

Raiders of the Lost Water Audit

Professional Education Presented by the New Jersey Water Association and Suburban Consulting Engineers, Inc.

Certified for Water Operators, and Certified Public Works Managers

Wednesday, April 14, 2021, 9:00 am - 11:15 am – as a Zoom Webinar

Wednesday, April 21, 2021, 1:00 pm - 3:15 pm – as a Zoom Webinar

Accreditation

2.0 Training Contact Hours for NJ-Licensed Water Operators.

TCH Course # 04-042101-10

2.0 (Management) Hours Toward Renewal for NJ Certified Public Works Managers

CPWM Course # DLGS-NJWA-213

*** Please note that only registered attendees who attend and participate in the webinar will be issued TCHs and CPWM Credits.**

Course Description:

New Jersey's currently established Water Allocation Permitting process empowers water utilities throughout the state, with support from regulatory agencies, to be stewards for the public and health safety of our water resources. However, aging infrastructure is inhibiting the efficiency and accountability of this resource by producing a high volume of non-revenue water, with unreported leaks being by far the largest of the categories. The AWWA M36 Water Audits and Loss Control Programs provides water utilities with the Best Management Practice tools and guidance to address this issue. This course will elaborate on a field-testing Macro to Micro Loss Assessment Strategy that utilizes analytics and field measurements to better pinpoint the locations to conduct targeted leak detection. It will also dive in deeper and explore how water utilities can capitalize on its AWWA Water Audit and conduct a Macro to Micro Water Loss Control Strategy to achieve a significant improvement in water audit scores.

Presentation Outline:

Raiders of the Lost Water Audit: Macro to Micro Loss Control Strategy

1. Introductions
 2. Background
 3. Objectives
- **Value of Water Audits**
 - Regulatory Required Audits
 - Self-Implemented Audits
 - **The Great Water Balance**
 - **Non-Revenue Water and Unaccounted for Water**
 - **Getting the Ball Rolling**
 - Perform the Desktop Audit
 - Institutional Knowledge and Mindsets
 - **Performance Indicators**
 - **Case Study**
 - Water System Background Information
 - AWWA Water Audit Results
 - Field Testing Program
 - Macro Zone Evaluation and Testing
 - Micro Zone Evaluation and Testing
 - **Unexpected Outcomes**
 - **Next Steps**
 - **Conclusions, Recommendations, Concluding Paperwork and Adjourn**

Instructors:

Mr. David A. Chanda, PE, CME joined SUBURBAN CONSULTING ENGINEERS, INC. (SCE) in July 2015 and has extensive experience in the engineering industry. Mr. Chanda is responsible for the utility design and permitting for the water/wastewater department, manages and directs junior designers, and has an excellent understanding of relevant New Jersey Regulations and permitting requirements both at the local and State level. Mr. Chanda has regulatory experience as an environmental engineer responsible for the Technical Review of all construction projects for Public Community Water Systems (PCWs) in both Atlantic and Burlington County. These projects included water main extension/ replacements, potable well installations, booster pump stations, chemical feed injections, treatment plant installation/modifications, and master permit detailing for large PCWs. The technical and regulatory information garnered from reviewing and developing construction permits is applied during the design and implementation of all improvement projects for both our municipal and private PCWs. Mr. Chanda possesses skills in leadership through his experience with guiding a lab certified Well Test Team with testing water quality for public community wells for potable use for all primary and secondary standards under the New Jersey Safe Drinking Water Program. Mr. Chanda is assisting SCE's water/wastewater department on a variety of projects for private, public and municipal clients including water main installation, production well facilities improvement projects, sanitary sewer system studies, environmental site studies, water storage tanks improvements, water/sewer treatment improvements, and pump stations upgrades. Mr. Chanda has worked on Corrosion Control Treatment Recommendation Reports, PFAS Treatment Evaluation Reports, Asset Management Plans, Emergency Response Plans, Lead and Copper Plans, Water Quality Parameter Plans, Revised Total Coliform Sampling Plans, Public Supply Improvement Plans, Cyber Security Programs, and NJDEP permitting for SCE's municipal and private clients.

Ms. Melissa Caliente, PE joined SUBURBAN CONSULTING ENGINEERS, INC. (SCE) in December 2019 and currently serves the firm as an Engineer in the Water/Wastewater Department. Ms. Caliente recently obtained her PE license in December of 2020, and she is working closely with project managers and other designers to enhance services to the firm's water and wastewater clientele. Ms. Caliente has significant experience with providing engineering design and permit acquisition of water and wastewater infrastructure, treatment and reuse systems, as well as developing hydraulic models and performing analyses for water distribution and sewer collection systems of various scales. She developed the first ever Alternative Source Water Plans using a Hazard Analysis Critical Control Point method for the prevention of *Legionella* and other risks in cooling towers using reuse water from wastewater treatment plants for four (4) high rise building in New York City. Ms. Caliente performs on-site inspection and construction administration services on water distribution and wastewater collection system improvement projects. She provides vital coordination between contractors, system operations and local residents/businesses throughout the duration of projects. She has excellent management skills, which include maintaining schedules and budgets. She mentors and provides guidance to other staff members including design calculations, reports, drawings, technical specifications, forms, maps, cost estimating, field work and coordinating project updates with various public and private clients. Additionally, Ms. Caliente has a wide-ranging experience in the design and implementation of instrumentation and P&IDs relating to water and wastewater equipment. Ms. Caliente demonstrates valuable quality assurance and quality control measures that ensure the firm's products and services are completed in accordance with SCE standards.

These webinars are free of charge. Pre-Registration is required

Registration at www.njwater.org