BACKFLOW PREVENTION AND CROSS CONNECTION CONTROL POLICY

SPU
Shakopee Public Utilities

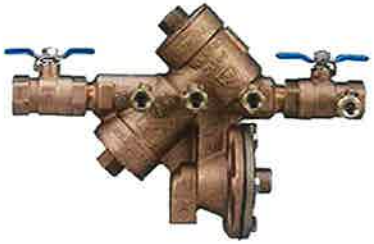
WHAT IS BACKFLOW?

BACKFLOW IS THE REVERSAL OF FLOW OF A LIQUID, GAS, OR OTHER SUBSTANCE IN A PIPING SYSTEM.


Without Backflow Prevention Assembly
Irrigation System
Boiler
Internal Plumbing
Internal Plumbing
Meter
Meter
Meter
Main Break
Back Siphonage/ Reversal of Waterflow

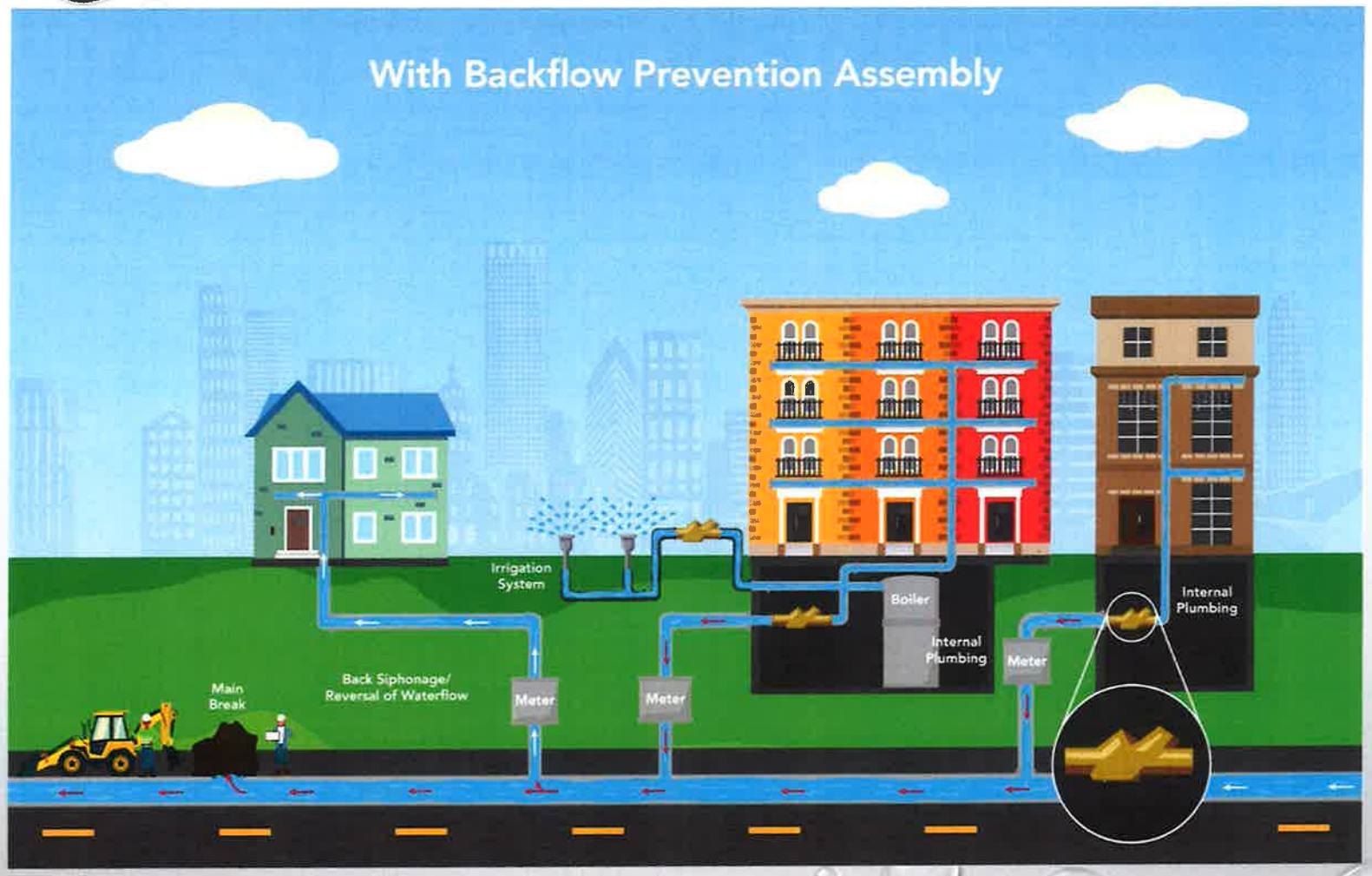
HOW CAN BACKFLOW INCIDENTS BE PREVENTED?

REDUCED PRESSURE ZONE (RPZ)



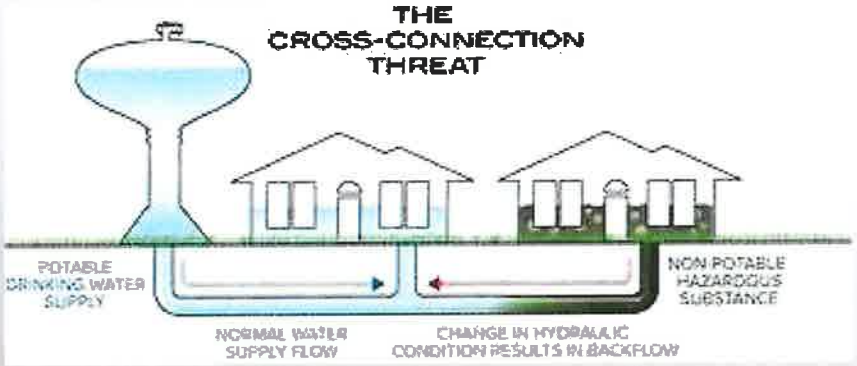
DOUBLE CHECK VALVE

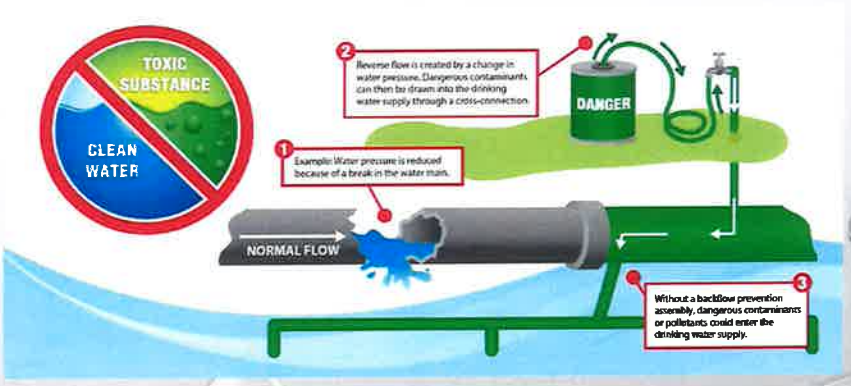
PRESSURE VACUUM BREAKER (PVB)


With Backflow Prevention Assembly
Irrigation System
Boiler
Internal Plumbing
Internal Plumbing
Meter
Meter
Meter
Main Break
Back Siphonage/ Reversal of Waterflow

WHAT ARE CROSS CONNECTIONS?

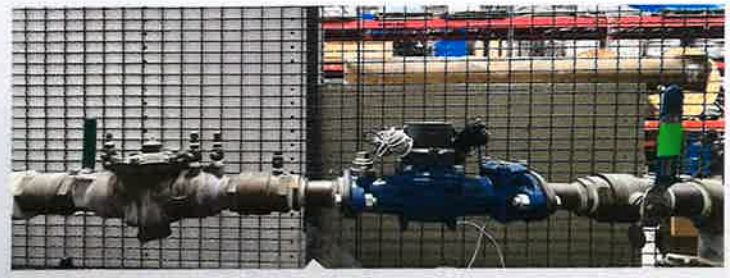
A CROSS CONNECTION IS AN ACTUAL CONNECTION OR A POTENTIAL CONNECTION BETWEEN ANY PART OF A POTABLE WATER SYSTEM AND ANY OTHER ENVIRONMENT THAT WOULD ALLOW SUBSTANCES TO ENTER A POTABLE WATER SYSTEM.





PREVENTION OF CROSS CONNECTIONS

- THIS POLICY REINFORCES THAT CROSS CONNECTIONS OF MULTIPLE WATER SUPPLIES (PUBLIC AND AUXILIARY) ARE NOT ALLOWED BETWEEN THE PUBLIC WATER SYSTEM AND ANY AUXILIARY WATER SOURCE.
- THIS IS ACCOMPLISHED BY REQUIRING THAT ANY PLUMBING THAT IS SUPPLIED BY THE PUBLIC WATER SYSTEM IS NOT CONNECTED IN ANY WAY TO ANY PLUMBING THAT IS SERVED FROM A AUXILIARY WATER SOURCE ALSO BY REQUIRING BACKFLOW PREVENTION ASSEMBLIES IMMEDIATELY AFTER THE SPU OWNED WATER METER (CONTAINMENT).
- THE MINNESOTA STATE PLUMBING CODE REQUIRES BACKFLOW PREVENTION ASSEMBLIES ON CERTAIN POINT OF USE EQUIPMENT (ISOLATION) TO PROTECT THE CUSTOMERS WATER SYSTEM.



Containment Backflow Assembly

Isolation Backflow Assembly

WHAT DOES THIS POLICY INTEND TO DO?

- THIS POLICY WOULD REPLACE THE EXISTING LANGUAGE THAT IS CURRENTLY IN THE WATER POLICY MANUAL.
- THE BACKFLOW AND CROSS CONNECTION POLICY IS A DOCUMENT THAT WOULD BE IN PLACE TO PREVENT THE CONTAMINATION AND ENSURE THE PROTECTION OF THE PUBLIC WATER SYSTEM FROM THE BACKFLOW OF WATER AND CROSS CONNECTIONS BETWEEN NON POTABLE WATER SOURCES OR CONTAMINATES.
- OFFERS MORE DETAIL ON THE REQUIREMENTS (SPU AND MINNESOTA PLUMBING CODE) FOR CUSTOMERS AND BUILDERS ON THE INSTALLATION, MAINTENANCE, AND TESTING OF BACKFLOW PREVENTION ASSEMBLIES.
- MORE CLEARLY DEFINES SPU POLICY ON CROSS CONNECTIONS BETWEEN THE PUBLIC WATER SYSTEM AND NON POTABLE WATER SOURCES.
- SPU HAS HAD REQUIREMENTS IN PLACE FOR BACKFLOW PREVENTION AND CROSS CONNECTIONS SINCE THE 1980'S. SPU HAS REQUIRED RPZ'S ASSEMBLIES IMMEDIATELY AFTER THE WATER METER (CONTAINMENT) ON COMMERCIAL, INDUSTRIAL, MULTI-FAMILY RESIDENTIAL AND COMMERCIAL LAWN IRRIGATION SYSTEMS TO PREVENT BACKFLOW AND CROSS CONNECTIONS FROM THE CUSTOMERS WATER SYSTEM INTO THE PUBLIC WATER SYSTEM.
- THE MINNESOTA STATE PLUMBING CODE REFERENCES WHERE BACKFLOW PREVENTION WOULD BE REQUIRED ON THE CUSTOMERS WATER SYSTEM (AFTER THE POINT OF THE CONTAINMENT BACKFLOW ASSEMBLY).

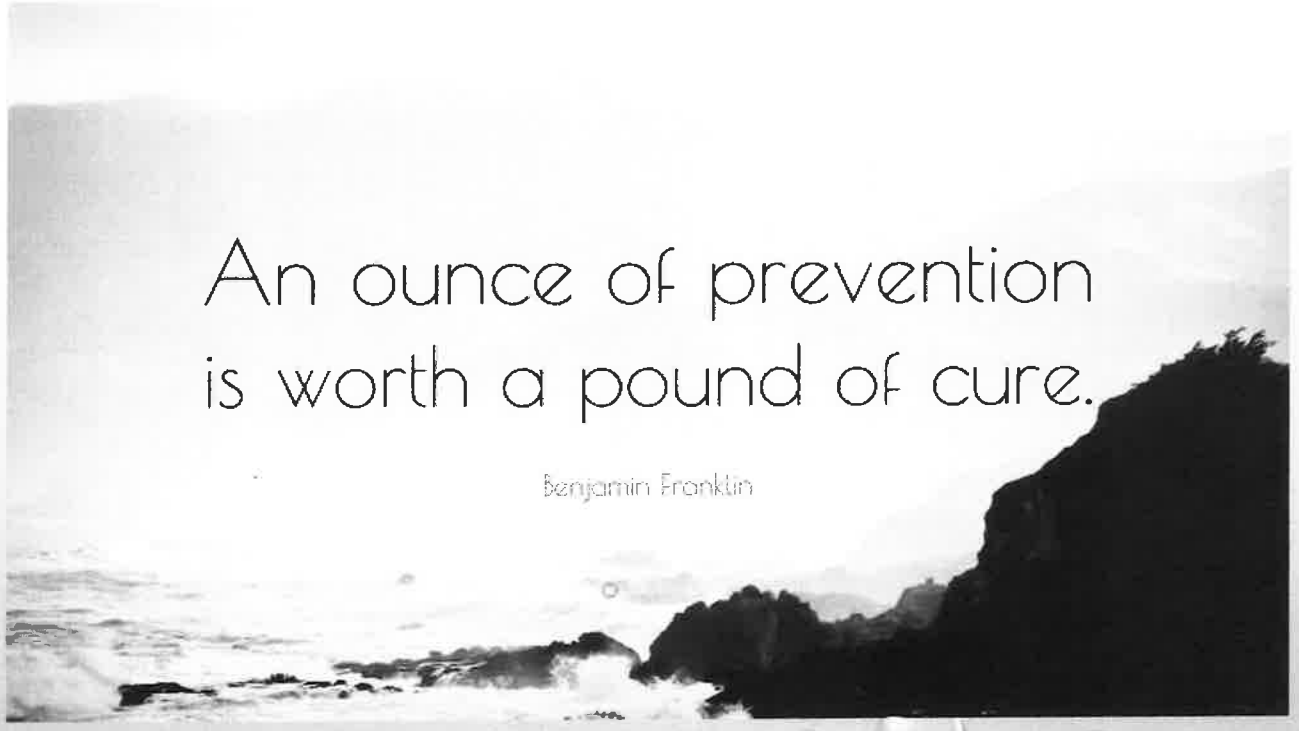
WHAT IS SPU CURRENTLY DOING AS FAR AS BACKFLOW PREVENTION?

- IN SEPTEMBER OF 2021-SPU CHANGED TO USING A BACKFLOW PREVENTION TESTING TRACKING SYSTEM CALLED THE COMPLIANCE ENGINE (SPU WATER STAFF HAD BEEN TRACKING IN HOUSE FOR MANY YEARS).
- WINTER/SPRING 2022-SPU WATER DEPARTMENT HAS BE INVENTORYING BACKFLOW PREVENTION ASSEMBLIES ON COMMERCIAL/INDUSTRIAL PROPERTIES TO MAKE SURE THE CURRENT BACKFLOW DATA BASE IS UP TO DATE.
- SPRING/SUMMER 2022 AND BEYOND-WORK ON GETTING PROPERTIES THAT HAVE BACKFLOW ASSEMBLIES THAT ARE OVER DUE FOR TESTING IN COMPLIANCE (THROUGH EDUCATION AND WITH THE HELP OF THE COMPLIANCE ENGINE).

CHANGES TO SPU'S CURRENT POLICY

- THE 2015 MINNESOTA PLUMBING CODE REQUIRED ALL TESTABLE BACKFLOW PREVENTION ASSEMBLIES THAT WERE INSTALLED ON OR AFTER JANUARY 23, 2016 TO BE TESTED ANNUALLY.
- THIS INCLUDES ALL SINGLE FAMILY RESIDENTIAL HOMES THAT HAVE THEIR OWN LAWN IRRIGATION SYSTEM.
- THE NEW POLICY WOULD ALIGN WITH CURRENT CODES AND ACCEPTED STANDARDS
- ADDED UPDATED LANGUAGE TO CLARIFY THE REQUIREMENTS AND RESPONSIBILITIES OF SPU AND THE PROPERTY OWNERS.
- THIS POLICY WOULD REQUIRE ALL TESTABLE BACKFLOW PREVENTION ASSEMBLIES TO BE TESTED ANNUALLY, REGARDLESS OF THE YEAR OF INSTALLATION.

QUESTIONS?


An ounce of prevention
is worth a pound of cure.
Benjamin Franklin

2014 Water Policy Manual Backflow and Cross Connection Language

Private Water Supplies

No water pipe of the municipal water supply system shall be connected with any pump, well or tank that is connected with any other source of water supply. When such connections are found, the owner shall be notified to disconnect the water supply, and if not done immediately, the municipal water supply shall be turned off forthwith. Before any new connection to the municipal system is permitted, Shakopee Public Utilities shall ascertain that no cross connections will exist when the new connection is made.

Installation of Backflow Preventors

A reduced pressure zone (RPZ) device is used to prevent water from returning to the water supply after it has entered the customer's service. Any devices after the water meter and RPZ are the responsibility of the City of Shakopee. An RPZ type backflow preventor shall be installed downstream of the meter at the water meter location on all new commercial, industrial, apartment, and institutional services and on all residential buildings having more than single occupancy and with shared laundry facilities. A RPZ backflow preventor must be installed on fire services which do contain chemical additives. The backflow preventors shall be installed on existing installations that do not have an existing backflow preventor at the time that modifications are made to any part of the water supply plumbing system in those installations. The requirements of this section shall be in addition to any such devices on individual lines which may be required by state plumbing code. Maintenance of the backflow preventor shall be the responsibility of the customer. RPZ type backflow preventors must be installed in accordance with the manufacturer's requirements and recommendations.

Periodic testing of RPZ backflow preventors is required. Testing shall be done by a trained backflow preventor tester acceptable to Shakopee Public Utilities. Testing intervals shall not exceed one year, and records must be kept. A copy of all test reports shall be filed with Shakopee Public Utilities within thirty days of the test date. All devices must be tested after initial installation to assure that debris from the piping installation has not interfered with the functioning of the device. The devices shall be overhauled at least once every five years, and records must be kept. The installation of new backflow preventors must be at least 12 inches, but not more than 6 feet above the finished floor or ground level.

RPZ type backflow preventors shall meet latest AWWA standards for such devices. Refer to detail WAT-011.