Walters environmental consulting, inc.

Treatment Chemistry Webinar Description

Chemistry drives every major process in water and wastewater treatment—from metals removal and turbidity control to disinfection and the destruction of trace contaminants. Yet in real-world systems, chemical reactions rarely behave exactly as expected. Variations in water quality, mixing, and system conditions often lead to inconsistent results, process upsets, and increased costs.

This course provides a practical, application-focused understanding of treatment chemistry, helping participants bridge the gap between theory and real-world performance. Participants will learn how key treatment chemicals work, how to monitor and control reactions, and how to adjust processes based on actual plant conditions.

The training covers a wide range of applications, including metals precipitation, breaking emulsions, coagulation and flocculation, disinfection chemistry, and the treatment of trace organic contaminants such as pesticides, pharmaceuticals, and PFAS. Emphasis is placed on selecting the right chemicals, understanding interferences such as chelating agents, and optimizing conditions for consistent results.

Participants will also explore chemical storage and handling, reaction monitoring, and troubleshooting strategies to diagnose why treatment processes are underperforming. The course introduces practical approaches to improving efficiency, reducing chemical usage, and incorporating more sustainable (“green”) chemistry practices.

Drawing from decades of field experience, this course focuses on what actually works in operating plants—providing tools and insights that can be immediately applied to improve treatment performance, maintain compliance, and reduce operating costs.