the workshop.

Revised Total Coliform Rule

July 20, 2022 • Bakersfield, CA

Four Points by Sheraton Bakersfield • 5101 California Ave. • Bakersfield, CA 93309

Sampling for total coliforms and E. coli is one of the primary tools used by public water systems to ensure that the drinking water they provide is safe. The federal Revised Total Coliform Rule (RTCR) became effective April 2016 and the California RTCR became effective July 2021. The RTCRs affect how operators and managers respond to total coliform positives (TC+) and requires steps to analyze the system's integrity as a result of positive samples. Investigation and corrective actions are at the forefront of the RTCR and knowing how to complete a level 1 assessment can be the difference between compliance and violation. This workshop will focus on reviewing triggers for level 1 and level 2 assessments, who is expected to perform them and how to conduct an assessment through examples and small group exercises.

Participants will learn:

- Repeat sampling requirements
- New procedures for the month following a TC+
- What to do if you have a positive E. coli result
- When an assessment of a system is needed
- How to complete a level 1 assessment of your system
- Tips on system inspection/investigation

Recommended audience includes operators, managers and board members.

Maintaining Distribution Water Quality Using: System Maps, Valves & Flushing

July 21, 2022 / Bakersfield, CA

Four Points by Sheraton Bakersfield • 5101 California Ave. • Bakersfield, CA 93309

To be effective in their job of providing safe drinking water to their customers, certified water system operators need to possess a wide range of knowledge on many different subjects. This in-person workshop will test the participant's understanding of a range of drinking water topics. The instructors will provide a detailed explanation of many of these topics.

Participants will learn:

- How to use, test and update water system maps and their effect in maintaining water quality
- We will look at valve types and their uses in the system
- The need for a valve turning program
- How to create and execute system-wide flushing programs and dead-end programs

The recommended audience includes distribution system operators.

AB54 & AB240: Ethics for Mutual Water Company Board Members

July 28, 2022 • Salinas, CA *6:00-8:00PM

Hampton Inn Salinas • 523 Work St. • Salinas, CA 93901

By law, all mutual water board members are required to have two hours of ethics training within six months of taking office and every six years following. This training is designed to provide system longevity and help ensure that board members meet their legal responsibilities. Required training topics include conflicts of interest, fiduciary responsibilities, Safe Drinking Water Act compliance, long-term management and capital improvement planning. We will also cover the AB240 requirements, which affect mutual water systems as of Jan. 1, 2014. This workshop allows mutual water systems to comply with this new regulation and helps prepare them to better govern their water company. This workshop meets the legal requirement for board members ethics training under AB54.

Participants will learn:

- Requirements of AB54 and AB240
- Financial conflicts of interest to avoid
- About strategic planning
- Financial responsibilities
- Capital improvement planning
- How to comply with the Safe Drinking Water Act

The recommended audience includes directors, board members and managers of mutual water companies.

Groundwater Well Operation & Maintenance

August 2, 2022 • Redding, CA

Red Lion Hotel Redding • 1830 Hilltop Dr. • Redding, CA 96002

It is crucial to know how your well is performing. Do you know what is going on deep in the ground? What goes into the process of choosing a well site? Well equipment must be maintained and monitored to ensure long life and quality water within the system. Regular monitoring of wells helps the operator to compile vital information on the health of the source.

Participants will learn:

- Well site selection process
- Well inspection
- Well maintenance
- Groundwater qualities
- Measuring drawdown
- Well sounders: Which one is right for me?

The recommended audience includes operators, management, water system personnel or anyone with an interest in better understanding the value of operating a safe drinking water system.

Financing Your Small Water System: Budgeting & Rates Setting

August 3, 2022 • Redding, CA

Red Lion Hotel Redding • 1830 Hilltop Dr. • Redding, CA 96002

If you are a board member, manager or operator, it is important to understand the budgeting process and what it means for you. Budgets impact our daily work and understanding how to build them, analyze them and use them to plan can shape our systems. Understanding the budget allows us to maximize resources and justify our rates, especially when an increase in rates is necessary. From the budget, rates can be calculated that satisfy the utility's revenue needs.

Participants will learn how to:

- Evaluate budget and financial indicators
- Develop a prioritized capital improvement plan
- Create a budget to sustain that CIP
- Use these tools to determine revenue needs
- Set rates in California
- Prop. 218 processes

The recommended audience includes board members, managers and operators.

CalTAP Fair: Emerging Trends in Water

August 25, 2022 • San Rafael, CA

Embassy Suites • 101 McInnis Parkway • San Rafael, CA 94903

See page 18 for more information

Creating Operation & Maintenance Plans

September 14, 2022 • Merced, CA

University of California Merced • 2145 Wardrobe Ave. • Merced, CA 95341

Your only licensed operator has just left town due to a family emergency and handed you the phone number of a certified operator in the next town. Will the substitute operator know how your system works and what needs to be done on a daily basis to keep it safe and in compliance? A properly prepared Operations and Maintenance (O&M) Plan is one of a water purveyor's most important documents. The O&M Plan is a "living" document that explains how a public water system is to be operated and maintained on a day-to-day basis to ensure public health, safety and compliance with applicable regulations. In addition to being an important training tool for new staff, the O&M manual serves as a practical handbook by which a qualified substitute operator can operate and maintain the system in a safe and reliable manner in absence of the system's primary operator.

Participants will learn:

- The vital elements that comprise an O&M Plan
- The most important tools needed for developing an O&M Plan
- Policies and procedures for keeping your O&M Plan updated
- Free resources and templates for developing O&M Plans

The recommended audience includes water system operators, managers and maintenance staff.



Must Have Financial Policies & Procedures for Small Water Systems

September 15, 2022 • Merced, CA

University of California Merced • 2145 Wardrobe Ave. • Merced, CA 95341

Financial policies are the blueprint to building a successful, sustainable water utility. Are yours up-to-date and complete? Polishing your policies can be the cornerstone to providing guidance in decision making, promoting staff efficiency and productivity and safeguarding assets. The goals of good financial policies and procedures are risk management and to ensure that the utility is consistently operated as a financially sustainable enterprise while providing safe and reliable water, both in the short- and long-term. Decision makers have very important financial responsibilities, including establishing the policy framework governing a utility's finances. Operators and staff support the board and implement financial management policies on a day-to-day basis and may be instrumental in recommending necessary policies. Comprehensive, well-organized policies should be readily accessible and easy to reference.

Participants will learn:

- Common financial policies for small water systems
- The benefits of written, up-to-date policies
- Which policies to create or update at your system
- How to create a draft policy using a template

The recommended audience includes all board and/or council members, accountants, bookkeepers and managers of small water systems.

Comprehensive Guide to Water Sampling

September 20, 2022 • Sacramento, CA

Sacramento Doubletree • 2001 Point West Way • Sacramento, CA 95815

You are getting customer water quality complaints and don't remember if you completed all the state's monitoring and reporting requirements. How do you know if the water you are delivering is safe to drink? What do you tell your customers? What bottles do you use to collect samples? How do you use best sampling techniques? Do you need all the info in that chain of custody? This workshop will provide water system personnel with the information to collect and record most samples effectively.

Participants will learn:

- Key existing regulations
- Reporting requirements
- Hands on sampling technique (volunteers appreciated)
- Emerging contaminants under the California Safe Drinking Water Act
- The benefits of a timely water quality monitoring program

The recommended audience includes operators, managers and anyone responsible for ensuring compliance with sampling regulations.

CIP & Funding Options

September 21, 2022 • Sacramento, CA

Sacramento Doubletree • 2001 Point West Way • Sacramento, CA 95815

Developing your capital improvement plan (CIP) is the first step in a complete asset management plan. As funders look at long-term planning, a system with a developed asset management plan rises to the top of many lists. An important step in developing your asset management plan is to identify funding opportunities. This workshop will help you to know where to look for funding opportunities, tools to help determine eligibility and resources available to help your system prepare for submitting a funding application.

Participants will learn how to:

- Identify system assets
- Develop a sample CIP
- Prioritize capital improvement
- Develop an asset management plan
- Look for funding opportunities
- Use MHI as tool to determine eligibility

The recommended audience includes operators and managers.

Water Operator Certification Prep

October 12, 2022 • Yuba City, CA

Hampton Inn and Suites Yuba City • 1375 Sunsweet Blvd. • Yuba City, CA 95991

The new California Operator Certification test program allows for operators to take their state exams within weeks of applying. This includes the distribution tests and the treatment tests. This workshop will teach operators the preparation needed for passing these state exams. This will include multiple resources, study materials and guidance needed to apply and take the test. This workshop will also cover the math basics needed to pass both exams while utilizing the state math conversion sheet.

Participants will learn:

- Where to secure study materials
- Studying basics
- Water distribution and water treatment basics
- Water math skills

The recommended audience includes drinking water operators, laborers and management.

Developing Water System Policies

October 13, 2022 • Yuba City, CA

Hampton Inn and Suites Yuba City • 1375 Sunsweet Blvd. • Yuba City, CA 95991

Public water system boards adopt policies to guide internal decision-making processes. These policies may be related to financial decisions, emergency response, personnel and more. Some policies are required by the State of California, such as having a discontinuation of water service policy that complies with SB 998 - The Water Shutoff Protection Act. This workshop will provide attendees with a reconnaissance-level look at governing documents and how to draft and adopt policies through examples and small group exercises.

Participants will learn:

- The difference between different governing documents
- Typical policies a company and water system should consider implementing
- Steps to draft and adopt policies

The recommended audience includes managers and board members.

Once More into the Bleach: Handling & Application of Sodium Hypochlorite

October 25, 2022 • Sea Ranch, CA

Del Mar Recreation Center • 40600 Leeward Rd. • Sea Ranch, CA 95497

Chlorine is the most commonly used drinking water disinfectant in all regions of the world. Today, about 98 percent of U.S. water treatment systems use some type of chlorine disinfection process to help provide safe drinking water. By a huge margin, sodium hypochlorite is the disinfectant used by the vast majority of small (populations of less than 10,000) water systems. Hypochlorite is also the most hazardous chemical used by most of these water systems. If improperly handled, sodium hypochlorite can create a hazardous and potentially fatal environment.

This learning event gives small water system operators the knowledge, skills and resources necessary to safely handle and reliably feed sodium hypochlorite.

Participants will learn:

- The physical and chemical properties of sodium hypochlorite
- Safe handling of sodium hypochlorite
- Hypochlorite decay and its effect on treatment
- How to read and use the sodium hypochlorite SDS
- The origins of germ theory and history of chemical disinfection
- Basic mechanisms of chemical disinfection
- 20 best practices for feeding hypochlorite
- The operation of hypochlorite feed pumps

The recommended audience includes all water system operators that use hypochlorite.

Utility Bookkeeping 101: From Shoebox to Financial Statements

October 26, 2022 • Sea Ranch, CA

Del Mar Recreation Center • 40600 Leeward Rd. • Sea Ranch, CA 95497

Have you ever wondered where all the numbers on your financial statements came from? In this fast-paced, hands-on class you will take a deep dive into developing a full set of books, either manually or using Excel. From setting up the chart of accounts, journals and general ledger, to entering transactions, to producing financial statements, you will do it all! This class will be of value to everyone (even those using accounting software) who want a solid understanding of the behind-the-scenes processes that put their financial information into a useable format for making decisions.

Participants will learn how to:

- Set up and balance a set of books either manually or using Excel
- Enter transactions into journals
- Record journal entries into the general ledger
- Reconcile books and make closing entries
- Produce vital financial statements

The recommended audience includes governing bodies, bookkeepers/accountants, managers and operators.

Participants are requested to bring a laptop with Excel.

Groundwater Treatment Techniques

November 2, 2022 • Victorville, CA

Courtyard Victorville • 9619 Mariposa Rd. • Hesperia, CA 92345

A significant number of California communities rely on contaminated groundwater sources for their public drinking water supply, requiring the source to undergo a comprehensive treatment effort. Operators of groundwater systems therefore need a comprehensive reconnaissance-level knowledge of groundwater treatment technologies and how these technologies are applied to removal and control of specific groundwater contaminants. This workshop will go over the six basic technologies used in groundwater treatment and explore treatment for the seven most common groundwater contaminants.

Participants will learn:

- An understanding of the basic technologies used in groundwater treatment including filtration, membrane processes, sorption processes, ion exchange, precipitation, chemical feed systems
- How to treat the seven main contaminants including microbial contaminants, iron and manganese, arsenic, nitrate, uranium, organics (VOCs & SOCs), hydrogen sulfide

The recommended audience includes operators, managers and board members.

Uranium in Drinking Water Symposium

November 3, 2022 • Victorville, CA

Courtyard Marriott Victorville • 9619 Mariposa Rd. • Hesperia, CA 92345

See page 19 for more information

No Bad Bugs: Protecting Your System from Microbial Contaminants

November 15, 2022 • El Centro, CA

County offices of Imperial County • 940 W. Main St., Ste. 208 • El Centro, CA 92243

Your water system can easily and effectively spread waterborne diseases such as cholera, typhoid and E. coli. The Center for Disease Control and Prevention documents more than 22 waterborne disease outbreaks annually in U.S. public water supplies. These outbreaks cause over 10,000 cases of illness. Protecting your water system from these microbial contaminants is a fundamental goal of every water system. In this workshop, we will trace the origins of a water system operators' battle with bad bugs, from Dr. Snow removing the handle on the Broad Street Pump in London to stop the 1854 cholera epidemic, to modern sanitary surveys and disinfection methods. The goal of this workshop is to make the water system operator aware of the pathways of microbial contamination and to provide low-cost strategies to prevent contamination of their system.

Participants will learn:

- The five most common routes of microbial contamination of a water system
- How to conduct a simple but effective Sanitary Survey on your water system
- The importance of chlorine residual as a low-cost and rapid method of detecting microbial contamination
- How to use operational records to identify water quality problems

The recommended audience includes all water system operators, managers and board members.

Electrical Controls: Theory & Troubleshooting

December 6, 2022 • Claremont, CA

DoubleTree by Hilton • 555 W. Foothill • Claremont, CA 91711

A basic understanding of control systems is critical to be successful as a water utility operator. We will explore the basics of control signals and how they are processed by Supervisory Control and Data Acquisition (SCADA) systems. Analog versus digital signals will be discussed using real world examples. This will be a deep dive into the nuts and bolts of control systems.

Participants will learn:

- Basic wiring schemes for common control system components
- The differences between analog and digital signals
- Basic instrumentation troubleshooting and maintenance
- Instrumentation calibration practices
- How to spot possible instrument failures in SCADA systems

The recommended audience includes operators, engineers/technicians and technical assistance providers.

Asset Management & Capital Improvement Planning

December 7, 2022 • Claremont, CA

DoubleTree by Hilton • 555 W. Foothill • Claremont, CA 91711

For any water utility, even a very small water system, asset management (e.g. water tanks, pumps, computers, buildings, etc.) plays a significant role in the overall financial performance and sustainability of the water system. With proper planning, emergencies can be avoided and overall costs will be reduced.

A capital improvement plan (CIP) prioritizes the replacement or installation of infrastructure assets. It includes the forecasting and budgeting of capital outlay and is an integral part of the budgeting and rate-setting process for even very small water systems.

Participants will learn:

- What is a CIP
- Why a water system needs a CIP
- Eight Elements of a CIP
- Nine Criteria for Prioritizing
- Updating a CIP

The recommended audience includes board members, general managers, financial managers and operators.

Public Notification: Your Customers Have the Right to Know

December 8, 2022 • Claremont, CA

DoubleTree by Hilton • 555 W. Foothill • Claremont, CA 91711

Despite the efforts of water suppliers, water quality can sometimes change, and problems with drinking water can and do occur. When problems arise, consumers have a right to know what happened and what they need to do to protect themselves. The public notice requirement of the Safe Drinking Water Act requires water suppliers to provide this notice and sets strict requirements on the form, manner, content and frequency of public notices. EPA specifies three categories, or tiers, of public notification. The delivery timeframe depends on what tier a violation or situation falls into. Each tier has different required methods for delivery.

Participants will learn:

- The 10 required elements of a public notice
- How to determine which tier your situation falls under
- Federal and state requirements pertaining to public communication and notification
- Consumer Confidence Report basics

The recommended audience includes water system operators and managers.



Sanitary Surveys

December 13, 2022 • Auburn, CA

Max's Restaurant & Bar • 110 Grass Valley Hwy. • Auburn, CA 95603

It is the ultimate responsibility of every operator, manager and board member to provide safe drinking water to their customers. The prevention and removal of contaminants from the water is an essential job function. Sanitary surveys are a very important tool in helping water systems provide safe drinking water. The Ground Water Rule puts increased regulatory emphasis on conducting sanitary surveys and correcting deficiencies before they lead to water contamination events.

This workshop will give the participants an overview of sanitary surveys. Guides and templates will be provided so that individuals can conduct sanitary surveys of their own water systems.

Participants will learn:

- What a sanitary survey is
- The benefits of conducting your own sanitary survey to provide safe drinking water to your customers
- The sanitary survey requirements in the Groundwater Rule
- How to use the EPA sanitary survey guidebooks and templates

The recommended audience includes system operators and managers.

Source Water Protection

December 14, 2022 • Auburn, CA

Max's Restaurant & Bar • 110 Grass Valley Hwy. • Auburn, CA 95603

Surface water or groundwater can serve as drinking water sources, and they each have their own treatment requirements for public drinking water supplies. Protecting source water from contamination can reduce treatment costs, saving both time and money. Protecting source water also reduces risks to public health from exposure to contaminated water.

Source water assessments provide water utilities, communities and others with information needed to protect drinking water sources. Learning how to conduct a source water assessment and implement management measures can prevent, reduce or eliminate risks to your drinking water supply.

Participants will learn:

- Delineation of source water protection area
- Inventory of known and potential contamination sources
- Determine susceptibility of your PWS to contaminant sources
- Public education about threats identified
- Management measures for prevention, reduction or elimination of risks
- Contingency planning for contamination events

The recommended audience includes operators, management, water system personnel or anyone with an interest in better understanding the value of operating a safe drinking water system.



Special Events

Join us for two special events

CalTAP Fair: Emerging Trends in Water

August 25, 2022 • 8:30 a.m. – 4:00 p.m.

San Rafael, CA

Embassy Suites • 101 McInnis Parkway • San Rafael, CA 94903

Technical Track

Groundwater Well Operation & Maintenance

Well equipment must be maintained to ensure long life and quality water within the system. Wells need to be monitored regularly to compile vital information on the health of the source. How is your well performing? What goes into the process of choosing a well site? Have you been monitoring your water levels in the aquifer? This workshop will address these topics and more.

Participants will learn:

- Well site selection process
- Well inspection
- Well maintenance
- Groundwater qualities
- Measuring drawdown
- Well sounders: Which one is right for me?

The recommended audience includes operators, management, water system personnel or anyone with an interest in better understanding the value of operating a safe drinking water system.

Pumping System Troubleshooting

How many times has this happened to you? You discover that one of your pumps is not performing like you think it should, or it will not run at all. What are your next steps? When should you call in an expert? These questions and more will be answered in the Pumping System Troubleshooting workshop. This will be a quick “need to know” course in the most common pumping and electrical system issues that could leave you out of water.

Participants will learn:

- Electric motor troubleshooting and common issues
- How to calculate TDH in a fluid pumping system
- How to calculate friction loss
- How to read pump curves
- Centrifugal pump troubleshooting techniques

The recommended audience includes system operators, technicians and managers.

Managerial Track

Simple Water Auditing

Water production is up but water sales are down, where is the water going? How do I start to look for where my system is leaking? Are the water lines leaking or are the meters slow? Could it be my accounting system? These questions and more will be answered in the Simple Water Auditing session. We will walk you through how to conduct a water audit and look at the free water auditing tool.

Participants will learn:

- Types of water loss
- How to calculate the amount of water loss
- About free water loss auditing tools

The recommended audience includes system operators, technicians, managers and board members.

Regionalization

No water system is an island; we need each other. Small water systems must meet the same regulations as large systems without the economies of scale. What's a system with 1,000 connections or less to do?

This workshop will discuss the spectrum of opportunities for partnering with others. From casual information sharing or operational support, to formal consolidation or joint powers agreements, we will review the challenges and benefits of partnering up.

By creating partnerships and opportunities for working together, we can solve some of our small system challenges.

Participants will learn:

- How to evaluate their system's potential for partnership
- Options for working with other systems
- The next steps to start or continue the conversation

The recommended audience includes anyone involved with a small water system.

Combined Track

Recruiting & Retention

Your water operator, office staff or manager has just given their notice and they are moving on to another job. They have been there for years and know the system history, where all the (hidden) valves/meters are and they developed relationships with all entities required to manage or operate a public water system. The powers that be (local government and/or management) may be wondering, "What could we have done to prevent this employee from seeking other employment?" and "How do we go about hiring someone to replace this valuable resource?" This workshop will utilize the trainer's and participants' experiences to explore these questions.

Participants will learn:

- About advertising, interviewing and hiring of water system managers, office staff and operators
- The resources available to assist with hiring good people
- About budgeting to acquire and retain competent staff
- How to use staff evaluations to help with retention longevity
- How to retain excellent staff (hint, it's not always about the money!)

The recommended audience includes management & local government board of directors.

Workforce Development

This workshop provides tools for employers to help with employee development through training and self-improvement. This will allow for advancement and promotion of the employers' workforce. This starts with new employees, who require guidance to become the staff you need during their probation period. Existing employees need continuing training to ensure that they are meeting expectations and the potential for future advancement. This presentation will assist management and staff with these goals with lecture, resources, exercises, and discussion.

Participants will learn:

- Tips for training new employees for employment longevity
- Appropriate training events for existing staff (technical or administrative)
- Developing employees for advancement within the organization
- Team building for employees

The recommended audience includes management & local government board of directors.

Uranium in Drinking Water Symposium

November 3, 2022 • Victorville, CA

Courtyard Marriott Victorville • 9619 Mariposa Rd. • Hesperia, CA 92345

Uranium is a common, naturally occurring and radioactive substance. It is a normal part of rocks, soil, air and water. Uranium occurs in nature in the form of minerals, but never as a metal. It enters water by leaching from soil and rocks, or in releases from processing plants. Uranium has demonstrated toxic effects on human kidneys, leading to their inflammation and changes in urine composition. Uranium can decay into other radioactive substances, such as radium, which can cause cancer with extensive exposure over a long period of time.

This one-day learning event will explore the occurrence, health effects and treatment of uranium in drinking water. Treatment technologies will focus on the most common treatment processes used in small water systems.

Uranium has a half-life of 4.468 billion years. So, if you don't have a few billion years to let nature take care of your uranium problem, this learning event is for you.

Participants will learn:

- Uranium sources and properties
- Uranium health effects
- Uranium treatment technologies, including waste disposal issues

The recommended audience includes operators, managers, and water system personnel.

Trainer Biographies



KIM BENNETT, Rural Development Specialist – Environmental, teaches classroom workshops and provides managerial and financial technical assistance for water and wastewater systems in rural communities in California. Kim conducts median household income (MHI) surveys, and her responsibilities include planning and implementing MHI surveys under RCAC's Proposition 1 and State Revolving Fund contracts with the State of California. Kim also represents RCAC at conferences, CFCC and CalTAP Fairs and other outreach events. She is a member of the American Water Works Association (AWWA).

MICHAEL BOYD, Regional Environmental Manager, conducts numerous water system assessments, sanitary surveys, source water assessments and related technical assistance. He has more than 25 years of experience in public water systems operations, maintenance, inspection, and management. He is a certified investigator/inspector and a licensed Grade 1-4 Treatment/Distribution and backflow operator. Mike assists operators in set-up of new and existing water treatment facilities including surface water, iron and manganese removal, lime softening systems and ion-exchange treatment. He regularly conducts workshops on water system issues throughout the country.

JASON CARMAN, Rural Development Specialist – Environmental, provides technical, managerial, and financial assistance and training for drinking water and wastewater systems. He assists them to achieve regulatory compliance and improve operations procedures. Jason has over 25 years of experience working in all types of water, wastewater, and industrial fluid handling systems in operations and management. He is a Grade 4 Water Distribution Operator, Grade 3 Water Treatment Operator, and a licensed maintenance electrician in Oregon. His electrical experience is industrial in nature, focusing on power systems and industrial automation/SCADA. Jason has over 15 years of experience supervising distribution, treatment and electrical operations for public water and electric utilities. He has also been responsible for capital improvement planning and execution. He served as the Oregon Health Authority's Direct Responsible Charge (DRC) for one of the largest public water utilities in Oregon for four years. He regularly conducts technical and managerial workshops throughout RCAC's service area.

MARY FLEMING, Rural Development Specialist – Environmental, provides financial management and QuickBooks™ technical assistance and training to small utilities and nonprofit housing organizations' staff, management, and board of directors. She has more than 30 years of experience in financial management. Mary develops financial management training curricula and teaches online and in classroom workshops for RCAC. She performs financial statements and rate analyses for utilities in California and works with other RCAC staff to provide the utilities with written recommendations for sustainability. Mary is a certified QuickBooks™ Pro Advisor and holds a bachelor's degree in accounting from California State University, Stanislaus.

JOHN HAMNER, Rural Development Specialist – Environmental, has more than 24 years of experience teaching classroom workshops on water and wastewater utility technical, managerial, and financial topics. John holds a Grade 3 California Water Treatment Operator Certification, a D3 Water Distribution Operator Certification, a Grade 3 Wastewater Certification and is a Water Conservation Practitioner I (CA/NV AWWA). He has managed and operated water and wastewater systems in Mendocino County and Lake County, California. He teaches water and wastewater classes for Woodland Community College at its Clearlake campus and is a full-time trainer for RCAC.

BRIDGET HARRIS, Rural Development Specialist III – Environmental, provides financial and managerial trainings to boards and councils throughout the rural west. She has nearly 20 years of experience leading management and financial aspects of nonprofit organizations. She develops and delivers curricula for in-person and online trainings, as well as system specific trainings for staff and boards. Bridget conducts financial analyses and rate studies throughout the west and assists utilities in asset management planning. She holds a bachelor's degree in accounting and an MBA in finance. Additionally, Bridget holds treatment and distribution Level 1 certifications in Nevada.

KATRINA HIOTT, Rural Development Specialist III – Environmental, provides training and technical assistance to mutual water companies, nonprofits, and local and Tribal governments to improve or develop water and wastewater systems and programs for rural communities. Before joining RCAC, Katrina worked as an environmental health specialist in water protection programs in local government, where she assisted the public in complying with county well ordinances and state water codes. Her experience includes creating and conducting environmental education programs, assisting small public water systems with state and federal compliance, performing water system and private well evaluations, well construction, destruction and modification permitting, and inspection of new construction of on-site wastewater systems.

DAVID HOSSLI, Rural Development Specialist- Environmental, provides technical assistance and training to small water systems in California. David has 35 years of water system operation and management experience. Before coming to RCAC he served for 30 years in many roles from operator to management on a water system serving 100,000 residents. He was the Water System Supervisor and Chief Operator when he retired. He holds a D5 California Water Distribution Certification and T2 California Water Treatment Certification.

JIM MCVEIGH, Rural Development Specialist, has more than 45 years of experience in the operation and management of water utilities. Jim holds certifications as a Grade 5 California Water Treatment Operator, Grade 4 California Water Distribution Operator, Grade 4 Hawaii Water Treatment Operator, and Grade 4 Hawaii Water Distribution Operator and is a Certified Environmental Trainer. He retired as the senior water operations supervisor running the City of San Diego's Otay Water Treatment Plant. Jim holds a bachelor's degree in chemistry and biology, a master's degree in organizational management and has extensive training in drinking water quality issues.

SAMANTHA RYAN, Rural Development Specialist – Environmental, provides training and assistance to water and wastewater systems. Samantha holds Grade 3 Wastewater Treatment, Grade 2 Water Treatment, and Grade 2 Water Distribution operator certifications. During her five years as a water and wastewater operator, Samantha operated a pond and marsh wastewater system, a grade 3 water distribution system, and tested and repaired backflow prevention devices. She was a program and regulatory analyst for a water district for three years where she helped to ensure compliance with many federal and state regulations, including those established to satisfy the California Safe Drinking Water Act.

SAMANTHA VAN BREUKELN, Rural Development Specialist Trainee – Environmental, conducts median household income (MHI) surveys according to California law and regulations. Samantha also performs financial rate and financial capacity analyses for water utilities in California. She holds a bachelor's degree in economics, specializing in quantitative analysis from California State University at Fullerton.

MILES RINNE, Rural Development Specialist – Environmental, provides technical, managerial, and financial training and assistance in water and wastewater to rural communities. Miles holds a bachelor's degree in geography and master's degree in urban and regional planning with a certificate in GIS. He specializes in mapping small water and wastewater systems using Geographic Information Systems. Prior to working for RCAC, Miles worked in a planning department and taught outdoor education.

Training Information

Contact Hours & Certificates:

Each classroom workshop qualifies for six (6) drinking water contact hours. Exceptions include the AB54 & 240 class, which qualifies for two (2) drinking water contact hours.

Each online, one-part workshop qualifies for two (2) drinking water contact hours. Each online, two-part series workshop qualifies for up to four (4) drinking water contact hours. Attendees may register and participate in one part for two (2) drinking water contact hours or two parts for four (4) drinking water contact hours.

Certificates for all online sessions are available for self-printing within 48 hours through your RCAC website registration/profile account. Self-printing classroom certificates are also available for most workshops, but may take longer to access through your online account. RCAC and the Water Board require signatures to verify attendance for in-person trainings and we must wait to receive the original classroom sign-in sheets from the RCAC trainer in order to verify attendance. Certificates will be provided at the conclusion of each on-site training to those who pre-registered at least two weeks in advance.

COVID-19 Response

We are monitoring the situation and will adhere to state and county COVID-19 guidelines/restrictions. All classroom workshops are subject to change in an effort to ensure public and trainer safety, and to comply with guidelines/restrictions.

Online Workshops

Online workshops will be hosted on the GoToTraining platform. The recommended web browsers are Edge and Chrome. Use of other browsers may lead to functionality issues. If using an IOS device, the GTT application should be downloaded and used.

All online workshop registrations require a valid e-mail address. See page 2 for more detailed information.

In order to receive contact hours for online workshops, each person must be registered and complete an online survey at the end of the training.

Are you attending as a group, but not watching from your own computer?

Attendees do not need to participate from their own computer/device for the online trainings, but will need to complete an evaluation to receive credit. **Your group leader will need to inform RCAC (registration@rcac.org) of attendees who will be viewing sessions as a group prior to session start. Sign-in sheets are NO LONGER accepted to validate attendance for contact hours for online workshops.**

Please notify RCAC as soon as possible if you cannot attend a session that you have registered for, as we have an attendee limit for online workshops. Cancellations can be made by email at registration@rcac.org or by phone at (916) 447-9832 x 1429. Please do not cancel through GoToTraining.

IMPORTANT: Failure to attend three workshops for which you reserved a seat (and did not cancel) in any six-month period will disqualify you from attending workshops in the following six-month period. **Please cancel a minimum of 48 hours in advance to allow others to attend the training.**

For the fastest registration and most current information, please visit:

https://stage.events.rcac.org/rcac/Free_CA_Drinking_Water_Workshops.asp

Then choose "California" from the state drop down and click "Filter" (see example at right).

Registration help: <http://www.rcac.org/trainings/registration-help/>

Training department phone: (916) 447-9832 ext. 1429 • Fax: (916) 372-5636 • **Mail:** RCAC • 3120 Freeboard Drive, Suite 201 • West Sacramento, CA 95691

How do I find my certificates online?

You can now access your contact hour certificates online. (Not all trainings may be available). From the "View My Profile" page, click at the prompt for your certificates and history. That will take you to "My Registration Portal" page.

You can then print your certificates directly from your browser.

If you are unable to access your records through your account for any reason, please phone our staff at (916) 447-9832 ext. 1429 or email registration@rcac.org. Certificates for all trainings may NOT be available. Contact registration@rcac.org if you cannot locate your training certificate online.

The screenshot shows the RCAC website interface. At the top, there's a navigation bar with 'TRAININGS', 'CALENDAR', and 'HOUSING COUNSELING TRAININGS'. Below this, the 'View My Profile' section is visible, with a red box highlighting the link 'To access your training history and certificates click here'. Below that, the 'My Registration Portal' section is shown, featuring a table of course registrations. The table has columns for Course Name, Course Session, Date, Instructions, and Certificate. Two rows are highlighted with red boxes around the 'View Certificate' links: 'AB54 & AB240: Ethics for Mutual Water Board Members ONLINE' and 'Basic Electric Concepts'.

MY CURRENT COURSE REGISTRATIONS				
Course Name	Course Session	Date	Instructions	Certificate
Financial Policies and Procedures for Small Water Systems	Financial Policies and Procedures for Small Water Systems 020718	2/7/2018		

MY COURSE HISTORY				
Course Name	Course Session	Date	Instructions	Certificate
AB54 & AB240: Ethics for Mutual Water Board Members ONLINE	03232017 10am Online AB54 & AB240 Board Training for Mutual Water Systems	3/23/2017		View Certificate
Basic Electric Concepts	120716CA Santa Barbara Basic Electric Concepts	12/7/2016	These contact hours have been approved for the Registered Environmental Health Specialist Program.	View Certificate

July–December 2022 Registration Form

There is NO FEE to attend these workshops. Please register in advance, as space may be limited. **Priority will be given to smaller water systems.** Please complete one form for each person who will attend. You can also register online at https://stage.events.rcac.org/rcac/Free_CA_Drinking_Water_Workshops.asp.

Name: _____

Email: _____ (All notifications regarding workshop changes are made via email)

Company or Water System: _____

Preferred phone: ☐ Work ☐ Home or ☐ Mobile: (_____) _____

Cell Phone (for text message notifications) _____ Cell phone carrier: _____

Preferred mailing address: ☐ Organization or ☐ Home Mailing address: _____

City: _____ State: _____ Zip: _____

Type of Water System: ☐ Community ☐ Non-community ☐ Non-community/Non-transient ☐ N/A

Water System ID#: _____ Number of connections: _____ Serves less than 10,000 population: ☐ Yes ☐ No

Operator Certification #(s): ☐ Distribution ☐ Treatment ☐ Wastewater _____

SPECIAL NEEDS: If you have special needs addressed by the Americans with Disabilities Act, please notify RCAC at (916) 447-9832 ext. 1003 or mayres@rcac.org at least three weeks prior to each workshop you are attending, so that we may make accommodations for you.

Please register me for the following workshop(s):

Online Workshops (one-part)

- 07/12 ☐ 10 a.m. & 2 p.m. Groundwater Wells with Iron
- 07/26 ☐ 10 a.m. & 2 p.m. Water System Basic Operations
- 08/09 ☐ 10 a.m. & 2 p.m. Get the Lead Out: Lead & Copper Rule Revisions
- 08/10 ☐ 10 a.m. & 2 p.m. Disinfection By-Products Rule
- 08/16 ☐ 10 a.m. & 2 p.m. Mapping Small Water Systems . . .
- 08/17 ☐ 10 a.m. & 2 p.m. Back to Basics: Water Supply & Sources
- 08/18 ☐ 10 a.m. & 2 p.m. MHI as a Management Tool
- 08/31 ☐ 10 a.m. & 2 p.m. Storage & Distribution
- 09/07 ☐ 10 a.m. Pathogens in Drinking Water
- 09/07 ☐ 2 p.m. Coliform Sampling Procedures
- 09/13 ☐ 10 a.m. & 2 p.m. Hydrant Installation
- 09/27 ☐ 10 a.m. & 2 p.m. Water Quality Sampling
- 09/28 ☐ 10 a.m. Arsenic
- 09/28 ☐ 2 p.m. Nitrates
- 10/04 ☐ 10 a.m. & 2 p.m. Groundwater Well Operation & Maintenance
- 10/05 ☐ 10 a.m. Budgeting for Small Water Systems
- 10/18 ☐ 10 a.m. & 2 p.m. Emergency Response Planning & Hazard Mitigation
- 10/19 ☐ 10 a.m. & 2 p.m. Navigating State Funding
- 10/27 ☐ 6 p.m. AB54 & AB240: Ethics . . .
- 11/09 ☐ 10 a.m. & 2 p.m. The Safe Drinking Water Act
- 11/17 ☐ 10 a.m. & 2 p.m. Water System Workforce Development
- 11/29 ☐ 10 a.m. & 2 p.m. Cyber Security for Drinking Water Systems
- 11/30 ☐ 10 a.m. Financial Management for Small Water Systems
- 12/01 ☐ 10 a.m. & 2 p.m. Dealing with "Forever Chemicals": PFAS in Drinking Water
- 12/13 ☐ 10 a.m. & 2 p.m. Board Roles & Responsibilities
- 12/20 ☐ 10 a.m. & 2 p.m. Partnerships & Regional Solutions
- 12/21 ☐ 10 a.m. & 2 p.m. Understanding Bacteriological Water Quality Standards

Online Deep Dive Workshops

- 07/13 ☐ 8:30 a.m. Financing Your Small Water System: Budgeting & Rates Setting
- 08/30 ☐ 8:30 a.m. Operation & Maintenance: . . .
- 10/11 ☐ 8:30 a.m. Regulation Essentials: The California Safe Drinking Water Act
- 11/08 ☐ 8:30 a.m. Pump & Motors Troubleshooting

Online Series Workshops: Do the Math 4-Part Series

- 09/01 ☐ 10 a.m. Operator Math 101: The Basics
- 09/08 ☐ 10 a.m. Operator Math 102: The Basics
- 09/15 ☐ 10 a.m. Operator Math 201: Applied Math Problems
- 09/22 ☐ 10 a.m. Operator Math 301: Advanced Math Problems

Classroom Workshops

- 07/20 ☐ Revised Total Coliform Rule (Bakersfield)
- 07/21 ☐ Maintaining Distribution Water Quality (Bakersfield)
- 07/28 ☐ AB54 & AB240: (Salinas)
- 08/02 ☐ Groundwater Well Operation & Maintenance (Redding)
- 08/03 ☐ Financing Your Small Water System: Budgeting & Rates Setting (Redding)
- 09/14 ☐ Creating Operation & Maintenance Plans (Merced)
- 09/15 ☐ Must Have Financial Policies & Procedures for Small Water Systems (Merced)
- 09/20 ☐ Comprehensive Guide to Water Sampling (Sacramento)
- 09/21 ☐ CIP & Funding Options (Sacramento)
- 10/12 ☐ Water Operator Certification Prep (Yuba City)
- 10/13 ☐ Developing Water System Policies (Yuba City)
- 10/25 ☐ Once More into the Bleach (Sea Ranch)
- 10/26 ☐ Utility Bookkeeping 101..... (Sea Ranch)
- 11/02 ☐ Groundwater Treatment Techniques (Victorville)
- 11/15 ☐ No Bad Bugs..... (El Centro)
- 12/06 ☐ Electrical Controls: Theory & Troubleshooting (Claremont)
- 12/07 ☐ Asset Management & Capital Improvement Planning (Claremont)
- 12/08 ☐ Public Notification: Your Customers Have the Right to Know (Claremont)
- 12/13 ☐ Sanitary Surveys (Auburn)
- 12/14 ☐ Source Water Protection (Auburn)

Special Events

- 08/25 ☐ CalTAP Fair: Emerging Trends in Water (San Rafael)
- 11/03 ☐ Uranium in Drinking Water Symposium (Victorville)


Registration questions or problems? Contact the Training Department:

Email: registration@rcac.org • **Phone:** (916) 447-9832 ext. 1429 • **Fax:** (916) 372-5636

Mail: RCAC • 3120 Freeboard Drive, Suite 201 • West Sacramento, CA 95691



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