



FREE California Drinking Water Workshops

Classroom & Online: January–June 2017

Presented by:
Rural Community
Assistance Corporation (RCAC)

Funded by:
State Water Resources Control Board



About the Workshops:

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

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

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

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

©2016. 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, Water Symposium and CalTAP Fair qualify for six (6) drinking water contact hours. The exception is the two-hour AB54 & AB240 class, which qualifies for two (2) drinking water contact hours. Each online workshop qualifies for two (2) drinking water contact hours. Certificates will be provided at the conclusion of each classroom training to those pre-registered at least two weeks in advance.

Cost:

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

Certificates for all online sessions are available for self-printing within 10 business days 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 from the RCAC trainer in order to verify attendance.

January-June 2017 Workshop Topics and Locations

ONLINE WORKSHOPS

Board Basics Series:

Basic Operations
Board Roles & Responsibilities
Safe Drinking Water Act
Ethics AB1234 Board Training
Financial Management
Budgeting
Capital Improvement Planning
Rate Setting

Operator Basic Series:

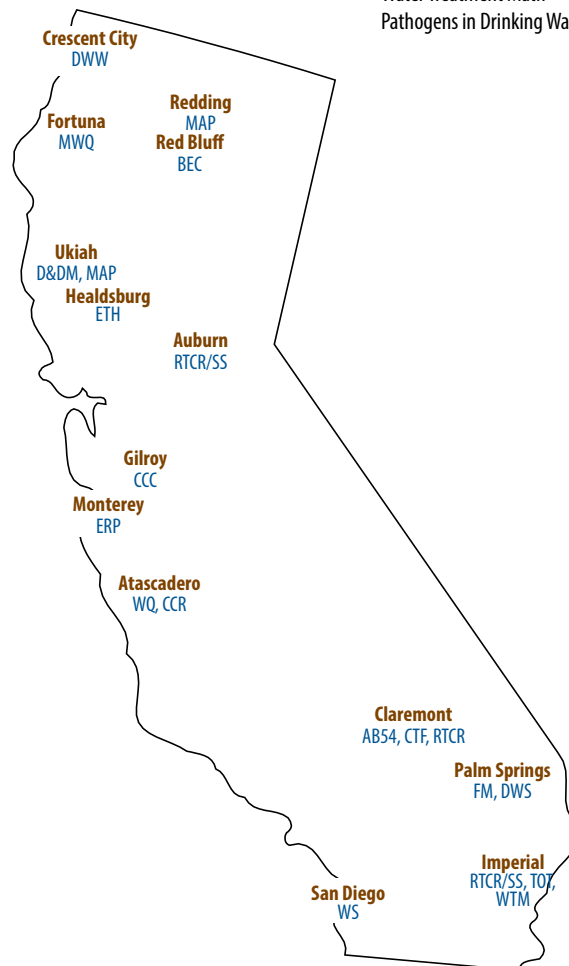
Control Valves
Water Treatment Techniques
Well O&M
Distribution Math Refresher
Water Supply & Sources
Cross Connection Controls
Storage & Distribution
Disinfection Basics
Water Treatment Math
Pathogens in Drinking Water

Regulations Basics Series:

Surface Water Treatment
Public Notification
Revised Total Coliform Rule
Water Quality Sampling
Disinfection By-Products Rule II
Lead & Copper Programs
Nitrates

Other:

Google Earth Mapping & CIP
Pumps & Motors Efficiency
Consumer Confidence Reports
Energy Efficiency



CLASSROOM WORKSHOPS

- AB54 = Board Training for Mutual Water Systems
- BEC = Basic Electric Components
- CCC = Cross Connection Controls
- CCR = Consumer Confidence Reports
- CTF = CalTAP Fair
- D&DM = Disinfection & Dosing Math
- DWS = Drinking Water Sample
- DWW = Drinking Water Wells, Storage . . . Monitoring
- ERP = Emergency & Disaster Response Planning
- ETH = Ethics, Conflict of Interest & Policies
- FM = Financial Management
- MAP = Google Earth Mapping & CIP
- MWQ = Maintaining Water Quality
- RTCR = Revised Total Coliform Rule
- RTCR /SS= Revised Total Coliform Rule & Sanitary Surveys
- TOT = Treatment Operator Techniques
- WQ = Monitoring & Water Quality
- WS = Water Symposium
- WTM = Water Treatment Math

Special Event: CalTAP Fair



Join us at the CalTAP Fair for Water Systems!

May 10, 2017 in Claremont, CA
8:30 a.m. to 4 p.m.

DoubleTree Claremont
555 West Foothill Blvd. • Claremont, CA

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 for water professionals throughout California, as well as many other resources.

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

(Lunch is one hour and on your own)

CalTAP Fair: Claremont, CA • May 10, 2017

PROGRAM AT A GLANCE

8 a.m.	Registration opens		
8:30 a.m.	Welcome & Introductions CalTAP Presentations		
10:15 a.m.	Break		
10:30 a.m.	Regulations Update		
Noon	Lunch (on your own)		
1 p.m.	Incident Response (VA-ERP) (3 hours)	THM Reduction Techniques	Complying with the Lead & Copper Rule
2:20 p.m.	Break		
2:40 p.m.	Incident Response (VA-ERP) con't.	Maintaining Water Quality	Consumer Confidence Reports
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, or 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.**

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 evaluation 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.

Online certificates

Certificates are available for self-printing within 10 business days 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 50 attendee limit for online workshops. Cancellation can be made by email at 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

Basic Operations

January 18, 2017 @ 10 a.m. ONLY

Many small public water systems have a board of directors, and most of these directors are volunteers unfamiliar with drinking water system components. This workshop will familiarize board members and new managers with the basic workings of a public water system. Participants will learn and understand:

- Drinking water regulations
- Capacity development
- Water sources
- Water treatment facilities and water distribution systems
- Financial responsibilities

Board Roles & Responsibilities

January 31, 2017 @ 10 a.m. ONLY

This module presents the many responsibilities attached to serving on a water authority board. Many board members are unaware of the scope and breadth of these responsibilities, which range from fiscal responsibility to environmental compliance, ethics, avoiding conflicts of interest, and familiarity with state and federal laws. Participants will learn:

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

This workshop will give participants the information and resources they need to understand a board's legal responsibilities, and become proactive and informed board members. Recommended audience includes system managers, new or existing board members, and those considering serving on a water system board.

Safe Drinking Water Act

February 21, 2017 @ 10 a.m. ONLY

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

- What the Safe Drinking Water Act (SDWA) is
- How the SDWA was developed
- How the SDWA is updated
- How to adhere to the SDWA
- Why state and county health departments enforce these regulations

Ethics Training for Board Members (AB1234)

February 23, 2017 @ 6 p.m. ONLY

Small water systems throughout the country have volunteer board members governing their public water system. According to the Fair Political Practices Board and the State Attorney General, in California all new and existing board members are required to attend two hours of an ethics training once every two years. This workshop meets the legal requirements for board members' ethics training under AB1234.

Participants will learn and understand:

- Open meeting laws (Brown Act)
- Conflict of interest
- Ethical conduct
- Fair processes
- Avoiding perks

Financial Management

March 21, 2017 @ 10 a.m. ONLY

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.

This session is ideal for a board member of a drinking water utility who needs to understand basic financial aspects of a utility's operations. 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 and how to read and interpret the common financial statements so more informed decisions can be made with the information that can be gained from them
- How to use financial statements to keep your system financially viable
- Elements of internal controls
- Identifying methods to balance the budget



Budgeting

May 2, 2017 @ 10 a.m. ONLY

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

Capital Improvement Planning

May 23, 2017 @ 10 a.m. ONLY

It is becoming all too common for public water systems to experience system failures, resulting in water outages or non-compliance issues. One method to avoid these issues is to plan for the future. 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. Participants will learn and understand:

- What a CIP is
- Resources for developing a CIP
- Updating a CIP
- Planning and developing a CIP
- How a CIP ties into other important documents and policies

Rate Setting

May 31, 2017 @ 10 a.m. ONLY

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. 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 to establish fair rates based on a budget with true costs. Participants will learn and understand:

- Where to acquire budgeting tools and templates
- How to prepare a budget
- How to adhere to Proposition 218 when applicable
- How to convince the public when rate adjustments are needed
- How to establish a rate structure based on the true cost of producing and delivering water

Operator Topics

Control Valves

January 10, 2017 @ 10 a.m. & 2 p.m.

Water operators use all sorts of valves each and every day. There are specialized functions for each type of valve. What valve is used for isolation? For throttling flow? Many areas use hydraulically operated globe valves. Do you know how they work? Do yours need adjusting or rebuilding? This workshop is designed to remind you of the considerations of valve operations in your system.

In this workshop participants will review:

- How frequent should the system valves be exercised
- Precautions when operating valves
- How do valves operate to isolate or control flows and pressures in the system
- What are the major parts and pieces of valves
- How does a Cla-Val (hydraulically operated globe valve) operate

This workshop should be a good review of the care and feeding (operation and maintenance) of the various valves found in water treatment and distribution systems. The operator should have a fresh perspective and be made aware of the precautions of both the care or the neglect of the various valves of the water system.

Water Treatment Techniques

January 19, 2017 @ 10 a.m. & 2 p.m.

There are multiple techniques used by public water systems to provide safe, aesthetically pleasing water to their customers. These techniques have been established by state law, federal law and the industry. This workshop will cover these techniques as well as provide resources for the water treatment operator.

Participants attending this workshop will learn about:

- Water quality parameters
- Water sources
- Water treatment techniques
- Water treatment regulations

Well Operation & Maintenance

February 22, 2017 @ 10 a.m. & 2 p.m.

As demand for fresh water continues to increase, so too does the demand for reliable groundwater. The ability to optimally use groundwater is affected by many factors including water quality, overdraft, and operations. This workshop is designed to provide operators and managers of small systems a primer on groundwater operations and maintenance principles and practices including:

- Aquifer types
- Well parts description and purpose
- Understanding a well driller's log
- Basic operations and maintenance
- Steps that can be taken to avoid well failure

Distribution Math Refresher

March 1, 2017 @ 10 a.m. & 2 p.m.

Water distribution operators must be able to use water math in order to determine pressure and volumes of water in order to properly dose their drinking water with chlorine. This workshop will show distribution operators how to use these math skills utilizing the conversion sheet used by the California State Water Resources Control Board.

Participants attending this workshop will learn:

- Volumes
- Pressure
- Chlorine dosage
- Pipe velocity



Water Supply & Sources

March 7, 2017 @ 10 a.m. & 2 p.m.

What does Under the Direct Influence mean? What is an unconfined aquifer? Why does surface water require different treatment than groundwater? Come learn the answers to these questions and more, as we explore small system water supply and sources. Learn how your water system's supply and source impact many of your daily activities as an operator.

This workshop includes information on:

- California's water supply
- Types of water sources commonly seen in small systems
- Characteristics of major water source types and treatment impacts
- Source water protection planning

Recommended audience includes system managers, new or existing water operators, and those considering employment in a public water system.

Cross Connection Controls

March 8, 2017 @ 10 a.m. & 2 p.m.

Do you have an active cross connection control (CCC) 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 understand the need and develop a program that fits your water system.

You will learn:

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

Recommended audience for this workshop is anyone who has responsibility for implementing and/or enforcing a CCC program and those wanting to learn new essential skills in water operations.

Storage & Distribution

April 5, 2017 @ 10 a.m. & 2 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.

Disinfection Basics

April 12, 2017 @ 10 a.m. & 2 p.m.

Many small public water systems are required to disinfect their potable water supplies in order to maintain the bacteriological water quality of the water provided to their customers. Understanding the properties and safe use of chlorine and other disinfectants is essential to providing safe water. Knowing how to determine proper chlorine dosing as well as testing for chlorine residual are basics all staff that are responsible for chemical addition to water supplies should understand. This workshop is designed for water system operators and managers to understand water system disinfection basics. Participants will learn and understand:

- Properties of the different types of chlorine and equipment typically used
- Disinfecting with hypochlorites
- Determining chlorine dose
- Safe use of different types of chlorine
- Alternative disinfectants overview

Water Treatment Math

April 26, 2017 @ 10 a.m. & 2 p.m.

One of many skills needed by water treatment operators includes the ability to perform water math problems. This includes volume, chemical dosage, filtration math, sedimentation basin 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:

- Volumes
- Chemical dosage
- Sedimentation and filtration
- Pipe velocity

Pathogens in Drinking Water: Preventing disease outbreaks in your water system

June 28, 2017 @ 10 a.m. & 2 p.m.

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



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

Regulations

Surface Water Treatment

February 1, 2017 @ 10 a.m. & 2 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

Public Notification

March 22, 2017 @ 10 a.m. ONLY

Water utilities are required to provide a minimum level of customer communication through Consumer Confidence Reports (CCRs), Public Notification, Proposition 218, Revised Total Coliform Rule and other requirements. Meeting and exceeding these requirements can move your utility from mediocre to good and from good to excellent.

This workshop will provide an overview of Federal and State customer communication requirements, and provide tools and resources for developing and implementing a comprehensive public notification plan.

Participants will learn:

- Why effective customer communication is vital for a small water system
- Federal and State requirements pertaining to public communication and notification
- Resources and tools for complying with Federal and State requirements
- Principles of an effective customer communication strategy
- Tips for online and new technology communication options

Revised Total Coliform Rule

April 4, 2017 @ 10 a.m. & 2 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.

Water Quality Sampling

May 25, 2017 @ 10 a.m. ONLY

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



Photo by Randy Vessels, RCAC

The Stage 2 Disinfection By-Products Rule

June 1, 2017 @ 10 a.m. ONLY

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

Lead & Copper Programs for Small Water Systems

June 13, 2017 @ 10 a.m. & 2 p.m.

In 1991, EPA published the Lead and Copper Rule (LCR) with the purpose of protecting public health by minimizing lead and copper levels in drinking water. All public water systems are subject to the requirements of the LCR. Unlike most drinking water contaminants, lead and copper enters drinking water primarily through corrosion of distribution system and household plumbing materials, which makes the LCR unique and sometimes difficult to navigate. This workshop is designed to help small water system operators to understand the general requirements of the LCR and how to implement lead and copper control strategies. Participants will learn:

- Overview of the LCR & revisions
- Health effects of lead and copper
- Monitoring and reporting
- Lead and copper sample collection requirements
- Calculating the 90th percentile
- Action levels and treatment strategies
- Public education

Nitrates

June 14, 2017 @ 10 a.m. & 2 p.m.

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

- What Nitrates are
- How Nitrates get into drinking water
- The acute health effects of Nitrate exposure
- How to achieve compliance with Safe Drinking Water Act requirements for Nitrates.

Other Online Topics

Google Earth Mapping & CIP

February 28, 2017 @ 10 a.m. & 2 p.m.

For a water utility, the management of assets plays a significant role in overall financial performance. With the use of effective asset management, it is possible to reduce overall infrastructure costs instead of waiting until the assets fail, incurring higher than necessary costs.

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

Participants will learn:

- The basics of asset management
- The basic tools of Google Earth needed to map water system assets
- How to import scanned maps, hand held GPS coordinates and public domain GIS data
- How to derive water main pipe lengths and surface elevations for evaluating pipe alignments and tank sites for hydraulic analysis, project planning and cost estimating
- How to edit, save and share your Google Earth maps with project team members and the public
- How to create an asset inventory for planning capital improvement projects and estimating capital reserve savings goals
- Where to find different tools and resources to help the system implement asset management practice

Pumps & Motors Efficiency

May 16, 2017 @ 10 a.m. ONLY

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 will learn:

- Where to find and how to use pump curves
- How to calculate TDH in a fluid pumping system
- How to solve wire-to-water energy calculations
- Review what O&M procedures that can be followed to ensure that a given pump is giving you good, efficient and reliable service

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.

Consumer Confidence Reports

May 24, 2017 @ 10 a.m. & 2 p.m.

Informing your customers yearly about the sources and quality of your water became a state and federal mandate with the 1996 SDWA amendments and electronic delivery of Consumer Confidence Reports (CCR) became allowable in 2012. The exact format and language required for doing so can be confusing, especially for operators and managers of small systems. This workshop will guide participants through the process of producing a CCR for their water system for calendar year 2017. You will learn delivery options of the CCR, information required to be included in a CCR, and how to use the resources available to produce a CCR. This workshop is designed for anyone tasked with producing or reviewing this annual report to ensure compliance.

You will learn:

- The location/usage of the California State CCR template
- Required language
- Important dates/deadlines
- Methods of distribution
- Public relations information (important accomplishments for 2016, emerging issues, etc.)

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

Energy Efficiency

June 27, 2017 @ 10 a.m. & 2 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. With the fluctuating costs of energy this is at best, difficult to budget, and in bad times a very major expense for the water system. In this workshop we will work to minimize these effects.

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 often result in substantial energy savings.

Participants will learn:

- How to identify the biggest "energy wasters" in your operation
- What are the issues that contribute to a loss in pump efficiency
- What are the things you and your coworkers can do to contribute to your energy savings?
- What and when should we monitor to ensure that energy is a focus
- 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.



Classroom Workshops

Revised Total Coliform Rule & Sanitary Surveys

January 11, 2017

Loyal Order of the Moose
2310 Myrtle Rd. • Imperial, CA

Limited to 50 attendees

March 22, 2017

Holiday Inn
110 Grass Valley Hwy • Auburn, CA

Limited to 50 attendees

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. This workshop presents two very important tools to provide safe drinking water.

The federal Revised Total Coliform Rule (RTCR) became effective in April 2016. Until California adopts the RTCR into state regulation, water systems must comply with both the state and federal regulations. This workshop will present the requirements of both regulations and strategies for compliance.

The 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:

- The requirements of the new RTCR and existing TCR
- Strategies for compliance with both Total Coliform Rules
- 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

Registration/Check-in: 8 a.m.; workshop: 8:30 a.m.-3:30 p.m.; Lunch is one hour (on your own).



Valley Fire destruction photo (Callayomi Water District): Elizabeth Zach, RCAC

Emergency & Disaster Response Planning

January 25, 2017

Hilton Garden Inn
1000 Aguajito Rd. • Monterey, CA

Limited to 50 attendees

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

This workshop will provide water system personnel with the information and resources to respond preemptively and proactively to most emergency situations.

Registration/Check-in: 8 a.m.; Workshop: 8:30 a.m.-3:30 p.m.; Lunch is one hour (on your own).

Cross Connection Controls

January 26, 2017

Forest Park Inn
375 Leavesley Rd. • Gilroy, CA

Limited to 50 attendees

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. You will learn:

- How to identify potential cross connections
- What backflow prevention devices to use in each situation
- Method and device definitions and how they protect from contamination
- State requirements regarding cross connection control
- How to develop a successful program

Registration/Check-in: 8 a.m.; Workshop: 8:30 a.m.-3:30 p.m.; Lunch is one hour (on your own).

Disinfection & Dosing Math

February 8, 2017

Ukiah Valley Conference Center
200 S. School St. • Ukiah, CA

Limited to 50 attendees

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 disinfection? 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 function 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

This class will focus on the various ways of meeting your system's disinfection needs, mostly with a focus on the various forms of chlorine. There will be opportunity to review your processes and procedures for the use and application of the various sources of chlorine for disinfection.

Registration/Check-in: 8 a.m.; workshop: 8:30 a.m.-3:30 p.m.; Lunch is one hour (on your own).



Google Earth Mapping & CIP

February 9, 2017

Ukiah Valley Conference Center
200 S. School St. • Ukiah, CA

Limited to 50 attendees

April 19, 2017

Hilton Garden Inn Redding
5050 Bechelli Lane • Redding, CA

Limited to 50 attendees

For a water utility, the management of assets plays a significant role in overall financial performance. With the use of effective asset management, it is possible to reduce overall infrastructure costs instead of waiting until the assets fail, incurring higher than necessary costs. Workshop participants are invited to bring their laptop computers for a fully interactive experience. Participants will receive a step-by-step tutorial on how to get started mapping your water system's assets using Google Earth for project planning, public presentations and developing capital improvement plans.

Participants should download and install the free Google Earth software prior to the class as internet access may be limited at the venue (google.com/earth/).

Participants will learn:

- The basics of asset management
- The basic tools of Google Earth needed to map water system assets
- How to import scanned maps, hand held GPS coordinates and public domain GIS data
- How to derive water main pipe lengths and surface elevations for evaluating pipe alignments and tank sites for hydraulic analysis, project planning and cost estimating
- How to edit, save and share your Google Earth maps with project team members and the public
- How to create an asset inventory for planning capital improvement projects and estimating capital reserve savings goals
- Where to find different tools and resources to help the system implement asset management practice

Registration/Check-in: 8 a.m.; Workshop: 8:30 a.m.-3:30 p.m.; Lunch is one hour (on your own).

Water Symposium: Distribution Operation & Maintenance

March 16, 2017

Handlery Hotel
950 Hotel Circle • San Diego, CA

Limited to 50 attendees

This symposium is designed to provide information and tools that operators of small water systems need for proper operation and management of distribution systems, with particular focus on maintaining water quality, avoiding water loss, and maintenance of critical components.

Many maintenance activities require advanced knowledge of not only valve and piping operations but also proper scheduled preventative programs in order to dependably deliver safe drinking water. These activities, when practiced as part of a routine maintenance plan, will help small systems to optimize their water supply in a sustainable manner. Participants will learn:

- Leak detection & pipeline repair procedures



- Main flushing guidelines
- Valve exercising and valve maintenance
- Meter repair & meter replacement programs
- Guidelines and tips on well modification

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

*Registration/Check-in: 8 a.m.; workshop: 8:30 a.m.-3:30 p.m.; Lunch is one hour (on your own). **There is a fee for hotel parking.***

Financial Management

March 28, 2017

Riviera Palm Springs

1600 N. Indian Canyon Dr. • Palm Springs, CA

Limited to 50 attendees

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, preparation and adoption of budgets, monitoring and oversight 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:

- Where to acquire financial tools, guides, and templates to improve your financial health
- Basic financial terms and how to read and interpret the common financial statements
- How to prepare a budget
- Identification of methods to balance the 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

Registration/Check-in: 8 a.m.; Workshop: 8:30 a.m.-3:30 p.m.; Lunch is one hour (on your own).

The Drinking Water Sample: A comprehensive approach

March 29, 2017

Riviera Palm Springs

1600 N. Indian Canyon Dr. • Palm Springs, CA

Limited to 50 attendees

There are many responsibilities with the SDWA compliance monitoring and site sampling plans. Many times operators are tasked with sample collection in their system. We will look at the many different samples collected, the bottles used,

and practice our sampling technique. We will take a closer look at different site sampling plans and lab paperwork including the chain of custody and lab results. Participants will learn:

- What determines our sampling requirements and the different types of SDWA compliance samples
- Who is qualified to collect drinking water samples
- How to determine representative sites and what type of site sampling plan best fits your drinking water system
- How to use good technique to ensure consistent, quality sample results
- How do we determine the correct bottle types and preservatives

This workshop will give participants the information and resources they need to understand the different samples that are required and the responsibilities of the trained water sampler. Recommended audience includes system managers, new or existing water operators, and those considering employment in a public water system.

Registration/Check-in: 8 a.m.; Workshop: 8:30 a.m.-3:30 p.m.; Lunch is one hour (on your own).



Ethics, Conflict of Interest & Policies

April 6, 2017

Best Western Dry Creek Inn

198 Dry Creek Rd. • Healdsburg, CA

Limited to 50 attendees

Small water systems throughout the country often have boards consisting entirely of volunteers. In California, all new and existing board members are required to attend an ethics training once every two years, and within six months of taking office. This workshop will satisfy the legal requirements of AB1234 for elected officials of public entities. We will also cover "Brown Act" and your fiduciary responsibilities as elected officials. Good policies: do you have them, have you reviewed them lately?

Participants will learn and understand:

- AB1234 ethics requirements for board members
- Understanding open meeting laws
- Conflict of interest
- What ethical behavior is

- Financial responsibilities
- Policy creation

This workshop meets the legal requirement for members ethics training under AB1234.

Registration/Check-in: 8 a.m.; Workshop: 8:30 a.m.-3:30 p.m.; Lunch is one hour (on your own).

Basic Electric Concepts

April 20, 2017

Hampton Inn & Suites
520 Adobe Rd. • Red Bluff, CA

Limited to 50 attendees

Electricity and water are two things that go great together. No, we are not saying you should directly mix the two, but how would you supply and control the water these days without the use of electricity? What IS electricity? How do we make it and use it? How is it that electricity brings to life little electronic items and allows sensors in a SCADA (computer control system) to work? In this workshop, we will review the basics of one of our lightest tools. Participants will learn:

- What is electricity: we will review amps, volts & watts
- How do we measure these characteristics?
- What is a kilowatt hour
- What is the difference in AC/DC power
- How some basic electronic components work
- What is a Variable Frequency Drive (VFD) and how it could save you money

This workshop will give participants a review of electrical theory and help them better understand the use and control of electrical power. Recommended audience is water system operators and managers.

Registration/Check-in: 8 a.m.; workshop: 8:30 a.m.-3:30 p.m.; Lunch is one hour (on your own).

Monitoring & Water Quality

April 26, 2017

Holiday Inn Express
9010 West Front Rd. • Atascadero, CA

Limited to 40 attendees

If there is an outbreak of E. coli within your community, how sure are you that the drinking water generated by your public water system is not responsible? There is only one way to be sure, and that is by adhering to state and federal drinking water regulations.

In this workshop, we will cover a wide range of topics that every water system operator, manager and board member should know.

Participants will learn:

- The Safe Drinking Water Act, its history and future rules



- Water quality monitoring requirements for their system
- The Revised Total Coliform Rule requirement
- Current and future water monitoring requirements

Registration/Check-in: 8 a.m.; workshop: 8:30 a.m.-3:30 p.m.; Lunch is one hour (on your own).

Consumer Confidence Reports

April 27, 2017

Holiday Inn Express
9010 West Front Rd. • Atascadero, CA

Limited to 40 attendees

Informing your customers yearly about the sources and quality of your water became a state and federal mandate with the SDWA amendments of 1996. The exact format and language required for doing so can be confusing, especially for operators and managers of small systems. This workshop will guide participants the step-by-step process of producing a Consumer Confidence Report (CCR) for their water system for calendar year 2016, in time to meet the July 1, 2017 deadline for delivery. Templates that we will use are available on the Water Board website at: http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/CCR.shtml.

If you would like to complete your CCR at the workshop, please bring a laptop computer (make sure your battery will support three hours of continuous use), and the following information:

- System and staff contact information
- Type of water source and location(s)
- All water quality monitoring results for 2016
- Previous years' CCRs
- Public relations information (important accomplishments for 2016, emerging issues, etc.)

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

Registration/Check-in: 8 a.m.; workshop: 8:30 a.m.-3:30 p.m.; Lunch is one hour (on your own).

AB54: Ethics for Mutual Water Companies (2 hours)

May 9, 2017

DoubleTree Claremont
555 W. Foothill Blvd. • Claremont, CA

Limited to 50 attendees

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

SPECIAL TIME: Registration/Check-in: 5:30 p.m.; workshop: 6-8 p.m.



CalTAP Fair for Water Systems

May 10, 2017

DoubleTree Claremont
555 W. Foothill Blvd. • Claremont, CA

See page 1 for more information.

Registration/Check-in: 8 a.m.; workshop: 8:30 a.m.-4 p.m.; Lunch is one hour (on your own).

Revised Total Coliform Rule

May 11, 2017

DoubleTree Claremont
555 W. Foothill Blvd. • Claremont, CA

Limited to 50 attendees

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. In most cases the results are diarrhea, cramps, nausea and other symptoms. But in some cases—particularly among the young, the elderly and ill people—waterborne diseases can lead to death.

Regular microbial monitoring cannot be over-emphasized. 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. 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:

- Maintaining microbial safe water
- Proper sampling technique for coliform samples
- Necessary actions for compliance
- Public Notification under the RTCR
- But wait, there's more!!! – Understanding and reviewing the Level 1 assessment process to comply with the RTCR.

Registration/Check-in: 8 a.m.; workshop: 8:30 a.m.-3:30 p.m.; Lunch is one hour (on your own).

Treatment Operator Techniques

May 17, 2017

Loyal Order of the Moose
2310 Myrtle Rd. • Imperial, CA

Limited to 50 attendees

The workshop reviews the basic principles of surface-water treatment plant operations and the regulations that guide us. Attendees will learn about:

- The Safe Drinking Water Act and multi-barrier treatment
- Source water
- Pathogenic organisms
- Conventional treatment processes
- Basic water chemistry
- Protecting water quality

This workshop is designed to assist operators, managers, board members and anyone interested in broadening their knowledge of water treatment topics.

Registration/Check-in: 8 a.m.; workshop: 8:30 a.m.-3:30 p.m.; Lunch is one hour (on your own).

Treatment Operator Math

May 18, 2017

Loyal Order of the Moose
2310 Myrtle Rd. • Imperial, CA

Limited to 50 attendees

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:

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

Registration/Check-in: 8 a.m.; workshop: 8:30 a.m.-3:30 p.m.; Lunch is one hour (on your own).

Drinking Water Wells, Storage Tanks & Hydrology: Monitoring what we cannot see

June 6, 2017

Lighthouse Inn
681 Hwy 101 South • Crescent City, CA

Limited to 50 attendees

How is your well withstanding the drought? How do you know what is going on deep in the ground? What goes into the process of choosing a storage tank? Every water tank must be periodically maintained in order to ensure long life of the tank and quality water within the tank. 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 wells and tank maintenance.

- Tank selection and design process
- Well and tank inspection
- Well and tank maintenance
- Hydrology: groundwater qualities
- Tank's impact on water quality
- Drawdown and recovery tracking
- Well sounders

Registration/Check-in: 8 a.m.; workshop: 8:30 a.m.-3:30 p.m.; Lunch is one hour (on your own).



Maintaining Water Quality

June 7, 2017

River Lodge Conference Center
1800 Riverwalk • Fortuna, CA

Limited to 50 attendees

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

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

Registration/Check-in: 8 a.m.; workshop: 8:30 a.m.-3:30 p.m.; Lunch is one hour (on your own).

Trainer Biographies

KEVIN BAUGHMAN, RCAC Rural Development Specialist – Environmental, provides technical assistance to tribal and small communities. He has more than 30 years of drinking water experience. He has provided drinking water in submarines and communities throughout the West. The last 10 years of his experience is in drinking water technical, managerial and financial topics in Hawaii. Kevin holds a 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 San Diego County and Hawaii.

MICHAEL BOYD, RCAC Rural Development Specialist – Environmental, conducts numerous water system assessments, sanitary surveys, source water assessments and related technical assistance. He has more than 18 years of experience in public water systems' operation, maintenance and inspection. He is a certified investigator/inspector and licensed Grade 1 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.

RICHARD CULP, RCAC Rural Development Specialist – Engineer, provides technical assistance to rural communities and public agencies on utility infrastructure construction, operation, management and administration. Richard has 11 years of experience managing a public utility, developing policies and ordinances, budgeting, supervising labor, utility billing, payroll, financial reporting and public meetings. His experience includes water and wastewater infrastructure designs, permitting, grant funding, assessment districts and construction management. He holds a bachelor's degree in civil engineering and is a California licensed civil engineer.

MARY FLEMING-LESLIE, RCAC 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 seven years of experience in financial management. Mary develops financial management training curricula and teaches online and classroom workshops for RCAC. She performs financial statement 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, RCAC Rural Development Specialist – Environmental, has more than 16 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 Yuba College at its Clearlake campus and is a part-time trainer for RCAC.

ANGELA HENGEL, RCAC 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 22 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 has been an instructor in the Water/Wastewater Technology Education program at Palomar College since 1998.

JIM MCVEIGH, RCAC Drinking Water Specialist, has more than 30 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 New Mexico Water Treatment Operator, Grade 4 Arizona Water Treatment Operator and is a Certified Environmental Trainer. He was 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, RCAC 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, 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.

JEAN THOMPSON-IBBESON, RCAC Rural Development Specialist – 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.

JOHN VAN DEN BERGH, RCAC 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, RCAC Rural Development Specialist – Environmental (Circuit Rider), provides technical assistance and training to Tribal and small communities in 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 and most recently served as director of water operations for a local Tribal community.

NEIL WORTHEN, RCAC Rural Development Specialist – Environmental, has more than 30 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.



Contact Hours & Certificates:

Each classroom workshop, Water Symposium and CalTAP Fair qualify for six (6) drinking water contact hours. Exception is the two-hour AB54 & AB240 class, which qualifies for two (2) drinking water 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, except for the CalTAP Fair, to those pre-registered at least two weeks in advance. CalTAP Fair attendees will have their certificates mailed after the event.

Certificates for all online sessions will be available for self-printing within 10 business days 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.

Certificates for all trainings may NOT be available. Contact registration@rcac.org if you cannot locate your training certificate online.

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 50 attendee limit for online workshops. Cancellations can be made by email at 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:

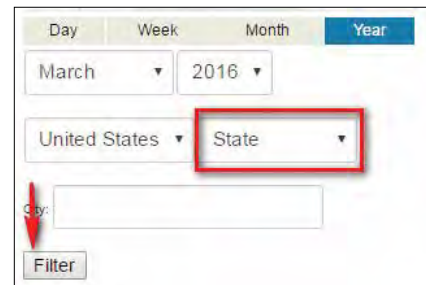
<http://www.events.rcac.org/rcac/Calendar.asp>

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

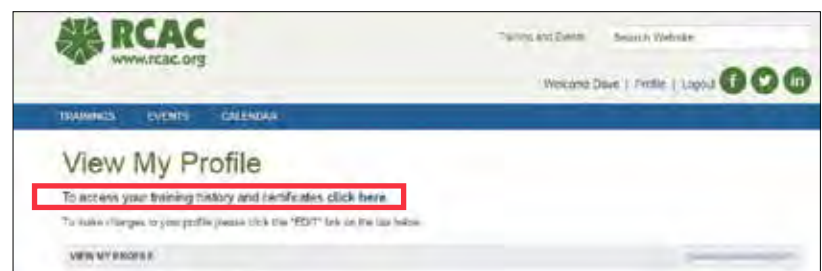


How do I find my certificates online?

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.



Course Name	Course Section	Date	Duration	Certificate
Drought Contingency Planning (ACET)	Drought Contingency Planning Workshop	12/9/2014		View Certificate
Hands-On Sanitary Surveys for Inspectors Training	Hands-On Sanitary Surveys for Inspectors	12/9/2014		View Certificate

CEU Type	Course/Event	CEU Points
Course Credit	Drought Contingency Planning (ACET)	0.5
Course Credit	Hands-On Sanitary Surveys for Inspectors Training	2.0
TOTAL CEU = 2.5		

January-June 2017 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 under **Trainings and Events**.

Name: _____
 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 _____

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.

NOTE: ALL NOTIFICATIONS REGARDING WORKSHOP CHANGES ARE MADE VIA EMAIL. Therefore, we request a valid e-mail address on your registration form. **A valid email address is required for online workshops.** See page 2 for more information.

If you are unable to attend a workshop that you have registered for, please let us know. We may have a waiting list of people who want to attend.

Registration questions or problems? Contact the Training Department: registration@rcac.org.

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

Please register me for the following workshop(s):

Classroom Workshops:

- 1/11/17 Revised Total Coliform Rule & Sanitary SurveysImperial
- 1/25/17 Emergency & Disaster Response PlansMonterey
- 1/26/17 Cross Connection ControlsGilroy
- 2/08/17 Disinfection & Dosing Math Ukiah
- 2/09/17 Google Earth Mapping & CIP..... Ukiah
- 3/16/17 WATER SYMPOSIUM:
Distribution Operation & Maintenance San Diego
- 3/22/17 Revised Total Coliform Rule & Sanitary Surveys Auburn
- 3/28/17 Financial Management & Rate SettingPalm Springs
- 3/29/17 Comprehensive SamplingPalm Springs
- 4/06/17 Ethics, Conflict of Interest & Policies: AB1234..... Healdsburg
- 4/19/17 Google Earth Mapping & CIP.....Redding
- 4/20/17 Basic Electric Concepts..... Red Bluff
- 4/26/17 Water Quality Monitoring Atascadero
- 4/27/17 Consumer Confidence Reports Atascadero
- 5/09/17 AB54 & AB240 Board Training for
Mutual Water Systems (6-8 p.m.) Claremont
- 5/10/17 CAL TAP FAIR FOR WATER SYSTEMS Claremont
- 5/11/17 Revised Total Coliform Rule..... Claremont
- 5/17/17 Treatment Operator TechniquesImperial
- 5/18/17 Water Treatment Math.....Imperial
- 6/06/17 Drinking Water Wells, Storage Tanks & Hydrology:
Monitoring what we cannot see Crescent City
- 6/07/17 Maintaining Water Quality Fortuna

Online Workshops:

- 1/10/17 10 a.m. or 2 p.m. Control Valves
- 1/18/17 10 a.m. ONLY Board Basics: Operations Basics
- 1/19/17 10 a.m. or 2 p.m. Operator Basics: Water Treatment Techniques
- 1/31/17 10 a.m. ONLY Board Basics: Board Roles & Responsibilities
- 2/01/17 10 a.m. ONLY Regulations Basics: Surface Water Treatment
- 2/21/17 10 a.m. ONLY Board Basics: Safe Drinking Water Act
- 2/22/17 10 a.m. or 2 p.m. Operator Basics: Well Operation & Maintenance
- 2/23/17 6-8 p.m. ONLY Ethics Training for Board Members (AB1234)
- 2/28/17 10 a.m. or 2 p.m. Google Earth Mapping & CIP
- 3/01/17 10 a.m. or 2 p.m. Operator Basics: Distribution Math Refresher
- 3/07/17 10 a.m. or 2 p.m. Operator Basics: Water Sources & Supply
- 3/08/17 10 a.m. or 2 p.m. Cross Connection Controls
- 3/21/17 10 a.m. ONLY Board Basics: Financial Management
- 3/22/17 10 a.m. ONLY Regulations Basics: Public Notification
- 4/04/17 10 a.m. or 2 p.m. Regulations Basics: Revised Total Coliform Rule
- 4/05/17 10 a.m. or 2 p.m. Operator Basics: Storage & Distribution
- 4/12/17 10 a.m. or 2 p.m. Operator Basics: Disinfection Basics
- 4/26/17 10 a.m. or 2 p.m. Operator Basics: Water Treatment Math
- 5/02/17 10 a.m. ONLY Board Basics: Budgeting
- 5/16/17 10 a.m. ONLY Pumps & Motors Efficiency
- 5/23/17 10 a.m. ONLY Board Basics: Capital Improvement Planning
- 5/24/17 10 a.m. or 2 p.m. Consumer Confidence Reports
- 5/25/17 10 a.m. ONLY Regulations Basics: Water Quality Sampling
- 5/31/17 10 a.m. ONLY Board Basics: Rate Setting
- 6/01/17 10 a.m. ONLY Regulations Basics: Disinfection By-Products Rule II
- 6/13/17 10 a.m. or 2 p.m. Lead & Copper Programs for Small Water Systems
- 6/14/17 10 a.m. or 2 p.m. Nitrates
- 6/27/17 10 a.m. or 2 p.m. Operator Basics: Energy Efficiency
- 6/28/17 10 a.m. or 2 p.m. Operator Basics: Pathogens

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 on page 16)

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FREE California Drinking Water Workshops: January-June 2017 Schedule-at-a-Glance

Classroom Workshops:

1/11/17	Revised Total Coliform Rule & Sanitary Surveys	Imperial
1/25/17	Emergency & Disaster Response Plans	Monterey
1/26/17	Cross Connection Controls	Gilroy
2/08/17	Disinfection & Dosing Math	Ukiah
2/09/17	Google Earth Mapping & CIP	Ukiah
3/16/17	WATER SYMPOSIUM: Distribution Operation & Maintenance	San Diego
3/22/17	Revised Total Coliform Rule & Sanitary Surveys	Auburn
3/28/17	Financial Management & Rate Setting	Palm Springs
3/29/17	Comprehensive Sampling	Palm Springs
4/06/17	Ethics, Conflict of Interest & Policies: AB1234	Healdsburg
4/19/17	Google Earth Mapping & CIP	Redding
4/20/17	Basic Electric Concepts	Red Bluff
4/26/17	Water Quality Monitoring	Atascadero
4/27/17	Consumer Confidence Reports	Atascadero
5/09/17	AB54 & AB240 Board Training for Mutual Water Systems (6-8 p.m.)	Claremont
5/10/17	CAL TAP FAIR FOR WATER SYSTEMS	Claremont
5/11/17	Revised Total Coliform Rule	Claremont
5/17/17	Water Treatment Techniques	Imperial
5/18/17	Water Treatment Math	Imperial
6/06/17	Drinking Water Wells, Storage Tanks & Hydrology: Monitoring what we cannot see	Crescent City
6/07/17	Maintaining Water Quality	Fortuna

Online Workshops:

1/10/17	Control Valves	10 a.m. & 2 p.m.
1/18/17	Board Basics: Operations Basics	10 a.m.
1/19/17	Operator Basics: Water Treatment Techniques	10 a.m. & 2 p.m.
1/31/17	Board Basics: Board Roles & Responsibilities	10 a.m.
2/01/17	Regulations Basics: Surface Water Treatment	10 a.m.
2/21/17	Board Basics: Safe Drinking Water Act	10 a.m.
2/22/17	Operator Basics: Well Operation & Maintenance	10 a.m. & 2 p.m.
2/23/17	Ethics Training for Board Members (AB1234)	6-8 p.m.
2/28/17	Google Earth Mapping & CIP	10 a.m. & 2 p.m.
3/01/17	Operator Basics: Distribution Math	10 a.m. & 2 p.m.
3/07/17	Operator Basics: Water Sources & Supply	10 a.m. & 2 p.m.
3/08/17	Cross Connection Controls	10 a.m. & 2 p.m.
3/21/17	Board Basics: Financial Management	10 a.m.
3/22/17	Regulations Basics: Public Notification	10 a.m.
4/04/17	Regulations Basics: Revised Total Coliform Rule	10 a.m. & 2 p.m.
4/05/17	Operator Basics: Storage & Distribution	10 a.m. & 2 p.m.
4/12/17	Operator Basics: Disinfection Basics	10 a.m. & 2 p.m.
4/26/17	Operator Basics: Water Treatment Math	10 a.m. & 2 p.m.
5/02/17	Board Basics: Budgeting	10 a.m.
5/16/17	Pumps & Motors Efficiency	10 a.m.
5/23/17	Board Basics: Capital Improvement Planning	10 a.m.
5/24/17	Consumer Confidence Reports	10 a.m. & 2 p.m.
5/25/17	Regulations Basics: Water Quality Sampling	10 a.m.
5/31/17	Board Basics: Rate Setting	10 a.m.
6/01/17	Regulations Basics: Disinfection By-Products Rule II	10 a.m.
6/13/17	Lead & Copper Programs for Small Water Systems	10 a.m. & 2 p.m.
6/14/17	Nitrates	10 a.m. & 2 p.m.
6/27/17	Operator Basics: Energy Efficiency	10 a.m. & 2 p.m.
6/28/17	Operator Basics: Pathogens	10 a.m. & 2 p.m.

