Course Title**: THM Mitigation in Water Distribution Systems through Water Storage Tank Mixing and Aeration**

60 minutes of instruction

Course Description: This 60-minute seminar will provide water system managers, operators and engineers a practical understanding of the conditions, chemistry and science behind trihalomethane (THMs) generation in water distribution systems. Importantly, the second half of the seminar will present a suite of proven technologies that can be employed to reduce THM levels in real world water distribution systems.

Course Outline:

1. Background on DBP and THM regulation in the United States
    a. EPA and Stage 2 DBP Rules
2. THM generation in water systems
    a. Conditions that allow for THM formation
    b. Nature of THMs (volatile compounds, Henry's Law)
3. Basics of THM removal
    a. THM volatilization – driving force
    b. Role of tank de-stratification and mixing
    c. Role of aeration
4. Equipment options and equipment form factors
5. Case Studies:
    a. Mixing and Ventilation
    b. Mixing, Ventilation and Aeration
    c. Process control and energy management

Presenter Bios:

Ethan Brooke

Senior Product Manager, THM Removal System, PSI Water Technologies, Inc.

Ethan Brooke is an internationally recognized expert on aeration technologies for trihalomethane (THM) removal. His master's thesis on THM aeration was published in the *Journal American Water Works Association* and resulted in three patents which are held by the University of New Hampshire. Ethan has a background in civil engineering and product management and has worked on a variety of water, wastewater and distribution system infrastructure improvement projects.

Learning Outcomes:

- Attendees will understand the conditions that generate THMs in distribution systems and the physical/chemical nature of THMs
- Attendees will better understand the mechanisms for THM removal based on the physical/chemical nature of THMs
- Attendees will be able to understand the roles of various technology choices and form factors that can aid in the removal of THMs through in-tank aeration

Tracking of Attendance:

When the invitation is sent out, it includes a registration link. This registration link requires them to enter in their contact information. That is captured in an Excel format into a spreadsheet. These spreadsheets are stored on our internal website for future needs to be accessed.