Water Industry Water Main Installation

Course Description
Water distribution systems are an integral part of keeping the public healthy and safe. The primary purpose of a water distribution system is the delivery of potable water for drinking and firefighting. To meet that goal, systems are designed by civil engineers and city planners to meet the changing needs of homes, offices, and industries. The water operator plays a key role in the installation of these systems.

This course will illustrate each step of water main installation, including excavating a trench, inspecting and laying pipe, backfilling a trench, and pressure and leak testing and flushing and disinfecting new pipelines. Safety precautions for all these steps will be made clear as well.

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

- describe the essential components and requirements of water distribution systems
- calculate water demand and know why different design standards and water system layouts are used
- detail proper excavation procedures and what to do prior to excavating
- discuss what pipe materials are acceptable and what is on a standard pipe material checklist
- implement effective traffic control methods related to water main construction projects
- implement appropriate methods for preventing cave-ins and know how to spot potential dangers
- explain the proper steps of the installation and backfilling processes
- detail procedures to pressure-and-leak test newly installed water mains
- detail how to properly flush and disinfect newly installed water mains, as well as how to test for bacteria

Agenda

- Introduction – 5 minutes
- Water Distribution Systems – 2 minutes
- Water Demand and Design – 2 minutes
- Water System Layout – 5 minutes
- Prior to Excavating – 5 minutes
- Excavation – 5 minutes
- Traffic Control – 5 minutes
- Preventing Cave-Ins – 5 minutes
- Installation Process – 5 minutes
- Backfilling – 5 minutes
- Pressure and Leak Testing – 5 minutes
- Flushing and Disinfection – 5 minutes
- Bacteriological Testing – 5 minutes
- References and Credits – 1 minutes

AVAILABILITY
This course is offered online and is available 24 hours a day, 7 days a week, 365 days a year.

TRAINING METHODOLOGY & EVALUATION

This course is self-paced online training. Review exercises and case studies reinforce the content, and students are evaluated with a multiple choice exam. Upon completion, students are prompted to submit a course evaluation.