

ADEQ

Arizona Department
of Environmental Quality



BACKFLOW & CROSS CONNECTION PDH WORKBOOK

Completion of this workbook will count for 1 PDH

Arizona Department of Environmental Quality
Drinking Water Section-Programs Unit
Operator Certification Program
1110 West Washington Street
Phoenix, AZ 85007
www.azdeq.gov

NAME _____

OPCERT NUMBER OP0 _____

DATE _____

DIRECTIONS

Answer the questions in the space provided with concise and accurate answers. Mail the completed booklet to the address provided. It is recommended that you keep a copy of the completed booklet for your records. Completion of this workbook will earn the operator one (1) PDH. Please print clearly. Workbooks that are illegible will not receive PDHs.

PDH means professional development hour.

A professional development hour is equal to one contact hour of continuing education. A total of 30 professional development hours are required for each 3-year renewal period regardless of the number of certificates that are held by an individual operator. Ten of the thirty PDHs must be directly related to an operator's job.

The type of PDH acceptable to the Department for certificate renewal include, but are not limited to: an approved college course, a course offered by a Certified Environmental Trainer, regulatory and tribal agency training, certain types of in-house training, technical conferences, correspondence courses, and manufacturer product training. An accredited college course is usually recorded in credit hours. In general, 1 college credit hour = 10 PDHs. If an operator has a question about a specific type of training, please contact the Operator Certification Program for approval before attending the training.

FOR MORE INFORMATION, CONTACT:

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Operator Certification Outreach
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1. Define the following terms:

A. Backflow

B. Cross-Connection

C. Backsiphonage

D. Backpressure

2. Describe the following ways of controlling cross-connections and explain how each works and is applied.

A. Reduced Pressure Principal Backflow Preventer

B. Air Gap

C. Double Check Valve

D. Vacuum Breaker

3. What Title, Chapter and Section of the Arizona Administrative Code defines the general requirements for backflow prevention?

4. What is the maximum time period between having a backflow device tested by a certified backflow tester?

5. When a cross connection occurs, which of the following has the greatest potential to cause contamination?

- A. A garbage disposal
- B. A commercial food processor
- C. A pesticide mixing tank
- D. A swimming pool

6. Where are backflow assemblies normally installed when used?

7. What items should be included on a cross-connection survey form?

8. What is a venturi?

13. Why would a screen be placed before a backflow prevention assembly?

- A. To prevent crenothrix bacteria from entering the assembly
- B. To prevent debris from fouling the assembly
- C. To allow the passage of air through the assembly
- D. To keep insects out of the air relief valve

14. Who is responsible for ensuring that contamination of the water supply because of a cross connection does not happen?

- A. The Arizona Department of Environmental Quality
- B. The water system owner
- C. The U.S. Environmental Protection Agency
- D. The Arizona Department of Health Services

15. How must a pressure vacuum breaker assembly be installed?

- A. It must be at least 12 inches above the lowest downstream outlet
- B. It must be 6 inches above the downstream outlet
- C. It must be at least 12 inches above the highest downstream outlet
- D. It must be installed as a barometric loop

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For additional training/PHDs click on the link below. This course provides 16 hours of PDH-approved training for drinking-water operators in the State of Arizona. These are available as individual lessons for credit or as a whole course.

<http://www.waterhelp.org/index.php/client/arizona>