



# FREE California Drinking Water Workshops

Classroom & Online: January–June 2018

## 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.

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



©2018. This document was prepared using funds under Agreement #15-017-550 with the California State Water Resources Control Board; the total Agreement is for \$3,971,379 and will produce multiple documents and training events over the span of the multi-year contract.

## Contact Hours & Certificates:

Each classroom workshop, Financial Symposium and CalTAP Fair qualify for six (6) drinking water contact hours. Exceptions include the AB54 class, which qualifies for two (2) drinking water contact hours and the Small Water System Operations and AB54 & AB1234 in Español classes which qualify for four (4) contact hours.

Each online workshop qualifies for two (2) drinking water contact hours.

Certificates for all online sessions are available for self-printing within 5 business days through your RCAC website registration/profile account. Self-printing classroom certificates are also available for most workshops, but might 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 pre-registered at least two weeks in advance, except for the CalTAP fair.

### 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.

## January–June 2018 Workshop Topics and Locations

### ONLINE WORKSHOPS

#### Board & Staff Series:

- Financial Policies
- Financial Management for Small Water Systems
- Budgeting
- Financial Management & Rate Setting
- AB54: Ethics Training for Mutual Water Companies
- Using Financial Statements

#### Operator Series:

- Pumps & Motors Efficiency
- Creating Operation & Maintenance Plans
- Distribution O & M and Math
- Energy Efficiency
- Storage & Distribution
- Drinking Water Wells & Hydrology: Monitoring What We Cannot See

#### Regulations Series:

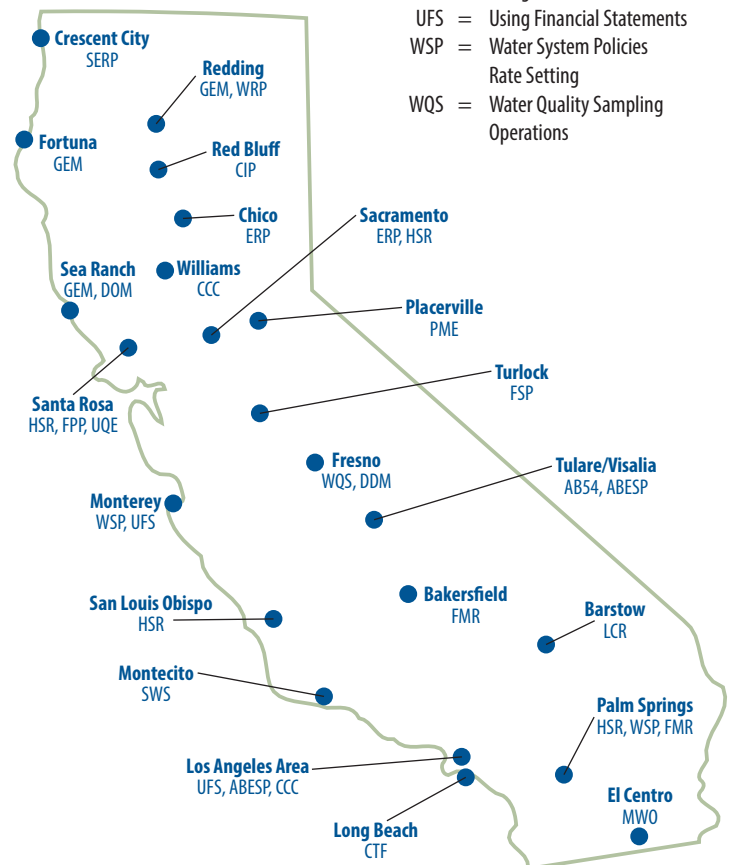
- Disinfection By-Products Rule II
- Sanitary Surveys
- A Flint Case Study and LCR Revisions
- Revised Total Coliform Rule (rTCR)
- What you need to know about the new Groundwater Management Act
- Surface Water Treatment Rule
- Consumer Confidence Reports (CCR)
- Performing a Revised Total Coliform Assessment Level 1 & 2

#### Other:

- Partner Up: Achieve Success by Working with Others
- Cross Connection Controls
- Arsenic Remediation
- Achieving Sustainability through Regionalization

### CLASSROOM WORKSHOPS

|  |  |
|--|--|
| AB54 = AB54: Ethics Training                 | FMR = Financial Management &             |
| ABESP = AB54 & AB1234 en Español             | FPP = Financial Policies & Procedures    |
| CCC = Cross Connection Controls              | FSP = Financial Symposium                |
| CIP = Capital Improvement Planning           | GEM = Google Earth Mapping & CIP         |
| CTF = CalTAP Fair                            | HSR = How to Sample and Report           |
| DDM = Disinfection & Dosing Math             | LCR = Lead & Copper Rules                |
| DOM = Distribution O & M and Math            | MWO = Math for Water Operators           |
| ERP = Emergency & Disaster Response Planning | PME = Pumps & Motors Efficiency          |
|  | SERP = Security and ERP                  |
|  | SWS = Small Water System                 |
|  | UQE = Using QuickBooks and Excel         |
|  | UFS = Using Financial Statements         |
|  | WSP = Water System Policies Rate Setting |
|  | WQS = Water Quality Sampling Operations  |



# Special Event: CalTAP Fair



## Join us at the CalTAP Fair for Water Systems!

**March 15, 2018 • Long Beach, CA  
8:30 a.m. to 4 p.m.**

The Westin Long Beach  
333 E Ocean Blvd • Long Beach, CA 90802

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.

*(Lunch is one hour and on your own)*

## CalTAP Fair: Long Beach, CA • March 15, 2018 PROGRAM AT A GLANCE

|            |   |                    |                  |
|------------|---|--------------------|------------------|
| 8 a.m.     | Registration opens                              |                    |                  |
| 8:30 a.m.  | Welcome & Introductions<br>CalTAP Presentations |                    |                  |
| 10:15 a.m. | Break   |                    |                  |
| 10:30 a.m. | Regulations Update                              |                    |                  |
| Noon       | Lunch (on your own)                             |                    |                  |
| 1 p.m.     | Case Study                                      | Distribution O & M | Operations Plans |
| 2:20 p.m.  | Break   |                    |                  |
| 2:40 p.m.  | RTCR Level 1                                    | Distribution Math  | Rate Setting     |
| 4 p.m.     | 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 the participant having to travel. Each session is two hours and qualifies for two contact hours.

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.

## Audio recommendations

We recommend using a headset or speakers with your computer. You do not need a microphone for this class. You can 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 to provide assistance if you are having problems connecting to a session. **If you continue to have problems connecting, contact GoTo Tech Support, toll free, at (855) 352-9002, and choose option 1.**

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.** Sign-in sheets are **NO LONGER** accepted to validate attendance for contact hours.

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

Each attendee does not need a separate connection to the online training, but **EVERY** attendee is required to have an email address and to complete an evaluation to receive credit. Your group leader will be sent an evaluation link (within two hours after the training) to share and to be completed individually to receive credit.

## 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.

Please notify RCAC as soon as possible if you cannot attend a session that you have registered for, as we have a 60 attendee limit for online workshops. Cancellation can be made by email at [registration@rcac.org](mailto:registration@rcac.org) or by phone at (916) 447-9832 x 1429.

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

**PLEASE CANCEL A MINIMUM OF 24 HOURS IN ADVANCE TO ALLOW OTHERS TO ATTEND THE TRAINING.**

## BOARD AND STAFF TOPICS

### Financial Policies

**January 23, 2018 @ 10:00 a.m.**

Your 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 safe guarding assets. The goal of good financial policies and procedures is risk management; 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.

As a result of attending, you will:

- Be able to list common financial policies for small water systems
- Recognize the benefits of written, up-to-date policies
- Identify which policies to create or update at your system
- Create a draft policy using a template

Recommended for all board and/or council members, accountants, bookkeepers and managers of small water systems.

### Financial Management for Small Water Systems

**February 01, 2018 @ 10:00 a.m.**

Do you want to improve your water system's financial health? As a member of the board 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 insure 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 and understand:

- Where to acquire financial tools, guides and templates to improve your financial health including rate setting, budgeting, asset management and customer policies
- Basic financial terms
- How to read and interpret common financial statements in order to make more informed decisions
- How to use financial statements to keep your system financially viable
- Elements of internal controls
- Identifying methods to balance the budget

This session is ideal for a board member of a drinking water utility who needs to understand the basic financial aspects of a utility's operations.

### Budgeting

**March 06, 2018 @ 10:00 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 of the primary tools 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 and understand:

- How to prepare a budget
- How to identify revenue and expenses
- Identify fiscal policies for assisting in balancing the budget
- How to review the budget comparison report on a regular basis
- What types of corrective action can be implemented when you have unexpected expenses or falling revenues

### Financial Management & Rate Setting

**March 29, 2018 @ 10:00 a.m.**

In order to remain viable, all public water systems should be billing their customers for the true cost of producing and delivering safe, aesthetically pleasing water under sufficient pressure. To determine the true value of water produced, a comprehensive budget must be established. Budgets should include reserves for the future replacement of system components. This workshop will show board members, managers and operators how to establish fair rates based on a budget with true costs.

Participants will learn and understand:

- The need to fund reserves
- How to prepare a forecasted budget
- How to implement new rates while adhering to Proposition 218, when applicable
- How to convince the public when rate adjustments are needed
- The pitfalls and limitations of Prop 13 and Prop 218

### AB54: Ethics Training for Mutual Water Companies

**April 11, 2018 @ 10:00 a.m.**

By law, all mutual water board members are required to have two hours of ethics training every six years, and within six months of taking office. This training is designed to provide system longevity and helps assure that board members meet their legal responsibilities. Required topics of training 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 January 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 and understand:

- All 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

Recommended audience includes directors, board members and managers of Mutual Water Companies.

## Using Financial Statements

**June 27, 2018 @ 10:00 a.m.**

The goal of good financial management is to ensure that your small water system is consistently operated as a financially sustainable enterprise that will continue providing safe and reliable water, both in the short and long-term. This workshop will introduce the process of using your financial statements as a tool for sound decision making to manage your current fiscal situation, as well as guide the future of your utility.

You will learn how to:

- Read and understand common Financial Statements
- Calculate ratios to determine if you are on a positive course
- Identify reserve accounts recommended for water systems
- How to monitor an annual budget

This session is ideal for a board member or staff of a small drinking water utility who needs to understand basic financial aspects of a utility's operations.

## OPERATOR TOPICS

### Pumps & Motors Efficiency

**January 03, 2018 @ 10:00 a.m. & 2:00 p.m.**

Pumping water is one of the most inefficient uses of energy there is. Most water pumping systems only convert 30 to 60 percent of the power they consume (and you pay for) into useful work. Pumping is one of the lowest margins of efficiency of all commercial and industrial uses. Why? The laws of physics mostly, but also simple mistakes made in selecting a pump or motor for a given duty point. This workshop will help you understand and minimize inefficiency in your pumping systems and how to choose the right pump and motor for the job – one that will save money year after year.

Participants will learn:

- Where to find and how to use free Total Dynamic Head (TDH) and horsepower calculators on the internet
- How to calculate TDH in a fluid pumping system
- How to solve wire-to-water energy calculations
- The six factors in friction loss and how to minimize them

This workshop will give participants a variety of tools, tips and information they can use to reduce energy costs at their utilities. The recommended audience is system operators and managers.

### Creating Operation & Maintenance Plans

**February 15, 2018 @ 10:00 a.m.**

**June 28, 2018 @ 10:00 a.m.**

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 two 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

Recommended audience includes water system operators, managers, and maintenance staff.

### Distribution O & M and Math

**March 08, 2018 @ 10:00 a.m. & 2:00 p.m.**

The drinking water distribution operator will occasionally need to utilize "water math" while maintaining and operating the water distribution system. When installing, replacing or generally working with water pipe the operator needs to plan for trenching materials and disinfecting the water mains once they are installed or repaired. They must also determine the velocity of the water in piping, volumes of water storage tanks, length of time to fill, pressures in the system and disinfection calculations. The operator needs to be familiar with groundwater well math, water meter math and determining system demand based on the customer base.

Participants will learn how to:

- Determine volumes and pressures (psi) of water storage tanks
- Calculate the dosage of chlorine to use while maintaining a water storage tank and installing water mains
- Deduce psi pressures in tanks and pipes and pipe velocity
- Figure well pumping volumes and water meter volumes

Recommended audience includes managers and operators.

### Energy Efficiency

**April 26, 2018 @ 10:00 a.m. & 2:00 p.m.**

Nearly four percent of the nation's electricity is consumed by water and wastewater facilities, and industry experts are predicting that energy costs are likely to increase 20 percent over the next 15 years. Approximately 30 to 60 percent of the average municipal budget is typically associated with water and wastewater treatment costs. Historically, water and wastewater facilities were designed for peak capacity, with little consideration for operational efficiency.

An energy audit performed by trained and certified personnel specializing in water and wastewater energy use can often uncover potential energy savings of 10 to 50 percent annually. But, even a cursory examination done by in-house staff can result in substantial energy savings.

Participants will learn:

- How to identify the biggest "energy wasters" in your operation
- How to calculate the break-even point (payback) of retrofitting obsolete equipment

- The difference between Level 1 (in-house) and Level 2 (contracted) energy audits
- How to select and hire a certified industrial energy auditor

This workshop will give all water systems the information and resources needed to start down the path toward increased efficiency and decreased costs.

Recommended audience is system operators, managers, board members and community leaders with an interest in energy cost reduction.

## Storage & Distribution

**May 22, 2018 @ 10:00 a.m. & 2:00 p.m.**

This module presents the wide aspects and varying operation of water storage systems and distribution piping. The distribution and storage system is the unrecognized backbone of any water system. However, due to its 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.

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 of and how to reduce contamination
- Inspection and record-keeping procedures that improve water quality

This workshop will give participants the information and resources they need to understand proper operation and maintenance of their storage and distribution systems.

Recommended audience includes system operators, new board members, and those considering becoming certified operators of a water system.

## Drinking Water Wells & Hydrology: Monitoring What We Cannot See

**June 21, 2018 @ 10:00 a.m. & 2:00 p.m.**

How is your well performing? How 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 in order 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.

This workshop will look into the many challenges regarding well maintenance:

- Well site selection process
- Well inspection
- Well maintenance
- Hydrology: groundwater qualities
- Drawdown and recovery tracking
- Well sounders; which one is right for me?

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.

## REGULATIONS TOPICS

### Disinfection By-Products Rule II

**January 04, 2018 @ 10:00 a.m. & 2:00 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

Recommended audience includes operators and managers of water systems that chlorinate their water.

### Sanitary Surveys

**January 17, 2018 @ 10:00 a.m. & 2:00 p.m.**

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 new Groundwater 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 new Groundwater Rule
- How to use the Sanitary Survey guidebooks and templates

Recommended audience includes operators, managers, and board members.

### A Flint Case Study & LCR Revisions

**January 18, 2018 @ 10:00 a.m. & 2:00 p.m.**

This session chronicles the events leading up to the Flint water crisis and its aftermath. With the Nationwide news coverage, the water industry has taken a hit on its reputation. Special emphasis will be given to the political and economic climate of the region, operational missteps, and regulatory failures.

Follow up to the event has led to new emphasis on the monitoring of lead and copper

in our drinking water. While the rule has not gone through a major revision, the interpretation has experienced some changes. Are you up to date with these? Please join us and learn or reinforce your understanding of the Lead and Copper Rule today.

- Flint Michigan Timeline:
  - Political and economic background
  - Public complaints and regulatory response
  - Coliform and THM violations
  - Emergency declaration and switch to bottled water
- Flint River Water Quality and System Operations
  - Flint River water quality and pipe deterioration
  - Sample collection technique
  - Effect on chlorine demand, outbreaks and boil water notices
  - Fall out, responsible parties and legal actions
- Lead And Copper Rule Minor Revisions (LCRMR), what is the new focus?
- Possible future changes to LCR

## Revised Total Coliform Rule (rTCR)

**January 31, 2018 @ 10:00 a.m. & 2:00 p.m.**

Drinking water is one of the oldest known public health concerns. Preventing waterborne disease is one of the primary objectives of any drinking water system. Although waterborne disease outbreaks are relatively uncommon in the United States, they do occur. The importance of regular microbial monitoring cannot be over-emphasized. So much of your water system is underground and hidden from view; the only way to be sure you are effectively protecting public health is to monitor the quality of water delivered to customer taps. The primary tool for this is coliform monitoring. This monitoring and regulation is in the process of revision and we have the latest on the 2016 Revised Total Coliform Rule (RTCR) and how to comply.

This workshop addresses all of the areas that a water system operator needs to know about the RTCR including:

- Importance of maintaining microbial safe water
- Actions necessary for the compliance with the RTCR
- Public Notification under the RTCR
- But wait, there's more!!! Reviewing and understanding the triggers for Level 1 and 2 assessments.

This is a must attend session for all operators to learn new essential skills or update your existing knowledge.

## What You Need to Know About the New Groundwater Management Act

**February 22, 2018 @ 10:00 a.m.**

**May 17, 2018 @ 10:00 a.m.**

The Sustainable Groundwater Management Act of 2014 (SGMA) has been called "the most important legislation in California in 100 years". SGMA mandates the sustainable use of groundwater in California. Given the fact that many groundwater basins are in overdraft, implementation of sustainable practices very likely will have a significant impact on small water systems that use groundwater from these basins.

SGMA applies to the 127 High and Medium priority groundwater basins, which account for approximately 96 percent of groundwater use in California. It is therefore very likely that a significant number of small water systems in California will be impacted by the implementation of sustainable practices mandated by this law.

Given that both Water Rights and Adequacy of Supply are DDW TMF elements and that SGMA is very likely to have a significant impact on the both these elements for a large number of small water systems in California, it is very important that these system have adequate training into SGMA's process and requirements.

At the completion of the SGMA training participants will:

- Understand the basics of groundwater hydrology, including: the Water Cycle and types of aquifers.
- Understand the provisions of SGMA, including:
  - Who is affected by SGMA
  - The ultimate goal of sustainable water extractions from a basin
  - What groundwater sustainability plans are and how they might affect our operations
  - Strategies that may be used to achieve sustainability
  - Why you should be involved in your basin's groundwater sustainability plan

The recommended audience for this workshop is water system managers, operators, administrative staff and board members.

## Surface Water Treatment Rule

**March 01, 2018 @ 10:00 a.m. & 2:00 p.m.**

It's been raining for three straight days and your effluent turbidity has just spiked at your water treatment plant. What monitoring and reporting procedures do you follow? What do those new regulations say? Is your treatment method still acceptable? What do you need to report and when? This workshop is designed to help you understand surface water treatment and monitoring regulations by reviewing the basis for current and future regulations.

Participants will learn:

- The Surface Water Treatment Rule
- Long-Term 1 and Long-Term 2 Enhanced Surface Water Treatment Rules
- Existing and future water quality monitoring requirements
- Basic treatment methods and technologies
- Regulatory reporting requirements

The recommended audience is operators and managers of surface water treatment facilities.

## Consumer Confidence Reports (CCR)

**April 19, 2018 @ 10:00 a.m. & 2:00 p.m.**

Informing your customers annually about the sources and quality of your water became a state and federal mandate with the 1996 SDWA amendments. In 2012, regulations were updated to allow electronic delivery of Consumer Confidence Reports (CCR). The exact format and language required for a CCR can be confusing to those creating the report and confusing to customers trying to understand the report.

This workshop will guide you through the process of producing a customer friendly CCR for your water system. You will learn how to use the resources available to produce a CCR, information required to be included, and delivery options. If you are tasked with producing or reviewing this annual report, don't miss this opportunity to create a more valuable report for your customers while ensuring compliance with current regulations.

Participants will learn:

- Resources including California's CCR template and EPA's CCR iWriter



- Required language
- Important dates/deadlines
- Methods of distribution
- Public relations information

Recommended audience for this workshop is anyone who has responsibility for producing and disseminating CCRs, or gathering the data necessary for its completion.

## Performing a Revised Total Coliform Assessment Level 1 & 2

**June 20, 2018 @ 10:00 a.m. & 2:00 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 and who is expected to perform them; 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

Recommended audience includes operators, managers, and board members.

## OTHER ONLINE TOPICS

### Partner Up: Achieve Success by Working with Others

**February 21, 2018 @ 10:00 a.m.**

Small water systems must meet the same regulations as large systems without the economies of scale that large systems enjoy. What's a system with 1,000 connections or less to do? Some call it creating partnerships; others use terms like regionalization, consolidation, or working together. Some do it, but never actually name it or openly discuss it. No water system is an island; we need each other. 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.

Participants will learn:

- A variety of options for working with other systems
- How to evaluate their system's potential for partnership
- When to work alone
- Next steps to start or continue the conversation

Recommended audience for this workshop is anyone involved with a small water system.

## Cross Connection Controls

**February 28, 2018 @ 10:00 a.m. & 2:00 p.m.**

Do you have an active cross connection control program? If not, it is time to get in the game. Not only are you required to have an approved program, but cross connection controls provide yet another barrier against water contamination. This workshop will give you the information and resources on how to develop a program that fits your small water system.

Participants will learn:

- How to identify potential cross connections
- What backflow prevention devices to use
- State requirements regarding cross connection control
- How to develop a successful program

Recommended audience includes operators, managers, and board members.

## Arsenic Remediation

**March 28, 2018 @ 10:00 a.m. & 2:00 p.m.**

Two water systems with similar levels of arsenic in their source water often need two entirely different types of treatment technology. Why? Because the ability of a specific type of treatment technology to remove arsenic depends on water chemistry. Learn more about what type of treatment is right for your water system, and find out if you can achieve Safe Drinking Water Act compliance for arsenic in drinking water, without installing treatment. This workshop will give you the tools to determine the right path to compliance for your system.

Participants will learn:

- Options for non-treatment mitigation of Arsenic
- Types of Arsenic treatment technologies
- How drinking water chemistry effects choosing an appropriate arsenic treatment technology

## Achieving Sustainability Through Regionalization

**April 19, 2018 @ 10:00 a.m.**

**May 14, 2018 @ 10:00 a.m.**

If aging infrastructure, snowballing regulatory requirements, increasing operating and maintenance costs, are among the challenges your utility faces on a regular basis, this workshop is for you. You are not the only one challenged with providing services to your customers when everything is falling apart, others are dealing with the same challenges. So, how do you get to strategic operating when reactive operating is the norm? This workshop will cover the basics of working with others to maximize resources, eliminate redundancies and create economies of scale to create a sustainable utility which overtime yield sustainable communities.

Participants will learn:

- How sustainability can be achieved through regionalization
- The difference between regionalization and consolidation
- How to create economies of scale through partnership



# 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.

*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). Besides the CalTAP Fair, all workshops are limited to 50 attendees.*

## Emergency & Disaster Response Planning

**January 10, 2018 • Chico, CA**

*Oxford Suites Chico • 2035 Business Lane • Chico, CA 95928*

**January 25, 2018 • Redding, CA**

*Holiday Inn Hotel & Convention Center • 1900 Hilltop Drive • Redding, CA 96002*

**June 14, 2018 • Sacramento, CA**

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

California has often been called a natural disaster theme park: fires, floods, earthquakes, tsunamis, and droughts. You name it, we have it. And yes, it can happen to your water system.

A water system emergency is any situation in which customers are without water, or the water is unsafe to drink. What will you do when an emergency or disaster strikes? Do you have a written response plan? Do you have a drought contingency plan? Do you have mutual aid agreements in place? How will you protect the health of your customers?

Participants in this workshop will learn:

- The wide variety of emergency situations to which California's water systems are exposed
- 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

- Using free Google Earth Pro to manage emergency information and inform the public

This workshop will provide water system personnel with the information and resources to respond preemptively and proactively to most emergency situations. Participants are encouraged to bring laptops, tablets and smart phones to share apps and web resources (charging outlets may be limited).

Recommended audience includes managers, operators, administrative staff and board members.

## Cross Connection Controls

**January 11, 2018 • Williams, CA**

*Granzella's Banquet Hall • 457 7th St. • Williams, CA 95987*

**March 22, 2018 • Ontario, CA**

*Ontario Comfort Suites • 1811 E Holt Blvd • Ontario, CA 91761*

Do you have an active cross connection control program? If not, it is time to get in the game. Not only are you required to have an approved program, but cross connection controls provide yet another barrier against water contamination. This workshop will give you the information and resources on how to develop a program that fits your small water system.

Participants in this workshop will learn:

- How to identify potential cross connections
- What backflow prevention devices to use

- State requirements regarding cross connection control
- How to develop a successful program

Recommended audience includes operators, managers, and board members.

## How to Sample and Report under the new Revised Total Coliform Rule and the Lead & Copper Rule

**January 23, 2018 • San Luis Obispo, CA**

*Camp San Luis Obispo • 10 Sonoma Avenue, Bldg. 904 • San Luis Obispo, CA 93405*

**February 06, 2018 • Santa Rosa, CA**

*Flamingo Conference Resort and Spa • 2777 4th St • Santa Rosa, CA 95405*

**April 03, 2018 • Palm Springs, CA**

*Hyatt Palm Springs • 285 N Palm Springs Canyon Dr. • Palm Springs, CA 92262*

**June 19, 2018 • Sacramento, CA**

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

The purpose of this learning event is to provide California water system operators with the knowledge, skills and resources necessary to develop and perform water quality monitoring that complies with the regulations and assures that the water is safe to drink.

The Safe Drinking Water Act requires every water system to monitor the quality of water delivered and report the results to its primacy agency. In fact, regulators assume non-compliance with an MCL if the water system fails to monitor at the prescribed location and frequency. For these reasons every water system must possess the knowledge and skill necessary to monitor and report its water quality to ensure compliance with the regulation and assure itself that it is providing safe drinking water.

Compliant monitoring and reporting is a basic responsibility of every water system. Historical data clearly shows a significant problem with monitoring and compliance; in many cases compliance with the monitoring and reporting requirements is a greater problem than actual MCL compliance. This is because the regulations (and the regulators) assume a water quality problem in the absence of data to the contrary.

At the completion of the Sampling & Reporting training participants will be able to:

- Develop a bacteriological site sample plan (Total Coliform Rule and Groundwater Rule)
- Take routine and repeat samples in accordance with the site sample plan
- Report monthly bacteriological data to primacy agency
- Develop a Lead & Copper Rule sampling plan
- Report Lead & Copper Rule data to primacy agency

The recommended audience includes water system operators and managers.

## Google Earth Mapping & CIP

**January 24, 2018 • Redding, CA**

*Holiday Inn Hotel & Convention Center • 1900 Hilltop Drive • Redding, CA 96002*

**March 07, 2018 • The Sea Ranch, CA**

*Del Mar Center • 40600 Leeward Rd • The Sea Ranch, CA 95497*

**June 07, 2018 • Fortuna, CA**

*River Lodge Conference Center • 1800 Riverwalk Dr. • Fortuna, CA 95540*

Effective asset management is critical to the overall financial performance of water utilities. Waiting until assets fail rather than planning for replacement significantly

increases the cost of service. Developing and maintaining a detailed asset inventory is the first step in the process. Spreadsheet templates and GIS mapping tools can make the job easier.

Participants will receive a step-by-step tutorial on how to map a water system's assets using free Google Earth Pro for desktop.

Participants in this workshop will learn:

- Basic Asset Management
  - Capital Improvement Plan (CIP) Development
  - Capital Reserve Estimating
  - Spreadsheets and templates for CIPs
- Google Earth Pro for desktop tools for mapping and data collection
  - How to import overlay maps, photos, hand held GPS coordinates and other GIS data
  - How to create water main maps and derive pipe lengths for estimating
  - How to attain surface elevations for evaluation of tank sites, hydraulic analysis and project planning
  - How to edit, save and share your Google Earth maps
  - Participants will be given time to create a map of their own water system
- Basic water system modeling using EPANET 2.0 for evaluating water main networks
  - Hydraulic Modeling of hydrant flow rates for water main sizing and operational simulations

Recommended audience includes operators, managers, board members, engineers and administrative staff.

Participants should download and install the free Google Earth Pro for desktop software (on a laptop) prior to the class ([google.com/earth/](http://google.com/earth/)) and bring the laptop.

## Financial Policies & Procedures for Small Water Systems

**February 07, 2018 • Santa Rosa, CA**

*Flamingo Conference Resort and Spa • 2777 4th St. • Santa Rosa, CA 95405*

“Do We Have a Policy for That?”

Your 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 safe guarding assets. The goal of good financial policies and procedures is risk management; 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, to your utility's customers.

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 and understand policies and procedures regarding:

- Banking and financial instruments
- Internal Controls
- Reserve Account Funding

- Reporting Errors, Omissions and Fraud
- Budgeting
- Code of Federal Regulations (CFR) Applicable Federal Awards (USDA, SRF, EPA)
  - Adhering to 7 CFR 1780
  - Adhering to 2 CFR 200
  - Adhering to 2 CFR 415 – 418
- Rates and Proposition 218
- Collections
- Board/Council Reports
- Financial Records Retention

Recommended for all board and/or council members, accountants, bookkeepers and managers of small water systems.

## Using QuickBooks™ and Excel for Small Utility Accounting

**February 08, 2018 • Santa Rosa, CA**

*Flamingo Conference Resort and Spa • 2777 4th St. • Santa Rosa, CA 95405*

In order to remain viable, all public water systems should be billing their customers for the true cost of producing and delivering safe water. Does your utility have accounting systems established to capture and bill all the costs of operation? This workshop will take you step-by-step from setting up an accounting system in QuickBooks™ and recording transactions, to producing the financial statements necessary for reporting and making management decisions regarding your utility's financial health. An Excel template that calculates billing rates based on meter reads will also be provided. You will be shown how to use the template to input customer usage and produce reliable billings that can be printed.

Participants in this workshop will learn and understand how to:

- Set up Chart of Accounts in QuickBooks™
- Set up vendors and customers in QuickBooks™
- Pay bills and receive payments in QuickBooks™
- Track revenues and expenses by activity (e.g., water, sewer)
- Enter budgets and produce reports for each activity in QuickBooks™
- Produce Statements of Financial Position, Statement Activities and Statement of Cash Flow in QuickBooks™
- Set up an Excel spreadsheet that calculates billing rates based on meter read

Recommended for bookkeepers, managers and those who will be making financial decisions based on the financial statements.

## Using Financial Statements as a Management Tool

**February 28, 2018 • El Segundo, CA**

*Hyatt House El Segundo • 810 S. Douglas Street • El Segundo, CA 90245*

**May 09, 2018 • Monterey, CA**

*Hilton Garden Inn Monterey • 1000 Aguajito Rd. • Monterey, CA 93940*

The goal of good financial management is to ensure that your small water system is consistently operated as a financially sustainable enterprise that will continue providing safe and reliable water, both in the short and long-term. This workshop will show how to use your financial statements as a tool for sound decision making in order to

manage your current fiscal situation, as well as guide the future of your utility.

Participants in this workshop will learn how to:

- Read and understand your Financial Statements
- Calculate ratios to determine if you are on a positive course
- Identify reserve accounts recommended for water systems
- Develop and monitor an annual budget
- Implement internal controls to safeguard assets

This session is ideal for a board member or staff of a small drinking water utility who needs to understand basic financial aspects of a utility's operations.

## Distribution O & M and Math

**March 08, 2018 • The Sea Ranch, CA**

*Del Mar Center • 40600 Leeward Rd • The Sea Ranch, CA 95497*

Most of the components of a distribution system are out of sight, making maintenance of the system particularly challenging. This workshop will address operations of drinking water distribution system components.

Participants in this workshop will learn about:

- Sources of water and quality issues
- Tanks and pumps
- Water piping and valves
- Water meters and fire hydrants
- Water disinfection
- Distribution system safety
- Distribution math

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.



## CalTAP Fair: For Water Systems

**March 15, 2018 • Long Beach, CA**

*The Westin Long Beach • 333 E Ocean Blvd • Long Beach, CA 90802*

See page 1 for more information.

*\* Registration/Check-in: 8 a.m.; workshop: 8:30 a.m.-4:00 p.m.*

## Lead & Copper Rules and Sampling Review

**March 21, 2018 • Barstow, CA**

*Comfort Suites • 2571 Fisher Blvd. • Barstow, CA 92311*

This session chronicles the events leading up to the Flint water crisis and its aftermath. With the Nationwide news coverage, the water industry and regulation has taken a hit on its reputation. It is time to take the time to review the event and consequential refocus on the subject of Lead and copper in our drinking water, plus, the monitoring of this contaminant. Special emphasis will be given to the political and economic climate of the region, operational missteps, and regulatory failures.

After the Flint Michigan story there has been a new emphasis on the monitoring of lead and copper in our drinking water. While the rule has not gone through a major revision, the interpretation has experienced some changes. Are you up to date with these?

Please join us and learn or reinforce your understanding of this new interpretation:

- Flint Michigan, who, what, how, and when did this crisis take place?
- Discuss what is happening in your neighborhood, can this happen to you?
- New: Lead And Copper Rule Minor Revisions (LCRMR), what is the new focus?
- Is this nothing but more sampling? (the answer may surprise you)
- Review what is a valid sample
- Find out if your system needs to incorporate corrosion controls
- What do you tell the public?

## AB54 & AB1234 en Español

**March 29, 2018 • Rosemead, CA**

*Quality Inn Rosemead • 9488 Valley Blvd • Rosemead, CA 91770*

**May 23, 2018 • Visalia, CA**

*Wyndham Visalia • 9000 W Airport Dr. • Visalia, CA 93277*

Los sistemas de agua potable en comunidades pequeños frecuentemente tienen juntas que consisten completamente de voluntarios. En California todos los miembros nuevos y existentes de las juntas de agua mutua están obligados a asistir a cursos de formación ética cada seis años, y dentro de los seis meses posteriores a su toma de miembro de la junta. Este taller cumple con las obligaciones legales para los miembros de una junta de agua mutua. También hablaremos de los requisitos de AB 240 "Reunión Abierta de una Empresa de Agua Mutua", requisitos presupuestales, y las revisiones contables anuales que entraron en vigencia el 1 de enero de 2014.

Los participantes aprenderán y entenderán:

- AB54 y AB240 requisitos éticos de la junta para una empresa de agua mutua
- Leyes de reuniones abiertos
- Conflictos de interés
- Que es comportamiento ético
- Responsabilidades financieros
- Creación de políticas

Este taller cumple con los requisitos legales para el entrenamiento ético de los miembros de la junta según AB54 y AB 240.

*Si tienes preguntas con el registro contactarse: Gerardo Tinoco [gtinoco@rcac.org](mailto:gtinoco@rcac.org) (661) 401-1857, o Jeff Navarrete [jnavarrete@rcac.org](mailto:jnavarrete@rcac.org) (530) 782-0001*

Registro / Check-in: 8 a.m.; Taller: 8:30 a.m.-12:30 p.m. (4 contact hours)

## Water System Policies: Must Haves for Small Systems

**April 04, 2018 • Palm Springs, CA**

*Hyatt Palm Springs • 285 N Palm Springs Canyon Dr. • Palm Springs, CA 92262*

**May 08, 2018 • Monterey, CA**

*Hilton Garden Inn Monterey • 1000 Aguajito Rd. • Monterey, CA 93940*

Create a legacy worth leaving! We all want to make a positive contribution to our corner of the world. Hopefully, the beneficial impacts of your efforts are felt long after you've moved on to your next project. If you are involved with a small water system, creating sound, written policies are one of the best legacies you could leave.

From ethics to finance and customer relations to personnel, a water system cannot stay in compliance or operate sustainably without policies. Many small systems have operated for decades thru verbal agreements but with no written policies, or policies that are so outdated they no longer reflect what happens. Having written, up-to-date policies that are followed is one of the best ways to avoid utility management disaster and ensure your water system remains in compliance and financially viable.

As a result of attending, you will:

- Be able to list common policies for small water systems
- Recognize the benefits of written, up-to-date policies
- Identify which policies to create or update at your system
- Discuss the impacts of policies on customers, operations and management
- Create a draft policy using a template

Please bring an electronic or hard copy of your water system's policies or rules and regulations if possible.

## Financial Management & Rate Setting

**April 5, 2018 • Palm Springs, CA**

*Hyatt Palm Springs • 285 N Palm Springs Canyon Dr. • Palm Springs, CA 92262*

**June 13, 2018 • Bakersfield, CA**

*Hilton Garden Inn • 3625 Marriott Drive • Bakersfield, CA 93308*

Do you really need to increase rates? Your improved understanding of financial reports will help you answer this question. The goal of good financial management is to ensure that the utility is 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, planning for the system's financial future, preparing and adopting of budgets, monitoring and oversight of financial performance, and ensuring that enough funds are available to accomplish these goals. Operators and staff need the support of the board to implement financial management policies on a day-to-day basis.

This workshop will show board members, managers and operators how good financial management helps to establish fair rates, with a budget based on true costs.

Participants will learn and understand:

- Financial terms and how to interpret financial statements
- How to prepare a budget
- Various methods to balance the budget
- How to establish a rate structure based on the true cost of producing and delivering water
- Who has to adhere to Prop 218 and how to adhere it

- The latest legal cases that impact the structure and implementation of new rates

The recommended audience is general managers, board members, operators, financial consultants, and financial analyst of utilities of cities under 10,000 customers.

## Water Quality Sampling

**April 18, 2018 • Fresno, CA**

*Wyndham Garden Fresno Airport • 5090 E. Clinton Way • Fresno, CA 93727*

You are getting customer complaints about musty tasting water and don't remember if you completed all of the state's monitoring and reporting requirements for the past three months. So, how do you know if the water you are delivering is safe to drink? What do you tell your customers?

Participants will learn:

- Key existing regulations
- Reporting requirements
- Future monitoring regulations under the California Safe Drinking Water Act
- The benefits of a timely water quality monitoring program

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

## Small Water System Operations, the Revised Total Coliform Rule and Compliance

**April 18, 2018 • Montecito, CA**

*Montecito Sequoia Lodge • 63410 Generals Hwy. • Sequoia National Park, CA 93633*

This training program is an introductory program for seasonal Transient Non Community Water Systems operating campgrounds and other seasonal operations. The RTCR and Total Coliform Rule and their associated sampling and procedures will be covered during this training along with sampling for other seasonal contaminants. Handling routine seasonal operational problems as well as required State start up and shutdown procedures for seasonal systems will be covered.

*\*Registration/Check-in: 8:30 a.m.; workshop: 9:00 a.m.—2:00 p.m. (4 contact hours)*

## Disinfection & Dosing Math

**April 19, 2018 • Fresno, CA**

*Wyndham Garden Fresno Airport • 5090 E. Clinton Way • Fresno, CA 93727*

Chlorine is one of the most common Drinking Water Disinfectants used on the planet today. Do you feed chlorine into your water system to achieve disinfections? Do you feed a given dose? Can you accurately and quickly adjust the dose if required or requested of you? What records do you keep for both the dosage and residuals? Why do you keep these records? What do the dosages and residuals indicate to the operator? As an operator this is one of the most basic functions we should be able to perform. Would you like to be a little more comfortable with understanding all of this?

In this workshop, we will:

- Review the common sources of chlorine to be used for disinfection
- Discuss the advantages and disadvantages of each source of chlorine
- Discover the various methods used to feed these various forms of chlorine
- Review the calculations needed to accurately feed each form of chlorine supply
- Talk about the maintenance and operations of the various pieces of equipment needed to safely use these chemicals

## AB54: Ethics Training for Mutual Water Companies

**May 10, 2018 • Tulare, CA**

*Hampton Inn and Suites • 1100 N. Cheery Street • Tulare, CA 93274*

By law, all mutual water board members are required to have two hours of ethics training every six years, and within six months of taking office. This training is designed to provide for system longevity and helps assure that board members meet their legal responsibilities. Required topics of training 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 January 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 and understand:

- All 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

Recommended for all Board and/or Council Members, Accountants, Bookkeepers and Managers of small water systems.

*\*Registration/Check-in: 5:30 p.m.; workshop: 6:00 p.m.—8:00 p.m. (2 contact hours)*

## Math for Water Operators

**May 15, 2018 • El Centro, CA**

*Holiday Inn El Centro • 350 Smoketree Dr. • El Centro, CA 92243*

One of the many skills needed by water treatment operators includes the ability to perform water math problems. This includes volume, chemical dosage, filtration math, sedimentation basic detention times and pipe velocity. This workshop will help the treatment operator master these formulas while using a conversion sheet.

Participants attending this workshop will learn how to calculate:

- Volumes
- Chemical dosage
- Filtration rate of flow
- Detention times
- Pipe velocity

Recommended for all operators, especially those taking the treatment certification exam.

## Capital Improvement Planning and Rate Setting

**May 16, 2018 • Red Bluff, CA**

*Red Bluff Community Center • 1500 S Jackson St. • Red Bluff, CA 96080*

One of the major components of water rates is the Capital Improvement Plan. It is becoming all too common for public water systems to experience system failures, resulting in water outages or non-compliance issues caused by the underfunding

of reserves. One method to avoid these issues is to plan for the future and to fund reserves. This workshop will show board members, managers and operators how to develop a Capital Improvement Plan (CIP) which will allow them to replace water system components prior to failure. Once the CIP is established, the workshop continues with the development of a forecasted budget and how this leads to new rates. Finally, the workshop will cover the latest interpretations of the Prop 218 procedures.

Participants will learn and understand:

- What a CIP is
- Resources for developing a CIP
- Using free Google Earth Pro for CIP pipe length estimates
- Updating a CIP
- Planning and developing a CIP
- How a CIP ties into other important documents and policies budgets
- How forecasted budgets lead to new rates
- Implementation requirements of Prop 218

Recommended audience includes board members, general managers, financial managers and operators.

## Financial Symposium

**May 24, 2018 • Turlock, CA**

*Holiday Inn Express and Suites • 3001 Hotel Dr. • Turlock, CA 95380*

Do you really need to increase rates? Learn how improving financial management at your water system can help you answer this question. The goal of good financial management is to ensure that the 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.

Decision makers have very important financial responsibilities, including establishing the policy framework governing a utility's finances, planning for the system's financial future, preparing and adopting of budgets, monitoring and over-sight of financial performance, and ensuring accountability and integrity of the financial system. Operators and staff support the board and implement financial management policies on a day-to-day basis. In order to determine the true value of water produced, a comprehensive budget must be established.

This workshop will show board members, managers and operators how good financial management helps to establish fair rates with a budget based on true costs.

Participants will learn and understand:

- Basic financial terms and how to read and interpret the common financial statements
- Where to acquire financial tools, guides, and templates for completing a Capital Improvement Plan.
- How to prepare and review a budget
- How to establish a rate structure based on the true cost of producing and delivering water
- How to adhere to proposition 218 when applicable

Recommended audience for this workshop are managers, bookkeepers, water system staff and board of directors.

## Security and ERP

**June 06, 2018 • Crescent City, CA**

*Crescent Fire Protection District Building Assembly Room • 255 W Washington Blvd • Crescent City, CA 95531*

The public water system operator has a responsibility to make sure that vandals and other individuals do not tamper with the pumping facilities, treatment plants, storage facilities, distribution system or any administrative buildings. This includes low cost basic protection like fences and signs, but when possible the water system operator may need to utilize a security camera system and electronic surveillance. Operators also have a responsibility to be prepared for any emergency that would potentially cause a water outage, water contamination or otherwise cause harm to system staff or the public. This includes water outages or contamination caused by intruders and emergencies may also be natural in nature or other man-made events. This workshop will utilize the instructor's experiences, but students will also be asked to share their experiences providing security and responding to emergencies.

Participants attending this workshop will learn:

- Basic security measures for public water systems
- Security camera and electronic surveillance methods
- Examples of how to prepare for emergencies that may affect public water systems
- Examples of how to respond to emergencies that may affect public water systems

Recommended audience includes board members, managers and operators.

## Pumps & Motors Efficiency

**June 13, 2018 • Placerville, CA**

*Best Western Plus Placerville Inn • 6850 Green Leaf Drive • Placerville, CA 95667*

Pumping water is one of the most inefficient uses of energy there is. Most water pumping systems only convert 30 to 60 percent of the power they consume (and you pay for) into useful work, one of the lowest margins of efficiency of all commercial and industrial uses. Why? The laws of physics mostly, but also simple mistakes made in selecting a pump or motor for a given duty point. This workshop will help you understand and minimize inefficiency in your pumping systems and how to choose the right pump and motor for the job – one that will save money year after year.

Participants attending this workshop will learn:

- Where to find and how to use free Total Dynamic Head (TDH) and horsepower calculators on the internet
- How to calculate TDH in a fluid pumping system
- How to solve wire-to-water energy calculations
- The six factors in friction loss and how to minimize them

This workshop will give participants a variety of tools, tips and information they can use to reduce energy costs at their utilities.

The recommended audience is system operators and managers.

# Trainer Biographies



**KEVIN BAUGHMAN**, Rural Development Specialist – Environmental, provides technical assistance to tribal and small communities. He has more than 35 years of drinking water experience. He has provided drinking water in submarines and communities throughout the West. The last 13 years of his experience is in drinking water technical, managerial and financial topics in Hawaii, California, and Nevada. Kevin holds California Grade 3 Water Treatment Operator Certification and a Grade 3 Water Distribution Operator Certification. He also holds a Nevada and Hawaii Grade 4 Water Treatment Operator Certification and Distribution System Operator Certification. Kevin has participated in maintenance and operations of water systems and their support equipment in the US Navy, San Diego County, Hawaii, and Nevada. Kevin also has facilitated Participant Centered Training based water system treatment and distribution operator workshops in all these locations and on line too.

**MICHAEL BOYD**, Rural Development Specialist II/Training Coordinator – Environmental, conducts numerous water system assessments, sanitary surveys, source water assessments and related technical assistance. He has more than 22 years of experience in public water systems' operation, maintenance, inspection and management. He is a certified investigator/inspector and 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.

**RICHARD D. CULP, P.E.**, Rural Development Specialist – Civil Engineer, provides technical assistance to rural communities and public agencies on utility infrastructure design, construction, management, operation and administration. Richard has more than 23 years of experience as a registered civil engineer and 11 years managing a water, wastewater and electric utility district in California, developing policies, ordinances, budgets, capital improvement plans, supervising union labor, utility billing systems, payroll and human resources, rate studies, financial and operational reporting, web site development and public meeting presentations. His experience includes water and wastewater infrastructure GIS mapping, design, water modeling, permitting, grant funding, construction management and inspection. He holds a bachelor's degree in civil engineering and is a California licensed civil engineer with T1 & D1 certifications.

**MARY FLEMING-LESLIE**, 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 12 years of experience in financial management. Mary develops financial management training curricula and teaches online and classroom workshops for RCAC. She performs financial statement and rate analysis 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 18 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 part-time trainer for RCAC.

**ANGELA HENGEL**, Environmental Manager, has an AA degree in Water Technology Education from Palomar College, a T3 Water Treatment Operator Certification and a D3 Water Distribution Operator Certification from the State of California. Angela has 25 years of experience in the field of water treatment and distribution ranging from very small systems to a 40-million gallon per day conventional treatment plant. Angela was an instructor in the Water/Wastewater Technology Education program at Palomar College from 1998–2015.

**JIM MCVEIGH**, Drinking Water Specialist, has more than 40 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 recently 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.

**ROSANNA NOVAL**, Rural Development Specialist – Environmental, facilitates classroom and online workshops, analyzes utility finances, conducts board and public education activities, and provides specialized assistance to small water systems in Washington, Oregon and California. Experienced in regulatory compliance, infrastructure project financing, natural resource management and laboratory operations, she brings a holistic approach to utility challenges. RosAnna's educational background is in environmental science, with a focus on water chemistry and natural resource education.

**STEVAN PALMER**, Regional Environmental Manager, RCAC Regional Environmental Manager, provides training and technical assistance to small utilities throughout RCAC's region. He formerly held certification as a level III Water Treatment and Water Distribution operator in Nevada, and currently holds Nevada certification as a wastewater treatment operator 1. He is a Certified Environmental Trainer (NESHTA),



a Certified Safety Trainer (MSHA) and a Water Conservation Practitioner I (CA/NV AWWA). He develops training curricula and regularly teaches workshops for RCAC. He is RCAC's regional environmental manager for Oregon, Washington and Alaska.

**BRIAN PHILLIPS**, *Regional Environmental Manager*, provides training to water operators and technical assistance to rural communities in RCAC's region. He has 35 years of public administration experience in the water and wastewater field. Brian holds Grade 3 California Water Treatment Operator and Grade 2 California Water Distribution Operator certificates and a Water Conservation Practitioner 1 (CA/NV AWWA). He worked as an operations superintendent and general manager for public agencies, a board member on a statewide rural water association, chairman of a city planning commission and an elected local fire board commissioner. He has training and experience in water and wastewater system operations, land use planning, financial management and has been a member of AWWA for 30 years. Brian holds a bachelor's degree in business administration from California State University, Sacramento.

**KIM STRONG**, *Rural Development Specialist – Environmental*, conducts median household income (MHI) surveys, and provides managerial and financial technical assistance for water and wastewater systems in rural communities in California. Her responsibilities include planning and implementation of MHI surveys under RCAC's Proposition 1 and State Revolving Fund contracts with the State of California; coordination of mailings and door-to-door surveys while ensuring data confidentiality and adherence to all state and federal guidelines; response rate monitoring; data quality control; and final results letters and reports. Ms. Strong also represents RCAC at conferences, CalTap Fairs and other outreach events. She is a member of the American Water Works Association (AWWA).

**JEAN THOMPSON-IBBESON**, *Rural Development Specialist II – Environmental*, teaches classroom workshops and provides on-site technical assistance to water and wastewater utilities on technical, managerial and financial issues. She has more than 20 years of water and wastewater experience throughout the western states. Jean previously managed the Delhi County Water District, a water and wastewater system in Merced County. She served as president on the California Rural Water Association board, and National Director representing California on the National Rural Water Association Board. She was a manager for the California Rural Water Association for 10 years, serving on many CDPH technical advisory committees, developing the TMF criteria and Water Works standards for California.

**JERRY TINOCO**, *Rural Development Specialist – Environmental*, holds a level 1 Water Treatment operator certification in CA and is starting the process to acquire more certifications as he begins to work on RCAC's Prop 1 technical assistance team. Jerry's educational background is in environmental science and is a former teacher and policy advocate, and brings that experience into his workshops. He has participated in various programs helping rural communities and oversees the Arsenic Interim Solutions project in Arvin and involved in RCAC's Agua4All and Drinking Water for Schools work.

**JOHN VAN DEN BERGH**, *Rural Development Specialist – Environmental*, provides rural communities with technical assistance in the areas of financial management and board training. He specializes in rate studies for small utilities, as well as implementing these rates through the Prop 218 process. He has more than 25 years' experience in the utility industry; either as a contractor, a general manager, a board member or an operator. He has an MBA in finance from the University of Michigan, is a Project Management Professional (PMP), has both a D2 and T2 Operators Licenses, and is a certified Clerk of the Board.

**RANDY VESSELS**, *Rural Development Specialist II – Environmental (Circuit Rider)*, provides technical assistance and training to Tribal and small communities throughout California. He has more than 20 years of experience with water and wastewater systems. Randy holds a T3 California Water Treatment Operator Certification, a D3 California Water Distribution Operator Certification, and a Grade III California Wastewater Operator Certification. He has managed and operated water and wastewater systems in Northern California including operation and maintenance of groundwater wells, chlorine disinfection, reverse osmosis treatment and wastewater ponds.

**DAVE WALLIS**, *Technical Services Programs Manager*, manages several programs for USEPA and the California SWRCB. Mr. Wallis' primary areas of expertise include the supervision of operation, maintenance and management of both water and wastewater systems at Sequoia and Kings Canyon National Parks and the US Navy Public Works Center San Diego. Mr. Wallis has 36 years of experience and maintains state certifications in California and Arizona including water treatment operations, water distribution system and wastewater treatment.

**NEIL WORTHEN**, *Rural Development Specialist – Environmental*, has 38 years of water and wastewater system operation and management experience in California, Hawaii and overseas. Neil holds certifications in water treatment, water distribution, wastewater treatment, water conservation, mechanical technology, environmental training and energy auditing. He has held operational posts with numerous California cities. He also was the water and wastewater supervisor for the Pohnpei State Government (Micronesia), and the general manager of a private firm operating and managing 25 water and wastewater facilities in Hawaii. More recently, he served as public works director for Rio Dell, California, and State Revolving Fund coordinator with California Rural Water Association. Neil is a part-time trainer for RCAC.

# Training Information

## Contact Hours & Certificates:

Each classroom workshop, Financial Symposium and CalTAP Fair qualify for six (6) drinking water contact hours. Exceptions include the AB54 class, which qualifies for two (2) drinking water contact hours and the Small Water System Operations and AB54 & AB1234 in Español classes which qualify for four (4) contact hours.

Each online workshop qualifies for two (2) drinking water contact hours. Certificates will be provided at the conclusion of each on-site training to those pre-registered at least two weeks in advance, except for the CalTAP fair.

Certificates for all online sessions will be 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 might possibly take longer to access through your online account. RCAC and the Water Board require signatures for in-person trainings and we must wait to receive the original classroom sign-in sheets to be sent from the RCAC trainers in order to verify attendance.

## Online Workshops

RCAC uses the GoToTraining™ online platform. 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. Sign-in sheets are NO LONGER accepted to validate attendance for contact hours.

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

Each person does not need a separate connection to the online training, but EVERY person needs to complete an online evaluation in order to receive credit.

Your group leader will be sent an evaluation link (within two hours after the training) to share and be completed individually to receive credit. Please notify RCAC as soon as possible if you cannot attend a session that you have registered for, as we have a 60 attendee limit for online workshops. Cancellations can be made by email at [registration@rcac.org](mailto:registration@rcac.org) or by phone at (916) 447-9832 x 1429.

**IMPORTANT:** Failure to attend three online workshops for which you reserved a seat in any six-month period will disqualify you from attending online workshops in the following six-month period. **Please cancel a minimum of 24 hours in advance to allow others to attend the training.**

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

<http://www.events.rcac.org/rcac/Calendar.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

The screenshot shows a registration form with the following elements: a date selector for December 2017, a state dropdown menu currently set to "United States" with a "State" dropdown highlighted in a red box, a city input field, and a "Filter" button with a red arrow pointing to it.

## 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 e-mail [registration@rcac.org](mailto:registration@rcac.org).

Certificates for all trainings may NOT be available. Contact [registration@rcac.org](mailto:registration@rcac.org) if you cannot locate your training certificate online.

The screenshot shows the RCAC website header with the logo and navigation links. The main content area is titled "View My Profile" and contains a red-bordered box with the text: "To access your training history and certificates click here." Below this is a link to "EDIT" and a "VIEW MY PROFILE" button.

The screenshot shows the "My Registration Portal" page for Mark Wiseman. It features a table of "MY CURRENT COURSE REGISTRATIONS" and "MY COURSE HISTORY".

| 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 |  |             |                                  |
| 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. |             | <a href="#">View Certificate</a> |

# January–June 2018 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 [www.rcac.org](http://www.rcac.org) under *Trainings and Events*.

Name: \_\_\_\_\_  
 Email: \_\_\_\_\_ (All notifications regarding workshop changes are made via email)

Company or Water System: \_\_\_\_\_

Preferred phone:  Work  Home or  Mobile: ( \_\_\_\_\_ ) \_\_\_\_\_ 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 \_\_\_\_\_

I'd like to receive the latest information on industry news by receiving RCAC's *Network News* via email.

**SPECIAL NEEDS:** If you have special needs addressed by the Americans with Disabilities Act, please notify RCAC at (916) 447-9832 ext. 1009 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):**

## Classroom Workshops:

- 1/10/18 Emergency & Disaster Response Planning (**Chico**)
- 1/11/18 Cross Connection Controls (**Williams**)
- 1/23/18 How to Sample & Report... (**San Louis Obispo**)
- 1/24/18 Google Earth Mapping & CIP (**Redding**)
- 1/25/18 Emergency & Disaster Response Planning (**Redding**)
- 2/06/18 How to Sample & Report... (**Santa Rosa**)
- 2/07/18 Financial Policies & Procedures (**Santa Rosa**)
- 2/08/18 Using QuickBooks & Excel (**Santa Rosa**)
- 2/28/18 Using Financial Statements as a Management Tool (**Los Angeles**)
- 3/07/18 Google Earth Mapping & CIP (**Sea Ranch**)
- 3/08/18 Distribution O&M and Math (**Sea Ranch**)
- 3/15/18 CalTAP Fair: for Water Systems (**Long Beach**)
- 3/21/18 Lead & Copper Rules and Sampling Review (**Barstow**)
- 3/22/18 Cross Connection Controls (**Ontario**)
- 3/29/18 AB54 & AB1234 en Español (**Rosemead**)
- 4/03/18 How to Sample & Report... (**Palm Springs**)
- 4/04/18 Water System Policies: Must Haves for Small Systems (**Palm Springs**)
- 4/05/18 Financial Management & Rate Setting (**Palm Springs**)
- 4/18/18 Water Quality Sampling (**Fresno**)
- 4/18/18 Small Water System Operations (**Montecito**)
- 4/19/18 Disinfection & Dosing Math (**Fresno**)
- 5/08/18 Water System Policies: Must Haves for Small Systems (**Monterey**)
- 5/09/18 Using Financial Statements as a Management Tool (**Monterey**)
- 5/10/18 AB54: Ethics Training for Mutual Water Companies (**Tulare**)
- 5/15/18 Math for Water Operators (**El Centro**)
- 5/16/18 Capital Improvement Planning and Rate Setting (**Red Bluff**)
- 5/23/18 AB54 & AB1234 en Español (**Visalia**)
- 5/24/18 Financial Symposium (**Turlock**)
- 6/06/18 Security and ERP (**Crescent City**)
- 6/07/18 Google Earth Mapping & CIP (**Fortuna**)
- 6/13/18 Financial Management & Rate Setting (**Bakersfield**)
- 6/13/18 Pumps & Motor Efficiency (**Placerville**)
- 6/14/18 Emergency & Disaster Response Planning (**Sacramento**)
- 6/19/18 How to Sample & Report... (**Sacramento**)

## Online Workshops:

- 1/03/18  10 a.m. or  2 p.m. Pumps & Motors Efficiency
- 1/04/18  10 a.m. or  2 p.m. Disinfection By-Products Rule II
- 1/17/18  10 a.m. or  2 p.m. Sanitary Surveys
- 1/18/18  10 a.m. or  2 p.m. A Flint Case Study & LCR Revisions
- 1/23/18  10 a.m. ONLY Financial Policies
- 1/31/18  10 a.m. or  2 p.m. Revised Total Coliform Rule (rTCR)
- 2/01/18  10 a.m. ONLY Financial Management for Small Water Systems
- 2/15/18  10 a.m. ONLY Creating Operation & Maintenance Plans
- 2/21/18  10 a.m. ONLY Partner Up: Achieve Success by Working with Others
- 2/22/18  10 a.m. ONLY The New Groundwater Management Act
- 2/28/18  10 a.m. or  2 p.m. Cross Connection Controls
- 3/01/18  10 a.m. or  2 p.m. Surface Water Treatment Rule
- 3/06/18  10 a.m. ONLY Budgeting
- 3/08/18  10 a.m. or  2 p.m. Distribution O & M and Math
- 3/28/18  10 a.m. or  2 p.m. Arsenic Remediation
- 3/29/18  10 a.m. ONLY Financial Management & Rate Setting
- 4/11/18  10 a.m. ONLY AB54: Ethics Training for Mutual Water Companies
- 4/18/18  10 a.m. ONLY Achieving Sustainability Through Regionalization
- 4/19/18  10 a.m. or  2 p.m. Consumer Confidence Reports (CCR)
- 4/26/18  10 a.m. or  2 p.m. Energy Efficiency
- 5/14/18  10 a.m. ONLY Achieving Sustainability Through Regionalization
- 5/17/18  10 a.m. ONLY The New Groundwater Management Act
- 5/22/18  10 a.m. or  2 p.m. Storage & Distribution
- 6/20/18  10 a.m. or  2 p.m. Performing a Revised Total Coliform Assessment
- 6/21/18  10 a.m. or  2 p.m. Drinking Water Wells & Hydrology
- 6/27/18  10 a.m. ONLY Using Financial Statements
- 6/28/18  10 a.m. ONLY Creating Operation & Maintenance Plans

### Registration questions or problems? Contact the Training Department:

**Email:** [registration@rcac.org](mailto:registration@rcac.org)

**Phone:** (916) 447-9832 ext. 1429 • Fax: (916) 372-5636

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



3120 Freeboard Drive, Suite 201  
West Sacramento, CA 95691

RCAC is the Western RCAP

Nonprofit Org.  
US Postage  
**PAID**  
Permit No. 2418  
Sacramento, CA

## FREE California Drinking Water Workshops: January–June 2018 Schedule-at-a-Glance

### Classroom Workshops:

|         |   |                    |
|---------|---|--------------------|
| 1/10/18 | Emergency & Disaster Response Planning              | (Chico)            |
| 1/11/18 | Cross Connection Controls                           | (Williams)         |
| 1/23/18 | How to Sample & Report                              | (San Louis Obispo) |
| 1/24/18 | Google Earth Mapping & CIP                          | (Redding)          |
| 1/25/18 | Emergency & Disaster Response Planning              | (Redding)          |
| 2/06/18 | How to Sample & Report                              | (Santa Rosa)       |
| 2/07/18 | Financial Policies & Procedures                     | (Santa Rosa)       |
| 2/08/18 | Using QuickBooks & Excel                            | (Santa Rosa)       |
| 2/28/18 | Using Financial Statements as a Management Tool     | (Los Angeles)      |
| 3/07/18 | Google Earth Mapping & CIP                          | (Sea Ranch)        |
| 3/08/18 | Distribution O&M and Math                           | (Sea Ranch)        |
| 3/15/18 | CalTAP Fair: for Water Systems                      | (Long Beach)       |
| 3/21/18 | Lead & Copper Rules and Sampling Review             | (Barstow)          |
| 3/22/18 | Cross Connection Controls                           | (Ontario)          |
| 3/29/18 | AB54 & AB1234 en Español                            | (Rosemead)         |
| 4/03/18 | How to Sample & Report...                           | (Palm Springs)     |
| 4/04/18 | Water System Policies: Must Haves for Small Systems | (Palm Springs)     |
| 4/05/18 | Financial Management & Rate Setting                 | (Palm Springs)     |
| 4/18/18 | Water Quality Sampling                              | (Fresno)           |
| 4/18/18 | Small Water System Operations                       | (Montecito)        |
| 4/19/18 | Disinfection & Dosing Math                          | (Fresno)           |
| 5/08/18 | Water System Policies: Must Haves for Small Systems | (Monterey)         |
| 5/09/18 | Using Financial Statements as a Management Tool     | (Monterey)         |
| 5/10/18 | AB54: Ethics Training for Mutual Water Companies    | (Tulare)           |
| 5/15/18 | Math for Water Operators                            | (El Centro)        |
| 5/16/18 | Capital Improvement Planning and Rate Setting       | (Red Bluff)        |
| 5/23/18 | AB54 & AB1234 en Español                            | (Visalia)          |
| 5/24/18 | Financial Symposium                                 | (Turlock)          |
| 6/06/18 | Security and ERP                                    | (Crescent City)    |
| 6/07/18 | Google Earth Mapping & CIP                          | (Fortuna)          |
| 6/13/18 | Financial Management & Rate Setting                 | (Bakersfield)      |

|         |  |               |
|---------|--|---------------|
| 6/13/18 | Pumps & Motor Efficiency               | (Placerville) |
| 6/14/18 | Emergency & Disaster Response Planning | (Sacramento)  |
| 6/19/18 | How to Sample & Report                 | (Sacramento)  |

### Online Workshops:

|         |  |                  |
|---------|--|------------------|
| 1/03/18 | Pumps & Motors Efficiency                          | 10 a.m. & 2 p.m. |
| 1/04/18 | Disinfection By-Products Rule II                   | 10 a.m. & 2 p.m. |
| 1/17/18 | Sanitary Surveys                                   | 10 a.m. & 2 p.m. |
| 1/18/18 | A Flint Case Study & LCR Revisions                 | 10 a.m. & 2 p.m. |
| 1/23/18 | Financial Policies                                 | 10 a.m.          |
| 1/31/18 | Revised Total Coliform Rule (rTCR)                 | 10 a.m. & 2 p.m. |
| 2/01/18 | Financial Management for Small Water Systems       | 10 a.m.          |
| 2/15/18 | Creating Operation & Maintenance Plans             | 10 a.m.          |
| 2/21/18 | Partner Up: Achieve Success by Working with Others | 10 a.m.          |
| 2/22/18 | The New Groundwater Management Act                 | 10 a.m.          |
| 2/28/18 | Cross Connection Controls                          | 10 a.m. & 2 p.m. |
| 3/01/18 | Surface Water Treatment Rule                       | 10 a.m. & 2 p.m. |
| 3/06/18 | Budgeting  | 10 a.m.          |
| 3/08/18 | Distribution O & M and Math                        | 10 a.m. & 2 p.m. |
| 3/28/18 | Arsenic Remediation                                | 10 a.m. & 2 p.m. |
| 3/29/18 | Financial Management & Rate Setting                | 10 a.m.          |
| 4/11/18 | AB54: Ethics Training for Mutual Water Companies   | 10 a.m.          |
| 4/18/18 | Achieving Sustainability Through Regionalization   | 10 a.m.          |
| 4/19/18 | Consumer Confidence Reports (CCR)                  | 10 a.m. & 2 p.m. |
| 4/26/18 | Energy Efficiency                                  | 10 a.m. & 2 p.m. |
| 5/14/18 | Achieving Sustainability Through Regionalization   | 10 a.m.          |
| 5/17/18 | The New Groundwater Management Act                 | 10 a.m.          |
| 5/22/18 | Storage & Distribution                             | 10 a.m. & 2 p.m. |
| 6/20/18 | Performing a Revised Total Coliform Assessment     | 10 a.m. & 2 p.m. |
| 6/21/18 | Drinking Water Wells & Hydrology                   | 10 a.m. & 2 p.m. |
| 6/27/18 | Using Financial Statements                         | 10 a.m.          |
| 6/28/18 | Creating Operation & Maintenance Plans             | 10 a.m.          |