

ORDINANCE NUMBER 14-2021

**AN ORDINANCE ADOPTING AND REAFFIRMING THE CLEVELAND COUNTY
WATER BACKFLOW AND CROSS CONNECTION CONTROL ORDINANCE**

WHEREAS, Cleveland County Water is a Sanitary District organized under the laws of the State of North Carolina and is a public water supply provider in Cleveland County, NC and surrounding areas; and

WHEREAS, Cleveland County Water adopted and duly executed a BackFlow and Cross Connection Control Ordinance on February 10, 2004 at a regular meeting of the Board of Commissioners (formerly Cleveland County Sanitary District); and

WHEREAS, in accordance with NCGS 130A-315 and NCGS 130A-317, staff has reviewed and provides to Commissioners the Cleveland County Water Backflow and Cross Connection Control Ordinance in accordance with State Law and the Rules Governing Public Water Supply Systems in North Carolina.

**NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COMMISSIONERS OF
CLEVELAND COUNTY WATER, LAWNSDALE, NC:**

Section 1. That the Board of Commissioners of Cleveland County Water hereby adopt and reaffirm the Cleveland County Water Backflow and Cross Connection Control Ordinance.

Section 2. That the General Manager and staff directed by the General Manager are hereby authorized to carry out the provisions of said ordinance in accordance with the Rules Governing Public Water Supply Systems.

Section 3. This ordinance and the Cleveland County Water Backflow and Cross Connection Control Ordinance marked as Exhibit A and incorporated into this Ordinance by reference are hereby adopted.

Adopted and Approved this 12th day of October 2021.



Donald O. Melton, Chairman
Cleveland County Water



Bill Cameron, Secretary
Cleveland County Water





CLEVELAND COUNTY WATER BACKFLOW AND CROSS CONNECTION ORDINANCE

Sec. 01-101. Introduction

- (a) The purpose of this cross-connection control article is to define the authority of Cleveland Co. Water as the water purveyor in the elimination of all cross connections within its public potable water supply.
- (b) This article shall apply to all users connected to the Cleveland Co. Water public potable water supply regardless of whether the user is located within the county or outside of the county.
- (c) This article will comply with the Federal Safe Drinking Water Act (PL 93-523), the North Carolina State Administrative Code (15A NCAC 08C), and the North Carolina State Building Code (Volume II) as they pertain to cross connections with the public water supply.

Sec. 01-102. Objectives of article

The specific objectives of this cross-connection control article for Cleveland Co. water are as follows:

- (1) 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.
- (2) To eliminate or control existing cross connections, actual or potential, between the consumer's potable water system and non-potable or industrial piping system.
- (3) To provide a continuing inspection program of cross connection control which will systematically and effectively control all actual or potential cross connections which may be installed in the future.

Sec. 01-103. Responsibilities

(a) Health agency

The state department of environment and natural resources 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 state department of environment and natural resources 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. The state department of environment and natural resources has 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 he requires the installation, testing, and maintenance of an approved backflow prevention assembly on the service connection when required.

(b) Water purveyor

Except as otherwise provided in this article, the water purveyor's (Cleveland Co. Water's) responsibility to ensure a safe water supply begins at the source and includes all the public water distribution system, including the service connection, and ends at the point of delivery to the consumer's water system. 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 Cleveland Co. Water 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. When it is determined that a backflow prevention assembly is required for the protection of the public system Cleveland Co. Water 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 Cleveland Co. Water, 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.

(c) Plumbing inspection

The plumbing inspection departments of the city and the county have the responsibility to not only review building plans and inspect plumbing as it is installed; but they have the explicit responsibility of preventing cross connections from being designed and built into the plumbing system within its jurisdiction. Where the review of building plans suggests 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 building code, for requiring that such cross connections be either eliminated or provided with backflow prevention equipment approved by the state building code. The plumbing inspector's responsibility begins at the point of delivery, downstream of the first installed backflow prevention assembly, and continues throughout the entire length of the consumer's water system. The plan inspector should inquire about the intended use of water at any point where it is suspected that a cross connection might be made or where one is actually called for by the plans. When such is discovered, it shall be mandatory that a suitable, approved backflow prevention assembly approved by the state building code be required by the plans and be properly installed. The primary protection assembly for containment purposes only shall have approval from Cleveland Co. Water, the state building code, and the state department of environment and natural resources.

(d) Consumer

The consumer has the primary responsibility of preventing pollutants and contaminants from entering his potable water system 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 customer's water system. The consumer, at his own expense, shall install, operate, test, and maintain approved backflow prevention assemblies as directed by Cleveland Co. Water. The consumer shall maintain accurate records of tests and repairs made to backflow prevention assemblies and shall maintain such records for a minimum period of three years. The records shall be on forms approved by Cleveland Co. Water 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.

(e) Certified backflow prevention assembly testers

When employed by the consumer to test, repair, overhaul, or maintain backflow prevention assemblies, a backflow prevention assembly tester will have the following responsibilities: The tester will be responsible for making competent inspections and for repairing or overhauling backflow prevention assemblies and making reports of such repair to the consumer and responsible authorities on forms approved by Cleveland Co. Water. 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 other equipment necessary to properly test, repair, and maintain backflow 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 Cleveland Co. Water: A certified tester shall perform the work and 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 to Cleveland Co. Water's cross connection control department within ten business days of any completed test or repair work. A certified tester shall maintain such records for a minimum period of three years. All certified backflow prevention assembly testers must obtain and employ backflow prevention assembly test equipment which has been evaluated and/or approved by Cleveland Co. Water. All test equipment shall be checked for accuracy annually, at a minimum, calibrated, if necessary.

Sec. 01-104. 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 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 (2.54 cm).

Approved means, as used in reference to a water supply, a water supply that has been approved by the state department of environment and natural resources; or, as used in reference to air-gap separation, a pressure vacuum breaker, a double check valve assembly, a double check detector assembly, a reduced pressure principle backflow prevention assembly, a reduced pressure principle detector assembly, or other backflow prevention assemblies or methods means an approval by Cleveland Co. Water.

Backflow means 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 The term "approved backflow prevention assembly" means an assembly used for containment and/or isolation purposes that has been investigated and approved by Cleveland Co. Water and has been shown to meet the 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. The approval of backflow prevention assemblies by Cleveland Co. Water is based on a favorable report by the Foundation for Cross-Connection Control and Hydraulic Research of the University of Southern California, recommending such an approval. To be approved, an assembly must be readily accessible for in-line testing and maintenance and shall successfully complete a one-year field evaluation within Cleveland Co. Water's water system.

Backflow prevention assembly--Unapproved The term "unapproved backflow prevention assembly" means an assembly that has been investigated by Cleveland Co. Water and has been determined to be unacceptable for installation within Cleveland Co Water's water system. Consideration for disapproval and removal from the "approved list" shall be based upon, but not limited to, the following criteria: (i) Due to poor performance standards (i.e., significant failure rate); (ii) lack of or unavailability of repair parts; and/or, (iii) poor service or response from assembly's factory representative.

Backflow prevention assembly-- Type means an assembly used to prevent backflow into a consumer or public potable water system. The type of assembly used should be based on the degree of hazard either existing or potential: The types are:

- (1) Double check valve assembly (**DCVA**).
- (2) Double check detector assembly (fire system) (**DCDA**).
- (3) Reduced pressure principle assembly (**RP**).
- (4) Reduced pressure principle detector assembly (fire system). (**RPDA**).

Backflow prevention assembly tester--Certified The term "certified backflow prevention assembly tester" means a person who has proven his competency to the satisfaction of Cleveland Co. Water. Each person who is certified to make competent tests, or to repair, overhaul, and make reports on backflow prevention assemblies shall be knowledgeable of applicable laws, rules, and regulations, shall be a licensed plumber or have at least two years experience under and be employed by a state licensed plumber or plumbing contractor, or have equivalent qualifications acceptable to Cleveland Co. Water and must hold a certificate of completion from an approved training program in the testing and repair of backflow prevention assemblies.

Backflow prevention device--Approved The term "approved backflow prevention device" means' 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 means 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 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.

Check valve--Approved The term "approved check valve" means a check valve that is drip-tight in the normal direction of flow when the inlet pressure is at least one psi and the outlet pressure is zero. The check valve shall permit no leakage in a direction reverse to the normal flow. The closure element (e.g. clapper, poppet, or other design) shall be internally loaded to promote rapid and positive closure. An approved check valve is only 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 means any person, firm, or corporation using or receiving water from Cleveland Co. Water's water system.

Consumer's potable water system means that portion of the privately owned potable water system lying between the point of delivery and point of use and/or isolation protection. This system will include all pipes, conduits, tanks, receptacles, fixtures, equipment, and appurtenances used to produce, convey, store, or use potable water.

Consumer's water system means 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 or systems may be either a potable water system or an industrial piping system.

Containment means preventing the impairment of the public potable water supply by installing an approved backflow prevention assembly at the service connection.

Contamination means 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 means 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 change-over devices, and other temporary or permanent devices through which or because of which "backflow" can or may occur considered to be cross connections.

Double check detector assembly means a specially designed assembly composed of a line-size proved 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 means an assembly composed of two independently acting, approved check valves, including tightly closing shutoff 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 *The* term "degree of hazard" is derived from the evaluation of conditions within a system which can be classified as either a "pollutional" (non-health) or a "contamination" (health) hazard.

Hazard--Health. The term "health hazard" means 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. The term "non health hazard" means 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.

Hazard--Pollutional. The term "pollutional hazard" means an actual or potential threat to the quality or the potability of the public or the consumer's potable water system but which would not constitute a health or a system hazard, as defined. The maximum degree or intensity of pollution to which the potable water system could be degraded under this definition would cause a nuisance or be aesthetically objectionable or could cause minor damage to the system or its appurtenances.

Health agency means the state department of environment and natural resources.

Industrial fluids means 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 to process waters; chemicals in fluid form; acids and alkalis; oils, gases; etc.

Industrial piping system--Consumer's. The term "consumer's industrial piping system" means any system used by the consumer for transmission of or to confine or store any fluid, solid or gaseous substance other than an approved water supply. Such a system would include all pipes, conduits, tanks, receptacles, fixtures, equipment, and appurtenances used to produce, convey, or store substances which are or may be polluted or contaminated.

Isolation means the act of confining a localized hazard within a consumer's water system by installing approved backflow prevention assemblies. Disclaimer: Cleveland Co. Water may make recommendations, upon facility inspection, as to the usages of isolation devices/assemblies, but does not assume or have responsibility whatsoever for such installations.

Point of delivery means generally at the property line of the customer, adjacent to the public street where Cleveland Co. Water's mains are located, or 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 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 the aesthetic qualities of such waters for domestic use.

Potable water means water from any source which has been investigated by the state department of environment and natural resources and which has been approved for human consumption.

Public potable water system means any publicly or privately owned water system operated as a public utility, under a current state department of environment and natural resources permit, to supply water for public consumption or-use. This system will include all sources, facilities, and appurtenances 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 a potable water for public consumption or use.

Reduced pressure principle backflow prevention assembly means 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 is 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 shutoff 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 principle detector assembly means a specially designed assembly composed of a line-size 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 and shall show a registration for all rates of flow. This assembly shall be used to protect against a health hazard (i.e., contaminant).

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

Vacuum breaker--Atmospheric type. The term "atmospheric vacuum breaker," also known as the "non pressure type vacuum breaker," means 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 shutoff 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.

Vacuum breaker--Pressure type. The term "pressure vacuum breaker" means an assembly containing an independently operating internally loaded check valve and an independently operating loaded air inlet valve located on the discharge side of the check valve. The assembly is to be equipped with properly located test cocks and tightly closing shutoff valves attached at each end of the assembly. This assembly is designed to protect against a health hazard (i.e., contaminant) under a back-siphonage condition only.

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

Water supply--Approved the term "approved water supply" means any public potable water supply which has been investigated and approved by the state department of environment and natural resources. The system must be operating under a valid health permit. In determining what constitutes an approved water supply, the state department of environment and natural resources has reserved the final judgment as to its safety and potability.

Water supply--Auxiliary the term "auxiliary water supply" means 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, etc., "used water", 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.

Water supply--Unapproved. The term "unapproved water supply" means a water supply which has not been approved for human consumption by the state department of environment and natural resources.

Water--Used. The term "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.

Sec. 01-105. Right of entry

(a) Authorized representatives from Cleveland Co. Water 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 article. 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, Cleveland Co. Water personnel will be permitted to enter, without delay, for the purposes of performing their specific responsibilities. Refusal to allow entry for these purposes may result in discontinuance of water service.

(b) On request, the consumer shall furnish to Cleveland Co. Water any pertinent information regarding the water supply system on such property where cross connections and backflow are deemed possible.

Sec. 01-106. Elimination of cross connections; degree of hazard

(a) When cross connections are found to exist, the owner, his agent, occupant, or tenant will be notified in writing to disconnect the cross connection within the time limit established by Cleveland Co. Water. Degree of protection required, and maximum time allowed for compliance will be based upon the potential degree of hazard to the public water supply system. 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 containment assembly in the form of a reduced pressure principle 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 a minimum containment assembly, a double check valve assembly within 90 days.

(4) If, in the judgment of Cleveland Co. Water, 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.

(5) Based upon recommendation from Cleveland Co. Water, the consumer is responsible for installing sufficient internal isolation backflow prevention assemblies and/or methods (i.e., air gap, pressure vacuum breakers, reduced pressure principle backflow prevention assembly, double check valve assembly).

(6) Water mains served by the county but not maintained by Cleveland Co. Water should be considered cross connections, with degree of hazard to be determined by Cleveland Co. Water. Degree of protection shall be based upon the degree of hazard, as determined by Cleveland Co. Water.

(7) In the event that a Cleveland Co. Water cross connection control inspector does not have sufficient access to every portion of a private water system (e.g., classified research and development facilities; federal government property) to allow a complete evaluation of the degree of hazard associated with such private water systems, an approved reduced pressure principle assembly shall be required as a minimum of protection.

(b) No person shall fill special use tanks or tankers containing pesticides, fertilizers, 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.

Sec. 01-107. Installation of assemblies

(a) All backflow prevention assemblies shall be installed in accordance with the specifications furnished by Cleveland Co. Water and/or the manufacturer's installation instructions and/or in the latest edition of the state building code, whichever is most restrictive.

(b) All new construction plans and specifications, when required by the state building code and the state department of environment and natural resources, shall be made available to Cleveland Co. Water for review and approval, and to determine the degree of hazard.

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

(d) All double check valve assemblies must be installed in drainable pits wherever below ground installation is necessary, in accordance with detailed specifications provided by Cleveland Co. Water.

(e) 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. Double check valve assemblies may be installed in a vertical position with prior approval from Cleveland Co. Water cross connection control department, provided the flow of water is in an upward direction.

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

(g) 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 Cleveland Co. Water cross connection control program department within 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 detector assembly (**RPDA**) is installed:

- (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, size of assembly.
- (7) Manufacturer, model number, serial number.
- (8) Test results/report.

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

(i) 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

(j) Following installation, all reduced pressure principle backflow preventers (**RP**), double check valve assemblies (**DCVA**), pressure vacuum breakers (**PVB**), double check detector assemblies (**DCDA**), or reduced pressure principle detector assemblies (**RPDA**) are required to be tested by a certified backflow prevention assembly tester within ten days.

Sec. 01-108. Testing and repair of assemblies

(a) Testing of backflow prevention assemblies shall be made by a certified backflow prevention assembly tester or may be contracted out to Cleveland Co. Water's cross connection control department at the customer's expense. Such tests are to be conducted upon installation and annually thereafter or at a frequency established by Cleveland Co. Water regulations. A record of all testing and repairs is to be retained by the customer. Copies of the records must be provided to Cleveland Co. Water's cross connection control 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 or required testing or routine inspection by the owner or by Cleveland Co. Water, these repairs must be completed within a specified time in accordance with the degree of hazard. In no case shall this time period exceed:

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

(c) All backflow prevention assemblies with test cocks are required to be tested annually or at frequency established by Cleveland Co. Water's regulations. Testing requires a water shutdown usually lasting 5 to 20 minutes. For facilities that require an uninterrupted supply of water, and when it is not possible to provide water service from two separate meters, provisions shall be made for a parallel installation of backflow prevention assemblies.

(d) All certified backflow prevention assembly testers must obtain and employ backflow prevention assembly test equipment which has been evaluated and/or approved by Cleveland Co. Water. All test equipment shall be checked for accuracy annually, at a minimum, calibrated, if necessary.

(e) It shall be unlawful for any customer or certified tester to submit any record to Cleveland Co. Water which is false or incomplete in any material respect. It shall be unlawful for any customer or certified tester to fail to submit to Cleveland Co. Water any record which is required by this article. Such violations may result in any of the enforcement actions outlined in section 01-130.

Sec. 01-109. Facilities requiring protection

(a) Approved backflow prevention assemblies shall be installed on the service line to any premises that Cleveland Co. Water has identified as having a potential for backflow.

(b) The following types of facilities or services have been identified by Cleveland Co. Water 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 Cleveland Co. Water. As a minimum requirement, all commercial services will be required to install a double check valve assembly, unless otherwise listed in this subsection.

DCVA = Double check valve assembly

RP = Reduced pressure principle assembly

DCDA = Double check detector assembly

RPDA = Reduced pressure detector assembly

AG = Air gap

PVB = Pressure vacuum breaker

(1) Aircraft and missile plants: RP

(2) Automotive services stations, dealerships, etc.

a. No health hazard: DCVA

b. Health hazard: RP

(3) Automotive plants: RP

(4) Auxiliary water systems:

a. Approved public/private water supply: DCVA

b. Unapproved public/private water supply: AG

c. Used water and industrial fluids: RP

(5) Bakeries:

a. No health hazard: DCVA

b. Health hazard: RP

(6) Beauty shops/barber shops:

a. No health hazard: DCVA

b. Health hazard: RP

- (7) Beverage bottling plants: RP
- (8) Breweries: RP
- (9) Buildings--Hotels, apartment houses, public and private buildings, or other structures having unprotected cross connections
 - a. (Under five stories) no health hazard: DCVA
 - b. (Under five stories) health hazard: RP
 - c. (Over five stories) all: RP
- (10) Canneries, packing houses, and rendering plants: RP
- (11) Chemical plants--Manufacturing, processing, compounding or treatment: RP
- (12) Chemically contaminated water systems: RP
- (13) Commercial car-wash facilities: RP
- (14) Commercial greenhouses: RP
- (15) Commercial sales establishments (department stores, malls, etc.)
 - a. No health hazard: DCVA
 - b. Health hazard: RP
- (16) Concrete/asphalt plants: RP
- (17) Dairies and cold storage plants: RP
- (18) Dye works: RP
- (19) Film laboratories: RP
- (20) Fire systems, Fire trucks:
 - a. Systems three-fourths inch to two inches:
 - 1. No health hazard: DCDA (Fire trucks do not require detector assembly.)
 - 2. Health hazard: (booster pumps, foam, antifreeze solution, etc.): RP
(Fire trucks do not require detector assembly.)
 - b. Systems 2 1/2 inches to ten inches or larger:
 - 1.No health hazard: DCDA (Fire trucks do not require detector assembly)
 - 2. Health hazard (booster pumps, foam, antifreeze solution, etc.): RPDA (Fire trucks do not require detector assembly.)
- (21) Hospitals, medical buildings, sanitariums, morgues, mortuaries, autopsy facilities, nursing and convalescent homes, medical clinics, and veterinary hospitals: RP
- (22) Industrial facilities:
 - a. No health hazard: DCVA
 - b. Health hazard: RP

- (23) Laundries:
 - a. No health hazard: DCVA
 - b. Health hazard: (i.e., dry cleaners): RP
- (24) Lawn irrigation systems (split taps): RP
- (25) Metal manufacturing, cleaning, processing, and fabricating plants: RP
- (26) Mobile home parks:
 - a. No health hazard: DCVA
 - b. Health hazard: RP
- (27) Oil and gas production, storage or transmission properties: RP
- (28) Paper and paper products plants: RP
- (29) Pest control (exterminating and fumigating): RP
- (30) Plating plants: RP
- (31) Power plants: RP
- (32) Radioactive materials or substances plants or facilities handling: RP
- (33) Restaurants:
 - a. No health hazard: DCVA
 - b. Health hazard: RP
- (34) Restricted, classified, or other closed facilities: RP
- (35) Rubber plants (natural or synthetic): RP
- (36) Sand and gravel plants: RP
- (37) Schools and colleges: RP
- (38) Sewage and storm drain facilities: RP
- (39) Swimming pools:
 - a. Direct plumbing: RP
 - b. Indirect plumbing: AIR GAP with Pressure Vacuum Breaker on designated spigot for pool.
- (40) Waterfront facilities and industries: RP
- (41) Agricultural meter: RP
- (c) All assemblies and installations shall be subject to inspection and approval by Cleveland Co. Water.

Sec. 01-110. 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 and natural resources to the water system supplied by Cleveland Co. Water. Any such connections allowed by Cleveland Co. Water must be in conformance with the backflow prevention requirements of this article.

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

Sec. 01-120. 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 double check valve assembly as a minimum requirement. All fire systems using toxic additives or booster pumps shall be protected by an approved reduced pressure principle 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 principle detector assembly at the main service connection.

(c) All existing backflow prevention assemblies 2 1/2 inches and larger installed on fire protection systems that were initially approved by Cleveland Co. Water shall be allowed to remain on the premises, as long as they are being properly maintained, tested and repaired as required by this article. If, however, the existing assembly must be replaced once it can no longer be repaired, or in the event of proven water theft through an unmetered source, the consumer shall be required to install an approved double check detector assembly or reduced pressure principle detector assembly as required by subsection 01-109(20)b.

Sec.01-130. Enforcement.

(a) The owner, manager, supervisor, or person in charge of any installation found not to be in compliance with the provisions of this article shall be notified in writing with regard to the corrective action to be taken. The time for compliance shall be in accordance with section 01-106.

(b) The owner, manager, supervisor, or person in charge of any installation which remains in noncompliance after the time prescribed in the initial notification, as outlined in section 01-106, shall be considered in violation of this article, and may be issued a civil citation by Cleveland Co. Water. The citation shall specify the nature of the violation and the provision of this article violated, and further notify the offender that the civil penalty for such violation is as set forth in subsection (c) of this section and is to be paid to Cleveland Co. Water within 30 days. If the penalty prescribed in this subsection is not paid within the time allowed, Cleveland Co. Water may initiate a civil action in the nature of a debt and recover the sums set forth in subsection (c) of this section plus the cost of the action.

(c) Any offender who shall continue any violation beyond the time limit provided for in the aforementioned notification shall be subject to a civil penalty of up to \$1,000.00 per violation. Each day in which a violation of any provision of this article shall occur or continue shall constitute a separate and distinct offense.

(d) If, in the judgement of Cleveland Co. Water, any owner, manager, supervisor, or person in charge of any installation found to be in noncompliance with the provisions of this article neglects his responsibility to correct any violation, such neglect may result in discontinuance of water service until compliance is achieved.

(e) Failure of a customer or certified tester to submit any record required by this article, or the submission of falsified reports/records may result in a civil penalty of up to \$1,000.00 per violation. If a certified backflow prevention assembly tester submits falsified records, Cleveland Co. Water shall take the necessary actions to revoke certification to test backflow prevention assemblies within the potable water system for a time period not to exceed one year. The tester will then be required to complete an approved certification course to acquire a new certification. Falsification made to records/reports after becoming recertified shall result in the permanent revocation of backflow testing certification, in addition to a civil penalty as provided for in this subsection.

(f) Enforcement of this program shall be administered by the manager of Cleveland Co. Water or his authorized representative.

(g) Requests for extension of time shall be made in writing to the manager of Cleveland Co. Water or his authorized representative. All other appeals shall be made in accordance with the following procedures:

(1) 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 manager of Cleveland Co. Water upon making written demand, identifying the specific issues to be contended, to the manager of Cleveland Co. Water within 30 days following notice of final decision to assess a civil penalty. Unless such demand is made within the time specified in this subsection, the decision on the civil penalty assessment shall be final and binding.

(2) Appeal hearings. Any decision of Cleveland Co. Water hearing officer made as a result of an adjudicatory hearing held under subsection (g)(1) of this section may be appealed by any party to Cleveland Co. Water board of commissioners upon filing a written demand within ten days of receipt of notice of the decision. Hearings held under this section shall be conducted in accordance with Cleveland Co. Water hearing procedures. Failure to make written demand within the time specified in this subsection shall bar further appeal. Cleveland Co. Water shall make the decision on the appeal within 90 days of the date the appeal was filed and shall transmit a written copy of its decision by registered or certified mail.

(3) Official record. When a final decision is issued under subsection (g)(2) of this section, Cleveland Co. Water shall prepare an official record of the case that includes:

- a. All notices, motions, and other like pleadings;
- b. A copy of all documentary evidence introduced;
- c. A certified transcript of all testimony taken if testimony is transcribed. If testimony is taken and not transcribed, then a narrative summary of any testimony taken;
- d. A copy of the final decision of Cleveland Co. Water.

(4) Judicial review. Any customer against whom a final decision of Cleveland Co. Water is entered, pursuant to the hearing procedure under subsection (g)(2) of this section, may appeal the order or decision by filing a written petition for judicial review within 30 days after receipt of notice by certified mail of the order or decision to the general court of justice of the county where the order or decision is effective, along with a copy to Cleveland Co. Water. Within 30 days after receipt of the copy of the petition of judicial review, Cleveland Co. Water shall transmit to the reviewing court the original or a certified copy of the official record, as outlined in subsection (g)(3) of this section.

Sec. 01-140. Severability

If any section, subsection, sentence, or clause of this article is adjudged to be unconstitutional or otherwise invalid, such adjudication shall not affect the validity of the remaining portion of this article. It is hereby declared that this article would have been passed, and each section, sentence, or clause thereof; irrespective of the fact that any one or more sections, subsections, sentences, or clauses might be adjudged unconstitutional, for any other reason invalid.

15A NCAC 18C .0406 DISTRIBUTION SYSTEMS

(a) **Water Pipe Materials.** Water pipes shall be cast iron, ductile iron, reinforced concrete, plastic, or other material designed for potable water system service and shall meet AWWA standards, section C, or be certified as meeting the specifications of ANSI/NSF Standard 61 Drinking Water System Components – Health Effects, which is incorporated by reference including any subsequent amendments and editions. Copies of AWWA standards may be obtained for public inspection as set forth in Rule .0503 of this Subchapter. Copies of ANSI/NSF Standard 61 may be obtained for public inspection as set forth in Rule .1537 of this Subchapter. The pressure rating class of the pipe shall be in excess of the maximum design pressure within that section of the water distribution system. The quality of pipe to be used shall be stated in the project specifications.

(b) **Cross-Connections.** No person shall construct, maintain, or operate a physical arrangement whereby a public water system has a cross-connection without the use of proper backflow protection.

- (1) No person shall introduce any water into the distribution system of a public water supply through any means other than from a source of supply duly approved by the Department or its representatives or make any physical connection between an approved supply and unapproved supply unless authorized in an emergency by the Department or its representative.
- (2) **Service Connection Relation to Plumbing Code.** No supplier of water shall provide a service connection to any plumbing system that does not comply with the North Carolina State Building Code, Volume II, and all applicable local plumbing codes. Where required, the supplier of water shall install or require to be installed an appropriate testable backflow prevention assembly prior to making the service connection. Design of backflow prevention assemblies for service connections shall not require Department review.
- (3) **Connections Requiring Departmental Review.** Connections between a public water system and the connection types in Parts (A) through (D) of this Subparagraph shall require review and approval by the Department prior to making the connection. Installation of a testable backflow prevention assembly or air gap shall be required if the connection is non-potable or unapproved. Engineering plans and specifications shall be submitted in accordance with Section .0300 of this Subchapter.
 - (A) Any regulated public water system;
 - (B) any community non-regulated public water system. Before providing a connection, a supplier of water shall ensure that the construction of the non-regulated public water system either was approved in accordance with Rule .0301(a) of this Subchapter or that backflow prevention is provided in accordance with this Rule;
 - (C) non-potable water treatment processes within a potable water treatment plant; and
 - (D) all cross-connections between potable water supplies and non-potable or unprotected supplies that are not specifically addressed in this Rule or AWWA M-14 Backflow Prevention and Cross Connection Control.
- (4) **Backflow Prevention Not Addressed by the Plumbing Code.** The following requirements shall apply to backflow prevention not addressed by the plumbing code.
 - (A) Testable backflow prevention assemblies shall meet American Society of Sanitary Engineering (ASSE) standards and carry an ASSE seal, be on the University of Southern California approval list for testable backflow prevention assemblies, or be on the North Carolina State Plumbing Code approval list for approved testable backflow prevention assemblies.
 - (B) For each identified water treatment process-related hazard, the supplier of water shall provide the appropriate backflow prevention assembly or method to protect the water supply and water treatment employees, in accordance with AWWA M-14 Backflow Prevention and Cross Connection Control.
 - (C) No person shall fill special use tanks or tankers containing pesticides, fertilizers, other toxic chemicals, or their residues from a public water system except at a location equipped with an over-the-rim free discharge of water or a reduced pressure backflow preventer properly installed on the public water supply. No supplier of water shall permit the filling of such special use tanks or tankers except at locations so equipped.
 - (D) A supplier of water shall not authorize for construction or other temporary, non-emergency use connections to hydrants that are not equipped with an approved air gap or an installed reduced pressure principle backflow prevention assembly.
 - (E) If storage capacity is used only for non-potable purposes and there is installed either an elevated or ground tank or a ground reservoir, the following precautions shall be taken:

- (i) If the reservoir or tank is filled from a supply other than a public water supply and the public water supply is used as a supplemental supply, the pipeline from the public water supply shall be installed with an air gap.
 - (ii) If the reservoir or tank is filled entirely by water from a public water supply and:
 - (I) a covered ground reservoir or covered elevated tank is used, an approved reduced pressure back-flow preventer or an approved double check valve assembly shall be used; or
 - (II) an uncovered ground reservoir or uncovered elevated tank is used, an air gap shall be required.
- (F) Installation. The following installation requirements shall be met, where applicable.
- (i) Backflow prevention assemblies shall be installed in accordance with manufacturers' recommendations and specifications and shall not be modified in the field.
 - (ii) Back-flow prevention assemblies shall be located and installed in such a manner as to function as designed; be accessible for testing, maintenance, and inspection; and include all necessary test cocks and drains for testing. Valves shall be installed in the line at both ends of the back-flow prevention device to provide for replacement and maintenance.
 - (iii) 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.
 - (iv) Reduced pressure principle assemblies shall be installed above ground or below ground in a vault with positive gravity drainage to atmosphere employing a drain of sufficient size to handle the full flow of discharge from a discharging assembly, 12-inch minimum clearance from vault walls and floor, and in accordance with manufacturer's recommendations. A reduced pressure principle assembly may be installed as protection for either a high-health or low-health hazard.
 - (v) Double check valve assemblies shall be installed either vertically or horizontal and above ground or below ground in a vault with positive gravity drainage to the atmosphere. A double check valve assembly shall be installed as protection for a low-health hazard only.
 - (vi) Pressure vacuum breaker assemblies shall be installed only where there is no possibility of a pressure higher than the supply pressure caused by a pump, elevated tank, boiler, air or steam pressure, or any other means which may cause backflow, and in accordance with manufacturer's recommendations. A pressure vacuum breaker shall be installed as protection for a high-health or low-health hazard that is subject to backsiphonage only and with no backpressure.
- (5) Interconnection to a public water system shall be subject to the approval of the supplier of water and shall not be made until authorized by the supplier of water.
- (6) A community or non-transient non-community public water system with five or more testable backflow prevention assemblies protecting the distribution system, as required pursuant to this Rule, shall maintain the following records beginning on January 1, 2020:
- (A) records of the location, type, installation date, size, and the associated degree of hazard of backflow prevention devices whose failure would create a high-health hazard;
 - (B) a description of specific ongoing plans, actions, or schedules to inventory existing backflow prevention devices under Part (b)(5)(A) of this Rule and to identify and address all uncontrolled cross-connection hazards;
 - (C) final results of all backflow prevention assembly field testing and air gap inspections; and
 - (D) review of new service connections and existing service connections during a change of the account owner to ensure all required backflow prevention devices are properly installed and tested.
 - (E) a supplier of water which contracts with a third-party to implement any part of their cross-connection program may allow records required by this Paragraph to be maintained on the premises of the third-party, as long as the records are available on demand by the supplier of water.

- (F) program records under Part (C) of this Subparagraph shall be maintained for a minimum of four years. Remaining records referred to in this Paragraph shall be maintained while still current or in use.
- (7) Each supplier of water shall notify the Department of any known incident of backflow into the public water system that creates a risk of contamination as soon as practical upon discovery of the incident but no later than the end of the next business day. If requested by the Department, the supplier of water shall submit a written report of the incident describing the nature and severity of the backflow, the actions taken by the supplier of water in response to the incident, and the action plan intended to prevent such incidents in the future.

*History Note: Authority G.S. 130A-315; 130A-317; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. April 1, 2014; September 1, 1990; December 1, 1988; June 30, 1980;
Readopted Eff. July 1, 2019.*

FIGURE 2: NORTH CAROLINA GUIDELINES CROSS CONNECTION CONTROL IN WATER DISTRIBUTION SYSTEMS

These guidelines are supplemental to Section .0406(b). 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	-----

* Reduced pressure zone

** Double check valve assembly

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

(This printed version is corrected from the July 2010 version which erroneously listed all irrigation as high hazard.)

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. Automatic service stations, bakeries and beauty shops with no health hazard and bottling plants with no back pressure.
6. etc.

B. Severe hazard - RPZ or air gap:

1. Lawn sprinkler systems with chemical injection or booster pumps
2. Wastewater treatment plants
3. Connection to an unapproved water system or unapproved auxiliary water supply
4. Connection to tanks, pumps, lines, steam boilers or vessels that handle 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 level
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.

A. RPZ:

1. Above ground installation preferred.
2. Below ground vault shall have positive drainage with adequate gravity drainage to atmosphere.
3. 12 inches minimum clearance from vault walls and floor.
4. Installation in accordance with manufacturer's recommendations.

B. DCVA:

1. Vertical or horizontal installation acceptable.
2. Adequate drainage shall be provided if installed below ground.

§ 130A-315. Drinking water rules; exceptions; limitation on implied warranties.

(a) The Commission shall adopt and the Secretary shall enforce drinking water rules to regulate public water systems. The rules may distinguish between community water systems and noncommunity water systems.

(b) The rules shall:

- (1) Specify contaminants which may have an adverse effect on the public health;
- (2) Specify for each contaminant either:
 - a. A maximum contaminant level which is acceptable in water for human consumption, if it is feasible to establish the level of the contaminant in water in public water systems; or
 - b. One or more treatment techniques which lead to a reduction in the level of contaminants sufficient to protect the public health, if it is not feasible to establish the level of the contaminants in water in a public water system; and
- (3) Establish criteria and procedures to assure a supply of drinking water which dependably complies with maximum contaminant levels and treatment techniques as determined in paragraph (2) of this subsection. These rules may provide for:
 - a. The minimum quality of raw water which may be taken into a public water system;
 - b. A program of laboratory certification;
 - c. Monitoring and analysis;
 - d. Record-keeping and reporting;
 - e. Notice of noncompliance, failure to perform monitoring, variances and exemptions;
 - f. Inspection of public water systems; inspection of records required to be kept; and the taking of samples;
 - g. Criteria for design and construction of new or modified public water systems;
 - h. Review and approval of design and construction of new or modified public water systems;
 - i. Siting of new public water system facilities;
 - j. Variances and exemptions from the drinking water rules; and
 - k. Additional criteria and procedures as may be required to carry out the purpose of this Article.

(b1) The rules may also establish criteria and procedures to insure an adequate supply of drinking water. The rules may:

- (1) Provide for record keeping and reporting.
- (2) Provide for inspection of public water systems and required records.
- (3) Establish criteria for the design and construction of new public water systems and for the modification of existing public water systems.
- (4) Establish procedures for review and approval of the design and construction of new public water systems and for the modification of existing public water systems.
- (4a) Limit the number of service connections to a public water system based on the quantity of water available to the public water system, provided that the number of service connections shall not be limited for a public water system

operating in accordance with a local water supply plan that meets the requirements of G.S. 143-355(l).

- (5) Establish criteria and procedures for siting new public water systems.
- (6) Provide for variances and exemptions from the rules.
- (7) Provide for notice of noncompliance in accordance with G.S. 130A-324.

(b2) Two or more water systems that are adjacent, that are owned or operated by the same supplier of water, that individually serve less than 15 service connections or less than 25 persons but that in combination serve 15 or more service connections or 25 or more persons, and that individually are not public water systems shall meet the standards applicable to public water systems for the following contaminants: coliform bacteria, nitrates, nitrites, lead, copper, and other inorganic chemicals for which testing and monitoring is required for public water systems on 1 July 1994. The standards applicable to these contaminants shall be enforced by the Commission as though the water systems to which this subsection applies were public water systems.

(b3) The Department shall not certify or renew a certification of a laboratory under rules adopted pursuant to subdivision (3)b. of subsection (b) of this section unless the laboratory offers to perform composite testing of samples taken from a single public water supply system for those contaminants that the laboratory is seeking certification or renewal of certification to the extent allowed by regulations adopted by the United States Environmental Protection Agency.

(c) The drinking water rules may be amended as necessary in accordance with required federal regulations.

(d) When a person that receives water from a public water system is authorized by the Utilities Commission, pursuant to G.S. 62-110(g), to charge for the costs of providing water or sewer service, that person shall not be subject to regulation under this Article solely as a result of submetering and billing for water service. The supplying water system shall perform the same level of monitoring, analysis, and record keeping that the supplying system would perform if the providing water system had not been authorized to charge for the costs of providing water or sewer service pursuant to G.S. 62-110(g).

(e) When a public water system supplies water through a master meter to a water system not regulated by this Article, the supplying water system is not responsible for operation, maintenance, or repair of the providing water system. The supplying water system shall not be responsible for contamination that is confined to the providing water system if the supplying water system meets applicable requirements for water quality, treatment, and system operation for that contaminant. The supplying water system may monitor the water within the providing water system for contamination pursuant to rules adopted under this Article. The supplying water system and the Department shall have access to the providing water system to investigate water quality problems and to determine whether any contamination is confined to the providing water system and whether the quality of the water supplied by the supplying water system is contributing contamination to the providing water system.

(f) If water in the providing water system exceeds the maximum contaminant levels established pursuant to this Article and the Department determines that the supplying water system is not responsible, the supplying water system must notify the providing water system owner in writing within one day of determining that the contamination is confined solely to the providing water system for bacteria, nitrate, and nitrite, and within 30 days for all other contaminants.

(g) A supplier of water regulated under this Article shall not be deemed to provide any warranty under Article 2 of Chapter 25 of the General Statutes, including an implied warranty of merchantability or an implied warranty of fitness for a particular purpose. (1979, c. 788, s.

1; 1983, c. 891, s. 2; 1985, c. 417, ss. 1, 2; 1991 (Reg. Sess., 1992), c. 826, s. 1; 1993 (Reg. Sess., 1994), c. 776, s. 15; 1995, c. 25, s. 1; 2000-172, s. 1.1; 2001-502, s. 6; 2004-143, s. 8; 2008-140, s. 1.)

§ 130A-317. Department to provide advice; submission and approval of public water system plans.

(a) The Department shall advise all persons and units of local government locating, constructing, altering or operating or intending to locate, construct, alter or operate a public water system of the most appropriate source of water supply and the best practical method of purifying water from that source having regard to the present and prospective needs and interests of other persons and units of local government which may be affected. The Department shall also advise concerning accepted engineering practices in the location, construction, alteration and operation of public water systems.

(b) All persons and units of local government constructing or altering a public water system shall give prior notice and submit plans, specifications and other information to the Department. The Commission shall adopt rules providing for the amount of prior notice required to be given and the nature and detail of the plans, specifications and other information required to be submitted. The Commission shall take into consideration the complexity of the construction or alteration which may be involved and the resources of the Department to review the plans, specifications and other information. The Department shall review the plans, specifications and other information, and notify the person, Utilities Commission and unit of local government of compliance or lack of compliance with applicable statutes and rules of the Commission.

(c) No person or unit of local government shall begin construction or alteration of a public water system or award a contract for construction or alteration unless all of the following conditions are met:

- (1) The plans for construction or alteration have been prepared by an engineer licensed by this State.
- (2) The Department has determined that the system, as constructed or altered, will be capable of compliance with the drinking water rules.
- (3) The Department has determined that the system is capable of interconnection at an appropriate time with an expanding municipal, county or regional system.
- (4) The Department has determined that adequate arrangements have been made for the continued operation, service and maintenance of the public water system.
- (5) The Department has approved the plans and specifications.

(d) Municipalities, counties, local boards or commissions, water and sewer authorities, or groups of municipalities and counties may establish and administer within their utility service areas their own approval program in lieu of State approval of water system plans required in subsection (c) of this section for construction or alteration of the distribution system of a proposed or existing public water system, subject to the prior certification of the Department. For purposes of this subsection, the service area of a municipality shall include only that area within the corporate limits of the municipality and that area outside a municipality in its extraterritorial jurisdiction where water service is already being provided to the permit applicant by the municipality or connection to the municipal water system is immediately available to the applicant; the service areas of counties and the other entities or groups shall include only those areas where water service is already being provided to the applicant by the permitting authority or connection to the permitting authority's system is immediately available. No later than the 180th day after the receipt of an approval program and statement submitted by any local government, commission, authority, or board, the Department shall certify any local program that meets all of the following conditions:

- (1) Provides by ordinance or local law for requirements compatible with those imposed by this Article, and the standards and rules adopted pursuant to this Article.
- (2) Provides that the Department receives notice and a copy of each application for approval and that the Department receives copies of approved plans.
- (3) Provides that plans and specifications for all construction and alterations be prepared by or under the direct supervision of an engineer licensed to practice in this State.
- (4) Provides for the adequate enforcement of the program requirements by appropriate administrative and judicial process.
- (5) Provides for the adequate administrative organization, engineering staff, financial and other resources necessary to effectively carry out its plan review program. A local government, commission, authority, or board may either employ an engineer licensed under Chapter 89C of the General Statutes to practice as a professional engineer in the State or contract with an engineer licensed under Chapter 89C of the General Statutes to practice as a professional engineer in the State in order to provide for adequate engineering staff under this subdivision.
- (6) Provides that the system is capable of interconnection at an appropriate time with an expanding municipal, county, or regional system.
- (7) Provides for the adequate arrangement for the continued operation, service, and maintenance of the public water system.
- (8) Provides that an approved system, as constructed or altered, will be capable of compliance with the drinking water rules.
- (9) Is approved by the Department as adequate to meet the requirements of this Article and any applicable rules adopted pursuant to this Article.

(e) The Department may deny, suspend, or revoke the certification of a local program upon a finding that a violation of the provisions in subsection (d) of this section has occurred. A local government administering an approval program shall be given notice that there has been a tentative decision to deny, suspend, or revoke certification and that an administrative hearing will be held in accordance with Chapter 150B of the General Statutes where the decision may be challenged. If a violation of the provisions in subsection (d) of this section presents an imminent hazard, certification may be suspended or revoked immediately. The Department shall give notice of the immediate suspension or revocation and notice that an administrative hearing will be held in accordance with Chapter 150B of the General Statutes where the decision may be challenged.

(f) Notwithstanding any other provisions of subsection (d) of this section, if the Department determines that a public water system is violating plan approval requirements of a local program and that the local government has not acted to enforce those approval requirements, the Department may, after written notice to the local government, take enforcement action in accordance with the provisions of this Article.

(g) The Department shall identify systems meeting all of the following criteria:

- (1) As constructed or altered, the system appears capable of interconnectivity with another system or systems located within the same river basin, as set out in G.S. 143-215.22.
- (2) The system appears to have adequate unallocated capacity to expand.
- (3) Interconnectivity would promote public health, protect the environment, or ensure compliance with established drinking water rules.

The Department shall notify the identified systems of the potential for interconnectivity in the future. The systems so notified may discuss options for potential interconnectivity,
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including joint operations, regionalization, or merger. The Local Government Commission shall be copied on the notice from the Department and shall assist the systems with any questions regarding liabilities of the systems and alterations to the operational structure of the systems. (1979, c. 788, s. 1; 1983, c. 891, s. 2; 1985, c. 697, s. 1; 1987, c. 827, s. 1; 2006-238, s. 1; 2015-241, s. 14.14A(a).)