

VILLAGE OF ALAMANCE

Cross Connection & Backflow Prevention Ordinance

LEGISLATIVE PURPOSE/INTENT:

The purpose of this Cross Connection Control Ordinance is to define the authority of the Village of Alamance as the water purveyor in the elimination of all cross connections with its public potable water supply.

This ordinance shall apply to all users connected to the Village of Alamance’s public potable water supply regardless of whether the use is located within the city limits or outside the city limits.

This ordinance will comply with the Federal Safe Drinking Water Act (P.L. 93-523), the North Carolina State Administrative Code (Title 5A, Subchapter 8C), and the North Carolina State Building Code (Volume II) as they pertain to cross connections with the public water supply.

The Village is authorized by G.S. 160A-312 to protect and regulate any public enterprise system belonging to it by adequate and reasonable rules and regulations.

NOW, THEREFORE, BE IT ORDAINED BY THE VILLAGE OF ALAMANCE COUNCIL THAT:

Section 1. **Cross Connection and Backflow Prevention Ordinance**

(a) **Definitions: The following definitions shall apply in this ordinance:**

Air-Gap Separation – An unobstructed vertical distance through the atmosphere between the lowest openings from any pipe or faucet supply potable water to a tank, plumbing fixture, or other device and the flood level rim of the receptacle. An approved air-gap vertical separation shall be at least double the diameter of the supply pipe. In no case shall be air-gap be less than one (1) inch.

Approved backflow prevention device, method, or assembly – Any combination of mechanical devices, assemblies, or practices that eliminates or prevents backflow or cross-connection acceptable to the City’s Cross-Connection Control Office and approved to meet the standards of the University of Southern California Foundation of Cross-Connection Control and Hydraulic Research (USFCCHR) and the American Society of Sanitary Engineers (ASSE).

Approved water source – Water that has been approved by the Village of Alamance that meets or exceeds federal or state regulations.

Auxiliary water supply – Water supply to any premise other than that of the approved water source. These auxiliary waters may include water from another public potable water supply or any natural source such as a well, spring, river, stream, etc., or “used waters” or “industrial fluids.” They may be polluted or contaminated, or

objectionable and constitute an unacceptable water source over which the city does not have sanitary control.

Backflow – The undesirable reversal of flow of water or mixtures of water and other liquids, gases, or other substances into the distribution pipes of the consumer or public potable water system from any source or sources.

Backflow Prevention Assembly – Any assembly used for containment and/or isolation a purpose that has been shown to meet the standards and specifications as set forth by the Village of Alamance’s Cross Connection Control Office.

Backflow Prevention Assembly – Type – An assembly used to prevent backflow into a consumer or public potable water system. The type of assembly used shall be based on the degree of hazard either existing or potential (as defined herein). The types are:

- 1) Double Check Valve Assembly (DCVA)
- 2) Double Check Detector Assembly (Fire system) (DCDA)
- 3) Pressure Vacuum Breaker (PVB)
- 4) Reduced Pressure Principle Assembly (RP)
- 5) Reduced Pressure Principle-Detector Assembly (Fire System) (RPDA)

Backflow Prevention Assembly – Unapproved – Shall mean an assembly that has been investigated by the Village’s Cross Connection Control Office and has been determined to be unacceptable for installation within the Village’s water system. Consideration for disapproval and removal from the “Approved List” shall be based upon, but not limited to, the following criteria: a) poor performance standards (i.e., significant failure rate); b) lack of or unavailability of repair parts, and/or, c) poor service or response from assembly’s factory representative(s).

Back-Pressure Backflow – A reversed flow of water created by pressure from the customer’s water system. This condition may be caused by elevated tanks, circulation pumps, boilers, or by any other means by which pressure is or could be greater than the supply pressure.

Back-Siphonage Backflow – Backflow caused by a negative pressure (vacuum) being created in the supply line with the backflow source subject to atmospheric pressure. Fire fighting, water main flushing, main breaks or any means by which supply pressure is reduced may cause this condition.

Bypass Loops – Loops installed to circumvent an installed backflow preventer (including detector loops on check valves.) These loops are prohibited unless the loops are equipped with an approved backflow preventer of the same type used on the main supply line.

Certified Tester – A person who has proven his/her competency to test, repair, overhaul, and make reports on backflow prevention assemblies as evidenced by successful completion of a training program approved by the Cross Connection Control Office.

Check Valve – A device that is drip-tight in the normal direction of flow when the inlet pressure is at least one (1) psi and the outlet pressure is zero. The check valve shall permit no leakage in a direction reversed to the normal flow. The closure element (clapper, poppet, or other design) shall be internally spring loaded to promote rapid and positive closure. An approved check valve is just one component of an approved backflow prevention assembly – i.e. pressure vacuum breaker, double check valve

assembly, double check detector assembly, reduced pressure principle assembly, or reduced pressure detector assembly.

Consumer – Any person, firm, or corporation responsible for any property at which water from the Village of Alamance’s public water system is received. In the absence of other parties or the failure of other parties to accept the responsibilities herein set forth, the owner of record shall be ultimately responsible.

Containment – Preventing the contamination/pollution of the public potable water supply by installing an approved backflow prevention assembly and/or method at the service connection.

Contamination – An impairment of the quality of the water which creates a potential or actual hazard to the public health through the introduction of hazardous or toxic substances or through the spread of disease by sewage, industrial fluids, or waste.

Continuous Pressure – A condition in which upstream pressure is applied continuously (12 hours or more) to an assembly or fixture.

Cross Connection – Any physical connection(s) between potable and non-potable water or water of an unknown origin.

Cross Connection Control Official – Personnel of the Village of Alamance employed to assist in the administration of the Cross-Connection Control Program utilizing site inspections and tests for the determination of hazards and type(s) of backflow protection that shall be required.

Direct Cross Connection – Any arrangement of pipes, fixtures, or devices connecting to a potable water supply to a non-potable source which is permanent in nature, for example, a boiler feed line.

Director – Village of Alamance, Director of Public Utilities, his successor or designee(s).

Double Check Valve Assembly – A mechanical assembly made up of two (2) independently acting spring loaded approved check valves, including two (2) tightly closing shut off valves, and four test cocks. The unit shall include tightly closing shut-off valves located at each end of the assembly and each assembly shall be fitted with properly located test cocks. This assembly shall meet the approval of the Village’s Cross-Connection Control Office standards and shall be used only for non-health hazards (i.e. pollutants).

Double Check Detector Assembly – A double check valve assembly, with a specific bypass water meter and a meter-sized approved double check valve assembly. The meter shall register in U.S. gallons accurately for only very low rates of flow (up to 3 gallons per minute) and shall show a registration for all rates of flow. The unit shall include tightly closing shut-off valves located at each end of the assembly and each assembly shall be fitted with properly located test cocks. This assembly shall be used to protect against a non-health hazard on fire line systems.

Dual Check Valve – A self-closing device designed to permit flow in one direction and close if there is a reversal of flow. A dual check valve is not an in-line testable device.

Fire System – A system of piping which may include sprinklers, hose connections, hydrants, or fixed spray nozzles that may be wet or dry, open or closed for the use of suppressing fires.

Hazard - Degree of – The evaluation of conditions within a system which can be classified as either a “pollution” (non-health) or a “contamination” (health) hazard.

Hazard – Health An actual or potential threat to the quality of the public potable water system. If introduced into the public water supply system, it could be a nuisance to water customers, but would not adversely affect human health.

Health Agency – The North Carolina Department of Environment and Natural Resources (division of Environmental Health) – NCDENR/DEH.

Indirect Cross Connection – Any arrangement of pipes, fittings, fixtures that may be temporary in nature (i.e. garden hose) connecting a potable water supply to a non-potable supply.

Industrial Fluids – Any fluid or solution which may be chemically, biologically, or otherwise contaminated or polluted in a form or concentration such as would constitute a health, or non-health hazard if introduced into a public or consumer potable water system. Such fluids may include, but are not limited; process waters; chemicals in fluid form; acids and alkalis; oils, gases, etc.

Interconnection – A connection between the Village’s potable water and an uncontrollable source of water, such as a private well. Interconnections are strictly prohibited by this ordinance and State codes.

Isolation – The act of confining a localized hazard within a consumer’s water system by install approved backflow prevention assemblies, or devices. The Village of Alamance may make recommendations, upon facility inspection, as to the usage of isolation devices/assemblies, but does not assume or have responsibility whatsoever for such installations.

Isolation Prevention Device/Assembly – A device/assembly or methods used for isolation purposes that has been shown to meet the standards of the Village of Alamance’s Cross Connection Control Office.

Non-Potable Water – Water that does not meet drinking water standards and is considered unsafe for consumption.

Pollution – An impairment of the water quality to a degree that it does not create an actual hazard to the public health, but does adversely and unreasonably affect the aesthetic qualities of such waters for domestic use.

Potable water – A source of drinking water, as certified by the Village in accordance with state and federal regulations, which has been approved for human consumption.

Premises – A building, complex, golf course, median, residence, or any other location that receives water provided by the Village of Alamance.

Public Potable Water System – Any publicly or privately owned water system operated as a public utility, under a current North Carolina Department of Environment and Natural Resources permit, to supply water for public consumption or use. This system will include all sources and facilities, between the source and the point of delivery such as valves, pumps, pipes, conduits, tanks, receptacles, fixtures,

equipment, and appurtenances used to produce, convey, treat, or store potable water for public consumption or use.

Reduced Pressure Principle Assembly – An assembly containing within its structure a minimum of two (2) independently acting spring loaded, approved check valves, with a hydraulically operating, mechanically independent, pressure differential relief valve located between the check valves. The first check valve reduces the supply pressure a predetermined amount so that during normal flow and at cessation of normal flow, the pressure between the checks shall be at least two (2) pounds less than the supply pressure. In case of leakage of either check valve, the pressure differential relief valve shall operate by discharge to atmosphere to maintain the pressure between the checks less than the supply pressure. The unit shall include tightly closing shut-off valves located at each end of the assembly and each assembly shall be fitted with properly located test cocks. This assembly shall be used to protect against health hazard (i.e. contaminant).

Reduced Pressure Principle-Detector Assembly – A specially designed assembly composed of a line-sized approved reduced pressure principle backflow prevention assembly with a specific bypass water meter and a meter-sized approved reduced pressure principle backflow prevention assembly. The meter shall register in U.S. gallons accurately for only very low rates of flow (up to 3 gallons per minute) and shall show a registration for all rates of flow. This assembly shall be used on fire protection systems.

Service Connection – A connection from the public potable water system to the consumer's water system.

Thermal Expansion – Expansion attributed to heating of water in an enclosed container such as a water heater.

Vacuum Breaker – Atmospheric Type – A device containing a float-check, a check seat, and an air inlet port. The flow of water into the body causes the float to close the air inlet port. When the flow of water stops the float falls and forms a check valve against back-siphonage and at the same time opens the air inlet port to allow air to enter and satisfy the vacuum. A shut-off valve immediately upstream may be an integral part of the device. An atmospheric vacuum breaker is designed to protect against a non-health hazard (isolation protection only) under a back-siphonage condition only. **These devices are not approved in the Village's service area except in special conditions (i.e. lab sinks with a six (6) inch clearance above the highest outlet).**

Vacuum Breaker – Pressure Type – An assembly containing an independently operating internally spring-loaded check valve and an independently operating spring-loaded air inlet valve located on the discharge side of the check valve. Each end of the assembly is to be equipped with properly located approved test cocks and tightly closing approved shut-off valves. This assembly is designed to protect against a health hazard (i.e. contaminant) under a back-siphonage condition only.

Water Distribution System – The Village's water system, owned and operated as a public enterprise under a valid health permit, and supplying water for domestic purposes. This system will include all sources, facilities, and appurtenances between the source and the point of delivery, such as valves, pumps, conduits, mains, tanks, and equipment used to convey, treat, and store potable water for public consumption or use.

Water Purveyor – The owner or operator of a public potable water system, providing an approved water supply to the public.

Water Supply – Approved – Any public potable water supply that has been investigated and approved by the North Carolina Department of Environmental and Natural Resources. The system must be operating under a valid health permit, in determining what constitutes an approved water supply, the North Carolina Division of Health Services has reserved the final judgment as to its safety and potability.

Water Supply – Unapproved – A water supply that has not been approved for human consumption by the North Carolina Department of Environment and Natural Resources.

Water – Used – Any water supplied by a water purveyor from a public water system to a consumer's water system after it has passed through the point of delivery and is no longer under the control of the water purveyor.

(b) **Intent, Purpose and Control:**

(1) The intent of this ordinance is to eliminate the potential hazards to the potable water within the water main and water supply systems. It is the intent of this ordinance to provide for the conveyance of potable water through the use of backflow prevention and cross-connection control practices. It is also the intent to apply the principle that the degree of protection will be commensurate with the degree of hazard.

(2) The purpose of this ordinance is:

(a) To protect the public potable water supply of the Village of Alamance against actual or potential contamination by isolating and or containing, within the consumer's water system, contaminants or pollutants which could, under adverse conditions, backflow through uncontrolled cross connections into the public water system.

(b) To eliminate or control existing cross-connections and backflows of all types or any other source of water or process water used for any purpose whatsoever which may jeopardize the safety of the public potable water supply of the Village of Alamance.

(c) To provide a continuing inspection program which will systematically and effectively control all actual or potential cross connections which may be installed in the future.

(d) To maintain continuous testing and maintenance programs ensuring proper execution of this ordinance.

(c) **Responsibilities**

(1) **Health Agency** – The North Carolina Department of Environment and Natural Resources (Division of Environmental Health) has the responsibility for promulgating and enforcing laws, rules, regulations, and policies to be followed in carrying out an effective Cross Connection Control Program. The public water supply section of the Division of Environmental Health also has the primary responsibility of insuring that the water purveyor operates the public potable water system free of actual or potential sanitary hazards, including unprotected cross connections. They have the

further responsibility of insuring that the water purveyor provides an approved water supply at the service connection to the consumer's water system and, further, that the purveyor requires the installation, testing, and maintenance of an approved backflow prevention assembly on the service connection.

(2) **Water Purveyor** – The Village of Alamance is primarily responsible for the prevention of contamination and pollution of the public water system. Such responsibility begins at the point of origin of the public water supply and includes all of the public water distribution system, and ends at the point designated under the Safe Drinking Water Act. In addition, the water purveyor shall exercise reasonable vigilance to ensure that the consumer has taken the proper steps to protect the public potable water system. To ensure that the proper precautions are taken the Village is required to determine the degree of hazard or potential hazard to the public potable water system, to determine the degree of protection required, and to ensure proper containment protection through a on-going inspection program.

When it is determined that a backflow prevention assembly is required for the protection of the public system, the Director shall require the consumer, at the consumer's expense, to install an approved backflow prevention assembly at each service connection. The Consumer shall be responsible to test immediately upon installation and every 6-12 months thereafter, to properly repair and maintain such assembly or assemblies and to keep adequate records of each test and subsequent maintenance and repair, including materials and/or replacement parts. All rubber parts, disks, and springs must be replaced every five (5) years.

(3) **Plumbing Inspections Department** – The Plumbing Inspections Department of the Village of Alamance and Alamance County have the responsibility to review building plans and inspect plumbing as it is installed, and they have the explicit responsibility of preventing cross connections from being designed and built into the plumbing system within their jurisdiction. Where the review of building plans suggest or detect the potential for cross connections as an integral part of the plumbing system, the plumbing inspector has the responsibility, under the North Carolina Building Code, to require that such cross connections be either eliminated or provided with backflow preventers approved by the Village's Cross Connection Control Officer.

(4) **Consumer** – The consumer shall have the primary responsibility of preventing contaminants and pollutants from entering the private potable water system(s) or the public potable water system. The Consumer's responsibility starts at the point of delivery from the public potable water system and includes all of the water system(s). The consumer, at his or her own expense, shall install, operate, test and maintain approved backflow prevention assemblies as directed by the Village. The consumer shall maintain accurate records of tests and repairs made to backflow prevention assemblies and shall maintain such records for a minimum of three (3) years. The records shall be on forms approved by the Village's Cross Connection Control Office and shall include the list of materials or replacement parts used. Following any repair, overhaul, re-piping or relocation of any assembly the consumer shall have it tested to insure that it is in good operating condition and will prevent backflow. A certified backflow prevention assembly tester shall perform tests, maintenance, and repairs of backflow prevention assemblies.

(5) **Certified Backflow Prevention Assembly Tester** – The tester will be responsible for making competent testing and for repairing or overhauling backflow prevention assemblies and making reports of such repair to the consumer and responsible authorities on forms approved by the Village's Cross Connection Control Office. The tester shall include the list of materials or replacement parts used. The tester shall be equipped with and be competent to use all tools and gauges necessary to properly test, repair, and maintain backflow prevention assemblies. It will be the

tester's responsibility to insure original manufactured parts are used in the repair of the backflow prevention assembly. It will be the tester's further responsibility not to change the design, material, or operational characteristics of an assembly during repair or maintenance without prior approval of the Village's Cross Connection Control Office. A certified tester shall perform the work and shall be responsible for the competency and accuracy of all tests and reports. A certified tester shall provide a copy of all test and repair reports to the consumer and the Village's Cross Connection Control Office within ten (10) business days of any completed test or repair work as scheduled by the Cross Connection Control Office. A certified tester shall maintain such records for a minimum of three (3) years.

All certified backflow prevention assembly testers must obtain and employ backflow prevention assembly test equipment that has been evaluated and/or approved by the Village's Cross Connection Control Officer. All test equipment shall be checked for accuracy annually (at a minimum), calibrated, if necessary, and certified to the Village's Cross Connection Control Officer as to such calibration, employing an accuracy/calibration method acceptable to the Village's Cross Connection Control Officer.

All certified backflow prevention assembly testers must become re-certified every two (2) years through an approved backflow prevention certification program as set forth by the Village's Cross Connection Control Officer.

(6) **The Village's Cross Connection Control Officer** – The Cross Connection Control Officer shall be the personnel designated by the Village to enforce the provisions of this section to ensure the potability of the consumer's water supply. The enforcement of this program shall extend to the last free flowing trap of the consumer's premises. The Cross Connection Control Officer shall maintain records of all inspections and tests performed on all premises where backflow prevention is installed. This responsibility extends to all new installations, alterations, and/or repair of existing premises to ensure that adequate backflow prevention is employed. The Cross Connection Control Officer may periodically offer re-certification training to certified backflow assembly testers and serve as an information resource to the consumer(s), and to the public.

(d) **Right of Entry**

Authorized representative(s) of the Village of Alamance shall have the right to enter, upon presentation of proper credentials and identification, any building, structure, or premises during normal business hours, or at any time during an emergency, to perform any duty imposed by this Ordinance. These duties may include sampling and testing of water, and inspections and observations of all piping systems connected to the public water supply. Where a user has security measures in force requiring proper identification and clearance before entry into their premises, the user shall make necessary arrangements with the security guards so that upon presentation of suitable identification, Village personnel will be permitted to enter, without delay, for the purpose of performing their specific responsibilities. Refusal to allow entry for these purposes may result in discontinuance of water service and will automatically classify that premises as a health hazard.

Upon request, the consumer shall furnish to the Village any pertinent information regarding the water supply system on such property where cross connection and backflow are deemed possible.

(e) **Elimination of Cross Connection**

When cross connections are found, the owner, his agent, the occupant, or the tenant will be notified in writing to disconnect the same within the time limit established by the Village of Alamance. The degree of protection required and the maximum time allowed for compliance will be based upon the potential degree of hazard to the public water supply. The maximum time limits are as follows:

(1) Cross connections with private wells or other auxiliary water supplies must disconnect immediately.

(2) All industrial and commercial facilities not identified as a “health hazard” shall be considered non-health hazard facilities. All non-health hazard facilities must install, as a minimum containment assembly, a double check valve assembly within ninety (90) days.

(3) If, in the judgment of the Village’s Cross Connection Control Officer, an imminent health hazard exists, water service to the building or premises where a cross connection exists may be terminated unless an air gap is immediately provided, or the cross connection is immediately eliminated.

(f) **Facilities Requiring Protection**

Approved backflow prevention assemblies shall be installed on the service line to any premises that the Village has identified as having a potential for backflow of contaminated or used water.

(1) Water mains served by the Village of Alamance but not maintained by the Village should be considered cross connections with degree of hazard to be determined by the Director. Degree of protection shall be based on degree of hazard.

(2) For premises where, due to security requirements or other prohibitions (research & development), the Village does not have access for a complete cross connection evaluation, an approved reduced pressure principle assembly shall be required as minimum protection.

(3) Premises having fire protection systems connected with the public water system shall be protected with an approved double check valve assembly as a minimum requirement. All fire systems using booster pumps, chemical agents, or additives to prevent freezing shall at a minimum be protected by an approved reduced pressure principle assembly.

(4) Any connection which requires a meter one inch (1”) or greater, or services multifamily units.

(5) No person shall fill special use tanks or tankers containing pesticides, fertilizers, or other toxic chemicals or their residues from the public water system except at a location equipped with an air gap or an approved reduced pressure principle backflow prevention assembly properly installed on the public water supply.

(6) No person, firm, or agency may connect to the Village’s fire hydrant system without approved backflow prevention. Agency refers to Village agencies as well as outside agencies.

The following types of facilities or services have been identified by the Village as having a potential for backflow of non-potable water into the public water supply

system; therefore an approved backflow prevention assembly will be required on all such services according to the degree of hazard present. Other types of facilities or services not listed below may also be required to install approved backflow prevention assemblies if determined necessary by the Village. As a minimum requirement, all commercial services will be required to install a Double Check Valve Assembly, unless otherwise listed below.

- DCVA** = Double Check Valve Assembly
- RP** = Reduced Pressure Principle Assembly
- DCDA** = Double Check Detector Assembly
- AG** = Air Gap
- RVB** = Pressure Vacuum Breaker
- RPDA** = Reduced Pressure Detector Assembly

- (1) Amusement Parks: (RP)
- (2) Automotive Services Stations: Dealership, etc.
 - (a) No Health Hazard: (DCVA)
 - (b) Health Hazard: (RP)
- (3) Auxiliary Water Systems:
 - (a) Approved Public/Private Water Supply: DCVA
 - (b) Unapproved Public/Private Water Supply: AG
 - (c) Well Systems/Private: AG
 - (d) Used Water and Industrial Fluids: RP
- (4) Bakeries:
 - (a) No Health Hazard: DCVA
 - (b) Health Hazard: RP
- (5) Beauty Shops/Barber Shops:
 - (a) No Health Hazard: DCVA
 - (b) Health Hazard: RP
- (6) Beverage Bottling Plants: RP
- (7) Breweries: RP
- (8) Buildings: Hotels, apartment houses, public and private buildings, or other structures
 - having unprotected cross connections:
 - (a) Under five (5) stories – No Health Hazard: DCVA
 - (b) Under five (5) stories – Health Hazard: RP
 - (c) Over five (5) stories – All: RP
- (9) Canneries, Packing Houses, and Rendering Plants: RP
- (10) Chemical Plants – Manufacturing, processing, compounding or treatment: RP
- (11) Chemically Contaminated Water Systems: RP
- (12) Commercial Car-Wash Facilities: RP
- (13) Commercial Greenhouses: RP
- (14) Commercial Sales Establishments: department stores, malls, etc.
 - (a) No Health Hazard: DCVA
 - (b) Health Hazard: RP
- (15) Concrete/Asphalt Plants: RP
- (16) Dairies and Cold Storage Plants: RP
- (17) Film Laboratories: RP
- (18) Fire Systems:
 - (a) No Health Hazard: DCDA
 - (b) Health Hazard (Booster Pumps, Foam, Antifreeze Solution, Etc.) RP
- (19) Hospitals, Medical Buildings, Sanitariums, Morgues, Mortuaries, Autopsy Facilities, Nursing and Convalescent Homes, Medical Clinics, and Veterinary Hospitals: RP
- (20) Industrial Facilities:
 - (a) No Health Hazard: DCVA
 - (b) Health Hazard: RP

- (21) Laundries
 - (a) No Health Hazard: DCVA
 - (b) Health Hazard (i.e. Commercial Laundries, Dry Cleaners): RP
- (22) Lawn Irrigation systems:
 - (a) Health Hazard/Back-Siphonage: RP
 - (b) Health Hazard/Back-Pressure (Booster Pumps, Chemical Systems), RP
- (23) Metal manufacturing, Cleaning, Processing & Fabricating Plants: RP
- (24) Mobile Home Parks:
 - (a) No Health Hazard: DCVA
 - (b) Health Hazard: RP
- (25) Motion Picture Studios: RP
- (26) Oil & Gas productions, Storage or Transmission Properties: RP
- (27) Paper & Paper Products Plants: RP
- (28) Pest Control (exterminating – fumigating): RP
- (29) Plating Plants & Facilities: RP
- (30) Power Plants: RP
- (31) Radioactive Materials or Substances – Plants or Facilities Handling: RP
- (32) Restaurants:
 - (a) No Health Hazard: DCVA
 - (b) Health Hazard: RP
- (33) Restricted, Classified, or Other Closed Facilities: RP
- (34) Rubber Plants (natural or synthetic): RP
- (35) Sand & Gravel Plants: RP
- (36) Sanitary & Storm Drain Systems: RP
- (37) Schools and Colleges RP
- (38) Sewage Treatment Plants: RP
- (39) Swimming Pools: RP
- (40) Waterfront & Port Facilities & Industries: RP
- (41) Water Treatment Facilities: RP

All backflow prevention assemblies/devices shall meet the testing and installation requirements set by the Village’s Cross Connection Control Officer for their specified use prior to installation.

(g) **Installation of Assemblies:**

(1) All backflow prevention assemblies shall be installed in accordance with the Village’s Cross Connection Control requirements regarding minimum clearances of twelve inches (12”) above ground, twenty-four inches (24”) on all sides and a maximum height of between thirty to sixty inches (30” – 60”), etc.

(2) All new construction plans and specifications, when required by the North Carolina Building Code and the North Carolina Division of Environmental Health (NCDENR), shall be made available to the Village’s Cross Connection Control Officer for review and approval, and to determine the degree of hazard. New installation of testable backflow prevention assemblies shall require protection against weather and vandalism; this may include a concrete foundation for covers to be installed with anchors at the owner’s expense.

(3) Ownership, installation, testing, and maintenance of the assembly shall be the responsibility of the customer.

(4) All double check valve assemblies must be installed above ground. The

Village's Cross Connection Control Officer may grant variances on a case by case basis. Double check valve assemblies may be installed in a vertical position with prior approval from the Village's Cross Connection Control Officer, provided the flow of water is in an upward direction.

(5) When it is not possible to interrupt water service, provisions shall be made for a "parallel installation" of backflow prevention assemblies; the parallel assembly shall be the same type as on the main line. The Village will not accept an unprotected bypass around a backflow preventer when the assembly is in need of testing, repair, or replacement.

(6) Reduced pressure principle assemblies must be installed in a horizontal position and in a location in which no portion of the assembly can become submerged in any substance under any circumstances (pit and/or below grade installations are prohibited).

(7) The installation of a backflow prevention assembly that is not approved must be replaced with an approved backflow prevention assembly.

(8) The installer is responsible to make sure a backflow prevention assembly is working properly upon installation and is required to furnish the following information to the Village's Cross Connection Control Officer within fifteen (15) days after a reduced pressure principle backflow preventer (RP), double-check valve assembly (DCVA), pressure vacuum breaker (PVB), double check-detector assembly (DCDA), or reduced pressure principle assembly (RPDA) is installed:

- (a) Service Address where assembly is located
- (b) Owner (and address, if different from service address)
- (c) Description of assembly's location (specific, i.e. North-east corner of front entrance)
- (d) Date of installation
- (e) Installer (include name, plumbing company represented, plumber's license number, and plumbing permit number).
- (f) Type of assembly, size of assembly
- (g) Manufacturer, model number, serial number
- (h) Test results/report

(9) The consumer shall, upon notification, install the appropriate containment assembly not to exceed the following time frame:

Health Hazard.....60 days
Non-Health Hazard.....90 days

All facilities which pose a health hazard to the potable water system must have a containment assembly in the form of a reduced pressure principle backflow prevention assembly installed within sixty (60) days or immediately, if it is determined that there is an imminent threat to the water distribution system.

All backflow prevention assemblies/devices shall be installed in an area **easily accessible** for testing and repair(s).

(h) **Testing, Inspection, and Repair of Assemblies**

(1) The frequency of inspection and re-inspection shall be set by the

Director, and shall be made by personnel of the Village's Cross Connection Control Officer. Inspections shall be made of properties served by the public water supply where cross-connections with the public water supply are deemed possible. The interval between inspections will be commensurate with the degree of hazard that will be determined by the Cross Connection Control Officer.

(2) Testing shall be made by a certified backflow prevention assembly tester. A record of all testing and repairs is to be retained by the customer. Copies of the records, after the completion of any testing and/or repair work, must be provided to the Village as scheduled by the Village's Cross-Connection Control Office. In no case shall the time exceed thirty (30) days from receipt of notification by the Cross Connection Control Office. Testing shall be at the expense of the property owner or occupant of the premises when the device is installed.

(3) Any time that repairs are deemed necessary, whether through annual inspections or required testing or by routine inspections by the owner or the Village, these repairs must be completed within a specified time in accordance with the degree of hazard in no case shall this time period exceed:

Health Hazard.....14 days
Non-Health Hazard Facilities.....21 days

(4) All certified backflow prevention assembly testers must obtain and employ backflow prevention assembly test equipment which has been evaluated and/or approved by the Village's Cross Connection Control Officer. All test equipment shall be checked for accuracy annually (at a minimum), calibrated, if necessary, and certified to the Village as to such accuracy/calibration, employing a calibration method acceptable to the Village's Cross Connection Control Officer.

(5) It shall be unlawful for any customer or certified tester to submit any record to the Village that is false or incomplete. It shall be unlawful for any customer or certified tester to fail to submit to the Village any record which is required by this Ordinance. Such violations may result in any of the enforcement actions outlined in Section 2 of this Ordinance.

(i) **Cross-Connection Prohibited**

(1) No person shall connect or cause to be connected any supply of water not approved by the State of North Carolina to the water system supplied by the Village, unless allowed by the Director. Any such connections allowed by the Director must be in conformance with Title 10, Chapter 10, Subchapter 10-D, Subparagraph, 1006 (North Carolina Administrative Code, rules governing water supplies).

(2) The owner, manager, supervisor, or person in charge of any installation which remains in non-compliance after the time prescribed in Section 1(g)(9) shall be considered in violation of this Ordinance and may be assessed a civil penalty by the Cross Connection Control Office of the Public Utilities Department. The citation or notice of assessment shall specify the nature of the violation and the provision(s) of this Ordinance violated. This notice shall further notify the offender that the penalty as set forth in Section 2 of this Code is to be paid to the Village of Alamance c/o Cross Connection Control Office within ten (10) days of receipt of the notice.

(3) If in the judgment of the Village, any owner, manager, supervisor, or person in charge of any installation found to be in non-compliance with the provision of this Ordinance, neglects their responsibility to correct any violation, it shall result in discontinuance of water service until compliance is achieved.

(4) Failure of a customer or certified tester to submit any record required by this Ordinance, or the submission of falsified reports/records may result in a civil penalty as provided in Section 2 of this Code. If a certified backflow prevention assembly tester submits falsified records to the Village's Cross Connection Control Office, the Village shall take the necessary actions to revoke certification to test backflow prevention assemblies within the potable water system for a time period no less than one (1) year. The tester will then be required to complete an approved certification course to acquire a new certification. Falsification of records/reports after becoming recertified shall result in the permanent revocation of backflow testing certification, in addition to a civil penalty (as stated herein).

(5) The Director shall administer enforcement of this program.

(6) Requests for extension of time shall be made in writing to the Director. All other appeals shall be made in accordance with the following procedures:

(a) **Adjudicatory Hearings:** A customer assessed a civil penalty under this section shall have the right to an adjudicatory hearing before a hearing officer designated by the Director upon making written demand identifying the specific issue(s) to be contended. This written demand must be made within ten (10) days following notice of final decision to assess a civil penalty. Unless such demand is made within the specified time frame, the decision on the civil penalty assessment shall be final and binding.

(b) **Appeal Hearings:** Any decision of the Village hearing officer made as a result of an adjudicatory hearing held under paragraph (a) above of this subsection may be appealed to the Board of Aldermen upon filing a written demand within ten (10) days of receipt of notice of the decision. Hearings held under this section shall be conducted in accordance with the Board's hearing procedures. Failure to make written demand within the time specified herein shall bar for quasi-judicial hearings further appeals.

(c) **Official Record:** When a final decision is issued under subsection (b) above, the Village Council shall prepare an official record of the case that includes:

- (i) All notices, motions, and other like pleadings;
- (ii) A copy of all documentary evidence introduced;
- (iii) A certified transcript of all testimony taken, if testimony is transcribed. If testimony is not transcribed, then a narrative summary of any testimony taken.
- (iv) A copy of the final decision of the Board of Aldermen.

(d) Any customer against whom a final decision of the Village of Alamance is entered, pursuant to the hearing procedure under subsection (b) above, may appeal the order or decision by filing a written petition for judicial review within thirty (30) days after receipt of notice by certified mail of the order or decision with the Superior Court of Alamance County, along with a copy to the Village.

(e) If in the opinion of the Director an imminent threat to health

exists due to a cross-connection, water severance will result until the cross connection has been corrected by implementation of approved backflow assembly or elimination of the cross connection.

Section 2. A violation of any provisions of this ordinance shall subject the offender to a civil penalty of \$100.00. A separate penalty may be applied for each day the violation continues. An additional fee of \$100.00 shall be applied for failure to pay the original penalty when due. Penalties may be collected in a civil action instituted in the Alamance County Courts. The Village shall also be authorized to terminate water service to any consumer who willfully fails to comply with this Ordinance.

Section 3. All ordinances or parts of ordinances in conflict with this ordinance are hereby repealed to the extent of such conflict.

Page 15 Cross Connection Control Ordinance

Section 4. If any section, subsection, paragraph, sentence, clause, phrase or portion of this ordinance is for any reason held invalid or unconstitutional by any court of competent jurisdiction, such portion shall be deemed severable and such holding shall not affect the validity of the remaining portions hereof.

Section 5 This ordinance shall be effective immediately upon its adoption.

Adopted the 25th day of October, 2004.

Mayor: Cathera R. Bundren

Attorney: Charles Bateman, Esq.

Attest: Tammy W. Speicher, Clerk