CHARLOTTE WATER

CITY OF CHARLOTTE

Backflow Prevention Program for the Future

Why have a Backflow Prevention Program?

To ensure that the drinking water continues to stay safe all the way to the customer

Backflow Prevention Program for the Future

Seven components to a successful Backflow Prevention Program

1) Training & Education
2) Establish Legal Authority
3) Standards & Specifications
4) Construction Plan Review
5) Surveying New/Existing Facilities
6) Testing & Maintenance
7) Record Keeping

Training & Education

What type of training?

- What is a cross Connection?
- How does backflow occur?
- How to run a program
- Methods of backflow prevention
  - What is a Device? What is an Assembly?
- How to test a backflow prevention assembly

Training & Education (cont.)

Who needs to be trained?

- Program Administrator
- Leadership
- Employees
- Testers
  - State Accredited?
  - “Operator in Responsible Charge” trained and approved?
- Irrigation Contractors
- Plumbers
- Interconnected Water Systems

Training & Education (continued)

Training Sources

- TREEO
- USC FCCC & HR
- ABPA
- Standard industry practices and recommendations
- AWWA and the M-14 manual

Establish Legal Authority

What does legal authority look like?

Ordinance, written authority

- Don’t reinvent the wheel
- Consult other ordinances
- Look at the EPA Model ordinance

Who will oversee the program?

- Operator in Responsible Charge?
- Assistants?

Establish Legal Authority (cont.)

What will enforcement look like

Will there be the authority to enter premises/conduct inspections?

Will there be fines? connected to water billing?

Who has the authority to disconnect water service for

Domestic, Commercial, Industrial and *Irrigation

Who will be empowered?

Standards & Specifications

Standards Operating Procedures

Written procedures for:

- Acceptance of testers
- Determining approved assemblies
- Installation requirements based on:
  - Manufacturer’s requirement
  - Local code
  - Location

Standards & Specifications (cont.)

Sources for Standards for the Approval of Assemblies

- USC FCC&HR
- ASSE
- ASTM
- FM
- UL
- Current Plumbing Code

Standards & Specifications (cont.)

Installation Detail Drawings

Clearances for assemblies

- From wall
- To bottom of assembly
- To top of cover
- To connect test kit

Will supports be required?

Will an enclosure be required?

- What type of enclosure?
- Will it require a heat source?

Standards & Specifications (cont.)

Program Policies

What does compliance look like?

How will compliance be monitored?

Who is **empowered** to enforce?

What are the circumstances that require disconnection of water service?

Standards & Specifications (cont.)

Emergency Response Plan

(Should include)

Determining source of contamination
Extent of contamination
Isolation of contamination
Disposal of contaminated water
Emergency water for drinking and bathing
Contact appropriate personnel
Anything else required by governing State agency

Construction Plan Review

An Additional Education Opportunity

Ensure Compliance with Program Requirements Prior to Construction

Identify Existing and Potential Cross Connections

Type of Hazard/Assembly Required

Location of Assembly

Size of Assembly

Surveying New/Existing Facilities

Inspections-New Installation or Retrofit

Who is Responsible?

Municipality/Water System Staff

Division, Department, Agency or Other

When will the inspection be done?

Before they get water, C.O.

During plumbing inspections

Because of a water quality issue

What kind of inspection will be done?

Containment, Isolation or Both

Testing & Maintenance

Determine Responsibility for Testing and Repair of Assemblies:

Who will certify those doing the work?
Does your state certify testers?
Will you be administering a tester's class, or will you use another municipality's testers?
Who will install/own assemblies?
Who will do initial inspection/test?
Who will make repairs?

Record Keeping

Determine what software you will use to maintain your backflow program data:

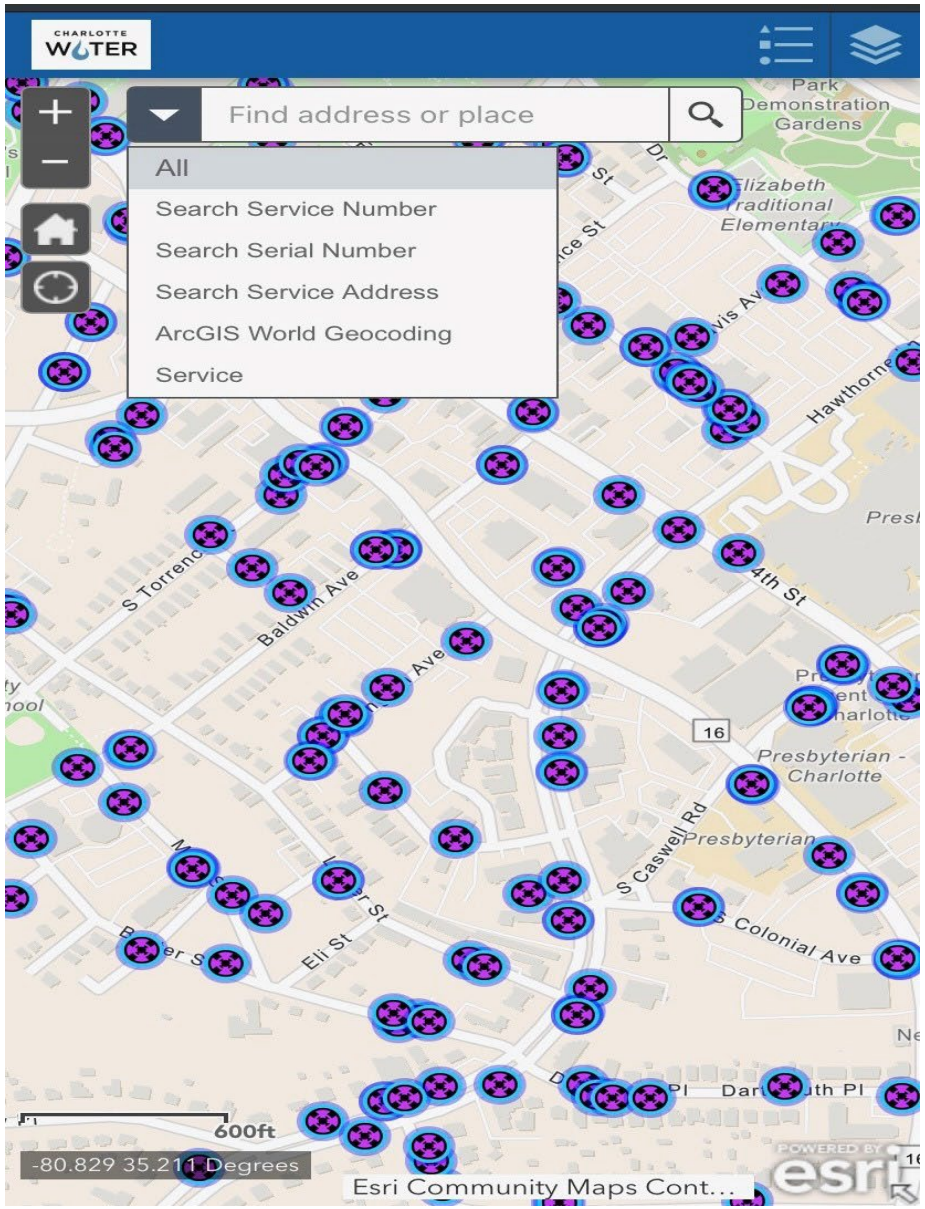
- Commercially Available
- In-House written
- Database software, i.e.. MS Access
- Contact other municipalities to find out what they are using

Develop a Test and Maintenance Report Form:

- Decide what is your best format
- Maintain an electronic copy for distribution
- Get a copy of the test and maintenance report form from other municipalities to help you create your own

Charlotte Record Keeping

Cityworks®
A TRIMBLE COMPANY



Charlotte Record Keeping cont.

(1 of 1)

Address: 200 QUEENS RD

Service Address: 200 QUEENS RD
Service Number: 44589-101
Service Type: IRRIGATION
Device Serial Number: 83194B
Meter Size: 1 INCH
Date of Last Backflow Test: 09/22/2022

Submit Backflow Device Test

Open Backflow Device Test In Survey123 App

Charlotte Water
BACKFLOW PREVENTER TEST AND MAINTENANCE REPORT

Customer: **Service Number:** 44589-101
Address of Property: 200 QUEENS RD
Meter Number or ERT #: 120964261
Type of Service: IRRIGATION **Type of Assembly:** RP **Type of Test:** Containment

ASSEMBLY INFORMATION

Manufacturer: CONBRACO **Model:** RPLF4A
Device Size: 1 **Device Serial No.:** 83194B
Location of Assembly: a/g right side of entrance off Lillington Av last 3#'s of serial # are 194 1in

Line Pressure: 80 ***PSI (#1 or #2 testcock)***

CHECK VALVE #1	RELIEF VALVE	CHECK VALVE #2
Closed DIFF. PRESSURE ACROSS CHECK VALVE **7.3** PSID	OPENED AT **3.1** PSID DID NOT OPEN:**no** BUFFER **4.2** PSI	**Closed** DIFF. PRESSURE ACROSS CHECK VALVE **1.7** PSID
CLEANED ONLY: REPLACED RUBBER KIT: CV ASSEMBLY: OTHER: List:	CLEANED ONLY: REPLACED RUBBER KIT: CV ASSEMBLY: OTHER: List:	CLEANED ONLY: REPLACED RUBBER KIT: CV ASSEMBLY: OTHER: List:
CLOSED TIGHT: DIFF. PRESSURE ACROSS CHECK VALVE PSID	DID NOT OPEN: BUFFER PSI	CLOSED TIGHT: DIFF. PRESSURE ACROSS CHECK VALVE PSID
SHUT - OFF #1:		**SHUT - OFF #2: HeldTight**

Test Results: Pass
NOTE: ALL REPAIRS MUST BE COMPLETED WITHIN (10) DAYS.
Remarks: TEST OF NEW INSTALL BY OTHERS

TEST KIT: MANUFACTURER: ARBITER **MODEL:** MAKO 5 VALVE **SERIAL NO:** SN02AC19060201

I HEREBY CERTIFY THAT THIS COMPLETED BACKFLOW PREVENTER TEST AND MAINTENANCE REPORT ACCURATELY REFLECTS OPERATION AND CONDITIONS OF THE SPECIFIED ASSEMBLY AT THE TIME OF THIS TEST.

TESTER (Printed Name): CHRISTOPHER REITZEL
TESTER (Signature):
CERT. NO: 0223-CM9-252
DATE OF TEST: 9/22/2022 9:20:00AM
PHONE #: 704-361-2026

Where to get more information

Other Training Sessions

Local Training Schools, TREEO and USCFCCCHR

ABPA, AWWA and other Associations

Books, Articles, Online Resources

ABPA News, Drinking Water & Backflow and other Associations, Organizations and Colleges

Consulting Resources

QUESTIONS?

Contact Information

Mark Bullins
Environmental Compliance Manager-Backflow Prevention
Charlotte Water
704-432-5800
mark.bullins@charlottenc.gov

Kathy Riley
Backflow Compliance Specialist
Charlotte Water
980-226-4304
kathy.riley@charlottenc.gov

Thank You!

Mark Bullins
Environmental Compliance Manager-
Backflow Prevention
Charlotte Water
704-432-5800
mark.bullins@charlottenc.gov

Kathy Riley
Backflow Compliance Specialist
Charlotte Water
980-226-4304
kathy.riley@charlottenc.gov