

Town of Quartzsite
Water Department

List of Approved Backflow Prevention Assemblies

List derived from (USC) University of Southern California Foundation for Cross-Connection Control and Hydraulic Research

All backflow assembly installed in the Town of Quartzsite water system must be an approved Reduced Pressure Principal Assembly, due to the nitrate plume and other contaminants found in most shallow wells. If certain conditions exist such as: deep wells, properly abandoned wells, or other alternate source of water, etc. the Town of Quartzsite Water Department will determine if a Reduced Pressure Principal is required.

Below is a suggested list of approved Reduced Pressure Principal assemblies that may be used.

Residential

Watts 009

Wilkins 975

Febco 825Y

Commercial

Watts 009

Wilkins 975

Febco 825

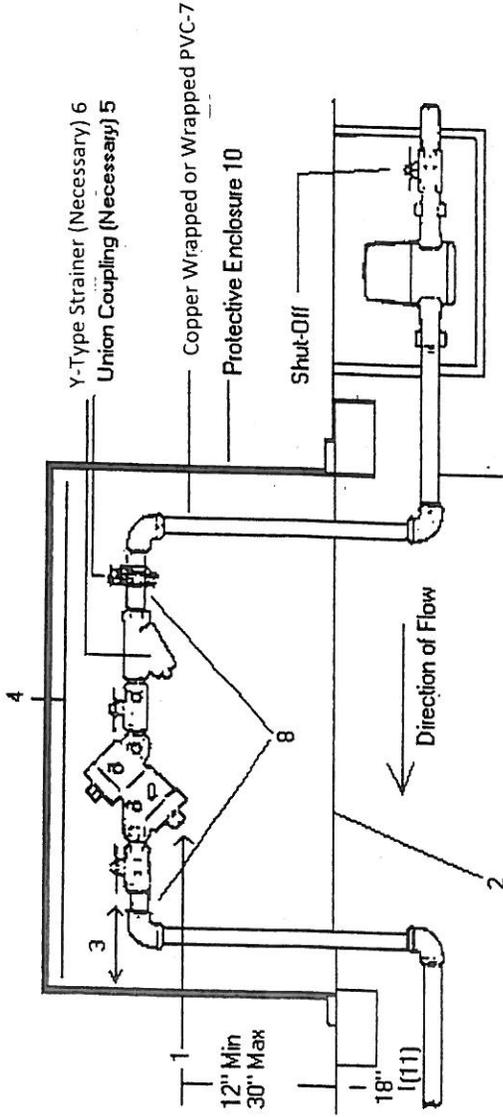
A backflow assembly installation diagram is being used for the proper installation of the device. If a backflow assembly is required, it must be an approved Reduced Pressure Principal Assembly. A certified backflow tester must test the backflow assembly upon installation and each year thereafter. The Town of Quartzsite Water Department must have a completed Backflow Prevention Assembly Test and Maintenance Record Form for the water to be turned on.

If you have any questions, please call the Town of Quartzsite Water Department at:
928-927-4333

REDUCED PRESSURE PRINCIPAL ASSEMBLY

3/4" - 2"

INSTALLATION GUIDELINES



9. Public water supply - No connections or tees between meter and backflow prevention Assembly

1. Allow adequate space for testing and maintenance
2. Adequate drainage should be provided.
3. Allow adequate room from shut off valve rotation.
4. Allow space for attaching fittings and hoses to test cocks.
5. Union coupling needed for removal of backflow or repair.
6. Y-type strainer used for protection of backflow device (necessary)
7. Riser uprights that are copper wrapped in a minimum 10 mil wrapping tape or PVC that may be wrapped. Risers shall be a minimum of 12" above and a maximum of 30" above grade.
8. Avoid dissimilar metals - electrolysis.
9. No physical connections between meter and backflow device.
10. Box cover - protection from extreme heat & freezing.
11. All new pipes shall be buried no less than eighteen inches (18").

WATER SUPPLY AND DISTRIBUTION SYSTEM CODE

- E. Water System Extensions. Water system extensions may be granted by the department at no cost to the user based on the financial viability of the extension and the projected user fees to be collected from additional system users connected to extension.

A water system extension is generally determined to be financially viable if that extension generates sufficient demand and subsequent connection fees and monthly user fees to cover associated development costs, debt retirement and its pro rata share of operation and maintenance costs as determined by the department.

- F. If the developer is required to pay for an oversized water system in order to facilitate future connections between the Town system and the newly developed property, the Town will enter into a development agreement with the developer which will outline reimbursement for the cost of the oversized portions of the system.

Section 17-1-9 Backflow Control Program – General Policy (Ord. 00-11/01-15/09-39)

A. Purpose

To protect the public water supply of the Town of Quartzsite from the possibility of contamination or pollution by isolating to the consumer's internal distribution system(s) or the consumer's private water system(s) contaminants or pollutants that could backflow into the public water systems; and

To provide for the maintenance of a continuing program of backflow prevention, which will systematically and effectively prevent the contamination or pollution of all potable water systems.

B. Responsibility

The Town of Quartzsite ("Water Department") shall be responsible for the protection of the public potable water distribution system from contamination or pollution due to the backflow of contaminants or pollutants through the water service connection. An approved backflow prevention assembly is required at the consumer's water service connection, for the safety of the water system, if any auxiliary water supply exists. The Water Department or its designated agent shall give notice in writing to said consumer to install such an approved backflow prevention assembly on the consumer's premises. The consumer shall immediately install such an approved backflow prevention assembly at the consumer's own expense; and, failure, refusal, or inability on the part of the consumer to install, have tested, and maintained said assembly, shall constitute grounds for discontinuing water service to the premises immediately until such requirements have been met satisfactorily. Commercial and industrial consumers shall be required to install an approved backflow assembly to protect the potable water distribution system from contamination or pollution.

WATER SUPPLY AND DISTRIBUTION SYSTEM CODE

C. Definitions

The Town of Quartzsite Water Department – The Town of Quartzsite (“Water Department”) is invested with the authority and responsibility for the implementation of an effective cross-connection control program and for the enforcement of the provisions of this ordinance.

Approved – The term “approved” as herein used in reference to a water supply shall mean a water supply that has been approved by the Town of Quartzsite Water Department.

The term “approved” as herein used in reference to an air gap, a reduced pressure principle backflow prevention assembly or other backflow prevention assemblies or methods shall mean approved by the Town of Quartzsite.

Auxiliary Water Supply – Any water supply on or available to the premises other than the Town of Quartzsite approved public water supply will be considered as an auxiliary water supply. These auxiliary waters may include water from another purveyor’s public potable water supply or any natural source(s) such as a well, spring, river, stream, harbor, etc., or used waters or industrial fluids. These waters may be contaminated or polluted or they may be objectionable and constitute an unacceptable water source over which the Water Department does not have sanitary control.

Backflow – The term “backflow” shall mean the undesirable reversal of flow of water or mixtures of water and other liquids, gases, or other substances into the distribution pipes of the potable supply of water from any source or sources. See terms Backsiphonage and Backpressure.

Backpressure – The term “backpressure” shall mean any elevation of pressure in the downstream piping system (by pump, elevation of piping, or stream and/or air pressure) above the supply pressure at the point of consideration, which would cause, or tend to cause, a reversal of the normal direction of flow.

Backsiphonage – The term “backsiphonage” shall mean a form of backflow due to a reduction in system pressure, which causes a sub-atmospheric pressure to exist at a site in the water system.

Backflow Prevention Assembly – An assembly or means designed to prevent backflow and includes:

Air–Gap – The term “air gap” shall mean a physical separation between the free flowing discharge end of a potable water supply pipeline and an open or non- pressure receiving vessel. An “approved air gap” shall be at least double the diameter of the supply pipe measured vertically above the overflow rim of the vessel-in no case less than 1 inch (2.54 cm).

Reduced Pressure Principle Backflow Prevention Assembly – The term “reduced pressure principle backflow prevention assembly” shall mean an assembly containing two independently acting approved check valves together with a hydraulically operating,

WATER SUPPLY AND DISTRIBUTION SYSTEM CODE

mechanically independent pressure differential relief valve located between the check valves and at the same time below the first check valve. The unit shall include properly located resilient seated test cock and tightly closing resilient seated shutoff valves at each end of the assembly. This assembly is designed to protect against a non-health (i.e. pollutant) or a health hazard (i.e. contaminant). This assembly shall not be used for backflow prevention of sewage or reclaimed water.

Contamination – The term “contamination” shall mean an impairment of the quality of water, which creates an actual hazard to the public health through poisoning or through the spread of disease by sewage, industrial fluids, waste, etc.

Cross-Connection – The term “cross connection” shall mean any unprotected actual or potential connection or structural arrangement between the public and a consumer’s potable water system and any other source or system through which it is possible to introduce into any part of the potable system any used water, industrial fluid, gas or substance other than the intended potable water with which the system is supplied. Bypass arrangements, jumper connections, removable sections, swivel or changeover devices and other temporary or permanent devices through which or because of which backflow can or may occur are considered to be cross-connections.

1) The term “direct cross-connection” shall mean a cross connection which is subject to both backsiphonage and backpressure.

2) The term “indirect cross-connection” shall mean a cross-connection which is subject to backsiphonage only.

Cross Connections-Controlled – A connection between a potable water system and a non-potable water system with an approved backflow prevention assembly properly installed and maintained so that it will continuously afford the protection commensurate with the degree of hazard.

Hazard, Degree of – The term “degree of hazard” shall mean either a pollutorial (non-health) or contamination (health) hazard and is derived from the evaluation of conditions within a system.

Hazard-Health – The term “health hazard” shall mean an actual or potential threat of contamination of a physical or toxic nature to the public potable water system or the consumer’s potable water system that would be a danger to health.

Hazard-Plumbing – The term “plumbing hazard” shall mean an internal or plumbing type cross-contamination in a consumer’s potable water system that may either be a pollutorial or contamination type hazard. This includes but is not limited to cross-connections to toilets, sinks, lavatories, wash trays and lawn sprinkling systems. Plumbing type cross-connections can be located in many types of structures including homes, apartment houses, hotels, and commercial or industrial establishments. Such a connection, if permitted to exist, must be properly protected by an appropriate type of backflow prevention assembly from a pollutorial or a contamination type hazard.

WATER SUPPLY AND DISTRIBUTION SYSTEM CODE

Hazard-Pollutional – The term “pollutional hazard” shall mean an actual or potential threat to the physical properties of the water system or the potability of the public potable water system but that would not constitute a health or system hazard, as defined. The maximum degree or intensity of pollution to which the potable water system could be degraded under this definition would cause a nuisance or be aesthetically objectionable or could cause minor damage to the system or its appurtenances.

Hazard-System – The term “system hazard” shall mean an actual or potential threat of sever danger to the physical properties of the public potable water system or of a pollutional or contamination hazard that would have a protracted effect on the quality of the potable water in the system.

Industrial Fluids – The term “industrial fluids” shall mean any fluid or solution which may be chemically, biologically or otherwise contaminated or polluted in a form or concentration which would constitute a health, system, pollutional or plumbing hazard if introduced into an approved water supply. This may include but not be limited to: polluted or contaminated used water; all types of process waters and used water originating from the public potable water system which may deteriorate in sanitary quality; chemicals in fluid form, planting acids and alkalies; circulated cooling waters connected to an opening cooling tower and/or cooling waters that are chemically or biologically treated and stabilized with toxic substances; contaminated by natural waters such as from wells, springs, streams, rivers, bays, harbors, seas, irrigation canals, or systems, etc.; oils, gases, glycerin, paraffin, caustic and acid solutions and other liquid and gaseous fluids used industrially, for other processes, or for firefighting purposes.

Pollution – The term “pollution” shall mean an impairment of the quality of the water to a degree which does not create a hazard to the public health but which does adversely and unreasonably affect the aesthetic qualities of such waters for domestic use.

Service Protection – The term “service protection” shall mean the appropriate type or method of backflow protection at the service connection, commensurate with the degree of hazard of the consumer’s potable water system.

Water-Potable – The term “potable water” shall mean any public water supply, that has been investigated and approved by the Arizona Department of Environmental Quality (“A.D.E.Q.”). The system must be operating under a valid health permit. In determining what constitutes an approved water supply, A.D.E.Q. has final judgment as to it’s potability.

Water-Non-Potable – The term “non-potable water” shall mean a water supply that has not been approved for human consumption by A.D.E.Q.

Water-Service Connection – The term “service connection” shall mean the terminal end of a service connection from the public potable water system, (i.e., where the Water Department may lose jurisdiction and sanitary control of the water at its point of delivery to the consumer’s water system). If a water meter is installed at the end of the service

WATER SUPPLY AND DISTRIBUTION SYSTEM CODE

connection, then the service connection shall mean the downstream end of the water meter.

Water-Used – The term “used water” shall mean any water supplied by the Water Department, from a public potable water system to a consumer’s water system, after it has passed through the service connection and is no longer under the control of the Water Department.

D. Water System

1. The water system shall be considered as made up of two parts: The Town of Quartzsite’s System and the Consumer’s System.
2. The Town of Quartzsite’s System shall consist of the source facilities and the distribution system; and shall include all those facilities of where the water system under the complete control of the Water Department, up to the point where the consumer’s system begins.
3. The source facilities shall include all components utilized in the production, treatment, storage, and delivery of water to the distribution system.
4. The distribution system shall included the network of conduits used for the delivery of water from the source facilities to the consumer’s system.
5. The Consumer’s System shall include those parts of the facilities beyond the termination of the Town of Quartzsite’s System that are utilized in conveying potable water to points of use.

E. Policy and Requirements

1. No water service connection to any premises shall be installed or maintained by the Quartzsite Water Department unless the water supply is protected as required by Town of Quartzsite laws and regulations and this Ordinance. Service of water to any premises shall be discontinued by the Quartzsite Water Department if a backflow prevention assembly required by this ordinance is not installed, tested and maintained, or if it is found that a backflow prevention assembly had been removed, bypassed, or if an unprotected cross-connection exists on the premises. Service will not be restored until such conditions or defects are corrected. Appropriate fees shall be assessed for the disconnection and reconnection of water service to the consumer.
2. The Consumer’s System should be open for inspection at all reasonable times to authorized representatives of the Town of Quartzsite Water Department, to determine whether unprotected cross-connections or other structural or sanitary hazards, including violations of these regulations, exist. When such a condition becomes known, the Quartzsite Water Department shall deny or immediately discontinue service to the premises by providing for a physical break in the service line until the consumer has corrected the condition(s) in conformance with the Town of Quartzsite Ordinances and Codes relating to plumbing and

WATER SUPPLY AND DISTRIBUTION SYSTEM CODE

water supplies and the regulations adopted pursuant thereto. Appropriate Fees shall be assessed for disconnection and reconnection of water service to the consumer.

3. An approved backflow prevention assembly shall also be installed on each vice line to a consumer's water system at or near the property line or immediately inside the building being served; but in all cases, before the first branch line leading off the service line wherever the following conditions exist:
 - A) In the case of premises having an auxiliary water supply, the public water system shall be protected against backflow from the premises by installing an approved backflow prevention assembly in the service line commensurate with the degree of hazard.
 - B) In the case of premises on which any industrial fluids or any other objectionable substance is handled in such a fashion as to create an actual or potential hazard to the public water system, the public water system shall be protected against backflow from the premises by installing an approved backflow prevention assembly in the service line commensurate with the degree of hazard. This shall include the handling of processed waters and waters originating from the water purveyor's system which have been subject to deterioration in quality.
 - C) In the case of premises having internal cross-connections that cannot be permanently corrected or protected against, or intricate plumbing or piping arrangements or where entry to all portions of the premises is not readily accessible for inspection purposes, making it impracticable or impossible to ascertain whether or not dangerous cross-connections exist, the public water system shall be protected against backflow from the premises by installing an approved backflow prevention assembly in the service line.
4. The type of protective assembly required by Section E, Subsection 3 (A), (B) and (C), shall depend upon the degree of hazard which exists as follows:
 - A) In the case of any premises where there is an auxiliary water supply as stated in Section E, Subsection 3 (A) of this section and it is not subject to any of the following rules, the Town of Quartzsite's system shall be protected by an approved air gap or an approved reduced pressure principle backflow prevention assembly.
 - B) In the case of any premises where there is any material dangerous to health, which is handled in such a fashion as to create an actual or potential hazard to the Town of Quartzsite's System, the Town of Quartzsite's System shall be protected by an approved air gap or an approved reduced pressure principle backflow prevention assembly. Examples of premises where these conditions may exist include sewage treatment plants, sewage pumping stations, chemical manufacturing plants, hospitals, mortuaries and plating plants.

WATER SUPPLY AND DISTRIBUTION SYSTEM CODE

- C) In the case of any premises where there are unprotected cross-connections, either actual or potential, the Town of Quartzsite's System shall be protected by an approved air gap or an approved reduced pressure principle backflow prevention assembly at the service connection.
 - D) In the case of any premises where, because of security requirements or other prohibitions or restrictions, it is impossible or impractical to make a complete in-plant cross-connection survey, the Town of Quartzsite's System shall be protected against backflow from the premises by either an approved air gap or an approved reduced pressure principle backflow prevention assembly on each service to the premises.
5. Any backflow prevention assembly required herein shall be a make, model and size approved by the Town of Quartzsite Water Department. An "Approved Backflow Prevention Assembly" shall mean an assembly that has been manufactured in full conformance with the standards established by the American Water Works Association (AWWA) entitled: AWWA/ANSI C511-07* Standard for Reduced Pressure Principle Backflow Prevention Assemblies;
 6. It shall be the duty of the consumer at any premises where backflow prevention assemblies are installed to have an initial field test performed by a certified backflow prevention assembly tester at the time of the initial installation and on a yearly basis herein after the initial installation.

Quartzsite Water Department shall notify the consumer when the annual test is required. Thirty (30) days shall be allowed for the consumer to complete the annual test. Failure to have the approved backflow assembly tested within the thirty (30) day time period shall result in a ten (10) day door notice of disconnection of service. Upon expiration of the ten (10) day notice without the completion and submission to the Water Department of a satisfactory annual test, service to the consumer shall be disconnected. Appropriate fees shall be assessed for disconnection and reconnection of water service to the consumer.

In those instances where the Quartzsite Water Department deems the hazard to be serious in the sole discretion of the Water Department, the Water Department may require field tests at more frequent intervals. These tests shall be at the expense of the consumer, and shall be performed by a certified tester approved by the Quartzsite Water Department. It shall be the duty of the Quartzsite Water Department, to see that these tests are made in a timely manner. The consumer may notify the Department in advance when the tests are to be undertaken so that an official representative may witness the field tests, if so desired. Backflow prevention assemblies shall be repaired, overhauled, or replaced at the expense of the consumer whenever said assemblies are found to be defective. Records of such tests, repairs, and overhauls shall be kept and copies filed with the Quartzsite Water Department.

WATER SUPPLY AND DISTRIBUTION SYSTEM CODE

The Quartzsite Water Department shall keep an inventory of all records for a period of at least three (3) years, for Arizona Department of Environmental Quality inspection purposes as required.

7. All presently installed backflow prevention assemblies which do not meet the requirements of this ordinance but were approved devices for the purposes described herein at the time of installation and which have been properly maintained, shall, except for the testing and maintenance requirements under section 6, be excluded from the requirements of these rules so long as the Quartzsite Water Department finds that they will satisfactorily protect the Town's water system. Whenever the existing device is moved from the present location or requires more than minimum maintenance or when the Quartzsite Water Department finds that the maintenance constitutes a hazard to health, the backflow prevention assembly shall be replaced by an approved backflow prevention assembly meeting the requirements of this ordinance or any related regulation.

All backflow prevention assemblies shall be installed to allow adequate space for testing and maintenance; provide for adequate drainage; allow adequate room for shut off valve rotation; allow space for attaching fittings and hoses to test cocks; include union coupling needed for removal of or repair to backflow; include y-type strainer used for protection of backflow device; include riser uprights that are copper wrapped in a minimum 10 mil wrapping tape or PVC that may be wrapped; risers shall be a minimum of 12" above and a maximum of 30" above grade; dissimilar metals shall be avoided to prevent electrolysis by using recommended PVC; consumers shall assure there are no physical connections between the meter and the backflow device; install a box cover to protect the backflow from heat & freezing; and install new pipe at a depth of no less than eighteen (18) inches.

8. The Town of Quartzsite Water Department shall submit to the Arizona Department of Environmental Quality and the local health authority a written cross-connection incident report within five business days of a cross-connection problem, which has resulted in the contamination of the public water system, including the information required in A.A.C.R.-18-4-115.H.
9. The Town of Quartzsite Water Department is authorized to make all necessary and reasonable rules and policies with respect to the enforcement of this ordinance. All such rules and policies shall be consistent with the provisions of this ordinance and shall be effective 30 days after being filed with the Town Clerk of the Town of Quartzsite.

Section 17-1-10 Unlawful Acts

- A. Any person who interferes with the officers or agents of the department in the discharge of their duties or who violates any of the provisions of this article is guilty of a misdemeanor. Such interference's include, but are not limited to:
 1. The tapping of a water main belonging to the system.