

Course Title: **Removal and Inactivation of Pathogens in Drinking Water Systems**
(formerly Handling Pathogens in Drinking Water Systems)

Contact Hours: 12.0

CEU Value: 1.2

Course Description:

This course for water system operations staff is designed to enable the staff to understand and use the science and engineering needed to know when any water system is being operated safely. The course focuses on harmful microbes that may be in or get into water and explains how to ensure they are either removed or made harmless to consumers. Participants will be introduced to the concepts and working methods set out for operators and engineers in the Ontario Procedure for Disinfection. In addition many practical examples of how to calculate where the safe limits are will be worked through in class using the tables in the Procedure.

Topics of discussion will include:

- Categories of harmful waterborne microbes
- Disinfection processes affecting the different microbes
- Measuring plant performance using log concept
- Categories of sources in Ontario
- Setting treatment log targets
- Using CT tables to set operational and alarm disinfectant levels
- Correct log treatment credits for filtration processes
- Basics of UV disinfection
- Calculating and adding logs for full process train disinfection
- Differences between primary and secondary disinfection