

NEW APPROACHES TO BACKFLOW EDUCATION

Mark Snider
Public Affairs Manager
United Water Idaho
PNWA-AWWA Annual Conference
Eugene, OR May 9, 2014



What is Backflow?

- Backflow is the reversal of the flow of water in the plumbing system. It can occur when the pressure in the water main or a home's plumbing system changes.
- Possible in a system that uses different water supplies, like in Boise.



Backflow Prevention – Our Responsibility



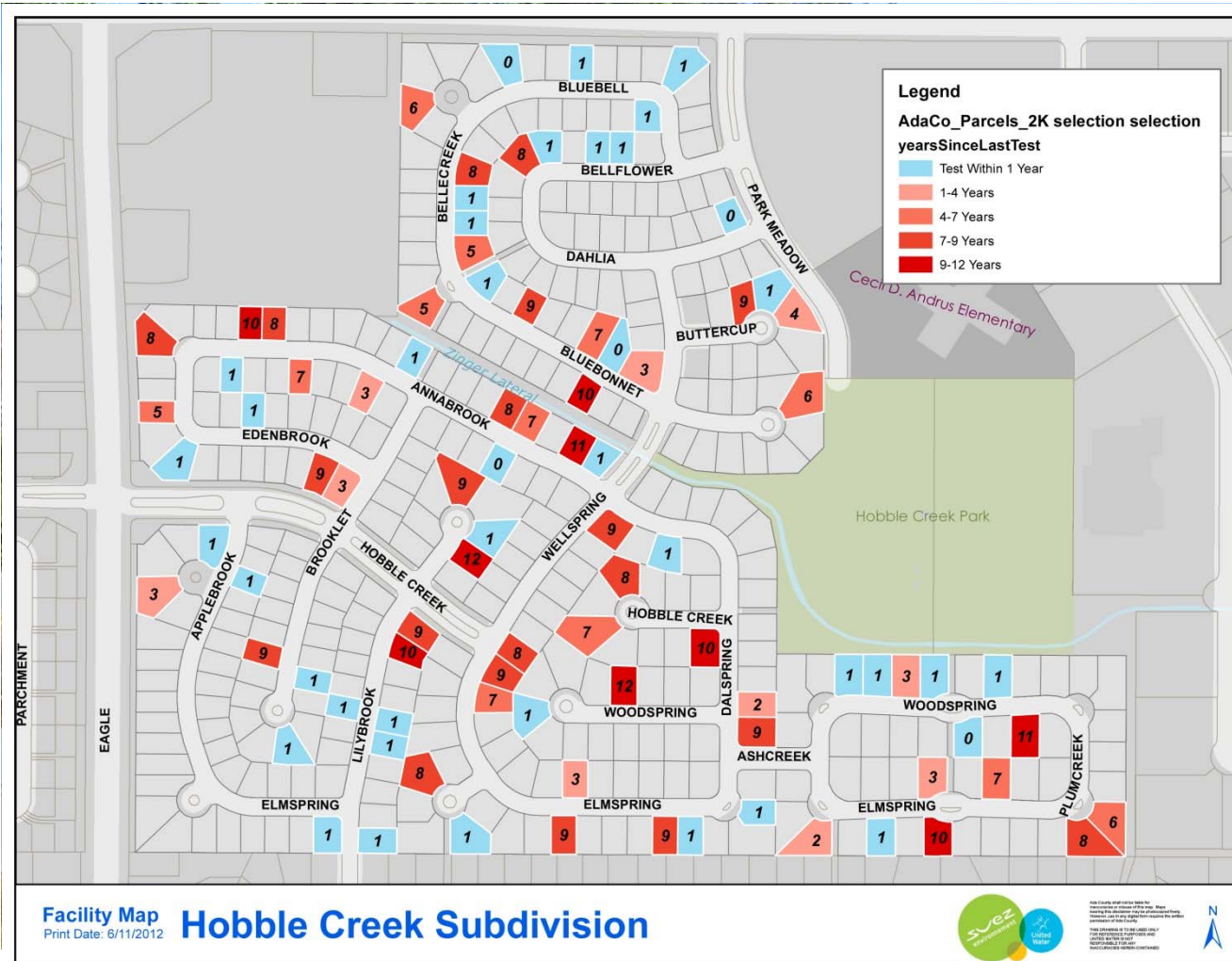
The water purveyor is responsible through its cross

543. FACILITY AND DESIGN STANDARDS - CROSS CONNECTION CONTROL.
There shall be no connection between the distribution system and any pipes, pumps, hydrants, water loading stations, or tanks whereby unsafe water or other contaminating materials may be discharged or drawn into a public water system. The water purveyor is responsible through its cross-connection control program to take reasonable and prudent measures to protect the water system against contamination and pollution from cross connections through premises isolation or containment, internal or in-plant isolation, fixture protection, or some combination of premises isolation, internal isolation, and fixture protection. (4-7-11)

connection control program to take reasonable and prudent measures to protect the water system against contamination and pollution from cross connections...

Source: Idaho Rules for Public Drinking Water (IDAPA) 58.01.08

Can it Happen?



Yes, it can!



Subdivision may have been exposed to untreated water



by Jamie Grey

NWCN.com

Posted on June 4, 2012 at 9:35 PM

Updated Tuesday, Jun 5 at 10:11 AM

BOISE -- Untreated water may have made it into homes in the Hobble Creek subdivision because of a possible back flow issue. United Water Idaho says it notified nearly 400 homeowners in the subdivision of the possible problem Monday.

The company says a vacant home had an improper back flow prevention device that had not been inspected. The problem was discovered during a meter read at the end of May and a technician found the meter had been running backwards, showing a reverse flow. The improper back flow device could have sent untreated water into the system and possibly other homes.

It's Happened Before



IMPORTANT CUSTOMER NOTICE FROM UNITED WATER IDAHO E. coli bacteria was detected in the water in a small section of Henry's North 40 Subdivision

What happened?
Untreated irrigation water entered the water system through an unauthorized connection in the neighborhood. The United Water Idaho has extensively flushed the mains and distribution system. The water provided by United Water Idaho is safe for consumption.

What does this mean? What should I do?

- E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause symptoms. They may pose a special health risk for people with compromised immune systems. These symptoms include diarrhea, stomach cramps, and nausea. If you experience any of these symptoms and they persist, contact your health care provider.
- The follow-up samples showed an absence of both coliforms and E. coli. This indicates that the contamination issue has been resolved within the United Water Idaho service area. Untreated irrigation water may have made its way into the water system through an unauthorized connection, or they could have become contaminated through other means.
- There are local labs in the area that will test sample water for coliforms and E. coli. For more information on testing, contact us at the numbers below for information on local labs.
- Until you have flushed your internal plumbing system with water without boiling it first. Bring all water to a boil for one minute, or use bottled water. Boiled or bottled water is safe for drinking, brushing teeth, washing dishes, and food preparation. Boiling water kills bacteria and other organisms in the water.

For more information, please contact United Water Idaho at 373-0550. General guidelines on ways to protect your drinking water are available from the EPA Safe Drinking Water Hotline at 1-800-426-4767.

This notice is being sent to you by United Water Idaho Inc.
Date Distributed: June 11, 2009



IMPORTANT CUSTOMER NOTICE FROM UNITED WATER IDAHO E. coli bacteria was detected in the water in a small section of Island Woods Subdivision YOU ARE ADVISED TO BOIL YOUR WATER BEFORE USING

What happened?
An improperly installed backflow assembly at a single residence in the subdivision resulted in untreated irrigation water contaminating a small portion of the water system in Island Woods Subdivision with E. coli bacteria. The source of the contamination was isolated and United Water Idaho has extensively flushed the mains and distribution system.

These bacteria can make you sick, and are a particular concern for people with weakened immune systems. The problem has been remediated and at this point we are waiting for additional test results to confirm that there are no further concerns with your drinking water.

What should I do?

- **DO NOT DRINK THE WATER WITHOUT BOILING IT FIRST.** Bring all water to a boil, let it boil for one minute, and let it cool before using, or use bottled water. Boiled or bottled water should be used for drinking, making ice, brushing teeth, washing dishes, and food preparation **until further notice.** Boiling kills bacteria and other organisms in the water.
- Fecal coliforms and E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems. The symptoms above are not caused only by organisms in drinking water. If you experience any of these symptoms and they persist, you may want to seek medical advice.

(OVER)

What We Used to Do



- **Send testing notices based on the anniversary date of installation of sprinkler system.**
 - Inconsistent, because if a system was installed during the off-season, testing of the device would not be possible if sprinkler system is depressurized.
 - Too much time could pass from receipt of testing notice and irrigation system start-up for the season.
 - No focused public education/information campaign.

Customer Outreach



Keep Your Water Supply Safe

Important information for do-it-yourself irrigation system installers

Some laws and regulations regarding backflow protection and approval of type of pipe used may vary depending upon local requirements.

For more specific information we advise you to contact your local water supplier at:

BOISE WATER CORPORATION
8248 W. Victory Road
Boise, ID 83709

Phone: 362-1300

This pamphlet has been prepared and edited by:

Pacific Northwest Section
American Water Works Association
Cross Connection Control Committee

Important information for do-it-yourself irrigation system installers

HOME Irrigation Safety

DON'T LET YOUR IRRIGATION SYSTEM CONTAMINATE THE WATER YOU DRINK

BACKFLOW PREVENTION ALTERNATIVES FOR HOME IRRIGATION SYSTEMS

Irrigation systems make watering lawns and gardens easier and save time, BUT, water that may be contaminated by weed killers and/or fertilizers can be back-siphoned (backflow) into your drinking water. Irrigation systems not protected by approved backflow prevention assemblies could endanger the health of a household, neighborhood or community.

ALL IRRIGATION SYSTEMS... new or existing...**MUST BE EQUIPPED** with an approved backflow prevention assembly. Only properly installed, state-approved backflow prevention assemblies meet the plumbing code and provide health protection for your family and neighbors. Your local water utility can give you a free list of state-approved assemblies and certified testers.

Freeze Protection
All backflow prevention assemblies installed above ground need to be protected from freezing. Recommendations are to install a drip tight shut-off valve (ball valve) below ground on the inlet side of the assembly. Install a shut-off valve with drain (stop and waste valve) just above ground level so piping ahead of the assembly can be drained. Open all testcocks, and shut off valves on the backflow prevention assembly half way and leave open. A low point drain should also be installed on your irrigation system.

Please Note:
ALL IRRIGATION SYSTEMS supplied by public water systems **REQUIRE A PLUMBING PERMIT** before installation. All piping and materials upstream of (before) the backflow prevention assembly must be of a type which is approved by the International Association of Plumbing and Mechanical Officials.

FOUR TYPES of Backflow Prevention Assemblies

ATMOSPHERIC VACUUM BREAKER (AVB)
...the least expensive
...often the easiest to install

PRESSURE VACUUM BREAKER (PVB)
...more sophisticated
...more versatile
...requires annual testing by certified tester

DOUBLE CHECK VALVE ASSEMBLY (DCVA)
...highly versatile
...requires annual testing by certified tester

REDUCED PRESSURE BACKFLOW ASSEMBLY (RPBA)
...usually most expensive
...most complex
...allows for application of fertilizer or other chemicals into irrigation system (No other type has this approval).
...requires annual testing by certified tester.

➤ Installation requirements for each type of backflow prevention assembly ➤

Lots of Devices



- **Not only were we tracking backflow devices on sprinkler/irrigation systems, but others, including:**
 - **Ice makers**
 - **Dentist equipment**
 - **Industrial equipment**
 - **Fire suppression systems**
 - **Soda fountains**
 - **Medical equipment**

Redesign the Program

UNITED WATER IDAHO
 CROSS CONNECTION CONT
 PO BOX190420
 BOISE, ID, 83719
 TEL 208-362-7304
 WWW.UNITEDWATER.COM/

UNITED WATER IDAHO
 CROSS CONNECTION CONTROL PROGRAM
 PO BOX190420
 BOISE, ID, 83719
 TEL 208-362-7304
 WWW.UNITEDWATER.COM/IDAHO/BACKFLOW



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 - Re-wrote te



UNITED WATER NOTICE TO T

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- Maintain and tes
 - Schedule and pa
 - Ensure that Unit

Many state licens onlin

Notice Date: April 1 Assembly Serial Nu Your Backflow Asse

Thank y We appr

Please make arrange season. Beginning in 2(testing to a Spring-Sum

Failure to test your bac accordance with the Ida Regulations (IDAPA 31.:



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Premise Details

Premise Name	
Premise Address	6520 W NORWOOD DR
Required Protection	IRRIGATION
Assembly Location	EARLY LEARNING CENTER SOUTH LAWN

Assembly Details

	Assembly of Record	New or Replaced (If Applicable)
Serial Number	25684	
Size	1	
Make and Model	WATTS 007M1QT	
Assembly Type	DCVA	

Initial Test: Pass Fail **Repair:** Yes No

Check Valve #1 PSI Across	Check Valve #2 PSI Across	Differential Pressure Relief Valve	Pressure Vacuum Breaker
Leaked <input type="checkbox"/>	Leaked <input type="checkbox"/>	Open at ____ lbs.	Air Poppit Open at ____ PSI
Closed Tight <input type="checkbox"/>	Closed Tight <input type="checkbox"/>	<input type="checkbox"/> Open Under 2# (or did not open)	<input type="checkbox"/> Open Under 2# (or did not open)

Final Test

PSI Across ____ Closed Tight <input type="checkbox"/>	PSI Across ____ Closed Tight <input type="checkbox"/>	Open at ____ lbs. Reduced Pressure	Water Turned Back On <input type="checkbox"/>
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**In completing and submitting this test report, the Tester certifies that the assembly has been tested and maintained in accordance with applicable state regulations and United Water's rules and regulations.*

Assembly Owner Contact Details If Changed

Name _____
 Mailing Address _____
 City _____ State _____, ZIP _____
 Phone (____) _____ Email _____

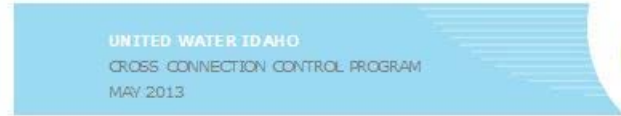
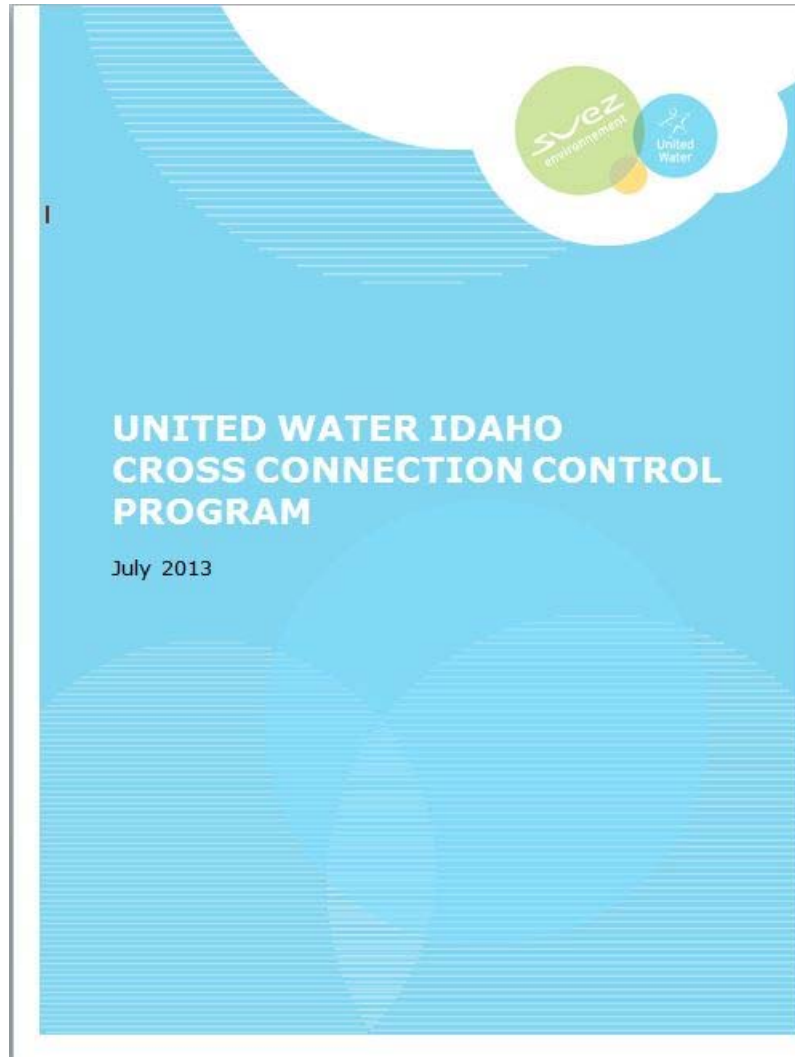
Final Tester Sign-Off
 Test Date ____ / ____ / ____
 License # _____
 Name _____
 Signature _____

Redesign the Program



- Audited testing community
- Field surveys
- Changed from sub-premise to premise isolation (removed 100's of backflow devices we used to track and require testing. City Plumbing Inspector now responsible for those devices)
- Training Field Service and Meter Readers to spot potential cross-connections





UNITED WATER IDAHO
CROSS CONNECTION CONTROL PROGRAM
MAY 2013



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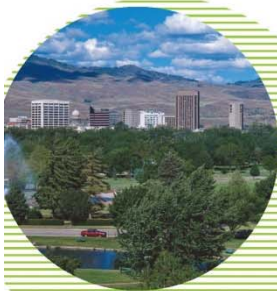
New Bill Insert



UNITED WATER IDAHO

takes pride in the work we do every day to provide you and your family with safe, clean and reliable drinking water. Your water meets and exceeds every state and federal water quality standard. We are committed to providing our customers with the highest quality water and service.

There is something you can do to help protect your family's water supply. Most homes and many businesses are required to have properly installed backflow prevention assemblies. These are mechanical devices that prevent contaminants and chemicals from entering the public drinking water supply.



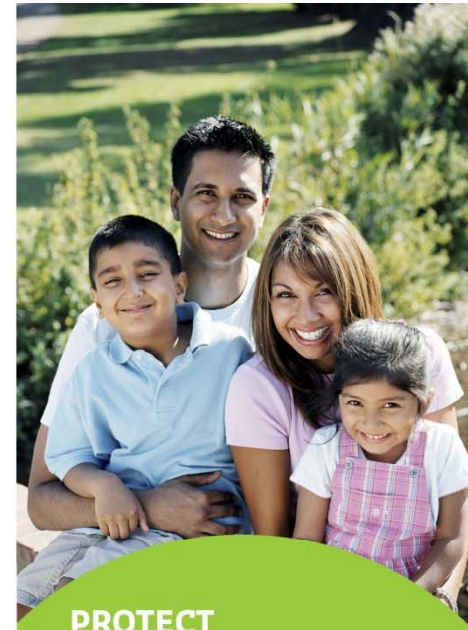
FOR ADDITIONAL INFORMATION

United Water Idaho
8248 W. Victory Road
Boise, Idaho 83709
208-362-7304

unitedwater.com/idaho



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PROTECT
YOUR FAMILY
IMPORTANT INFORMATION
ABOUT
**BACKFLOW
PREVENTION**



New Bill Insert



WHAT IS BACKFLOW?

Backflow is the reversal of the flow of water in the plumbing system. It can occur when the pressure in the water main or a home's plumbing system changes.

WHAT IS A BACKFLOW PREVENTION ASSEMBLY AND DO I NEED ONE?

A backflow prevention assembly is a device that provides a mechanical barrier to backflow. If you have an irrigation system installed at your home, you are required by Idaho State Drinking Water regulations and the uniform plumbing code to have an approved backflow assembly installed and annually inspected.



It's a good idea to test your backflow assembly every spring when you turn your irrigation system on. You can find a certified tester in the phone book.

WHAT IF I HAVE A PRESSURIZED IRRIGATION SYSTEM?

If there is no physical connection between the pressurized irrigation system and the public water supply, there is no need to have a backflow assembly. If there is any connection between the two water supply systems, you must have a backflow assembly installed and tested annually.

HOW AM I AT RISK IF THERE IS A BACKFLOW INCIDENT?

If there is backflow at your home, you could contaminate your drinking water with non-treated water from an irrigation canal or water pooled around a sprinkler head that has fertilizer on it. Also, if you use your hose to fill a wading pool or hot tub, a reversal of the water flow could siphon pool or spa chemicals back through the garden hose and into your house's plumbing.

Garden hoses that are used to apply chemical fertilizers or pesticides are also susceptible to drawing contaminants into your home. If your home was built after 1985, it should be equipped with backflow-preventing hose bibs. If your home is older, you need to check to make sure you have the proper protection for outside faucets.

If there is a backflow incident at just one home in a neighborhood, there is the potential for contaminants to spread into the public water supply, threatening your neighbors. A properly operating backflow assembly can help prevent this.



Launched New Website



United Water - Backflow Prevention - Windows Internet Explorer provided by United Water

http://www.unitedwater.com/idaho/backflow.aspx

File Edit View Favorites Tools Help

Convert Select

Favorites Suggested Sites Free Hotmail

United Water - Backflow Prevention

Page Safety Tools

Our Services

Keep Your Family Safe

Get Your Local Utility Info

enter zip code

Related Links

- Facts & Figures
- Environment
- Conservation
- Press Releases
- Residential Customers
- Business Customers

Do you have a sprinkler system at your home?

If you do, you need to get your backflow system annually tested to prevent possible contamination of your drinking water. State law requires sprinkler systems have what's called a backflow prevention assembly. Simply speaking, these assemblies prevent the accidental mixing of untreated irrigation water with the domestic drinking water supply.

Regardless of the source for irrigation water you use, if you have a sprinkler system, you are required to have a properly installed backflow assembly installed and tested annually.

Annual Test Notification

You will receive a letter from United Water Idaho at the beginning of the irrigation season (April-May). This letter will provide a blank test form, and advice on how to locate a certified tester. It is your responsibility to contact a licensed backflow tester and ensure results are returned to United Water within 10 days of that test.

In many cases, you can have the test completed when activating your sprinkler system for the summer. Tests cost between \$25-50, and are good for one year.

Trusted sites | Protected Mode: Off 100%

Detailed Backflow Information



Media Campaign – Print/Online



CLICK HERE to learn MORE



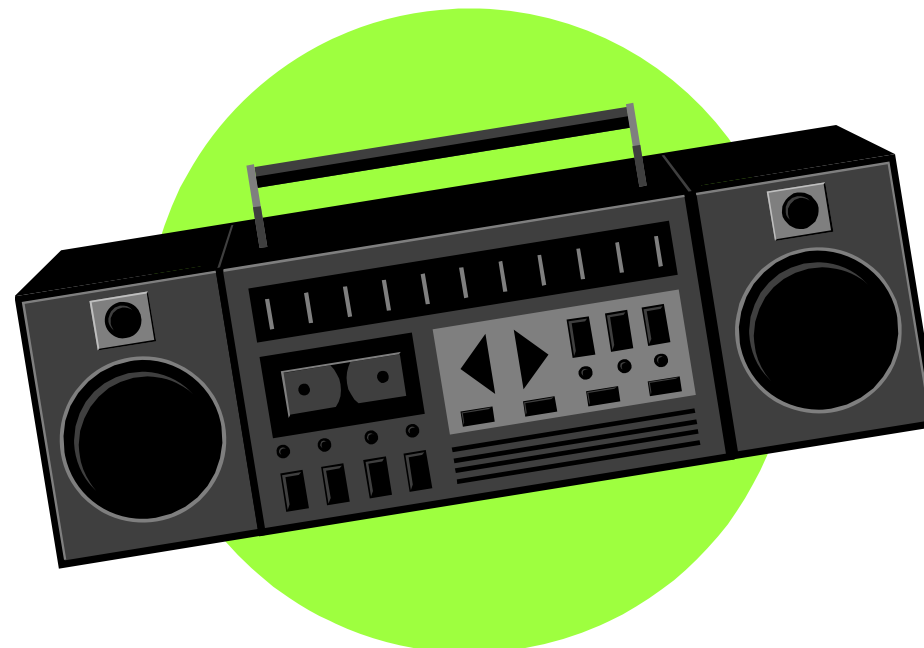
A public service of United Water Idaho.

www.unitedwater.com/idaho/backflow

Media Campaign – Radio Spots



Media Campaign – Live Radio



Media Campaign – TV Spots



Other Outreach

- Include backflow message in annual CCR (Water Quality Report)
- Conservation Guide
- Customer Service scripts
- Flushing Hotline/Website
- E-mail newsletter
- Outreach to HOA's
- Neighborhood Associations



WATER QUALITY INFORMATION ANNUAL

Protect Your Family – Get Your Backflow Assembly Tested

If you own a commercial property or have an irrigation system connected to the public water supply, you are required by state law to have an approved backflow assembly installed and annually tested. Backflow assemblies are mechanical devices that safeguard public health by preventing contaminants from entering the public water supply.

Do I Need A Backflow Assembly?

If you are unsure of your need for a device, please contact United Water Idaho to schedule a determination survey. Our Backflow Inspectors can provide you with details on the approved device type, premise isolation location, and information for ongoing test requirements.

If you have any questions about your need for a backflow assembly, call our Customer Service team to speak with a Backflow Inspector.

Call (208) 362-7304 or visit www.unitedwater.com/idaho/backflow.

How Do I Get My Assembly Tested?

The State of Idaho requires annual testing of all backflow assemblies. Any currently licensed state tester can complete this test. Your tester is required to send results to United Water Idaho within 15 days. They should also provide you with a copy of the completed test report for your records. Licensed backflow testers can be found in the phone book or online.

Arrange to have your backflow assembly tested annually. Failure to comply with installation and testing requirements will result in termination of your water service.

2013 DAHD

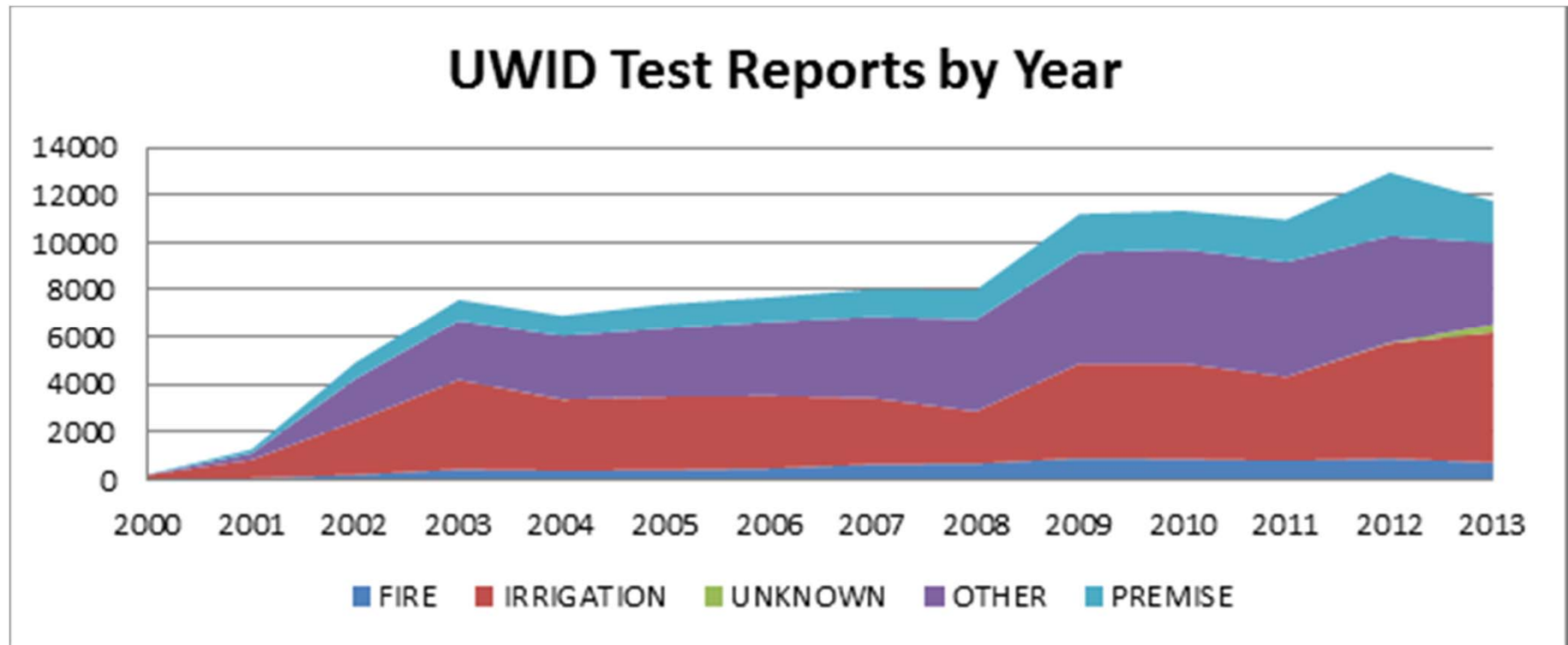
Additional Outreach



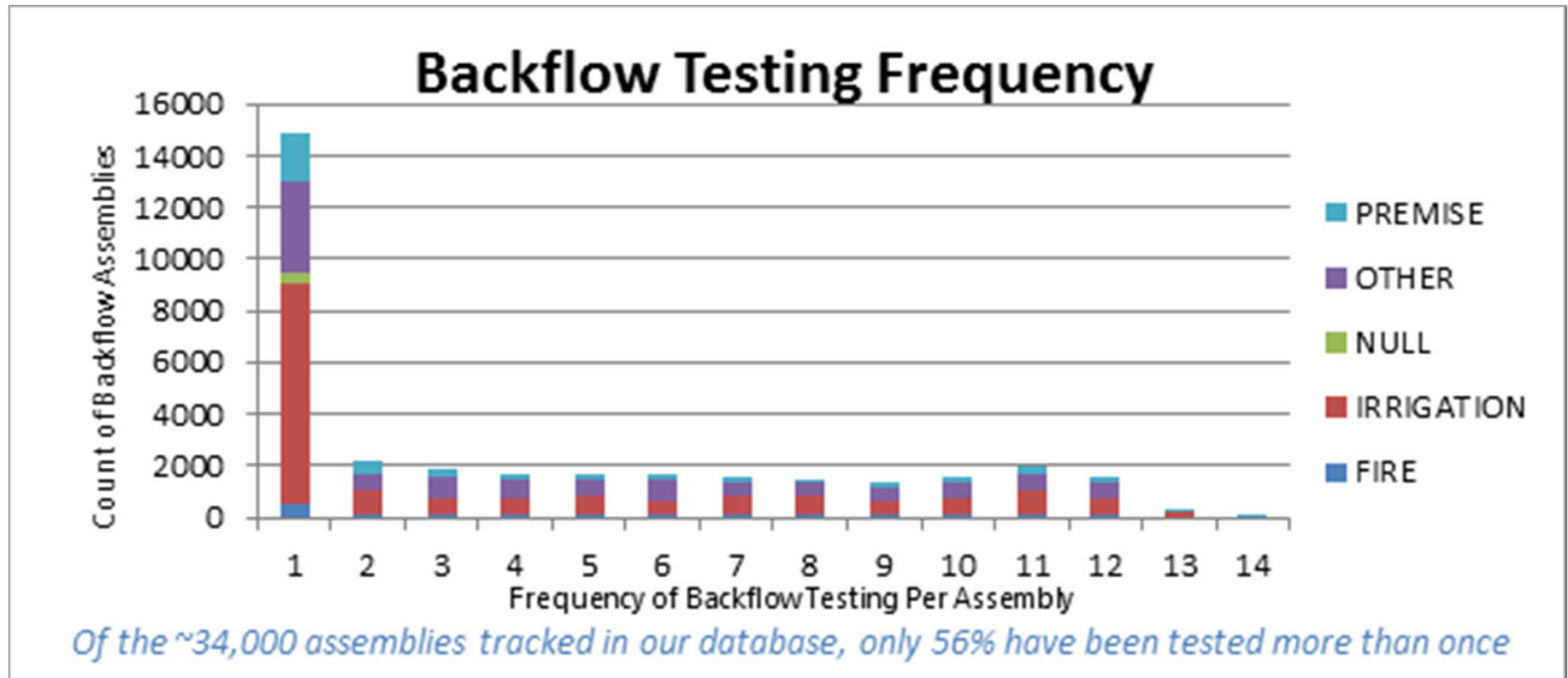
- Home Depot Water Conservation Workshop
 - April 26, 2014



How Did We Do?



How Did We Do?



Challenges



- **By removing sub-premise devices from our database, total number of annual tests will drop.**
- **Need to continue working with HOA's, property managers, neighborhood associations to promote backflow testing.**
- **State licensing of sprinkler installers.**



Thank You.

Questions?

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