

The background features a large, light gray watermark of the ASSE logo. It consists of a circular emblem with a globe in the center. The word "ASSE" is written in large, bold, sans-serif letters across the globe. Above the globe, the word "SANITARY" is written in a smaller, curved font. Below the globe, the word "ENGINEERING" is written in a similar curved font. At the bottom of the emblem, the slogan "Prevention Rather Than Cure" is written in a curved font, followed by a registered trademark symbol (®).

ASSE Guidelines for **Cross-Connection Control Certification**

- Backflow Prevention Assembly Testers
- Backflow Prevention Assembly Repairers
- Cross-Connection Control Surveyors
- Fire Sprinkler System Cross-Connection Control Testers
- Backflow Prevention Program Administrators (Specialists)

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Overview

This section provides insight into the organizational structure of the ASSE International Chapter of IAPMO, LLC (hereafter referred to as ASSE), and the operation of the ASSE Guidelines for Cross-Connection Control Certification (hereafter referred to as Guidelines), including Backflow Prevention Assembly Tester (ASSE 5110), Cross-Connection Control Surveyor (ASSE 5120), Backflow Prevention Assembly Repairer (ASSE 5130), Fire-Sprinkler System Cross-Connection Control Tester (ASSE 5140) and Backflow Prevention Program Administrator (ASSE 5150).

Introduction

The primary responsibility for the Cross-Connection Control Certification Program belongs to the ASSE Board of Directors and the professional qualifications coordinator, except for those specific areas of responsibility that may be delegated to the appropriate committee.

Certification exams shall only be administered to classes taught by an ASSE approved instructor at an ASSE accredited school. The certification exam shall be witnessed by an ASSE approved proctor. An Instructor shall not proctor any examinations, either written or practical, for any class in which they were the instructor.

ASSE reserves the right to inspect any school's facility without prior notice.

Program Quality Control

Program quality control for the ASSE Cross-Connection Control Certification Program shall be the responsibility of the ASSE Board of Directors and the professional qualifications coordinator. Quality control is maintained through ASSE, the Cross-Connection Control Technical Committee (hereafter referred to as CCC Technical Committee) and its sub-committees, the School/Instructor Committee and the Proctor Committee.

The ASSE Board of Directors may revoke the accreditation of any school, instructor or proctor that has shown deceit, displays gross negligence, incompetence or misconduct in the performance of their duties as stated in the ASSE/ANSI/IAPMO Series 5000, Cross-Connection Control Professional Qualifications Standard (hereafter referred to as Series 5000), and these Guidelines. Any school that conducts a class that does not meet the requirements of the Series 5000 and these Guidelines shall have their accreditation reviewed. Students enrolled in a school that has had its accreditation revoked may be required to repeat the course and certification exam at an ASSE accredited school. ASSE shall not be held responsible for any financial losses.

Schools must adhere to these Guidelines. Schools found in violation may be placed under review and possibly have their ASSE approval removed. A signed document agreeing to the Guidelines must be submitted to ASSE prior to a class being held. If a school is found to be in violation of the program Guidelines, the following procedures will be followed;

1. Written notification of the violation will be sent to the school.
2. The school will have thirty days to present, in writing, their evidence of compliance.
3. All evidence will be presented to the ASSE International Board of Directors.
4. The ASSE International Board of Directors will decide the appropriate corrective action.
5. The school will be notified, in writing, of the ASSE International Board of Directors decision.

Program Record Keeping Responsibility

ASSE shall maintain a record keeping system for the Cross-Connection Control Certification Program.

Equal Opportunity

ASSE respects each participant in the Cross-Connection Certification Program as an individual and assures that no participant will be subjected to discrimination in ASSE's performance of its certifying authority because of the individual's race, color, religion, national origin, non-disqualifying disability, sex, age or other protected class as defined by federal or state law.

ASSE recognizes that its responsibility to certify backflow prevention assembly professionals is intended to support and enhance the protection of public health. ASSE will exercise its authority hereunder without regard to the status of the employer/employee or any prospective employer/employee of any program participant.

Disclaimer

In no event shall ASSE, its Board of Directors, committees, consultants or employees incur any obligation or liability for damages, including, but not limited to, consequential damages arising out of, or in connection with, the applicable certification.

Committees

The committees governing the program are the CCC Technical Committee, the Proctor Committee and the School/Instructor Committee. With the approval of the Board of Directors, the committees may enlist outside expertise as necessary or required, and within budget.

CCC Technical Committee:

- Is appointed by the ASSE International president and includes the chairman of the School / Instructor Committee and the chairman of the Proctor Committee, as well as the professional qualifications coordinator.
- Is responsible for maintaining the technical aspects of the program. The committee maintains the question bank for certification exams and ensures the validity of the exam content.
- Reviews and updates these Guidelines and the course curriculums.
- Reviews and updates the appendixes to the Series 5000 standard, including the backflow prevention assembly field test procedures.
- Conducts other activities as directed by the ASSE Board of Directors and the CCC Technical Committee chairperson.
- Is responsible for on-site inspections of school facilities and classes as directed by the ASSE Board of Directors or the CCC Technical Committee chairperson.

Proctor Committee:

- Is appointed by the ASSE International president.
- Reviews the qualifications of the proctor applicants for approval.
- Conducts other activities as directed by the ASSE Board of Directors or the CCC Technical Committee chairperson.

School/Instructor Committee

- Is appointed by the ASSE International president.
- Reviews the applications of the schools and instructors for approval.
- Reviews curriculum and facilities of schools applying for accreditation.
- Conducts other activities as directed by the ASSE Board of Directors or the CCC Technical Committee chairperson.

Cross-Connection Control Certification

Introduction

ASSE third-party certification affirms that an individual has completed the required course of instruction, has passed the required written and practical exams and has met all the criteria as stated in the Series 5000 and these Guidelines.

Certification

- A. An approved course of instruction shall mean the course curriculum as approved by the School/Instructor Committee. This includes the minimum requirements as stated in the Series 5000.
- B. Certification to Standard 5110 for Backflow Prevention Assembly Testers is available only to individuals who have a minimum of five (5) years experience in the installation or service of plumbing, mechanical, fire sprinkler, lawn irrigation or a related industry field using potable water. Certification shall consist of a minimum of forty (40) hours of instruction and exams.
- C. Certification to Standard 5120 for Cross-Connection Control Surveyors. There are two sets of criteria for meeting the requirements for certification. Track A is for individuals who possess a current backflow tester certification in accordance with ASSE 5110, Certification shall consist of a minimum twenty (20) hours of instruction and exam. Track B is for individuals who do not possess a current 5110 certification and have a minimum of (5) years of experience in plumbing, mechanical, fire protection, water distribution or a related industry field using potable water. Certification shall consist of a minimum forty (40) hours of instruction and exam.
- D. Certification to Standard 5130 for Backflow Prevention Assembly Repairers is available only to individuals who hold a current backflow prevention assembly tester certification in accordance with ASSE 5110. Certification shall consist of a minimum of twenty (20) hours of instruction and exams.
- E. Certification to Standard 5140 for Fire-Sprinkler System Cross-Connection Control Testers is available only to individuals who hold a current backflow prevention assembly tester certification in accordance with ASSE 5110 and a current backflow prevention assembly repairer certification in accordance with ASSE 5130. Certification shall consist of a minimum of thirty (30) hours of instruction and exams.
- F. Certification to Standard 5150 for ASSE Backflow Prevention Program Administrator (Specialist) shall consist of a minimum of thirty-two (32) hours of instruction and exams.

Participant's Application

An application will be distributed to each student prior to taking the exam. Failure to provide accurate contact information on the application may result in the certification not being processed by ASSE. The applicant shall forfeit the full application fee. By signing the bottom portion of the application, the instructor verifies that the applicant attended the required course.

Course Instructional Objectives Checklist

An applicable Instructional Objectives Checklist (IOC) will be presented by the instructor to each course participant. The IOC outlines the required course content which includes the teaching of at least one of the ASSE recognized test procedures. The recognized test procedures include but are not limited to ASSE, EPA, Backflow Assembly Manufacturers' procedures, NEWWA, One-Hose, TREEO and USC 10th edition. By signing the IOC, participants verify that the required items were covered during the course of instruction.

Instructional Materials

ASSE does not provide training manuals. The training materials used by schools in teaching cross-connection control classes are determined by the school. The list of training materials shall be submitted for review at the time of application for accreditation. Training materials shall be provided to ASSE upon request. Additional reference materials for the classes shall include:

- A. ASSE/IAPMO/ANSI Series 5000, Cross-Connection Control Professional Qualifications Standard (provided by ASSE for each student)
- B. ASSE Guide to Cross-Connection Protection Devices and Assemblies (provided by ASSE for each student)

Exams

- A. The professional qualifications coordinator and the CCC Technical Committee shall prepare such written and practical exams as will properly reflect the minimum criteria as outlined in the Series 5000 and these Guidelines.
- B. Each student seeking certification must successfully complete a written and practical exam. An ASSE approved proctor shall administer certification exams. Both the written and performance exams shall be completed without the aid of reference materials or study guides.
- C. In the event an applicant fails to appear for a scheduled exam, a new exam date shall be arranged between the school and the applicant.
 1. The request for an exam must occur within thirty (30) days of the original exam date. A test fee is required by ASSE.
 2. The applicant shall complete the exam within six (6) months of the original exam date. After six (6) months, the applicant shall repeat the appropriate course of instruction.
 3. Any costs related to the certification exam or repeated course of instruction shall be the responsibility of the applicant. A test fee is required for each attempt.
- D. In the event the applicant fails an exam, a re-test date shall be arranged between the school and the applicant.
 1. The request for a re-test must occur within thirty (30) days of notification of failure by the school. An applicant must wait a minimum of 24 hours before attempting a retest of the practical exam.
 2. The applicant shall complete the exam within six (6) months of the original certification exam failure date. After six (6) months, the applicant shall repeat the appropriate course of instruction.
 3. Should the applicant fail three (3) exam attempts, the applicant shall repeat the entire course of instruction. A new application is required. This includes applicants who fail the practical exam. Applicants must successfully field test all four assemblies during any retest.
 4. Any costs related to the exam or repeated course of instruction shall be the responsibility of the applicant. A re-test fee is required for each attempt.
- E. Evidence of falsifying information or failure to maintain an atmosphere conducive to an exam process, may result in the school's ASSE accreditation being revoked.

Written Exam

The written exam must be administered by a proctor or exam facilitator.

A school may use an Exam Facilitator to witness the written exam only, provided the following conditions are met.

- A. A list of individuals intended to be used as Exam Facilitators must be submitted to ASSE prior to submitting a Class Application. The list must include the individual's name and title.
- B. The name of the Exam Facilitator must be included on the Class Application and appear on the eligibility list on file with ASSE.

Practical Exam

The practical exam must be administered by a proctor.

- A. ASSE 5110 certification (and recertification) requires testing four (4) assembly types, with a minimum of one set up in a failure mode using one of the ASSE recognized test procedures. The test procedures include but are not limited to ASSE, EPA, Backflow Assembly Manufacturers' procedures, NEWWA, One-Hose, TREEO and USC 10th edition. The four assembly types include: reduced pressure principle backflow prevention assembly (ASSE Standard 1013), double check backflow prevention assembly (ASSE Standard 1015), pressure vacuum breaker assembly (ASSE Standard 1020) and a spill-resistant vacuum breaker assembly (ASSE Standard 1056). The assembly that is in fail mode must be tested to completion or until the test cannot proceed further. The candidate must complete the testing of all four assemblies within a continuous 1½ hour time period.
- B. ASSE 5120 certification requires the successful completion of an actual or virtual field survey. The actual survey is subjective in nature and will be administered by a proctor in an on-site field setting. The virtual survey is objective with just one correct answer per question. The survey tests the candidates' field knowledge of the requirements and procedures for conducting surveys for cross-connection control, identification of actual or potential cross-connections, and the appropriate application of backflow preventers. 70 percent is the passing score.
- C. ASSE 5130 certification requires disassembling and reassembling a total of four (4) assemblies including a 2 ½ inch or larger reduced pressure principle backflow prevention assemblies (ASSE Standard 1013), a 2½ inch or larger double check backflow prevention assembly (ASSE Standard 1015), a 1 1½ inch or larger pressure vacuum breaker assembly (ASSE Standard 1020) and a ¾ inch or larger spill-resistant vacuum breaker assembly (ASSE Standard 1056).
- D. ASSE 5140 certification includes successfully shutting down, testing of ASSE 1013, ASSE 1015, ASSE 1047 and ASSE 1048 assemblies, and restoring the fire-sprinkler system to proper service as defined by NFPA 13, Standard for the Installation of Sprinkler Systems, and NFPA 25, Standard for the Inspection, Testing and Maintenance of Water-Based Fire Protection Systems.
- E. ASSE 5150 certification requires the successful completion of a virtual field survey conducted via a PowerPoint presentation. The survey will test the candidates' knowledge of applying containment protection to any type of service connection that may be encountered. 70 percent is the passing score.

Procedures for Certification

- A. A class application shall be submitted to ASSE thirty (30) days prior to the course completion. It is the responsibility of the school to ensure that each student meets the prerequisites for the class the student is enrolled in. The application shall include the class start date, exam date, proctor, exam facilitator (if any), instructor, number of students and names of students, together with a signed statement that each student has demonstrated at least five (5) years of experience in a plumbing, pipefitting or a related industry field. The experience requirement is waived for students applying for the 5150 certification class.
- B. Upon receipt of the aforementioned information, ASSE will forward the Series 5000 and the ASSE Guide to Cross-Connection Protection Devices and Assemblies books to the school for distribution to the students. The exams will be forwarded to the appropriate party prior to the exam date.
- C. All paper exams, complete and incomplete, must be returned to ASSE along with the required applications and IOCs. Exams are processed in the ASSE office and results are sent to the school. ASSE does not give paper exam results to students. All student contact shall be through the school.
- D. Protests of the exam results shall be filed by a candidate. Such protests shall be submitted in writing to the professional qualifications coordinator within thirty (30) days of notification of the

exam results. The professional qualifications coordinator shall make an inquiry of the protests and render a determination in writing within sixty (60) days. All expenses incurred shall be borne by the candidate.

- E. Appeals of the professional qualifications coordinator's determination shall be submitted in writing within thirty (30) days to the ASSE Board of Directors. The appellant shall resubmit all original data and shall offer supporting documentation or rationale to justify a second hearing. The Board of Directors shall make their determination within sixty (60) days. The decision of the Board of Directors shall be final.

Issuing a Certificate

- A. Upon satisfactory fulfillment of the requirements provided herein, ASSE shall issue a suitable certificate and/or wallet card. The certificate shall state the classification for which the applicant is certified.
- B. The certificate shall indicate that the holder has satisfactorily fulfilled the requirements as stated in the Series 5000 and these Guidelines.
- C. Any certificate used in accordance with these regulations shall be valid for a period of three (3) years from the date of issuance.
- D. Certified individuals must renew their certification within six (6) months of the printed expiration date. Recertification up to six (6) months before the expiration date will not result in any loss of certification time. Recertification up to six (6) months after the expiration date is permitted. The certification is not valid between the expiration date and the renewal date. Recertification up to six (6) months after the expiration date does not result in any gain of certification time. The new expiration date will be three (3) years after the original expiration date. Failure to recertify by six (6) months after the expiration date will result in the individual having to retake the initial course and exam. The CCC Technical Committee may make exceptions; i.e. for active duty military personnel.
- E. Certified individuals failing to renew their certificates prior to the expiration date shall have their names removed from the certification list.
- F. The Board of Directors shall revoke the certificate of any person who, after a hearing before the Board of Directors, is found to have obtained a certificate by fraud or deceit, or displays gross negligence, incompetence or misconduct in the performance of his/her duties as a certified cross-connection control professional. All costs incurred for the hearing shall be the responsibility of the individual.

Recertification

Recertification to 5110, 5120, 5130, 5140 and 5150 shall be to the requirements of the current Series 5000. The only exception to the recertification requirements are:

- a) An ASSE approved instructor may recertify without exam if they have taught an ASSE approved cross-connection control course within the previous three (3) years. The recertification fee is required.
- b) An ASSE approved proctor may recertify without exam if they have proctored an ASSE cross-connection control exam within the previous three (3) years. The recertification fee is required.

Certification – When Previously Certified by another Agency

A tester holding a current non-ASSE certification may be eligible to upgrade their certification to an ASSE certification upon completion of the required training hours and testing requirements listed in ASSE Standard 5110, 1.3. The backflow prevention assembly tester shall successfully complete a backflow assembly testing course. The CCC Technical Committee will determine the number of hours required.

Fees for Certification

The application fee for certification shall be payable to ASSE and is the responsibility of the school conducting the class.

Proctors & Exam Facilitators

The following outlines a program that will establish uniformity to the exam procedures and credibility to the certification programs.

Responsibility for maintaining the exam requirements falls to the professional qualifications coordinator and the CCC Technical Committee. The CCC Technical Committee may, at its discretion, establish additional requirements as appropriate.

Proctor Qualifications

To qualify for the proctor pool, an individual shall submit an application, a resume of trade related experience and supporting documentation to ASSE to be evaluated for approval by the Proctor Committee. The applicant must show evidence of:

- A. A current ASSE recognized backflow assembly tester certificate.
- B. Meeting one (1) or more of the following criteria:
 - 1. Three (3) years of backflow prevention testing experience.
 - 2. Completion of an ASSE recognized train-the-trainer program (minimum 20 hours) specific to the teaching of cross-connection control.
 - 3. Possess a current Cross-Connection Control Proctor certificate from an ASSE recognized agency.

In order to continue to qualify for the proctor pool, an individual must maintain a current ASSE backflow tester certification.

Only ASSE approved proctors having a repairer certification can proctor the ASSE 5130 Repairer exam. Only ASSE approved proctors with a 5140 certification can proctor the ASSE 5140 Fire-Sprinkler System Cross-Connection Control Tester exam. Exceptions to this requirement shall only be made by the Proctor Committee.

Proctor Responsibilities

The proctor may not be the course instructor. Proctor(s) shall be responsible for maintaining an atmosphere conducive to an exam process. The Proctor Guide is available at the ASSE office and shall be followed whenever an ASSE exam is given. The Proctor Guide gives a detailed explanation of the proctor's role in administering the practical exams, as well as the written exams. A proctor shall witness no more than one (1) individual at a time when proctoring any ASSE practical exam for the ASSE 5110, 5130 and 5140 certifications. A proctor is prohibited from proctoring the practical exam for more than 10 people in a single day. Refer to the Proctor guide for the pass/fail criteria and testing requirements. The Proctor and Exam Facilitator Responsibilities form must be signed and returned to ASSE after each exam.

Exam Facilitators Responsibilities

An exam facilitator may witness written exams only and may not be the course instructor. The exam facilitator shall be responsible for maintaining an atmosphere conducive to an exam process. The Proctor Guide shall be followed in the administration of the written exams. An exam facilitator is prohibited from witnessing more than 20 people seated for any written exam unless permission is granted by the professional qualifications coordinator prior to the exam. The Proctor and Exam Facilitator Responsibilities form must be signed and returned to ASSE after each exam.

Compensation

Proctors and Exam Facilitators are not employees or sub-contractors of ASSE and are not compensated by ASSE. Proctors will be compensated by ASSE for exams given in California.

Instructors

Instructor Qualifications

To apply to be an ASSE approved instructor, an individual must be sponsored by an ASSE accredited school with the intent of teaching for that school. The applicant must submit a completed application, a résumé and supporting documentation as to their qualifications. To qualify as an instructor, a person shall have:

- A. A current ASSE recognized backflow assembly tester certificate.
 - B. Minimum of seven (7) years of experience in plumbing or a related field.
 - C. Knowledge or experience in all subjects described in the Series 5000.
 - D. Meeting one (1) or more of the following criteria:
 1. Minimum of three (3) years of experience in cross-connection control and three (3) years of teaching experience.
 2. Completion of an ASSE recognized train-the-trainer program (minimum 20 hours) specific to the teaching of cross-connection control.
1. An instructor who will teach the ASSE 5130 Repairer certification course will be required to have a valid backflow tester certification and a current backflow repairer certification. The repair training shall include the requirements of ASSE 5130. They shall be previously approved by ASSE as a backflow tester instructor. If the repairer certification is other than ASSE, a new application shall be submitted for review by the committee.
 2. An instructor who will teach the ASSE 5120 Cross-Connection Control Surveyor or 5150 Backflow Prevention Program Administrator (Specialist) certification courses will be required to have a valid backflow tester certification and a current backflow surveyor certification. The survey training shall include the requirements of ASSE 5120. They shall be previously approved by ASSE as a backflow tester instructor. If the surveyor certification is other than ASSE, a new application shall be submitted for review by the committee.
 3. An instructor who will teach the ASSE 5140 Fire-Sprinkler System Backflow Tester certification course will be required to have a valid backflow tester certification and a current backflow repairer certification. The repairer training shall include the requirements of ASSE 5130. They shall be previously approved by ASSE as a backflow tester instructor. All applicants must complete a separate application for fire-sprinkler system tester instructor. The application shall be submitted for review by the committee.
 4. An instructor who will teach the ASSE 5150 Backflow Prevention Program Administrator (Specialist) certification course will be required to have a valid backflow tester certification and a current Backflow Surveyor certification. The survey training shall include the requirements of ASSE 5120. They shall be previously approved by ASSE as a backflow tester instructor. If the surveyor certification is other than ASSE, a new application shall be submitted for review by the committee.

In order to continue to qualify for the instructor pool, an individual must maintain a current ASSE backflow tester certification.

Instructor Responsibilities

Instructors shall be responsible for maintaining an atmosphere conducive to the learning process. The instructor shall be responsible for teaching, at a minimum, every item on the course outline as it was submitted to ASSE for approval. ASSE approved instructors are not employees of ASSE, nor are they compensated by ASSE. Schools accredited by ASSE are responsible for the compensation of instructors.

Facilities and Equipment

ASSE recognizes that the quality of training is dependent on the training environment and believes that any approved training program should be adequately equipped to train the number of people in any given training session.

ASSE shall conduct an on-site visit prior to making a determination to approve a training facility. All classes shall be conducted in an ASSE approved facility by an ASSE approved instructor, and an ASSE approved proctor shall witness all exams. ASSE reserves the right to inspect any facility without prior notice. This includes during class periods and when an exam is being given. ASSE reserves the right to appoint a representative for these inspections. ASSE reserves the right to survey participants to assure that classes, facilities and equipment are in compliance with these Guidelines.

Classroom

- A. The classroom of an ASSE approved training facility shall be of such a size as to adequately and comfortably accommodate:
- 1) Maximum number of students per class in accordance with the school approval, never exceeding 20.
 - 2) Equipment necessary for the class.
 - 3) Minimum of 15 square feet of classroom space per student.

A school may not exceed the maximum class size for which it was approved.

- B. There shall be:
- 1) Sufficient tables and chairs for each registered student.
 - 2) Adequate lighting
 - 3) Sufficient sanitary facilities
- C. There shall be a representation of multimedia or physical devices from different manufacturers of:
- 1) Testable backflow assemblies
 - 2) Backflow devices (ASSE 1001, 1002, 1011, 1012, 1019, 1022, 1024, 1032, 1035, 1052, 1053, 1057)
 - 3) Test kits
- D. There shall be a representation of physical devices from different manufacturers of the following backflow devices (ASSE 1001, 1012, 1022, 1024)
- E. There must be a minimum of at least one ASSE 1013 or 1015 assembly that is at least 2½ inches nominal pipe size.

Wet Laboratory

- An ASSE approved wet lab shall contain backflow prevention and test equipment necessary for the instruction of testing backflow prevention assemblies. This includes, but is not limited to, assemblies as stated in ASSE Standards 1013, 1015, 1020 and 1056.
- An ASSE approved wet lab shall simultaneously accommodate all of the students enrolled in the class with no more than two (2) students per station. Each test station must have a test kit. Test gauges must be verified for accuracy on an annual basis to a nationally recognized standard and recalibrated if necessary.
- An ASSE approved wet lab shall have adequate water supply pressure or means of providing an adequate water supply pressure.

Off-Site Training Classes

ASSE International accredited schools may apply to conduct off-site training classes after a minimum of one (1) year, or upon conducting a minimum of 4 classes at their permanent location. All ASSE International accredited schools must maintain a permanent location.

ASSE International accredited schools that have had prior approval to instruct classes for other national or state recognized programs, may apply to conduct off-site classes.

A separate application per each off-site location shall be required to be submitted to and approved by ASSE International no later than 30 Days prior to conducting off-site training. All mobile equipment shall meet the same criteria as required for permanent classrooms and wet labs within these Guidelines.

Changes to Schools

Should an ASSE approved training facility make any changes, a notice of the change, together with a full description of the change, shall be submitted to ASSE for review. A change shall include, but not be limited to, a physical change of address, additions or deletions to the course outline, equipment or training material.

Every three (3) years a renewal fee shall be submitted with a letter certifying that the school has not changed from the information currently on file with ASSE. The school shall review the qualifications of the instructors and proctors. If there were any changes to the facility, or to the listed instructors or proctors, the school must provide documentation of the change. To be renewed, a school shall have held a minimum of one (1) ASSE certification class within the previous three (3) years. If no class was held, the school shall reapply as a new school.

Additional Equipment Necessary for ASSE Repairer Certification

The equipment for an ASSE approved repairer course shall meet all of the requirements as stated above for the ASSE certified tester course, plus:

- The following assemblies of different manufacturers:
 - 1) 2 RPZs (1013) that are at least $\frac{3}{4}$ inch
 - 2) 2 RPZs (1013) that are at least $2\frac{1}{2}$ inch
 - 3) 2 DCs (1015) that are at least $\frac{3}{4}$ inch
 - 4) 2 DCs (1015) that are at least $2\frac{1}{2}$ inch
 - 5) 1 PVB (1020) that is at least $1\frac{1}{2}$ inch
 - 6) 1 SRVB (1056) that is at least $\frac{3}{4}$ inch
- Specialty tools required to repair the devices and assemblies as per the manufacturer's recommendations.
- OSHA approved safety equipment.
- Safety bars for disassembly.

Additional Equipment Necessary for ASSE Fire-Sprinkler System Backflow Tester Certification

Representation of the following types of fire protection systems:

Wet Pipe Sprinkler Systems:

- 1) Riser with a paddle type flow switch, main control valve, system gages and main drain valve.
 - Alarm valve with trim, main control valve, system gages and main drain valve.
 - Antifreeze loop system with ASSE 1013 RP.

- 2) Dry Pipe Sprinkler Systems:
 - Differential type dry valve with trim, main control valve, system gages and main drain valve.
 - Low pressure type dry valve with trim, main control valve, system gages and main drain valve.

- 3) Preaction System:
 - Preaction valve with single interlock electric release trim, main control valve, system gages, and main drain valve and releasing panel.
 - A total of three mock-ups, one for each type of system. Only one panel is necessary.

Other required equipment:

- Alarm panel: addressable
- Tamper switches for all main control valves
 - Lever type
 - Plunger type
 - Rope type
 - Built in type
- Fire pump controller with a transfer switch
- Jockey pump control panel
- Indicating control valves
 - 1) OS & Y (outside screw and yoke)
 - 2) Butterfly valve with built in tamper
 - 3) PIV (post indicator valve) – wall type
- 2 ½ inch ASSE 1047 RPDA (reduced pressure detector assembly)
- 2 ½ inch ASSE 1048 DCDA (double check detector assembly)

California Requirements

All training providers conducting classes in the State of California, or for individuals who will test in the State of California, shall meet the additional requirements listed below as determined by the California Department of Public Health.

Written Exam Requirements:

The initial written exam shall include at least the following subjects:

- 1) Hydraulic, theory and principles of backflow.
- 2) California cross-connection control codes and regulations.
- 3) Backflow prevention assemblies – installation, design, operation and maintenance.
- 4) Field test equipment – type and when to verify accuracy.
- 5) Recordkeeping and safety.
- 6) Field test procedures for RP, DC, PVB and SVB backflow prevention assemblies utilizing USC's 10th edition procedures.
- 7) All other requirements as stated in these Guidelines for written exams.

Performance Exam Requirements

Pass a practical exam that includes successfully testing a RP (ASSE 1013), DC (ASSE 1015), PVB (ASSE 1020) and SVB (ASSE 1056). The practical exam shall include:

- 1) Proper working conditions utilizing USC's 10th edition procedures.
- 2) Successful identification of one or more improper working conditions in randomly selected backflow protection assemblies utilizing USC's 10th edition procedures.
- 3) Improper working conditions selected randomly from the following:
 - a)leaks in or fouling of shutoff valves
 - b)leaks in or fouling of check valves
 - c)leaks in or fouling of air inlet valves
 - d)leaks in or fouling of relief valves
- 4) USC's 10th edition field test procedures.
- 5) All other requirements as stated in these Guidelines for performance exams.

Proctors

Proctors for the performance exam shall be impartial and independent of the candidate's training provider. Proctors shall not be affiliated with the training provider other than as a proctor. The Proctor shall have no involvement in the examinee's training and his/her compensation shall not be affected by the examinee's outcome. Proctors shall not be directly compensated by the training provider.

- 1) Only one candidate shall perform and be evaluated by a proctor at a time.
- 2) If the candidate makes an error during a performance exam, they shall proceed to the completion of the exam before being informed of the error and then be allowed to start the exam again.
- 3) If the candidate makes an error during a second attempt of the performance exam, the proctor shall stop the exam and explain to the candidate the cause for failure.
- 4) Errors include an action that could affect the outcome of the field test procedure or the reporting of results.
- 5) All other requirements as stated in these Guidelines for proctors.

Recertification

To recertify, an individual shall successfully complete a minimum of a three (3) hour review course, a minimum of a twenty five (25) question written exam and a performance exam conducted as stated in the requirements above for both performance exams and proctors. The performance exam for recertification must include all four (4) assemblies listed above under performance exam requirements.

List of Testers Certified to Meet the California Criteria

ASSE shall maintain a list of all backflow prevention testers certified to meet the above stated California requirements, along with their expiration dates. ASSE California certifications and wallet cards will contain specific California markings. The list shall be posted on the ASSE website.

