

CHAPTER 50: WATER

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Appendix A: North Carolina Guidelines for Cross-Connection Control in Water Distribution Systems

Cross-reference:

Sewer Use, see Ch. 51

WATER CONSERVATION

§ 50.01 DEFINITION OF WATER SHORTAGE; CURTAILMENT OF USE REQUIRED.

A **WATER SHORTAGE** shall be deemed to exist when water demand by customers connected to the county water system reaches the point where, in the opinion of the County Manager or his or her designee, continued or increased demand will equal or exceed the system supply or transmission capabilities and results in the condition whereby customers cannot be supplied with water to protect their health and safety. **WATER SHORTAGES** may also be deemed to exist when the reservoirs and river system that provides the water supply to the county water system experience such a demand that water systems throughout the area cannot be supplied with water to meet their needs. Upon the occurrences, demand must be substantially curtailed to relieve the water shortage as provided in this subchapter.

(Ord. passed 6-4-2007)

§ 50.02 DECLARATION OF WATER SHORTAGE CONDITION.

(A) In the event that it appears that the demand on the water system may exceed supply or transmission capabilities, or that the demand on the water supply may exceed its ability to provide sufficient water for all of the water users, the County Public Works Department shall so notify the County Manager.

(B) Following consultation with the Chairperson of the Board of Commissioners, the County Manager may declare a Stage 0 water shortage watch.

(C) If water supply conditions worsen, following consultation with the Chairperson of the Board of Commissioners, the County Manager may declare a Stage 1 water shortage condition requesting voluntary water conservation by customers of the system.

(D) In the event that the voluntary measures of the Stage 1 water shortage condition fail to alleviate the shortage, the County Manager, after consultation with the Chairperson, may declare that a Stage 2, Stage 3, or Stage 4 water shortage condition exists and implement the mandatory procedures provided hereinafter.

(Ord. passed 6-4-2007)

§ 50.03 STAGE 0 WATER SHORTAGE WATCH CONDITION.

(A) In the event that a Stage 0 water shortage watch condition is declared, an extensive publicity campaign will be initiated using public media and any other methods as the County Manager may deem appropriate or necessary to inform the public of an impending water shortage.

(B) Stage 0 water shortage watch conditions do not encourage any specific reduction in use of water beyond normal use.

(Ord. passed 6-4-2007)

§ 50.04 STAGE 1 WATER SHORTAGE CONDITION; VOLUNTARY GUIDELINES.

(A) In the event that a Stage 1 water shortage condition is declared, an extensive publicity campaign will be initiated using public media and any other methods as the County Manager may deem appropriate or necessary to inform the public of an existing water shortage. The public shall be encouraged to voluntarily adhere to the following guidelines:

(1) Limit car washing;

(2) Limit lawn, garden, and shrubbery watering to the minimum necessary for plants to survive, and reuse household water when possible;

- (3) Eliminate washing down of outside areas such as sidewalks, patios, parking lots, service bays, or aprons;
- (4) Eliminate continuous running of water while shaving or rinsing dishes;
- (5) Limit the use of washing machines and dishwashers and operate only when fully loaded;
- (6) Use showers instead of bathtubs for bathing and limit showers to no more than four-minutes duration;
- (7) Limit flushing of toilets by multiple usage;
- (8) Limit hours of operation of water-cooled air conditioners;
- (9) Use biodegradable and/or disposable dishes;
- (10) Use flow restriction and other water-saving devices where possible; and
- (11) Delay new landscape work until the water shortage has ended.

(B) The goal for a Stage 1 water shortage condition is to reduce water usage by 3% to 5% from a normal level.

(Ord. passed 6-4-2007)

§ 50.05 STAGE 2 WATER SHORTAGE CONDITION; DECLARATION OF MANDATORY RESTRICTIONS; ILLEGAL ACTS.

(A) In determining whether to declare a Stage 2 water shortage condition, the County Manager shall consider water storage levels, available supply sources, available usable storage on hand, drawdown rates, projected supply capability, outlook for precipitation, daily water use patterns, and availability of water from other sources.

(B) Upon the declaration of a Stage 2 water shortage condition, and until the time as the declaration of water shortage has been rescinded, it shall be unlawful for any person or entity to use or permit the use of water from the county water system for any of the following purposes:

(1) To water lawns, grass, shrubbery, trees, flowers, or vegetable gardens, except as may be specifically allowed in accordance with a watering schedule established in accordance with § 50.11; however, shrubbery, trees, flowers, or vegetable gardens may be watered by use of a hand-held hose with an automatic cut-off;

(2) To fill newly constructed swimming or wading pools or to refill existing swimming or wading pools which have been drained;

(3) To operate or induce water into any ornamental fountain, pool, pond, or other structure making similar use of water (except as otherwise provided below);

(4) To wash automobiles, trucks, trailers, boats, airplanes, or any other type of mobile equipment, including commercial washing (unless water is recycled);

(5) To wash down outside areas such as streets, driveways, service station aprons, parking lots, patios, office buildings, or exteriors or windows of buildings, including residential and commercial construction, or to use water for other similar purposes;

(6) To use water from fire hydrants for any purpose other than firefighting or other public emergency;

(7) To serve drinking water in restaurants, cafeterias, or other food establishments, except upon request;

(8) To operate water-cooled air conditioners or other equipment that does not recycle cooling water, except when health and safety are adversely affected; and/or

(9) To use water for any unnecessary purpose or to intentionally waste water.

(C) The goal for a Stage 2 water shortage condition is to reduce water usage by 5% to 10% from a normal level.

(D) Incidental uses of water (including birdbaths and garden ponds or pools) that serve pets, livestock, or other animals are hereby exempted from these restrictions.

(Ord. passed 6-4-2007) Penalty, see § 50.99

§ 50.06 STAGE 3 WATER SHORTAGE CONDITION; DECLARATION OF MANDATORY RESTRICTIONS; ILLEGAL ACTS.

(A) The County Manager may declare a Stage 3 water shortage condition after considering the factors listed in § 50.05 and determining that the shortage is significantly more urgent than the Stage 2 level.

(B) Upon the declaration of a Stage 3 water shortage condition, and until the time as the declaration of water shortage has been rescinded, it shall be unlawful for any person or entity to use or permit the use of water from the county water system for any of the following purposes:

(1) To induce water into any pool;

(2) To use water outside a structure for any use other than an emergency involving a fire; however, shrubbery, trees, flowers, or vegetable gardens may be watered by use of a hand-held hose with an automatic cut-off; and/or

(3) To operate an evaporative air conditioner which recycles water, except during operating hours of business.

(C) The goal for a Stage 3 water shortage condition is to reduce water usage by 10% to 20% from a normal level.

(D) In addition, during a Stage 3 water shortage condition, the following guidelines shall apply: fire protection shall be maintained wherever possible by drafting of ponds, rivers, and the like, and all eating establishments shall be encouraged to use disposable plates and utensils.

(Ord. passed 6-4-2007) Penalty, see § 50.99

§ 50.07 STAGE 4 WATER SHORTAGE EMERGENCY; DECLARATION OF MANDATORY RESTRICTIONS; ILLEGAL ACTS.

(A) The County Manager may declare a Stage 4 water shortage emergency condition after considering the factors listed in § 50.06 and determining that the shortage is significantly more urgent than the Stage 3 level.

(B) Upon the declaration of a Stage 4 water shortage condition, and until the time as the declaration of water shortage has been rescinded, it shall be unlawful for any person or entity to use or permit the use of water from the county water system for any outside use. The county shall implement emergency water use restrictions, including enforcement of these restrictions and assessment of penalties. The county shall also meet with large commercial and industrial water customers to discuss strategies for reduction of water uses.

(C) The goal for a Stage 4 water shortage condition is to reduce water usage by 20% to 30% from a normal level.

(Ord. passed 6-4-2007) Penalty, see § 50.99

§ 50.08 LIFTING OF RESTRICTIONS IMPOSED DURING A WATER SHORTAGE.

The County Manager shall lift or reduce the restrictions imposed during a water shortage when he or she determines, after consultation with the Chairperson of the Board of Commissioners and any other persons as he or she deems appropriate, that the conditions which caused the shortage have been alleviated. The action shall be promptly and extensively publicized.

(Ord. passed 6-4-2007)

§ 50.09 VIOLATIONS.

This subchapter shall be enforced by the Public Works Department.

(Ord. passed 6-4-2007)

§ 50.10 DISCONTINUANCE OF SERVICE.

(A) In addition to any other applicable remedy, any person or entity who willfully violates the provisions of this subchapter may be subject to temporary disconnection of service and payment of the applicable reconnect fee before service may be restored.

(B) Continued gross noncompliance may subject the violator to discontinuance of service, removal of meter, and forfeiture of all tap fees and deposits.

(C) Reconnection shall thereafter be made only upon payment of all then-current tap and other fees and deposits.

(Ord. passed 6-4-2007)

§ 50.11 SCHEDULE.

Notwithstanding any other provision of this subchapter, the County Manager or his or her designee is hereby authorized to establish schedules, during Stage 2, 3, or 4 emergency conditions described herein, to set forth certain times or days in which citizens may engage on a limited basis in activities that are otherwise prohibited under this subchapter.

(Ord. passed 6-4-2007)

CROSS-CONNECTION CONTROL

§ 50.25 INTRODUCTION.

The purpose of this subchapter is to define the authority of the county as the water purveyor in the elimination of all cross-connections within its public potable water supply. This subchapter shall apply to all users connected to the county's public potable water supply regardless of whether the user is located within the county or outside of the county. This subchapter will comply with the Federal Safe Drinking Water Act, being 42 U.S.C. 300f *et seq.*, the North Carolina Administrative Code (Title 15A, Subchapter 18C), and the North Carolina State Building Code (Volume II) as they pertain to cross-connections with the public water supply.

(Ord. passed 4-2-2001)

§ 50.26 OBJECTIVES.

The specific objectives of this subchapter are as follows:

(A) To protect the public potable water supply of the county against actual or potential contamination by isolating 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, actual or potential, between the consumer's potable water system(s) and non-potable or industrial piping system(s); and

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

(Ord. passed 4-2-2001)

§ 50.27 RESPONSIBILITIES.

(A) *Health agency.*

(1) The North Carolina Department of Environment, Health, and Natural Resources (Division of Health Services) has the responsibility for promulgating and enforcing laws, rules, regulations, and policies to be followed in carrying out an effective cross-connection control program.

(2) The Division of Health Services also has the primary responsibility of ensuring 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 ensuring that the water purveyor provides an approved water supply at the service connection to the consumer's water system.

(B) *Water purveyor.*

(1) Except as otherwise provided herein, the water purveyor's responsibility to ensure a safe water supply begins at the source and includes all of the public water distribution system, including the service connection, and all ends at the point of delivery to the consumer's water system(s). 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 county 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 an on-going inspection program.

(2) When it is determined that a backflow prevention assembly is required for the protection of the public system, the county shall require the consumer, at the consumer's expense, to install an approved backflow prevention assembly at each service connection, to test immediately upon installation and thereafter at a frequency as determined by the county, to properly repair and maintain the assembly or assemblies and to keep adequate records of each test and subsequent maintenance and repair, including materials and/or replacement parts.

(C) *Consumer.* The consumer has the primary responsibility of preventing pollutants and contaminants from entering its 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 its water system(s). The consumers, at their own expense, shall install, operate, test, and maintain approved backflow prevention assemblies as directed by the county. The consumer shall maintain accurate records of tests and repairs made to backflow assemblies and shall maintain the records for a minimum period of three years. The records shall be on forms approved by the county and shall include the list of materials or replacement parts used. Following any repair, overhaul, repiping, or relocation of an assembly, the consumer shall have it tested to ensure 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.

(D) *Certified backflow prevention assembly tester.* When employed by the consumer to test, repair, overhaul, or maintain backflow prevention assemblies, a backflow prevention assembly tester will have the following responsibilities.

(1) The tester will be responsible for making competent inspections, for repairing or overhauling backflow prevention assemblies and making reports of the repair to the consumer and responsible authorities on forms approved by the county. The tester shall include the list of materials or replacement parts used. The tester shall be equipped with and be competent to use all the necessary tools, gauges, manometers, and prevention assemblies. It will be the tester's responsibility to ensure that original manufactured parts are used in the repair of or replacement of parts in a 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 county. A certified tester shall perform the work and be responsible for the competency and accuracy of all test and reports. A certified tester shall provide a copy of all test and repair reports to the consumer and to Public Works Department within ten business days of any completed test or repair work. A certified tester shall maintain the records for a minimum period of three years.

(2) All certified backflow prevention assembly testers must obtain and employ backflow prevention assembly test equipment, which has been evaluated and/or approved by the county. All test equipment shall be registered with the Public Works Department. All test equipment shall be checked for accuracy annually, calibrated, if necessary and certified to the county as to the calibration, employing an accuracy/calibration method acceptable to the county.

(3) All certified backflow prevention assembly testers must become re-certified every two years through an approved backflow prevention certification program.

(Ord. passed 4-2-2001) Penalty, see § 50.99

§ 50.28 DEFINITIONS.

For the purpose of this subchapter, the following definitions shall apply unless the context clearly indicates or requires a different meaning.

AIR-GAP SEPARATION. 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 SEPARATION*** shall be at least double the diameter of the supply pipe measured vertically above the overflow rim of the receiving vessel; in no case less than one inch.

APPROVED. As herein used in reference to a water supply, shall mean a water supply that has been approved by the State Department of Environment, Health, and Natural Resources (Division of Health Services). The term **APPROVED** as herein used in reference to air-gap separation, a pressure vacuum breaker, an ASSE approved dual check valve assembly, a double check valve assembly, a double check detector assembly, a reduced pressure principal backflow prevention assembly, a reduced pressure principal detector assembly or other backflow prevention assemblies or methods shall mean an approval by the county.

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, APPROVED. An assembly used for containment and/or isolation purposes that has been investigated and approved by the county and has been shown to meet design and performance standards of the American Society of Sanitary Engineers (ASSE), the American Water Works Association (AWWA), or the Foundation for Cross-Connection Control and Hydraulic Research of the University of Southern California.

BACKFLOW PREVENTION DEVICE, APPROVED. A device used for isolation purposes that has been shown to meet the design and performance standards of the American Society of Sanitary Engineers (ASSE) and the American Water Works Association (AWWA).

BACK-PRESSURE BACKFLOW. Any elevation in the consumer water system (by pump, elevation of piping or steam and/or air pressure) above the supply pressure at the point of delivery, which would cause, or tend to cause, a reversal of the normal direction of flow.

BACK-SIPHONAGE BACKFLOW. 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.

CONSUMER. Any person, firm, and corporation using or receiving water from the county potable water system.

CONSUMER'S WATER SYSTEM. Any water system commencing at the point of delivery and continuing throughout the consumer's plumbing system, located on the consumer's premises, whether supplied by a public potable water or an auxiliary water supply. The system(s) may be either a potable water system or an industrial piping system.

CONTAINMENT. Preventing the impairment of the public potable water supply by installing an approved backflow prevention assembly 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.

CROSS-CONNECTION. Any unprotected actual or potential connection or structural arrangement between a public or a consumer's water system and any other source or system through which it is possible to introduce any contamination or pollution, 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.

DOUBLE CHECK DETECTOR ASSEMBLY (DCDA). A specially designed assembly composed of a line-size approved 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 and shall show a registration for all rates of flow. This assembly shall only be used to protect against a non-health hazard (i.e., pollutant).

DOUBLE CHECK VALVE ASSEMBLY (DCVA). An assembly composed of two independently acting, approved check valves, including tightly closing shut-off valves attached at each end of the assembly and fitted with properly located test cocks. This assembly shall only be used to protect against a non-health hazard (i.e. pollutant).

HAZARD, DEGREE OF. Derived from the evaluation of conditions within a system, which can be classified as either a "pollutional" (non-health) or a "contaminant" (health) hazard.

HAZARD, HEALTH. An actual or potential threat of contamination of a physical, hazardous, or toxic nature to the public or consumer's potable water system to such a degree or intensity that there would be a danger to health.

HAZARD, NON-HEALTH. An actual or potential threat to the quality of the public or the consumer's potable water system. A **NON-HEALTH HAZARD** is one that, if introduced into the public water supply system, could be a nuisance to water customers, but would not adversely affect human health.

HEALTH AGENCY. The North Carolina Department of Environment, Health, and Natural Resources (Division of Health Services), NCDEHNR.

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. The fluids may include, but are not limited to, process waters; chemicals; in fluid form; acids and alkalis; oils, gases; and the like.

POINT OF DELIVERY. Shall generally be at a point on the customer's property where the meter is located. The customer shall be responsible for all water piping and control devices located on the customer's side of the point of delivery.

POLLUTION. 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 the aesthetic qualities of the waters for domestic use.

POTABLE WATER. Water from any source which has been investigated by the North Carolina Department of Environment, Health, and Natural Resources (Division of Health Services) and which has been approved for human consumption.

REDUCED PRESSURE PRINCIPAL BACKFLOW PREVENTION ASSEMBLY (RP or RPZ). An assembly containing within its structure a minimum of two independently acting, approved check valves, together 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 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 less than the supply pressure. In case of leakage of either check valve, the pressure differential relief valve, by discharge to atmosphere, shall operate 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. The assembly is designed to protect against a health hazard (i.e., contaminant).

REDUCED PRESSURE PRINCIPAL DETECTOR ASSEMBLY (RPDA). A specially designed assembly composed of a line-size approved reduced pressure principal backflow prevention assembly with a specific bypass water meter and a meter-sized approved reduced pressure principal backflow prevention assembly. The meter shall register (in U.S. gallons) accurately for only very low rates of flow and shall show a registration for all rates of flow. This assembly shall be used to protect against health hazard (i.e., contaminant).

SERVICE CONNECTION. The terminal end of a service connection from the public potable water system, i.e., where the county loses jurisdiction and sanitary control over the water at its point of delivery to the consumer's water system.

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, which has been investigated and approved by the North Carolina Department of Environment, Health, and Natural Resources. The system must be operating under a valid health permit.

WATER SUPPLY, AUXILIARY. Any water supply on or available to the premises other than the purveyor's approved public potable water supply. These auxiliary waters may include water from another purveyor's public potable water supply or any natural source such as a well, spring, river, stream, or industrial fluids. These waters may be polluted, contaminated, or objectionable and constitute an unacceptable water source over which the water purveyor does not have sanitary control.

(Ord. passed 4-2-2001)

§ 50.29 RIGHT OF ENTRY.

(A) Authorized representative(s) from the county 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 the event of an emergency, to perform any duty imposed by this subchapter. Those duties may include sampling and testing of water, or inspections and observations of all piping systems connected to the public water supply. Where a user has security measures in force which would require 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, the county personnel will be permitted to enter, without delay, for the purposes of performing their specific responsibilities. Refusal to allow entry for these purposes will result in discontinuance of water service.

(B) On request, the consumer shall furnish to the county any pertinent information regarding the water supply system on the property where cross-connections and backflow are deemed possible.

(Ord. passed 4-2-2001) Penalty, see § 50.99

§ 50.30 ELIMINATION OF CROSS-CONNECTIONS; DEGREE OF HAZARD.

(A) When cross-connections are found to exist, the owner, agent, occupant, or tenant will be notified in writing to disconnect the same within the time limit established by the county. Degree of protection required and maximum time allowed for compliance will be based upon potential degree of hazard to the public water supply system. The point of service shall be immediately disconnected if the corrective action has not occurred within the maximum time limit allowed. No additional notification shall be given other than the original notification. The maximum time allowed shall begin with the issuance of the written notification of the violation.

(B) The maximum time limits are as follows:

(1) Cross-connections with private wells or other auxiliary water supplies - immediate disconnection;

(2) All facilities which pose a health hazard to the potable water system must have a contaminant assembly in the form of a reduced pressure principal backflow prevention assembly within 60 days;

(3) 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 minimum containment assembly, a double check valve assembly within 90 days;

(4) If, in the judgement of the county, an imminent health hazard exists, water service to the building or premises where a cross-connection exists will be terminated unless an air gap is immediately provided, or the cross-connection is immediately eliminated;

(5) Based upon recommendation from the county, the consumer is responsible for installing sufficient internal isolation backflow prevention assemblies;

(6) No person shall fill any bulk water tanks or tankers from the public water system except when equipped with an air gap or an approved double check valve assembly properly installed, at the consumer's expense, and inspected by the county. Bulk water tanks or tankers shall be filled at sites in the county designated by the Director of Public Services; and

(7) No person shall fill special use tanks or tankers containing pesticides, fertilizers, other toxic chemicals, or their residues from the public water system, except when equipped with an air gap or an approved reduced pressure principal backflow prevention assembly properly installed, at the consumers expense, and inspected by the county. Special use tanks or tankers containing pesticides, fertilizers, other toxic chemicals, or their residues shall be filled only at sites in the county designated by the Director of Public Services.

(Ord. passed 4-2-2001) Penalty, see § 50.99

§ 50.31 INSTALLATION OF ASSEMBLIES.

(A) All backflow prevention assemblies shall be installed in accordance with the specifications furnished by the Public Works Department and/or the manufacturer's installation instructions and/or in the latest edition of the State Building Code, whichever is most restrictive.

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

(C) All double check valve assemblies must be installed in drainable vaults, with 18 inches of clearance on all sides wherever below ground installation is necessary, in accordance with detailed specifications provided by the Public Works Department. Double check valve assemblies may be installed in a vertical position with prior approval from the Public Works Department, provided the flow of water is in an upward direction.

(D) Reduced pressure principal assemblies must be installed in a horizontal position only and can be installed in vault that provides a minimum of 18 inches of clearance on all sides and is provided with adequate drainage, to the atmosphere, so as not to allow submersion.

(E) The installation of a backflow prevention assembly, which is not approved, must be replaced with an approved backflow prevention assembly.

(F) 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 Public Works Department within 15 days after installation:

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

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

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

- (1) Health hazard - 60 days; and
- (2) Non-health hazard - 90 days.

(Ord. passed 4-2-2001) Penalty, see § 50.99

§ 50.32 TESTING AND REPAIR OF ASSEMBLIES.

(A) Testing of backflow prevention assemblies shall be made by a certified backflow prevention assembly tester. The tests are to be conducted upon installation and annually thereafter. A record of all testing and repairs is to be retained by the customer. Copies of the records must be provided to the Public Works Department within ten business days after the completion of any testing and/or repair work.

(B) Any time that repairs to backflow prevention assemblies are deemed necessary, whether through annual testing, required testing or routine inspection by the owner or by the county, these repairs must be completed within a specified time in accordance with the degree of hazard. If these repairs are not completed within the specified time period, water service will be terminated. In no case shall this time period exceed:

- (1) Health hazard facilities - 14 days; and
- (2) Non-health hazard facilities - 21 days.

(C) All certified backflow prevention assembly testers must obtain and employ backflow prevention assembly test equipment, which has been evaluated and/or approved by the county. All test equipment shall be checked for accuracy annually (at a minimum), calibrated, if necessary, and certified to the county as such.

(D) It shall be unlawful for any customer or certified tester to submit any record to the county, which is false or incomplete in any material respect. It shall be unlawful for any customer or certified tester to fail to submit to the county any record, which is required by this subchapter. The violations may result in the termination of service.

(Ord. passed 4-2-2001) Penalty, see § 50.99

§ 50.33 FACILITIES REQUIRING PROTECTION.

Approved backflow prevention assemblies shall be installed on the service line to any premises that the Public Works Department has identified as having a potential for backflow. All customers shall follow the *North Carolina Guidelines for Cross-Connection Control in Water Distribution Systems*, set out in Appendix A of this chapter, in determining the type backflow prevention assembly required for an installation.

(Ord. passed 4-2-2001)

§ 50.34 CONNECTIONS WITH UNAPPROVED SOURCES OF SUPPLY.

(A) No person shall connect or cause to be connected any supply of water not approved by the State Department of Environment, Health, and Natural Resources to the water system supplied by the Public Works Department. Any such connection allowed by the Public Works Department must be in conformance with the backflow prevention requirements of this subchapter.

(B) In the event of contamination or pollution of a public or consumer potable water system, the consumer shall notify the Public Works Department immediately in order that appropriate measures may be taken to overcome and eliminate the contamination or pollution.

(Ord. passed 4-2-2001) Penalty, see § 50.99

§ 50.35 FIRE PROTECTION SYSTEMS.

(A) All connections for fire protection systems connected with the public water system, two inches and smaller, shall be protected with an approved dual check valve assembly as a minimum requirement. All fire systems using toxic additives or booster pumps shall be protected by an approved reduced pressure principal assembly at the main service connection.

(B) All connections for fire protection systems connected with the public water system greater than two inches shall be protected with an approved double check detector assembly as a minimum requirement. All fire protection systems using toxic or hazardous additives or booster pumps shall be protected by an approved reduced pressure principal detector assembly at the main service connection.

(C) All existing backflow prevention assemblies two inches and larger installed on fire protection systems (that were initially approved by the Public Works Department) shall be allowed to remain on the premises, as long as they are being properly maintained, tested, and repaired as required by this subchapter. If, however, the existing assembly must be replaced, or in the event of proven water theft through an unmetered source, the consumer shall be required to install an approved assembly as required by this subchapter.

(Ord. passed 4-2-2001) Penalty, see § 50.99

§ 50.36 VIOLATIONS.

Any violation of or noncompliance with the requirements of this subchapter may result in the termination of service.

(Ord. passed 4-2-2001) Penalty, see § 50.99

§ 50.99 PENALTY.

(A) *Generally.* Any person violating any provision of this chapter for which no specific penalty is prescribed shall be subject to § 10.99.

(B) *Sections 50.01 through 50.11.*

(1) Any violation of a provision of this subchapter shall constitute a Class 3 misdemeanor, punishable upon conviction as provided in G.S. § 14-4 or successor statute by a maximum fine of \$500 and a maximum of 30-days imprisonment.

(2) In addition to the other remedies cited in this subchapter for the enforcement of its provisions, and pursuant to G.S. § 153A-123, the regulations in this subchapter may be enforced through the issuance of civil penalties by the Public Works Department. First offense penalties may be assessed at the rate of \$50 per offense. If the offender continues to violate the provisions of this subchapter, the second offense may be assessed in the amount of \$250 and the third or greater offense may be assessed in the amount of \$500. If the offender fails to pay the civil penalties within five days after having been cited, the county may either add the amount of the penalties to the offender's next water bill or recover the penalties in a civil action in the nature of debt. Offenders who fail to pay any such penalties added onto their water bills will be subject to disconnection of service as provided in § 50.10.

(3) In addition to, or in lieu of, the foregoing, pursuant to G.S. § 153A-123, the county may seek a mandatory or prohibitory injunction and/or an order of abatement commanding the offender to correct the unlawful condition or cease the unlawful activity.

(4) The above remedies are cumulative, and the county may pursue any or all of the same at its discretion.

(Ord. passed 6-4-2007)

APPENDIX A: NORTH CAROLINA GUIDELINES FOR CROSS-CONNECTION CONTROL IN WATER DISTRIBUTION SYSTEMS

These guidelines are supplemental to Section .1006(b) of the "Rules Governing Public Water Supplies". These guidelines are intended as a minimum requirement. Public water suppliers may adopt more stringent requirements. Each supplier of water shall conform to the minimum requirements established in these guidelines.

I. Degree of Hazard:

A. *Severe:* Actual or potential threat of contamination that presents an imminent danger to the public health with consequence of serious illness or death.

B. *Moderate:* One that presents foreseeable and significant potential for pollution, nuisance, aesthetically objectionable or other undesirable alterations of the drinking water supply.

II. Backflow Prevention Assembly Requirements:

Degree of Hazard	RPZ*	DCVA**	Air Gap
Severe	X	-----	X
Moderate	-----	X	-----

*III. Facilities that require installation of a Backflow Preventer***:*

A. Moderate Hazard - DCVA:

1. Fire sprinkler systems without booster pump facilities or chemical additives.
2. Connection to tanks, lines and vessels that handle non-toxic substances.
3. Lawn sprinkler systems without chemical injection or booster pumps.
4. Most commercial establishments
5. Automotive service stations, bakeries and beauty shops with no health hazard and bottling plants with no back pressure.
6. Etc.

* Reduced Pressure Zone

** Double Check Valve Assembly

*** This is not intended to be an exhaustive list.

B. Severe Hazard - RPZ or Air Gap

1. Lawn sprinkler systems with chemical injection or booster pump.
2. Wastewater Treatment Plants
3. Connection to an unapproved water system or unapproved auxiliary water supply.
4. Connection to tanks, pumps, lines, steam boilers and vessels that handles sewage, lethal substances, toxic or radioactive substances.
5. Fire sprinkler systems with booster pump facilities or chemical additives.
6. Buildings with five or more stories above ground.

7. Hospitals and other medical facilities.
8. Morgues, mortuaries and autopsy facilities.
9. Metal plating facilities.
10. Bottling plants (subject to back pressure).
11. Canneries.
12. Battery manufacturers.
13. Exterminators and lawn care companies.
14. Chemical processing plants.
15. Dairies.
16. Film Laboratories.
17. Car Wash Facilities.
18. Dye Works.
19. Laundries.
20. Swimming Pools.
21. Water front facilities.
22. Etc.

IV. Approved Backflow Prevention Assemblies:

Meets American Society of Sanitary Engineering (ASSE) standard and carries ASSE Seal or is on the University of Southern California approval list.

V. Backflow Prevention Assembly Installation:

Backflow prevention assemblies must be located in a place where it is readily accessible for regular testing, maintenance and inspection. Bypass lines parallel to a backflow prevention assembly shall have an approved backflow prevention assembly installed that is equal to that on the main line.

(Ord. passed 4-2-2001)