COURSE TITLE

Lead Contamination of Public Water Systems

## Course Description

Welcome to this course on Lead Contamination of Public Water Systems. Potential lead contamination from drinking water presents a significant health risk. Notable examples of lead contamination include a crisis in Flint, Michigan, a city that, for a variety of reasons, failed to protect its citizens from the dangers of this toxin. Other examples are reported far too regularly. Such an example includes an EPA report that approximately 350 schools and day-care centers across the nation failed 470 lead tests between 2012 and 2015. Even more disturbing was a change in Washington, DC water system disinfection methods that caused a spike in lead levels to thousands of homes — a result that was kept hidden from residents for three years. Another example includes Sebring, Ohio schools, where officials shut down water fountains due to elevated lead levels.

Lead is particularly toxic to children. The crisis in Flint exposed 8,000 children under age 6 to dangerous levels of lead. Unfortunately, Flint is not unique. The good news is that lead contamination is easily preventable, and preventative measures may be successfully implemented in all potable water systems.

## Course Objectives

After successfully completing this course, you will be able to:

- Describe the effects of lead contamination on the human body
- Describe how lead gets into drinking water
- Discuss how to prevent lead contamination in water
- Describe phosphate treatment technologies for potable water systems
- Describe the issues surrounding the Flint, Michigan event

## Outline

- Introduction – 2 minutes
- Lead Effects on the Human Body – 22 minutes
- How Lead Gets Into Drinking Water – 3 minutes
- How to Prevent Lead Contamination – 3 minutes
- Phosphate Technologies – 4 minutes
- Guidelines for Phosphate Technology Selection – 6 minutes
- Product Selection – 2 minutes
- Corrosion and Chemical Inhibitors – 4 minutes
- Case Study – 13 minutes
- Conclusion – 5 minutes