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AC20 Virtual Conference & Expo

ADVANCED WATER TREATMENT OPERATIONS TRAINING

THIS IS WHY VIRTUAL
OCTOBER 19-22

CWEA

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As California turns to more water recycling, the demand for advanced water treatment operators will accelerate. Join two experts in reuse technologies for training on current and emerging reuse technologies. This is an advanced discussion that will benefit engineers, managers and front-line water and wastewater treatment operators. **Don't miss it!**

AWT SESSION DESCRIPTIONS

Wednesday, Oct. 21 | 9:30 - 11:30 a.m.

Advanced Water Treatment Operations: Carbon Advanced Treatment for Water Reuse

Andrew Salveson, Water Reuse Practice Director, Carollo Engineers

In-depth **Q&As**

Get **Your Questions** Answered

Potable water reuse has become an important component of many communities water supply programs. In the next 10 years, the amount of potable water reuse production in California will double. There is a dramatic need for advanced water treatment operators (AWTO) to staff and run these current and future facilities. This series of presentations focused upon the innovative use of Carbon Based Advanced Treatment (CBAT) and details four AWTO Training modules on ozone, biologically active carbon, granular activated carbon, and ultraviolet light (with and without advanced oxidation).

Two live Q&As with panel of experts - Mr. Salveson, Alan Domonoske, Eva Steinle-Darling, Harold Wright, Carollo.

Wednesday, Oct. 21 | 1:30 - 3:30 p.m.

Advanced Water Treatment Operations: Membrane Bioreactor Innovations for Water Reuse

Dr. Amos Branch, Water Reuse Technologist, Carollo Engineers

Membrane treatment is now a fundamental component of advanced water reuse treatment schemes. Low pressure micro and ultrafiltration (MF/UF) membranes are widely used as part of reuse schemes to filter secondary or tertiary effluent directly, or are submerged in activated sludge in membrane bioreactors (MBRs) to replace clarification.

High pressure reverse osmosis (RO) membranes are used downstream to remove salt and act as a broad spectrum barrier to chemicals of concern. MF/UF membranes, MBRs and RO membranes also contribute to protection of public health by removing pathogenic microorganisms. Critical control points and monitoring strategies are defined for each treatment process to assure that pathogen removal is achieved in water reuse. There are a number of ongoing research initiatives to improve the understanding of pathogen removal in MBRs to support their application in water reuse. This session will comprise 3 modules and focus on the following concepts: Module 1 – Fundamentals of low and high pressure membrane filtration as well as biological treatment, Module 2 – Applying critical control points for monitoring pathogen removal performance of membrane systems including, MF/UF, MBRs and RO, and Module 3 – Current research innovations supporting the application of MBRs for water reuse. At the end of the 3 modules, a live Q&A will be facilitated with membrane filtration experts.

Learner Outcomes - After the session, attendees will:

- Understand fundamental membrane filtration and biological treatment concepts as applied for MF/UF, MBRs and RO.
- Be able to describe the purpose, and apply the concepts of critical control point monitoring of membrane processes to assure pathogen removal is achieved.
- Be aware of evolving approaches to verify pathogen removal performance in MBRs for water reuse.

Live Q&A with panel of experts - Dr Branch, Mr. Salveson, Brandon Yallaly and Dan Hugaboom, Carollo.

Keep the discussion going **after** each session in a 30 minute, small group **MEET THE PRESENTERS** video roundtable. There's plenty of time for discussion.