



# ***California-Nevada Section***

---

## **American Water Works Association**

### **California – Nevada Section American Water Works Association**

## **CROSS-CONNECTION CONTROL SPECIALIST NEED-TO-KNOW CRITERIA**

**(Approved 8/12/2003)**

**NOTE:** The Need-To-Know Criteria is intended to provide a comprehensive outline of topics a prospective Cross-Connection Control Specialist should know and understand. Each topic should be presented as they relate to the responsibility of a Cross-Connection Control Specialist.

**PREREQUISITE:** An applicant for the Cross-Connection Control Specialist certification must hold certification as a Backflow Prevention Assembly Tester as issued by the CA-NV Section AWWA before.

- I. Definitions
  - A. Hydraulics
  - B. Types of Cross-Connections
  - C. Cross Connection Control Program
  
- II. Regulations/Codes
  - A. Federal
  - B. State
  - C. Local
  
- III. Survey
  - A. Assessment of Degree of Hazard
    - 1. Contaminant (Health Hazard)
    - 2. Pollutant (Non-health Hazard)
  - B. Methods of Protection
    - 1. System Protection
    - 2. Internal Protection
  
- IV. Water Service Types
  - A. Critical Services
  - B. Combined Services

## Cross-Connection Control Specialist

### Need-To-Know Criteria

#### Page 2

- C. Dual Services
- D. Fire Services
- E. Irrigation Services
- F. Restricted or Classified Services
- G. Single and Multiple Family Dwellings

#### V. Basic Elements of Hydraulics

- A. Pressure
- B. Flow Rate

#### VI. Common Water Connected Equipment

- A. Boilers
- B. Water Treatment Systems
  - 1. Ion Exchange Units
  - 2. Reverse Osmosis Units
- C. Water Filters
- D. Deaerators
- E. Heat Exchangers
  - 1. Single Wall
  - 2. Double Wall
- F. Heat Sinks
- G. Cooling Tower / Chillers
- H. Trap Primers
- I. Solar Heating Systems
- J. Sump / Lift Stations
- K. Dental Equipment
- L. Recycled Water Systems
- M. Graywater Systems
- N. X-ray Equipment
- O. Carbonators
- P. Injection Systems
  - 1. Chemical
  - 2. Soaps & Other Chemicals
  - 3. Irrigation
- Q. Chemical Pot Feeders
- R. Portable Equipment

#### VII. Approved/Listed Backflow Prevention Assemblies

- A. Approval/Listing Agencies
- B. State List
- C. Local List

#### VIII. Types of Backflow Protection – Approved

- A. System Connection Protection
  - 1. Air-Gap Separation (AG)
  - 2. Reduced Pressure Principle Backflow Prevention Assembly (RP)
  - 3. Double Check Valve Backflow Prevention Assembly (DC)

4. Reduced Pressure Detector Backflow Prevention Assembly (RPDA)
5. Double Check Detector Backflow Prevention Assembly (DCDA)
6. Spill Resistant Vacuum Breaker Backsiphonage Backflow Prevention Assembly Backflow Prevention (SVB)

B. Internal Connection Protection

1. Atmospheric Vacuum Breaker Backsiphonage Backflow Prevention Assembly (AVB).
2. Pressure Vacuum Breaker Backsiphonage Backflow Prevention Assembly (PVB).
3. Spill Resistant Vacuum Breaker Backsiphonage Backflow Prevention Assembly Backflow Prevention (SVB).
4. Hose Bib Vacuum Breaker Backsiphonage Backflow Prevention Assembly Backflow Prevention (HBVB).

C. Backflow Prevention Assembly – Other

1. Barometric Loop
2. Vented Dual Check
3. Dual Check
4. Single Check Valve

IX. Backflow Prevention Assembly Tester

1. Certification
2. Responsibility
3. Local Requirements

XI. Shutdown Test

- A. Preliminary arrangement and pre-inspection preparation
- B. Physical field test methods
  1. Dye Test
  2. Pressure Test

XII. Emergency Response and Assessment

- A. Documentation
- B. Response
- C. Assessment
- D. Notification
- E. Mitigation

XII. Plan Check and Review

- A. Plan Reading
- B. Plan Symbols
- C. Isometrics Drawings
- D. Design Drawings
- E. Record Drawings (As-built)

XIII. Record Keeping

IXV. Public Relations

XV. Installation Methods

- A. Standards
- B. Variances
- C. Freeze Protection
- D. Accessibility