Walters environmental consulting, inc.

Elements of Treatment Webinar Description

Treatment processes are often taught as separate systems—coagulation, disinfection, softening—but at their core, all treatment is chemistry driven by a relatively small group of elements. Understanding how these elements behave provides a powerful framework for understanding how treatment actually works.

This fast-paced course approaches water and wastewater treatment from a different perspective: the chemistry of the elements themselves. Starting with foundational elements such as hydrogen, oxygen, and carbon, and progressing through key metals and compounds like aluminum, iron, calcium, and chlorine, participants will learn how commonly used treatment chemicals function, interact, and influence overall process performance.

The course connects each element to its practical role in treatment, including coagulation, oxidation, disinfection, corrosion control, nutrient removal, and advanced treatment processes. Participants will gain insight into how similar elements behave differently under varying conditions, and how those differences impact chemical selection, dosing, and effectiveness.

Rather than memorizing isolated concepts, attendees will develop a cohesive understanding of treatment chemistry—seeing how individual chemicals fit into a larger system and how changes in one area can affect the entire process.

By the end of the course, participants will have a stronger foundation in applied chemistry, enabling them to make better operational decisions, troubleshoot more effectively, and approach treatment challenges with greater confidence and clarity.