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Webinar Topic: Microbial Water Quality in Distribution Systems

Presented by: Gerry LaBudde, PE

Overview: Operators play a critical role in addressing microbiological water quality concerns in the distribution system. In this webinar, we will explore historic examples of microbial outbreaks and review regulations governing microbial contaminates in distribution systems. We will also discuss pathogens of concern, causes and sources of contamination, and strategies to maintain and prevent microbial water quality degradation.

Audiovisual Materials to be Used: PowerPoint Presentation (copy available upon request)

Handouts: A copy of the PowerPoint Presentation slides will be made available for all attendees.

Virtual Course Monitoring and Attendance Verification: This class will be held as a webinar using the Zoom Events program. All attendees are required to register individually to receive credit. This ensures that all participants can be tracked independently, including verification of log-in and log-out times. The school also requires presenters to include quizzes and polls throughout the training to ensure participants are active and engaged. This also allows us to assess learner understanding. A moderator is present throughout the course to help the presenter direct questions and monitor chat activity. Records will be kept for a minimum of 7 years.

Time (PST)	Subject	Credit Hours
10:00 – 10:05am	Review of distribution system water quality concerns and role of operator	5 min
10:05 – 10:15am	Historical microbial outbreaks affecting water systems 1. National statistics 2. Case studies a. Background b. Root cause c. System actions	10 min

d. Lessons learned

10:15 – 10:35am	Regulatory Framework 1. Surface Water Treatment Rule 2. National Primary Drinking Water Standards a. Regulated primary contaminants b. Microbiological contaminants 3. Specific regulations that also apply to microbial water quality in distribution 4. Treatment techniques vs numeric MCLs	20 min
10:35 – 10:55am	Microorganisms of concern and characteristics (physical, source, health impacts) 1. Virus 2. Protazoa 3. Bacteria 4. Algae	20 min
10:55 – 11:15am	Sampling and detection 1. Total Coliform and Revised Total Coliform Rule 2. Use of indicator organisms 3. Routine an d repeat sampling 4. Evaluation of laboratory report a. Example of lab results b. Key information included in the report	20 min
11:15 – 11:40am	Pathways of microbial contamination of distribution systems 1. Source 2. Cross connections 3. Leaks 4. Biofilm 5. Tanks and pump stations 6. Facility design a. Distribution b. Tanks c. Pump stations	25 min
11:40 – 12:00pm	Review/ Q&A	20 min

Total Time: 120 minutes; 2.0 Contact Hours; 0.2 CEUs