

**BACKFLOW PREVENTION PROGRAM
RULES AND REGULATIONS
VILLAGE OF BALTIMORE**

Pursuant to the authority granted under Village of Baltimore Ordinance 2007-21 approved May 29, 2007 Section 6109 of the Ohio Revised Code, and Section 3745-95 of the Ohio Administrative Code, hereby adopts, establishes, and publishes these rules and regulations to be effective at the earliest date allowed by law. These rules and regulations are in addition to any established requirements that have not been superseded or rescinded by this or any previous act.

APPLICATION

These Rules and Regulations shall apply to all properties served by the public potable water supply system of the Village of Baltimore.

WATER SYSTEMS

For the purposes of these Rules and Regulations, the water system shall be considered as consisting of two parts; the public water supply system and the consumer's water system.

The public water system shall consist of the source facilities and distribution system, and shall include all the facilities of the potable water system under the control of the Baltimore Service Department up to the point where the consumer's water system begins.

The source shall include all components of the facilities utilized in the production, treatment, storage, and delivery of water to the public water distribution system.

The public water supply distribution system shall include the network of piping used to deliver water from the source to the consumer's water system.

The consumer's water system shall include all parts of the facilities beyond the curb stop used to convey water from the public water supply distribution system to the points of use.

PLUMBING SYSTEMS

It shall be the responsibility of the consumer to have his water plumbing system comply with the latest additions and revision of the Ohio Plumbing Codes and the Village of Baltimore Codes. The consumer shall retain records of installation, maintenance, testing, and repairs as required by these Rules and Regulations for a period of at least five years.

BACKFLOW PREVENTION RULES

Backflow or cross-connection control is intended to prevent the contamination or pollution of the public and consumer's water systems. The following Backflow Prevention Rules have been approved by the Village Council, Village Solicitor, Village Administrator, and Service Superintendent. Cross-connection control devices allow for

the protection of the public water supply by isolating within the consumer's water system any contaminants or pollution which could backflow through the service connection.

CROSS-CONNECTION PROHIBITED

No water service connection shall be installed or maintained to any property where actual or potential cross-connections to the public potable or consumer's water system may exist unless such actual or potential cross-connections are abated or controlled to the satisfaction of the Village of Baltimore and the Ohio Environmental Protection Agency (OEPA).

No connection shall be installed or maintained whereby water from an auxiliary water system may enter the public potable or consumer's water system unless the Service Superintendent approves such auxiliary water system and the method of connection.

There shall be no arrangement or connection by which an unsafe substance may enter the public potable water supply.

WATER USE SURVEYS AND INSPECTIONS

The owner/consumer's property shall be accessible at all reasonable times to the Service Department or an authorized representative to perform water use surveys or to inspect or test backflow prevention assemblies within the property.

On request by the Baltimore Service Superintendent or an authorized representative, the consumer shall furnish information regarding the piping system or water usage within the consumer's property.

It shall be the owner/consumer's responsibility to arrange periodic surveys of water use practices at their property to determine whether there are actual or potential cross-connections to the water system through which contaminants or pollutants could backflow into the potable water supply system. All cross-connection control or water use surveys must be conducted by the Service Superintendent or an authorized representative.

WHERE PROTECTION IS REQUIRED

An approved backflow prevention assembly or method shall be installed on each service line to a consumer's water system serving properties, where any of the following conditions exist:

- I. Properties that have, or have access to, second source water unless actual or potential cross-connections are abated or controlled to the satisfaction of the Service Superintendent and the OEPA;
- II. Properties where any substance is handled which can create an actual or potential hazard to the public potable water supply. This shall include properties having sources or systems containing process fluids or water originating from the public potable water supply system that are no longer under the quality control of the Village of Baltimore Service Department;

- III. Properties having internal cross-connection that, in the judgment of the Service Superintendent, are not correctable, or where intricate or complex plumbing arrangements make it impractical to determine whether or not cross-connections exist;
- IV. Properties with security requirements, other prohibitions or restrictions which make it impossible or impractical to make a complete cross-connection survey;
- V. Properties supplied by more than one service, where the services are connected to the water distribution system within different pressure districts;
- VI. Properties having repeated history of establishing or re-establishing cross-connections;
- VII. Installation of backflow assemblies in parallel is required anywhere Baltimore Service Superintendent and/or OEPA determines there is a need if the complete interruption of water is critical to the owner/consumer's operations.

TYPE OF PROTECTION REQUIRED

The type of protection required shall depend on the degree of hazard and be determined by the Service Superintendent.

- I. A "severe health hazard" classification shall mean a harmful or potential threat of contamination of the water system that could be harmful. An approved fixed air gap separation shall be installed and maintained in accordance with Ordinance 2007-21.
- II. A "health hazard" classification shall mean an actual or potential threat of contamination of a physical or toxic nature that would be a danger to health. An approved fixed air gap separation or an approved reduced pressure principle backflow prevention assembly shall be installed and maintained in accordance with Ordinance 2007-21.
- III. A "non-health hazard" classification shall mean an actual or potential threat to the physical properties of the water supply, but which would not constitute a health hazard, as defined. An approved fixed air gap separation, an approved reduced pressure principle backflow prevention assembly or an approved double check backflow assembly shall be installed and maintained in accordance with Ordinance 2007-21.
- IV. The type of protection required for instances described in "Where Protection Is Required" Sections III, IV, V, and VI shall be an approved fixed air gap or an approved reduced pressure principle backflow prevention assembly.

- V. The type of protection required for instances described in “Where Protection Is Required” Section VII shall be equal to the contaminant assembly required.
- VI. Fire protection systems with chemicals added, or with the ability to add chemicals, shall install approved reduced pressure principle backflow assembly.
- VII. Fire protection systems without chemicals shall install an approved double check backflow assembly.
- VIII. A reduced pressure detector assembly (ASSE 1047) and a double check detector check assembly (ASSE 1048) can be installed in lieu of a reduced pressure or double check backflow assembly, respectively. Note that all meter requirements must comply with the Baltimore Service Department meter installation specifications.

Below is a list of property types and their respective backflow requirements. This list was established as a guideline and is not to be used as a legal requirement without the approval of the Service Superintendent. Updates to these requirements can be obtained by contacting the Village of Baltimore at (740) 862-8550.

Type of Property	Requirements
Industrial	Reduced Pressure Backflow Device
Commercial	Reduced Pressure Backflow Device
Residential with lawn irrigation *	Reduced Pressure Backflow Device
Residential with water uses other than domestic	Reduced Pressure Backflow Device
Residential with second source water or access to second source water	Reduced Pressure Backflow Device

* pressure vacuum breaker may be used on lawn irrigation

The following are to be protected as listed, regardless of on-site water-use hazard:

Type of Property	Requirements
Automotive & Auto Body Repair Shops	Reduced Pressure Backflow Device
Car Washes	Reduced Pressure Backflow Device
Commercial Lease Accounts	Reduced Pressure Backflow Device
Full Service Restaurants	Reduced Pressure Backflow Device
Hospitals	Reduced Pressure Backflow Device
Laboratories	Reduced Pressure Backflow Device
Lawn Irrigation	Reduced Pressure Backflow Device
Mortuaries	Reduced Pressure Backflow Device
Medical Clinics, Offices, etc.	Reduced Pressure Backflow Device
Nursing & Convalescent Homes	Reduced Pressure Backflow Device
Sewage Treatment Plants	Reduced Pressure Backflow Device

BACKFLOW PREVENTION ASSEMBLIES

The Village of Baltimore requires that backflow prevention devices be endorsed by the American Society of Sanitary Engineering.

Installation of approved assemblies shall be made in accordance with standard detail drawing #1 (attached) and to the satisfaction of the Service Superintendent.

Maintenance shall be performed as recommended by the manufacturer of the assembly and the Service Superintendent.

A proper fixed air gap separation is defined as a physical separation between the free flowing discharge end of a potable water supply pipeline and an open (non-pressure receiving) vessel. The separation shall be at least double the diameter of the supply pipe measured vertically above the overflow rim of the vessel and in no case less than one (1) inch.

TESTING AND MAINTENANCE

Wherever backflow assemblies are required by the Service Superintendent, it shall be the duty of the owner/consumer to have inspections, tests, maintenance and repairs made according to the following schedule”

Fixed Air Gap Separation Backflow Assemblies shall be inspected and tested at the time of installation and every twelve (12) months, or more frequently if required by the Service Department.

Reduced Pressure Principle Backflow Assemblies shall be inspected and tested at the time of installation and at least every twelve (12) months, or more frequently if required by the Service Department, and rebuilt as needed.

Double Check Valve Backflow Assemblies shall be inspected and tested at the time of installation and at least every twelve (12) months, or more frequently if required by the Service Department, and rebuilt as needed.

Pressure Vacuum Breaker Backflow Assemblies shall be inspected and tested at the time of installation and at least every twelve (12) months, or more frequently if required by the Service Department, and rebuilt as needed. The consumer shall visually inspect the installed assembly every three (3) months for conditions that would prevent the normal functioning of the assembly.

Backflow testers who are certified shall perform testing. The actual tester must possess an active Ohio Department of Commerce Backflow Prevention Assembly Tester’s Certificate and be approved by the Baltimore service Department.

Each backflow prevention assembly shall have a tag attached listing the date of the most recent test, the name of the tester, the tester’s certificate number, the company with which the tester is employed, the type and date of any repairs, and the test results.

The consumer shall forward test and repair results to the Village of Baltimore.

The consumer shall maintain a maintenance and test log and store it in a manner so that it will always be readily available to the Service Superintendent or an authorized representative upon request. The log shall include date of each test, name and certificate number of the tester, name of the company with which the tester is employed, test results, repairs or servicing required, repairs made and date completed, and servicing performed and date completed.

Fixed air gap separation assemblies shall have a tag attached listing the date of the most recent visual inspection and the name of the certified inspector.

Whenever backflow prevention assemblies required by the Service Superintendent are found to be defective, they shall be repaired or replaced by the owner/consumer, at their expense, without delay.

Backflow prevention assemblies shall not be bypassed, made inoperative, removed or otherwise made ineffective without specific authorization by the Service Superintendent.

Test equipment used for initial, annual or emergency backflow prevention assembly testing required by the Service Superintendent, shall be calibrated at least every twelve (12) months by an independent calibration company.

INSTALLATION

Required backflow prevention assemblies shall be installed at a location and in a manner approved by the Service Superintendent and at the expense of the water consumer. For detailed instruction refer to Standard Drawing 1.

VIOLATIONS

Non-compliance with any of the backflow prevention requirements may result in certain penalties, including discontinuation or denial of water service until the consumer has eliminated the actual or potential risk of cross-connection to the satisfaction of the Service Superintendent.

SUPPORT DOCUMENTATION

Backflow prevention assemblies shall be installed so that the inlet shut-off valve of the backflow device is the next piped fitting (including piping) after the water meter, except where a meter bypass, limited area fire system or strainer is needed.

Where the meter is located in the pit and the backflow device has been approved to be installed in the building, the backflow assembly inlet valve shall be twelve (12) inches from the wall or immediately after the ninety degree bend where the supply enters the floor.

All assemblies are to be installed in a horizontal orientation.

Minimum and maximum ground clearance is measured from the floor to the lowest part of the assembly.

Each installation shall include properly located test cocks and manufacturer approved tightly closing shutoff valves.

All shut off valves two (2) inches and under are to be ball valve types.

No backflow assembly shall be subject to excessive heat or cold.

It is recommended that a floor drain be installed as close as possible to the assembly.

Reduced Pressure Principle Backflow Assemblies shall not be installed in a pit, vault or any area subject to flooding and shall always have an approved air gap assembly.

Pressure Vacuum Breakers shall never be subject to back pressure and must be installed a minimum of twelve (12) inches above the highest downstream discharge.

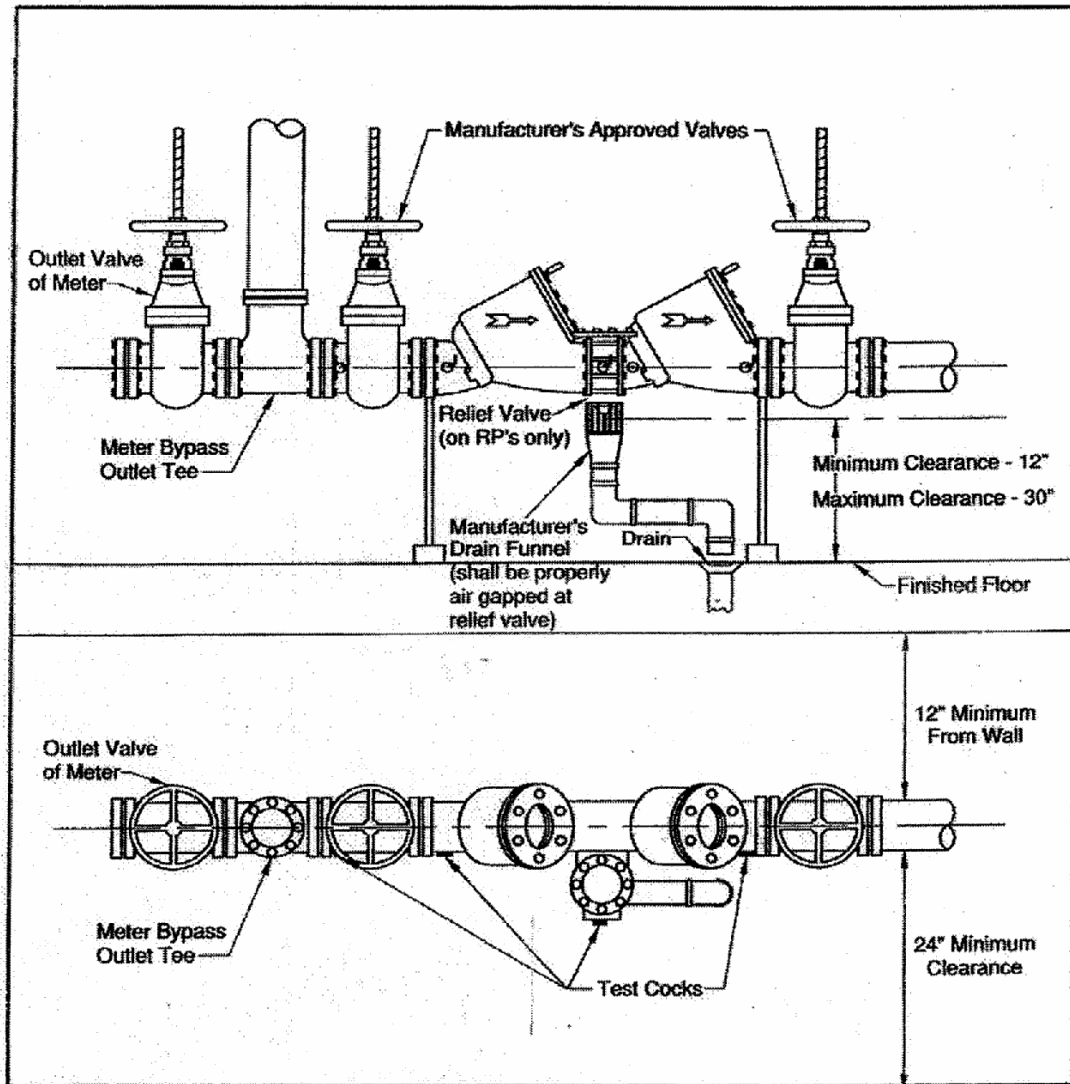
Lawn Irrigation Systems shall not have any outside exposed tees, drains or hose bibs.

Backflow Prevention Assemblies shall prevent the release of on-site pressure to the public distribution water system. Therefore, internal compensation in accordance with the Ohio Plumbing Code shall be considered and made when needed, to relieve any excessive increase in on-site pressure due to hot water heating systems or other heat sources.

No Backflow Prevention Assembly shall be bypassed unless the bypass line contains equal backflow protection and the approval of the Baltimore Service Department.

NOTE: If there is a reason any of these criteria cannot be met, you will need to contact the Village of Baltimore at (740) 862-8550.

DRAWING 1



REDUCED PRESSURE DEVICE

In these figures, the RP device is shown on the service connection. The minimum clearance of twelve (12) inches above the floor from the lowest point of the RP device above the floor grade is to insure an air gap between the relief valve and any water that might puddle beneath the device. The maximum height is so that the device will be easy to work on during testing and maintenance. Minimum distances from a wall or protective enclosure are for testing and maintenance as well.

**OHIO EPA APPROVED BACKFLOW PREVENTION
REDUCED PRESSURE DEVICES**

<u>Company</u>	<u>Model</u>
Ames	4000 SS
Buckner	2400 for ¾” 2401 for 1”
Cla-Val	RP-2
Conbraco	40-204 for ¾” 40-205 for 1”
Febco	825YA
Flomatic	RPZ B9200 for ¾” RPZ B9201 for 1”
Hersey	FRPII
Orion	BRP
Rain Bird	RPA-075 for ¾” RPA-100 for 1”
Watts	009,909
Wilkins	975

VILLAGE OF BALTIMORE BACKFLOW CONTACTS

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Don Johnson
Water Department
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Marsha Hall
Village Administrator
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All forms for testing and rules and regulations are available at the Village of Baltimore website for downloading. The address is www.baltimoreohio.org.



VILLAGE OF BALTIMORE
 RETURN ORIGINALS TO 103 WEST MARKET ST.
 Annual Test & Maintenance Report for Backflow Prevention Assemblies

Facility Name: _____ Address: _____
 Contact Person: _____ Phone No. _____

Assembly Information

Make: _____
 Model: _____
 Size: _____
 Serial Number: _____

Installation Information

Containment		Isolation	
Meter Pit	<input type="checkbox"/>	Basement	<input type="checkbox"/>
Penthouse	<input type="checkbox"/>	Boiler Room	<input type="checkbox"/>
Mechanical Room	<input type="checkbox"/>	Protection Provided:	_____

Double Check Assembly

Initial Test	Outlet Valve		Pass <input type="checkbox"/>
			Fail <input type="checkbox"/>
Date	1 st Check Valve	___psid	Pass <input type="checkbox"/>
			Fail <input type="checkbox"/>
	2 nd Check Valve	___psid	Pass <input type="checkbox"/>
			Fail <input type="checkbox"/>

Reduced Pressure Assembly

1 st Check Valve	___psid	Pass <input type="checkbox"/>
		Fail <input type="checkbox"/>
Relief Valve Opening Point	___psid	Pass <input type="checkbox"/>
		Fail <input type="checkbox"/>
2 nd Check Valve		Pass <input type="checkbox"/>
		Fail <input type="checkbox"/>
Outlet Valve	Pass <input type="checkbox"/>	Fail <input type="checkbox"/>

Pressure Vacuum Breaker

Air Inlet Valve	___psig	Pass <input type="checkbox"/>
		Fail <input type="checkbox"/>
Check Valve	___psig	Pass <input type="checkbox"/>
		Fail <input type="checkbox"/>

Repairs & Materials Used

Double Check Assembly

Re-Test After Repairs	Outlet Valve		Pass <input type="checkbox"/>
			Fail <input type="checkbox"/>
Date	1 st Check Valve	___psid	Pass <input type="checkbox"/>
			Fail <input type="checkbox"/>
	2 nd Check Valve	___psid	Pass <input type="checkbox"/>
			Fail <input type="checkbox"/>

Reduced Pressure Assembly

1 st Check Valve	___psid	Pass <input type="checkbox"/>
		Fail <input type="checkbox"/>
Relief Valve Opening Point	___psid	Pass <input type="checkbox"/>
		Fail <input type="checkbox"/>
2 nd Check Valve		Pass <input type="checkbox"/>
		Fail <input type="checkbox"/>
Outlet Valve	Pass <input type="checkbox"/>	Fail <input type="checkbox"/>

Pressure Vacuum Breaker

Air Inlet Valve	___psig	Pass <input type="checkbox"/>
		Fail <input type="checkbox"/>
Check Valve	___psig	Pass <input type="checkbox"/>
		Fail <input type="checkbox"/>

TESTER CERTIFICATION: *I certify that the above data is correct and that the backflow prevention device is in proper working condition.*

Tester Name (Printed) _____ Signature _____ Phone No. _____
 Company Name _____ OH Cert. No. _____ Contractor No. _____ Date _____

FACILITY CERTIFICATION: *I hereby certify that the above backflow prevention device has been in constant use at this location during the entire prescribed interval between test periods and during that period this device was not bypassed, made inoperative or removed without proper authorization. I further certify that I have the authority and responsibility to ensure the above.*

Owner/Officer (Printed) _____ Signature _____ Phone No. _____
 Title: _____ Date: _____