



December 13, 2017

Katie Papadimitriu, Chairman  
Illinois Pollution Control Board  
1021 N. Grand Ave. East  
PO Box 19274  
Springfield, IL 62794-9274

Re: Request for additional information for recertification of Cross Connection Control Device Inspector (CCCDI)

Dear Chairman Papadimitriu,

On November 16, 2017 the board has asked that I provide copies of recertification programs throughout the country. Attached hereto please find Documents provided by Backflow Prevention Industry Group (BPI), American Backflow Prevention Association (ABPA), American Society of Sanitary Engineering (ASSE), University of Southern California's Foundation of Cross Connection Control and Hydraulic Research (USC-FCCCHR), and the New England Water Works Association (NEWWA). All the documents provide show enforcement by all associations for a recertification process for backflow testers.

What you will find throughout all documents provided, is that all plumbing standards, all backflow prevention standards, and all national associations require and/or recommend a 2 or 3-year recertification program. Although some programs have different requirements for how they do the recertification, it is the intent of the ISAWWA: Backflow Committee to recommend that the IEPA propose rules based on the provided Backflow Prevention Industry Position Paper dated July 1, 2014 and attached hereto.

If more information is needed, please contact ISAWWA Backflow Committee for more information.

Best Regards,

Richard Marvel  
ISAWWA Backflow Committee Chair  
Email: rick@testgauge.net



# Backflow Prevention Industry Position Paper:

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## TESTER EDUCATION, TRAINING, AND CERTIFICATION

July 1, 2014

This position paper is presented as a united effort with the organizations listed below to enhance the safety of the drinking water and quality of cross connection control and backflow prevention programs throughout the world. We, the undersigned believe properly trained and certified backflow prevention assembly testers are of paramount importance to any effective cross connection control program. To further this goal we endorse and recommend the following as a minimum of best industry practices for backflow prevention assembly tester, training, certification and recertification.

### **PARTICIPATING ORGANIZATIONS:**

American Backflow Prevention Association (ABPA), ASSE International (ASSE), Backflow Prevention Association of Australia (BPAA), Backflow Prevention Manufacturers Association (BPMA), International Association of Plumbing and Mechanical Officials (IAPMO), IAPMO Backflow Prevention Institute (IAPMO BPI), and United Association of Journeymen and Apprentices of the Plumbing and Pipefitting Industry of the United States and Canada (UA).

### **Training**

- Should consist of a comprehensive training course in backflow prevention and cross connection control covering the range of knowledge required by the certifying authority. (Typically no less than 40 hours)
- Equivalent work and/or educational experience may be considered in lieu of the training course.

### **Certification**

- Should pass a 100 question multiple choice closed book written exam.
- A minimum passing percentage, weighted against the written exam, should be established. (Typically 70%)
- Closed book practical exam. Demonstrate proper field test procedure on RP, DC, PVB, and SVB assemblies<sup>1</sup>.
- Practical exam should include assemblies in various conditions, including common failure modes.
- Practical and written exams should be developed and administered independent of the training course instructor of record.
- Certification should be valid for a maximum of 3 years.
- Certification applies to certificate holder only.

### **Recertification**

- Should pass a 100 question multiple choice closed book written exam tailored towards a tester with experience.
- A minimum passing percentage, weighted against the written exam, should be established. (Typically 70%)
- Closed book practical exam. Demonstrate proper field test procedure on RP, DC, PVB, and SVB assemblies.
- Practical exam should include assemblies in various conditions, including common failure modes.
- Practical and written exams should be developed and administered independent of the instructor of record.
- Certification should be valid for a maximum of 3 years.
- Certification applies to certificate holder only.

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<sup>1</sup> RP - Reduced Pressure Principle Backflow Prevention Assembly; DC - Double Check Valve Backflow Prevention Assembly; PVB - Pressure Vacuum Breaker Backsiphonage Prevention Assembly; SVB - Spill-Resistant Pressure Vacuum Breaker Backsiphonage Prevention Assembly

# SERIES 5000 • STANDARD #5110

## *Professional Qualifications Standard for Backflow Prevention Assembly Testers*

### 1.0 Scope and Purpose

#### 1.1 Scope

This standard applies to any individual who is certified in accordance with this standard and who will test all types of backflow prevention assemblies.

#### 1.2 Purpose

The purpose of this standard is to provide minimum qualification criteria, as defined by the scope.

### 2.0 Limitations for a Backflow Prevention Assembly Tester

2.1 The certification shall be valid for a period of three (3) years.

2.2 Compliance with this standard in itself shall not constitute the requirements for a cross-connection control surveyor, as identified by ASSE Standard 5120, a backflow prevention assembly repairer, as identified by ASSE Standard 5130, a fire protection system cross-connection control tester, as identified by ASSE Standard 5140, a backflow prevention program administrator, as identified by ASSE Standard 5150, or as required by local jurisdiction.

### 3.0 General Knowledge

3.1 With respect to backflow prevention, the tester shall be knowledgeable of codes and regulations from the federal, state and local levels, and approved listing agencies. The individual shall be knowledgeable on testing procedures under all applicable ASSE standards.

3.2 The tester shall be able to identify and describe an understanding of fundamental theory, concepts and performance pertaining to:

- A. ASSE Standards 5013, 5015, 5020, 5047, 5048 and 5056
- B. Backflow
- C. Backpressure
- D. Backsiphonage
- E. Cavitation
- F. Check valve design
- G. Differential pressure
- H. FDA approved lubricants
- I. General knowledge of test procedures
- J. Special tool requirements
- K. Thermal expansion
- L. Turbulence

### 3.3 Safety

The tester shall be able to describe the safety precautions and hazards during backflow prevention assembly testing relating to:

- A. Animals and insects
- B. Confined spaces
- C. Electricity
- D. Falling objects
- E. Noise
- F. Pressurized fluids
- G. Toxic fumes
- H. Vehicle traffic

### 4.0 Product Performance Knowledge

4.1 The tester shall be able to identify and describe the performance characteristics of the following backflow prevention devices and assemblies:

- A. Air Gaps in Plumbing Systems (ANSI A112.1.2)
- B. Atmospheric Type Vacuum Breakers (ASSE 1001, current edition)
- C. Anti-siphon Fill Valves (Ballcocks) for Gravity Water Closet Flush Tanks (ASSE 1002, current edition)
- D. Hose Connection Vacuum Breakers (ASSE 1011, current edition)
- E. Backflow Preventer with Intermediate Atmospheric Vent (ASSE 1012, current edition)

- F. Reduced Pressure Principle Backflow Prevention Assemblies and Reduced Pressure Principle Fire Protection Backflow Prevention Assemblies (ASSE 1013, current edition)
- G. Double Check Backflow Prevention Assemblies and Double Check Fire Protection Backflow Prevention Assemblies (ASSE 1015, current edition)
- H. Vacuum Breaker Wall Hydrants, Freeze Resistant, Automatic Draining Type (ASSE 1019, current edition)
- I. Pressure Vacuum Breaker Assembly (ASSE 1020, current edition)
- J. Drain Air Gaps for Domestic Dishwasher Applications (ASSE 1021, current edition)
- K. Backflow Preventer for Beverage Dispensing Machines (ASSE 1022, current edition)
- L. Dual Check Backflow Preventers (ASSE 1024, current edition)
- M. Dual Check Valve Type Backflow Preventers for Carbonated Beverage Dispensers - Post Mix Type (ASSE 1032, current edition)
- N. Laboratory Faucet Backflow Preventers (ASSE 1035, current edition)
- O. Pressurized Flushing Devices (Flushometers) for Plumbing Fixtures (ASSE 1037, current edition)
- P. Reduced Pressure Detector Fire Protection Backflow Prevention Assemblies (ASSE 1047, current edition)
- Q. Double Check Detector Fire Protection Backflow Prevention Assemblies (ASSE 1048, current edition)
- R. Hose Connection Backflow Preventers (ASSE 1052, current edition)
- S. Chemical Dispensing Systems (ASSE 1055, current edition)
- T. Spill Resistance Vacuum Breakers (ASSE 1056, current edition)
- U. Outdoor Enclosures for Fluid Conveying Components (ASSE 1060, current edition)
- V. Inflow Preventers (ASSE 1063, current edition)
- W. Backflow Prevention Assembly Field Test Kits (ASSE 1064, current edition)
- X. Backflow Preventers with Integral Pressure Reducing Boiler Feed Valve and Intermediate Atmospheric Vent Style for Domestic and Light Commercial Water Distribution Systems (ASSE 1081, current edition)

building (as descriptive as possible); description of application (i.e. equipment or system served); initial test results (pass-fail of first check and second check, relief valve discharge, static line pressure); test gauge manufacturer, model number, serial number and expiration date/last date of calibration; repairs made; repair parts used; cleaning performed; final test results, as applicable; printed name, signature and certification number of the tester/repairer; type of assembly, affirmation statement of assembly performance at the date and time of the test.

**5.2** The tester shall provide copies of the report to the owner and other appropriate parties as required. The tester shall maintain a copy of the report for the records in accordance with the requirements of the authority having jurisdiction.

**6.0 Product Installation Knowledge**

**6.1** The tester shall be able to describe the proper installation requirements for backflow prevention assemblies relating to:

- A. Manufacturer recommendations
- B. Physical location and accessibility
- C. Local jurisdiction requirements

**6.2** The tester shall be able to identify and describe the problems resulting from the improper installation of backflow prevention assemblies including ,but not limited to:

- A. Environment
- B. Flow capacity
- C. Location
- D. Orientation
- E. Temperature

**7.0 Test Equipment Knowledge**

**7.1** The tester shall have knowledge of ASSE Standard 1064, *Performance Requirements for Backflow Prevention Assembly Field Test Kits*.

**7.2** The tester shall be able to identify and describe the proper usage for following equipment:

- A. Differential pressure gauge
- B. Multipurpose transducer (digital readout)
- C. Sight tube (water column)

**7.3** All testing equipment shall be verified for accuracy and proper operation, in accordance with ASSE 1064, at a minimum annually.

**5.0 Reporting Knowledge**

**5.1** The test report shall contain, but not be limited to, the following information: manufacturer's name, model number, serial number and size of assembly; responsible person's name and address; building address; physical location of assembly within the



**8.0 Terminology**

The backflow prevention assembly tester shall demonstrate a basic working knowledge of the terms located in Appendix G.

**9.0 Certification of Backflow Prevention Assembly Testers**

**9-1 Eligibility Requirements for Certification**

- A. A minimum of five (5) years of documented practical experience in the installation or service of plumbing, mechanical, fire protection, lawn irrigation or a related industry field using potable water.
- B. Successful completion of a minimum 40-hour training course on backflow assembly testing covering all aspects of ASSE 5110.
- C. Successfully passing a 100-question exam with a score of 70% or higher.
- D. Successfully passing a practical exam that includes testing ASSE 1013, 1015, 1020 and 1056 assemblies.
- E. Certification to this standard shall be through a nationally recognized third-party certification agency
- F. Certification shall be for a three (3) year period.

**9-2 Recertification of Backflow Prevention Assembly Testers**

- A. Must have a valid, current ASSE 5110 backflow tester certification.
- B. Successful completion of a minimum eight (8) hour training course on backflow assembly testing.
- C. Successfully passing a 25-question exam with a score of 70% or higher.
- D. Successfully passing a practical exam that includes testing ASSE 1013, 1015, 1020 and 1056 assemblies.

- 2.2 Education - Have attained graduation from high school, G.E.D. equivalent or demonstrated academic equivalent.
- 2.3 Have reached the proper age requirements as needed in the jurisdiction where working.

### 3.0 GENERAL CERTIFICATION REQUIREMENTS

- 3.1 The Administrator shall provide applications for the Association's Backflow Prevention Assembly Tester Certification Program. The application shall be completed by the applicant and sent with the appropriate non-refundable fees to the Administrator at least thirty (30) days prior to the examination date. The applicant shall be notified of the time and place of the appropriate examinations at least twenty (20) days prior to the date of the examination. Applicants attending a training course less than thirty (30) days in length may submit a completed application on the first class meeting date with sixty (60) days prior written recognition of the examination date by the Administrator.
- 3.2 Before the examinations is taken, the applicant should have successfully completed a course of instruction or show two (2) years of experience in testing of backflow prevention assemblies within a recognized certification program. It is the responsibility of the applicant to be proficient with the Association's Backflow Prevention Assembly Tester Need to Know Criteria Prior to taking the examination.
- 3.3 The applicant shall successfully complete the Association's written and performance examinations for the backflow prevention assembly tester. Applicant shall be notified within thirty (30) days from the last examination date of passage or failure of the examinations. Upon issuance date of certificate, applicant is considered to be certified by the Association. The certificate shall be mailed within sixty (60) days of the last examination date.
- 3.4 The certification of the backflow prevention assembly tester shall be valid for three (3) years from the date of issuance.

### 4.0 CERTIFICATION FEES

- 4.1 The application fee for the backflow prevention assembly tester certification shall be payable to the American Backflow Prevention Association (ABPA). The current application fee shall be posted on the application forms provided by the Administrator.

- 4.2 The application fee must accompany the application form. If the check is returned from the bank for non-payment the returned check charge will be equal to the application fee.

## 5.0 EXAMINATIONS

- 5.1 The Association shall utilize examinations developed by the Committee. Examinations shall be constructed to ensure their proper reflection of criteria as represented in the Association's Need to Know Criteria.
- 5.2 All examinations shall be administered by a proctor appointed by the Administrator. The proctor shall meet all requirements of the proctor qualifications of the Association. The proctor shall administer the necessary closed book examinations to all applicants who have completed the application per these rules.
- 5.3 The applicant shall successfully complete the written examination and the performance examination. Applicants failing the written or performance examination may retain the passing score from the initial examination for one (1) year and must apply for re-examination per Section 3 of these rules.
- 5.4 If an applicant fails to appear for a scheduled exam, without prior approval of the Administrator, they shall be required to re-submit an application and fees for future examinations.
- 5.5 Once an applicant successfully completes the examinations, a certificate shall be issued by the Administrator to the applicant. The certificate shall state the type of certification, full name of the tester, certificate number, a date of issuance, and be signed by the Administrator.

## 6.0 **RECERTIFICATION**

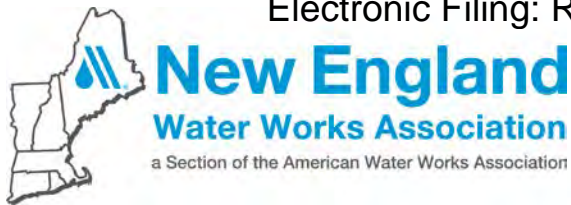
- 6.1 To maintain an ABPA Backflow Prevention Assembly Tester Certification, beyond the certification expiration date, the tester shall submit an application with the appropriate fee as shown on the application to the Administrator for recertification. The applicant shall be required to successfully complete the written and performance examination within six (6) months prior to expiration date as referenced in Section 5 of these rules.

- 6.2 It is the responsibility of the tester to apply for recertification. Notice of a pending expiration date of certification shall be sent to the address of record of the tester. This notice shall be sent six (6) months prior to a certification expiration date. If a tester has not responded, a second notice shall be sent three (3) months prior to the certification expiration date. A final notice shall be mailed thirty (30) days prior to the certification expiration date.
- 6.3 The tester shall be responsible to notify the Administrator of a change of address.
- 6.4 Once the completed application for recertification is received by the Administrator, the tester shall receive notice of the examination time and location as per Section 3.1.
- 6.5 The applicant applying for re-certification shall meet all requirements of these rules.
- 6.6 Applicant may retain certification number up to one year after date of expiration. Once an applicant successfully completes written and performance examination within that one year after date of expiration, applicant shall be issued a new start and expiration date.
- 6.7 If the applicant successfully completes a written and performance examination prior to six (6) months of their expiration date as referenced in Section 5 of these rules, the applicant shall be issued a new start and expiration date.

## 7.0 REVOCATION OR APPEAL

- 7.1 The Board of Directors may revoke any certification issued under these rules upon the submission of conclusive evidence from the Committee that the tester has been found to have obtained the certification by fraud or deceit or has displayed gross negligence or misconduct in the performance of their duties as a tester.
- 7.2 The Administrator or his appointed proctor shall address all applicant appeals regarding the examination at the examination site. Any applicant appeal made because of the determination of the Administrator or his appointed Proctor shall be submitted in writing within fifteen (15) days of





TO: NEWWA Certified Backflow Prevention Device Testers

FROM: Nelson Cabral, Program Coordinator – Cross Connection Control and Backflow Prevention

DATE: June 3, 2015

SUBJECT: New Renewal Requirements for Backflow Prevention Device Tester Certification

Effective **January 1, 2017**, there are new requirements for renewal of the Backflow Prevention Device Inspector/Tester Certification.

NEWWA's Board of Certification of Backflow Prevention and Cross Connection Control met on May 8, 2015, and voted to require Certified Backflow Testers to obtain 0.6 CEUs in the areas of backflow prevention and cross connection control, as well as pass a practical, performance-based recertification examination for recertification.

**NOTE THAT THIS CHANGE IS NOT EFFECTIVE UNTIL JANUARY 1, 2017 FOR THOSE WHO ARE ALREADY CERTIFIED TESTERS.**

Renewal requirements for Backflow Prevention Device Tester Certification, as stated in “**New England Water Works Association Rules Governing Backflow Prevention and Cross Connection Control**” **Section 5.7, Sub-Section (a)**, now read:

5.7 The renewal requirements for certification are as follows:

(a) Backflow Prevention Device Inspector /Tester

1. Obtain 0.6 CEUs in the areas of backflow prevention device testing or cross connection control as approved by the Board, or NEWWA Executive Director, or his/her designee **and** pass a performance recertification examination within 18 months prior to expiration of certification; or
2. Demonstrate competency to the board's satisfaction in the proper inspection/testing techniques of backflow prevention devices.

This language replaces the previous, which read:

5.7 The renewal requirements for certification are as follows:

(a) Backflow Prevention Device Inspector /Tester

1. Test 50 devices in a three year period **and** obtain .6 CEUs in the areas of backflow prevention device testing or cross-connection control as approved by the Board; or
1. Pass a performance examination; or,
2. Demonstrate competency to the board's satisfaction in the proper inspection/testing techniques of backflow prevention devices by passing a Board approved written performance based recertification examination.

The NEWWA Board of Certification of Backflow Prevention and Cross Connection Control determined that this change was necessary in order to better align NEWWA's Backflow Prevention Device Inspector/Tester Certification program with industry standards and practices, and to measure and ensure competency of inspectors/testers.

If you have any questions or concerns regarding the new requirements please feel free to contact me via phone at (508) 893-7979 ext. 229 or via e-mail at [ncabral@newwa.org](mailto:ncabral@newwa.org).

**NEW ENGLAND WATER WORKS ASSOCIATION  
RULES GOVERNING CROSS CONNECTION CONTROL  
CERTIFICATION**

**APPROVED: FEBRUARY 23, 1984**

**REVISED: JULY 25, 1990**

**REVISED: DECEMBER 17, 1992**

**REVISED: AUGUST 5, 1997**

**REVISED: FEBRUARY 16, 2001**

**REVISED: JUNE 7, 2002**

**REVISED: JANUARY 1, 2010**

**REVISED NOVEMBER 15, 2012**

**REVISED MAY 27, 2015**

**1. GENERAL**

The purpose of these rules is to provide for the certification of individuals who conduct cross-connection control surveys and inspect/test backflow prevention devices.

**2. DEFINITIONS**

2.1 "Approved Backflow Prevention Device" means a device that has been accepted by the authority having jurisdiction as meeting an applicable standard, specification, requirement, or as suitable for the proposed use.

2.2 "Approved Course of Instruction" means:

(a) Backflow Prevention Device Inspection/Testing: means a course of instruction covering the theory of cross connections and backflow prevention, applicable regulations and laws, and design, testing and maintenance of backflow prevention devices.

(b) Cross Connection Control Survey: means a course of instruction covering the theory of cross connections and backflow prevention, applicable regulations and laws, cross connection control philosophy and the application of backflow prevention devices.

2.3 "Board of Certification for Backflow Prevention and Cross Connection Control" (hereafter referred to as the Board) as used in these rules, refers to the group of persons designated by the NEWWA Board of Directors to administer the Backflow

Prevention and Cross Connection Control Certification Programs of the New England Water Works Association (NEWWA). The Board will consist of the following persons:

- (a) The Executive Director of NEWWA or designee.
- (b) The Chief of the Region I EPA Water Supply Section or designee
- (c) The drinking water administrator from each of the six New England States' public drinking water program regulatory agencies, or designees.
- (d) Three NEWWA At Large members who are also members of NEWWA and confirmed by the NEWWA Board of Directors.
- (e) One NEWWA at large member who is also a member of a national backflow prevention organization such as the American Backflow Prevention Association and who is also a member of NEWWA and confirmed by the NEWWA Board of Directors
- (f) A representative from a public water system who is also a member of NEWWA and confirmed by the NEWWA Board of Directors
- (g) A representative from the plumbing industry who is also a member of NEWWA and confirmed by the NEWWA Board of Directors.

2.4 Any action which changes the policy or normal procedures of the Board must be approved by a majority vote of Board members present at a Board meeting, of which all Board members have been properly notified. A minimum of six Board members must be present for such voting to take place. The Chair may accept members as present via phone attendance or any other electronic media. The Board may designate individuals to carry out its work such as instructors, examiners, secretaries, etc.

2.5 "Certified Backflow Prevention Device Inspector/Tester" means a person holding a valid certificate from the Board.

2.6 "Inspection" shall mean the physical examination and testing of a backflow prevention device.

2.7 "Certified Cross Connection Control Surveyor" means a person certified by the Board to conduct a cross connection control survey..

2.8 "Survey" shall mean a complete physical examination of plumbing and piping systems to identify cross connections.

**3. REQUIREMENTS FOR CERTIFICATION**

To hold a NEWWA certification an individual shall:

- (a) Successfully pass the required examinations and meet other requirements as specified in the document; or,
- (b) Presenting evidence, acceptable to the Board, of a certificate or license issued by an organization having equivalent standards as determined by the Board.

**4. EXAMINATION**

4.1 To be Certified as a Backflow Prevention Device Inspector/Tester the applicant must pass a Board approved written and performance examination.

4.2 To be a certified Cross Connection Control Surveyor the applicant shall complete an approved course of instruction as stated at 2.2 (b) and pass a Board approved examination.

4.3 The Board may, at its discretion, require an oral examination in addition to the required examinations.

4.4 In the event an applicant fails to appear for a scheduled examination, without prior notification and Board approval, a new application and filing fee will be required.

4.5 An examination may be repeated as frequently as desired, but each examination will require the submission of a new application and filing fee.

**5. CERTIFICATES AND RENEWALS**

- 5.1 Upon satisfactory fulfillment of the requirements provided herein, the Board will issue an appropriate certificate on behalf of NEWWA.
- 5.2 Each certificate shall indicate that the holder is certified in the appropriate classification.
- 5.3 Certificates must be renewed every three (3) years to remain valid. Renewal will require submitting a renewal application and renewal fee, the amount of which will be determined by the Board and must be submitted within six months of the current certification expiration date.
- 5.4 If a Backflow Prevention Device Inspector/Tester or Cross Connection Control Surveyor does not renew his or her certificate by the expiration date, the certificate expires.
- 5.5 An individual may renew an expired certificate for up to six months after the expiration date by meeting the renewal requirements stated at 5.7
- 5.6 To renew an expired certification after the six months grace period, an individual shall meet the renewal requirements stated at 5.8
- 5.7 The renewal requirements for certification are as follows:
- (a) Backflow Prevention Device Inspector /Tester
1. Obtain 0.6 CEUs in the areas of backflow prevention device testing or cross connection control as approved by the Board, or NEWWA Executive Director, or his/her designee **and** pass a performance recertification examination within 18 months prior to expiration of certification; or
  2. Demonstrate competency to the board's satisfaction in the proper inspection/testing techniques of backflow prevention devices.
- (b) Cross Connection Control Surveyor:

1. Perform ten discrete facility surveys, acceptable to the Board, ; or,
  2. Pass a Board approved written recertification examination; or,
  3. Demonstrate competency to the Board's satisfaction in the proper survey techniques of cross connection control.
- 5.8 The requirements for renewing an expired certification after the six months grace period are as follows:
- Backflow Prevention Device Inspector/Tester:
1. Attend a NEWWA recertification Inspector/Tester training course and pass the performance examination: or
  2. Present evidence acceptable to the Board, of a certificate or license issued by an organization having equivalent standards as determined by the Board and pass the Board approved performance examination.
- (a) Cross-Connection Control Surveyor:
1. Attend a NEWWA recertification Cross-connection Surveyor training course and pass the recertification examination; or
  2. Present evidence acceptable to the Board, of a certificate or license issued by an organization having equivalent standards as determined by the Board and pass a Board approved written certification examination.
- 5.9 The Board may revoke the applicable certificate of any person who, after a hearing by the Board shall be found to have obtained or renewed a certificate by fraud or deceit, or displays negligence, incompetency, misconduct or violates any laws, regulations or codes related to the specific certified discipline in the performance of their duties.
- 5.10 For the reinstatement of certificates revoked by the Board, reapplication and re-examination will be required after a one year waiting period.
- 5.11 The Chair shall appoint a three member disciplinary review committee from the members

- of the Board, which will decide on the revocation and reinstatement of certification.
- 5.12 The Board shall hear and decide any and all appeals associated with these rules

**6. APPOINTMENT OF BOARD**

The Board shall be appointed by the NEWWA Board of Directors and shall serve for a period of three years unless reappointed. The Chair of the Board shall be designated by the NEWWA Board of Directors. The Chair shall appoint a Vice Chair and Secretary, both of whom shall be approved by the Certification Board.

**7. FEE FOR CERTIFICATION**

- 7.1 The application fee for a certification examination shall be set by the Board.
- 7.2 The application fee shall accompany the completed application form. The fee shall not be returned to the applicant because of failure to take the examination or failure to pass the examination.
- 7.3 The fee for the renewal of a valid certificate shall be set by the Board.
- 7.4 The fee shall accompany an application for certification or renewal and should be in the form of a check or money order made payable to NEWWA.

For further information contact:

**NEWWA**  
**125 Hopping Brook Road**  
**Holliston, MA 01746-1471**  
**(508) 893-7979 FAX# (508) 893-9898**  
**WWW.NEWWA.ORG**



*Installation Guidelines*

When a backflow prevention assembly is required, it is necessary to provide installation guidelines to the customer to ensure the assembly is installed correctly. Guidelines for backflow prevention assembly installations may be found in Chapter 8.

**Certified Testers and Specialists****Certified Backflow Prevention Assembly Testers**

Once backflow prevention assemblies are properly installed, they must be periodically field-tested and properly maintained. Who will field-test these assemblies? That may be determined by a state regulation or a local administrative authority. There are some very important issues that need to be considered when determining who will be permitted to field-test the backflow preventers. First of all, what method of field-testing is to be used? Some may assume if the assembly is not visibly leaking, then it is working properly. This is not likely to be the type of field-testing any administrative authority would want to see in their jurisdiction. Chapter 9 of this manual contains the field-test procedures for the double check valve assemblies, the double check detector assemblies, the double check detector assemblies-type II, the reduced pressure principle assemblies, the reduced pressure principle detector assemblies-type II, the pressure vacuum breaker assemblies and the spill-resistant vacuum breaker assemblies. These procedures are widely accepted by many administrative authorities and certifying bodies. AwwaRF report 90928 reports that 74% of the respondents indicated that the field-test procedures used in their jurisdiction are from either the 8th or 9th Edition of the *Manual of Cross-Connection Control*.<sup>3</sup> These procedures enable the tester to accurately determine the condition of the backflow preventers, even with minor shutoff valve leaks. But, there are other field-test procedures available and the administrative authority must make the determination as to what field-test procedure is to be used in their jurisdiction.

Once the field test procedures are adopted there must be some means of determining if a tester is qualified to test using these procedures. Training and certification are necessary to ensure qualified personnel field test the backflow preventers. While many training organizations offer training courses to train individuals on the intricacies of testing and diagnosing problems on the various backflow prevention assemblies; passing these training courses does not necessarily certify the attendee. The attendees may be issued a diploma or certificate of completion, which states that the individual did successfully complete the course. But certification is usually a process instituted in which individuals are recognized for their demonstrated proficiency in field testing backflow preventers. The certification of backflow prevention assembly testers typically requires a written and performance examination with a recertification every two or three years, to ensure the tester maintains their proficiency with the current field test procedures. The recertification should, like the original certification, include a written and performance exam. It also may require the certified tester to attend an update seminar that includes a review of field test procedures prior to recertification.

Many administrative authorities conduct their own certification program. Others adopt the certification program of a third party organization or another administrative authority.

One of the most important aspects of a certification program is recertification, as mentioned in the previous paragraph. Recertification is necessary to ensure that certified testers maintain their proficiency in performing the field test. For example, if an administrative authority does not have a certification program (including recertification), but only requires training, a tester could come in to the administrative authority and show a certificate of completion from ten, twenty, or even thirty years prior. The tester meets the qualifications, if those qualifications only state that the tester must have attended an acceptable training course. It is possible that the tester hasn't tested a backflow preventer in thirty years. If he has, he has probably continued to use outdated methods. This is why recertification is so important. Of course, recertification may take on many forms. For some types

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Lee, J. J., et al, 2003, *Impacts of Cross-Connections in North American Water Supplies*, Denver, AwwaRF

A certified cross-connection control program specialist is trained to administer a cross-connection control program. The specialist must be very familiar with all of the essentials of any program.



of certification only a renewal fee is necessary. However, for backflow prevention assembly testing it is essential that an examination be required, not only a written examination, but also a performance examination. There is no way to tell if a tester can actually test and ascertain the condition of an assembly if they do not demonstrate this fact to an impartial proctor. Whether the administrative authority conducts their own certification program, or adopts one already in operation it is imperative that the program requires recertification with both a written and performance examination, and recertification no more than every three years. See guidelines for a certification program in Chapter 8.

### ***Certified Cross-Connection Control Program Specialists***

The Administrative Authority has the responsibility of requiring site surveys to determine if backflow protection is needed at the site. This is one of the tasks of the cross connection control program specialist. A certified cross-connection control program specialist is trained to administer a cross-connection control program. The specialist must be very familiar with all of the elements of any program. One of the most critical tasks is conducting site surveys, where the program specialist determines what type of backflow protection is needed.

How the specialist goes about this will depend on the type of protection for which the administrative authority is responsible—system protection or internal protection. If the administrative authority has a containment or system protection program, it is the responsibility of the administrative authority to determine if there are unprotected cross-connections on the premises, which may pose a threat to the quality of the water in the distribution system. If there is a hazard, the administrative authority must require the appropriate type of backflow preventer at the service connection in order to protect the potable water distribution system.

If, however, the administrative authority is responsible for internal protection, the assessment of which type of backflow protection is necessary, if any, must be made for each point of water use. A program specialist will need to conduct a site survey to make the determination. The program specialist will need to have a thorough knowledge of the plumbing code as well as an understanding of the various hydraulic conditions, which allow backflow to occur. Additionally, it will be necessary to have a good understanding of the degree of hazard. Knowledge in these areas is necessary in order to make a determination as to which type of backflow protection, if any, would be needed at each point of use.

In a similar fashion to the tester certification, there are third-party certification programs as well as agency certification programs for the program specialist. These certification programs typically require training and/or experience and a certification exam.

### ***Defensible and Detailed Records***

Another important element of a cross-connection control program is record keeping. Records should be retained for a specific period of time. Some areas have specific requirements for this. Other areas go by the statute of limitations on any action, which may be brought against the administrative authority for failing to administer a viable cross-connection control program. But retaining the records for a certain period of time is only one aspect of record keeping. Records must be detailed and defensible. The records must contain specific information, which supports the actions of the administrative authority.

The records must be “defensible.” This means the records should be sufficient to show that the administrative authority is meeting all of the requirements necessary to carry out their cross-connection control program. Should, for example, there be a backflow incident in the jurisdiction, the administrative authority needs to be able to show through their records, that they have done all they could to survey sites, require approved backflow preventers and require regular field testing of these assemblies (show due diligence). If the records are insufficient to do this, it could leave the administrative authority in non-defensible position.

*The certification of backflow prevention assembly testers typically requires a written and performance examination with a recertification every two or three years, to ensure the tester maintains their proficiency.*