



CROSS CONNECTION SPECIALIST CERTIFICATION COURSE OUTLINE AND AGENDA

Course Description:

This four-day course is intended to provide the student with the required information to establish, implement and maintain a cross connection control program for water systems of all sizes. It is designed to meet the regulatory agency's requirements for initial certification as a cross connection specialist as well as provide plumbers, water and wastewater personnel with an understanding of the hazards and protection of cross connections.

Special attention is given to the steps necessary for implementing a program, from ordinance writing and public education to performing surveys and setting up a record keeping system.

Objective:

The cross-connection control specialist needs to understand the regulations and maintain positive and educational communication with the general public, water system staff. They will be expected to coordinate with various regulating agencies to help assure safe, clean drinking water.

Instructors:

- Garrett Yates
- Ray Johnson

Target Audience:

1. Cross connection specialists applying for OHA certification requiring OESAC-approved CEU. Journeyman plumbers that need code-related credits for their continuing education requirements (currently approved for 32 CR with Building Codes Division).
2. Water Distribution Managers/Operators for 3.2 CEU who may also be the responsible person overseeing a backflow/cross connection control program and therefore requiring the broad scope of knowledge and training provided at this class.
3. DEQ Waste Water and Water Treatment Plant Operators for 3.2 CEU because cross connection control, backflow prevention, understanding the potential hazards and the ability to survey, inspect and protect their facilities are very important due to often complicated piping systems, chemicals used and the number of health hazards present.

Text manuals and materials:

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- *Cross Connection from A to Z – A Comprehensive Guide to Cross Connection Control Programs*, published by BMI, 1996 rev. 2013.
- Chapter 6, “Water Supply and Distribution”, *Uniform Plumbing Code*, published by Int’l Assoc. of Plumbing and Mechanical Officials.
- “Permit-Required Confined Spaces”, OSHA Federal Regulation 29CFR1910.146. “Safety in Confined Spaces”, AWWA.
- *Cross Connection Control Manual, 7th Edition*, published by PNWS-AWWA Cross connection Control Committee.
- *Manual of Cross Connection Control, 10th Edition*, published by University of Southern California, Foundation for Cross Connection Control and Hydraulic Research.
- *Oregon Administrative Rules 333-061 for the Drinking Water Program*, published by the State of Oregon, latest edition.
- Overhead projection of text materials.
- Brass cutaway models of backflow assemblies, large and small complete and plumbed assemblies, devices and poster-sized mechanical drawings of each type of assembly during various hydraulic conditions.
- Examples of cross connection control enforcement documents.
- Atmospheric gas monitor and related safety equipment for confined space entry; personal protection equipment and safety during surveys of facilities.

Course Agenda:

Day 1 – 8:00 AM – 5:30 PM, 1 hour lunch, 2 – 15-minute breaks

1. Definitions	1 Hour
2. Regulations –Federal, State and local	1 Hour
3. Plumbing Code	1 Hour
4. Case Histories – Incidents	1 Hour
5. Hydraulics	1 Hour
6. Cross Connections – actual or potential?	1 Hour
7. Types of Hazards	2 Hour
8. Reading and review of assignments	Homework

Day 2 – 8:00 AM – 5:30 PM, 1 hour lunch, 2 – 15-minute breaks

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1.	Review of Day 1	30 Minutes
2.	Legal Aspects	1 Hour
3.	How to set up a Program	1.5 Hour
4.	Determining the type of Enforcement Document required	1 Hour
5.	Writing an Enforcement Document	1 Hour
6.	Public Education	1 Hour
7.	Safety concerns for Specialists; confined space, traffic control, excavations	2 Hour
8.	Reading and review of assignments	Homework

Day 3 – 8:00 AM – 5:30 PM, 1 hour lunch, 2 – 15-minute breaks

1.	Review of Day 2	30 Minutes
2.	Water-using equipment	1 Hour
3.	Fire Protection Systems	30 Minutes
4.	Health Hazard Facilities	30 Minutes
5.	Applying appropriate protection	1 Hour
6.	Survey techniques	1 Hour
7.	Performing walk-through surveys of facilities	1 Hour
8.	Completing the survey report form	1 Hour
9.	Residential - Commercial service connections	1.5 Hour
10.	Reading and review of assignments	Homework

Day 4 – 8:00 AM – 5:30 PM, 1 hour lunch, 2 – 15-minute breaks

1.	Review of Day 3	30 Minutes
2.	Backflow prevention assemblies, devices and air gaps	1 Hour
3.	Installation guidelines	1 Hour
4.	Testing programs and testing assemblies	1 Hour
5.	Reporting test results	30 Minutes
6.	Record keeping	30 Minutes
7.	Review of all materials and assignments	1 Hour
8.	Student course evaluations	30 Minutes
9.	Written exam	2 Hour

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