

**A RESOLUTION AMENDING ARTICLE IV, CHAPTER 24 OF THE  
MOORESVILLE TOWN CODE**

Be it ordained by the Board of Commissioners of the Town of Mooresville:

**Section 1. Article IV of Chapter 24, is rewritten and replaced in its entirety to read as follows:**

**Sec. 24-90. - Purpose and objectives.**

(a) The purpose of this article is to reduce the risk of waterborne disease, organism, or contaminant from entering the Town of Mooresville water system through either:

(1) The installation of backflow prevention devices whenever a new service connection to a property is installed or when a change in occupancy/change in use is applied for.

(2) The reduction of the risk of cross-connections whenever a hazard is found to exist through either (i) a site survey, (ii) whenever the type of use is changed, or, (iii) the plans for the modification of the water service connections are subject to review and approval by the town.

(3) The reduction of the risk of cross-connections according to the degree of hazard posed by the facility to which water service is provided.

(b) The specific objectives of the cross-connection control program for the town are as follows:

(1) To reduce the risk of cross-connections within the town's public potable water supply.

(2) To protect the town's public potable water supply against actual or potential contamination by isolating within each consumer's water system, contaminants or pollutants which could, under adverse conditions, backflow through uncontrolled cross-connections into the public water system.

(3) To eliminate or control existing cross-connections, actual or potential, between the potable water systems of consumers and non-potable or industrial piping systems.

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

## Sec. 24-91. - Definitions.

The following words, terms and phrases, when used in this article, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

*Air gap separation* means an unobstructed vertical distance through the atmosphere between the lowest opening from any pipe or faucet supplying water from any source to a tank, plumbing fixture, or other device and the flood level rim of the receptacle. An approved air gap separation shall be at least double the diameter of the supply pipe. In no case shall the air gap separation be less than one (1) inch. An approved, air gap separation is an effective method to prevent backflow and shall be considered as a backflow prevention assembly.

*Backflow* means any reverse flow of water, gas or any other liquid substance or combination into the public water system from any source due to an unprotected cross-connection.

*Backflow prevention administrator* means the director of utilities or his/her designee to administer and enforce the provisions of this article.

*Backflow prevention assembly—Approved* means an assembly that has been investigated and approved by the Town of Mooresville Utilities Department and has been approved to meet the design and performance standards of the American Society of Sanitary Engineers (ASSE), the American Water Works Assoc. (AWWA), or the Foundation for Cross-Connection Control and Hydraulic Research (FCCC and HR) of the University of Southern California.

*Back pressure* means any elevation of pressure in the downstream piping system caused by pumps, elevation of piping, or steam and/or air pressure above the supply pressure at the point of consideration, which would cause a reversal of the normal direction of flow.

*Backsiphonage* means a reversal of the normal direction of flow in the pipeline due to a negative pressure (vacuum) being created in the supply line with the backflow source subject to atmospheric pressure.

*Certified tester* means any individual person who has proven his/her competency to test, repair and overhaul backflow prevention assemblies. This person must hold a certificate of completion from a certified training program in the testing and repair of backflow prevention assemblies and cross-connection control.

*Customer* means any person, firm, company, corporation, or entity using or receiving water from the Town of Mooresville public water system. For purposes of this article, the terms customer and consumer have the same definition.

*Containment* means the prevention of backflow from a private water system by an approved, properly functioning backflow prevention assembly which is installed, operated and maintained in accordance with the provisions of this article.

*Contamination* means an impairment of the quality of the water to a degree, which creates an actual hazard to the public health through poisoning or through the spread of disease.

*Cross-connection* means any actual or potential connection or piping arrangement between a public or 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 fluids, gas or substance which could be harmful or hazardous to the potable water system.

*Double check valve* assembly means an assembly composed of two (2) single, independently acting, approved check valves, including tightly closing shut-off valves located at each end of the device and suitable connections for testing theater tightness of each check valve.

*Dual check valve* means a device composed of two (2) single, independently acting, approved check valves. This is classified as a device and cannot be in-line tested.

*Hazard degree* means the evaluation of a hazard within a private water system as low, moderate, or high.

*Imminent hazard* means an actual threat of contamination to the public water system that poses an imminent risk of serious illness or death.

*Person* means any person, individual, firm, company, corporation, business, or entity of any kind.

*Pollution* means an impairment of the quality of the water to a degree which does not create an actual hazard to the public health, but which does adversely and unreasonably affect such water for domestic use.

*Potable water* means water from any source which has been approved for human consumption by the appropriate agency of the State of North Carolina, Town of Mooresville and/or local health agencies.

*Pressure vacuum breaker* means an assembly suitable for continuous pressure, to be used to provide protection against back siphonage.

*Private water system* means any water system located on the customer's premises, whether supplied by public potable water or an auxiliary water supply. The system or systems may be either a potable water system or an industrial piping system. By means of illustration only, the water line that runs from a customer's home or place of business to the point where such line connects to the water meter is a private water system.

*Public water system* means the potable water system owned and operated by the Town of Mooresville. This system includes all distribution mains, lines, pipes, connections, storage tanks, and other facilities conveying potable water from the water treatment plants to the service connections of each customer.

*Reduced pressure zone assembly* means an approved, properly functioning assembly containing two (2) independently acting check valves with a hydraulically operating, mechanically independent pressure differential relief valve located between the check valves and at the same time below the first check valve. The assembly must include properly located test cocks and tightly closing shut-off valves at each end of the assembly. This assembly is designed to protect against a high hazard.

*Service connection* means the terminal end of a service connection from the public potable water system, i.e., where the Town loses jurisdiction and sanitary control over the water at its point of delivery to the consumer's water system.

*Thermal expansion* means the dimensional changes exhibited by solids, liquids, and gases for changes in temperature.

*Used water* means 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.

*Water purveyor* means owner or operator of a public potable water system providing an approved water supply to the public.

*Water supply, auxiliary* means any water supply on or available to the customer's premises other than the purveyor's approved public potable water supply. The auxiliary water may include water from another purveyor's public potable water supply or any natural source such as a well, spring, river, stream, etc., and used or objectionable.

*Water supply, unapproved* means any water supply, which has not been approved for human consumption by the North Carolina Department of Health Services.

**Sec. 24-92. - Responsibilities.**

(a) State health agency. The North Carolina Department of Environment and Natural Resources (NCDENR), Division of Environmental Health, has the responsibility for promulgating and enforcing laws, rules, regulations, and policies to all water purveyors in the state in carrying out an effective cross-connection control program. The state division of environmental health also has the primary responsibility of ensuring 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, that the water purveyors require the installation, testing, and maintenance of an approved backflow prevention assembly on the service connection when required.

(b) Town of Mooresville. Except as otherwise provided herein, the Town of Mooresville's responsibility is to provide a safe water supply beginning at the source and continuing throughout the public water distribution system, including the service connections, and ending at the point of delivery to the water system(s) of consumers. In addition, the Town of Mooresville shall exercise reasonable vigilance to ensure that the consumer has taken the proper steps to protect the public potable water system. To ensure proper precautions are taken, the Town of Mooresville is required to identify, prevent, and eliminate potential hazards to the public potable water system; 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 an on-going inspection program.

(c) Plumbing inspector. Plumbing inspectors have the responsibility to not only review building plans and inspect plumbing as it is installed, but also to prevent cross-connections from being designed and built into plumbing systems. Where the review of building plans indicates or detects the potential for cross-connections being made an integral part of the plumbing system, the plumbing inspector has the responsibility, under the state plumbing code, to require that such cross-connections be either eliminated or provided with an approved backflow prevention assembly. The plumbing inspector's responsibility begins at the point of delivery, downstream of the first installed backflow prevention assembly, or where the service line approaches private property and continues throughout the entire length of the consumer's water system. The inspector shall inquire about the intended use of water at any point where it is suspected that a cross-connection may exist, or where one is designed for installation. When a cross-connection is discovered, a suitable, backflow prevention assembly (a "reduced pressure principle assembly" or RPPA)

approved by the Foundation for Cross-Connection Control and Hydraulic Research (FCCC and HR) of the University of Southern California shall be required.

(d) Customer. The customer has the responsibility of preventing contaminants and pollutants from entering the customer's private water system or the public water system operated by the Town of Mooresville. The customer, at his own expense, shall install, operate, and maintain all backflow prevention assemblies specified within this article. If a customer who operates or is responsible for a private water system does not maintain the private water system and has no authority to bring the system into compliance with the provisions of this article the Town of Mooresville may assert any available action against the tenant to assure the private water system is brought into compliance with this article. Following any repair, overhaul, re-piping, or relocation of a customer's backflow prevention assembly, the customer shall have it tested to insure that it is in good operating condition and will prevent backflow. Tests, maintenance and repairs of backflow prevention assemblies shall be made by a certified backflow prevention assembly tester.

(e) Certified tester. All backflow prevention assembly testers must become certified or recertified every two (2) years through a state AWWA/WEA approved backflow prevention certification program. When employed by the consumer to test, repair, overhaul, or maintain backflow prevention assemblies, a certified tester will be responsible for:

(1) Making competent inspections and repairing or overhauling backflow prevention assemblies and making reports of such repair to the consumer and responsible authorities on forms approved by the Town of Mooresville, including the lists of materials and/or replacement parts used.

(2) Being equipped with, and competent to use all the necessary tools, gauges, manometers and other equipment necessary to properly test, repair, and maintain backflow prevention assemblies.

(3) Ensuring that original manufactured parts are used in the repair of or replacement of parts in a backflow prevention assembly.

(4) Not changing the design, material, or operational characteristics of an assembly during repair or maintenance without prior approval of the Town of Mooresville.

(5) Providing a copy of all test and repair reports to the consumer and to the Town of Mooresville within ten (10) business days of any completed test or repair work. A certified tester shall maintain such records for a minimum period of five (5) years.

(6) Performing the work and ensuring the accuracy of all tests and reports. All certified testers must obtain, and employ, backflow prevention assembly test equipment, that has been evaluated and/or approved by the public services department. At a minimum, all test equipment shall be checked for accuracy annually and calibrated, if necessary, employing an accuracy/calibration method dictated by the manufacturer of the equipment acceptable to the Town of Mooresville cross-connection section. Certification of the accuracy and calibration shall be provided to the public services department annually.

**Sec. 24-93. Backflow prevention assemblies required.**

(a) Any structure or facility that has a commercial or industrial use and that has existing water services with the Town of Mooresville Utilities Department is required to be inspected for compliance of backflow and cross-connection control prevention, subject to the following:

- (i) Single family dwellings are not subject to this Article.
- (ii) Duplexes where each unit is individually metered are not subject to this Article.
- (iii) Duplexes that have a master meter are subject to this Article.
- (iv) Apartment houses or complexes are subject to this Article if such apartment house or complex has one master meter.
- (v) Apartment houses or complexes where each apartment unit is individually metered are not subject to this Article.

(b) All new construction plans and specifications for a building or structure for which this Article applies that will directly affect the Town of Mooresville water system or that are required by the North Carolina Building Code, the North Carolina Division of Health Services (NCDEHNR), or by town or county planning and zoning offices, shall be made available to the Town of Mooresville Backflow Administrator for review, approval, and to determine the degree of hazard.

(c) Any facility or structure for which this Article applies in which a certificate of occupancy is requested from the Town of Mooresville or County of Iredell shall be inspected for compliance with this article. Any facility or structure for which this Article applies that does not have backflow protection or that changes the degree of hazard as set out in this Article shall be brought into compliance before the backflow administrator may release a certificate of occupancy.

(d) Any facility or structure that is either a low hazard, moderate hazard, or high hazard as set out in this Article is required to comply with the requirements of this Article.

(e) When it has been determined that a backflow protection assembly is required, the backflow prevention administrator shall notify the customer, in writing, to bring the facility or structure into compliance with this article within a time set by this article.

(f) Any backflow prevention assembly that is to be installed at the service entrance must be approved by the backflow prevention administrator. Prior to the installation of a dual check or double check valve assembly, the owner of the private water system must be notified that the installation of a dual check valve or double check valve assembly can create a closed system, and as a result thermal expansion and an explosion can occur. For this reason, a thermal expansion unit is required whenever a dual check valve is installed.

(g) If it has been determined that a backflow prevention assembly cannot be installed at the meter service due to zoning or Town or NC DOT rights-of-way, an approved backflow assembly must be installed before any branch of plumbing, after the service meter.

(h) Bypass piping is not permitted unless the bypass piping is equipped with an approved backflow prevention assembly of the same type and brand as the main line assembly. It shall be necessary to install two (2) approved backflow prevention assemblies to ensure continuous water service.

(i) All backflow preventer assemblies, except for dual check valve assemblies, must be installed above ground unless otherwise approved by the Backflow Prevention Administrator. Backflow preventers installed inside must be a minimum of twelve (12) inches above the floor, and no higher than four (4) feet above floor. The customer must maintain adequate clearance around the assembly for testing or repair of the assembly. Wherever a reduced pressure principle backflow preventer is installed inside a building, an air gap drain of adequate size must be installed.

(j) Backflow prevention assemblies, except for dual check valve assemblies, installed outside must be protected with an ASSE 1060 approved enclosure. The assembly must maintain a minimum distance of twelve (12) inches and a maximum distance of thirty (30) inches above ground.

(k) Protective enclosures must be used to prevent from freezing or vandalism for backflow prevention assemblies installed outside above ground. Freeze-proof enclosures that meet or exceed state plumbing code standards (in accordance with the state plumbing code, section 608.14.1) are acceptable provided the insulation is at least 7.05 R factor, and have the 1060 ASSE approval plate. Adequate drainage shall be provided by hinged door drain or ports along the bottom walls of the protective enclosure. The enclosure will require to be mounted to the ground or



existing grade. If the structure is not removable it must be accessible by doors large enough for entrance and repair.

(l) Backflow prevention assemblies two and one-half (2½) inches or larger must be supported to allow for the weight of the backflow prevention assembly. Support construction can consist of cinder block, brick or steel. Supports must have proper footing to rest on. Supports should be spaced so they do not cause interference with the testing and/or repair of the assemblies.

(m) In order to prevent obstruction during the testing or repair of the assembly, additional piping and/or valves shall not be located within and/or under the enclosure.

(n) A report of any backflow prevention assembly installation shall be provided to the Backflow Prevention Administrator prior to initial connection to the potable water system.

(o) All reduced pressure principle assemblies (RPPA) 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).

(p) All existing commercial water services that are renewed shall have containment assemblies installed at the service connection raised above ground in a freeze-proof enclosure.

(q) All assemblies installed below ground before July 1, 2011, that fail the annual test and are considered a nuisance installation and are considered the cause of a potential cross-connection shall be raised above ground and placed in an ASSE 1060 approved freeze-proof enclosure within thirty (30) days of any failed test date.

(r) All reduced pressure principle assemblies installed below ground before July 1, 2011, that do not have working gravity drains that are not two (2) times the supply size of the water service supplying assemblies shall be raised and placed in an ASSE 1060 approved freeze-proof enclosure within thirty (30) days of notification.

(s) Installation drawings shall be approved by the town before upgrades to the water system are installed.

(t) The backflow administrator must approve each backflow assembly required by this article. A list of approved assemblies can be obtained through the backflow administrator; any unapproved backflow assembly must be replaced with an approved backflow assembly within a time set by the administrator, which shall be

at least ten (10) business days from the time that the administrator first gives notice of an unapproved assembly.

(u) 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 town within ten (10) business days:

- (1) Service address where assembly is located;
- (2) Owner and mailing address;
- (3) Description of assembly's location;
- (4) Date of installation;
- (5) Installer (including name, company, license number, and project permit number);
- (6) Type of assembly, size of assembly;
- (7) Manufacturer, model number and serial number; and
- (8) Test results, report.

(v) All backflow prevention assemblies shall be installed in accordance with the Backflow and Cross-Connection Manual furnished by the Town of Mooresville and/or the manufacturer's instructions, whichever is most restrictive.

(w) When it is not possible to interrupt water service, provisions shall be made for a parallel installation of backflow prevention assemblies. The Town of Mooresville will not accept an unapproved bypass around a backflow prevention device when the assembly is in need of testing, repair or replacement.

**Sec. 24-94. – Testing and repair of assemblies.**

(a) Testing of Double Check and Reduced Pressure backflow prevention assemblies shall be made by a certified backflow prevention assembly tester at the customer's expense. Such tests are to be conducted upon installation and annually thereafter or at a frequency established by town regulations. A record of all testing and repairs is to be retained by the customer. Copies of the records must be provided to the Town of Mooresville within ten (10) business days after the completion of any testing or repair work.

(i) Dual Check valves must be inspected annually by a certified inspector or, in the alternative, the check modules (poppets) and O-rings must be replaced annually and certification of such replacement shall be filed with the backflow administrator.

(b) The installation or replacement of a backflow prevention assembly for domestic water use shall only be performed by a licensed plumber or utility contractor. The installation or repair of a backflow prevention assembly on a dedicated fire sprinkler service shall be performed by a licensed fire sprinkler contractor or utility

contractor. All backflow prevention assemblies may be tested by a certified backflow technician authorized by the Town of Mooresville.

(c) Double check valve assemblies installed before July 1, 2011, that fails the annual test or that services a use that meets a higher degree of hazard must be replaced with a reduced pressure principle assembly (RPPA) and raised above ground within thirty (30) days. Repair to the existing DCVA is strictly prohibited by the Town of Mooresville.

(d) Any tester to be found repairing a failed double check valve assembly to avoid its replacement of a reduced pressure principle assembly will lose testing privileges within the Town of Mooresville water system and will be subject to penalties outlined in section 24-100 of this article.

(e) The certified tester shall notify the town within one (1) business day any time that repairs to backflow prevention assemblies are deemed necessary, whether through annual or required testing or a routine inspection by the owner or by the town. These repairs must be completed within a specified time period in accordance with the degree of hazard. In no case shall this time period exceed:

(1) High Health hazard: Thirty (30) days.

(2) Moderate health hazard: Sixty (60) days.

(3) Low health hazard: Ninety (90) days.

(f) If an imminent hazard or unreasonable threat of contamination or pollution to the public water system is detected, the backflow administrator may require the installation of the required backflow assembly immediately or within a shorter time period than specified in this section.

(g) If a customer does not wish for water service to be interrupted when a backflow assembly is tested, repaired, or replaced, a parallel installation must be made using an approved assembly of the same degree of hazard. The parallel line may be of the same size or smaller.

(h) It shall be unlawful for any customer or certified tester to submit any record to the town, which is false or incomplete material in any respect. It shall be unlawful for any customer or certified tester to fail to submit to the Town of Mooresville any record, which is required by this program. Such violations may result in any of the enforcement actions outlined in this Article.

**Sec. 24-95. - Right of entry.**

Any authorized representative of the Town of Mooresville shall have the right to enter any property having a private water system which is served in any manner by the public water system. Such entry shall be made at reasonable times and for the purposes of inspecting and observing the private water system, testing, and sampling of the water from such system and discharging any other duty which may be imposed upon the Town by this article. If a customer does not permit an authorized representative of the Town to undertake and complete any inspection, observation, test, sample, or other duty of such representative concerning the customer's private water system, service to the customer's private water system from the public water system may be terminated.

**Sec. 24-96. - Unprotected cross-connection prohibited.**

(a) Filling of tanks or tankers or any other container from a Town of Mooresville owned fire hydrant is strictly prohibited unless it has been equipped with the proper meter and backflow protection assembly (RPPA) and a permit has been obtained from the Town of Mooresville allowing such filling. Hydrant meters issued by the town will require a deposit of one thousand dollars (\$1,000.00). Any unauthorized connection to a fire hydrant is considered an illegal cross-connection to the public water system and will be subject to civil penalties as set out in this Article, criminal prosecution, or both.

(b) No water service connection to any private water system shall be installed or maintained by the Town of Mooresville unless the water supply is protected against cross-connection as required by this article and other applicable laws. Service of water to any premises may be discontinued by the Town of Mooresville if a backflow assembly, required by this article, is not installed, tested, and maintained or if a backflow assembly has been removed, bypassed, or if an unprotected cross-connection exists on the premises. Service will be restored after all such conditions or defects are corrected.

(c) No customer shall allow an unprotected cross-connection to be made or to remain involving the customer's private water system.

(d) No connection shall be made to an unapproved auxiliary water supply unless the public water supply is protected against backflow by an approved backflow assembly, appropriate to the degree of hazard.

(e) No customer shall fail to maintain in good operating condition any backflow prevention assembly, which is part of the customer's private water system and is required by this article.

(f) No customer shall fail to submit to the Town of Mooresville any record that is required by this article.

**Sec. 24-97. - Fire protection systems.**

(a) All existing backflow prevention assemblies installed on fire protection systems (that were initially approved by the town) in operation at the time these regulations becomes effective, shall be allowed to remain on the premises, as long as they are being properly maintained and tested as required by this program. If, however, an existing double check valve assembly fails annual testing, the consumer will be required to replace with a reduced pressure principle detector assembly (RPPA) as required by this Article.

(b) All backflow preventers for fire protection shall also meet the requirements of federal, state, or local building and fire codes.

**Sec. 24-98. Hazards Endangering the Potable Water Supply.**

(a) There are no exemptions, or grandfather clauses, which prohibit the Town of Mooresville from requiring the installation of backflow prevention device(s)/assemblies on existing water services when potential hazards are found to exist which endanger the potable water supply.

(b) No water service shall be provided until the backflow administrator has been able to determine the degree of hazard and make a determination of the proper backflow prevention assembly to be installed to protect the public water supply. Any customer desiring to make any modification to a private water system's backflow prevention configuration or use which may create or change the degree of hazard, shall notify the backflow administrator before any modification is attempted. If the backflow administrator determines that such modification requires a different backflow prevention assembly such assembly must be installed before the modification is made.

(c) All assemblies and installations shall be subject to inspection and approval by the Town of Mooresville. If, because of the confidential nature of the structure to which town water is supplied, the backflow administrator is unable to determine the degree of hazard, a reduced pressure zone assembly will be required.

(d) Determining degree of hazard. The following types of facilities or services have been identified as having a potential for backflow of non-potable water into the public water supply system. An approved backflow prevention device, as specified in this section according to the degree of hazard present, shall be required on all such services. An approved device that provides a higher level of protection will also fulfill the requirement for backflow prevention. Facilities or services not listed below are required to install approved backflow prevention devices; however, the appropriate device shall be determined on a case-by-case basis. If the degree of

hazard cannot be determined (due to confidential activities, unknown connections, etc.) a reduced pressure principle assembly (RP) shall be required as a minimum.

- (i) The following devices are listed in the order of least protection to most protection:
  - a) DC = Dual Check Valve (two (2) inches or less)
  - b) DCVA = Double Check Valve Assembly (includes test assemblies)
  - c) RP = Reduced Pressure Principle Assembly (includes test assemblies and dump port)

(e) Degrees of Hazards

1. Low Hazard: any of the following uses unless the use includes a use clearly identified as a higher hazard. These activities shall have a minimum of a dual check valve (DC) installed at the meter service (two (2) inches or less).

- Two-family residential homes (duplexes)
- Multi-family residential units
- Duplexes that have a master-meter
- Office buildings
- Retail stores with only one (1) meter under two-inches (2") in diameter
- Warehousing (detached and with only restrooms)
- Churches (with only restrooms)

2. Moderate Hazard: any of the following uses unless the use includes a use clearly identified as a higher hazard. The following is a list of facilities, activities and processes which require the installation of an approved double-check valve assembly (DCVA).

- A private water system or building, any portion of which is elevated less than 50 feet above any service connection between such private water system and the public water system
- Beauty shops/barber shops
- Fire sprinkler or standpipe systems without chemical additives without booster pumps
- Gas stations (with no food preparation)
- Industrial or manufacturing facilities (that do not include a high hazard)
- Apartment houses or complexes that have a master-meter
- Mobile home parks/ Manufactured Home Parks
- Restaurants, bakeries, commercial kitchens or convenience stores with food service with no water-supplied fire suppression system
- Churches (with kitchen facilities)

3. High Hazard: any of the following uses. The following is a list of facilities, activities and processes which require the installation of an RP.

- Any private water system used or designed for use with a booster pump or which may become pressurized for any reason to the extent that backpressure may occur
- Any service connection having irrigation tied in (irrigation not on a separate tap) including residential irrigation systems
- Any private water system which contains water which has been or is being recirculated
- Connection of a non-potable water use (fire lines, fire suppression systems, irrigation systems, cooling towers, auxiliary water supplies, used water, etc.) to a potable water supply
- A private water system or building any portion of which is elevated fifty feet (50') or more above any service connection between such private water system and the public water system
- Automotive plants and service bays
- Beverage bottling plants
- Breweries
- Campgrounds, RV parks
- Canneries, packing houses and other rendering houses
- Commercial carwashes
- Chemical plants
- Churches (containing a baptismal or operating a multi-functional facility)
- Commercial greenhouses
- Commercial laundries
- Concrete/asphalt plants
- Dairies and cold storage plants
- Dentist offices
- Dry cleaning
- Dye works
- Morgues, mortuaries, and embalming facilities
- Film Laboratories
- Fire sprinkler or standpipe systems with chemical additives
- Hospitals, clinics, medical buildings
- Hotels, apartment houses, public and private buildings or structures fifty feet (50') feet or more in height
- Industrial facilities that utilize water in their industrial process.
- In-ground irrigation systems, with or without chemical additives.
- Laboratories
- Lawn care companies
- Malls, strip malls, or multi-tenant strip malls (frequent tenant change and photo labs, etc.) that are master-metered
- Master-metered buildings or facilities with multi-use tenants
- Metal processing plants

- Nursing homes
- Oil and gas production, storage or transmission properties
- Paper and paper products plants
- Pest control (exterminating and fumigating)
- Pharmaceutical plants
- Photo labs
- Plating plants
- Power plants
- Radioactive materials or substances – plants or facilities handling
- Restaurants, bakeries, commercial kitchens, convenience stores with food services, any of which having water-supplied fire suppression system
- Rubber plants (natural or synthetic)
- Sand and gravel plants
- Schools and colleges
- Swimming pools, spas, hot tubs, with fixed water lines
- Tanks or reservoirs filled by water from public water supply
- Tire manufacturers
- Truck wash facilities
- Veterinary hospitals, clinics, offices
- Wastewater treatment plants, lift stations, and storm drain facilities
- Waterfront facilities and industries

4. Imminent hazard: If it has been determined a customer's private water system poses an imminent hazard, such customer must install a backflow prevention assembly specified by the backflow administrator and this article. This assembly must be installed within twenty-four (24) hours of notification from the administrator. If the customer fails to install the specified assembly within the allowed time limit, water service to the customer's private water system will be terminated and may be subject to civil penalties. In the event the backflow administrator is unable to notify the customer within twenty-four (24) hours of determining that an imminent hazard exists, the administrator may terminate water service until the specified assembly is installed. These actions may be carried out under the Safe Drinking Water Act (Title XIV Section 1431) and the N.C. State Plumbing Code (Appendix D104.2.6).

(f) Only a backflow prevention assembly offering a greater degree of protection than that required in this Article may be installed in place of a specified assembly required by this article.

(g) If a structure, facility, or use does not fit within the degree of hazard as set forth in this section, the Backflow Prevention Administrator shall assign such degree of hazard as determined by the use and degree of hazard.



**Sec. 24-99. - Notice of contamination or pollution.**

In the event the customer's private water system becomes contaminated or polluted the customer shall notify the Town of Mooresville Utilities Department immediately. In the event a customer has reason to believe that a backflow incident has occurred between the customer's private water system and the public water system the customer must notify the Town of Mooresville Utilities Department immediately in order that appropriate measures may be taken to isolate and remove the contamination of pollution.

**Sec. 24-100. - Enforcement.**

(a) Notice of violation.

(1) Any person found to be in violation of the provisions of this article shall receive, in writing, an explanation of the violation, the remedial action(s) to be taken, and the time period within which the violation(s) must be corrected, such time period being any period as set out in the section of the ordinance being violated and if no period is set out, then such time period to be thirty (30) calendar days.

(2) The notice shall be served by personal delivery or certified mail, return receipt requested, to the consumer and/or owner.

(3) Failure by the consumer and/or owner to correct the violation within the time specified, or to pay any civil penalty or expense assessed under this section upon the Town of Mooresville's written demand of payment shall be just grounds for immediate termination of the Town of Mooresville water service. Service shall be re-established when the violation is corrected and any applicable civil penalties and other required fees are paid.

(b) Civil penalties.

(1) Unprotected cross-connection to the Town's water system—Imminent hazard: One-thousand dollars (\$1,000.00) per violation, per day.

(2) Unprotected cross-connection to the Town's water system—Moderate or high hazard: Five-hundred dollars (\$500.00) per violation, per day.

(3) Unprotected cross-connection to the Town's water system—Low hazard: Two-hundred fifty dollars (\$250.00) per violation, per day.

(4) Unauthorized or intentional cross-connection: One-thousand dollars (\$1,000.00) per violation per day.

(5) Submitting false records, or failure to submit records, that are required by this article: Five hundred dollars (\$500.00) per violation.

(6) Failure to test or maintain backflow prevention assemblies as required by this article: One hundred dollars (\$100.00) per violation, per day.

(c) The issuance of civil penalties does not preclude the initiation of criminal charges if state law makes the conduct or act a violation of the criminal law.

**Sec. 24-101. - Reduction of penalty.**

The administrator may dismiss any civil penalty imposed under this section if the administrator has determined that the person charged with the violation has no past history of violations and has corrected the violation within ten (10) calendar days after being notified of such violation. A civil penalty shall not be reduced if it has been determined that the violation was intentional. Any customer, person, company, corporation, business, or any other entity violating any part of this article remains liable to the Town of Mooresville for any expenses incurred by the town in investigating a violation found to exist or for repairing damage to the public water system caused by any violation.

**Secs. 24-102—24-125. - Reserved.**

**Section 2. Effective Date.**

This Resolution, and any ordinances affected thereby, is effective on the date of its enactment.

This the \_\_\_\_\_ day of \_\_\_\_\_, 2012.

\_\_\_\_\_  
Miles Atkins, Mayor

Attest:

\_\_\_\_\_  
Janet O. Pope  
Town Clerk

Approved as to form:

---

Stephen P. Gambill, Town Attorney