Avondale Irrigation District

Cross Connection Control Program

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Executive Summary

As part of its mission, Avondale Irrigation District (AID) provides safe and clean drinking water to its patrons and consumers. As a supplier of community drinking water, AID is regulated under state and federal law including the Idaho Rules for Public Drinking Water Systems. In part, the purpose of these laws is to insure that public drinking water systems, like AID's, are protected and safe from potential sources of cross contamination that could injure public health. In order to meet that purpose, AID has developed and implemented a Cross Connection Control Program (CCCP) intended to comply with both state and federal regulation and further its mission of providing safe and clean drinking water to its consumers. This document provides a summary of AID's CCCP and an updated copy will remain available on AID's website for future reference.

Introduction

In compliance with state and federal law, AID has developed and implemented this CCCP. The purpose of the CCCP is to protect our drinking water from possible and probable sources of cross contamination that pose a risk to or could injure public health. It is important that AID employees, patrons and consumers understand the risks associated with cross contamination, how those risks can be effectively reduced or eliminated by compliance with the CCCP and how AID and its customers are expected to comply with the CCCP.

Responsibility

AID's Responsibilities

AID's mission is to provide clean potable drinking water to its consumers. Implementing, administering, and maintaining a CCCP that protects our entire water system from cross contamination is an important attribute of this mission. AID's responsibilities include:

- effective backflow prevention measures are implemented by consumers to ensure continual protection of the distribution system,
- conduct accurate record keeping,
- send timely notices,
- perform site surveys, and
- provide pertinent education.

AID shall have final authority on all cross connection and backflow related issues arising from and related to compliance with the CCCP including, but not limited to, resolution of any complaints, testing procedures, submitted test reports, backflow testers, or other issues that may arise pertaining to the CCCP. If AID determines that appropriate back-flow prevention measures have not been taken, AID shall take all necessary measures, billed to the consumer, to ensure that the distribution system is protected and ultimately has the right to discontinue water service.

Consumer's Responsibilities

Consumers, at their own cost, are responsible for preventing contaminates from entering their private water system and the public water system. In general, this responsibility starts at the downstream side of the water meter or service connection. Consumers responsibilities include:

- assuring the installation and maintenance of approved backflow devices and/or assemblies,
- and that said assemblies are tested on an annual basis and kept in proper working condition.
- maintain accurate records of tests and repairs made to backflow assemblies, and
- providing AID with copies of these records.

Testing shall be performed in accordance with the latest test procedures published by the University of Southern California Foundation for Cross-Connection and Hydraulic Research. A copy of which is provided and available at the AID administrative office.

Cross Connection Control Program Basics

Cross Connection Defined

Under the Idaho Rules for Public Drinking Water Systems, a Cross Connection is defined as: Any actual or potential connection or piping arrangement between a public or a consumer's potable water system and any other source or system through which it is possible to introduce into any part of the potable water system used water, water from any source other than an approved public water system, industrial fluid, gas or substance other than the intended potable water with which the system is supplied. Cross connections include bypass arrangements, jumper connections, removable sections, swivel or change-over devices and other temporary or permanent devices which, or because of which "backflow" can or may occur.

Compliance

In short, each and every connection to AID's public drinking water system is required to meet CCCP requirements, there are no exceptions.

Commercial Properties

Commercial properties include, but are not limited to, office buildings, industrial property, medical centers, hotels, malls, retail stores, multi-family housing buildings (over 3 units), schools, campgrounds, warehouses, restaurants, fuel stations and most places that occupy retail of any kind.

Residential Properties

Residential properties consist of single family dwellings such as homes, multi-family housing (3 units or less), townhouses, condominiums, mobile homes or any additional living space such as a loft or living quarters in a garage.

Irrigated Spaces

Irrigated spaces include swales, parks, community greenspace, empty lots, livestock pastures and agricultural fields. A greenspace is any space that can be irrigated that may not have a domestic residence.

Licensed Backflow Tester

A licensed backflow assembly tester shall hold a valid BAT license that has been awarded through the Idaho Board of Occupational Licenses. The backflow tester shall meet all regulatory requirements for licensed backflow assembly testers in the State of Idaho and shall submit a current copy of approved license to AID. Backflow testers are responsible for keeping a current record of license on file with AID. Testing reports from licensed testers not producing copies of current license will not be accepted.

Test kits must be checked for calibration annually. Testers are responsible for keeping accurate and up to date copies of test kit calibration records on file with AID.

Backflow Assembly Testers have the responsibility and duty to perform accurate testing on backflow prevention assemblies. This includes verifying that the assembly is properly installed and is approved for the application per its degree of hazard. The tester shall not change the design, material or operational characteristics of an assembly. The tester is encouraged to identify and notify the consumer and AID of other potential non-protected hazards that may be noticed while on site to perform testing.

Report forms that contain all pertinent information about the valve, the test results, repairs and parts used, along with the tester's information and date of test must be turned into the AID officer no later than ten (10) days after the conclusion of testing. The tester is ultimately responsible for work performed and accuracy of all tests and reports. AID reserves the right to deny any tester the right to test backflow prevention assemblies or conduct site surveys within its water system boundaries if the tester has shown poor testing habits or falsified testing form documents in the past with AID or any other public water system.

Acceptable Assemblies

All acceptable assemblies listed must have been tested and approved by the USC Foundation for Cross Connection Control and Hydraulic Research (USC FCCHR). There are two types of backflow, Backsiphonage and Backpressure.

Backsiphonage is caused by negative or a reduced pressure in the supply piping.
Backpressure is water pressure that exceeds the operating pressure within the potable water supply.

Testable Assemblies

Reduced Pressure Principle Assembly (RP)
Reduced Pressure Principle Detector Assembly (RPDA)
Double Check Assembly (DC)
Double Check Detector Assembly (DCDA)
Pressure Vacuum Breaker (PVB)
Spill-Resistant Vacuum Breaker (SVB)

Non-Testable Devices

Atmospheric Vacuum Breaker (AVB)
Air Gap (AG)
Hose Bib Vacuum Breaker (HBVB/HVB)
Dual Check
Carbonated Beverage Machine Dual Check

Degree of Hazard

There are generally two hazard classifications for water system connections, “High” and “Low” or “Health” and “Non Health.”

High Hazard

High hazards (also known as Health Hazards) are contaminates, substances that could impose a health concern by the spread of disease or illness if it were introduced into the drinking water supply. Approved devices and assemblies include RP, RPDA and AG. Backsiphonage conditions only include PVB, SVB and AVB.

Low Hazard

Low hazards (also known as Non Health Hazards) are pollutants, substances that would not impose a health concern but could be aesthetically objectionable but not an immediate health concern. Approved devices and assemblies include RP, RPDA, DC, DCDA, PVB, SVB, AVB, AG, HBVB.

CCCP Guidelines

Annual Testing

AID will annually send letters of notification to potential and known backflow assembly owners as a reminder of testing deadlines. The testing deadline is currently July 1st of each calendar year. Consumers are responsible for providing, and the testing of, approved assemblies located on their property, prior to the deadline. Consumers who are unsure of assemblies needed should contact the AID office at (208) 772-5657. Irrigation turnouts will not be turned on if proper backflow prevention is not present at the time of expected water delivery. Assemblies that cannot pass annual tests or those found to be defective shall be repaired, replaced, or isolated within ten (10) business days. If the failed assembly cannot be repaired, replaced, or isolated within ten (10) business days, water service to the failed assembly shall be discontinued. All replacement parts and components, including resilient seated

shutoff valves, shall meet original manufacturer's specifications or otherwise be approved by the USC Foundation as replacement parts or components for use on assemblies.

Residential Property Testing

Considerations for backflow prevention devices and assemblies on residential properties include but are not limited to:

Sprinkler Systems – Typically a low hazard assembly such as a DC, PVB, or SVB is used.
Hose Bibs – Hose bibs need to be anti-siphon in design. Hose bibs that are not currently anti-siphon can be retrofitted with anti-siphon adapters.
Frost Free Hydrants – As with hose bibs, these need to be anti-siphon or have anti-siphon adapters. Frost free hydrants should have anti-siphon adapters that allow draining to prevent freezing.
Radiant Floor Heating – Homes with radiant floor heating or boilers will need to have site surveys completed and the proper backflow assemblies installed if needed.
Pools/Spas – Pools or spas that have direct feed water connection for filling will need to install backflow prevention assemblies.
Medical Equipment – Some medical equipment such as dialysis machines require backflow prevention assemblies. If you are not sure, a site survey should be conducted.
Booster Pumps – Booster pumps on the consumer's side of the meter require backflow prevention assemblies.

Commercial Property Testing

Commercial properties have many different backflow prevention needs. Commercial properties should have site surveys completed by licensed testers to assure that the proper devices are being applied for the designated hazards. Testers should notify the business owner of potential hazards, suggest applicable backflow prevention devices, and report all findings to AID.

Non-Compliance

Non-compliance of the CCCP will result in a non-compliance notification. If needed a site survey will be conducted and ultimately could lead to temporary discontinued service. Service will not be restored until all compliance issues have been resolved, a reconnection fee will be collected prior to continuing water service.

Licensed Testers

A list of licensed testers on file with AID will be kept at our office and posted on our website. Consumers are encouraged to take proactive measures to assure the tester they hire has current credentials, current equipment calibration certificates, and is on file with AID. AID is not responsible for the actions of testers, failure of testers to submit testing forms, testers equipment calibration or faulty testing or workmanship completed by the tester.

Site Surveys

AID personnel will conduct site surveys on all commercial properties alternately every three (3) years. AID will conduct random site surveys on residential properties yearly and has the right to conduct a site survey at any property, any time reasonable, in the interest of protecting the drinking water system. Consumers are encouraged to report potential hazards within the water system to AID, which will more than likely lead to a site survey of the suspected hazard. AID will notify consumers in advance either by writing, email, or verbally prior to conducting a site survey. AID recognizes that in some instances it will

be necessary to schedule site surveys for a date that meets the schedules of both the consumer and AID. The consumer will be provided with a site survey report once the survey has been completed. If consumer does not allow AID to perform a site survey, then AID will require at the consumer's expense, that an RP assembly be installed at the service connection.

Fill Stations

AID has installed specific water filling stations at convenient points within the water system for the convenience of contractors and the public. Filling stations are backflow protected with RP assemblies and are open to those who have purchased a permit or made arrangements through our district office. Unauthorized use or tamping with filling stations is punishable by law.

Fire Hydrants

No unauthorized use of fire hydrants is permitted. When permission has been granted to fill directly from a hydrant, AID personnel will be on site to assure that the proper backflow assemblies are being utilized. The proper device for any truck, tanker, or portable water reservoir is either an RP or an Air gap. Unauthorized use or tamping with fire hydrants is punishable by law.

New Service Owners

New service owners will receive a CCCP packet at either the time the connection fee is paid, or once they have taken possession of the property. The packet will contain CCCP guidelines, helpful information regarding testing, a list of current licensed testers, and a site survey to be turned back into AID. All new service connections are required to install adequate backflow protection prior to AID providing water service.