



NEED-TO-KNOW CRITERIA

Backflow Prevention Assembly Tester

A Need-to-Know Guide when preparing for the:

ABC Backflow Prevention Assembly Tester Exam



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Before You Dive In...

What is the Need-to-Know Criteria?

This **ABC Backflow Prevention Assembly Tester** Need-to-Know Criteria was developed to assist backflow prevention assembly testers in understanding the content that will be covered in the ABC Backflow Prevention Assembly Tester exam. A methodical and comprehensive international investigation was conducted to determine the most significant job tasks performed by backflow prevention assembly testers. The content covered on the exam represents the job tasks identified through this research as essential tester competencies, and is not limited to the practices of your system/facility. The following pages organize these job tasks into Core Competency Job Areas, and identify how much of the test is devoted to each area.

Is this Need-to-Know Criteria relevant to MY exam?

WPI offers a variety of standardized and customized exam services. This document is reflective only of the ABC Backflow Prevention Assembly Tester exam; older editions of the standardized exam and various customized exams are also administered by various certification programs. Please contact your certifying authority to determine whether they have implemented this exam for your program.

Exam Preparation Resources

Visit **gowpi.org** to access the formula/conversion table administered with this exam, a list of approved references, information on purchasing study guides available from partner organizations, and more.

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ABC Backflow Prevention Assembly Tester

CORE COMPETENCY JOB AREAS

The following pages list the core competencies for backflow prevention assembly testers. The core competencies are clustered into the following job duties:



Duty 1. Basic Concepts



Duty 2. Compliance with Public Health Principles



Duty 3. Operating Characteristics of Backflow Prevention Assemblies and Devices



Duty 4. Field Test Equipment



Duty 5. Field Test Procedures

ABC Backflow Prevention Assembly Tester



DUTY 1. BASIC CONCEPTS

- 1.1** Explain hydraulic concepts of backsiphonage, backpressure, and pressure drop
- 1.2** Identify acceptable/unacceptable backflow prevention installations
- 1.3** Describe backflow prevention assemblies
- 1.4** Describe backflow prevention devices
- 1.5** Explain the difference between backflow prevention assemblies and devices



DUTY 2. COMPLIANCE WITH PUBLIC HEALTH PRINCIPLES

- 2.1** Describe the public health principles, laws, and regulations



DUTY 3. OPERATING CHARACTERISTICS OF BACKFLOW PREVENTION ASSEMBLIES AND DEVICES

- 3.1** Recognize indicators of normal and abnormal conditions
- 3.2** Identify causes of abnormal conditions using proper troubleshooting techniques
- 3.3** Identify and describe all components of each type of backflow prevention assembly
- 3.4** Identify operational characteristics of all testable assemblies and non-testable devices
- 3.5** Describe operation of backflow assembly/components
- 3.6** Conform to standards, laws, and regulations



DUTY 4. FIELD TEST EQUIPMENT

- 4.1** Recognize need for calibration
- 4.2** Use manufacturer's instructions
- 4.3** Identify storage and handling requirements
- 4.4** Describe operational characteristics of each type
- 4.5** Conform to standards, laws, rules and regulations

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DUTY 5. FIELD TEST PROCEDURES

- 5.1** Perform notification procedures (advance notification)
- 5.2** Identify type of assembly
- 5.3** Record physical identification of assembly
- 5.4** Identify direction of flow
- 5.5** Perform preliminary steps prior to testing
- 5.6** Perform test procedures
- 5.7** Evaluate test results
- 5.8** Explain reasons for using proper procedures
- 5.9** Record necessary information on all required reports
- 5.10** Provide test results to appropriate parties
- 5.11** Use necessary tools/test equipment/reference manuals
- 5.12** Conform to safety procedures
- 5.13** Identify safety hazards
- 5.14** Conform to standards, laws, and regulations

Performance Exam “Need-to-Know” Criteria

All of the following are considered critical.

- 1 Perform notification procedures (advance notification)**
 - Describe purpose of advance notification
 - Describe reasons for prompt arrival time
 - Explain need for identification at a reception desk prior to entering the facility or site
 - Explain need for accompaniment of facility personnel
- 2 Identify type of assembly**
- 3 Record physical identification of assembly on approved test sheets**
- 4 Have necessary tools, test adapters, approved test equipment, reference manuals, etc. on hand and use**
- 5 Maintain test kit in proper working condition**
- 6 Identify improper installations of assemblies**
- 7 Perform preliminary test procedures prior to testing using approved procedures:**
 - Obtain direction of flow
 - Number the test cocks
 - Assemble test adapters and blow out
 - Request permission to shut down
 - Shut down
 - Evaluate assembly several moments following shut-down (RP only)
- 8 Perform test using approved procedures**
- 9 Explain reasons for using proper procedures**
- 10 Evaluate test results**
- 11 Explain what the test results indicate in relation to the proper or improper operation of the assembly**
- 12 Record necessary information on all required reports**
 - Obtain signature of witness on the reports
 - If passed, notify facility personnel and return assembly to flow condition
 - If failed, notify facility personnel that repair or replacement of the device is required
 - Distribute copies of the report

Performance Exam “Need-to-Know” Criteria

- 13 Conform to safety procedures
- 14 Identify safety hazards
- 15 Conform to standards, laws, and regulations

References

The following are approved as reference sources for the ABC Backflow Prevention Assembly Tester examinations. Testers should use the latest edition of these reference sources to prepare for the exam.

American Water Works Association (AWWA)

• *M14 Backflow Prevention and Cross-Connection Control: Recommended Practices*

To order, contact: **American Water Works Association**
6666 West Quincy Ave.
Denver, CO 80235
Website: www.awwa.org
Phone: (800) 926-7337
Fax: (303) 347-0804
E-mail: custsvc@awwa.org

Foundation for Cross-Connection Control and Hydraulic Research, a Division of the University of Southern California

• *Manual of Cross-Connection*

To order, contact: **USC Foundation Office**
University of Southern California
1150 South Olive Street, Suite 1700
Los Angeles, CA 90015
Website: www.fccchr.usc.edu
Phone: (866) 545-6340
E-mail: fccchr@usc.edu

Pacific Northwest Section – American Water Works Association

• *Cross-Connection Control Manual, Accepted Procedure and Practice Handbook*

To order, contact: **PNWS-AWWA**
PO Box 872467
Vancouver, WA 98687
Website: www.pnws-awwa.org
Phone: (503) 760-6460
Fax: (360) 254-0695
E-mail: execdir@pnws-awwa.org

United States Environmental Protection Agency

• *Cross-Connection Control Manual*

Available at: www.epa.gov

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