



Ruby Jubilee

40th TRI-STATE SEMINAR

Celebrating
40 YEARS OF TRAINING EXCELLENCE

AUGUST 4-7, 2025
SOUTH POINT HOTEL & CASINO | LAS VEGAS

CERTIFICATION PREP WORKSHOPS

MONDAY, AUGUST 4, 2025

WORKSHOPS

TIME		COURSE DESCRIPTION	LOCATION	SESSION
7:30 AM – 4:00 PM	*** 1 DAY COURSE *** (Day 1 of 1, 7 hours)	Water Distribution Operator Exam Prep <i>Steven Hernandez, WaterWisePro Training</i>	Mission Bay	9901
7:30 AM – 4:00 PM	*** 3 DAY COURSE *** (Day 1 of 3, 7 hours)	PACP™, LACP™, MACP™ Pipeline, Lateral and Manhole Assessment Certification Class <i>Michael Lukas, Fishhawk Enterprises</i>	Morro Bay	9905
7:30 AM – 4:00 PM	*** 2 DAY COURSE *** (Day 1 of 2, 7 hours)	Overview of Advanced Water Treatment and Exam Readiness Workshop <i>Troy Walker, Hazen</i>	Monterey Bay	9907

TUESDAY, AUGUST 5, 2025

WORKSHOPS

TIME		COURSE DESCRIPTION	LOCATION	SESSION
7:30 AM – 4:00 PM	*** 1 DAY COURSE *** (Day 1 of 1, 7 hours)	OSHA Trenching, Shoring, and Confined Space Certificate Training <i>Kris Graham, United Rentals</i>	Pelican Bay	9912
12:00 PM – 4:00 PM	*** 4 HOUR COURSE ***	Intermediate and Advanced Wastewater Math, Grades III - V <i>Shawn Powell, The Wastewater Enthusiast</i>	Half Moon Bay	9913
7:30 AM – 4:00 PM	*** 2 DAY COURSE *** (Day 2 of 2, 7 hours)	Overview of Advanced Water Treatment and Exam Readiness Workshop <i>Troy Walker, Hazen</i>	Monterey Bay	9915
7:30 AM – 4:00 PM	*** 3 DAY COURSE *** (Day 2 of 3, 7 hours)	PACP™, LACP™, MACP™ Pipeline, Lateral and Manhole Assessment Certification Class <i>Michael Lukas, Fishhawk Enterprises</i>	Morro Bay	9916

WEDNESDAY, AUGUST 6, 2025

WORKSHOPS

TIME		COURSE DESCRIPTION	LOCATION	SESSION
12:00 PM – 4:00 PM	*** 4 HOUR COURSE ***	Wastewater Math 101: Sharpen Your Skills and Prepare for Certification <i>Shawn Powell, The Wastewater Enthusiast</i>	Half Moon Bay	9924
7:30 AM – 4:00 PM	*** 3 DAY COURSE *** (Day 3 of 3, 7 hours)	PACP™, LACP™, MACP™ Pipeline, Lateral and Manhole Assessment Certification Class <i>Michael Lukas, Fishhawk Enterprises</i>	Morro Bay	9926

THURSDAY, AUGUST 7, 2025

WORKSHOPS

TIME		COURSE DESCRIPTION	LOCATION	SESSION
7:30 AM – 4:00 PM	*** 1 DAY COURSE *** (Day 1 of 1, 7 hours)	MS4CCEI - MS4 Compliance & Code Enforcement Inspector <i>Luke Owen, NPDES Training Institute</i>	Mission Bay	9931





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TECHNICAL WORKSHOPS

MONDAY, AUGUST 4, 2025

WORKSHOPS

TIME		COURSE DESCRIPTION	LOCATION	SESSION
7:30 AM – 4:00 PM	*** 1 DAY COURSE *** (Day 1 of 1, 7 hours)	Activated Sludge and Nutrient Removal <i>Sidney Innerebner, Indigo Water Group</i>	Pelican Bay	9902
12:00 PM – 4:00 PM	*** 4 HOUR COURSE ***	Valve-Ology: In depth view of valves, gates, and associated equipment <i>Kris Wall, Ben Wall, B&K Valves & Equipment</i>	Half Moon Bay	9903
7:30 AM – 11:30 AM	*** 4 HOUR COURSE ***	Vibration Fundamentals for Rotating Equipment <i>Christen Mancini, Hydro</i>	Half Moon Bay	9904
7:30 AM – 4:00 PM	*** 1 DAY COURSE *** (Day 1 of 1, 7 hours)	PFAS 101: Emerging Trends & Technologies to Solve the PFAS Crisis <i>Tonya Chandler, Alex Evans, BioLargo</i>	Redwood (Ex)	9906

TUESDAY, AUGUST 5, 2025

WORKSHOPS

TIME		COURSE DESCRIPTION	LOCATION	SESSION
7:30 AM – 4:00 PM	*** 1 DAY COURSE *** (Day 1 of 1, 7 hours)	Centrifugal Pumps 101 <i>Aaron Guydosh, Mechanical Systems Trainer</i>	Mission Bay	9911
7:30 AM – 11:30 AM	*** 4 HOUR COURSE ***	Under Pressure: Distribution Pipeline and Force Main Inspection Technologies <i>Paul Gagliardo, Gagliacqua; and Chris MacDonald, CPM Pipelines</i>	Half Moon Bay	9914

WEDNESDAY, AUGUST 6, 2025

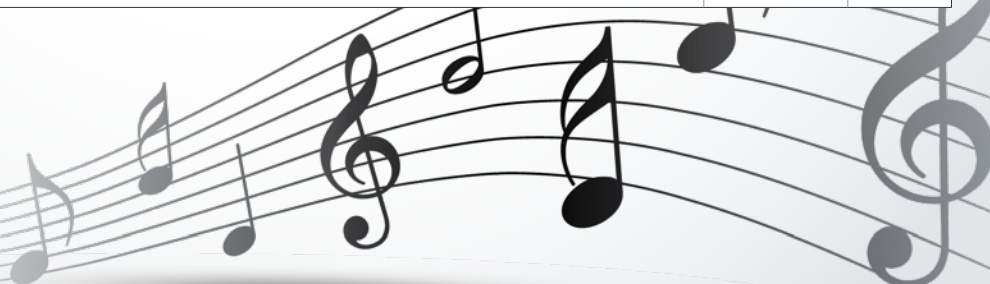
WORKSHOPS

TIME		COURSE DESCRIPTION	LOCATION	SESSION
7:30 AM – 4:00 PM	*** 1 DAY COURSE *** (Day 1 of 1, 7 hours)	Intro to Advanced Water Chemistry Training for Membrane Professionals <i>Darrell Byrer, Andrew Gohr, American Water Chemicals</i>	Mission Bay	9921
7:30 AM – 4:00 PM	*** 1 DAY COURSE *** (Day 1 of 1, 7 hours)	Wastewater Microbiology Hands-On <i>Steve Leach, Leach Microbial Consulting; and Rick Marshall, METC Group</i>	Pelican Bay	9922
7:30 AM – 4:00 PM	*** 1 DAY COURSE *** (Day 1 of 1, 7 hours)	WEF Air Quality and Odor Community Presents: Fundamentals of Odor Management <i>Ian Watson, USP Technologies; and Brett Offerman, Kemira</i>	Monterey Bay	9923
7:30 AM – 11:30 AM	*** 4 HOUR COURSE ***	Running Backflow and Cross-Connection Programs <i>Randy De La Garza, City of Surprise</i>	Half Moon Bay	9925

THURSDAY, AUGUST 7, 2025

WORKSHOPS

TIME		COURSE DESCRIPTION	LOCATION	SESSION
7:30 AM – 4:00 PM	*** 1 DAY COURSE *** (Day 1 of 1, 7 hours)	Wastewater Microbiology Hands-On <i>Steve Leach, Leach Microbial Consulting; and Rick Marshall, METC Group</i>	Pelican Bay	9932
7:30 AM – 4:00 PM	*** 1 DAY COURSE *** (Day 1 of 1, 7 hours)	Going from Buddy to Boss: Secrets to Stepping-up to O&M Leadership Roles <i>James Mcpherson, Ralph Stevens, Competency Training Systems (CTS)</i>	Half Moon Bay	9933





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WORKSHOP SUMMARIES



CERTIFICATION PREP WORKSHOPS

WATER DISTRIBUTION OPERATOR EXAM PREP (1 DAY COURSE – 7 HOURS)

\$275.00 – Session 9901

The water distribution exam Prep course will review expected range of knowledge for distribution operators preparing for their grades 1 through 5 exams in California and grades 1 through 4 for association of board certification exams. All attendees will receive a study guide that has helped thousands of operators successfully pass their exams and will greatly benefit from this course. We will cover everything from source water to regulations, distribution components and safety, and finish the class with math.

PACP™, LACP™, MACP™ PIPELINE, LATERAL AND MANHOLE ASSESSMENT CERTIFICATION CLASS

(3 DAY COURSE – 7HRS/DAY)

\$1,290.00 – Sessions 9905, 9916, 9926

PACP™, LACP™, MACP™ is a pertinent certification for those individuals who assess the condition coding of pipelines, laterals and manholes. The goal of this program is to help pipeline system owners create comprehensive databases to properly identify, plan, prioritize, manage and renovate their assets based on condition evaluation. This program allows individuals to speak the same language regarding pipe defects, coding procedures, documentation and plans for rehab or the replacement of sewers. This is a 3 year certification and does require recertification in order to stay certified. Some individuals that may acquire this certification are CCTV operators, engineers, contractors, manufacturers & more. Registration for this certification includes a version 8 field manual, an eBook, a fully accessible NASSCO account and CEUs/ PDHs directly from CUIRE.

OVERVIEW OF ADVANCED WATER TREATMENT AND EXAM READINESS WORKSHOP (2 DAY COURSE – 7HRS/DAY)

\$150.00 – Sessions 9907, 9915

This two-day exploration of Advanced Water Treatment (AWT) topics will cover a wide range of technologies, processes, and

concepts that are used within many water and wastewater applications. In addition, these topics are part of the range of knowledge candidates need to understand to prepare for the AWT Operator® certification exam. We will cover membrane processes used in advanced treatment, incl microfiltration, ultrafiltration, and reverse osmosis. The workshop will highlight process description, descriptions of the membranes, monitoring strategies used in these treatment processes, process parameters, instrumentation, and critical control points. Day 2 we'll cover advanced disinfection such as UV, ozone, and biofiltration processes. The class will highlight individual technologies and the combined use of technologies. It will include treatment components, monitoring strategies, process parameters, instrumentation, and critical control. Participants are welcome to share their experiences and ask questions.

Water treatment and wastewater operators with a grade 3 or higher certification are eligible to apply for the AWT® grade 3 exam. Learn more at www.awtoperator.org

OSHA TRENCHING, SHORING, AND CONFINED SPACE CERTIFICATE TRAINING (1 DAY COURSE – 7 HOURS)

\$190.00 – Session 9912

Introducing our all-new Excavation Safety Course, featuring a completely redesigned curriculum, interactive student activities, and updated training materials. Competent Person Training is designed for all employees involved in trenching work, including job foremen, job superintendents, engineers and any personnel involved in underground projects. According to OSHA 29 CFR 1926 Subpart P, every excavation must have a designated Competent Person to manage the safety aspects of the site. To properly

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WORKSHOP SUMMARIES

carry out Competent Person responsibilities, this individual must have training in, and be knowledgeable of, soil analysis, the use of protective systems and the requirements of the standard. Additional responsibilities include identifying existing and predictable hazards in the work environment and possessing the authority to take prompt corrective action.

Training topics:

- Introduction to trench safety
- The OSHA excavation standard
- Competent person responsibilities
- Sloping, shoring, shielding guidelines
- Protective systems options
- Soil analysis
- Job planning

INTERMEDIATE AND ADVANCED WASTEWATER MATH, GRADES III – V (4 HOUR COURSE)

\$325.00 – Session 9913

This course is geared towards intermediate and advanced level wastewater treatment plant operators who are currently studying for an exam. Entry level operators are invited to attend to get exposure to this higher level math. We will start the class with a review of Grade II math concepts as a refresher such as MCRT, flow rates, F/M ratios, volatile solids reduction, and chemical dosing. We will then get into higher level math such as wasting rates, calculating MLVSS using F/M ratio, pumping rates, calculating BOD vs CBOD vs NBOD, DAF solids loading, solids recovery, and pump efficiency. We will also discuss test preparation and study strategies, as well as exam day tips. Attendees should bring a calculator. Booklets, pens, and scratch paper will be provided.

WASTEWATER MATH 101: SHARPEN YOUR SKILLS AND PREPARE FOR CERTIFICATION (4 HOUR COURSE)

\$175.00 – Session 9924

This course is geared towards entry-level wastewater treatment plant operators who are currently studying for an exam, as well as advanced wastewater treatment plant operators who want a review. We will review basic math concepts such as finding area and volume, as well as Grade I, II, and some III level

math problems which include, the pounds formula, sludge volume index, MCRT, sludge age, flow rates, F/M ratios, organic loading, hydraulic loading, percent efficiency, volatile solids reduction, chemical dosing, pond math, and trickling filter math. We will also discuss test preparation and study strategies, as well as exam day tips. Attendees should bring a calculator. Booklets, pens, and scratch paper will be provided.

MS4CCEI - MS4 COMPLIANCE & CODE ENFORCEMENT INSPECTOR (1 DAY COURSE – 7 HOURS)

\$322.00 – Session 9931

The MS4 Compliance and Code Enforcement Inspector (MS4CCEI) Seminar customized for the Tri-State Seminar attendees is a 1-day training experience designed to credential Municipal Separate Storm Sewer Systems (MS4) staff and contracted personnel to perform MS4 permit compliance & stormwater code enforcement responsibilities.

1-Day Training:

- Clean Water Act Fundamentals
- Water Quality – An American Perspective
- Urban Stormwater Impacts
- Point Source/
Non-Point Source Management

- MS4 Permit Compliance and Enforcement Basics
- Role of the MS4CCEI Inspector
 - Field Data Collection
 - Construction Site Inspections
 - Industrial Facility Inspections

Course modules have been prepared, reviewed, and attended by state, local and federal USEPA regulatory personnel as well as stormwater consulting professionals with well over 150 years of combined MS4 stormwater experience.



TECHNICAL WORKSHOPS

ACTIVATED SLUDGE AND NUTRIENT REMOVAL (1 DAY COURSE – 7 HOURS)

\$250.00 – Session 9902

The objective of this class is to give front-line operators and process control engineers a more in-depth understanding of the activated sludge process. Lecture is supplemented with open discussion and an activated sludge process simulator. Computers provided. Activated sludge process control requires operators to exercise their professional judgment to select the

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WORKSHOP SUMMARIES

right sludge age, F:M, MLSS concentration, RAS rate, WAS rate, DO concentrations, ORP targets, and internal mixed liquor recycle rates. Many training classes and articles discuss the basics of what each of these variables are and what they do, but very few give guidance on how an operator should decide what the target setpoints should be for each of these variables in their own facilities. As a result, operators are forced to use a trial and error approach. Attendees will learn how to select an appropriate sludge age for their facility based on treatment goals, water temperature, and sludge quality. They will learn how to recognize the interdependence of many of these process variables and why it is impossible to simultaneously control more than one at a time.

VALVE-OLOGY: IN DEPTH VIEW OF VALVES, GATES, AND ASSOCIATED EQUIPMENT (4 HOUR COURSE)

\$25.00 – Session 9903

Workshop will cover AWWA Valves, AWWA Slide/Sluice Gates, Flap Gates, and associated equipment. Breakout sessions to go over specific valve types commonly found in the AWWA market. We will also review valve assessments along with case studies.

VIBRATION FUNDAMENTALS FOR ROTATING EQUIPMENT (4 HOUR COURSE)

\$25.00 – Session 9904

This workshop serves to demystify the subject of vibration. The course starts with an overview of vibration terminology and the physical nature of vibration. Vibration instrumentation and how it is used for data collection and analysis is reviewed. The course then shifts to a discussion of diagnosing machinery faults using vibration. Finally, a review of IoT technologies and how they are being used to detect and diagnose machinery degradation will be explored. The broad range of learning objectives is complemented with real world examples through focused case studies.

Learning Outcomes:

- Define basic vibration terminology
- Understand vibration spectra and waveforms, including the concepts of

frequency, amplitude, and phase

- Identify methods of vibration data collection using varied instrumentation
- Apply vibration analysis techniques to diagnose machinery faults
- Understand the basic theory behind natural frequencies and resonance
- Familiarize attendees with emerging condition monitoring technology

PFAS 101: EMERGING TRENDS & TECHNOLOGIES TO SOLVE THE PFAS CRISIS (1 DAY COURSE – 7 HOURS)

\$25.00 – Session 9906

The workshop will explore the questions, What is PFAS? Where did it come from? Why is it so dangerous? Why all the hype? What do we do with it? How do we treat it? What do we need to know when evaluating treatment? The workshop will do a deep dive into the history of PFAS, the terminology that surrounds PFAS, current regulatory framework and the trends and treatment options for PFAS. Both new and innovative treatments for water, wastewater, leachate, soil and air will be explored. The workshop will present the pros and cons of each treatment methods and the best applications for each treatment. The program will explore the science of PFAS and its prominent role in our society. It will look at the commercial implications of removing PFAS.

CENTRIFUGAL PUMPS 101 (1 DAY COURSE – 7 HOURS)

\$175.00 – Session 9911

This work shop would identify the different parts of ansi style centrifugal pump. How to disassemble one rebuild one and the different ways to set impeller clearance. Mechanical seal installation. Packing installation. What different types of impellers are for. The difference between an impeller and an expeller. What a big boar stuffing box is. How to install a pump and the alignment process. Also troubleshooting the pump and system. What cavitation is and how to correct it. How pipe stress can affect your alignment process. Training pumps will be provided to disassemble and reassemble.

UNDER PRESSURE: DISTRIBUTION PIPELINE AND FORCE MAIN INSPECTION TECHNOLOGIES (4 HOUR COURSE)

\$25.00 – Session 9914

This workshop will present the options for inspecting pressurized pipes, both sewer force mains and water pipes. The session will review the technological options including multi-sensor, ultrasonic, and electromagnetic sensing technologies. A variety of technologies from various vendors will be discussed. Each system will be described and the applications it is best suited for will be identified. The applications will include considerations of plastic pipe versus metal pipe. Case studies of these technologies will be presented to document the types of data collected and how the data can be used to plan for rehabilitation or replacement. This information is critical because identifying the root causes of defects in pressure pipes can direct utilities to a more cost-effective option, reducing the community's impact. It can also considerably lower the overall cost of a project and ensure a similar life cycle for the new pipeline. The cost of implementing these various forensic solutions will be discussed and compared to other NDT techniques for determining replacement options.

INTRO TO ADVANCED WATER CHEMISTRY TRAINING FOR MEMBRANE PROFESSIONALS (1 DAY COURSE – 7 HOURS)

\$25.00 – Session 9921

This workshop will increase participants' knowledge of water chemistry concepts critical to reverse osmosis (RO) and nanofiltration (NF) processes. Individuals will be introduced to basic RO principles and operations, membrane construction, membrane system configuration, membrane pre-treatment basics and process, monitoring of membrane systems and troubleshooting the use of basic data along with corrective actions. Join the American Water Chemicals (AWC®) team for this training designed to equip water treatment professionals with the skills and knowledge to optimize performance, extend membrane life, and improve the operational efficiency of their membrane systems.



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WORKSHOP SUMMARIES

WASTEWATER MICROBIOLOGY HANDS-ON (1 DAY COURSE – 7 HOURS)

\$425.00 – Session 9922

Biological wastewater treatment systems all over the world experience shocks or upsets one time or another and the faster the operator can determine the cause, the quicker the return to steady state operation. If the operator knew what to look for, as far as indicator organisms, floc structure, or filament impact they may be able to limit the time between the upset and recovery. Performing the Microscopic exam can do just that. Many filaments appear during certain conditions and recognizing whether they are growing or static could provide the operator the edge in deciding his best course of action. The focus on the four key elements of biomass and what they tell us can be an important tool for the operator. This workshop will enable the operator to use the microscope to better understand what is happening to the biomass and how it reacts to changes. This workshop is "hand-on" and all attendees will have access to Phase contrast microscopes. It will be a combination of instruction and actual sample analysis. We will focus on Floc, Filaments, Higher life forms and the bulk water. Attendees can bring their own samples.

WEF AIR QUALITY AND ODOR COMMUNITY PRESENTS: FUNDAMENTALS OF ODOR MANAGEMENT (1 DAY COURSE – 7 HOURS)

\$25.00 – Session 9923

When problems of wastewater odor arise, there are numerous solutions available to the wastewater utility, and yet determining which solution will provide best outcome is often extremely difficult, even for those with significant expertise. Appropriate for wastewater collections and treatment professionals of all levels, this workshop will examine the basic concepts of odor generation and emission, and what to do when odors become a problem, including critical factors to consider in technology selection as well as common mistakes and oversights. Practice experts from municipalities and odor control service providers will cover use cases and limitations

for the majority of available aqueous and vapor phase control solutions, presenting short case examples of each, with the goal of empowering the treatment professional to select the best odor control solutions for their facility. Intended provide practical experience in odor control problem solving, this workshop will include group interactive exercises in proposing solutions to actual odor issues encountered by municipalities in the southwest.

RUNNING BACKFLOW AND CROSS-CONNECTION PROGRAMS (4 HOUR COURSE)

\$25.00 – Session 9925

Issues presented in nine EPA white papers that were reviewed by the committee, cross connections and backflow, new or repaired water mains, and finished water storage facilities were judged by the committee to be of the highest importance. Particular attention is given to backflow events via cross connections, the potential for contamination of the distribution system during construction and repair activities, maintenance of storage facilities, and the role of premise plumbing in public health risk. My workshop is to help develop a cross-connection program that will answer this concerns.

WASTEWATER MICROBIOLOGY HANDS-ON (1 DAY COURSE – 7 HOURS)

\$425.00 – Session 9932

Biological wastewater treatment systems all over the world experience shocks or upsets one time or another and the faster the operator can determine the cause, the quicker the return to steady state operation. If the operator knew what to look for, as far as indicator organisms, floc structure, or filament impact they may be able to limit the time between the upset and recovery. Performing the Microscopic exam can do just that. Many filaments appear during certain conditions and recognizing whether they are growing or static could provide the operator the edge in deciding his best course of action. The focus on the four key elements of biomass and what they tell us can be an important tool for the operator. This workshop will enable the operator to

use the microscope to better understand what is happening to the biomass and how it reacts to changes. This workshop is "hand-on" and all attendees will have access to Phase contrast microscopes. It will be a combination of instruction and actual sample analysis. We will focus on Floc, Filaments, Higher life forms and the bulk water. Attendees can bring their own samples.

GOING FROM BUDDY TO BOSS: SECRETS TO STEPPING-UP TO O&M LEADERSHIP ROLES (1 DAY COURSE – 7 HOURS)

\$150.00 – Session 9933

This comprehensive workshop is designed to equip current and aspiring leads and supervisors with the essential tools, strategies, and skills needed to excel in leadership roles. Participants will explore key topics, including the fundamental roles and responsibilities of a lead or supervisor, and how effective leadership can drive team success. The workshop will cover ethical leadership practices, strategic planning, and performance evaluation techniques, providing practical insights into managing and optimizing both individual and team performance. Time management and organizational skills will be emphasized to help supervisors stay on top of their responsibilities, while team-building exercises will foster a collaborative and positive workplace culture. Additionally, we will discuss proven methods for motivating employees, communicating effectively, and developing talent within your team, ensuring both new and current employees thrive. The session will also delve into holding employees accountable, evaluating performance accurately, and maintaining a strong focus on workplace safety and wellness. The critical role of quality customer service is also examined. ●

