CITY COUNCIL AGENDA ITEM

Date: April 13, 2015

To: Brian Kischnick, City Manager

From: Timothy Richnak, Public Works Director

Subject: Backflow Prevention 2014 Program Update and 2015 Program

History

- The (DEQ) notified the City of Troy in August of 2013 that to be compliant with Public Act 399, the City must include residential backflow testing in its cross connection program. Public Act 399 –The Michigan Safe Drinking Water Act was enacted in 1976. It enables the Michigan Department of Environmental Quality (DEQ) to maintain the state's authority over drinking water.
- The residential program was developed and modeled after the city's commercial backflow program which has been in existence for over 40 years.
- The residential program requires that residential backflow assembles be tested once every three years and the city was broken up into three program years matching the three water billing districts.
- The Water and Sewer Division would after the 2014 program evaluate the program regarding any new State Rules or Laws and make changes accordingly.
- The Water and Sewer Division will continue to research ways to streamline the communication and process into the 2015 program.
- Attached is the "Backflow Assembly Testing Program" power point presented to City Council at the June 16, 2014 regular meeting.

2014 Program Update

- Success Data as of 4/2/2015
    - Notices Mailed 6824 with total reports submitted of 5068 (74%)
    - Reports of no sprinklers on premises 1423 which is 28% of submittals
    - Of the 3645 assemblies tested the test results were 2534 initially passed (70%)

- There were 1,756 addresses that were non-responsive in the 2014 program. Will be sending out follow-up letters to those addresses in 2015.

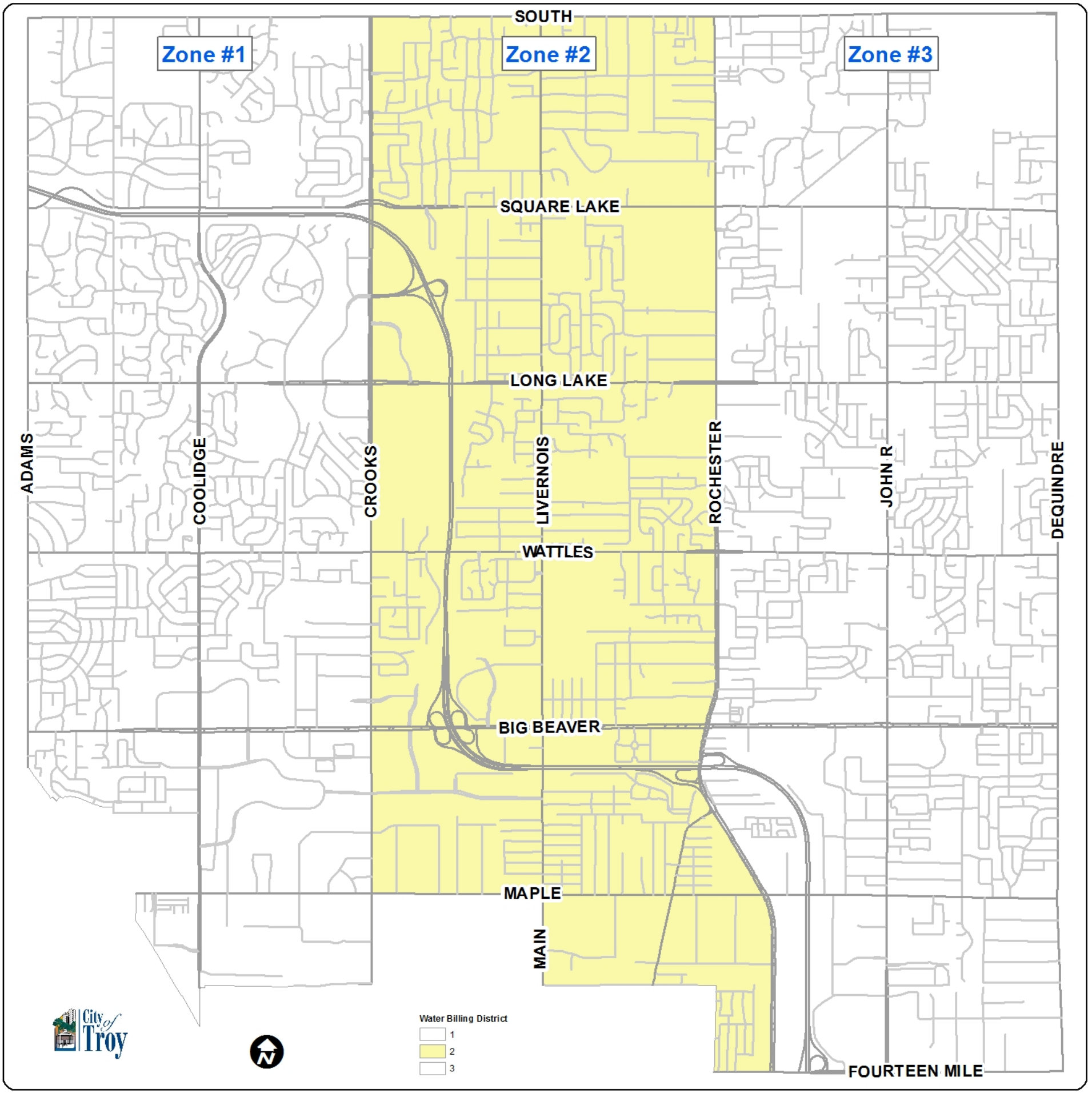
2015 Program

- Water billing section Zone 2 shall receive notices this year regarding the residential backflow testing requirements. See attached Water Billing District map.

- The 2015 program will have some process and communication element adjustments.
    - An advanced notice is going out in the April 15 water bill.
    - The mailing will go out earlier this year and the testing completion date was extended to September 30th.This extends the time from 2.5 months to almost 5 months for residents to complete the process.
    - The mailings for this program year will be staggered at 3 two week intervals, allowing staff to respond in a timely manner to inquiries as they should come in staggered over a longer span of time.
    - A phone line and email address has been dedicated to inquiries and will be monitored for messages daily with responses within 72 hours.
    - A link has been established to the City website with the June 16, 2014 council power point presentation, and the program mailing information.

- Attached are the updated 2015 Residential Backflow Assembly Testing Program brochure, notification letter, backflow test report/tester list, residential survey form and the advance notice insert being mailed in the April 15 water bill.

TR/ef\DPW AGENDA ITEM\04.13.15 – ResidentialBackflowTestingProgramUpdate


SOUTH
Zone #1
Zone #2
Zone #3
SQUARE LAKE
LONG LAKE
ADAMS
COOLIDGE
CROOKS
LIVERNOIS
ROCHESTER
JOHN R
DEQUINDRE
WATTLES
BIG BEAVER
MAPLE
MAIN
FOURTEEN MILE
City of Troy
Water Billing District
1
2
3

The Who, What & Why

WHAT IS A CROSS CONNECTION?

A Cross Connection is any connection between the drinking water system and any other system, machine, piping, or atmosphere, etc. that does not contain drinking water. Such systems may contain harmful chemicals or biological organisms.

WHAT IS BACKFLOW?

Backflow is the reversal of flow from a system not containing drinking water, back into the drinking water supply.

This may occur when there is a pressure drop in the drinking water supply lines from a water main break, or a fire in the area, or for other reasons causing a Siphon condition.

Backflow may also occur from Backpressure, when a system such as a boiler or pump generates more pressure than the supply line and pushes water back into the water supply

WHAT ARE COMMON CAUSES OF BACKFLOW?

-Irrigation systems may contain pesticides, herbicides, biological organisms such as bacteria and worms, animal droppings, and other contaminants.

-Garden hoses may be submerged in swimming pools, mud puddles, utility sinks, buckets, etc. and can act as a siphon hose.

-Boilers create backpressure that pushes contaminated water back into the water supply.

-Toilet tanks contain bacteria and mold.

-Anything connected to the water supply is a potential source of contamination.

WHY IS TESTING REQUIRED?

Backflow assemblies are mechanical devices and are subject to failure from wear and tear, corrosion, freezing, water conditions, and misuse.

They contain springs, plastic parts, rubber washers, o rings, and diaphragms.

Testing ensures that the assemblies are operating as required to keep contaminated water out of the drinking water supply.

WHO MAY TEST, REPAIR AND INSTALL BACKFLOW ASSEMBLIES?

Per State of Michigan Law - Public Act 733 of 2002, ***only Licensed Plumbing Contractors*** may work at the business of plumbing.

Act 733 states that backflow preventers are a part of the plumbing systems, and that ***only Licensed Plumbers*** may work on them.

You must obtain the services of a Licensed Plumbing Contractor to perform backflow assembly testing, installations, and repairs.

If a backflow preventer is to be replaced/installed, a Plumbing Permit must be obtained.

MORE INFORMATION

For more information, please visit the
Water & Sewer Division website at:
www.TroyMi.Gov/Water

Telephone 248-619-7266

The Program is scheduled to run from April to September.

Year 2015 Residential Backflow Assembly Testing Program for Water Billing Section 2 between Crooks & Rochester Roads

This brochure explains everything that you need to do. After reading this brochure, if you have any questions please got to www.TroyMi.Gov/Water or call 248-619-7266

Responsibilities & Requirements

RESPONSIBILITIES

The City of Troy is responsible for protecting the water supply throughout the city.

State & Federal Laws (Safe Drinking Water Acts) require that the City of Troy protect the public water supply up to customers' premises.

Other State laws and codes also require that the City verify the water supply inside consumers' premises is protected; primarily by enforcing the Michigan Department of Environmental Quality (MDEQ) Law and Rules, and the Michigan Plumbing Law and Codes.

Other laws and regulations also play a part in protecting the water supply including the Fire Code and MIOSHA (Michigan Occupational Safety and Health Administration).

Consumers also have responsibilities for protecting the water supply by properly maintaining their plumbing systems in a safe condition according to

Due to a MDEQ mandate, the City of Troy is now required to implement a program to have all backflow assemblies on residential property tested for proper operation.

This may require a Licensed Plumbing Contractor that is certified in backflow assembly testing to access the property to perform backflow assembly testing, and repairs if necessary.

Such assemblies are mostly on irrigation systems (and usually outside the house), and may also be connected to boilers, fire systems, water powered sump pumps, and other systems connected to the water supply that require protection.

A report form must be filled out and sent back to the City by the due date of September 30th.

NOTE: The program is scheduled to run April to September of 2015

Please fill in the enclosed Survey Form and return it in the pre-paid envelope provided.

If you do have a testable assembly, then your plumber will test the backflow assembly, fill out the form, and return a copy to you and the City.

Irrigation systems:

TESTABLE Pressure Vacuum Breakers:

The most common type. Valves are allowed downstream. All piping, Nozzles, and sprinkler heads must be 12" or more below the assembly. Allow for adequate drainage. Note the 2 test ports sticking out the left side.

An RP assembly may also be used (See below)

A

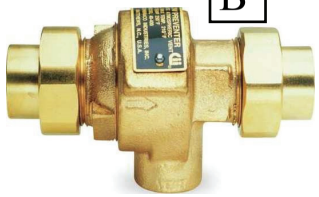
Boilers and Water Powered Sump Pumps:

These must have a backflow preventer

Non-Testable Vented Dual Check Valves:

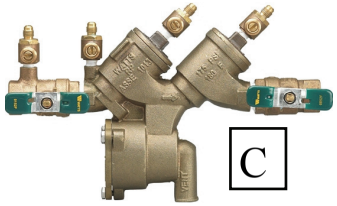
This type is used on boiler supplies that Do Not have any chemical additives in the boiler, and may also be installed on Water Powered Sump Pumps.

B



TESTABLE RP Assemblies:

This type is used on boiler supplies that Have chemical additives in the boiler, and may also be installed on Water Powered Sump Pumps.



C

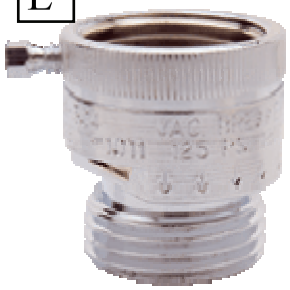
Other Non-testable Backflow Devices

Atmospheric Vacuum Breakers.
Typically used on irrigation systems
No Valves Allowed Downstream.
No irrigation zone valves downstream either.
NOTE: There are no Test Ports on these devices. However, they should be periodically visually inspected to make sure they are operating properly.

D

Garden Hose Connections:
ASSE 1011 approved Hose Connection Vacuum Breakers are required on ALL hose bibs.
Non-Freeze types are recommended for use on outside hose bibs so they can be drained for winterization.
The device on the left must be manually drained.
The device on the right automatically drains when the hose is disconnected.

E



F

Department of Public Works
Cross Connection Control
4693 Rochester Rd., Troy, MI 48085
Desk 248-619-7266 Fax 248-524-3520 BackflowTesting@troymi.gov

Backflow Prevention Assembly
Survey and Testing Notification

CROSS CONNECTION SURVEY FORM IS DUE NO LATER THAN: September 30, 2015

IF REQUIRED, BACKFLOW TEST FORMS ARE DUE NO LATER THAN: September 30, 2015

Residential Homeowner

Cross Connection Control is a program undertaken to prevent contamination or pollution of the drinking water supply from any connections containing materials that render the water unusable for human consumption.

Since 2013, the State of Michigan Department of Environmental Quality has required the City of Troy to enforce mandatory backflow assembly testing for all assemblies located in the City of Troy.
This will now include assemblies on residential property as well as commercial property.

Most of the testing on residential property will be for Pressure Vacuum Breaker assemblies connected to lawn irrigation systems. Other assemblies may require testing as well. Such systems are connected to Boilers or Water Powered Backup Sump Pumps. Assemblies on residential properties must be tested at least every three years.

It is necessary to have all backflow assemblies on your property tested by a Licensed Plumbing Contractor.
If any assemblies fail testing they must be Repaired or Replaced and Retested.

This is not something homeowners can do on their own because special licenses are required for this work.
By State of Michigan law, only licensed plumbers shall Test or Repair backflow assemblies.

Completed reports must be returned by **September 30th** and may be sent to the address above.

If an assembly is to be replaced, a plumbing permit must be obtained by a licensed plumbing contractor.

By State of Michigan Law, failure to have any backflow assembly tested, repaired or replaced in a timely manner could result in interruption of your water service.

Enclosed is a brochure which explains backflow prevention and procedures for getting backflow assemblies tested, repaired and replaced. Please read this brochure carefully to get an understanding as to what you may be required to do to protect the water supply.

Thank you for your timely cooperation in this important matter.

Sincerely,

City of Troy - Department of Public Works

r:2015.04.01

BY STATE LAW, ONLY LICENSED PLUMBING CONTRACTORS ARE ALLOWED TO INSTALL, REPAIR or TEST BACKFLOW ASSEMBLIES

City of Troy

BACKFLOW PREVENTER TEST REPORT

TEST YEAR 2015 **TEST REPORT DUE 9/30/2015**

4693 Rochester Rd, Troy, MI 48085-4928 | 248-524-3398 Desk 248-524-3520 Fax 248-524-3370 Ofc | KAPCIAMR@TROYMI.GOV

Facility Name: OCCUPANT | Contact:

Address: 500 W BIG BEAVER RD | City: TROY | State: MI | Zip: 48084

Phone | Fax | Cell | Email

OWNER NAME
500 W BIG BEAVER RD
TROY MI 48084

Owner Information	
Phone	
Cell	
Fax	

Email

Assembly Make | Model | Serial No. | Size | Type

Application | RPZ or DCV Orientation Horizontal ☐ Verticle Up Flow ☐ Verticle Down Flow ☐

Location | Height above floor or ground Feet

Assembly Properly Installed? Yes ☐ No ☐ **ALL PSID READINGS MUST BE RECORDED**

First Test Date - - Pass ☐ Fail ☐ **Test Time** | Supply Line Static Pressure

Test Gauge Make | Model | Serial | Last Annual Certification - -

Status of Shutoff Valves During Test	During #1	During #2	Maximum Backpressure 2.0 for DC's & SCV's	#1 Check	#2 Check
Closed Tight	☐	☐		P ☐ F ☐	P ☐ F ☐
Leaked	☐	☐		.	.
Not Applicable	☐	☐	RP #2 Check Valve Direction of Flow OR Double Check #2 Shut Off Test		.

Status of Shutoff Valves	Before #1	Before #2	After #1	After #2
Valves On	☐	☐	☐	☐
Valves Off	☐	☐	☐	☐

RP Relief Valve (RV): Dripped ☐ Malfunction ☐; 1st Opening Drip Point .; Optional RV Flush performed Yes ☐; Optional RV Full Open Test Pass ☐ Fail ☐

Vacuum Breaker (PVB or SVB): Air Inlet P ☐ F ☐ Check P ☐ F ☐; 1-Hose PSID . 1-Hose PSID .; 2-Hose Direction of Flow Check Valve Test PSID .; Air Inlet Fully Open ? Yes ☐ No ☐; Piping Backpressure ? Yes ☐ No ☐

ALL FAILED ASSEMBLIES MUST BE REPAIRED OR REPLACED WITHIN 15 DAYS BY A LICENSED PLUMBING CONTRACTOR

Final Test Date After Repairs - - Pass ☐ Fail ☐ **Test Time** | Supply Line Static Pressure

Test Gauge Make | Model | Serial | Last Annual Certification - -

Status of Shutoff Valves During Test	During #1	During #2	Maximum Backpressure 2.0 for DC's & SCV's	#1 Check	#2 Check
Closed Tight	☐	☐		P ☐ F ☐	P ☐ F ☐
Leaked	☐	☐		.	.
Not Applicable	☐	☐	RP #2 Check Valve Direction of Flow OR Double Check #2 Shut Off Test		.

Status of Shutoff Valves	Before #1	Before #2	After #1	After #2
Valves On	☐	☐	☐	☐
Valves Off	☐	☐	☐	☐

RP Relief Valve (RV): Dripped ☐ Malfunction ☐; 1st Opening Drip Point .; Optional RV Flush Performed Yes ☐; Optional RV Full Open Test Pass ☐ Fail ☐

Vacuum Breaker (PVB or SVB): Air Inlet P ☐ F ☐ Check P ☐ F ☐; 1-Hose PSID . 1-Hose PSID .; 2-Hose Direction of Flow Check Valve Test PSID .; Air Inlet Fully Open ? Yes ☐ No ☐; Piping Backpressure ? Yes ☐ No ☐

The assembly listed above was tested in accordance with applicable standards and the results were true at the time of testing.

Testing Co | Phone | Fax

Address | City | State | Zip

Tester's Name | Tester Signature

Backflow Cert # | MI Plumbing License # | Plumbing Contractor License #

Customer - Please Print / Sign / Date

Annual testing of backflow assemblies is required by the Michigan Plumbing Code to protect the water supply. r:20150331
Michigan Codes require owners, occupants, and agents to have all plumbing systems maintained in proper operating condition.
There is no guarantee that this assembly will continue to operate because mechanical failure or contaminants in the water could cause the assembly to fail at any time.

Department of Public Works
Cross Connection Control
4693 Rochester Rd., Troy, MI 48085
Desk: 248-619-7266 Fax: 248-524-3520

The City of Tomorrow... Today

BACKFLOW TESTER LIST

R:2015.04.01

The City of Troy accepts no responsibility for the accuracy of this list.
This list does not constitute a recommendation for anyone on this list.
This list is only issued as a convenience to our customers to assist them in finding qualified backflow testers in the area.

NAME	ADDRESS	CITY	ZIP	PHONE
BIG BEAVER PLUMBING & HEATING, INC.	866 HARTLAND	TROY	48083	248-528-1333
DONALD R. KELLETT COMPANY	2820 W MAPLE RD STE 132	TROY	48084	248-822-8070
PRECISION PLUMBING, INC.	360 EAST MAPLE RD STE J	TROY	48083	248-616-0623
S. J. SHORT PLUMBING & EXCAVATING, INC.	328 E SQUARE LAKE RD	TROY	48085	248-879-2081
A-FORDABLE PLUMBING & MECHANICAL, INC.	1147 CENTRE	AUBURN HILLS	48326	248-371-0494
ALL ABOUT PLUMBING INC.	727 W. LINCOLN	MADISON HEIGHTS	48071	248-542-7850
ALL BUILDING SERVICES LLC	1369 OAK RIDGE RD	OXFORD	48371	248-622-0464
BACKFLOW PREVENTION SERVICES, LLC	3549 AIRPORT RD STE 102	WATERFORD	48327	248-942-5007
BRINKERS PLUMBING & HEATING	5806 DIXIE HWY	WATERFORD	48329	248-673-2121
BURTON & SONS INC.	32900 MANOR PARK DR	GARDEN CITY	48135	734-427-3070
CHRISTIAN BROS. PLUMBING, HEATING, SEWER	24819 VAN DYKE	CENTERLINE	48015	586-755-7490
CREGGER SERVICES, INC.	2305 GOODRICH	FERNDALE	48220	248-543-8887
D.J. MURRAY PLUMBING & SEWER SERVICE, INC	1800 BELLAIRE AVE	ROYAL OAK	48067	248-582-8655
DAN WOOD PLUMBING AND HEATING SERVICES,	40400 GRAND RIVER STE F	NOVI	48375	248-348-4242
EARL J. WEIL & SON INC.	27250 HARPER AVE	ST. CLAIR SHORES	48081	586-775-2205
FRANKLIN MECHANICAL, INC.	20110 VILLAGE DR	BEVERLY HILLS	48025	248-646-0808
LPS PLUMBING COMPANY	46435 CONTINENTAL	CHESTERFIELD TWP	48047	586-948-2822
MACOMB MECHANICAL INCORPORATED	6250 19 MILE RD.	STERLING HTS	48314	586-737-9920
MASTER SERVICES, INC.	3215 OLD FARM LN	COMMERCE	48390	248-926-1680
NELSON BROTHERS SEWER & PLUMBING SERVICE	1115 E 11 MILE RD	ROYAL OAK	48063	248-541-0819
PAUL C SCOTT & SONS PLUMBING, INC.`	832 W. 11 MILE RD	MADISON HEIGHTS	48071	248-547-9334
PROGRESSIVE MECHANICAL, INC.	10800 GALAXIE AVE	FERNDALE	48220	248-399-4200
PUTMAN & SONS PLUMBING, INC.	967 E TIENKEN RD	ROCHESTER HILLS	48306	248-652-0990
ROYAL OAK PLUMBING CO.	810 N ROCHESTER RD	CLAWSON	48017	248-588-7712
SMITH PLUMBING & HEATING, INC.	5281 AUBURN RD	UTICA	48317	586-254-5151
SUPERIOR PLUMBING & HEATING, INC.	5316 HIGHLAND RD	WATERFORD	48327	248-673-7260
WATER WORKS PLUMBING AND BACKFLOW, L.L.C.	PO BOX 66197	ROSEVILLE	48066	586-775-0100
WATER WORKS SOLUTIONS, LLC	7810 BROOKPINES DR	CLARKSTON	48348	248-922-9361
ZACK'S PLUMBING, INC.	59957 KUNSTMAN RD.	RAY TWP	48096	586-786-1762

CITY OF TROY RESIDENTIAL SURVEY FORM **Please shade in all the boxes that apply**

Do You Have:	YES	NO
A lawn sprinkler system?	☐	☐
If "No" continue to the next page		
Lawn System connected to the City water supply?	☐	☐
Lawn System pumped from a well?	☐	☐
Lawn System pumped from a river, pond, or lake?	☐	☐

The most common system is like that seen in picture "A"

The system you have is most like:

- Picture A ☐
- Picture B ☐
- Picture C ☐
- Picture D ☐
- Not Applicable ☐

A

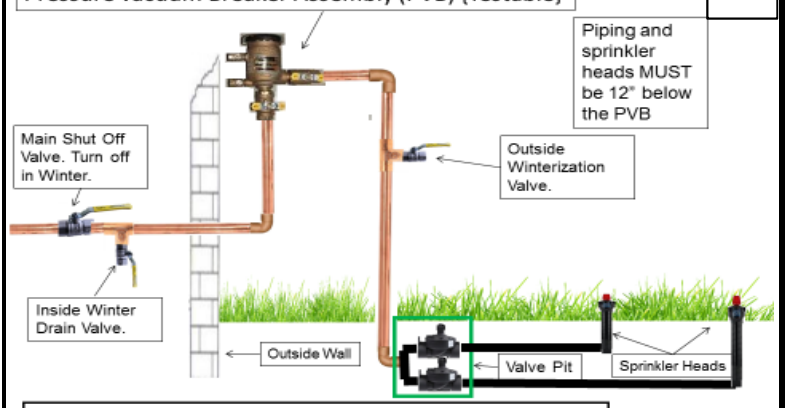


Diagram of Pressure Vacuum Breaker Installation on a Multi-Zone Lawn Irrigation System. Valves allowed after the PVB.

Testable Pressure Vacuum Breaker (PVB) with zone valves downstream. All piping and sprinkler heads must be 12" below the PVB outlet pipe. {This is an approved installation}

B

Underground system connected to a hose bib. The hose bib must have an Atmospheric Vacuum Breaker that is 6" above the higest sprinkler head..

C

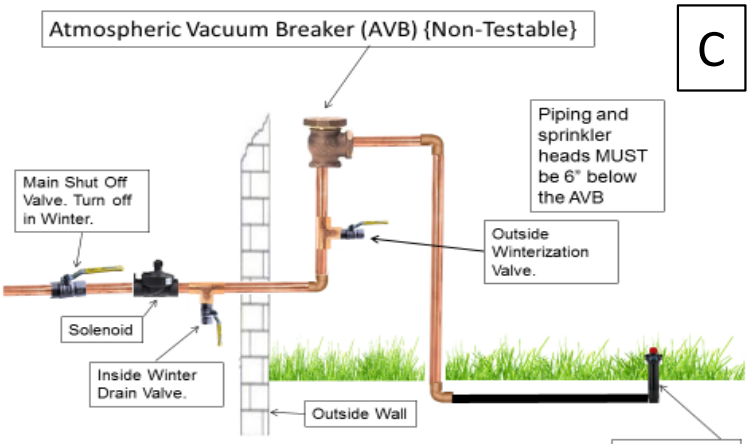


Diagram of Backflow Preventer Installation On a Lawn Irrigation System. No valves after the AVB.

Non-Testable Atmospheric Vacuum Breaker (AVB) with only valves upstream. No valves downstream. All piping and sprinkler heads must be 6" below the AVB outlet pipe. {This is an approved installation}

D

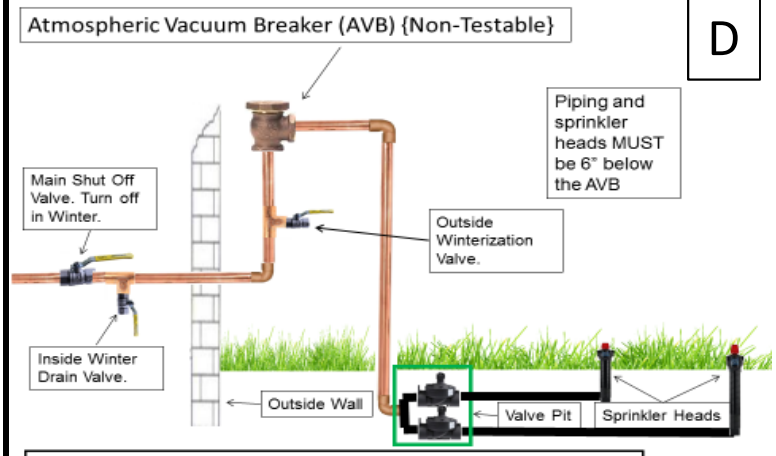
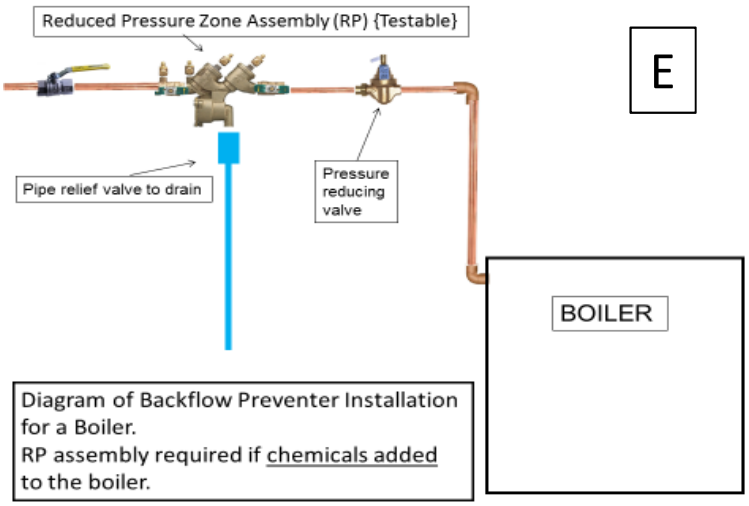


Diagram of Atmospheric Vacuum Breaker Installation on a Multi-Zone Lawn Irrigation System. IMPROPER INSTALLATION.

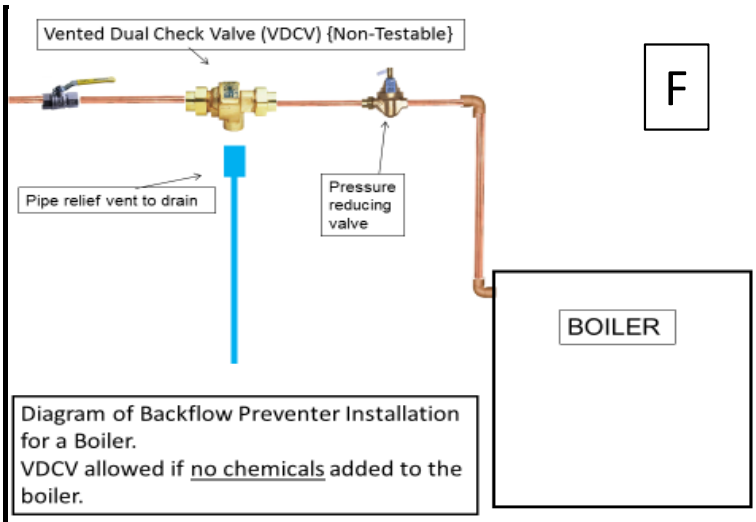
Non-Testable Atmospheric Vacuum Breaker (AVB) with Zone valves downstream. {**This is <u>NOT an approved installation</u>** and must be changed to a Pressure Vacuum Breaker.}

CITY OF TROY RESIDENTIAL SURVEY FORM **Please shade in all the boxes that apply**

Do You Have:	YES	NO	The system you have is like picture:
A Boiler for heating your home?	☐	☐	Picture E ☐
If yes:			Picture F ☐
Has there ever been any chemicals added to the boiler?	☐	☐	Not Applicable ☐

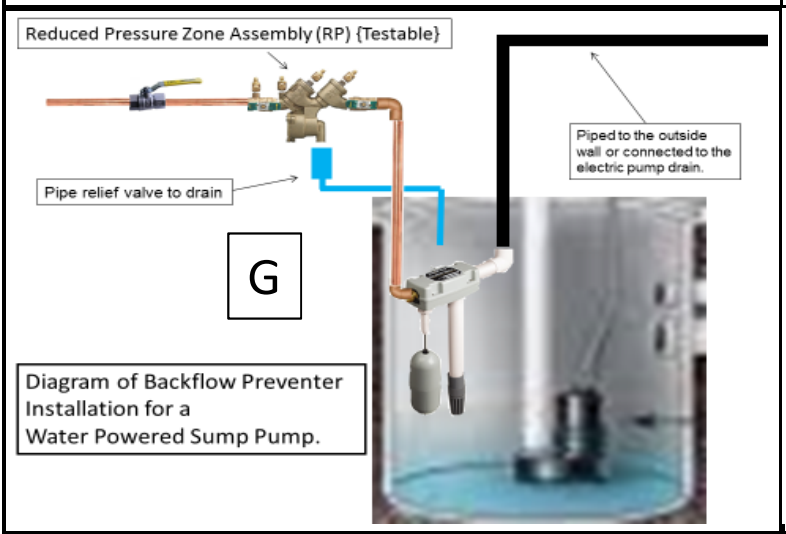


Testable Reduced Pressure Zone Assembly used on a boiler that has chemicals added.

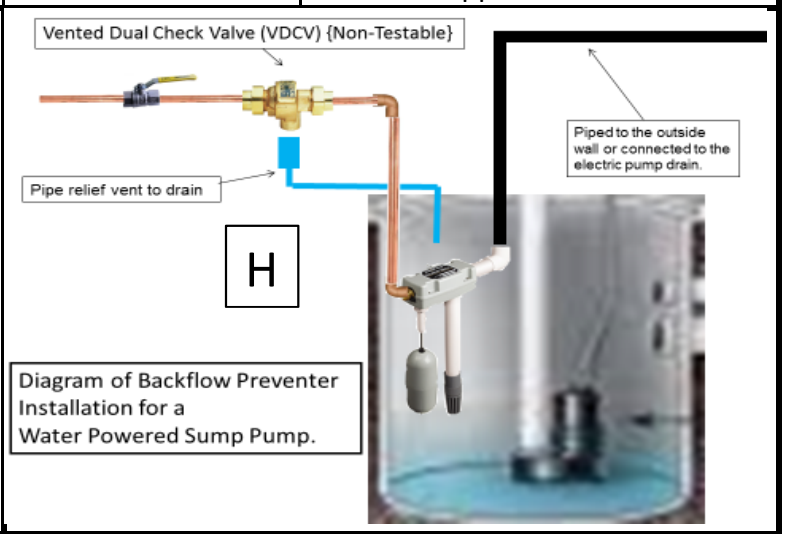


Non-Testable Dual Check with Vent used on a boiler that does not have chemicals added.

Do You Have:	YES	NO	The system you have is like picture:
A Water Powered Sump Pump?	☐	☐	Picture G ☐
			Picture H ☐
			Not Applicable ☐



Testable Reduced Pressure Zone Backflow Preventer used on a Water Powered Sump Pump. **This is the best and recommended protection for a Water Powered Sump Pump.**



Non-Testable Dual Check with Vent used on a Water Powered Sump Pump.

Please Print your Name & Address and Sign your name.

I hereby attest that this survey form was filled in truthfully and completely. DATE

Address

Name

2015 CITY OF TROY BACKFLOW PREVENTER TESTING PROGRAM

In August of 2013 the City of Troy was notified by the Michigan Department of Environmental Quality that to comply with the Safe Drinking Water Act, the City must now require testing of residential Backflow Preventers (BFP's) at least every 3 years.
(The City has required annual testing on commercial properties for 40 years.)

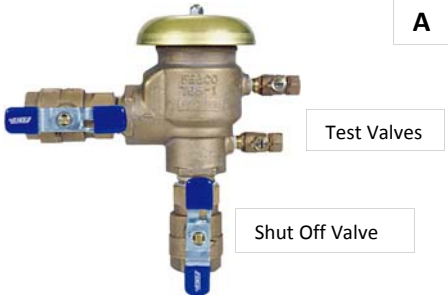
In the spring of each year, the City will be sending out notifications to residential properties to have BFP's tested, and systems brought up to code if necessary. Included in these notifications will be forms and informational brochures that will explain the program and what each resident must do to comply.

BFP's are mechanical devices that prevent contaminated water from backflowing into the drinking water supply. These BFP's have many components that can wear out, and some must be periodically tested to ensure that they are working properly. The testable assemblies have 2 shut off valves and either 2 or 4 small test valves. (See photos A & B below).
The non-testable devices do not have any valves attached. (See photos C & D below).

Most backflow preventers on residential property are for lawn sprinkler systems, and most of those are Pressure Vacuum Breakers which must be tested. Heating Boilers and Water Powered Back-up Sump Pumps also require backflow preventers, some of which also must be tested.
For more information go to: www.TroyMi.Gov/Water or telephone 248-619-7266

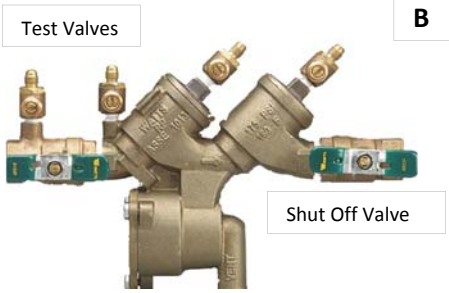
Testable Assemblies

A



Testable Pressure Vacuum Breaker for lawn sprinkler systems. All downstream piping and sprinkler heads must be 12" below the PVB.

B



Testable Reduced Pressure Zone assembly for Lawns, Chemically Treated Boilers, and Water Powered Sump Pumps.

Non-Testable Devices

C

Non-Testable Atmospheric Vacuum Breaker for lawn sprinkler systems. No manual valves or zone valves are allowed downstream.

D

Non-Testable Vented Dual Check Valve for Boilers that are not chemically treated.

City of Troy

Backflow Assembly Testing Program

Water and Sewer Division

What is Cross Connection Control?

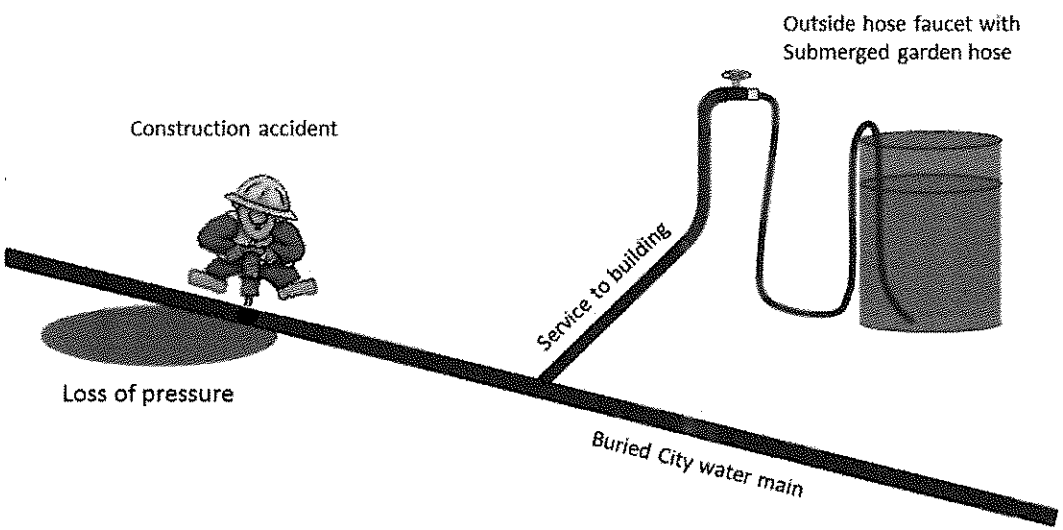
- A *cross connection* is a connection between our drinking water system and any other type of system that does not contain drinking water.

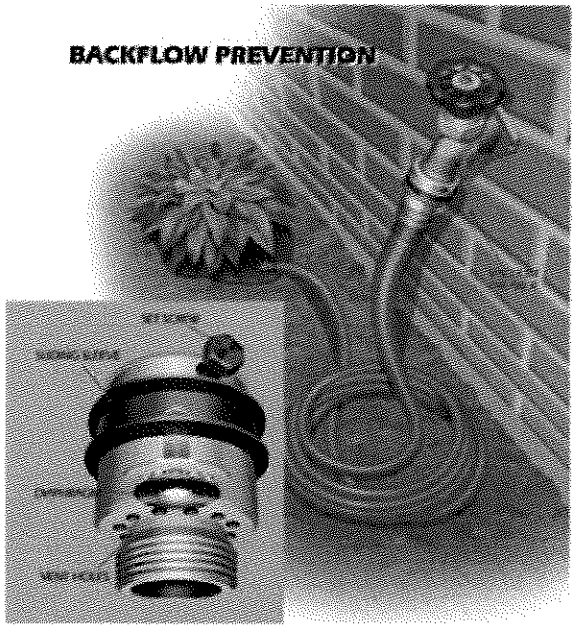
- A *cross connection control program* seeks to prevent the contamination of our drinking water supply through <u>inspection</u> of water systems & connections, and also by <u>testing</u> backflow prevention assemblies

- *Backflow assemblies* are mechanical devices with many components that must be tested. This is to ensure contaminated water does not backflow into the drinking water supply.

Backsiphonage

Backsiphonage due to water main break





Public Act 399 –

The Michigan Safe Drinking Water Act was enacted in 1976.

It enables the Michigan Department of Environmental Quality (DEQ) to maintain the state's authority over drinking water.

Backflow assembly testing is an important part of a cross connection program to keep our water supply safe.

Why is testing being required now?

- The (DEQ) notified the City of Troy in August of 2013 that to be in compliance with Public Act 399, the City must include residential backflow testing in its cross connection program

DEQ Request for Programming

Aug. 21. 2013 1:57PM No. 9012 P. 1

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
SOUTHEAST MICHIGAN DISTRICT OFFICE

RICK SNYDER
GOVERNOR

DAN WYANT
DIRECTOR

August 19, 2013

Mr. Richard Shepler
Water & Sewer Superintendent
City of Troy
4693 Rochester Road
Troy, Michigan 48085

WSSN: 06690

Dear Mr. Shepler

SUBJECT: City of Troy – Water System Sanitary Survey

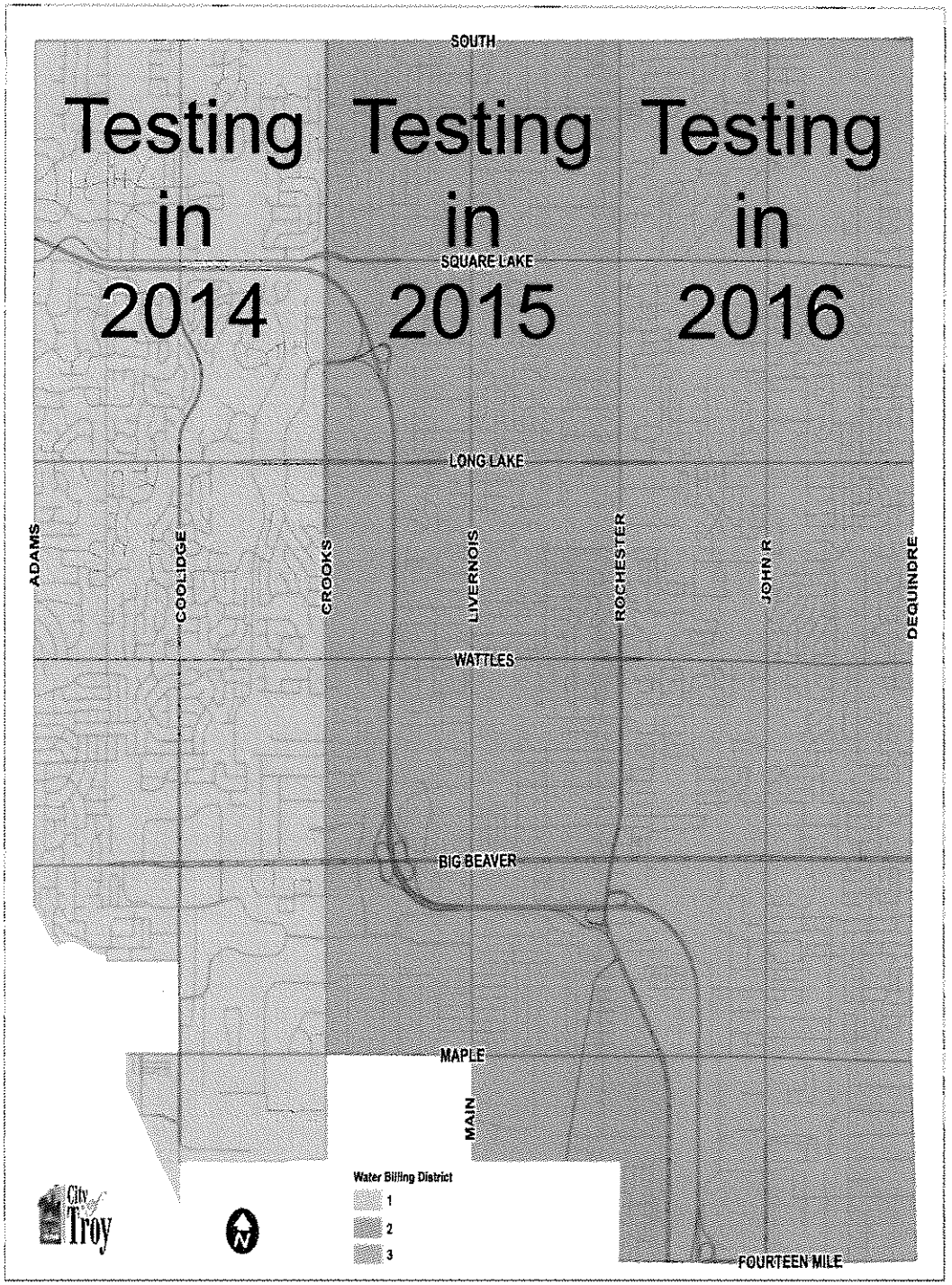
This letter will confirm my visit with you on July 30, 2013, and summarize the subsequent review and discussion of the water supply facilities serving the City of Troy. The purpose of this meeting was to evaluate the water system with respect to the requirements of the Michigan Safe Drinking Water Act, 1976 PA 399, as amended (Act 399). In addition, the enclosed Water

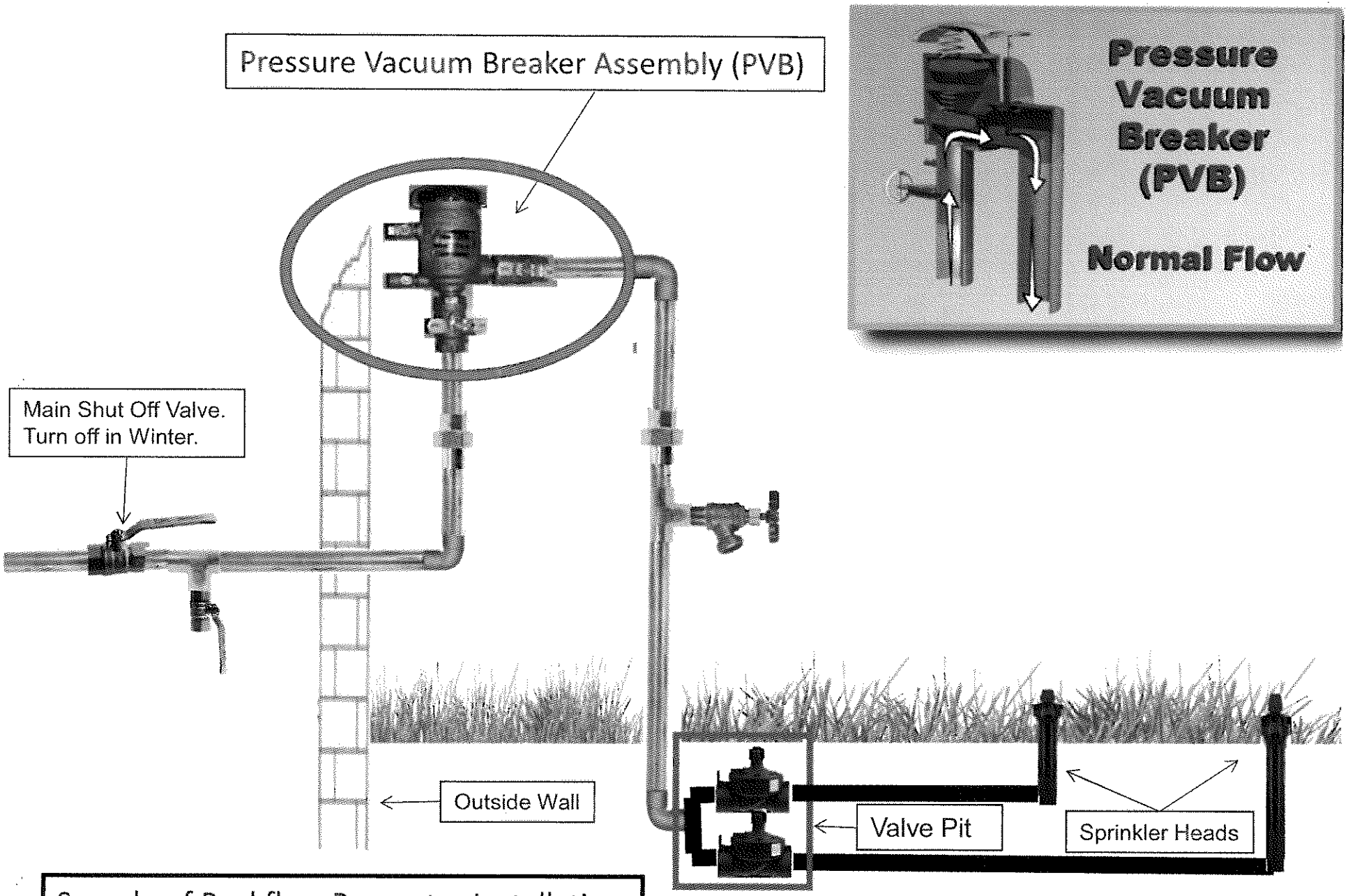
3. In accordance with Part 14, *Cross Connections*, the DEQ received your 2012 Water Supply Cross Connection Report on March 22, 2013. Per Rule 1401, the City is required to implement a program for the removal of all existing cross connections and the prevention of all future cross connections. Currently, the city's program does not include residential inspections and enforcement. A cross connection program, in accordance with Part 14, should include a residential component to fully comply with the rule. **Please respond in writing to this office on how the city intends to meet the residential program requirements for inspections and testing by September 19, 2013.**

- All cities within Michigan must comply with the Michigan Safe Drinking Water Act.

- Backflow assemblies on every commercial, industrial, and residential property in Troy must be tested

- Troy residents will be receiving letters notifying them of the requirement for testing in a rotating order based on Billing Districts





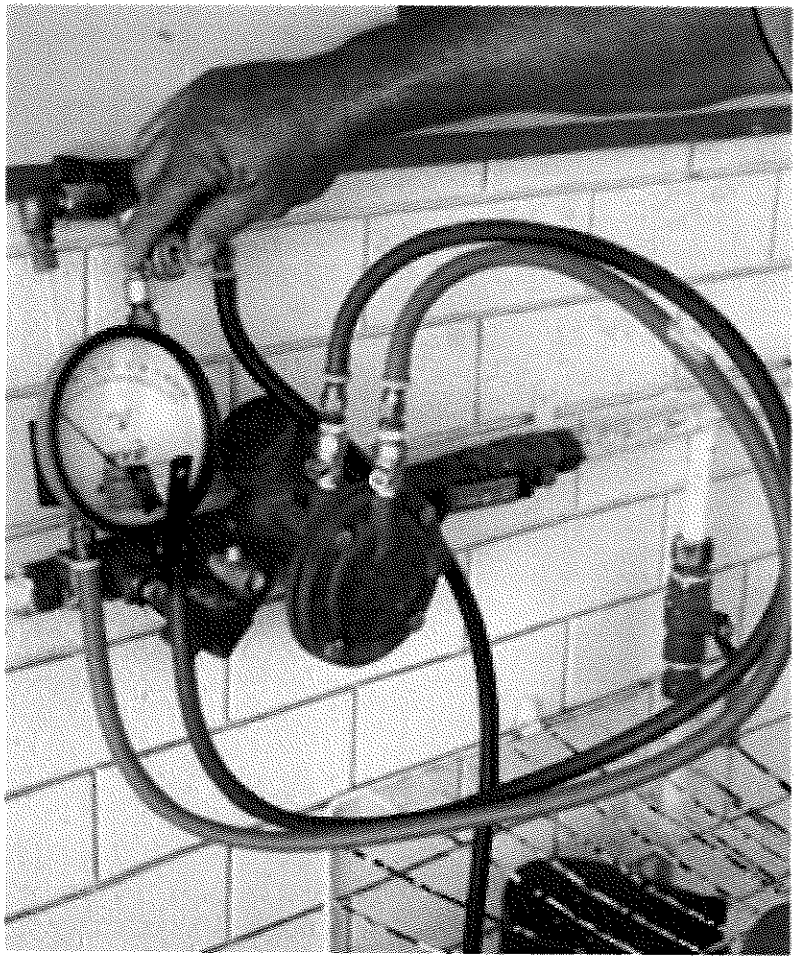
Sample of Backflow Preventer Installation
On a Multi-Zone Lawn Irrigation System

R:2014.09.26

How do I ensure my backflow assembly is working correctly?

Per State of Michigan Public Act 733 (State Plumbing Act), backflow preventer testing, repairs, replacements, and new installations must be completed by a Licensed Plumbing Contractor.

Once the testing is complete, a test report must be completed *by the licensed plumber* and returned to the City by the assigned Due Date.



Updated Residential Backflow Assembly Test Report will be pre-printed.

RESIDENTIAL BACKFLOW TEST FORM

ONLY LICENSED PLUMBERS WORKING FOR LICENSED PLUMBING CONTRACTORS ARE ALLOWED TO TEST BACKFLOW ASSEMBLIES

City of Troy
Cross Connection Control

TEST REPORT DUE 9/30/2015
TEST YEAR 2015
LAST TEST STATUS

4693 Rochester Rd, Troy, MI 48085-4928 | 248-524-3520 Desk 248-524-3520 Fax 248-524-3370 Ofc | KAPCIAMR@TROYMI.GOV | r 20140923

Occupant OCCUPANT Contact
Service Address 12345 STREET NAME City TROY State MI Zip 48084
Office Phone No. Fax E-Mail Address
Owner OWNERS NAME Contact
Owner Address 12345 STREET NAME City TROY State MI Zip 48084
Owner Phone No. Fax E-Mail Address
Assembly Make Model Serial No. Size Type
Application
Location Height above floor or ground Feet
Assembly Properly Installed? Yes ☐ No ☐ ALL PSID READINGS MUST BE RECORDED

First Test Date - - Pass ☐ Fail ☐ Test Time Supply Line Static Pressure
Test Gauge Make Model Serial Last Annual Certification - -

Status of Shutoff Valves During Test	#1	#2
Closed Tight	☐	☐
Leaked	☐	☐
Not Applicable	☐	☐

	#1 Check	#2 Check
	P ☐ F ☐	P ☐ F ☐
	.	.
RP #2 Check Valve Direction of Flow		.

Status of Shutoff Valves	Before #1	Before #2	After #1	After #2
Valves On	☐	☐	☐	☐
Valves Off	☐	☐	☐	☐

RP Relief Valve (RV): Dripped ☐ Malfunction ☐; 1st Opening Drip Point .; Optional RV Flush performed Yes ☐; Optional RV Full Open Test Pass ☐ Fail ☐

Vacuum Breaker (PVB or SVB): Air Inlet P ☐ F ☐ Check P ☐ F ☐; 1-Hose PSID . 1-Hose PSID .; 2-Hose Direction of Flow Check Valve Test PSID .; Air Inlet Fully Open? Yes ☐ No ☐; Piping Backpressure? Yes ☐ No ☐

ALL FAILED ASSEMBLIES MUST BE REPAIRED OR REPLACED WITHIN 15 DAYS BY A LICENSED PLUMBING CONTRACTOR

Final Test Date After Repairs - - Pass ☐ Fail ☐ Test Time Supply Line Static Pressure
Test Gauge Make Model Serial Last Annual Certification - -

Status of Shutoff Valves During Test	#1	#2
Closed Tight	☐	☐
Leaked	☐	☐
Not Applicable	☐	☐

	#1 Check	#2 Check
	P ☐ F ☐	P ☐ F ☐
	.	.
RP #2 Check Valve Direction of Flow		.

Status of Shutoff Valves	Before #1	Before #2	After #1	After #2
Valves On	☐	☐	☐	☐
Valves Off	☐	☐	☐	☐

RP Relief Valve (RV): Dripped ☐ Malfunction ☐; 1st Opening Drip Point .; Optional RV Flush Performed Yes ☐; Optional RV Full Open Test Pass ☐ Fail ☐

Vacuum Breaker (PVB or SVB): Air Inlet P ☐ F ☐ Check P ☐ F ☐; 1-Hose PSID . 1-Hose PSID .; 2-Hose Direction of Flow Check Valve Test PSID .; Air Inlet Fully Open? Yes ☐ No ☐; Piping Backpressure? Yes ☐ No ☐

The assembly listed above was tested in accordance with applicable standards and the results were true at the time of testing

Testing Co Phone Fax
Address City State Zip
Tester's Name Tester Signature
Backflow Cert # MI Plumbing License # Plumbing Contractor License #

Customer - Please Print / Sign / Date

Annual testing of backflow assemblies is required by the Michigan Plumbing Code to protect the water supply.
Michigan Codes require owners, occupants, and agents to have all plumbing systems maintained in proper operating condition.
There is no guarantee that this assembly will continue to operate because mechanical failure or contaminants in the water could cause the assembly to fail at any time.

Program Evaluation

2014 Data:

- The test reports received will be entered in the computer and analyzed.
- Individual Tester's data will also be reviewed.
- Homes reported as not having sprinkler systems will be verified.
- Customers that have not responded will be notified to comply.

The Department will then evaluate the program regarding any new State Rules or Laws and make changes accordingly.

The Department is also researching ways to streamline data entry, possibly by having the testers use smart phones or tablets to enter data directly in the field as the tests are being conducted.